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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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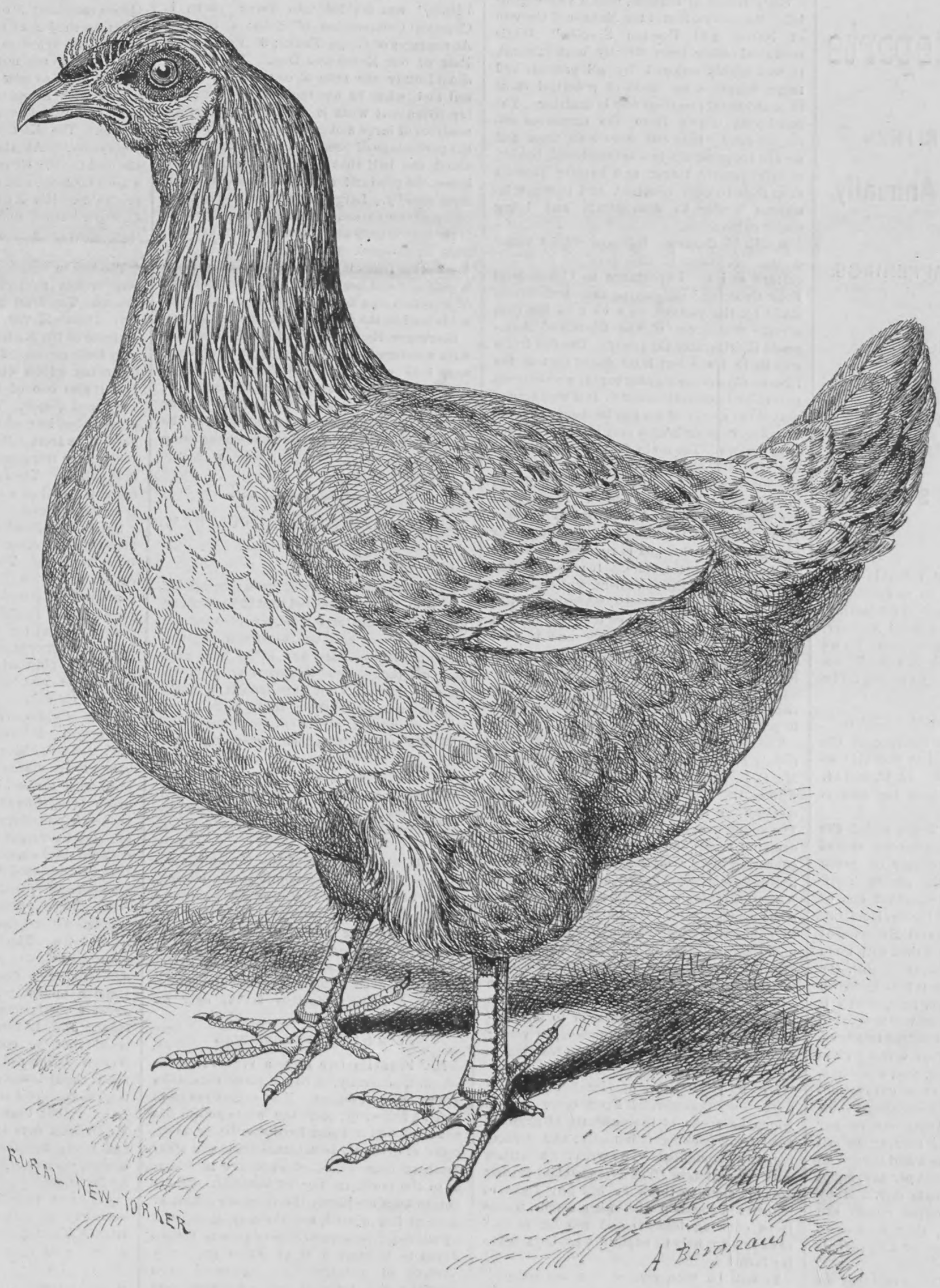
The Poultry Yard.

A SHAPELY PULLET.

WE begin the New Year by showing a specimen of the "new breed" we have frequently spoken of. Our readers will remember the story of our experiment. Last spring we procured a well-shaped White Wyandotte rooster and five White Dorking hens. These were kept in a pen by themselves and the eggs were carefully preserved for hatching. The chickens were of all colors, the whites being in the minority. Most of them had a trace of brown, the bird shown in the picture, see Fig. 1, being the darkest in color of the entire flock. We have selected her as coming nearest to the shape we have selected as our ideal. The square, "blocky" body, trim neck and short legs indicate, in our view, a serviceable hen for the general farmer.

We shall continue experiments with this cross. We care far less for color than for shape and laying qualities. We had hoped to use a brother of this hen in continuing the experiment, but as he was killed by a careless workman, we are obliged to select a new rooster and shall probably use a White Wyandotte.



ONE OF THE RURAL'S WYANDOTTE-DORKING PULLETS. From Nature. Fig. 1.

DISEASES OF FOWLS.

P. H. JACOBS.

THERE are so many diseases incident to poultry that it is impossible to describe the symptoms of all in a brief article. The disease most prevalent in the fall, winter and spring, is roup, which kills more fowls in this country than cholera and all other causes combined.

Roup is due to colds, and may be brought into the flock by contagion, by dampness, by exposure to winds, and by improper shelter. There are several forms of roup, but the signs are discharges from the nostrils, swelled heads and eyes, hoarse breathing, and whitish sore throat. When the eyes are swelled, bathe once a day with warm water, and anoint with a few drops of glycerine. If the bird breathes hoarsely, give a pill composed of equal parts of quinine, bromide of potash, and asafetida, the size of a bean, three times a day. If sore throat results, swab the throat with a solution of sulphate of copper. Add a teaspoonful of carbolic acid to each gallon of drinking water.

Cholera is always known by intense thirst, debility, an anxious expression and greenish droppings. The best remedy is to add a teaspoonful of liquid carbolic acid to each half-gallon of the drinking water, and give a mixture of 10 drops of paregoric and five drops of spirits of camphor, twice a day.

Gapes is the result of suffocation caused by a small, slender worm. Numbers of them cluster together. A drop of spirits of turpentine on a bread crumb, twice a day, is the best remedy. The vapor of carbolic acid will also cure the difficulty. Chicks only are subject to gapes.

If roup and cholera can be kept out of the flock, half the battle will be won. To avoid disease of any kind follow these hints:

Never have your fowls too fat, and you will seldom have cases of egg-bound, double-yelk eggs, or soft-shell eggs. Hence do not feed largely of grain.

Nearly all ailments are due to a lack of grinding material in the crop. Always keep broken glass, pounded crockery, or sharp, flint gravel within reach of the fowls. Cold draughts of air blowing across them, or down on them, will cause swelled head and eyes, and finally lead to roup. It is often the case that weak legs may be caused by high roosts, the birds being injured by jumping therefrom to the ground. When the roosts are low and a hen is unable to stand on her legs, remove her from the male at once, as the cause may be traced to him, especially if he is very heavy.

Feather pulling is due to idleness, and not to a lack of something in the food as many suppose. Active birds, if confined and not exercising, will pull feathers, but the habit is easily acquired from any one of the flock by the other members thereof.

Hens do not eat their eggs unless they learn the habit from having eggs broken in the nest. Never use stale eggs as nest-eggs.

A dust bath is the toilet of the hen. It is her mode of keeping her body clean. If given a dusting place she will keep the vermin off if you will keep the poultry house clean.

The great source of contagion is the drinking water. A sick fowl should never be allowed to drink from the same vessel with the others.

On very cold nights a large flock will be more comfortable than a small one, as there will be more warmth in the poultry house.

A crack in the wall, or a hole as large as the head of a nail, will cause more damage than if the whole front of the house is open, provided the rear and sides are tight.

Never give medicine to healthy fowls. Feeding sulphur and adding Douglass Mixture to the drinking water, should only be done when necessity requires.

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Pale or dark comb is not a disease, but indicates that the bird is not well. A healthy fowl always has a bright, scarlet comb.

Salt is necessary. Season the food with salt whenever it can be done, but only slightly.

Crop-bound usually results from the bird eating long grass, old rags or rope, or some substance that stops the passage leading from the crop to the gizzard.

The best place for a sick bird is the bottom of a flour barrel, straw being used for bedding.

No gases arise from frozen droppings, but the poultry house should be cleaned daily, if possible, and dry earth should be sprinkled on the floor, which permits of sweeping the latter with a broom. Cleanliness prevents disease.

The combs will not easily become frosted on cold days if they are annointed with glycerine. Birds with large combs and wattles should drink only from vessels into which they can get their beaks alone. A hen with frosted comb will not lay.

Never use kerosene on the legs or body, as it often irritates and does damage.

Have roosts low. Many birds gradually droop and die from internal injury due to constant jumping to the floor from high roosts.

Indust'l Societies.

Readable Reports

—OF—

WHAT WISE WRITERS

Aim to Argue Annually.

HORTICULTURAL HAPPENINGS.

DAIRY DOINGS.

AGRICULTURAL ASPIRATIONS.

SUNDRY SENSIBLE SYNOPSES

REPORTS of a number of valuable meetings have been sent to us during the past few days. This is the season for talking. As last week's RURAL was a Special Number, we were unable to print these reports. So we issue several of them together this week, believing that they contain many excellent bits of information.

OHIO STATE HORTICULTURAL SOCIETY.

THE twenty-second annual meeting of the Ohio State Horticultural Society was held at Troy, Miami County, on Dec. 12, 13, and 14. Everything conspired to make it the success which all declared it to be.

At two o'clock President Tryon called the meeting to order. The afternoon was almost entirely consumed in the reading of seven reports. The first and, to the general horticulturist, much the most important one of these was that of Mr. W. J. Green, Horticulturist of the Ohio Agricultural Experiment Station at Columbus. He said that with them irrigation had been found impracticable, the chief reason being that water is too expensive. One and one-fourth inch per acre, which is about the amount of a good shower is equal to one thousand barrels or one hundred two-horse loads, and costs in Columbus seven dollars and fifty cents. Mulching, too, sometimes fails. The best plan seems to be cultivation. Experiments in Illinois and Connecticut show that half an inch of rainfall may be saved per week from evaporation by stirring the soil every alternate day. A man and horse can cultivate two and a half acres per day, equal to five acres every alternate day. If by cultivation one inch of water per month can be saved from evaporation, there need be no fear of drought except at one or two periods like the strawberry season.

Reporting on fruits, Mr. Green said that the Jessie and Bubach strawberries are about equal for profit to the Crescent and are safe to plant. Itasca, Logan, Sunapee, and Monmouth should be returned C. O. D. whence they came. Jewell and Gold seem to have a weakness for good living. Carmichael is worthless.

Mr. E. H. Cushman from the grape-growing region east of Cleveland, reported that the crop of that district was about 500 carloads. Many growers realized no more than one and a half cent a pound on Concords and but little better on Catawbas. Euclid Catawbas sold this year in Denver, Colo. at 20 cents a basket, while two years ago they were worth more than that on the vines. The future of viticulture nobody knows.

In his report Mr. N. Ohmer, of Dayton, said he sprayed his apple trees just as they were going out of bloom with ten ounces of London-purple in 50 gallons of water, and was pleased with the results. He would not spray when they were in full bloom as many bees are thus killed. He considers 35 or 40 feet a better distance for apple trees than 30 feet. His orchard at the latter distance is crowded.

In the report of Mr. J. C. Albaugh, of Troy, prominent mention was made of a new strawberry, the Miami. It is large, dark-red, late, of good quality, a strong grower, and able to withstand drought and neglect better than others.

The reports were almost unanimous in placing Bubach at the head of the list of strawberries. Their general tone was indeed pleasant as there seems to have been large fruit crops in all parts of the State, making Ohio's Centennal year one of happiness to the growers and to the poor.

Sec'y Ragan of Indiana, read a paper entitled. "A comparison of the Manner of Growth of Native and Foreign Species." While botanical rather than strictly horticultural, it was highly enjoyed by all present, and might doubtless be made of practical value in ornamental plantings and in grafting. The conclusion drawn from the numerous examples cited is that our American trees and shrubs are generally less symmetrical, bolder, and frequently larger and hardier growers than their foreign relatives, and in many instances harder to domesticate and bring under cultivation.

Mr. E. H. Cushman followed with a paper on the "Relation of Refrigeration to Horticulture and its Importance in Commercial Fruit-Growing," embodying the observations made by the essayist on a visit to the cold storage warehouse of the Cleveland Automatic Refrigerator Company. The fine fruits seen there leave but little doubt that in the future, cold storage is going to play a prominent part in horticultural industry. It is well known that if the spores of rot can be kept from developing, organic bodies may be preserved for long periods. The main factors in doing this are coldness, absence of light, and dryness, the last of which has caused most difficulty in all systems where ice is used. The system practiced in Cleveland is briefly as follows: Aqua ammonia is reduced to an anhydrous condition; and this gas is reduced by steam pressure to a liquid state. It is then passed through pipes in the chambers, which are surrounded by dead air spaces, where it volatilizes and thus produces a low temperature. It then returns to the condenser and is used again. A very low temperature may thus be produced and maintained. Dampness, instead of causing decay, becomes condensed on the pipes. The system is probably the nearest to perfection of any yet introduced.

The most interesting part of Thursday forenoon's programme was a short address by Mr. C. E. Thorne, Director, O. Ag. Exp. Sta., who said: "Whenever we attend a farmer's meeting we see few but gray-haired men. The young men are not there. The cities are drawing them; the schools and colleges are educating them away from the farm into the professions, where they will enter a fierce race, whose beginning is poverty and whose end is a chance of success. We should do all we can to counteract this tendency. The opening and improvement of so many experiment stations have opened a new profession to young men, more lucrative than many of the literary ones. The Ohio Station, feeling its duty in this matter, intends soon to offer advantages, not attainable elsewhere, to young men desirous of getting practical training in horticulture.

Mr. F. R. Palmer, of Mansfield, read a paper on "Commercial Fruit Growing," in which he spoke of the necessity of growing good fruit, packing it honestly, and dealing honestly throughout. The writer was struck with one sentence, "The average Ohio farmer does not seem to think he has any right to luxuries in common with other people, unless it be chewing tobacco and paying taxes." Does this not help to explain why boys leave the farm?

It will be with sorrow that the horticulturists not only of Ohio but of her sister States learn of the positive declination of Secretary Campbell to serve again. For a number of years he has held this position and largely by his efforts the Ohio reports have become very valuable. We may feel glad, however, that he still holds a prominent place in the society, having been elected Vice-President. His successor as Secretary, is Mr. W. W. Farnsworth, of Lucas county.

After the election, Secy. Campbell read a valuable report on grapes. With him, as in Summit County, the Mills and Downing mildew badly. There were embodied in this report two letters from Mr. Geo. M. High, of Sandusky County, in which that gentleman says that, after careful experiments, he has concluded that the best remedy for grape rot is the following: Dissolve one pound of sulphate of copper (blue vitriol) in two or three gallons of hot water. When cold add one pint of spirits of ammonia. Pour off the clear liquid and add to what remains 20 to 25 gallons of water. Begin spraying about 10 days before blossoming time.

Mr. L. B. Pierce, Ornithologist of the society, read his long, carefully prepared, first report. He spoke of the scarcity of knowledge on this subject and of the great labor necessary in acquiring accurate knowledge of birds. He has no sentimental, poetic love for those feathered depredators, the robins and sparrows. The time seems to have come when small patches of raspberries or orchards of cherries cannot be grown on account of birds. These fruits must be grown largely as allowance must be made for depredations.

Prof. Lazenby's paper on "Some Lessons from the Chemical Composition of Fruits and Fruit Plants," was divided into three parts, 1, Chemical Composition of Soils; 2, Ulterior Advantages of Large Fruits; 3, Fruit as a Part of our Every-day Diet. Every man should study the natural composition of his soil and what he has removed from it, and try to make it what it should be. Average analyses of large and small apples show that the percentage of seed in the former is only about one half that of the latter. As we know, the production of seed taxes the soil most heavily. Large apples then add to their other advantages the fact that they remove from the soil only about one half as much fertility as an equal weight of small ones does. With other fruits it is the same. As a diet fruit is pleasant and healthful. It keeps the organs of secretion in a healthy condition, while its acids tend to the destruction of disease germs.

Secretary Ragan entertained the audience with a lecture on the great cold wave of January 1886 which froze the Florida oranges, illustrated by charts showing the center of low barometric pressure and the zero line at each of the eight-hour observations for the three days during which the wave was crossing the country. W. S. C.

Cuyahoga Falls, O.

NEW JERSEY STATE HORTICULTURAL SOCIETY.

THE General Fruit Committee, through Mr. J. B. Rogers, reported that the season, beginning with the terrible March blizzard, has not been a very good one, horticulturally considered. The blizzard had killed large numbers of that most mischievous bird, the English sparrow, but this benefit is not a lasting one, since these birds have shown their wonderful reproductive powers, and will soon be present in their former vast numbers. The season was very unfavorable to fruit buds. The pear crop was light all throughout the State; apples were generally a poor crop, while peaches were injured by cold and wet weather during the ripening season.

Mr. Taplin, in behalf of the Committee on Flowers, sent a communication stating, among other things, that new roses are more subject to mildew, probably on account of excessive forcing for stock; also that the chrysanthemum now gives the flower lover a chance to have fine flowers for some weeks after frost, even without the use of a greenhouse. A little protection is the only requisite.

COMMITTEE ON VEGETABLES.

Mr. Franklin Dye gives a very favorable account, generally, of the crops of vegetables grown the past season. Most vegetables have given a full crop; only the white potato has not done well in many localities, either on account of drought, as in Cumberland and other southern counties, or of excessive moisture, as in the northern tier of counties. Where potato bugs are plenty, the vines are generally more or less injured, and the crop diminished by the required applications of poison. Crown Jewel is mentioned as an extra good new variety of potatoes. Among sweet corn varieties the Cory lacked sweetness, and had an unusual tendency to be attacked by black fungus, and the crop was almost spoiled. Triumph and Minnesota can be recommended. Evergreen for late is all that can be desired. Rosy Gem and White Strassburg were favorites among radishes, and California Cream, was a pet among lettuces. Eclipse is yet the best beet; American Wonder and Bliss's Everbearing the best peas. Among red-fleshed melons the Emerald Gem and Princess take the lead, and Improved Early Hackensack among the green-fleshed sorts. The Rochester tomato has proved one of the best. The true, white-seeded Ice-cream is an elegant watermelon.

NEW FRUITS.

Dr. J. B. Ward, as a member of the special committee on trial of new fruits mentions the following:

Golden Queen raspberry very prolific, a strong grower, of excellent flavor. Its wonderful suckering tendencies, and its color are against it. Not good for market. The Crystal raspberry is four or five days earlier and handsomer, and of bright yellow or straw color; perhaps it is not quite so prolific. Introduced by Caywood. The Cohanzick strawberry is a complete failure. Fruit hard and very acid, and not to be recommended. The Minnewaski blackberry holds its own, and even improves on acquaintance. It ripens with the Wilson. Fruit larger, very sweet; vines very prolific and hardy even in exposed locations. No rust or double blossoms noted about it as yet. Holds its color well. Mr. J. T. Lovett says the market rejects all but a bright red variety. Fashion in a measure controls the market. The Golden Queen raspberry is only good for family use.

On the subject of worthy fruits new or old, Mr. W. R. Ward says that some of the old fruits which are not yet much disseminated are as good as new ones, and can often be grown with as much profit as any, new or old. Old varieties are often new to some people. The Kieffer has been growing in popularity. At the start too much was claimed for it. Growers now concede it to be a good cooking, and a good market fruit, and profitable. His Kieffers sold in market for $1.40 per bushel, and Anjou for $1.65. Yet the Kieffer, one year with another, produces double as much as the Anjou.

The loss in ripening is very small and the tree is not subject to much injury from insects. The fruit is valuable for New Jersey. Dana's Hovey is in many respects the opposite of the Kieffer—one of the oldest, yet very little grown. It is of highest flavor, and deserving widest dissemination. The Quinn pear is also one of the very best—late and a very good keeper. The Lawson tree is a good grower, but he could not say anything in regard to its fruit. Many strawberries have recently been introduced, but few are receiving field culture. The Jessie is one of them, doing especially well on a heavy soil. Its popularity is on the increase.

Shaffer's Colossal raspberry is discarded on account of its color. Cuthbert and Marlboro take its place. The latter is considerably earlier than the Cuthbert, hence does not come in competition with it; and is gaining in popularity. Fay's currant is sustaining its reputation and the claims made for it by its introducer or originator. He has some bushes three years old that yielded as much as twelve quarts each, and the fruit sold for 10 cents a quart. Of cherries, the Montmorency and English Morello are good, and yet not generally grown. Moore's Early grape is one of the very best early black sorts in cultivation. It comes to the market when that is yet unsupplied with grapes; or at the same time with green Ives, Champions, or Concords from Delaware and Maryland. Last season it sold in Newark for eight cents per pound, while Concords in their season brought only four cents. It takes the place of Ives, and is much better and more acceptable.

Mr. Beebe praises Grimes's Golden apple, that has never been pushed half as much as it deserves. The Wagener also is hardly disseminated, and yet it is one of the finest apples. He is disgusted with many of the Russian apples. The Canfield is a tough sweet apple, perhaps good to cook or for cider. J. T. Lovett thinks the Russian apples should not be condemned in this fashion. Yellow Transparent is good. Being asked about the Delaware Winter apple, he says he is quite confident that it is identical with the Lawver; but even this is not much known. Mr. Wilcox says it is a good keeping apple, but never becomes good to eat. Quailty always very poor. Grimes's Golden is praised by Mr. Lovett.

President Baird's address emphasized the necessity of selecting proper varieties of fruits. The tendency in horticulture is in the direction of quantity, rather than quality. He would like to see this reversed. Rubbish is not wanted in any market. The grower should also confine his efforts to an area tha

he can handle. The income from our orchards might in most cases be doubled by better care, more manure and better marketing. Select a good commission dealer and stick to him. He has sent his produce to the same firm for 25 years. The yellows are troublesome, yet New Jersey growers have now as many healthy, thrifty trees as at any time before. There are so-called yellows that come from want of proper care or proper feeding, and from other causes that can be remedied. There are also the genuine yellows so much dreaded, that we as yet know little about. Speaking of the matter of transportation, he calls attention to the concessions that the Association of American Nurserymen have obtained from transportation companies. This has not been done without considerable effort; but it should stimulate fruit-growers to exert themselves in the same direction. The States can do much to aid horticulture. The Experiment Stations have done much towards educating the people; for instance in regard to fertilizers. Almost every farmer now knows something about the three chief elements of plant food. The grape-grower finds himself face to face with the problems of excessive production of grapes, and unprofitable prices, and President Baird seems to see a ray of hope in the possible use that might be made of a large share of the crop in the manufacture of "new wine," (unfermented grape juice), so highly eulogized as a beverage and medicine.

THE PEACH YELLOWS.

Prof. Edwin F. Smith, of the Section of Vegetable Pathology, Department of Agriculture, has made the subject of peach yellows a special study, and came to prove to the New Jersey peach grower, by a long array of instances and statistics, covering large sections of Delaware and Maryland, that the true disease is not caused by lack of proper food in the soil (by soil exhaustion,) a fact which the progressive New Jersey peach growers have long since recognized. The results of the various experiments made by experiment stations, professors and growers are often conflicting. There may be a disease resulting from starvation, that somewhat resembles in its symptoms the true yellows, but which is curable by proper feeding. Commercial fertilizers have been largely applied to peach orchards, but as a cure or preventive they have no value. There are many authenticated cases where the application of kainit and muriate of potash did no good. The most that could be gleaned from the Professor's remarks, was that the nature of the disease has not yet been discovered, and that the Department cannot suggest a remedy. The investigator has not been able to find the incipient disease or its cause (fungus) by microscope or otherwise. He has succeeded in transferring the disease from one tree to another. The investigation is not completed, but the hope is held out that the Department, in a year or two, will be able to give us more definite information. This then leaves the whole matter in the old unsettled and unsatisfactory state. One member reports that he has used salt with good effects. Another member preaches against the practice of root-pruning, and considers it the chief cause of weakness and early decay of peach and pear trees.

INSECTS AND INSECTICIDES.

Geo. D. Hulst, Entomologist of the Experiment Station, holds to the opinion that injurious insects after all, are not an unmitigated evil. They make production a little more laborious, he says, and add to the chances of financial success for the careful man. We have yet much to learn about insects, and how to deal with them; but we are advancing. A knowledge of the life history of every insect is needed in order to show us at what stage of its existence—egg, worm or caterpillar, chrysalis, and perfect insect—we can take it at its greatest disadvantage. Of poisonous remedies the arsenical preparations answer the purpose for leaf-eaters in almost every instance. Kerosene and pyrethrum kill by contact. A mixture of the two kinds, however, Paris-green or London-purple with kerosene emulsion or pyrethrum), secures two chances to kill, and will be found most effective in many cases.

Mr. Hulst also states that we need stricter laws, or stricter enforcement of existing laws, against the destruction of birds. The demands for material for decorating female head gear have done more to strip the country of our song birds than the quarrelsome nature of the English sparrow. Among useful insect-eaters Mr. Hulst names toads, snakes, moles, the latter the only enemy that preys upon the rose-beetle when in the larval state. People should begin to fight insects at their first appearance, and not wait until they have grown numerous and destructive.

To the query; "Would you advise using Paris-green for the cabbage worm?" Mr. Hulst replied in the negative. Hot water, pyrethrum, and other non-poisonous remedies are good and effective. The inquiry after an effective remedy for the scaly bark louse was answered by Mr. Nicholsen. who recommends a solution of sal-soda—one pound to the gallon of water. If applied to the affected tree by means of a brush, the remedy will kill the bark louse. It is good for woolly aphis also.

RESPONSIBILITY OF NURSERYMEN.

How far should nurserymen be held responsible for the correctness of the stock sent out? Mr. Wilcox stated that nurserymen don't know half the varieties they send out, nor can they be sure of what their stock really consists. They buy young trees and propagate from them without hardly ever fruiting them. The nurseryman should not be held responsible if such stock does not prove true to name. Mr. J. B. Rogers said: "This is a question of law. Seedsmen were held responsible for the genuineness of their seeds, and are trying to protect themselves against oppressive responsibility by the disclaimer printed on each seed package. The law holds nurserymen responsible, as it does seedsmen, and if they desire to protect themselves, they should use disclaimers as seedsmen do.'

FIGHTING INSECTS WITH FUNGI.

The observation that many injurious insects are kept so effectively in check by diseases, has led to the idea of studying these diseases, and introducing them among insects in localities where the diseases have not yet appeared. This is ably advocated by Mr. Nicholson, who states that cabbage worms are not very destructive in Europe because a fatal fungus disease does not permit their rapid increase. All such fungi should be bred and spread among our healthy insect crops.

GRAPES FOR GENERAL CULTURE.

The following grapes have the indorsement of the society as the best for general culture, viz: Worden, Concord, Moore's Early (black), Brighton (red), Niagara and Empire State (white). It might be interesting to know whether the members who vote for Concord have given the Worden and Moore's Early a thorough trial.

EXPERIMENT STATION AND SOCIETIES.

Of the various lines of work that Secretary Williams thinks the Experiment Stations might do for the horticultural societies, one of the most needed and important is the analyses of all the kinds of fruits and vegetables. Ex-president Alex. W. Pearson, kept at home by sickness, sent a paper on the same topic. The discussions in our meetings, he says, sometimes serve to make a dark subject still darker and more confused. He has listened to the discussions on peach yellows until he now knows less about the subject than he thought he did years ago. The Agricultural Experiment Stations should act as referees. The Department of Agriculture has practically settled the question of curing or preventing grape diseases, yet there is plenty of work ahead. Other remedies, or better and cheaper ones may yet be found, and many experiments are still needed. Mr. Williams mentioned the great diversity of the composition of soil as a serious drawback to the success of the work of testing small fruits at the stations. Definite conclusions can hardly be reached.

CHEMISTRY AND AGRICULTURE.

In the course of a most interesting lecture on the Relation of Chemistry to Agriculture Dr. P. T. Austin, of the experiment station, stated that the mineral substances of plant food, phosphoric acid and potash, are held in the soil, and a loss is not liable to occur. Nitrogen when applied in excess, however, may filter through as through a sieve, and escape. Almost all fruit flavors in general use are made by the chemist, and even the finest of them, like pine-apple, etc., owe their origin to old cheese and a cheap acid. There may be a difference of flavor between two apples, but the chemist cannot tell this difference, chemically, or how the flavor gets there. Which substance shall we encourage? Which do away with? What is the relation of fertilizers to composition of plant, root, flavor? All these are open questions, and should be investigated by the stations. If we have a sick tree, we generally try to cure it by giving some food to the roots. This may be like feeding a sick man with a big dinner, and making him still sicker. It is not impossible that a cure might be effected by inserting some medical agent through the bark directly into the sap circulation. Here is another field for experiment. In conclusion Dr. Austin calls the attention of farmers and fruit growers to two substances which promise to rank high among destroyers of fungi and perhaps insects. Crude naphthaline, a waste product and formerly considered a nuisance, seems particularly adapted to kill the lower forms of life, bacteria and (not unlikely) insects. It is a harmless substance, insoluble in water so that it could do no possible injury if put into the soil occupied by roots of trees or plants, yet highly volatile. If placed under, or in the limbs of a tree, diseases and insects might be kept off by the atmosphere of naphthaline which would constantly envelop the tree. It costs only about 12 cents per pound, and may be bought of the N. Y. Coal-tar Co. The other substance is bisulphide of lime, which is produced in large quantities, and is a cheap and powerful deodorizer and antiseptic. It should be more largely used by farmers and fruit growers, as it has all the antiseptic properties of burning sulphur, and is more convenient and less risky to use. It might be tried as a fungicide for leaf diseases of plants, and perhaps as a preservative for silage, etc.

UNPARDONABLE PRODIGALITY.

Secretary Williams wished to protest against the prodigal practice of Americans in the exports of wheat and corn. The richness of our soil is sent to foreign lands, and our soils are left poorer in mineral elements from year to year. The wheat should be ground, thus giving more employment to American millers, and the flour exported, and the bran, which contains the mineral elements of plant food, fed to stock, and eventually returned to the soil. Mr. Greiner said this would be very desirable; but it takes two to make a bargain, and if we desire to effect a sale, one will have to sell what the other party wants to buy. Prof. Geo. Cook, of the Experiment Station, puts the blame largely upon the American farmer himself, who does not appreciate bran, cotton-seed meal, etc. as he ought, and is not willing to pay the prices gladly paid by foreigners. Cotton-seed meal as a fertilizer is worth all it costs. The most economic method is to feed these materials to stock, get 30 per cent. of their substance in the growth of the animal, and 70 per cent. in manure.

OFFENSIVE LAWN FERTILIZERS.

Mr. Williams and Prof. Cook united in protesting against the use of such bad-smelling and unsightly stable manures on lawns as could be noticed on the grounds around the State House where the meeting was held. Cotton-seed meal, bone dust and other commercial fertilizers might be used with just as good results and without offense to eye or nose.

NITROGEN FROM ATMOSPHERE.

In complaining that Americans do not make proper use of many of the waste products of manufacture, Prof. Cook also mentioned the great loss of ammonia driven out of soft coal in the coke works of Pennsylvania. No practical method of catching the escaping gas and utilizing it for manurial purposes has yet been found. It goes into the air, becomes carbonate of ammonia, and nobody knows whither it goes. Plants do not seem to get hold of it. The grass in that section does not grow any greener, the corn and wheat any thriftier. The soil there is poor anyway, and the large quantities of escaping ammonia are not improving it. It seems quite certain that plants do not absorb an appreciable amount of nitrogen from the atmosphere. If ammonia is in the air, it has to pass through the soil first before plants can get it and they absorb it through the roots. Mr. Baker says that if he applies nitrate of soda to the soil, in expectancy of rain, and it does not rain within ten days he receives no good from it. The effect is lost. [This is a mistake.—EDS.]

A GOOD POTATO CROP.

Mr. D. Aug. Vanderveer, of Monmouth county, who had planted one acre of Silver Lake potatoes (of Peerless shape and general characteristics), makes the following report: Two-eye seed-pieces were planted 16 inches apart in drills 2½ feet apart. The fertilizer applied was special potato manure; 600 pounds broadcast before planting, 400 pounds in the drills over the slightly covered seed, and 500 pounds around the hills at the second cultivation—1,500 pounds in all. The rows were slightly hilled after the last manure application. Blight struck the field before the crop was fully matured. Yield, 135 barrels or 370 35-60 bushels.

THE RURAL POTATO CONTEST.

Treasurer Jones who was one of the witnesses at the digging of the famous potato crop on the Rural Experiment Grounds, tells of the wonderful sight presented by the quantities of "enormous tubers rolling out of the ground," and speaks with especial warmth of the No. 2 now being disseminated. Dr. Ward inquired about the flea-beetle, as he is not satisfied with anything that has yet been brought out. Sec'y Williams says it shows preferences for certain varieties. In spite of all inquiries, however, not much new information was developed either concerning the flea-beetle or the potato blight which was so very destructive in many parts of New Jersey last season, especially in Monmouth County.

EXPERIENCE WITH GRAPE DISEASES.—Mr. Williams reports having made 2½ applications of Bordeaux mixture. He has had better grapes than last year, or in a long time before. None were left untreated. Col. Pearson's experiments in Vineland under the direction of the Department of Agriculture have conclusively shown that grape diseases are preventable by the proper use of copper sulphate preparations. Mr. Williams had to use one of the older style hand force pumps, as he could not get a perfect sprayer. Mr. Vanderveer has experimented with eau celeste, making the first application June 1st. but he could not see much difference. Mr. Williams recommends spraying or washing the vines with the Bordeaux mixture *now* and then again in the spring. The winter spores should be killed first. He has bagged Duchess before bloom, yet on some clusters every berry rotted. Some varieties when bagged before blooming formed perfect clusters; others did not, for want of proper fertilization. This depends largely on the vigor of vines etc.

T. GREINER.

AS A FARMER'S DAUGHTER SEES IT.

MY brother and I have just attended the farmers' institute held at Cortland, on Dec. 17 and 18. The distance, weather and condition of the roads made it impossible for us to take in the whole of it, so I shall not try to give a full description of the proceedings, but I'll tell you what I especially liked. First, Col. F. D. Curtis, the instructor, who filled the place of Sec'y Woodward, proved very conclusively that New York is a dairy State and gave valuable instruction in regard to food rations for stock, for different purposes. He is a pleasant and genial teacher. Silo and silage were thoroughly discussed and their benefits explained. The paper by A. Devereaux, on "Silage in the Dairy," was very interesting and practical. Prof. Ladd, of the State Experiment Station at Geneva, by the use of his charts made very plain the value of different kinds of food, and the proper combinations for rations. His paper was a little too learned for one like me, not versed in scientific terms, but his explanation of his charts, and his answers to the questions asked, were very clear. "The Horns in Relation to Milk and Butter," by Dr. Law, of Cornell University, was also very learned. But I would like to have placed some of our friends who told about the docility of dehorned and polled cattle, in the yard with a polled bull that we had on our farm a few years ago. I think one look at his monstrous head and wicked eyes, would have inclined them to edge near the fence. G. P. Squires, of Marathon, read an important paper on the "Breeding of Domestic Animals."

He dwelt on the folly of breeding from all kinds of stock with the expectation of getting all the good points and none of the poor ones; and on the folly of every farmer trying to raise a trotter. There was a short paper on "Potato Culture," by Robert Purvis, of Cortland, but dairying seemed to be the principal theme, and potatoes were forced to take the background. Perhaps their present low price had something to do with it. The institute was a success judged by the interest shown in the questions asked, and the number present in spite of storm. Mrs. Burnham, of East Homer, gave a very fine rendering of one of Will Carleton's poems at the close of the exercises. Now, just a little criticism on the friends who have so kindly given us instruction. I do not think they give farmers full credit for the improvement they have made and are trying to make. They cannot realize the difficulty and the obstacles farmers have to meet. The farmer with small means and old-fashioned tools and unimproved stock already on his hands, finds it hard and slow work to make the changes he desires. But it is a pretty slack farmer in these parts that is not trying in one way or another to improve. Just let people give us credit for what we have done and we will gladly receive all the instruction they have for us.

EMMA L. BLISS.

THE N. Y. STATE DAIRYMEN'S CONVENTION.

THE State Dairymen's Association met in Oswego on Dec. 11. After the appointment of committees, the work was commenced by a discussion of proper rations for fattening animals and in feeding for milk. A series of charts, which are to be exhibited at each of the institutes this winter, were hung up in the hall. The first of these shows the relative amount of food elements in each of several of the most common substances used in feeding. For example, one bar painted across the chart showed in red the relative amount of albuminoids in hay, or about 4-100 of its

length as hay consists of about 4 per cent. of that food element; 40-100 was blue to represent carbohydrates and 1-100 was another color to represent fat, etc. A second chart showed the proper proportion of these food elements for a complete ration, also in some improper but commonly used rations.

In the further discussion Col. Curtis emphasized the importance of feeding for a purpose. Let the ration be a properly balanced one and do not feed more nitrogenous foods or albuminoids than the right proportion, neither should one feed an excess of starchy matter, for all excess in either case is wasted. When corn-meal is fed alone one half is wasted, for there is not a sufficient amount of albuminoids to balance the starch and fat. This is undoubtedly one of the most profitable fields for the practical farmer to study. Tables showing the composition and feeding values of all the ordinary foods, have been published and a complete ration for a milch cow of 1,000 pounds' weight is about 2½ pounds of albuminoids, 12½ pounds of carbohydrates and about one pound of fat, in about 30 pounds of dry fodder.

In the afternoon Dr. Collier gave an address in which he said that there are 1,540,000 cows in New York State and if the destroying angel would pass over the land and with proper discrimination blot out one half of these, their destruction would be a great blessing to the farmers. Very many cows are kept at an actual loss. In 90 creameries and factories from which he had been able to obtain statistics, the returns to the farmer per cow ranged from $14.50 to $82.17, and the difference in the price of the yields was but little. The ratio given is as 1 to 5⅝. The loss was in the amount produced. The New Hampshire experiment station has shown the cost of a quart of milk from the best cow to be 1.55 cent and from the poorest cow 4.26 cents, the average being 2.74 cents, and this on a good ration. The cost of the milk from the best cow with the best ration was 1.32 cent, and that of the milk from the poorest cow with the poorest ration 5.35 cents per quart—400 per cent. in favor of the best cow with the best ration. It is a question whether the average cow produces over 3,000 pounds of milk per year, but that yield will not pay the cost of keeping. Throw out the poor cows, feed the others better and bring the yield up to 5,000 or 8,000 pounds of milk per year. The value of the grass crop in New York State needs emphasizing, for it is worth more than the cereals and is of greater benefit to the land. Do not sell hay, for you cannot get what it is worth to you as feed for your stock. Its manurial value is great—about $7.50 per ton. The encouragement is offered that N. Y. State farms are not, on the whole, materially losing in fertility, which cannot be said of Western lands. The Empire State is as good as any in the world for farming. The address abounded in statistics and was to the point.

Col. Curtis followed, and said the farmer should make up a proper ration for his stock which shall be, first, for maintenance and, second, for production of milk and butter. He mentioned the fact that at Cornell last summer at the dairy conference it took 15½ pounds of milk for a pound of butter; at Kirby Homestead, 16½ pounds of milk, and at another place 22½ pounds.

Prof. Roberts discussed manures, or, as he put it, capital stock, and urged that the fertility of the farm be not allowed to become exhausted. No man has a right to take from the capital stock in farming, for he is robbing those that come after him. In feeding stock to produce flesh and butter one should feed also for manure. Every ton of solid manure is usually worth from $3 to $4. Manure is usually worth half the cost of the food, but its worth depends upon the kind of food consumed. The Professor gave as a ration for a milch cow of 1,000 pounds' weight:

20 pounds corn fodder, worth	$.05
4 pounds cotton-seed meal, worth	.05
6 pounds wheat bran, worth	.06
2 pounds corn meal, worth	.02
Total	$.18

The manural value of this will be 11 cents, but if a ration is made up largely of straw, the manure is worth considerably less; 10 pounds of straw are worth about one cent, while 10 pounds of cotton-seed meal are worth 11 cents. The importance of spreading manure in the fall and winter rather than waiting until spring was fully emphasized. One had found a difference of fully 25 per cent. in favor of spreading in the fall. Prof. Roberts said that we should always spread manure in the fall and where there is a plant to grow, it will grow nearly all winter. Sow clover or rye in the fall, or some crop that will live through the winter, so that its roots may go down and take up and make ready the plant food for some other crop to be put on in the spring. The Lord manures in the fall and you cannot beat Him.

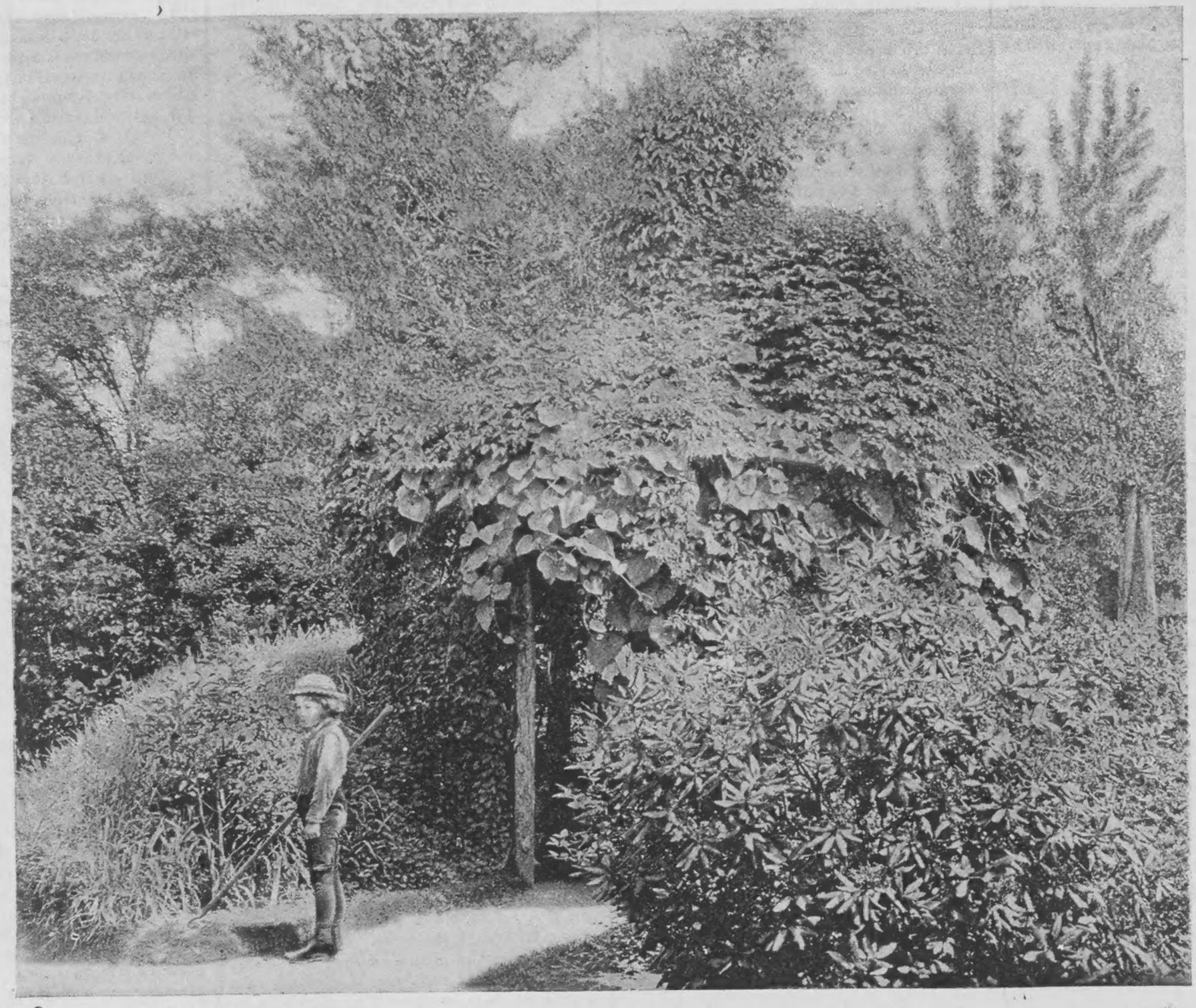
A paper was read setting forth the advantages of the thoroughbred sire and particularly of one from a long line of ancestors which have shown fine results in the milk pail or the churn.

Mr. Richards read a paper on cheese. He said set rules cannot always be depended upon in making cheese because conditions vary so much. The weather, the feed, the condition of the cow, the way the milk has been handled before arriving at the factory, all have an influence on the production so that a cheesemaker must understand his business thoroughly and must be a man of judgment or he cannot make good cheese every time. If the milk is right, is a pure and clean production, and has been properly aërated the cheesemaker can be properly held responsible. Aerate more and cool less. Throw away the skimmer and soon our cheese will have a reputation as good as that of Canada, and the home consumption will take all we make and at remunerative prices. Only 2½ per cent. of our dairy products are exported now. A good full-cream American cheese equals any made in Canada, and if we will banish the skimmer and insist upon a good cheese every time, our reputation abroad will come up to the best.

Dairy Commissioner Brown gave a good talk, during which he stated that there is but very little oleomargarine sold in New York State and none made there. The dairy products are to-day the purest articles of food offered in the markets of the State. The consequence is that the demand for fine dairy products is constantly increasing. There will be scarcely any limit to the demand for milk, butter and cheese, when all are perfectly fine products.

The little talk from Dairy Commissioner Brown was calculated to provoke considerable thought. Friends and neighbors wearing themselves out trying to pay interest, and stave off the foreclosure of the mortgage, and keep up respectable appearances, to send the children to school, and attend church and meet the reasonable requirements of such a course; and think of their working from four in the morning till nine at night and knowing all the time that they are waging an unequal warfare, is indeed sorrowful. It well represents the dark side of farm life. The importance of getting rid of the cow that gives 3,000 pounds of milk a year and replacing her with a 5,000-pound or 8,000-pound cow is self-evident. What a grand thing it would be if all dairymen would avail themselves of the information and the incentive for improvement which these annual meetings furnish.

Mr. Munson's paper on butter making was intended to be a little out of the old rut. The discussion which followed proved to be quite complete and brought out many questions. Want of knowledge is one important cause for so much poor butter. The young wife dislikes to tell her husband that she does not understand fully how to make good butter and so works on and makes a poor article. She ought to go to some good neighbor who has had experience, and who knows how good butter is made, and get her to tell how and show how it should be done. Deep setting is better than shallow. Thoroughly aërate the milk before setting in cans, by dipping from one vessel to another several times. Do not let the milk stand in the stable or in a room where it can absorb foul odors. Heat to 90 or 95 degrees before setting and cool down to 40 degrees. By so doing all the cream will rise in 12 hours. During a summer as cold as the past, milk will go down to 65 degrees before it would ordinarily be set. Use the thermometer and know what you are doing. If the milk is warmed much above 110 degrees considerable caseine is likely to come up with the cream, producing a butter containing cheese, an undesirable quality. Do not cool below 40 degrees in the creamer, for there is danger of injury to the butter. There are a thousand million fat globules in a cubic inch of milk. If the can of milk is set in very cold water the outside is soon cooled and there is a greater difference in the specific gravity between the milk and the fat globules. A slight current is created in the milk downwards near the outside, and a corresponding one upward toward the center, the upward current being milk and fat globules. This helps to get the cream to the surface. When the cream is taken from the milk it should be kept at as near the temperature of the milk from which it was taken as possible until enough is obtained to make a churning, then mix all together and warm to 62 to 70 degrees until fully ripened and slightly soured. It needs to come in contact with the oxygen of the air which helps to put it in proper condition. The best plan is to put the cream in large open pans, protected from the dust, etc., but exposed to the air. If set in pails, stir at least a dozen times a day. It will take about 20 hours to perfect the ripening process. Churn at a temperature, best determined by experiment, from 58 to 64 degrees in summer and 62 to 70 degrees in winter being about the range. Some creams must be churned at a higher temperature than others. There is such a thing as churning when the longer the churn is worked the further the cream is from butter. Under some circumstances the concussion may break the globules into finer ones. Some difference of opinion was expressed, but Prof. Roberts thought best to churn at as low a temperature as possible and get the butter in one hour. Others thought it better to get the butter in twenty to thirty minutes. The butter can be washed in the churn. Stop churning when the granules are about the size of grains of wheat. Draw off two-thirds of the butter-milk and add water at 55 degrees. There seems to be a little danger in cooling down too quickly to too low a temperature, keeping back a portion of the butter-milk in the butter, thus making an article of poor keeping qualities. It was not generally advised to salt in the churn, but to remove to the worker and salt there.



AN INEXPENSIVE SUMMER HOUSE. Fig. 2.

DAIRY SCHOOLS.

Col. Curtis presented his scheme for dairy schools. A lively discussion ensued, but all agreed that the plan was a good one. Col. Curtis gave a history of the efforts which have been made in this country to spread dairy knowledge, tracing the American Dairymen's Association from its birth until it disappeared and finally reappeared in the shape of the New York State Dairymen's Association. He also told something of what has been the effect of these meetings upon the people as an educator. Then followed an account of what has been done in the line of dairy education across the water. Not only Holland, Denmark, Norway and England are ahead of us in this line, but Prussia, Ireland, Italy and other European governments have established schools for the education of dairymen and maidens. Americans are far behind in this respect. Col. Curtis proposes that the State make an appropriation for the establishment of schools in some of the villages throughout the State, the scientific work to be under the supervision of a professor, who

shall teach the scientific side of the work, and the practical work to be under the supervision of a good practical farmer, who, working in harmony with the professor, shall teach the practical, the work of the farm to be performed by the students. H. H. L.

INEXPENSIVE SUMMER-HOUSES.

WE have talked in previous numbers of "nooky places;" of their importance in making grounds home-like, just the same as a room may be made cozy by nick-nacks, by pictures, by a clever arrangement of little interesting things that fill up without cluttering. It is easy to conceive of two rooms, one of which is furnished in the most costly manner without being cosy, the other of which is furnished in an inexpensive way and is still most restful and inviting.

It is just as easy to apply the simile to the grounds about our houses. There is nothing whatever about the Rural Grounds of a costly or pretentious character. Simplicity rules, and we have always thought that a great part of the praise which these two acres have received has been due to this one fact.

The vine-clad arbor and border surrounding it, shown in our photographic picture, Fig. 2, give us a forcible illustration of this principle. It was constructed about 15 years ago of Red cedar. It is octagonal in form, about 10 feet in diameter, with rustic seats around the inside and a rustic table in the middle. The entire cost for material and carpenter work was $12. Back of it is an old apple tree that serves chiefly as a support for vines. The Trumpet-creeper—most home-like of vines—and the Virginia Creeper, after climbing to the peak of the summer-house, have reached out and taken possession of it. The structure is a matted mass of these and also of the Dutchman's Pipe, desirable for its big leaves, rubbery stems, curious flowers and freedom from insects; honeysuckles, so fragrant in flower, so rich in their nearly evergreen foliage; clematis, which brightens all with its wealth of conspicuous flowers. Besides these, the Moon-seed (Menispermum Canadense) and the Celastrus scandens, so notable for its scarlet arils, help to make an entangled covering concealing all else from view. On the right of the picture is one of a dozen different varieties of rhododendron, growing in the crescent bed, selected for hardiness and for variety of color. On the left is a rock-work which, for the most part, has been taken possession of by the Ribbon grass (Phalaris arundinacea picta), so often seen in old gardens, and so valuable, too, as a part of semi-wild gardens or in half-kept, remote parts of grounds where plants are left to grow untrained—as if nature had placed them just there and was caring for them in her own unassisted way.

Everywhere.

RURAL SPECIAL REPORTS.

Nebraska.

WESTON, Saunders Co., December 11.—We have had one inch of snow to-day—the first this fall. Last summer was rather dry. We had just rain enough to make a good average crop of everything but wheat. We have not had a good rain since August 14. Hardly any fall plowing has been done, the ground being too dry. Corn is all gathered and farmers are busy marketing the crop at 20 cents per bushel. Feed of all kinds is plentiful, and stock of all kinds are doing well. Success to the RURAL! P. T. N.

New Hampshire.

KEENE, Cheshire Co., Dec. 10.—The hay crop in this part of New Hampshire was large, but on account of too much rain, much of it was of poor quality. Rowen was poor for the same reason. Rye and oats made a large growth, but were secured in poor condition. Potatoes, early varieties, a large yield, quality No. 1. Late varieties are in some places badly rotting. Corn, on account of the frosts on September 5 and 6, was very poor. Corn fodder is nearly worthless. Apples in some places are a full crop; in others half one. Pears, a very small crop. Plums, one-third of a crop; rotting badly. Grapes, an entire failure. There was too much rain this year; we have had more than 60 days of rain in the last 100.

Ohio.

GUYSVILLE, ATHENS Co., Dec. 15—Here in Southeastern Ohio the plow has become the land's greatest terror. With the exception of the river bottoms, its too frequent visits are unmistakably telling upon the once fertile soil, which is carried off in the loads and loads of golden grain and can not be replaced by a few sacks of "fosfate" sown broadcast. The incessant cropping, together with the reckless waste of manure, is fast impoverishing our soil; but it seems useless to raise a cry. Many will tell you it was only due to the season that their crops were not so good this year as last.

The great and unsurmountable difficulty here to-day is, to get and keep a good catch of grass. The writer, though young in years, can remember riding the mower in clean Timothy that stood as high as the horses' backs, but such growth cannot be made again upon the same land although it is in good hands. Why? Simply because the feeding qualities of the soil are to some extent exhausted.

The question here arises: Can this fertility ever be returned to the soil by the use of commercial fertilizers? I answer, yes, but it will force the owner to mortgage his farm.

Not only will he have to mortgage it, but the sheriff will foreclose the mortgage and some one else will have a rich farm.

A. B. S.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.

HOW OVER 100 BUSHELS OF SHELLED CORN WERE RAISED.

C. R. W., Westfield, N. J.—How did Mr. Henry Stewart raise over 100 bushels of shelled corn in New Jersey?

ANSWERED BY HENRY STEWART.

My first attempt to raise a large crop of corn was as follows:

A piece of old sod land containing four acres of light sandy loam sloping slightly to the south, quite free from stone, on my farm near Westwood, N. J. was plowed early in May, 1881; thoroughly well harrowed and 300 pounds per acre of the Mapes's special corn fertilizer were harrowed in. One half was planted with the Prolific Tennessee corn and the other half with a white corn from Long Island similar in all respects to the corn grown on the Rural Farm on Long Island. The corn was planted three feet apart each way. As soon as the corn was planted 300 pounds more of the corn fertilizer were sown broadcast per acre. The land was cultivated several times until it was showing the silk and the horse was hidden in the rows. This was all. Most of the stalks had two good ears; the Tennessee corn averaged three fair-sized ears and some stalks had three or four small ears in addition. The corn was husked by the bushel and was carefully measured by the husker in the field and by me as it was brought in. There were 398 bushels of ears of the Long Island corn and 412⅓ bushels of the Tennessee corn. The rows and cross-rows were finally counted, to be sure about the quantity of ground and measured 92 rows one way and 207 the other.

The next year the land that had grown the Tennessee corn was put in corn again, and with precisely the same treatment yielded 198 bushels of corn shelled, but there were not quite two acres in this piece; the rows were not the same as the previous year, being five less and were consequently a little further apart. The same year I had a piece of land in my garden (a very poor piece I thought), at my residence at Hackensack, N. J., 40 yards long by 20 wide, which had been in potatoes the year before; and was planted with the Prolific corn of seed from the previous crop on my farm. This ground was plowed with a Rue's hand-plow, by myself, and crossed; then raked smooth and marked out accurately in squares of three feet. Fifty pounds of the Mapes's fertilizer were raked in, and after planting, 20 pounds more were sown on the surface; 30 pounds more were used at intervals of two or three weeks, being sown through the rows before the cultivator (Planet hand hoe), was used. This land was cultivated every week, and as soon as the silks appeared the last 10 pounds of fertilizer were applied. This plot yielded 25 bushels 8 pounds of dry shelled corn, shelled in January; or nearly 151 bushels to the acre. My next crop—grown on the same land the next year—was Pride of the North corn. It was treated in precisely the same way; the summer was very dry and several smutty ears and stalks were destroyed as soon as they appeared: the yield was 14 bushels and a quart, equal to 84 bushels to the acre. One year since then I had 17 bushels on the same ground, equal to 102 per acre, the cultivation and fertilizing being the same. I grew corn consecutively on this piece of land, (a light clay loam rather damp and low) for seven years, when smut prevailed so much that I discontinued. The smallest yield during all this time was 80 bushels per acre. As my farm was devoted to dairying and soiling crops only were grown, I did not grow corn after 1882 there. In 1883 I had several acres of Evergreen sweet corn on the farm for market ears, and from one measured acre I picked over 11,000 ears, which is equal to more than 100 bushels per acre of ordinary corn. The same fertilizer and mode of cultivation were used, that is, the use of one half the fertilizer harrowed in before planting, a portion sown after planting, and the rest at intervals up to the time of silking; the crop was cultivated as nearly as possible once a week, it being the regular work for Mondays, weather permitting, until the silk appeared. I feel confident that the frequent cultivation and repeated fertilizing as the crop increases its demands for food are two most important requisites for large yields. I am still using (and always shall) this method of cultivating corn.

ASHES AS A FERTILIZER.

Subscriber (address lost)—1. I have a patch of Snyder blackberries which were set out four years ago on good corn ground, but which have never amounted to anything. They make a growth of two or three feet every summer, then die down, and never sprout. Would a dressing of wood ashes be likely to benefit them? I can get the ashes for a dollar a load, and manure for 50 cents; which would do the more good? Would the ashes be of any benefit to an old pasture, and when should they be applied? Will the Downing mulberry winter-kill here?

2. I have a patch of Black-cap raspberries that are set on loose black ground; they bore a very heavy crop this summer. As soon as the crop was taken off I cut the old canes out and put a large shovelful of wood ashes around each hill. What does the RURAL thinks of this plan?

ANS.—1. There is no better fertilizer than unleached wood ashes. The only trouble is that they have no nitrogen. Now if you will use the manure and the ashes, you will furnish all the land needs. We cannot account for the feebleness of your blackberries unless the soil is too impoverished. At such prices for manure and ashes, your farm should not suffer for food. Yes, ashes will help the pasture fields; but you should add nitrogen in some form. The best time to spread ashes is in the spring. Downing's mulberry will stand the climate of central and southern Ohio we should say.

FEED FOR SHEEP.

A. F. H., Dansville, N. Y.—I want to mix beans, middlings and oats in equal quantities to be fed to sheep; what amount should I feed per head, feeding twice a day? Could I make a better composition by increasing or lessening any of the above ingredients? Would corn be a better substitute for the beans?

ANS.—Sheep will not eat beans whole, and if mixed as above suggested the beans would be left unconsumed. At least the majority of sheep refuse beans when given whole. But if the beans are ground with the oats and the meal is mixed with the middlings, the whole will be readily eaten. As a rule, however, sheep will do better upon whole grain than on fine meal, which they are apt to bolt too greedily without mastication and so suffer from indigestion. At the present price of beans they cannot be fed with profit, but only at a large loss. A moderate allowance of oats or corn with good clover hay, makes the best feeding for sheep, and the cheapest at present prices. A sheep of 100 to 120 pounds live weight should have three pounds of hay and a pint of mixed corn and oats, or buckwheat added. Buckwheat, rye and oats are excellent grain food for sheep. When beans are discolored in harvesting and are thus damaged for sale, they may be usefully fed with corn to sheep or horses or pigs.

ABOUT PLANTING POTATOES.

A G. L., Sterling, Kans.—I have prepared a plot of about five acres for potatoes next spring as follows: I plowed it as deep as I could and subsoiled it six inches; not throwing the subsoil out. This stirs the soil 14 inches. Now what process would the RURAL recommend next spring before planting? I have two plans in my mind—one to plow the ground four inches deep and drop the potatoes in every third furrow; the other, to plow and subsoil again and pulverize the soil and then mark out and plant in furrows. Which is the better?

ANS. Our preference would be to plow a furrow both ways, leaving the equivalent of a trench a foot wide and six inches deep. We would drop pieces of not less than two or three strong eyes a foot apart, and fill the furrows by *harrowing*. Let the furrows be three feet apart from the middle of each. Before plowing the trenches we should again plow the land and harrow it, but omit a second subsoiling.

The R. N-Y. would be glad if in *one* trench he could use at the rate of 1,000 pounds to the acre of some high-grade potato fertilizer for comparison.

LAMENESS IN A HEIFER.

J. C. C. New Brunswick, N. J.—For four or five months a young heifer has been so lame in one of her fore legs or shoulder that she hasn't put down the affected member. The lameness came on gradually. There is no heat, soreness or swelling. She lies down most of the time. She is in good condition, and will drop a calf soon. What is the trouble; and how should she be treated?

ANS. Your description gives us no clue to the cause or location of the trouble; we cannot therefore advise as to treatment. Carefully re-examine the whole limb. Look especially to the foot to see that it is clean between the claws, and has not been pricked by a sharp-pointed body. Move each joint slowly backward and forward and endeavor to locate the seat of tenderness. If you cannot locate the trouble call a competent veterinarian to diagnose it and treat the cow for you.

COLD IN A HEN.

A. F. M., Martinsburg, Mo.—What ails my hen? She is laying and seems well except that every little while she shakes her head and says "pip." A year ago she and some of her chickens hatched from her own eggs were troubled in the same way; one of the chickens died. What can I do for the poor thing?

ANS.—The trouble is a cold which clogs the nostrils, the "pip" being simply a sneeze. It is due to a draft of air from some source, either from a crack in the wall of the poultry house or from a top ventilator. High winds will also cause it, or exposure to dampness. A drop or two of kerosene, injected into each nostril, will probably effect a cure if the hen is kept in a dry, warm place.

DUCKS.

C. W. E., (no address)—Do the Aylesbury ducks mature as early as the Pekin or Rouen, and which lays the largest number of eggs?

ANS.—With equally good care and feeding the Pekin duck will develop a greater weight at an early age than the Rouen or Aylesbury; but there is not much difference in the time of maturing between Aylesbury and Pekins, but, as the Pekin is the larger duck, it gets and keeps the earliest start in size. In regard to laying, the Pekin is the earliest and largest layer, but it must be remembered that feeding and care tell much more on ducks than on hens in the production of eggs, especially with the Pekin and Aylesbury.

THE RURAL'S CARROT CROP.

E. V. A., Bethlehem, N. Y.—What manure was used in raising the RURAL'S carrot crop, and how was it applied? When was the seed sown?

ANS.—Farm manure (20 tons to the acre) was spread in the spring and plowed under. It was harrowed well and then 400 pounds of Mapes's potato fertilizer were sown broadcast. The land was again harrowed and the seed drilled in very thick in drills three feet apart. The carrots were hilled up as they grew.

Miscellaneous.

W. S. Mc. W., Brooklyn, N. Y.—What variety of yellow corn will mature by September 10, if planted from May 25 to June 1?

ANS. Pride of the North will come the nearest to ripening in the time mentioned of any dent we know of. We should not fear to risk it It can be had of any seedsmen.

G. W. S., (no address).—A friend has recently brought me from England a few of the English Magnum Bonum potatoes for trial. Have they been tested in this country, and if so with what success?

ANS. Yes; the R. N.-Y. planted them when they were first introduced in England some 13

years ago. We have also raised many seedlings from this variety. All were worthless.

F. M. R., Fairview, Pa—1. What is the name of the inclosed wheat, which the RURAL sent out a few years ago in its Free Seed Distribution? 2. What is the name of a reliable dealer of farm produce in N. Y. city. also in Philadelphia, Pa.? 3. Can all the ladies who are members of a family where the RURAL is taken enter the Potato Contest?

ANS. 1. The wheat resembles "Surprise." 2. S. H. and E. H. Frost, 100 Park place or E. and O. Ward, 279 Washington street N. Y. Parcoast and Griffith, 122 Dock street. Philadelphia, Pa. 3. By all means.

W. C. A. (no address).—Can the common hickory tree be grafted with the Shell-bark hickory. If so, when should it be done, and in what way?

ANS. Yes, the hickory can be so grafted. The best method we know of is by the RURAL'S bud-graft method. The stem to be grafted is cut off horizontally. Then slits are made through the bark, as in budding, from the top down an inch or so. The cions cut on one side only are inserted and the whole covered with strong paper which extends an inch above the grafted stem. This basin so formed is filled with mud. It should be wet from time to time.

E. R. L., Clarion Co., Pa.—My mare has been lame in the left front foot for about three weeks. She does not limp at every step; she does so only when her toe or the right side of the foot strikes something. The day after she became lame I took her shoe off and wrapped her foot and pastern with rags which I kept wet with cold water for 24 hours. Then I set the foot in some wet cow manure for 12 hours. In a day or so I bathed the hoof with caustic balsam, making two applications 24 hours apart, and then two more, 30 hours apart, a week afterwards. The foot s worse if anything. I have not worked the animal since she became lame. She does not rest the foot in the stable but sometimes puts it a little in advance of the other. What can be done for her?

ANS.—You should have given a full description of the cause and nature of the injury or disease causing the lameness. We cannot tell what form you have been treating, and therefore cannot advise further treatment until we know the probable cause and nature of the trouble. Each of the various forms of lameness in the foot requires special treatment. If you will give a full description of the case we may be able to prescribe suitablo treatment.

DISCUSSION.

THE MAN FOR COMMISSIONER OF AGRICULTURE.

FRED GRUNDY.—I am glad to see the RURAL express itself in favor of a practical farmer for our next Commissioner of Agriculture. Its choice, Mr. J. S. Woodward, of New York, is a most excellent one. We do not need a personal introduction to him to be assured of his eminent fitness for the position. The great mass of reading farmers know very well that he is not a man who opens his mouth simply to put his foot into it. His utterances are invariably clear and practical, and prove him to be a man who is thoroughly informed on all matters pertaining to agriculture. Of course he is politically in accord with the President-elect, or the RURAL would not have presented his name. [That does not follow at all. We have mentioned a dozen names regardless of their politics.—EDS.] While the RURAL is not in any sense a party paper, I still think it would be remiss to its whole duty if it did not openly and emphatically advocate the appointment of a practical man to the one position which farmers as a class are especially interested in. That the office of Commissioner of Agriculture is connected with politics to a certain extent is a fact that there is no need to gloss over with varnish or cover with soft soap. There is nothing wrong in the Commissioner being a politician. He has a perfect right to belong to a party, and, when out of office, to vigorously work for the success of that party. The idea that the Commissioner of Agriculture should not have decided political opinions is simply silly. It is the idea of a lot of soothing sirup goody-goodies who are shocked at the shadow of a ballot, and of a class of low pettifoggers and paste diamond politicians who desire that he should be simply a good-natured old cove, with hayseed in his hair and corn in his pocket, who is handy to have about when the "rooral element" needs to be conciliated; a gentle, pudgy old chap, whose greatest delight it is to provide packages of turnip seed to be gratuitously distributed among "my influoential rooral constituents."

We need to smash that idea so everlastingly that it will never be heard of again. We need to demolish that free seed swindle so thoroughly that even its ghost will never reappear. We need a man that is not afraid to do it: a man who is honest enough, is politician enough and has grit enough to handle politicians without gloves, and to prove that a veritable farmer is neither simple-minded pig-headed nor inconsistent; who is not afraid to say that a swindle is a *swindle*, if it is sanctioned by Congressmen.

I think Mr. Woodward is the man who is capable of doing these things, and he is the man we should have. But he never will be appointed unless the class whose interests he will represent emphatically demand it. Ancient political hacks and theoretical husbandmen are serenely bobbing up in all parts of the country and almost moving mountains to secure the appointment. It behooves farmers to bestir them selves if they desire to be represented by a whole practical man.

FARMING DOESN'T PAY.

A. W., LITCHFIELD, CONN.—Under caption of the "Post Office Club" "Small Pica" gives a colloquy between the parrot which says "farmin' don't pay," and the "schoolmaster" who gives "facts" and "figures" purporting to show that farming does pay. The "schoolmaster" gives the value of the farms, farm machinery and live stock, together with the cost of fertilizers, the value of crops, of horses, mules, etc., including pretty much everything farmers have about them (or owe for) and then says "Farmin' don't pay, eh? What do you think of all this wealth then?" Now I would much prefer to figure as the "parrot," for I believe he shows more sense by far or more honesty than the schoolmaster. He at least sticks to an obvious fact. But how about the "school-master?" Think of enumerating the cost of fertilizers with the wealth of the farmer! Why not put in his *taxes* and interest money too? As to the value of farms, farm machinery, etc., if there's a "school master *abroad*" so lacking in honesty or sense as to claim these are a true criterion of the prosperity of the farmers, he ought to be trounced immediately and sent off to his own, the *politicians* who are seeking by such sophisms to silence the farmers. The truth is that such valuations show more truly what the *banks* and other money-lenders are worth, and what the *farmers* owe for and pay interest and taxes on. As to the value of farm products, if he will take their total value by his "census of 1880," subtract interest on capital invested and divide the remainder by the numbers engaged in agriculture, I think he will find that the farmers get, on an average, about $190 per annum with which to support and educate their families, and to buy the luxuries, the makers of which they are supporting in the "market." Though I propose to "stick to it," and fight monopolies and other iniquities, nevertheless,—"farming doesn't pay.

SALT FOR POTATO SCAB.

W. C. T., Harmony, R. I.—On page 816 of the RURAL, D. B. H., Delevan, Wisconsin, claims that one tablespoonful of salt dissolved in two gallons of water and sprayed on the ground, is a preventive of scab in potatoes and he asks me to try it. I am willing to try the remedy if D. B. H. will tell how many hills the two gallons should be applied to. He also found the same amount applied with Paris-green answered the same. Now I use a very fine sprinkler to put on Paris-green, and two gallons of water will cover from 250 to 300 hills. I do not think one-eighth part of it would touch the ground; applying one-eighth of a tablespoonful of salt to 300 hills of potatoes is very fine work.

R. N.-Y. We cannot see how the salt can have any effect in preventing scab, if applied in this way. If fertilizers are used—kainit, for instance—a comparatively large quantity of salt is applied to the soil.

SCAB IN POTATOES.

D. L. B., NUNDA, N. Y.—The RURAL asks some one's experience in using salt as a preventive of scab in potatoes. I have used salt for that purpose at the rate of 15 bushels to the acre, so that no weeds grew where it was used. It was applied two weeks or more before planting. Nevertheless I had scabby potatoes as usual. I do not think wire-worms cause scab on my potatoes. In fact, I know they do not. A close inspection will show small white spots all over the potatoes. These turn brown and increase in size and depth as the tubers mature. I have tried sulphur, lime, plaster, different fertilizers, both special and general, without any perceptible effect. They have been so badly affected some years that I did not pick up half of them; and the longer they are left in the ground the worse they are. I would like to hear the experience of others in the matter.

COTTON-SEED MEAL FOR MILCH COWS.

E. B. D., SHOREHAM, VT.—After a number of years' experience in feeding cotton-seed meal to milch cows I continue to use it. The cows have been very healthy. There has been only one case of abortion in more than 15 years in a herd of 35, and only one case of milk fever. The product has been very good. The production of butter ran as high as 325 pounds per cow in 1885, and 310 pounds in 1886, without grain in summer. I would not feed over two quarts of cotton seed meal per day with corn or corn and oat-meal—four quarts per day, fed at two feeds, with plenty of good hay and water twice per day.

BROWN SWISS COWS AS BUTTER MAKERS.

R. H. A., CHATHAM, N. J.—Is not the RURAL a little "rough" on the Brown Swiss cattle's butter capacity? On page 833 it says it takes 25 to 30 quarts of their milk to make a pound of butter. Mine will yield a pound to 12 quarts and I am milking about 20 thoroughbred registered cows and heifers. The RURAL cannot speak too highly of the Brown Swiss as the farmer's cow.

[R. N-Y. Our correspondent refers to a quotation made from the Farm Journal. Doubtless pounds should have been used instead of quarts.]

J. R. B., WELLSVILLE. KANS.—V. M. H Milford, Del., wishes to know how the ailanthus tree does in the West. In this part of Kansas it is a failure. It grows well while young, but when a few years old it loses all its vigor. The Early Harvest blackberry is as hardy here as the Snyder; it stands the climate as well. It ripened this year June 18.

The Luceretia Dewberry is a success here. RURAL readers should know that a hot-bed is the cheapest, safest and best brooder they can have. I never saw or heard of one being used until last spring. I made one myself. Our chicks were chilling to death. I set a large box on a pile of heating manure, banked it up and put some old sash on for a cover, and I never saw chicks grow faster or do better, At one end there can be a door and a run attached.

B. C. HAVERHILL, N. H.—I find feeding little potatoes to milk cows a benefit. I give about four quarts daily to each cow while on dry fodder. If too many are fed they will affect the milk so that it will be quite difficult to get butter from the cream.

What Others Say.

AN ENGLISHMAN'S NOTES ON AMERICAN LIVE STOCK.—Mr. MacDonald, a well-known live-stock authority and one of the editors of the Mark Lane Express, is now visiting this country. In a letter to the Express he says that the shortage of grazing steers on Western ranches, results mainly from two contrary causes. On the one hand, the spaying knife has been too freely employed; on the other, unusally large numbers of half-famished cattle—store cattle of all classes—have been consigned to the butcher during the past autumn. The spaying of heifers, like dehorning, has become a mania with Western stockmen. It is a sure and effectual source of infertility, but it is to say the least, a cruel, and superfluous practice. The operation is at once painful and revolting, and the results are only partially successful. while, unless a shrewd business eye is kept upon the condition and tendencies of the trade of the entire country it is very liable to be seriously overdone.

Mr. MacDonald desired to visit the wonderful ranching region of Texas. He saw a large number of cattle from some of the biggest ranches, which he characterizes as rough, ugly brutes. Many of them showed a slight departure from the original scrub, but at best they were very much inferior to what he saw even in Kansas, where Texan cows are extensively used for crossing with pedigree bulls. Yet he was told Texan beef is superior to that of improved and highly-fed bullocks, for the simple reason that it is raised under more natural conditions. Texan steers are wholly grass-fed, and although they do not attain to a high degree of maturity at any age, their beef is tolerably sweet. "But," said one of his informants, "we see little of it, and taste less; it is all shipped to Europe."

It is a national misfortune, continues Mr. MacDonald, for America that so little of the land is suited for the cultivation of roots.

No turnips, and only a few mangels are grown; and though there is a belief in some parts of England that these are not worth the trouble and expense of raising them, they form a very important ingredient in the cattle dietary. If American stockmen used more roots and less corn they would make fewer visits to England for breeding stock. Yet he has no wish to discourage their visits. It would be prejudicial to both countries to do so. If there is one point at which British and American interests become identical, it is in the matter of fine stock-breeding.

He believes that horse-breeding is likely to take a prominent place among the paying industries of the future. He might have said also the paying industries of the present, for it is at this moment the only branch of agriculture he thinks, that is yielding any substantial profit. In spite of bad times, everybody who has handled horses has had tolerably substantial remuneration for his labor There has always been a good demand for imported horses, and it would seem as if increasing. Phenomenal prices are seldom heard of, but for well-bred animals good round sums are given which enable importers to pursue their business with profit.

Notwithstanding the many hundreds of Shire and Clydesdale horses, and latterly Clevelands and Hackneys, annually landed, it is within the mark to say that quite three-fourths of the horses in America are of the Percheron breed or descended therefrom. The French horse Mr. MacDonald does not much admire, being very short in the quarters and rather bent in his hind legs. Yet the Percherons are useful stock. They are about the right size and weight for American tastes, though the heavier types of horses, such as the Shire and the Clyde, are being more and more looked after for horse-ranching purposes. The favorite type seems to be the thick, blocky horse—as square as a brick—with strong, short legs and good feet. For agricultural purposes, no horse weighing over 1,600 pounds is used to any great extent, the popular weight being from 1,300 pounds up to 1,600 pounds.

AVERAGE YIELD OF CORN PER ACRE.—The corn crop this year is the heaviest ever grown in this or any other country, amounting probably to 2,000,000,000 or at the rate of 32 bushels per acre. The yield in the Southern States averages 11 bushels in North Carolina, against nine bushels in South Carolina, 10 in Florida, 13 bushels in Alabama, 19 5-10 bushels in Texas, 17 bushels in Virginia, 11 bushels in Georgia, 19 bushels in Delaware, 25 bushels in Maryland, 19 7-10 bushels in Arkansas, 21 2-10 bushels in Tennessee and 26 7-10 bushels in Kentucky. Iowa is the banner corn State, in 1888 her average yield per acre being 37 bushels, against 27 7-10 bushels in Minnesota, 35 2-10 bushels in Ohio, 31 bushels in Michigan, 35 bushels in Illinois, 31 bushels in Wisconsin, 35 bushels in Indiana, 31 bushels in Missouri, 27 bushels in Kansas, 36 bushels in Nebraska, 28 bushels in California and 25 bushels in Oregon. The average yield in the New England States is 18 5-10 to 31 8-10 bushels, against 31 bushels in New York, 32 1-2 bushels in New Jersey and 32 6-10 bushels in Pennsylvania. Surely there need not be much improvement in agricultural practice to increase the average yield in some of the above States. Remember, too, these being average yields, the production on about half the farms in each State must be considerably below the figures given. Can such crops pay?

AVERAGE YIELD OF WHEAT PER ACRE.—In looking back over the year's work, it certainly seems that there ought to be little difficulty in increasing the yield of wheat, say by one bushel per acre. While in the United Kingdom the average yield for a series of years has been 28 bushels per acre, the average in the United States has been less than 14 bushels, or less than half the "Old Country" production. In view of the fact that the land there has been cropped for centuries, while much of our land is virgin soil or nearly so, such a great disproportion should not exist. This year the yield of wheat here has been unusually low, averaging only 11 4-10 bushels. The new States and the Territories make the best show; while the Southern States make the poorest.

Washington Territory yields 18 5-10 bushels, against 16 3-10 bushels in Oregon and 5 bushels in the two Carolinas. The average yield in New York is 14 1-10 bushels, against 14 6-10 to 16 8-10 bushels in the New England States, 13 bushels in New Jersey, 13 7-10 bushels in Pennsylvania, 12 6-10 bushels in Delaware, 14 5-10 bushels in Maryland, 8 7-10 bushels in Virginia, 9 5-10 bushels in West Virginia. The average in Georgia is 5 1-10 bushels, against 5 8-10 bushels in Alabama, 7 8-10 bushels in Mississippi, 11 2-10 bushels in Texas, 9 7-10 bushels in Tennessee and 9 7-10 in Arkansas. The winter-wheat crop in 1888 was far less than the yield of most of the previous years, being 11 2-10 bushels in Kentucky and Ohio, against 14 5-10 bushels in Michigan, 11 3 10 bushels in Indiana, 13 bushels in Illinois, 12 6-10 bushels in Missouri, 14 7-10 bushels in Kansas and 12 7-10 bushels in California. The spring-wheat States in 1888 had unpropitious weather, and the average out-put per acre is much smaller than usual,

being 11 8-10 bushels average in Wisconsin, against 8 7-10 bushels in Minnesota, 10 3-10 bushels in Iowa, 10 8-10 bushels in Nebraska, 16 bushels in Nevada and 9 2-10 bushels in Dakota.

PATENTS BY WOMEN. There are interesting spots in Patent Office reports even. One is the recently published information about women to whom patents have been issued. During the first 70 years of the Government but 55 patents were allowed to women; but in 1887 alone, 188 were issued, and the total is over 2,000. The first patent ever given to a woman was in 1800, when Mary Kies took out one for straw weaving with silk or thread. The second patent was issued to Mary Brush in 1815 for a corset. Probably the oldest woman inventor alive is Mrs. Nancy M. Johnson, who in 1843 patented an ice cream freezer and made considerable money thereby. Contrary to remarks frequently seen in print, most of the patents issued to women have been in some way connected with their dress and household labor-saving devices. Few of the women who have invented were from the New England States, and the most of the few were from Massachusetts

RURAL LIFE NOTES.

IF you have some choice retinisporas, arbor-vitæs, yews, junipers or other dense-growing evergreens, says Mr. Falconer in the American Florist, don't let the snow destroy them by weighting down the branches and spreading them apart. Just take a piece of marlin or stout string and run it in among the branches to tie them together and prevent their being spread apart by the snow.....

AT a recent Wisconsin institute, Prof. Short described the proper methods of handling milk and cream in order to make the best quality of butter. Cream not sufficiently ripened does not produce a good-keeping or good-flavored butter, cream too much ripened yields a bad-flavored butter. He cautioned the farmers not to put sweet cream in with ripened cream just before churning. No cream should be churned until it has been ripened at least twelve hours. The chief reason for butter not keeping well is the caseine which is permitted to remain in it and which should be thoroughly washed out before removing the butter from the churn.....

SUBMERGED setting of milk is preferable to any other system, as, if the milk is submerged promptly, and the water kept cold, as soon as drawn from the cow, it produces more cream than by any other process, and prevents contamination by any impurities in the atmosphere. Experiments at the station have proved that milk left out of the water ten minutes after being drawn from the cow lost seven per cent of cream, and that left out half an hour lost 30 per cent over that submerged as quickly as possible after being drawn. Not more than 60 per cent of the butter contained in it can be got out of sweet cream by any churning process. Sweet cream may be added to that undergoing the ripening process, but it should be well stirred up every morning; any cream ripening, unless a ripener is used, should be frequently stirred to keep the temperature alike through the entire quantity.....

THERE is no set method of telling when cream is properly ripened; the buttermaker must determine by experience the same as a good baker knows when bread is raised sufficiently to bake. The probable cause for having to churn for an unusual period before butter comes is the existence of albumen in the cream: to effect a remedy add a few quarts of water to the cream at the same temperature as the cream; let it stand a few minutes; churn again, drawing off the water from the bottom; if not successful repeat the process of watering, thus washing out the albumen. Salt in the water is advantageous, but not enough salt should be used to destroy the value of the buttermilk; put milk cans in ice water at any season to raise the cream, but do not let cream freeze.....

NEARLY $900 are thus far contributed in souvenirs to the Rural's Women's National Potato Contest. Let the good work go on....

THE Audalusian breed of fowls in the R. N.-Y.'s humble estimation, as judged from its present trial of the breed, is a delusion and a snare .....

A WRITER in the London Garden pronounces A. K. Williams and Marie Baumann the two best red hybrid perpetuals.....

AMONG new roses the Garden mentions Duchess of Leeds, a seedling from La France, as possessing its parent's charactaristic habit of growth and type of flower. The flower is smaller but deeper in color and it is likely to make a pretty garden rose.....

HYPERICUM KALMIANUM (St. John's-wort) is a hardy shrub scarcely appreciated here in its native country. It bears a profusion of yellow flowers in August, and succeeds well in the shade.....

READERS may secure a free copy of the R. N.-Y., by sending us five yearly subscribers and $9.....

MAKE a note to try the Emerald Gem muskmelon next season—for family use. Try the new Japan buckwheat. Plant a Paragon chestnut. Make your plans *now* for the growing season of 1889. Visit your enterprising neighbors and ask them questions. Attend the institutes. Take your note-book along and use it. Ask the R. N.-Y. any question you can not yourself answer. The R. N.-Y. or some of its contributors will try to assist you.....

A BLUE rose is advertised in England. Mr. Peter Henderson writes to the London Garden to ascertain upon what plea so bold a claim is made.....

A THREE OR FOUR-INCH tire is looked at by many rural travelers with something akin to amazement, remarks the Times. And yet such a tire not only does not damage a road, whether it be hard or soft, but it actually improves it, rolling it and making it hard, smooth and firm. And, moreover, the load is drawn with greater ease. In field work the advantage is equally great. The wheels do not sink through an ordinary sod and very little in a stubble, while two horses will draw 3,000 pounds of manure upon freshly-plowed land with four-inch tires to the whole when they would be stalled with 1,500 pounds upon 1½-inch wheels.....

TRUE it is, says the Breeder's Gazette, that the condition of the wool-grower is more complicated than that of his beef-raising neighbor. Wool is especially exposed to foreign competition, and for that reason needs and receives Government defence. In addition there is a menace against which no defence has thus been secured—in fact rarely asked for, if desired. This is the presence and steadily increased use of materials other than wool in the clothing of our people. Improvements in machinery, in the designing of fabrics, combined with universal demand for *cheap* products, have brought into common use a multiplicity of materials to displace fleece wool from its once almost exclusive employment in the manufacture of cloths, carpets, and other household fabrics. Cast-off garments now return to purchasers who demand cheap goods, for new service, and what sound, fresh wool that was not required to "carry" the adulterant, remains unsold until its owner accepts a price deemed all too low for its profitable production.....

THE English Society for the Prevention of Cruelty to Animals has lately prosecuted two farmers living in different parts of the country, for dehorning their cattle. The lower courts dismissed both cases and an appeal in one of them was made to the High Court, which also dismissed the case, allowing the defendant $26 costs. Three years ago—in 1885—the Common Pleas Division of the High Court in Ireland decided that dehorning was not an offense under the law in that country. As our readers will remember, a similar decision was rendered in Illinois some time back. The dehorners therefore need fear no interference from the courts.....

THE Commission appointed by the French Senate to study the consumption of alcohol in France says in its report that the recent diseases of the vine, such as phylloxera, have produced a complete revolution in the drinking customs of the French, spirits having taken the place of wine. Consequently there has been a great increase of insanity, suicide, and criminality. In Normandy and other northern divisions there is a public house for every sixty-two inhabitants.....

WE have applied a mulch of New York stable manure to our crossbred and hybrid wheats at the rate of 20 tons to the acre .....

THE R. N.-Y., has raised Bermuda grass both from seeds and cuttings, two years in succession. The grass is partially hardy with protection .....

BONE flour and unleached ashes make an excellent fertilizer for any plant whatever. It is as a complete fertilizer slightly deficient in nitrogen. Add 200 pounds of nitrate of soda to every 1,000 pounds of bone.....

WE have 65 hybrids between Rosa rugosa (mother) and many other roses. Don't you suppose that one or more of these will prove to be worthy of introduction?.....

PICKING the potato beetle by hand—the earliest brood—does not pay. We are positive as to that it we may judge by persistent, laborious experience.....

SCATTERING poisoned sliced potatoes over the potato ground before the sprouts appear, as many farm papers advocate, does not pay at all. The beetles prefer to rest in the soil until the sprouts do appear above it. Weather that is too cold for potato sprouts, is too cold for potato beetles.....

TRY just one plant of Prickly Comfrey. Then you can judge, without much cost, how you and your animals like it. The RURAL has grown this much-discussed plant for 12 years.....

DON'T plant more than one of the Lucretia Dewberry. One will answer to satisfy you...

MAKE your experiments with commercial fertilizers on a poor soil.....

THE trouble with Red-cap fowls is that their caps are too large.....

PLANT some Irises—Kœmpferi or Lævigata. They are hardy and beautiful and will thrive anywhere.....

TOUCH novelties gently, but touch them....

REMEMBER that our best grains, roots, fruits, flowers and vegetables were novelties once.....

SHOULD the fertilizer be spread under or over the seed pieces of potatoes? That is a problem that the R. N.-Y. has been working on for three years.....

WORD FOR WORD.

CHRISTIAN UNION: "What is wanted is, not a labor system which will make the prison self-supporting—a matter of no pecuniary moment whatever—but a labor system which shall fit the convict to be self-supporting when he comes out of prison; a system, therefore, which shall be educative and not commercial—the end of which shall be the making of men, not the making of money. Such a system would not offer any such competition with workingmen outside of prison walls as would interfere with or tend to lower their wages."

——THE IDEA: "The peach crop for 1889 has failed."

——LONDON LIVE STOCK JOURNAL: "There can be no safety for British agriculture if, for the sake of the speculative minority who want cheap stores, we should again allow, even well-bred, well-fed, Transatlantic cattle to be distributed free over the country, carrying disease and disaster in their train. This trade will again, as it has done before, carry disease and disaster in its train."

——SWINE BREEDERS' JOURNAL: "The innocent purchaser of pork at the city meat market does not know if he is eating meat from a healthy porker or from one that is within a few hours of death's door with hog cholera. So extensive is this nefarious practice that many farmers will not under any consideration buy or use city-cured meats and lard."

——WEEKLY PRESS:—"A humane way of despatching an animal is to send a good-sized bullet into the center of the brain, paralyzing feeling at once. A handful of feed placed on the ground or floor before the animal is an aid in keeping it quiet so as to present a good mark. If the shot is properly placed the animal will drop as if struck by lightning and die in a few seconds without a struggle.

——"THERE are some honest commission men, but it costs money to find them."....

Miscellaneous Advertising.

Rheumatism

We doubt if there is, or can be, a specific remedy for rheumatism; but thousands who have suffered its pains have been greatly benefited by Hood's Sarsaparilla. If you have failed to find relief, try this great remedy. It corrects the acidity of the blood which is the cause of the disease, and builds up the whole system.

"I was afflicted with rheumatism twenty years. Previous to 1883 I found no relief, but grew worse, until I was almost helpless. Hood's Sarsaparilla did me more good than all the other medicine I ever had." H. T. BALCOM, Shirley Village, Mass.

Hood's Sarsaparilla

Sold by all druggists. $1; six for $5. Made only by C. I. HOOD & CO., Lowell, Mass.

100 Doses One Dollar

MAKE HENS LAY

SHERIDAN'S CONDITION POWDER is absolutely pure and highly concentrated. It is strictly a medicine to be given with food. Nothing on earth will make hens lay like it. It cures chicken cholera and all diseases of hens. Illustrated book by mail free. Sold everywhere, or sent by mail for 25 cts. in stamps. 2½-lb. tin cans, $1; by mail, $1.20. Six cans by express, prepaid, for $5. L. S. Johnson & Co., P. O. Box 2118, Boston, Mass.

A NEW GATEWAY

BY the completion of a new bridge across the Missouri River at Rulo, Nebraska, the Burlington Route has established, for the entire distance over its own track, a new, direct, through line from St. Louis to Kansas City, St. Joseph, Atchison and Denver. Over this line is run "The Burlington's Denver Express"—a solid train with through sleeping cars and coaches from St. Louis to St. Joseph and Denver, and a through sleeping car from St. Louis to Kansas City. The connections made by this train at the Missouri River, at Denver and at junction points en route are such that one can directly reach by it all points in Nebraska, Colorado and all sections of the West and Southwest, as well as all Pacific coast points. This is in addition to "The Burlington's Number One" well-known solid vestibule train between Chicago and Denver and Cheyenne, with which direct connection is made by C. B. & Q. R. R. train from Peoria, and by which one can make the run between Chicago and Denver without being more than one night on the road. For tickets via the Burlington Route and for special excursion folder, call on any ticket agent of connecting lines, or address P. S. Eustis, Gen'l Pass. and Ticket Agent, C. B. & Q. R. R., Chicago, Ill.

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NEW YORK STATE AGRICULTURAL SOCIETY.

ANNUAL MEETING.

The Annual Meeting of the New York State Agricultural Society will be held at the Society's rooms, Albany, on WEDNESDAY, the 16th day of January, 1889, at noon.

W. JUDSON SMITH,
Secretary Pro-tem.

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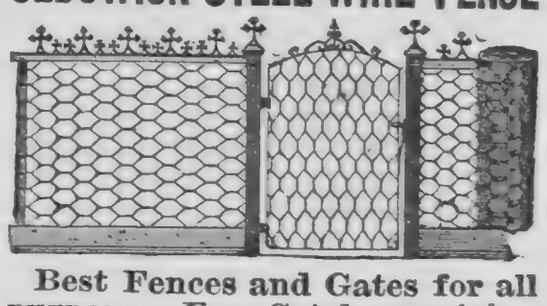

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AGENTS LOOK HERE

and farmers with no experience make $2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made $18 one day, $76.50 one week. So can you. Proofs and catalogue free.
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THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, JANUARY 5, 1888.

NOTICE.

THOSE desiring to have seeds of any kind or plants of any kind tested by the RURAL NEW-YORKER will kindly send such seeds or plants to the Editor at River Edge, Bergen Co., New Jersey, and not to this office.

"*There are* 1,540,000 *cows in N. Y., and if the destroying angel would pass over the land and with proper discrimination blot out one-half of these, their destruction would be a great blessing to the farmers.*" So says DR. COLLIER on page 4.

HAVE the courage, even if only on one acre or, we may add, one-tenth of an acre, to try if more money cannot be made by making it richer than it is.

"*Farming is and must always be a close business; yet everywhere we find men who make a good living and lay up money at it. No business is good for all that are in it. Thought, prudence, patience, hard work—these are the qualities required to make farming pay, or any other business that is honest.*"—BUCEPHALUS BROWN, page 9.

THE RURAL NEW-YORKER is *invariably* discontinued at the expiration of the subscription term. Any of our readers, therefore, who do not intend to renew need not trouble themselves to inform us of the fact.

"*We need to demolish that free seed swindle so thoroughly that even its ghost will never appear. We need a man that is not afraid to do it: a man who is honest enough, is politician enough and has grit enough to handle politicians without gloves, and to prove that a veritable farmer is neither simple-minded, pig-headed nor inconsistent; who is not afraid to say that a swindle is a swindle, if it is sanctioned by Congressmen.*"—FRED. GRUNDY, page 3.

"PLEASE NOTE," says C. V. Mapes, "the unusual array of prizes offered in the country this season for the best results with potatoes. The one who obtains the largest yield of potatoes will receive almost enough to buy a small farm. This unprecedented interest in potato culture is largely due to the efforts of the RURAL NEW-YORKER." Thank you, Mr. Mapes, we think so too.

WE have been told of late of the labor to be saved by the use of various intricate machines. There is a lesson that should be enforced with this story. Take potato diggers, for example. The point to be remembered is that in order to make one of these implements work satisfactorily the land must be loose and fine and free from weeds and stones. These intricate machines require the best conditions for their perfect work. A potato digger such as Mr. Terry finds profitable, put into the ordinary potato field, would only cause vexation.

"*The farmer with small means and old-fashioned tools and unimproved stock already on his hands, finds it hard and slow work to make the changes he desires. But it is a pretty slack farmer in these parts that is not trying in one way or another to improve. Just let people give us credit for what we have done and we will gladly receive all the instruction they have for us.*"—EMMA L. BLISS, page 3.

HIGHLY favored are those country homes which during the wintry season, have evergreen trees so situated that whichever way one looks, the cheery green greets him. The contrast between country-home grounds planted with deciduous trees only, and those with a well-selected variety of evergreens, is very striking at this season of the year. The one is cheerless and we are tempted to shut ourselves up in the house, even in mild weather, because there is nothing to invite us out-of-doors. But hardy evergreens are always interesting and companionable.

THE RURAL has the kindest possible feeling towards the experiment stations. It is prepared to treat them fairly and to remember the fact that most of them will have to learn how to conduct themselves before they can be of much service to farmers. We have been glad to give space to farmers who have told what they want the stations to do and what plans they have to suggest. Fair and generous criticism is always valuable. It is the same with our farmers' institutes. One would think from most of the reports that these meetings are about perfect. We shall see about this. We have arranged with some practical farmers to tell us wherein they think these meetings could be improved so that they might reach a larger part of the farming community. Any of our readers who have anything to offer in this connection will be welcomed to the discussion.

WE have planted on our wheat plots at the rate of but 43,560 kernels to the acre; that is, one grain to every square foot. Now, a careful estimate shows that there are about 619,520 grains of wheat of average size, in a bushel, which would give only a little over two quarts of seed grain to the acre, instead of 48 quarts or more, as usually sown. Is the land (the R. N.-Y.'s wheat plot) well covered with wheat plants? Yes, fully as well covered as are the rye fields with rye plants. Very little wheat is raised about us. Rye is more profitable.

It is true that the RURAL wheats were planted in early September, while it is not the custom of the farmers to sow rye before late September or early October.

From the R. N.-Y.'s experience through many years, it is believed that *under certain conditions* a larger crop of wheat and a heavier kernel can be secured from two quarts of seed than from one to two bushels of seed. Can these conditions be economically secured? Probably not.

HERE is a letter from one of our lady readers in this State.

"It seems to me that the RURAL's cartoon of Dec. 4. is a one-sided affair. Why should that patient-faced woman who has toiled early and late by his side, who has endured all things, borne all things for his and sweet love's sake, be placed three steps below her 'lord and master', on a level with his sheep, his oxen and his swine. It looks to me as if such a man's thought could be voiced, instead of the sweet words of Old Hundred, we would hear something like this.

"Praise me, Oh woman where you stand,
I own all these, and this broad land
Is mine. Can't you the difference see,
While I own you, you don't own me."

I suppose the wife and mother might retort, 'I can have the use of my third, in case, etc., etc.' But she never will, for her standing there shows that plainly.

Yours for equal rights, a footing on the same plank, and the Potato Contest."

Now, here is a chance for the men to state their side of the case.

THE late Thomas G. Clemson was the son-in-law of the celebrated South Carolina statesman John C. Calhoun, from whom he inherited Fort Hill, the Calhoun homestead, which at his death, last summer, he left to the State for an agricultural college, together with personal property to the amount of $100,000. The testator was thought to be very poor and the heir to the estate was Miss Isabelle Lee, daughter of a New York stock-broker and great-granddaughter of J. C. Calhoun. Her father at once contested the will, and on December 18, Judge Simonson, of the United States District Court, granted an injunction temporarily restraining the executor of the estate from conveying the property to the State of South Carolina. The acceptance of the bequest became an issue in the last campaign and caused much bitter political recrimination. A large element in the State regarded accepting the bequest as robbing Miss Lee of her birth-right. The farmers of the State. however, have, almost unanimously, favored its acceptance. After many sharp debates it was accepted by the House about a month ago; but it was thought the Senate would reject it. Contrary to expectation, the Senate has just accepted the bequest just before adjournment, and now it is hoped by the opponents of the measure that the Governor will veto it. That it received the support of the farmers of the State will be to other farmers a pretty strong proof that it was a just gift: but the farmers of the State would pay dearly for it at the price of an injustice to any one.

LAST week the New England Tobacco Growers' Association, at its convention at Hartford, Connecticut, adopted a resolution asking Congress to impose a tax of 30 cents per pound on imports of stemmed leaf tobacco and of 20 cents on unstemmed. The tariff bill now before the Senate makes the tax on imported stemmed leaf 20 cents and on unstemmed 25 cents. The representatives of the growers vainly tried, the other day, to induce the Senate to raise the duty on stemmed leaf, and a Democrat offered an amendment putting it at 40 cents; but the Republicans refused to make any alteration in the bill. The growers' resolution that tobacco stems, which are used chiefly for fertilizing purposes, should be admitted free, also failed to meet with a favorable consideration. The fact is that tobacco growers are only a small percentage of the agriculturists of the country, and while a considerable proportion of these are opposed to tobacco culture on moral or sanitary grounds, the great body of them fail to express any interest in an industry which does not directly affect their own welfare. Hence the tobacco growers' legislative resolutions have not, as a rule, the powerful support of the great body of the agriculturists of the nation.

The Canadian Government has canceled 27 grazing leases, covering 700,000 acres in the Northwest, because the land was held by speculators who failed to stock their holdings according to regulations. This decisive action is warmly commended by the Canadian press and it is expected greatly to stimulate the ranching industry in that vast but undeveloped section, by forcing lease-holders to stock their holdings at once. American ranchmen, pressed for room in Dakota, Wyoming and Montana, are clamoring for admission to the Canadian ranching country along the frontier on the same terms as Canadians. At present a duty of 20 per cent. is imposed on American cattle imported into the Canadian Northwest, or, indeed, into any part of the Dominion. A quarantine of 90 days on cattle from this country is also considered a great grievance, as no contagious disease exists among cattle in the Territories from which importations are made, and rigorous laws in each provide against the introduction of diseased stock from other parts of the country. There appears to be little likelihood, however, that Canadians will make any concessions in this direction in the near future, although by relaxing the quarantine and remitting the import duty, it is very likely the vast unoccupied grazing areas in the Canadian Northwest would soon be rendered profitable by multitudinous herds of American live stock. The existence of these would be a great benefit not only to the Government, which would derive large sums from the rentals of the land, but also to transportation companies and commission firms, which would ultimately handle the stock on its way to market.

SELLING VEGETABLES BY WEIGHT.

ATTENTION was called, last week, to the fact that the N. Y. City Board of Aldermen have adopted an ordinance providing that vegetables and fruits must hereafter be sold by weight in this market. Last Saturday Mayor Hewitt gave a hearing to those who regard the ordinance as oppressive. A number of representative farmers and commission men took advantage of this opportunity to state their side of the case.

It was stated that the prime object of the law is to protect retail grocerymen who claim that they are being swindled by farmers in consequence of the lack of a uniform standard of weights and measures.

When shall vegetables be weighed? asked the committee of Mayor Hewitt. Nearly all sorts of vegetables and fruits are packed as soon as they are gathered—frequently during a rain or while the dew is heavy. Shall they be weighed while wet, or after being dried out? There will be a decided difference in weight. A barrel of potatoes may be over-weight in the morning, and so much lighter at night that the seller will be liable to a fine.

Again, who is to weigh and mark the thousands of packages of vegetables that are daily brought into this city? It will be necessary to create hundreds of little petty offices to accommodate these who must be "remembered" by city politicians. Business will be greatly delayed if everything must be weighed before being sold. and dishonest commission men will have new means of swindling farmers added to the already long list. Who that knows anything about the vast quantities of vegetables that are daily brought to New York, believes that every package and barrel can be weighed.

The law will surely divert business from New York. Brooklyn and Jersey City will reap the benefit of such a rule and the price of fruits and vegetables will be naturally increased to the retail purchaser, while the farmer will receive no more than at present. Farmers claim that there are too many "middlemen" between them and the consumers now. There is no one reason why hundreds of "weighers" should be added to the number.

Such were the main points brought out at the hearing. The Mayor has since then returned the measure to the Aldermen for slight amendments.

BREVITIES.

THAT public benefactor, John Burr, of Kansas, is now 88 years old.

DR. HOSKINS says potatoes want food "well cooked"—that is, soluble.

SEC'Y J. S. WOODWARD has entirely recovered from his late illness.

"*No business is good for all that are in it,*" So says B. BROWN on page 9.

Prof. Roberts says that the Lord manures in the fall and you cannot beat Him.

ONE of the lady subscribers who enters her name for the Potato Contest is 80 years old.

READ Bucephalus Brown's "Notions and Ideas" this week. It is full of sound teachings.

HOW to mix caution and courage in the right proportion so as "to bring luck." Ah! that's the rub.

"I THINK the women should do all the work except the team work, and even that if they choose. E. M. C.

THERE is nothing like utilizing waste products. A writer on another page tells how he made the escaping heat of a manure pile warm up a chicken brooder. What next?

IN dispensing hospitality, it is a pity we do not carry out the English custom of inviting people for just so long, specifying the time. So suggests Miss Taplin in her department this week, and the suggestion is an excellent one.

WE received on Oct. 1 or thereabouts, two Duchess pears of about the same size, weighing together three pounds. Each measured 13 inches in circumference. We regret that the name and address of the person sending them were mislaid.

MR. G. W. PECK, of Roselle, N. J., 16 miles from New York, reports that the August Giant is with him vigorous and hardy as to the plant. The berries are very large, but the quality poor. He has discarded Rogers's No. 15 (Agawam), as the berries rot and drop. Lexington (Miner), is not good for much. Carlotta (Miner), is a fine white grape ripening with Concord.

AT the Norwich farmers' institute a very lively discussion was held regarding the making of whole and skim cheese. One argument that seemed to meet with very general approval was to the effect that if only whole cheese was made the public would learn that cheese is really a good and valuable food and the demand would increase ten-fold. Who will object to this proposition?

The next meeting of the American Pomological Society, to be held at Sanford, Florida, next February (6, 7, 8,), will prove a rare chance for a full insight into the progress which horticulture has there acheived in a short period. We are glad to know that there will be no "formal banquet or speech-making, but instead thereof visits to the most interesting places." A few short, sharp, practical talks will be good, but deliver us from long-drawn-out essays. We hope that Pres. Berckmans will look to this. Cut off the long dreary talkers.

THERE'S a good deal of satisfaction, even to an unmalevolent mind, in seeing the biter bit. The Jute Bagging Trust affords such a sensation to the public now. A large proportion of the stock it cornered at high figures still remains on its hands, and there is almost a certainty that it can not get rid of it except at figures considerably below those at which the stuff was bought. The season's experience with bagging from pine fiber has been most favorable. It has been demonstrated that the article can be manufactured at almost any weight per yard. It will neither rot nor stain cotton. It can be manufactured and sold at a lower price than jute bagging, even should the latter be placed on the free list. There is little doubt that with improved machinery the manufacture of pine straw bagging will become a highly profitable industry in the South. The raw material costs absolutely nothing beyond the expense of gathering it from the ground and transporting it to the mills. How can jute bagging compete with it at the prices which jute bagging commanded even before the article was cornered?

Rural Topics.

BUCEPHALUS BROWN'S NOTIONS AND IDEAS.

WHAT ARE THE ESSENTIALS OF POTATO-GROWING?—If we are going in for big crops per acre—intensive potato culture, so to speak—it is very important to eliminate all non-essentials, since every part of the work will be costly. One of my neighbors, who reads the RURAL, and has been practicing mixed farming, tells me he shall put all his eggs into one basket next season, and plant forty acres of potatoes as his only money crop. He will use machines for planting and digging, and manure with chemicals only; and he will get through, with his crop turned into cash, by the end of September, and discharge most of his help then. He thinks he will make the most money this way; yet I cannot but have my doubts, though he is a good farmer, and potatoes are one of our surest crops. Yet I have rarely known a one-crop farmer to be successful in the long run.

BUT ABOUT THE ESSENTIALS.—Deep and thorough tillage seems to me to be the first, not only in time but in importance. The potato wants a chance to expand; and it can get it only by having its bed made deep and mellow. Then it wants its food plenty, handy, and well cooked—that is, soluble—and it don't want any help, in the shape of worms, to consume either the food or the crop. A large crop means a great deal taken from the soil in a short time—three months. Stable manure, if rich and fine, could not be bettered as a food for potatoes it it were not for the drawback of the scab-making pests with which it is so often infested.

WHAT ELSE?—A satisfactory variety being chosen, and the field being deeply mellowed and liberally enriched, how shall we plant? Shall it be hills or drills and at what distance? How deep? How much seed? How cut? Well, on all these points there are divided opinions; but the fact cannot be disputed that as large crops as are on record have been got from two-eyed sets, planted pretty close, the land being well prepared and well enriched. The best results I have seen have been from deep planting and level culture. This method makes rather hard digging, which is the only objection. There is less danger from drought, and no loss from green ends; but more are left in the ground, unless the diggers are very faithful.

THE CORN CROP.—I earnestly hope that corn-husking machines will prove a success and I wouldn't quarrel with the man who would bring me a machine that would give me, at the end of two days, my corn from twenty acres all husked, and the fodder crushed, cut and stowed away, even if he wanted four cents a bushel for doing it. It will cost a farmer in the East more than twice that to do it in the old way, and the fodder will not be in as good shape either.

DOES IT PAY TO GROW CORN?—I mean in New England. All our valley farmers think it does. Most of our hill farmers think it doesn't. On the high hills, or in the narrow, elevated valleys between them, the crop is too uncertain for its grain, though it is planted even there as a fodder plant. Wherever planted, a corn that will not ripen in any season but the most exceptional can hardly be made to pay unless through the silo. As a winter feed corn fodder requires too much handling, too much room, and is too subject to injury from mold and mice to be desirable on any large scale. The silo is the place for it, and perhaps only on light soils is it better than would be the same work and manure put into the grass and small grain crops.

DOES IT PAY TO GROW ANY GRAIN?—I mean in the same section. Most of our farmers would stare to be told that it does not, yet very few of them grow all they need. Under ordinary conditions if it pays to grow some, why does it not pay to grow enough? "Well, it takes too much help." Our farmers do not see their way to hire help enough to till any broad area of land at the present rate of wages and price of crop and products. It is a close business, without doubt. Farming is and must always be a close business; yet everywhere we find men who make a good living and lay up money at it. No business is good for all that are in it. Thought, prudence, patience, hard work—these are the qualities required to make farming pay, or any other business that is honest.

AND COURAGE, TOO.—Many a farmer who lives among the "ebbs and shallows" of fortune could do much better if he had more courage. But, ah! where can he get it? And how to mix caution and courage in the right proportions "to bring luck," says one who is looking over my shoulder. Many a farmer has tried to "branch out [a little" and has mired himself for life, and remained a warning to his neighbors ever afterwards. But when we look into it, we shall find, in such a case, that it has been into some "gambling crop," like hops, or tobacco, or small fruits—things that require expert knowledge, and capital to stand occasional bad crops or low prices.

TRY STANDARD CROPS.—When a farmer wants to broaden his business, let him begin with that part of it which he knows the most about. Then he will not be deceived by the glimmering haze that hangs over the unknown, and enlarges and distorts it to the eye. It seems to me that the remedy for that bugbear, high wages, may be found in making the same ground grow bigger crops. This is the safest place to enlarge, because it involves the least proportional expenditure. Have the courage, even if only on one acre, to try if more money cannot be made by making it richer, even if you have to buy the enriching material. This will be the only extra expense, except in the harvesting, for which the crop will pay.

APPLY THE SAME IDEA FARTHER.—Apply it to your stock. Have you the most profitable stock, or if you have are you getting all the profit there is in it? Try feeding the stock better as well as the land. Try improving your seed by selection or purchase. Try stopping all the leaks, one after the other—not by miserly economy, but by a wise attention to details. This is not speculative farming. This is not running an unknown risk. It is simply applying the old rule that, what is worth doing is worth doing well. I don't believe much in sticking up mottoes. They do not seem to make much impression. But I have known a word timely spoken to have a life-long effect upon the hearer. I once heard a boss mechanic say to his apprentice, in a wrathful tone, "D——n you, none of your 'bout rights'—is it right?" He did not even know that I heard him, but his fervor and emphasis drove a truth into my mind that has been worth thousands to me, whether it helped the apprentice or not.

Postscripts.

SHORT, SHARP AND SENSIBLE.

"I unhesitatingly say that warts need not prevent the sale of a good heifer. They are blemishes and their presence renders milking unpleasant to the milker and painful to the cow and would, if not easily removable, render her much less valuable than she would otherwise be. I would not hesitate any longer in purchasing an animal with warty teats, than would be necessary to give the seller time to determine how much less he considered her worth on that account, which generally is a good percentage. I would then purchase a pound of lard (if I had none or but little of home made) and by greasing the teats well after milking would in a few weeks look in vain for the warts, and credit the amount of purchase money saved to profit side of the profit and loss account. A heifer should be accustomed to having her teats handled before "coming in," and greasing them daily will not only remove warts but accomplish this object. I believe any kind of grease will answer; I prefer lard because it is less unpleasant for me to apply, and I keep it in a shallow tin box with a tight-fitting lid." C. A. U., Falls Church. Va.——"That bread conundrum was 'a hit.' My sister took the premium at the county fair—she is the *'flour* of the family.'—That first-page cartoon of December 15th!! We are still laughing with the man on the other side of the fence—though without 'enmity'—Miraculous escape, no bones broken." M. S., Oswego Co. N, Y.——"I had a P. Rock hen confined with her chicks. She began laying eggs while so confined, for two or three days. I found each day an egg in her coop; then she would cackle, but when I came for the egg it was not there. While watching her one day I discovered her destroying and eating the egg as soon as it had dropped. I at once determined to kill and dress her for the table. I put her in the corn crib intending to kill her the next day, but in the interval saw a number of addled eggs left by a hatching hen. I determined to try an experiment. I gathered them up and put two of them with the hen. She immediately set to work to break their shells, and did so—eating both of them. I then put four more addled eggs in the corn crib and left her. The next morning I opened the crib and found two eggs unbroken. I then put the hen in a coop, put two good eggs with her, but she refused to eat them and has not eaten an egg since that time." C. S. COOPER, Schraalenburg, N. J.——Our district bought a Vulcan Road Machine last spring. The roads were worked with it, as long as the appropriation held out, and they were left in a very much better condition than ever before. They were not touched during the summer or fall; they are, however, in better condition now than they have ever been at this season. I judge from this that the road machines make the roads good at the moment and make them so that they remain good much longer than when 'made' in the old-fashioned way. J. H., G. Queens Co., N. Y.——"No great loss without some small gain. Our corn did not ripen well this year. The wet weather kept it from hardening and the early frost killed the leaves so that the stalks were nearly worthless for feed without cutting and splitting. We made silage out of the dry stalks. You ought to see how the cows relish it; for we have the right kind of machine to make it and know how to make it." E. B. S., Hydetown, Pa.——"We can't get along without the RURAL; it beats them all; its best feature is originality; to a fruit grower, it is unsurpassed." T. S. Grimb.——"I have entered my name for the Potato Contest and expect to do all the work a woman can, even to driving the horse while a fifteen-year-old boy holds the plow. Because of this I think there should be two clases: one for all those who *oversee* the work, and the other for those who do all the work a woman can. I also wish to raise an early variety of potatoes." Mrs. D. L. B., Wilbraham, Mass.——"I farm because I love it. It makes me independent; it makes me money and enables me to provide for my family as I wish. This gives me pleasure; in fact I am a free man when I farm." T. A. S., Wartrace, Tenn——"A tool that saves us much labor is a potato separator, which was invented by a French Canadian farmer, nine miles from Montreal. It is constructed very much like an ordinary grain fanner without the fans. I would not be without one for a good deal, for when our potatoes begin to sprout in the spring we put them through the separator and it breaks the sprouts off and does not injure the potato in the least." .R B., Quebec, Canada.——

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

A HAPPY NEW YEAR; and may all our good resolutions be fulfilled! We are all making them about the 1st of January, and we are most of us breaking them all the rest of the year.

* * *

A beautiful table cover is made of cream-white corduroy. It is lined with golden-yellow sateen and finished all around the edge with gold-colored silk cord.

* * *

A NEW and pretty idea is to cover the little occasional tables with chamois leather. It is put smoothly over the top, and either painted or gilded in some simple design. One very pretty decoration is of pansies, the edges outlined in gilt. Straggling dog-wood flowers, connected by gilt circles, make another pretty decoration. A pretty way of finishing the legs of these tables, when of the tripod shape, is as follows: A width of China silk is tacked smoothly around the edge of the table; the bottom is gathered, and tied with a bow where the legs cross. Around the edge of the table is a row of small tassel fringe, such as is used to border curtains.

* * *

PERHAPS one of the rules for good manners more honored in the breach then in the observance is the assurance that independence does not mean impudence. A great many seem to have the idea that if they show complete disregard for the feelings of others, they are vindicating their own position. They are ostentatiously familiar with those who may be considered of social superiority, and rough or contemptuous to those less fortunate. We all know people of this type; pity they are so plentiful. If only they could learn that courtesy to all alike is the first rule for good-breeding. But they never do.

* * *

IN dispensing hospitality, it is a pity we do not carry out the English custom of inviting people for just so long, specifying the time. Thus, in wording the invitation, say the day of arrival and departure, whether it is a few days, a week, or a month. Nothing is more exasperating to a hostess who has certain duties for certain times than to have self-invited guests quarter themselves upon her for an indefinite time. There is nothing inhospitable in the English custom though many seem to think so. Mrs. A. may invite Miss B. to spend a week with her from the 20th to 27th, and she may then make her arrangements to entertain her guest. But if she asks Miss B. to come on the 20th and make her a visit, the hostess may be obliged to put off all her arrangements through the uncertainty as to the duration of the visit. It is far better for a guest to leave regretted than to outstay her welcome.

* * *

THE most exasperating invitations we ever receive are those asking us to come and make a visit some time. This may be repeated until we decide to accept it, and we then learn that "some time" means no time at all. It is proper to be thoroughly explicit; ask your friend to visit you at such a date, to stay so long. The guest, for her part, should state at what hour she will arrive, and at what hour she will leave. She should in all cases conform as much as possible to the usages of the family. She should be punctual at all meals, and, if she is wise, will make some excuse for solitary occupation—letter writing or the like—every morning, thus giving the hostess an opportunity to attend to personal occupations. She will enjoy her guest's society all the more when it is not made a burden upon her. Half the science of entertaining consists in knowing when to amuse people and when to leave them alone.

NELLIE'S NEW YEAR'S EVE.

"THE WAY THE LORD HAS LED ME"

NELL looked quickly up. Grandma's hands were folded over her knitting lying on her lap. Her eyes (turned toward the western window through which the setting sun was casting bright farewell glances) had a far-away look. And Nell knew Grandma was living over again the bygone years.

She softly crossed the room, seating herself on the low footstool at Grandma's feet, and laid one of her hands on her knee.

"Grandma, was it always an easy way and the way you wanted to go?" she asked Grandma smiled such a tender, loving smile down into the eager, childish face.

"Not always, dear," she softly answered. "But it was the Lord's way for me to walk, and looking back after many years, I see (although I have rebelled in spirit many times) how much the better was the way the Lord chose for me, and my heart is filled with thankfulness this New Year's eve."

"But, Grandma, when you want to do something, oh! so much, it's so hard to think it's best you shouldn't." And Nell's eyes brimmed over with tears, while her lips trembled. The dear old lady's face grew grave. Her heart ached for this little girl.

A gay riding party had been arranged for this New Year's eve, and Nell was one of its number. But, mamma, finding that among the party were two or three she did not wish her daughter to be intimate with had been obliged to withdraw her consent, and Nell, who never questioned mamma's decisions, nevertheless felt her disappointment hard to bear. Grandma knew it all and she drew the tear-stained, girlish face down on her lap, and let the sobs that were coming thick and fast, have their way, smoothing meanwhile the curly head with tender fingers.

The sobs grew less, and less, and at last Nell lifted her head, smiling at Grandma, even through her tears. She was a child in spite of her 17 years.

"I couldn't help it, Grandma dear. Somehow it all came at once, and I *did* want to go so badly."

Grandma stooped to kiss away one or two tear-drops lying on the rosy cheeks. Nell nestled closer to her. Grandma's way of comforting was so lovely, all her grandchildren said.

Footsteps sounded on the door stone outside. A moment later Grandpa looked in, holding the half-open door in his hand. "Alone, mother?" he asked in his cheery voice, "Oh: no, I see our little girl is here." Grandma, and Nell helped Grandpa off with his great coat and hat, and Nell drew his arm-chair close up by Grandma's low rocker. She knew they liked it that way, and kneeling, untied his shoes, for Grandpa's hands were chilled, Grandma said, holding one in both of hers.

"Only a little" he answered smiling. "But it is going to be a frosty night."

"Thank you, little daughter" he said, as Nell having finished her task, rose to her feet.

"She is such a comfort, our little girl," he added to Grandma.

Nell went back to her seat by the window. Was she a comfort? She didn't feel that she was at all; she was only a great, disappointed girl, who wanted to have a lovely time sleigh-riding with the rest,—and couldn't. She glanced over at Grandpa and Grandma. Their faces were so peaceful. Would hers

ever look like that? She was quite certain it didn't look that way now.

A door opened and steps came into the next room. She knew it was mother, for she heard baby fretting in a sleepy way, and the low, soothing mother-voice hushing him as she laid him in his cradle. Not her own mother—she had gone to the better land many years ago, and this one had come to Nell when she was an unreasonable little girl of twelve years, —a wise loving woman, whom Nell reverenced and dearly loved. Two little boys had followed mother into the room. Nell could hear their mingled voices clamoring for many things, after the manner of children, and baby kept up his fretful cry.

"Those dreadful boys! If they would only go out baby would go to sleep," Nell said to herself. Must she go out there? It was so peaceful in here.

She looked over at Grandma. The dear old lady was looking anxiously at her. Grandpa's eyes were on the floor. He was lost in thought, but she seemed to hear his tones again, "She is such a comfort, our little girl." Nell slipped quietly out of the door, and the next moment Grandma heard her say, "Let me rock baby, mamma, you are tired, and the boys want you." She also heard the mother's "Thank you, dear," and then the tramp of many feet out of the room, and all was quiet save Nellie's voice in cradle lullaby to the little one.

Grandpa heard it; it roused him from his reverie, "Who is singing, mother?" he asked.

"Nellie," she softly answered—"to the baby."

"Oh? yes," he said "I think I must have been dreaming, her voice is so like her mother's" Grandma had noticed it too; old memories came back to them both, and they sat silent. A loud peal of the door bell made them both start. Nell heard it, too, and it roused even baby, just crossing the border into dreamland. Nellie settled him back on the pillow, singing softly the while. Mamma herself answered the bell, smiling pleasantly on the tall young fellow standing there, who eagerly asked was Nellie home. Mamma said she was. "Well: Mrs. Brown, Annie is going with Tom Wright over to Uncle Jo's. They are going to have a little company, to-night. We just heard of it, and I thought, perhaps, (hesitating a little, and stammering over his words,) Nellie would like to go with me, It's splendid sleighing, and not so very cold. May she go, Mrs Brown?"

No mother, much less this good stepmother, could have refused the request made in this frank boyish way, and he followed Mrs. Brown into the cosy sitting-room, where leaving him, she went to Nell who, waiting with glowing cheeks and sparkling eyes whispered softly (not to waken baby) "Oh! mamma; how good! I heard you say I might go."

It took but little time for Nell, with mother's help, to put herself in party trim. Then warmly wrapped from the cold, she was lifted into the sleigh, and tucked around with the robes. The two aged people, attracted by the sleigh bells, and voices outside, had gone to the window. Grandma's face wore a bright smile, but Grandpa looked perplexed.

"Where are they going, mother?" he said "this cold night, and it's almost dark, too."

"Oh: only for a little ride, dear, I suppose," the dear old lady answered, adding briskly, "they are young people, you know, not old folks like you and I."

"On, yes," said Grandpa, "I see. Well, let them go, but" with an anxious look after the retreating sleigh, "it seems to me its pretty dark for children to be out."

Grandma did not answer. She went concontentedly back to her rocking-chair. Grandpa soon followed, and the two old people sat together in the double twilight, that of their lives, and that of *the New Year's eve.*

A FARMER'S SISTER.

WHAT THE GRANGERS DID TO HELP AN AGRICULTURAL COUNTY FAIR.

A GREAT deal of uncertainty was felt and evinced by the President and managers of the Chautauqua Co., Agricultural Society during the latter part of the summer of '88 in regard to the financial outlook for the coming fair at Jamestown. In the first place, the nature of the grounds was such that nothing like "racing", or even a trial of horse speed could take place. Marvin Park, although furnished with some of the best buildings in the State for an agricultural exposition, with its Floral, Mechanic, Dairy and Poultry Halls, and its half mile or more of sheds for the accomdation of stock, is adjacent to the outlet of Chautauqua Lake, and, within the memory of many who are not the "oldest inhabitants", it was a vast swamp. This piece of land has been so far reclaimed as to make it admirably adapted for all the uses of an agricultural fair, except the very questionable one of horse trots," which the loose and spongy nature of the soil forbids. It is thought that probably the whole tract is underlaid with water at no great depth, as fast driving causes the ground to shake and vibrate for a great distance around the vehicle. This consideration, together with the fact that the fair which was held the first week in September would lap on to the International Exposition at Buffalo—only 70 miles distant—which would probably draw a great many of the fine cattle and horses for which Chautauqua Co. is noted, caused apprehension in the minds of the officers of society,

Chautauqua Co. is one of the strongholds of the Grange, there being 17 thriving organizations within its limits, numbering thousands of members. The President, Vice-President and several of the directors are members of Union Grange No. 244, which has its place of meeting in Jamestown, and is nearly 400 strong, being the largest grange in the State. The question was several times asked at its sessions, "What can the granges—what can Union Grange do for the fair?" It was finally decided that the Agricultural Society should offer three prizes, of $50, $30, and 20, for the three best exhibits on wheels made by granges in the county. From this competition, however, Union Grange was to be excluded on account of its superiority in numbers and its proximity, which would render the contest unequal should it be allowed to compete. Again arose the question, "What can Union Grange do individually to help the fair?"

At last a lucky thought entered the head of one, which, on being voiced, found ready acceptance with the majority, to the effect that the Grange should make a free exhibition of whatever its members might choose to bring of the products of field, garden, orchard and home. The inner angle of Mechanic's Hall was the place chosen for the exhibit of Union Grange. A space about 10 feet in width was partitioned off from the hall by upright posts on which were hung and festooned elegant draperies with wreathings of various grains tastefully arranged, for, as one expressed it, "Evergreens which are so generally used for decorations are the free gift of the Creator and are common to every one who may choose to gather them, but fruit, grain and flowers come by labor and are the emblems of our industry," so these three products were chiefly used as being most appropriate. On the cut-off corner of the outer angle between the draperies was suspended a round shield, three feet in diameter, covered with wheat heads sewn flat on its face, with the words "Union Grange" in large letters arranged in the form of the segment of a larger circle made of everlasting flowers, and below this "No. 244." Around the shield was a fringe of oat heads, adding grace and beauty. The walls in the rear were covered with mahogany-colored cloth, forming a charming back-ground for the display of pictures and household work. On one side of the angle was a miniature representation of Chautauqua Lake, on a table 10 feet in length, with Lakewood, or the Saratoga of Chautauqua, in the back-ground. The shores of the lake were formed of sand and pebbles covered with moss, while in front ran, at short intervals, a miniature train of cars loaded with produce, representing the C. L. Railway. The cars passed behind a screen at the back, and at either end of the table was a huge pyramid which was turned by the same power which propelled the train. One pyramid was covered with flowers and the other with fruit both fresh and canned. Back of this table, in letters 22 inches long, was the word "Fraternity," the motto of the grangers, made by stringing kernels of corn on wire. This involved a great deal of work, but the effect was unique and altogether in keeping. Then there were fine oil paintings and crayons executed by the farmers' daughters which vied with anything seen in Floral Hall furnished by the city ladies, and specimens of needle work, silk patchwork, crochet, tidies, etc., such as fair-going people are familiar with, all the very best and finest which the wives and daughters in so many happy homes could produce. A beautiful floral shaft which might well have been the pride of a professional florist was the admiration of all beholders. Quadrangular in shape, it gracefully rose from the pedestal some two feet or more, tapering gently and ending in a point at the top. Two of the sides were covered closely with white flowers, with letters in scarlet geraniums making the words "Faith," "Hope," while the other two sides, which were covered with green, bore the words "Charity," "Fraternity" in white. On the opposite side of the hall were specimen products of the garden, field and orchard. The city papers and no doubt most of their readers pronounced this exhibit of Union Grange, which was made without any entries for premiums and without cost to the Agricultural Society, the most attractive display ever seen at a Chautauqua County fair. The third day of the fair came the "Grange wagons", five in number, from as many different granges, tastefully decorated and loaded with samples of everything fine to the taste, and pleasant to the eye, which the Creator grants to reward the faithful labors of the husbandman. These were displayed in the most advantageous manner according to the various tastes of those who had a hand in their construction. Each wagon carried also many articles of skill and taste fashioned by the ready fingers of the wives and daughters who lent their aid, fabrics which a half century ago would have been the marvel of an artisan. The advent of the "grangers", had been well advertised, and consequently the crowd which came to witness this new feature at an agricultural fair was immense, the gate fees were increased accordingly, the fair was a financial success, and the officers were made happy.

CHAUTAUQUA.

GOLDEN GRAINS.

How true it is no spoken words can give
Form to the best of thoughts which in us live!
—*Samuel Burnham.*

DR. CLARKE says a blind or deaf man has infinitely more reason to deny the being, or the possibility of the being, of light or sounds, than an atheist can have to deny or doubt the existence of God.....

SIR WM. TEMPLE truly says that company are to be avoided that are good for nothing; those to be sought and frequented that excel in some quality or other.....

How important, then, that we have friends! How important that we have good and pure friends! An impure hand stains the soul on which it is laid. Many a character carries a blot through life which an hour's companionship left on it. Many a life-web is marred and spoiled by the threads which unworthy and defiling friendships weave into it through the years. But the friendship of the pure and noble purifies, ennobles, adorns, beautifies and exalts.....

OLIVER WENDELL HOMES describes old age in the following exquisite lines:

"Youth longs and manhood strives, but age remembers—
Sits by the raked-up ashes of the past;
Spreads its thin hands above the whitening embers
That warm its creeping life-blood till the last."

"THIS day our daily bread," says the Contributor, has in it the great lesson of taking only to-day's burden, instead of adding that of a day which may never come. We may and must look ahead and make such plans and provisions as are within our reach, but in all cases, without worry and fear or anxiety. He who feeds sparrows is sure not to overlook his children.....

THAT is not wise molding of childhood which aims at brilliancy rather than sterling worth. Character, pure, symmetrical and sincere; attainments, solid, practical and well in hand, these scale the rising hights of success, and shine out over the sometimes rough and sometims dark sea of life with an evenness and intensity that no mere outward show and glitter can rival.....

SIR ARTHUR HELPS says with respect to the kind of persons to be trusted, it may be observed that grave, proud men are very good confidants. Secrecy is very much a matter of habit; and it may be expected that those who have ever had to conduct any business in which secrecy was essential will acquire a habit of reserve for all occasions.....

To the country parsons whose lives are made miserable by the flood of doubt and uncertainty which is apparently sweeping over our country, the author of Robert Elsmere brings words of encouragement and consolation, and advises them to fear not; although the higher criticism will doubtless destroy much that they have learned to love. The historical and scientific method, when applied to Christianity, may prove much that they hold dear to be no more than a beautiful myth. But a God of wisdom and goodness yet remains. They can still believe in a Power not ourselves which makes for righteousness, and in a religion whose cornerstone is the Divine brotherhood of man.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

"If all dainty fingers their duties might choose,
Who would wash up the dishes and polish the shoes."

1889!

"Gone with its hopes, its joys and its fears—
Gone with its griefs, its sorrows and tears—
One more link in the chain of years—
Another year has gone!"

A NEW YEAR! What has t in store for us? Will it be a year of joy and prosperity, or will it be a year of grief and disaster? These questions force themselves upon us as the old year goes out and the new one is about to dawn. The young and gay look forward to "New Year's" as a day of festivity, but to the older the memory of the past years is sure to bring sadness with it. How many of us who had a happy, unbroken home-circle last year, will find a vacant chair at the fireside, a loved voice stilled forever, an empty place in the heart that nothing can fill! And when the New Year comes, all the sadness of the dying year rushes over us afresh. But even in our sadness comes the thought that the dawn of each year brings us nearer that great New Year, when the cares of this life are ended.

What good resolutions we start out with! We say we will be more careful and more frugal in the year that is just opening; that we will keep a watch on our tongues and tempers; that we will do, oh! so many wonderful things in the year that is to come. But how long do we keep these resolutions? Not long, many of us, I fear. But we can, if we will. If we form a good resolution, let us keep up to it each day, and if we do this, we will find ourselves victors at the close of the year.

We all long to achieve some great, wonderful thing in life, and while waiting for the great thing to come, we neglect our every-day, common-place duties, because they are so common-place. But it is these very common-place, every-day things that build up the whole net-work of our lives. Do each duty, each task as it presents itself, and when Death calls he will not find us with hands filled with the threads of life, tangled and knotted, but will find us with our web woven to the best of our ability, ready to give the ends into some one's else hands.

Who will begin with this new year? Do not set yourself too many tasks, but pick out a few things that you know you ought to do and set to work at once. A good plan might be to make a little placard on which to write your new resolutions; frame it neatly and hang it on your wall where you will see it when you wake in the morning. This will remind you each day of the promise you made yourself when the year was young I mean to do this myself—who else will?

DORA HARVEY VROOMAN.

"Your day will come,
though it arrive but slowly;
There's cream in all life, set however lowly."

A KITCHEN TALK.

ANNIE L. JACK.

IT is a busy time for mince pies and plum puddings, for traditional good cheer seems to be a necessity with the young and gay crowd that form our circle. Christmas and New Year's Day are really the children's times for enjoyment and we older ones are to have our pleasure in seeing them happy. Given a large amount of bread crumbs and less suet a plum pudding is not at all indigestible, and even mince pies can be made with enough apples and fruit to render them harmless. And when one has plenty of home-grown fruit, and can make candy at one's own kitchen fire, it is a great pleasure to the little ones to "help."

The younger girls are just beginning to con the cook books that have been such a guide to the elders, and we watch them experiment with a sort of sadness amid our pleasure—the sadness of retrospection.

Meanwhile the kitchen fire burns brightly and everything betokens good cheer. The housewife's bugbear is waste, and it is quite an item to take care of the food that is prepared for this season. Mold and decay in various forms are likely to creep in, and we

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

have to be constantly on the lookout lest wilful waste bring woeful want later on.

I was thinking of the force of example as I sat mending the guidman's socks. A little waif that we took into our family some years ago, who took a pride in idling her time, now seems to enjoy the light tasks of housework thoroughly, and improves more than our own little girl of the same age in thought and attention to duties. Children of good, sound stock can be molded,and it is only where there is moral and physical unsoundness that there is a defiance of improvement in training.

Looking back upon my own family government I can see many mistakes that I have made, but it is useless to rehearse them. Experience is the best school for learners and it is very seldom one mother profits by another's blunders. Meanwhile in our kitchen the newly fledged cooks are busy and feel their responsibility, for to make good bread and puddings, to get up a simple dinner for the family well cooked and on time is work far more important than it seems. And most young girls like to do the important and changing work that entails some responsibility and requires thought and skill better than the routine of sweeping and dusting. And now and then we are surprised on seeing how well things turn out even at the hands of a novice. At any rate it is best to let the young things try to make our burdens lighter.

FLOWERS IN THE HOUSE.

EVERYBODY worthy of a home strives to make it pleasant and cheerful. This is necessary at all esasons of the year, but particularly so during the long, dreary winter evenings of the North. Nothing will aid this desirable work so cheaply and effectually as flowers. They are a constant yet everchanging source of pleasure, every day presenting new forms of loveliness. A little skill and knowledge are necessary for the management of house plants, and with these as with all other things success is necessary to enjoyment. I shall endeavor to give a few suggestions that, I hope, will make the road to success easy.

Those who have green-houses and gardens perhaps will not need my counsel. My hints are designed for amateurs, for the thousands who have not these helps; but who love flowers and cultivate a few in the house. Thousands of persons annually purchase vigorous plants from the green-house and are pained to see them gradually fade and perish. How this can be prevented and how the plants can be kept in health and vigor, is the question I wish to discuss. Plants, like ourselves, need air, light, warmth, food and drink. If these are furnished in proper quantities they will live and grow, barring accidents of course. Where good soil is used in potting plants they seldom need any special fertilizer. The best soil is found near old fence rows where sod has grown a long time; this mixed with sand is superior for potting purposes. In watering, to each gallon of soft water used add a tablespoonful of liquid ammonia. In winter the temperature of the water should be about blood heat. Do not water often, but do so thoroughly. Most plants wintered in rooms are injured by too much heat. For a genera collection a room should not be kept at more than 65 degrees Fah., during the day, and 45 to 50 at night. Give a little fresh air every day when the thermometer is above 35 in the shade. An effort should be made to give moisture to the atmosphere. This can be done by evaporating water. Light and air should be given freely and sunshine when it is available. Plants deprived of these grow sickly and colorless. Cold drafts should be avoided as much for plants as for their owners.

Cleanliness is of vital importance to plant life. Every possible precaution should be taken to secure them from dust, also to cleanse the leaves by sponging or spraying. Even here a little caution is necessary, for while smooth-leaved plants are benefited by spraying or sponging, the rough-leaved varieties, like Rex Begonia, should not have the leaves often moistened. All plants should be turned around every day to give each side the same amount of light. This prevents them from growing one-sided. A thorough fumigation with tobacco smoke should be given them once a week to destroy insects.

J. F. POWER.

GOSSIP, GASTRONOMICAL AND OTHERWISE.

THE great question of domestic help, the despair of so many establishments, seems at last about to meet with a happy solution. A plan is on foot for the establishment of training schools especially adapted to benefit foreign-born girls who come to this country, ignorant of American house-keeping. Everything pertaining to domestic service, from blacking a stove, and washing dishes, to mending fine laces will be taught. A diploma will be given to every girl who graduates, and those who take but a part of the course, will receive a certificate stating what they can do, and to what wages they are entitled.

Many American girls who wish to be educated it is hoped will avail themselves of this opportunity to become good mistresses of homes, even if they still retain their foolish prejudice against working in other people's homes. The school is being organized under the auspices of the Sunshine Mission, in the form of a joint stock company. A capital stock of from $50.000 to $75.000 is needed. Shares are to be put at $1. each to make it possible for many to lend a hand in the enterprise. This, I am sure will be welcome gossip to many over-tired housekeepers.

WHITE is again coming into demand for table linen. Plush and satin scarfs are to be discarded, and napery itself must not only be white, but plain and fine as my lady's kerchief, and hemstitched in like manner. Table floral decorations are to be a matter of taste. Handsome china dishes in three compartments are used for wafers, butter and cheese, to be passed with salads, and also for jellies, olives and like relishes. A sensible article of dining-room furniture, known as the "dinner wagon" in England, and "etagère" in France, has been brought into use here. It consists of a set of open shelves holding extra silver, napkins, the salad bowl, jelly, and dessert dishes, and finger bowls. The large, heavy napkins used with the first courses should be replaced by smaller and finer ones with the Roman punch, or game or dessert, or a new one with each of the lighter courses.

A NEW YORK lady has established a new industry, if it may so be called. She is a lady, too, by the way, lacking only the wealth recently lost to make her sought after for other qualities than those which she now exercises. She attends to the marketing for a number of wealthy families; going to each house each day immediately after breakfast she ascertains by an inspection of the larders what will be the necessary supplies for the next three meals, receiving suggestions from the mistress in regard to certain wished for viands, or relying entirely upon her own judgment in the matter. She more than saves her salary in the greater economy employed in making purchases, on which she has in addition a percentage from the "butcher, baker and candle-stick maker." Generally in these establishments the cooks are competent to follow her suggestions regarding certain made dishes and entrees to be made from the "left-overs," which also greatly diminishes the waste and extravagance. PALMETTO.

THE LONDON QUEEN thinks that to be really a good neighbor demands the possession of many excellent qualities—tact, temper, discernment, and consideration for other people's feelings: Anent intimacy, it thinks it is necessary to exercise a little tact and to try to find out when one's neighbors have most leisure and at what hours they like best to receive visitors; there are, it thinks, very few neighbors, even if intimate friends, whom one cares to see every day; their society is apt to pall if one sees them too often. In fact, friendship with near neighbors, however nice and charming they may be, is best sustained by not too constant intercouse; there are very few people we can see daily and do not tire of; one does not meet more than one or two in a life-time.

WINTER SOUPS.

I OFTEN envy farmers' wives who can go to their root cellars, and from their abundant stores draw material for many delightful and different soups, whereas we unfortunate dwellers in cities and towns must buy all these little items, not perhaps at a great cost of anything except memory.

In my own family I have found a steaming hot vegetable soup both an appetizing and economical thing to begin a dinner with on a cold day. Even when I have to buy the milk and vegetables, the cost never exceeds from five to 10 cents for a sufficient quantity for six persons. Cream of celery is our favorite and would be somewhat extravagant, if I had not learned a new wrinkle in buying the celery. Every Monday I ask my butcher for three bunches of soup celery. For these I pay from 10 to 15 cents. This is merely the celery left from Saturday which has become wilted and is no longer salable. An hour in a pan of cold water restores it to its pristine freshness. The tops are then cut up for the fowls,and the roots are trimmed and laid in a pan of cold water with the outside pieces which are to be used for soups, sauces and stews. The roots are good for flavoring soups made with bones and meat which require long boiling. The crisp, white inner stalks are reserved for the table.

The RURAL has, I think, given directions for celery soup, but my recipe may be slightly different. Chop first a pint bowlful of celery with one small onion; cover with one quart of boiling water and if you have a rind or bone of bacon, or salt pork, add that also; boil for one to two hours until the celery is very tender; rub through a sieve with a potato masher and return to the fire with one pint of boiling milk, season with salt, pepper and a dash of Cayenne; add a tablespoonful of butter cut in bits, and rolled in the same quantity of flour, and one tablespoonful of finely chopped parsley. Give one boil and serve.

Carrot soup. Scrape and slice a pint bowlful of carrots, and boil until very soft in a quart and a pint of water. Put a tablespoonful of butter in the saucepan, and when melted, stir in a heaping tablespoonful of flour; mix smoothly, add the carrot purée, salt, pepper, and one cupful of hot milk. This is a cheap and pretty soup. A slice of bacon boiled with the carrot adds a nice flavor.

Onion Soup. Fry the above quantity of sliced onions in a little hot dripping until turning yellow; dredge with two level tablespoonfuls of flour; add a quart of boiling water and simmer for one hour: mash through a sieve; add a pint of boiling water, and a few bits of butter, and put three dozen croutons in the dish. Any of these soups may be varied, or improved—if you call it an improvement—by the addition of yesterday's, chop, steak, or veal bones, but they are very excellent without. A few slices of bologna sausage, and a grated carrot added to a split pea or bean soup, after it has been strained, and allowed to simmer for half an hour, make a pleasant addition.

Cauliflower soup made like the cream of celery, with some cauliflower left from dinner, is very nice. Potato soup should have a quarter of a pound of salt pork to two quarts of soup.

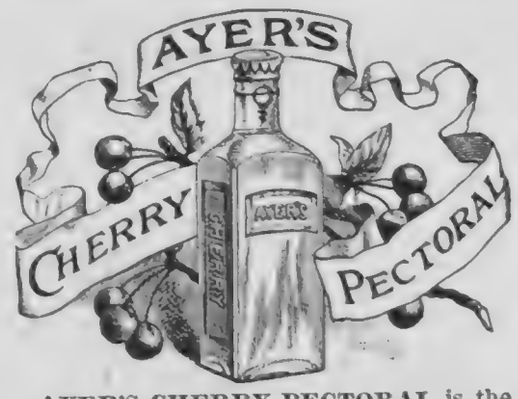
Mock bisque made with tomatoes you are all familiar with, but if you have a pint of pea or bean soup left you can entirely change its character for the next day's dinner by adding half a can of tomatoes and a cup of water; simmer all together for half an hour, thicken with a teaspoonful of flour wet with cold water, season, strain and serve.

An excellent combination soup is made from every kind of raw vegetables chopped together. If they are minced very fine they need not be strained. A handful of soup beans boiled with them gives the soup quite a different flavor.

A most delightful soup is made from two cups of cold baked beans, a pint of canned tomatoes and a quart of water. Simmer half an hour; mash through a sieve and thicken with a little flour and water.

AUNT ALICE.

Miscellaneous Advertising.



AYER'S CHERRY PECTORAL is the best of all cough cures. It allays inflammation of the throat and speedily removes irritating mucus from the bronchial passages.

Mrs. L. P. Cutler, 47 North Washington sq., New York City, says: "When I was a girl of 17 I had a cough, with profuse night sweats, and Ayer's Cherry Pectoral cured me. I have recommended this preparation in scores of similar cases."

Ayer's Cherry Pectoral,

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass. Sold all by Druggists. Price $1; six bottles, $5.

BROWN'S FRENCH DRESSING

The Original. Beware of Imitations.

AWARDED HIGHEST PRIZE AND ONLY

MEDAL, PARIS EXPOSITION, 1878,

Highest Award New Orleans Exposition.

BURLINGTON ROUTE DAILY EXCURSIONS TO THE PACIFIC COAST, COLORADO, WYOMING AND UTAH.

RAILROAD ticket agents of the Eastern, Middle and Western States will sell, on any date, via the Burlington Route from Chicago, Peoria or St. Louis, round trip tickets at low rates to San Francisco, Los Angeles, San Diego, Portland, Tacoma. Seattle, Vancouver, or Victoria; also to Denver, Cheyenne, Colorado Springs, or Pueblo. For a special folder giving full particulars of these excursions, call on your local ticket agent, or address P. S Eustis, Gen'l Pass. and Ticket Ag't, C. B. & Q. R. R , Chicago, Ill.

"The Gladstone" LAMP

is the finest lamp in the world. It gives a **pure, soft, brilliant white** light of **85** candle power,—a *marvelous light from ordinary kerosene oil!*

Seeing is Believing

A "wonderful lamp" it is indeed. Never needs trimming, never smokes nor breaks chimneys, never "smells of the oil;" no gumming up, no leaks, no sputtering, no climbing of the flame, no annoyance of any kind, and **cannot explode.** And besides all these advantages it gives a *clear, white light,* **10 to 20** times the size and brilliancy of *any ordinary house lamp!* Finished in either Brass, Nickel, Gold or Antique Bronze.

Send postal card for illustrated price list. Single lamps at *wholesale price,* carefully boxed and sent by express. Get our prices "*Seeing is believing.*" Address **GLADSTONE LAMP CO., 10 East 14th St., New York.**

METAL AND Wood Workers' **TOOLS**
FOOT POWER SCROLL SAWS, MORTISERS, LATHES, FORMERS, CIRCULAR SAWS, **MACHINERY**
We carry in Stock all the **LEADING** Foot Power Machines. AND MAKE **VERY LOW PRICES!**
Send stamps for large Illus. Catalog
JOHN WILKINSON CO., 55 State Street, CHICAGO.

WONDERFUL RESULTS obtained with Perfection Fast Dyes for Cotton. Turkey Red, Blue, Yellow, Scarlet, Cardinal, Wine and Brown. Package by mail, 10c.; ½ doz. samples, 40c. Agents wanted.
W. CUSHING & CO., Foxcroft, Me.

BRIGHT, ACTIVE AGENTS WANTED to sell the Rich Book
"DELIGHTFUL STORIES"
Or Home Talks out of the Wonderful Book.
This work contains 100 Delightful Naratives of the most wonderful occurrences in the Sacred Volume, very attractively illustrated. Success of agents is **astonishing.** One lady has sold nearly 3,000 copies alone. **Low Price. Big Terms** to Agents. Apply to **HUBBARD BROS.,** Philadelphia and Chicago.

MUSIC SELF TAUGHT. PROF. RICE'S SELF-TEACHING SYSTEM. All can learn music without the aid of a teacher. Rapid, correct. Established 12 years. Notes, chords, accompaniments, thorough bass laws, etc. Stamp for Music Journal. Circulars free. G. S. RICE MUSIC CO., 243 State St., Chicago.

GRIND YOUR OWN Bone, Meal, Oyster Shells, Graham Flour & Corn, in the **$5 HAND MILL** (F. Wilson's Patent). 100 per cent. more made in keeping Poultry. Also POWER MILLS and FARM FEED MILLS. Circulars and testimonials sent on application. **WILSON BROS.** Easton, Pa.

PLAYS Dialogues, Tableaux, Speakers, for School, Club & Parlor. Best out. Catalogue free. T. S. DENISON, Chicago, Ill.

$200 GIVEN AWAY For the Largest Spanish King Onions grown from seed procured from us. Full particulars free. Address THE HOUSEKEEPER, Minneapolis, Minn.

RAZORS AND POCKET KNIVES
If you have forgotten the name of the firm advertising Razors and Pocket Knives by mail, write at once to **ALLING & LODGE, Madison, Ind.**

General Advertising Rates of
THE RURAL NEW-YORKER.
34 PARK ROW, NEW YORK.

The following rates are invariable. All are therefore respectfully informed that any correspondence with a view to obtaining different terms will prove futile.

ORDINARY Advertisements, per agate line (this sized type, 14 lines to the inch).....80 cents.
One thousand lines or more, within one year from date of first insertion, per agate line, 25 "
Yearly orders occupying 14 or more lines agate space.....25 "
Preferred positions.....25 per cent. extra.
Reading Notices, ending with "*Adv.*," per line, minion leaded.....75 cents.

Terms of Subscription.

The subscription price of the RURAL NEW YORKER is:

Single copy, per year	$2.00
" " Six months	1.10
Great Britain, Ireland, Australia and Germany, per year, post-paid	$3.04 (12s. 6d.)
France	3.04 (16¼ fr.)
French Colonies	4.08 (21¼ fr.)

Agents will be supplied with canvassing outfit on application.

Entered at the Post-office at New York [illegible]

News of the Week.

HOME NEWS.

SATURDAY, December 29, 1888.

THE police will not permit Anarchist Lucy Parsons to lecture in Chicago. Many say she ought to be allowed to speak and be punished for any criminal language she might use..... All reports about the recall of Minister Phelps from England are said to be unfounded .. ....On December 23, the steamboat Kate Adams, one of the finest and swiftest boats on the Mississippi, was burned near Commerce, Mississippi, about 40 miles below Memphis, Tenn. She had about 200 persons on board of whom 80 belonged to the crew. All those in the cabin escaped, but 50 of the deck hands and passengers perished. The officers and crew behaved bravely and saved many lives..... ...Pawnee Bill is the new leader of the Oklahoma boomers who are said to number from 10,000 to 14,000 in Southwestern Kansas and Western Arkansas. Wichita is at present the headquarters. Some want to march at once; but it appears to be the opinion of the majority that they ought to wait for the result of the Oklahoma bill now before Congress. Should this be unfavorable they will start at once, "using arms only for self-protection."..... .... Christmas Day the steamboat John H. Hanna was burned on the Mississippi near Plaquemines, La., and over 30 of the passengers and crew were burned to death or drowned. The pilot, Jim Givens, acted as heroically as Jim Bludso, keeping the vessel's nose to the bank though his eyes were burned in their sockets and his ribs laid bare by the flames. The hero died in great agony a few hours later ..... On Christmas day 37 of the principal building in Marblehead, Mass, were cremated, including several factories. Indeed, most of the town was burned. Nearly 1,500 persons have been thrown out of employment. Distress is great and pressing and public charity is earnestly solicited..... ..The most startling train robbery in years is that of the Central Pacific the other day near Clipper Gap, in the Sierras. The booty is said to be as high as $50,000 .....A 14-year-old boy, named Gleck, broke the lock on a powder and dynamite magazine at Mount Pleasant, 17 miles from Wheeling, W. Va., on December 23, and with two other youngsters entered the building smoking. There were 210 kegs of powder, and 10 cases of dynamite. All went off, blowing Gleck into atoms and severely injuring his two companions, who had run away before the explosion. Seventeen men were badly injured and nearly every house within a mile was badly wrecked. It felt like an earthquake away in Wheeling.....Hermansville, in the Upper Peninsula of Michigan, has been wiped out by fire. Loss, $250,000..... It is estimated that there are 2,500 women in the United States who hold diplomas from medical colleges, either American or foreign.. .....There is a decided movement in West Virginia in favor of changing the name of that State. Its promoters say that every State should have a distinct name of its own, so far removed from the name of any other State that no confusion of names can arise. West Virginia is so nearly like Virginia that the people do not enjoy it. Curiously enough, they all agree that "Kanawha" is the name for the State.....Dr. James Scott, author of the famous Scott liquor laws, died the other day at Columbus, Ohio, aged 73 ..... The dead body of the second daughter of Hawes, the Birmingham, Ala., murderer, was found over a week ago in the lake where her sister's was discovered. He is now held for the murder of his wife and two daughters. No more rioting.....Axworthy, Cleveland's defaulting treasurer, has settled by paying down $160,000 and making over to his creditors all his American property..... The Indiana Legislature will have to borrow $2,000,000 for the running expenses of the State for the next two years.... The Texas Capitol, built by Chicago men for three million acres of land, valued at $1 per acre, has been turned over to the State and accepted..... Samuel J Tilden's will which left about $4,000,000 for founding a great public library in this city, and which has been contested by his nephew, has been sustaind by the Supreme Court. It will now be taken to the Court of Appeals—the Court of final arbitrament..... Governor Hill has ordered an extraordinary session of the Court of Oyer and Terminer for the trial of the New York "boodle" Aldermen ..... During November 25,419 immigrants arrived at the several ports of the United States.....Judging from the number of steamboat and railroad accidents, deaths by drowning, murders and stabbing cases reported during the last few days, the correctness of the old saw about a "green" Christmas fattening the churchyards has been partially established..... Illinois, following the example of Ohio, Indiana and New Hampshire, passed a law last year forbidding the marriage of first cousins; but its passage was overlooked until the other day, and many illegal marriages of the kind have been contracted since it was to go into force..... ....Governor Hill has just appointed George B. McClellan, son of Little Mac, an aid on his staff. This makes young McClellan a Colonel at a jump. He is one of the Wall street reporters for the New York Herald..... The body of Gen. Logan was removed from its temporary resting place at Washington, Wednesday to the mortuary chapel erected by Mrs. Logan at the Soldiers' Home..... Attorney-General Garland has decided to locate permanently in Washington, where he will open a law office after the 4th of March. ..... James Matthews, editor and proprietor of the Buffalo, (N. Y.) Express, died Dec. 20, aged 60.....Oliver Ditson, the well known music publisher, died at Boston, December 21, aged 77..... Indian scouts under Lieut. McComb have driven all the settlers "like so many hogs" from Oklahoma Station. Many prisoners have been made.....A severe storm prevailed in Iowa, Wisconsin and Northern Illinois, Wednesday and Thursday. Over a foot of snow fell..... Last week a terrible blizzard swept over the Province of Quebec, Canada, causing heavy pecuniary losses, a vast amount of suffering and several deaths.....The Prohibitionists cast a total popular vote in the Presidential election of 257,243. This is to be compared with the 151,808 votes for St. John in 1884; 10,305 in 1880, and 9,522 in 1876.....The South Carolina Legislature, just before its recent adjournment, reduced Confederate pensions from $50 to $30 a year..... There has been "a war of races" at Wahalak, Miss. where one white has been killed and several wounded. As the negroes retired to the woods and swamps and the pursuing whites swore terrible vengeance, it is not known how many colored persons were killed and wounded. At a riot at Lamar, Miss. two whites and five negroes were killed. There has also been a good deal of rioting between whites and blacks at Wilmington, Del. and several other places, but no deaths are recorded. In all cases of negro rioting in the South numerous armed white volunteers flock to the scene from all the surrounding country; for all feel that negro turbulence must be promptly suppressed at any cost..... The little propeller Leif Ericksen, with 33 persons on board, plying between Seattle and Sidney, W. T., was burned Monday when off Alkali Point, and five certainly, and possible seven lives were lost..... ..... Chicago packers are again denouncing the freight rates on Western railroads to go into effect on Jan. 1. They say rates on live hogs are higher than on packing-house products from Kansas City and Omaha to Chicago, thereby giving the packers at Mississippi river points an advantage over Chicago packers.....Mayor Hewitt, of this city, says his expenses in his late unsuccessful attempt to secure a re-election were $40,000.....

With Apologies to Pope.

"Then know thyself, presume not God to scan
The proper study of mankind is man."
Place the deft touch upon the pulsing wrist,
Or at the breast unto its throbbings list."
Note thou the crimson tide in ebb and flow,
Now quick in heat and now in languor slow.
See vigor more with its impatient stride,
Or being faint, as swells or sinks its tide.
Consider then, the air we breathe is rife
Will ill or ailment of throbbing life,
With food or poison charged, to turn the blood
A bounteous flow or an infectious flood.
But bland and mollient to the sharp distress,
Is nature's breath in magnetized excess,
All purient clog and obstacle to purge,
With blessings come—with weaknesses emerge.
Sweet, transient guest, the lungs one moment hold
To bring a glow depart with choking cold.
To urge new vigor thrill with rare content,
Gracious, restoring, curing ailment
Revive the weak with animation warm,
Treatment by inhalation acts a charm.

Witness the following:

FORT WORTH, TEXAS, Nov. 2, 1885.
"I regard your treatment by inhalation as a wonderful discovery of science."
REV. A. A. JOHNSON,
Pres. Wesleyan College.

SYRACUSE, N. Y., June 13, 1888.
"Compound Oxygen did so much for me."
F. C. JOSLYN.

UTICA, Miss., July 18, 1888.
"I most cordially recommend your Home Treatment." MRS. THOS. H. LEWIS.

JAMESTOWN, N. Y., June 30, 1888.
"Compound Oxygen has benefited me."
No. 33 Main St. WM. H. PROUDFIT.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 331 Montgomery St., San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, December 29, 1888.

After all, it looks very much is if De Lesseps's grand project, the Panama Canal, had collapsed, so that the "Big Ditch" is likely never to be dug or at any rate not by those who have already buried so much money in it. The originial stock of the company was $60,000,000 in shares of $100 each or thereabouts in French money, the face value being 500 francs per share. De Lesseps promised that the work should be done for between $125 000 000 and $170,000,000 and that the canal should be opened on Jan. 1. 1889. The funded debt now amounts to $350,000,000 and the outstanding obligations to $50,000,000 more, and not much more than one-third of the work is completed, while the engineers can't furnish even proximate estimates of the sum required to finish it. There are 800,000 shareholders, most of them poor French people—chiefly economical artisans and farmers, who, remembering the brilliant success of the Suez Canal, and deceived by the alluring talles of De Lesseps and his coadjutors, time after time entrusted then savings for investment in the ditch. Moreover, they were tempted by large interest on their money from the very first, though it wasn't earning a cent, the interest being taken out of the capital. Probably the investors will lose every cent. Not long ago the shares sold at a premium—at over 500 francs each—now they are going down at 117 francs. After failing in various other schemes for raising money, DeLesseps, some months ago, after much pleading and threatening, obtained permission from the French Government to issue 400,000 fresh Panama bonds in the shape of a lottery loan. A little over a fortnight ago it was found that only a little over 180,000 of the bonds could be put off on the public, and as it was agreed that the money should be refunded unless all were taken, this has been done. Efforts have been made and are still being made to induce the Government to guarantee interest on the loan as the only means of floating it, but it is hardly likely to do this. It is already too much involved in the matter, and a guarantee of a loan would involve the ultimate completion of the project by the Government at a ruinous cost, in defiance of the unequivocal assurance it gave our Government in 1880 that it would continue a purely private business. It is very unlikely that our Government would permit a canal across the Isthmus to fall under the control of any European Government contrary to the "Monroe Doctrine" and with much danger to our commercial and national safety and welfare. Efforts are being made in France to find some expedient for continuing the work to the end, but none has hitherto been discovered. About 2,000 workmen have been discharged, but about 9,000 are still plodding along. Boulanger has availed himself of the Panama collapse to seek fresh adherents among the discontented elements of all kinds. He writes a letter sympathizing with De Lesseps and blaming the Government. A meeting of 4,000 Panama share-holders in Paris adopt the same policy. In fact, all the stockholders who have spoken do the same. Boulanger's popularity is growing. Although already a Deputy, he will contest the seat for Paris made vacant by the late occupant. Gen. Montauban, a man of great influence in civil and military life, has come out solidly in his favor, and how to defeat his party at the next elections is sadly puzzling the Government.

Deserving of Confidence.—There is no article which so richly deserves the entire confidence of the community as BROWN'S BRONCHIAL TROCHES. Those suffering from Asthmatic and Bronchial Diseases, Coughs, and Colds should try them. They are universally considered superior to all other articles used for similar purposes. The late Rev. Henry Ward Beecher said of them: "I have never changed my mind respecting them from the first, except I think yet better of that which I began by thinking well of. I have also commended them to friends, and they have proved extremely servicable."—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, December, 29, 1888.

OVER 2,362,500 pounds of butter have been made during the year in the 63 creameries in Connecticut, bringing in a revenue of about $600,000.... ...There are 2,800 members of the Michigan Anti-Horse-thief Society, and during the past year they have not had a cent's worth of property stolen..... The International Exhibition of horses, asses, etc., to be held in Paris in 1889, has been fixed definitely for the 1st to the 10th of September. The prizes have been largely increased, and the highest for the best horse in the exhibition will be 10,000 francs.....The Nebraska State Beekeepers' Association will meet at Lincoln, January 9, 10 and 11.....The Ontario Beekeepers' Association will meet at Owen Sound, Ont., January 8 and 9..... It is said that Mr. J. B. Haggin, the California millionaire and sportsman, has paid $50,000 for the Kentucky three-year-old gelding, Proctor Knott, which so highly distinguished himself on the race-course during the past year.... .....The Twenty-Second Annual Meeting of the Minnesota State Horticultural Society, in joint session with the Minnesota State Amber Cane Association, is to be held at Market Hall, Minneapolis, Minn., Tuesday, Wednesday, Thursday and Friday, January 15, 16, 17, and 18, 1889..... The Vermont Legislature has granted $1,000 to the Vermont Dairymen's Association, and appointed a commission to study the whole dairy subject of the State..... John E. Wood, proprieter of the Knickerbocker Stock Farm, near Middleton, N Y., died the other day of pneumonia, aged 62. It was he who founded the Knickerbocker Ice Company when he was a young man.....Just before Christmas, Smith's Falls, Ont., Canada, shipped 200 tons of dressed poultry to the Boston market in 20 refrigerator cars over the Canadian Pacific R. R. They were entered at the Custom House as worth $45,000.. .....Farmers in various parts of the country are beginning the cultivation of the indigo plant, which forms a very important feature of Chinese agriculture. The indigo fern is one of the seed-pod varieties of plants, with a stock and leaf not unlike the fish geranium, but of darker green in color. It is very hardy, easily cultivated, and unlike many of our native products, is never attacked by insects..... Professors H. E. Stockbridge and William P. Brooks have arrived here from Japan, where they have for some years been connected with agricultural teaching. The former is at once to become Director of the Indiana Agricultural Experiment Station, and the latter to become Professor of Agriculture in the Massachusetts Agricultural College, of which both are graduates .....At the meeting of the Mass. State Grange, at Westboro last week, Henry A. Barton Jr., of Dalton, was unanimiously elected Master to fill the unexpired term of Arthur A. Brigham. He is 37, the sixth Master, and an extensive dairy and fruit farmer.....

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING DECEMBER 29, 1888.

E. A. T.—F. A.—A. B. A.—F. G D.—N. H. W., thanks. —H. C. G.—H. H.—J. H. C.—J. M. F.—D. T.—F. W. W.—T. T L.—J. McF., thank you.—S. N. F.—M. J. G.—I. & W. H.—W. B.—J C., thanks.—L. C. S.—M. M. A.—M. P. —A. N.—W G. S —Mrs. Neel, potato received.—W. H. R., tomato seeds received.—J. T. P.—H. G. W.—P. H. S.—F. A. B.—H. C.—C. M. L.—A. F.—J. L.—J. H. S.—F. A. H.—J. S. McF.—J. O.—J. N. P.—S. D.—F. J. I.—A. T —M. L. F.—A. G. L.—T. H H.—P. M. A.—T. H. H.—R. B —P. H.—J. A. F.—G. W. H.—G. F.—E. J. M.—G. P. C.—H. C.—H. H. W.—J. N. B.—E. C. F.—F. H.—O. L. H.—E. E. B —A. F. H.—P. H. J.—I J. B.—I. K. F—C. C. A.—H. S. B —A. W.—F. S. W —I. D. C.—H S & Co.—N H.—E W.—D. T.—W. A L.—M. C. L.—Dr H. W.—Mrs. M. L. H.—R. M.—W. C. A.—J. A. C.—M. C.—S C. G.—O. S. —T. W.—J. D. W.—H. A. —.—A V. M.—W. B —E. A. F. —L. F.—M. A. C.—J. S. F.—C. H. S.—A. C. W —E G. H. —S. S. H.—R. L. R.—G W. S.—C. L. T.—A. C. E.—S. M. F.—M W.—E O. E.—O. R.—H. D. P.—F. B K.—J. C. D. C.—S. M.—F. M. P.—S R. G.—B. M.—I J. N —P. S.—W. C. A.—E. J. B.—A. W.—P. G.—W B. H.—C. R.W.—J. M. R.—D. B. C.—A. N.—A. B. S.—J. M. R.—L. W. McE.—H. W. S.—J H. F., thank you.—L G. More, yes —H. R. M. —M. N,—J. C.—E. A. F.—N. B.—M. B.—J. R. B.—H. B. C. —S. O.—B. W. H.—M. B.—E. W.—K. D.—J. K. S.—L. A. D.—M. O. C.—S. O.—A. H., thank you for suggestion.—F. O C.—M. B.—E. A. F.—D. D.—J. C.—M. N.—T. C. N. —H. W. S.—S. C.—B. W. H.—A. B.—R. C.—E. W.—K. D. —J. K S.—L. A. D.—M. O. C.—W. M. D.—R, A. C —E. M. C.—J. M. W.—A. H.—H- M. D.—T. H - M. M. C.—F. M. S.—C- C.—M. H.—M. B.—E. A. F.—F. W. W.—E W. —H. O N.—N. J. L.—M. A. P.—E. H.—P. S.—M. A. Y.—H. O. N.—E. C.—M. B.—G. E. H.—J. W. H.

WIRE NETTING FENCES.

THIS style of fencing has been in use for many years in a limited way, but in the last five or six years thoulands of miles of it has been put up. It has proved to be the best fence for all purposes that has yet been tried. Sedgwick Bros., of Richmond. Ind., are large manufacturers of these excellent fences, and will send catalogues to all applicants. The RURAL NEW-YORKER takes pleasure in inviting its readers to write to them, referring to this paper.—*Adv.*

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, January 5, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	6¾	6¾	.....
Strict Ordinary	7⅛	7⅛	.....
Good Ordinary	8 3-16	8 7-16	.....
Strict Good Ordinary	8 11-16	8 15-16	.....
Low Middling	9¼	9⅜	.....
Strict Low Middling	9⅜	9¾	.....
Middling	9¾	10 1-16	.....
Good Middling	10 1-16	10 1-16	.....
Strict Good Middling	10 5-16	10 5-16	.....
Middling Fair	10 11-16	10 15-16	.....
Fair	11 5-16	11 9-16	.....

STAINED.

Good Ordinary	6 9-16	Low Middling	8 5-16
Strict Good Ord	7¼	Middling	9 3-16

POULTRY-LIVE-Fowls, near-by, per lb, 11@12c; fowls Western, per lb, 12@13c; roosters, per lb, 6@6½c; turkeys, per lb 10@12c; ducks, western, per pair, 65@85c; geese, western, per pair, $1 40@1 75; chickens; nearby, per lb. 11@42c; do, western, 11c.

POULTRY.—DRESSED—Turkeys, dry packed, good to choice, per lb, 12@14c do do, common to fair, 9@10c; do, iced, dry packed, choice, 11@12c, Fowls, western, packed, choice, 8@9c; do, nearby, do do, 8½@10c; do do, western, iced, dry picked, 9c; do do do, scalded, 8@9c. Squabs, white, per doz, $2 75@$3 00; do, dark, do, $1 75@$2 00. Chickens Philadelphia, dry packed, 14@15c, do Jersey, do, choice, 11 12c; do nearby, do, good, 10@11c; do Western, do do, 9@10c; do do, iced, good to choice 8@10c. Ducks, nearby, choice, per lb, 13@14c; do do, good, 12@13; do Western, good, 11@13c. Geese, Western, good, 10@11c

GAME.—Woodcock, per pair, —@—. Partridges, per pair, 60c@$0 90; Wild Ducks, Canvas back, per pair, $4 00@$5 00; do, Red Head, do, $1 00@2 00; Grouse, do, 75c@$0 90, Wild Ducks, Mallard, do, 60@75; do, Teal, do, 25@40c; Quail, per doz, $1 50@$2 25;

HOPS.—State, new, best, 21@22c: do, prime, 19@20c; do, low grades, 17@18c; do do, 1887, best 11@13 do do do, fair and good lots, 10@12c; do do, common, 12@13c; do do, old, —@—c; do, California, new, 22@23c; do do, State, old, —@—c; California, new, choice, 24@26c; do best, old, 13@14c; do, good, 12@—c; do, common, 9@11c

HAY AND STRAW.—Choice Timothy, 95@100c; do good do, 85@90c; do medium, 70@80c; shipping, 60@65c; do, Clover, mixed, 60@65c. Straw.—No. 1, rye, 80@85c; short do, 55@60; oat, 40@50.

BEANS.—Marrows, new, $2 50@—; new mediums, choice, $2 05@2 10; pea, $2@—; red kidneys, $2 50@—; white kidneys, choice, —@—; foreign, mediums, $1 35@1 55; California Lima, $3 00@$3 05; green peas, new, $1 55.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 5@5¼c, and farmers' grades at 4¼@4½c. CHESTNUTS quoted at $1 75@$2 50 per bushel. HICKORY NUTS quoted at $1 50@$1 75 per bushel.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Long Island, per bbl, $2 00@$2 10; Maine, per bbl. $1 5@——; State, per bbl, $1 15@1 75; Sweets, per bbl, $1 25@2 75. State Onions, Orange county red, per bbl, $0 90@1 00; Cabbages, Long Island, per 100, $1 50@4 00; Onions, Connecticut red, per bbl, $1 25@$——; do do, white, per bbl, $2 75@$3 75; do do, yellow, per bbl. $1 00@—; do State, do, do, $1 00, @—. Turnips, Russia, per bbl, 40@70c. Cauliflower, per bbl $2 50@3 50; Celery, per doz. bunches, 75c@—; Kale, per bbl, 25@50c; Spinach, per bbl, $1 00@$1 50.

FRUITS.—FRESH.—Apples, Pippin, per bbl, $1 50@$2; do, King, do, $1 50@$2 25; do Snow, do, $1 50@$2 00; do, Baldwin, $1 00@1 50; do, Greening, $1 00@$2 00; do, common, $1 25@$1 40. Pears, Dutchess, per bbl, $4 00@4 50; Virgalieu, per bbl, $4 00@$5 00; do, Vicar, do, $2 50@$3 00; do, Kieffer, do, $3 00@$4 50. Grapes, Delaware, per lb, 2@7c; do, Catawba, do, 3@4; do, Concord, 2@4c; do, Niagara, ——c Cranberries, Cape Cod, choice to fancy per bbl, $7 00@7 50; do do, fair, per bbl, $6 00@$——; do do, per crate, $2 00@2 50; do do do, frosted, do, $2 50@$3 50; do, Jersey, do, $1 50@$2 15. Quinces, per bbl, $0 50@$1 25. Florida Oranges, best, per box, $1 75@$3 00; do, good lots, $2 50@$2 50; do lemons, best, $3 00@3 50; do do, common, per box, $1 00@$2 50

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 6¾@8c; do do, old, 5@7c; do do, new, common to prime, 5¾@6½c; do sliced, new, 4@5¼c; do, quarters, choice, 5@5¼c; do, coarse cut, 4@4¼c. Cherries, new, 13@15c. Raspberries, new, 20@22½c. Blackberries, 5½@5¾c. Huckleberries, 12@13c. Peaches, Delaware, evaporated, peeled, 17@21c; do do do, unpeeled, 8@9½c; do, North Carolina, sun-dried, peeled, 9@12c. Plums, 7½c.

PROVISION MARKETS.

NEW YORK.—PROVISIONS.—PORK.—New mess, 14 40@14 75, short clear, 16 00@$17 75. Extra Prime mess, $14 00; prime do, $15@15 50, and family mess, $15 75@16 00. BEEF—India Mess, in tierces, $21@23 Extra Mess, in barrels $7 50@8 00 Packet, $10 50@$11 50 per bbl, and $13@$13 50 in tierces; Plate, $10 50@11 50; Family at $12 50@$16. HAMS -$13 00@$14 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 9¾c; Pickled Hams, 9¼@10c; pickled Shoulders, 9c; Smoked shoulders at 9¼c; do Hams, 10@11c. Dressed Hogs.—City, heavy to light, 7¾@7¾c. Pigs, 8½c. LARD.—City steam, $7 80; December, $8 30; January, $8 12; February, $8 04; March, $8 04; May, $8 32; June, $8 06; South America, 10c.

BOSTON.—PROVISIONS firm and steady. New Mess Pork, $16 75@$17 00; Old Mess Pork, $16 00@$16 25; Extra Prime, new, $15 75@$17 00. LARD, $9 75@$10 50.

PHILADELPHIA, PA.—PROVISIONS.—Potatoes steady; Early Rose, 45@50c per bush.; Burbanks and White Star, 35@43c. Provisions were steady, in moderate demand. BEEF.—City family, per bbl. $10 00; do do, packets, $9 50; smoked beef, 11@12c; beef hams, $14 00@15.00. PORK.—Mess, $17 00@$17 50; do Prime Mess, new, $16 50; do, family, $18 00@18 50; Hams, smoked, per lb, 12½@13½c do, S. P., cured in tierces, 11@11½c; do do do, in salt, 10½c; sides, clear ribbed, smoked, 11c; shoulders, in dry salt and fully cured, 10c; do, do, smoked, 10c; Shoulders, pickle cured, 9½c; do do smoked, 10@10½c; bellies, in pickle, 10½@11c; do breakfast bacon, 11½@12½c LARD.—Steady; City refined, 10½; do steam, 10@10¼c; butchers' loose, 6¼@6½c.

CHICAGO.—MESS PORK.—$13 50@13 62½ LARD.—$8 09@8 10 per 100 lbs; Short Rib sides (loose), $7 25; dry salted shoulders, boxed, $7 37½; short clear sides, boxed, $7 50@$7 62½.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER.—Creamery—State, pails, best 21@29c, do do, tubs, best, 33@34: Pennsylvania, best, 33@34; Elgin, best, 39@40; Western, best, 30@31; do prime, 29@31; do good, 26@28; do poor, 19@21; do June, good to best, 16@23. State—Dairy, half-firkins, tubs, best, 27@28c; do do, prime, 23@26c; do do fine, 19@21c; Welsh tubs, fine, 24@26; do do, good, 21@23; firkins, best, 23@24c; do prime, 21@22c; do fine, 18@21c. Western—Imitation Creamery, best, 24@26c; do, fine, 22@24c; Western dairy, fine, 26@27c; do fair, 20@22c: do, poor, 14c; 15c; do factory, fresh, best, 22@25c; do, prime, 18@20@ do, good, 14@16c; do, poor, 11½@13½c; do, June, 18@.5c

CHEESE—State factory, September made, 11½@11¾c; do, October, fancy, 11@11¼c; do, fine, 10¼@.0½c; do; fair and good, 9¼@9¾c; Ohio, flat, prime, 11@11¼c-do, good, 9¾@10¼c; skims, light, 8½@10½c; do, medium, 7@8c; do, full, 3@3½c.

EGGS.—Near-by, fresh, 21@23; Canadian, fresh, 20@22c; do, ice house, 10@20—c; Western, best, 22@23c; limed 18@19c.

PHILADELPHIA.—BUTTER steady. Pennsylvania creamery extra, at 34@36c; Western creamery, extra at 16½@17c. B. C. and N Y. creamery extra, 17c; Western factory 14@15c, packing butter, 11@12c. Eggs—Were firm Pennsylvania firsts, 27@28c; Western firsts 18@19½c; Cheese—steady; demand fair; New York full cream, at 9@9¼c. Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

BOSTON.—Butter firm; Western extra Creamery, 25@26c; Eastern extra Creamery, 25c. Cheese steady. Eggs steady; Eastern extras 22c; Michigan extras 20½@21c; Western firsts at 19c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was quiet and steady; Elgin creamery, 39@41c; choice choice Western, 33@37c. choice dairy, 25@30c; common to fair, 18@22c. Eggs firm at 22@23c.

GRAIN MARKETS.

NEW YORK.—WHEAT.—No. 2 Red quoted, $1 00¾@$1.06, elevator, $1 02 afloat; $1 01½@$1 03¼ f. o. b, store and afloat. No. 3 Red, 95c. No. 2 December, 99⅝c@$1 00⅜; do January, 99⅝c@$1 00⅝; do February, $1 01⅛@$ 02⅛; do March, $1 02⅛@$1 03⅝; do April, $4 04⅛@$1 05¼; do May, $1 05@$1 06 5-16; do June, $1 04⅞@$1 05¾; do July, $1 00@$1 01. RYE.—Western quoted at 50 61c, State, 62@63c. CORN.—Ungraded Mixed at 38@48c. Rejected, 36@36¼c; Steamer Mixed 42¼@42¾c; elevator, 43½@44c, delivered; No. 3, 38¼@39c, elevator, 39½c, delivered; No 2 46@46¼c elevator, 47@48c delivered; Steamer, White, 41½@42c; No. 2 December, 46¼@46½c; do January, 45⅞@46¼c; do February, 46@46¼c; do May, 45⅝ 45⅞c OATS.—No. 3, 29½@29¾c; do White, 31¾@32c; No. 2, 30¼@30¾c; do White, 34⅜c; No. 1 White, 33c; Mixed Western, 29@32c; White, do, 33@36c; No. 2 January 30¾@30⅞c; do February, 31¼@31¾c; do May, 33¼@33½c; No. 2 White, January, 34¼@34½c. do February, 35@35¼c; No. 3 White, January, 32c; do February, 32⅜c.

CHICAGO, Ills.—No 2 Spring Wheat, 103@104⅛c; No. 3 Spring Wheat, 87@97c, No. 2 Red, 103@104¼c. No. 2 Corn, 35½c No. 2 Oats, 25⅞c. No. 2 Rye, 50½c. No. 2 Barley, nominal. No. 1 Flax Seed, $1 52½. Prime Timothy Seed, $1 50.

PHILADELPHIA, Pa.—WHEAT—No. 2 Red for December, 101¼@101¾c; do January, 103⅛@103c; do February, 104½ 105c; do May, 109⅛@110c. RYE dull and lower No. 2 Pennsylvania, at 63c. CORN firm and steady; No. 3 Mixed, 48c, Old No. 2 Mixed, in 20th st. elevator; 50c do, in grain depot 53½@54c No. 2 Mixed for December 43¾@44¼c; do January, 43¾@44¼c, do February, 44@44½c; do for March, 44@45c; do for May, 44½@45¼c. OATS.—Receipts moderate and market for car; lots ruled firm and steady; Rejected White at 30½c Ungraded White, 31c; No. 2 White, 33@33½c; No. 2 White, in 20th-street elevator, 35c; No. 2 White, in grain depot, 35½c.

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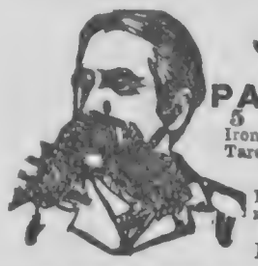

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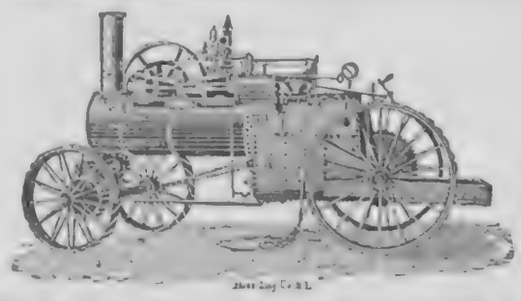

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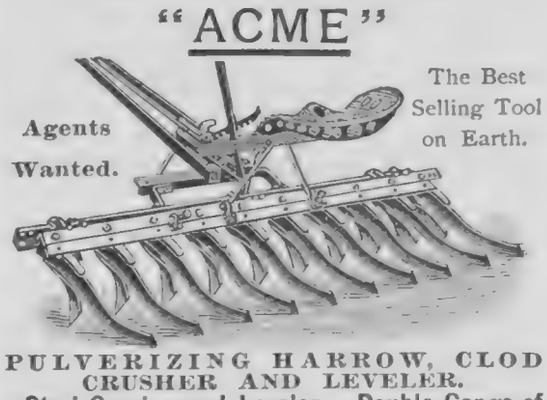

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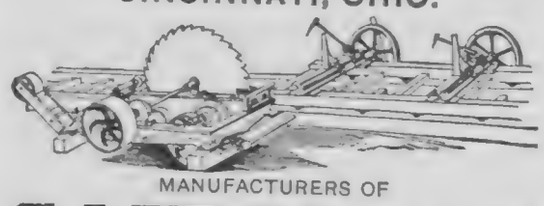

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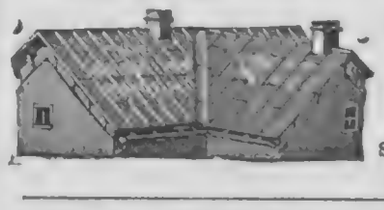

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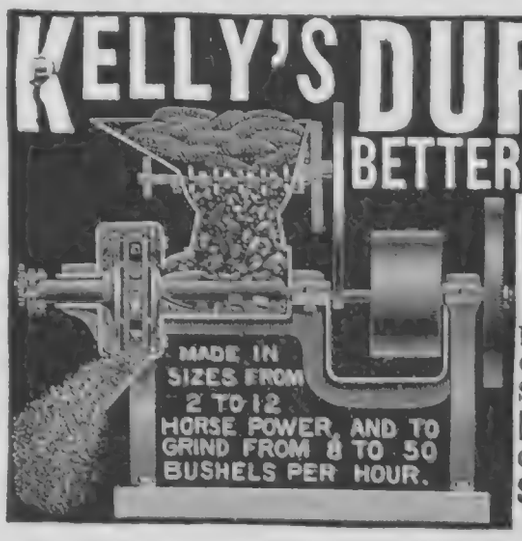

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Literary.

THE DRUM LAKE EASTER SERVICE.

A story of the Michigan Pine Woods.

BY HERBERT W. COLLINGWOOD.

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"AN you said 'e 'ad a futer did you Bill?" "I did that, mum, which I'll leave it to Parson, mum." Thus appealed to, the Rev. Mr. Grayling testified to the truth of Mr. McKelvey's statement.

"So 'e 'ave Bill, so 'e 'ave"—was Mrs. Mc Kelvey's consoling remark.

I hardly think it wise to attempt to disprove any of Mr. McKelvey's claims in regard to the "futur" of his son and heir. As the young man was some thirty years the junior of Mr. Gray, that cynic would be obliged to reach a very ripe old age in order to enjoy more "futur."

Mr. McKelvey went at his work with the air of a man who had still plenty of fight left in him. He drowned imaginary Jack Grays in the hot dish-water and rubbed the lie out of him with his towel time and again.

The "fool" had been so much interested in this discussion that he had not noticed the visitor who came in with Mrs. McKelvey. It was only when he walked up to the stove after the question had been decided, that he noticed a little girl sitting by the cradle. He started at the sight of her. It seemed to him that he had never seen such a pretty little thing before.

The hair, bright as gold, fell in a tangle down over her neck and face. Her great blue eyes were wide with wonder at the strange things before her. The little ragged dress could not conceal the beautiful little form. The minister sat down by the stove to watch her.

Where had he seen those great eyes before? Had they not looked in at him through that window upstairs? The yellow curl in his pocket seemed to give a great throb as he thought of it; but he fought the feeling down. It was not often that he noticed children, but this one seemed to fascinate him in some way. "Come hither, little one"—he said at last beckoning to the child. She came and stood by the stove and looked wonderingly up in his face.

"What is your name?" he asked, stroking the mass of curls back from her eyes. The little thing did not seem to understand him. She only opened her eyes wider than ever at the question. How like the others they were!

"What is your mamma's name then?" asked the minister. "Sarcy Sall"—answered the little girl, as her eyes fell.

"Ye musn't talk about her mother, Parson," broke in Mrs. McKelvey hastily—"she hain't a good woman, Parson, an 'it hain't fer such as ye ter talk h' about 'er. Come 'ere, Mamie"—she added with a strange tenderness—"come 'ere and git yer supper." She had formed a high chair by placing a little cricket upon one of the common chairs, then she brought out from the pantry, for her visitor, a small, gaily-painted plate and a tiny cup, which had been bought for her own little girl who now lay in a grave under the snow.

The child ran away from the Parson at Mrs. McKelvey's invitation and the good landlady lifted her to the top of the high cricket. Mamie held up her little mouth to be kissed, and then began her supper, with Mr. McKelvey to do the honors in his best style.

Mrs. McKelvey's eyes glistened as she came over to whisper an explantion to the Rev. Mr. Grayling. "'Er mother is dying, sir. She 'ave been a h'awful bad woman, but she can't live much longer an' I won't see 'er starve sir—no matter what folks dooes say"—and Mrs. McKelvy bristled defiantly.

I doubt not that if Drum Lake had defended Sarcy Sal, Mrs. McKelvey would have been her most bitter assailant, but as Drum Lake society had long since closed its doors against the aforesaid person, Mrs. McKelvey was her only champion.

"Who wouldn't take care of such a dear little creter, bless 'er dear little 'art?" and even brave strong-minded Mrs. McKelvey wiped her eyes on her apron, thinking no doubt of the other little girl who used to sit in the same place years ago.

But crying will not prepare breakfast for hungry boarders, and such memories will never wash dishes. So Mrs. McKelvey seemed to think, for, after blowing her nose in a most suspicious manner, she went at her work with an energy that made it fairly tremble in its boots.

The "fool" sat and watched the group around the table. You or I would have been satisfied ter watch Mrs. McKelvey. But the minister hardly noticed her even when she went to the pantry with a long row of cups under her chin forming a most dangerous angle down over her ample breast. He was watching the little girl.

Mr. Mc Kelvey was giving evidence of great powers of entertainment. He could make himself extremely agreeable to his guests if he chose, and already he and little Mamie were wonderful friends. He would wink at her in the most knowing way over the dish-pan, or play "bo-peep" behind a tin plate, till the little girl would throw back her head and laugh so merrily that Mrs. Mc Kelvey would come to the rescue with, "Now, Bill, 'ow you h'act."

But Mr. Mc Kelvey did not speak to his little friend, for he knew he would only frighten her if he did.

I wonder what made the "fool" do it. He promised himself to burn the ribbon and curl, but he was like other men after all. There is something about such things that begs us not to destroy them, even when we know it would be better to put them in the flames. Perhaps the Rev. Mr. Grayling thought it would be about the same to give the ribbon away as to burn it. Perhaps the little tangle of golden hair touched him. No matter what the motive was, he pulled the ribbon slowly out of his pocket, and walked over to the little girl.

"She ought to have her hair confined, let us try this band"—he said, holding out the faded token.

Mrs. Mc Kelvey hastily dried her hands, and tied the ribbon around the head of the smiling little girl. Then she stepped back to view her work. "H'aint it putty" she cried delighted "Where did 'e git it Parson?"

"I—I—have had it in my possession for—a—some time," stammered the "fool."

Mr. McKelvey came and lifted Mamie from her chair and carried her over to the looking-glass so that she could see herself. "'Mazin' putty, 'mazin' putty," he criticised in a hoarse whisper that was entirely new to the minister. It was his tone for conversation with children.

Mamie was wonderfully pleased with her present. She raised herself on her small toes when Mr. McKelvey put her down in the hope of obtaining another peep at herself. Mr. McKelvey, at the risk of prolonging his work till morning, came every two or three minutes to hold her up for another inspection.

At last Mrs. McKelvey decided that it was time for Mamie to go home. The little girl pouted a little at this announcement, but did not refuse when Mrs. McKelvey told her that her mother might need her. She went all around to say good-bye. She kissed Mr. McKelvey and pulled his beard and his nose in the most friendly manner, and kissed the baby just as heartily as if no insinuations had ever been cast upon his nose. When she came to Mrs. McKelvey that kind woman gathered her up in her arms, and rocked back and forth with her for a moment. "I love you," said the little girl, "and *you*, too,"—seeing the disappointed look on Mr. McKelvey's face—"and *him*," she added doubtingly, pointing to the minister.

"Bain't e goin ter kiss the Parson?'—asked Mrs. McKelvey, when her violent demonstrations of affection were over. Mamie walked bashfully up to the minister, and held her mouth up to him. He bent down to meet it, and she gave him a kiss that sent his blood tingling as it had not done for years.

Mrs. McKelvey stood at the kitchen window after Mamie went out, to see that the child reached her home in safety. She was satisfied at last to see the little girl run in at the door of a small house far down the street. Then she went back to her work with an extra energy to make up for lost time. While she is busy let us go in with Mamie for a moment.

The room that Mamie entered was very plain. A cooking stove at one side, a few chairs, a rough board table made up all the furniture. There was no light except for the moonbeams that came drifting in, at the window, and formed long patches of light on the floor.

(TO BE CONTINUED.)

Miscellaneous Advertising.

DESSICATED FISH.

Something New for Poultry Food. The fish is cooked, pressed, dried and ground. Will keep any length of time. To be mixed with the soft feed. **TRY SOME.** Send for my Circular. Also send for Book on **Successful Poultry Keeping,** 31 pages with illustrations. Book is **free.** Send 2-cent stamp to pay postage. Address

C. A. BARTLETT, Worcester, Mass.

FINEST Card Sample Book ever sent out 2 cents. Star Importing Co., Cadiz, O.

"WHAT'S KILLING US."

THE WONDERS WHICH THE MICROSCOPE REVEALS.

ONE of the leading scientific publications states that many people are now using the microscope to discover the real cause of disease in the system, and to detect adulterations of food and medicines.

This wonderful instrument has saved many a life. A microscopial test shows, for instance, the presence of albumen, or the life of the blood, in certain derangements of the kidneys, but medicine does not tell us how far advanced the derangement is, or whether it shall prove fatal.

The microscope, however, gives us this knowledge:

Bright's disease, which so many people dread, was not fully known until the microscope revealed its charactertistics. It greatly aids the physician, skilled in its use, in determining how far disease has advanced, and gives a fuller idea of the true structure of the kidney.

A noted German scholar recently discovered that by the aid of the microscope, the physician can tell if there is a tumor forming in the system, and if certain appearances are seen in the fluids passed, it is proof positive that the tumor is to be a malignant one.

If any derangement of the kidneys is detected by the microscope, the physician looks for the development of almost any disease, the system is heir to, any indication of Bright's disease, which has no symptoms of its own, and cannot be fully recognized except by the microscope, he looks upon with alarm.

This disease has existed for more than 2,000 years. It is only until recently that the microscope has revealed to us its universal prevalence and fatal character. Persons who formerly died of what was called general debility, nervous, breakdown, dropsy, paralysis, heart-disease, rheumatism, apoplexy, etc., are now known to have really died of kidney disease, because, had there been no disorder of the kidneys, the chances are that the effects from which they died would never have existed.

As the world becomes better acquainted with the importance of the kidneys in the human economy by the aid of the microscope, there is greater alarm spread through the communities concerning it, and this accounts for the erroneous belief that it is on the increase.

As yet neither homeopathist nor allopathist is prepared with a cure for deranged kidneys, but the world has long since recognized, and many medical gentlemen also recognized and prescribe Warner's safe cure for these derangements, and admit that it is the only specific for the common and advanced forms of kidney disorders.

Formerly the true cause of death was discovered only after death. To-day the microscope shows us, in the water we pass, the dangerous condition of any organ in the body, thus enabling us to treat it promptly and escape premature death.

As the microscope in the hands of laymen has revealed many diseases that the medical men were not aware of, so that preparation, like many other discoveries in medicine and science, was found out by laymen, outside the medical code; consequently it comes very hard for medical men to indorse and prescribe it. Nevertheless, Warner's safe cure continues to grow in popularity and the evidences of its effectiveness are seen on every hand.

Some persons claim that the proprietors should give the medical profession the formula of this remedy, if it is such a "God send to humanity," and let the physicians and public judge whether or not it be so recognized.

We, however, do not blame them for not publishing the formula, even to get the recognition of the medical profession. The standing of the men who manufacture this great remedy is equal to that of the majority of physicians, and the reason that some doctors give for not adopting and prescribing it—viz: that they do not know what its ingredients are—is absurd.

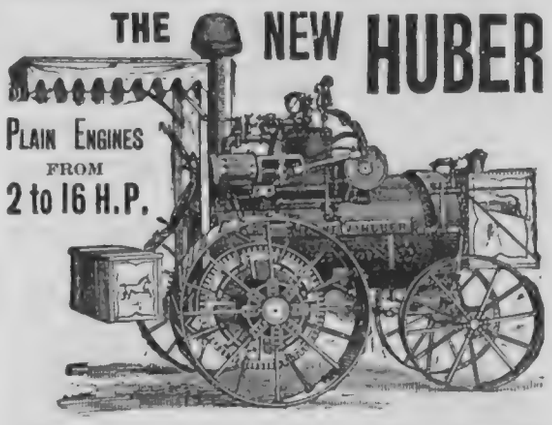
Mr. Warner's statement—that many of the ingredients are expensive, and that the desire of the unscrupulous dealer or prescriber to realize a large profit from its manufacture by using cheap and injurious substances for those ingredients would jeopardize its quality and reputations; and that Warner's safe cure cannot be made in small quantities on account of the expensive apparatus necessary in compounding these ingredients—seems to us to be a reasonable and sufficient one.

The universal testimony of our friends and neighbors, and the indisputable evidence that it, and it alone, has complete mastery over all diseases of the kidneys, is sufficient explanation of its extraodinary reputation, and conclusive proof that it is, perhaps, the most beneficient discovery known to scientific medicine since the microscope revealed to us the all important nature of the organs it is designed to reach and benefit.

Pennsylvania Agricultural Works, York, Pa.
Farquhar's Standard Engines and Saw Mills.
Send for Catalogue. Portable, Stationary, Traction and Automatic Engines a specialty. Warranted equal or superior to any made.

Address A. B. FARQUHAR & SON, York, Pa.
Corn Shellers, Fodder Masticators, Grist Mills, etc.

THE NEW HUBER



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INSECTS ON FRUIT TREES
Can be destroyed by spraying the trees with London purple dissolved in water. For full directions and improved outfits for **Hand** or **Horse Power** at **BOTTOM CASH PRICES,** address **FIELD FORCE PUMP CO.** Lockport, N.Y.

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ORIGINAL IN ALL ITS DEPARTMENTS.

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It will please all progressive rural people and all people sensible enough to have rural tastes.

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"The RURAL NEW-YORKER has done more to promote the true interests of agriculture in the way of experimenting, than all of the experiment stations put together."

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"The RURAL NEW-YORKER is one of the ablest and best papers on rural affairs in all America. It is thoroughly practical in every department, and its constant efforts in the introduction of new seeds, plants, and implements after the most careful tests commend it to the confidence of every tiller of the soil."

From the Farm Journal, Philadelphia, Pa:
"The RURAL NEW-YORKER is the best farm weekly in the world."

From the Inter-Ocean, Chicago, Ill.:
"Readers of the Inter-Ocean do not need to be told that the RURAL NEW-YORKER is one of the best horticultural and farm weeklies published."

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"The RURAL NEW-YORKER is the best agricultural paper in the country."

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Specimen Copies, Posters, Premium Lists free. Price $2.00 a year. In clubs of five or over, $1.50.

Considering the cost of its publication, the R. N. Y. is the cheapest agricultural paper published.

The Rural NewYorker,
34 Park Row, N. Y.

CATALOGUES, ETC., RECEIVED.

PURITY AND VITALITY OF SEEDS.—Bulletin No. 59 of the North Carolina E. S., has an article describing some tests made to determine the value of seeds sold in N. C. Here are a few of the conclusions reached by the Director of the station.

"Except in regard to the larger sorts of seeds, such as cotton, corn, peas, etc., the seeds of field crops are rarely sold entirely free from an admixture of weed seeds. Indeed, most of the weeds now so troublesome in our cultivated fields are European plants, which were originally introduced and widely disseminated in packages of imported seeds.

"While the entire exclusion of weed seeds from packages of clover, grass and small grain seed is not to be expected, the farmer is justified in demanding that the real worth of the seeds he purchases shall come up to a reasonable standard. A number of samples of grass and clover seeds recently tested at this Station fall so far below such a standard as to convey the impression that they have been adulterated, with fraudulent intent, by the seed growers.

"The seeds of no two species of plants are exactly alike in size and weight; and, since manufacturers now supply automatic cleaning machinery of very great perfection, there can be no excuse for putting upon the market such seed, for instance, as a sample of Red-top examined, which contained 37.50 per cent. of impurities; and of the pure seed only 53 per cent. were capable of sprouting; or, in other words, in the sample there were only 44.92 per cent. of pure, vital seed.

"Carelessness on the part of the grower, and a desire to furnish cheaper seeds than competitors, have much to do with the marketing of such impure and semi-worthless seed. The seedsmen are, however, not wholly to blame in this matter.

"So long as farmers and gardeners demand cheap seeds, regardless of quality, just so long will persons be found to cater to the demand, even though they are obliged to debase the quality to make up for the low price. Very cheap seeds should be always viewed with suspicion. They are usually the most expensive things that the farmer can buy."

It is stated in the bulletin that the following standard of purity and vitality of agricultural seeds has been established by the Royal Agricultural Society of England; English seedsmen are required to guarantee their seeds in accordance with this standard.

1. "That 95 per cent. by weight of the seeds shall be true seeds of the species claimed."

2. "That of the pure seed not less than 90 per cent. shall be capable of sprouting in the case of the clovers, the cereals and Timothy grass. Of Foxtail grass not less than 20 per cent., and of all other grasses not less than 70 per cent."

METHODS OF ANALYSIS OF COMMERCIAL FERTILIZERS, CATTLE FOODS, ETC., ETC.—Bulletin No. 19 of the Department of Agriculture is issued under the above title. It contains the report of the meeting of agricultural chemists held last August.

PEACH "YELLOWS."—This is to be the subject of a bulletin now being prepared by the U. S. Department of Agriculture. It is to certain 200 pages with 40 illustrations. All horticulturists who want it, should send their names to Commissioner Colman at Washington, D. C.

ALABAMA EXPERIMENT STATION.—Bulletin No. 2 is devoted to the record of some experiments with wheats. A list of the trees of Alabama is also given. Why do not some of our Southern stations do something about classifying varieties of cotton?

THE AMERICAN MAGAZINE.—This excellent magazine is published in this city. It ranks with the very best in quality while its price is below the others. Those who examine it will find an excellent chance to secure a set of the complete works of Charles Dickens.

POULTRY FOOD.—Canned goods have long been used in the family, but it is a new thing to put up canned meats for poultry. The Hollis Dressed Meat and Wool Co. 20 North Street, Boston, Mass., put up a good quality of fresh meat, carefully cooked, ground fine, seasoned, hermetically sealed in tin cans of convenient size. The meat is ground fine and can be readily mixed with soft food. It is sold at a reasonable price and is likely to have a very large sale among the better class of poultry raisers. Send for circulars, etc.

THE POST OFFICE CLUB.

OUR parrot has been putting in double time of late. The end of the year is always the time for settling matters. It is like a traveler on a strange journey pausing to get his bearings. Life is a journey. We are all moving on. Some are pushing bravely ahead, lending their best energies to the task of working out some settled purpose. Others are simply drifting with the tide. Some of the folks in our neighborhood seem to have fallen behind the tide a little, but still they move. The seasons change us. Each one brings something and takes something away. The record is never left even. About New Year's time we hear it all.

The parrot has been listening carefully. He took it all in. Last night he delivered his opinion.

He mounted the top of the stovepipe. It would be too hot for him there but for the fact that the thick layer of dust is a poor conductor of heat. We got the condensed opinion as follows:

"Farmin' don't pay!"

There were several men who were all ready to applaud this sentiment, but the minister got in ahead of them.

"Why, my very dear friend," he said, "you are surely misinformed. The power for good that lies in agriculture is simply unbounded. The farmer feeds the world. Civilization dates from the farm. The farmer stands as the great balance wheel in public affairs—the conservator of morality, sobriety and order."

The parrot listened attentively to this eloquent outburst. He put his head on one side and croaked,

"Farmin' don't pay!"

"Don't pay, eh?" said John Cheeseton, "That's where you make a fool of yourself. I make it pay. I keep a dairy herd. My wife makes the best butter in this country and I can sell every pound of it at 30 cents a pound, summer and winter. I have paid my mortgage and made a good start. I use the best cows and the best tools I can get."

The parrot did not seem to feel insulted at all. He merely scratched his beak with his claw and croaked,

"Farmin' don't pay!"

"Of course it don't pay as *you* farm" said Job Go-ahead. "You sit here and croak and mutter over this stove till your muscles all get tired. What business *ever* pays till you get out and push it. You are like a man stuck in the mud. He stays on the seat and groans. He won't get out till he puts his shoulder to the wheel and pushes the wagon out of the old rut. "Farmin' don't pay?"

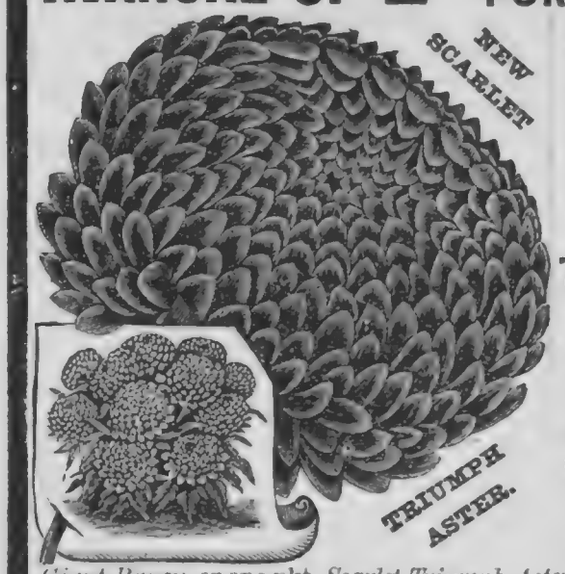
"No, and it never will as *you* do it. You keep on croaking and scratching yourself. You can't scare anybody that has got good sense." And the parrot could only say—

"Farmin' don't pay!"

SMALL PICA.

Trees, Seeds and Plants.

OUR MANUAL OF EVERYTHING FOR THE GARDEN



For 1889 is the handsomest and most complete Garden Guide ever published. It is really a book of 140 pages, size 9 x 11 inches, contains *three colored plates*, and illustrations of all that is new, useful and rare in **Vegetables, Flowers, Fruits** and **Plants,** with plain directions "How to grow them," by

Peter Henderson

This manual we mail to any address on receipt of 25 cents (in stamps). **To all** so remitting 25 cents for the manual, we will at the **same time** send free by mail, **in addition,** their choice of any one of the following **Splendid Novelties,** most of which are now offered for the **first time,** and the price of either of which is 25 cts.: One packet of *Autumn King Cabbage*, or one pkt. of *Yosemite Mammoth Wax Bean*, or one pkt. *Delmonico Musk Melon*, or one pkt. *Giant Pansy*, or one pkt. *Scarlet Triumph Aster* (see illustration), or one pkt. *Sunflower, "Silver and Gold,"* or one plant of the climber *Blue Dawn Flower*, or one plant of the *White Moonflower* or one *Bermuda Easter Lily*—**on the distinct understanding,** however, that those ordering will state in what paper they saw this advertisement.

PETER HENDERSON & CO. 35 Cortlandt St., NEW YORK.

A CURE FOR HARD TIMES

100,000 HEARTS MADE GLAD

BOLEY'S NORTHERN SPY POTATO

THE GREATEST DISCOVERY SINCE THE ADVENT OF THE EARLY ROSE

6 TO 8 HUNDRED BUSHELS TO THE ACRE UNDER 47 SWORN TESTIMONIALS

100,000 HOMES MADE HAPPY

SEEDS AT YOUR DOOR AT WHOLESALE PRICES. Having grown a large quantity of the following choice and valuable seeds the past season, and in order to introduce them, with our wonderful new Potato, into 100,000 homes, we make the following **UNPRECEDENTED OFFER: For $1.00** in postage stamps or money, we will send a box post-paid, containing one packet each of the following NEW AND IMPROVED SEEDS, and **one medium-sized tuber of BOLEY'S GREAT NORTHERN SPY POTATO,** the greatest discovery since the advent of the EARLY ROSE. **Wilson's Early Blood Turnip Beet,** earliest and best. **Bastian's Half-Long Winter Beet,** best variety. **Wilson's Best of All Pole Beans,** good for snap-shorts in winter. **Wilson's Best of All Bunch Beans,** rich, tender, and buttery. **Early Advance Cabbage,** best and earliest. **Wilson's Premium Flat Dutch Cabbage,** best late variety. **Early Green Cluster Cucumber,** best for table use. **Wilson's Long Green Cucumber,** best for pickles. **New Cory Sugar Corn,** the earliest in the world. **Wilson's Large Evergreen Sugar Corn,** sweet and delicious. **California or Golden Pop Corn,** best variety. **New Self-Blanching Celery,** extra quality, needs no banking up. **Wilson's Extra Early Lettuce,** heading sort. **Jordan's Gray Monarch Watermelon,** very large, sweet, and sugary. **Miller's Cream Nutmeg Melon,** best flavored in cultivation. **Improved Round Yellow Danvers Onion. NEW SPANISH KING ONION,** 3-pound onions from seed first year. **Abbot's Improved Sugar Parsnip. Ruby King Pepper,** finest, largest, sweetest pepper ever seen. **JUMBO, of CALIFORNIA,** the largest pumpkin in the world; has weighed 400 lbs. **Early Rosy Gem Radish,** best and earliest. **New Chartier Radish,** best summer variety. **White Pineapple Squash,** good for pies, keeps all winter. **Early Summer Butter Squash. Turner's Hybrid Tomato,** best and finest ever introduced. **NEW ZEALAND FIG TOMATO,** excellent for preserving; cured and dried, equal to the best figs. **Munich Strap-Leaf Turnip,** tender, sweet. **Golden Globe Ruta Baga,** best for table use. **VEGETABLE PEACH,** easily grown from seed first year; makes pies or preserves equal to the best peaches. Sample packet of **Wilson's True Leaming Corn,** the earliest and best field corn in cultivation. **New Mammoth Zinnia,** double as a Dahlia, bright as a rose. **Washington Asters,** very large, all bright, beautiful colors. **Giant German Pansies, best mixed,** in all **33** FULL-SIZED PACKETS, with DIRECTIONS FOR CULTIVATING, and **ONE whole POTATO** for **$1.00**

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Always Ready for Use.

Sows Clover, Timothy, Red Top, and all kinds of Grass Seeds, any quantity to the acre, as evenly and accurately as the Best grain drill. Sows 20 to 40 acres a day. Manufactured by

Indispensable for sowing in windy weather. *Send for circular*

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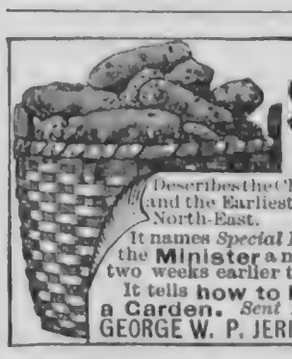

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Describes the Choicest **Seed Potatoes** and the Earliest **Seeds** all from the Cold North-East.

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GRAPE VINES, FRUIT and ORNAMENTAL TREES

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Among the latter we introduce the **CRAWFORD STRAWBERRY.**

YOU WANT IT! It combines more good qualities than any other. If you want PURE TESTED SEED or anything for ORCHARD, GARDEN, LAWN or PARK, send for our

VALUABLE FREE CATALOGUE

containing about 140 pages with hundreds of illustrations. **IT'S A BEAUTY! ORDER DIRECT. Get the best at honest prices,** and save all commissions. Thirty-fifth year; 24 greenhouses, 700 acres.

THE STORRS & HARRISON CO., Painesville, Lake Co., O.

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Come, Fellow Farmers!

It is the good things and the new things you want, Here is a Catalogue full of them! Do you want tested seed, raised from stock selected with extra care, grown from the best strains, got from the originators? I aim to have mine just such. Do you want new varieties that are really good, and not merely novelties? I aim to have mine such. Do you want seed that the dealer himself has faith enough in to warrant? I warrant mine, as see Catalogue. Do you want an exceptionally large collection to select from? Mine is such. Do you want them directly from the grower? I grow a large portion of mine—few seedsmen grow any! My Vegetable and Flower Seed Catalogue for 1889 **FREE to everybody. JAMES J. H. GREGORY, Marblehead, Mass.**

FOR THE **MARKET GARDEN**

Are acknowledged to be **THE BEST.** *No failure when they are used.* You cannot afford to be without our Illustrated **CATALOGUE FREE** containing all the **NOVELTIES** in **Vegetables, Flowers,** and **Field Crains, Oats, Wheat, Potatoes,** etc. Address

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THE DINGEE & CONARD CO'S **ROSES AND SEEDS**

We offer *postpaid* at your own door, the LARGEST STOCK of ROSES in America, *all varieties, sizes and prices,* to suit all wants. **ALL THE FINEST NEW ROSES,** New Hardy FLOWERING PLANTS, New CLIMBING VINES, New Summer FLOWERING BULBS, and JAPAN LILIES, New CHRYSANTHEMUMS, GLADIOLUS and TUBEROSES, The Wonderful NEW MOON FLOWERS, New GRAPES, New and Rare **FLOWER and VEGETABLE SEEDS.** Goods sent everywhere by mail or express. *Satisfaction Guaranteed.* Our NEW GUIDE, 110 pages, handsomely illustrated, FREE TO ALL *who write for it.* It will pay you to see it before buying.

THE DINGEE & CONARD CO., Rose Growers and Importers, West Grove, Pa.

Humorous.

ROSES.

THE PLAINT OF THE BELLE.

I DREAD the very sight of them:
My tired eye closes
At glimpse of blush, or bud, or stem
Of proffered roses.

To sniff them all, I'd need, at least,
A dozen noses;
I'm sure my nostrils have increased
From smelling roses.

For too much of a good thing, mark,
One's mind disposes
To base ingratitude—then, bark—
Don't send me roses!

I know this edict seems unkind;
It so forecloses
The satisfaction that men find
In buying roses.

Why can't they guess that woman needs
For all her poses,
Gloves, laces, slippers, fans and beads
Far more than roses?

Ah, no! My future's door ajar
But this discloses—
More men who struggle from afar
To bring me roses.

—*Madeline S. Bridges. in Puck.*

IN everybody's mouth—Teeth.—*Texas Siftings.*

HEARTS may be honest, but they are always on the beat.—*Woodruff News.*

A SALT codfish-breakfast and a rubber-overcoat will keep a man dry through a long storm.—*Gloucester Advertiser.*

THE American eagle will now please step aside for a week or two and give the American turkey a chance.—*Omaha Republican.*

EXTREMES MEET when the tips of your half-frozen ears brush against the sealskin cap which is burning your brain into a fever-heat.—*Puck.*

WHEN a Boston girl has occasion to make use of a well-known proverb she says "Sheol is macadamized with excellent purposes."—*Boston Courier.*

AN unsuccessful lover was asked by what means he lost his divinity. "Alas," cried he, "I flattered her until she got too proud to speak to me."—*Indiana Farmer.*

LITTLE PASSENGER (on incoming ocean steamship)—"Mrs. Mc Ginnis, what do folks mean by saying there is a wake behind the vessel?" Mrs. McGinnis—"Sure, now isn't it a wake since we started."—*Philadelphia Record.*

FIRST OYSTER (at a Church Fair): "There were three of us at first. What has become of the other one?" Second Oyster (inclined to be slangy): "He's 'in the soup.'"—*Philadelphia Record.*

"DAD can tell the time without looking at his watch," said little Johnnie. "When I ask him in the morning, he says it is time to get up, and when I ask him at night he says it is ime to go to bed."—*New York Sun.*

EDITOR: "That little item of yours yesterday reminded me strongly of some of Shakespeare's work. "Funny man (blushing): "Ah, thank you. It is kind of you to say so. In what respect, may I inquire? "Editor (coldly): In age, principally."—*Washington Post*

"DID that lady buy anything?" asked the jeweller of his new boy, as the lady in question left the store, apparently in a temper. "She did not. She asked me for an old gold breastpin, and I asked her if she took this store for a junk-shop. Then she went out."—*Jewellers' Weekly.*

MRS. JASON: "Jehiel, I've had the awfulest scare. I opened the door and found the worst-looking tramp I ever saw. Why, I could'nt say a word for ten minutes." Mr. Jason: "Do you know which way he went? I would like to get his make-up if it had that effect."—*Terre Haute Express.*

"YOU must feel some satisfaction in eating the turkey that chased you around the yard a week ago," said the minister. "He was a very saucy bird when alive, wasn't he?" "Yes," replied little Johnnie, "and ma said when you got through there would be nothing left but the cranberry sauce."—*N. Y. Sun.*

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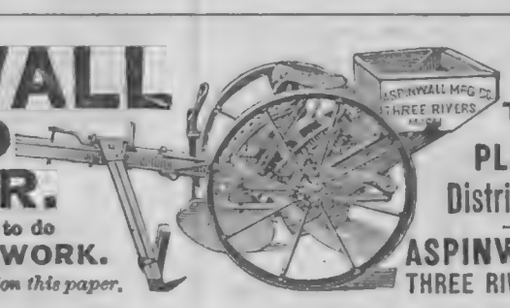

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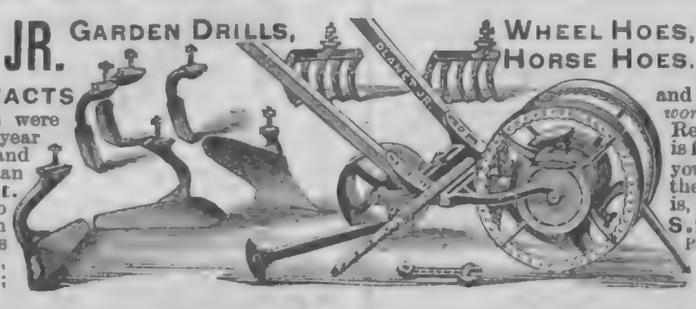
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII. NO. 2033 NEW YORK, JANUARY 12, 1889. PRICE FIVE CENTS. $2.00 PER YEAR.

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HOW HE LOVED HER. (With the R. N.-Y.'s Apologies to Puck.) Fig. 4.

The Vineyard.

THE NIAGARA GRAPE.

1871 and 1889.

DID THE R. N.-Y. DECEIVE ITS READERS?

THE RURAL'S ESTIMATE OF THE NIAGARA IN 1871.

THE ESTIMATE OF EXPERTS TO-DAY

The Value of a Candid Rural Journal That Tests Novelties and Renders Impartial Reports.

Estimates from Pres. T. T. Lyon, Pres. P. J. Berckmans, P. M. Augur, J. J. Thomas, P. Barry, T. V. Munson, N. Ohmer, Prof. J. L. Budd, W. D. Gunn, Sec'y G. W. Campbell, Sec'y E. Williams, Mrs. Jack and Thaddeus Smith.

IT was in the fall of 1879 that a vine of the then unknown Niagara grape was sent to the Rural Grounds for trial—the only vine which the company cared to intrust to outside hands. Our earliest estimate of this now famous grape is our estimate to-day, viz.: that its chief good points are size, showiness of bunch, vigor of vine. We pronounced it of no better quality than the Concord. The R. N.-Y. popularized the Niagara, it may truly be said, just as its impartial reports of all new small fruits have either killed or popularized most of the varieties that have been introduced during the past 10 years. This is as it should be. The labor, time and care required to plant and observe novelties are quite beyond the editors of most farm papers. They are, therefore, constrained to make their reports from what others say. Below we give the estimate of many of our leading grape authorities and vineyardists. Our readers will draw their own conclusions as to the actual value of the Niagara as well as of the wisdom of the course the R. N-Y. has pursued regarding it. Our record is before our readers and we could not recall it if we would.

Our illustration is engraved from a photograph of three bunches raised and presented to the R. N-Y. by Secretary E. Williams, of Montclair, New Jersey.

FROM CONN. STATE POMOLOGIST P. M. AUGUR.

The Niagara is one of the most beautiful of our white grapes. In quality it is about equal to Concord. It is hardly as reliable for a sure crop as the latter. When it makes a good yield I think it will bring a larger price per pound or ton. In respect to its hardiness, it is not equal to the Concord with me. It has been a very vigorous grower but has killed back somewhat. In this respect it is not equal to the Pocklington which has proved perfectly hardy. In some localities it fufills all that has been claimed for it. The reliable varieties are Delaware and Brighton for red, with a good promise for Ulster; Moore's Early, Concord and Worden for black; and Hayes, Pocklington and Niagara for white, with some allowances for unfavorable seasons and localities.

Middlesex Co.

FROM PRESIDENT T. T. LYON, OF MICHIGAN.

I think the Niagara as a white grape, occupies a somewhat higher position than does the Concord as a black grape. It is yet too soon, perhaps, to determine how far its popularity as a market grape will be affected by its color. Time should be allowed to dissipate the feeling of novelty before this can be determined. At present it commands more attention and better prices in the market than does the Concord, added to which is the fact that it is somewhat more productive. It is considered to lack slightly in hardiness of vine, but not to an important extent, save, perhaps, in unusually trying localities. The originator and introducers have been conservative in their claims, so far as commendations of the Niagara are concerned, and I think it must be conceded that their assurances in this respect have been pretty fully realized. I know of no variety that, to-day, promises better as a profitable market grape. Its strongest competitors, aside from the Concord, are Worden, Pocklington, and perhaps Brighton. How far the Empire State and Diamond will be able to compete for the leadership, in this respect, is a question for the future.

Van Buren Co.

FROM PRES. P. J. BERCKMANS, OF GEORGIA.

The Niagara grape as regards size and appearance of bunch may be classed among the profitable market varieties, providing it can be kept free from rot. If in sound condition it will bring double the price of Concord. The vine is hardy, a vigorous grower and quite free from disease. It does not in my opinion fulfill what was expected from it, owing to its general tendency to rot, and its conduct during the past season was especially disastrous in that respect. Delaware is far more valuable for market. Even the Ives and Concord have paid better than the Niagara during the past season.

Richmond Co.

EROM J. J. THOMAS OF UNION SPRINGS, N. Y.

The Niagara grape combines several good qualities, each moderate in itself. It is a strong grower, and a great bearer, has handsome and attractive bunches, and, unlike the Concord, it bears long conveyance by railway. People differ as to its quality, some preferring what they term its "aroma," while others dislike it for its "foxiness." It would be just, however, I think, to place it as high in quality as the Concord. Its showy appearance assists it well in selling in the market; and I observe that it commonly stands higher in the market reports than most of our common varieties. Like other grapes, it is liable to rot, and in some localities it has been badly injured. At present, it is a good grape to plant for market, as it grows fast, and bears soon; but many large vineyards having been planted, the market in a few years may be over supplied.

FROM PRES. P. BARRY, ROCHESTER N. Y.

I regard the Niagara as a valuable white grape—I consider that it ranks among white grapes about as Concord does among black. It is hardy, vigorous and productive and quite free from disease here. I think it substantially fulfills the promises of its originators. The Niagara for a time, while it was a novelty, commanded the highest market price; but the price has dropped pretty low and will go lower. Black and red grapes will hold the price better. For profit I would rather plant here, in W. New York, Concord and Worden; but the Niagara is worthy of a place in all market plantations here.

Monroe Co.

FROM ANNIE L. JACK, OF CANADA.

The Niagara is a profitable grape, but it is somewhat injured here by late and early frosts. It is more valuable than the Concord because it brings a better price per pound in our market while bearing fully as well. It is free from disease so far, but many of the vines die every winter in exposed places, and it needs protection. It fulfills the promises made in its behalf as to fruit-bearing; but this season it failed to ripen its fruit thoroughly. It has no recent competitor for market because the public demand a big, showy grape; otherwise the Duchess would stand first for market as it does in quality and keeping properties, and it is also prolific even when the vines are young.

Province of Quebec.

FROM T. V. MUNSON, OF TEXAS.

My opinion of the Niagara grape is that the vine is vigorous and productive. The clusters and berries of a white grape are very attractive when not attacked by rot, which devastates it even worse than it does the Concord. In quality it is about the same as Concord except that the musky, "foxy," Labrusca flavor is more intense, a serious objection in the estimation of lovers of pure-flavored grapes, especially of the Vinifera species. Yet numerous Americans love the "foxy" odor and flavor. I think it not superior to Concord in any way. The above qualifications render the Niagara as a white grape nearly an equal of the Concord as a black grape, and hence, where the Concord is very successful and profitable, the Niagara will likewise prove of about equal worth. As to fulfilling its originator's promises, I cannot say, as I have made no close comparison of the result with such promises. In fact, I do not well remember what was promised exactly; but I can safely venture the assertion that it has come as near to fulfilling what was claimed for it as any of the new varieties recently introduced. Owing to freedom from rot and to earliness the Delaware, Ives, Moore's Early, Worden, and Cottage I think fully as profitable or more so. In regions where rot does not prevail, the Brighton will be more profitable, being a handsome red, early, of fine quality, and prolific. The Woodruff promises to do still better with less rot, and (if an originator's opinion is worth anything in this connection), I feel confident that I have produced several varieties which will outrank those mentioned, and yet there is large room for improvement ahead before we can equal numerous Vinifera varieties in beauty and quality. Still I am confident that we have native material which will some day be brought to equally as high a standard of excellence. There is a new grape, Progress, (some think it a synonym of the Norfolk), which ripens about with the Cottage or Worden, and is of the same size in berry and cluster as the Catawba, and fully equal in quality, with less sour pulp, and not so subject to rot so far with me. It is a clear, lively red, about as handsome as the Delaware, and I believe it will take a very high rank when known. The vine is very vigorous, hardy and prolific. As a fine late white grape, the Triumph is without a rival in the South.

Grayson Co.

FROM SEC'Y N. OHMER, OF OHIO.

I have not had the Niagara grape in bearing long enough to answer the RURAL'S questions satisfactorily. I think well of the Niagara, however, and believe that it and the Concord make a good team.

Montgomery Co.

FROM PROF. J. L. BUDD, OF IOWA.

The foliage of the Niagara does not meet the requirements of our summer heat and great aridity of air at times. The Concord is all right with us on suitable soil and its fruit matures in our climate more perfectly than at the East. The Niagara wholly fails east of the Missouri divide and on the loess soils of the Missouri slope it only succeeds partially. Mr. Silas Wilson, of Atlantic, who has had it on trial longest, has no words of praise for it. West of Lake Michigan it has not fulfilled the claims made for it. Concord, Worden, Moore's Early, Telegraph, Cottage, and Pocklington are far more profitable on the prairie soils.

Story Co.

FROM W. D. GUNN, OF ULSTER CO. N. Y.

The Niagara has acquitted itself so well the past season, both in product and prices, as to enhance its value very materally in the opinion of growers hereabouts, and it is taking first place among the whites as a market grape. It is more valuable as a white grape than the Concord as a black. It is as good a bearer as the Concord, while it has brought prices far above those of that variety, and somewhat better than those of other white varieties. In this locality it has proved hardy and vigorous, when necessary care has been given. Heavy soils, with considerable admixture of clay, have been found better adapted to its growth and fruiting than sandy or gravelly loam, or even slaty soils. It has less rot than some and more than other varieties,—and is comparatively free from mildew. It has very nearly come up to the claims made in its behalf. Perhaps in drier seasons than the past, less favorable to the development of rot and mildew, it may entirely fulfill the promises of its originators. According to the outcome of the past season, I know of no more valuable grape for market.

FROM SEC'Y GEO. W. CAMPBELL, OF DELAWARE, OHIO.

I have seen no reason, with further observation and experience, to modify or materially change the opinion which I have heretofore expressed of the Niagara grape through the columns of the RURAL. As to whether it is more or less valuable as a white grape than the Concord as a black, I should say that for general use, it will be found less valuable. At the same time, for special localities which are well adapted to its culture, it may be found even more so. The reasons for this may be found in the answer to the questions about its hardiness, vigor, freedom from disease, etc. In hardiness, or ability to endure severe cold uninjured, it does not compare favorably with the Concord; for I have found the wood and fruit-buds of the Concord remaining unhurt under the same temperature and exposure during the winter, that injured the wood and killed the fruit-buds upon the Niagara. I would not think it safe to plant the Niagara for profit without giving it winter protection, in any locality where the thermometer is liable to fall much, if any, below zero, during the coldest seasons. In vigor of growth, and also in productiveness, I regard it as fully equal, if not superior to the Concord, under favorable circumstances, and not more liable to rot in sections and seasons where that malady prevails. The Niagara is more subject to diseases of the foliage than the Concord; but not more so than Brighton, Jefferson, and the best of Rogers's Hybrids, or the Catawba. As to whether the Niagara fulfilled the promises made by its originators, I should say that in some respects it has; in others, I think it has not. The representations as to the vigor and productiveness of the vine appear to have been fairly realized. But the statements that it was "as early as Hartford Prolific," and that it would endure "35 degrees below zero" uninjured, were certainly not warranted. It seems rather slow in coming to perfect maturity, although it partially ripens and is often sent to market with the Concord, and those who have been accustomed to buy unripe Ives and Talman or Champion would, doubtless, call it good. I have, however, found it from one to two weeks later than the Concord in reaching its best condition; but it is then, to my taste, much better than the Concord, and it loses nearly all of that foxiness which is so prominent if it is gathered earlier and before it is really ripe. In my experience the vines have invariably suffered injury when left exposed on the trellis during the winter, if the thermometer has fallen to 10 or 15 degrees below zero. Thirty degrees below zero in my locality would kill every Niagara vine to the ground.

To mention what grapes are more valuable for market than the Niagara is more difficult, so much depends upon the situation and surroundings. For those places where grape growing is precarious, and where early-ripening, hardiness of vine and health of foliage are necessary to success, Moore's Early, Lady, Worden, Pocklington, Concord, and, perhaps, others of the pure Labrusca type would be more valuable. But wherever the conditions of soil and climate requisite for growing the Niagara to perfection can be found, or where the cultivator will give the necessary protection, and employ the preventives against diseases of the foliage and fruit, which recent discoveries and experiments have demonstrated to be practicable, I believe the Niagara will be found one of the most valuable and profitable market grapes yet introduced. The Empire State and the Pocklington are perhaps its most formidable rivals. In vigor of growth and hardiness in winter I have found little or no difference between the Empire State and the Niagara, though I thought at one time the Empire was the hardier vine. In health of foliage, the Niagara has always shown more mildew in unfavorable seasons. As to productiveness, the Niagara averages larger clusters, and larger berries, and I think the vines will carry a larger weight of fruit. Their period of maturity with me, has been very nearly the same, both requiring to hang longer upon the vines to attain their best flavor and highest character than is permitted by most growers. The quality of the Empire State is, to my taste, much superior to that of the Niagara, being entirely free from foxiness, and having something of the high and delicate flavor that pertains to the best foreign varieties. The Pocklington seems to have hardiness and health of foliage quite equal to the Concord, with great productiveness also, and some tendency to over-bear. Its growth has not been as strong as that of the Concord or Niagara, and a judicious and early thinning of the fruit by cutting out the small or imperfect clusters would be very desirable, and would result in better grapes, handsomer clusters, and better condition of the vines. The Niagara can usually be put into market a few days earlier than the Pocklington, though the latter ripens more rapidly, and arrives at its best condition. I think, quite as early as the Niagara. In quality there is not much to choose between the two; and of those who have tasted both in comparison, in my presence, the majority have preferred the Pocklington. This, however, would not agree with my own taste, as the Niagara, when fully ripe, retains less of the foxy taste and odor.

THE NIAGARA GRAPE. From Nature. Fig. 5.

FROM THADDEUS SMITH, OF PELEE ISLAND, CANADA.

My experience with the Niagara grape has not been long enough to enable me to form very positive opinions in regard to its merits. I planted 200 vines in the spring of 1884 and my knowledge of the grape comes from my observation of these vines and their fruit. My present opinion is that the Niagara is a hardy, strong-growing, productive vine, producing fruit of medium quality in large clusters and berries. In comparison with the Concord, it is not as vigorous a grower, nor as free from rot and mildew. I do not think that it will prove to be as popular over so large an area of country; but for the present it is likely to be the most popular white grape upon the market. It is very hardy—neither bud nor vine has ever been injured by cold here. It is a strong grower, but not as vigorous as the Concord, Empire State. and some other varieties. It is not entirely free from rot and mildew. My vines were somewhat affected by both this year, but were not injured enough to materially affect the amount of the crop. I gathered a little over a ton of sound grapes from my 200 vines on about 50 rods of land, or about at the rate of four tons per acre. Some of these would have done for shipping for table grapes, but as the bad ones would have had to be picked out, and the market was poor, I did not ship any.

The variety has not fulfilled the promises made for it by its introducers. They promised too much, probably too much for any grape. I consider the quality only second rate. But this is somewhat a matter of taste, as I have known persons to prefer to eat the Concord rather than any other grape, and there are some who like the sweetness of the Niagara regardless of its strong "foxy" flavor. A correct or cultivated taste can never give. preference to the Concord or Niagara over such standards of excellence as the Catawba, Iona and Delaware. The Catawba here, and some earlier grape, like Moore's Early or Worden, are more profitable; but this might not apply to other places.

Province of Ontario.

FROM SEC'Y E. WILLIAMS, OF MONTCLAIR, N. J.

The Niagara has fully met my expectations, for it was an untried venture when I planted and attended with some misgivings as all novelties are, but it has succeeded so well with me that I have no reason to regret having been called a lunatic for making my little venture. It is true the Niagara is not perfection in every respect as a white grape, (I did not expect that, neither do I expect to ever find a grape of any kind that will do equally well in all soils and situations in this broad land of ours); but it comes nearer that position than any I have tried, and, with me, stands head and shoulders above its competitors introduced at the same time. I consider it the most valuable white grape I have, and in comparison with my other white grapes, as regards size and beauty of berry and cluster, etc., all others are nowhere. The Concord has many competitors—strong ones too. The Niagara vines are apparently as hardy and vigorous as those of the Concord, but probably a little more liable to mildew and rot; but I have had Concords that rotted fully as badly as the Niagaras. These troubles—rot, and mildew—are the most serious difficulties I have to contend with; yet I have fought them with considerable success thus far, and I have hopes that we shall ere long be able to entirely overcome them. The hardiness of vines—which is generally understood to mean the ability to pass a winter of low temperature—is often dependent on freedom from mildew, as a mildewed vine will not stand the exposure that one will that has not been affected with this fungus. I cannot say positively whether the Niagara has come up to the claims made for it originally, without referring to the promises made at the time of introducing it; but if every novelty in the fruit line came as near "filling the bill" as the Niagara grape has, there would be little cause for complaint. I have said it was not perfect. Its chief fault—aside, of course, from its liability to mildew and rot—is its tendency to drop from the cluster soon after reaching maturity. Of course, this dropping is sometimes due to mildew, oftener perhaps than we suspect, but there appears to be, when it is fully ripe, a weakness of the grapes in holding on the peduncle. I sometimes think this is due in a measure to a condition of the vine which may be overcome, but I have not yet experimented sufficiently to decide. I have none that is more profitable. In my collection of over 50 varieties in full bearing the three *best* red, white and blue are Brighton, Niagara and Worden. This has been my opinion for the past three or four years, and I can't get beyond it yet.

Horticultural.

CHRISTMAS VEGETABLES.

WILLIAM FALCONER.

Frequent scarcity of good vegetables in the country; their abundance and excellence in cities; small profits for producers there, owing to competition and to the necessity of prompt sales; why supplying private customers in cities is generally impracticable; local vegetable growing for country villages a growing and profitable business; a supply there creates a demand; a notable case in point—from two acres of garden heavily mortgaged, to six acres free from mortgage and with abundant prosperous surroundings; a like success easily possible in every village of the country.

IT is a fact that many country folks are pretty ill off for green vegetables at Christmas time. True, they have cabbage in abundance and some celery and these are all very good in their way, but they do not furnish variety enough; our appetite craves for variety and our health is profited by it. In the matter of a variety of green vegetables in winter, city folks are a good deal better off than are country people, for, in addition to the vegetables furnished by our local market gardeners, fresh green vegetables are sent hither all winter long from Florida, and the other Atlantic Southern States. There is a current idea that city vegetables are stale, and that if one wishes for really nice, good, fresh vegetables he must go out into the country to get them. Well, nothing will dispel this idea better than a visit in the early morning to some of our metropolitan vegetable markets. Here will be found not only a large variety of all manner of seasonable vegetables, but everything is fresh and of superior quality and can be got at almost starvation (to the grower) prices. The stale vegetables get stale after they leave here. Truck gardeners get little enough for prime produce, but for inferior vegetables they wouldn't get enough to pay them for gathering and hauling them to market, let alone growing them. Don't regard the prices charged consumers by retail grocers as anything approaching the prices the poor gardeners get.

The market gardeners around large cities must seek a city wholesale market; their produce is large and perishable and they can't hold it over nor dilly-dally about selling it; they must sell it in bulk and just as soon as it is marketable. It is no use talking of drumming up a private connection and disposing of the crop directly to the consumers; if a gardener had 20 sons in the business with himself this might be all right; but he himself could not attend personally to every little detail of the business. The milkman has his regular customers for his milk, so too may the gardener for his vegetables, but customers don't want vegetables every day nor do they want the same sort of truck all the time, and to supply what they want takes too much time, patience and expense for the city market gardener. Then what about the hotels? Hotels go to market and buy at wholesale prices. Then how much better off would the gardener be for selling to them? Besides, no one gardener grows all the sorts of vegetables required by our hotels, nor would any hotel be likely to need everything the gardener has upon his wagon. This being so, what's the use of either of them making two bites of a cherry? Why shouldn't both go to the wholesale market? But in country towns and villages distant from large cities the case is different. There is profit—a big profit—in gardening at home. Don't growl about your sleepy village; don't complain because everybody has a garden of his own and won't want anything from anybody else's garden; don't scare yourself because there isn't a vegetable now sold in your village. Just consider these questions. In your village this day

Can you buy a dish of fresh spinach for your Christmas dinner?

Can you buy a dozen heads of prime celery?

Can you buy a dozen white-hearted lettuces?

Can you buy a dozen milk-white cauliflowers?

Can you buy a peck of Brussel's sprouts?

Can you buy a bunch of fresh, crisp radishes?

Can you buy a bunch of fresh young parsley?

Can you buy an eight months (only) old stick of horse-radish?

Can you buy a quart of green chives?

Can you buy a quart of fresh mushrooms?

Can you buy a bunch of green thyme, or green sage, or green mint or green chervil?

If you can buy any of these, is it grown right in your village or is it brought there from a distant city? If it isn't grown in your village, don't you think it would pay some of you to grow it there? And if you cannot buy it at all in your village, don't you think your village is pretty far back? Yes, and it is just your own fault. You can grow and supply your villages with these things, and you can make a deal more money by doing so than you can by growing corn and potatoes.

There is nothing fictitious about these vegetables at this time of year. I have every one of them here right now, and so can you have them at your home and make money out of them, and that, too, with no great exertion. And you haven't got the great expense of a team a whole day off at a city market, nor do you get the short wholesale figures for your produce; no, you get a fair retail price. But who would buy these vegetables if you had them to sell? Every mechanic and merchant in your village and even your next-door farmer-neighbor. You needn't shake your head and say you know differently—that I "don't know the kind of folk in these parts." We all know that supply creates demand. If these vegetables are not presented to your people, can you expect them to run around looking for them? No, for they won't do it. But you take half-a-dozen milk-white cauliflowers, fresh cut this morning, half-a-dozen solid-hearted lettuces, white, fat, crisp, and plucked to-day, half-a-dozen heads of celery, white-bleached to the tips, and so tender and crisp that when you'd bite a leaf one could smell it half a rod away; do you think there is a family in your village who wouldn't crave that basketful of vegetables for a Christmas treat?

But let me come right home to our own village here. Everybody hereabout has a garden and grows vegetables more or less, and at our principal stores vegetables in their season are exposed for sale the year round. Some of these are grown by the farmers around and sold to the stores, and what isn't raised hereabout has to be brought hither from the city, both supply and demand being moderate and modest enough. Four years ago one of our workmen having saved a few hundred dollars, bought two acres of land in the middle of the next village to this. The land cost him $1,000 an acre. He paid $200 down and gave a mortgage for the balance. Then he built a $500 house upon his land. And he set in to grow all manner of fruit and vegetables depending upon the village market alone. He worked from daylight till dark and even with lamplight. It was a little hard at first and the market was slim. It is only four years since he bought the place, but he now owns six acres there and has built himself a barn and greenhouses and many hot-bed frames. He has a horse and wagon and employs several men. His land is full to overflowing of everything likely to be required for furnishing the village folks' gardens—fruit-trees, grapevines, roses, etc., and three-fourths of his land is devoted to vegetables. He has formed a wide connection among the village people and he is yet unable to supply the demand—yes, the very demand that didn't before exist. He grows prime stuff and a good variety of it, and takes it around in his wagon and peddles it. Nothing is left over, everything is sold, and the people are asking for more. The people know now where they can get good vegetables, fresh-gathered the day they buy them, and they see and seek many a vegetable they never before passed a thought upon; they know the day the gardener comes around, for he has his days and his routes and his customers as the milkman or butcher has his, and they prepare for him accordingly.

And this man is making money fast, yes, more money than any farmer round about here. The people all know he is making money and they look upon him as a god send to the village, and now wonder how on earth they got along before he started business here. And apart from the mature vegetables he raises and sells in the spring time, he raises any quantity of egg plants, peppers, tomato, cabbage, cauliflower, lettuce, and other plants for sale. This too is a blessing to our village folks. Many of them much prefer to buy the young plants than to bother raising them themselves, and when they know they can get them right here, good and cheap, they plant freely and sorts they did not before try to grow. But isn't this bad for the gardener? Not a bit of it. He gets his chief supply in before and after the glut. He uses his brains as well as his hands. And now every one who wants anything in the garden line, naturally goes to this place. People are drawn to it, not only to get what they want, but also to see it; it is one of the most interesting spots in the neighborhood, always beautiful, neat and clean, and always blooming, and everyone who comes almost always sees something that he would like to have at home, and as everything is for sale, it means some pennies more.

Now in every village in the country haven't we got one or more farmers who could add just such an adjunct to their present business? You don't know how, you haven't got the experience, are lame excuses nowadays. You can raise cabbages, and sweet corn, and carrots, and beets and a host of other vegetables, just as well as anybody. And any one who knows this knows enough to start well. Use your brains; don't rush into the thing till you know the road: carefully note your successes and failures as you go along; be determined and persevering, and every step you take will be suggestive, and at the end of a couple of years I guess you will have learned from your own practice more than any one else could teach you.

Queens Co., L. I., N. Y.

Miscellaneous.

CORRESPONDENTS' VIEWS.

JAPANESE BUCKWHEAT ONCE MORE.—In the spring of '87 I bought one pound of Japanese buckwheat, sowed it on July 3, and harvested and thrashed 4½ bushels of very plump seed. This year, I sowed half a bushel and thrashed 30 bushels, and this though it has been a very poor year for buckwheat. One of my neighbors sowed about the same amount of ground with gray buckwheat and got only one bushel and three-quarters. As for bees not working on it, my bees worked on it continually both years. F. A. BLY.

Rising City, Neb.

Everywhere.

RURAL SPECIAL REPORTS.

Illinois.

ALEDO, Mercer Co., Dec. 24.—We have had very fine weather for the last two months. Corn is all gathered in very good condition and is selling at 23 to 25 cents per bushel; oats, 23 to 24; not much wheat is raised here; it sells at 80 cents. There is a good demand for stock cattle at 3 to 3½. There are a good many fat cattle here which have not been sold yet; prices are unfavorable for the holder. About half our fat hogs have been shipped at from 4½ to 4¾ cents per pound. All kinds of stock look well and there is plenty of feed. I hear some complaints of scarcity of water, for we have had very little rain this fall so far. The ground is frozen slightly at present.

C. N.

Indiana.

HARLAN, Allen Co., Dec. 23.—We have had a very fine fall this year for doing work. It has been dry and warm. There has not been rain enough to start the under-drains, although there have been some light showers, so that wheat looks tolerably well. We have had no snow yet, except some little flurries.

I am going to try to raise some potatoes on the Trench System next summer. S. M.

Iowa.

LIMA, Fayette Co., Dec. 22.—Farming here is mixed. Very few sheep, and a good many horses are raised. We farmers have done better this year than during the two last, as the crops have been better. We have had more rain, but not enough. Corn was a large crop, but some of it is soft. It is selling at 25 cents per bushel. Oats good in quantity, but not in quality: selling at 18 to 20 cents per bushel. Potatoes good in quantity and quality—25 cents per bushel. There is a large number of creameries in this county. Butter is worth 20 to 25 cents per pound; eggs 16 to 20 cents per dozen. We have had a splendid fall and winter so far; there has been no snow to speak of, and the weather has not been so cold as one expects at this time of the year. If we had more rain it would be good for the wells and springs. P. E. J.

Kansas.

WRIGHT'S P. O., Ford Co.—Three years ago I left the eastern part of this State for the southwestern part, and filed on 40 acres of homestead land two and a half miles from Fort Dodge and five miles northeast from Dodge City, near A. T. Soul's great irrigating canal. Nothing to speak of has been raised in any of the western counties of the State for the two past years, and it has been fully

demonstrated that there is no certainty of a crop of any kind without irrigation, for it is sure not to rain when crops most need moisture, and the hot winds burn up corn as a general thing; so, with hail, chinch bugs, hot winds and drought, this is the most miserable country that the sun ever shone on. The water was turned into the canal for a week or so last spring and every one thought he would raise a crop, but all at once the Arkansas river went dry and remained so all summer; but about two months ago the dam settled a number of feet and caught the undercurrent, and that soon filled the canal with water in abundance, so we poor grangers can get water all over our farms and next year will tell the story. If a success, this land is worth $100 per acre. C. L. S.

PLEASANT VALLEY, Lincoln Co., Dec. 17.—We hope for more rain next season than we have had during the past, so that we can raise at least enough to eat. For the last two years farmers have failed in everything in this section, and starvation or heavy indebtedness stares them in the face, all owing to the lack of a little rain at the right season. I don't see how any farmer can do without the RURAL. I'm sure it costs me nothing. The seeds alone have been worth more than the cost of the paper. Success to the RURAL!

H. R. M.

New Hampshire.

SOUTH SUTTON, Dec. 15—It has been a hard season for farmers in this section. A late spring, an early frost, and a wet fall damaged all the crops one half, except hay. Stock, too, is very low in price and there is no demand. All around here times are pretty hard with not much help and high wages.

We prize the RURAL very much indeed, and it brings to this home many pleasantly spent hours. H. B C.

New York.

FORESTVILLE, Chaut. Co., Dec. 21.—The past season has been one of mixed results. Grapes, which were a large crop, brought the farmers of this county over $800,000. By the way, the grape business has made rapid strides here for five years past. Land which a short time ago could have been had for a song, is now selling readily at $100 to $150 per acre. Potatoes and corn were good crops; oats fair; hay light; consequently fodder is scarce and high. A great many farmers are selling off their stock at low figures, which I fear they will regret doing when the dairy season opens in the spring. What can farmers do without the cow, the sheep and the ox? How is the fertility of the farm to be maintained? Can it be done with commercial fertilizers alone? Men who have tried doing so tell us no. Then, why sell the cow? It seems to me that farmers must be blind or out of their heads, who sell their stock thinking that by so doing they can sell all the products of the soil, taking everything off and putting nothing back, and yet hope to prosper. The cow is the great balance-wheel of the farm. Take her off, and the little wheels will soon stop still. It takes a long time to reclaim old, worn-out land that has been farmed by these anti-stock fanatics.

Brother farmer, do unto your farm as you would have your farm do unto you, and the rural crown of prosperity will deck your brow.

C. H. F.

ALTAMONT, Albany Co., Dec. 21.—Although I have been a subscriber for the RURAL for only about six months, yet I think it is the grandest paper of the kind that I ever saw. Altamont is a charming summer resort about 17 miles west of Albany, at the foot of the Helderbergh mountains. Farming in this section is rather mixed, hay and grain being the most important. Crops the past season were fair on the whole. Potatoes were a failure with some; apples in some parts of the county were plentiful.

Prices range about as follows—corn, 80 cents; oats, 43 cents; wheat, 85 cents; rye, 65 cents per bushel. Potatoes $1.25 and apples $1.50 per barrel. Hay from $10 to $14 per ton. Wages are fair; farm hands get from $17 to $20 per month. J. H. F.

Pennsylvania.

ELIZABETHTOWN, Lancaster Co., Dec. 24.—Farmers were able to plow this fall until December 13th. Scarcely any snow has fallen, and at present there is every indication that fair weather will continue at least to the end of the year. Butter is getting scarcer and higher every year in this vicinity, owing to creameries being built every few miles. These send teams out among the farmers to gather the cream and milk. One creamery alone at a small village called Ridgeville has seventeen teams employed. Butter is 33 cents per pound; eggs, 24 cents per dozen; lard, 11; wheat, $1 per bushel; corn, 55; oats, 35; potatoes, 50 cents. Tobacco, one of our chief products, has been nearly all sold, some selling as high as 20 cents per pound for Havana seed. Nearly every farmer slaughters four to eight hogs and one or more cattle for his own use, always turning some of the meat into pudding and sausage, which cannot be excelled and rarely equaled in quality by any other section of country. W. C.

EVANS CITY, Butler Co., December 25.—This has been a very wet fall and winter so far. Wheat was a fourth of a crop. Oats were good. Corn and potatoes full crops. Hay was only a half crop owing to drought in the spring. The acreage of wheat sown this fall was not so large as usual. This is a mixed farming country anyway. I like the RURAL very much; it gives good information on farming and everything else. J. H.

Vermont.

PERKINSVILLE, Windsor Co., Dec. 25—The past month has been one of exceedingly unfavorable weather. There has been no snow at all, excepting flurries, and traveling has been anything but pleasant on the frozen ground. Some snapping cold weather has been experienced, with high winds, and stock has suffered severely where the barns were not extra warm. Many of our farmers feel discontented because of the loss of the crops, but yet they have many things to be thankful for. No wood or lumber is moving yet, although much is being cut. Complaints are common against the ordinary dry wood. Unless dried under cover it is worse than green it is so badly damaged by wet weather. Even the wood worked up under sheds is faulty and moldy because of the dampness. The weather lately has been remarkably fair, but snapping cold. B. H. A.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.

PORK GROWING IN THE SOUTH.

W. K., Ontario, Kans.—I am thinking of going South to make a specialty of hog raising. After reading Henry Stewart's article on the Southern hog in a late RURAL, I want to know whether he refers to the Berkshire, Poland-China, Chester White, or Duroc-Jersey, or does he refer to the native rail-splitter?

ANSWERED BY HENRY STEWART.

The Southern hogs are unfortunate in their bringing up—so to speak—rather than in their progenitors. They are evidently descended from the best breed, the Essex and the Berkshire mostly, for the majority are black, or black with remains of the Berkshire points, viz., white feet and a white spot on the face. There are a good many of the sandy or reddish-brown kind which may be the descendants of the old Red Berkshire or the Red Jersey or Duroc breed or of both. Having been much neglected, poorly fed, or not fed at all, except on the mast, they are small, thin, and great eaters, although making but little growth for the food they eat. But it is a question after all, if they are not the best hogs under the circumstances in which they are kept and the most profitable. At first sight of these slab-sided, long nosed and long-legged creatures with big jaws and thin, long necks around which the cracked bells are hung by straps so they can be easily hunted up in the woods, I thought they must be wretched things and utterly unworthy of one's notice. But I have traveled considerably and have learned that it is not safe to despise the ways of the natives in any locality, "who are to the manner born," and perhaps understand their own affairs the best. And since then I have tested these hogs and have found them to be not only able to live where a high-toned, pure-bred, pedigreed pig would perish, but able to do well and make fair growth when well cared for. For instance, I purchased, as a test, a sow with seven small pigs for $7, and a boar for $5. These pigs ranged in a wood lot all summer, living on last year's acorns and chestnuts, together with grass and roots of various kinds. They did quite as well as any better pigs I have had on clover pasture. In the fall, I put up the seven pigs to fatten on boiled potatoes, bran, corn meal and skimmed milk, and made over 700 pounds of pork at an actual cost of two cents per pound. The meat can be sold now readily for 10 to 14 cents a pound, which has been the ordinary price for bacon not as good as this for some years past. This has been a bad mast year so that hundreds of pigs have died in the woods of starvation, which, however, is not unusual, at least the deaths, for, when mast is abundant, the pigs die of cholera, so that this experience, as regards the profi of feeding swine here, is not unusual at all. Last year I made an estimate of the cost of growing pork here, for the State Agricultura Department, and I put the cost at three cents per pound; while pork has always sold for five years past at from 10 to 15 cents a pound. With ordinary care in breeding these native pigs which seem fitted by nature for their environment, ranging them in the summer and fall and feeding some milk along with the mast when abundant, and with bran and corn when it is scarce, they will, I am sure, in spite of their naturally, or, more truly in fact, unnaturally poor and woebegone looks, make more profit than any other pigs in any other place I know of. As the South, and especially the mountain region of it, is especially well adapted for the dairy—I am selling butter for 35 cents per pound which does not cost, all expenses told, five cents—and pork growing will go exceedingly well with it by the use of skimmed milk, I am confident this business alone or combined with the dairy would afford a very handsome profit. There are many wild hogs, upon rough parts of woodland, which have escaped from cultivation, as might be well said, and which have never had any other food for years than the mast, the Bunch Grass and the roots, nor any other shelter than hollow trees and beds under shelving rocks—very good shelter, too, by the by. If the native hog does so well, I think civilized Berkshires, fed upon the easily grown clover pastures and the nuts in the woods with milk only added, in average years would furnish pork for less than two cents per pound. My $12 venture has given me $70 worth of meat, with the sow and boar on hand, and a second litter now weaned and worth, as they run, $14; the total cost has not been more than $3, and $3 more will carry the stock to next fall, when, with a good mast year and another litter due in the spring, there will be $100 in sight, with no cost except the feeding with skimmed milk. This is a true, unvarnished tale of pork growing in the South.

BITTER OR SALTY MILK.

W. H., Albion, Idaho.—My three-year-old Holstein cow had a calf when 22 months old, and has never thrived since. She has a good appetite but is very thin, and her milk has always had a bitter taste, and it is now salty in addition, besides being quite dark in color. She is fed good Alfalfa hay with a change to wheat and oat hay with a bucket of cut oats in the sheaf. What should be done for her?

ANSWERED BY DR. F. L. KILBORNE.

Bitterness of the milk may result from several causes. Perhaps the most common cause is that due to the change in the milk which often takes place during the last two to four weeks of the period of gestation. Cows usually dry off naturally a few weeks before coming fresh again, but a few cows, mostly heavy milkers, will continue the flow of milk up to the time of calving. In such cases the bitter or salty milk warns you that the cow is soon to be fresh again, and that she ought to be dried off as soon as possible. Dairymen usually dry their cows off at least four weeks before they are due to calve. Certain foods will give to the milk an unpleasant or bitter taste. In such cases the remedy is simply to give a change of food, or to reduce the quantity of that portion of the feed that gives the milk the undesirable flavor. Unhealthy, foul stables and surroundings may give a flavor to the milk even before it can be removed from the stable or milking yard. Particular attention should be given, not only while the milk is being drawn, but after it is set, to make sure that it is not exposed to the foul gases from putrefying animal or vegetable matter of any kind, or kept in close, foul quarters. Fresh milk is very susceptible to the presence of such odors and gases, and will readily absorb a sufficient quantity to acquire their odor or flavor. Disease of the liver in which there is reabsorption of the bile into the blood, may give a more or less bitter taste to the milk. In the present case we would advise drying the cow off. Feed more liberally. Give a ration of grain twice daily—to be made up largely of middlings and shipstuffs or bran, with ground oats if convenient, and but little corn—with one-half pint of ground flaxseed or linseed cake. If the cow is to come fresh soon, wait until after calving before giving further treatment. Then if the trouble continues, or if the cow is not with calf, give three-fourths of a pound each of Epsom salts and common salt with one ounce of ginger, as a drench dissolved in warm water. After the bowels have moved, give the cow, twice daily, in the feed two heaping tablespoonfuls of the following powders: Sulphate of soda and powdered gentian root each two pounds, niter one pound.

COLT CUT ON WIRE FENCE.

G. C., Summit, Ohio.—My six-months-old colt ran into a wire fence about two weeks ago, and cut off the extensor muscle about six inches above the knee. I dressed the wound, drew the lips together with stitches, bandaged it and put the animal in a sling just so that it could rest on its feet if it chose to do so. But in a few days somehow in struggling, it broke the stitches, and gradually the wound opened until now there is a wide gash between the edges of the skin. The fleshy part underneath has somewhat filled up; but the part of the wound below where the skin was severed, has bulged out so that there is a prominence a thick as the palm of the hand and almost as large, the flesh being apparently healthy. Is it likely that this prominence will, in healing, draw back into the wound and heal without much of a scar, or will it remain as it is? What would have been the best mode of treatment from the beginning, and what from this on? Is the colt likely to be ruined for the road? It could use its leg tolerably well from the beginning. I have used nothing on the wound except water with a little carbolic acid in it. The animal has been healthy and in good condition all the time since it was hurt.

ANSWERED BY DR. F. L. KILBORNE.

We are not surprised that the stitches broke or sloughed out; because in the horse the tendency to suppuration is so strong, especially in extensively ragged wounds or cuts, that it requires a competent veterinary surgeon to successfully stitch and bandage such a wound: and even then it not infrequently sloughs open. The prominence or swelling should mostly disappear as the wound heals; but a scar can be expected. The colt will probably not be seriously injured for the road. Possibly the limb may be slightly stiffened, but if the wound heals properly no permanent injury should result. Your treatment has been good. To remove the unhealthy granulations, or "proud flesh," we would have preferred a stick of lunar caustic—nitrate of silver. Continue the use of carbolic lotion—carbolic acid two to three parts, water 97 parts—very carefully washing out the wound once daily. Then apply the bandage with gentle pressure, not too tightly, and pads if necessary, so as to gradually draw the edges together. Always be sure to keep an opening at the lower part of the wound for the free drainage and discharge of the matter or pus. If the wound becomes unhealthy, and the healing appears to be at a stand-still, apply compound tincture of myrrh and aloes or a five-per-cent solution of the carbolic acid once or twice a week.

DUTIES ON FOREIGN WOOLS.

D. C. M. C., Cumberland, Ohio.—1. What are the tariff charges on the different kinds of wool? 2. What are the penalties for smuggling the different sorts into the United States.

ANS.—1. Wools, hair of the alpaca, goat, and other like animals, and manufactures of.

Unmanufactured:	
Class one, clothing wools—that is to say, merino mestiza, metz, or metis wools, or other wools of merino blood, immediate or remote. Down clothing wools, and wools of like character with any of the preceding, including such as have been heretofore usually imported into the United States from Buenos Ayres, New Zealand, Australia, Cape of Good Hope, Russia, Great Britain, Canada, and elsewhere, and also including all wools not hereinafter described or designated in classes two or three:	
Value 30 cents or less per pound	10 cts. per lb
Value over 30 cents per pound	12 cts. per lb
Washed Wool:	
Value (before washing) 30 cents or less per pound	20 cts. per lb.
Value (before washing) over 30 cents per pound	24 cts. per lb
Scoured Wool:	
Value (before scouring) 30 cents or less per pound	30 cts. per lb.
Value (before scouring) over 30 cents per pound	36 cts. per lb.
Class two, combing wools—that is to say Leicester, Cotswold, Lincolnshire, Down combing wools, Canada long wools, or other like combing wools of English blood, and usually known by the terms herein used, and also all hair of the alpaca, goat, and other like animals:	
Value 30 cents or less per pound	10 cts. per lb
Value over 30 cents per pound	12 cts. per lb.
Class three, carpet wools and all other similar wools, such as Donskoi native South American, Cordova, Valparaiso, native Smyrna, and including all such wools of like character as have been heretofore usually imported into the United States from Turkey, Greece, Egypt, Syria, and elsewhere	
Value 12 cents or less per pound.	2½ cts. per lb.
Value over 12 cents per pound	5 cts. per lb.
Scoured wool, value (before scouring) over 12 cents per pound	15 cts. per lb.

2. The punishment varies in accordance with the character of the offence, and the circumstances under which it was committed. In very bad cases the goods are forfeited, and, in addition, a fine or imprisonment, or both are imposed. In bad cases a forfeiture of the goods usually suffices with sometimes a fine

In light cases, the goods are allowed to pass on payment of the duties due on them, and in very light cases, a compromise is sometimes made with regard to the amount of the duties to be paid.

NAVICULAR DISEASE IN A HORSE.

H. C., Schenevus, N. Y.—My seven-year-old mare, weighing about 950 pounds, has been lame in her left fore leg or foot for nearly two years. She has good feet with the heels well spread, yet she is getting stiff and sore, standing with the affected foot put forward, especially after she has been driven a few miles. I let her stand with her feet in a tub of water every morning, while she is being groomed, and I have also blistered her across the heel once or twice and used Merchant's Gargling Oil, but all to no purpose. What can I do for her?

ANSWERED BY DR. F. L. KILBORNE.

I suspect the mare is suffering from navicular disease. Try the following course of treatment. Your treatment has been rather mild, and I suspect you did not give the mare a long period of rest, without which, treatment would be of little or no benefit.

Remove the shoes, after which shorten the toe and pare the sole to relieve the pressure. Then keep the foot in a warm flaxseed poultice five to eight days, renewing the poultice once daily: when the hoof has been well softened, remove the poultice, and to prevent drying again, keep the whole hoof well coated with an ointment of equal parts of pine tar and vaseline melted together. Now apply a cantharides blister to the front and sides of the pastern, and repeat as soon as the effects of the first blister have nearly passed off. Blister: powdered cantharides two drams, vaseline one ounce, spirits of camphor 10 drops. A rest of two or three months will be necessary, giving only walking exercise at the halter or in a small yard. Continue the use of the hoof-ointment once daily for three or four months, to keep the hoof from drying and contracting. When again put to use on the road, drive carefully for some time to accustom the foot to its work. If the lameness returns repeat the treatment, but try firing in points, instead of blistering.

GRAPES, ETC.

F. W. W., Leominster, Mass.—1. What are the best three kinds of early grapes for Massachusetts? I want those that have been well tested and also some which are new and promising. 2. What are the best three old kinds for late keeping and three of the best new sorts? 3. Where can I get grapevines to the best advantage? 4. What is the best kind of grass on a high, steep bank? 5. What is the best time for cutting cions and grafting cherries, plums and quinces? 6. What is the best grape for wine, or unfermented juice for canning?

ANS.—1. We would suggest Moore's Early, Worden and Concord or Cottage, as likely to fill the bill for the tested sorts, and Eaton, Hayes and Niagara for the new and promising kinds. 2. Wilder, Herbert and Salem for late-keeping old sorts. New sorts, Vergennes, Ulster Prolific, Victoria. 3. Of any honest, reliable grower who knows what good plants are, no matter where he may be located. 4. If a grass is wanted try Quack grass, Blue grass or White Clover. If the object is merely to cover the land with verdure, giving it no care, plant Canary grass or Periwinkle or Running Mrytle. 5. Cut cions in late winter or early spring when not frozen. Graft cherries in February and March if the weather is suitable; plums and quinces later. 6. For Massachusetts Clinton or Ives is probably as good as any.

GRAPES AND WINTER SWEET APPLES.

C. G. S., Astoria, N. J.—1. Which are the best three kinds of grapes—early, medium and late, taking quality, hardiness, etc., into consideration, about Chatham, N. J.? 2. What is the best winter apple for baking purposes?

ANSWERED BY SEC. E. WILLIAMS, OF MONTCLAIR, N. J.

1. The locality mentioned is in this latitude, being a continuation of the same range of mountains, and the soil is of very similar composition, so that the grapes succeeding best here ought, with similar care and treatment, to do well there. I should therefore say, for early, plant Cottage or Worden for black, and Brighton for red; for medium and late, Wilder, Barry, Concord for black; Niagara, white; Lindley, Vergennes, Salem, or Rogers's 32 for red. For very late plant Catawba and Jefferson for red, but they are too uncertain to be at all reliable. Talman or Lady's Sweet might do for a winter sweet apple. The latter was Mr. Downing's favorite; but I have had little experience with winter sweet apples aside from the Canfield, the universal winter sweet apple for all this region. Talman Sweet, as grown by a neighbor, is affected with hard spots or knots in the flesh.

GRAPE CUTTINGS.

A. M. Alexandria, Ohio.—When is the right time to make grape cuttings? When should they be planted, and how should they be kept through the winter? How late can they be planted in spring?

ANS.—Cut the vines at *once*. If the soil is still open, plant them in the soil at a slight angle, so that the upper bud just reaches the top soil. Then cover with any protecting material. They may also be planted in tubs or boxes—the boxes placed in the cellar until spring. Then the cuttings may be left to sprout *in* the box or tub, or planted in the open ground. This tub method is an excellent way of sprouting grape-vine cuttings. In the spring the cuttings should be planted before the buds push.

Miscellaneous

J. L. C. Botetourt, Va.—What commission houses in New York city handle veal calves?

ANS.—Hallenbeck & Hollis, and Everett & Pidcock, of this city, handle lots of calves.

F. G. G., New Britain, Conn.—1. What is the name of Rogers's No. 30 grape? 2. Does it benefit a grape-vine to bury the prunings of ripened wood in the bed?

ANS.—1. No. 30 has never been named. 2. We don't understand the question.

H. S., Edgerton, Kans.—1. What is considered the best special dairy paper? 2. Who are reliable breeders of pure-bred Jerseys?

ANS.—1. Hoard's Dairyman, Fort Atkinson, Wis. 2. Miller & Sibley, Franklin, Pa.; Smith Bros., Eagle, Mich.: R. A. Mayhall, New Maysville, Ind.; D. H. & S. S Tripp, Peoria, Ill., and T. L. Hacker, Madison, Wis

F. O. C., Washington, Kans.—I send the RURAL some specimens of grape-vines infested with insect eggs. To what insect do they belong, and what is the remedy?

ANS.—The canes are infested with the eggs of the tree cricket (so-called), Œcanthus niveus. They are usually deposited in the canes of the raspberry. The remedy is to cut out late in the fall or early spring all those portions of the cane which contain eggs, and burn them.

DISCUSSION.

TRAIN UP A CHILD.

"READER."—In reading Oliver Howard's "How John Became a Market Gardener," my attention was specially drawn to his suggestions as to the manner in which children may be encouraged to take an interest in their parents' business, and I thought my experience upon the other side when a boy, might not prove uninteresting, and that it might even contain a moral for some of those parents who are endeavoring to interest their children in the details of their business, hoping that their sons may follow in their footsteps. I am one of a family of several children and have one brother two years older than myself. My father was a farmer in fair circumstances and my first recollection is of a farm in Illinois. As soon as a child reached the age when his strength became valuable, he was at once placed where it would contribute towards acquiring the "almighty dollar". My father was quite close in money matters and seldom or never gave his sons a cent, but by the time I had reached the age of 10 and my brother 12 years, we had accumulated a small sum. Not one cent of this had been contributed by our father, but it had been honestly earned of others by our own labor. For instance, if a neighbor wished to go on a visit he gave us a dime or a quarter for feeding his stock during his absence. We had also built the fires and swept the floor of the district school during the winter term, which was all the schooling we received. But we had accumulated the (to us) magnificent sum of three dollars. Our father suggested that, as we had become capitalists, we should invest our money in something which would bring us a fair profit, and proposed that he should take the money, giving us in exchange two young suckling pigs. They were not worth a dollar apiece, but we knew thrifty pigs had a habit of growing and we gladly consented. The pigs were chosen and marked by a slight nick in the ears. The money was handed over and proudly we assumed undisputed ownership of two infant porkers. We gave the drove the best of care and rejoiced to see the confirmation of our youthful judgment in that the chosen ones were better than the average. The pigs became shoats and the shoats became hogs. We had seen hogs weighed and knew that ours would now weigh more than 300 pounds each. The price of pork rose to $6 per hundred. Our hogs would bring almost $40. Did the bank of England contain more money? Our enthusiasm rose to the highest pitch and we proudly planned how we would invest our money in a span of young colts. The buyer came. Our hogs were sold by our father along with the rest of the drove. As he pocketed the money we meekly suggested to him that two of the hogs were our property and that we should receive the proceeds. He answered, "You have no use for money while I have many uses. I shall keep the money, but you may go to the herd and each choose a steer calf which you may have for your own."

Knowing it was "Hobson's choice" we reluctantly consented. We chose our steers which were about six months old. We made a small yoke and taught them to lead and drive. We did not expect to work them, for our ambition rose above oxen. The purchase of the colts was delayed, but the idea of it was not abandoned. We gave the herd every attention that our own might receive a corresponding benefit, and they responded nobly to our efforts. They grew as had the hogs before them. Again the buyers came. Our steers were sold among others. As our father complacently pocketed a goodly sum we demanded our own. It was refused. A mild rebellion followed, but it was promptly quelled by the head of the firm who informed us that he owned both ourselves and our earnings until we reached the age of 21. The law gave him that right, and until that time he proposed to exercise all the authority which the law gave him. And so the matter ended. Our "castles" vanished along with the original investment. The colts were beyond the horizon. From that time until I left home, which I did at the age of 18, I never presumed to call anything my own. Since then by my own exertion I have acquired a fair share of this world's goods. I have also met many losses and disappointments, broken promises and betrayals of confidence; but none was as keenly felt or as bitterly mourned as my first attempt at acquiring property, and my father's desire to interest me in his business.

START THE PIGS RIGHT.

A. M. CROSBY, CATONSVILLE, MD.—Under this heading in the Dec. 22 issue of the RURAL, Mr. George Q. Dow gives some very excellent advice, and some that is rather "too excellent." One would be apt to think that if it were necessary to take so much trouble, pigs, most certainly would not pay.

It is stated, in the first place, that pigs should not be bred before they are a year old. I have now two sows, one of which was bred when 10 months old, and the other when nine, and again when 15. Both raised fair pigs and are in good condition. A neighbor of mine breeds sows when they are even younger. If spring pigs are not bred until they are a year old, one will either have as a result fall pigs, or else he will have to keep his sows two years before they begin to declare dividends. Mr. Dow says that a pig is a very intelligent animal, and then goes on to say that a sow hasn't sense enough to take care of her own offspring when they arrive. His pigs must be constructed rather differently from those around here. I have never had more than one case where interference was necessary; and then the fault was due entirely to myself. I left the sows out all winter and fed them exclusively on corn, and even in that case only one sow out of nine showed any inclination to eat her pigs. If a sow has been treated properly, fed the right kind of foods, given a warm, dry bed by herself, there is not one case in 20 where she will need watching, or would be benefited by interference. This I know from the experience of my neighbors and from the records of the pigs I have raised. Mr. Dow further states that the period of gestation "may be timed to a day, and reckoned almost to the hour," and that farrowing usually takes place after eating. Well, if Mr. Dow knows that his litter of pigs will arrive at 10 minutes after supper-time, why does he sit up through the long winter night? Referring to my record of pigs bred, I find the periods of gestation as follows:

2 sows	111 days
1 sow	112 "
4 sows	114 "
1 sow	115 "
1 sow	118 "

Here is a variation of seven days, or 168 hours. I don't know what sort of a climate Mr. Dow has, but in this latitude where the mercury occasionally drops to 10° Fahr. warming spring pigs is unnecessary, if the sow and her surroundings are in good condition. And if food and affection arrive at the same time, I think we also may safely include pigs in the list. The old sow probably has as much affection as she has pigs, but being in great pain, she does not ordinarily show it. Luck is certainly not a good factor in raising pigs, but an ounce of careful attention before farrowing will save many a pound after.

"WITCHING" FOR WATER.

T. H. T., ALEXANDRIA, DAKOTA—What do all the good and wise men who read the R. N.-Y. know about witching for water? There seems to be just enough of mystery about it to make it interesting, and enough of reality to make it worthy of study. Can't we have some reports for and against? Here's mine. My friend bought a farm which had been bored, drilled and dug in all likely and unlikely places for water, without finding the "liquid staff of life." As a last hope, he sent for a water "witch," or wizard who held an ordinary bullet about four inches from the ground, suspended by a string about eight inches long. He did this at various places, until he found a place where the bullet swung like the pendulum of a clock. Said he, "Here you will find that water," and there my friend dug a well, and at 56 feet struck the so called "Jasper" rock which runs across these parts and comes out at various places, and is worked at Sioux Falls, but, as he said, "It was as dry as bone dust; but I was desperate, so I went to drilling and blasting" He blasted out 20 inches of rocks and water rushed into his well from the northeast. The "witch" had said "The stream runs to the southeast," which proved to be true. My friend has good water and plenty of it, *except* when the wind blows from the northwest; 12 hours' wind from this quarter will make a very sad and strange shrinkage in the supply.

Now, observe these facts:—My friend finds by actual experiment that he himself is a water "witch," the bullet swinging as violently for him, at right angles with the supposed movement of the water, as it did for the professional; while for the son of my friend, and for me, the bullet will only show a very slight disturbance when held over the supposed stream, and that disturbance is parallel with the water, or at right angles with the bullet's movement when the string is held by either of the men. What is it? Who can tell?

JAPANESE BUCKWHEAT ONCE MORE.

H. T. L., BRIGHTON, CAN.—On page 748 P. S. B. wants to know the experience of others with "Japanese buckwheat." Two years ago I purchased one pound of this variety, costing 53 cents. It was sown 10 days later than our common kind and was hurt by the sun and drought immediately after sowing, so that it could not yield its full capacity, although I harvested about half a bushel.

This was sown again this season, but the sheep stole into the patch when the crop was about four inches high and destroyed most of it, so I cannot tell what it would have yielded had it not met with such misfortune, but it is certainly the buckwheat for this country. It is about 10 days earlier than our common kind and will stand more drought and is less liable to be injured by the sun. The straw is more juicy, and, therefore, takes longer to cure; but if buckwheat straw is good for stock at all, this is certainly relished more by animals.

I have the same opinion of buckwheat straw as H. T. (page 816)—that it is better for beds than feed. From the pound I purchased two years ago I have now five bushels.

FLOURING QUALITY OF JAPANESE BUCKWHEAT.

E. G. S., CUBA, N. Y.—Having seen much said about Japanese buckwheat, and having noted several inquiries as to its flouring qualities, I venture to send the following statement made by the miller at Nile, N. Y.

"This is to certify that I have ground two bushels of the Japanese buckwheat raised by E. G, Stone, and it was fully up to the yield of other buckwheats, and I think it will excel all others as to quality." L. BURDICK.

J. H. L., COXSACKIE, N. Y.—Fred. Grundy's article on page 831 of R. N.-Y., wherein he says that "practical, common-sense management will get into the poultry yard after awhile" is good; but when he calls it all "fol-de-rol" about hens having pebbles, meat, etc., and then says that his hens get none of these things; but just "pick over the ashes from the stove" and get the "parings and scraps from the kitchen table," it reminds me of one of my neighbors who says that he does not care for any meat for breakfast if he has plenty of ham and eggs.

I. J. B., TITUSVILLE, N. J.—S. E. H., in a late RURAL, is about right on the La Bastie lamp chimney. Such articles seldom break, although they will break sometimes even with apparently fair usage. I have some that have been used three years.

What Others Say

THE ONTARIO CHEESE TRADE.—The growth of the Ontario cheese trade within a few years is said by the Toronto Globe to have been wonderful. "The exports of the Dominion now amount in value to over $7,000,000, and the season just closed shows the largest business on record. The shipments from Montreal this season were 1,134,349 boxes, as against 1,104,065 boxes last year, 507,019 boxes in 1880 and 359,251 boxes in 1874. Of this season's exports 499,391 boxes went to Liverpool, 140,394 boxes to Glasgow, 235,176 boxes to London and 259 388 to Bristol. In striking contrast to this statement is our foreign trade in butter. The exports this season were only 46,528 packages, as against 60,353 packages last year, 194,366 packages in 1880 and 80,206 packages in 1874. Of this year's shipments some 26,014 packages went to Bristol, and 20,253 packages to Liverpool."

FULL AS A TICK.

IT is rather remarkable that of the many experiments tried by the stations in order to show what quantity of seed-oats will give the largest yields, not one gives anything but contradictory results. Experiments of this kind made at the R. N.-Y. Farm 10 years ago were not contradictory. One and a quarter bushel was the amount which gave the heaviest yield. In a bulletin just received from the University of Illinois E. S, one bushel of seed gave 52 bushels of crop; two bushels gave 61; three bushels gave 62; four bushels gave 61.

ANOTHER experiment was made to find out which would give the greater yield of oats, a compact or a loose seed bed. Of the three plots, all fall-plowed, the oats on the first were lightly covered with a disc harrow and rolled with a heavy roller. No. 2 was cultivated with a disc harrow before sowing; the oats were covered by disking once and once harrowing. No. 3 was disked three times before sowing, once afterward and then harrowed. The yield was as follows:

No 1 (compact),	60	bus.	per	acre.
" 2 (medium loose),	66	"	"	"
" 3 (very loose),	61	"	"	"

A THIRD experiment was made to determine the best time for sowing, with the following results:

April	6	yield	66 bus.
"	13	"	57 "
"	20	"	49 "
"	27	"	49 "

OATS were sown from one to six inches in depth. The largest yield was from the seed covered three inches: the next from that covered four inches, the next from that covered one inch. Of course nothing is taught by this trial.

HERE is an item which is being published in many of our farm papers.

"THE editor of the Mark Lane Express (London), advises farmers to cut off potato blossoms as soon as they appear. The balls, or true seed of the potato, which results from the blossom, are not only unnecessary to the formation of the tuber below, but are a prejudicial strain on the plant.

THE R. N.-Y. has raised as many as 100 different varieties of potatoes in a single season without being able to find a single seed-ball. Labor spent in cutting off the flowers would be thrown away. In fact the varieties of potatoes of to-day fruit very sparingly in this country. If some of our agricultural editors could be induced to visit a potato patch once in awhile, they would find this out.....

How should horticultural meetings be managed is a question which Green's Fruit-Grower asks. John J. Thomas says that they are made successful only by much labor. They will not run of themselves. The managing officers must be willing to employ much correspondence and as much personal effort and interviewing as practicable before the time of meeting. Write to or converse with those who have been successful or who have *made money* by raising and selling fruits; give their experience. The prospect of learning how to *realize profits* will have a *special charm* to most men .....

In the planting of a tree, says C. W. Garfield, all the family may take a part, and as it grows thereafter, we find that that tree is a part of the family as much as each child, and about it the tissues of the home concentrate and hold them all together, and by and by they look upon that tree as one of the influences that have lifted them to a higher plane of living .....

L. B. PIERCE, of Ohio, very sensibly fears that horticultural societies are liable to degenerate into banqueting associations, coming together for an orgie instead of intellectual entertainment. He says that long records of the weather, of cold snaps and periods of drought, generally known as *ad interim* reports, are of little value. The world is too busy to read weather reports 18 or 20 months old .....

MR. PIERCE makes the statement that more than one-half the farmers in Ohio do not raise enough strawberries, currants, pears and cherries for home use, and not one in ten grows a decent supply of strawberries and blackberries .....

IT seems to him that it should be the work of the horticulturist, not only to enlarge the consumption of fruits, but to teach thousands who know them not, the joys that come with their growing .....

MR. E. C. DAVIS, of Northampton, the winner of the $25 prize offered by C. A. Green for the largest crop of the Jessie strawberry raised on a given area, reports 41 ¾ pounds of berries from 12 plants—which seems close to incredible to the R. N.-Y.

To quote his words: "It is simply wonderful and beats everything I have ever seen or dreamed of among stawberries. If there is any defect about it I have yet to discover it."

THUS we see how a kind of fruit thrives in perfection in one locality and fails in another. The Jessie as yet has not shown any decided superiority over older kinds at the Rural Grounds.....

Mr. Davis never sets out plants of any kind without thoroughly preparing the soil for them, and with strawberries he works into the ground all it will hold of old, well rotted cow manure. Then he makes the ground as mellow and fine as possible.

Then, after culture, feeding and watering are what tell on strawberries, particularly between the time of blooming and the ripe fruit. He treats his strawberry plants in this respect as he does his poultry and horses, feeding and watering them every day, the feeding being largely with fertilizers, although he uses wood ashes and bone meal freely. Then he finds they can hardly be mulched too much, and especially is this true of light, thin land, where the mulch retains the moisture. The strawberry plant delights in two baths every day, one of water and the other of the sun .....

THE Chattanooga Tradesman says that the assessments of property in the 12 Southern States amounts to $3,681,740,945. The increase in population in these States since 1880 has been 5,500,000.....

A FRENCH writer says that in Paris the municipal chemists accept milk as pure when it contains one ounce of butter and four ounces of solids per quart. At Berne, milk must contain at least three per cent of butter, and may contain 90 per cent, of water. At Berlin, the police seize all milk offered for sale which is below the legally required standard 2.7 per cent of fatty matters.

THE Western Druggist gives a formula for a liniment much used for cuts in live stock from barbed wire. For healing cuts and flesh-wounds of all kinds it has no equal, and flies will not trouble a sore where it is used. Raw linseed oil, 16 ounces; saltpeter, powdered, 1 ounce; sugar of lead, powdered, 1 ounce; sulphuric acid, 1 ounce; carbolic acid, ½ ounce. Mix the oil with the saltpeter and sugar of lead, and slowly add sulphuric acid, stirring constantly. When cold pour off from the dregs and add the carbolic acid. Apply with a feather twice daily. Do not wash the sore at all. Keep a supply constantly on hand to be ready for casualties.....

IN order to more exactly determine the effects of inoculation against pleuro-pneumonia as we learn from the London Agricultural Gazette, extensive experiments have been arranged by the Saxony Agricultural Society, which are supported by the Government. Sixteen heifers, from various parts of the country absolutely free from pleuro-pneumonia, have been collected, inoculated in three different parts of the body, the wounds being treated antiseptically, and the animals have now been sent to a farm where pleuro is reigning extensively, being mixed with the diseased cattle. The experiments are conducted by Prof. Dr. SCHUTZ.....

IF we look at the composition of roots and straw, says Sir J. B. Lawes, we see that their properties are totally distinct and opposed to each other. In the roots, we find an immense quantity of water, varying from 88 to 92 per cent, and it is very remarkable that this water is so intimately combined with the solid matter of the root that even when cut up into small pieces no water runs from it; milk, which is perfectly fluid, contains less water than the solid root; the solid matter of the root is chiefly sugar, and what is not sugar is almost entirely digestible. Straw, on the other hand, is hard and dry, and the digestible matter is largely mixed with substances which are not digestible; the two foods when used together correct each other's defects. To squander the fertility of your soil in useless vegetation is bad enough, but to feed thistles and Couch grass with nitric acid worth 15 cents per pound is wasteful extravagance .....

LOOK to the potatoes to be used for seed next spring. Remember that every sprout weakens the potato and that every seed piece of this kind *cannot* sprout in the field as vigorously as one that is sound.....

THE R. N.-Y has its heart in fruit culture. What other paper has done more for pomology?.....

GRAFT GRAPE-vines during February if the ground is open, or in March or later so long as the sap does not flow.....

DIRECT.

——"WHEN a man farms in a certain way and then charges his failures on the business instead of on his way of conducting it, he makes a great mistake."

——W. B. ALWOOD of the Va. E. S. "The Women's Potato Contest is a grand move."

——T. B. TERRY: "When using the Cutaway harrow, always lap half. You thus harrow all the ground twice, once each way, and leave it nearly level."

——N. E. HOMESTEAD: "No higher compliment could be paid farmers than the words of Prof. S. W. Johnson, Director of the Connecticut experiment station. 'I am astonished,' he said 'in looking over some of the agricultural papers, to see the character of matter they print, that their subscribers read and digest. But a few years ago all this would have been as unintelligible as Greek is to most men. The scientific feeding of cattle, the chemical constituents of the soil, and the practical discussion in print of kindred matters show how deeply farmers are thinking. No people under heaven can show such progress in 25 years. I say this not to brag, but for sober encouragement."

——LONDON AGRICULTURAL GAZETTE: "In these days, green manuring is seldom attempted, simply because after having grown your crop it is too valuable as sheep food to be plowed in. * * * We are told that wheat never looked better than it does now." . . . .

——COR. N. Y. TRIBUNE: "When you put a kerosene lamp in your cellar to warm it set a joint of stovepipe over it and lay a tin plate or the like over the upper end, taking care not to have it tight enough to interfere with the draught. The pipe will be hot as long as the lamp burns, radiating the heat in all directions, while an open lamp merely sends a hot current upward, leaving the bottom of the cellar as cold as ever. * * * * "There is danger in selecting too many varieties of summer apples: better have several on one tree for testing."

——PUCK:

"BUSINESS IS BUSINESS.

"AMERICAN MILLIONIARE (year 1988).—What are the prices of admission?"

"DOORKEEPER (United States Capitol).—Seats in the Senate are five hundred thousand dollars; but I can give you a seat in the House for one hundred thousand dollars. Thanks. Hand this ticket to the usher. Keep the coupon in your hat to avoid mistakes."

Miscellaneous Advertising.

Dyspepsia

Does not get well of itself; it requires careful, persistent attention and a remedy that will assist nature to throw off the causes and tone up the digestive organs till they perform their duties willingly. Among the agonies experienced by the dyspeptic, are distress before or after eating, loss of appetite, irregularities of the bowels, wind or gas and pain in the stomach, heart-burn, sour stomach, etc., causing mental depression, nervous irritability and sleeplessness. If you are discouraged be of good cheer and try Hood's Sarsaparilla. It has cured hundreds, it will cure you.

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Self Guiding. Uses a wheel landside. Two horses instead of three. A ten year old boy instead of a plowman. No pole (except among stumps). No side draft. No neck weight. No lifting at corners. Easier driving, straighter furrows, and LIGHTER DRAFT THAN ANY PLOW on or off wheels. Will plow any ground a mower can cut over. No equal in hard, stony ground, or on hillsides. Our book, "FUN ON THE FARM," sent Free to all who mention this paper.

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NEW YORK STATE AGRICULTURAL SOCIETY.

ANNUAL MEETING.

The Annual Meeting of the New York State Agricultural Society will be held at the Society's rooms, Albany, on WEDNESDAY, the 16th day of January, 1889, at noon.

W. JUDSON SMITH, Secretary Pro-tem.

AGENTS LOOK HERE

and farmers with no experience make $2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made $18 one day, $76.50 one week. So can you. Proofs and catalogue free. J. E. SHEPARD & Co., Cincinnati, O.

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A National Journal for Country and Suburban Homes.

Conducted by
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THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, JANUARY 12, 1889.

FROM THE LIEUT. GOVERNOR.

BINGHAMTON, N. Y., Dec. 29, 1888.

Editor Rural New-Yorker: THE RURAL NEW-YORKER of December 29 is before me, and its effect on me is to impel me to express to you my sincere wishes for a Happy New Year for yourself, and continued success for the RURAL, which, when contrasted with the agricultural papers of 25 years since, shows not only the improvement in the paper itself, but also illustrates the progress made by the agricultural class, much of which *is due to the inspiration of the* RURAL NEW-YORKER, *and such of its contemporaries as follow its example.* EDWARD F. JONES.

"But who would buy these vegetables if you had them to sell? Every mechanic and merchant in your village and even your next-door farmer-neighbor. You needn't shake your head and say you know differently—that I "don't know the kind of folk in these parts." We all know that supply creates demand. If these vegetables are not presented to your people, can you expect them to run around looking for them? No, for they won't do it."—WM. FALCONER, page 20.

"BUT, taking the year together, my dear, there isn't more cloud than sun."

THE RURAL NEW-YORKER for 1889, will be, as hitherto, invariably, $2.00 a year for single subscriptions, and $1.50 in clubs of five or more.

THE best kinds of vegetables, roots, potatoes, etc., for both the garden and field; the best of the old kinds, the best of the new. These topics will be fully treated by practical writers in a few weeks.

THE three bunches of Niagara grapes, received from Secretary Williams, September 29, and illustrated in Fig. 5, weighed about three pounds. Some of his clusters weighed a pound and a quarter. The illustration is precisely life size.

"THE success of the 'Potato Contest' of our friends of the THE RURAL NEW-YORKER, has stimulated several publishers and manufacturers to the offering of large money prizes for crops to be raised during the coming year." So says the Editor of the American Garden.

MR. C. W. MINOTT, the Horticulturist of the Vermont Agricultural Experiment Station, writes us, under date of December 26, as follows:

"The R. N.-Y. potato No. 2, I think, is bound to come to the front. It fulfills all that is claimed for it. It nearly leads the 80 varieties tested here this season in merchantable tubers."

THE 1889 catalogues are now being sent out by the seedsmen and nurserymen of the country. We shall soon begin to review these catalogues, calling special attention to the new and old things of merit and demerit, which it might be well to try or to leave untried. The R. N.-Y. always endeavors to be strictly impartial in its catalogue reviews.

SUCH of our readers as make butter will confer a favor upon us by ascertaining how many pounds of milk are required to make a pound of butter. We are gathering statistics regarding dairy profits, and want as many figures as we can get. Our readers will have all the benefit of our investigations. The greater the number of accurate statements, the more valuable the conclusions. We want the milk weighed as it is put into the pans, the cream weighed as it goes into the churn, and the butter weighed as it is sold or used. Then we would like to know the breed of cows, the feed, and any other information that is easily obtainable. Who will help in this matter?

FOR the past 10 years, in a general way, but for the past four years especially, we have had occasion to observe that the subscribers of the R. N.-Y. are, more and more with each succeeding year, of the more intelligent, progressive, alert, well-to-do class. This is as it should be. It is what we have worked for. It is in accordance with the old and forcible maxim that "birds of a feather flock together." We want all the subscribers we can get. That, as they say, "goes without saying." It is not for the R. N.-Y. to select its clientage, any more than it is for a merchant, doctor, lawyer or minister. Nevertheless, it is gratifying, all the same, to find that we are supported by good, intelligent people. The R. N.-Y. some years ago found out that purchased subscribers, how much soever they may swell the subscription list for the time, are not worth having.

THE Southern Cotton Oil Company, the great hopeful rival of the Cotton Oil Trust monopoly, has been doing a fair business during the season, and, the other day, at the end of its first half year's business, decreed a dividend of four per cent., payable February 1. This is said to represent less than half its earnings, the rest being reserved for expenses in increasing its plant and machinery. While the oil-producing quality of cotton seed this year has not been equal to that of last year, the higher prices that have been obtained for the product have made better returns and enabled the company to pay better prices to the planters. Owing to the competition between the rival organizations in some places and to the refusal of the planters to sell their seed at unremunerative figures in others, higher prices than usual have been obtained by growers for their seed during the past season. Southern farmers have shown a good deal of spirit and sense during the past year in refusing to sell their seed at unreasonable prices, as well as to buy jute bagging at extortionate figures.

THE Hon. Columbus Delano, of Ohio, President of the National Wool Growers' Association, has called a meeting of the officers of the National and State Associations at Washington on January 10. In his address he says that "the schedule pending before the Senate fails to afford adequate protection to the wool-growing industry." He thinks the provisions relating to carpet wools will lead to large importations of wool used for clothing purposes at a duty of only 2½ cents per pound. He points out that it contains no provisions preventing the present large importations of scoured wools at the low duty imposed upon washed wools; and he thinks these and other defects endanger the prosperity of the wool industry, unless they are remedied before the bill is passed. At present wool is in good demand at an average of three cents per pound higher than it was a year ago; but at an average of one cent per pound lower than it was at the corresponding date in 1886. The stocks on hand at Boston, the great wool market of the country, are about 40 per cent. lower than a year ago, and at Philadelphia, our second greatest wool market, they are estimated to be at least 50 per cent. lower, while at other points they are unusually small also. At all Eastern markets receipts are very light and there is no anxiety to sell except at top figures, while the tendency of prices is decidedly upward. Some large manufacturers have considerable stocks on hand; but small mill owners are not provided with much for future consumption. The news from abroad continues quite favorable, and with the confidence arising from the knowledge that no decrease will be made in the tariff for at least the next half dozen years, the outlook for sheep husbandry is very encouraging.

SPECIAL NUMBERS.

EVERY issue of the R. N.-Y. for 1889 will contain an elaborate discussion of some timely and important subject. We find that this idea of grouping the opinions of various authorities in one issue is very popular and convenient. Some of the best of these discussions are frequently started by suggestions made by readers, who, in course of their studies, come across points that are not clear to them. We always take pleasure in collecting all the information we can, that will benefit our readers. While our readers may expect 52 special discussions for 1889, there are several topics that we deem of sufficient importance to warrant us in giving extra attention to them.

Farm Help.—If we may judge from the deep interest evinced in the replies to our inquiries, the question of farm labor and laborers is of the utmost importance.

We shall give the most reliable information obtained from the various sections of the United States.

Seed and Seedsmen.—In this Special Number some of our best market gardeners and farmers will give lists of the seeds they find most profitable for field and garden culture, with very reliable information regarding culture, etc. "To what extent should seedsmen be held responsible for their seeds?" This question will be discussed fairly and intelligently in this number.

Manures.—We shall issue our usual Fertilizer Special in which a number of exceedingly interesting topics will be discussed. In short, the R. N.-Y. will do its best to collect the most reliable information regarding any agricultural proposition discussed.

TAXES ON MORTGAGES.

IN several of the States if a farm worth $5,000 is mortgaged for that sum, the mortgagor is taxed as if he owed nothing, and the mortgagee as if he had created property to the extent of the incumbrance; in other words, $5,000 being taxed twice, is taxed as if it were $10,000. To avoid such double taxation borrowers frequently give deeds for the land in common form, taking bonds for reconveyance when the money is repaid with interest; but this is a perilous practice. The creditors of the lender may attach the property and hold it as his, for it stands in his name; the creditors of the borrower may attach it and hold it as his, for the bond to reconvey is a secret trust, and in law a fraud upon them, unless it is recorded with the deed, in which case the two instruments constitute a mortgage; and, finally, in some States at least, the tax collector, if he can learn the facts, may treat the transaction as a mortgage, and collect from both parties.

In some other States the tax on mortgages is smaller, and few resort to such dangerous expedients to avoid it. In all cases, doubtless, the reason for the original imposition of this burden was the supposition that it would operate as a tax on capital. Even if such were the case, it is questionable whether such legislation would be best for the people at large. As a matter of the plainest fact, however, it is always and inevitably a tax on the borrower and not on the lender; for in all cases the latter, in addition to the interest he would otherwise charge, exacts enough to cover the tax he has to pay on the mortgage. Moreover, such a tax always operates as an unjust discrimination against the capital of the State in which the mortgage lies in favor of outside capital.

Some of the States in which mortgages are taxed, having realized the evils of the system, are agitating for the repeal of the laws. Of these Minnesota is probably a fair example. There the tax on mortgages is two per cent. The financial standing of the State is so high and the reputation of her citizens so excellent that, on good security, they ought to be able to obtain money readily at six per cent; whereas the current rate of interest is eight per cent. The difference is due entirely to the tax on mortgages. The man who makes the loan knows that he must pay two per cent on it to the State, and, intending to realize six per cent on his investment, he charges eight per cent, to cover interest on the loan and the tax on the mortgage in addition. Then there arises an unjust discrimination. If the lender is a citizen of Minnesota, he is subject to her law, and must pay the tax. If he is a citizen of some other State, he is beyond her jurisdiction, and the tax on the mortgage cannot be collected within her borders. The result of this is to keep the rate of interest in Minnesota artificially high. Citizens of a few other States holding Western mortgages are taxed on them in their own States, and must therefore add this tax to the amount of interest they exact. Even where this is not the case, capital invariably charges the rate of interest current in any community; and the Eastern capitalist who has to pay no interest at home on his Western mortgages, will always charge eight per cent. in Minnesota, because the home-lender must do so to cover the two per cent. he has to pay to the State on his mortgage. The net result of the tax, therefore, is to raise the rate of interest over the whole State by two per cent, and this enormous tax is wholly borne by the unfortunate debtor class—chiefly farmers. Taxation of mortgages is always a harmful and iniquitous policy, because it inevitably adds to the burden of those already grieviously oppressed, and all legislation sanctioning it should be speedily repealed in every State in the Union.

BREVITIES.

THE R. N.-Y.'s best admonition to its readers for the New-Year: "Love ye one another."

NOW is the time to begin to handle over your seed potatoes. Read what was said about this last year.

THE city supplies the country with eggs just now. Where does the blame rest—with the hen or the hen owner?

THE KIEFFER PEAR is a prince in quality compared to the large and beautiful California Clairgeaus now in the market.

A WRITER in "Postscripts" gives an original plan for interesting children in the literature of agriculture; why not try this?

MANY ladies who have entered for the "Potato Contest" write to the effect that they want to do all the work themselves except the plowing and cultivating.

THE Bubach strawberry is worthy of a trial. It succeeds well at the Rural Grounds, and favorable reports come to us regarding it from many parts of the country.

THE Niagara grape—outside of the Niagara nursery—was first fruited at the Rural Farm, Queens Co., L. I. It thrives well there, but at the Rural Grounds, Bergen Co., N. J., it rots badly in moist seasons.

In our issue of Sept. 15th, page 615, under head of "Latest and Briefest" we said: "Ammoniated bone, made by J. B. Eckerson, River Vale, N. J.; selling price $38; station valuation $27.20" —We should have said *sampled* by J. B. Eckerson.

ONE of our leading agricultural writers suggests Prof. J. L. Budd, of the Iowa Agricultural College, for our next Commissioner of Agriculture. "I believe," he says, "that for enterprise we have no better man." And the R. N.-Y. believes precisely the same thing.

THE hogs that work over the manure in New England barn cellars have done a good work for agriculture. They have not made the best of pork though. The best of pork can be made only by animals which make a business of pork-making, and do not have to act as manure-mixers as a side issue.

THE Pennsylvania Patrons of Husbandry advocate the preparation of petitions to be presented to the Legislature providing for a bounty of two and a half cents per head for the destruction of that "intolerable nuisance," the English sparrow. Similar petitions asking for a bounty of two cents per head have been circulated in New York State, and measures looking to the extermination of the pests have also been advocated in a large number of other States; but while the farmers are talking, the friendless little vagabonds are multiplying and spreading abroad prodigiously rendering their destruction next to an impossibility, while becoming all the more desirable. This pugnacious and impudent little robber is among birds what weeds are among plants.

THERE is a tariff of $20 a head on imported horses and mules, and at first glance this certainly appears equitable in view of the usual cost of such animals and the tariff on manufactured products. Moreover, it is easy to count off imported beasts and levy the tax, and there is no danger of under-valuation. In a debate on the matter in the Senate the other day, however, a Texas Senator stated that many horses and mules imported from Mexico are valued at only $10 apiece, although they answer all intended requirements. A tariff of $10 on such an animal would be equal to 200 per cent., while on a Canadian truck horse worth $100, it would be only 20 per cent., and on a $2,000 imported Thoroughbred, only one per cent. In such cases a specific duty of $10 per head would tax the Texas planter 200, the Vermont farmer 20, and the "dude" horseman only one per cent. Surely there are some puzzling problems in the tariff question.

THE famous Legion of Honor was founded by Napoleon Bonaparte when First Consul of France, for merit both military and civil. To obtain the insignia of the Order is one of the highest ambitions of a Frenchman, and is a mark of signal honor for a foreigner. The number of such decorations bestowed on the latter class, in all parts of the world, is small, hence the greater the distinction for the fortunate few. On the first of each new year, the head of the nation, whether Emperor, King or President, confers the honor of the Order on those natives or foreigners whose merits are considered worthy of the favor. The only foreigners who were thus decorated by President Carnot on last New Year's Day were two Americans, one an occasional, and the other a frequent contributor to the RURAL—F. L. Scribner, Mycologist of the Department of Agriculture, and T. V. Munson, vine originator of Texas. In both cases, wasn't the honor worthily bestowed?

Postscripts.

SHORT, SHARP AND SENSIBLE.

"I find the nicest way to prepare ground for an orchard, is to plow it in the fall in lands, the dead furrow coming just where the row of trees is wanted. Go an extra round in each dead furrow, deepening it as much as possible. The winter's frosts and rains will mellow the soil and subsoil finely. Then in the spring harrow thoroughly and plow the earth back, making a back furrow in the dead furrow. Harrowing again leaves a mellow plant-bed of fine soil knee-deep. One does not have to dig a hole for the trees, but simply to throw out a few shovelfuls of dirt. I set out 600 two-year-old apple trees in three days all alone. Many of the trees were set by pushing the shovel down its full depth, pushing it forward a little, and putting in the tree, and dropping the earth back and treading it down firmly. The trees all lived and grew well." W. B. H., Como, Montana.——"Here is a suggestion for those who wish to give their children an interest in agriculture: Take the RURAL as it comes to hand, look for the author of the most interesting thing in it, tell the children the person's name and residence and let them look the latter up on the map—an advanced school geography will do. See what can be found out about the climate and natural resources of the place and the principal farm products of that region, and compare them with those of your own locality. Then tell them what you know about the author and what are the branches about which he or she writes, how he works his farm and your opinion of his writings and farm practice. Also compare what he says with what any other writer on the same subject teaches. Thus you will give your children a practical knowledge of the more prominent agriculturists in all parts of the country, which will be of at least as much use to them, if they are to be farmers, as will the knowledge of famous generals, politicians and lawyers, usually found in children's books and papers." F. W. H., Warren, Me.——"One year ago last spring I planted the Pond corn sent out by the RURAL. I was so well pleased with it that last season I planted the whole crop, about one and one-half acre, and from this I had as fine a prospect for a good yield of corn as I ever had in my life. But on the nights of Sept. 6 and 7, frost came and blasted my hopes and my corn. I have no seed now, and want one-half bushel. One year ago last fall, I sowed a bushel of the Thousandfold rye on one-half acre. Last fall I thrashed 22 bushels of as nice rye as ever was raised here. Last fall I sowed two bushels on one acre; the stand looks nice now. I obtained my seed from a small paper sent by the RURAL." C. M. L., Centre Lisle, N. Y.——"I cannot farm without the splendid old RURAL. It has improved with every year and month during which I have taken it. I used to think that its price ($2.00) was pretty steep; but now I regard it as the *cheapest* as well as the best, and would do so even if the price were raised to $3. The special topics are most ably conducted. The cartoons are most excellently printed, and for originality, truthfulness and vividness, its teaching cannot be surpassed." F. S. G., Phœnix, Arizona——"It is evident that the unprecedented loss of poultry caused by the prevalence of cholera will affect the poultry and egg market in the near future. In the portions of Long Island devoted chiefly to raising broilers for the early market, the death rate from cholera has been enormous. It is not only the actual loss of the fowls that is deplorable, but the discouragement which it brings to poultry raisers, many of whom have already decided to go out of the business." H. L. J., Suffolk Co., N. Y.——"Potatoes are one of our staple products here, and I am greatly interested in the RURAL'S trench system. I intend to get my neighbors interested by inducing them to subscribe for the RURAL. The trench system has not been tried here yet, but it will be next season on this farm if my health is spared. The RURAL is the only paper every word of which I read clear through, and we take about half a dozen papers, all of them good ones." E. W. T., Gainesville, N. Y.——"If you want a true but old sketch you have it here: Amos G. Fassett in 1861, killed a hog 20 months old that weighed 777⅓ pounds. It was a cross between the Chester White and the Berkshire. He raised the pig himself. It weighed 30 pounds when four weeks old. It was fed at first on milk, then on pudding; the pudding was made of corn meal and a little salt. After eating all the pudding he wanted, the hog had a handful of whole corn. There was no need of hiring any butcher, for there were present about 20 men with a pair of scales, to see Fassett's hog killed." E. A. F. Hancock, Vt.——"The Thanksgiving Number is splendid. We think all those who found fault with Mary Wager-Fisher's "Dark Side of Farm Life" can forgive her now, for she has written of a very bright side. After reading her article, every word of which is true, we felt so proud to be farmers! Her dark side is true also. The idea of expecting it to be attractive! We very much admire Mary Wager-Fisher and Annie L Jack." E. G. L., Essex, N. Y.——"I am greatly interested in the RURAL experiments, especially in raising potatoes, as I am making that a specialty. I have shipped to market the last season over 3,000 bushels from 15 acres. I raise Hebrons and ship them early, commencing about the middle of August. They net me 50 cents per bushel here. I have used the Aspinwall Planter for three seasons. It is a perfect working machine. I intend to plant 40 acres next season and must have a digger. I use no manure except ashes and superphosphates. I used the last season about 1,300 pounds of the latter per acre." E. B. TRUE, Orleans Co., Vermont.——"On a cold and stormy winter's day, when everything is covered with ice and snow, when there is little life to relieve the dreary death-like appearance of the landscape, it is a relief, a positive pleasure, to have a good-sized flock of crows in the neighborhood. Their peculiar antics, their harsh chattering, their serio-comic actions, even their very boldness are fascinating at this season and relieve the monotony of the winter. After all the hard stories which have been told about the crow; after all our emphatic language when we have found evidence of his depravity in our corn fields, I am not so sure that we would exterminate him if we had the power to do so." CROW LOVER.——"Here is a simple remedy for the currant worm, which I have used successfully for 24 years and it has never failed. Try it! Take one ounce of sulphate of iron, (copperas) and dissolve it in two gallons of water and apply to currant bushes with a watering pot and rose." J. S, Sherburne Falls, Mass.——"People are talking about the good qualities af Japanese buckwheat. I sowed 1½ bushel of Silver Hull buckwheat on July 20 and harvested 52 bushels. This was my first sowing of buckwheat. I shall sow some of the Japanese also next year." F. W. B, Pottsville, Pa.——"I most highly indorse the RURAL'S plan of enlisting the ladies in its method of potato culture. I feel very sure that if the ladies espouse the cause it will be a success, and if it will be any encouragement to the good cause I will take pleasure in donating a half dozen Idaho Pear trees one to each successful competitor. In thinking the matter over, it seemed to me this would be a suitable prize not only from the intrinsic value of the pear, but also owing to the fact that the Idaho was originated by a most estimable woman." JNO. H. EVANS, Lewiston, Idaho.——"I am a woman 75 years old, but I would like to enter the RURAL'S potato contest. The young ladies had better look out." N. B., North Dartmoor, Mass.——"After a few years' acquaintance we feel very much attached to the RURAL, and are much interested in the 'potato contest,' and glad to see such a wide-spread interest in it from all parts of the country. It will certainly stimulate and encourage many to interest themselves in the work, who might never have thought of labor in the field. It was a capital thought. Who knows what well-springs may be reached by it." NEAL HAMBLETON, Lancaster Co., Pa.——"The RURAL satisfies m If it can be made better, why it shou e done of course; but if it can be kept a good as it has been in the past it may count on me as a subscriber while I am above the daisies. The editor should come over to Canada some time; we should like to see him." W. S., Beansville, Ont.——

Pomological.

HOW TO GROW FRUIT.

RES. T. T. LYON.

Lovers of the business alone should engage in fruit culture; how deep to set trees; when to prune; at what hight to permit branching.

IN a report of the Herkimer Farmers Institute, at page 819 of the RURAL, Seth Fenner is reported as saying, among a variety of good things, under the above head—"If a man has no love for fruit culture, he had better stay out of the business. If there is any one branch of farming that needs careful thought and brains, it is successful fruit culture"—a very correct conclusion, as is also his advice concerning the choice of soils, their preparation and under-drainage. To the last I will add, however, that the planter will do far better to pay the full additional cost of thorough under-drainage for land with a thoroughly permeable subsoil than to attempt to secure the needful conditions by under-draining upon a retentive subsoil.

The direction is given to "set the tree as deeply as it grew in the nursery." This may do in the soils specified, but it should by no means be accepted for all soils. On very retentive soils (and some growers must plant upon such or not at all), the trees should be planted almost if not quite upon the surface and merely earthed up to the hight at which they stood in the nursery, while on light, dry soils they will be better planted somewhat deeper, and in very light soils even several inches deeper than when standing in the nursery.

I regard the directions for pruning as, in the main, sound except that the cutting of any other than small branches, in May, while the sap is just beginning to move, is quite liable to result in bleeding and consequent disease. While pruning "with a jack-knife," is a light matter, and may be done at almost any time, all pruning to secure the growth of a proper head, or to encourage the production of wood for any purpose, should be done while the tree is in a dormant state. Later on, if it becomes desirable to hasten or increase fructification, pruning while growth is in progress, or during the summer, may be expected to tend to that result.

To my apprehension, the most objectionable advice is—"Never permit a limb to grow from the trunk less than five feet above the ground. This will allow a horse to pass underneath the tree, when cultivating the crops." There are wide differences in the habits of trees; some, like Rhode Island Greening, Talman Sweet, Roxbury Russet, and others, would become low-headed trees, even if branched at five feet; while Early Strawberry, and Benoni among apples, and Buffum, Clapp's Favorite, and many others among pears, would soon grow quite beyond reach if branched at this hight, and would scarcely at all interfere with cultivation, even if branched at the surface.

If even the most spreading varieties be branched within one to three feet of the ground, varying to correspond with habit, although the head may somewhat interfere with cultivation while young, there will be little difference when older, since the tops, even if branched as high as six feet, will, when loaded with fruit, generally droop so low as to preclude cultivation; while the shade of the heads of low-branched trees, and when of bearing age, of high-branched ones also, will effectually prevent any injurious weed growths underneath, and thus obviate the need of cultivation there. This will generally be true of low-branched trees almost from the time of planting.

Of the obvious convenience of low-branched trees, so far as the force of the wind, general management, and especially gathering the fruit are concerned, I scarcely need speak. I will only add that the soil is usually filled with feeding rootlets, even beyond the extent of the branches, and that, therefore, horse-cultivation, within that limit, should by no means be permitted.

Van Buren Co., Mich.

Various.

PROLONGING THE SEASON FOR GREEN CORN.—During the past season, I arranged so as to have sweet corn at all possible stages for the table, planting every two weeks as long as there was any chance for its maturing. On the night of September 28th, there came a frost severe enough to kill the corn that was still green and prevent further growth. At that time I had some just fit for the table and some not quite filled out. The next morning I cut it all up before the frost was off and put it up in large shocks, leaving it there in the field. For more than a month afterwards it rained so often that there was no chance to get it in dry, and occasionally I would go out, open the shock a little and break off some ears for dinner. I then got in a part, put it in a cool place and in bulk, and had fresh corn daily for some two or three weeks, when I drew in what remained outside and treated it in the same way with the same result. It is now all gone with the exception of a few ears well filled but green, which I packed away in the husk in a wet place, as an experiment, and that I think from its appearance would be good boiled to-day (Dec. 12th). In view of this accidental experiment, may it not be possible by a little effort to extend the season for having green corn upon the table, even in this climate, with all its frosts, from one to three months?

Cut green when just filled, keep moist and cool, and pluck when you want it.

N. H. WILSON.

Farmers' wives are not generally "farmerines," which might mean tillers of the soil. Many of us have all we can do without trying to draw this side of the cart. Yet every one of us means to be helpful in case of necessity or a chance to benefit ourselves. As for me who am a "home-keeper" and not a tiller of the soil, I will enter for the "potato contest" "FARMERINE." H. L. Faribault Co., Minn.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

A VERY handy way to send coins in a letter is described in the Writer. The money is laid between two thin pieces of pasteboard, such as old postal cards cut to a handy size, or even two pieces of blotting paper; the coin is then stitched in flat with the sewing machine. It cannot slide about, or break out, and it does not make a clumsy package. A very convenient idea, and one easily carried out.

* * *

IN the early part of November the latest eccentricity in veils appeared in New York; a big piece of sprigged or dotted net, shirred at top and bottom, the upper part gathered around the crown of the hat—the lower part tied with a ribbon about the wearer's neck. They are worn over big, wide-brimmed hats and are decidedly baggy. The newspapers irreverently call them fly-traps, but their more dignified title is that of Hading veils, after the French actress now visiting this country. When they first appeared, one would hardly see one worn in the course of a promenade and it would attract much attention, but by the middle of December they were worn by dozens and seen everywhere. It is rather a ridiculous fashion, but it finds plenty of followers.

* * *

DURING the cold weather one who is the victim of an unheated bedroom is very apt to neglect proper bathing, and yet it is as necessary as in warm weather. In so many country houses the bedrooms are really too cold to take a bath without risk of a severe chill. The only thing to do is to arrange for the bath in a warm room. Even in very cold weather we have found the advantage of bathing the feet in cold water before going to bed; the feet are not kept in the water long enough to chill the body and are thoroughly scrubbed with a towel until all in a glow. In many cases this is an effective remedy for cold feet. Another thing recommended by many doctors as a preventive of cold is to bathe the chest and throat night and morning in cold water.

* * *

A VERY useful little gift is a postal card case. To make it, take two pieces of cardboard a little larger than a postal card; from the front piece cut off the upper right-hand corner. Cover the outside with fancy silk, plush, or chamois leather; it may be painted, embroidered, or left plain. Cover each piece with an inner lining of silk, and neatly overhand the two pieces together. Put a small cord around the edge, and put a little bow on the upper left-hand corner. Sometimes a narrow strip of silk is overhanded between the two pieces, giving space for a larger number of cards.

FEAR IN CHILDREN.

I WAS much interested in an article in the RURAL under this title. The author, "A Mother," so nearly portrayed my own troubles, at night, from fear, when a child, of, I knew not what; (but I think my fears were more of people than anything supernatural) that it seemed as though it was my very self she was writing about.

I well remember how I used to clutch the sheet, and pull it over my head, much to the disgust of my small bed-fellow, two years older than myself; and in the morning the entire sheet would be lying above my head, on the pillow. I wonder, as I think back, that I did not smother, for I did not dare put my head from under the bed clothes in the dark.

How often I called to the patient mother in the "wee sma' hours" of the night, "Mother are you awake?" and "Yes, dear," lingers yet

in memory, and causes me to be patient with my own fear-stricken babies. I must confess, I am not very courageous now. B. H. J.

THE GIRLS' SEWING CLUB.

I HAVE always known that I was meant to have a "mission" in life, but somehow until lately I never could find out in what particular line it lay. I couldn't teach a class in Sunday School. I had tried, and beyond the questions and answers of the lesson book, I couldn't find a word to say. I could have all the children at my home on a Saturday, and make their little hearts glad, but I couldn't moralize, and I loved them all so much that I couldn't lecture them, even when I caught them playing pranks under the very nose of the superintendent. I live in a village where there are few really poor people, but there is a great field for active benevolence of a certain kind among those who are above actual want, and it came to me like an inspiration that it would be a sort of benevolence to teach the village girls to sew. It is not easy for mothers with all the care and work of a large family, to find time to direct the little stupid fingers that hold the needle so awkwardly, and must have the knots put in, and the needle threaded, and the end fastened, for every two or three inches of sewing.

It was one thing to think of it, and another to manage to get the children together. They would need some other lure than learning to sew, so I began in a very small, modest way by asking the two little girls of my next-door neighbor, who had a teething baby, and several small boys besides, to come in and spend the afternoon. They were nice little girls of eight and ten, and I pleased myself with the thought of how much help they would be to their tired, patient mother in after years.

I thought of my own childhoood, and recalled the patchwork which had been so dear to my girlish fancy. I never tired of looking over my "blocks," and examining the different patterns of the calico, and a fresh design was always an incentive to renewed labors. I cut a number of square patches from the prettiest bits of calico in my possession and basted them firmly together; then after I had amused the children awhile with books and pictures, I proposed that we should make a dolly's quilt. As I had supposed, they had never used a needle, and we did not make very much progress that afternoon, but I had interested them, and that was the principal thing. I gave them leave to bring several of their little cousins and friends the next week, and thus was the nucleus of our girls' sewing club formed.

After the dollies' quilts, came dishcloths for mamma, and very proud was each little girl to carry home to mamma a nicely hemmed dishcloth. It was not all plain sailing, and at times I felt as discouraged as most people who have undertaken self-imposed "missions," but I persevered, and in course of time the needles did not get so persistently sticky and bent, and the threads were less grimy.

Dish towels and all sorts of old soft muslin dusters were hemmed by my industrious little band. I did not ask them to bring work from home until they were able to do presentable work, then they were encouraged to bring cloth to make into simple undergarments for themselves. With very poor children it would be a fine charity to furnish canton flannel, cutting it into warm night-gowns, drawers, waists and skirts. It will help the work along wonderfully, and be a great incentive to them to persevere if you foster their love of the beautiful by giving them some strong, simple edgings to sew on them. Encourage them not only to sew, but to sew well. It is a dear, old-fashioned accomplishment, that of being able to hem, fell, back-stitch and gather neatly.

They have learned to sew on buttons, to make button-holes, and to darn stockings, and I flatter myself that they will make far better wives and mothers for my year's work. A wealthy lady who became interested in my little school sent a neat woolen dress pattern for each little girl for Christmas, and after the holidays I shall have each child make her own dress entirely with her own hands.

It only takes one afternoon a week, at least that is all the time I can spare to give to our club, and it seems to me a most potent way of doing good. What do the RURAL sisters think of it? MINNIE GREY.

DOES AGE BRING WISDOM?

IN regard to the neglect of their health and disobedience to the laws of hygiene, I think old people are as much to be censured as the young folks. A woman, though she be a grandmother, will run upstairs until it becomes a physical impossibility for her to do so. She will eat the wrong things, although she knows they will disagree with her, and she will overwork without reflection that this means premature old age, and mayhap helplessness.

"Mother is just as apt to go to the well for a pail of water without her bonnet as if she did not have to tell each of her half dozen brood, a dozen times a day, to put their hats on before going out," said a young lady, and half an hour later she, too, accompanied a friend to the door, and stood gossiping on the piazza long enough to get chilled through. We have to pay dearly for all such imprudences, sooner or later. A friend of mine was accustomed to move her square piano, on sweeping days, without aid, and I have even heard her boast that she had once moved it into an adjoining room. The cancer in the breast from which she died after great sufferings, was traced to a bruise made by pressing against that heavy article of furniture when moving it.

Some women will clean house in May, even though the weather may be very unsuitable: result, heavy cold, heavy doctor's bills to pay, and much discomfort to the whole family.

"I should be miserable if I did not get my washing out of the way on Monday," said a neighbor to me a short time ago. It was a rainy Monday, damp, cold and penetrating, but she washed, and blued, and wrung, in her steam-heated kitchen, hung such unstarched pieces on the line as she thought would be benefited by remaining there all night to "freeze as white as the driven snow," said she with more poetry than I thought the subject warranted. On Thursday I found her in bed with pneumonia, and the clothes were still unironed, while if she had waited until Wednesday, she would have had a fine day, and the work would have advanced further, to say nothing of her freedom from suffering.

More women have died from too rigid an adherence to the idea that Monday is the only day of the week suitable for washing, than we "dream of in our philosophy." System is a good thing, but it may be carried too far.

I am sorry to have had such a circle of senseless acquaintances, because a man, and I suppose a woman is known by the company she keeps, but I once knew a young lady who would walk in the rain without taking any of the usual precautions to keep from getting her feet wet, and to all remonstrances would say "I never take cold." For a time it seemed as if she could commit almost any imprudence with impunity, but for the past 10 years she has been the victim of rheumatism in a most aggravated form.

People forget that as they grow older, they cannot safely endure excess of work and must husband their resources. Don't be afraid of confessing that you are not as strong as you once were. It won't make you an hour older, while every time you err a little on the side of care and prudence, it will add to your chances for a long and comfortable life. I never can understand the feeling that makes people shrink from acknowledging that they are growing old. One can only be "sweet sixteen" for a single short year. To my mind the woman of sixty, who has grown old wisely and gracefully, is far more pleasing an object or companion than an unformed schoolgirl. Don't be afraid of old age which must come to every one if he lives long enough, but see to it that your wisdom increases with your years to the benefit of both mind and body. SELMA CLARE.

GOLDEN GRAINS.

IF we shut our eyes to the beauty of things around us, who is to blame if we find life dreary and monotonous .....

BE thrifty, but not covetous: therefore give
Thy need, thine honor, and thy friend his due;
Never was scraper a brave man. Get to live;
Then live, and use it; else it is not true
That thou hast gotten; surely use alone
Makes money not a contemptible stone.
—*George Herbert.*

THE CHRISTIAN UNION says that Bronson Alcott was a vegetarian. Once he told Dr. Walker, of Charlestown, his belief that the eater of mutton became a sheep, the eater of beef a cow or ox, and the eater of pork a hog. "And is it then true," asked Dr. Walker, "that vegetable eaters become poor potatoes?".....

PRAISE not thy work, but let thy work praise thee; for deeds, not words, make each man's memory stable. If what thou do'st is good, its good all men will see; musk by its smell is known, not by its label.....

THERE was once great consternation in the office of "Zion's Herald" when the writer of an ordinary article upon a mother in Israel, having said in pious phrase that she died and "claimed the promises," the paper was made to aver that she had died "and cleared the premises." And it was out at Worcester, Mass., where the Rev. George H. Hepworth, having declared in a public address, "I am not a free lance," the sedate "Spy" gave him fame by printing the sentence, "I want a free lunch."....

DR. SPEAR, in his "Bible Heaven," justly says if the pangs which one feels be the natural and proper result of thoughtfulness, then he may be sure that there is some serious error in his practical life and what he should do is, not to dismiss the thinking because it is unpleasant, but to reform and reconstruct that life. Rest to the soul gained by mere dissipation of thought, is always purchased at a very dear price.....

THE PILGRIM TEACHER says one is great in the kingdom of heaven just in proportion as he loses his desire for greatness, and forgets himself in his desire to be of service to others. When one honors all others but himself, then he becomes honored of God. "For though the Lord be high, yet hath He respect unto the lowly; but the haughty He knoweth from afar."....

DR. JOHN HALL says that one who is healthy does not wish to dine at a dissecting-table. There is evil enough in man, God knows! But it is not the mission of every young man and woman to detail and report it all. Keep the atmopshere as pure as possible, and fragrant with gentleness and charity.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

He who distinguishes the true savor of his food can never be a glutton; he who does not cannot be otherwise. A Puritan may go to his brown bread crust, with as gross an appetite as ever an Alderman to his turtle Not that food which entereth into the mouth defileth a man, but the appetite with which it is eaten. THOREAU.

A FAMILY OF BOYS.

THEY sit in front of me every Sabbath, and I must confess that they sometimes cause my attention to wander. Their little round heads look so funny sloping up or down like a pair of steps. There are seven of them, and the oldest is only 12. Their jackets are so neat and well brushed, that only an experienced eye can detect now and then a tiny darn in one of the elbows. When I come in late with my small flock—I should say with my one ewe lamb—it is such a reproach to me to see those seven boys headed by their tiny mamma, already in their pew, for Monsieur B——. doesn't count in the matter of getting them ready.

I had a pleasant little afternoon chat with madame B——. the other day, who meanwhile was busily repairing a suit belonging to her eldest boy, going about it in such a scientific way that, in my usual fashion, I mentally made a "note on it."

The sleeve linings were badly worn. These were ripped out carefully, much use being made of a sharp penknife, always kept for the purpose. The old lining was pressed, and the new one cut by it exactly, made and put in in the same manner, care being taken to cut both at once so that they might not turn out to be for the same sleeve. The sleeves themselves were a little short, and the cuff was ripped off, and put on an inch lower down, the sleeve faced inside with cloth of a different pattern, but matching somewhat in color. Next the pockets were examined. Those that were badly worn where they joined the garment, were ripped out entirely, pressed, and new ones cut from stout muslin and put in carefully. Others required patching, or piecing, half way down. In every case, the new cloth was cut by the old, and allowance made for the seams.

The button-holes were all worked anew, and the whole garment thoroughly sponged with warm water to which two teaspoonfuls of ammonia had been added to a quart of warm water. Care was taken to dampen every spot. Grease spots were removed with benzine, the coat hung to dry on a form, and pressed while still a little damp. The greatest triumph of home tailoring was the repairing of a light overcoat of her husband. The silk facing was worn, the buttons had torn out bits of the cloth, and the whole appearance was shabby in the extreme. The facings were taken out carefully, pressed, and new ones cut from a breadth of an old brown silk dress which happened to be of the right shade, and of so good a quality that Madame B— said it would wear as long as the rest of the garment. While the linings were out the corners of the pockets that had torn loose from the coat were neatly fastened to muslin stays on the wrong side and firmly stitched down on the right with the machine, after which they were pressed, with a wet cloth laid over them. Bits of the cloth cut from a wide seam were laid under the holes made by the tearing off of the buttons, blind-stitched down neatly first on the wrong side, and then on the right around the ragged edge. They were then pressed, and the buttons sewed on firmly.

The facings were felled in neatly by hand, and the frayed fronts and collar bound with a silk braid matching the cloth in color.

"How did you become such an expert tailoress?" said I.

"There is no teacher like necessity, and you see I have so many boys that I can afford to make a business of looking after their wardrobes. I dare say if I had only one, I should find it a more difficult matter," this politely, as if to prevent any feeling on my part because the aforesaid ewe lamb more often sports holes than she does patches.

However, I have determined to reform, and I have been mending and patching and repairing ever since my visit to Madame B—, and so in love with my new avocation have I become, that, like Alexander, I am sighing for new worlds to conquer. A C.

"IT is shallowness that decides instantly; that always thinks it knows what it is about."

CHEAP DISHES.

A DISH of yellow Indian meal, boiled a long time in a double boiler, served in a pretty dish, and eaten as a vegetable, with meat, or as a dessert, with sirup, or milk and sugar, and stewed fruit, is by no means to be despised. Cut into slices half an inch thick, and fried a golden brown in a little hot dripping, it forms a nice accompaniment to sausages, hash, fried or broiled ham for breakfast.

Most recipes for corn bread, pone and hoecake, call for three eggs to as many cups of milk. I have experimented with one egg, using a little more baking powder, and find the result very satisfactory.

Macaroni may be cooked in such a manner as to be as costly as game, but it may also be made very appetizing at a small cost. It should be yellow or brownish in color—the white sorts being poor. It must be simply wiped, and broken into convenient lengths, dropped at once into boiling water containing salt. As soon as it is tender, which you may ascertain by pressing it between the fingers, drain and add the water in which it was cooked, to the stock-pot. Leave the macaroni in the colander while you melt together over the fire a tablespoonful each of cold butter and flour, and add slowly a pint of boiling water, or half a pint each of water and broth; stir until smooth, season with salt and pepper, and lay in the macaroni to heat while you fry a shredded onion in a little fat; dish the macaroni and pour the onion over it. This makes an excellent dinner with a pound of fried, broiled or boiled sausages, a dish of boiled turnips, and a bread pudding. You may even preface it with one of the inexpensive "winter soups" lately given in the RURAL.

A nice way to cook sausages is to prick them with a fork; lay them in hot water for a few minutes, roll them in flour and fry brown. Cut as many small slices of stale bread as you have links or cakes of sausage, and fry them in the fat; dish one under each sausage. Make a gravy by pouring a cup of boiling water into the fat in the pan thickened with a tablespoonful of flour wet with cold water; boil up, season, and pour over the bread.

Very good fish cakes can be made of fresh or canned salmon, or of any kind of cold boiled, baked, fried, or broiled fish. Their excellence will depend upon your skill in seasoning, and the delicacy and creaminess of your mashed potatoes. Mix together equal quantities of fish and potatoes, season with salt and a bit of Cayenne pepper, and beat well with a fork. You may then roll it in crumbs and beaten egg or not as convenient.

A delicate little breakfast dish is made from the veriest trifle of minced poultry, ham, or ham and veal. Mince the meat of whatever kind very fine, season rather highly, bind together with a beaten egg or a part of one, according to the quantity of meat, and

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

then inclose a tablespoonful or so in a mashed potato, so that it looks like potato cake; dip in egg and crumbs and fry by immersion. A little dish of this kind disguises the fact that it is made of scraps, and is so appetizing that you may be sure of its meeting with a hearty reception. AUNT ALICE.

THE London Queen says that the old-fashioned scold among cultured and refined people is as obsolete as the branks and the ducking-stool, by which she was checked and punished. Big words and furious tempers do not come into the order of modern life; and the woman of condition who should storm like a whirlwind through the house, scattering the wildfire of reproaches and objurgations as she went, would forfeit her claim to be held as a true gentlewoman, and, no matter what her wealth or inherited position, would be relegated by public opinion to the ranks of the essentially vulgar and irredeemably unrefined. But the race survives, though the manifestations be different; and the scold of the ducking-stool, the shrew of the street, is to be found in the discontented, the otherwise-minded, the persistently nagging, the constitutionally depreciatory, the wilful makers of unnecessary crosses, which, after having made them, they bear with many sighs and audible groans, the general putters-to right from a higher moral platform than that inhabited by common-sense people of the world. All of these may be women of gentle bearing, refined speech, perfect manners, but they are none the less survivals of the earlier, coarser type.

BREAD.

GOOD flour and good yeast are essential to successful bread-making. We may also add that yeast, wetting and salt, should always be thoroughly mixed before mixing with the flour, and that warm, dry flour produces superior results. To make good, soft yeast: with two cups of boiling potato-water scald one cup of wheat flour, stirring till smooth. Then add two cups of finely mashed potatoes, a tablespoonful each of salt and sugar, beat well, add the strained hop tea obtained by steeping a single handful of hops in a quart of boiling water while the potatoes were cooking, stir, and when cool enough not to scald, add a cupful or two of good yeast, cover with a thin cloth and set in a warm room to rise. When very light (usually next morning) I put it in the yeast jar which in the meantime has been washed, scalded and dried, cover closely and put it in the cellar. If made while cooking potatoes for breakfast or dinner but little extra time is required in its preparation.

To make wheat bread:—For each loaf required take six cups of sifted flour, and to two cups of lukewarm water add one-fourth of a cup of yeast and one-fourth of a heaping teaspoonful of salt, pour this into the flour and with the hand mix quickly and thoroughly, not kneading at all; then cover with another pan (this prevents a crust from forming on top) set it to rise, at bed-time, or if very cold weather, early in the evening. In summer it may merely stand on the kitchen table, in cold weather it may if necessary be wrapped in a thick cloth and a warm board be placed underneath. Early in the morning it is usually light and is put directly into the baking pans, using no flour except a mere dust rubbed on the board to keep it from sticking, not kneading it at all, and handling it only enough to form it into loaves. Cover and set it in a moderately warm place to rise. When light, bake about an hour—sometimes a little less. When done the loaves should *lift light*, the bread be fine-grained and spongy, sweet and delicious.

Another good rule is to observe the same proportions as to ingredients, but on first mixing the bread, knead it thoroughly, then let it rise and in the morning make it into loaves without kneading, using no more flour. Some flour requires less wetting than other, so that it is sometimes found necessary to merely allow to each loaf two cups of wetting, including the yeast. After a little experience, one need not measure the flour, but may pour the wetting into the center of a pan of flour, mix 'till of the proper consistency, then knead thoroughly and set it to rise. My sister, a very successful bread maker, makes bread this way, only at all times of the year she leaves the bread upon the kitchen-table to rise, from first to last, never putting it near the fire until it is ready to bake; but she usually makes it rather early in the evening, in cold weather.

To make rye bread: For one large loaf, take three cups of wetting—about one-third cup of yeast, the rest luke-warm water—add a level teaspoonful of salt, pour all into a pan containing one cup of wheat, and seven cups of rye flour, stir with a strong spoon till thoroughly mixed, pour into a greased baking pan, cover and set it in a moderately warm place to rise; when very light bake till thoroughly done, usually about an hour. We think rye bread is best the next day after it is made. GLADDYS WAYNE.

MY method of bread making is not new, simply good yeast and flour, and *common sense.*

One cake of compressed yeast dissolved in about two tablespoonfuls of warm water, add one tablespoonful of salt, two of sugar, and one quart of warm water. Stir well and add two-thirds of a cup of sweet lard, mix well and stir in flour enough to knead without sticking (I use roller process). Put back in pan, cover and set in a warm place until morning, when the pan should be full. As soon as convenient I divide it into four parts, mold into loaves and put into tins. When full bake a nice brown in a moderately hot oven. M. E. THOMAS.

ACCORDING to Paris fashions the style of dressing the hair is certainly lower than has lately been worn. One way of arranging is to have the hair twisted round like a rope, at the nape of the neck, with one or two curled ends escaping or falling carelessly. In front the fringe is massed together like a thick lock in the middle. Another way is to plait the back hair in two wide plaits, raised up with a comb, and then falling slightly on the neck. In fact, the nape is now covered, but the hair does not descend lower except in the case of curls being worn.

BUTTON-HOLES.

SOME ONE not long since gave her way of strengthening every-day button-holes. I use coarse thread, as coarse as No. 16 spool cotton, and find it answers well, and does not look so bad as a ragged button-hole. MRS. L. H. NILES.

APPLE CUSTARD.

PARE, core and quarter tart apples, and cook carefully, not to break the pieces. Sweeten and put into a pudding dish. Make a custard of a pint of milk, three eggs, sugar and flavoring. Pour over the apples and bake until the custard is firm. MRS. ECONOMY.

THE VERY BEST GINGER SNAPS.

ONE large cup of butter and lard mixed; one coffeecup of sugar; one cup of molasses; one-half cup of water; one tablespoonful of cinnamon, one tablespoonful of ginger, one teaspoonful of cloves, one teaspoonful of soda dissolved in hot water. Flour for a pretty stiff dough. Roll out thin and bake quickly. They keep well.

OLD-FASHIONED GINGER BREAD.

ONE quart of good New Orleans molasses; three-fourths of a pound of butter, one tablespoonful of soda, one gill of water, ginger to taste. In winter it will take more water than in summer. Mix with flour as soft as you can roll out. Roll about one-half inch thick. Cut in squares or cards and bake in a flat pan.

GOOD FRIED CAKES, ETC.

TAKE one pint of butter-milk, one egg, one cup of sugar, one large tablespoon heaping full of butter, a little ginger, one teaspoonful of soda. Knead as soft as you can roll, and drop in hot fat.

For canker-sore-mouth, burns, chafes, slight flesh cuts, the *white of an egg* is the *best* remedy.

For rattle-snake bite I used a bottle with a large mouth to cup the wound, inserting it first in *hot* water, then immediately on the wound. After removing it, I washed the flesh in strong saleratus water, and a green, yellowish fluid came off. After repeating this several times, I put on a mixture of one teaspoonful of salt; the yelk of an egg and as much gunpowder as I needed to make a paste. This I spread on a cloth and bound on to the wound, renewing it several times until it refused to adhere. I should have said that I bandaged the limb below the knee, and I also put on worm-wood steeped in vinegar. After two days, the swelling had disapeared and the boy played about as if nothing had happened. I have seen this recommended for the bite of a mad dog. MRS. VIOLA GRIBLIN.

PUMPKIN BUTTER.

TAKE out the seeds of one pumpkin, cut it in small pieces and boil them soft. Take three other pumpkins, cut them in small pieces and boil soft; put in a course bag and press out the juice. Add this to the first pumpkin and let it boil ten hours or more, stirring often. If the pumpkins are frozen, the juice will come out much more readily. This will keep best in a wooden box or keg.

PUMPKIN CHIPS.

PARE a ripe, rich pumpkin, remove the seeds, and slice all the best part of it in equal-sized chips and as thin as you can cut them. Weigh, allow one pound of granulated sugar and a gill of lemon juice to every pound of the chips. Lay the chips in a large earthen vessel, strewing the sugar between them and putting the lemon juice over the top. Cover and let stand over-night. Next day place over the fire and boil slowly until the chips are tender, crisp and transparent all through. Spread the chips on a dish to cool and then put into glasses or jars, straining the sirup over them. Place a thin paper dipped in vinegar over the top and seal. AUNT ADDIE.

AUNT JEANNIE'S RECIPES.

BROWN BREAD.

THREE cups of rye meal and five of Indian. Add a teaspoonful of salt and dissolve a teaspoonful of saleratus in a pint of sour milk. Mix a little too stiff to stir with a spoon. You will require a little more milk. Put into a greased tin and bake three hours. The oven should be quite hot when first put in to prevent cracking on top, but afterwards it should be moderately hot.

APPLE PUDDING.

PARE and quarter enough tart apples to fill an ordinary pie tin, adding a little water, perhaps two tablespoonfuls, and set on the back of the stove while you make the crust. Sift into a pint of flour one half teaspoonful of saleratus, and one heaping teaspoonful of cream-of-tartar. In this rub a tablespoonful of butter and mix rather soft with sweet milk. Roll out the size to cover the tin of apples, and place in the oven. When done turn on to a plate, which of course brings the apples on top. Spread with butter and cover with sugar. Very nice. FANNY HAY.

DEFECTIVE VISION.

A WRITER in the North American Review holds that coffee is a frequent cause of defective vision. Children who are allowed to partake freely of coffee, he says, become fussy, noisy and half wild with mischief. They will advance rapidly in their studies, but hate work, and at times become indifferent to their books. They grow rapidly, but not aright, and become men and women too soon.

I am sure that few parents need the caution, or rather I feel that few *should* need it, for I have seen injudicious mothers allow their children to have the regulation cup of coffee which was served to the older members of the family. Bring a child up to have what my little one calls "white tea," and he will have the warm drink which is perhaps necessary in cold weather, without any of the harmful effects of coffee or tea. It consists of a tablespoonful of either coffee or tea, in a cup of hot milk sweetened and is both harmless and pleasant. MOTHER.

Miscellaneous Advertising.

THE CHAMPION

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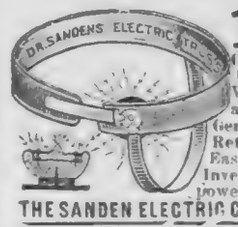

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34 PARK ROW, NEW YORK.

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PEERLESS DYES Are the BEST. SOLD BY DRUGGISTS.

News of the Week.

HOME NEWS.

SATURDAY, January 5, 1889.

The Brotherhood of Locomotive Engineers complain that other roads refuse to employ the engineers and firemen who stuck last spring on the "Q" system, the strike on which has not yet been "declared off." The men also say that other roads have helped the "Quincy" financially and otherwise. They offer to declare the strike "off" if the "Q" road will give the same chance to the old employés as it does to others. Threats are made that if this isn't done, trouble will be caused to the "Q" and all assisting roads.....The debt of Canada increased about $12,000,000 during the past fiscal year and stood on June 30 at $234,513,358..... Nearly 100 designs for the proposed Grant monument in New York City have been submitted in competition for the prizes offered by the Executive Committee of the Grant Monument Association. Five prizes will be given, ranging from $1,500 to $200, and nobody will be barred because of nationality. It is not unlikely that the monument may be erected over the tomb in this city..... Mrs. Schofield, wife of the General, died the other day .. ....Mr. Joseph Anderson, brother of "Our Mary," was married to Gertrude Barrett, daughter of actor Lawrence Barrett, at the Catholic Cathedral of the Holy Cross, Boston, last Thursday, amid the greatest *éclat*..... There has been an unusually large amount of talk lately on both sides of the frontier about the annexation of the Dominion to the Union; but while there are on both sides a considerable number of strong and prominent advocates of such a measure, the great bulk of the people take little or no interest in the discussion. There is a quiet but deep-seated conviction in this country that annexation is inevitable. The belief is pretty general that it will occur either voluntarily, on account of the desire of the Canadians to share in the great profits of free trade with this country, or compulsorily, as the result of a distant war with England. There is no general desire, however, to hasten the step as a result of either cause .....Senator Stanford, of Cal., has sold to Miller & Sibley, of Franklin, Pa., the weanling colt Electioneer, out of the mare Beautiful Bells, for $12,500—the highest price ever paid for a weanling colt in America. This colt is a full brother to two others that have beaten 2:20 at three years old..... After all, it is denied that the great English race horse, Ormonde, is to come to the United States, although it is not denied that an American offered $85,000 for him; but it is said that a man from Buenos Ayres offered $125,000 for the wonder. His owner, the Duke of Westminster, the richest noble in England, is going to breed him, and will probably keep him if his get are not roarers like himself.....The town of Springer was laid out as the capital of "Oklahoma Territory" on Dec. 31, and Indian Territory cattle men were elected officers. It had then a population of 5,000. The "boomers" captured on Dec. 10, have been released. It looks very much as if the county would be opened with or without the consent of Congress which is a trifle dilatory in acting on the Springer Bill establishing the Territory ....Three parties of five each, have been persistently hunting offending negroes since that trouble at Wahalak, Miss., about a fortnight ago. They are known to have met and killed four negroes in spite of the piteous appeals for mercy made by the latter, some of whom said they had taken no part in the "difficulty." All of them owned small farms, and all the farms have just been "located" by white men. The whole trouble was caused, it appears, by lawless acts of whites who wanted the colored men's farms..... The Chicago Railway Age reports that during 1888, 19 railroads, with almost 1,600 miles of lines and nearly $64,000,000 of bonds and stock, have been closed out for the creditors. .....The remarkable weather which we are now enjoying reached its climax on Wednesday last, when not a drop of rain nor a flake of snow fell throughout the United States. Such an occurrence at this season of the year, is probably without precedent..... ....Mr. James McMillan, who has just been nominated to succeed Senator Palmer by the Republican Legislature of Michigan, is the chief stockholder of the Detroit Car-Wheel Company, the Baugh Steam Forge Company, the Detroit Iron Furnace Company and a number of other large concerns in Michigan..... U. S. Consul Astwood, on the part of another American, has just made an offer of at least $200 000 a year to the Government of the petty Republic of San Domingo, as payment for permission to exhibit the bones of Christopher Columbus through this country for four years. The Domincan Secretary of State has administered a stinging rebuke to the shameless official for his breach of decency and propriety. Consul Astwood should at once be kicked out of the service of Uncle Sam..... The Richmond (Va.) Whig, the oldest paper in the city—in its 64th year—has suspended publication.....The State of New York is nearly out of debt, and if the Direct Tax Bill, now before Congress, is passed, returning $2,000,000 from the General Government, the tax rate will be the lowest for 50 years..... The railway mileage of the country has increased, the past year, 7,120 miles of main track in all States and Territories, except Rhode Island and Nevada. Kansas laid the most. California next.....Any person who committed murder after midnight on January 1, in this State, and who may be convicted and not pardoned, must be executed by electricity, so that "hanging is played out" here; but not as criminals wished it to be. The condemned murderer is to be parted from his relatives and all the rest of the outside world for the last time at the door of the court-room after sentence. He will be shackled and carried to one of the State prisons. A week is to be set by the judge, and in some day in that week, the man is to be killed by electric wires, and buried in quicklime within the prison walls, so that his body may be promptly destroyed. Not a prayer is to be said over the corpse or the grave, and the newspapers are forbidden to print anything about the execution, except that the sentence was carried out. It is thought by many that this clause of the law is unconstitutional as interfering with the liberty of the press, and doubtless the first execution of the kind will be more fully reported than any in late years has been. Only a few persons are allowed to be present at the "shocking" scene, however..... Private Dalzell is authority for the statement that $14,000,000 of unpaid pensions await claimants in the U. S. Treasury. He says that not less than 400,000 pensioners are entitled to receive $25 to $35 each by simply applying for it in Washington as follows:

First—Five cents per mile from place of discharge home
Second—Twenty-five cents daily for extra duty between April and October, 1862.
Third—Twenty-eight cents daily while in prison or on furlough.

He says he obtained his extra compensation as pensioner in these particulars by simply applying for it last year, and that not one in ten Americans knows anything of the legality of such a claim. Here's a New Year's gift for many of our brave soldier readers. A telegram just received from Washington casts considerable doubt on the correctness of the "High Private's" statement, however, for it says most of the money due has been paid.... The combined coal companies in the Wyoming and Lackawanna region, Pa., charge their miners working on "starvation wages" $3 per keg for powder which cost only $1.25 per keg ! ! ! .. All over the country there is a healthy, growing movement for reform in political elections. Flagrant bribery is persistently charged against both the great parties in the recent elections in many parts of the country; but especially in Indiana. Such charges are made after each election, municipal, county, State and national as well as charges of "colonization," ballot-box stuffing, etc., and the conviction is growing that the safety of our institutions peremptorily demands some amendment. The Massachusetts Legislature has just adopted a secret ballot law as a step in the right direction, and her example has given an impetus to this kind of reform throughout the other New England States, and, indeed, elsewhere also. The Australian method of voting finds many advocates. ... .The San Francisco Examiner says that the Chinese exclusion bill has brought on a great labor crisis in California, and predicts an agitation looking to the repeal of that law. It is reported that the coolies are rapidly withdrawing from the farms to supply city shops and factories where wages are higher. It is said that there is not now enough labor in the State to handle next year's crops, and that if farmers and fruit growers want cheap labor they must come to this side of the mountains for it.....The single land-tax men are preparing a monster petition to Congress for the appointment of a committee to inquire into the expediency of raising all public revenues from a tax on land, to the exclusion of all other taxes, whether in the form of tariffs upon imports, taxes upon internal productions or otherwise. Signatures to this petition are pouring into the headquarters at New York at the rate of 700 and 800 a day..... Col. John C. Dent, brother-in-law of Gen. Grant, died at his home in Carthage, Mo., the other morning, aged 73. Col. Dent served with distinction in the Mexican war and also in the War of the Rebellion.....The growth of Duluth, Minn., during 1888 is remarkable. Over $4,300,000 has been spent for improvements of various kinds, and 782 new buildings have been erected at a total cost of $2,802,600 .....Armour & Co., of Chicago, did a cash business during the year ending November 1, of $55,000,000. The firm employs 6,000 hands, and during the year took the lives of 561,199 head of cattle, 1,140,000 hogs, and 164,539 sheep ..... Congress met Wednesday and the Senate resumed the consideration of the Republican tariff bill, which will have right of way till action is taken on it on January 21. The most important change hitherto made is an amendment providing for a bounty of one cent per pound on American sugar; but this meets with strong opposition. In the House, Mr. Springer, of Illinois, introduced a joint resolution providing for the election of the President and Vice-President by a direct vote of the people and for the term of six years. It makes the President ineligible for a second term and extends the terms of members of Congress to three years, the terms to expire December 31. It also provides that each session of Congress shall begin the first Wednesday of January in each year. No chance of its passage at this session. Nothing else of importance or interest during the week, except the development of a strong opposition to the Oklahoma bill.....

Coughs and Colds. Those who are suffering from Coughs, Colds, Hoarseness, Sore Throat, etc., should try BROWN'S BRONCHIAL TROCHES, a simple and effective remedy. They contain nothing injurious, and may be used at all times with perfect safety.—*Adv.*

FOREIGN NEWS.

SATURDAY, January 5, 1889.

NEW YEAR'S is always waited for with more or less anxiety by the people of Europe, for at the "receptions" then given by the various rulers, little speeches are made which are thought to be indicative of the opinions of the sovereigns with regard to the outlook for peace or war during the ensuing year. These speeches are generally rather oracular in their ambiguity, so that very different inferences are generally drawn from them. This year, however, the general consensus of opinion is that they indicate peace. France and Russia are, as a rule, held up as the bugbears of war; but the cordial union of the "Central Powers"—Germany, Austria-Hungary and Italy—is regarded as a guarantee of peace, because it is thought that neither France nor Russia, nor both combined, will have the temerity to attack the coalition, or any of its members, for to attack one would be to incur the hostility of all. Great changes are also being made once more in the armaments of all the belligerent countries, and also in the drill and manœuvres of the various armies, to meet the new conditions brought about by the discovery of new explosives of stupendous power, and of newly invented cannons and rifles of unprecedented accuracy, rapidity and reach. It will take another year, say the knowing ones, before the various nations can be equipped with the latest and deadliest arms, and be prepared to resist these to the best advantage by new formations of troops in the field and improvements in fortifications.... .. In England, Parliament has just reassembled after the Xmas vacation, but nothing of interest has yet occurred. Of late in two bye-elections for members of Parliament, the Conservatives secured considerable gains; but the tide seems against them still. The Parnellite trial is still suspended. It is charged that the Times and the Government are prolonging the case in order to get in all the damaging evidence possible without a chance for rebuttal before the case collapses, either because the Parnellites are bankrupted or because the court may decide that there is "no case" against the accused. It is charged that emissaries for the paper hunted up dynamiter Sheridan, at Pueblo, Colorado, and promised him $50,000, $25,000 down, if he would give incriminating testimony against the accused. He declined, fearing the fate of informer Jim Carey, who was shot to death for "peaching." Evictions of recalcitrant tenants still continue in Ireland in spite of vigorous resistance. Those who offer this are tried and imprisoned usally for some years. Two members of Parliament have also been lately imprisoned for delivering speeches to crowds who persist in meeting when ordered not to do so under the Crimes Act .....In England agricultural distress still continues, and there is much stagnation in trade, and compulsory idleness in towns and cities. Strikes are frequent, and charity, public and private, is heavily taxed .... The English show no signs whatever of quitting Egypt, the chief strategic points of which are still occupied by British troops. Down at Suakim, on the Red Sea, there has been a good deal of fighting lately between the Egypto-British garrison and the besieging Arab followers of the Mahdi under Osman Digma, whom reports have killed so often. Success has been invariably on the side of the besieged, the Arabs having been repeatedly routed with great slaughter, but they require as much killing as Digma did. Lately the latter ex-merchant and slave trader said that last October the followers of the Mahdi in the Soudan had captured the German Emin Pasha and a white man, who was identified as Henry M. Stanley by a letter which was known to be in his possession and a copy of which was produced by Osman, who offered to surrender the prisoners if the town were evacuated, threatening death to them in case of refusal. Later advices from both the Eastern coast of Africa, at Zanzibar, and from the Western coast at the mouth of the Congo, go to prove that Stanley had met Emin and relieved his necessities in the way of arms and ammunition, and that both were free in November. Reports are a trifle vague and confusing, however, but the probability is that both Stanley and Emin, or the former, at any rate, will soon emerge in safety from the Dark Continent..... .. The drought in South Australia has been broken by copious rains.... ... Indian advices say that cholera prevails in a virulent form at Quilon, on the Malabar coast. It is reported that 2,000 Christians have succumbed to the disease ..... The Argentine Republic of South America has been borrowing so much money abroad as to create some alarm among foreign investors. During the past year alone, she has borrowed in Europe over $185,000,000, while her population is only 3,500,000. This sum exceeds the entire internal, foreign and floating debt of the country a year ago. Is it a bubble or the foundation of vast and profitable improvements, is an anxious question with trusting investors.....

AGRICULTURAL NEWS.

SATURDAY, January 5, 1889.

The 19th annual meeting of the Vermont Dairymen's Association will be held at the City Hall, Burlington, on January 16, 17 and 18. A splendid programme of addresses and a fine exhibit of dairy products and implements will delight visitors..... The Pennsylvania State Horticultural Society will hold its 13th annual meeting in Montgomery Hall, Lewistown, on January 16 and 17. All interested in horticulture are cordially invited..... The second annual convention of the Connecticut fruit-growers and cider-makers will be held in room 50, State Capitol Building, Hartford, on January 15 and 16. An instructive meeting is certain..... The third annual meeting of the Central Ohio Farmers' Institute will be held at the City Hall, Columbus, on January 17 and 18..... The 13th annual convention of the Swine Breeders of Indiana will be held in the State House, Indianapolis, on January 25..... The 22d biennial convention of the American Pomological Society will be held at Ocala, Fla., February 20 and 22..... ...The 34th annual convention of the New York State Horticultural Society will begin at Rochester, on January 23 .....The 22d annual winter meeting of the Minnesota State Horticultural Society will be held at Minneapolis, January 15—18, the State Amber-cane Association taking up Wednesday afternoon for its 12th annual session..... The Michigan Shorthorn Association will hold its annual meeting at Lansing, on January 19 and 20..... Governor Richardson of South Carolina, has vetoed the act accepting the Clemson bequest which left Calboun's old homestead and $100,000 for the establishment of an agricultural college. The Governor appears to fear the farmers' vote less than did the members of the Legislature..... Cotton seed of prime quality is offered so sparingly to the mills South that it is understood that the leading consumers are about to offer higher prices in order to bring out any surplus that may be in planters' hands..... ..... The Evaporator of Harden & Sweeting, at Barker's Station, Niagara Co., N. Y., the largest in the world, was burned Jan. 2. It was capable of handling between 1,000 and 2,000 bushels of apples a day. There were in the cremated building from 25,000 to 30,000 bushels of apples. Estimated loss, $10,000 .. ....The little equine whirl-wind, Jay-Eye-See, "is all right."... . .....A bill is to be introduced into the Legislature of Pa., at an early day, by Representative J. M. Baker, of Delaware Co., providing that only graduates of legally chartered colleges shall be allowed to practice veterinary surgery in that State. An exception is to be made in favor of all who have been practicing for five years preceding the passage of the act..... The National Expert Association of Judges of Swine will hold its first annual meeting at Dayton, Ohio, January 17 and 18 ..... The shipment of mutton from New Zealand and Australia to England is likely to be very heavy this year. As a single specimen, nearly 200,000 sheep have been guaranteed to the Canterbury Frozen Meat Company, of New Zealand, for shipment to London during the season of 1889-90..... ..... French farmers are complaining of the embargo on their cattle in England, and the French Government has been protesting against it with little prospect of relief, as the English base the closing of their ports on the plea of the prevalence of infectious deseases in France. The only Continental countries to whose cattle English ports are still open are Portugal and Sweden.....Hogs received at Kansas City in December averaged 236 pounds in weight, against 224 pounds in 1887 .....Copious rains in California are said to have almost assured extra good crops. In the great producing district, in the San Joaquin Valley, where there was insufficient moisture last year to save the wheat crop, there have been from three to four inches of rain, in comparison with an average of 1⅛ inch in the valley last year. In San Franciso there have been 10 inches, against three inches last year; in Martinez, seven inches, against two; in Maryville, 10 inches, against four; in Sacramento, eight inches, against 1⅛; in Stockton, 5 inches, against 1⅛; in Fresno, 4 inches, against 1⅛; in Los Angeles, 11 inches, against two..... The officers of the National and State organizations of wool-growers will meet at Washington, Jan. 10 to consider important questions relative to the American wool industry and its protection. The president of the National Association thinks that the Senate tariff bill does not provide adequate protection as it now stands.... The inspectors of the Bureau of Animal Industry of the United States, have unearthed a novel method of defrauding the United States Treasury. It has been the custom since the Bureau extended its operations to Queens County, N. Y., to appraise and pay about $35 a head for all cattle killed because of pleuro-pneumonia. The swindlers would buy cattle at $20 a head and inoculate them with the disease ..... The Hungarian maize syndicate has collapsed, having lost 3,000,000 florins.....Under an agreement lately made by the Western millers, 250 mills in the fall-wheat belt are to close down or run on half time during January, to lessen the output of flour. All the flouring mills in St. Louis, except one, closed January 2. At Minneapolis, the aggregate production of flour for last week was 60,000 barrels, against 59,480 the previous week, and 120,900 for the corresponding time a year ago. The direct exports for the week were 15,800 barrels, against 16,200 the preceding week. The receipts were: Wheat, 281,120. Shipments: Wheat, 208,320; flour, 51,676 barrels, and mill-stuff, 1,935 tons ..... Ferret breeding is a new and highly profitable branch of farming in Australia and New Zealand. One firm that has commenced the business on a large scale has contracted to supply 14,000 ferrets per annum for three years to the Government at $1.82 per head, the creatures being delivered when they are three months old. They are to be used in exterminating rabbits.....

No Need of Comment.

PRINCE'S BAY, N. Y., April, 1, 1887.
"My wife was fully relieved. We recommend Compound Oxygen to every one."
J. W. ANDROVATH.

"We have ourselves used Compound Oxygen. We confidently recommend it."
HOMER A. KING.
Of *Evangelist and Herald*, Springfield, Mass.

DARLINGTON, S. C., February 7, 1886.
"I recommend your Compound Oxygen."
SERENA L. DARGAN.

ACHILLES, Kan., April 22, 1887.
"I have great faith in Compound Oxygen."
A, LYLE MCKINNEY.

ALMOND, N. Y., May 20 1887.
"It is a marvelous remedy."
MRS. J. C. GOFF.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 331 Montgomery St., San Francisco, Cal.—*Adv.*

"Herbrand" Fifth Wheel for Buggies.—*Adv.*

Crops & Markets.

SATURDAY, January 5, 1889.

According to the latest reports in the Northwest, West and Southwest, there has hitherto been practically no winter. There is very little frost in the ground, and, with the exception of a few isolated limited areas, there is no snow. Even Canada reports that while there have been a few days of sleighing this winter, at present all traces of snow have disappeared. All along the Ohio River, the weather has been very open, no snow, and the pastures good yet. The wheat looks well and the mills generally are supplied with wheat enough to last them sixty days. Texas reports no hard freeze this winter; in fact, they have plenty of moisture, and the weather could not have been more favorable for the winter wheat than it has been for the last sixty days. In Kansas, we find it unusally dry, and it is said that the subsoil of central and western Kansas has never been as dry at this season of the year as now. Taking the State as a whole, Kansas needs very favorable weather from now on to give her an average crop of winter wheat, and it is estimated that there is not over 15 per cent. of the old crop of winter wheat remaining to-day in farmers' hands. The movement of new corn during December in northern Kansas and Nebraska was large, so much so that the railroads found great difficulty in furnishing cars to move the crop. The recent decline, however, has checked the movement very much, and very little corn will move for some time while present prices remain. Reports from northern Dakota are that there is no No. 1 wheat in farmers' hands. The rejected grade is probably one-eighth of the crop which was raised, and the largest portion of that will be ground for feed. There has been a great deal of harrowing done during the month of December on account of the dry weather.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, January 5, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	6⅝	6⅞	.....
Strict Ordinary	7⅛	7⅜	.....
Good Ordinary	8 3-16	8 7-16	.....
Strict Good Ordinary	8 11-16	8 15-16	.....
Low Middling	9¼	9½	.....
Strict Low Middling	9¼	9½	.....
Middling	9¾	10	.....
Good Middling	10 1-16	10 5-16	.....
Strict Good Middling	10 5-16	10 9-16	.....
Middling Fair	10 11-16	10 15-16	.....
Fair	11 5-16	11 9-16	.....

STAINED.

Good Ordinary	6 9-16	Low Middling	8 5-16
Strict Good Ord	7¼	Middling	9 3-16

POULTRY-LIVE—Fowls, near-by, per lb, 11@12c; fowls Western, per lb, 11@12c roosters, per lb, 6@6½c; turkeys, per lb 10@12c; ducks, western, per pair, 65@85c; geese, western, per pair, $1 40@1 75; chickens; nearby, per lb. 11@12c; do, western, 11c.

POULTRY.—DRESSED—Turkeys, dry packed, good to choice, per lb, 13@15c. do do, common to fair, 10@12c; do, iced, dry picked, choice, 11@12c. Fowls, western, packed, choice, 9@10c; do, nearby, do do, 10@12c; do do, western, iced, dry picked, 9c; do do do, scalded, 8@9c. Squabs, white, per doz, $2 75@$3 00; do, dark, do, $1 75@$2 00. Chickens Philadelphia, dry packed, 15@17c, do Jersey, do, choice, 13@14c; do nearby, do, good, 10@11c; do Western, do do, 9@10c; do do, iced, good to choice 10@12c. Ducks, nearby, choice, per lb, 13@15c; do do, good, 12@13; do Western, good, 12@14c. Geese, Western, good, 10@11c

GAME.—Woodcock, per pair, —@—. Partridges, per pair, 60c@$0 90; Wild Ducks, Canvas back, per pair, $4 00@$5 00; do, Red Head, do, $1 00@2 00; Grouse, do, 75c@$0 90, Wild Ducks, Mallard, do, 60@75; do, Teal, do, 25@40c; Quail, per doz, $1 50@$2 25;

HOPS.—State, new, best, 21@22c; do, prime, 19@20c; do, low grades, 17@18c; do do, 1887, best 10@12 do do do, fair and good lots, 9@11c; do do, common, 11@12c; do do old, —@—c; do, California, new, 20@21c; do do, State, old, —@—c; California, new, choice, 24@26c; do, best, old, 12@13c; do, good, 12@—c; do, common, 9@11c.

HAY AND STRAW.—Choice Timothy, 90@95c; do good do, 75@85c; do medium, 70@80c; shipping, 60@65c; do, Clover, mixed, 70@75c. Straw.—No. 1, rye, 80@85c; short do 65@75; oat, 55c.

BEANS.—Marrows, new, $2 25@—; new mediums, choice, $1 90@1 95; pea, $2 50@—; red kidney, $2 10@2 20; white kidneys, choice, 2 50@2 55; foreign, mediums, 1 35@1 55; California Lima, $2 75@$3 00; green peas, new, $1 85@1 40.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 5@5¼c, and farmers' grades at 4½@4½c.
CHESTNUTS quoted at $1 75@$2 50 per bushel.
HICKORY NUTS quoted at $1 50@$1 75 per bushel.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Long Island, per bbl, $2 00@$2 10; Maine, per bbl. $1 75@$2; State, per bbl, $1 15@1 75; Sweets, per bbl, $2 00@2 75. State. Onions, Orange county red, per bbl, $1 15@1 25. Cabbages, Long Island, per 100, $1 50@4 00; Onions, Connecticut, red per bbl, $1 25@$—; do do, white, per bbl. $3 00@$4 00; do do, yellow, per bbl, 1 25@1 40; do State, do, do, $1 00@—. Turnips, Russia, per bbl, 40@70c. Cauliflower, per bbl. $2 50@ 3 50; Celery, per doz. bunches, 75c@—; Kale, per bbl, 50@75c; Spinach, per bbl, $1 00@$1 50.

FRUITS.—FRESH.—Apples, Pippin, per bbl, $1 50@$2; do, King, do, $1 50@$2 25; do Snow, do, $1 50@$2 00; do, Baldwin, $1 00@1 50; do, Greening, $1 00@$2 00; do, common, $1 25@$1 40. Pears, Dutchess, per bbl, $4 00@4 50; Virgalieu, per bbl, $4 00@$5 00; do, Vicar, do, $2 50@$3 00; do, Kieffer, do, $3 00@$4 50. Grapes, Delaware, per lb, 2@7c; do, Catawba, do, 3@4; do, Concord, 2@4c; do, Niagara, ——c. Cranberries, Cape Cod, choice to fancy per bbl, $6 50@8 50, do do, fair, per bbl, $6 00@$——; do do, per crate, $2 00@2 75; do do do, frosted, do, $2 50@$3 50; do, Jersey, do, $1 50@$2 15. Quinces, per bbl, $0 50@$1 25. Florida Oranges, best, per box, $2 40@$2 75; do, good lots, $2 00@$2 25; do lemons, best, $3 00@3 50; do do, common, per box, $1 00@$2 50

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5½@7c; do do, old, 5@7c; do do, new, common to prime, 4½@5¼c, do sliced, new, 4@5¼c; do, quarters, choice, 5@5¼c; do, coarse cut, 4@4¼c. Cherries, new, 13@15c. Raspberries, new, 19@21c. Blackberries, 5½@5¾c. Huckleberries, 12@13c. Peaches, Delaware, evaporated, peeled, 17@21c; do do do, unpeeled, 8@9½c; do, North Carolina, sun-dried, peeled, 9@12c. Plums, 7½c.

PROVISION MARKETS.

NEW YORK.—PROVISIONS.—PORK.—New mess, 14 14@25 75, short clear, 15 50@$17 00 Extra Prime mess, $13 50; prime do, $15@15 50, and family mess, $15 75@16 25. BEEF—India Mess, in tierces, $21@23 Extra Mess, in barrels $7 00@7 25 Packet, $10 50@$11 50 per bbl, and $13@$13 50 in tierces; Plate, $9 00@9 50; Family at $12 50@$16. HAMS—$13 00@$14 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 9¾c; Pickled Hams, 9¼@10c; pickled Shoulders, 9c; Smoked shoulders at 9¾c; do Hams, 10@11c. Dressed Hogs.—City, heavy to light, 7⅝@7¾c. Pigs, 8¼c. LARD.—City steam, $7 35; December, ——; January, $7 65; February, $7 65; March, $7 68; April, $7 70; May, $7 82; June, $7 73; South America, 10c

BOSTON.—PROVISIONS firm and steady. New Mess Pork, $16 75@$17 00; Old Mess Pork, $16 00@$16 25; Extra Prime, new, $15 75@$17 00. LARD, $9 75@$10 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes steady; Early Rose, 47@50c per bush.; Burbanks and White Star, 38@40c. Provisions were steady, in moderate demand. BEEF.—City family, per bbl $10 50@$11; do, packets, $9 50@$10; smoked beef, 11@12c; beef hams, $14 15. PORK.—Mess, $15 00@$15 50; do Prime Mess, new, $14 50; do, family, $17 00@18 00; Hams, smoked, per lb, 11½@12c do, S. P., cured in tierces, 10@11c; do do do, in salt, 10c; sides, clear ribbed, smoked, 9½@10c; shoulders, in dry salt and fully cured, 8½@9c; do, do, smoked, 9c; Shoulders, pickle cured, 8½@9c; do do smoked, 9@9½c; bellies, in pickle, 9½@10c; do breakfast bacon, 10½@11c. LARD.—Steady; City refined, 9½; do steam, 9½@10¼c; butchers' loose, 6¼@6½c.

CHICAGO.—MESS PORK.—$13 50@13 62½ LARD.—$8 09@8 10 per 100 lbs; Short Rib sides (loose), $7 25; dry salted shoulders, boxed, $7 37½; short clear sides, boxed, $7 50@$7 62½.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER.—Creamery—State, pails, best 21@29c, do do, tubs, best, 20@28: Pennsylvania, best, 33@34; Elgin, best, 32@—; Western, best, 30@ ; do prime, 25@28; do good, 18@24; do poor, 19@21; do June, good to best, 16@23. State—Dairy, half-firkins, tubs, best, 27@28c; do do, prime, 23@26c; do do fine, 19@21c; Welsh tubs, fine, 24@26; do do, good, 21@23; firkins, best, 23@24c; do prime, 21@22c; do fine, 18@20c. Western—Imitation Creamery, best, 23@25c; do, fine, 22@24c; Western dairy, fine, 22@24c; do fair, 18@20c: do, poor, 14c; 15c; do factory, fresh, best, 22@25c; do, prime, 18@20@ do, good, 14@16c; do, poor, 11½@13½c; do, June, 13@.5c

CHEESE—State factory, September made, 12c; do do do, October, fancy, 12c; do, fine, 10¼@10½c; do; fair and good, 9¼@9¾c; Ohio, flat, prime, 11@11¼c do, good, 9¾@10½c; skims, light, 8½@10½c; do, medium, 7@8c; do, full, 3@3½c.

EGGS.—Near-by, fresh, 10@19½; Canadian, fresh, 20@22c; do, ice house, 10@16c; Western, best, 18½@19c; limed 17@17½c.

PHILADELPHIA.—BUTTER steady. Pennsylvania creamery extra, at 30@—c; Western creamery, extra at 16½@17c B. C. and N Y. creamery extra, 17c; Western factory 14@15c, packing butter, 11@12c. Eggs—Were firm Pennsylvania firsts, 24@—c; Western firsts 18@19½c. Cheese—steady; demand fair; New York full cream, at 9@9½c. Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

BOSTON.—Butter firm; Western extra Creamery, 30@32c; Eastern extra Creamery, 29@30c. Cheese steady. Eggs steady; Eastern extras 27@29c; Michigan extras 24c; Western firsts at 24c.

CHICAGO, Ill—BUTTER.—On the Produce Exchange to-day the butter market was quiet and steady; Elgin creamery, 28c; choice choice Western, 23@24½c. choice dairy, 20@22c; common to fair, 17@19c. Eggs firm at 22@23c.

GRAIN MARKETS.

NEW YORK.—WHEAT.—No. 2 Red, elevator, $1 01¼@$1 01½; afloat, $1 01½@$1 02½ No. 3 Red, 95½@95¾c. No 2 January, 99⅝@$1 00⅝; do February, $1 01@$1 02¼; do March, $1 02½@$1 03⅝; do May, $1 04⅞@$1 06⅜; do June, $1 04¾@$1 06; do July, $1 00¾@$1 00¾. RYE.—Western, 57 61c, State, 59@63c. BARLEY—No. 1 Canada, quoted 88@89c; Extra No. 2, 86@87c. Two-rowed State, 78@80c. CORN.—Rejected, 36¼c; Ungraded 39@47c; No. 3, 38@39½c; elevator, 39½@40c, delivered; Steamer, Mixed 42¼@42⅝; elevator, 43¼@44c, delivered; No. 2, Mixed, 45¾@46c, elevator, 47@48c, afloat; steamer, White, 42¾c; No 2 January, 45¾@46c; do February, 45¾@46c do March, 46⅛c; do April, 46¼c; do May, 45⅝@46¾c OATS.—No 3, 30½c; do White, 31⅜@31⅝c No. 2, 31¾@31⅞c; do White, 34½@34⅝c; No 1 White, 39c; Mixed Western, 30@32c; White do, 33@39½c No 2 January, 31⅝@31⅞c; do February, 32@32⅛c; do May, 33@33¼c; do February, 35⅜c.

CHICAGO, Ills.—No. 2 Spring Wheat, 99¾@100c; No. 3 Spring Wheat, 82@90c, No. 2 Red, 99¾@100c. No. 2 Corn, 33⅛c No. 2 Oats, 24⅞c. No. 2 Rye, 49½c. No. 2 Barley, 73@75c. No. 1 Flax Seed, $1 62. Prime Timothy Seed, $1 51.

PHILADELPHIA, Pa.—WHEAT—Ungraded Longberry in grain depot at 175c; No. 1 Pennsylvania Red in do, 107c; No. 3 Red for January at 95@95½c; do for February, at 96½@97c; do for March at 98@98½c; do May, 101½@102c CORN.—No. 4 Mixed, in 20th st. elevator, 36c; No 3 Low Mixed, short storage in grain depot at 37c; No. 3 Mixed in export elevator 35½c; Steamer No. 2 Mixed in export elevator, at 39⅜c; No. 2 Mixed for January, 41⅞@42c, do February, 42⅜@42⅝c; do March, 42⅞@43c; do April, 43¼c; do May, 43¾@44½c. OATS.—Rejected Mixed, 27¾c; No. 3 Mixed, 30c; Rejected White, at 30c; Ungraded White, at 34c; No. 3 White, 33c; No. 2 White, 34@34½c; do Prime, 35½c; do Choice, 35c.

ST. LOUIS—WHEAT.—No. 2 Red, cash 94½c bid; January at 94¼c; May at 99¾@101⅝c; July, 89c asked. CORN.—No. 2 Mixed, cash, 29⅞@30c; January, 29¾@29⅞c; Febauary, 30⅜@½c; March 31⅝@¾c; May, 33½@33⅝c. OATS.—No. 2, cash, 24½c; February, 24⅝c bid; May, 28½c, closing 28c bid. RYE.—No. 2, cash, 49½@48c. BARLEY.—Iowa, 55c. HAY.—Prairie, $7 25@$8 05.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, Jan. 5, 1889.

MILCH COWS.—Receipts 150 head since last Saturday. As reported yesterday the market is dull at $28 to $40 per head by the carload.

CALVES.—Veals, 153 lb average, at 9c. per lb; do, 137 lb, at 7c.; do, 117 lb, at 7c.; do, 235 lb, at 6c. fed Calves, 470 lb, at 3¾c.; Veals, 135 lb, at 8c.; do, 145 lb, at 9½c.; Mt. Holly Calves, 247 to 442 lb, at 5½@6½c; Jersey Veals, 112 to 200 lb, at 6½ to 9c.

SHEEP AND LAMBS.—Western Sheep, 122½ lb, average at $5 per 100 lb, do 100 lb, at $4 85; do, 108½ lb. at $4 55; Ohio sheep, 127¾ lb, at $5 50; Indiana do, 104 lb, at $5. Indiana Sheep, 93 lb, at $5 do, 104 lb, at $4 87½. State Lambs, 69 lb. at $7 12½; State Sheep, 83 lb, at $4 75 Western Sheep 107 lb. at $5; do, 113 lb, at $5; State do. 87 lb, at $4 25; do, 75 lb, at $4 50 do, (few Lambs) 84½ lb, at $5; State Sheep and Lambs, 88 lb, at $5 25; do, 93½ lb, at $5 50; Bucks, 133 lb, at $3 50; Western Lambs, 67½ lb, at $7; State do, 68 lb, at $6 50; do, 66 lb, at $7, 76 lb, at $7 40: do, 78 lb, at $7 62½; Mixed Lambs, 70 lb, at $7; do, 78 lb, at $7 37½; Indiana Lambs, 73 lb, at $7;

HOGS.—Country Dressed firm at 6 1-4@6 3-4c. for Heavy; 7@7 1-2c for Medium 7 3-4@8c. for Light States, and 8 1-2@9c. for Light Upper Jerseys,

CATTLE.

CHICAGO.—Beeves—$4 50@4 80. Steers $2 85@$4 40. Stockers and Feed Feed $2 20@3 30. Cows, Bulls and Mixed $1 40@3 00. Texas Cattle $1 80@3 25. Western Rangers $3 00@3 80. Hogs Mixed $4 95@5 15. Heavy $5 00@5 25. Light $4 95@5 25. Skips $3 00@5 00 Sheep, Natives, Inferior to Prime $2 72@4 85 Western, Corn-fed $4 30@4 62, Texans $2 50@3 40. Lambs $4 00@$6 00.

ST. LOUIS.—Cattle.—Choice Heavy Native Steers $4 40@$5 10. Fair to Good Native Steers, Medium to Choice $3 20@4 40. Stockers and feeders Fair to Good $3 00@3 15. Rangers Corn-fed, $3 00@4 00; Grass-fed $2 10@3 10. Hogs—Choice Heavy and Butchers' Selections $5 10@5 20 Packing, Medium to Prime, $5 10@$5 10. Light Grades Ordinary to best, $4 85@5 00. Sheep.—Fair to Choice $3 00@$4 40.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING JANUARY 5, 1889.

M. F. R.—L. B. F.—S. C. T—J. M, McC.—F. G. G.—E. G. S.—A. E, M.—A. A. M.—J, L. I.—K. B. I.—F. I.—W. H. G—L G.—A. K.—W. R C.—B B. C.—H. B. C.—C. M. M.—H. R.—C. E. P.—M. M. S.—H. F. N.—E. R.—J. A. F.—W. W. H.—L. S. T.—J. G. D.—L. V. R.—H. H.—J. A. H.—J. D.—L S. T.—G. L.—C. S. A. T.—H K.—F. A. D.—A. M. P.—M. B.—M. H. P.—C. H. W.—J. W.—L A. H.—E. A. B.—G. S.—E R.—J. T. W. L.—H. M. S.—J. Y. D.—A. B. P.—M. W.—A. W. B.—E. L. R,—E. B.

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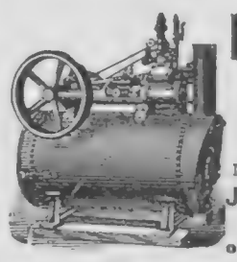

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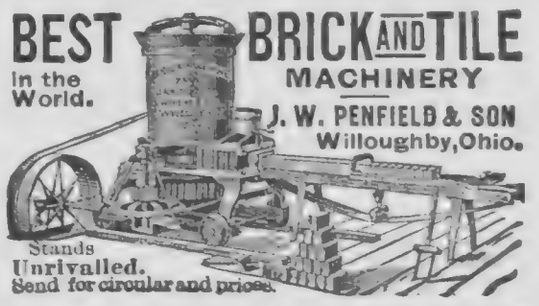

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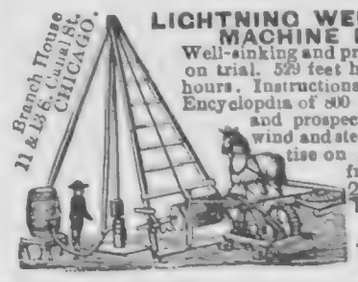

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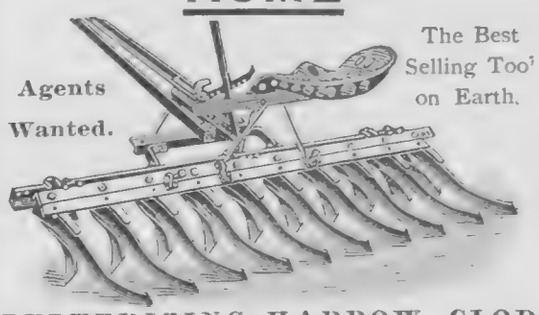

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Literary.

THE DRUM LAKE EASTER SERVICE.

A story of the Michigan Pine Woods.

BY HERBERT W. COLLINGWOOD

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BUT Mamie did not stay here. She ran across the dreary room, and standing on her toes, loosened the latch of the door that led to another apartment. The door pushed open at last, and she ran in and closed it behind her. The room was pretty compared with the other one; for it had evidently been arranged by a woman who had known a certain refinement. The window curtains were caught gracefully at one side, and little bits of ribbon and other trifles that women can make so much of, were fastened about the room.

On a scantily covered bed lay "Sarcy Sal"—at once the terror and the scorn of Drum Lake. She had been, as Mrs. McKelvey said, "an awful bad woman," but now her days of wickedness were ended. Alone, with only the sneers and contempt of her old friends, she was paying the horrible reckoning that had been gathering for her through years. Poor "Sarcy Sal"—and to think what *might* have been.

The sick woman turned her head wearily on the pillow as Mamie came running in. The great mass of golden hair rolled down over the coverlid as she slightly raised herself to help the little girl climb on the bed.

"Did you have a good time, Mamie?" she asked. "Splendid"—answered the little girl gleefully, "and see, mamma, what the Parson gave me"—and she took the ribbon from her hair to show to her mother.

The sick woman took the ribbon carelessly, and held it nearer the candle. She was about to hand it back to Mamie, when her eye fell upon the letters written on the corner, M. B. to H. A. S. G.

"Who gave you this?"—she gasped, suddenly starting with an effort from the pillow. "Parson"—said Mamie, wondering at her mother's excitement. It was all she could explain. She had not heard the "fool's" other long-sounding name, nor could she have remembered it had it been told her.

The wretched woman looked in wild terror at the ribbon for a moment. Then her strength failed, and she fell back with a dreadful cry of—"God pity me, and let me die!" She covered her face with her hands, and sobbed like a child, as she had not done for years before.

Mamie threw her arms about her mother's neck and sobbed with her—"Don't ky, mamma, I love 'ou."

The miserable woman mastered herself by a mighty effort. "Never mind, darling," she gasped, and she soothed the little curly head till Mamie sobbed herself to sleep. There they lay. The little girl slept soundly with her arms about her mother's neck. "I love you," she had said, and it was all her prayer, all her creed. But the woman could not sleep. She lay through the long night, moaning over and over again the only prayer she dared to make, "God pity me and let me die!"

You will remember that we left the minister sitting by the fire in Mrs. McKelvey's kitchen. We feel well disposed towards the melancholy little man and would gladly allow him to remain in that comfortable position. But in order that a truthful narration of the events of this history may be given, we must move him. He sat very patiently in his place for a long time, thinking, no doubt, of his Easter sermon.

Mrs. McKelvey broke the silence at last. "I see ye 'ave a fiddle in yer room, Parson, do 'e play it, sir?"

"Now and then, Mrs. McKelvey—are you fond of music?"

"That I be, sir. Bill an' me is wonderful fond of it. Bill kin tell jest 'ow a tune orter be played. Say, Parson, why couldn't 'e bring out yer fiddle an' play while we does our work. Pears ter me we kin git through sooner."

The Rev. Mr. Grayling did not need any second invitation to go in search of his violin. He came the nearest to perfect happiness when he had his adorable fiddle under his chin. He rose from his seat very readily at Mrs. McKelvey's invitation, and went at once for his musical instrument.

"Now, Bill"—said Mrs. McKelvey, as the door closed behind the minister, "don't 'ye git carried away by no music so that 'e can't peel them pertaters."

Mrs. McKelvey knew that music was as essential to a full development of her husband's nature as salt was to his food.

Mr. McKelvey said never a word. He only grasped his potato knife more firmly, and spread out his feet as if to intimate that the music that transported him for any distance, must be of a captivating nature indeed.

The minister's violin hung from a nail driven in the wall of his room. He took it tenderly down and held it to the light where he examined it carefully. I wish for the sake of romance I could say that it was one of those rare old instruments with a history that reads like a novel. I am writing from the facts, however, and truth compels me to say that the Rev. Mr. Grayling's fiddle was a poor, cheap affair such as one could buy in any music store. But if it had been made of gold, the "fool" could not have handled it more tenderly. He carried it very carefully back to the kitchen, and resumed his old seat by the stove.

The Rev. H. A. S. Grayling A, B. etc., with nothing but his Easter sermon to think of, and the same gentleman, with his violin in hand, were two different persons, strange as the idea may seem. The little man looked almost happy as he sat by the stove the second time. From somewhere down in the pockets of his dangling coat, he pulled a faded silk handkerchief, and placed it under his chin as a rest for the violin. Then with half-closed eyes, and head slightly rocking, he drew his bow over the strings of the instrument.

Either the fiddle was very much out of tune, or else the minister possessed a highly cultivated ear, as for nearly ten minutes he did nothing but tune the instrument till it really seemed, as Jack Gray called it, "a box of aggerny." First he would tighten a string and then let it out, only to go through the same performance a dozen times.

It must indeed have been a most monotonous entertainment for Mr. and Mrs. McKelvey, but they said nothing, evidently buoyed up by the thought that a most remarkable musical treat was sure to follow such a careful preparation. The "fool" himself seemed to enjoy it thoroughly, so it was not all lost.

Mr. McKelvey, the great musical critic, the man who knew "jest how a tune orter be played" watched the parson carefully, though he did not for a moment neglect his work. If he could have expressed his thoughts without attracting the attention of the entire neighborhood, they would probably have been about as follows—"'E kin jerk a good bow, an' do a clean job, when 'e gits ready."

But, sad as it may seem, Mr. McKelvey and his wife were not to listen to the minister's solo. Just as the parson finished his tuning, in fact he had risen to his feet and turned his back upon the audience, the kitchen door opened and Jim Foster walked in.

Had it been any one else, I actually believe the McKelveys would have risen, voice and all, to drive the intruder away. But Jim Foster was a particular favorite with the boarding-house couple, for he had actually made the statement, before a large company, that "McKelvey's kid tuck the cake away from any kid he ever see."

Now I will put it fairly to any of my readers. If a man of Jim Foster's experience and observation should make such a remark about *your* baby, would you say one word if he interrupted the best musical entertainment you ever attended? Not at all; you would smile on him as sweetly as did the McKelvies, and pretend that you were delighted to see him, hoping all the time he had some new compliment for the small specimen of humanity in the cradle

"Good evenin', mum and Parson How are ye Bill?" was Mr. Foster's salutation. Jim did not really have any particular solicitude for the state of Mr. McKelvey's health, but I think he wished to recognize the fact that he considered Mrs. McKelvey and the Parson, in a certain sense, superior to their companion.

Mr. McKelvey nodded, Mrs. McKelvey smiled, and the minister after some little hesitation, put down his violin, and resumed his seat.

Jim came to business at once. "Could I see ye outside fer a minnit, Mis'. McKelvey?"—he said with a wink in the direction of the minister, as if to indicate that the proposed interview would concern that individual.

(TO BE CONTINUED.)

"EDITOR'S BACK STAIRS."

THE INTERESTING VIEW OF THE LATE DR. J. G. HOLLAND.

The columns of the newspapers appear to be flooded with proprietary medicine advertisements. As we cast our eyes over them, it brings to mind an article that was published by the late Dr. Holland in *Scribner's Monthly*. He says: "Nevertheless, it is a fact that many of the best proprietary medicines of the day were more successful than many physicians, and most of them, it should be remembered, were at first discovered or used in actual medical practice. When, however, any shrewd person, knowing their virtue, and foreseeing their popularity, secures and advertises them, then, in the opinion of the bigoted, all virtue went out of them."

Is not this absurd?

This great man appreciated the real merits of popular remedies, and the absurdity of those that derided them because public attention was called to the article and the evidence of their cures. If the most noted physician should announce that he had made a study of any certain organ or disease of the body, or make his sign larger than the code size, though he may have practised medicine and been a leader in all medical counsels, notwithstanding all this, if he should presume to advertise and decline to give his discovery to the public, he would be pronounced a quack and a humbug, although he may have spent his entire life and all his available funds in perfecting his investigations.

Again we say "absurd."

If an ulcer is found upon one's arm, and is cured by some dear soul of a grandmother, outside of the code, it will be pronounced by the medical profession an ulcer of little importance. But if treated under the code, causing sleepless nights for a month, with the scientific treatment, viz., plasters, washes, dosing with morphine, arsenic and other vile substances, given to prevent blood poisoning or deaden pain, and yet the ulcer becomes malignant, and amputation is made necessary at last, to save life, yet all done according to the "isms" of the medical code, this is much more gratifying to the medical profession, and adds more dignity to that distinguished order than to be cured by the dear old grandmother's remedy.

This appears like a severe arraignment, yet we believe that it expresses the true standing of the medical profession in regard to remedies discovered outside of their special "isms" One of the most perplexing things of the day is the popularity of certain remedies, especially Warner's safe cure, which we find for sale everywhere. The physician of the highest standing is ready to concede its merits and sustain the theories the proprietors have made—that is, that it benefits in most of the ailments of the human system because it assists in putting the kidneys in proper condition, thereby aiding in throwing off the impurities of the blood, while others with less honesty and experience deride, and are willing to see their patient die scientifically, and according to the code, rather than have him cured by this great remedy.

Yet we notice that the popularity of the medicine continues to grow year by year. The discoverer comes boldly before the people with its merits, and proclaims them from door to door in our opinion much more honorably than the physician who, perchance, may secure a patient from some catastrophe, and is permitted to set a bone of an arm or a finger, which he does with great dignity, yet very soon after takes the liberty to climb the editor's back stairs at 2 o'clock in the morning to have it announced in the morning paper that "Dr. So-and-so was in attendance," thus securing for his benefit a beautiful and free advertisement.

We shall leave it to our readers to say which is the wiser and more honorable.

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34 Park Row, N. Y.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

PRECAUTIONS IN BUYING LAND.

L. T. S., Des Moines, Iowa.—For some years I did office work in Chicago; but am going to buy a farm if I can find a suitable one at a fair price. I have had no experience whatever in making investments in land; what precautions should I take to secure a valid title?

ANS. This is a very important subject, for carelessness in the purchase of land is a fruitful source of expensive litigation and serious loss. A title to land may be obtained by Government grant, judicial decree, inheritance, will, deed, or by long-continued open, notorious, peaceable and uninterrupted possession under a claim of ownership. As a title may pass by judicial decree or may become involved or clouded without such decree, a purchaser who looks no further than the registry of deeds may learn an expensive lesson. To all appearances there, the title may be perfect; yet the town records may show an attachment; the court records may show that a judgment against the land has been rendered, while the records of the court of equity may show that a conveyance has been ordered to enforce a bond for a deed, or to annul a deed obtained by fraud or mistake, or the owner may have become bail for a friend before any one of 50 justices of the peace, and although it may be impossible to obtain any record of it, it will constitute, in some States, a lien upon the property, and, finally, back of all and superior to all, there may be liens for betterments and unpaid taxes. When one contemplates buying land the ownership of which is claimed by inheritance or under a will, it would be prudent for the would-be purchaser to cause an examination of the records of the probate, surrogate or orphans' court—the court, whatever its local name, where estates are settled. If there is no will, no disputed claims against the estate, and no minor or other person under disability interested in it, the purchaser should see that all debts and liabilities of the deceased have been provided for, and that his grantor has taken sufficient deeds from all persons interested. Still he will have to run the risk that a will may yet be found. If the estate has been settled in regular form, he will be aided in his investigations by the records, and ordinarily claims of creditors not presented within a reasonable time, will be barred, freeing the land as to them. Whether there is any will or not, the intending purchaser should investigate whether there is any hostile interest in the land on the part of any widow, widower, heir, legatee, or other person, especially one under disability and not represented. If there is a will, it must be examined to see that it is valid upon its face. Unless it has been duly proved and the time for appeal has expired, it may be well to ascertain whether any suspicious circumstances, such as mental feebleness, insanity, or undue influence, attended its execution. If the testator leaves children, born or unborn, or decendants of a deceased child, and they are not mentioned or referred to in the will, they will have an interest in the land, which the purchaser must take into account. A child born after its father's death has the same rights as another, and, like any minor, may have until he is 41 years old—till he is of age and 20 years more—to assert his rights. The above are the chief precautions which a person about to purchase land ought to take to secure a valid title to it.

TAXABILITY OF WESTERN MORTGAGES HELD IN CONN.

L. T., Westfield, Conn.—Are Western farm mortgages held by persons living in this State taxable? I claim that taxes on the property are paid there, and that persons holding mortgages on such property should not be taxed here on account of their mortgages.

ANS.—Yes; Western farm mortgages owned by citizens of Connecticut are taxable in that State. Section 3,830 of the Revised Statutes provides that "the list of any person need not include any property situated in another State when it can be made satisfactorily to appear to the assessors that the same is fully assessed and taxed in such State to any party, or out of this State as money at interest." This whole question arose in the case of Kirtland *vs.* Hotchkiss (42 Conn., 435), in which the decision was that "debts due to a citizen of this State from a citizen of another State for money loaned there and secured by a trust deed of land therein, on which land the debtor is to pay full taxes without abatement for the debt, are taxable against the creditor in this State."

A FEE SIMPLE.

L. T. M., Matoon, Ill.—What is the real meaning of a "fee simple" in land?

ANS.—A fee simple is an estate of inheritance belonging to the owner, and transmissible to his heirs, absolutely and simply, without condition attached to the tenure. It is the largest possible estate which one can have in land. It is a pure inheritance clear of any qualification or condition, and it gives a right of succession to all the heirs generally. It is when lands are given to a man and his heirs absolutely without any end to or limitation on the estate. Every restraint upon alienation is inconsistent with the nature of a fee simple; and if a partial restraint be annexed to a fee as, for example, a condition not to alienate or transfer the land for a limited time, or not to a particular person, it ceases to be a fee simple, and becomes a fee subject to a condition.

FEES OF EXECUTORS.

S. T. M., Albany, N. Y.—In reading over a law case the other day, I learned that the fees of an executor amount to five per cent. on all sums not exceeding $1,000, 2½ per cent. on sums between $1,000, and $10,000, and one per cent. on all amounts above $10,000. If there are two executors, does each get the above percentage, or is it divided between them?

ANS.—The old rule was to allow only one commission and divide it between them according to the services each had rendered; but a later act provides that when the personal estate is not less than $100,000 over and above all indebtedness, each executor, if there are not more than three, shall be entitled to the full amount of compensation he would have received if he had been the sole executor.

INJURY TO TRESPASSERS FROM VICIOUS ANIMALS.

A. F. B., Catskill, N. Y.—In spite of notices to the contrary, people persist in taking "short-cuts" through my farm; should my bull injure one of them would I be liable for damages?

ANS.—No; unless the animal was known to be vicious. Any person who keeps a domestic animal, which to his knowledge is of a ferocious, or mischievous disposition, is bound to restrain it at his peril, and if it escapes and does damage, the owner is liable for the injury committed, even though it resulted from the carelessness of the person injured, or he was a trespasser, if his own negligence did not contribute to the injury.

R. W. L., Salem, Ind.—A sells his farm to B and gives him a good and sufficient deed therefor. He remains in possession, however, for over six months, as B lived in another State and wasn't ready to move at once. By the carelessness of another—a member of B's family—no official record of the transfer of the farm was made, and A, learning this, sold the farm to C and went to some place unknown. C bought the place, so he insists, in good faith, though at a considerably lower price than that paid by B, and for less than it was really worth, and he recorded his deed at once. B now finds that his deed is held to be worthless; has he any redress?

ANS. No; unless he can find A, or prove that B knew of the previous sale of the farm when he purchased it from A.

L. S., Worcester, Mass.—1. Is a wire fence a legal fence in this State? 2. What is a legal rail fence here?

ANS. 1. Yes. 2. One 4½ feet high.

THE POST OFFICE CLUB.

THE parrot received strong support the other night. It seemed to do him good, for he has brightened up considerably since then. The support came from a man from Gloomville. That is a pretty dreary place. Nothing goes right over there. Everybody seems blue and discouraged all the time. People in Gloomville are never happy; they brood and fret and worry. It is very different from the way they do business in Sunnyvale, on the other side of our valley. In Sunnyvale people are bright and cheerful. Farming pays over there because they count happiness at its proper price per pound. It gives one a feeling of rest to ride through Sunnyvale, while it makes one tired to go near Gloomville.

Our friend from Gloomville stood near the stove as the parrot crawled out of his box. I don't think his boots had ever been polished. I am sure his hat had never had a brush rubbed over it. He was a hard-looking customer. It was so long since he had tried to brush up and look like somebody, that he had forgotten how people appear when they are happy and contented. The parrot picked this individual out as a man after his own heart. He crawled up on the stove-pipe, scratched his beak with his claw and croaked:

"Farmin' don't pay!" Our friend from Gloomville was interested at once. "You're right, it don't," he briskly said. "There ain't nothin' into it but work an' no profits. The harder ye work the more these big Trusts an' monopolies make, an' the less we git. I'm ready to quit workin' sos't somebody else kin make money. Taxes and tariffs is jest eatin' us all up, an' yet there ain't nothin' right. Roads ain't good fer nothin', folks we 'lect ter office don't do nothin' but steal, an' folks in town don't do nothin but set down an' make money outer the farmers. I'm jest ez good ez they be, but they're so stuck up I don't git no show. Prices is low, season's bad, help skerce—ain't nothin' right. Farmin's a dog's life an' don't pay nobody." And the parrot almost screamed for joy as it broke in with

"Farmin' don't pay!"

I wouldn't be at all surprised if the bird moved over to Gloomville so as to be nearer his real friends. SMALL PICA.

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Humorous.

WHEN a woman gets into her camel's-hair dress she is evidently very proud of hirsute.—*N. Y. Sun.*

SHE: "It may be I have yellow fever. Henry; I think we had better send for Dr. Pillsbury." He: "Why, my love, I wouldn't send for him. You know he is color-blind."—*Life.*

CHICAGO BOY: "What's the matter, sis?' Little sister: "Nothin', only mamma's got that divorce frown again." Chicago Boy: "Well, I'm glad of it. I don't like this papa much myself."—*The Cartoon.*

FLOORED THE OLD MAN.—"DID you steal any apples off the tree in the next yard?" asked old Brown. "No; there's a dog there," replied little Johnnie; "but if you want me to steal some, I'll try and do it."—*N. Y. Sun.*

PARSON: "I am astonished to hear a man with three married daughters say 'marriage is a failure.'" Citizen: "Well, sir, when you have three families besides your own to support, you will learn that marriage is positively bankruptcy."—*Lowell Courier.*

A LITTLE girl was sitting on the floor when the sun shone in her face. "Go 'way! go 'way!" she cried, striking out at it. "You move, dear, and it won't trouble you," said her mamma. "I s'ant; I dot here first," said the little one.—*Youth's Companion.*

YOUNGEST DAUGHTER (to father of seven of them): "Papa, I can't, I positively can't stand the strain! I m-m-must t-t-tell you! I had planned to elope to-night!" Papa: "Just my luck! What did you want to peach for? Now I suppose I've got to stop you."—*Puck.*

OMAHA MAMMA: "Mercy on me! What does all this racket mean on Sunday—and you've got all your dolls out, too." Little Dot: "You said we might play church." "Do you call all this gabble and laughter church?" "No, mamma, church is just over and the folks is goin' home."—*Woodruff News.*

DOCTOR (passing a stone-cutter's yard): "Good-morning, Mr. Jones. Hard at work, I see. I suppose you finish your gravestones as far as 'In Memory of,' and then wait for some one to die, eh?" Stone-cutter: "Why, yes—unless somebody's sick and you're doctoring him; then I keep right on."—*Chambers's Journal.*

CLERK (to young lady who has just purchased a pair of gold sleeve buttons for her fiancé): "Any initials, Miss?" "Oh, yes, I forgot; engrave the letter U, his first name." Clerk: "May I ask, Miss, if it is Uriah or Ulysses? Names beginning with U are rare." Young lady, proudly: "His name is Eugene!"—*Farm Journal.*

TWO OF A KIND: "What I object to in Maine," remarked a Pennsylvania man, "is the horrible names you have up there. There's Androscoggin, for instance." "Yes," replied the Maine man, "that name is almost as bad as some you have in Pennsylvania—Punxsutawney, Youghiogheny, and the like."—*Home Journal.*

PRESENTS FOR A FAMILY. Fond Mother: "Here comes my dear boy. Bless his precious heart. He has been out all the morning buying Christmas presents with his own money for the whole family. Well, pet, did you have a nice time?" Little Dick: "Yes, indeed, mamma; I bought a paper of pins for the cook and some hair-pins for you, and a pocket-comb for pa, and a brass collar for my dog, and a bell and ribbon for my kitty, and a drum and a trumpet and sled and pair o' skates for my little brother." "But you havn't any little brother" "Well maybe I'll have one before Christmas. If I don't, I can use the things myself."—*Philadelphia Record.*

A SUCCESS.

TERENCE: "Dinny! wud ye moind the foine church we have ericted sense ye was awee?"

DINNY (with astonishment): "Shure, it do bate the divil!

TERENCE: "Well, that was the intinshun."

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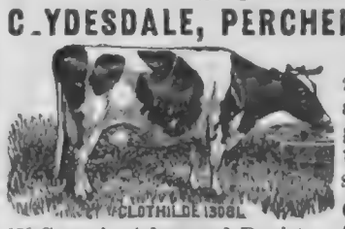

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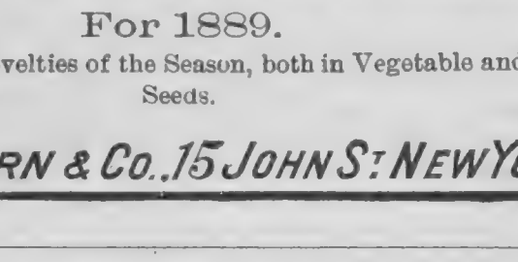

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII. NO. 2034. NEW YORK, JANUARY 19, 1889. PRICE FIVE CENTS. $2.00 PER YEAR.

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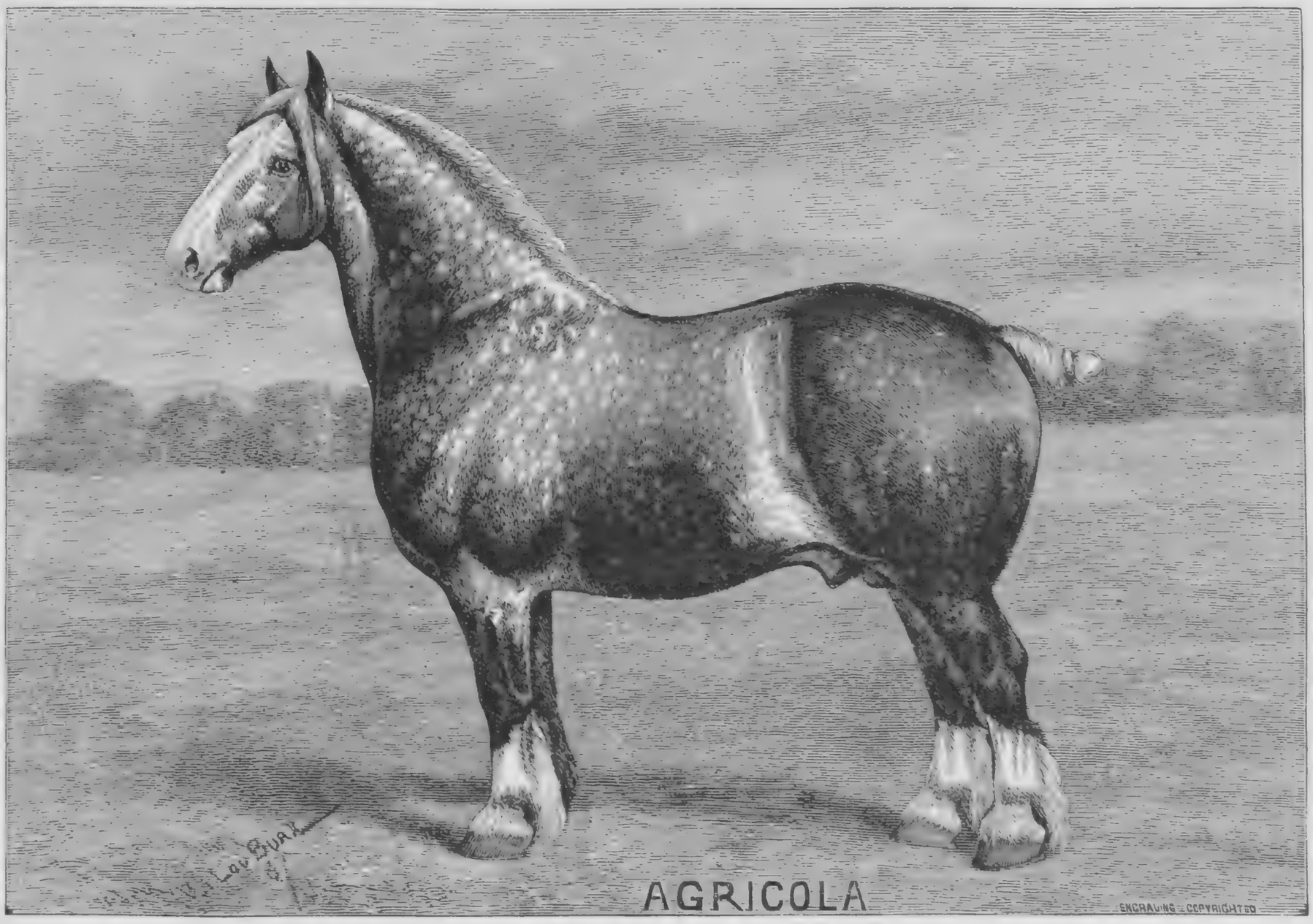
Horseman.

SHIRE HORSE, AGRICOLA.

HIS excellent English Shire stallion is owned by Messrs. Galbraith Bros., of Janesville, Wis. He is a noble specimen of this famous breed, which is becoming very popular on this side of the Atlantic. That Agricola ranks among the very best of the breed, is shown by the following record: "Agricola has won, among other prizes, first at the Royal Manchester and Liverpool Show in 1882; first and champion over all ages at the same show in 1883; first at the Lancaster Spring Stallion Show; first at Leyland; first at Nelson, and first at Skipton, all in 1886. In 1887 he won first at Ormskirk Spring Stallion Show, third at the Royal Society's Show at New Castle; first at Ormskirk, Southport, and Bootle Shows, and champion prize for best stallion in the show-yard. He has been exhibited only twice in America, viz: at the American Horse Shows of 1887 and 1888. In the former year, his stable companion, Caractacus, won first, the well known Holland Major second, and Agricola third. At the last show, however, Agricola turned the tables on Holland Major by winning first place in the strongest class of Shire horses ever seen in America."

A picture of Agricola is shown at Fig. 9.



ENGLISH SHIRE STALLION, AGRICOLA. Fig. 9.

Floricultural.

THE ROSE FRANCOIS MICHELON.

(*See page* 34.)

JUST as among men there are always some few who tower head and shoulders above their fellows, whether physically, intellectually, or morally, and are universally considered "great men," so among roses there are some varieties whose claims to be accepted as "great roses" are undisputed. Moreover, as in the world of men, although there are plenty of good and useful, not to say indispensable, members of the community, the number of really great men is small, so in proportion to the infinity of beautiful roses in cultivation the really great roses, such as General Jaqueminot, Charles Lefebvre, Marie Baumann, Alfred Colomb, La France, Baroness Rothschild, Louis Van Houtte, Marquise de Castellane, A. K. Williams, Madame Gabriel Luizet and Ulrich Brunner, are by no means numerous.

So writes our esteemed contemporary, the London Garden, from which our portrait of the rose, François Michelon, is re-engraved—see Fig. 7. This rose is no less esteemed here than in England. In the list of really great roses, it must be admitted that this is well entitled to a place. It was produced by Levet in 1871, a seedling of La Reine. The color is a dark rose, tinted with lilac. It is of large size, very full and of globular form. It is fragrant and free-blooming. The habit of the plant is upright; the thorns are not numerous. In England it rarely blooms in the fall. In this country it blooms as well in the fall as any of the hybrid remontants, while it continues to bloom later in the summer.

Farm Economy.

A NEW FERTILIZER.

EXTRAORDINARY results are reported from the use of sulphate of iron, or the common copperas of commerce, when it is used in connection with the potash and phosphate fertilizers. The Marquis of Paris, who is more of a successful fruit-grower than a nobleman, and more of an extensive market gardener than either, has been the first to recommend and employ it extensively. His practice is, after applying other fertilizers, to sow copperas at the rate of about one ounce to the square yard of surface, for all garden crops, and for tree and shrub fruits as well, and he reports very good results. Not long ago, a scientist of some reputation experimented with copperas, and came to about the same conclusions; but as these experiments were conducted on the usual minimum scale, nothing valuable was established and nothing came of it, because it has come to be recognized by practical men that the personal force and belief of the experimenters provoke the wished-for results. But in the case of the Marquis-gardener, the beneficial influence of copperas when used in connection with other fertilizers was demonstrated, and the fact will be accepted and adopted by his professional brethren. In the relations of these circumstances our scientific agriculturists may perhaps read a useful lesson, and to this effect: that if the average farmer and fruit-grower suspects the integrity of unusual results obtained on a minimum scale, and perhaps rejects their teachings altogether, he at once takes off his hat and pays the tribute of respect to acres of successful demonstration.

B. F. J.

[Our friend may not be aware that the R. N.-Y. has made four experiments in the use of sulphate of iron on corn and potatoes. The yield was less in every case where the copperas was used.—EDS.]

THREE-HORSE POLE.

(*See page* 35.)

MR. TERRY'S recent statement of the advantages of a three-horse pole has called out several letters from those who desire to know how such an arrangement can be fitted to the wagon. At Fig. 8 we show a form much employed on heavy wagons in this city.

Horticultural.

POTATOES FOR SEED.

WM. FALCONER.

THERE is a general impression among farmers and gardeners hereabout that potatoes raised by ourselves are not as good for seed as are those raised in Maine or Nova Scotia, and a large business is done here in potatoes grown far north. My own experience is in favor of Maine seed potatoes; but this is because I do not grow potatoes purposely for seed. Still, in the case of our earliest potatoes, I have to use home-grown seed, because I expect to have our earliest potatoes planted before the ice in the Maine harbors has broken up enough to admit of shipping the potatoes from there. True, this can be overcome by getting our seed potatoes in the fall instead of in the spring. At the same time it is a well known fact that some of our truck farmers always grow their own seed potatoes. Mr. Hallock, of Suffolk Co., who grows Early Ohio in large quantity for the Boston market tells me that he always selects, saves, and grows his own seed, and prefers it to any that he can get anywhere else. Mr. Abram Van Sicklin, of Jamaica, Queens Co., who is one of the largest and most successful truck gardeners around New York, saves his own potatoes for seed; but he tells me "there is a point or two in this potato seed business not generally known." He plants his potatoes that are to be reserved for seed very late; this year it was the second week of June before he planted them. The potatoes from these late plantings don't average as large tubers, or as heavy a crop as those from earlier plantings; but they don't sprout in winter as do tubers saved over from early plantings. These last have to be sprouted once or maybe twice during winter; hence they are deteriorated to a considerable extent for use as seed, for the first sprout is always the best, and makes the healthiest and most prolific plant. But the tubers from the late plantings, like the Maine-grown potatoes, if properly kept, do not sprout in winter; hence when planted out their growth is first-sprout growth with its advantages. Mr. Van Sicklin tells me that no matter how good a white-skinned potato may be, his customers

don't care about it; marketmen have a decided prejudice against such potatoes, especially in the case of early ones. The Early Rose and other pink-skinned potatoes always sell best; but late in the year, when potatoes are plentiful from all quarters, the objection to white-skinned potatoes is not so marked.

Farm Topics.

LIME

AS A "SOIL IMPROVER."

How Does It Set Plant Food Free?

A POPULAR FANCY.

Folly To Use It Alone.

DOES IT MAKE THE FATHER RICH?

DOES THE SON GROW POOR?

FROM T. H. HOSKINS, M. D.

The RURAL refers to me, for reply, the following request from an Illinois subscriber: "*I would like to hear from those who have had experience in the use of lime for the purpose of increasing fertility. What quantity per acre? Slaked or unslaked? It seems to me that this black prairie soil has abundance of fertility, but that it needs to be set free.*"

It has become a pretty well established fact that lime is not a necessary substance to apply to the land for the purpose of directly nourishing the crop. Few, if any agricultural lands lack lime enough to feed a long succession of crops; while not only chemical fertilizers, but stable-manures contain much more than the necessary quantity of lime, in proportion to their other components. We must look, therefore, in some other direction for an explanation of the well-known practical fact that lime is a great amelioration to *some*, yet not to *all* soils. Through the older parts of New England, no benefit seems to be derived from it, with the single exception that it often proves of great benefit "to liven up the soil" of old, over-manured gardens, which has become "sour," and is in any way out of condition, and which is the habitation of vast numbers of injurious insects, worms, snails, etc. But it is not to be supposed that, because this is the experience of the farmers of the older settled parts of New England, lime may not eventually be useful on much New England soil, especially in the rich valleys away from the coast. I believe that in the Champlain Valley lime is sometimes found a very useful application.

On the black prairie soil of the middle West, which has had its virgin productiveness skimmed out in a long succession of grain crops, there is a good chance that liming may be of some temporary advantage, though this can be, and has been, carried to excess on similar soils—such overlimed soils losing the cohesion necessary to afford support to the roots of crops, and to retain moisture. Liming has had the most marked success in America, on the long-farmed lands of Eastern Maryland and Virginia, and lime, in connection with green sand-marl, which is rich in potash, has been of great benefit to that region. Yet it is only as a temporary and auxiliary practice, in connection with other processes of renewal, that such treatment is found satisfactory over a long series of years.

Unquestionably, one chief effect of lime is upon the physical condition of soils, and this effect may be beneficial or injurious on the same soil at different times, as well as upon different soils. It has some chemical effects of benefit under peculiar conditions, such as in the over-dunged gardens above referred to, and also upon land injured by the presence of a large quantity of sulphuret of iron. What it is, exactly, that lime does to a soil, where it benefits it, has been difficult to determine, and undoubtedly the best exposition of the present state of our knowledge upon the subject is to be found in Professor F. H. Storer's "Agriculture," Vol. 2, p. 139, *et seq.* I cannot undertake to give, with any considerable fullness, what is there stated; but it may be said, briefly, that lime increases the porosity of a too compact soil, thus permitting the elevation of nutritive matters from the subsoil by capillary attraction, as well as furnishing minute passages for the fine roots downward. Lime has also a tendency to cause the finest particles of fine soils to unite with coarser granules, in this way greatly improving the texture of clays, and of fine loams, such as would naturally be too muddy and cohesive. This is the character of much prairie soil, especially of the magnesian wheat lands of Illinois, which tend to become puddled by cultivation, and thus impervious to water, either in its downward course in wet weather, or its upward course when the season is dry. These very fine soils are extremely difficult to manage, especially after they have been long under tillage, on account of this tendency to become puddled. The use of lime to cure this condition is an important one.

Lime is believed to have a direct chemical effect upon the soil, by uniting with the hydrous silicates, so as to expel from them potash, ammonia, or magnesia, for the use of crops. But for this purpose the sulphate of lime (land plaster) is more effective than quicklime. I have already referred to the action of quicklime in hastening the decomposition of humus. In doing this, which is called by practical gardeners "sweetening the soil," the lime releases much inert nitrogen, and makes it available for the nutrition of crops. Recently drained bogs or "muck beds," are thus greatly benefited by a free dressing of lime, which hastens the putrefactive process, quickly converting the cold muck into a warm and productive seed-bed for crops. But still another action takes place in soils rich in vegetable matter, under right conditions of temperature, moisture and aëration, whereby an application of quicklime may greatly favor the formation of nitrates. The nitrifying ferment "prospers exceedingly" in presence of a sufficient quantity of carbonate of lime, and, indeed, will hardly do good work without it.

As to the quantity of lime to apply, it has been reckoned that about 150 bushels per acre is as much as is necessary for a first application, except upon very cold clays, when as much as 250 bushels have been used with profit.

Subsequently, lighter dressings, at intervals of seven to 12 years, may be used; but the apparent benefit lessens, and will finally cease, unless the land is faithfully and intelligently managed otherwise. It is utter folly to depend upon lime, because it has had a wonderfully good effect at the first application. The common practice is to draw out the fresh lime, as it comes from the kiln, and distribute it in little piles of a bushel or less, evenly over the field. A little depression is made in the soil to receive it, and the pile is then covered lightly with earth and left until it has fallen to a powdered condition, when it is distributed upon the surface as evenly as possible, and worked into the soil.

In some parts of the country, where stone lime is not to be found, there are often deposits of calcareous marl, which may be made to answer a good purpose; and along the sea-shore marine shells make excellent agricultural lime, when burned. Leached ashes act in much the same way, besides supplying considerable plant food. It should be added that it is vain to apply lime to land with the hope of profit, unless the land is naturally good. A barren soil can never be helped by liming.

Orleans Co., Vt.

THE ROSE FRANCOIS MICHELON.

After the London Garden. Fig. 7. See Page 33.

FROM PROF. J. W. SANBORN.

I have used lime on a soil not as rich as described by your Illinois correspondent, and observed something of its effect. I have avoided its use, except in an experimental way, save a considerable quantity used on a granite soil. In the latter case, it was used as a top-dressing for grass without satisfactory results. I have avoided lime for the reason that I have never been willing to farm at the expense of old age or of the next generation. Lime acts as a soil disintegrater, and does not add fertility, as your subscriber implies, except in very rare soils. Anything that acts as an agent of soil decomposition, and which in this way makes available as plant food matters already in the soil is desirable, especially if stock on the farm are fed on the resulting products, and the manure is returned to the soil. If the crop is sold from the farm, then soil impoverishment is only hastened. This process of liming may temporarily pay, but it is at the expense of the future, while we pay for the agent that does this permanent mischief.

I have preferred to pay more to secure a fertilizer that acts both chemically on the soil and as a direct source of plant food. I would not be understood as saying that in the hands of a prudent man lime is not a useful and profitable agent in securing an increase of crops; but that it is dangerous when used by a farmer who uses it under the belief that it adds just so much fertility to the soil. The one will feed the crops raised to his stock as well as use the lime in moderate amounts; the other will sell his crops in this part of the country under the short-lived delusion that liming is sure to furnish continuous crops.

The black prairie soil is one rich in vegetable matter and most likely to respond safely to the use of lime, provided it is used in moderate quantities. Its excessive use would result in too free liberation of nitrogen from its insoluble compounds, and its consequent loss, either by leaching or volatilization. Any tendency to acidity in such soils, which is liable to exist where they are undrained and rest on impervious subsoils, would be corrected. From 100 bushels to much larger amounts of lime have been used in the past, but now that its character is better known, it is used more sparingly, or from 100 bushels downward. Where it is used to correct the physical character of the soil through its action on clays, both mechanically and chemically, large amounts are needed, in a relative sense. On the soils described by the Illinois inquirer, I would use only moderate amounts, but I would make such applications more frequently than has been common. I used 300 pounds per acre and increased the crop nearly 100 per cent. as an average of two years' trial. The third year, 1888, the difference was in favor of the lime, but there was not so heavy a gain. The year was too good a corn year to show great differences. The lime was used in an air-slaked condition. It should be allowed to slake in order to have a fine material for distribution. A larger quantity than was used by me, may be used yearly with safety, and it is better not to use large quantities at longer intervals. It is better to use small amounts every year rather than get a severe action of it on the vegetable matter faster than crops can utilize the product.

Columbia, Mo.

FROM E. DAVENPORT.

One can scarcely ask a man a tougher question than whether or not to use lime in the soil of a particular locality, and the only answer I am willing to give, is "Try it on a small scale and see." I am aware that this is cold comfort to one who seeks advice; but opinions and theories are so varied, soils and climate are so diverse, and, withal, the action of lime is so little understood, that it is decidedly unsafe to reason from the experience of one as to the results with another.

Many of the effects of lime upon the soil are well understood, and a long paper might be written upon the subject: but I do not suppose that is what the Illinois inquirer wants. If I were in his situation, I would apply lime in considerable quantities to a small area, and watch the result very carefully; and while awaiting development, to the end of forming an intelligent opinion, I would study some such works as Storer's Agriculture, which is well up on the subject, and gives the latest facts known. I would use marl if near at hand; and if it is not, I would use burned lime which should be slaked before it is applied. Besides removing half the weight, burning is the cheapest way to reduce it to a powder. Marl will, as a rule, fall down well by the action of the weather.

It must be borne in mind that lime is in no sense a manure. While it is an indespensable ingredient of plants, there are few soils that do not contain more than is sufficient for this purpose. Its action is, to say the least, mainly corrective, and it should be applied for this purpose and not as plant food; that is, in quantities expressed in tons, rather than as a fertilizer in pounds. I would try two or three tons to the acre, bearing in mind the old adage—"Lime enriches the father, but impoverishes the son."

FROM FRED GRUNDY.

I never have tried lime on our black soil for the purpose of increasing fertility, nor can I learn of any person who has. The character of the water in shallow wells plainly indicates that there is an abundance of lime in the soil; but whether it is near enough to the surface to be available as a liberator of fertility I am unable to say. Much of our black soil is heavy and inclined to be wet, and, until it is thoroughly under-drained, the immense quantities of plant food it contains are not available to any great extent. Underdraining loosens this heavy soil, rendering it porous and friable. Plants send their roots deeper and tap the vast stores of fertility in the subsoil, and for some years the crops are as heavy as when the land was first plowed. For four or five years after this prairie soi

was first broken up, it remained very light and porous, and enormous crops were grown upon it. But as the old grass roots decayed and disappeared, the soil seemed to run together and pack like clay. If tramped or worked in the spring while a little wet, it becomes so hard and cloddy when it dries, that nothing can be done with it until late in the summer. If worked at just the right time, when neither too wet nor too dry, it will remain fairly friable through most of the season. Underdraining and clover bring it into a condition similar to that of newly broken prairie, and seem to renew its strength completely; and I am satisfied that neither lime, sand, nor anything else of that sort will accomplish a like result. Our black soil is rich in fertility, and, if treated properly, it will grow immense crops of cereals for years and years; but it will resent ill-treatment almost as emphatically as a Jersey cow.

Christian Co., Ill.

FROM F. S. WHITE.

From what little experience I have had with lime, I am satisfied that it would be very beneficial on some soils and for some crops. If I had a heavy clay soil and wanted to grow corn, wheat, oats, or a crop of cabbage, I would use air-slaked lime freely, and I would also use it on a sandy soil for the same crops. I have always thought that our black, rich soil of the West had lime enough in it for all crops. I am sure we do not need to apply lime here yet, except on such soils as I have mentioned. Lime applied to plants has a very drying influence, and it should be used sparingly, and if it is applied to the soil it would seem that more could be used in a wet than in a dry season. I have used lime several seasons in my cabbage ground, and I find it slow to mix with the soil here. Different soils and different localities would show different results, so I think the advisability of using lime is a question to be settled by practical experiment. The cost of lime is another question to be considered. We could not afford to use it here, unless the prices of our crops were higher.

Polk Co., Iowa.

FROM J. W. INGRAM.

Scarcely any lime is used on the land in Northern Pennsylvania, on account of the great distance it would have to be brought and the cost of its transportation. There are but few limestone rocks to be found in this part of the State, and these are composed chiefly of innumerable small shells cemented together, the shells containing all the lime. When burned, the lime has considerable strength, and is called "gray lime." In the southern part of the State, where I have frequently traveled, and especially in Dauphin and Lancaster counties, immense quantities of white lime are used on the land to increase the crops. It is drawn from the kiln and put on the fields in piles nearly as large and as close together as ordinary manure piles, and afterwards these are evenly spread over the ground and harrowed in. I was told that lime was a benefit to all crops, but more especially to wheat and the other cereals, making the straw brighter and stiffer, and causing a larger yield of plumper grain. In my opinion, an application of caustic lime to the raw prairie soils of the West, although it would be of no benefit to corn, would put the land into a more favorable condition for raising wheat and oats.

Bradford Co., Pa.

Rural Topics.

SUGGESTED BY A PICTURE.

T. B. TERRY.

The wife's rightful position; the curse on Eve not indefinitely transmissible; man's natural tendency to domineer; a true helpmate; give the wife the keys of the safe as well as those of the kitchen; legal injustice to wives; the "dower" insufficient; man and wife full partners; inconsiderate and niggardly husbands; no better time for reform in domestic relations than just now.

THE picture on the first page of the Thanksgiving Number of the RURAL pleased us greatly. We looked at it long and earnestly, and repeated the "True Thanksgiving Song" with full hearts. But, after a time, there came a feeling that something was not quite right about the picture. It seemed to leave an impression on the mind that wasn't quite satisfactory. At last, a passage of scripture was recalled, that made all plain—"And he shall rule over thee."

That one command of his Maker, man has rarely failed to obey. The man in the picture seems to take to it naturally. His position shows it; the way he grasps that ear of corn would convince any one. Oh! dear RURAL, when you had such a good chance to make a man take his rightful position for once, and acknowledge the full partnership with his help-mate, why didn't you do it? Why didn't you put the sharer of all his joys and sorrows by the lord's side, with his arm around her, even if he didn't beat time quite so accurately for the creatures below?

To be sure the Creator did lay a curse on Eve; but I know you do not believe that it was intended that it should stay on women for all time. They have certainly been punished enough. It would be un-Godlike, unmanly, to keep that curse forever hanging over them. It has been already largely removed. What has done it? Christianity. It must be right, then. Let the good work go on until woman is acknowledged in every respect the equal of man, and his full partner in life, as the great Creator undoubtedly intended in the beginning she should be.

But how easy it is to fall into this "rule-over-thee" way. Come to think it over, I must plead guilty myself. In all I have ever written for the papers, I do not remember that I have given my partner one bit of credit for what we have accomplished. No, I have taken it all on my own lordly shoulders. And still for nearly a quarter of a century we have worked hard together, she doing her full share, if not more. Let us think a little. The first year we came on to the farm, my partner loaded all the hay. We were too poor to hire a man. We had help but one day that year. When I was learning to plow, for I was entirely green at farming, who drove the horses and encouraged me? Who has been ready at any time to help, out-of-doors or in, where she could do the most good, willing to live on little, yea, contented and happy, until we could work our way out? I tell you, friends, it was that blessed wife and partner of mine, and many thousands of you have just such partners; see to it that you acknowledge and treat them as such, and do not play the "lord and master" over them.

The beginning of a New Year is a good time to start an improvement of this kind, where there is need of it. The subject is too broad for one to attempt to go over it all in a newspaper article, so allow me to confine what I may say to two points: First, brother farmer, if you should die this year, would your farm or even half of it go to your wife, who has done as much as you towards earning the money and paying for it? If not, fix that matter to-day. In Ohio, a man and his female partner may work and save for 30 years to pay for a farm. The man dies first, and if there are children the law does not give that poor woman the ownership of one single acre of that farm; she gets simply the right to use one-third of it during her life-time. Think of the terrible injustice this may work. Think before it is too late, if you love your wife, or have any love for justice. Justice demands that you do no less than deed her half of the farm. For myself I have deeded all the farm to my wife, so in no case can she be cheated out of her rights. It is time enough for the property to go to the children when both the original partners are through with it. The wife can will the property back to the husband, or, in Ohio, she can deed it back and he can keep the deed and not put it on record unless she should die first.

In any State the matter can be fixed so as to work injustice to no one, if it is attended to in time. In a few years, it will be safe to leave this matter for the law to settle, as our laws are fast coming to acknowledge man and wife as equal; but until that good time comes, when public sentiment has been worked up to simple justice, we farmers who love our wives and recognize their claims as full business partners, must take it in our own hands. Do it immediately, otherwise you may be to blame for a "dark sorrow that mars" your dear one's next Thanksgiving Day (see last line of the "True Thanksgiving Song.")

The next point is very simple. When two partners are doing business together, should one carry the pocket-book and handle all their joint earnings and savings, and the other, when she wants any, have to ask for it in a begging way? Not much. And still that is about the way many women have to do, and they are thankful when they ask, if they are not met with a harsh refusal. There is a terrible wrong and injustice here. There is but one right course. Have no secrets. Let the wife know at all times just how you, or rather you and she, stand in the world. Consult together about all large expenditures. Have confidence enough in each other's judgment to ask no questions about little amounts. Have the pocket-book as accessible to one partner as to the other. No true woman will ever abuse such a partnership, and there are more true women in this world than there are true men. I am not a woman; but I believe women have the same feelings that we men have, and I do know how grinding it would be for me to have to ask my wife for every dollar I got, even if she always gave it to me graciously.

Last winter, after having talked on this point at a farmers' institute, the writer was taken by the hand by one of the good old mothers of the audience. I knew her husband, and knew him to be one of the richest farmers in Ohio. The good lady said, with eyes full of tears, "Mr. Terry, I do not know that my husband ever positively refused me any money when I asked for it; but," she added, "if there was any way in the world in which I could earn what I want, unbeknown to him, as old as I am, I could do it sooner than to ask for it.'

Oh! friends, there was a terrible injustice there. I do not think it was at all intended on the one side; but it was felt on the other all the same. Was this an isolated case? Well, I have stood before thousands of farmers' wives since then and have told this simple story, and I know from their looks that it is not.

Now, my brother men, will you not see to this point to-day, also? Do not make your dear wife look up to a "lord and master" any more, and meekly beg a few cents of you when she wants them. Do not *give* her a little now and then. That makes her a beggar. Do not *pay* her so much a week or month for her own. That makes her a hired servant. Make her rather a full partner, a free woman, and not a slave. Let her see that her husband is not a master, but a noble man in whose heart justice reigns as well as love.

After I had finished a hard day's work, not long since, my wife said: "How much have you made to-day?" I replied; "It is hard to say exactly; but I believe this day's work may be safely set down at $5." "And I have made $1." she says. "I have done the washing and ironing which I could hire done for $1." "No, my dear", I replied, "you do not put the matter rightly. 'We have made $6. between us,' is the way to put it. We went into partnership 24 years ago; but then you are too modest. Who has got me three nice meals? Who takes care of and makes my home pleasant, thus making it possible for me to do strong and telling work? Who did that washing and ironing herself just because she couldn't hire it done quite nicely enough to suit her? We must pay for the best when we will have it. If you want to charge up your labor to-day, charge $3 and it will be just and fair." Wasn't I right, friends?

Summit Co., O.

Indust'l Societies.

THE HISTORY OF A FARMERS' INSTITUTE.

Large attendance and lively interest in Michigan farmers' institutes; how the Kalamazoo County institute was started; farmers and professors co-operating; the Grange the prime mover; local hospitality to visitors; a farmers' institute by farmers; organization of a county farmers' club; country villages preferred to cities for meetings; principles on which the annual institutes have been conducted.

I NOTICE in a recent issue of the RURAL, a complaint from a correspondent that the farmers of New York do not take proper interest in farmers' institutes which are held for their benefit. He seems to think that when so much pains are taken to supply first-class lecturers, the farmers ought to avail themselves of the opportunity to hear what is said, and learn what is taught. Now I do not know anything about the institutes in New York; but I do know a good deal about those in Michigan, and the complaint suggests the query to my mind: Have they not begun at the wrong end of things there? Are they not trying to heat the mass from the top instead of from the bottom? If so, it may take some time to get it warmed through. It is not so in Michigan. At every farmers' institute the biggest room in town is crowded with farmers and their families, and the greatest interest is manifested. Perhaps a little history of how institutes were started here may be of benefit elsewhere.

Something over a dozen years ago, the State Board of Agriculture provided for a series of six annual institutes, to be held in various parts of the State, under the direction of the professors from the agricultural college at Lansing. Climax is a little village of between 300 and 400 inhabitants at "the corners," in the midst of one of the prettiest little prairies in Southern Michigan, and surrounded by a thriving farming community. At that time it had a Grange, and the Master of the Grange was a graduate of the Michigan Agricultural College. It struck him that Climax would be just the place for a farmers' institute, so he broached the matter to the members of his Grange, and after not a little argument and persuasion, induced them to invite the State Board of Agriculture to assign one of the institutes to Climax. By the use of his influence with the Board, the institute was secured. One of the conditions was that a local committee should make all the necessary local arrangements and provide one half the speakers for the occasion. The Grange, being the only organized body ready to deal with the matter, immediately set to work to make the necessary arrangements. The co-operation of all the citizens in the vicinity was secured. Invitations were extended to the best known and most successful farmers for many miles around to prepare papers on special topics, on which they were known to be well posted. A sufficient number responded to fill the programme. Everybody far and near was invited to attend. The Master of the Grange was chosen presiding officer of the institute. The best music to be had in the vicinity was provided for the occasion. The institute was held in the largest church in the place, which was filled to overflowing. The professors from the college and the farmers mingled together and got acquainted, both performing their part in the programme, the farmers doing their full share in sustaining the interest of the meeting. The institute lasted two days. The people of Climax and vicinity took the visitors home with them, fed and lodged them, and treated them in every way as welcome guests, as they were. The institute was in every respect a grand success.

The next year the same man said to his Grange:

"Let us have another institute this winter."

But they said:

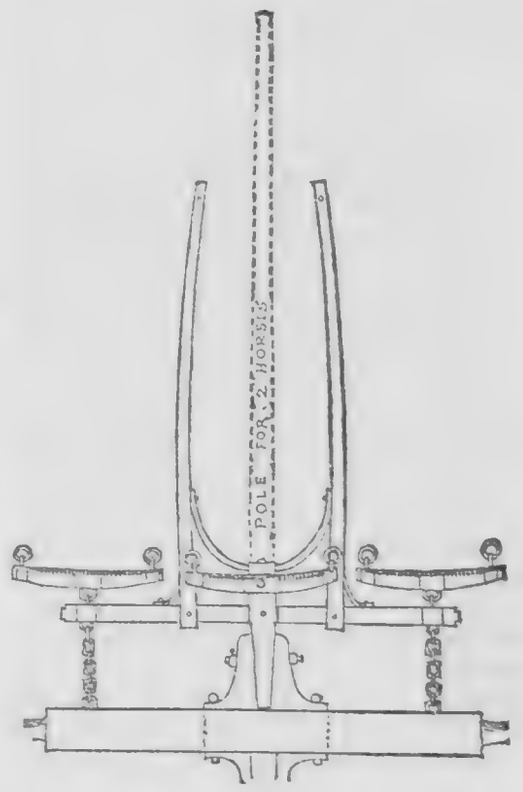
"The State will not give us another one so soon."

"Very well, then, let us have one on our own account."

"But we cannot sustain it alone."

"Yes, we can, I will risk it. It is worth trying anyhow." It was done. Under the same management, and following the same plan, a second institute was held in Climax, quite as interesting and successful as its predecessor. The presiding officer on both occasions urged the formation of a club or organization to continue the institute. At the second one, the organization was effected under the name of the Kalamazoo County Husbandman's Club. It has been a flourishing society from the very start. Its twelfth annual institute will be held the first week in February next, in Richland. The main parts of the papers and discussions have been furnished by the farmers of Kalamazoo county and vicinity. Some help has been obtained from year to year from the professors of the agricultural college. The institutes have all been held in the small villages of the county, in the midst of the farming communities. The city was shunned as not having the right sort of atmosphere and surroundings for such meetings.

Every institute has been "the best one yet." These principles have been at the bottom of the whole business: 1. The institutes have been made the farmers' own meetings which the professors were invited to attend and take part in—not the professors' meetings where the farmers were invited to come and be instructed. 2. They have been held in a congenial atmosphere, with congenial surroundings. 3. Persons coming from a dis-



THREE-HORSE POLE. Fig. 8. (See page 33.)

tance have been made welcome guests by the people in the vicinity where the institutes have been held. Farmers have gone home as visitors with farmers, viewed the farms, stock, buildings and improvements, and thus many pleasant acquaintances, and even friendships have been made. It has not been in any sense a charity. The guests have been welcome ones and many have gone to their homes at night feeling sadly disappointed when there were no visitors left to accompany them, and share their hospitality. I believe the same policy will produce in New York results similar to those which we are all so familiar with here in Kalamazoo county, Michigan. The winter is before us and now is a good time to try this plan if it has not already been done.

F. HODGEMAN.

Dairy Husbandry.

PROFITABLE RESULTS FROM A SMALL DAIRY HERD.

Butter-making as a profitable change from unprofitable grape, potato and fruit growing; satisfactory record of a herd of 14 grade Jerseys; feed; when butter production is most remunerative; growing public taste for new butter; why cows should come in at intervals through the year.

GRAPES are largely produced in the vicinity of Lake Keuka, and potatoes elsewnere in Steuben County bordering on the Conhacton Valley, and both have an excellent market reputation. There is also a respectable show of winter apples which, grown in this elevated region, are noted for their good keeping qualities. The prices prevailing a year ago for these articles were fairly remunerative, particularly those for potatoes, which induced the planting of an increased acreage last spring. With a large yield of each over the whole country, with grapes hunting for buyers at 1½ and two cents per pound in the autumn, with potatoes and apples bringing only 25 cents per bushel at the end of a muddy, weary haul of many miles, there was not found a margin of profit. This unfortunate condition of things raised anew the question whether there is not some other business better adapted to the already worn soil of the region, and less likely to be overdone than so much potato growing—one whose products would be less subject to extreme depression of values, and to which more attention could be profitably given. I refer to the making of a superior quality of butter in larger quantities for which an elevated region, soft spring water, a soil naturally adapted to the growth of grasses, together with constant improvements n methods and machinery for manufacturing the article would seem to furnish all requisites

With a view to comparison, and possibly to strengthen a purpose any one may have formed to modify his system of farming as herein indicated, I give here a carefully compiled record of my small dairy operations for the year 1888, and I believe that as good or better results are easily within reach of many farmers.

Counting as one cow a small two-year-old heifer and an older animal that, owing to a mishap, was in actual use but six of the 52 weeks in the year, the herd numbered 14 head, all grade Jerseys, averaging slightly over three-quarters blood. Parenthetically it may be stated that six of them were three or four years old, all being something short of maturity. The figures given cover an even year—from Jan. 1, 1888, to Jan. 1, 1889

Pounds of butter,	3,960
Per cow,	283
Pounds sold,	3,604
Family supply,	356
The average price was 25.6 cents per pound, so that the value 3,960 pounds of butter was	$1,013.76
Skimmed milk in making $185 net in pork and pigs was,	125
Skimmed milk also fed to nine high-grade heifer calves and 50 poultry in winter,	75.
A pair of twin four weeks ⅞-blood veals, net,	16.31
Milk and cream sold and used in a family of ten, say,	29.93
Total product,	$1,260.00
Per cow,	90
Do. in butter,	72.41

A year ago the writer was able to report, in a local paper, an average yield of 306 pounds of butter per cow, or 23 more than for the year just passed. The reduction is ascribed to a change in milkers, drought-stricken pastures in autumn, pumpkinless corn-fields, and a larger use of new milk in feeding calves. But the better prices obtained for butter, pork, and calves, bring the total proceeds per cow, substantially to the figures of the year before, or $90.

My cows have grass only during the early growing season, supplemented in August and September, with a morning feed of green fodder corn, and, later, with pumpkins, or soft corn in exceptional seasons, like the last, when there is an excess of this feed owing to premature frosts. To the winter rations of oat straw and chaff, corn stalks, and early cut hay largely consisting of Orchard grass, is added for each cow in milk, a peck or so of sliced Golden Tankard beets sprinkled with two to four quarts of meal, consisting of two parts of corn and three of oats by measure, fed in the stanchions.

Turning to my monthly record, it is found that 38 per cent. of the yearly total is credited to the first and last three months, and 62 per cent. to the intervening six months. It would have been better for my pocket if the proportions had been reversed; that is, if the larger yield came during the six late fall and early winter months, and the smaller percentage during the six months from April to September inclusive, when the great bulk of the butter of the country is made. The fear of milk fever or other mishap, if cows are permitted to come in during the heat of September, has hitherto prevented such wise adjustment, my experience having been that only heifers or quite young cows are proof against the deadly milk fever in hot weather. But it may be better to take even this risk, in order to lessen mid-summer and increase early autumn production.

The public taste is being steadily educated to demand fresh butter. A dealer remarked that each passing year he found it more difficult to handle held summer stock with profit to himself and satisfaction to the producers. The fact suggests the wisdom of increasing production in private farm dairies during the winter season when prices for butter, pork, veals and eggs are sure to be better than in the summer, and when the farmer has more time at his command. Comfortable stables, with a fair addition of meal and roots to the ordinary winter ration are showing fairly satisfactory results in my case, and I can commend a trial to my brother farmers. It looks as if they would be obliged to make one, or give up the business because of the changing taste referred to. Formerly June butter was regarded as the thing especially desired for family use during the succeeding winter and spring; but the increased amount of fresh creamery butter that has of late years been placed in the market, has changed all that, as the market reports increasingly show.

I will only add that, instead of having all the cows of a dairy, large or small, coming in during the spring, or in the fall months, it would be clearly advantageous to have them come in at different dates through the year, as the cream from each new cow improves the color and freshens the flavor of the entire make of the butter, besides shortening the time of churning. W. B. PRATT.

Steuben Co., N. Y.

SPURIOUS DAIRY PRODUCTS.

PROFESSOR J. P. SHELDON.

Difficulty of finding a title expressive enough; degeneration of the "dairy"; evils due to bogus butter and cheese and their pestiferous makers; legal checks put on dishonesty in bogus butter, but dishonesty in bogus cheese still tolerated; losses entailed on dairymen by fictitious names for spurious products; the curse of lard cheese; the injury it does to the sale of the genuine article; American protection against genuine foreign competition, but none against spurious native competition; Americans "a funny people."

THE title I have employed for this article, to do duty as a sort of sponsor for it, does not exactly satisfy me, and I only use it for want of another and a better. It is a trifle misleading; it is not strictly accurate as an indication of what I mean; it inferentially casts, or might be taken to cast, a slur on the word "dairy," which occurs in it, and which is one of honor and renown; and it does not convey a sense of one half of the detestation I feel for what I mean by it, which will presently appear. I could not, however, at the moment, think of a title which "exactly filled the bill," and so I had to let it pass, *cum grano salis*. It vexes me a little, all the same, to prefix the pure word "dairy" with the impure word "spurious," and I must apologize to my agricultural readers for using a phrase which, for want of a better, occupies a position which it is not entitled to fill.

By the term "Dairy Products," we mean milk, and cheese, and butter, all of them honest and genuine, whatever their quality and condition may be, and it is a burning shame that anything which is not honest and genuine should ever have come to be classed with them, under any conditions whatever. Until recent years, the dairy was a place which bore a reputation that was not sullied by the nefarious practices of those who have used it for a cover for dishonesty. It was suggestive of cleanliness and purity all through. Its very name conveyed an odor of sweet milk, and a glimpse of golden butter. George Eliot immortalized it in Adam Bede, and Charles Dickens declared that if mankind were to return to the worship of animals, the cow would be the chief Divinity. It was the scene of wholesome labor, and the source of honest profit, almost universally, in the days that are gone. The farmer's wife shone in it with credit, and the good man reaped a substantial reward. It was the center toward which all the outside labor of the farm was directed, and a cruel thing it is that spurious articles should have injured its reputation, and diminished the profit which it was wont to yield.

I charge all this disaster to bogus cheese and butter, and to those who make them. These people, under the specious pretext of utilizing animal fats, have done to an honorable industry an injury whose extent is simply incalculable. They have grown rich in despoiling others. Their aim is to steal a march on dairy farmers, and to cheat the public. In both, they have succeeded monstrously, and the process is still in full swing. The butterine man uses milk and butter, in part, and the bogus cheesemen use the caseine of milk as a plausible base for their spurious productions, and hence it is that they have attained so much success. Money is clean, anyhow, however dirty the source from which it may have been obtained, and profit is pleasant, no matter whence it comes; so these people think, of course. And the game goes merrily on, while dairy farmers are defrauded of a large part of their just profit, and I suppose this will go on until the nations rise up in indignation and put an end to such unscrupulous practices once for all.

Something has been done in your country and ours, and in others too, to place some restriction on the unblushing sale of margarine as butter, and the profits of dealers and workers alike have been properly curtailed; but nothing has been done to bring bogus cheese to book. The retail dealers in margarine, in this country, complain that a once lucrative trade has shrunk alike in profit and in volume. The public still buy margarine extensively, but they do so with their eyes open, and at a price which more nearly approaches the intrinsic point. Buy it they will, and buy it they ought, let us frankly admit, for it is a useful thing when made of honest and cleanly materials. What we complain of is the abominable fact that it was ever called by a name which identified it with the dairy. This it is that has done most of the harm to dairy farmers, for had the spurious stuff from the first been called by a name which properly and effectually disconnected it from the dairy, not a tithe of the mischief would have been perpetrated. As it is, an ancient, honorable, and legitimate industry has been deliberately and insolently plundered by one which is probably ephemeral and certainly dishonest.

But what about "lard cheese," and the mischief it is doing to the legitimate dairy? This stuff, too, is made in factories, in part from milk, and is unblushingly called "cheese," without any affix or prefix. Again, the pretext is that animal fats, which might otherwise be neglected, are put to the best use possible by being incorporated with skim-milk cheese. Here it is that the deception comes in, and the public are swindled, while a deadly injury is inflicted on dairy farmers. Skim-milk, which ought, for the most part, to be fed to calves and pigs, is made up into a product which, by the admixture of lard and other fats, is made to simulate the cheese of the dairy farmer, and is sold as a genuine article. And what is the result? Well, people buy it, taste it, think it rather funny, and give up cheese eating altogether. They find it to be anything rather than an aid to digestion, as Shakespeare considered cheese to be. Lard cheese had not been invented in Shakespeare's time, and we can only deplore the fact of its subsequent evolution. I know a man who once ate some of this stuff, toasted, at supper; he was hungry at the time, or he wouldn't have eaten much of it; he survived, but the Doctor declared he had had a close shave of it, and he has never tasted American cheese since. And so it is; lard cheese is an American production, and the British public are rapidly coming to distrust and suspect American cheese, generally, on account of it. In plain, sober truth, bogus cheese is very seriously discounting the reputation of genuine American cheese in the English market, and so it is that American dairy farmers are being plundered.

I wonder how long your people will submit to this sort of thing. In free-trade England, we admit almost anything, and let it stand or fall on its merits. But America is, *par-excellence*, the country of commercial and industrial protection You protect your people against a genuine foreign competition,—a competition which would be fair and square—why, therefore, in the name of thunder, don't you protect your people against a spurious and impudent native competition? You protect the skin, so to speak, of your great and noble country, and you tolerate a festering abscess in your vitals. Indeed, you Americans are a very funny people. You could crush a vast civil war, and you seem to be powerless against bogus cheese. Oh, fie! surely you don't perceive the evil of it, or you wouldn't permit it.

Surrey County, England.

Everywhere.

RURAL SPECIAL REPORTS.

Illinois.

DONNELLSON, Montgomery Co., Jan. 2.—Times are very close in this locality, although we had above an average crop year. The previous year's failures were the cause of our distress, for to make the loss good it cost the farmers all their ready cash, and many incurred debt for feed to get through the winter and make a crop. At present, feed is plentiful, and stock are in good order. Hogs are numerous and "going like hot cakes" at $4 to $4.70. Cattle are plentiful, but sales are dull at $2 for choice animals. For horses, there are no offers as yet. Clover and pastures are lovely. In short, old '88 has had more joys than sorrows, and its memory is to be loved and cherished. Wheat looks well, though but a small acreage was sown. A. W. R.

Iowa.

DES MOINES, POLK Co., Jan. 1.—The past year was neither good nor bad for farmers It found a great many of our farmers in debt after the two previous years of drought, some paying heavy interest, and all hoping for better times. It has given us great crops of almost everything, and while we feel very thankful that we have been able to produce so much, and that there is plenty in the land to feed all the people and all stock, yet prices are so low and our market for farm products so poor that we will not, as a farming class, be able to meet all our debts, and a great many farmers will have to commence another crop encumbered with debts. Still, but few of our people seem to be cramped; most of them seem to be looking on the bright side. We have had a very merry Christmas, and the trade in presents for the joyous festival was unusually large. Our fall and winter so far have been ones long to be remembered, as among the finest ever known in Iowa. Our fall was very dry; in fact, too dry for plowing, so that very little fall plowing was done; but the corn crop was all gathered in before the holidays. The thermometer has not been as low as zero yet. On Christmas night we had a snow storm, and the snow was drifted four feet deep in places, yet the weather has not been cold. Water is scarce in most places, and it is hard to get enough for stock. The snow has been melting somewhat and we have had several light rains, which have helped. The ground is barely frozen under the snow. One of my neighbors dug potatoes the day before Christmas, and found that but few of them had frozen. Vegetables to an unusual amount were stored for this winter, and the weather has been so warm that they are not keeping well. This is the prettiest New Year's Day I have ever seen here. I feel that I have been greatly benefited by the visits of the RURAL during the past year, and hope all its readers have been so too. F. S. W.

Virginia.

RICHMOND, Henrico Co., Va., Jan. 5.—Tobacco planters have been so discouraged by prevailing low prices of dark leaf that they are holding it back. Common old stock is selling at three to four cents per pound. The weather for the last three weeks has been mild and open and quite comfortable without fires. The business outlook is fair to good in tobacco, but there will be many losses for 1888, to be gradually met and felt in 1889. Indeed very little money was made in tobacco last year and what was made was only in exceptional cases with special brands of the weed. During the past week new West Virginia bright crops have been sampled, and sold by auction, bringing very satisfactory prices. One crop from Putnam county brought an average of 44 cents per pound! L. T. M.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.

PREPARING LAND FOR AN ORCHARD.

J. B. Mc C., Mt. Morris, Pa.—I want to plant an acre of peach, apple and plum trees on a poor white-oak and chestnut, yellow sandy hill, the soil of which is underlaid with clay. It appears well adapted to fruit. Stable manure is difficult to get, but Forest City superphosphate has given me a good catch of grass, and helped my crops generally. I wish to prepare the soil so as to produce good crops while it is growing richer. What kind of fertilizer should I use, and how much per acre, and what crops would be likely to give the best returns and benefit the fruit most?

ANS.—The best fertilizer for fruit trees is unquestionably a mixture of coarsely ground raw bone and unleached hard-wood ashes. For a first dressing, 1,000 pounds of the bone, and 50 bushels of the ashes (both well worked into the soil) would be none too much, especially as the land is "poor." It is not said whether the land is poor by nature, or by bad farming; but we infer the latter, as it it said to be "well adapted to fruit," which naturally poor land is far from being. If the land is to be cropped while the trees are young, the crops should be manured the same as though the trees were not there, and they should always be hoed crops. Small grains are death to a young orchard. Low crops—beans, roots, etc.,—are the best. While the trees are small, strawberries, well manured, will do well among them. Currants, gooseberries, or black raspberries will succeed in and between the rows until the trees get well into bearing. Profit from tree fruits is quite as much dependent upon care and good culture as in the case of any other crop whatever. When it is proposed to crop between the rows for a number of years, it is best to make the rows considerably wider apart than the trees in the rows. Then the cultivation can be continued for a considerably longer time.

WHAT AILED THE STEER?

M C. M., Blackstone, Mass.—When I went out to milk one night recently, I found one of my three-year-old steers lying down and sick. I couldn't make him get up. The doctor came in about two hours and gave him some physic, and said the trouble was impaction of the rumen. He cut into the rumen and removed its contents; after which he inserted about two pounds of salts into it, and then sewed the opening up. The contents of the rumen seemed to be packed pretty hard, but were not dry. The steer died in about 30 hours, nothing more being done except to give him some oat-meal gruel. Was it impaction of the rumen, and was the treatment proper?

ANSWERED BY DR. F. L. KILBORNE.

You should have given a full history and the symptoms of the case, if you expect us to give a satisfactory opinion as to the disease and treatment. In the absence of any facts to the contrary, we suppose the steer was taken suddenly sick, with no apparent or known cause for the attack; that there had been no change in diet, and that the only marked symptoms were the lying down and refusal to rise when urged to do so.

If these are the facts, the history and symptoms are not what we would expect in a case of impaction or over-loading of the rumen. We suspect the doctor failed to correctly diagnose the disease, and consequently gave the wrong course of treatment.

YELLOW OR JAUNDICED PORK.

J. J. H., Pardoe, Pa.—The other day I butchered six hogs, each about one year old, which had all been fed together. They ran during summer in an apple orchard. Their food was principally milk during summer, finishing off with corn since the winter apples began to fail. When I dressed them, I found two of the largest and most healthy-looking somewhat peculiar. The entire carcasses were of a yellow or saffron color, the lard after being rendered, still retained the same color. The color of one pig was black; that of the other white. What was the cause, and is such pork fit for food?

ANSWERED BY DR. F. L. KILBORNE.

The color of the flesh was probably due to a re-absorption of bile into the system, followed by the staining of the tissues with the bile pigment. The causes that may produce this re-absorption are so numerous and often so complicated, that it would be impossible to say, without making a personal examination, what caused the trouble in the present cases. While I cannot advise any one to offer such meat in the market, because, strictly speaking, it is not clean, healthy meat, I am of the opinion that it is suitable for food, and, except a prejudice against the unnatural color, I believe there is no special reason why it should not be so used. It is certainly more wholesome than large quantities of meat that finds its way into the market.

SWELLING ON A COW'S KNEE.

M. C. G., Johnson's, N. Y.—On the knee of my three-year-old cow in milk, there is a lump as big as a fist, produced, I suppose, by a bruise. It is spongy and soft. She is now in a box stall. I thought of putting a seton in the swelling; would it be safe to do so? What is the proper treatment?

ANS.—Try painting the swelling every three days with compound tincture of iodine until the skin is considerably blistered; then apply it less frequently. The seton should not be inserted, because it is liable to increase, instead of removing, the trouble. And, in any case, an extensive swelling about a joint should not be opened except by a competent veterinary surgeon, as the joint, or a synovial sac might be opened, and that would be very difficult to close and heal. If the above treatment fails, call a veterinarian to examine the cow.

GRAFTING APPLE TREES.

J. C. M., (no address).—What is the proper time for grafting apples? Where can I get a work on the subject?

ANS.—1. We prefer to graft apple trees just before the buds break. They may be grafted earlier and later. The writer has succeeded in grafting apples even after the buds have pushed. But the cions must be dormant. We have thoroughly explained the process many times, and will probably go over it again before spring. Any of the pomological works explain grafting and budding, such as Thomas's American Fruit Grower, and Barry's Fruit Garden.

Miscellaneous

C. N. R., Canton, Pa.—What is the address of some manufacturer of No. 1 grain drills.

ANS.—A. B. Farquhar, York, Pa.; P. P. Mast & Co., Springfield, O.; Spangler M'f'g. Co., York, Pa.

G. S., Westfield, N. Y.—Our canning factory wants me to raise a small, red, smooth tomato to put up as a fancy article. What kind would you suggest?

ANS.—King Humbert, Wonder of Italy, Nesbit's Victoria, or the Pear-shaped. They are all nearly alike.

L. H. T., Elmira, N. Y.—The authorities at Washington will furnish you with a circular entitled Instructions Relative to Entries Under Homestead, Pre-emption, and Timber Culture Laws, that will give you full information regarding "homesteading." Address General Land Office, Department of The Interior, Washington, D. C.

L. D. A., Texas Valley, N. Y.—1. I sent the RURAL some gooseberry plants two years ago; what about them? 2. How can I exterminate snails?

ANS.—1. The plants did not live. 2. We do not know, but should try Buhach, salt and water, and the kerosene emulsion. Some of our readers may be able to answer the question definitely.

J. C., Petaluma, Cal.—1. Under the head of catalogues, etc., is noticed an Introduction to Entomology, by Prof. Comstock: is this free, and are such things in general free, when the price is not mentioned? 2. Is it better to burn leaves, corn-stalks, potato vines, and all such rubbish as collects on the farm, or to put them in the compost heap? 3. Did the RURAL print an article on the best disposition to be made of straw? If so, in which number?

ANS.—1. The price of Prof. Comstock's book is $2. This price should have been given when the volume was noticed. The idea is that all pamphlets for which no prices are stated are supposed to be free, though it is always courtesy to inclose stamps when writing for them. 2. That depends upon many conditions, like the cost of labor, the location of the rubbish, etc., etc. On our new farm which is sadly in need of manure, we have collected large quantities of leaves, vines and stalks, which, after being used as bedding, have been thrown into the manure heap and mixed with wood ashes. Other vines, brush, chips and rubbish were collected in heaps on the ground designed for potatoes. In the spring, these heaps will be burned and the ashes will be scattered. 3. You will find the article you speak of on page 623 of the RURAL for September 24, 1887.

DISCUSSION.

MORE HEN TALK.

O. H., GREELY, COLORADO.—On page 709 of last year's RURAL, "Jerseyman" had a savage article about "city farmers." Among other things he laughed at the idea of making a fortune out of hens. I have said many times that I believed I could support a very large family from fowls alone. This was several years ago before the recent low prices for chickens and eggs. At this writing, eggs sell readily here at 30 cents per dozen, and in September spring-chickens were selling slowly at 25 cents and 30 cents each. The Kansas and Nebraska people send fowls into Denver so that they sell at very low rates—so low, in fact, that we could not raise them at much of a profit with corn at 66 cents and wheat at $1. per bushel. Of late years, I have seen barrels of Nebraska dressed fowls selling at from six to nine cents per pound. We sometimes see flat cars on the Union Pacific piled high with coops of fowls—probably thousands of them—going through from Nebraska to the Pacific coast. Last spring, eggs dropped once to 10 cents per dozen and sold for weeks at 15 cents, so I am not so sure of the profits of the hen business as I was when prices were far better. I often wonder how it was that I sold, when a boy, three and four-pound spring chickens at the Fourth of July, for the Boston market, for from $2 50 to $3 50 *per pair*, and cannot begin to do it in Denver.

I know one thing—we boys used to make a good deal of money from our fowls, and we knew how to manage them. I am very positive, and we had no glass houses and had never heard of anything like an incubator except the following, which we read in Lippincott's Gazetteer, in an article on Egypt: "Of all the trades pursued in this country, the most remarkable is the hatching of eggs by the artificial heat of ovens—a peculiarity of Egypt handed down from ancient times. The poultry reared in this way are wholly without the instincts which relate to the care of offspring; the artificial method of hatching, therefore, when once resorted to, soon becomes necessary, and the natural system of incubation is totally superseded."

Now, if I were to make a poultry test, very much as the RURAL made a potato one, with the intention of seeing how much money I could make from the smallest capital, I would act as follows here in this dry climate of Colorado. I take the hint from the poor Mexican women of New Mexico, who, travelers assure me, raise quantities of eggs and fowls on a small investment.

If the problem was to see how one could make the most clear money from fowls, in one or two years, considering the investment of money and labor, I would contrive pits in the earth at regular intervals, on a four-acre lot. Each pit should be about three feet deep, and sheltered by a sloping roof of some inexpensive material, like a battened door, or poles, willows, grass, hay, straw or earth. The effort should be to construct a shelter, offering the following advantages in some of its various parts: warmth, dryness, coolness, light, darkness, secludedness, and safety from nocturnal visitants.

The hen entrance should be such that it could be instantly closed by the hen-farmer, to keep out unwelcome visitors; or to keep the fowls in at stated times. The perches should be so placed as best to insure the safety of the colony. The hens will lay in dry-earth nests very well. About 24 hens to the colony would be enough. One man would have to work hard to care for 1,000 or 2,000 fowls. That man should be the owner. If I wanted eggs mostly, I would have the White Leghorn, an easy keeper and a good layer. As for an egg-producing article of diet, I believe the world never yet saw the beat of sweet beef-bones chopped into pieces about the size of peas. A ration of this, with a variety of grains, crumbs, sour milk and water, and eggs will be plentiful. Bone crackers are offered for sale in many places. In this climate, hens very sensibly enjoy the coolness of a cellar in summer, where they will sing and coin money for a fellow, as Uncle Marcus used to say, "like all possessed." I have tried it.

CONSUMPTION OF HORSE FLESH.

W. L. H., BROOKLYN, N. Y.—The consumption of horse-flesh by people on the Continent of Europe, and especially in France, has long been legalized under certain restrictions. What is disposed of in this way is sold for what it really is, or, at any rate, severe penalties are provided for its sale as anything else. In England, however, it appears that a good deal of it is sold as beef. I wonder whether American butchers are innocent of such practices. At a recent meeting of the butchers of Manchester and Salford, (which are practically a single city) it was stated that 100 shops in both places were regularly engaged in the sale of horse-flesh, and that the "joints" were delivered in carts after dark. The slaughter-houses were watched, and some of them also protected by dogs in order to prevent casual inspection. Good horses could not be sold for eating purposes under from 25 to 60 cents per pound, whereas the average prices of horses for slaughtering ranged from $15 to $25. Municipal and government authorities were asked to regulate the traffic. Experience among wild and civilized people amply proves that horse-flesh is a savory and wholesome article of diet. Its quality, of course, depends, to a great extent, on the age and condition of the animal, and as nobody anywhere raises horses for meat production, those only which, for some cause, are unfit for work are, as a rule, sold to meat consumers. It is, therefore, all the more necessary that, while traffic in horse-flesh should not be prohibited, it should be strictly regulated by law, both for sanitary purposes, and to prevent imposition on the public. There is no doubt that prejudice alone forbids the use of this kind of food. Would it not be well to take advantage of circumstances to render it useful if not popular? For instance, the great obstacle to the maintenance and efficiency of large armies in the field is the difficulty of providing a sufficiency of wholesome food just where it is wanted. Now, the horses of an army are, as a rule, quite healthy, though sometimes they are rather thin. Their flesh would therefore be always wholesome, though sometimes not very juicy—but then it would, at the worst, be as palatable as the hard tack or fat pork which the soldiers often find so very appetizing. The fatality among horses in an army in the field is very heavy, even apart from the deaths in battle. Why not utilize as human food the large supply of meat thus furnished? Of course in cases of distress, it is often utilized: but food thus forced on men is seldom used by any of them after the necessity for it is over. The meat is wholesome; a well disciplined army is bound to accept the rations served out to it; why shouldn't wholesome, handy horse-flesh form part of such rations? The men would thus become accustomed to the article, and would be likely to use it after they had been discharged, and others would soon follow their examples, especially as its wholesomeness would be assured by the government. For Americans there is one strong recommendation for this plan—it would have to be tried first on the monstrous armies of Europe; for while destructive war is not unlikely to begin any day on the other side of the Atlantic, on this side productive peace is certain to be of indefinite continuance.

A DISPUTED POINT IN CORN CULTURE.

S. W. H., METUCHIN, N. J.—That cornfield? What is the matter with it? The corn failed to ripen off, and the reason for this was, I think, because I did not go through it with a small plow and sever some of the roots. This ought to be done when it first comes into silk; but heavy showers with high wind in July twisted the corn so that I could not follow the row. With this exception, I have not failed to do this for the last ten years. I use a No. 18 one-horse plow with the handles narrowed up, so as to enable me to run close to the row, but not close enough to lift the hills. I find that corn ripens a week or ten days earlier if this operation has been performed. Still I would advocate comparatively level culture in the early part of the season. Four years ago, I had a part of this same field in corn. In the latter part of June when the crop was about three feet high, we had so much rain that, owing to the softness of the ground, I could not work the field until the first of September. Even then, the horse got mired; but I got around the field in lands once while the corn was in the milk. Ten days later I went over it twice in the rows, leaving two and four rows at intervals for experiment's sake. Near the last of August a neighbor passed the field. "Well, I declare," said he, "what corn stalks, but not an ear. You have a poor show there. Why," said he, "my corn has roasting ears on it." I could not get him to come and see the corn before I cut it up, which was the last of October. It turned out 110 bushels of ears per acre, and had I gone over every row, the yield would have been greater. I have often seen a field of corn of very rank growth, with stalks almost ready to burst so full of sap were they, and leaves reaching away across their neighbors, as if crying out, "Give us more room," and I wondered if it would ever be satisfied. Were the season long enough and it found material to feed upon, I believe

that a narrow, deep furrow on each side of the row, checks the growth, and throws the force into the grain.

E. L. B., GROTON CITY, N. Y.—I have always been told that if the milk from a farrow cow was put in with that from new milch cows, we would get no butter from the farrow cow's milk, because the butter would be so much longer in coming that it would be left in the buttermilk. I never had any means of testing this, but here is my experience with our last churning. We have eight cows that we have been milking since last spring. In the last churning, there was a little milk from a new milch cow—just what the calf did not take. The condition of the cream, etc., was as nearly as possible the same as usual. Through November and December, it has taken from one-half to three-quarters of an hour for the butter to come; but it took only 12 minutes for it to come in this churning. The amount of butter, as nearly as I could judge, was about the same as before from the same amount of milk. I certainly never knew the butter to come so soon at this time of the year. I thought I would profit by what I heard at the institute at Cortland, so I weighed the milk for one churning. Here are the results: Pounds of milk for five days, after taking some out for use in the family: 27, 22, 24, 22, 28, 22, 26, 19, 24, 22.—Total 236. Pounds of butter, 13. 236 divided by 13 equals 18 2-13.

G. B. T., SOUTH ORANGE, N. J.—In the RURAL of January 5, under "What Others Say" is an account of the "Average yield of corn per acre." Four States are named as giving a larger yield than New Jersey. After a careful estimate by measuring the ears of corn taken from a given number of shocks, and counting the shocks in the field, I have determined that 3,000 bushels of ears of corn grew on less than 20 acres of land on the "Red Gate Farm," in Sussex Co., New Jersey, this last season. Let us hear what farm or field has done better than this.

I. J. B., TITUSVILLE, N. J.—We have a few trees of cider and other varieties of apples worked on the Doucain stock, that were set in the orchard in the spring of 1864. They are now from six to 11 inches in diameter at the ground, and perhaps 25 feet high. They are as large as the free stocks, and look as if they would live a long time. They were worked low and have borne good crops of fruit. I believe the Doucain will grow with most kinds if worked low.

W. S. C., CUYAHOGA FALLS, O.—At the top of column two, page two, of the RURAL for January 5, Mr. W. J. Green is reported as saying that the Monmouth strawberry, among others, should be sent C. O. D. whence it came. A mistake has been made somewhere. He condemned the Mammoth, not the Monmouth.

What Others Say.

A BUSINESS RETROSPECT.—The press of the country takes a cheery view of things in general. The Herald says the year of our Lord 1888 went into history gaily and trippingly. It leaves behind it a degree of general prosperity in this country which stimulates the gratitude of all classes and excites the wonder, if not the envy, of other nations. It has been more than kind, and, perhaps we may add that it has been more than generous to us. To a far greater degree than any other people on the globe we Americans are engaged in material development. We have not inherited a land which has been the battle field of a thousand years, a land of crumbling castles and drained resources, but a virgin soil which invites enterprise, awakens avarice, inspires the genius of invention.

We may congratulate ourselves that the business of the country is forging ahead with the firm tread of assured success. Thriving trade, promising opportunities for investment, not only indicate the increasing wealth of the few, but—what is of more consequence—a larger degree of contentment and a wider measure of happiness for the many.

THE PROFITS ON BEEF.—It appears that the lowest cost of getting cattle ready for market, according to the Chicago Tribune, is two and a half cents per pound, so that when the cattle raiser is paid anything over that figure he is in a position to make money. With the average bullock weighing 1,000 pounds, the cost of placing him on the market would be $25. He is bought in for, say, three cents, or $30, which gives the raiser 20 per cent on his investment. The $30 worth of bullock is then sent to the slaughter-house, and when seen again is in the shape of 500 pounds of marketable meat, the hide, tallow, etc., bringing say $7. These 500 pounds of meat are sold for six cents, or $30, which, with the $7 for hide, etc., foot up $37. This is a profit of 23 per cent. The retailer takes the 500 pounds of dressed meat for $30, and immediately cuts it into ribs and loins, of which he gets 125 pounds, and has 375 pounds of plates, chucks, etc., left. He gets 18 cents per pound for his choice cuts, or $22.50, and an average of seven cents for the coarse meat, or $26 25, or a total of $48.75. It cost him $30, so it will be seen that his little percentage figures up something over 60, yet he will tell you that he isn't making anything, and would persuade you that he is doing missionary work for the benefit of his health and the convenience of the public.

THE TOMATO EGG-PLANT.—We find the following in our excellent contemporary the American Agriculturist: "Our engraving represents a curious new plant which attracted a large share of attention at the last Burlington county, N. J., fair, where it was exhibited by B. F. Bishop, in the collection of the "Progressive Farmers' Club." The plant has the general appearance of a common egg-plant, while its fruit, when ripe, resembles a medium-sized, ribbed tomato. Its skin is very glossy and bright red, much like that of a Cayenne pepper. The history of the plant, so far as we could learn, is that the year before last a single specimen of it came up among a large number of Black Pekin egg-plants, growing in Southern New Jersey. The specimen from which our illustration (representing the fruits and leaves one-third natural size) was drawn, was raised from seeds of this original plant. The flesh of the fruit is very solid and dry, apparently unfit for use, but as a curiosity and ornament the plant is worthy of a trial by those in search of unusual novelties. The cultivation of the plant is the same as that of the common egg-plant."

The R. N.-Y. would say to its neighbor that the Tomato Egg-plant has been offered by seedsmen for 25 years, and longer for aught we know, and its name is the "Scarlet Chinese Egg-plant."

ROAD LEGISLATION.—The best test of the civilization of a country is found in the condition of its roads, and good roads are indispensable to the material prosperity of a country. The RURAL'S late Road Special has directed unusual attention to the advantages of good country roads, and the subject of improving our road legislation and our systems of highway administration is referred to in the annua messages of Governor Ames, of Massachusetts, and of Governor Beaver, of Pennsylvania, transmitted to the Legislatures of those States last week. Governor Ames recommends the passage of a law authorizing the appointment of an officer having a general oversight of the roads and bridges of the commonwealth, and authority to report annually regarding the condition of the roads and bridges, with suggestions for the improvement of the same. Governor Beaver suggests that the road laws of his State be thoroughly revised and codified. Now, it is to be hoped that good results may come from agitation of this subject, not in these two States alone, but all over the country.

MANITOBA'S WHEAT CROP, 1888.—The Manitoba wheat crop before frosts was estimated as high as 12,000,000 bushels. But the frost did considerable damage, affecting, it has been estimated, one-quarter to one-third of the crop. The damaged grain, however, is not wholly spoiled. The farmers have, according to Bradstreet's, paid their notes given for farm implements to the extent of 90 per cent. of the whole. The Dominion, taking all the colonies together, will have scarcely any wheat for export, and may have to import from the United States to a limited extent.

ARTESIAN WELLS IN THE ARID REGION.—New Mexico and Montana are asking Congress for appropriations for the purpose of sinking artesian wells in the hope that they could be used in irrigating arid land. It is hoped that the appropriation asked for will be made. A sufficient appropriation of this character should be made to sink experimental wells in every important part of the arid region. It is especially desirable that they should be sunk in southern Nevada. There is a vast area of country in the southern part of that State which, according to the Denver Republican, would be very valuable if it were reclaimed from its arid condition. It is possible that this result could be attaind by sinking artesian wells.

THE FARMER OF THE FUTURE.—Blackwood's Magazine is one of the oldest and best of that class of periodicals, not only in England, but in any part of the world. In a very fine, thoughtful article on English agriculture in a late issue, it speaks as follows on the above topic; and what is here said of the English "farmer of the future" is equally applicable to the American:—The successful farmer of the future must be well grounded in the general and technical knowledge of his business. He must look closely and more carefully into the internal workings of his farm than was necessary in former times. He must watch keenly every movement of the foreign producer, study the condition and prospects of the markets, and be prepared to produce such commodities as are likely to bring him the best returns. He must not tie himself to the growing of certain crops and the rearing of certain stock merely because his forefathers did so, or because he himself found them profitable in times gone by. He must cultivate an 'open mind,' be ready and willing to avail himself of any new system or modification of practice calculated to benefit him, being careful, of course, not to attempt upon a large scale practices that are risky or have not been proved by actual test. He must not be above giving his attention to little points of detail, or to tiny driblets of income, for in agriculture the 'day of small things' has assuredly come. Method, precision, industry, forethought, economy, sound and ready judgment, and intelligence—these are the elements of successful business. They are as essential to the farmer of to-day as to the busiest business man in our greatest commercial center. Conducted by a race of farmers thus qualified, there need be no fear as to the future of British farming.

VINTAGE PROSPECTS IN EUROPE.—From an article on this subject in Bradstreet's, we learn that although in some quarters the vintage in Europe has been medium, in too many districts the crop must be regarded as a failure. While, with the striking exception of the Médoc, quantity as a whole is under the average, in no locality is quality likely to be as good as it was last season. In the Bordeaux district while the quantity is larger than it has been for several years, the quality is inferior.

In Champagne the crop has been a complete failure. Few of the grapes gathered can be used for making champagne, and these can only produce a wine of the poorest description. Nevertheless, the prices demanded by growers are higher than those of last year. In the Saumur district also the results of the vintage are insignificant both in quantity and quality. Burgundy has been more fortunate. Where the vineyards are free from phylloxera the yield is above the average. In Cognac the yield is larger than has been known for several years, but neither in strength nor quality will the brandy equal that of last year. On the Rhine and Moselle the wine, in quantity about two-thirds of a full yield, cannot reach a medium excellence. From Italy the news is equally discouraging; though the quality in some districts is of fair average, the quantity of wine made shows a material diminution from that of last year. In Austria and Hungary the yield amounts to about one-half of an average, the quality being better than was anticipated. From Greece, Turkey and Roumania, the reports are much more cheerful. Although the quantity leaves something to be desired, yet in the more important matter of quality there has been a distinct success.

BRIEFS.

A REPORT by Major J. W. Powell, director of the geological survey, was sent to Congress on Jan. 2. He calls attention to the fact that about two-fifths of the entire area of the United States, exclusive of Alaska, is dependent on irrigation for its fertility, and it is mainly on these lands that the future settlers on the public domain must make their homes. He asks that $350,000 be appropriated to carry forward the survey during the next fiscal year. He estimates that a region large enough to make four or five States like Pennsylvania, now almost entirely infertile, will bear great harvests, if the project of irrigation shall be wisely and energetically carried on.....

"GOD makes short rib sides, and man makes lard," is the way a Chicago man once illustrated the facility for increasing the one product beyond the producing power of the hog.....

YOU remember, don't you, says the Christian Union, that remarkable echo you used to court when a child? At the other end of the pasture lot was a knoll, then a low marsh and, on the other side of that, an old barn. Standing at a certain point on the knoll, every sound you made was tossed back at you with surprising abruptness and clearness. It seemed as if the neighboring woods were peopled with elves, big and little, good-natured and belligerent, hilarious and grief-stricken. And how sympathetic in their expressions the spirits were! Shout, they shouted; laugh, they laughed; whistle, they did the same; sing, and they filled the valley with music. Every newspaper has its echoes, or ought to have; and the louder, clearer, and more varied its voice, the more vigorous and invigorating its chorused echoes reverberated by its correspondents. Without these, the editor may shout as loud as he pleases, but his voice is wasted on the fog. It is evident that he has no audience; and a one-sided conversation soon becomes dull and profitless.....

THAT popular farm writer, Jacob Biggle, says that the best bacon is made from pigs that weigh about 100 pounds when dressed, and have a good coat of lean meat along the back Only the sides are used, and these should be cut lengthwise in strips about six inches wide, or nine, so as to get even cuts from the side. For 100 pounds of meat, use six pounds of salt, four ounces of saltpeter, and five pounds of brown sugar, well mixed and rubbed into the meat, which should be piled flesh side up. Every three days it should be rubbed till the mixture is all absorbed by the meat; then it is ready to be smoked. If it is to be kept through the summer, one pound more salt may be added. Smoke with hard maple, birch, or hickory chips, or corn-cobs till the meat is a delicate brown, or dark straw color. Instead of rubbing, if preferred, it might be packed in a pickle of the same preparation as above, and kept under by weights for six weeks..... ..

A LAZY head man will cost more than any farmer can afford to pay, for he will spoil all the other men on the place. Under his management, the work will never get done, and the more men there are around the more you will be in the lurch. Especially if you are not always about the work yourself, it is absolutely essential to have an honest, interested, pushing man as leader of the farm force. To have any other sort invites disappointment and failure.....

OLEOMARGARINE, lard, and other nefarious adulterations have spoiled our trade in cheese says Henry Stewart. It has been notorious for some years past that good cheese was exceedingly difficult to procure in the United States, and that it has constantly lost ground in the English market because of its inferior quality. And, while we have been falling into a demoralized condition, the Canadians have beaten us by manufacturing the best possible quality and by refraining from the use of adulterants.....

INSECT Life published, by the U. S. Department of Agriculture, with Prof. C. V. Riley as the Editor-in-chief, says that the Buhach Producing and Manufacturing Company, of Stockton, Cal., very generously offered to sell the Department some time ago seed of Pyrethrum cineraræfolium, at the following rates: One pound, $50; 5 pounds, $200; 10 pounds, $350; 50 pounds, $1,250; which shows that there is money in the cultivation of this insecticide plant in the United States. We have already shown that the plant can be successfully grown over a large portion of the country, and it seems remarkable that this firm should have enjoyed a monopoly so long.

The R. N.-Y. was among the first to test the hardiness of this plant after it was made known that the powder of its flowers raised in California was just as effective in destroying insects as the imported so-called Dalmatian Insect Powder. Plants started from seeds at that time [some six years ago] are still alive and thrifty.....

LAST Sunday, one of the New York City papers got up a "symposium" as to how a moderate sum of money could best be invested profitably and safely, and real estate mortgages held the first place in the answers, and real estate itself the second.....

THE N. Y. TIMES takes the view that our present system of destroying diseased cattle, is closely akin to putting out fires by the fire companies. It is only a temporary relief, and does not prevent future outbreaks, because the causes are not removed. The slaughtering method of dealing with this disease has been in operation in England for many years, and yet the disease breaks out here and there in widely-distant places every month. One recent out-break cost $250,000 to stamp out by the present ineffective method .....

A CORRESPONDENT of the O. C. Farmer was led to set out an asparagus bed in his home garden five years ago, and it was the best job he ever did in his life. His family is large and he has, for the past two years, had enough to supply his table abundantly. It is worth $25 every year to him, and all the plants, labor and fertilizer expended on it have not yet cost $10.....

YES, an asparagus bed is a good bed to have and to hold. We hope that every

reader of the R. N.-Y. that does not raise asparagus will conclude to do so next spring. A bed 33 feet square will in three years give asparagus enough for a family of four.....

MESSRS. TERRY, Gould and Cook think highly of the new Cutaway harrow..... ...

THE AMERICAN GARDEN for January, thinks, with the R. N.-Y., that Dr. F. M. Hexamer would make an efficient and trusty Commissioner of Agriculture. It also mentions, as we have done, that either P. J. Berckmans, or E. M. Shelton would be first-rate men for the position. It further mentions Eugene W. Hilgard, of California, and Thomas Meehan, in the same category. They, too, are unquestionably able, true, men. It seems to the R. N.-Y. that if the Commissioner is to be chosen from the West, it would show an appreciation of his valuable services while Commissioner under Hayes, if Gen. W. G. LeDuc were again appointed.....

E. S. GOFF, in the Garden, speaks of having beautiful sweet pea blossoms in early November. The seeds were put into the ground last April, the very day the soil became dry enough to work, and many days before it was warm enough for them to grow. But is it usual for sweet peas planted so early to continue blooming throughout the season? Judging from past experience, it is not usual. Mr. Goff attributes the marked success in this case to deep planting, thorough watering during the dry summer weather, and keeping the flowers picked so that no seed was permitted to form. In seasons when these precautions have not been observed, the plants have dried up in August, and their highest beauty has lasted but a few days after their period of full bloom. He regards the systematic picking of the flowers as even more important than the watering in dry weather, but both are essential. Not a pod must be permitted to form.....

A NEW and distinct variety of potato will be offered under the name of Bliss's Rough Diamond. They are of Peachblow shape. The skin is tough and "corrugated." It is thought to have great keeping qualities.....

MR. TERRY says, in the Ohio Farmer, that if he were in the dairy business now, he would stick to it instead of changing to potatoes. The planter and digger make it so easy to grow potatoes on a large scale that thousands will rush into it. Those who invested in these tools at the very first made some money, and can stand the low prices which are almost as sure to come as they did in the wheat market soon after the binder came into general use...

WINTER is the time to do good mental work, says Mr. Crawford, in the above mentioned journal. That is true; the nights are long and we get all the rest we need. We are not exhausted with bodily exercise which "profiteth little." The surroundings are favorable for one important work we have on hand—getting ready for spring. Is it not a fact that spring usually comes before we are ready?.....

LET each one ask himself these questions: What can I raise that will yield the greatest profit? How can I best inform myself concerning what I expect to grow? What fertilizers, seeds, plants and tools do I need? What each one can raise most profitably must be determined by himself. He must study his market, his land and himself.....

EVERY man, continues Mr. Crawford, has certain advantages, but some never learn what they are, for want of thought. One can not know too much about the crops he cultivates. The great majority of us know too little. Fortunately there are abundant means of becoming posted for all who are anxious to learn. If one has a specialty, he should read all that has been written on it.....

PERHAPS the farmer can get along without buying fertilizers, but the horticulturist can not. As all his efforts are directed towards changing plant food into a more valuable product, surely he can not afford to be too saving of the raw material. If his capital be too small to buy all he would, let him cultivate a smaller area and make that rich. One should study the catalogues with a view of learning all about the different varieties, and send his order for supplies in good season. He can not afford to be hindered after he is ready for them. Besides, the most desirable varieties may be sold out in early season. New sorts should be tried only in a small way, depending for the main crop on those that are known to be reliable.....

WHEN the corn is shelled, the cobs are worth caring for, for various useful purposes, suggests Mr. Stewart. They make the best fuel for the smokehouse, giving the hams and bacon a delicate and agreeable flavor, free from the pungency of oak and other woods which contain much acid. When steeped in kerosene oil, they make good kindlings for fires, and they are equally good for this purpose when saturated with a solution of one pound of saltpeter in two gallons of water and dried. They then burn fiercely, giving out quick heat sufficient to kindle a coal fire. But they are also good for feeding, as they contain as much nutriment as straw, and where straw is scarce the whole ears may be ground together with advantage. The husks are still more nutritious, and may be ground up with the ears in appropriate mills made for the purpose. For feeding stock cattle and for fattening, ear corn in the husk is an exceedingly cheap and desirable food.....

MR. W. H. RUDD, an experienced poultry raiser, says, in the Massachusetts Ploughman, that he finds incubators very much superior to hens in every way. They are always ready, never forsake their eggs or exasperate their owner by any of the "ways that are dark and tricks that are vain" incident to the average sitting hen, but hatch the chicks on the very day they are wanted, free from lice, which is one-half the battle of raising them, and ready for the brooder, which contrivance he is vastly more successful with, even in midwinter, than he has ever been with hens..

MR. RUDD advises no one to embark in the poultry business at one bound. He has never known success to follow any plan but that of entering it gradually. Neither would he, as some do, advise commencing the business of raising poultry for market and depend upon hens to do the hatching and rearing until having become familiar with the incubator—because, comparatively speaking, only early market poultry is worth raising—and depending upon hens for this and upon the profits to support a family, is leaning upon a broken reed, and the person who thinks differently will discover the error after having tried it. If the incubator is to be dispensed with, much better rely upon eggs as the chief source of income and raise only enough chickens to keep the number of layers good. The cockerels which are sold will materially reduce the cost of the pullets. .....

THE point Mr. Rudd strongly emphasizes is this: Where one desires to prosecute the poultry business by natural means alone, rely upon eggs for the principal income, because it has been abundantly proven that there is a reasonable profit in it; but where the main income is expected from the much larger profit of dressed market poultry, and especially the early sales which bring twice or thrice or four times the prices of the later ones, do not attempt it except by artificial means, for it cannot be done except to a very limited extent.....

MR. RUDD keeps only Plymouth Rock fowls. Brahmas will drive the ordinary man to the almshouse before they begin to lay. When they are large enough for early broilers, they are all legs, and the leading hotel keepers who want broilers will not take them.....

MR. RANKIN has never raised any chickens naturally that were absolutely free of vermin. By hatching artificially, the chicks are free of lice and are not, therefore, stunted in their growth.....

MR. RANKIN says that cotton-seed meal is forcing and very good for hens. He always feeds a little of it.....

DENMARK is a great dairy country, the cows averaging about one to every two people. In six years the increase in the butter exportation has been about 200 per cent. Although a small country there are 200 co-operative dairies. Milk is paid for by the quantity of cream contained in it.....

ABSTRACTS.

——CENTURY FOR JANUARY: "To know others, study thyself; to know thyself, study others."

"THOU hast concealed thine age? Surely not thy folly!"

"THE surest way to drive honors from you is to go to them."

"WOMEN are more likely to love those whom they hate, than those who appear to them ridiculous. For of the ridiculous we deem ourselves the superior; but those we hate are seldom our inferiors."

——SUNDAY SCHOOL TIMES: "It is hard to tell which of the two is the more pitiable,—the over-nice reasoner, who never comes to any conclusion, or the vacillating, double-minded man, who never decides to act. He is like the farmer in the Book of Ecclesiastes, who is always observing the clouds and the wind to make sure of the exactly right time for his work. As 'the Preacher' says, that man will never sow and will never reap; or, as Sir Philip Sidney says, 'Whosoever, in great things, will think to prevent (anticipate and forestall) all objections, must lie still and do nothing."

"KIND hearts are the gardens,
Kind thoughts are the roots,
Kind words are the blossoms,
Kind deeds are the fruits;
Love is the sweet sunshine
That warms in o life,
For only in darkness.
Grow hatred and strife."

——GARDEN & FOREST: "THERE is no need of any more botanical gardens in the world run for the purpose of supplying bouquets and dinner-table decorations for the politicians who control the appointment of the managers; or to serve as a means for advancing commercial or private interests."

"It is well known that the varieties of potato most highly prized in England, will come to nothing here under out-door cultivation, and an enterprising marketman near this city has now growing in his green-house some Ash-leaf and Walnut-leaf Kidneys, in the hope that some one will pay him a dollar a pound for his tubers, on account of their supposed nutty flavor, or because they are strictly English."

——FARM AND FIRESIDE: "The Department of Agriculture, to attain its highest success, must be run on a basis entirely free from partisan politics."

——IDEM: "Turning over new leaves by everlastingly changing crops from year to year, is an operation that savors of gambling, with the chances against the gambler. If this has been your practice, it is high time to turn over another new leaf by quitting it. Stability and small, regular profits are better than the uncertainties—the high profits and perhaps the greater losses of the gambling-table."

——U. S. DEPARTMENT OF AGRICULTURE BULLETIN—Insect Life: "The RURAL NEW-YORKER potato contest has been decided and the RURAL Seedling No. 2 yielded at the rate of 1,076 bushels to the acre. No. 3 lost the day and was nearly a failure on account of the ravages of the common Flea-beetle, Crepidodera cucumeris. Probably the yield of No. 2 would have been greater but for this cause. This insect has been particularly destructive during the past season upon the Rural Grounds, confining its attack to the leaves and terminal shoots. It is now proposed to start a potato contest for ladies, the patches to be not less than one-fortieth of an acre. The details, however, are not fixed."

——FARM JOURNAL: "We have become a convert to the special food theory, and have gone back on *all* corn for making meat of any kind and especially for all young, growing animals. We mix bran, wheat or rye, with corn meal, and we do not give our animals any more of this mixture than we used to of clear corn meal, and they grow faster and do better. This corn meal notion is a big leak. We are glad to know that careful experiments verify these new ideas. Now, farmers, make an advance and feed less corn, and you will save money."

——"A LITTLE at a time and often," is a good rule to follow in oiling carriage axles.

——"DIP the points of nails and spikes in grease before attempting to drive them into hard wood."

——LIFE: "President-elect Harrison's pathway is strewn with flowers—forget-me-nots."

——PUCK: "De darkey's hour am jes' befo' day," said Uncle Aaron, as he invaded his neighbor's chicken-roost at 3 A. M.

——"THE PEOPLE who never get right in this world are those who get left."

Miscellaneous Advertising.

Scrofula

Probably no form of disease is so generally distributed among our whole population as scrofula. Almost every individual has this latent poison coursing his veins. The terrible sufferings endured by those afflicted with scrofulous sores cannot be understood by others, and their gratitude on finding a remedy that cures them, astonishes a well person. The wonderful power of

Hood's Sarsaparilla

in eradicating every form of Scrofula has been so clearly and fully demonstrated that it leaves no doubt that it is the greatest medical discovery of this generation. It is made by C. I. HOOD & CO., Lowell, Mass., and is sold by all druggists.

100 Doses One Dollar

MAKE HENS LAY

SHERIDAN'S CONDITION POWDER is absolutely pure and highly concentrated. It is strictly a medicine to be given with food. Nothing on earth will make hens lay like it. It cures chicken cholera and all diseases of hens. Illustrated book by mail free. Sold everywhere, or sent by mail for 25 cts. in stamps. 2½-lb. tin cans, $1; by mail, $1.20. Six cans by express, prepaid, for $5. L. S. Johnson & Co., P. O. Box 2118, Boston, Mass.

Trees, Seeds and Plants.

If you want the best Garden you have ever had, you must sow

MAULE'S SEEDS.

There is no question but that Maule's Garden Seeds are unsurpassed. Their present popularity in every county in the United States proves it, for I now have customers at more than 31,000 post-offices. **When once sown, others are not wanted at any price.** Over one-quarter of a million copies of my new Catalogue for 1889 have been mailed already. *It is pronounced the most original, beautifully illustrated and readable Seed Catalogue ever published.* It contains among other things, cash prizes for premium vegetables, etc., to the amount of $3,500. **You should not think of purchasing any Seeds this Spring before sending for it.** It is mailed free to all enclosing stamp for return postage. Address

WM. HENRY MAULE,
1711 Filbert St. **PHILADELPHIA, PA.**

OVER **6,000,000** people believe that it pays best to buy Seeds of the largest and most reliable house, and they use

Ferry's Seeds

Earliest Cauliflower in existence.

D. M. FERRY & CO. are acknowledged to be the *Largest Seedsmen* in the world.

D. M. FERRY & Co's Illustrated, Descriptive and Priced

SEED ANNUAL
For 1889

Will be mailed FREE to all applicants, and to last year's customers without ordering it. *Invaluable to all.* Every person using Garden, Field or Flower Seeds should send for it. Address

D. M. FERRY & CO., Detroit, Mich.

Stayman's No. 1 Strawberry.

Large and Fine, produced at the rate of **30,000 quarts per acre. Price $2 per dozen; $10 per 100**

JEWEL the earliest and best black grape known. Equal to the Delaware in quality. **Price, $1.50 each. Send for testimonials.**

STAYMAN & BLACK,
LEAVENWORTH, KANSAS.

Pearl Strawberry. The handsomest, best flavored, most perfect-formed berry, best colored and MOST PRODUCTIVE. Ahead of JESSIE on the same soil and cultivation. 1¼ ACRES produced $743.87 worth of berries the past season Send for circ. Plants $10 per 1,000. *Fine Meeche's Quince and Apple trees* in abundance. WEST JERSEY NURSERY CO., Bridgeton, N.J.

200,000 TWO AND THREE-YEAR APPLE TREES, Hedge Plants and Apple Seedlings, at low prices. **BABCOCK & STONE,**
North Topeka, Kan.

XTRA Flat Dutch Cabbage Seed, grown with great care from only the most perfect selected Heads. Descriptive price-list of choice garden seeds free.
E. E BURWELL, Branch P. O., New Haven, Conn.

SEEDS Our sales in **1888** *double* those of 1887. Why? Because we sell only the *Best*, at Reasonable Prices.
SEED POTATOES, *large stock, great variety.*
Small Fruit Plants and Trees. Catalogue Free.
FRANK FORD & SONS, Ravenna, Ohio.

Beautiful Strawberries. We are now offering for the first time and only by us, the beautiful **Eureka,** and a strawberry that yielded at the rate of **127 Bushels** to the acre at one picking the past summer—60 other varieties; **80 of Grapes; Thompson's Early Prolific** Red Raspberry, the earliest of all; Palmer Rash the most productive early Black; **Thompson's Early Mammoth Blackberry,** etc., etc. If you mention this paper we will send you Catalogue free, telling about these beautiful berries & others Everybody wants it

CLEVELAND NURSERY,
Lakewood, Cuyahoga Co., Ohio

IOWA SEEDS ALWAYS PLEASE

Handsome Catalogue, Illustrated in Colors, **Free.** To *new customers* we will send for trial **12 Packets Choice Vegetable Seeds**—including some novelties, for **25c.** 12 packets Choice Flower Seeds 25c. **15 packets** rare and beautiful **Flower Seeds** including new Iowa Giant Pansy for **50c. 40 packets Choice Flower Seeds** including Iowa Giant Pansy and New Moon Flower for **$1.00.**

20 Choice House Plants for $1 a splendid variety, including Moon Flower. **10 Choice Summer Flowering Bulbs**—Gold Banded Lily of Japan included, for **50c.** The six collections for $3. All our selection, but all different. Order now, this ad won't appear again.

IOWA SEED CO., Des Moines, Iowa.

INSECTS on FRUIT TREES

Can be destroyed by spraying the trees with London purple dissolved in water. For full directions and improved outfits for **Hand** or **Horse Power** at **BOTTOM CASH PRICES,** address FIELD FORCE PUMP CO. Lockport, N.Y.

THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, JANUARY 19, 1889.

"He who getteth himself honey,
Though a clown, he shall have flies.
In the end God grinds the miller;
In the dark, the mole hath eyes."

READ Prof. Porter's article on page 41, "The Yard-stick or the Plow."

And the game goes merrily on, while dairy farmers are defrauded of a large part of their just profit, and I suppose this will go on until the nations rise up in indignation and put an end to such unscrupulous practices once for all.—PROF. SHELDON, page 36.

"QUES.—Why am I a farmer?"
"ANS. –Because I can trust the Lord more, and people less for success in this business, above all others." J. M. Y.

What we complain of is the abominable fact that it was ever called by a name which identified it with the dairy. This it is that has done most of the harm to dairy farmers, for had the spurious stuff from the first been called by a name which properly and effectually disconnected it from the dairy, not a tithe of the mischief would have been perpetrated.—PROF. SHELDON, page 36.

DO NOT fail to read Mr. Terry's article on page 35. Every word of it, in the R. N.-Y.'s estimation, is true. It touches the heart with its evident sincerity while its forcible truths are spoken in the simplest, most touching manner. Thank you Mr. Terry—many thanks.

I know a man who once ate some of this stuff, toasted, at supper; he was hungry at the time, or he wouldn't have eaten much of it; he survived, but the Doctor declared he had had a close shave of it, and he has never tasted American cheese since.—PROF. SHELDON, page 36.

NO LESS than three potato originators have written us that the R. N.-Y. potato No. 2, is precisely the same as their own seedlings. "There is no doubt about it." No less than six persons have written us that the R. N.-Y. Trench System is their system. One says, "I began it 60 years ago."

You protect the skin, so to speak, of your great and noble country, and you tolerate a festering abscess in your vitals. Indeed, you Americans are a very funny people. You could crush a vast civil war, and you seem to be powerless against bogus cheese.—PROF. SHELDON, page 36.

THANK you, ladies, very much, for your interest in the Women's National Potato Contest. We can scarcely believe it. Souvenirs for all of you who produce creditable yields, are what we desire to secure. The eyes of the world will be upon you, ladies. Will you object to that? The Contest is a worthy one and will do good.

The process of liming may temporarily pay, but it is at the expense of the future, while we pay for the agent that does this permanent mischief.—See PROF. SANBORN, page 34.

DURING the past two weeks of damp, unseasonable weather, nearly every fowl in the neighborhood of the Rural Grounds has had the roup. A near neighbor who keeps about 75 hens and gives them excellent care, treats this disease with almost unfailing success, and this too without resorting to any medicine or roup nostrums whatever. The roupy bird is shut up in a darkened coop and the coop is placed in a warm part of the barn. She is fed nutritious food while thus confined, but in small quantity. Usually from three to four days of this treatment suffice for a complete cure.

FIVE hundred bushels of potatoes *on an acre of impoverished* soil is what the R. N.-Y. expects to raise next season under the Rural Trench System, aided mainly by fertilizers. Let us see. It further expects to raise at the rate of over 700 bushels on one-fortieth of an acre. It further proposes to raise over 100 bushels of shelled corn on a measured acre, as 10 years ago it averaged more than that on five acres.

THE best vegetables, new and old, including celery, cabbage, lettuce, beets, Brussel's sprouts, borecole, carrot, celeriac, cucumber, egg plant, garlic, onion, leek, mushrooms, radish, spinach, okra, peppers, rhubarb, squash, tomato, pumpkin, peas, beans, sweet corn, cauliflower, celery, etc., etc., *early and late for field and garden.* These will be treated in a *Special* soon to appear, by the best practical writers of the country.

THE R. N.-Y. considers the article by Mr. Terry, on page 35, one of the most eloquent and admirable tributes it has ever seen. It is true, every word of it, and we venture to say that there is hardly a right-minded, fair-thinking man who will not acknowledge its truth.

"Have confidence enough in each other's judgment to ask no questions about little amounts. Have the pocket book as accessible to one partner as to the other. No true woman will ever abuse such a partnership, and there are more true women in this world than there are true men."

Right you are, Mr. Terry, just as right as you can ever be. Well said. The writer of this is not at all ashamed to say that his wife is just as good a financial manager as he is, just as well able to handle every cent of money belonging to us, and a great deal better able to manage any expense that has to do with household matters.

THE R. N.-Y. is going to see how much corn it can raise on a measured acre; how many potatoes on a measured acre. Then the ladies of the R. N.-Y. have entered for the Women's "Potato Contest." Again it is going to try to raise at the rate of over 700 bushels of potatoes per acre on more than double the area of last year's "Contest" plot. It hopes also to print many reports as to the R. N.-Y. No. 2. (from the little specimen sent to each applicant-subscriber), that will show it to be the best late or intermediate potato in existence. It also further hopes, should the Flea-beetle be kept in check, to show that the R. N.-Y. No.'s 3 and 4 are the biggest yielders of all varieties at present known, while the quality is extra fine. It still further hopes to send out a few grains of six different kinds of its hybrid rye and wheat and cross-bred wheat plants, and that a number of other varieties will have become so fixed as to be ready for dissemination another year. We have great hopes from these new varieties. Oh! it hopes for lots of things from the New Year. It is anticipating lots of fun for itself and for its good readers. It is altogether happy, and would gladly aid in making them happy as well.

LIEUT. GOVERNOR JONES ACCEPTS.

THE R. N.-Y. solicited Lieut. Gov. Jones to act as one of the judges in the R.N.-Y.'s potatocontest next summer. His reply is as follows:

"It will afford me a great deal of pleasure to serve as one of the judges at your next potato contest."

Our next potato contest promises to be a matter of no little importance, and it is desirable that well-known people be selected as judges, so that there may be no manner of doubt as to the impartiality of their report.

There will be three plots. First, the full acre plot of irregular ground and an impoverished soil; second, the Women's plot, and, last, the *regular* contest plot, which will be twice as large as that of last year. All are to be treated strictly in accordance with the R. N.-Y. Trench Method.

A NOTE FROM PRES. BERCKMANS.

"THE next session of the American Pomological Society will be held at *Ocala* (not Sanford), Florida, Feb. 20, 21 and 22. There will be a large attendance, judging from many lettters I daily receive. In a few days I shall be able to announce that reduced rates have been secured from railroads. The Ocala people are doing everything possible to entertain their friends and they hope to welcome many from every section."

P. J. BERCKMANS.

THE WOMEN'S NATIONAL POTATO CONTEST.

ESTIMATED value of souvenirs contributed up to January 10th, $850.00

H. L. BARRICKLOW, Rising Sun, Ind. $5 in grape-vines and ornamental shrubs.

G. W. FRY, Dunlap, Mo., a choice of a setting of eggs of either Silver Wyandottes or R. C. B. Leghorns.

NORTHRUP, BRASLAN & GOODWIN Co., Minneapolis, Minn., $10 in any kind of seeds from their 1889 catalogue.

GEO. B. LORING, M. D., Washington, D. C., $5.00 in cash.

W. B. ALWOOD, vice-director of the Virginia Experiment Station, $5 in cash.

M. MURRAY, Centre, O. Five premiums, each consisting of two pounds of Ross's Favorite potato (new).

S. FROGNER, Herman, Minn., $20 in potatoes, as follows:

10 prizes of one *peck* each of Early Minnesota (new.)

10 prizes of one pound each of No. 18 (not for sale.)

10 prizes of one pound each of No. 64 (not for sale).

10 prizes of one pound each of No. 50 (not for sale).

The pound prizes to be sent postpaid; the peck to be sent by express at recipient's expense.

JONES, OF BINGHAMTON, N. Y., $10 in two platform scales.

WHY NOT?

AND there is not one, as yet, to accept of the RURAL's wager. What's the matter with you, good people? The money will go to a charitable purpose. *Probably* the R. N.-Y. will be defeated. It was defeated last year, and now, on a plot more than twice as large, it wagers $50 or $100 that it will next year raise at the rate of over 700 bushels of potatoes to the acre. Why not accept it, friends—you who have money to give away to some worthy charity? Let the season be what it may; in spite of insect depredations; in spite of too much rain or of drought; in spite of poor seed, of varieties that may not yield well—in spite of *anything*, the RURAL is willing to wager $100 that it will raise *seventeen and a half* bushels of potatoes on one-fortieth of an acre. And we propose to do it *economically. What can be done on one-fortieth of an acre can be done on an acre if the same conditions are secured.* It is our intention to plant an acre also, and in 1890 to make the same offer for the acre that we now make for the smaller area. The land is at present rough, uneven and impoverished. We shall do our best with it *next spring*, and see how large a yield may be obtained under the Rural Trench System, faithfully reporting the results to our readers. Meanwhile, friends, we are waiting for you to accept of our *present* wager, and it is difficult to see why it is not readily accepted. Please tell us of an authentic record where as many as 17½ bushels of potatoes have been raised on an area of 1,089 square feet.

FIRST SEVERE BLOW AT THE TRUSTS.

THE first severe blow against Trust monopolies has just been delivered by Justice Barrett, of the New York Supreme Court, in a luminous decision against the North River Sugar Refining Company, one of the most important members of the Sugar Trust. Before the organization of the Trust, the sugar refineries of the State were conducted both by corporations and partnerships. To form the Trust, all the partnerships were turned into corporations, which agreed that all the shares of their capital should be transferred to a Board of Trustees consisting of 11 persons. The share-holders did not sell their interests, but received in exchange for their deeds "trust certificates," just like the certificates of stock in any corporation. The Trust consisted of all the refineries in New York State together with the most prominent concerns in other States, and its object was to prevent competition and control prices. The directors of each of the original corporations became mere agents of the Trust, and each corporation paid over the profits of its business to the board of 11 men, and from the aggregate profits dividends were declared on the Trust certificates.

Corporations enjoy certain privileges from the State, and are amenable to its laws. By joining a Trust, which is in the form of a corporation though it is not one, they shirk their obligations while retaining their privileges. The Judge decides that the company has forfeited its charter because it went beyond its corporate powers in merging itself in the Trust. He bases his decision on no particular law, but on the broad principle of "plain law and plain sense" that the law is able to protect itself against such abuses of the privileges it grants, "which, if allowed to thrive and become general, must inevitably lead to the oppression of the people, and ultimately to the subversion of their political rights". The application of this principle of common law is not confined to the State of New York, but extends to every State in the Union. It is difficult to overestimate the importance of this decision, should it be sustained by the Court of Appeals, to which the case is sure to be taken. True, it applies only to corporations forming Trusts, while that exemplar of all Trusts, the Standard Oil Company, declares it is not affected by it, as it is composed, not of corporations, but of individual stock-holders. While, as Judge Barrett suggests, "further legislation, both preventive and disciplinary," is desirable "to check and punish" the wrongs done by these monopolies, it is a cause of thankfulness to the general public that so trenchant a judgment has now been rendered against them, which may serve as a wholesome precedent in other cases and in other States.

BREVITIES.

READ what Dr. Kilborne says about yellow pork, on page 37.

JANUARY 10, and no frost in the ground. Potatoes are sprouting badly.

"'WHY DO I FARM?' To my mind the main articles in the Thanksgiving Number answer that question pretty well."

"THERE is a point or two in this potato seed business not generally known." See Mr. Falconer's article on the first page.

MR. PRATT, on page 36, ascribes a portion of the loss in the average butter production of his herd to a change of milkers. It is certainly remarkable how much difference in a cow's yield a new milker can produce.

MR. HOWARD, page 37, outlines a plan for a poultry experiment. Wouldn't the soil of that field be rich the next year? Speaking of poultry experiments, when are our experiment stations going to try something of the kind?

MR. HODGEMAN, on page 35, gives the history of a very successful farmers' organization. Is he right in his guess that the managers of the N. Y. State meetings are trying to "heat the mass from the top?" Think this over.

THE experiments on feeding steers of various breeds, conducted at the Michigan Agricultural College, aroused considerable interest among cattle-men. Now it is proposed to conduct a similar experiment with sheep of the different breeds.

YOU will notice that the first of the experiments as to the weight of milk required to make a pound of butter, is recorded this week under "Discussion." In this case it required 18 2-13 pounds of milk to make a pound of butter. Can your cows beat this record?

Field Crops.

THE SWEET POTATO.

A sweet potato convention suggested; the need of it argued; sweet potatoes in the Gulf coast country; the patches a brilliant display of flowers.

THE sweet potato has many strongly-marked and permanent varieties, but when one hears or reads of them by name, he cannot at all feel certain of what he is hearing or reading about, owing to there being no settled nomenclature for the different varieties of the product. In traveling over the Southern States you will find the same variety sailing under a different name in almost every settlement, usually going by the name of the man who first introduced it there, or the name given by him, or that of the man who is making a specialty of it. For instance, we have a pale red variety known here as the Musgrove, there as the Dooley, at the other place as the Hayti Yam, and in still another place as the Red Bermuda, and so on. Under such circumstances, it would be impossible to order the variety from a distance with any certainty of getting what one wanted. I have often urged the people interested in sweet potato culture, to hold a convention for the purpose of establishing a regular sweet potato nomenclature. I think the existing inconveniences, as just hinted at, certainly demand it. Nothing we cultivate on so large a scale as we do the sweet potato in the South lies under such perplexing uncertainty as to names of established varieties.

The sweet potato is one of the very important products of the country lying along the Gulf of Mexico east of the Mississippi River, and along the lower Atlantic further east. It is the easiest crop to raise that the Southern people grow. The yield is enormous. With comparatively little attention, it gives us a yield of from 200 to 400 bushels to the acre, and the trouble of keeping it over to the next season is scarcely worthy of mention. We throw the potatoes up in heaps of 15 or 20 bushels, in the open ground, place over the heaps a few inches of straw, (usually pine straw,) and over the straw a few inches of earth, and the work is done. They will be found as sound and good there next May as when they were first "banked," as we call it.

To-day (November 27), the people of the Gulf coast region are busily digging their sweet potatoes. The yield for the season is very good, as a rule. There has been no frost to touch the vines up to this date, consequently the patches are regular flower-gardens, so to speak. To the Northern sweet potato grower, who is not thoroughly informed relative to the peculiarities of the crop down here, this mention of flowers will be something of a surprise. The sweet potato is a heavy bloomer with us, beginning to show its flowers about the last of July, continuing till frost. The flowers are of a pale blue color, and much resemble those of the small-flowered morning-glories. In some seasons the flowering is heavier than in others; the present has been one of those heavy-flowering seasons. So numerous are the flowers on the vines of a patch now in sight from my window, that the entire surface of the growth presents a bluish shade. Freely as it flowers in this region, the sweet potato does not appear to mature any seed. I have never yet been able to find a single perfect seed pod.

Mobile, Ala. J. P. STELLE.

Educational.

THE YARD-STICK OR THE PLOW?

PROF. D. G. PORTER.

Supereminent opportunities for cultivated enjoyment on the farm; incitements there to individuality and independence; absence of harrassing anxieties; the grim struggle with Nature tends to develop heroism and manhood; farming viewed from different standpoints; education as an attractive, not a repellent force on the farm; agriculture an excellent business opening; increased facilities for success in it; "American husbandry the ideal of human occupations;" need of full special winter courses for farmers' sons at agricultural colleges.

I WISH to make an emphatic indorsement of the RURAL'S advice to the sons of farmers who think of abandoning the farm in order to become clerks, bookkeepers, etc. I said in a recent communication that there is no industrial occupation which offers such natural facilities for education as farming.

I now say that there is no situation at all accessible to the industrial classes, in which a man can so well enjoy an education as in agricultural and rural life. To the educated man there is a constant delight in the association with nature, which the farmer enjoys, in the infinite variety of plants and trees, animals and birds, in the magnificence of mountain and meadow, forest and stream, in the changing beauty of the day from dawn to star-light, in the grand procession of the heavens, in the quiet beauty of evening and the grandeur of storms. All these education fits the farmer to enjoy, while to the dweller in cities, whether educated or not, they are largely a matter of theory in which he has little actual experience.

There is also an element of largeness and liberty about country life, which is well calculated to develop individuality and independence of character; so that a man accustomed to it feels an uncomfortable sense of closeness and repression in the city. There is also a material independence connected with farm life, which men in other situations can seldom enjoy; and material independence is in most cases a necessary foundation for independence of thought and action. If the farmer does not get rich, he at least does not fail, as a large majority of those who enter on business careers do, and he knows that no one can disturb him in the possession of what he has.

Again, the farmer is free from the burden of wearying, harrassing anxieties which has driven many a city man to his grave, especially if his sons stay on the farm with him instead of leaving him to depend on such strangers as he can pick up, for help. Then there is an element of heroism in country life, which the knight of the yard-stick seldom has an opportunity to develop. Heroism in man is always associated with physical achievement of some kind. In summer's heat and winter's cold, in the labors of forest and field, in the competition of manly sports, in the mastery of beasts, in buffeting with Nature in her sterner moods, there is opportunity for real, heroic achievement, such as commands the approval of men and the admiration of women, and tends to make a man satisfied with himself. Nature often opposes a stout, but kindly resistance in order that her children may grow strong and heroic in the encounter; and the element thus developed is of high value as a factor of genuine manhood. But it must be remembered that many and many a time it is education, mental culture and elevation that make the difference between heroism and drudgery. To one man his occupation is irksome, and has only a sordid significance; to another the same occupation is a pleasure in itself, and the opportunity of a noble development. It is the spirit in which a man takes up his walk that makes the difference, and this spirit is largely a matter of education, culture, and breadth of mental vision.

The fear is sometimes expressed that education would take the farmer's sons away from the farm. This in my opinion is a groundless fear. I admit that once the tendency and the object of education was to take boys away from the farm, and to fit them for professional life. But we have already passed that stage. The idea now is, and should be, to educate the man; and education is valuable wherever true manhood is honored. Especially should the American agriculturist be an educated man. His position in life requires it. He is not a tenant at the mercy of a landlord. He lives in independence and comfort on his own domain, and is rearing and educating a family. Every atom of education he can obtain will come in play. It is better that the labors of the field should be enlivened by discussions on history and science, than that the conversation should be mere idle, unelevating gossip as is so often the case; and the farmer's home should be a center of culture, where literature and art should be familiar topics.

As regards the business aspects of the case, the RURAL has well pointed out that there are already hundreds of candidates for every possible chance of a clerkship or other similar position. Indeed, the rush in these directions reminds me of the remark of a distinguished English visitor that for every American trying to get a living by honest labor, there are about six others trying to get rich by speculating on him. A condition that could even suggest such a criticism is not creditable or wise. And it should be remembered that the possibilities of American agriculture have greatly increased, while opportunities in these other directions have diminished. There are now improved agricultural machinery, commercial fertilizers and the silo, each of which has diminished the toil and increased the profits of husbandry. There is organization to protect farming interests and to increase the intellectual and social attractions of farm life. And, above all, there are the natural educational facilities not yet developed, but which, when developed and improved, are capable of making American husbandry the ideal of human occupations, the best field in which to rear and train a noble race of American citizens. I agree with the RURAL in thinking that these considerations should be urged, and that more of our young men should thus be kept on the farm or brought back to it. There are already enough "deserted villages" in the country, especially in New England, as a result of the movement of our populations towards the cities.

> "And a bold yeomanry, their country's pride,
> When once destroyed can never be supplied;—"

or can be supplied only with an incongruous foreign element whose rapid increase already threatens the permanence and predominance of American ideas.

There is many and many a farmer even now in our Northern States, who can easily and speedily realize the poet's ideal of

> "Culture's charm and Labor's strength
> In rural homes united."

Does any one ask how this can be done? Let me say, in reply, unite with your brother farmers in asking the managers of your State university, endowed in part by the Morill Land Grant and for your especial benefit, that they provide for your sons, not an agricultural course of a few months, but a regular academical college course, to consist of at least four winter terms commencing the 20th of October and closing the 15th. of April. These terms will include from two-thirds to three-fourths of the work of a whole college year which in any case consists of less than 200 days of study; so that your sons in this course will not fall so very much behind those who have had the whole year for study, while their expenses will not be more than one quarter as much, considering the value of their services on the farm in summer.

You will probably get the college course proposed as soon as your sons are ready; for the principal difficulty will be in getting them ready to enter. But the conditions of admission will not be severe at the start, and some of your sons will "get there" if they have half a chance. One term at college will make a decided difference with your boy. He will bring the college atmosphere with him when he returns to work in the summer. His brothers and sisters, and you yourselves will be interested in his college studies and his college life. When he and his class-mates have graduated, by teaching in the district schools in the winter, they can make these schools answer the purpose of preparing for the college course such of the rising generation as desire it; and under these circumstances, what a race of educated, cultivated men and women the rising generation of farmers' sons and daughters will become!

Brother farmers, this is your opportunity; see that you improve it This is the educational birthright of your sons and daughters. Do not barter it for a mess of pottage.

New Haven County, Conn.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

MOST people of narrow means who are gifted with generous instincts feel their poverty most acutely when they wish to give, not only charities, but little tokens of friendship and good-will. Especially is their poverty felt at Christmastide. We read recently of a Japanese family who for many generations have pursued a simple plan for providing money for such uses. Setting aside a money box for the purpose, they put in it the surplus from unnecessary expenses. Thus, if they decided to spend four dollars for a robe, they would try to purchase a plainer garment, and put the money saved in the box. The same with food or luxuries of any kind, the means thus secured being devoted to charitable purposes. This they called an offering to the Great God of Unselfishness.

* * *

How very few people are too poor to do something of this sort. The plan may also be recommended to those who are anxious to put something by for a rainy day, and yet feel unable to set aside a regular amount. Whenever a nickel or dime, or a quarter seems likely to be spent for something foolish or needless, drop it into the box. We object most strongly to parsimony or avarice, but there is so much extravagance on the part of the people in moderate circumstances that one cannot too strongly urge the necessity for prudence. Of course, the savings must be very small, on the part of many. But a girl might, now and then, "scrimp" on the price of a ruffle or a ribbon, or drink water instead of soda when shopping; she would be none the worse at the time, and later she would feel the benefit of her little self-denial. Why not begin it now, and see if you do not feel the advantage when buying your next Christmas gifts?

* *

WE are apt to regard the country as the abode of rugged health, and it is a little discouraging to read a recent paper by Dr Lucy M. Hall on "Sanitation in the Country." She began by describing a typical country house surrounded by dense shade trees, producing gloom and mold; with the best parlor always shut up closely, lest the carpet should be faded by the sunshine, or the furniture specked by a fly; with small, ill-ventilated bedrooms either in the middle of the house or on the cold and dark northern exposure; with the well in the house or very near it; with the outhouses joining the main building or in close proximity; with a cellar uncemented, damp, and often wet, and with the kitchen garbage thrown out near the house.

The lecturer declared that many country housewives were afflicted with a mania to keep out sunlight. She said that pale and ailing women among well-to-do country people exceeded any other class. These women take no out-door exercise of any kind, and the result is an appalling array of pallid daughters and narrow-chested sons.

She suggested as a remedy for these evils that country houses should be built with large and sunny living-rooms, and shade trees at a respectful distance; with wells safe from the drainage of earth-closets and stables, and all the out-buildings remotely situated; with bed-rooms on the second floor; with cellars cemented, and extended under the entire house; with temporary awnings instead of permanent projecting porches, and with everything constructed upon sound hygienic principles. As a remedy in existing houses, she suggests open windows, plenty of sunshine, the removal of gloomy shade trees, and the demolition of contiguous barns, pig-stys, henneries, and other offensive out-buildings. In addition to this, there should be a better education in sanitary matters. Many of the assertions made in this lecture seemed sweeping, but it is an undoubted fact that we need greater attention to hygiene in country life. Fresh air, sunlight, and out-door exercise are three necessities greatly neglected by many country girls and their mothers, and in spite of their cleanliness and industry, a good many sanitary precautions seem neglected or out of the question.

OUR ARTIST'S "FRENCH HEELS."—The RURAL is an excellent paper and it is an honor to the American farmer and fruit-grower. But I want to protest against the French heels which its artist, Mr. Berghaus, has been allowed to introduce into the progressive farmer's family of late. In the very suggestive and excellent cartoons published for Thanksgiving and New Year's Day, he has shown the farmer's wife and the little daughter as wearing the abominable French heel shoes, thoughtlessly perhaps and without design, but the lesson is just as unwholesome for all that.

These pictures are doubtless studied by a very large circle of readers, and because the RURAL seems to say so, many will be apt to think French heel shoes are all right. But I don't believe the RURAL means to sanction any such thing. It is not in harmony with the sound and sensible principles which seem to underlie its whole conduct. Don't let us condemn the farmer's wife and daughters to

Miscellaneous Advertising.

Weak and Painful Kidneys, Aching Sides, Back and Chest, Rheumatic, Sciatic, Sharp and Muscular Pains, **relieved in one minute.** by the first **Cuticura Anti-Pain Plaster.** The and only instantaneous pain-killing, strengthening plaster. 25c.; 5 for $1. At druggists, or of POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

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stand on their toes, if some foolish city and society people do still cling to the old and pernicious fashion. The heels of our feet are made to stand upon. Let us get broad soles and heels on our shoes and use our feet sensibly and decently. H. H.

A GOOD DIGESTION.

"Where be your gibes now? your gambols? your songs? your flashes of merriment, that were wont to set the table in a roar?"

HAMLET.

HOW many of you have ever connected cheerfulness and merriment at meal times with a good digestion? And yet, not even good cookery has a more pronounced effect on the digestive organs than happy thoughts and pleasant speech while at the table. This is strongly exemplified among my friends, the Quinbys. There never was a more jolly, or a more healthy family. Happiness and health beam in every countenance from ruddy-faced Mr. Quinby who seems a sort of personified chuckle, to the crowing, dimpled, year-old baby, Toddles. A meal at their house is an episode never to be forgotten—the merry quips, the bad puns, which seem the funnier the worse they are, the general air of contentment and good nature, make an impression not easily removed. Five sons and five daughters, and all as harmonious as birds in a nest, I was going to say, but any one who has watched a nest full of struggling, pushing birds, each trying to get the first worm, will agree with me that the author of "Birds in their little nests agree," is not to be commended either for his knowledge of natural history or his veracity.

At the house, by mutual consent every unpleasant subject seems to be dropped out of sight and mind during meals, and although nothing better than a "dinner of herbs" frequently graces their board, there is always "contentment therewith." No worries are ever discussed at such times. Even a dish that has suffered at the hands of stupid Gretchen, instead of being greeted with frowns and ill-natured criticism, becomes a theme for fresh jollity.

But what a different atmosphere at the Rawleys Mr. R—. bemoans his losses, his expenses, or his debts, scolds his sons, nags his daughters and complains of the food. Mrs. R—. who doesn't believe in letting "a man have everything his own way," laments that her house is smaller, and her furniture shabbier than that of the Smiths who live across the way. She discusses the shortcomings of her servants, and the disobedience of her children, and the children, not to be behindhand, indulge in many a side squabble.

"Breakfast," says Leigh Hunt, "is a foretaste of the whole day. Many a meal that has every other means of enjoyment, is turned to bitterness by unwilling, discordant looks, perhaps to the great misery of some person present who would give and receive happiness if at any other table."

I do not wish to bore you by going into the medical science of a fact with which any physician will acquaint you, namely, that cheerfulness during a meal promotes digestion. You can prove or disprove it for yourself by simply trying it for a season. If you have been used to finding fault with your wife's cooking, try praising it by way of a change, and note the result. ALICE CHITTENDEN.

ABOUT WOMEN.

IN the Women's Training College for Teachers, in Cambridge, England, recently, a school of scientific carpentry has been started. The young ladies are trained in the use of tools one afternoon in the week. No attempt is made to teach a trade, says the Builder's Journal, but only an effort to develop a certain degree of manual dexterity on the part of the young women. The experiment has been so highly satisfactory that Miss Hughes, the principal, says:

"I cannot speak too highly of the educational value of scientific carpentry. I am delighted with the result here, although we can spare very little time for it. The relief from mental work is immense, the exercise excellent (one rule is, we learn, to saw equally well with the left and right hands so as to develop both sides of the body equally), the pleasure is very great, and the powers of observation, accuracy and common sense that can be developed by this manual work are simply marvelous. It is also the very best possible training for a future technical training."

Verily I see before me a millennium when every woman, as well as every man, will be not only the architect of her own fortune, but of her house as well—when we shall become so self-helpful that men will no longer be necessary, and when in order to find grace in our sight they must reach a higher standard of perfection than many of them have yet attained to. Husbands will learn to speak gently to wives who can handle an adz, a saw and a hammer as easily and dextrously as a rolling pin or a flat-iron. They will, on the other hand, have fewer compunctions about letting us split our own firewood.

Jesting aside, however, this new departure, although perhaps not pertaining to the "higher education of women," will undoubtedly prove more useful to the majority than a knowledge of Euclid and conic sections. Little things about the house are continually going to pieces for the want of a little timely carpentry, that Jack either has not the time or skill to attend to, for there are nearly as many men as women, who literally cannot drive a nail.

A CHICAGO paper gives a picture of a "lady of the old school," that every girl must be the better for having read, and which we subjoin:

"The mysteries of the kitchen had no terror for her, and she fully understood the art, as one of the old cook books expresses it, of 'shaking hands with a saucepan.' Her table linen was spotless, and every plate and cup and saucer, every knife and fork, every piece of glass and silverware, gleamed in resplendent purity As she sat at the table, opposite the gentleman of the old school, and surrounded by her family, her face was a benediction, for happiness had its abode with her.

Under her firm and womanly hand her children were dutiful, her servants respectful, and her husband, safely trusting in her, gladly gave her his love and praise. But if she was mistress in the kitchen, she was queenly in the parlor. There she received her friends with an ease and grace that made the most awkward easy and graceful, each one reflecting, as in a glass, her own charms. Many a bashful young man and many a modest maiden have called her blessed because her fine manners did not chill, but rather warmed them into animation and life. Her fine tact left no guest, however humble, obscure or in a corner, and none ever left her presence without feeling how much wittier they were than they had supposed. Her dress was not more costly than her purse could buy, and was as appropriate to her as the plumage to a bird. Its very detail harmonized so perfectly that it was almost indescribable, and the only impression it left on the beholder was that she was well dressed. Serenity shone from her eyes and contentment smoothed every feature, and although the trials of life came to her as they came to all, she ever endured them with religious patience." PALMETTO.

GOLDEN GRAINS.

DR. BEHRENDS doesn't approve of the popularity of Robert Elsmere. He says it is a house upon the sand, a beautiful bubble, collapsing at the first breath of earnest protest. The world has no need of such a substitute for the old historic gospel.....

"CHARITY to a man's own soul is the very soul of charity" is a saying we have read somewhere, and it is true. All that a man does or thinks or says has its reflex action on himself, hence no act of charity to others can help but be an act of charity to a man's own heart.....

WE are not worse at once—the course of evil
Begins so slowly and from such slight sources
An infant's hand might stem its breach with clay;
But let the stream get deeper, and Philosophy—
Aye, and Religion, too—shall strive in vain
To stem its headlong torrent. —*Scott.*

ARTIFICE is incompatible with courteous frankness of manner. Rochefoucauld has said that nothing so much prevents our being natural as the desire of appearing so.....

WE are apt to forget our duty toward our immediate relatives and friends. Dean Stanley says that each one of us is bound to make the little circle in which we live better and happier; each of us is bound to see that out of that small circle the widest good may flow; each of us may have fixed in his mind the thought that out of a single household may flow influences that shall stimulate the whole commonwealth and the whole civilized world.....

"HE most lives who thinks the most,
Acts the noblest, feels the best,
And he whose heart beats quickest
Lives the longest, lives in one hour
More than in years do some whose
Fat blood sleeps as it slips along their veins"

THE CHRISTIAN UNION says that the men who give their work character, distinction, perfection, are the men whose spirits are behind their hands, giving them a new dexterity. There is no kind of work, from the merest routine to the highest creative activity, which does not receive all that gives it quality from the spirit in which it is done or fashioned. Work without spirit is a body without soul; there is no life in it.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

One of the best resolutions for the young year that we know of is to try to make some one happier each day. You may not always succeed, but the effort is well worth the trial, for he or she who maketh the effort bringeth happiness unto his or her own soul.

WINTER WARMTH.

MARY WAGER-FISHER.

TO keep the blood up to its normal heat in winter, is the secret of warding off the long line of ailments that result from getting cold, or chilled. This can be best accomplished by warm clothing and good circulation. It sometimes happens that the flannels are thin, and to buy new ones is not within the compass of the family purse. But even with worn underwear much can be accomplished by basting warm linings across the shoulders, both front and back, and protecting the top of the arms and knees in the same way. Some of the best ready-made woolen undergarments are woven so that both the chest and the abdomen receive a double layer of the fabric. For boys and girls always in a hurry—the kind that rush out-of-doors without top-coats in cold weather—warm clothing is such a safeguard against pleuritic attacks, inflammation of the lungs and throat, etc., etc, that there seems to be nothing better in the way of household economy than to make these youngsters proof against sudden chills by judicious padding. For sleeping, the night-gowns should be warmly lined across the shoulders, or people should wear, over the gown, a woolen sack or jacket, which warm garment for the shoulders and arms will save much discomfort and even illness in the case of sleeping adults who are not over-robust. The human body is weakened by every cold which attacks it, and to keep it free from ailments of every kind, is to keep it strong and hardy. It is not necessary that clothing should be fine or costly to be warm; but warm it should be, even if patched and ugly to a startling degree. Some one has said that one had better be a fool than be dead!—and it is certainly better to look like a guy than to suffer from the cold. Women who are much in-doors need especially to protect the neck, the sides of the face about the ears, when going out in cold weather, and it is much more sensible and profitable to wear a hood than a bonnet or hat in winter-time when riding or driving. A newspaper, folded and laid across the chest under the coat, when one is to face a biting wind, is a great protection to the lungs.

The evil so many women have felt of the insufficient warmth afforded to the legs by petticoats, has led to the discarding of under petticoats altogether. The lower part of the body is clad very much as men clothe theirs, with warm woolen drawers coming to the heels, over which the stockings are drawn, and then another set of over-drawers or pantaloons of still greater warmth of cloth, or wadded silk or cotton, as one can afford. The external appearance of the non-petticoat wearer does not differ from that of the much petticoated woman, except that she is freer and more graceful in her movements, and is relieved of the heavy, bunchy look that petticoats give. A woman who has no pattern to guide her in making these pantaloons for herself, can experiment with a cast-off pair of her husband's or brother's trousers, cutting away all the unnecessary appendages, and, of course, having the garments well washed and ironed. Her own should fit smoothly around the hips, and reach to the top of the shoes. Some ladies have them made of quilted silk, and some cut them from their quilted petticoats. They are such an improvement in dress in the way of comfort and health and of modesty, too, that they will win their way speedily.

Winter bathing is also very essential for warmth and health. A substitute for bathing is friction applied to the skin by means of a brush, rough mittens or towels. Standing on one's toes is a good exercise for warming the feet, slipping off the shoes for that purpose. This is good for the feet before retiring, if a quick cold bath is too violent for them. The virtue that lies in a rough towel is rarely appreciated. The vigorous use of it is worth all the cosmetics in the world as a beautifier. A daily hand rubbing of the arms, neck, cheeks, chest, indeed, of every part of the body, will keep wrinkles, flabbiness, weakness and pains at bay, as nothing else can. The pores are kept open, the tissues are healthy and hardy, the blood tingles with life, the flesh forgets to grow old, the teeth and nails are polished by it; in fact, when rightly and persistently used, the rough towel is worth its weight in gold.

One of the best exercises for every lady in need of chest development, is the use of Indian clubs. They can be made at home without cost, and in nearly every neighborhood some one can be found to show one of the best ways to use them. For a narrow-chested, round-shouldered boy or girl they are excellent. Another good exercise can be had by standing in the corner of a room, and with the hands on each of the two walls, inclining the body into the corner, so that one's very nose fits into the angle. Repeat this operation 20 times in succession to begin with. Children quickly catch the knack of doing it, and it brings their shoulders back beautifully, and is an ever-ready expedient.

To allude again to the friction produced by rubbing, I have known sore throat, earache, neuralgia, etc., driven off, when, at the outset of the attack, vigorous rubbing has been applied about the affected parts.

The cut-off legs of worn-out stockings, drawn over the stockings that are worn, form very good knee protectors for children much on their knees. The under sides of the cut-off legs are usually little worn, and should be turned to the front. Economical women buy children's stockings of the same color the year round. Creeping bags are made for infants, of calico, in two widths, of the length of the child from the neck to the heels The top end lets the arms through the side seams, and is gathered into a band large enough to slip easily over the head. The bottom end has slits cut for the feet to come through, or the bag may be cut up through the center a little way, and each side gathered into a band to fit around the ankle. It is reversible so as to be worn either side to the front.

CIVIL GOVERNMENT IN SCHOOLS.

LEILA S. TAYLOR.

ONE branch which I am glad to see is being added to the course of study in many High and Grammar Schools, as well as academies and private institutions, is civil government, or the science of statesmanship. It might well be introduced into all district schools, and should be required wherever there are boys or girls near the dead line of 15. If our country ever needed wide-awake, well-informed American citizens it is now, and the years to come will probably only increase the necessity for them. How few of those whose ballots determine the nation's fate understand her history, appreciate her mission, or foresee her dangers! How few realize the character of her constitution, or the nature of her government! What can the German, or the English, or the Irish, or the Swedish man, fresh from his native soil, know of our polity? The sons of these men go to our schools and there must they learn, if they ever do, the history, nature and requirements of the government their parents have given them as a birthright. Let our school committees see to it that no boy nor girl goes out from our country schools, till the principles and methods of the State and National Governments are understood.

There are several good text books on civil government. Among the best, are Townsend's and Martin's. First, the idea of government is explained and illustrated. The State is defined; law, penalty, and the different kinds of government are discussed Then follows a brief historic sketch of the growth of English law, and its development through colonial history, until its final crystallization in our present constitutions of the States and Nation. Then the different departments of the government are taken up, and discussed in their various forms and functions. The nature of the town, county, and State, with that of their numerous offices, and requirements is explained.

One method which may be employed by any wide-awake teacher, is to take the pupils

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

to a town meeting, and afterwards discuss it with them, step by step, thus giving them an object-lesson in civil form. Get town documents, an old warrant, for instance, and talk over each phrase and item. The science of government is discussed in these text-books, but, more than that, and of far more importance, the sacred obligations of citizenship are enlarged upon. The position and obligations of the citizen of a State are plainly enforced.

His rights and duties are clearly defined, and it is impossible for a conscientious and patriotic teacher to handle these themes before a class of bright boys and girls, without making them feel that it is a noble and sacred thing to be an American citizen.

If, in all our schools, are taught the relations and obligations of State and citizen, it will go far toward removing the present blindness and ignorance of the voting classes. Boys and girls will grow up educated not to scorn or slight their responsibilities as American citizens. If anything stamps a young man as empty-headed and weak-kneed, it is to hear him prate of political corruption and brag of his indifference to public affairs, boasting of being too clean to dabble in politics. It is like calling himself too clean to go and help his old mother cut of a mud-puddle into which she had fallen.

I never hear a young man speak in that way without wishing he could be left to the tender mercies of a mob or a commune.

One corrective of this false, unmanly, and un-American foppishness is this early training in the common schools. It is a good theme for family reading. Get a text-book, fathers and mothers, and in these long winter evenings read aloud and talk it over with the children, fitting them yourselves for the days and the duties that are to come.

BEAUTIFYING THE COMPLEXION.

WRITING of fine complexions, Harper's Bazar says that a clear, fresh complexion gives a look of cleanliness to the person possessing it, and the practice of cleanliness will best accomplish this result, as there is no beautifier equal to the daily tepid bath. But *any* water will not do, and hard water is almost worse than none. If not naturally soft, it should be made so with ammonia or borax. That wonderful old lady, Diana of Poitiers, who persisted in being beautiful at such an unreasonable age, is said to have used no cosmetic but a daily bath of rain-water. This is a wonderful preserver and freshener of the complexion, but at the present day it is a somewhat inaccessible remedy, [Not to the country girl.—ED.] A handful of bran to a basin of water has a very cleansing and softening effect, and oatmeal is equally good. As frequent a change of underclothing as possible also is a decided beautifier of the complexion, and this luxury, once indulged in, is not easily given up.

A salt bath, too, is excellent; and it is not necessary to go to the sea-shore for it, as a few cents' worth of rock-salt will supply the luxury for a month. A good-sized lump dissolved in a basin of water is all that is needed for a single application. Besides invigorating the system, this bath is said to freshen the complexion and restore the appearance of youthfulness. One certainly "feels good" after it.

Many simple purifiers, greatly in vogue two generations ago, when cosmetics were considered "sinful," have lost none of their active virtues. Among these old-fashioned remedies, a tablespoonful of sulphur, with as much molasses as is needed to mix it, taken every other morning for a week, and then, with an interval of three days, resumed again for another week, has quite a magical effect on a muddy or eruptive skin. Cream-of-tartar is also good: milk, if it does not disagree with the stomach, is a very beautifying beverage; and grape juice, pure and simple, gives the loveliest of tints, because it makes the purest blood.

A glass of hot water, as near to the boiling point as can be tolerated, taken about an hour before each meal, helps greatly to keep the complexion in order; and half a lemon may be added if desired, but no sugar. Powdered charcoal is often efficacious. A teaspoonful mixed with water should be taken three nights in succession, and then followed by citrate of magnesia to remove it from the system.

Prevention, however, is always better than cure; and a proper or improper diet is sure to tell upon the complexion.

OLD-FASHIONED HOUSES.

NOTHING adds more to the "cheeriness" of a sitting-room in winter than a sunny window full of plants and flowers. What a pity we cannot all have sunny windows. It seems to me that the old-time builders must have had an especial spite against the sun, since they managed so cleverly to shut him out of so many farm-houses. In many sitting-rooms into which he would send his rays if possible, the builder has sunk the porch into the house five or six feet, seemingly to guard against his entrance.

I once lived in one of those old-time houses where, if the architect had studied to that end, he could not have shut "Old Sol" out more completely. The house was low and rambling, with low eaves, and surrounded by trees. The only sunny room in it was the kitchen, and that was small and blazing with heat from the stove and sun together. The other living-rooms had all of their windows to the north. If there happened to be a sunny window, it would brighten a closet or pantry. Windows everywhere except in the right place! My plants had a sorry time of it in that house. There was one window in the sitting room that opened into a kind of alcove formed by the upright and wings, where the sun straggled in for a half hour each day. There I kept my poor starved plants. It was the dream of my life then to have windows cut through in every available place. Even a "sunk-in" porch would have been a treasure in that house. I should have had it inclosed with glass immediately, and transformed into a mimic conservatory.

Why will people go on living in such houses year after year, when a little deft carpenter work done here and there would make such a change, and render their rooms so cozy and bright? Aside from this, the injury done to a person's eyes while sewing or reading in those dark, old-fashioned rooms, is no small amount, as I can testify from experience. I wish the careful housekeepers that we read of, who keep the blinds closed, or the shades drawn down to keep the sun from fading their carpets, could exchange windows with some of their sun loving sisters.

Here are two of my stand-by cake recipes. They are reliable and never disappoint me.

CUSTARD LAYER CAKE.

Four eggs beaten with two cups of sugar until light, one half cup of sweet milk, two tablespoonfuls of butter, more if melted, three heaping teaspoonfuls of baking powder, two cups of flour. Flavor with lemon.

CUSTARD FOR THE ABOVE.

Take one cup of milk, one tablespoonful of corn starch dissolved in it and brought to a boiling heat, and the yelk of one egg to color it. Sweeten and flavor with lemon. Let cool and put between the cakes while they are warm.

MARBLE CAKE.

Light part: one and a half cup of white sugar, one-half cup of butter, one-half cup of sweet milk, one-half teaspoonful of soda, one teaspoonful of cream-of-tartar, whites of four eggs, two and a half cups of flour. Flavor with lemon.

Dark part: One cup of brown sugar, one-half cup of molasses, one-half cup of butter, yelks of four eggs, one-half cup of sour milk, one-half teaspoonful of soda, two and a half cups of flour, one teaspoonful each of nutmeg and cinnamon. FANNY FLETCHER.

FOR POLISHING FURNITURE.

A VERY nice screen of ebonized wood standing in a back parlor, had become defaced with white paint by having the door opened against it. Upon inquiry at a furniture store as to what could be done to restore it, I was told to rub all the spots, the way of the grain of the wood, with finely pulverized pumice-stone and oil—any furniture oil—and then polish with a soft, dry cloth. I followed directions and, to my delight, the screen looked like new. So I went through the house, and found many articles of furniture that needed attention, and which now shine resplendently.

M. A. PETERSON.

DON'T begrudge 15 or 20 minutes a day to brushing the hair. We know from experience that, if persevered in, it has a wonderfully subduing effect upon coarse, harsh hair.

BREAD FROM ROLLER PROCESS FLOUR.

MY method of making bread with compressed yeast and roller-process flour is very simple and quite different from the way of making bread of home-grown wheat, for which we found potatoes indispensable. For my family of seven persons, I use two-thirds of a cake of compressed yeast, leaving the remainder for making milk-rolls the next day.

We make bread and rolls three times a week. About eight o'clock in the evening, I prepare a pan of flour, sifting and warming it. Have ready three pints of new milk, or milk and water, if milk cannot be spared. Into this, stir the two-thirds of a cake of yeast dissolved, a teaspoonful of salt, and, having beaten it thoroughly, knead it hard and place it in a pan, covered, where it will keep warm all night. In the morning, work it into three large loaves, put into deep iron pans (well buttered) and let it rise again. Then turn each loaf out of the pan on to the molding board, and knead it lightly and rapidly, using no more flour than is required to keep it from sticking to the board. Return to the pans, have ready a little dish of melted butter and brush each loaf over with it, using a bit of soft muslin. This will prevent a hard, thick crust from forming. In 15 or 20 minutes, it will be ready for baking. Put it into a hot oven, and, if the top is in danger of scorching, cover with a thick paper or light tin cover. Do not put anything heavy upon it, for doing so will make it sodden. When done, turn out upon a clean linen cloth, and cool it before putting it in jars.

For our tea rolls which we bake between our bread makings, I use one quart of milk beated to the boiling point, and add to it one teaspoonful of salt, two dessertspoonfuls of lard, and two of granulated sugar. I let stand till it is lukewarm, then add the one-third of a cake of compressed yeast, dissolved in a little tepid water. I mix it in a soft sponge in the morning about eight o'clock, let rise and work it over, kneading it hard. I let it rise again, and turn it out on the molding board, working it lightly and rolling it out as for biscuit. I cut it with a biscuit-cutter and put a small lump of butter on top of each roll, folding over and pressing together. I now place the rolls in a deep baking tin, brush the top with butter, and let them rise once more, then bake about 20 minutes in a hot oven. When done, I have ready a little milk and sugar, to be washed over the crust. These are excellent.

MRS. C. S. SPEAR.

HOW CRANBERRIES ARE COOKED AND SERVED AT THE RURAL GROUNDS.

LOOK over carefully, rejecting the imperfect ones. Wash and drain, turn into a granite-iron-ware kettle, add water to half cover, cover tightly and cook until tender. When cool, press through a wire sieve—being careful to press every particle of pulp through—sweeten with granulated sugar, and boil slowly 15 or 20 minutes. Stir often to prevent burning. Turn into a flat dish of such size that the cranberries will be about an inch and a quarter in depth. When firm, cut into cubes and serve two or three, according to size, in small dishes. The effect is pleasing if the cubes are served in gilt-banded, white china.

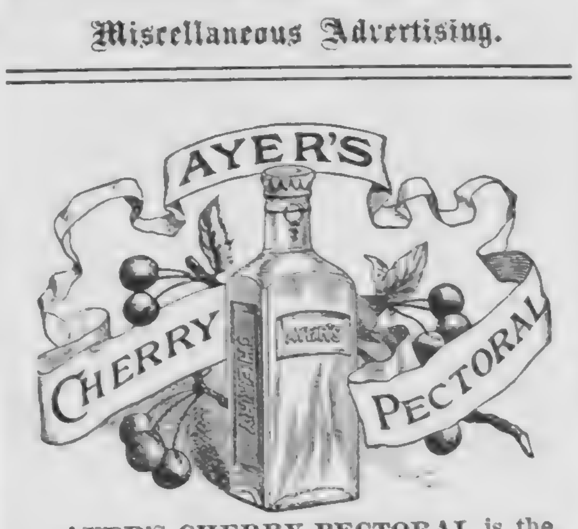
VEILS of good size are now worn.

FRINGE is again coming to the fore.

CORDUROY has been fashionable goods for gowns this winter.

WE seem to have taken up the French fad of wearing flowers upon our winter bonnets.

Miscellaneous Advertising.



AYER'S CHERRY PECTORAL is the best of all cough cures. It allays inflammation of the throat and speedily removes irritating mucus from the bronchial passages.

Mrs. L. P. Cutler, 47 North Washington sq., New York City, says: "When I was a girl of 17 I had a cough, with profuse night sweats, and Ayer's Cherry Pectoral cured me. I have recommended this preparation in scores of similar cases."

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Prepared by Dr. J. C. Ayer & Co., Lowell, Mass. Sold all by Druggists. Price $1; six bottles, $5.

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The Original. Beware of Imitations.

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IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the buttermilk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere. **More of it Used** than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & Co., Burlington, Vt.

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Seeing is Believing

A "wonderful lamp" it is indeed. Never needs trimming, never smokes nor breaks **chimneys, never** "smells of the oil;" no gumming up, no leaks, no sputtering, no climbing of the flame, no annoyance of any kind, and **cannot explode.** And besides all these advantages it gives a *clear*, **white** *light*, **10 to 20** times the size and brilliancy of *any ordinary house lamp!* Finished in either Brass, Nickel, Gold or Antique Bronze.

Send postal card for illustrated price list. Single lamps at *wholesale price*, carefully boxed and sent by express. ☞ Get our prices "*Seeing is believing.*" Address **GLADSTONE LAMP CO., 10 East 14th St., New York.**

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$200 GIVEN AWAY For the Largest Spanish King Onions grown from seed procured from us. Full particulars free. Address THE HOUSEKEEPER, Minneapolis, Minn.

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AGENTS LOOK HERE

and farmers with no experience make **$2.50 an hour** during spare time. J. V. Kenyon, Glens Falls, N. Y., made **$18 one day, $76.50 one week.** So can you. **Proofs and catalogue free.** J. E. SHEPARD & Co., Cincinnati, O.

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Agents will be supplied with canvassing outfit on application.

Entered at the Post-office at New York City, N. Y., as second-class mail matter.

News of the Week.

HOME NEWS.

SATURDAY, January 12, 1889.

AN epidemic of White-capism has suddenly afflicted half the States in the Union, if not more. It has spread East as far as New Jersey, where the usual threatening notices have made their appearance in several localities. Indiana and Ohio are still its headquarters, however, in spite of the efforts of the Governors of both States to suppress the lawless organizations. Everywhere the members pharisaically pretend to be better than their neighbors, and to be acting as censors of the morals of their respective communities, executing their own irresponsible sentences by visiting obnoxious parties in overwhelming numbers during the darkness of night, with their features concealed by white caps or other devices, and flogging them unmercifully. Women and cowardly men are the people whom they delight to torment. A bold resistance, even by a single person, generally puts the skulking rascals to flight. Where their identity has been disclosed, it is generally found that they are a set of rapscallions who themselves richly deserve the withes, although in some places they appear to be among the most respectable and law-abiding members of the community. Private grudge or enmity on their part, instead of moral turpitude on the part of their victims, is often the cause of their action. A number of deaths have resulted from their conduct. Moreover, just think of the misery caused by dread of their threats and the sting of their lashes! ....During the past year, lynchings have been unusually numerous in the South and West. There have been eight in North Carolina alone, and the Attorney-General of the State says that he has no doubt that many innocent persons were hanged; and that sometimes the men who were really guilty were the prime movers in the outrages, in order to fix their own guilt on others. The number hung or shot by Judge Lynch in several other States was still greater. There is no doubt that laxity in legally punishing criminals is the chief cause of these popular outbursts of lawlessness. Vastly more care is taken to protect than to punish the guilty, and the greater a man's guilt, the greater the protection the laws and especially the lawyers, afford him. The legal executions during the year in the whole Union were only 87, as compared with 79 in 1887, 83 in 1886 and 108 in 1885. Here are the numbers in the different States and Territories: Alabama, 5; Arkansas, 5; California, 5; Connecticut, 1; Delaware, 1; Georgia, 3; Illinois, 2; Indiana, 1; Iowa, 1; Kansas, 2; Kentucky, 1; Louisana, 3; Maryland, 1; Massachusetts, 1; Minnesota, 1; Mississippi, 4; Missouri, 4; New York, 9; New Jersey, 4; North Carolina, 2; Ohio, 3; Oregon, 1; Pennsylvania, 5; South Carolina, 5; Tennessee, 2; Texas, 6; Arizona, 1; Idaho, 2; Montana, 2; Washington, 1; Wyoming, 1; Indian Territory, 2. Of this number all were males but one; 57 were whites, 29 negroes and one Chinaman..... .... The Secretary of the Interior asks Congress for $350,000 to be immediately available for prosecuting the survey of the arid lands ... Proofs are fast accumulating in Minnesota Dakota and Washington Territories that a rich, well organized gang, many of them apparently of the highest respectability, are smuggling large quantities of opium from British Columbia. Large seizures of the drug have recently been made at several points in the Northwest and on the Pacific Coast, and a number of arrests have been made. It appears difficult, however, to secure convictions. ....Members of the Cotton Oil Trust monopoly are busy getting control of the manufacture of pine bagging in the South. The Trust is hesitating as to the prudence of monopolizing this new business; but its members are eagar to put millions in it, in the expectation of getting many more out of it.... ....The Frank Leslie Publishing Company, of this city, has been incorporated, with a capital of $1,000,000, and will henceforth control the great business which has, since her husband's death, been managed by Mrs. Leslie. .....The able and magnetic Rev. John Dooley, pastor of the Broome street Mission Tabernacle, this city, has resigned, to become superintendent of the Albany City Mission and Tract Society, next April.....A dispatch from Los Angeles, Cal., states that the mystery of the Murchison-Sackville correspondence is fully dispelled. The writer of the "Murchison" letter is one George F. Osgoodby, of Pomona, Cal., a New-Yorker by birth, of English parents, thirty-four years old. Murchison is a family name, attached to the Osgoodbys by marriage..... The publishers of the temperance paper the "Voice," charge that the Republican National Committee bought its mailing list and other private matter pertaining to the paper from two dishonest employés, who had stolen the matter, and who, besides cash down, received promises of fat government situations after March 4. The employés have been arrested and have confessed. Quay and Dudley are said to be implicated. The Knights of Labor also allege that some one sold to the same committee the mailing list of their organ, the "Journal of United Labor," for $5,000. The subscribers to both papers received "any amount" of Republican campaign documents through the mail. No denial yet.....The strike on the "Q" system has been declared "off," on the promise of the railroad people that they would not oppose the employment of their old striking hands either on their own roads or on others—a very small concession....Chief Arthur, of the Brotherhood of Locomotive Engineers, will, it is said, soon resign, because the present policy of the Brotherhood is not in accordance with his views. There's talk of "locking up every wheel in the country" next spring, unless the railroads make great concessions to the engineers, firemen, switchmen, etc.....The number of railroad employés now in this country is about 785,000. The 7,200 miles of road built last year gave employment to about 36 000 new hands. The average throughout the country is about five to a mile ..... A test case is to be brought in this State to try the constitutionality of the collateral inheritance tax .....Last Monday, a Mayoralty election took place at Windsor, Canada, (across the river from Detroit), at which the question of annexation to the United States was the issue, and if the annexation candidate had got 20 votes more than were polled for him, he would have been elected. The issue wouldn't have been made, however, had not the annexation sentiment been exceptionally strong there, owing doubtless to the proximity of the place to the United States, and especially to wide-awake, prosperous Michigan..... On the same day another Mayoralty election took place at Ottawa, with the National question as an issue. The English candidate was elected by 100 majority, though the French-Canadians made desperate efforts to elect their man. A bitter feeling exists and is growing between the two nationalities, and long-headed people foresee a serious conflict between the races before long .. .... While the national debt of the United States is decreasing every year, that of Canada is increasing. While the writer was traveling extensively through Canada some years ago, he was frequently told, half seriously, half jocosely, that the proper policy for the country would be to make a vast number of internal improvements in the way of railroad and canal construction, etc., even if a large debt had to be incurred to do so. Then when annexation took place. Canada would be well equipped for successful competition with the other States, and the Union would have to assume the debt of the new accession. To make the improvements beforehand at the general expense would be easy, to do so afterwards might be difficult. Has this idea anything to do with the great increase in the debts of the Dominion? ... . Frequent obstructive tactics and dead-locks in the Lower House of Congress during the week, as a few men seem determined to prevent all legislation unless they can get their own pet measures through in spite of the opposition of a large majority of the House. The Oklahoma and Pacific Railroad funding bills can hardly come up on this account, until the last six days of the session, and cannot then be passed unless the Senate will have already passed them. There are 12,000 bills now before Congress, and new ones are introduced every week to "make a record," as only a very few of those already considered can be acted upon. The Democrats want to make capital before they become the minority, and the Republicans want to delay desirable legislation till they can get the credit for it when they are in the majority and therefore the responsible party.....

As Good as Medicine.

Invalids like encouragement. The physician of kindly demeanor acts often as a remedy in himself. There is an indefinite yet delightful assurance of convalescence in every word, every gesture.

But better than this is evidence, evidence of past success, evidence of present efficiency. Such, for instance, as the following, in regard to Compound Oxygen.

FREEMANSBURG, N.Y., August 10, 1888.
"I would not have been amongst the living if it had not been for Compound Oxygen." MRS. S. RAPPLEYE.

NORWOOD, MASS., August 10, 1888.
"I have improved very much under your Treatment." MRS. USTICE STOCK.

NEWARK, N. J.. June 12, 1888.
"Mother and I are enjoying good health, no doctor having been called to our house for over three years, ever since I first sent for Compound Oxygen." MISS SUSIE STEELE.

MILTON, DEL., August 8, 1888.
"My wife says I must tell you she believes that she would have been in her grave if it had not been for Compound Oxygen."
J. B. MUSTARD, *Postmaster*.

The above evidence needs no comment. We would add, however, that we publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 331 Montgomery St., San Francisco, Cal.—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, January 12, 1889.

A BILL is now before the Pennsylvania legislature, which makes it a crime for any person in the State to sell or offer for sale any dressed beef, pork or mutton, unless the animal from which it was taken has been previously "inspected on the hoof," so as to make sure that it is in a healthy condition. Last year Chicago slaughtered 1,820,000 cattle for dressed and canned meat, besides vast droves of swine and sheep, and this measure is to shut out competition with the cheap dressed meats of the West. It is said to be in the interests of Eastern farmers, the prices of whose stock are kept unduly low by this dressed meat competition. Others, however, insist that it is merely the result of the machinations of Pennsylvania butchers and stock-yard monopolists, who have seen their enormous profits dwindle because so much of the meat for local markets is now supplied from Chicago. These say that farmers would be benefited hardly at all by the passage of the bill, as stock would be cheaply transported on the hoof from the West, and that the chief or only gainers would be the butchers and stock-yard men; while the public would have to pay considerably higher prices for their meat.....Byron Halstead, Professor of Horticulture at the Iowa Agricultural College, at Ames, has accepted a similar situation at the New Jersey Experiment Station, at New Brunswick .... There has been trouble between Mexican shepherds and herders belonging to the Chiricahua Cattle Company, on the Gila River, in Arizona. The shepherds were all killed for daring to graze their flocks near the company's range .....Accounts come of appalling suffering from starvation among settlers in western Walsh County, Dakota. Over 70 families, with four or five children each, have been living on porridge made by cooking their frozen green wheat and oats, stuff fit only for hogs. They went there with little money a few years ago, trusting to their crops for support after the first season. Crops mostly failed last year, and they had absolutely no money. They've had no flour for six weeks; their potatoes, which they shared as long as they lasted, are all gone, and they are on the brink of starvation. They have worn their clothes into rags; their shanties are open all over to rain, snow and blizzards, and there's little fuel. Aid will be thankfully recived by the Rev. C. W. Riches, Park River, Dakota. Send some right along—no fear of there being too much for a long, bitter winter and 70 starving, ragged families, with five thin, half-naked children apiece..... The Jute Bagging Trust is collapsing..... Owing to alleged favoritism on the part of the Pennsylvania Railroad Company, the Baltimore elevators are overstocked with wheat, and loaded cars are side-tracked as far north as York, Pa., while the Philadelphia elevators are nearly empty. While over 4,000.000 bushels of wheat are awaiting shipment in the Monument City, less than 325,000 bushels are in the Quaker City elevators..... . The prize of 80.000 francs offered by the French Government for a machine that could successfully separate the fibre of the ramie plant from the woody portion of the stem, has not been awarded to any of the ten competitors, as none had satisfactorily done what was proposed. The great strength, fine lustre and beauty of the fabrics made from the ramie, would undoubtedly place it ahead of cotton, flax and hemp were it not for the difficulty of cheaply separating the silky fibre from the resinous, woody substance with which it is incorporated. This has hitherto defied the ingenuity of mechanics and chemists. .. .. Representatives from 30 States, including all of the Eastern States, were present at the second annual meeting of the American Association of the Agricultural Colleges and Experiment Stations, held at Knoxville, Tenn., last week. Special attention was given to a dircussion of the work and organization of the new Agricultural Experiment Stations. It appears that in all the States, except two or three, the $15,000 a year given to each station are honestly expended in accordance with the letter and spirit of the Hatch law. It will be remembered that provision was made for withholding the appropriation from stations which misused it. It is to be hoped that this provision will not be permitted to fall into "nocuous desuetude."....

True Merit Appreciated.—Brown's Bronchial Troches are world-renowned as a simple yet effective remedy for Coughs and Throat Troubles. In a letter from Hon. Mrs. Pery, Castle Grey, Limerick, Ireland, they are thus referred to: "Having brought your 'BRONCHIAL TROCHES' with me when I came to reside here, I found that, after I had given them away to those I considered required them, the poor people will walk for miles to get a few." Obtain only "BROWN'S BRONCHIAL TROCHES." Sold only in boxes.—*Adv.*

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, January 12, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans. and Gulf.	Texas
Ordinary	6 11-16	6 15-16	.....
Strict Ordinary	7 3-16	7 7-16	.....
Good Ordinary	8¼	8⅜	.....
Strict Good Ordinary	8¾	9	.....
Low Middling	9 5-16	9 9-16	.....
Strict Low Middling	9 9-16	9 13-16	.....
Middling	9 13-16	10 1-16	.....
Good Middling	10 3-16	10 7-16	.....
Strict Good Middling	10 7-16	10 11-16	.....
Middling Fair	10¾	11	.....
Fair	11⅜	11⅝	.....

STAINED.

Good Ordinary	6⅝	Low Middling	8 7-16
Strict Good Ord	7⅜	Middling	9 5-16

POULTRY-LIVE—Fowls, near-by, per lb, 11@12c; fowls Western, per lb, 11@12c; roosters, per lb, 6@6½c; turkeys, per lb 10@12c; ducks, western, per pair, 60@90c; geese, western, per pair, $1 40@1 75; chickens; nearby, per lb. 10c; do, western, 9@10c.

POULTRY.—DRESSED—Turkeys, dry packed, good to choice, per lb, 13@15c. do do, common to fair, 10@11c; do, iced, dry picked, choice, 11@12c Fowls, western, packed, choice, 11@11½c; do, nearby, do do, 11@12½c; do, western, iced, dry picked, 9c; do do do, scalded, 8@9c. Squabs, white, per doz, $3 50@$3 75; do, dark, do, $2 25@$2 75. Chickens Philadelphia, dry packed, 15@17c, do Jersey, do, choice, 13@14c; do nearby, do, good, 12@13c; do Western, do do, 9@10c; do do, iced, good to choice 10@12c. Ducks, nearby, choice, per lb, 14@16c; do do, good, 13@15; do Western, good, 13@14c. Geese, Western, good, 8@12c

GAME.—Woodcock, per pair, —@—. Partridges, per pair —@—; Wild Ducks, Canvas back, per pair, $3 00@$4 50; do, Red Head, do, $1 00@2 00; Grouse, do, 75c@$0 90, Wild Ducks, Mallard, do, 60@75; do, Teal, do, 25@40c; Quail, per doz, $2 00@$2 50.

HOPS.—State, new, best, 21@23c; do, prime, 19@20c; do, low grades, 15@17c; do do, 1887, 7@11 do do do, California, new, 21@22c; do do do, choice, 24@26c.

HAY AND STRAW.—Choice Timothy, 90@95c; do good do, 75@85c; do medium, 70@80c; shipping, 60@65c; do, Clover, mixed, 55@70c. Straw.—No. 1, rye, 85@90c; short do 60@65; oat, 60c.

BEANS.—Marrows, new, $2 25@—; new mediums, choice, $1 90@1 95; pea, $2 50@—; red kidney, $2 10@2 20; white kidneys, choice, 2 50@2 55; foreign, mediums, 1 85@1 55; California Lima, $2 75@$3 00; green peas, new $1 35@1 40.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 6¼@7c, and farmers' grades at 5½@6c. Hickory Nuts quoted at $1 00@$1 50 per bushel. Pecans, 6@8c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Long Island, per bbl, $2 00@$2 10; Maine, per bbl, $2@$2 25; State, per bbl, $1 15@1 75; Sweets, per bbl, $2 00@2 75. State Onions, Orange county red, per bbl, $0 90@1 00; Cabbages Long Island, per 100, $1 50@4 00; Onions, Connecticut red, per bbl, $1 25@$—; do do, white, per bbl, $3 00@$4 00; do do, yellow, per bbl, 1 25@1 40; do State, do, do, $1 00, @—. Turnips, Russia, per bbl, 30@50c Cauliflower, per bbl $2 50@3 50; Celery, per doz, bunches, $1@$1 25; Kale, per bbl, 40@50c; Spinach, per bbl, $1 00@$2 00.

FRUITS.—FRESH.—Apples, Pippin, per bbl, $———; do, King, do, $1 50@$2 25; do Snow, do, $1 50@$2 00; do, Baldwin, $0 75@1 40; do, Greening, $1 00@$1 00; do, common, $1 25@$1 40. Pears, Dutchess, per bbl, $4 00@4 50; Virgalieu, per bbl, $4 00@$5 00; do, Vicar, do, $2 50@$3 00; do, Kieffer, do, $3 00@$4 50. Grapes, Delaware, per lb, 2@7c; do, Catawba, do, 3@4; do, Concord, 2@4c; do, Niagara, —@— Cranberries, Cape Cod, choice to fancy per bbl, $6 50@8 50, do do, fair, per bbl, $6 00@$—; do do, per crate, $2 00@2 75; do do do, frosted, do, $2 00@$2 50; do, Jersey, do, $1 50@$2 15. Quinces, per bbl, $—@$—. Florida Oranges, best, per box, $2 40@$2 75; do, good lots, $2 00@$2 25; do lemons, best, $3 00@3 50; do do, common, per box, $1 00@$2 50

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5½@7c; do do, old, 5@7c; do do, new, common to prime, 4½@5¼c, do sliced, new, 4@5¼c; do, quarters, choice, 4@4¾c; do, coarse cut, 4@4¼c. Cherries, new, 13@15c. Raspberries, new, 19@21c. Blackberries, 5½@5¾c. Huckleberries, 10½@11c. Peaches, Delaware, evaporated, peeled, 16@20c; do do do, unpeeled, 7@9c; do, North Carolina, sun-dried, peeled, 9@11c. Plums, 9c.

PROVISION MARKETS.

NEW YORK.—PROVISIONS.—PORK.—New mess, 14 25@14 50 short clear, 15 50@$17 00 Extra Prime mess $13 50; prime do, $15@15 50, and family mess, $15 75@16 25. BEEF—India Mess in tierces, 20@22 Extra Mess, in barrels $7 00@7 25 Packet $10 50@$11 50 per bbl and $13@$13 50 in tierces; Plate $9 00@9 50; Family at $12 50@$16. HAMS $12 00@$13 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 7¼@7¾c; Pickled Hams, 9½@10c; pickled Shoulders 6¾@7c; Smoked shoulders at 8@8½c; do Hams, 10@11c. Dressed Hogs.—City, heavy to light, 7¾@7¾c Pigs, 8½c. LARD.—City steam, $7 35; December, ——; January, $7 65; February, $7 65; March, $7 68; April, $7 70; May, $7 75; June, $7 79; South America, 10c.

BOSTON.—PROVISIONS firm and steady New Mess Pork, $16 75@$17 00; Old Mess Pork, $16 00@$16 25; Extra Prime, new, $15 75@$17 00 LARD, $9 75@$10 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes steady; Early Rose, 47@50c per bush.; Burbanks and White Star, 40@42c Provisions were steady, in moderate demand. BEEF—City family, per bbl $10 50@$11; do, packets, $9 50@$10; smoked beef 11@12c; beef hams $14 15. PORK—Mess, $15 00@$15 50; do Prime Mess, new, $14 50; do, family, $17 00@18 00; Hams, smoked, per lb, 11½@12c do, S. P., cured in tierces, 10@11c; do do do, in salt, 10c; sides, clear ribbed, smoked 9½@10c; shoulders, in dry salt and fully cured, 8½@9c; do, do, smoked, 9c; Shoulders, pickle cured, 8½@9c; do do smoked, 9@9½c; bellies, in pickle, 9½@10c; do breakfast bacon, 10½@11c. LARD—Steady; City refined, 9½; do steam, 9½@10¼c; butchers' loose, 8¼@8½c.

CHICAGO.—MESS PORK.—$13 20@13 25 LARD.—$7 25@7 30 per 100 lbs; Short Rib sides (loose), $6 90; dry salted shoulders, boxed, $6 37; short clear sides, boxed, $7 25@$7 37.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER.—Creamery—State, pails, best 21@29c, do do, tubs, best, 20@26; Pennsylvania, best, 28@—; Elgin, best, 29@—; Western, best, 27@—; do prime, 24@26; do good, 18@24; do poor, 17@18; do June, good to best, 16@23. State—Dairy, half-firkins, tubs, best, 25@26c; do do, prime 20@23c; do do fine, 19@21c; Welsh tubs, fine, 22@23; do do, good, 19@20; firkins, best, 23@24c; do prime, 21@22c; do fine, 18@20c. Western—Imitation Creamery, best, 22@23c; do, fine, 17@19c; Western dairy, fine, 20@21c; do fair, 18@20c; do, poor, 14c; 15c; do factory, fresh, best, 19@20c; do, prime, 16@17@ do, good, 14@16c; do, poor, 11½@13½c; do, June, 13@15c

CHEESE—State factory, September made, 12c; do do do, October, fancy, 11@11¼c; do, fine, 11½@11¾c; do; fair and good, 10@10½c; Ohio, flat, prime, 11@11¼c do, good, 9¾@10½c; skims, light, 8¾@9¼c; do, medium, 6½@7c; do, full, 2@2¾c.

EGGS.—Near-by, fresh, 20@20½; Canadian, fresh, 20@22c; do, ice house, 14@15c; Western, best, 20@—c; limed 15@16½c.

PHILADELPHIA.—BUTTER steady, Pennsylvania creamery extra, at 28@—c; Western creamery, extra at 16½@17c B. C. and N. Y. creamery extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs—Were firm Pennsylvania firsts, 19@—c; Western firsts 18@——c; Cheese—steady; demand fair; New York full cream, at 9@9¼c, Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

BOSTON.—Butter firm; Western extra Creamery, 30@32c; Eastern extra Creamery, 29@30c, Cheese steady. Eggs dull; Eastern extras, 27@28c; Michigan extras 24c; Western firsts at 24c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was quiet and steady; Elgin creamery, 28c; choice choice Western, 23@24½c. choice dairy, 22@24c; common to fair, 17@19c. Eggs firm at 14@15c.

GRAIN MARKETS.

NEW YORK.—WHEAT.—No. 2 Red, $1 01½@$1 01¾; afloat, elevator $1 00¾@$1 00¾; No. 3 Red, 95@95½c; No. 2 January, 99½c; do February, $1 01; do March, $1 02½; do May, $1 04⅝@$1 05¾; do June, $1 04¼@$1 05½; do July, $1 00⅝@$1 01. CORN.—No 3, 39@39½c, elevator 39½@40¼c, delivered; Steamer, Mixed, 41@41½c, elevator, 42@42½c, delivered; No. 2, 44¼@44½c, elevator, 45@45¾, delivered; steamer, White, 41c; do Yellow, 42¾c No. 2 January, 41½@5¼c; do February, 44⅝@45⅜c; do March, 45¼@45⅝c do May, 45¼@45½c; steamer Mixed, February, 32½c. OATS.—No 3, 30½c; do White, 31¾@32c; No. 2, 32¼@32½c; do White, 34½@do White, 35c. No. White, 40c; Mixed Western, 28⅛@33c; White do, 33@40c; No. 2 January, 31¾@32¼c; do February, 32¼@32⅝c; do May, 32⅞@33½c; do White, February, 35⅜@35⅝c.

PHILADELPHIA, Pa.—WHEAT—No. 2 Red for January, 95@96c; do for February, at 96@96½c; do for March 98@98½c; do for April, 99¾@100¼c; May, 101¾@102¼c. RYE dull and weak; No. 2 Pennsylvania, at 58c CORN steady; No. 4 Mixed in grain depot at 38½c; No. 3 Mixed, on track, 38½c Steamer No. 3 Mixed, in export elevator, 39¼c; Steamer No. 2 Yellow, in grain depot, 42½c, do in export elevator, 41½c; No 2 Mixed for January, 41¼@41½c; do February, 41⅝@41⅞c; do March, 42½@42¾c; do April, 43@43½c; do May, 43¾@44¼c. OATS.—Ungraded White, 32½@33½c; do Clipped, 36c; No. 3 White, 32½c; No. 2 do, 34¼c; do choice, 34½c.

CHICAGO, Ills.—No. 2 Spring Wheat, 97¾@88c; No. 3 Spring Wheat, 82@90c; No. 2 Red 97¾@98c. No. 2 Corn, 33½c No. 2 Oats, 25c. No. 2 Rye, 48c. No. 2 Barley, nominal. No. 1 Flax Seed, $1 62. Prime Timothy Seed, $1 54

ST. LOUIS—WHEAT.—Flour quiet and unchanged. Wheat quiet; No. 2 Red cash 96¼c bid; January at 95½c; May at 99¾@101c, closing at 99⅞c; July, 88½c@89¼c, closing 88½c asked. August, 87½c. CORN firm; cash, 29¾@30c; Options strong; February, 30½@33½c; May, 30½@30¼c; closing 30¼c bid. OATS quiet; No. 2 cash 24c bid; May, 27⅝@27⅞c. RYE firm; No. 2 cash, 48c bid. BRAN quiet at 63@64c. Flaxseed dull at $1 50.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, Jan. 12, 1889.

MILCH COWS.—Good cows sell for $40 per head; Poor to Fair at $25@$35; Choice at $45@$50.

CALVES.—Dressed Calves quiet and steady. Some very coarse Country Dressed Grassers are going as low as 5c, but most of the sales are at 5 1-2@6 1-2c. Country Dressed Veals 8@11c, with little Calves bringing 5@7c. City Dressed sold at 9@13c.

SHEEP AND LAMBS.—Inferior to Good Sheep sold at $4@$5 40, and 6 head at $5 50; Very Ordinary Lambs at $6 $7 50. Dressed Mutton firm at 7@8½c. and Dressed Lambs selling stronger at 9½@11c 83 lb. average at $ per 100 lb: do, 88 lb, at $5 12½; do, 100 lb, at $5 25: do, 92 lb, at $5 40 State Lambs, 70½ lb at $7 12½; Michigan do, 81 lb, at $7 50 State Sheep, 77 lb at $4: do, 82 lb, at $4 75. do, 90 lb, at $5: do 98 lb, at $5 50; State Lambs, 57 lb, at $6: do, 79 lb, at $7 35: do, 75 lb, at $7 37½ Sheep 93 lb, at $5 25; Michigan Lambs, 58 lb, at $6 62½; Indiana Sheep, 81 lb, at 4 60: do 89 lb, scant, at $4 85, Western do 106 lb, at $5: Ohio Lambs, 75 lb, at $5: do, 77 lb, $7 50 Western Sheep, 101 lb, at $5 Pennsylvania Sheep, 83 lb, at $5 25 State do, 125 lb, at $5: State Lambs, 75 lb, at $7 50: Jersey Ewes and Bucks, 117 lb, at 4½c per lb Lambs, 75 lb, at 7c.

HOGS.—Country Dressed slow at 6@6 1-2c for Heavy, 7@7 1 2c for Medium 7 1 2@8c for light States and lower Jerseys, and 8 1-2c for light upper Jerseys.

CHICAGO. Beeves $4 90@5 15. Steers $3 20@$4 40. Stockers and Feeders $2 40@3 50. Cows, Bulls and Mixed $1 75@3 10. Texas Cattle $2 00@3 50. Western Rangers $3 00@3 80. Hogs—mixed $5 05@5 27½. Heavy $5 15@5 30. Light $5 10@5 25. Skips $3 40@5 10. Sheep—Natives, Inferior to Prime $2 75@5 20. Western Corn-fed $4 35@4 65. Texans $2 45@3 40. Lambs $4 75@6 45.

ST. LOUIS.—Cattle.—Choice Heavy Native Steers $3 20@$5 30. Fair to Good Native Steers, $4 10@4 80. Butchers' Steers, Medium to Choice $3 0@4 00. Stockers and Feeders Fair to Good $3 00@3 10. Rangers Corn-fed, $3 00 4 6; Grass-fed $2 00@3 00. Hogs—Choice Heavy and Butchers' Selections $5 10@5 25 Packing, Medium to Prime, $5 10@$5 15. Light Grades Ordinary to best, $4 95@5 10. Sheep.—Fair to Choice $3 00@$4 60.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING JANUARY 12, 1889.

A. M.—M. F. A.—M. L. B.—C. A.—P. K.—E. A. A.—J. F. H.—C. H. W.—L. A. W.—M. B.—D. D—Snowdrop.—W. A. F.—A. B. S.—R. S. C.—C. P.—C. M. C.—F. R. J.—S. W.—A. G. R.—H. M. R.—W. G. L.—G. S.—J. B.—C. A. L.—E. R. L. H. M.—R. J. B.—L. H. M.—F. A. C.—M. McC.—C. H.—F. K. P.—F S. W, thank you.—F. D.—T. D.—L. E. A.—W. C. M.—H. A. M.—J. T.—D. C. S—T. H. H.—T. B. T.—J. T.—H. A. W.—S. D. C.—C. L. J.—F. G. G.—J. H. S.—H. M. E.—J. E. G B.—A. T. T.—T. V. M. W. S. B.—H. S.—P. S.—L. A. P.—W. S S., thank you.—D. S. B.—H. L. W.—H. S.—B. N. A.—J. B. P.—G. B. F.—M. S. W.

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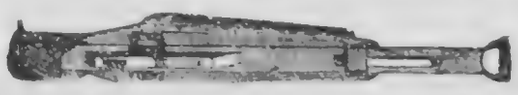

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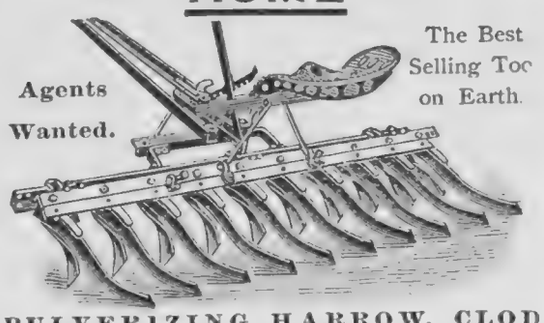

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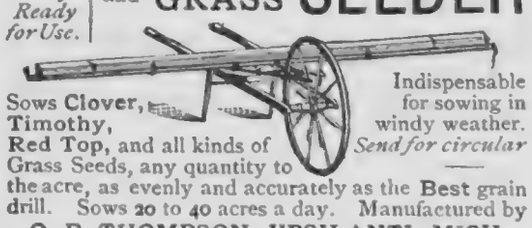

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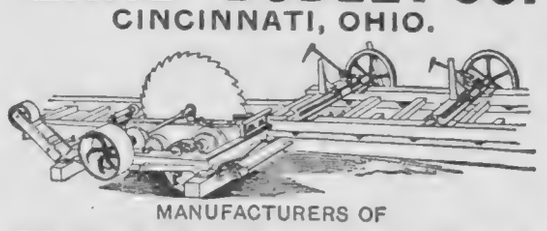

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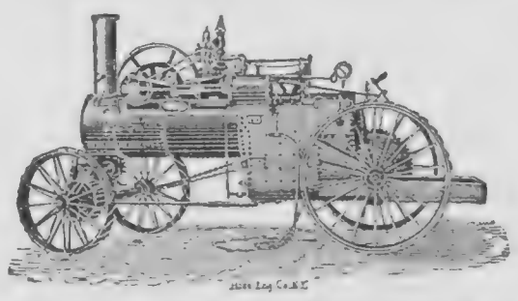

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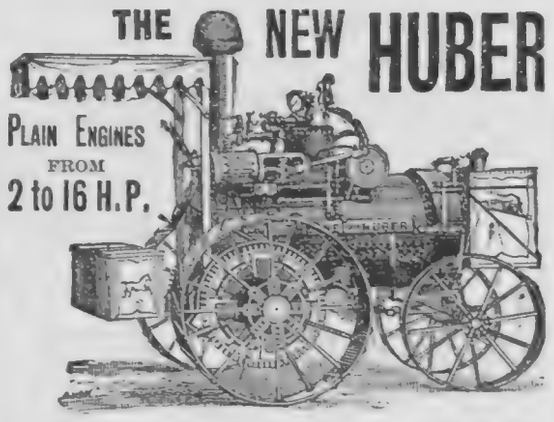

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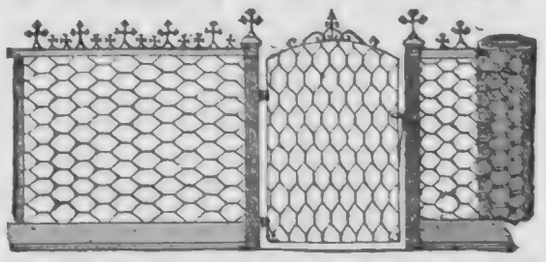

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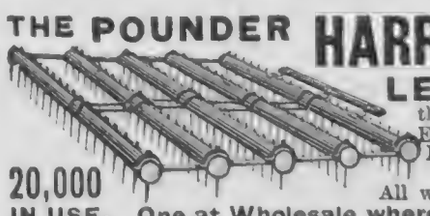

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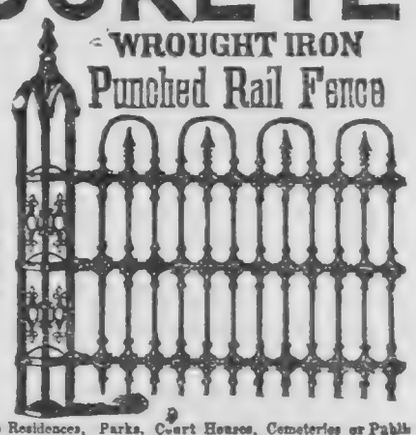

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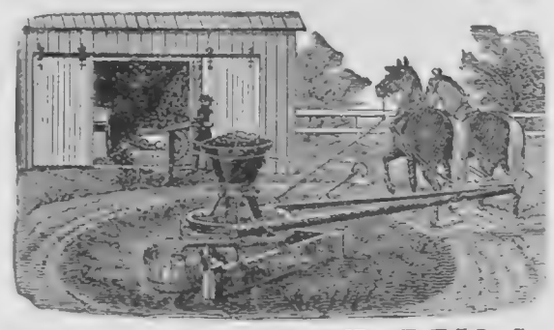

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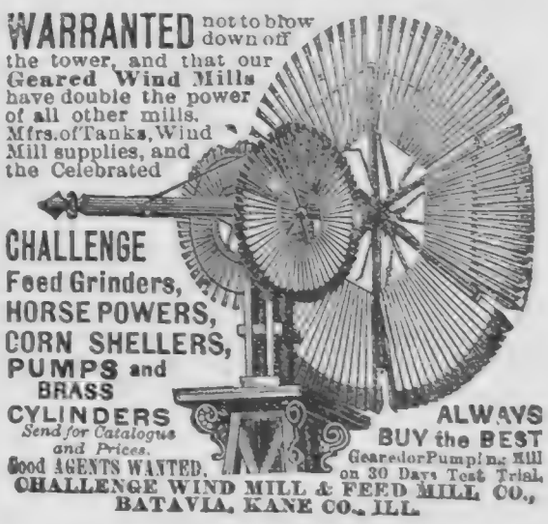

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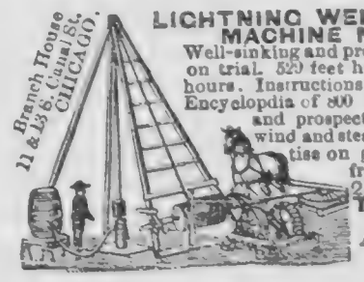

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Literary.

THE DRUM LAKE EASTER SERVICE.

A story of the Michigan Pine Woods.

BY HERBERT W. COLLINGWOOD

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"NOT as I wants no hard feelin's betwixt Bill an' me," explained Jim, "an' not but I thinks everything of the Parson here, but could I speak to ye outside, mum?" And he winked again in the direction of the minister.

Mrs. McKelvey threw a shawl over her shoulders, and went at once, knowing that it must indeed be something out of the usual line of events that would prevent Jim Foster from speaking out in public.

Mr. McKelvey apparently had perfect faith in his wife. He kept at his work, only stopping once to sharpen his knife on the leg of his boot. A close observer might have detected a look of sorrow on that part of his face left exposed by his beard, but let us believe that it was caused solely by the loss of the music.

Mrs. McKelvey and Jim found Ben Stone waiting for them on the outside. There are many things that tempt one to believe that Jim and Ben had been sent as a sort of committee to perform the business which they unfolded to Mrs. McKelvey.

"Now," said the landlady "you wanter talk quick fer h'I'm behind with my work."

Jim certainly consumed very little time in his introduction.

"Do ye 'spose that we can git the Parson ter fiddle fer the dance down ter Cobb's?"

Mrs. McKelvey held up her hands in holy horror. "The Parson at a dance!"

"I knowed what ye'd say at fust, but wait till I tell ye about it. Ye see we hired Hank J cobs ter come over from Carter's an' play, but the boys from camp say he's drunk an can't come. We danced a couple o' sets ter Bill Gammon's singin,' but his wind gives out too quick. I was gonter quit an' come up an have a visit with your kid, when Ben, he said that the Parson kin jerk a bow right alongside Hank. So I sed I'd come down an' see what the prospects is fer gettin the Parson. It'l be a big thing fer him. He kin git acquanted 'round, an' the boys 'll turn out big fer his preachin' termorror."

Mrs. McKelvey very weakly hesitated. She ought to have told him at once that the Parson could not go, but the thought of Jim Foster leaving a dance to visit with her baby was too much.

"But I don't believe ye kin git him ter go," she objected."

"But I've gut an' idee ter cover that pint," said the diplomatic Jim; "I'll jest tell him it's a sorter soray like. We'll introduce him 'round, and put him inter Cobb's front room, an' then call on him for a tune. Then we'll form on fer a two-by-four in the next room, an' while he's playin' jest make the dust fly. Then we'll cheer him big; an' call him out agin, an' the rest of the crowd kin dance. We've gut it all fixed up, an' ye kin help us big, mum, by tellin' him it's all straight."

This plan was certainly both bold and original. Mrs. McKelvey hardly knew what to do. She was very anxious to please Jim, and yet the idea of the Parson forming the orchestra in a ball-room, struck her as a performance not exactly prescribed by the Church of England. It was too great a question for her to decide. Let the Parson decide for himself.

"Go in, an' ask Parson," she said at last. "If you can git him to go, I won't put no veto agin it," and she turned back into the house.

"All right," said Jim gleefully. He considered the worst of the battle over. "Come Ben," he added, "les' go in an' tackle him," and he led the way into the kitchen followed by Mr. Stone.

As it may be that some of my readers may be called upon at some period of their lives to perform some delicate feat of diplomacy, I would ask them to note carefully Jim's method of approaching the minister. They may be able to obtain some very useful hints.

"Parson," said Jim, when they were fairly in the room, "this is my friend, Mr. Stone. He's go'nter come to hear ye preach termorror."

The "fool" rose to his feet to greet his parishioner. "I am glad to greet you, sir," he said as he walked over to shake hands with our friend Ben. This action roused Ben to a realization of the fact that he was the "Mr. Stone" referred to. He had been called "Ben" so long that the new combination sounded strange to him. Thinking his part of the conspiracy demanded some return for the minister's greeting, he shook the extended hand till the Parson winced. "How be ye, Parson," he said in his pleasantest voice—"how's tricks?"

"I am well, I thank you," replied the little minister, examining his hand to see if any of the bones remained. Tricks were evidently somewhat dull.

"Wall, that's bizness, health is wealth an' wealth is health.' I'm healthy an' yet I ain't wealthy," with which startling truism, Mr. Stone seemed to reach the limit of his conversational powers. He gave Jim an intimation of the fact by sitting down near Mr. McKelvey.

(TO BE CONTINUED.)

CATALOGUES, ETC., RECEIVED.

STUDENT LABOR.—This is the topic mainly discussed in the report of the Farm Department, recently issued by Prof. Johnson of the Michigan Agricultural College. Prof. Johnson has some very positive ideas regarding this subject, and, as the labor system has done much to sustain the Michigan college, those interested in the subject will want to read this article.

STEEL CASE HAY BALING PRESS.—Catalogue from P. K. Dederick & Co., Albany, N. Y. This is a very valuable machine, and it will pay all hay-men to investigate it. It possesses every advantage possessed by the wood-framed machines; with the added advantages of superior strength, solidity and permanency. Indeed, this press might well be called "everlasting," for it will surely outlive any common machine. Send for this catalogue and see what the press is.

CLYDESDALE AND ENGLISH SHIRE HORSES.—Catalogue from Messrs. Galbraith Bros., Janesville, Wis. This is an elegant volume—one of the most complete stock catalogues issued in this country. The fact is very evident to observing stock-men, that the business of producing good draft horses has of late been surprisingly popular. The following conclusions, taken from this catalogue, seem to us sound.

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THE OLIVE, ITS CULTURE IN THEORY AND PRACTICE.—By Arthur Tappan Marvin, sent by the Orange Judd Co., New York, price $2. This is a complete and very interesting account of the cultivation of the olive and the harvesting and preparation of the crop. The author presents his own experience, coupled with a general compendium of all previous literature bearing on the subject. Californians who wish to develop the olive industry in their State, will find this book very instructive.

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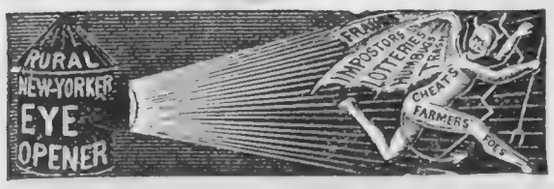

THE "ELECTRIC SUGAR" SWINDLE.

The worst "blind pool" swindle ever perpetrated has just collapsed. It is known as the Electric Sugar Refining Company, and it has an office in this city, a "refinery" in Brooklyn, and a branch in Liverpool, England. In 1881-2 "Professor" Henry C. Friend, then about 40 years old, called upon several large sugar refiners in Chicago and New York, and tried to induce them to invest capital in a secret process, which he said he had discovered, for refining sugar by means of electricity at a nominal cost. He wanted them to get up a company with a large capital, which should pay him an immense sum for his "secret," which he insisted must remain in possession of himself and wife. All refused to invest money in such a "blind pool," though they were ready to invest any amount in the enterprise if, on investigation, the professor's claims proved to be well founded. The latter was persistent, however, and shortly afterwards managed to get up, in Chicago, a company with a small capital; but as he still refused to disclose his "secret," the "business" was not prosperous, money soon ceased to come in, and the concern collapsed, the investers losing every cent. Shortly afterward, in 1884, Friend came to this city, and at last succeeded in starting the Electric Sugar Refining Company, with a capital of $1,000,000, in 10,000 shares of $100 each. Several well known business men became interested in it, and soon the business was "booming." Why sensible men could be foolish enough to put money in such a scheme can be accounted for only on the ground that, like ordinary gudgeons, they could not resist the alluring promises of enormous profits. Friend and his wife had everything in their own hands. They were to remain in possession of the secret, and any attempt on the part of the company, their employes, agents, or lawyers to find out the secret, forfeited all their rights and any stock they may have held. It was also a condition that the request of the stockholders for the secret or any attempt to force it by legal process, should work a forfeiture, and, in case the professor died, the conditions should remain the same with regard to Mrs. Friend.

Of the 10,000 shares, 5,250 were owned by Friend, giving him a controlling interest; 2,793 were sold to 650 persons in England; 1,000, were given gratis to President Cotterell and Treasurer Robertson, and the remaining 957 were sold to people in this country, many of whom bought them for speculation. According to the general opinion, about $350,000 were paid into the Treasury as the proceeds of the sale of the shares. Of this amount, nearly $200,000 were advanced to Friend for the purchase of machinery; while about $45,000 were given him to be expended on the Brooklyn refinery, a ramshackle old building leased on condition that on the expiration of the lease, all the fixtures etc., should revert to the landlord. One of our city papers, however, prints a table to show that $928,000 were received for the shares sold, instead of the $350,000 admitted. It says all expenses were not over $170,000, so that $748,000 are still unaccounted for. Here and in England, the prices of the $100 shares ranged from $200 to $585, and it appears nobody really knows how many were issued, except, of course, the inside circle of conspirators. Friend died last March of a gallon-a-day-of-brandy, and was buried on Blizzard Day, and since then his smart, resolute widow, who has bought a fine house and farm at Milan, near Ann Arbor, Michigan, has been the sole possessor of the "secret." There is a dispute as to what this pretended to be. The officers of the company, in conversation and by circulars, stated that the process refined raw sugar direct from the cane to a higher standard than could be obtained by any other means; but no such claim is contained in the original contract, which merely says that it is a process for refining different grades of sugar at prices far below the market value thereof, making 90 per cent of pure sugar, with a loss of weight of not over five per cent.

From the first, Friend permitted no one, except his wife, to see the process in operation. When the refinery was started in Brooklyn, two rooms were partitioned off and lined with sheet-iron. When exhibitions of the process were made, all could see barrels of coarse sugar carted to the building; they were rolled into these rooms, which contained all the "machinery," chemicals, etc., and finely ground sugar of a superlative quality soon poured down through the chutes, into the bins in the room below, where the spectators were assembled. After Friend's death, his brother-in-law, Howard, did the work. A few days after New Year's, a cablegram from England announced that shares there had suddenly fallen from £80 to £1. Here there was at once a corresponding tumble. For some time previously the stock had been going down somewhat, but this instantaneous collapse was a thunder-bolt from a cloudless sky. The company wanted to begin a regular business, and asked Mrs. Friend to disclose the secret of the process She absolutely refused. Doubts as to the genuineness of the thing soon became certainties that it was a fraud. The secret rooms in the Brooklyn refinery were, after much trouble, broken open, and were found to contain some barrels of coarse, brown sugar, some of fine, white sugar caked in masses, a sugar grinding mill, and a few other things of no importance. The thing had been a gross fraud on the public from the beginning. The brown sugar, instead of being instantly refined, and poured down through the chutes as pretended, was set aside and the prepared white sugar was ground and sent down in streams to dazzle the admiring spectators. Only a small fraction of the $200,000 given Friend to buy machinery could have been spent for the few paltry appliances on hand, and only a small part of the $45,000 be claimed to have expended on the building, could have been laid out on it. Investigation shows that the affair was a swindle through and through. Neither the President nor the Secretary had invested a dollar in it. The previous President had been discharged because he had dishonestly pocketed the proceeds of 561 shares; but he wasn't prosecuted lest the disclosure should injure the credit of the concern. Everybody officially connected with it appears to have been "on the make." The outside stockholders on both sides of the water were gulled on all sides. Shares can now be had for $10 here, and for $5 in England. They are thought to be worth this for the chance of something turning up

There is a good deal of loose talk about criminally persecuting Mrs. Friend and her confederates; but it appears that there is little legal ground for such a course. The officers of the company, against some of whom grave charges of an ancient date are raked up, seem to have willfully deceived the public as to the claims made for the "invention" in the contract between the company and the inventor. The public, dazzled by the enormous profits promised by the company, blindly invested their money, and, as ought to have been expected under all the circumstances, have been beautifully swindled. There may be a process for improving refined sugar, as the samples produced are said to have been of a finer grade than can be made by any known process; but, if so, Mrs. Friend holds the secret, and resolutely refuses to disclose it. She also maintains that she holds the secret of a process, invented by her husband, for making ordinary refined sugar out of grape sugar. To this, she says, the company has no claim whatever.

What is the lesson taught to the public by the "electric sugar" gang? Simply that it is the sheerest folly to invest either faith or money in a business with which one is unacquainted, and whose workings are entirely in the control of other parties. There are many such blind pools, in mines, stocks, produce, etc., and farmers have lost thousands and thousands of dollars by them. To the lessons taught by these should be added that inculcated by the "Electric Sugar Swindle."

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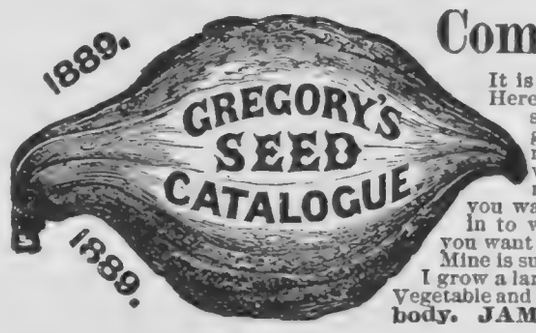

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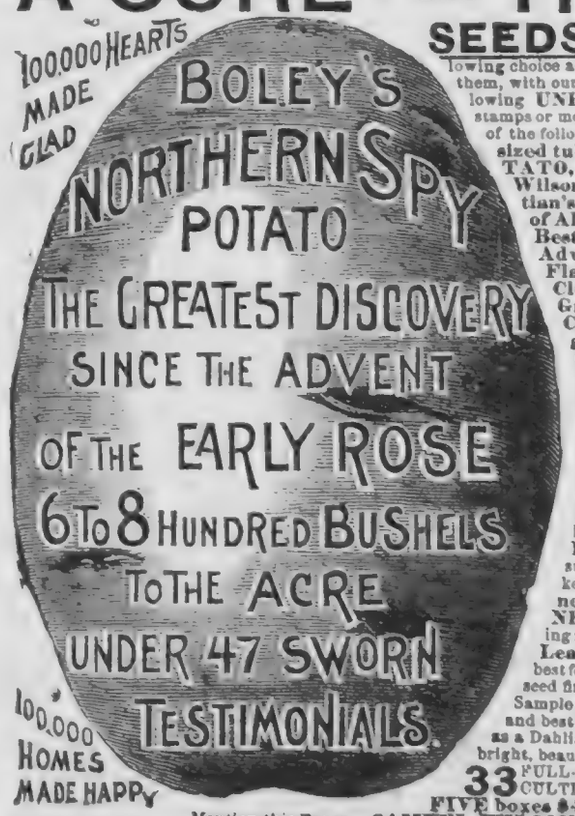

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ALL played out—Open-air concerts.—*Oneida Press.*

An inveterate smoker: Vesuvius.—*The Prairie Farmer.*

"DO YOU enjoy good health?" "Why, yes; to be sure; who doesn't?"—*Sanitary News.*

A SETTLER.—He: "That song always carries me away." She (pointedly): "I thought it would."—*Michigan Farmer.*

A MUSTARD plaster does not seem smart at first, but it makes its impression by hard, steady application.—*New York News.*

LITTLE CHARLIE: "Mamma, where do little fishes sleep?" Mamma: "In the bed of the river, dear."—*Drake's Magazine.*

NOAH was the first man who strictly observed lent. He lived on water for forty days and forty nights.—*Michigan Farmer.*

MISTRESS: "Why, Nora, how dusty the chairs are!" Maid: "Yes, mim, there's nobody sat on thim to-day, mim."—*Town Topics.*

THERE is no real objection, after all, to having men go out between the acts at the theater. The objection is to having them come back.—*Somerville Journal.*

HE: "That was an awful thunder storm last night, wasn't it?" She: "A thunder storm! Why didn't you wake me? You know I can't sleep when it thunders,"—*Town Topics.*

THE Power of Song: "I don't understand this at all. Ever since our Lina has been taking singing lessons the door bell is always ringing and people coming to ask if a dentist lives here."—*Fliegende Blatter.*

"BUT the worst of all 'isms," said a lecturer on sectarianism, "is pugilism." "I know a worse one than that," said a lame man in the back of the hall. "What is it?" "Rheumatism."—*Boston Courier.*

MISTRESS: "Mary, have you made the dressing for the turkey." Mary: "Sure, ma'am, an' I've made his pants, but I'm havin' hard work wid his coat, for it's no samestress I am at all, at all."—*Buffalo Courier.*

FARMER: "Hi, there! Can't you see that sign—'No fishing on the grounds'?" Colored Fisherman: "Co'se I kin see de sign. I'se cullid, boss, but I ain't so ignerant as ter fish on de groun's. I'm fishing in de criek!"—*Texas Siftings.*

LITTLE BOY: "I say, mister, do you know why you are like water?" Fat Man: "No, my little boy, I do not." "Neither of you can run up hill." Fat man chases boy twice around block, and whacks him with his cane—*Texas Siftings.*

FRIEND [who has been listening to a man kicking about his coal bill]: "I wonder how you can stand all the abuse you get!" Coal Dealer: "Well, I don't mind it. In this business you get used to being hauled over the coals."—*Lowell Citizen.*

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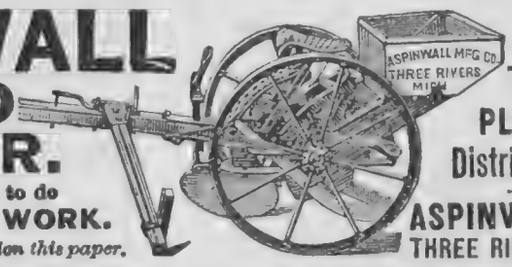

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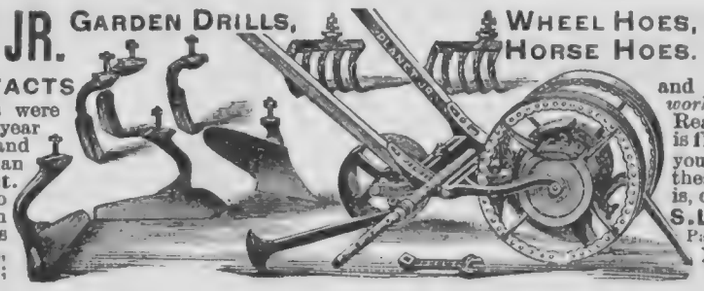

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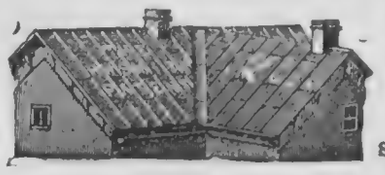

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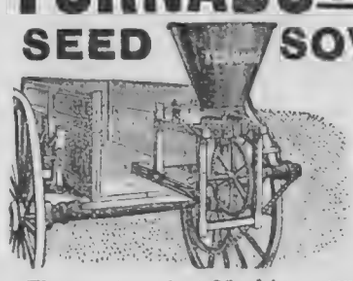

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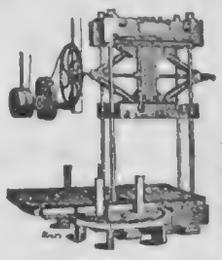

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A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII NO. 2035. NEW YORK, JANUARY 26, 1889. PRICE FIVE CENTS. $2.00 PER YEAR.

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The Herdsman.

PROFIT IN ANGORA GOATS.

HENRY STEWART.

THERE are some mistaken ideas current in regard to goats. It is generally supposed that these animals are exceedingly hardy and easily kept; that they subsist upon brush and coarse herbage that is not good for any other use; that they are not injured by dogs, and need no looking after except at shearing time; in short, that "they are all that fancy painted" in regard to an easy way of making money. All these suppositions are baseless. A goat is very much like a sheep, except that it is more enterprising, restless and erratic, and it needs quite as good food and care to be a source of profit. The only places and circumstances in which I know of goats being kept profitably, with little trouble and expense, are the islands of the Pacific coast where the modern Robinson Crusoes live surrounded by their flocks and the ocean, which makes the only fence that can restrain these "birds of freedom"—as one might very well call them from their flighty habits and high roosting proclivities. I have known them to get upon the roof of a barn-shed and bask in the sun, and at night to choose the same gently sloping roof for their sleeping place. Perhaps this was to escape the prowling dogs, which are as apt to make mutton of them as sheep. Goats are quite as easily destroyed by dogs as sheep are, although they are better able to escape from attack by their superior agility. They are equally subject to the diseases of sheep as these are. Scab, foot-rot, liver-rot, and the ordinary troubles which affect neglected sheep, attack goats, and these animals require quite as much care at all times as sheep do, so that the charge of a flock of goats is no sinecure, unless one could have a moderate sized island for his pasture, where he could be "monarch of all he surveyed" with none his "right to dispute." But the sea should be broad enough to prevent errant dogs from swimming over in pursuit of their favorite sport.

But, as to profit, there is profit in any industry if it is only properly pursued. The fleece of the Angora goat is a valuable staple used in American factories for the making of braids, fringes, and lustrous goods which are generally known as mohair, and the wool generally brings more than the fleeces of the long-wool sheep. Sixty cents a pound is about the average price, and a good fleece will weigh eight pounds. Goat's flesh is as good as mutton, and the kid makes excellent lamb. I have seen and eaten lamb which had hairy legs, but, keeping my own counsel, no one else had any suspicion that it was not choice South Down. Nevertheless, goat mutton and kid lamb are not free from a certain natural prejudice dating back to primitive times when the goat was supposed to be a wicked animal, and most suitable to bear vicariously the sins of a whole nation, besides being made the type of the unregenerate and vicious lost souls. Strangely enough, this bad name still sticks to this useful race, and it is undoubtedly a bar to the fully profitable keeping of these really innocent and valuable animals.

Goats may be made profitable for cheese-making. The famed Roquefort cheese is in part made of goats' milk. There is a certain demand for them, for milking, by residents of suburban localities, and for the so-called all-purpose "dairy animal;" it is certainly much in their favor that they yield a comparatively large quantity of rich and sweet milk, a valuable fleece, and, quite possibly, two pairs of kids in the year, and at the end they make good mutton. No general-purpose cow (if she is ever found) can do all this. Goat skins, too, bear a high price and are in demand for the manufacture of morocco and kid leather, also for glove leather. In fact, the goat has more valuable uses than any other domestic animal, and if a flock is well cared for, can be kept in due restraint, saved from dogs, and, provided with any kind of nutritious pasture—the better the more desirable—it would be more profitable than sheep, were it not for the prejudice against the use of its flesh for mutton. An excellent illustration of a pair of Angoras will be found at Fig. 13.

[As is the case with many other products, fashion has much to do with the price of mohair. We are informed by dealers here that the current price now paid is not more than half that now given by Mr. Stewart.—EDS.]

A PAIR OF ANGORA GOATS. Fig. 13.

The Vineyard.

THE "GENEVA" GRAPE.

(*See page* 50.)

A SPECIMEN of this vine was sent to the Rural Grounds (No. 300) in April of 1886. Somewhat crowded by the Lady upon the same trellis, it has not as yet fruited. On Sept. 23 we received a few bunches from R. G. Chase & Co., of Geneva, N. Y., a photographic illustration of one of which we present at Fig. 14, showing an average-sized bunch. The berries are of medium size, translucent, and of a pea-green color. The skin is quite firm, the pulp tender, and the seeds separate freely. The grape is juicy, sprightly, pure and pleasant. The seeds are medium as to size and number. The vine is said to be vigorous and healthy, ripening its fruit with the Concord. The Geneva is one of Jacob Moore's seedlings from the wild Labrusca, crossed with Muscat of Alexandria, the product being crossed with Iona. Its hardiness and adaptability to various sections can be ascertained only by trial.

Horticultural.

THE WEEPING EUROPEAN ASH.

(*See page* 51.)

WE now record our experience with this tree for the first time. A single specimen was purchased 14 or 15 years ago. The stock was about six feet high, on which the pendulous variety was grafted. Its way of growing might be called lawless. One branch will grow directly downward; another directly upward, while others will shoot out in all intermediate directions. If we desire to cultivate the drooping habit, all of the rambling shoots must be cut back. The tree then in a few years becomes a rounded mass of branches and foliage, as shown in our photographic illustration Fig. 15. This picturesque tree is now about 18 feet high, with a spread of branches at the ground 25 feet in diameter. The trunk is nininches in diameter, the first branches issuing therefrom being

about eight feet high. The branches and foliage form, within, an oval arbor in which a dozen persons may socially gather and enjoy its shade. This tree needs constant pruning to preserve a symmetrical shape and also to remove the branches killed every year by the borer, which has penetrated nearly every part of it. Fig. 16 is a photographic illustration of the same tree, taken in early spring.

On the whole, we don't prize this tree very highly. Its roots extend to a considerable distance in every direction, growing near the surface and often extending above it. Again, the leaves are so late in starting that one might reasonably suppose the tree quite dead, as he sees the leaves of other trees about it well advanced.

Rural Topics.

HELP!

ON THE FARM; IN THE HOUSE.

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A Most Important Discussion

OPINIONS FROM ALL SECTIONS.

QUESTIONS.

1. *Where do most of the farm laborers in your section come from? What nationality? What proportion are American-born, and how many of them lay up money and finally farm on their own account?*

2. *When and how are they secured? What wages are paid? Are regular contracts signed?*

3. *What arrangements are made about doing chores and Sunday work?*

4. *On the whole, what treatment is fairest for the hired men met with in your section?*

5. *Which is the better business—to hire a cheap man and try to save wages, or to get as good a man as can be secured and pay him his price?*

6. *Has the experiment of trying to break city boys into farm work ever been tried in your country? If so, with what result?*

FROM T. B. TERRY.

MOST of the farm laborers in this section are either Americans or Germans. Some of the best of them are saving money to get into business for themselves; but it would be difficult to tell what proportion. We have had two, within 20 years, who staid with us four or five years, and saved their wages carefully, and were men with the elements of success in them. They were both German. One had nearly $1,000, when he left us. All others that I now think of were of the class that live as they go, or spend as they make.

Our help here is generally hired in March, for the season (eight months) or a year; mostly for the former time. At that time there are generally plenty of them looking for places. From $15 to $20 a month were paid for the season last year. It is a good plan for one who hires by the year, to hire in the fall, and then he has many to pick from and can know the reputation of his men. I generally engage one at this time for the next season, when we are in need of a new one. If one keeps a little watch through the summer he can know where there is a good one. A neighbor hired a young German who came along one spring. In riding by I could not help noticing that his plowing was perfect, and that he worked as though he was interested in accomplishing something. When my neighbor was through with him, I hired him, and kept him season after season. I paid him $27 a month for the season of 1887, and told him he should have more in '88; but he was taken sick and died in June. It was like parting with one of the family. Men who work out should learn something from the above. The faithful man will soon be known; but farmers do not always pay such men as they should, and thus encourage them.

I never knew a contract between hired men and employer to be written out and signed. It is thought to be one-sided. The man can hold you; but if he has his money you can not hold him. If you hold something back, it would make him feel as though he was not trusted, which I do not believe is the best plan. Our hired men as a rule are as honorable as their employers. Treat them like men, and there will very rarely be any trouble. This is a dairy section, and men are expected to and do milk and do necessary chores on Sunday. They can find no fault, for they know before hiring what will be expected and what is the common custom.

"On the whole, what treatment is fairest for the hired men met in your section?" One should tell them, to start with, that he expects them to be as gentlemanly as he and his sons are; then each should be taken right in as one of the family. They should not be made to sit in the kitchen, or be otherwise treated as though belonging to an inferior race. They should be paid well and promptly, and encouraged and aided in saving their money and investing it safely. They should not, as a rule, be required to work more than ten hours a day. They should understand that you expect a day's work done; and that when it is done they can stop.

They should be encouraged to wash and slick up a little, after their day's work is done. A bath tub with water handy should be found in every farmer's home, and the hired man should be made to feel free to use it every night during the heated term. He will do more work the next day. Then he should be furnished with papers and books to read, according to his education, the same as the rest of the family.

There is in this town a farm hand whose employer has several times told me that he was a number one hand, and he thought everything of him. The farmer works his men a good deal more than ten hours a day.

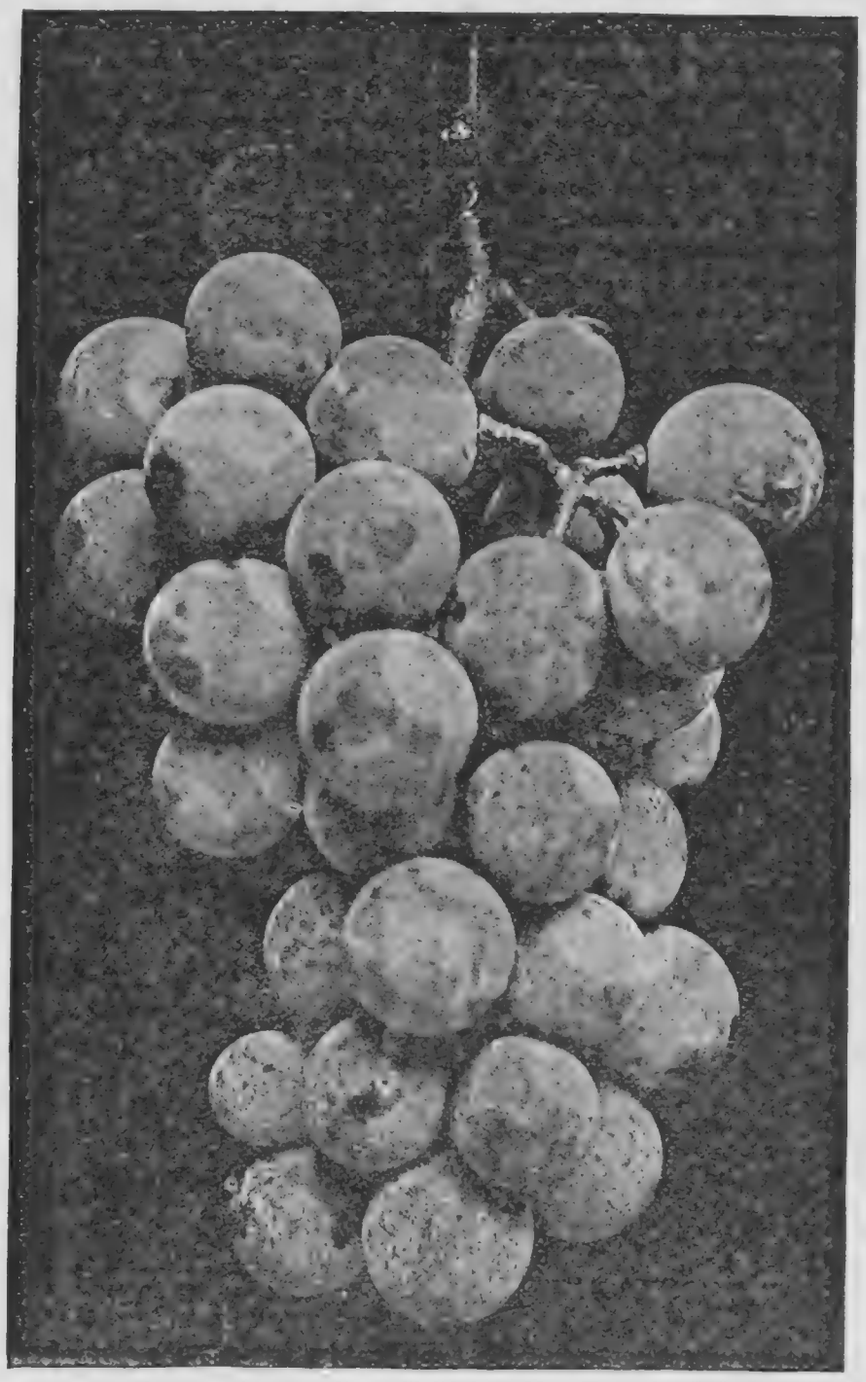
The other day this valued farm hand told me (of course not expecting it to be repeated) that when he worked in a place where he knew he must keep on the go for 15 hours or so a day, he worked accordingly; that if he knew he could stop at the end of ten hours, as a rule, he would much sooner do the same amount of work in the fewer hours; but that no man could drive him to his utmost in speed and hours both; if he was cheated on the time he would be even with his employer on the amount accomplished.

The writer became satisfied not only of the truth but of the justice of the above years ago, and his men know they are to quit at six o'clock. I couldn't be induced to go back to the old way. Where men complain because they cannot get as good help as they used to, whose fault is it? There are plenty of good men; but the best go to the city and get better wages and fewer hours to work. The remedy seems plain; make the work and home life more pleasant and pay them better.

Where one works right along with his man, all the time, it may sometimes be best to hire a cheap hand and save on the wages. The saving will depend somewhat on the reason why he is cheap. I have known boys of 16 or 18 who did not expect full wages, that I could get along with nicely if right with them most of the time. They were strong and willing, but not experienced. In this way $50 might be saved in a season's wages. Fifteen years ago I might have taken the boy; but now give me, every time, the very best man (from 20 years old to 25 preferred) that can be found, who will go ahead and take the blunt of the work and expect me to take the lighter jobs, as I have to do the thinking and planning. Then I would always pay a man his price, or not hire him. I would give him no possible excuse for not doing his best. It is the right thing to do, and then it pays him and you too. If one is small with his employés he shouldn't expect them to be angels. Hired men are very human as well as the rest of us. Of course, the "golden rule" won't always work; but it is the best rule we have to go by, and when one fails with it, after having done his share, his own conscience is unsoiled.

City boys now and then come out here and get a place. I have tried them. If they want to come I would as soon have one as a country boy of the same age and size, except that the country boy would have a little more farm knowledge to start with. It is more important what the boy is and what he likes than where he came from. I have known for 46 years, one boy who was raised in town and city, but had a love for farming. He found his way on to a farm some 20 years ago, as green at the business as any boy could be, and he couldn't be hired to go back. Yes, there are city boys who will make good farmers, just as there are country boys who cannot be kept on the farm. Most of the farm hands in this vicinity are unmarried men. There seems but one way to do—we must take them into our home. Selfishly, I should prefer not to; but as it seems to be a necessity, let us do the right thing by them, and treat them as brothers or sons while they stay with us.

Summit Co., Ohio.



THE GENEVA GRAPE. From Nature. Fig. 14.

FROM T. H. HOSKINS, OF VERMONT.

Our hired men are mostly sons of neighboring farmers; but many come from the closely adjoining province of Quebec. Many of the latter are French; but I prefer the sons of the English or Scotch settlers in the Eastern townships. Many of the French are good hands, and the only objection to them is the inability to exchange ideas clearly. They usually lay up money. Several of my young American hired men have done so to acquire an education, and have gone through colleges, literary and agricultural. The Canadians think less of this, and save to get farms for themselves. I have had two men working for me, this year, who are paying off debts on their farms which are let on shares while they do this.

The men apply personally. It is known that I pay well and promptly, and I get the pick of help. I have usually paid about $25 a month for eight months, with board. Hands who have families and board themselves get about $35; or by the day, $1.25.

It is understood that all necessary chores shall be done at all times; but otherwise all legal holidays are allowed. One of my men took the first prize in a public running match, last Independence Day; but couldn't hold the greased pig.

The above is satisfactory, as to wages. We have large lumber mills close by, which pay about the same prices for unskilled labor; but the best hands prefer farm work, going into the woods in winter. Some farm help is kept the year round, but most of our farmers let their men go on December 1, or earlier.

There is no such thing as a cheap man. You must either pay full wages for a capable man, or hire an incapable man at a serious loss. Generally speaking, these "cheap" hands are worth considerably less than nothing. They do not often ask me for a job. I no not want city help! Of all—well, condemnable help, the city-bred boy or man is the worst of all nuisances on the farm. Such people know all games to "beat" their employers, and practice them to the full limit of their hope for his endurance. Their example is demoralizing to every one that comes in contact with them, even so corrupting their employers as to make them desire to commit murder several times a day. I had one, once, —a waif from the London market gardens. He knew his work—London fashion,—but would not learn any American ways, or obey any instructions different from his own Henglish notions. I hired him for the season, and paid him for it, but let him go, gladly, before summer was over. As for the city boy, he is only just a little worse than the city man, and our village boys, whom we sometimes hire, are more plague than profit. Doubtless something might be made of this class of help in the cultivation of land, but only under military or reformatory discipline.

On the general question of farm help, I believe in paying good wages to good men; but under present conditions it is hard on the plain common farmer, far from his market, and in competition with others elsewhere with more capital and skill, and better railroad rates and facilities. The small farmer is under the harrow in New England, and flies westward, only to find it rather worse there than here. What is needed is, first, more knowledge of our business. Next, we want more capital to do it with to advantage, either our own, or hirable at a low rate of interest. Then we want the railroads to help us, by putting us directly in connection with the consumers of the large towns and cities. Few of us grow enough to fill a car at a time, and in less quantities the freights and commissions take all the profit. Most of our small northern New England farmers have relatives and friends in the manufacturing places, and could supply them with the produce they consume, if there was such a thing as a "freight express" that would carry the goods to them at a rate that would not take all the possible profit. If such a course of trade could be established, a great improvement would soon be seen in our farming; our farmers would brighten up and enlarge their operations, and the people in the towns would be better and more cheaply supplied For lack of this many are eloping to the West; and the rest, who stay at home, hardly know how to make anything at the present cost of labor and price of products. The clearest solution to my eyes is higher farming and much larger and better crops, enabling the farmer to ship direct by the carload. This, however, is difficult from lack of knowledge, capital and faith; and so our agriculture languishes as a

business; although as a mere means of getting a living it is probably no worse, but rather better than the farming of 40 years ago. But the living of 40 years ago would be comparative poverty now, and in fact it would be in many ways, impracticable to the farmer of to-day. FROM ILLINOIS.

There is no fixed rule in regard to farm laborers in this section. Frequently there are considerable variations in adjacent counties. Here most of the farm laborers are American-born with many Germans and a considerable number of other nationalities. Unfortunately very many save little of their earnings; too many of them are almost necessarily idle during the winter. A fair number, I am glad to say, do save money and become tenant farmers here or land-owners in the West.

Perhaps one in three of the hired laborers is engaged "by the year." Most of the others, aside from extra help for harvest, are engaged about March 1st, to work until "after harvest" or after "corn-husking." From $16 to $18 per month with board and washing are common wages. When there are small tenant houses occupied by married men, the money wages are frequently $25 per month. When the laborer is in any sense a foreman, or is employed for special work, the wages may be more. Written contracts are the exception rather than the rule.

The regular laborers are expected to do or help do the "chores," and the necessary work on Sunday. My own recent experience and most frequent observation are affected by closeness to towns of abont 10,000 inhabitants, furnishing a large supply of laborers, especially for "day work." On the University farms our custom has been to employ two men with families, furnishing them houses, gardens, milk, etc., expecting them to be responsible for feeding stock, and other "chores." Usually they have given board to other laborers. We have paid $28 per month. Contrary to the usual custom here, we require but 10 hours' field work a day; in winter it is less in practice. Our men are paid in full each month.

Generally speaking, a fairly intelligent, energetic man can do better than to remain a farm laborer long. Two or three years are as long as we have usually kept the better class of men. Some who have worked for us are now doing well as farmers, or in other business. Some of the best laborers we have had, have been young fellows of 18 or 20.

When there can be direct and close supervision, I believe that best pecuniary results will come from insisting on following out explicit instructions closely, rather than in leaving anything to the judgment of the laborer. I prefer having men of some intelligence, interested in their work, and encouraging them to use their own judgment concerning details, but in practice there are some objections to this plan. Where there is but one hired laborer, payment of an extra price to a proved good man is wise. Where there are several nominally under like conditions, there are obvious objections to differences in the rate of payment. Usually in such a case I would think it better to get rid of the less desirable men than to pay them a less rate.

We have had some rather satisfactory experience with young men or boys with no previous knowledge of farming, or even with our language, but this is exceptional.

So long as there is a good prospect that a good man can do better in some other way than by working as a farm laborer—and I hope this may long continue to be the case—we cannot expect long-continued service of intelligent men free to choose the place and kind of labor. So long as there remains so great a disproportion in the quantity of labor required on the average farm in summer and winter, farm laborers, as a class, will be at a disadvantage. In so far as it is practicable, it seems to me in every way desirable to try to furnish work throughout the year to desirable men, rather than compel them to be idle and an expense during the winter, or, at the best, to seek employment elsewhere.

University of Illinois. G. E. MORROW.

CENTRAL NEW YORK.

In regard to farm help hereabouts, they are mostly Germans or Irish. I could not say how large a proportion are American-born. Some lay up money; many spend all as they go. Usually a man comes along and is hired. Wages vary from $10 per month and board to $18, or $20, the amount depending on the time of the year and the length of service. Written contracts are not common. All are required to help or do the chores on the Sabbath. All are well treated, as a general rule. Some men at cheap wages, are better than more expensive ones; first-class men are cheaper at good wages than poor men at any price, but such men are the exceptions, not the rule.

I have tried the city boy, but the trial has always resulted in a failure. There is a decided dearth of good farm help. It isn't that the men are unable to do the work, but they won't. I am now in want of a good farm hand, to whom good wages would be paid, and a permanent place is offered, but a man with a pipe in his mouth won't answer. In regard to the city boy, a lad of 14 from a village came to my farm in 1887 for his vacation outing. He soon learned to harness a horse and rake and ted hay as well as a man, also to load hay. When he left he said: "As soon as school is out next June, I shall start for Rome for two months' work on the farm." He came this year and was valuable, helping in the hay and harvest fields, tedding, raking, loading hay and grain, and also mowing away the same, better than some men. A lad of 10 years came with him the past year; both were willing workers and helped in the hay field, thus showing what some boys can do, if they try. J. TALCOTT.

Oneida Co

WEEPING EUROPEAN ASH. Summer View. From Nature. Fig. 15.

spend all they earn. Most of the white laborers are satisfied if they can rent a farm. Rarely does one buy a place. The renter will make more money than he would if he owned the land. We can generally hire all we need at our doors. They come to us to hire by the year. We pay for a foreman $12 to $15, and to ordinary farm hands $10 a month, and furnish a house and garden, and allow them to keep some poultry and a pig and give them 300 to 400 pounds of pork, 12 to 13 bushels of corn and five to 10 bushels of wheat per year. Variations in the quantity of these mark the difference in wages of the foreman and ordinary farm hands.

Contracts are definite but verbal. One man is paid a dollar a month extra for doing milking and chores. All take turns in doing Sunday work.

The above is the treatment *all* receive. I never heard of a hired man here failing to get all he bargained for or being turned off without good reason. The men occasionally leave in the middle of the year to the damage of the employer, but the latter has no redress even under a written contract, as the law secures to the laborer a good deal more property than he is ever likely to own.

Theoretically, there is no doubt that it pays me better to hire a man at $15 a month who can earn $15 than to hire one at $15 who can earn only $10. Practically, inequality of wages is inadmissible; the laborer himself will not allow it. Here, as elsewhere, the lazy and noisy ones rule the quiet and industrious, and will not allow them to do more than an ordinary day's work. Nine times out of ten the laborer is demoralized by giving him more than the usual wages. The tenth man who can earn better wages and has moral force to earn them in spite of social influence, will not remain a farm laborer. He will soon either rent or own a place.

I know of no one here who has ever tried city boys. Elsewhere I have heard that city boys taken from the class of mechanics and small shop-keepers have proved the best of workers. I think, on the whole, we have the best system of hiring farm labor, viz: hire your men by the year and give them a home. Let the young men board at home till they get married.

The crying evil of the times here is "the servant-girl question." The supply of good girls is utterly inadequate to our needs. In this the city ought to help us, but it does not.

Easton. C. F. EASTMAN.

FROM WESTERN NEW YORK.

During a life-time of nearly 60 years on the farm on which I now reside, "the hired man" question has been regularly discussed as the season approaches for each year's farm work. According to my earliest recollection, those employed on our farm were young men of Puritan or New England stock, sons of the neigboring families and they were well skilled in all the requirements of the farm work

WEEPING EUROPEAN ASH. From Nature. Spring View. Fig. 16.

FROM MARYLAND.

Most of the farm laborers of this section were born here. Three-fourths are blacks and one-fourth native whites. The negroes hunger and thirst to own a house and piece of land, and where it is possible for them to purchase, they do so at any sacrifice. Without some direct motive for saving money, they of those days. As a rule, they were intelligent, industrious, of temperate and regular habits, and are to this day pleasurably referred to by the oldest farmers as models for hired men of the period. As time passed on, help of this kind gradually gave place to those of foreign birth, and the help of this locality for a time con-

sisted largely of Welshmen, who came in large numbers to this country about 45 years ago, and settled near Utica, Oneida Co., N. Y., and were subsequently employed on many of the farms of Western New York. They were, as a rule, sober and industrious, and many of them were enabled by their habits of economy to secure homes of their own and a competency for life. The above would truthfully apply to their English brethren who were also employed at that time to a considerable extent on the farms of this county. But this class of farm laborers has long since disappeared, and the German element is now and for nearly 30 years past has been the predominating help on our farms. Those now employed are mainly from the adjoining counties of Erie and Wyoming, appearing each year usually during March, visiting the different farms to hire for the season a period of about seven months, or until the regular farm work is completed; in either case the season's work is considered to begin the first day of April.

The wages paid range from $15 to $22 per month, according to the age and efficiency of the applicant. But it is considered good policy and money well expended to pay two or three dollars more per month to an experienced and reliable man, one who is fully competent to successfully manage and care for the various implements now used on the farm, who is conscientious in his work, with principles of right and justice firmly established, and a suitable companion for our sons while engaged in the farm work But it is lamentable to add that comparatively few of those employed for farm work are overburdened with the above virtues, or by their conduct illustrate them the season through. When two or more hands are employed, it is often good economy to have one of them younger and with less experience than the other, as there are many things he could do as well perhaps as could a more expensive hand.

Breakfast is served on most farms at 6 A. M. Previous to this, the cows have been milked, the horses groomed and harnessed, and other necessary chores cared for. About an hour and a half are taken for dinner, and, contrary to the old time custom of serving supper at 5 P. M., and then resuming field work until the time for night chores—the work for the day being finished at sundown, or nearly so—the work for the day now, on nearly all farms, ends at 6 P. M. Supper is eaten and chores are cared for afterward, often affording the men nearly an hour's recreation before sunset.

The above applies to those who board, lodge, and have their washing done in the farmer's family.

Many farmers have comfortable and convenient houses expressly for those men who have families, who furnish their own board and lodging. They are hired for a stipulated amount for the season of seven months, or by the year, including certain privileges, comprising house rent, use of garden, keep for a cow and fuel (fire wood) for one year's time. While the outlay for help of this kind is not materially lower than that for other men, it is generally admitted that owing to their possessing a greater knowledge of farm work, and to the fact that their "wild oats" have already been sown, they are, as a rule, more trustworthy and valuable. This, taken in connection with the fact that the labor and annoyance for the housewife are materially less, is sufficient to recommend this mode of hiring hands wherever circumstances favor its adoption. Sunday work, consisting of the chores usually done on week days, is considered obligatory, on the part of the farm hands.

Argeements relating to time, wages, chores and other minor matters on the farm, are almost universally verbal. Indeed written contracts are the exceptions, and however much we have at times realized the importance of adopting this method, I have never had a formal contract drawn up and signed, nor do I know of any of my neighbors who has done so. It is needless to add, however, that the adoption of this just and business-like manner of hiring help would tend much to lessen the unpleasantness and dissatisfaction afterwards arising from misunderstanding or failure to fulfill the conditions of an agreement.

It rarely occurs that help from the cities is employed on the farms. A common prejudice seems to exist against employing people of this character, owing, mainly, to the fact, no doubt, that the applicants are inexperienced, and, as a rule their general appearance indicates their unfitness for active farm work. Occasionally, however, there are notable exceptions. I have now in my employ a young man nearly 17 years of age who recently came from New York City, who by diligence, good behavior, and the desire manifested to comply with all reasonable demands, is fairly in the way of making himself indispensable to those by whom he is employed. In the same way comfortable homes and a fair competency can be secured to those manifesting the same spirit, who are now struggling for a bare existence in our large towns and cities.

Genesee Co. IRVING D. COOK.

FROM MICHIGAN.

By far the larger number of our farm laborers are the sons of small farmers in the vicinity, and are mostly American-born, though frequently of foreign descent, mainly German or Dutch. Probably 50 per cent of them save money, and eventually buy or rent farms for themselves. Those who rent are naturally increasing in number as the country grows older, the number who buy correspondingly decreasing. What might be called the professional laborer is only beginning to be a factor in the community. Men of this class are mostly limited to those who are married and day laborers.

Regular help is engaged by the month, usually for a period of nine months, beginning from about March 1. Extra help is secured by the day as needed, and both classes are employed without a written contract. A few hire for the year; but wages are paid on a monthly basis. The average wages are $16 to $18 per month, or $1 per day with board, or $1.25 per day without. These figures are for ordinary labor, about 50 per cent. being added for haying and harvest. Custom varies as to "chores," but, as a rule, wherever such duties devolve upon a man through the week, he expects to discharge them on Sunday.

We are fortunate in still being able to secure young men who are sober, industrious, honest and reliable—men who are working for an object, and to that end, labor for the best interests of their employer. This is what every one should do, and while such men are to be had I would have no others Such a man is a gentleman and should be treated as such, and may be safely made a member of the family. The only doubt or risk in the matter is to be sure he is that sort of man, which may only be known on trial.

I believe in stating the case plainly to a new man; in substance, that hiring him is strictly a business transaction in which he is expected to work for my interest; that I shall willingly pay him the highest wages, as I expect the most valuable service, and that no other will be satisfactory. As a protection to both, it should be fairly understood that when either party for any reason becomes dissatisfied, the agreement is to terminate. I want no unwilling services, and besides, I always reserve the right to be the judge whether the man is what I need. While I should not exact an agreement of him to be a gentleman, I should certainly discharge him if he proved to be anything else. Let it be plainly understood that quantity of work performed will not be the measure of efficiency, but that the quality must be of the best. I have seldom seen a man that did his work well who did not perform a fair amount of it. With a different class of help these plans would need modification, but this has been the custom at our place, and many of the best of men have rendered continuous service under it till ready to engage in business for themselves. Our best laborers are drawn from the same class of people as their employers, and are in every way worthy of considerate treatment.

City help has not been tried, and I have already stated my views upon cheap labor. I never employed any yet that did not prove an expensive nuisance. Inefficient help causes much weariness of the flesh and vexation of spirit, and a vicious man is an unadulterated curse. E. DAVENPORT.

Ingham Co.

FROM LONG ISLAND.

The problem of securing farm help is quite a serious one for both in-doors and out. Our help is mostly German with very few Irish, and a few negroes. Perhaps five per cent. are native whites of American parentage; 20 per cent. are born in this country of foreign parents; three per cent. are colored and the rest are foreign-born. Rarely one saves anything. I know of but three or four who are working places on their own account, and two or three who have built on lots and own their own homes, but still work out.

Yearly help is secured from the neighborhood, mostly men who have long lived there. Only extra for summer is secured from the city, or drifts along and is tried for a few weeks. If satisfactory, the hands are kept and may become permanent, otherwise they tramp on. Wages $10 to $18 per month with board; good day hands $1, without board. Usually no contracts are required. If several hands are employed, they do the Sunday chores in turn, or they do the chores morning and evening without extra pay if they are regularly hired; a man that will not help in doing chores is not usually kept long. The hands should be treated as men. The "golden rule" has always served me best. My head man has been with me 23 years next May without a quarrel. I don't like change and I change only for cause. Good men are always the cheapest, but are hard to get and poor ones will ask the same terms as if they were good. As in the work-shops, it is hard to scale prices. City boys are but little thought of, and when they are brought out here, they soon drift back to the city after the novelty has worn off country life. We are too near their old homes, for they can walk back in a day. I know of none that have been out here two years. H.

Creedmoor.

FROM KANSAS.

A majority of the farm laborers in our section are colored After them in point of numbers come American-born whites. Comparatively few are foreigners—Germans preponderating. Only a small percentage lay up money, but still some do. A number of tenant farmers among us began life as farmhands, and a few of our proprietary farmers started from the same level.

The supply of help with us is fully equal to the ordinary demand, so that no effort is needed to secure it from abroad except through potato digging, when it has to a small extent been imported from Kansas City and Lawrence. Wages are about $16 per month and board for eight months; day hands get from $1 to $1 50 per day, according to the pressure of work in the neighborhood. Contracts are rarely signed. Monthly hands generally have some regular "chores" assigned them, which they do Sundays as well as week days.

City boys have sometimes been brought out for extra busy times, but no persistent attempts have been made, that I know of, to break them in to farm work. The small experiences some of us have had with them have not disposed us to an extended acquaintance.

The question is not whether it is better to hire good men or poor at their respective prices, and will not be till there are enough good men to go round. My father used to say the "good hired men have farms of their own"—a rather extravagant statement of what is, after all, a general truth. And the really "capable" men who have failed on their own farms, can still do better than take the small wages that farmers can afford to pay them. We are left to do the best we can with the residue. Many of the perplexities of their employment and occasions for their short-comings might be avoided by simplifying their duties.

On the average farm, the hired-man is put at so many and such diverse jobs in the course of the year, that to do them all fairly well he needs to have an acquaintance with more processes and a familiarity with more details than it is reasonable to expect of him. Perhaps, too, he would do more if he were not so often shifted from task to task. The loss of time and effort imposed by the short pulls and frequent changes of ordinary farming is too often unjustly charged to the hired man's inefficiency. The farmer is, in a sense, a manufacturer, and he can, as it seems to me, with great profit to himself, imitate, as far as practicable and much farther than is commonly practiced, the method by which manufacturers in other lines secure fairly good service from unskilled and indifferent laborers; viz: by work within narrow limits. It is advantageous, also, to concentrate as far as possible, all the help on the farm on one thing at a time under the direction of the farmer himself or a competent foreman; then the shirk can be held to his task, the ignorant instructed, the careless prompted, the talker silenced and the whole gang watched and pushed.

Edwardsville. EDWIN TAYLOR.

(*Continued on Page 57.*)

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.

BONE AND WOOD CHARCOAL AS PURIFIERS AND DEODORIZERS.

V. L., Caledonia, N. Y.—Will a water filter made with what the seller is pleased to call animal charcoal, free the water from typhoid germs any more than vegetable charcoal? Will either do it?

ANS.—Animal charcoal has a mechanical as well as a chemical effect when used as a filter. Its mechanical effect is to catch and retain among its particles all suspended matter so that fluids passed through a mass of finely powdered charcoal flow away clear of this matter. Its chemical effect is due to various properties it possesses as follows: it is extremely porous, a cubic inch of it having a total surface, within and without, of about 100 square feet. Porous bodies like this have the power of occluding and condensing gases to a large extent, and oxygen is thus absorbed by charcoal to such an extent that it will sometimes spontaneously take fire and produce combustion, by the effect of the oxygen condensed into its pores. Animal charcoal is more porous than wood charcoal, because of the very intricate cellular structure of the bones of which it is made. Consequently liquids passed through a mass of charcoal are chemically purified by the oxidation and destruction of the organic germs which may be contained in them, and tainted meat is freed from its bad odor in the same way, and on account of the difference mentioned, bone charcoal is more effective than wood charcoal. But charcoal is not an antiseptic, but, on the contrary, an active agent of decomposition by oxidation; yet at the same time it is a deodorizer and disinfectant, because it absorbs and destroys by the same oxidation the new, malodorous products of decomposition as fast as they are formed. It might be interesting to mention here, that the purifying effects of common earth and the more active properties in this direction of black vegetable (carbonaceous) soils are due to the same porosity, aided by the presence of finely divided carbonaceous matter (a sort of charcoal) in it.

THE PECAN TREE.

C. E. P., Ocean Springs, Miss.—I have about 200 pecan trees five years old from seed. They are from four to seven inches in diameter. Will their nuts be like those of the trees from which the seeds were obtained? Would it pay to let them bear first, and then gradually graft or bud them with better sorts? Which would be the better—grafting or budding? What is a remedy for a greenish-white worm that destroys the pecan buds.

ANSWERED BY T. V. MUNSON, OF TEXAS.

Pecan trees grown from nuts taken from trees growing in the vicinity of other pecan trees or of pig-nuts (Carya glabra) will be more or less mixed with the latter. But if they are from nuts from isolated trees, most of them will closely follow the parent in characteristics. The pecan is what the botanists term monœcious. Every tree produces both the male and female flowers separately, and the pollen of a tree will either fertilize its own pistillate flowers, or, still better, those of other trees. At blooming time the pollen flies long distances in the air and may fertilize the pistillate flowers after being wafted for hundreds of yards or rods. Generally the experience of those who have planted fine pecans collected in the woods, is that among the seedlings there will be one tree in 100 or in 500, that will produce nuts as fine as those of the parent tree. If the nuts planted were extra fine, I would let the trees bear, and then top-graft all the inferior ones with the finest; but if the young trees are only one or two years old, and wood of very fine kinds can be obtained, I would graft the seedlings. For the greenish-white worm that destroys the buds, although I have no definite knowledge of it, I would, on general principles, try spraying the trees with the kerosene emulsion or Paris-green mixture. This would certainly destroy the tent caterpillars which do a great deal of injury to the pecan.

TOBACCO WATER FOR INSECT PESTS.

L. E. A., Smyrna, Del.—1. Can tobacco water be made strong enough to injure foliage of any kind? 2. How much tobacco will it require in a barrel of water, and how long must the mixture stand before it is strong enough to use? I want to try it on rose-bugs and the flea-beetle this coming season.

ANS.—1. Yes. But much depends on the sorts of plants, also on the age or consistency of the leaves. 2. Use a bushel of stems to a barrel of water. But here, again, much depends upon the strength of the tobacco—for it isn't all equally strong—and on the age and condition of the leaves on which the infusion is to be used. We generally steep it over-night, and in this way extract most of the strength from the tobacco; but if it is required for immediate use, we will get pretty strong juice in half an hour, or if we use boiling instead of cold water, in 10 minutes. When we have occasion to use large quantities of tobacco water, we fill the barrel with dry stems, then fill up with water and let the stems soak over-night. In the morning we use this

black water diluted with three times its bulk of clean water, for roses, chrysanthemums, and cherry and plum tips, being guided, of course, by the condition of the subjects operated on.

A GOOD AND CHEAP RATION FOR MILCH COWS.

C. H. B., Carman, Minn.—What is the best and cheapest ration for butter, made out of the following feeds? Wheat at 50 cents per bushel; oats, 35 cents; barley, 30 cents; shorts, $13 per ton; bran, $11; wild slough hay, $5, wheat and oat straw costing nothing.

ANSWERED BY HENRY STEWART.

The cheapest ration for the production of butter from the above mentioned foods would be as follows per day:

20 pounds of oat straw	——
6 pounds of oats	4 cents
4 pounds of bran	2⅓ cents

and as much of the hay as the cows would eat. The above ration would doubtless be increased one third in effect if part of the straw was cut, say, five pounds for each meal, and wetted and mixed with half the grain food finely ground, thus making two meals of cut feed and one of whole straw at noon. The butter made from this food, however, would be crumbly in texture and light in color, but it would have a good flavor, if it was not spoiled in the management.

WORKS ON RAISING AND FEEDING LIVE STOCK

C. H. S, Brooklyn, N Y.—What is a good work on stock raising and feeding and what is one on training Thoroughbreds? I would prefer works which explain technical terms.

ANS.—There is no single good work which treats of stock raising and feeding. The following are good works which treat of different parts of the broad subject—American Cattle, by L. F. Allen, price $2.50; Stock Breeding, by Manly Miles, $1.50; the Shepherd's Manual, by Henry Stewart, $1.50; Swine Husbandry, by F. D. Coburn, $1.75; Horse Breeding, by J. H. Sanders, $2; Feeding Animals, by E. W. Stewart, $2; Manual of Cattle Feeding, by H. P. Armsby, $2.50; Poultry Culture, by I. K. Felch, $1 50; Wright's Practical Poultry Keeper, $2. A good work on training Thoroughbreds, is W. Day's, the Race-horse in Training, $6.25. All of these can be obtained through the nearest book store, or from the Orange Judd Company, 751 Broadway, New York City.

THE "COMBINATION" FENCE.

L. B., Lawford, Va.—Has what is known as the "combination" fence been treated of in any of the past numbers of the RURAL? We think that there is no doubt that it is the most serviceable farm fence. It consists of wooden pickets woven together by strands of wire. There is no patent on it, but there are about 60 different patented machines for making it. A survey of them in the Patent-Office is quite bewildering. In deciding between their merits, the services of a mechanical expert and of a patent-lawyer would be necessary. It appears to me that it would be worthy of a paper like the RURAL to devote a special issue to the subject, and having worked it up thoroughly, to present the salient features of each machine, so that the farmer desirous of using one could tell which would best suit his purpose.

ANS.—Yes, we have frequently spoken of this fence, which is certainly an admirable one. We will consider the matter of such a special number.

ROSES.

J. B., Plymouth, W.—Among white, yellow, pink, and red roses, which are the most hardy, freest bloomers, and best adapted to a northern climate.

ANS.—Abel Grand, rose color; Anne de Diesback, carmine; Baron de Bonstettin, deep crimson; Baroness Rothschild, light pink; Boieldieu, cherry; Caroline de Sansal, flesh color; Gen. Jacqueminot, pinkish crimson; La Reine, rose color; Baronne Prévost, Madame Plantier, white; Coquette des Blanches, Harrison's Yellow, yellow. The above list are the hardiest roses we know of giving the colors desired. They are all hybrid remontants except Harrison's Yellow and one or two others whose origin is doubtful. The rose that is "most hardy, freest to bloom, etc.", is yet to appear.

THE POST OFFICE CLUB REPORTS.

A. W., Litchfield, Conn.—Was it owing to a loss of interest in "facts" and "figures" or to the absence of the "Schoolmaster" that "Small Pica" fell back on "sunshine" and sentiment in his last report of the "Post Office Club?"

ANS.—"Small Pica" is merely a reporter. He states what takes place at the Post Office Club, without any particular interest in presenting an argument. "The Parrot" is the only character that holds to a single line of argument.

Miscellaneous.

P. S., Swansea, Mass.—Is there any machine for banking celery?

ANS.—We do not know of one.

F. C. B., Lawrence, Kans.—Is there any work on frog culture?

ANS.—We don't know of any such work.

L. H. M., Shelburne, Mass.—What will kill black-knot on plum trees?

ANS.—Cutting back is the only remedy we know of. It is best to cut somewhat below the affected part.

C. L. J, Vergennes, Vt.—Where can I get a cheap telephone that will work well for 40 rods in a straight line?

ANS.—A telephone made by the Shaver Corporation of this city does very fair work.

A. A. M., Md.—Is there any effective destroyer of potato beetles, except Paris-green?

ANS.—We know of no preparation except Paris-green or other arsenical compound, that will kill the beetle without material injury to the vine.

F. E. W., Warwick, Mass.—Which is the correct name—McIntosh Red or McIntosh Red Canada apple?

ANS.—McIntosh Red and the Canada Red are different apples. There is no McIntosh Canada Red apple that we have ever heard of; but the McIntosh Red originated in Ontario, Canada.

W. A H., Homewood, Pa.—1. I want to plant 200 peach trees next spring; how would it do to plant strawberries with them? 2. What does the RURAL think of the Erie Blackberry and Souhegan Raspberry as market varieties?

ANS.—1. There is no objection. The strawberries will have passed their usefulness before the peach trees take possession of the land. 2. The Erie is said by several good judges to be the Lawton. The Souhegan is about the same as the Doolittle and a half dozen other kinds which it closely resembles. The Souhegan is as good as any.

F. A. C., Glendale, N. Y.—1. What two varieties of strawberries—one early and the other late—will do best on a sandy soil? 2. What red and black raspberries would do best on the same soil? 3. What is the usual price of tomatoes per bushel at the canning factories?

ANS.—1. We would suggest Manchester for late, and May King for early. 2 Cuthbert for a red raspberry, and Hilborn for a black. 3. The price varies somewhat according to the proximity of local markets. A firm in this city has a factory at Mateawan, N. J. They formerly paid 18 cents per bushel, but on account of the nearness of the city markets they have raised the price to 22 cents. About 20 cents per bushel would be a fair price for the grower.

F. K.P., Delevan, Wis.—1. In planting potatoes, does it pay to cover the seed-pieces with half a pint of slaked lime in each hill as a preventive of leaf blight and other pests. How should the "ounce of prevention" be applied? 2. Is land plaster much used in artificial fertilizers?

ANS.—1. We do not see that covering the seed-piece could have any effect in preventing rot or blight. This is merely an opinion. If lime were strewn in the soil where the tubers form it might have such an effect We cannot say. Our experience has been confined to sulphur. We have never had any rot or scab where powdered sulphur has been liberally used in the trenches. It is the R. N.-Y.'s opinion that much of so-called blight has been caused by the Flea-beetle. This we *know* to have been true in many cases the past season. 2. Not in high-grade fertilizers.

DISCUSSION.

BUCKWHEAT EXPERIENCE.

H. A. W., ERIE, PA.—Having read with much interest the numerous communications upon the buckwheat question, that have been published in the RURAL during the past few months, I have concluded to give a few facts from an experience of over 20 years. I am acquainted with only four kinds of buckwheat and I think there are no other kinds known to the trade to-day. The common black kind has been known to the oldest inhabitants as a standard, and has usually given a fair return for the labor of cultivation and a satisfactory quality of flour, but it is not as abundant a flour-producer as any of the newer varieties. Farmers usually conclude that any soil will produce buckwheat, as it receives a large percentage of its food from the atmosphere Then came the gray kind, like the black in the shape of the kernel, but gray in color, and producing flour a very little more in quantity but not better in quality. The average product of grain per acre of either of these was from 15 to 20 bushels. Sometimes on extra fine soil the yield would run up to 30 bushels; but this yield was very rare. The quantity of flour per bushel seldom exceeded 16 to 18 pounds. In 1880 I procured one bushel of 43 pounds of the Silver-hull, costing $4.65, thinking to sow it upon 1½ acre of clover sod, from which I had cut the crop on June 25. That night it rained very hard, and as the clover was lying in the swath, it, of course, became very wet. For two days and nights we had rain almost constantly. When the sun came out sufficiently to dry the crop, the latter was black and in many places spoiled. I soon put the plow at work turning the sod seven inches, and so completely covering the clover that one would not suspect that at least two tons of hay to the acre had been turned under.

After plowing, the ground was put in fine condition for the seed, and after applying 500 pounds of Bowker's superphosphate and two barrels of salt to the land, I sowed the seed, rolling the ground after harrowing. The result was the largest yield of straw I ever saw and 67½ bushels of very plump, nice grain. The thrasher who had followed the machine for years, said it surpassed anything he had ever seen. Remember the seed cost $4 65 a bushel (one of my foolish ventures) The following season I sold 55 bushels for $1 50 a bushel, while the old kind was worth only 60 cents a bushel. This kind has, for the last six years, been the standard for this section. It is first for the quality and the quantity of its flour, there being usually about 22 to 24 pounds to the bushel, and in quality it is sweeter and whiter than the flour of any other kind raised here. This kind is often advertised by seedsmen, for the sake of giving it a high-sounding name, as the English Silver-hull. The average yield per acre is from 25 to 35 bushels. When sown at the same time as either of the old kinds, it will ripen about one week earlier and the burning suns of September do not blight it as they do the old kinds. Last spring I procured eight quarts of the new Japanese buckwheat and sowed it on half an acre, by the side of two acres of the Silver-hull. The ground for both was prepared exactly in the same way, and both were sowed the same day, and in every way treated alike. The Japanese grew a very strong straw and ripened a few days later than the Silver-hull. The yield was at the rate of 36 bushels per acre, and the flour is in no ways superior to that of the Silver-hull either in quantity or quality. The kernel is much larger than that of either of the other kinds, though similar in shape and color to the old black kind. I cannot believe it will prove in any way superior to the Silver-hull. Were I to sow any great amount, I would stick to the Silver-hull, as it has stood the test for years. In all new varieties of seeds it is wise to go slow Having had quite an experience with different new varieties, I again, repeat: go slow with new sorts.

THE LENGTH OF ROOTS.

J. W. I., SUGAR RUN, PA.—The RURAL NEW-YORKER once asked the question: "How long are potato roots anyway?" I cannot tell, but, judging from analogy, I should say that in a fine, rich, mellow soil under favorable conditions, they grow five or six feet long. The person who pulls up a hill of early potatoes while the tops are green, and shakes off the earth may suppose he has got nearly all the roots, but such is by no means the case. The same is true of onions. I once had an onion bed on a hill side garden, the soil of which was a fine sandy loam. The bed was about four feet wide, the onions about full-grown and the tops still green. There came a shower in the night and a stream ran down over the bed until the surface dirt was all washed away and the roots were left bare, extending unbroken in every direction, and generally remaining in the place where they grew. In the morning when I visited my garden to see the havoc that had been caused by the rain, I was surprised, beyond measure, to find that onion roots were so long. Some onions that stood near the middle of the bed had pushed their roots in both directions to the outside of the bed; in other words, their roots were extended two feet on all sides. I would not believe it if I had not seen it myself. It is the common opinion that the roots of trees extend about as far out in the ground as the branches project out above it; but the truth is that they extend much farther. I have seen large trees, as well as willows, and alders, washed out by a flood in the creek, and in every case the roots were more than twice the length of the branches. The person who buys trees from the nurserymen may think he obtains about all the roots with the trees, but he does not get one-half of them. From what I know of other vegetables, I believe that potatoes of vigorous growth send out roots three feet in every direction where they are not opposed by some impediment, and that if there is richer soil or manure within four feet of where they are planted they will start for that the first thing, and reach it in a short time. The man who manures one row of potatoes and leaves the next without any manure as an experiment, to find out the value of commercial fertilizers, makes as great a mistake as the one who put his money into a contribution box, thinking it a savings-bank. If you manure one row of potatoes, the next row will steal part of the manure unless you interpose an impassable barrier of boiler plate or chilled iron.

GREEN CORN IN WINTER.

A. T. T., FRANKLIN PARK, NEW JERSEY.—An article in a late RURAL, related to prolonging the season for green corn. A neighbor of mine has had a similar experience. I was in his house during the latter part of November just at his dinner hour, and found him munching a fat ear, with a plateful of luscious ones close at hand.

"How long does your run on sweet corn extend this season?" was my not unnatural inquiry, considering that the weather had been quite severe of late.

"Well, unless some thief comes along and steals it, we expect to keep this up all winter," said he.

"Your corn grows right along I suppose now since cold weather and winter have set in?" I remarked.

"I can't say the stalks grow much," said he "but the corn grows—grows better in taste anyway. The fact is we had more planted than we supposed ourselves able to use, and when the early frosts of September came and froze the stalks and leaves, I imagined the corn was ruined The effect on the ears, however, was to improve the flavor rather than otherwise, and its natural tendency to harden has been permanently checked A good comparison, perhaps, may be noted in the influence of mustard on sweet cider, which "fixes" the cider so that the usual changes incident to age and fermentation do not take place. I have not cut the corn, and the stalks have been whipped bare of leaves by the wind and weather, but the corn ears hang on all the same, so that when the cook wants a supply for the kitchen, she goes into the garden and helps herself just as if it were mid-summer instead of winter"

"A truly wonderful labor-saving device!"

"Yes, that's what we think, and to emphasize the matter a little, there is no beating this plan of harvesting a corn crop. Perhaps I exaggerated a little in saying it will last all winter, but it will certainly hold out until it is used up, anyway."

"Exaggerate, indeed! That's a mild term for it. Why, my dear fellow, if you daily consume as big a pile as that now before you, your whole farm would have to be a cornfield to last all winter."

"Well, I admit I am rather fond of sweet corn myself. My neighbors are too. Sit right up now and help yourself; your mouth has been watering for some of this long enough."

KEEPING UP SOIL FERTILITY BY MEANS OF COMMERCIAL FERTILIZERS ALONE.

D. C. L., CRANBERRY, N. J.—In a late RURAL, C H. F., of Forestville, N. Y., asks, "What can farmers do without the cow, the sheep, and the ox? How is the fertility of the farm to be maintained without them? Can it be done with commercial fertilizers alone? Men who have tried doing so, tell us, no. My own experience tells me, yes. I have a farm of 100 acres, 90 of which are under cultivation. The sales of the products of my farm are now larger than they have been for any year of the 17 I have owned it, and I am keeping less stock than at any former period. Two working teams and three cows are all that I keep on the farm through the year. I also keep two or three steers through the winter to dispose of the corn fodder and coarser products. My farm to-day is more productive, growing larger crops than at any former period, and this improvement is brought about by the use of chemical fertilizers alone. I do not believe that the usual superphosphates will give such a result, as they contain too little nitrogen and potash in them; but when fertilizers of a high grade are used, excellent results can be secured. In one instance in Monmouth County, N. J., a field of 10 acres has not received any manure except chemical fertilizers, for about 13 years, and that field is producing double the crops it did under the old system, when yard manure, marl and lime were used. Now, this result has been obtained, not by use of ordinary superphosphates; but by the application of special and high-grade fertilizers.

R. B., ST HENRY OF MONTREAL, CANADA.—I was much interested in those letters on potato scab in a late RURAL. I find that to plant potatoes on land where grain grew the pre-

vious year, or where sawdust is in the manure, tends to produce scabby potatoes. I never have scabby potatoes after a crop of vegetables or on sod plowed under and well rotted. One-half of one of my fields is composed of clay loam; the other half of sandy loam. The former is likely to produce scabby potatoes; but I have never found any in the latter.

E. E. B., NORFOLK, VA.—I have been very much interested in the articles on pages 612 and 664 in the RURAL for 1888, on defects, etc. in mowers. I think they contain valuable ideas for farmers, and wish we could have more. Why not have a "Machine Special" describing new tools and contrivances, as well as the defects in old sorts, and how to remedy them, etc.? Let the farmers tell what improvements they want in their manufacture.

PROF. S. W. JOHNSON, NEW HAVEN, CONN.—Apropos of the "Concentrated Feed" recently exposed by Dr. Amsby in the RURAL NEW-YORKER, an analysis and estimates of it will be found in the report of the Connecticut Agricultural Experiment Station for 1884, pages 111 *et seq.*

What Others Say.

"THE RURAL NEW-YORKER is collecting from 100 to 500 rewards or souvenirs, to be given to a corresponding number of the most successful contestants, and proposes to extend the number of souvenirs as far as possible, and in this way help to secure a general interest and enthusiasm throughout the entire potato-growing country. Hundreds of its women subscribers are sending in their names for the "contest," while the number of gifts or souvenirs for the best yields already amounts to nearly $1,000. The committee to examine the reports and to award the prizes will be made up of persons (either men or women as preferred) whose names shall be a sufficient guarantee of strict, impartial action. The attention of World readers is called to this contest because it is a very laudable project, and one sure to bring desirable results in many ways."—N. Y. World.

DURING the present Congress 635 new public offices have been created involving an expenditure of $720,000 for salaries, while the salaries of 50 officers have been increased by $13,352. During the same session 405 public officers were practically dropped by omission to provide payment of their salaries, thus saving $470,028 to the Government; while in the case of seven officers salaries were reduced $1,487.....

THE UNITED STATES BEET SUGAR INDUSTRY.—Claus Spreckels vigorously opposes the proposed reduction in import duties on sugar, and says that the compensating bounty of one cent per pound on home-produced sugar, to be granted by the Republican tariff bill, isn't enough. His California beet sugar factory cost $400,000, of which $45,000 were paid as duty on machinery imported from Germany simply because no suitable machinery was made here. His will serve as patterns for future machinery to be made at home. His factory at Watsonville, Cal., has a capacity of 350 tons of beets every 24 hours; and it has run up to 379. Operations began about Oct. 20, 1888, and ended on Dec. 20. There were received at the factory 15,000 tons of beets from 1,000 acres, averaging 15 tons to the acre. The farmers received, on an average, $5.52 per ton for their beets, or $82.70 for the product of an acre. The highest product from the best cultivated land was 40 tons per acre. In Germany the best beet crops average from 20 to 25 tons per acre; but there the land is better tilled and, moreover, it is fertilized at a cost of $15 per acre, every three years; but experience has shown that the rules for cultivation and seeding in Germany are not suitable for the soil and climate of California. Only one-third of the seed used in the former is needed in the latter. While the average saccharine contents of California beets was 11¾ per cent., that of German beets ranges from 10 to 14 per cent.; but in some instances California beets contained upwards of 20 per cent of sugar. The results of the season's work at Watsonville were 1,640 tons of sugar, which netted a profit of $29,930 or nearly $20 per ton, representing a return of seven per cent. on the outlay for machinery and buildings, without allowing anything for the wear and tear of the machinery.

The duties on sugar average as high as 76 per cent. and the new Republican tariff bill proposes to cut them down to 37 per cent. and, as an equivalent for the reduction, it offers a bounty of one cent per pound to domestic producers. This would be $20 per ton, so that the home producer would have an advantage of 67 per cent. over the foreign producer, instead of 76 per cent. as at present, so that there would still be a reduction of nine per cent. against an average of 12 per cent. proposed by the Democratic Mills bill.

This reduction Mr. Spreckels thinks would put a stop to any further progress in beet sugar manufacture in this country, as the profits now are less than seven per cent. on the capital invested, if allowances are made for deterioration of the plant. For the fiscal year ending June 30, 1887, we imported 1,459,076 tons of sugar; while in the following year the imports were only 1 235,872 tons—a decrease of 223,000 tons, which Mr. Spreckels attributes to the increase of domestic sugar. As the duty remains to-day, he is confident this country can profitably produce all the sugar required for home consumption. This would be a fine thing for farmers wherever sugar beets could be grown for $82.70 per acre!

CUTTING POTATOES FOR SEED.—Bulletin No. 13 of the Vermont Experiment Station gives an account of the result of planting different-sized seed-pieces of potatoes. The following table fully explains it. The rows were 50 feet long and three feet apart, the seed two feet apart in the rows:

No. of Plot.	METHOD OF CUTTING.	Whole Number of Merchantable Tubers	Weight of Same.
			lbs. oz.
1	Large whole tubers, 10 ounces each	150	32—11
2	One-half tuber, cut lengthwise	137	30— 6
3	Medium tuber, sprouts on, six ounces	148	30—..
4	Medium tuber, sprouts off	155	37— 4
5	Medium tuber, ridged	138	24—12
6	Small tuber, quartered, two ounces	104	31— 9
7	Halves of seed-ends, medium tuber	134	40—12
8	Quarters of seed-ends, medium tuber	144	38—14
9	Single eyes, cut shallow medium tuber	117	30—..
10	Single eyes, halved, medium tuber	39	9—10
11	Single eyes ridged, medium tuber	78	15—10
12	Seeds four weeks dried, medium tuber, quartered	38	15— 5
13	Medium tubers, mulched when four inches high	176	46— 9
14	Medium tubers, mulched when four inches high	182	43—14

As usual in such trials, the results are very contradictory.

"THE WOMEN'S POTATO CONTEST."—The following is taken from the N. Y. World of January 2d:

"THE RURAL NEW-YORKER proposed, some three months ago, that its lady readers should enter into a potato contest of their own. In the way of suggestion, it was proposed that the plot be 33 feet square, or just one-fortieth of an acre. This is a very convenient size and shape. The plot may be larger, but not smaller. Each contestant will choose her own method in every particular, the kind and quantity of fertilizer or manure, the variety of potato, the distance apart to plant, etc. etc. It will not, of course, be required that the contestant do all of the actual work herself, but merely that it be done under her direction and supervision. The aim will be to produce the largest quantity of merchantable potatoes on the chosen area at the least cost: the standard of what constitutes a 'merchantable' potato to be fixed hereafter. The reports (to be satisfactorily substantiated) will give the full particulars as to the kind of soil, fertilizer, manure, variety of potato and method of culture, and are to be handed in before the first of next October."

IT looks as if the farmers were getting a trifle discontented at being always kept on the back seats in politics. Some of them want to do something more than vote for others at the polls. They want to elect their fellow farmers to the Legislatures of their respective States. Nor does this content them: many of them want to be represented by men of their own calling in the House of Representatives at Washington. Nay, they have even the audacity to want to send farmers to that nest of millionaire capitalists and corporate agents—the United States Senate. S. B. Alexander, their candidate for that body in North Carolina, is running Senator Ransom and his railroad backers a hot race. In Delaware also the Senatorial fight is between the candidates of the farmers and the railroads. In Minnesota, too, the granger element is taking a front place in the Senatorial fight against Sabin, and if their efforts were more concentrated, good judges think they would come out ahead. Farmers are beginning to appreciate the truth of the old, old adage that God helps those who help themselves. Of course, the political papers, as a rule, discourage this new departure; but there is a strong probability that they will have to become accustomed to it.

THE NEW AGRICULTURE.—The Sun talks, rather sarcastically, of the "New Agriculture." It says that the system was discovered by that irrepressible, electrical veteran, Asahel Newton Cole, of Allegany County, N. Y., and the right place to make a conspicuous and triumphant display of its marvelous results is here at the doors of this metropolis, among the hills of Westchester. The land is there, its long slopes turning to the southern sun; the living springs of water are there; the climate is favorable, the situation peerless, and all that is necessary s that some great and far-seeing man, with as much money as he has brains, should devote a little thereof to a work whose success will not merely make its capitalist glorious and famous, but also increase his wealth beyond the wildest dreams of avarice. What wise millionaire, what rich and great philanthropist, desirous of being the benefactor of the human race, of putting an end to hunger and poverty, will come forward and lay hold of this unexampled opportunity to gain for himself imperishable renown, and to confer upon his grateful countrymen the benefits of universal prosperity and boundless abundance?

IN FAVOR OF DEHORNING.—When the craze for dehorning cattle sprang up at the West some years ago, looking at it from a distance of a thousand miles or more, it looked like a mighty cruel business to take a saw and cut off the horns of all the animals on the farm. During Mr. J. H. Hale's recent visit to the West, as reported in the Conn. Courant, he noticed, in several counties of Illinois and Wisconsin, thousands of cattle that had been thus treated, and at a farmers' institute in Grant County, Wisconsin, he asked for a little information with the following results. Thirty-six of the farmers present had each dehorned from 9 to 600 head. Not a single animal's life had been lost; two cows were reported as having given less milk for a few days. Not a single one of these farmers yet had any reason to regret his work, and most of them were confident that their cattle were doing better in winter on less feed than ever before. Most of them have abandoned tying up cattle and now turn them all into the stables together, as there is no danger of injury from hooking. It was not thought best to dehorn young calves as they are likely to form a habit of bunting, but by leaving the horn on till the animal is two years or more old, they learn to use them; and when they are once removed they realize their weakness, and become very peaceful. After this testimony and thinking over the list of Connecticut farmers who have been seriously injured during the past ten years by the horns of various farm animals, Mr. Hale is convinced that dehorning is a modern idea that has come to stay and that we shall keep sawing off the horns till such time as nature shall breed them off.

POLLUTED WATER AS A SOURCE OF TYPHOID FEVER, ETC.—At the meeting of the American Public Health Association the other day, Dr. Charles Smart, surgeon in the United States Army, presented an important paper on the pollution of water supplies. A few years ago it was popularly assumed that some system of artificial filters, either those composed of masses of sand through which the water was compelled to pass on its way from the reservoir to the supply pipes, or domestic filters, would serve to remove the germs which produce typhoid fever and other kindred diseases. Dr. Smart holds with nearly all those who have studied the subject, that such filters, though they may afford water apparently of the purest kind, really do not serve to separate the poisonous elements from it. He cites a number of important instances which have a bearing on this point. He notes the fact that in case of the poisonous water which bred the dreadful epidemic in Plymouth, Pa, where hundreds of the 8,000 people were affected by typhoid fever, and 130 died from the disease, the water was passed through three storage reservoirs on its way to the distribution pipes. In a similar epidemic at Lauzun, in Switzerland, the germs had passed through what seemed to be perfect filters. His conclusion is that water which has once been contaminated can never be safe for use. Dr. Smart states that 30,000 people die of typhoid fever each year within the limits of the United States. If we allow that the average death rate is one in ten of those prostrated by the disease, we have an appalling amount of illness due to this malady. The probabilities are that the average death rate is one in 15, or perhaps even less, so that something near one-half a million people probably undergo each year a long period of illness and consequent enfeeblement of body owing to this disease.

POINTERS.

THE disposition to go to extremes has to be met on all sides, says Dr. Hoskins, in the Vermont Watchman. One would hardly have supposed, ten years ago, that any agricultural writer would be so soon obliged to make this cautionary remark. But after painstaking experiments, running through six months, with all kinds of rations, Professor Whitcher, of the New Hampshire Agricultural College, found that cows fed 50 pounds of silage and eight pounds of rye hay, costing 11.02 cents per day, did as well as they did when fed 15 pounds of hay, 15 pounds of cut corn-stalks and eight pounds of meal, costing in all twenty-six cents per day. The silage was made from thinly-planted and eared corn.

SEE that the seed corn is in a dry place free from frost.....

PROFITABLE crops are always a subject of interest. And among other catch crops which give little trouble, but yield much profit, the pickle cucumber is one of the best. A farmer in Connecticut, says the Times, planted an eighth of an acre last year and gathered 43,000, which sold for $107.50, leaving a profit of $69, or at the rate of $552 per acre. These things are required for profit in this crop—rich, well-manured land, well cultivated; the right kind of seed, Green Prolific being the best, and near-by market, or else ability and opportunity to pack the pickles in brine in barrels for sale at a later season.....

TO PRODUCE milk Mr. Hoffman of the Elmira Club (N. Y.) said that no other root he had ever fed was at all comparable to the potato. He would have no hesitation in feeding potatoes, liberally, even if butter were the object. Another speaker who had fed many potatoes, and for considerable periods of time, declared them excellent for butter making. He would feed them with corn meal and wheat bran, for that had been his successful practice .....

MR. J. J. THOMAS says that the Summer Doyenné still remains the most popular early pear; that Giffard, following it, is larger in size and superior in quality. Frederick Clapp, one of the newer pears, promises high value. P. Barry places Superfin near the head of the list for excellence of quality.....

IN Henry Stewart's practice in the dairy, in which he has made a great many experiments and tests, he has found that when milk is set in shallow pans at a temperature of 60 degrees to 62 degrees for 36 hours, and then skimmed every 12 hours, the cream may be kept to the end of 36 hours at the same temperature, to arrive at the best condition of ripeness. And cream taken from deep pails skimmed every 12 hours, after 24 hours setting at 45 degrees may be kept 48 hours at a temperature of 62 degrees to get the proper degree of ripeness. To reach this perfectly as he states in the Albany Cultivator, the cream must be gently stirred from the bottom to the top and thoroughly mixed when new cream is added, by which the fresh cream is soon brought to the same degree of acidity as the older cream, the acidity of which is partly neutralized by the sweet cream added. This thorough mixing is important, as it equalizes the acidity or ripeness of the whole quantity.....

IT has been maintained that there is a loss of butter in the sweet cream by this mixing, and that to get all the butter, or the largest quantity of it from cream, it must be kept or exposed to the air, or ripened, or oxidized (all these mean the same thing), by itself and churned by itself. This, however, is a mistake, and Mr. Stewert avers most confidently that the mixture of the cream as above stated, will be equally effective for butter product, and the results of the churning will be the same as if every skimming be kept and churned by itself.....

THE best "starter" for ripening cream is sour cream, or even sour milk, if it is not desirable to afford the requisite time and exposure to the air in the usual way in which cream is kept. He has found that six hours' time is

ample for perfecting the equalization of the cream after the last addition of sweet cream has been made, and it has been well mixed by stirring with a large spoon or a broad wooden spatula.....

AMONG the suggestions received by the Senate Finance Committee concerning tariff schedules is one from the West that a duty of one cent a dozen be laid upon all eggs imported into the United States. The writer says that there is just the same argument in favor of protecting eggs that there is for protecting wheat or corn. He argues that if the tariff is laid upon eggs it will satisfy the women of the agricultural districts, to whom the management of this industry is almost unanimously conceded by the sterner sex. ..

THE State Grange of Virginia petitioned Congress to give a bounty of 55 per cent. on exported agricultural products. The resolutions say that the present tariff protects manufactures at an average rate of 55 per cent., and agriculture at only 20 per cent., and that as any protection afforded by tariff laws would be ineffectual owing to the fact that our agricultural staples are produced in excess of the demand and have to seek a foreign market, therefore, a bounty should be allowed.....

IN anticipation of the proposed utilization of a large part of the sewage of Paris by irrigation on the fields of Acheres, a commission appointed by the French senate recently visited the irrigation fields at Berlin. These are now in working order and furnish the most extensive example of sewage purification by irrigation in the world. Berlin now contains more than 1,300,000 inhabitants, having trebled in population, during the last 20 years. In the outlying districts the cess pool is still used, Science says, but the whole of the closely built portion of the city, containing 1,150,000 inhabitants, is thoroughly sewered, and all waste matters from this part of the population are carried by water to the pumping stations, from which they are distributed on the irrigation fields.....

THE PHILADELPHIA PRESS, commenting upon the R. N.-Y.'s question: "How often should cows be fed?" says that whether the food is furnished in two meals a day or three or four is of small moment comparatively, so long as the meals are timed with scrupulous punctuality. No doubt she can adjust her apparatus to three feeds or less or more, but plainly it suits her easy-going, ruminant nature best to have feed coming around with astronomical punctuality as regularly as the earth or moon revolves. If her meals come haphazard she will need to make a new time table for her stomachs every day, and they can not do as efficient work as when they settle down to an established schedule that never varies .....

THE PRESS is certainly right in assuming that it is poor policy to buy a show animal—for that implies a pledge to give it show treatment. And if you are trying to hunt up some kind of stock that can live with little to eat and with less care, this is the very worst possible investment. The disappointment and shock which a pampered animal receives are too great. It should be a rule never to buy stock that you cannot keep in as good style at least as that to which they had been accustomed. Well-bred animals are always the best to buy, provided they have been brought up on good healthy food and with proper care.....

AFTER 30 years' use of stanchions Mr. John Gould decrees that they must go to the woodpile, and his new stable is furnished with double stalls and neck chain ties that allow great freedom of motion, and by the shoulder partitions they are afforded no chance to use their horns on their neighbors. They lie down and rise up in comfort, and can sleep with their heads on their sides or rest their muzzles on the manger boards and dream of full baskets of coming silage. When he sees them so comfortable he kicks himself for hanging on to stanchions so many years because they were handy. The argument for the stanchion was all on his side. The comfort of the cow and her wishes as to freedom of movement were not considered.....

THERE seem to be but three ways for a nation to acquire wealth, said Franklin. The first is by war, as the Romans did, in plundering their conquered neighbors—this is robbery; the second by commerce, which is generally cheating; the third by agriculture—the only honest way wherein a man receives a real increase of the seed thrown into the ground, in a kind of continued miracle, wrought by the hand of God in his favor, as a reward for his life and his industry.....

LAST year our first "greens" came from the cultivated dandelion. The variety called French Garden is offered by seedsmen at 20 cents the ounce.....

PREPARE for the next meeting of the American Pomological Society to be held at *Ocala* Florida, beginning Februar A cordial reception awaits the members and visitors.....

MR. CRAWFORD, in Popular Gardening, says that in an experience of over 30 years he has never seen strawberry plants injured by too deep a covering if uncovered early enough in the spring. He has seen beds covered with six inches of soil, that were in perfection in the spring.....

MEMBERS of the New Jersey Horticultural Society are of the opinion that the old Lawton and the new Erie blackberry are the same.....

THE question is raised by S. B Keach, whether the Signal Service is not a signal failure.....

OUR respected friend, J. J. Thomas, says that the Shaffer raspberry has exceeded any other of the new varieties for the short period it has required for a general approval, East and West, throughout the country. It exceeds any other variety he has tested in its invariably heavy crops. The berries are large, and uniformly free from distortion or any defect in form .....

OUR friend E. P. Powell, an experienced fruit grower of Clinton, N. Y., mentions, in Popular Gardening, several pears which for one reason or another he prefers. He thinks there is no early pear equal to the Tyson. Season August. He prefers Clapp's Favorite to the Bartlett, in which preference the R. N.-Y. disagrees with him. Howell is a grand and handsome pear either as a dwarf or standard. Sheldon, Mr. Powell thinks, is the finest table pear in the word. Picked early in September and stored in a cool cellar, it will be in good order for two months. Louise Bonne should be left on the tree till frost, and then placed in a cool room to ripen slowly. Anjou is the noblest Roman of them all. The Jones pear, Mr. Powell says, promises to be the best for mid-winter, and Josephine de Malines for late winter.....

THE Arkansas Experiment Station, Fayetteville, set out 165 varieties of grape-vines last spring, many of which were affected with the downy mildew. On July 1, the Eau Celeste, or blue water, was applied with satisfactory results. The mildew was completely checked, no further application being made for six weeks, when it appeared again, this time mostly on new foliage and on varieties not previously affected. The station does not recommend waiting until the mildew has appeared, but to apply the solution as a preventive to all the varieties subject to the disease. .....

THE Eau Celeste was made as follows: Dis solve one pound of sulphate of copper in two or three gallons of warm water; when completely dissolved and the water has cooled add one pint of commercial ammonia, then dilute to twenty-two gallons. Use a force pump and a spraying nozzle.....

GEO. W. CAMPBELL, in Green's Fruit Grower, speaks out loudly in favor of the Woodruff Red Grape. He says that *quality* is a matter of individual taste to such an extent that he never questions any one's opinion on that point. But nine out of 10 who have tasted the Woodruff in his presence have expressed delight as to its quality, and pronounced it *very* good. And about 19 in 20 would call it at least good. He has heard parties express a preference for the Woodruff over the Delaware! For himself, while he would not call it very poor, he would not class it very good; but he thinks it as good as Concord or Niagara, and it is earlier in ripening than either. He thinks also, it will be for general culture one of the most popular and generally useful red grapes we have. It is so strong in growth, so productive, so healthy in foliage, and so perfectly hardy, combined with large size, beautiful color and early ripening, it must be popular and valuable, especially for market. And its quality will be found *good enough* for the great mass of buyers and consumers.....

ALL that Secretary Campbell says of the Woodruff the R. N.-Y. can substantiate from its own trial of a vine dug up and thrown away two years ago, except as to quality. It is as foxy as many wild Labruscas, and the pulp is as tough.....

FROM a recent bulletin issued by the University of California Experiment Station, we learn that two-ounce packages of seed of Pyrethrum cinerariæfolium and roseum (Dalmatian Insect plant) will be sent to applicants forwarding two cents for each package.....

THE station will also supply cions of many different kinds of fruit trees—10 cents for each dozen cions. The varieties may be selected from the University report of 1886 on pages 130 to 140. All applications must be made to E. J. Jackson, Berkeley, Cal.....

WORD FOR WORD.

——HERALD: "No one ever can or ever will know half as much as a young man of 20."....

——N. Y. TIMES: "Just now there is a tendency to adopt the old discarded favorites, the Saxony and Silesian rams again, and to displace the large French sheep and to favor the production of light, fine fleeces, instead of the heavy, coarser ones, which are always more profitable and always will be so long as wool is sold and bought as it is now, has been, and probably will be for years."

——GLEANINGS IN BEE CULTURE: "I feel called upon to say amen to the statement that digging potatoes is just as honorable as preaching the gospel, or controlling large banking interests. May God be praised that it is my privilege to dig potatoes at least part of the time."

——CHRISTIAN UNION: "Steady work for the love of it, and for the satisfaction and peace which it brings, never breaks the worker down. On the contrary, it so weakens temptations from without, and so destroys inferior ambitions and desires, that it gives the whole nature steadiness and poise. It is the best cure for restlessness. The joy of life for strong natures lies in a noble activity a work adapted to the aspirations of the soul; a work that brings calm by its magnitude, and by its very demands evokes the best and greatest in us."

——DAIRY WORLD: "Hon. J. Irving Pearce, the proprietor of the Sherman House, Chicago, under date of Dec. 2, 1888, writes as follows concerning the carcass of the pure-bred Jersey steer exhibited at the late American Fat Stock Show and purchased by him of the Michigan Agricultural College: "You ask how I like the carcass of the Jersey steer that I purchased of the Michigan Agricultural College. I do not think I ever used finer meat. I bought of the college meat from all the animals (Short-horn, Hereford, Devon, Holstein, Galloway and Jersey), they had on exhibition at the Fat Stock Show, and put them on our ménu as premium beef. The Jersey was pronounced by all, without hesitation, as the finest in quality and flavor and the tenderest of any beef they ever ate. I had the Jersey meat for Thanksgiving dinner, and do not think any one tasted it without remarking that he never tasted such meat."

——IDEM: "A farmer had a boy who showed no special aptitude for business, and he was puzzled what to do with him. He concluded to try an experiment, so he locked the boy in a room in which there were only a Bible, an apple and a dollar. A few minutes later he stole quietly to the room. He made up his mind that if he found the boy eating the apple he would make a good farmer. If he was reading the Bible he should be trained for the pulpit, and if he had taken the money his success as a broker, the father thought, was assured. Upon entering the room he found the boy sitting upon the Bible, eating the apple, with the dollar in his pocket. The boy became an able politician."

——GERMANTOWN TELEGRAPH: "Don't you think it time for our lawmakers to accept smaller salaries commensurate with the changed condition of things? A hundred cents will now buy a dollar almost anywhere, while the same cost 285 cents when the high salaries were fixed where they remain yet, and the farmers are working 'tooth and nail' to make both ends meet and pay these salaries."

Miscellaneous Advertising.

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We do not claim that Hood's Sarsaparilla is the only medicine deserving public confidence, but we believe that to purify the blood, to restore and renovate the whole system, it is absolutely unequalled. The influence of the blood upon the health cannot be over-estimated. If it becomes contaminated, the train of consequences by which the health is undermined is immeasurable. Loss of Appetite, Low Spirits, Headache, Dyspepsia, Debility, Nervousness and other "little (?) ailments" are the premonitions of more serious and often fatal results. Try

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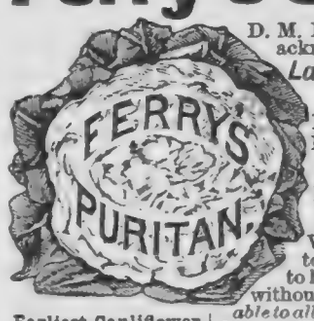

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TREES ROOT GRAFTS—*Everything!* No **larger** stock in U. S. No **better**, no **cheaper.** **Pike Co. Nurseries, Louisiana, Mo.**

IF you want to grow vegetables, get some of Burwell's Selected Seeds. Descriptive List free. E. E. BURWELL, Branch P. O., New Haven, Conn.

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A National Journal for Country and Suburban Homes.

Conducted by
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THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, JANUARY 26, 1889.

THE RURAL NEW-YORKER for 1889, will be, as hitherto, invariably, $2.00 a year for single subscriptions, and $1.50 in clubs of five or more.

Farming is my ideal life; therefore I am a farmer. E. Y. LYON.

ONE of the best evidences that the R. N.-Y. No. 2 potato is a superior variety is that there are so many parties claiming that it is their seedling, which the R. N.-Y. has appropriated. Thus, you see, how delightful it is to help on agricultural progress by original contributions.

I have seldom seen a man that did his work well who did not perform a fair amount of it. E. DAVENPORT.

THE R. N.-Y. never varies its rates (as published in every issue), for advertising. All advertising patrons are treated precisely alike. This statement is made every year at about this time, in order to spare intending advertisers the trouble of any correspondence with a view to obtaining lower rates. There are but few journals published in this country whose rates are absolutely invariable. The RURAL NEW-YORKER is one of the few.

PRES. W. I. Chamberlain proposes, in a few weeks, to favor the R. N.-Y. with a series of short articles which will discuss, in a popular way, the rights of person and property and their limitations in society and under government, especially the limitations of property under commerce and when invested in monopolies. This covers the ground of land ownership, taxation, control of commerce, especially in regulating weights, measures and currency, and forbidding and punishing counterfeiting and adulteration. It also covers the ground of patent rights, railway property, pools, trusts, grain and stock gambling; in short, all that tends to interfere with or "corner" the prices of necessities of life.

The time has come when farmers must "earn their bread by the sweat of their brows" (brains) and not wholly by their hands. Hence the *prices* of what they raise as affected by the above, are fit subjects to be discussed in an agricultural paper, following on our first-page cartoons.

"There is no such thing as a cheap man. You must either pay full wages for a capable man, or hire an incapable man at a serious loss. Generally speaking, these "cheap" hands are worth considerably less than nothing. They do not often ask me for a job."—T. H. HOSKINS, page 50.

FROM a recent decision of the Supreme Court of Iowa, it is evident that no mitigation of the rigors of the prohibitory laws of the State can be expected from its judicial tribunals. The Court has just decided that any drink containing ever so small a quantity of alcohol is "intoxicating" within the meaning of the State Constitution. In the case in question, the Court below had decided that a certain drink called "Cummings" was not intoxicating. Chemical analysis showed that it contained only three per cent. of alcohol, and the chemists testified that it did not have an intoxicating effect except in cases where persons wholly unused to alcohol might take large quantities of it. The Court, however, held that in the meaning of the law it was immaterial what effect the alcohol might have upon the drinker. The stuff is intoxicating and remains such as a drink, no matter how much it may be diluted or disguised in other liquors. The same principle applies to cider and perry, the sale of which is illegal in the State. The farmers of Iowa, however, can well afford to lose any profit from the prohibition of the sale of these beverages in their own State in return for the blessings of peace, economy and morality that go hand in hand with rigidly observed abstinence from intoxicants.

"A bath-tub with water handy should be found in every farmer's home, and the hired man should be made to feel free to use it every night during the heated term. He will do more work the next day."—T. B TERRY, page 50.

GOOD.

THE souvenirs contributed up to the 19th inst. to the Women's Potato Contest amount, in money value, to over $1,000. The entire list will appear in a few weeks.

"In so far as it is practicable, it seems to me in every way desirable to try to furnish work throughout the year to desirable men, rather than compel them to be idle and on expense during the winter, or, at the best, to seek employment elsewhere."—PROF. G. E. MORROW, page 51.

CONCENTRATION BETTER THAN DISPERSION.

THE Ives bill, which became a law in New York State, in 1887, gave certain racing associations the privilege of selling pools within specified limits of time and place, and on condition that they should pay to the State Comptroller five per cent. of their gate-money. Under this law, $22,619.10 or $23,139.69 (reports vary), were received by the Comptroller in 1887, and $25,012.61 in 1888. Section 5 of the law provided that all revenues from this source should be "annually distributed in behalf of the State for prizes for improving the breeds of cattle, sheep and horses at the various county fairs throughout the State, by the State Agricultural Society." No disposition has hitherto been made of any of this fund, which now amounts to about $48,000. There are 59 counties in the State, so that about $800 which should go to each county society, according to the provisions of the law, are still in the Comptroller's hands. This is due to the action of the town associations, many of which are stock companies—mere private affairs. Last year their friends in the Legislature opposed the distribution of the money among the county societies alone, and a bill was introduced to allow the private stock associations to share in the "fund." It was vigorously opposed, however, and defeated, but the distribution of the fund was suspended. The town associations are again on hand to press the passage of the measure this winter. The county associations insist that it was mainly by their aid that the Ives bill was passed; that the law intended that the money should go to them; that if the town associations share in it, the tendency will be to induce the organization of more town associations, whereas the county societies even now find it difficult enough to pay premiums and running expenses. They will, during the present session of the Legislature, urge its members to stand by the law distributing the money exclusively among them. They are now considering the feasibility of sending delegates to a meeting to be held at Albany on January 31, for the purpose of organizing in support of their view of the question. It seems to us that their view is the right one. What public benefit can result from frittering this fund away among a multitude of associations, with many of which the notion of benefiting the public is altogether subordinate to the effort to benefit themselves? The farmers of the Empire State should promptly inform their representatives, in both branches of the Legislature, of their conviction on this subject.

"A poor, blundering, careless man will lose every year more than would pay for a good man, through mistakes and carelessness in leaving gates open and fences down, and also tools out in the rain and sun to rust and warp."—H. A. MARCH, page 57.

ENSILAGE CORN.

ENSILAGE PEOPLE—your ear! Tell us why you advocate the use of B. and W. corn? B. and W. corn means, as nearly as we can find out, Southern corn of any kind, of which there are 100 or more different varieties. Southern corn, that known as such, grows to a great hight—12 feet or more. The joints of the stalks are far apart; the leaves, as compared with the stalk, are few. We have a maximum of stalk, a minimum of leaves. Is that what you ensilage people want? If so, why not settle upon a known variety, such, *e. g.*, as the Chester County Mammoth? This variety does not sucker much. The main stem grows, at the Rural Farm, from 10 to 12 feet high. It bears, generally, one fine ear a foot long, with from 14 to 30 rows of kernels of rather large-sized yellow dent. What's the use of talking about B. and W. corn if it does not mean anything but Southern corn?

Now, the R. N.-Y., some 10 years ago, distributed among its subscribers a variety of flint corn called the RURAL NEW-YORKER Thoroughbred. *Thoroughbred* indeed it is, having been grown, far away from other varieties, for over 40 successive years. The ears are remarkably long, often measuring 14 inches. The kernels are broad, though not deep. For a flint corn it is soft. Each kernel, in good soil, will give from three to four stalks which grow so large that it is impossible to say which is the main stalk and which are suckers. Each stalk will generally bear one ear. The stalks are short-jointed, the leaves are *many* and *broad*. One-quarter of the seed usually planted will suffice on account of its suckering propensity. *Why not use this corn for ensilage?* We ask for information. Messrs. Gould, Henry and Co. kindly tell us why not. It is needless to say that the R. N.-Y. has no pecuniary interest in this variety. It has never *sold* a cent's worth of it, or of anything else whatever to any subscriber. It is against our principles to sell anything except the R. N.-Y. And there is not one of our subscribers, old or new, that can say otherwise.

"The crying evil of the time here is the servant girl question. The supply of good girls is utterly inadequate to our needs. In this the city ought to help us, but it does not."—C. F. EASTMAN, page 51.

UNDER-TAXATION OF PERSONAL PROPERTY.

ACCORDING to the census of 1880, the assessed value of land in the United States was $13,036,766,925, and that of personal property only $3,886,000,000, making the total assessed valuation about $17,000,000,000. From all accessible data, however, the best statisticians then put the value of the property of the country at $50,000,000,000, the census estimating its true value at over $43,000,000,000, and it was thought that at least one half of that amount consisted of personal property. In some of the States, of course, the disproportionate value of the personal property was very much greater than in others. The disproportion between the assessed valuations of both kinds was, of course, least where the population was sparse, and greatest where the population was dense and wealth in the hands of a few. In the large cities where there is certainly much more personal than real property, the inequality was maintained. The explanation of this unjust disproportion is plain. Land cannot be concealed; nor can it be undervalued as easily as personal property. There is more difficulty in concealing property in sparsely settled than in thickly settled sections, in the country than in cities. The very nature of all sorts of property owned by country people renders it impossible to conceal it as easily as city property. In the cities, too, people are accustomed to attend to their own business; in the country many attend to their neighbors' also. Although since the census the personal property of the country has been advancing in value considerably more than the real estate, the tax returns of the various States show that taxation on it has been, every year, proportionately diminishing.

As owners of most of the real estate, the farmers of the country are the chief sufferers from this unfair inequality of taxation. Of the $13,036,766,925 assessed value of the land in 1880, the value of the farms was $10,197,096,776. A moment's thought will leave no doubt that while the farmers pay an unfairly large proportion of the State, county and municipal taxes levied for the protection of life and property, their property requires the least protection. Land and fixtures thereon cannot be stolen. The whole expensive array of militia, sheriffs, police, judges, jailers, is chiefly engaged in protecting personal property, or in punishing offenders against it. In addition to the flagrant injustice to farmers arising from the escape of personal property from its proper proportion of taxation, other evils result from it. Those who own this kind of property are generally careless as to the expenses of the government, to which they contribute little or nothing; yet the wealth of a majority of the members of our State and National Legislatures consists in stocks, bonds, mortgages and other forms of personal property, which, wholly or in part, escape assessment. If these men shared fairly with real estate owners in the load of taxation they impose on the people, they would be much more likely to make the burden lighter.

There is a good deal of discontent and quiet agitation in reference to this matter in a large number of the States at present. In Massachusetts the disproportion between the taxation on both kinds of property is stigmatized as "absolute injustice" and "legalized robbery." In round numbers, the valuation of all the property of that State for the purposes of taxation, is about $2,000,000,000, of which only $500,000,000, are returned as personal property, although it is notorious that the value of the personal property in the Bay State is much greater than that of the real estate. In Ohio the authorities complain that they cannot reach a tithe of the personal property justly liable to taxation. Throughout Illinois there is a loud cry against the wholesale exemption of this kind of property from taxation. Everywhere real estate bears nearly the entire load of local taxation, and the little contributed by personal property is unequally and unfairly distributed, as it comes chiefly from widows and orphans whose property is laid before the assessors in the probate courts, where concealment from the State is impossible. There must be a practicable remedy for this flagrant injustice; what is it?

BREVITIES.

"I AM a farmer because then I can always know where my home is, and am never out of a job." Thus writes a subscriber in Steele City, Neb.

ONE of our correspondents in this week's issue, says he prefers Silver-hull to the Japanese Buckwheat—the first disparaging remark we have heard respecting the latter.

WE have been covering the ground of two of our chicken yards with pine "needles" about six inches deep. These keep the chickens' feet warm and dry. The grain (corn and wheat), is scattered upon this covering, and the birds are obliged to scratch for their food.

GO TO the woods and cut sticks from one to four feet high. Any kind of wood will answer. Shave off one end and paint it with white lead and turpentine—no oil. Sharpen the other end. You will have a label stake that can be used for at least two years, at a trifling cost.

IT is the R. N.-Y.'s belief that it is during such "open" winters as the present that grapevines, strawberry and raspberry plants usually sustain the severest injury. Heaving of the soil can not occur when frozen, and a uniformly cold winter will therefore leave the roots intact. But the soil is saturated with water, and alternations of frost and thaw occur during almost every 24 hours. Mulching is the only protection against this.

A subscriber in Maryland calls attention to an important matter as follows:

"Can't something be done to stir up the farmers of the country to prepare for the census of 1890? The agricultural reports of the census are of little value because they consist largely of averages made up by the census-takers, and not of actual facts reported by the farmers. The farmers don't know the facts and the census man puts down what he thinks the facts ought to be."

How many farmers can put a just valuation on their property? This matter may well be investigated.

HELP.

(*Continued from page* 52.)

A WOMAN'S OPINION.

Farmers labor under peculiar difficulties in employing help. In the first place, no standard of skill, experience or character is required, the reverse of the custom in employing operatives in any other business. This necessitates untiring patience and constant vigilance on the part of the employer. Even then there are often waste and ruin of materials, implements and time, through ignorance, aud indifference; but the wages still go on. In the next place, the best interests of our business and our families seem to conflict in employing ignorant—(not necessarily as regards general intelligence but in respect to labor,) and often uncouth and unprincipled strangers. Farmers just beginning in life, and those of moderate means, not having tenant houses, are obliged to take these men and boys into their families, in a measure. The degree of familiarity, or privileges granted them is a problem that vitally concerns us and our children, affecting us physically, financially, and intellectually. If the same help remained year after year, we might hope to benefit them in all these respects; but they do not, and the majority have no appreciation of such benefits, or ambition in these directions. The natural consequence to ourselves is that our own efforts and aspirations are relaxed, and our children are in a way constantly to imbibe ideas and manners that are pernicious. Of less importance possibly, but more trying to our nerves and tempers, are the noises, annoyances and indignities we suffer daily from these men, (often unclean foreigners,) if they eat at our table. Even if it were possible to make them comprehend the usefulness, the healthfulness, the luxury of cleanliness of body and garments and boots, the nature of their work would often render their presence obnoxious to people of refined sensibilities. I realize that this is unavoidable, but is it unavoidable that we should lower our standard? What are we really living for? Then the food and appointments of a table for such laborers are entirely different from those relished and needed by members of the family. More than this, the farmer ought to have the delightful privilege of seclusion with his own, around the frugal board, three short half-hours a day, that each may speak freely of all in his heart, direct conversation into a higher plane, and not fear having his private affairs circulated as stupid ears or an evil tongue might construe them.

On the other hand, we must consider the well-being and the feelings of our help. Their labor is exhausting; they need abundant and nourishing food, served with regularity, and promptness; they should not be required to eat after the family; if anything, their meals should be earlier in the day; but circumstances vary greatly. Some keep but one man, their accommodations are limited, there's no maid to help, and time and labor must be rigidly economized, so all must eat together. Even then too great familiarity with help at the noon and evening hours should be avoided. Granting them unusual favors makes them exacting and presuming. It is difficult to guard the children from this without exciting the suspicion and animosity of the help. A wise and righteous course is to insist as one of the rights and privileges of our help, that they be left to the enjoyment of seclusion with themselves and their friends who come to see them. We should be conscientiously kind and honest with them, and give them true ideas of the duties, responsibilities and real pleasures of life. We should teach them how to work and make them feel the satisfaction and pride afforded by doing work skillfully and honestly, and that it usually results in a saving of time, strength and material, thus teaching them to think and reason out cause and effect. This is more feasible with indoor help, providing they have any natural intelligence, but we must not be surprised if we see no immediate results. Usually the only compensation to us is the consciousness of having done a little home missionary work on our own territory

MRS. I. D. C.

FROM WASHINGTON TERRITORY.

We get our help mostly from the Western Atlantic States. Swedes and Americans predominate, but there are rather more Swedes on the farm, as Americans and Irish take more to the logging camp, as they can get better wages in the woods, and, as a general thing, Americans from the West are good axemen. The Swedes are very saving and take good care of their money. I should say two-thirds of them are farming for themselves in three or four years. The Americans are more inclined after they have earned a few hundred dollars, to start a logging camp, or a country store in a new settlement.

The farmers usually get hands by sending to the employment bureaus in our largest cities, such as Seattle or Tacoma, at the termini of railroad and steam-boat travel. The wages for a good farm hand are $300 per year, with board and washing. No contracts are signed. We agree to pay $30 per month for summer, and $20 for winter work—six months of each. The agreements can be broken at the pleasure of either party on a week's notice.

In the morning, chores are done, breakfast eaten, teams harnessed ready for work, by seven o'clock. At six in the evening we quit work; the teams are then taken care of, and chores are done for the night. On Sundays the men must do the chores morning and night. The hired man is mostly treated as one of the family. We don't forget that we were hired men ourselves once.

We hire good men every time, even at an advance of $5.00 per month; for a poor, blundering, careless man will lose every year more than would pay for a good man, through mistakes and carelessness in leaving gates open and fences down, and also tools out in the rain and sun to rust and warp. Moreover, the employer must be with a poor man all the time, to see that he does his work properly, or something is sure to go wrong. Our cities are not crowded as are those in the East, so that the boys all find work at home if they are willing to work at all. I find that farmers in this part of the country, if they get a good man, try to use him so kindly that he will stay as long as he cares to hire out.

I know plenty of farmers who have had the same men for four and five years. They are treated as members of the family, and don't care to change about. H. A. MARCH.

Miscellaneous.

CORRESPONDENTS' VIEWS.

SIDE-WALKS AND SHADE TREES.—I was asked the other day why the shade trees in certain streets and fashionable avenues seemed to languish in growth and present a sickly, stunted appearance. I pointed to the hard, smooth asphalt pavement which covered the roadway from curb to curb, and asked my friend how he supposed any water or moisture could get through that air-tight surface. He had never thought of that, and the suggestion only recently came to me. It cannot be possible that trees so placed can receive the moisture and nourishment requsite for thrift and vigor, and it is really surprising that they live at all for any length of time, especially where the sidewalk is also covered with the impervious asphalt, as it often is. The roots must go down very deep. Of course, the soil in such places is very retentive of moisture, not being subject to the evaporation common to unsealed surfaces. But in prolonged droughts lack of water is inevitable. Might not some practical plan be devised to obviate this difficulty in part? A capacious cavity about the tree to receive surplus water, gratings at intervals near the curb, or a line of gratings there would answer the purpose. We can't well do without the trees. We want them to feel comfortable and look vigorous, and yet we don't want to give up this excellent and beautiful form of pavement where it will staud. It is so smooth, clean and elastic, such a saver of friction, noise, horse-flesh, wear and tear of vehicles, time and temper—almost everything is in its favor. How many have thought about the welfare of our street trees? H. H.

IT WAS MY INTENTION to have sent the RURAL specimens of some of my seedling grapes this season, but they were cut off by a very severe hail-storm in May, which caused a delay of about two weeks, until a new growth from the latent or secondary buds took place, with but few small clusters of fruit. My vines have made a very strong, vigorous growth of well-ripened wood, giving promise of a good crop next season, and I hope to be able to send the RURAL a number of varieties, some of which prove superior to any others grown here or known to me. I am much pleased with the Minnehaha grape after four years' fruiting. It is a very strong, vigorous and healthy vine, very prolific of delicious fruit. It showed a little mildew this season, but not enough to prevent the fruit from ripening up well, it having escaped being cut off by the hail. I have seen no notice of it except in the RURAL some two years since. The vine is three-quarters Vinifera and appears to be as hardy as any of the hybrids. I am in hopes of being able to say something favorable of a four-year-old vine, a seedling from a Flame Tokay grape, the seed being from fruit grown in California. Four branches have grown from it this season, one 12, one 15, and two 18 feet each. They are mostly well-ripened wood as thick as my finger, and very short-jointed. I think it wonderful. JOHN BURR.

WHY I AM A FARMER.—As the RURAL desires its subscribers to tell why they are farmers, I may as well tell my reasons now. There seems to have been a love for farming born with me. I was not reared on a farm, but always desired to possess one, not for the money to be made upon it, for in the matter of dollars and cents farming can not be called a success; but I wanted to be a farmer to obtain independence, health, time for mental culture and enjoyment of nature in all her changes, and for these purposes a life upon the farm cannot be excelled. There are many unpleasant things connected with farming, but it seems to me to be man's most natural occupation. Having an intense love for fruits and flowers, I can indulge in them to my heart's content. The time and money required for a beautiful lawn and garden are trifling, compared with what is wasted loafing at the store. Farming is my ideal life, therefore, I am a farmer. E. Y. LYON.

Essex Co., N. Y.

When I first saw the RURAL NEW-YORKER in '85, I thought it was devoted to agriculture for a more southern latitude than this; but I find that there are good articles in it for farmers as far north as Maine, besides a large amount of practical and instructive teaching on farm matters with which climate has little to do. I like the way the paper is taking up the nomination for Commissioner of Agriculture. If all the agricultural papers would work up the subject and get at the wishes of the farmers, possibly a man might be nominated who would use his office to secure the greatest good to the greatest number of farmers. It certainly seems as though there was room for some improvement on what we have had in times past. If President Harrison does not give us a good man, why, let us work all the harder next time. F. WM. H.

Warren, Maine.

I have been a subscriber for the RURAL for a number of years, and I must say that the longer I know it the better I like it. There has been no number during the past year which did not contain information that saved me more than two dollars. I could not estimate in dollars, what the Eye-Opener has saved me in being no longer pestered by sharks and sharpers. My front gate seems to be marked with some private mark known to sharpers, which must mean, "Beware of the Eye-Opener." DANIEL FOLEY.

St. Clair Co., Mich.

I VISITED THE FARM of a prominent market gardener near here recently, and had occasion to notice the manner in which his stock of 15,000 cabbages were buried for protection during winter, while easily accessible. They had been placed roots upward, in twos, in parallel rows in the field where they had grown. A furrow of earth was turned with a plow on either side of them, completely covering the heads. The owner assured me that they kept splendidly and that none but the outside leaves were injured by freezing and thawing. This plan certainly saves much labor, and it is not necessary to uncover the whole supply to obtain a few heads. W. T.

Dover, Del.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

THE "Kindly Club" is an organization devoted to the virtues expressed by its name. It originated in the busy brain of Mrs. Janet Runtz-Rees, a literary woman of English birth. To quote from a leaflet sent out by Mrs. Runtz-Rees, the object of the club is the cultivation of kindly thoughts by kindly words and by the suppression of "evil speaking, lying, and slandering."

To be a member it is only necessary to sign the form of membership, and to strive to cultivate kindliness of thought and word, to resolve never to repeat derogatory or ill-natured remarks of another, never to belittle any one, never to speak unkindly gossip or scandal.

* * *

THE badge of this society is an inexpensive pin with the design of a bridle bearing as motto "The Law of Kindliness," or a violet button. The price of the pin is 50 cents, and of the button 10 cents. Badges and circulars may be obtained from the Secretary, 19 East Sixteenth St., New York. The society holds monthly meetings, and also gives kindly talks from time to time. Branches are being formed in different places, like the King's Daughters' Tens. Even without formally joining a club, can't we all be members of this society? It does seem the hardest thing in the world to bridle the tongue, the last lesson so many of us are able to learn. Any one of us, in looking back over the worries and disagreements of a single year, will find that half of them, at least, would have been soothed and softened by a kindly tongue.

* * *

WHILE speaking of this society, a quotation from the "Home-Maker" is very appropriate.

"Do not say a rough word when a smooth one will serve your purpose as well. Before indulging in retort, or sly thrust, or "crusher"—whatever the provocation—ask yourself, 'Would I wish this unsaid if I were never to behold his living face again?' "Common sense ought to have proved to us by this time that oil is a better lubricant of household machinery than vinegar or caustic."

* * *

A PRETTY picture frame for a marine view is described in the Home-Maker. It consists of a plain pine frame, roughened by sticking an awl in a little way, and then turning it. This is done all over. Around the inner edge of the frame is a mat made of braided twine, the braid being three-quarters of an inch wide. Over the two upper corners a piece of fine twine netting is placed, making a three cornered cover on each. On each lower corner a small starfish is glued. When these decorations are secured the whole thing should receive two coats of silver paint.

* * *

THE same paper describes a charming door decoration. It was an unused door, and an ugly one to boot. First a small shelf was put over it. On this were a few pieces of china. The door itself was covered with plain maroon velveteen stretched from top to bottom without any fullness. Over the velveteen, across the top and down the sides, were a pair of thin Syrian curtains, gracefully draped. Half way down was fastened a small bracket; above this were tacked some engravings without frames, the velveteen making an excellent back-ground. At the base was a large jar filled with bulrushes, cat-tails, and long grasses. This makes a charming bit of decoration.

HOME DUTY.

J. H. G.

IN these days, when so much of our population is concentrated in cities and large towns; when our habits of living are almost communistic in character; when individual and isolated home-life is almost unknown, our public duties demand a large and ever-increasing share of our time and attention. It is at times exceedingly difficult to determine where our private duties end and our public duties begin, and we are too apt to let personal ease or pleasure determine our action. With very many people, public duty has a fascination which seems almost irresistible. With men it is usually politics, clubs, or secret societies which furnish the excuse for the neglect of the home; with women it is usually sewing societies, church sociables, Chautauqua meetings and the like, which cause the neglect of home duties. It is a very common thing to see children roaming the streets in rags and dirt, while the mother is at a meeting of the sewing society and the father at the village store talking politics. A recent number of the Christian Union contains a story which illustrates our duty in a very entertaining way. It is in the form of an imaginary discussion at a church meeting. The Parson, as usual, would measure the piety of his parishioners by their regular attendance at the various church meetings; the Deacon differs from him.

"But I can't agree with you, Deacon," said the Parson, "in your saying that the home is more sacred than the church. God founded the church in the wilderness."

"And God founded the family in the garden," said the Deacon.

"Christ died for the church on the cross," said the Parson.

"And Christ was born into the family in the manger," said the Deacon.

"God will at last present the church a perfect church, without spot or wrinkle, or any such thing," said the Parson.

"When we all come home," said the Deacon, "to join the great family of redeemed in the household of faith around our Father which is in heaven."

"But, Deacon," said Mrs. Geer, the Parson's wife, "suppose everybody stayed at home and took care of her own children, what would become of the church?"

"And suppose everybody goes off to church," replied the Deacon, "what's to become of the children at home?"

"There must be a golden mean, I suppose," said Mrs. Geer.

"No!" said the Deacon; "there is no golden mean. Means are not golden. They're brass, or lead, or pewter. Every man's first duty is to his own home. He ought to invest his first money there, and put his first energies there, and concentrate his first thoughts there, and give his first time there. Then, if he has any left, let him give it to the church."

The Parson shook his head.

"Parson," said the Deacon, energetically, "didn't you think Mr. Wheaton did a good thing last year when he undertook to pay the expenses of young Whitcomb through college and the theological seminary?"

"Yes," said the Parson; "I certainly did."

"But here's Mr. Hardcap," continued the Deacon, "who is not only paying for the schooling, but for the food, and clothing, and shelter, all the expenses of four or five boys and girls, and that not for five or six or seven years—he has assumed the cost of each of them for fifteen years or so."

It was a sight to behold—the expression on Mr. Hardcap's face at this unexpected discovery of his before unsuspected beneficence.

"But they're his own children," said the Parson.

"Certainly," said the Deacon; "what of that? Somebody's got to take care of them. And I should like somebody to tell me why it is not just as benevolent for Mr. Hardcap to take care of his own as for Mr. Wheaton to take care of somebody else's child; and why it does not do just as much good."

"I never thought of it in that way before," said the Parson.

"You may depend upon it, it is the right way," said the Deacon. "God has given every man his children to take care of—to feed, to clothe, to house, to educate. If we all did our duty, there would be no need of philanthropic charity. That's God's way of taking care of everybody. The man who neglects his own children to take care of somebody else's children starts all wrong. The father and mother who have reared, cared for, educated and put into life well endowed for life's work half a dozen children, have done a good life work, if they never do anything else. That's the main thing: anything else they may do is extra, be it little or much."

BORROWING.

"Neither a borrower nor a lender be,
For loan oft loses both itself and friend."

THUS wrote the Bard of Avon, and I have found it true that the 'loan oft loses itself,' sighed I, as I sent Timothy out to make a circuit of the neighborhood in search of my quilting-frame, which I had lent last spring to Mrs. Brown, who had lent it to a neighbor, who had in turn lent it, and so on. I have always been free to lend, and Timothy says he spends most of his time in hunting up the articles from the borrowers who make a point, it seems, never to return anything. I was as willing to borrow as to lend until my mother-in-law, of blessed memory, came to make me a visit a few years after my marriage. Seeing me about to send Norah to a neighbor's for some sugar, she asked me how far it was to the store. "Five minutes' walk," said I. "Then," said the old lady, "why not send and buy it at once, since you must eventually do this, as well as make two trips to your neighbor's house?" After that, when I had the impulse to borrow, I studied the matter first to see how really necessary the borrowing was, and I found that in nine cases out of ten it was easier and better to do without, or substitute something else for the required article, and that a little carefulness and restraint here helped me wonderfully in remembering to keep certain supplies on hand.

Still, although I have learned not to borrow, and find borrowers a nuisance, I have not the courage to refuse to lend. When the Browns send their little boy in for next week's RURAL I shall lend it, although I know that it will either not be returned at all, or that when it comes back it will be soiled, dog-eared, and ragged. If they will read this, and if it sets them thinking, I shall be repaid, although I shall have to order another copy of the paper to keep my file entire.

MRS. TIMOTHY HAYSEED.

INDOORS AND OUT.

EXCEPTION has been taken to the cartoon in the Thanksgiving Number of the RURAL because the woman is placed two or three steps lower than the man and on a level with the animals. The critics evidently forget that it is an out-of-door scene. It is in a place where the man should lead and govern. In the subsequent banquet in the spacious dining-room, the farmer's wife presides and leads the welcome music of the tea-kettle with an accompaniment of delicious perfumes from the well roasted turkey and hot mince pies. Here the *man* very properly gives way to the woman and she reigns supreme.

Why is it that so many women are "always and eternally" dissatisfied with their position in life? Every one knows that all institutions, including the smallest family, must have a head. It is ordained of God that man shall be at the head of the family and no earthly power can change the divine decree. The only result of dissatisfaction and carping criticism, is the injury of the family and the home: the institutions which lie at the very foundations of our national structure. The highest type of womanhood is that of the wife and mother and as such she must be subordinate to man out-of-doors.

J. H. G.

GOLDEN GRAINS.

MOODY says that there is something better than a revival, and that is a Christian that does not need to be revived ...

THE Rev. Dr. Denner says if we are going to apply the doctrine of averages to our Christian life, let us make it a high one. Let us not use our extra piety of the Sabbath to fill the ungodly holes and gaps in our conduct on other days. What we have done will never level up what we have left undone.....

THIS sentence from Herbert Spencer is as good religion as it is politics: The man who plumes himself upon his wisdom in minding his own business, is blind to the fact that his own business is made possible only by maintaining a healthy state .....

KATE L. BROWN thinks it is a good thing to fall sometimes. It has the effect of an electrical shock, starting the life currents into new activities. But let us take care that these falls be "falls upward," and that new grace and wisdom are fruits thereof.....

BENEFICENCE is a running stream, says Dr. Edwards. If cash flows out of a Christian man's pocket, it will almost miraculously flow in again, just as water rushes into a channel whose waters have to gush out. Many a good man's purse is like a syphon, the very emptying of which insures its refilling.....

A WRITER in the Philadelphia Ledger says it is useless to talk of sacrificing self to others unless there is something in self that others need. It is the full and rich life, not the poor and empty one, that can fill and enrich others. True benevolence, then, must obtain that which it would give. To acquire honorably money or leisure or power, to cultivate health and happiness, to gain knowledge and wisdom, to develop interest in human affairs, to cherish just principles and generous impulses, to fill the mind with pure and noble thoughts and the heart with tender love and sympathy—these things are essential if we would pour out blessings and benefits upon our fellow-men, while at the same time they ennoble and gladden our own lives. We are all influencing others in the direction in which we ourselves are tending.....

RUSKIN said that childhood often holds a truth with its feeble fingers, which the grasp of manhood cannot retain, which it is the pride of utmost age to recover.....

THE one prudence in life is concentration, the one evil is dissipation, and it makes no difference whether our dissipations are coarse or fine—property and its cares, friends and a social habit, or politics, or music, or feasting.

KEEP THIS FACT IN VIEW.—Thatcher's Orange Butter Color is to-day the strongest, cheapest and most natural color in the world and can be found with nearly every dealer throughout the dairy belt of U. S. Thatcher M'f'g. Co., Potsdam, N. Y.—*Adv.*

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

He who bestows nothing, receives nothing; he who sows not, reaps not, and he who bears not the burdens of others, is usually crushed under his own.

EXTRACTS FROM SUNDAY EVENING TALKS AT THE RURAL GROUNDS.

FOR the enlightenment of our new subscribers, we will again state that the extracts under this heading are taken from essays or talks read or given extemporaneously, at what we call our Sunday evening devotional exercise, by the different members of the Rural circle, who, as our old readers know, live in a lonely country place and some distance from a church. These exercises consist of Bible reading, discussion of the matter read, reading and explanation of the International Sunday-school Lesson, reading of the paper prepared by a previously appointed member, and singing, ending with repetition in concert of the Lord's Prayer.

Our readers will kindly consider that our extracts are taken alike from young and old. While we intend to quote from time to time from these talks, many of them are of too personal a character to allow of so doing. As a matter of course, the RURAL NEW-YORKER does not hold itself responsible for the principles advocated or denounced in these talks.

"INASMUCH as ye have done it unto one of the least of these my brethren, ye have done it unto me." MATTHEW, 25:40.

It occurred to me some time ago, that my next production for our Sunday evening services should be based upon an incident of my life, which has influenced me probably more than any other one thing. I know of no more appropriate text than the one I have read.

The summer I was 16 years old was the happiest, in the sense of freedom from care, within my remembrance. Yet toward the close of that summer I was guilty of the act to which I have referred. One night during the last week in August, I attended a party or "sociable," as such meetings are sometimes called. Having returned home at a late hour, I was tired and sleepy. It seemed as though I had just gone to sleep, when I was awakened by my little brother who shared my room, and was always my especial favorite.

"Sister, I am *so* thirsty, I want a drink of water."

Half asleep I went to the water-pitcher, but found it *empty*. I said to him:

"There isn't any water up here; you'll soon go to sleep," thus summarily dismissing the subject from my mind, believing that his thirst would soon be forgotten and he soundly asleep. The next thing of which I was conscious was of hearing the following conversation.

"Mamma, are you awake?"

"Yes, dear; what is it?" said the mother, springing out of bed, and running to the stairs where the little fellow stood, half-way down. (The mother's room was on the first floor).

"Will you give me a drink of water, please?"

You may be sure that the little boy had not long to wait for his drink *then*.

"Why didn't you tell sister?"

"I did; but there wasn't any water upstairs, and sister was so tired and sleepy. Thank you, mamma. Good-night."

"Good-night, little boy; be careful, don't fall!" (The hall was very dark.) I heard the little fellow patter up the stairs and across the floor. He climbed into bed, and nestling close up to me, I heard him say:

"Poor sister, so tired and sleepy!"

Can you imagine my feelings? *No.* I don't believe any one can know how I hated myself. For hours I lay there unable to close my eyes in sleep. "Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto me," came to my mind time and again. Also this passage from St. James, in which it seemed to me that "*love*" should be substituted for "*faith.*" "What doth it profit, my brethren, though a man say he hath faith and have not works? Can faith save him? Faith, if it hath not works, is dead.

Yea, a man may say, Thou hast faith and I have works: shew me thy faith without thy works, and I will shew thee my faith by my works." Surely my *faith*, my *love* were "without works." There was "my own little boy" (as I called him), whom I loved with all the love of which I was capable, yet self-indulgence had come before that love.

That lesson taught me what I fear I should never have learned otherwise, and it has since seemed as though I "did evil that good might come."

It made me considerate to an extreme degree, I believe, of a child's or of children's wants—even notions. I can say, with all truth, that never since has a child's appeal, request, or desire been unheeded by me. Not that I gratify every little whim, for I know that children are apt to have a great many, which, if indulged would result in material injury to both body and character. I mean that I give it a reasoning thought and act accordingly. I feel that I would make any personal sacrifice, or undergo any hardship in order to grant a child's request, or to save a child from disappointment.

The *divine* in my text appeals not to me so much as the *human*. That is not the true significance and application I know, but how can we reach the *divine* but through the *human?*

All right-minded people will, I think, agree with me that education and morality alone should be the levelers, so to speak, as to social equality, and that they alone should decide whether a person be your equal or your inferior, or whether he be a suitable person to introduce into your home or one whom it would be better to avoid. Now, I do not wish to be misunderstood as not attaching importance to what is called "blue blood," or "good family," for such is not the case; but what I wish to assert is that if a person is morally and intellectually your equal, he *is* your equal, notwithstanding the fact that his mother takes in washing or that his father drives a cab. What is the difference between servant and master, maid and mistress? What draws the line and where is it to be drawn? Morally I have known girls superior to their mistresses, and I have known some maids and mistresses of such a character that, were their positions changed, each would have been better fitted for the situation.

If your girl is as refined as you are and morally your equal, then she should be treated as your equal—she is not your servant, neither will she long occupy a servant's position.

Associations, lack of education, refinement and often a dulled or warped moral sense, these are the inheritances that compel your servant to occupy a lower place than you grace or disgrace; these the inheritances that draw the line. God forbid that I should feel that any human being was beneath me, but because I feel thus, is it any reason why I wish to eat with my man or maid servant? Is it any reason why I should wish to talk over my private affairs with Peter or Jane, or to be "hail fellow well met" with them? * * Caste nowhere shows its disreputable side so well as in the so-called fashionable society of our times. It is held together not by any high grade of intelligence, not by any moral principles. A love of display and the gratification which springs from the adulation which wealth inspires are the lodestones that hold it together and make it what it is. It is a life, senseless, aimless and worthless, if viewed from an elevated point of view. Fashionable people give to intellect and morality a secondary place; refinement they assume to manufacture for themselves. * * * It has often occurred to me that the class of human beings, known as the nobility, will experience an altogether novel sensation in the world beyond, where rank and precedence dissolve before the just but inexorable judgment of Him who hath said: "For he that is least among you all, the same shall be great," and again, "Many that are first shall be last and the last shall be first."

But the great question that concerns us individually, my friends, is whether we be first or last when judged by the Eye which knoweth the innermost secrets of the heart.

NOT long since I read an interesting little book entitled "A Child's Influence" which made a deep impression upon me. How many of us stop to consider the meaning of the word influence, and how few of us realize that in our every day life we are exerting an influence either for good or bad? Are we letting our light shine as it should? A thoughtless, unintentional act on our part may be the means of leading some one astray. It is well to realize this.

A WORD TO CHARITY SWEETHEART.

A MOST estimable lady of my acquaintance made it a regular practice to air her domestic grievances every time she attended the class-meetings of her church, and while it may have been edifying to her own mind, it was rather rough on her auditors. So, Charity seems to think it a duty to tell the RURAL readers all about her own tribulations. If this would have any good effect, the dear soul would be justfied in publishing abroad her troubles; but in the present case she seems to be somewhat afflicted by that dread disease—*cacœthes scribendi.* Charity would have had her father to go behind the barn for

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria.

his pig-killing, and prevent "that unnecessary blot on her housewifely pride." Well, it might have been best; but my father brought home a lot of fish, which my step-mother refused to have cleaned in the kitchen. He did the work away from the house and in the rain. Within a few days my step-mother was a widow; but she maintained her reputation for neat housekeeping. Charity's father *might* have spared her "that unnecessary blot," and he might have become wet and chilled, and a victim of pneumonia. But "that blot" seemed to have been of more consequence than the well-being of father, brothers, and hired men, "who have no more brains than so many calves." Judging from Charity's complaint, she must have had chances of attending some school where she could learn "to paint little things for Christmas," and probably acquire other accomplishments, and become so refined that her father, brothers and neighbors appear to be "boors" in her sight. Such is the way of the world! Farmers' daughters are sent off to school to become "refined and accomplished," while they associate with intelligent people. The boys usually stay at home to toil for the "refining" of their sisters. Working 16 hours out of every 24, side by side with ignorant and vicious hired men, they have small chance of choosing their associates and consequently lack the polish of the drawing-room, yet "those whom they profess to love" will often, as in the case of Charity Sweetheart, if they can get an audience, proclaim to the world the shortcomings of the "boors," instead of endeavoring to imbue them with a little of that culture and refinement so persistently held forth to the view of a long-suffering public. I have a daughter whom, if she is spared to me, I will endeavor to have educated in such a manner that she will not hold up to public ridicule her less cultured father and mother and brothers, after the manner of Charity Sweetheart, whose name, by the way, is a gross misnomer.

A MAN.

COOKING MUSHROOMS.

MRS. WILLIAM FALCONER.

IF you raise your own mushrooms, you can gather them when you please, and cook them as you please, and enjoy them in their most delightful condition. Bought mushrooms are a very great luxury, for they cost $1.50 a pound, and are often poor enough at that. Canned mushrooms are immensely inferior to freshly-gathered ones. The small, short-stemmed, white-skinned mushrooms offered for sale in the leading fruiterers' stores, are of the variety known as French mushrooms; the larger, longer-stemmed, broader-headed and darker-colored kind that we also find offered for sale, is what is known as the English mushroom. The French mushrooms are preferred in market, but the English variety is the best-flavored, and by far the best for home use.

But as we grow our own mushrooms, and have had them in quantity since the first of November, I will confine myself to these.

Mushrooms should be gathered when they are full grown, but either before the frill around the neck bursts open, or within a day after it opens. Over-young mushrooms are somewhat tasteless, and those that are too old are tough. In gathering mushrooms do not cut them off, but pull them up by the roots; in this way they keep fresh much longer than they would do were they cut. As soon as gathered, cover them over with paper or cloth and keep them in a cool place to preserve them plump and fresh and white. Rough handling, crushing or jarring bruises and discolors them.

The broad head or cap of the mushroom is the part mostly used, but the top or succulent part of the stem is also good to eat, although not so well flavored as is the cap. But any part of the stem that is woody, soggy, tough or discolored is unfit for use. In preparing mushrooms for cooking always peel the skin off the top of the cap, but don't remove the gills or underside, and also break out the stem; the stems part easily from the caps. We do not peel the stems and seldom cook them together with the caps; they are mostly sliced thin and cooked separately. The bottom part of the stems should be thrown away.

Mushrooms that have wilted by age or exposure before being cooked, will be tough; undergrown young mushrooms, though not exactly tough, will be almost as tasteless as putty; mushrooms that are too old will be tough and black when cooked; mushrooms that are undercooked will be tough; so will those that are overdone, and those that are allowed to get cold before they are eaten.

Now, before cooking mushrooms, decide upon the minute when you wish to eat them, because of all vegetables mushrooms are the ones that must be eaten hot and just as soon as they are cooked; that is, if one wishes to enjoy their delicious aroma. And always serve them on hot dishes.

BAKED MUSHROOMS.—Peel and stem the mushrooms, rub and sprinkle a little salt on the gills, and lay the mushrooms, gills up, on a shallow baking tin. Place an inverted saucer or deep plate over them in the tin, and put them into a brisk oven for about 15 minutes. Then take them out, and dish them up on a hot plate, without spilling the juice that has collected in the middle of each mushroom. Send to table and eat at once. This is the commonest, and, in fact, everybody's way of cooking mushrooms, and by it we secure the true mushroom aroma and taste in their finest perfection.

STEWED MUSHROOMS.—Peel and stem the mushrooms. Take an enameled sauce-pan, put a lump of butter in it and melt it, then put in the mushrooms, and season with salt and pepper, a small piece of pounded mace (if you like it), then cover the sauce-pan tightly, and stew the mushrooms gently until they are tender, which will be in about half an hour. Have ready some toast, either dry or fried in butter, as you like it best, spread out on a hot dish, then dish out the mushrooms on to the toast, keeping them gills side up, and pour the juice over them. Serve and eat hot.

MUSHROOMS À LA CRÊME.—Peel and stem the mushrooms, roll a lump of butter in flour and put it into the sauce-pan, then put in the mushrooms, and some salt, white pepper, a little sugar and some finely chopped parsley. Stew for ten minutes, then take the yelks of two eggs, beaten up with two large spoonfuls of cream, and add the mixture gradually to the stew; cook for about a couple of minutes longer, then serve in hot dishes. This is a delicious dish, but the fine mushroom flavor is not as pronounced in it as it is in the plain bake or stew.

CURRIED MUSHROOMS.—Peel and stem about 20 mushrooms, sprinkle with salt, add a little butter, and stew gently in a little good gravy or stock. Add four table-spoonfuls of cream and one tea-spoonful of good curry powder, previously well mixed, with two tea-spoonfuls of wheat flour. Mix carefully and serve on a hot dish with hot toast. A capital dish, and enjoyed by those who like curry.

SOYER'S BREAKFAST MUSHROOMS.—Place some freshly made toast, divided, on a dish, and put the mushrooms, stemmed and peeled, and gills up upon it; add a little pepper and salt, and put a small bit of butter in the middle of each mushroom. Then pour a tea-spoonful of cream over each, and add one clove for the whole dish. Put an inverted basin over the whole. Bake for 20 minutes, then bring to the table hot, and do not remove the basin till the dish is brought to the table, so as to preserve the grateful aroma. A most delightful dish.

MUSHROOM SOUP.—Take a good quality of mushrooms, peel and stem them. Stew them with a little butter, pepper and salt, and some good stock still tender; take them out and chop them up quite small, prepare a good stock as for any other soup, and add it to the mushrooms and the liquor they have been stewed in. Boil all together, and serve. If white soup is required, use white button mushrooms and a good veal stock, adding a spoonful of cream or a little milk as the color may require. This is a nice soup and tastes well. But it always seems to me a pity to cut up good mushrooms. If the mushrooms are very young, they have but little flavor; if they are full grown, they darken the soup, and if they are a little brown in the gills at the time when they are used, the soup will be disagreeably black. If after preparing but before cooking the mushrooms, you pour some boiling water over them and into this drop a little vinegar or lemon juice, and then drain them off through a colander you can prevent, to a great extent their darkening influence on the soup, but always at the expense of their flavor.

HERE AND THERE.

THE RURAL seems to be better than ever this week, (Jan 12.) there are so many items which call forth responses from many a heart.

After perusing "Reader's" remarks on training up children to take an interest in their parents' business, can any one wonder that boys who have been treated in that shabby way wish to leave the farm? Yet I know the picture is not overdrawn, as I have heard of similiar cases, and have thought such fathers worse than the old-time slave masters, at the South; for, as a general thing, whatever a slave might earn by extra work or accumulate by the generosity of visitors, was his own, and he was at liberty to spend it as he chose.

I would ask such parents. "Are your own children yours, soul and body, until they are 21 years of age?" I don't think God so intended, and I do not wonder that a son should rebel against such treatment, and seek different employment and strange masters.

How I wish I were yet living in the country, and could join in the "Ladies' Potato Contest." I would enjoy it without the hope of a prize, for I dearly love to work amongst flowers and vegetables.

A nice way to cool mush you wish to fry next morning, is to rinse an empty baking powder can or cans, in cold water, and fill them with the warm mush. When it is cold, turn it out and cut in slices; hot mush dropped on a well greased, hot griddle is excellent.

Minnie Grey's "mission" is indeed a blessed one, and though the world at large may never hear of her, those little ones she is now so kindly helping, will in after years "rise up and call her blessed." I have often wondered why it is that those who need to understand sewing most (the very poor) are so often entirely ignorant of it. Speed the day when we shall have more sewing and cooking schools!

EMMA D W.

BREAD; ANOTHER METHOD.

THE easiest and best method of bread making, that I know of, is to let the baker make it, and if you buy yesterday's bread at four cents per loaf, it is neither very expensive nor very dry, and is far more wholesome than fresh bread. When I make bread myself, however, this is the way I do it:—I sift warmed flour, with a pinch of salt, in a deep bowl, and use half a cake of compressed yeast or half a cup of liquid yeast for two loaves. I mix at night with warm water, using only enough to permit kneading at once I work it again in the morning once—or twice if desired—and let it rise till it is light, and bake rather quickly. I think the success of bread-making depends much more on the liveliness of the yeast than on any other one thing.

RENA ROSS.

QUEEN'S PUDDING.

"WHAT a delicious pudding," thought I, as I tasted of the dessert at my friend's dinner-table on New Year's Day. After the feast was over and all things were in apple-pie order, and we were ready to visit in a good old-fashioned way, I thought of "our" RURAL'S Domestic Department, and asked how that pudding was made. Said Mrs. S., "I take about a quart of good, rich, sweet milk, and, I think, half a pint of bread crumbs, *minus* the crust. Milk and bread are scalded together, and cooled enough to work through the colander. This I do with my hands. In this way the bread is worked smooth, and is thoroughly mixed with the milk. To this mixture are added the yelks of four eggs and the whites of two, about two-thirds of a cup of sugar, and one spoonful of butter. I beat the ingredients together very thoroughly, for the success of the pudding depends much on the beating. I flavor with nutmeg. I bake it in a very moderately hot oven, much as I would a custard pie, which, you know, should never come to a boil.

When baked, beat the whites of the two eggs to a stiff froth and add three or four spoonfuls of granulated sugar for the frosting. Spread a good layer of jelly upon the pudding, and over this spread the frosting, and set in the oven till it browns, which takes but a very few minutes if the oven is hot. To be eaten with cream and sugar."

It was only a bread pudding after all, and yet there was not a trace of bread visible to the eye, nor could the tongue detect a single crumb.

MAY MAPLE.

Miscellaneous Advertising.

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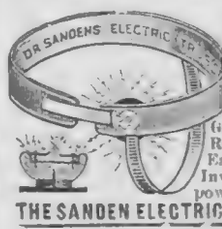

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News of the Week.

HOME NEWS.

SATURDAY, January 19, 1889.

LAST Monday the various electoral colleges, consisting of the Presidential electors chosen on November 6, met at the capitals of their respective States, as provided in the United States Constitution, and cast their votes for President and Vice-President. Altogether 401 votes were cast. Of these Harrison got 223 and Cleveland 168—a majority of 65 for the former. As a matter of interesting record and condensation the following table briefly shows the results of the recent election.....

	Popular Vote.				Electoral Vote.	
	Rep.....Harrison.	Dem.....Cleveland.	Fisk, Pro.	Un. Lab. Streeter,	Cleveland	Harrison.
Alabama	57,197	117,310	583	.....	10	..
Arkansas	58,752	85,962	614	10,618	7	..
California	124,816	117,729	5.761	....	..	8
Colorado	51,796	37,610	2,210	112	..	3
Connecticut	74,584	74,920	4,284	.....	6	..
Delaware	12,973	16,414	400	.....	3	..
Florida	26,659	39 561	403	.....	4	..
Georgia	40,453	100,472	1,803	136	12	..
Illinois	370,473	348,272	21,695	7,090	..	22
Indiana	263,361	261,013	9,881	2,694	..	15
Iowa	211,598	179 877	8,550	9.105	..	13
Kansas	182,502	102,541	6,452	36,236	..	9
Kentucky	155,134	183,800	130	.....	13	..
Louisiana	30,701	85,032	5,2 5	622	8	..
Maine	73,734	50,482	2,690	1,345	..	6
Maryland	99,986	106 168	4,766	.....	8	..
Massachusetts	183 447	151,990	8.641	.....	..	14
Michigan	236.307	213,404	20,942	4.542	..	13
Minnesota	136,359	99.664	15,000	.....	..	7
Mississippi	30,096	85.471	218	22	9	..
Missouri	236 253	261,954	4,540	18,589	15	..
Nebraska	108,425	80,552	9,429	4,226	..	5
Nevada	7,088	5 149	41	.....	..	3
New Hampshire	45 728	43.358	1,585	18	..	4
New Jersey	144,814	151,493	7,904	.....	9	..
New York	650 338	635.965	30,281	626	..	36
North Carolina	134,784	147,902	.....	.....	11	..
Ohio	416,054	396,455	24,356	3,496	..	23
Oregon	33.293	26,524	1 677	363	..	3
Pennsylvania	526,091	446,633	20.947	3,873	..	30
Rhode Island	21.969	17,530	1,251	.....	..	4
South Carolina	13,740	65,825	.....	.....	9	..
Tennessee	139,989	158,787	5,969	.....	12	
Texas	88,280	234,883	4,416	23,188	13	..
Vermont	45,192	16.788	1,460	.....	..	4
Virginia	150,438	151,976	1,678	.....	12	..
West Virginia	78,100	79,330	.....	.....	6	..
Wisconsin	176,553	155,282	14,277	8 552	..	11
Totals	5,437,580	5,534,079	244,959	136,443	168	233

Total vote of the four leading parties, 11,353,061. Cleveland's plurality, 96,499.

A bill has been introduced into the Lower House of Congress by Representative Funston authorizing the Commissioner of Agriculture to establish and maintain at some central point a station for experimenting in the manufacture of sugar from beets, sorghum or cane. The Commissioner is authorized to receive at such station for education in sugar-making processes students who will agree to continue in the busines three years after they leave the station. Each State will be entitled to send two students to such station, and the Territories and District of Columbia, one each. For the purposes set forth in the bill, $100,000 are appropriated, together with all unexpended balances of appropriations made for sugar experiments..... The total number of murders committed in the country, as reported to the Chicago Tribune, during 1888, is 2,184, as compared with 2,335 in 1887, 1,499 in 1886 and 1,808 in 1885. The causes of these murders may be classified as follows:

Quarrels	1,033	Resisting arrest	64
Unknown	247	Self-defense	38
Jealousy	214	Infanticide	66
Liquor	192	Riots	34
By highwaymen	143	Outrage	6
Highwaymen killed	82	Strikes	12
Insanity	41	Duels	2

A newly discovered alum mine in Utah yields 80 to 90 per cent of pure alum..... Wetherell, husband of Emma Abott, the singer, died the other day, leaving Emma over $500,000.....The most important of the amendments to the State constitution just formulated by the constitutional convention of New Hampshire provides for biennial sessions of the Legislature, beginning in January instead of June, and gives the legislators a salary of $200 instead of $3 a day. Votes will be cast on March 12.....

An Extended Popularity.—Brown's Bronchial Troches have been before the public many years. For relieving Coughs, Colds and Throat Diseases they have been proved reliable. Sold only in boxes. Price 25 cents.

AGRICULTURAL NEWS.

SATURDAY, January 19, 1889.

THE demand in the foreign quarters of London for roasts and fillets of horse-flesh, has assumed such proportions, that meat venders are obliged to maintain a constant supply of this equine product..... In 1887 the United States exported bread stuffs to the value of $158,528.053; the exports for 1888, notwithstanding the shortage in European crops, were valued at only $112.615,376. Before the harvesting of the next crop it is probable there will be a revival of the export trade; but a reduction of nearly $36,000,000 in the value of bread-stuffs sold has made a serious pull upon the trade balance ..... The Pennsylvania Agricultural Society, in session at Harrisburg, has elected John McDowell President; A. H. O'Brien, First Vice-President; D. W. Seiler, Secretary; John J. Nissley, Treasurer.....The shipment of corn from Baltimore to European ports was unusually large this season. On Saturday five steamships sailed with an aggregate of 332,000 bushels. There are several other vessels in port loading, and others are expected there soon to take on cargoes for foreign ports. The greater portion of the grain goes to Ireland, although French ports and Antwerp have received some large consignments. .....The New York State Grange will hold its annual meeting at Syracuse, beginning on February 15, and lasting three or four days.....The next Maine Legislature will be asked to pass a law giving a bounty of 10 cents for every dead crow. It is estimated that the pests now do damage to the amount of $100,000 a year to the farmers of the State .... The unpaid bills on account of the last Massachusetts State fair at Springfield amount to $4.223, to pay which there are only $865 in the treasury, but $2,748 of the guarantee fund promised by citizens are still unpaid, leaving a credit balance of $611. The following officers of the Bay State Agricultural Society were chosen the other day: President Col. H. S. Russell, Milton; Secretary, T. H. Appleton, Peabody; Treasurer, Col. W. H. Bowker, Boston; and a long list of vice-presidents and trustees.....

Evidence.

THE best we can say of Compound Oxygen is not half so convincing as the report our patients give of it.

While you may be ready to accept our statements still the words of others have more of the character of evidence. There is encouragement in the following:

GLASGOW, Ky.

"I regard Compound Oxygen as a wonderful remedy, and shall ever be grateful to you for it. JAS. B. MARTIN.

MIDDLETOWN, N. Y., January 25, 1888.

"I have used the Compound Oxygen now for about three years, and consider it the most efficient remedy ever offered to the sufferer. REV. WM. MCGLATHERY.

SUMTER, S. C.

"I have used the Compound Oxygen Home Treatment from DRS. STARKEY & PALEN as a revitalizer, and have experienced marked benefit from it. MR. N. G. OSTREN, Proprietor *Watchman and Southern.*

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 331 Montgomery St., San Francisco, Cal.—*Adv.*

Crops & Markets.

SATURDAY, January 19, 1889.

The December report of the Department of Agriculture, which publishes in detail estimates of some of the more important crops, makes the product of corn 1,987,790,000 bushels, grown on 75,672,763 acres, valued on the farm at $677,561,580, or 31.1 cents per bushel, against 44.4 for the crop of 1887, a decrease of 23 per cent., the product of 1887 being 27 per cent. less, in volume, than that of 1888. The yield of the commercial belt, or seven corn surplus States, averages 33.2 bushels per acre. The Atlantic Coast, south of the Potomac, averages 11.2 bushels of comparatively poor quality.

The wheat aggregate is 414.868,000 bushels, grown on 36,339,138 acres, valued at $384.248,030. The average yield is therefore 11.11 bushels per acre: winter wheat 11.6 bushels, and spring wheat, 10.3 bushels per acre. The average farm value is 92.6 cents per bushel, against 68.1 cent for the previous crop, a difference due more to foreign than domestic scarcity.

The aggregate for oats is 707,737,000 bushels, grown on 26,998,282 acres, and valued at $195,424,240. This is 27.8 cents per bushel, against 30 cents for the crop of 1887

A comparison of aggregate values shows that the present corn crop is worth $31,000,000 more than the previous one; wheat $74,000,000 more; oats $5,000 000 less.

It will be noticed that in the above report Statistician Dodge says nothing about the deficiency in the weight of the wheat crop, leaving that presumably for his March report as usual. This shortage is variously estimated at from 20,000,000 to 30,000,000 bushels. In measured bushels, Professor Dodge's latest estimate is about 8,000,000 bushels more than the last previous estimate, which was 406,000,000 bushels. At Chicago the report was accepted on Monday and Tuesday as an exceedingly bearish document by the wheat speculative public, and the market was borne down by tremendous offerings. New York came in first with terrific selling orders. All the private wire houses and a great many firms that do not have private wires were heavy sellers. Local heavy-weights were quick to catch the drift, and among the number Ream figured as a tremendous seller early in the day and during the early stages of the break that followed the reception of the Government bulletin.

The annual report of the tomato pack of the United States and Canada, as compiled by the American Grocer, indicates a second era of over production. Of tomatoes there were put up last season 3 319.437 cases of two dozen tins each, or a total of 79,666 488 cans, costing at points of production about $6,000,000 and reaching consumers at a total expense of $8,000,000. The acreage was largely increased in all directions, but fortunately (as the result shows), the weather was unfavorable to the proper and full development of the crop; and yet, in spite of a cold and backward season, heavy periods of rainfall in some States and long droughts in others, and early killing frosts in October, the pack turns out to be unusually large, reaching a total of 3,319,437 cases, against 2,817.048 cases in 1887. The canning industry has grown rapidly in the Western and Southern States, largely reducing the demand upon Baltimore, Philadelphia and New York for such goods. In a few years each section of the country bids fair to supply its wants from home canneries. The leading points of production are Maryland and Virginia, credited with 1,118,733 cases; New Jersey, 789 363; Delaware, 227.030; New York, 197,432; Western States, 789,363; Eastern States, 43,360; Canada, 73,990.

"Herbrand" Fifth Wheel for Buggies.—*Adv.*

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, January 19, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	6 13-16	7 1-16	.....
Strict Ordinary	7 5-16	7 9-16	.....
Good Ordinary	8¾	8⅝	.....
Strict Good Ordinary	8⅞	9⅛	.....
Low Middling	9 7-16	9 11-16	.....
Strict Low Middling	9 11-16	9 15-16	.....
Middling	9 15-16	10 3-16	.....
Good Middling	10 5-16	10 9-16	.....
Strict Good Middling	10 9-16	10 13-16	.....
Middling Fair	10¾	11⅛	.....
Fair	11½	11¾	....

STAINED.

Good Ordinary	6¾	Low Middling	8¼
Strict Good Ord	7 7-16	Middling	9⅜

POULTRY—LIVE Fowls, near-by, per lb, 10@11c; fowls Western, per lb, 10@11c; roosters, per lb, 6@6½c; turkeys, per lb 10@12c; ducks, western, per pair, 60@90c; geese, western, per pair, $1 40@1 90; chickens; nearby, per lb. 10c; do, western, 9@10c.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per lb, 11@14c do do, common to fair, 8@10c; do, iced, dry picked, choice, 11@12c Fowls, western, do, choice, 10@11c; do, nearby, do do, 11@12½c; do, western, iced, dry picked, 9c; do do do, scalded, 8@9c. Squabs, white, per doz, $3 50@$3 75: do, dark, do, $2 25@$2 75. Chickens Philadelphia, dry picked, 15@17c, do Jersey, do, choice, 13@14c; do nearby, do, good, 12@13c; do Western, do do, 11@12c; do do, iced, good to choice 10@12c. Ducks, nearby, choice, per lb, 14@15c; do do, good, 13@14; do Western, good, 13@14c. Geese, Western, good, 7@8c

GAME.—Woodcock, per pair, —@—. Partridges, per pair, ——@——; Wild Ducks, Canvas back, per pair, $2 50@$4 00; do, Red Head, do, $1 00@2 00; Grouse, do, 75c@$0 90, Wild Ducks, Mallard, do, 75@$1 00; do, Teal, do, 25@40c; Quail, per doz, $2 00@$2 50.

HOPS.—State, new, best, 21@23c; do, prime, 19@20c; do, low grades, 15@17c; do do, 1887, 7@11 do do do, California, new, 14@18c; do do do, choice, 20c.

HAY AND STRAW.—Choice Timothy, 90@95c; do good do, 85@90c; do medium, 70@80c; shipping, 60@65c; do, Clover, mixed, 55@70c. Straw.—No. 1, rye, 85@90c; short do 60@65; oat, 50@55c.

BEANS.—Marrows, new, $2 25@—; new mediums, choice, $1 90@1 95: pea, $1 85@—; red kidney, $2 10@2 20; white kidneys, choice, 2 50@2 55; foreign, mediums, 1 35@1 55; California Lima, $2 75@$3 00; green peas, new $1 35@1 40.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 6½@7c, and farmers' grades at 5½@6c. HICKORY NUTS quoted at $1 00@$1 50 per bushel. Pecans, 6@8c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Long Island, per bbl, $2 25@$2 35; Maine, per bbl. $2@$2 25; State, per bbl, $1 00@1 65; Sweets, per bbl, $2 00@2 75. State Onions, Orange county red, per bbl, $0 90@1 00; Cabbages, Long Island, per 100, $1 50@4 00; Onions, Connecticut red per bbl, $1 25@$——; do do, white, per bbl, $2 75@$3 25; do do, yellow, per bbl, 1 25@1 40; do State, do, do, $1 00@—. Turnips, Russia, per bbl, 30@50c. Cauliflower, per bbl $2 50@3 50; Celery, per doz. bunches, $1 25@$1 50; Kale, per bbl, 50@75c; Spinach, per bbl, $0 75@$1 25.

FRUITS.—FRESH.—Apples, Spitzenburg, per bbl, $1 50@2 00; do, King, do, $1 50@$2 25; do Snow, do, $1 50@$2 00; do, Baldwin, $0 75@1 40. do, Greening, $1 00@$2 00; do, common, $1 25@$1 40. Pears, Dutchess, per bbl, $4 00@4 50; Virgalieu, per bbl, $4 00@$5 00; do, Vicar, do, $2 50@$3 00; do, Kieffer, do, $3 00@$4 50. Grapes, Delaware, per lb, 2@7c; do, Catawba, do, 3@4; do, Concord, 2@4c; do, Niagara, ——c. Cranberries, Cape Cod, choice to fancy per bbl, $6 50@8 50, do do, fair, per bbl, $6 00@$——; do do, per crate, $2 00@2 75; do do do, frosted, do, $2 00@$2 50; do, Jersey, do, $1 50@$2 15. Quinces, per bbl, $——@$——. Florida Oranges, best, per box, $2 40@$2 75; do, good lots, $2 00@$2 25; do lemons, best, $3 00@3 50; do do, common, per box, $1 00@$2 50

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5½@7c; do do, old, 5@7c; do do, new, common to prime, 4½@5¼c, do sliced, new, 4@5¼c; do, quarters, choice, 4@4¾c; do, coarse cut, 4@4¼c. Cherries, new, 13@15c. Raspberries, new, 19@21c. Blackberries, 5½@5¾c. Huckleberries, 10½@11c. Peaches, Delaware, evaporated, peeled, 16@20c; do do do, unpeeled, 7@9c; do, North Carolina, sun-dried, peeled, 9@11c. Plums, 9c.

PROVISION MARKETS.

NEW YORK.—PROVISIONS.—PORK.—New mess, 13 75@14 50, short clear, 15 50@$17 00 Extra Prime mess $13 50; prime do, $15@15 50, and family mess, $15 00@15 50. BEEF—India Mess in tierces, $20@22 Extra Mess, in barrels $7 00@7 25 Packet $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate $9 00@9 50; Family at $12 50@$16. HAMS $12 00@$13 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 7¼@7¾c; Pickled Hams, 9¼@10c; pickled Shoulders 6@6½c; Smoked shoulders at 8c; do Hams, 10@11c. Dressed Hogs.—City, heavy to light, 7¾@7¼c. Pigs, 7¼c. LARD.—City steam, $7 05; December, ——; January, $7 45; February, $7 44; March, $7 45; April, $7 47; May, $7 50; June, $7 53; South America, 9c.

BOSTON.—PROVISIONS firm and steady. New Mess Pork, $16 75@$17 00; Old Mess Pork, $16 00@$16 25; Extra Prime, new, $15 75@$17 00. LARD, $9 75@$10 50.

PHILADELPHIA, PA.—PROVISIONS.—Potatoes firm; Early Rose, 47@50c per bush.; Burbanks and White Star, 40@42c Provisions were steady, in moderate demand. BEEF—City family, per bbl $10 50@$11; do, packets, $9 50@$10; smoked beef 11@12c; beef hams $14 PORK.—Mess, $15 00@$15 50; do Prime Mess, new, $14 50; do, family, $17 00@18 00; Hams, smoked, per lb, 11½@12c do, S. P., cured in tierces, 10@11c; do do do, in salt, 10c; sides, clear ribbed, smoked, 9½@10c; shoulders, in dry salt and fully cured, 8½@9c; do, do, smoked, 9c; Shoulders, pickle cured, 8½@9c; do do smoked, 9@9½c; bellies, in pickle, 9½@10c; do breakfast bacon, 10½@11c. LARD—Steady: City refined, 9; do steam, 9½@10¼c; butchers' loose, 8¼@8½c.

CHICAGO.—MESS PORK.—$12 80@—— LARD.—$7 00@—— per 100 lbs; Short Rib sides (loose), $6 90; dry salted shoulders, boxed, $6 87; short clear sides, boxed, $7 25.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER.—Creamery—State, pails, best, 21@29c, do do, tubs, best, 20@26: Pennsylvania, best, 25@26; Elgin, best, 26@—; Western, best, 24@ ; do prime, 21@28; do good, 18@20; do poor, 12@15, do June, good to best, 16@23 State—Dairy, half-firkins, tubs, best, 25@26c; do do, prime 20@23c; do do fine, 19@21c; Welsh tubs, fine, 21@22; do do, good, 19@20; firkins, best, 19@21c; do prime, 21@22c; do fine, ——c. Western Imitation Creamery, best, 19@20c; do, fine, 17@19c; Western dairy, fine, 18@19c; do fair, 18@20c; do, poor, 14c; 15c; do factory, fresh, best, 19@20c; do, prime, 16@17 do, good, 14@16c; do, poor, 11½@13½c; do, June, 13@14c

SAVED HER LIFE.

DEPOSIT, N. Y., November 8, 1888.

Mr. Wallace Barnes, Box 604. Bristol Conn.

Dear Sir:—The heifer is in calf and will be due February 17th. She had a calf when two years old, but for two years we have not been able to get her in calf until last spring; we gave her your medicine for three weeks before being served, and but one service proved sufficient. We have had her served by different bulls. We sent her away from our farm several miles to another farm and had her served there. We gave her prescriptions from good veterinary surgeons, and we used injections, trying at the same time to dilate the os uteri, but it was all in vain. We had determined to beef her, when your advertisement caught our eye, offering Harboriri at $2 a bottle. Yours truly,

A. DEVERAUX & SON.

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WETHERSFIELD GROWN
ONION SEED
☞ By Mail Post Paid. ☜

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		Pr oz.	Pr lb.
Genuine Wethersf'ld Large red Onion Seed,		$0.15	$1 60
" Medium Early thick red	" "	.15	1.60
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" Southport Yellow Globe	"	.15	1.75
" Southport Red Globe, true	"	.80	2.50
" Southport White Globe, true	"	.20	2.50
" White Portugal or Silver Skin	"	.20	2.50

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JAPANESE BUCKWHEAT FOR SEED.

Superior to all other Early. Yields nearly Double per acre. Makes a good crop in spite of Drought; makes the whitest of flour. Price per bushel of 48 pounds, **$1 50**; half bushel, **$1**—purchasers paying freight. Address

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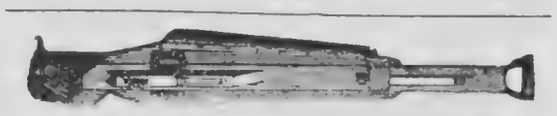

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C. A. BARTLETT,

CHEESE—State factory, September made, 12c; do do do, October, fancy, 11@11¼c; do, fine, 11⅛@11⅝c; do; fair and good, 10@10¾c; Ohio, flat, prime, 11@11¼c do, good, 9¾@10½c; skims, light, 8¾@9¼c; do, medium, 6½@8½c; do, full, 2@2¾c.

EGGS,—Near-by, fresh, 17½@18; Canadian, 13@14c; Western, best, 17@17½c; limed 13@15½c.

PHILADELPHIA.—BUTTER steady. Pennsylvania creamery extra, at 28@—c; Western creamery, extra at 16½@17c B. C. and N.Y. creamery extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs—Were firm Pennsylvania firsts, 19@—c; Western firsts, 18@—c; Cheese—steady; demand fair; New York full cream, at 9@9¼c, Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

BOSTON.—Butter firm; Western extra Creamery, 30@32c; Eastern extra Creamery, 29@30c. Cheese steady. Eggs dull; Eastern extras, 27@28c; Michigan extras 24c; Western firsts at 24c.

CHICAGO, Ill—BUTTER.—On the Produce Exchange to-day the butter market was quiet and steady; Elgin creamery, 28c; choice Western, 23@24½c, choice dairy, 22@24c; common to fair, 17@19c. Eggs firm at 14@15c.

GRAIN MARKETS.

The Grain Markets remain practically the same as in our last report.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, Jan. 19, 1889.

MILCH COWS.—Markets nominally steady at previous quotations, or at $28 to $45 per head.

CALVES.—Market unchanged. Some coarse yearlings sold at $2 75@$3 per 100 lb; a carload of grassers at $3 37½; Mixed calves at $3 65; and Common to Choice Veals at $6@$9; Dressed calves quiet at 3@6½c for dressed grassers; 9@11c for country dressed veals; and 10@13c for city dressed.

SHEEP AND LAMBS.—Poorest to best sheep sold at $3 to $6 12½ per 100 lb; and Ordinary to Choice Lambs at $6 25@$8 00; Dressed mutton dull at 7½@8½c, with prime wethers bringing 9c; and dressed lambs weak at 8½@11c for inferior to choice carcasses State Sheep, 83 lb average, at $3 per 100 lb do, 93 lb at $5; Territory do, 103 lb. at $5 55; do, 128 lb, at $6; State Lambs, 54 lb, at $6 50; Northern Canada do. 84 lb, at $7 40; State Sheep 97 lb, at $5 50; do, 122 lb, at $6; do, 124 lb at $6 12½; Michigan Lambs, 71 lb, at $7; State Sheep, 109 lb, at $5; State Lambs, 81 lb. at $7 60; Ohio Lambs, 68½ lb, at $7 87½; Ohio Sheep, 117½ lb, at $5 75 do, 96½ lb, at $5 75; do 113 lb, at $5 62½. Western do 91 lb at $5 37½; Ohio Lambs, 79 lb, at $7 50; Ohio Sheep (mainly Ewes), 117 lb, at $5 75; do, 91 lb. at $5 40; Buffalo do (few lambs), 98 lb, at $5 40 Buffalo Sheep, 114 lb, at $5 75; Buffalo Lambs, 59 lb. at, $6 25; do, 93 lb, at $7 50, State Sheep, 82 lb, at $5 12½; do, 115 lb, at $5 25; do, 125 lb, at $5 50; State Lambs, 50 lb, at $6 55.

HOGS.—None for sale alive. Nominally weak at $5 40@5 80 per 100 lb.

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COMMUNICATIONS RECEIVED FOR THE WEEK ENDING JANUARY 19, 1889.

G. W. P. J.—A. J. C.—S. H. C—H. D.—A. A. R.—P. H. H.—G. C. S—J. L H—W. W W.—W. L. D.—C. F. M.—A. J. C—S. H. S—G. W. S.—J. C S.—A. L. C.—L. H. G.—M. W.—W. L—W. H A—M C. P.—F. A. T—B. E. D.—M. H.—A. C. B.—W. B W.—F S.—E. P. J.—M. A. T. K L.—E L. V.—M F. G.—E. S. L.—I. Y—M. F. W—M. C.—J. A. F—J. J. W—M. E. S.—H. F. U., thank you.—A. J. C.—W. A. M. C.—L. A. E.—F. C F.—V. M. W.—C. L. J—A. A R.—L J. P.—W. H. C.—A. R. T.—O A. D.—C. E. C.—G. D. W.

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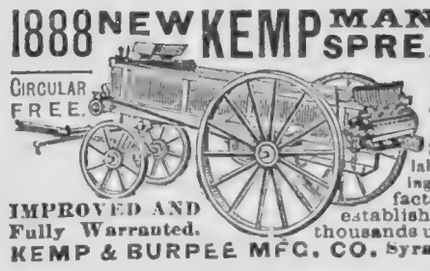

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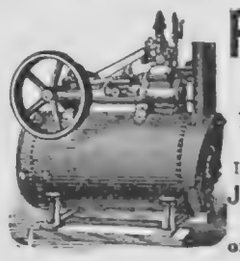

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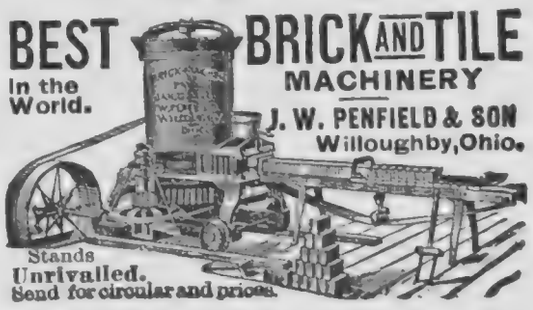

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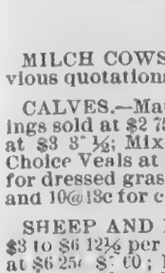

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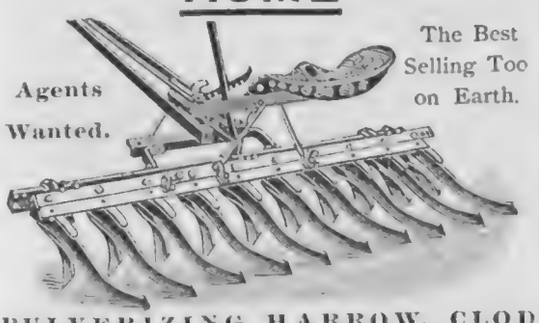

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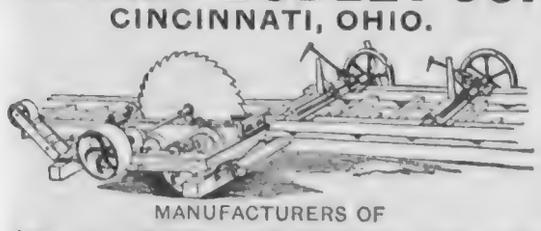

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Literary.

THE DRUM LAKE EASTER SERVICE.

A story of the Michigan Pine Woods.

BY HERBERT W. COLLINGWOOD.

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JIM was fully equal to the occasion. He pulled his chair up by the side of the minister and began: "What be yer g'nter give us fer a talk ter morrer?"

"It was my intention to preach a purely doctrinal sermon to-morrow, the first of a somewhat extended series, but I shall doubtless introduce a few practical ideas. My topic will be 'Can any good come out of Nazareth?'"

"Wall, sir, I spose that'll be a big thing. I heare'd lots of the boys askin' the same thing," and Jim made haste to change the subject. No doubt he was a little afraid the minister would ask him in which direction Nazareth might be found.

"Wall, how do ye like Drum Lake?" Jim asked at last.

This was a hard question for the minister to answer. When, two days before, he had looked upon the snow drifts that covered all that was left of "St. Paul's Church," he had made up his mind that Drum Lake was indeed a modern Sodom. But his duty lay within the town limits—he had been sent to "build up" the church, and he therefore hoped to find some redeeming quality. So he skillfully compromised matters by assuring Jim that he was much impressed with the place.

"Wall, I thought ye would be," replied Jim, "didn't you, Ben?"

Mr. Stone made haste to back up his friend's assertion. He added, as if to show his appreciation of the delicate compliment given Drum Lake: "Them idees is what knocks Parson."

"I don't s'pose," continued Jim, as he held up his boot in front of the fire, "that you ever done much work in the woods, did ye?"

The minister assured him that he had never done any work of that character. He had often thought, however, that he would like to try it.

"Have ye? What kind of work do ye s'pose ye'd like ter strike, chopin', jerkin' a saw, or swampin', or what?"

The minister had not exactly decided as yet what department he would prefer to enter. He would like some romantic or heroic work, he thought.

"Wall, that's the idee I hed," said Jim, "Somethin' heroyic like. I say, Ben, whare do ye s'pose Parson could git a job on some heroyic work in case his preachin' don't pay him big."

"Wall, I hev an idee he cud git inter the cook's shanty," answered Mr. Stone, after a moment's reflection.

There was a pause in the conversation. The Rev. Grayling was anxious to get rid of his visitors, yet he did not dare to let them see it. Mr. Stone broke the silence at last. "Say, Parson, what did ye give for them boots?"

But Jim ignored this question, so we can never know whether the bargain was a good one or not. Pretending to see the violin for the first time, Jim remarked, "Parson, I see you've got a fiddle there."

"Yes, sir," said the minister, timidly, "I—I—play a little."

"Do ye? Wall, Parson, I believe you're jest the man ter help us out of a big hole. Yer a regular Jonas fer us."

I do not know what historical character the Jonas referred to may be, the comparison was evidently very complimentary to the minister. He looked at Jim in mild wonder, for he hardly liked to be called a "Jonas."

Jim was fairly started at last. "Ye see, Parson, we hev been thinkin' of havin' a sorter soray like down ter Cobb's store this evenin', singin' an' speakin' ye know, an' all the excetterays. They wuz a feller—Mr. Jacobs—comin' over from Carter's ter jerk a bow fer us, but he's gut full; thet is, he's met with an' accident, so seein's we ain't gut no music, couldn't we git you ter go down an' play us a tune or two? We'll treat ye an' feed ye well, an' give yer a front seat. What do ye say?" and Jim leaned back in his chair to watch the effect of his words upon the minister.

Poor Mr. Grayling! He was at his wits' end surely. What should he do? This must be the dance that his former visitor referred to. Think of it—he the Rector of St. Paul's Church providing music for a dance.

"But there will be dancing there, will there not?" he managed to say at last.

"Wall, 'pears ter me I did hear one or two speak about dancin', seein' its so clost to Easter ye know, Parson, 'cause after termorrer' 'cordin' to youse feller's idees, we hev ter quit fer quite a piece of time"—Jim was a little mixed in regard to the lenten season.

"But, my very dear sir, you must be aware of the fact that I am conscientiously opposed to dancing."

"So be I as fur as thet goes; ain't you Ben?"

Mr. Stone hardly dared commit himself on this leading question. I hardly think he was sure of the meaning of the words "conscientiously opposed." He fell back upon his usual—"that's what knocks."

Jim braced himself for the final struggle.

"Now, then, Parson, we three be all agin this dancing bizness, an' like enough if we brace right up to it we kin break it all down. You jest go down thar with me, an' I'll introduce ye 'round an' give ye a good send-off. Then ye kin play a tune or two on yer fiddle, an' I'll bet ye'll have the biggest mob ye ever preached ter when termorrer comes." And Jim finished his remarks by looking round at the company as much as to say, "Who can beat this matchless programme?"

What could the weak little man say in answer to this outburst of logic and eloquence? Even Mrs. McKelvey had deserted him, and when he turned his spectacles appealingly upon her, she, in answer to Jim's supplicating wink, advised, "I think it would be a good thing for 'e, Parson."

"But," stammered the minister, evidently at the very last ditch of his defences, "I had hoped to be able to devote this evening to the formation of a choir for our church service."

"Wall, tell me what kind of a quire ye want, an' I'll get it ef it's ter be found in Drum Lake," Jim was bound to carry his point at all hazards.

"We usually form our choir of boys; four good voices would be sufficient for to-morrow."

Jim was in ecstacy. "Parson, now yer striking sap. I kin git ye four of the finest singers ye ever see ef ye will give us a lift with yer fiddle. Come, will ye?"

The minister was fairly cornered. There was no possible escape for him now, and he was obliged to say that if Jim would provide the choir, he would attend the "soray."

"Come on, Ben," said Jim, when this point was settled, "We'll jest roust out them singers," and he led the way to the door.

Mr. Stone followed his leader. He was wondering how Jim could ever keep his promise in regard to the choir. He had thought of suggesting himself as tenor with Mr. McKelvey as a possible bass, but he was willing to leave it all to Jim. He had a very high opinion of that gentleman as a manager, but when the new plan was disclosed, I really think Jim would have received at least one vote for President of the United States could he have been induced to run for that position. "Ben," said Jim, "you jest go down that street an' coller the fust two boys you see. It don't make no odds who they be. Jest coller 'em an' bring 'em in. Jest resk it ter me. I kin make ole spettycles think he's gut the biggest quire that ever sung."

Mr. Stone did not need much urging. He started down by the mill, while Jim went in the opposite direction.

If Jim had had plenty of time, he could easily have found four boys who would gladly have helped him out of his trouble. But time was short, and he decided to "coller" a choir, and trust to his great powers of persuasion to keep them in trim.

As Ben walked by the old mill, he noticed a slight ray of light stealing out through a crack in the door. This was such an unusual thing in decaying Drum Lake that he stopped even his present urgent errand. He put his eye to the crack, and made a hasty examination. There must have been some startling act on the boards, for he turned, and ran with all his speed in the direction Jim had taken.

Jim was not meeting with great success in his hunt. He was much surpised when Ben came up behind him at such headlong speed.

"Jim" said the messenger—"I've gut 'em dead. Andy Brown an' Mox Jensen has gone down ter Bryan's Mill to fight. They's a dozen boys down there ter see it out. We kin git the Parson's quire there jest like rolling off frum a log."

(TO BE CONTINUED.)

THE POST OFFICE CLUB.

THE parrot was actually happy last Saturday night. He danced a sort of jig on the hot stove-pipe and winked his red eye furiously.

"Farmin' don't pay! Farmin' don't pay!"

Oh! how he croaked it out! Didn't it do him lots of good to thus pulverize the opposition with his unanswerable argument? The parrot had reason for his extra energy. We had just had a funeral in our neighborhood; that backed him up wonderfully. It was old Mrs. Grinder that we buried. Her's had been a sad life. Old Grinder started in, years ago, with the idea that the sole object of life was to make all the money he possibly could at as little outlay as possible. I guess he succeeded, but while he was doing it he rubbed all the fertility out of his farm, all the happiness and beauty out of his wife's life, and just about all the charity out of his own heart. His boys were smart; they had sense enough to run away and get into something that manufactured happiness. The daughter stood it as long as she could for her mother's sake—then she ran away with a tin-peddler. The old man has a good, round sum tucked away in the county bank. I wonder how much it was worth to him last Saturday as he sat by the head of the coffin with his face buried in his great, rough hands. How pitiful it was! That poor, thin, patient face! How she had toiled and slaved and carried the cross all through these years. It all came back to him. He could not have starved his soul so completely that it could not respond to that flood of memories. How true, how faithful she had been to him! The tenderness came too late. She was dead! Why couldn't he have felt as he felt then, 30 years before? It came too late, she was dead. The parrot was right about old Grinder's farming. It didn't pay—it was a losing business all through—and yet, think what it *might* have paid him!

Well, the fact is that the day's proceedings cast a gloom over the club meeting and nobody felt able to argue with the parrot as it danced on the stove-pipe and croaked:

"Farmin' don't pay! Farmin' don't pay!!"

SMALL PICA.

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Law.

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LAWS RELATING TO FARMERS AND HIRED HELP

THE laws relating to farmers and their hired help vary somewhat in details in the different States; but briefly they are substantially as follows in all.

The relations between the farmer and his "help" rest wholly upon contract, expressed or implied. If the contract is for less than a year's service, it need not be in writing; but if the service cannot be performed within a year from the date of the contract, the latter must be in writing in order to be legally binding. This is the case in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New Jersey, Delaware, Pennsylvania North and South Carolina, Ohio, Georgia, Florida, Illinois, Arkansas, Missouri, Tennessee, Texas, Virginia, Kansas, Mississippi, Maryland, Kentucky, Indiana and Minnesota. In New York, Michigan, Wisconsin, Oregon, Nevada, California, and Alabama oral contracts are absolutely void. If a farmer has made an oral bargain to employ a person for a year, and the contract can be completed within that time, it is binding; but if the performance of it is to begin at a future day, so that the service cannot be completed within a year, the contract cannot be enforced. An oral contract, however, to hire a person for a year, to commence the next day, is valid. If no definite period of employment is agreed upon, the farmer has a right to discharge and the laborer a right to leave at any time, without cause. If there is no special bargain with regard to hire, the farmer must pay a reasonable value for the service, the amount to be determined by the current rate of wages for similar service at the time and place of performance. It is essential that the parties should have the legal capacity to contract. Thus, if a laborer under age binds himself for a specified term at a fixed price, he is not bound by his bargain, and if he leaves, he is entitled to what his services were reasonably worth, without any deduction therefrom for his breach of contract. If a contract is made on the understanding that either party must give notice beforehand of the termination of service; both parties are bound by it. The mere fact that the employer, whether master or mistress, is accustomed to give notice is of no consequence unless it is understood by the employé when the engagement is made. Where a farmer employs a laborer for a definite time, and before the termination of the term, the man voluntarily leaves, without just cause or the consent of the farmer, the laborer cannot recover any part of his wages, whether he has contracted to stay a year for a round sum or a year at so much a month. If he leaves even the day before the end of his term, and the whole year's wages are due, he cannot recover a cent in most of the States.

In New Hampshire, Iowa, Mississippi and Texas, however, the employé can recover what his services were reasonably worth, less the damage to the employer by reason of nonperformance of the contract. If the farmer has made a partial payment to his hired hand, who has left his service without valid excuse before his term expired, he cannot recover the money, even though it was not due at the time of payment, and if he has given a note for the amount already earned, he will be obliged to pay it. But the farmer can recover such damages as he has sustained from the man who has broken the contract, and the latter cannot set off against his claim the value of the work he has done and not been paid for. If the laborer leaves even for a single day, before the end of his term, the farmer is not obliged to take him back or to pay him for the work he has done. If, however, he is prevented by illness from completing the contract, he can recover *pro rata* for the services he has rendered. In the absence of an agreement to the contrary, a person is entitled to legal holidays, and is not bound to "make fair weather," or to lose time when there is nothing for him to do. It is otherwise with a person hired by the day. A hired man who lames a horse or injures a tool or machinery is liable for damages only when the injury is the result of carelessness. On the same principle, a domestic cannot be legally made to pay for broken crockery unless there is an express contract to that effect, if the domestic has exercised ordinary good care.

If a farmer has to furnish board and lodgings, per contract, for his hired man, and does not provide enough wholesome food and suitable lodgings, or treats him improperly, by assaulting him, the man is justified in leaving. So he is if he is compelled to work on Sundays, except to do the necessary chores, such as feeding live stock. Any act on the part of the farmer, prejudicial to the morals, reasonable comfort and safety, health or reputation of his laborer will justify the latter in leaving So will the habitual use of blasphemous language towards the man, but not the use of harsh language; nor will he be justified in leaving before the end of his term, because he has quarreled with a fellow employé. The jury must decide whether the laborer had reasonable ground for leaving the service, the burden of proof being upon him to establish the fact. Every contract is subject to the right of the farmer to discharge the laborer for sufficient cause without rendering himself liable for future wages. To justify such dismissal, the employé must have been guilty of wilful disobedience of a lawful order or moral misconduct, pecuniary or otherwise; or habitual neglect. Insulting language towards his employer or members of his family, habitual drunkness, unwarranted absence, and fraudulent conduct would justify dismissal; but in all such cases the discharged man can recover whatever his past services were actually worth to the farmer. A contract for services may be dissolved by the expiration of the term for which the laborer was hired; by the death of either party, or by the laborer becoming unable to perform his duty owing to illness or permanent disability. In such cases the employer must pay for the services actually rendered, and in case of the death of the employé, his representative is entitled to recover what his services were reasonably worth. If a farmer discharges a hired man without valid cause, he renders himself liable to a suit for damages, and if the man cannot secure suitable employment, the measure of his damages will be the amount of wages he would have received had he not been discharged.

The farmer must furnish his hired man with suitable tools and implements, and will be liable for any injury which may happen to the latter from any known defect in the implements; but if the employé's negligence contributed to the injury he cannot recover. If he was injured by the negligence of a fellow employé, the employer is not liable unless he is in some way in fault; still the latter is bound to exercise due care in selecting his employés, for he has no right to expose one to danger from the incompetency or recklessness of another. The hired man, however, must take the ordinary risks incident to his occupation. The employer is bound by contracts made by his employé in the course of his regular business; but, in order to be binding, such contracts must be within the scope of the man's authority, expressly conferred or implied by the farmer's conduct. The farmer is not bound to provide a physician, medicine, or attendance in case his employé falls sick. A farmer is responsible in damages to third persons for any injury done by his employé through negligence, fraud, deceit or even wilful misconduct, if it is done within the scope of his regular employment, and this though the farmer did not authorize or even know of his laborer's act or neglect. Even if the latter in the commission of the act wilfully violated his employer's orders, still, if the act was done in the course of his employment, the farmer is answerable. But he is not responsible for any act or omission of his employé, which is not connected with the business for which he was engaged, and which does not happen in the course of his employment. The farmer, however, is entitled to recover from his employé the amount of the judgment he has been compelled to satisfy to a third party for injury due to the negligence or misconduct of his help. Any person who entices away a person employed by another under contract, knowing such to be the fact, thereby renders himself liable for an action for damages for all the inconvenience and loss caused to the employer by his conduct; but an unsuccessful attempt to entice a person away is not actionable unless some damage has thereby been sustained by his employer. Nobody is liable for damages, however, for inducing a laborer to leave his employer's service at the end of the stipulated term.

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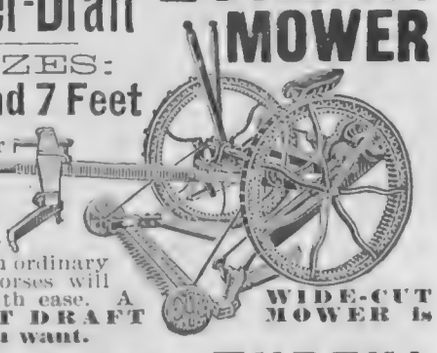

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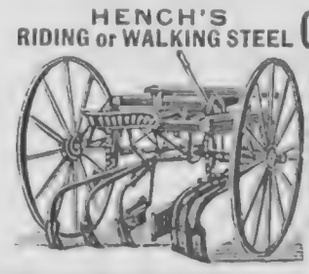

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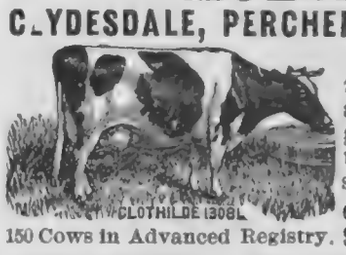
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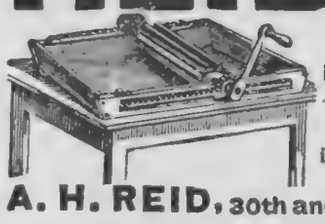

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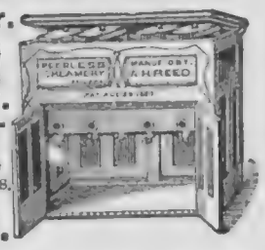

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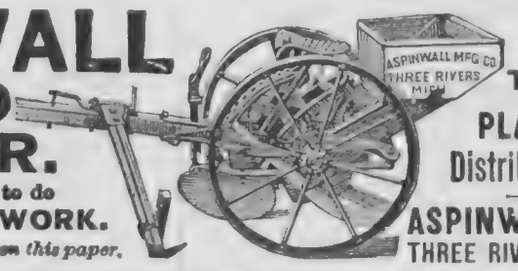

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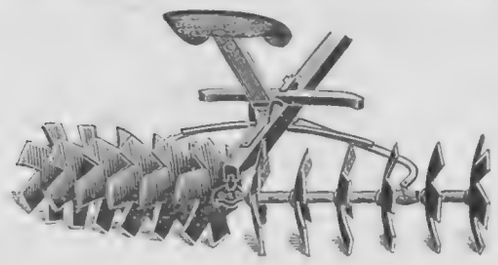

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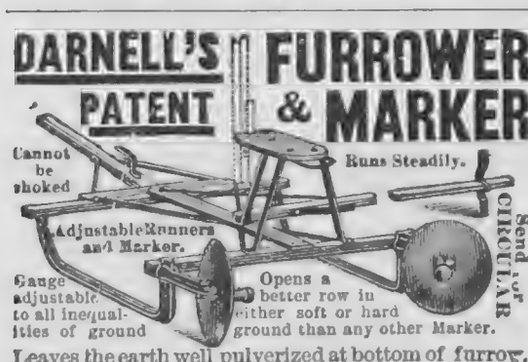

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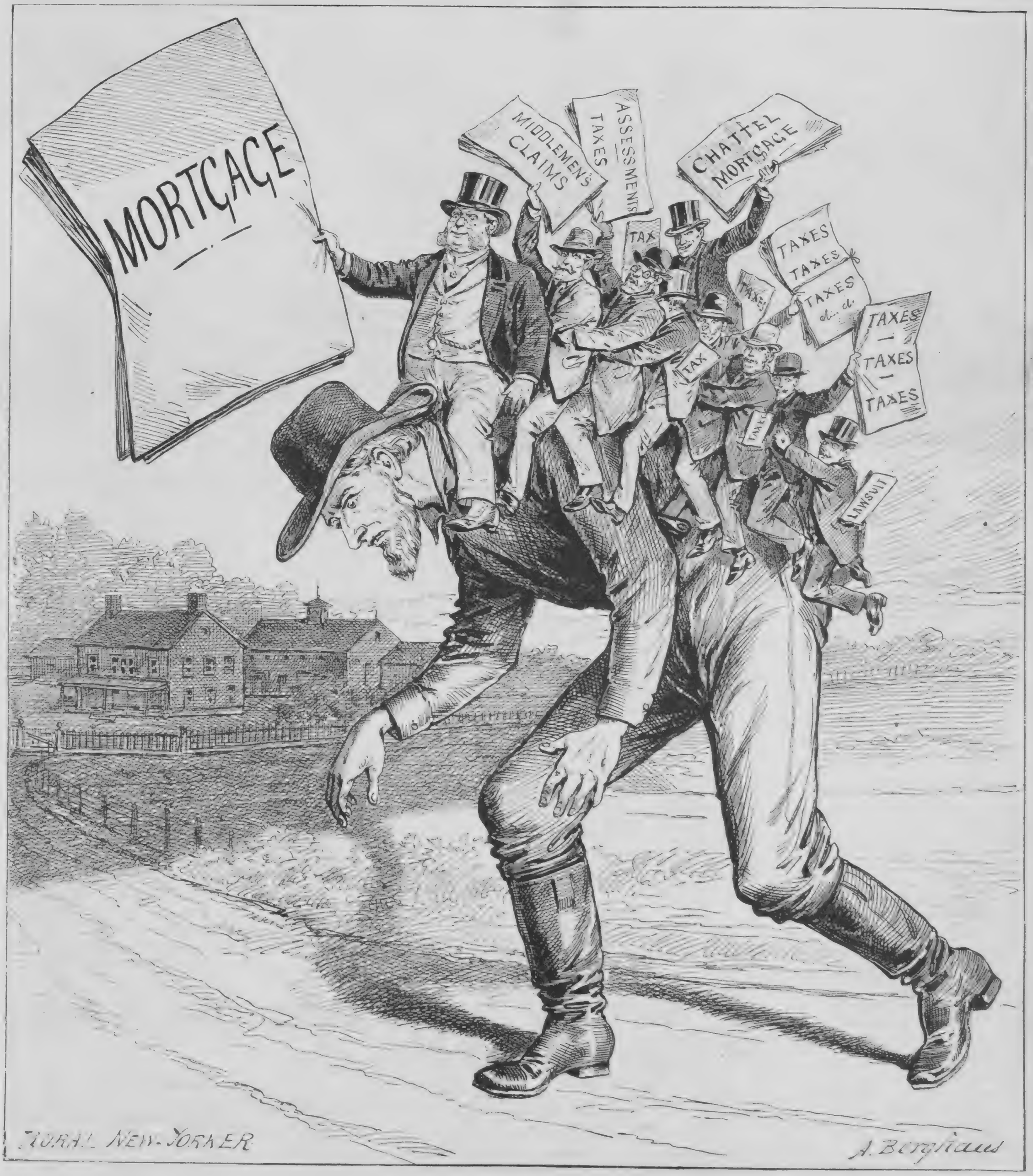

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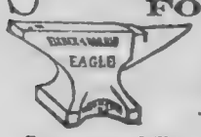

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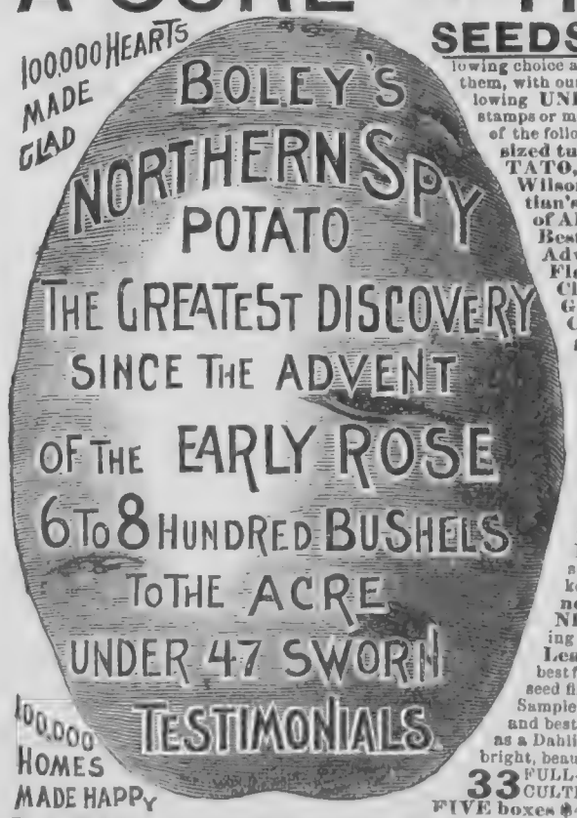

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INSTRUCTIONS AND SUGGESTIONS.

THE R. N.-Y. proposes that its lady readers enter into a potato contest of their own. In the way of suggestion merely at this time, let us propose that the plot be 33 feet square, or just one-fortieth of an acre. This is a very convenient size and shape. The plot may be larger but not smaller. Each contestant will choose her own method in *every* particular, the kind and quantity of fertilizer, or manure, the variety of potato, the distance apart to plant, etc., etc. It will not, of course, be required that the contestant do all or any of the actual work herself, but merely that it be done under her *direction and supervision.* The *aim will be to produce the largest quantity of merchantable potatoes on the chosen area at the least cost*; the standard of what constitutes a "merchantable" potato to be fixed hereafter. The reports (to be satisfactorily substantiated) will give the full particulars as to the kind of soil, fertilizer, manure, variety of potato and method of culture, and are to be handed in before the first of next October.

THE REWARDS.

The R. N.-Y. is collecting 500 or more rewards, or *souvenirs*, to be given to a corresponding number of the most successful contestants.

We believe this to be a very laudable project and certain to do a deal of good in very many ways.

The R. N.-Y. begs to express the hope that those of its friends who may take the above view of the project, will continue to encourage it by donating suitable articles or by contributing such moderate sums of money as in the aggregate may enable the committee (to be appointed) to extend the number of souvenirs as far as possible, and in this way help to secure a general interest and enthusiasm throughout the entire potato-growing country.

The Committee to examine the reports and to award the prizes will be made up of persons (either men or women as preferred) whose names shall be a sufficient guaranty of strict, impartial action.

FINALLY.

All of our female readers, whether young or old, who desire to enter the lists will kindly send in their *names* and *addresses* on postal cards, *adding the words* "FOR THE POTATO CONTEST."

The value of the souvenirs already promised amounts to over $900, as will be seen by reference to another page. *Our lady friends are sending in their names for the contest freely and a grand national contest, likely to engage the attention of the civilized world, is assured.*

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII. NO. 2036. NEW YORK, FEBRUARY 2, 1889. PRICE FIVE CENTS. $2.00 PER YEAR.

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Farm Economy.

TWO POTATO TOOLS.

IN growing a few acres of potatoes every year I find a great saving of labor and time in using a potato plow to dig the tubers and a screen to sort them. The original plan of my plow came from the R. N.-Y. some years ago. I had the iron beam of my single shovel-plow bent so as to lay the plow nearly flat; then I straightened the shovel somewhat and had bars riveted to it. Chains drag behind the bars. This implement does good work if the cultivation has been level; but if the ground is badly ridged, it does not bring all the potatoes to the top. The plow had been such a useful implement to me and to some of my neighbors, that I thought I would slip down "home" to my father-in-law's, some six miles away, and do him a good turn for many good ones he has done for me, by throwing out his five acres of potatoes; but, to my great surprise and annoyance, I found the potatoes so deep that when I gauged the plow to run under them, so much earth poured over it that the tubers were not all brought into sight. I at first thought I had a "two-story" hill, like those described later in the RURAL; but I now think that the depth of the tubers was due to a clover sod and mellow cultivation with large shovels. An illustration of this plow is shown at Fig. 20, page 68.

This year I made a screen on account of having an unusual amount of small potatoes. I first made a chute with cross-bars, having openings between them, but potatoes too large to pass the openings would lodge and clog them. After cutting slots in a salt barrel and revolving it like a wheat screen, I had a sheet of wire-cloth made out of No. 10 wire, and with square meshes an-inch-and-a-half in the clear. It was 48 inches long by 28 wide. I rolled it up the long way, making a cylinder which I introduced into the frame in place of the barrel, and revolved it with a crank. It did well. Potatoes, dirt, etc., were shoveled into the hopper and, falling into the screen, the dirt and small potatoes dropped through on to an inclined plane made of wicker-work, with half-inch meshes through which the dirt fell, the little potatoes rolling down into a basket, while the large ones poured out at the other end of the screen into another basket. The screen works well with Rose potatoes; but for Burbanks and long, slim tubers generally the meshes should be a little smaller. The screen is shown at Fig. 19. E. H. C.

Mattsville, Ind.

DEVICE FOR HAULING BRUSH.

(*See page* 68.)

DRAWING brush from an orchard has always been a perplexing job with me. I have never read a description of any good way of doing it. Here you have my way. The drawing Fig. 21 shows the implement. In this 1, 1, 1, represent the frame, and 2, 2, 2, the stakes. I do not fasten the stakes in the holes or pile the brush so high that the stakes cannot be pulled out when I want to unload. In doing this I drive the frame out from under the brush, replace the stakes, and am ready to load it again. The load being so low, a large one can be drawn without interfering with limbs of the trees. The expense for such an arrangement is too small to be mentioned. B. B. T.

Wakeman, O.

Farm Topics.

A JERSEYMAN'S JOTTINGS.

THE RURAL sends me the following letter. It is from a subscriber at Paducah, Kentucky.

"In the RURAL of October 27, appeared an article about "City Farmers," that has furnished me food for considerable reflection, and I have scanned each succeeding copy of the paper expecting to see the article criticised either by the editor or some of the many subscribers. The writer seems imbued with a sentiment so often met with in our local farmers' clubs and other similar organizations, that I cannot refrain from pointing out what I consider some of its errors, and, I may say, evils. He criticises most unmercifully some of the "projects" and "schemes" proposed by those city farmers, and says that he advises them to raise nothing but hay and rye, with, perhaps, a few potatoes.

Now the thought I wish to present is this: Does either of them "know it all"—or, in other words, is not "Jerseyman" and the "city farmer" *each* in possession of facts and information that the other needs?

There is no question but that a man brought up in a city knows more about the wants, tastes and fancies of city people than does the ordinary farmer. He also knows more about the "commercial world;" knows better how to buy and sell, also the most popular and attractive methods of preparing products for market, etc., etc.; while, for want of experience (or rather lack of information obtainable from reliable agricultural papers and books), he is far behind his neighbor farmer in the production of crops. Let these two classes of farmers establish a farmers' institute, or, better still, a private circle, club or wheel (as they may be pleased to call it), composed of not more than 12 male members; let them have their meetings monthly or semi-monthly at the different homes of the members, taking them in rotation and spending the day. The forenoon can be devoted to going over the farm, the visitors seeing how the proprietor plants and cultivates his crops, utilizes stony or swampy lands, constructs his fences, prunes and cultivates his orchard and vineyard, houses and feeds his stock, etc., while the proprietor can avail himself of the advice and counsel of his fellow farmers upon various points upon which he may be undecided. After returning to the house and enjoying a substantial farm dinner, they can go into session and (if it be their first meeting) permanently organize and designate such topics for discussion and investigation at the next meeting as will be to the mutual interest of all.

A "POTATO SEPARATOR." Fig. 19.

Here the city farmer, from having more time and opportunities for keeping posted, can contribute his share of information by posting the Jersey farmer on statistics relating to the extent and condition of crops, prices, etc., and give advice about packing and shipping. The Jerseyman can point out the errors the city farmer is committing, and offer such advice as may be necessary. What else can and should be done at these meetings I will not now venture to suggest, lest I make this article too long; but if each member that is fortunate enough to have a wife, will take her with him to these meetings, she will enjoy them, live longer and be happier, take more interest in farming and the world generally and be as much benefited by seeing how her hostess conducts her household affairs, as he will be by his convention.

But I have strayed somewhat from the original thought: Are not some, at least, of the "schemes" proposed by the city farmers practical, and would they not be profitable if taken hold of and carried out in a practical manner? And would not the Jersey farmers profit by diversifying their farming more than "Jerseyman" recommends, and not try to "carry all their eggs to market in one basket?" What we farmers need as badly as anything else is an interchange of ideas with men experienced in matters of which we are ignorant, and if there were more sociability and sympathy existing between the two parties in question, I cannot help thinking it would be to the mutual interest of both."

REPLY. R. B L.

It appears that I was not quite plain enough in my article. The main idea that I tried to bring out was that in order to make any money at farming a man has got to make a business of it. In this State he has got to do part of the work himself, stay by the crops constantly and make a study of his business. While our friend the city farmer, keeps up his work in the city, he can't farm except at a loss. This is no reflection upon the business ability of the city farmer. It only proves that farming is a mighty intricate business that will surely suffer if you try to make it a side issue. If a man can't give his whole heart and mind to farming he has no business to growl if he loses money at it. I always urge city farmers to raise the crops that require the least labor and care. Take rye and hay. If these crops are well manured and started they grow without the bother of weeding, cultivating and hoeing; one can sell the standing crops if he wants to, and it is a good deal better for the city farmer to do just this business than it is for him to put out a lot of truck, like sweet corn and melons or fruit, that must be handled just right in order to pay.

This I claim is true while we have such help as we ordinarily get in this State. A club such as our friend describes would be a first-rate thing if it could be organized. The trouble is that no club could live long containing two such opposite elements as our city farmers and those of us who have to dig our living out of the ground. We might form a club of our own and they might form one of their own set, but I doubt if we would pull very far together. Why? In order to make such a club successful, there must be some fundamental truth that every member can come back to for a fresh start when his feelings are aroused by a sharp discussion over farm methods. Now, in such a club as our friend talks about there could be no basis for a solid organization. One-half the members would feel that agriculture meant to them the most serious kind of business, while to the other half it would mean a recreation or a scheme for spending some money. Let me argue some farm method with a fellow farmer, and while I might not believe his opinion was very sound I would be apt to respect it because I could feel that he earned his bread and butter by backing it up with actual work. Can I feel so when a "city farmer" advances such schemes as I detailed in my article? JERSEYMAN.

Dairy Husbandry.

BUTTER FOR THE TABLE.

THE way in which butter is served at very

many farmers' homes, as well as at restaurants and hotels, is a disgrace to good butter, and in no way restores health to poor butter. Some farmer's wife says good butter served in a coffee cup is still good butter, and bad butter in neat little pats is bad butter still. Very true. But do you not love to have everything neat and convenient? I proceed as follows: We prefer fresh butter and hence save only three or four pounds from each churning. I use the bread-board and rolling-pin in salting, not touching my hands to the butter of course. After the salt is thoroughly worked in the butter, I roll it out to about three-quarters of an inch in thickness. I then use two little grooved paddles of the following description: They are each 2¾ inches wide, 4½ inches long, a quarter of an inch thick, with four-inch handles. One side of each paddle has 27 parallel grooves running lengthwise. These grooves are about one-eighth of an inch deep. Cut the butter that has been rolled out flatly on the board, into strips about an inch wide. Take from each strip enough to make, say, a half ounce roll, or more if you desire. Take a paddle in each hand and roll the butter on the grooved surface. In a few seconds, you will have a beautifully shaped ball of butter about large enough for one person. With a little practice these balls or pats can be made round, oblong, cob shaped, or double cone-shaped with the large diameters together. The surface of these pats, however made, will be full of small indentations and look very pretty.

I expected at the outset to prepare the butter in this way for dinner parties only, but having become accustomed to its use, I think it is an economy of time and a saving of butter. A farm hand takes from the roll placed on his butter-dish, just as he would, of course, if it was differently served. But there is less time required to clean the butter-dish when served in this way, and my observation is that there is less waste of butter, because when the butter is put on the butter-dish in a mixed shape, considerably more adheres to the dish and is wasted in the wash water. I recently prepared three pounds, making 91 little balls in 15 minutes. J. N. MUNCEY.

THE VERMONT DAIRYMEN.

(RURAL SPECIAL REPORT.)

A lively and instructive convention; hints on cheese making by "the largest cheese-maker in the world;" cheese making lessens competition in our butter markets; quality is money; feeding the wastes of the dairy to calves; dairy products must suit the consumers; growing mangolds; comparative value of mangolds and silage; beets; milk-testing; judging butter; officers elected; why Guernseys are preferable to Jerseys; linseed and cotton-seed-meal for feed; dairy progress in New York; need of culling a dairy herd; utilizing a bull; treatment of young heifers; increasing the fertility of dairy farms.

THE Dairymen's Association of Vermont, assembled in strong force at Burlington, for a three days' convention, January 16, 17, and 18, at the City Hall, which was well filled by them, and the interest manifested in all the proceedings was remarkably strong. The hall was neatly decorated with agricultural emblems, and the exercises were conducted with spirit from the start. The society begins its twentieth year under encouraging circumstances, having been recognized for the first time by the State Legislature, at its recent session, $1,000 yearly having been appropriated for its benefit.

After some opening congratulatory remarks by President Tinkham, Mr. D. M. McPherson, the prominent cheese-maker of Ontario, styled on the programme, "the largest cheese-maker in the world," addressed the meeting upon cheese-making. Referring to the fact that Vermont is mainly a butter-making State, he yet claimed that we had a right to be interested in the progress and prosperity of the allied industry, because the success of the American cheese industry relieved the market for butter of a strong competitive pressure, which it would seriously feel if all the milk that now goes into the vats should be devoted to the creameries. He asserted that there was little difference in the profits of the two industries, and that the scale was turned one way or the other by special and local conditions. The products of the American dairy surpass in money value, the products of any other two farm industries, and are an immense factor in the prosperity of our agriculture. The great point in these manufactures is to perfect the goods in point of quality, for here is the source of profit. There is no money in poor butter or cheese.

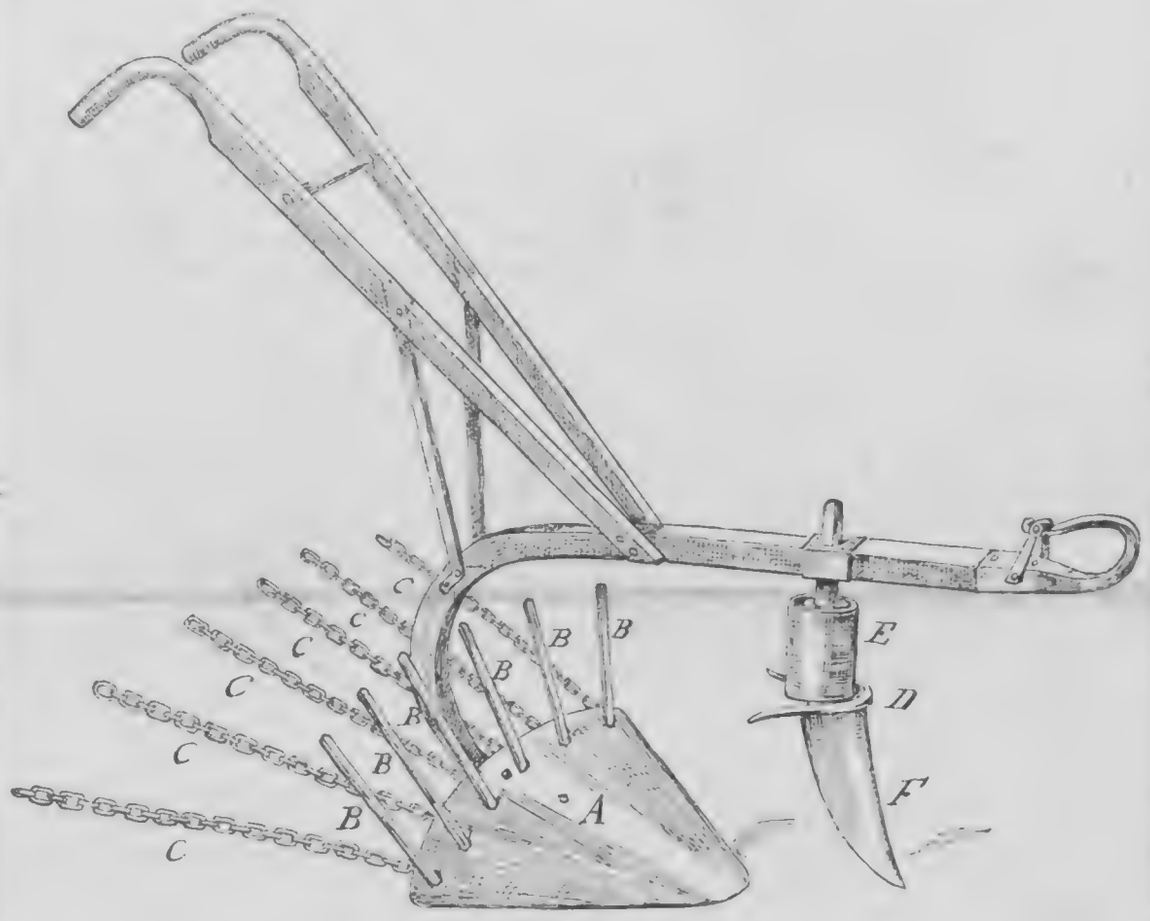
Mr. McPherson's chief points were the necessity of thoroughly controlling the expulsion of the 87 per cent. of water in milk, so that the finished product should contain nearly equal quantities of caseine, butter and moisture. The curd must be thoroughly controlled. The sugar of the milk is the most active agent, and must be controlled as the source of that acidity, the due development of which fixes the quality of the product. It will not be possible in this report to follow out the argument in its details, but the audience, which contained a considerable proportion of cheese-makers, followed the speaker with interest, and generally with marked approbation.

In the afternoon the first speaker was Mr. James Cheeseman, Secretary of the New England Creamery Association. His topic was the feeding of the wastes of the dairy to calves and pigs. Pointing out the provokingly little value that whey and butter-milk have as single feeds, he endeavored to show how much and how easily this value can be increased by the judicious admixture of other feeds—especially flax-seed, oat and gluten-meal—with whey for calves, and bran with butter-milk for pigs. Clover feed for the latter was strongly favored. He expressed the belief that there is no profit in feeding pigs on this system beyond 170 pounds before slaughtering.

The evening session of Wednesday was mostly given up to proceedings of a formal and ceremonial character (address of welcome, etc.,) but was concluded with a spirited speech from John Gould, of Ohio, upon the Advantages of Dairy Conferences. Speaking of the advantages of Vermont over the West in dairying, consequent on special adaptation and nearness to markets, he urged the improvement of the smaller farms more thoroughly by dairying, and the building up of the industry by establishing creameries in the hill towns. "I advise you," said he, "to suit the consumers. You must find out what they want, and then fill the want. When you succeed in this you are greatly aiding the general prosperity of the State. The dairy conference and the dairy school are what we need, together with the best apparatus, and a continually advancing skill. Put aside prejudice, seek knowledge, and sift out a system that shall take the lead, and bring in the profits that always attach themselves to the best production."

Thursday's sessions were very lively and interesting, and the hall was well filled. The first address was by the foreman of the Billings farm at Woodstock, George Atkins, an Englishman, who knows how to grow roots, and told the audience a method with mangolds. The ridge system is the only practical one where profit is the object, the seed being sown upon the tops of the ridges and nitrate of soda being applied in the drill to give the seed a quick start. The young plants are singled 10 inches apart, entirely with the common hoe, the neck being straightened so that the blade forms about a right angle with the handle. This is used with a thrusting movement, pushing the surplus plants out. When the first movement is made, a plant next to the hoe falls over, and the next push on the other side will remove all but that plant. No hand work is done, and Yankees soon learn this quick English way of singling the plants. He never gets less than 24 tons of beets (Norbiton Giants) per acre, and he has grown 40 tons, at an average cost of four cents a bushel, on land in a condition to give 50 bushels of corn to the acre. The beets are topped in the field, and the cows are turned in to eat the leaves, which have a considerable value. In tests he finds that cows fed 80 pounds of beets and 12 pounds of hay daily give an average of 20 pounds of milk, costing 9½ cents a gallon, against hay and grain feed producing an equal result at a cost of 31 cents a gallon. Professor Cooke, of the Vermont Experiment Station, stated that analysis of the beets fed show the Norbiton to be as good in quality as any other mangold, and better than some yellow sorts of smaller growth; also that beets are a much better balanced ration than silage. A lively discussion followed, Mr. Gould, of Ohio, defending silage, and saying that in testing it against roots he had found that, not counting the value of the leaves of the roots, the feed from an acre of ensilage was 3½ times greater than from the same area of beets. Dairy Commissioner Brown, of New York, stated that he was keeping 17 cattle and four horses on 20 acres of silage, with an income of $90 from each cow at a cost of $34 for feed, and that he could make butter with a slight profit at 16 cents a pound. Milk-testing by Professor Short's method was then practically exemplified by Mr. Gould, and, by Professor Cooke, with the lactocrite, the first being adapted to the farmer's house use or the factory; the second chiefly to the factory. A simple and effective milk aërater was shown in operation by Mr. McPherson of Ontario.

(*Continued on Page* 81.



POTATO PLOW. Fig. 20.

Horseman.

CLOVER HAY FOR HORSES.

T. B. TERRY.

Keeping work horses without grain feed; the kind of hay needed; how to feed; experience with work horses so fed; why the animals are kept on hay; clover for hay should be cut early; driving-horses may need grain; slow working horses don't.

ON page 799 of the RURAL for last year, appeared a short extract from an article of mine in the Ohio Farmer, from which several readers have obtained the impression that I feed my work horses no grain, and they have written asking for particulars.

The impression is correct. No grain has been fed to my work horses for seven years and very little for 20. I find that choice clover hay grown on good land and cut in full bloom or very soon afterwards, will keep work horses in good order with the work I have to do. The hay, however, must be choice. It should be three-quarters clover at least. A little Timothy in it seems to be an advantage. It is more easily cured and the horses like a little for a change, although they prefer clover to Timothy as a rule, and then, clear, early-cut clover is almost too loosening.

Having such hay I want horses of reasonable stomach capacity to feed it to, and I want to feed a reasonable amount three times a day, the heaviest feed being given at night, when the animals are working hard. To keep hay before horses all the time or nearly all, is not the proper way. I want to see them hungry when I go in to feed them. We sprinkle the hay slightly after putting it in their mangers. A common garden sprinkling can is used, and, having water in the barn, supplying it is very little trouble. Feeding in this way, with ordinary care about pulling a horse very hard when he was full, I have had no trouble from heaves. In fact, I have bought horses that had the heaves and worked them for years on clover hay alone.

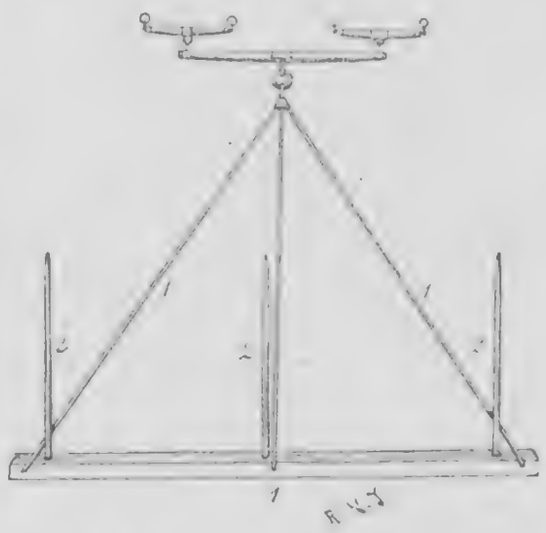
We live 2½ miles from town. I seldom have occasion to drive a horse to a carriage farther than that. For this use, and our regular farm work, and teaming crops to market, my clover-fed horses answer well. Some years I have drawn my potatoes and wheat to Akron, 12 miles away, being months steadily at work at it, and found no trouble in keeping the horses in fair working order without feeding any grain. They were not loaded beyond their strength, however, and were allowed to take their own gait, without being worried by the driver.

In the summer time my horses are fed clover hay three times a day, the same as in the winter. They are kept in box-stalls, in a cool basement, when not at work, during the day. At night they are usually turned out in a small pasture, more to wet their feet and give them a little exercise than for what grass they may eat. When there is very hard work to be done every day, as when we are plowing or moving the crops to market, the horses are kept in the barn at night and given about all they will eat up clean before morning. Now many are situated so that it would be as cheap for them to feed part grain as all hay, perhaps cheaper. I am not. I must raise clover once in three years to keep my land up. Good care is taken of it. The result is I always have literally more hay than I know what to do with. I do not wish to sell any. It is one of the products that should be turned into money on the farm as I am situated. I have yet to find any better use to which I can put 20 to 25 tons of it than to keep my horses on it.

As I write, I can look out of the window and see a field with clover on it, that would have made 25 big loads of hay. It will be turned under for potatoes next spring. Had I not had a great abundance without it, this could have been cut and fed to the horses and the manure returned to the field, at a trifling expense. There would have been some loss, of course; but, after all, my horses could have been kept at so small a cost as to be hardly worth mentioning. I raise potatoes, clover and wheat. My land will bring from 100 to 300 bushels of potatoes per acre. When the yield is 100 to 160 bushels we generally get 70 cents to $1.00 a bushel, as in 1887. Now it would seem foolish to put such land in oats or corn; that is, for money-making.

These facts will probably make it plain to all, why I was anxious in the first place to keep my horses on clover hay, and why, having found out that it can be done, I shall be likely to go on doing so. This is simply my experience, and I am not advising any one to follow me; I want all to think for themselves.

Seven years ago last fall, I bought a fine team of a neighbor. He had fed them grain three times a day. I gradually worked them off of grain; feeding more and more hay. I took care of them myself and just laid myself out to see what I could do. They were in fine condition when I bought them; but, if I remember correctly, 330 pounds more of flesh were put on them during the winter, and their coats shone like silk. I twice refused $500 for them. It took all my skill and strength to handle them. I used to dread to unhitch them from the plow at night and drive them to the barn they were so full of life. I drove them myself entirely, and it took me all summer to work that surplus weight off of them without hurting them—weight that never ought to have been put on, only that I wanted to show what I could do.



DEVICE FOR GATHERING BRUSH. Fig. 21.

This was done entirely with early cut clover hay. For seven years they never had a single quart of grain or ground feed of any kind. Last fall, after digging the potatoes and putting in the wheat, which took some

weeks of solid work, I weighed them and they were a little heavier than when I bought them. They have never once been lower in flesh than what they started with, according to my judgment. Being 13 years old now, they have seen their best days; but they will last longer than if they had been heavily fed with grain. Another point: they have never known a sick day. There is no danger of their being over-fed or fed when too warm. I am abundantly able now to buy grain, and perhaps for a noon feed when I am in a hurry, this might be best; still I am not thinking of changing.

The above story is exactly true in every particular, although it has been a hard one for many to swallow. It has amused the writer more than can easily be imagined to see visiting farmers, when they thought they were not noticed, prying into every out-of-the-way corner of the barn in search of grain. They could not believe me to my face. It is hard to believe anything that is much beyond what one is doing himself.

Certainly all might profit from this to the extent of cutting their clover early. I have seen many a field of clover and Timothy cut for horses as well as cattle so late that it would take considerable grain fed with the hay to make the ration as good as the hay alone would have been if cut in time. There can be no question on this point, and it seems equally certain that it is a poor way to do business. For driving horses feeding grain may be the best plan. They need concentrated food, and a little quite ripe hay goes well with the grain. Dried grass would be too loosening; but it is healthful and grand feed for slow-moving work horses, as well as for milch cows and young cattle.

Summit Co., O.

Entomological.

THE INSECTARY AT CORNELL UNIVERSITY.

At Fig. 22 we show a picture of this building, which is described in Bulletin No. 3 of the New York E. S. This insectary—the word was coined to suit the special uses to which the building will be put—is probably the most complete entomological laboratory yet devised. Special pains will be taken by Prof. Comstock and his assistants to study the life-history of many of our injurious insects. A great deal of space will be allotted to "breeding cages," or places where insects can be allowed to grow and develop in such situations that they can be constantly observed. Those who desire to study the curious and ingenious appliances used in insect breeding at Cornell are referred to the bulletin which, in addition to a description of the insectary, contains notes On Preventing the Ravages of Wire-worms, and The Destruction of the Plum Curculio by Poisons.

Rural Topics.

ABOUT THE POTATO CONTEST.

A WITTY WOMAN'S WISE WORDS.

Reading so many things "unthought of by me" about the Potato Contest at the time of entering for it, being one of the first, caused me to hunt up my thinking cap, and use it too for the benefit of the New Englanders. I suggest that the country be divided into four sections—North, South, East and West—and that the premiums or souvenirs be divided also so that we here in New England can stand on an equal footing with the others; if this cannot be done I fear we may come out of the little end of the horn in contesting with the potato growers of Dakota and other places West.

But never mind; I am not discouraged as it is. I have a pen of 20 White Plymouth Rocks which are aiding me in securing my fertilizer, as their droppings are removed every week and spread on the allotted potato patch. I have spared the life of an old hen which did ample duty in keeping the beetles off of a quarter of an acre of potatoes last year, to aid me in the same good work, as I do not like to have anything to do with Paris-green or hand-picking the hateful things if I can get along without either. She is so faithful and gets her own living, besides presenting me with a dark-brown egg almost every day during the season. My husband says her life is insured till Nature claims her. Her name is Potato-Bug Eater. When I entered for the Contest I supposed I was to do all the work except plowing, and I do intend to do it though I expect to have a good many lookers-on among the other sex, who will no doubt offer me unasked-for advice as to this or that; but my ears will be closed, as I am quite deaf, and will heed the advice of no one.

A teacher of mine, who is now a Congregational minister, said a true lady was as much a lady in the kitchen or field as in the parlor. A true gentleman was such, he said, whether in the barn-yard or in the counting-room or office, and I think so too. I am glad there are others of the same stamp who are not ashamed to be seen caring for a potato patch in the coming Contest.

The lady of 75 years who has entered, warns her younger rivals to "look out." When we see the enthusiasm for doing good cropping out at that age, I think we "younger ones" will have to look out in good earnest or be beaten by such mature minds.

I am glad the male portion of the community are so interested as to be willing to put their brown hands deep down into their pockets to draw forth cash or its equivalent for the souvenirs for the lady contestants, as all of us have a promise of some souvenirs if we make a fair show at the potato bin. At least we will all have the fruit of our labor to eat and enjoy next winter, which will give us something to think and talk about. There is no knowing what good it may do. We women may do so well that we may be asked by our husband and fathers to do the same year after year. Is this one of the reasons why they are so interested?

MRS. O. J. PUTNAM.

Worcester Co., Mass.

MYSTERIES OF THE SEED TRADE.

No. 1.

Great increase in the seed trade; gross puffery and exaggeration by some seedsmen; fraudulent dealers; assuming credit due to others; the Northern-grown seed-humbug.

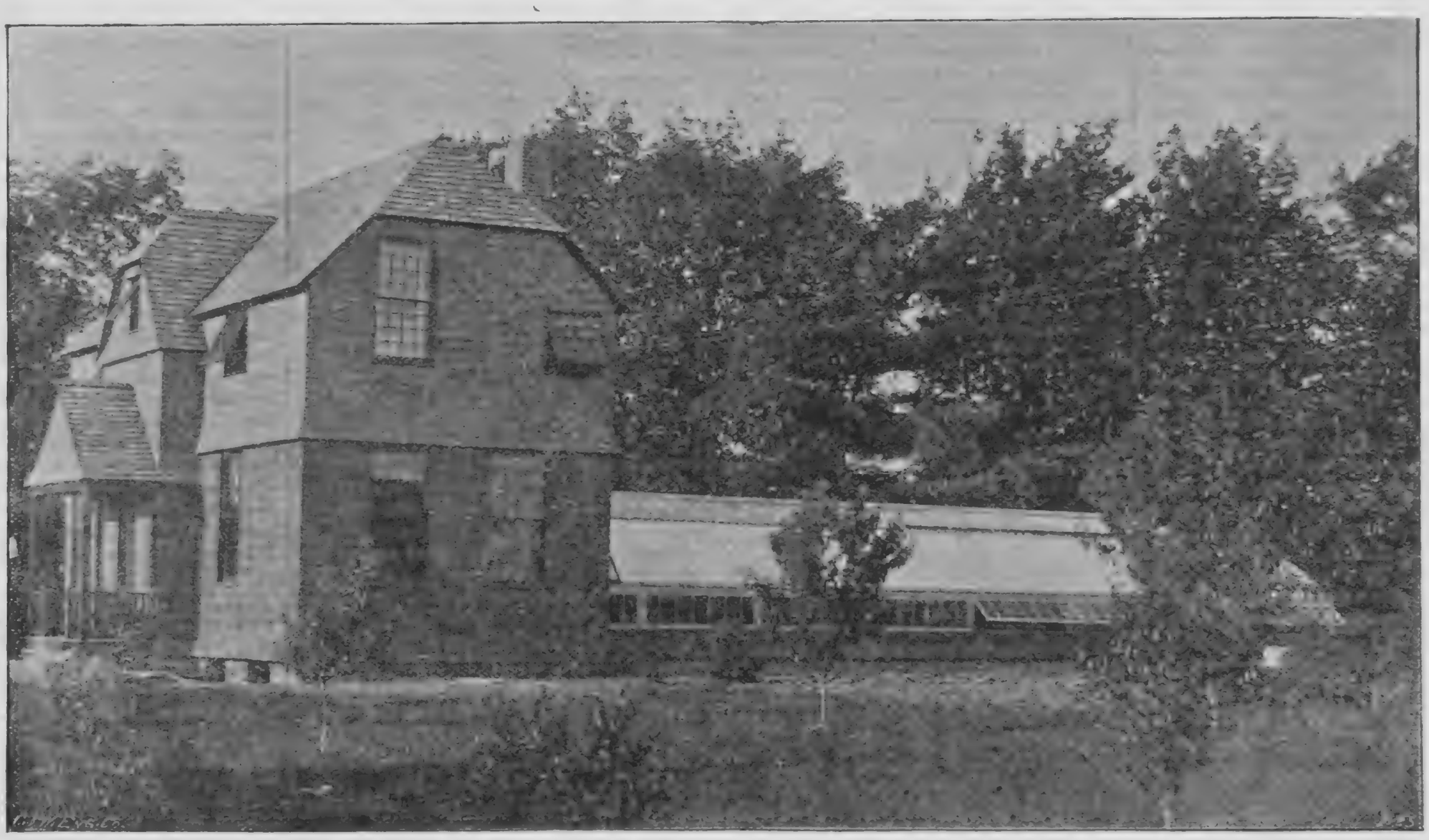
No kind of business has, perhaps, so greatly increased in the past 40 years as the seed trade. It has adopted the modern methods of using agents and newspaper advertising and, as a consequence, has developed in a remarkable way. The hold gained in this way has been further increased by the distribution of catalogues at a cost, in proportion to value of goods thereby sold, far beyond that incurred in the same line by any other business Many of these catalogues are marvels of enterprise, great volumes of information and beauty. It is also true that in many, indeed in most cases, they are open to criticism. It is evident that the charge of exaggeration can be placed against them. This is a common fault in all trades, but apparently worse in this as seen in the indiscriminate praise and over-statement both in words and illustrations. Pick up some catalogues and you read about thus: No. 1. This is best of all. No. 2. is unequaled. No. 3. is, if there be any difference, better than any other; while No. 4. has never yet been approached. This style has its desired effect; the reader becomes enthused and determines to buy all these good things. Occasionally, however, it may have the opposite effect. So common is this puffing that the seedsman who is averse to it must have other and exceptional advantages to secure success. Now, there is a limit to this; and it depends on the patrons, for so long as they bite the bait will be there.

But would it not be well for established houses to modify this custom and leave it to the charlatans? There are some who are deserving of this title. They are not exactly swindlers, but they get their trade largely by deception. A specimen of this class hails from some little town and assumes the role of a farmer and grower of the seeds he offers, and the originator of some. His style of talk in his circulars is that of the confidence man, and as there is an affinity between such and a certain class, the victims are found among the latter. This style of deception will find its end when men have gained more intelligence, which may be a good while yet. Some of these have no stock, or little of their own, and simply turn over the orders to others to be filled from old and refuse stock, sending tags with their own names, to be put on the packages.

A style of blowing not particularly harmful but in bad taste is that of attaching one's name to a variety that was not originated or even grown by the person who gives his name to it. Mr. Smith offers—"Smith's Peerless Oats," whereas Mr. Brown introduced it, and Mr. Smith did not even grow it. Here it would seem that Mr. Smith gets credit for something, as it were by theft. Here is a catalogue in which we read Jones's Early Summer Cabbage, Jones's Excelsior Flat Dutch Cabbage, Jones's Evergreen Sweet Corn, and, by actual count, Jones's name is attached to 50 more varieties. While this may win, it also repels; for I have heard many men say that they were afraid to send to such a "blower."

A common advertisement is of "Northern-grown seeds," and the claim for superiority is emphasized for those from the northernmost States. Without thorough knowledge on the subject, I venture the opinion that the claim is only half true. Many of the seeds cannot be grown so far north, and, as a fact, without doubt these men get their seeds mostly from the same sources from which the seedsmen of the Middle States get theirs—largely in a middle latitude. Here is an instance: One of these sellers of "Northern-grown seeds," to my own knowledge, bought field corn grown 250 miles south of him, and quite likely some of his Northern melon seeds were grown in Georgia.

To my mind it is not a settled fact that seeds grown in the far north are better than those grown in the Middle States or even, in some cases, in the South. A favorite theory of mine is that seeds are best when grown in the latitude and location where they thrive best, a theory I shall hold to until it is disproved. I should therefore not hesitate to go south for some seeds, where it is not essential that they should mature early. ANON.



THE CORNELL INSECTARY. Fig 22.

Field Crops.

SOWING GRASS AND CLOVER SEED.

HENRY STEWART.

Progress is change; that grass and clover can't take care of themselves an antiquated notion still entertained by old-fogies; no need of a foster crop for either; if one is used, oats as good as any; cause of "poor catches;" personal experience.

What a world of change this is, surely, and change is no more apparent in any other direction than in farm practice. Heretofore it has been thought indespensable to have a grain crop for the protection (?) of grass and clover seed, as if grass and clover cannot take care of themselves! They do this too well when they spring up as weeds where we don't

want them, and, in fact, they are able to do it as well where we do want them; consequently we are gradually cutting loose from the foster crops, and are sowing clover and grass just as we sow any other crops, giving hem all the ground, and all the light and air. sowed a few acres of clover and Timothy, ast spring, alone. The land was thoroughly well plowed and worked with the Acme pulverizer. The grass and clover—a peck of each per acre—were sown, and a light, sloping-tooth harrow was run over the surface. It was a pleasing sight to see the young grass, ike hair, coming through the surface in two weeks after sowing, and the round clover leaves interspersed among the tiny spires of the grass. Nothing interfered with that grass and it came on quickly, covering the ground by the end of May, (it was sown in April), and in August it was a dense mat. In September I turned a lot of calves on to it and they fed it down, and now it does not differ at all in appearance from an adjoining part of the field seeded the year before with oats.

But oats! A few years ago the man who sowed grass seed with oats would risk being thought imbecile at least, perhaps crazy. Fall grain was thought the only crop to seed grass with, and clover was sown on the snow, or on the frozen ground, or on the hard, beaten surface, haphazard, in the spring, to do or die. Usually it did die. Then the poor catch was complained of and seedings that had failed made poor meadows and scanty hay. The thing cured itself. Grass would no longer grow in the old way, and fresh land must be provided, and oats necessarily usurped the place of the fall grain. I say usurped, because the crop is a usurper, needless and injurious, because it robs the grass and clover of the food they need and must have or perish. But grass and clover are sown with oats, and the practice is becoming popular and general. Just as a boy on a log fears to get out of reach of the shore of the pond, and keeps within knee depth of water, so we farmers hang on to the spring grain seeding, and cannot break loose because the young grass is so tender, we think. It is tender, doubtless, but it is too tender to be burdened with a hungry crop to starve and shade it from the air and sun. If one cannot bring himself to this belief, he must choose the oat crop as the foster, and if he does well with the land, giving it manure liberally, the oats will pay for it, and the grass will repay for it, and fit the soil well; the grass and clover will make out to stand the strain and show a fine aftermath on the stubble, and give a good account of themselves the next year. I have about 30 acres thus seeded with oats, not that I thought the oats helped the grass, but that the land was good enough for both—as it was—and I wanted the oats anyhow. But for several years past I have lost every clover seeding made in fall crops, and I have had but poor Timothy and other grass from fall sowing. If one will study the drift of experience now given in the agricultural journals, he will find that the old method is fast being abandoned and that spring sowing is becoming popular and successful. Thus we change and advance, but unless one reads of what is going on, he gets left behind.

Indust'l Societies.

STATE AGRICULTURAL SOCIETY.

THE ALBANY FARMERS' INSTITUTE.

New York crops good last year with several exceptions; farmers' institutes becoming more popular; Treasurer's report; officers elected; Secretary Woodward at work again.

THE annual meeting of the New York State Agricultural Society was held in the society's hall in Albany, at noon, on January 16. The attendance of members was larger than at any previous meeting, save one, since the organization of the society. The report of the executive committee upon the condition of agriculture in the State and the affairs of the society, said that the cereal crops of last year compare favorably with the records of the previous year except in the case of wheat. As to that, although the seeding remained fairly well protected by the snow of last winter, owing to the dry autumn of 1887 the seed did not germinate well, which, added to the effects of the dry, cold weather of April, accounts for a lighter yield per acre and a poorer quality of wheat in 1888 than in either of the two preceding years.

Rye and oats, on the contrary, yielded much more per acre, and while the former was about the same in quality, the latter was much better than in 1887. Barley held the place it occupied the year before, and gave a slight increase in returns per acre, though it was not equal either in quality or yield to the crop of 1886. Corn planting was delayed by continued cold weather, and the severe early September frosts practically ruined a large portion in various parts of the State. As a result, the crop runs far below that of 1887 both in quality and yield per acre, and consequently many farmers have been led to try silage. The hay crop was better in quality, though not quite as high in yield per acre as in the previous year. The September frosts, which decreased the yield of corn, also affected that of tobacco, and were disastrous to buckwheat. The same may be said of broom-corn and sorghum. Owing to a late, cold season and dry weather in midsummer, hops were reported only about one-half the usual crop. Continued autumn rains gave us good late pasturage. Of fruit it may be said that while there were fewer pears, there were many more apples and a much better yield of grapes than in 1887. Last season was favorable for live stock and the losses were less than usual. The demand for a better class of horses is being promptly met by a judicious selection and improvement in the breeding stock. The same may be said of dairy cattle and, in fact, of all kinds of farm stock. The improvement in the quality of dairy products in this State is very noticeable.

The farmers' institutes show much improvement in the second year. So hearty and cordial has been the reception of these institutes, that where at first the people welcomed them, they now demand them. Thirty-seven have been held since the last annual meeting. The society is satisfied that the agitation, discussion, and diffusion of useful knowledge, afforded by the institutes must inevitably result in better farms, better houses, better cattle, better horses and greater happiness.

Hon. Adin Thayer, Treasurer, read his report for 1888 as follows:

RECEIPTS.

Cash on hand January, 1888	$4,870.63
Ticket sales at the Elmira State Fair,	15,258.25
From the State	8,000.00
Other sources	9,801.93
Total	$37,930.81

DISBURSEMENTS.

Premiums	$11,009 16
Fair expenses	11,345 83
Salaries	5,086.70
Institutes	4,961.46
Sundries	2,322.42
Cash on hand	3,185.24
Total	$37,930.81

The committee of 24,—three from each judicial district—to nominate officers, presented by its chairman, Gen. N. M. Curtis, the following unanimous report.

President, James Wood, Westchester; Vice-presidents, J. Pierrepont Morgan, Jos. H. Storm, F. D. Curtis, C. D. Smead, Jared Van Wagener, M. C. Remington and Col. H. Bowen; Corresponding Sec'y., J. S. Woodward; Recording Secretary, Seth Fenner; Treas. Adin Thayer; Executive Committee David Cossitt, J. F. Converse, F. C. Stevens, A. C. Chase, W. R. Richardson, F. O. Chamberlain, F. B. Redfield, James Hilton; Consulting Veterinary Surgeon, James Law; Consulting Entomologist, J. A. Lintner, all of whom were unanimously elected. Secretary Woodward, whose illness had prevented his attention to business for several weeks, was present and seemed to have regained his usual excellent health. At a meeting of the executive committee, it was determined that the annual exhibition should be held on September 12—19, the place to be either Albany, Poughkeepsie or Rochester.

(To be continued.)

The Poultry Yard.

ABOUT CAPONS.

DO THEY PAY? Well, I will tell you what I did as an experiment last year: In August, I bought 28 cockerels, that the party I purchased of said were hatched the last of May, so they were what I called late chickens. Their average weight, when I bought them, was about 2½ pounds. They were a mixed lot, the Plymouth Rock blood showing in them more strongly than any other, yet there was considerable Leghorn blood there, too. They were, however, regular mongrels, and what I called a "hard lot." I gave the farmer 25 cents each for them, and immediately gave them a pen by themselves, until I could free them of lice, which I very soon did with cynolina. The following week, after getting them in proper condition, I caponized the whole lot, not with the idea of making large capons of them, but to ascertain just how much profit could be made on such a lot. After they had been caponized, I simply treated them as I did all my growing chicks, giving them the same amount of feed and no more. As usual, they immediately began to grow very rapidly and seemed well contented in their new life. I was unfortunate enough to lose three by a door blowing against them. When the time arrived for shutting the fowls in for winter, I had 25 promising capons in this lot. In my regular lot I had over 200, but I called this my experimental lot.

To these 25 I gave a pen by themselves and simply fed them on corn, bone and water. There was no bother with nests, cooked feed, etc., with which hens must be furnished. It did not take me five minutes a day to attend to them. In January a party in Boston wrote to me for some capons. I concluded to kill this lot and send them to him. Although they were not fully grown, yet they were very plump and fat. I dressed the 25 and they weighed, when ready to ship, a little over 200 pounds, or an average of eight pounds each. I sold them for 28 cents a pound It cost me just 50 cents to keep each bird, from the time I bought him to the date of his death, making a total cost of 75 cents for each bird. The manure would well pay me for my time in caring for them. Eight times 28 are $2.24, less 75 cents, which leaves $1.49, net profit on each bird.

Now, what I did any man of intelligence and good common sense could do. Of course, the price I received was extra high, as the party wanted them right off. But I could have received in the open market that day 25 cents a pound, which would have left me a profit of a dollar a head. In my opinion the profit in raising capons is much larger than that in keeping hens, with less than half the trouble. With proper instruments one can perform the operation of caponizing with perfect success. GEORGE Q. DOW.

Everywhere.

RURAL SPECIAL REPORTS.

Canada.

OTTAWA, Ont., January 10.—We are having the most extraordinary winter experienced here in 40 years. The Ottawa River is open opposite the city, where in ordinary seasons it would take a man a day at this time of the year with axe and shovel to cut a hole through the ice to get down to the water. Members of the canoe club went out for a spin the other day, to record the fact that such an unheard-of event occurred here on January 8. Snow has just commenced to fall, and it looks as if winter was now to set in in earnest. A. H.

NEW WESTMINSTER, B. Columbia, January 9.—The year has been a very kind one to us here on the Pacific coast. We have had a bountiful harvest of almost everything raised; we have got good prices for produce, compared with those obtained in the Western States. Timothy hay fetches from $12 to $18 a ton; wheat is worth from $30 to $40 a ton; oats $27 a ton; butter 30 cents a pound; cheese 20; eggs—fresh—50 cents a dozen; apples $1 per box of 50 pounds, and so on. R. S.

Delaware.

DOVER, Kent Co., January 7.—So far this has been one of the finest winters on record. We have had but one fall of snow, just enough to whiten the ground, and for the greater part of the time the weather has been just cool enough for work and we have had plenty of sunshine. There has been no stoppage in farm work. Farmers have improved the fine weather by hauling manure, cutting wood, pruning trees and doing various other odd jobs, and if the winter continues open we will be in good shape to start in the spring. Stock is doing finely. Public sales are unusually numerous, and, in spite of the low price of corn, the prices obtained for stock and implements are all that could be expected. Good cows bring from $25 to $45; horses from $25 to $175. Hay and other feeds are scarce and in demand at good prices. Of pork and beef the supply is fully up to the demand; price $7 per cwt. Not much corn is being marketed, as the price is so low—about 35 cents per bushel. Wheat looks well for the time of year, and as our crop is among the first to be marketed, farmers hope to realize a good price for this season's crop. Some fear that the open winter will cause peach buds to start so that if we have severe weather later the buds may be killed; but we hope not, for the peach crop is the crop we depend on for clear cash. The first of January is usually moving day here, and many farms change tenants, and nearly every farmer is called on to help some one to move. Many times have I taken a team and carried a load for a neighbor 20 miles or more gratis. Quite a lot of building is going on and most of the mechanics are employed. Wheat is selling at $1.10; corn, 35 cents; oats, 30; butter, 25; eggs, 20; chickens, 10 cents per pound; potatoes, 40 to 50 cents per bushel; wood, $3.00 per cord; coal, $5.75 to $6.25 per ton; hay $8 to $15 per ton. A. G. S.

Kansas.

PARSONS, Labette Co., January 11.—Our winter so far has been decidedly exceptionally mild. The temperature has not been lower than 14 degrees, and ice not more than three-quarters of an inch thick; still we have had hardly 24 hours through the winter without frost. December, January, and February, are our driest months, but this winter is exceptional, and once or twice a month we have had two or three inches. Corn is being gathered promptly and shipped to the cotton States as fast as it is gathered. The fact that we adjoin the cotton States is of very great value to us, as we get St. Louis and Chicago prices, or very nearly, on track here. We also ship eggs, butter, hay, apples, etc., to the Northern States. It is reported that wheat is looking very well all through Kansas, and that the acreage is four times that of any preceding season. The ice crop may reasonably be predicted as a failure, in spite of the uncertainty of weather predictions. J. B.

CHANUTE, Wilson County, January 10.—Crops in this county the past season were good. Wheat is good now; it is raised only on creek and river bottoms. Oats are rather light, the weather is too dry for them. Corn was mostly good, yet many fields were very poor, owing to drought. Flax was generally good. A tow mill has just been erected and is now running, buying up flax-straw, which is a great help to the farmers. After hauling the straw often many miles, they get $3 per ton for it. Potatoes were a poor crop. Farmers have to buy potatoes shipped in from Iowa. Fruit crops of all kinds were good. Millet hay was a very heavy crop; much is sown here for feed. Very little Timothy is grown here; but it is doing well where a good stand has been secured. We have had an open, or mild winter so far. We have had about six snow storms, commencing in November and lasting only for two or three days; some snow is on the ground now; but it will be gone soon; the weather does not remain cold longer than two or three days at a time. A great deal of plowing has been done; plows were running this week, but it is now too wet. F. J. C.

New York.

FORESTVILLE, Chautauqua Co., January 10.—The winter so far has been warm. It has rained for the past week almost constantly. If the spring should be cold and backward there will be lots of hungry stock, hay being scarce and high. A good many farmers will find it up-hill business to pull through. Many cattle are being sold at astonishingly low figures; some entire herds are going as low as $10 to $12 per head. Only a short time ago it was hard work to find a man that would plow a foot of ground in the fall; now it is safe to say that over two-thirds of the plowing is done in the fall or during open spells in the winter. How this way of turning up the soil to exposure will stand the test of frost, rain and sun remains to be seen. Potatoes are low—25 to 30 cents per bushel; eggs, 25 cents per dozen; butter is in good demand at 25 to 30 cents per pound. Almost all kinds of produce find a good market with us this season. C. H. F.

NEWARK, Wayne Co., January 14.—We had a few days of sleighing before Christmas; since then there has been no snow, but a great amount of rain. A very small acreage of winter wheat was sown; it is looking well. What promised to be a very prosperous season for farmers, proved quite to the contrary, owing to the decline in prices of potatoes, apples and onions at the time when it was possible for farmers to market them. There had been so much rain all through the fall, that cold weather came along before they were ready for it. The prices offered in the latter part of November were as follows: apples, $1 to $1.25; potatoes, 20 cents; onions, 20 to 30 cents. There are at least 50,000 bushels of potatoes in the hands of farmers in Wayne County. A few are being shipped, buyers paying 25 to 30 cents per bushel. The price of peppermint oil has declined from $2.75 to $2 15 per pound. This is usual at this season, buyers knowing that a good part of the oil is held by small farmers, who usually sell it to pay taxes, so that they can purchase the oil at less than the real market value—another illustration of the ways used to defraud the producer of what honestly belongs to him. Market prices are as follows: Wheat $1; barley, 60 to 85 cents; oats, 34 cents; potatoes 25 to 30 cents; butter and eggs 18 cents. W. H. K.

THE FARMERS' CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.

BUCKWHEAT AS STOCK FEED; BEST STANDARD RATION FOR A MILCH COW; SEEDING TO GRASS.

O. B., Lombard, N. Y.,—1. Is buckwheat mixed with oats a wholesome and profitable feed for horses? What would be the proper proportion of each? 2. What would be the best proportion of each kind of feed in a mixture of wheat-bran, corn-meal and linseed-meal for milch cows? 3. In the reply to my question in a late RURAL, with regard to restoring fertility to a worn-out soil, it was presumed that this is a winter-wheat section; whereas it is not. I was advised to use 300 pounds of high-grade fertilizer to the acre; should I do this in spring and sow grass seed with some grain? What kind of grain would be the best for this purpose?

ANSWERED BY HENRY STEWART.

1. Buckwheat should be fed with caution because of its highly nitrogenous character. This is, however, more clearly indicated by practice than by science, and presents a case in which the scientific standards are to be taken with some allowance. For instance, the tables give the quantity of albuminoids in buckwheat as only nine per cent. and the nutritive ratio as one of albuminoids to 7½ of carbohydrates; but the bran of buckwheat contains 17 per cent. of albuminoids and its nutritive ratio is one to four. Now, this large quantity of albuminoids renders this grain too heating for horses, and in practice it produces inflammation of the skin and so much irritation that the animals will rub the hair off their necks, tails and other parts of the body; consequently, if buckwheat is fed, it would be better if mixed with corn, which contains a large excess of starch, which is a carbohydrate. One part of buckwheat, one of oats and three of corn make a very good feed for horses, when it is coarsely chopped. In fact, it is good for all kinds of stock, especially for pigs. I have fed it largely to horses, mules and colts with much advantage. 2. The best standard ration for a dairy cow, I think, is one part of wheat-bran and two parts of corn-meal, and of this four pounds may be given twice a day, morning and night, with dry hay at noon. Linseed-meal is not a desirable food for cows kept for butter. Cotton-seed meal is preferable, as it seems to give a desirable flavor, color and hardness to the butter, while linseed-meal does the opposite. I long ago abandoned the use of linseed-meal in the dairy. 3. There is no necessity for sowing any grain crop with grass seed; the grass and clover may be sown alone with the best results. If any spring grain is sown, oats are as good as any, and the grass and clover seeding is now done with this grain more than with any other.

SHOULDER LAMENESS—SWEENY OR SHOULDER SLIP IN A COLT.

H. R. C., Ann Arbor, Mich.—My four-year-old colt slipped on the ice while playing two years ago, and went lame for a while. I used a strong liniment for a short time. On breaking and working her, I find that she goes quite lame in the left front leg. It is difficult for her to back up, as she drags her foot. When stepping over a log, she swings her foot out sideways, from the body. Her foot and whole leg seem to be drying up. There is no fever in the foot. What causes the lameness, and what can be done for her?

ANSWERED BY DR. F. L. KILBORNE.

The lameness is in the shoulder. There is probably no trouble in the foot. You have given a very good description of shoulder lameness, but whether it is due to a sprain of the large tendon which plays over the point of the shoulder directly *in front*, or to a sprain of the muscle which fills the posterior cavity of the outside of the shoulder-blade, and plays over the *outer side* of the shoulder-joint, I cannot say positively. We will suppose the latter to be the case, this being the more common seat of sprain, causing what is commonly called *sweeny*. If our supposition is correct, the characteristic symptom will be a *rolling outward of the point of the shoulder*, readily seen by standing directly in front of the animal. There will also be a marked wasting of the muscles on the outer surface of the shoulder-blade, although the other muscles of the limb may be somewhat wasted from disuse.

Apply the following liniment to the wasting muscle every three days, until the skin becomes slightly blistered, then apply only once a week, but not so as to blister too severely. Equal parts of strong aqua ammonia and linseed or sweet oil, and one-eighth part oil of turpentine; shake well before using. If this fails to replace the wasted muscle, after a few weeks apply a cantharides blister—powdered cantharides, two drams, vaseline, one ounce, spirits of camphor, 12 drops. Follow the directions and precautions frequently given in these columns. In the absence of the characteristic symptom of sweeny, carefully examine the point of the shoulder in front, pressing firmly upon the center of the tendon and at each side. If tenderness is found apply the cantharides blister at once, and repeat as soon as the effect has nearly passed off. In this case it would be well to apply a high-heeled shoe. A rest of several weeks may be necessary to effect a recovery. In either case the colt should be put to work gradually after recovery, and not be put to the plow until the shoulder is well hardened by other work.

ORNAMENTAL HEDGE PLANTS.

"*Snowdrop*," *Oswego County, N. Y.*—Having bought a small farm, I am desirous of making it attractive to my wife and children by surrounding the house with a flowering evergreen hedge, using the inclosure for a flower garden. Will the RURAL assist me in selecting varieties of evergreens that would furnish bloom from early spring until late fall? Where could I obtain the plants and how far apart ought they to be set out? My soil is a sandy loam.

ANS.—You cannot have such a selection in any Northern State. Of evergreen plants for hedges, we have plenty; for instance, Norway Spruce, White Spruce, Colorado Blue Spruce, Hemlock Spruce (in situations congenial to it) and American Arbor-vitæ; but not one of these is what is familiarly known as a "flowering" shrub or tree. Hardy rhododendrons and Mountain Laurel (Kalmia latifolia) are handsome evergreens and lovely blooming shrubs, but they bloom in early summer, and neither is adapted for hedge-work. If you insist on having an evergreen hedge, try one of the hedge plants mentioned above and restrict it to hedge proportions; then within the inclosure, as taste and circumstances may advise, use a goodly variety of such handsome flowering shrubs as forsythias, spiræas, deutzias, deciduous magnolias, rhododendrons, azaleas, lilacs, mock-oranges, snowballs, hydrangeas, althæas and the like. The Japan quince, of which we have pure white, pink, and crimson-scarlet-flowered varieties, makes a really pretty division ornamental hedge, but should not be pruned in hard—merely enough to keep it within bounds and orderly. Hedges made up of mixed shrubs are not to be recommended. The proper distance apart between plants in the hedge row depends on many things; but more especially on the sort of plant selected, the object in view, whether it is to be a stiff or flowering ornamental hedge, and also whether it is meant to act as a fence against cattle. Don't use a hedge of any kind nowadays as a cattle fence. If it is to be a stiff hedge three feet apart will be close enough, and four feet after a few years, will be better; but if it is to be a flowing, flowering ornamental hedge, four to six feet will be about right. The plants can be got from Ellwanger & Barry, the Storrs & Harrison Co., or from any of the other nurserymen who advertise in the RURAL.

TREATMENT OF BONES AND FLESH FOR FERTILIZING PURPOSES.

J. M. W., St. Mary's, Pa.—1. How long must bones be steamed under a pressure of 80 pounds to reduce them to a semi-liquid mass? 2. How much plaster should be composted with every 100 pounds of flesh to fix all the ammonia?

ANSWERED BY W. H. BOWKER.

1. I do not think any steaming of bones, however high the pressure may be, will reduce them to a semi-liquid mass. The steaming of bone breaks down its animal texture, and throws out the grease, which rises to the top and is drawn off. The bone which is broken down is taken out at the bottom and pressed, in order to extract the water and what additional grease there may be, and then the mass, which is in a pasty condition, is placed in large revolving driers, and dried to a fine, dry powder. In some cases I presume it is taken from the tanks and pressed and then spread out in thin layers on the floor, and dried in this way. Bone, to keep well, should be dried down to ten per cent. moisture and below. 2. I suppose the flesh in this case to be raw, and I have had no experience in mixing plaster with this article. I should say the better way would be to tank it the same as the bone is tanked, under 80 pounds pressure of steam, in order to get out the grease which is of no value as a fertilizer, and then press it in order to extract the moisture, and then dry it by spreading it out in thin layers or in a revolving drier. If the latter course is not practicable, plaster might be mixed through it, and put over it as a cover in sufficient quantity to keep down all odor, and how much plaster that would require experience alone can tell; but I should say that a layer three or four inches deep would accomplish that end.

ABOUT APPLES.

C. P., Dawn Mills, Ont., Canada.—1. What kind of apples are Wolf River, Scott's Winter, and Mann? 2. Are budded young trees better than those that are root-grafted; if so, why?

ANS.—1. Wolf River is a large late fall apple, which originated near the river in Wisconsin for which it is named. It very closely resembles the Alexander, and is supposed to be a seedling of that variety, but the tree is less hardy. Scott's Winter is a long-keeping red apple of medium size, which originated in Orleans County, Vt., near the shores of lake Memphremagog. It is hard, sour and unfit for eating uncooked until spring; when the flesh softens, and the flavor becomes milder, brisk and spicy. It is the longest keeper yet known among the American iron-clad varities. The tree is vigorous, productive and an early bearer, but makes a bushy head, requiring considerable pruning. Mann is a long-keeping, green-skinned apple of above medium size, and not more than fair quality. The tree is vigorous, and productive, and the variety is profitable to grow. It has been called an "iron-clad," and advertised as being "as hardy as Duchess of Oldenburg," but in fact it it but little if any hardier than Northern Spy. It kills to the snow line in winters where Wealthy and Scott's Winter are uninjured. 2. Budded trees are in no way better than those grown from root-grafts; but a new or scarce variety can be more rapidly increased by budding than by root-grafting, as but a single bud is required for the former, while not less than two buds, and, more commonly, three or four are used for the latter.

STIFLE LAMENESS IN A COLT.

J. B. H., Friendship, N. Y.—My seven-months-old colt became lame about two months ago in the right stifle joint, where there is the appearance of a bruise. At first there was a gathering on the outside of the joint, and I lanced it, and drew off the pus; but it gathered again. I have blistered it a number of times since. There seem to be a good many sacs of pus on the inside of the joint as well as on or near the cap. I have used chiefly hot applications. There is but little heat, though the colt is very lame. When I hold my hand on the joint and the animal moves on that limb, I can feel the joint slip into place. I am now using astringent applications. The colt is in good health and growing nicely. What shall I do for him?

ANS.—The applications you have used are good; but we would not advise you to open any sacs on or near a joint unless you are familiar with the anatomy of the part, because of the danger of opening into the joint or a synovial sac that might be troublesome to close. If the present swellings appear to contain liquid, their contents may be properly drawn off with a small trocar and cannula or an aspirator. Try bathing once daily with a solution of acetate of lead—three drams in each quart of water. If this fails, after a few weeks, apply a liniment of equal parts of strong aqua ammonia and sweet oil. Shake well before using, and apply once daily until the skin is thickened and quite well blistered. Then cease, to be again applied if necessary when the effects of the first applications have nearly passed off. You could scarcely have actually blistered the joint a number of times in the two months since the colt was injured, because a good blister usually requires at least four weeks for the effects to disappear.

STEELE'S RED WINTER APPLE.

L. A. E., East Randolph, Vt.—Can the RURAL give me any information about Steele's Red Winter apple? We have a few trees in this vicinity, that are beginning to bear. The cions were obtained a few years ago from Michigan. It appears to be a fine and very promising apple.

ANS.—Downing makes the Steele's Red Winter a synonym of the Baldwin, on page 85 of the Fruits and Fruit Trees of America. The Baldwin is so well known that there is no need of describing it here. Again, on page 324, he makes it a synonym of the Red Canada, which in 1869 (when the work was published) was much grown in Connecticut and Massachusetts, and succeeded well in Western New York, Ohio and Michigan. Tree thrifty, but of slender growth; very productive, young wood brownish-olive. Fruit medium, oblate, inclining to conic. Skin yellow, mostly splashed with a deep red or crimson; some striped or splashed on the sunny side, and thickly sprinkled with gray, and sometimes gree ish dots. Stalk short, inserted in a broad, deep cavity. Calyx closed. Segments long, in a small narrow somewhat irregular basin. Core small, close. Flesh white, tender, crisp, abounding with a brisk refreshing juice. Very good to best. Season January to May. Is this the apple about which our friend inquires? J. J. Thomas also, in his American Fruit Culturist, makes Steele's Red Winter a synonym of the Baldwin and Red Canada.

CABBAGES AND CAULIFLOWERS "MIXING."

Several Subscribers.—In the recent article on cauliflowers grown on Puget Sound, nothing is said about the danger of the seed being mixed with that of the cabbage family. What about this?

ANSWERED BY H. A. MARCH.

The cabbage and cauliflower cross very readily, and great care must be taken to prevent crossing, as the bees carry the pollen from the cabbage to the cauliflower blossoms. But we raise seed the same year we raise the heads, and our cauliflower blooms don't appear until the middle of July, so that the cabbage family have mostly gone out of bloom by that time. But to make things sure, the boys are sent to every cabbage patch where seed is raised, within three miles of us, and with a pair of shears they nip every late bud and blossom to be found. That gives us assurance of pure seed. How about the different kinds of cauliflower mixing? We raise but one variety the same year, or different strains of the same variety.

Miscellaneous.

F. H. B, Black Hawk, Colorado.—You can get bone mills of various sizes from Wilson Bros., Easton, Pa.

J. J. W., Honeoye, Ont. Co., N. Y.—Is the Downing Mulberry hardy?

ANS.—It is not reliable in any severer climate than that of N. Y. City. It is grown somewhat north with more or less success.

W. H. M., Marshalltown, Iowa.—Where can I get a potato planter that will do good work?

ANS.—Write the Aspinwall Manufacturing Co., Three Rivers, Mich. See their advertisement in our columns.

W. B. W., Leominster, Mass.—1. About how many two-eyed seed-pieces would I be likely to get from one barrel of the Rural No. 2 potato? 2. Would it be safe for me to put barrels of such seed in cold storage in the city?

ANS.—1. We should guess about 900. 2. Yes, it would be safe.

R. B., St. Henry of Montreal, Canada.—Does California-grown onion seed produce as good a crop as Eastern-grown seed? There is quite a difference in the price.

ANS.—Yes, the stock being equal in quality, seed grown in California produces as good onions as Eastern-grown seed.

J. W. L., Rockford, Ill.—Which are the most profitable varieties of potatoes for market, to be grown in a light soil? Where can they be obtained?

ANS.—Early Ohio, Pearl of Savoy, Early Puritan, White Star, Empire State, Rural Blush, White Elephant or Late Beauty of Hebron. Please see the seedsmen's catalogues soon to be noticed, to ascertain where the various kinds can be obtained.

Subscriber.—Many of the writers in the "meat" articles say they put ashes in the water in which the hogs are scalded; why is this done? What chemical action is induced by the ashes?

ANS.—Any alkali has the effect, when applied to an animal's skin, of loosening the hair. Thus ashes (potash), or lime paste, spread on the fleshy side of a hide, very soon loosens the hair or wool, and tanners loosen the hair by steeping the hides in lime water. Hence the addition of ashes to the hot water —180° is the right temperature—helps to loosen the hair and facilitate the cleaning of the skin.

J. H. S., Middlebury, Ohio.—I have received the inclosed circular in regard to the Tree Currant, in which the nurseryman, among other things, claims that it never suckers or sprouts, and that worms never eat the leaves. He also claims that the

Champion Gooseberry is very large and that it never suckers. He gives the names of a number of grapes the fruit of which, he says, will keep fresh and plump in an ordinary cellar, if put into a shallow box until it is quite full, even if no cover is put over them. Will they do so?

ANS.—We have no faith in the claims made. Any currant can be easily trained to a tree form. Or any variety may be grafted on such tall-growing stocks as the Missouri Currant. "Cutting out the buds," etc., will not prevent sprouting. Currant worms do not attack black currants. The Champion, as we have it (J. M. Ogle), is of medium size only. No; the grapes will *not* keep as represented. The varieties will be found in most nurserymen's catalogues.

DISCUSSION.

DOES "FARMING PAY."

E. T., EDWARDSVILLE, KANS.—It seems to me that the Parson misses the point of the parrot's remark, on January 15, R. N.-Y. The bird is talking about the "pay" of farming, not the ministerial approval of it. The farmer finds "honorable mention" to be a poor salve for a shrunken purse, as it is but a poor and unsatisfactory return to Mr. Leary for the loss of his raft, that he is in high favor at the Hydrographic Office. One may be a "conservator" of the public good and a useful citizen generally, and yet find his business in a poor way. The parrot is speaking about the business part of farming. "The farmer feeds the world," it is true; but he is not doing it primarily for applause; that's a sort of "pay" that doesn't pay very well—pay debts and taxes, for instance. The sleek citizen's "well done!" furnishes no legal-tender for the hired man.

John Cheeston appears to be a little off, also. He offers himself in testimony, but he is not a competent witness, not being a representative farmer. The parrot makes no charge against butter-making as a remunerative industry, or against sheep-growing, or cattle-raising, or market-gardening, or flower-culture, or the production of fruits, potatoes, seeds, nursery stock, grain, hay or celery; and no doubt would readily admit the profitableness of any one of them when pursued persistently and intelligently under favorable conditions, as a main issue, like Cheeston's butter-making. But such "special" culture is not farming in the common acceptance of the word. It is the New Gospel of Agriculture. As it comes in, I have hope that farming will go out, and the parrot change his tune.

A NEW FARM FENCE.

E. D., WOODLAND, MICH.—I will describe for the benefit of others a fence we are trying and which promises better than anything I have ever seen before. It is made of ten smooth steel wires running horizontally like the warp of cloth, and connected by cross wires a foot apart. The space between the two lower wires is three and one half inches, and the distance gradually increases till the upper space is twelve inches. The whole is 58 inches high, and when just two inches above the ground makes a five-feet fence. All the horizontal wires are number nine except the top and bottom ones, which are much heavier, and the cross wires are of number eleven. The horizontal wires are twisted spirally before the fence is woven, so that they resemble in the fence, coiled springs drawn out, and there is a constant tendency to shorten. This, it is claimed, keeps the fence tight in warm weather and adds to its strength at all times. The posts need not be closer than two rods, and we had a stretch of 60 feet with a sag of less than two inches. One horse has tried a charge upon it, and picked himself up uninjured, but wiser. It has all the advantages of barbed wire without its dangers. It is put in place for seventy-five cents a rod, and while I am not interested in any way in its sale, I believe it to be the cheapest good fence I know of.

ABOUT THE NATIONAL WOMEN'S POTATO CONTEST.

H. B. M., VERMILLION, KANS.—I would like to have it definitely stated in the RURAL whether in the Potato Contest women contestants will have to contend against masculine labor beyond plowing the ground and digging the crop; and also as to how the prizes are to be distributed. I quite appreciate the RURAL'S good intentions; but want to learn on what business basis the contest is to be conducted. What is a merchantable potato?

R. N.-Y. We are in favor of having the women (bless them!) do all the work except the preparatory plowing or digging, harvesting and application of fertilizers or manure. All this they *may* do if they choose, and the doing of it should count a point or so with the judges. The R. N.-Y. is open to any suggestion or advice that may be given. We shall hope to fix upon a rational basis of action that will please all of our lady friends not disposed to be cranky. How would five ounces answer as the minimum of a merchantable potato?

WHAT WAS THE MATTER WITH THE CORNFIELD?

D. C. L, CRANBERRY, N. J.—On page 37, S. W. H. asks this question and goes on to show that the trouble lay in not cutting some of the corn roots. Now the land about Metuchen, is a heavy clay soil. The fact that the corn did not ripen I should attribute to one or two causes, and not to the fact that the roots were not cut off with the plow, as S. W. H. supposes, when the corn was in the silk. I would prosecute a man for damage, if I could, if he plowed my corn after it was coming in silk. The time of planting may have been late, and the season was very wet, so that it kept corn growing and so full of sap that it could not ripen. Large quantities of corn with us, gathered as late as November, were not fit to crib, and I expect to hear of a large amount that will have molded when the owners come to shell it.

"WITCHING" FOR WATER AGAIN.

U. S. S., NEW HARTFORD, NEW YORK.—In reply to T. H. T., of Alexandria, Dakota, here is what I have heard my father say about "witching" for water:—About 30 years ago he was going to dig a well, and sent for a "water witch" to locate the spring, which he did by holding a crotched stick in both hands, so that the end formed by the two twigs would point directly ahead of him, at right angles with the course of the spring, which he said was to the north in that locality. As he passed over the supposed stream, the crotched stick would turn in his hands and point toward it. My father dug where the "witch" said the spring had its course, and found water just as he had said—10 feet below the surface. The professional said the twigs must be cut from a tree that bore fruit with stones, as peach, plum, etc. The twig would not point to the water for my father. What it is, is more than I can tell.

CURE FOR AN EGG EATER.

J. L. H., WATKINS, N. Y.—In R. N.-Y., No.2,032 there is a cut of a very pretty pullet, and from her looks I take it that it would not take much to get her to break eggs. Now all poultry writers whom I have read, when treating on the subject of "hens eating eggs," give no satisfactory method of breaking them of the habit, excepting to cut their heads off, and even P. H. Jacobs on the same page on which the cut of the pullet appears, speaking on this subject, gives no way to prevent it. A hen with an ordinary beak cannot break an egg by pecking it, but a hen with a beak that has become pointed, like the one in the RURAL'S cut, can break an egg by pecking it a few times. That being the case, what could be a reasonable remedy? Blunt her beak. Simply take a jackknife and clip off a small piece of her upper bill.

E. A. F., HANCOCK, VT.—In reading A Tale of Toads in December 29th RURAL, I was reminded of a nearly similar experience with the same batrachians and also with a striped snake. On looking my bees over one morning, I noticed one swarm that seemed to be readier for war than work. The hive was a Langstroth and set on the ground, with a board in front to prevent the grass from growing up in the way. On removing the board, to my surprise, there, coiled up, was a striped snake, which left before I could kill it. I left, but soon returned to find the snake on the alighting board with his head to the entrance. I struck at it but missed. About an hour later I found it in the same place again and I killed it.

J. N. J., HOLLAND PATENT, N. Y.,—The RURAL'S answer to A. F. H., Dansville, N.Y., in a late issue in regard to feeding beans to sheep, I think is misleading. It is said that sheep will not eat beans whole. My experience in feeding sheep has been right to the contrary; they eat them with avidity and most sheep are very fond of them. In a flock of 80 not more than two or three refuse them with me. Beans make an excellent food for them; but care must be taken not to feed too heavily at first; ground beans would, I presume, be the best.

E. M., ECHO PLACE, ONTARIO, CANADA.—What does the editor of the R. N.-Y. think of Agnes as a good name for his best seed potato?

R. N.-Y.—We certainly think it a good one, especially as a woman by that name has had as much to do with the RURAL'S originations as the editor himself. It was thought best, however, to identify the potatoes with the RURAL NEW-YORKER.

I. Y., PONTIAC, ILL.—I am in favor of Mr. Woodward for Commissioner of Agriculture. I have been reporter or correspondent to the Department for the past eight years, and I have no fault to find with Mr. Colman; but we may expect a change. If we cannot have Mr. Woodward, give us Prof. Morrow of this State, although we want him to continue in the place he now occupies: for he has been a great help to the farmers around here.

What Others Say.

MANAGEMENT OF CREAM.—T. D. Curtis, in the Prairie Farmer, says that there is a good deal of discussion going on now, in the papers, in regard to the best manner of ripening cream for churning. All agree that cream should be ripened, but few seem to understand precisely what ripening is. But all concur in giving age to the cream, and nearly all assume that some sort of souring is necessary. John Boyd, of Elmhurst, Illinois, aims to exclude the air from both his milk and cream, and to develop only one acid, which we understand to be lactic. His idea is that this alone gives the flavor so much desired by connoisseurs in butter, and that exposure to the air develops other acids, which interfere with the lactic acid flavor, and in so much injure the quality of the butter. Mr Boyd is consistent, at least. It may be questioned whether lactic acid imparts the true butter flavor; but, if it does, it cannot be denied that the development of other acids must injure the flavor imparted by this one. Quick souring, to get ahead of other kinds of fermentation, is what he aims at. To secure this quick fermentation, he prepares what he calls "a starter" of skimmed milk. He prefers, according to his theory, skimmed milk that has parted with its cream by submerging, as it is deemed important by him to exclude the air as soon and as much as possible. This skimmed milk is still excluded from the air, and when it has reached the desired acidity, a certain portion is added to his batch of new cream, and thoroughly incorporated with it. This cream is also excluded from the air, and he does not even permit it to be stirred for the purpose of equalizing the temperature and degree of acidity, lest it be too much exposed to the air thereby. He churns at the ordinary temperature, when the cream is properly ripened, or has reached the requisite degree of acidity, by pouring it into a tight box-churn. Thus, from first to last, Mr. Boyd aims to exclude the air as much as possible, and to develop only one acid—the lactic. He admits that he has not yet succeeded to his satisfaction, but is still experimenting, in the hope of reaching definite results. Whether right or wrong in theory, he is making a laudable effort to solve one of the yet unsolved problems in butter-making. Are these experiments and opinions of no value? asks Mr. Curtis. Perhaps there are more ways than one of developing flavor, and we may yet be able to take our choice of flavors when we buy butter. We have that choice now, but most of the flavors are bad.

THE NATIONAL WOOL GROWERS' CONVENTION.—The Convention of members of the National and State Wool Growers' Associations met at Washington last week. Thirteen States and Territories were represented. Resolutions were adopted demanding that the duties on wool and woolen and worsted goods be adjusted so as to secure the American market to American wool growers; protesting against some of the provisions of the Senate bill as inadequate and unjust to wool growers; providing for a Committee to prepare a schedule of tariff duties on wool to be presented to the Senate for adoption, and calling for an early session of Congress. On Saturday a delegation called on the Senate Finance Committee and presented its schedule. This proposes to divide wool into three classes—clothing, combing and carpet. The duty on wools of the first and second class shall be 11 cents per pound, including hair of the alpaca, goat, camel, llama and other like animals. Wools of the third class, valued at 12 cents a pound or less, shall pay three cents duty; valued at over 12 cents, six cents a pound; prepared wool shall pay extra duty, according to the character of the preparation. Wastes, composed wholly or in part of wool or worsteds, 30 cents a pound; woolen rags, shoddy, etc., 20 cents a pound. Wools dyed or otherwise prepared beyond scouring or washing shall pay the same duty as manufactures of wool.

The Senate will consider the wool schedule in the bill this week, but it is not deemed probable that any material change will be recommended by the committee. The wool manufacturers want lower duties on certain classes of wools, especially on carpet wool, and Western wool growers say that if this is granted, they will insist on free wool and free woolens.

CORN AS STOCK FEED.—The Special Commissioner sent to this country by the London Mark Lane Express, says, in that Journal, that he cannot help thinking how much better it would be for the stock-breeding interests of America if more roots were grown to feed in conjunction with the more heating and pampering ingredients of corn and cake. Indian corn, fed judiciously along with grass or succulent food of any kind, is productive of good effects. But it is not the food to use for growing animals, because of its insufficiency of mineral constituents, such as phosphate of lime, magnesia, etc. It has a ratio of only 8 6 carbonaceous to 1 of nitrogenous food and is thus peculiarly rich in the heating and fattening properties. As a food for full-grown stock it is a powerful auxiliary, but it is so poor (having only some 2.1 per cent. of ash) as to be almost destitute of muscle-forming and bone-building materials. Whether American breeders can produce as good cattle as English breeders, therefore, Mr. McDonald believes to be more a question of feeding than of climate or anything else.

SPICE.

OUR respected friend Dr. Hoskins, says, in our respected contemporary Garden and Forest, speaking of winter apples—

"The one apple which should not be omitted, is Hunt's Russet, sometimes called 'The Golden Russet of Massachusetts.' If there is a best apple, surely we have it here. (Downing has it under both names, seemingly unaware of the fact.) It originated in Concord, the home of patriotism, poetry, and philosophy. Not a large fruit, rather small indeed, it illustrates the saying that the best things are put up in small packages. It is thinly russeted on a yellow ground, with a bright, rich red cheek, with a fine-grained, yellowish flesh, with a tender, juicy, very rich, aromatic, and briskly (but not excessively) acid taste, and altogether, Hunt's Russet is an apple to offer to our most highly valued friends, in our most friendly mood."

The American Pomological Society double-stars this apple for Massachusetts only and pronounces it "very good."

THE Westfield Seek-no-Further of Connecticut is a market and dessert apple of a high grade, successful over a broad extent of country. It is grown westward to Michigan, and the finest specimens of the variety that Dr. Hoskins has seen on exhibition have been from that State. It is an apple very even in size, a thing important in barrel-fruit. The peculiar Pearmain flavor noted by Downing, makes the Westfield very popular with old-fashioned people

YELLOW BELLFLOWER is an apple hard to surpass when in perfection, and prime fruit of this variety always fetches a high price in Boston. But it is very particular in its choice of locality. Dr. Hoskins has never seen first-class Bellflowers grown anywhere except upon the banks of, or near to, some large river, like the Connecticut or the Kennebec. When suited in location, no apple yields better or finer fruit. Maine-grown Bellflowers keep as well as Baldwins, though it is reckoned an early winter sort

THE catalogue of the A. P. S. double-stars it for Nova Scotia, Ohio, West Virginia and California, and single-stars it for 20 other States

SUBSCRIBERS to the R. N.-Y. may order our Specials sent to any of their friends. We will promptly obey such orders

THE London Garden illustrates and describes a new Kœlreuteria, K. bipinnata. It is a robust-growing tree about 60 feet high. The leaves are 24 inches broad at the base, regularly bipinnate; leaflets leathery. The flowers resemble those of K. paniculata, being yellow. It grows wild in Central Yunnum at an altitude of 5,850 feet. It blooms in late July

WE shall make an effort to procure of our subscribers half-a-dozen of the largest and shapeliest R. N.-Y. No. 2 potatoes grown by them

THE best of the new and old vegetables for both field and garden culture by our best practical writers. *This will be the subject of our next Special.*

WHAT new kinds of grapes, strawberries, blackberries, currants, etc, are improvements over older varieties, will be the subject of the next thereafter

PROF. HENRY of the Wisconsin Agricultural College, says that it is not necessary to fill the silo slowly. A small silo was filled to the depth of 13 feet in one day, and the si-

age was of excellent quality. The partition is useless and a nuisance. The best silage has no unpleasant odor. Silage has not proved a good f.od for pigs.....

HORNS AND MILK.—Prof. Law, of Cornell, says, in the Weekly Press, that the growth of the horns coincides with an abundance of rich blood, thus making the same requisites for growth of horn and for flow of milk. But it is folly to say that the removal of horns will stop the forming of an abundance of rich milk. When the horn is not required to be nourished there should be more blood for the secretion of milk. The horn itself contains no nerves and cannot exert a refl-x influence. Horn is made of gelatine, the same substance making hair and a part of the bones and sinews. Large bones and sinews are certainly not required for good dairy cattle. Nor is long hair a requisite of a good cow. In autumn and winter is the greatest growth of hair, but the greatest flow of milk is in the spring .....

A PAPER called the Agricultural Epitomist, published at Indianapolis., Ind. byJ. A. Everett & Co., prints the following:

"Some paid-for (at 20 cents a line) New York dailies say of the RURAL NEW-YORKER: 'It has done more to promote the interests of agriculture in its experiment grounds than all the experiment stations put together.' We do not begin to believe any such stuff."

The same paper also publishes the following:

"Carman, of the RURAL NEW YORKER, to use a Western expression, is a 'slick' citizen, when it comes to a potato contest. The turning point in the same seems to be to 'blow the horn' of his No. 2 potato."....

IN introducing the novelties originating at the Rural Grounds, whether they be potatoes, cross-bred wheats, hybrids between rye and wheat, hybrid roses, blackberry hybrids, or anything else, the R. N.-Y. looks for compensation in but one way, viz., an appreciation on the part of the people of its earnest endeavors to promote the interests of agriculture and horticulture.

The RURAL has shown that J. A. Everett & Co., advertised and sold the Armstrong or Landreth wheat as "Martin's Amber;" that they advertised and sold Russian White Oats under the name of "Yankee Prolific," and that during the past year they have falsely assumed to be the head quarters for the new and promising variety of wheat called "Golden Cross." Possibly in this fact may be found the animus which prompted the falsehoods above quoted.....

IN renewing your subscriptions, readers of the R. N.-Y., add a line or so telling us wherein you conspicuously failed or were successful last year; if you have any new ideas, tell us what they are; if you would have the R. N.-Y. talk less or more upon any subject, let us know about it. So shall we help one another.....

AN engraving in a late bulletin N. C. Experiment Station., gives illustrations from nature of Lucerne or Alfalfa plants. The report says that most of the root system was within 10 inches of the surface. The plot was two years old. The crop was cut three times last season, and on Dec. 1, was in good shape to give a cutting on March 1. The soil is a compact, red clay. It was so hard that a spade could make no impression on the ground, and a mattock had to be used to loosen the soil, even on the surface. Under the most favorable circumstances a well established Lucerne meadow will yield 15 to 20 tons of green fodder, equal to four or five tons of dry hay, per acre. Under such circumstances the duration of the meadow is indefinite, but under favorable conditions it will yield well for 10 or 15 years.....

THERE seems to be an irreconcilable difference between farmers as to the best way of sowing Lucerne seed. Some declare for drills 14 to 18 inches apart; others are as strongly in favor of broadcast seeding. Upon one point, however, all authorities agree, namely, the absolute necessity of having the seed-bed finely pulverized and in good heart. For those who can afford to weed the crop three or four times during the growing season, the safest plan is to sow in drills 14 inches apart and cultivate with a hoe, The plants should be allowed to ripen seed in the fall and the spaces between the drills should be seeded down. Lucerne does not sucker from the roots, and hence can be increased only from seed. If seed is sown in drills; use 15 pounds to 18 pounds per acre; if broadcast, use 25 pounds to 30 pounds—the larger amount on the poorer land.....

THE North Carolina report says that Lucerne seed will not sprout if covered deeper than a quarter of an inch. The R. N.-Y. thinks this must be a mistake. The seed of the Rural plot of a quarter-acre was drilled in at least half-an-inch and the stand was very good The greatest care should be exercised in selecting seed. The vitality of Lucerne seed is so low that seed over one year old is scarcely worth sowing.....

IN sending lists of trees, whether fruit or ornamental, to nurserymen, specify that you want small, young trees. Remember what such men as Robert Douglas, Pres. Lyon and Prof. Budd, have said on this important subject. As a rule, if you plant a spruce that is only a foot high, in 10 years you will have a finer, more symmetrical tree than if you had planted a spruce four feet or more high. The same principle is good for fruit trees....

PROF. J. L. BUDD agrees with Pres. Lyon that the planter of one-year-old pear trees will, when they are at the usual age of bearing, have a healthier, more productive and profitable plantation than if he planted older trees. Beyond all shadow of doubt this is true, as it is almost impossible to secure decent roots on two or three-year-old pear trees if worked on pear stocks. Prof. Budd says, in the Farmers' Review, that he wishes also to extend this idea and include the cherry and plum. His experience during the past 25 years favors the idea that, with the fair culture the orchard fruits need during the first stages of growth, a larger proportion of the one-year-old cherry or plum trees will live and make thrifty growth the first season, and that at the end of three years they will make larger, handsomer and healthier trees than will two or three-year olds set at the same time.

PROF BUDD further states that he has found the cherry quite as easy to graft as the apple. The main requisite in top-working is really to have the cell structure of stock and cion in the same condition.

On this same principle we can graft the cherry when the buds have started in the spring if we cut the cions as needed from trees about equally started.

To illustrate: He was obliged to take up some valuable cherry trees of bearing size last spring in the college grounds (Ames, Iowa). Not wishing to lose the varieties, he cut off every cion when the buds had begun to elongate and show the green point of the embryo leaves. He had some seedlings about equally started upon which they were at once grafted, and at the close of the season it was hard to find a vacancy in the two nursery rows in which they were planted, but they did not make as good growth as those grafted early in the winter and kept in a cold cellar.

IN speaking of the present system of education—now happily passing away for a better one—the Popular Science Monthly says that we want one man to be always thinking, and the other to be always working; and we call one a gentleman and the other an operative; whereas, the working man ought often to be thinking, and the thinker often to be working, and both to be gentlemen in the best sense. As it is, we make both ungentle, the one envying, the other despising the other; and the mass of society is made up of morbid, unhealthy thinkers and miserable workers. It is only by labor that thought can be made happy. The professions should be more liberal, and there should be less pride felt in peculiarity of employment, and more in the excellence of achievement.....

DIRECT.

——N. Y. HERALD: "Canada has a public debt of over two hundred millions.

"If Uncle Sam marries this maiden it will surely be for love, not for money.

"Afterthought—If Miss Canada should say "'Yes!' when Uncle Sam 'pops,' would she be influenced by his strong box?

"Well, let that pass. She might promise to be a 'sister' to him, and for the present we ought to be satisfied."

——ORANGE COUNTY FARMER: "At any rate, we do not want Forrest K. Moreland or Dr. Loring for Commissioner of Agriculture. To appoint either would be to slap every reputable farmer in the country, full in the face."

——D. B. WEIR, IN ORCHARD AND GARDEN: "The late Arthur Byrant found the pecan growing wild in the valley of the Illinois, 60 miles above Peoria. At my old home, Lacon, Illinois, 30 miles north of Peoria, there were great trees of it, some over three feet through, and 80 feet high, that gave abundant and regular crops of nuts. These nuts, from some trees, were larger than any I ever saw from the South and were fine in quality,"

——" MR. PEEK, of Georgia, thinks that nursery-grown pecan trees, two or three years old, are of a very suitable size for planting in groves, and if properly formed, can be transplanted about as successfully as any fruit tree of the same age."

——HUSBANDMAN: "Dr. Collier a man of brains, and of truth as well, said, years ago, that sugar could be produced at a cost of a cent a pound and he was derided as a lunatic; but the foremost scientists of the age, in the light of practical results, say, now, that the cost need not exceed three-fourths of a cent a pound and the work is growing n practical reality."

——PROF. HENRY: "Uncut corn-stalks make silage of the finest quality, but the labor of getting them out of the silo is too great. For a silo 16 feet deep, studs 2x9 inches should be used, and these should be bridged a few feet from the ground to prevent springing."

——GOV. HOARD, before the Dairymen's Association of Ontario: "Our people are clamoring, 'Why don't you give us some cheese we can eat?' I don't think there is a set of people on God's green earth who are so stupid as cheesemen. Now you have got it square in the teeth. I never saw a set of men that when a man asked for bread would give him a stone, and then damn him because he didn't like stones, as cheesemen do with respect to this question of home demand,"

——J. J. H. GREGORY, in Farm and Home: "When we have a lot of cabbages that do not form hard heads, or immature cabbages that have just begun to turn the leaves in roundly, we plow a furrow seven inches deep and jam the roots of the cabbages downward as close as they will stand, firming the earth about the roots and throwing what is dug out of the trench and more over the cabbages, piling it directly upon them to the depth of one foot. It doesn't seem possible, but it is true that cabbages treated in this way will to a large per cent. head up finely and be fit for market in the spring. The good thing about this process of winter growing is that this cheap class of vegetables that hardly pays for harvesting in the fall, shows round profits when dug out of its burrow in the spring when cabbage is high."

——RURAL CANADIAN. "The cherry is about the only fruit tree which can be recommended for shade in pastures along road-sides, as the hardy varieties of cherries are not affected by the trampling of stock or passing of vehicles, which would prove injurious to most other fruit trees."

——S. S. TIMES. "Conservatism is all very well—when it is well; but there are times when the truest conservatism is in smashing things. If you want to save the meat of an egg, you must break the shell. There is no getting at the kernel without cracking the nut."

——N. E. FARMER "A sheepman claimed to have an offer of $500 for a ram, which in two years from the time he was glad to sell for $50. Another sheepman claimed to sell a ram for $1,500, and the check came for that amount, but part of the money was paid back on the sly. Money is sometimes hired for only a day or two, and for the purpose of deceiving some one by showing it. The following is a case in point: A young man hired $100 Saturday night to be paid Monday morning, for which he paid a good bonus, to show to his girl on Sunday night as his own. Girls should be smart enough when a man shows them money to find out whose it is."

——WESTERN RURAL: "Weld & Co., nurserymen of Lyndonville, N. Y., is a firm without means and without honor. It does not pay its bills and they cannot be collected."

——PROF. LAZENBY IN OHIO FARMER. "When will farmers and others learn that life is not for work, but that work is for life? If our work adds nothing to the completeness of our lives, if it makes us no braver or better, if it contributes nothing to our well-being and happiness, surely such labor is in vain."

Miscellaneous Advertising.

Hood's Sarsaparilla

This successful medicine is a carefully-prepared extract of the best remedies of the vegetable kingdom known to medical science as Alteratives, Blood Purifiers, Diuretics, and Tonics, such as Sarsaparilla, Yellow Dock, Stillingia, Dandelion, Juniper Berries, Mandrake, Wild Cherry Bark and other selected roots, barks and herbs. A medicine, like anything else, can be fairly judged only by its results. We point with satisfaction to the glorious record Hood's Sarsaparilla has entered for itself upon the hearts of thousands of people who have personally or indirectly been relieved of terrible suffering which all other remedies failed to reach. Sold by all druggists. $1; six for $5. Made only by C. I. HOOD & CO., Apothecaries, Lowell, Mass.

100 Doses One Dollar

MAKE HENS LAY

SHERIDAN'S CONDITION POWDER is absolutely pure and highly concentrated. It is strictly a medicine to be given with food. Nothing on earth will make hens lay like it. It cures chicken cholera and all diseases of hens. Illustrated book by mail free. Sold everywhere, or sent by mail for 25 cts. in stamps. 2½-lb. tin cans, $1; by mail, $1.20. Six cans by express, prepaid, for $5. L. S. Johnson & Co., P. O. Box 2118, Boston, Mass.

Trees, Seeds and Plants.

If you want the best Garden you have ever had, you must sow

MAULE'S SEEDS.

There is no question but that Maule's Garden Seeds are unsurpassed. Their present popularity in every county in the United States proves it, for I now have customers at more than 31,000 post-offices. **When once sown, others are not wanted at any price.** Over one-quarter of a million copies of my new Catalogue for 1889 have been mailed already. *It is pronounced the most original, beautifully illustrated and readable Seed Catalogue ever published.* It contains among other things, cash prizes for premium vegetables, etc., to the amount of $3,500. **You should not think of purchasing any Seeds this Spring before sending for it.** It is mailed free to all enclosing stamp for return postage. Address

WM. HENRY MAULE,
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OVER **6,000,000** people believe that it pays best to buy Seeds of the largest and most reliable house, and they use

Ferry's Seeds

D. M. FERRY & CO. are acknowledged to be the *Largest Seedsmen* **in the world.**

D M. FERRY & Co's Illustrated, Descriptive and Priced **SEED ANNUAL** For 1889 Will be mailed FREE to all applicants, and to last year's customers without ordering it. *Invaluable to all.* Every person using Garden, Field or Flower Seeds should send for it. Address

Earliest Cauliflower in existence.

D. M. FERRY & CO., Detroit, Mich.

Pearl Strawberry. The handsomest, best flavored, most perfect-formed berry, best colored and MOST PRODUCTIVE. Ahead of JESSIE on the same soil and cultivation. 1¼ ACRES produced $743.87 worth of berries the past season. Send for circ. Plants $10 per 1,000. *Fine Meeche's Quince and Apple trees* in abundance. WEST JERSEY NURSERY CO., Bridgeton, N.J.

SEEDS Our sales in 1888 *double* those of 1887. Why? Because we sell only the *Best*, at Reasonable Prices.
SEED POTATOES, *large stock, great variety.* Small Fruit Plants and Trees. Catalogue Free.
FRANK FORD & SONS, Ravenna, Ohio.

SEEDS.

My Annual PRICED CATALOGUE is now ready and mailed free to all applicants. It contains all the leading and most popular sorts of

Vegetable, Farm,
—AND—
Flower Seeds,

Besides all the desirable novelties of last season, and nearly everything else in my line of business.

ALFRED BRIDGEMAN,
37 East 19th Street, New York City.

SEED AND PLANT CATALOGUE FREE, and if you send the address of 4 persons who buy seeds and plants, we will send a 20-cent package of pansies. Address
ROOP & ZILE, Westminster, Md.

TREES ROOT GRAFTS—*Everything!* No **larger** stock in U. S No **better, no cheaper.** **Pike Co. Nurseries, Louisiana, Mo.**

JESSIE only $2 per 1,000. Crescent, $1; all varieties; prices *free.* SLAYMAKER & SON, Dover, Del.

Stayman's No. 1 Strawberry.

Large and Fine, produced at the rate of **30,000 quarts per acre. Price $2 per dozen; $10 per 100.**
JEWEL the earliest and best black grape known. Equal to the Delaware in quality. **Price, $1.50 each. Send for testimonials.**

STAYMAN & BLACK,
LEAVENWORTH, KANSAS.

Beautiful Strawberries. We are now offering for the first time and only by us, the beautiful **Eureka**, and a strawberry that yielded at the rate of **127 Bushels** to the acre at one picking the past summer—60 other varieties; **80 of Grapes; Thompson's Early Prolific** Red Raspberry, the earliest of all; Palmer Rash, the most productive early Black; **Thompson's Early Mammoth Blackberry**, etc., etc. If you mention this paper we will send you Catalogue free, telling about these beautiful berries & others Everybody wants it

CLEVELAND NURSERY,
Lakewood, Cuyahoga Co., Ohio

THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, FEBRUARY 2, 1889.

"FARMIN' DON'T PAY."

WITH APOLOGIES TO THE "PARROT."

The farmer who's growlin' "Farmin' don't pay"
Is chewin' or smokin' I'll vow:
And standin' out in his fields to-day
Is his mower, self-binder, or plow.

His wife's a-bringin' in water and wood,
His debts are a-cloudin' his brow,
The "farmer's account" he has kept is no good—
It's a blank, just like his scrub cow.

The world's a-cheatin' him's all he can say
And everything's all in a "skow,"
He's confident only that "Farmin' don't pay"
Some way or another, somehow.

Rexford, Kan. *E. K. M.*

CHANGE OF CLUBBING TERMS.

The Weekly Inter-Ocean and the R. N.-Y., one year, $2.50

The N. Y. Weekly World and the R. N.-Y., $2.25.

The Detroit Free Press and the R. N.-Y., $2.25.

The Courier Journal and the R. N.-Y., $2.50.

The lowest possible clubbing rates with any journal in America will be given on application. Subscribe through the RURAL NEW-YORKER.

A small tuber of the Rural New Yorker Potato No. 2 will be sent to our YEARLY SUBSCRIBERS *who apply, without any charge whatever. It will be sent, as the weather permits, from time to time, so that all shall receive a tuber before the planting season commences.* APPLICATIONS ARE NOW IN ORDER. *No doubt this potato will fail in many parts of the country, but from the reports thus far received, it may be said to be the nearest approach to a perfect potato at present known.*

THE NEXT SPECIAL number of the R. N.-Y. will be the issue two weeks hence. Subject, fertilizers. The first-page cartoon is said by those who have seen proofs, to be one of the most forcible and suggestive illustrations of the kind ever presented.

A friend sends us the following thoughts from "Ben Hur:"

"A man 30 years old should have his fields of life all plowed, and his planting well done, for after that it is summer time, with space scarce enough to ripen his sowing."

"Sympathy is in great degree a result of the mood we are in at the moment; anger forbids the emotion. On the other hand, it is easiest taken on when we are in a state of most absolute self-satisfaction."

"In thankfulness for present mercy, nothing so becomes us as losing sight of past ills."

DON'T talk of the cruelty of dehorning while spaying is tolerated—the meanest, most inexecusable cruelty ever inflicted upon dumb animals.

"I follow farming because it is the highest occupation of man, and we always eat at the first table, and if anything is left then others come in." *M. K.*
Upper Sandusky, Ohio.

THE R. N.-Y. never varies its rates (as published in every issue), for advertising. All advertising patrons are treated precisely alike. This statement is made every year at about this time, in order to spare intending advertisers the trouble of any correspondence with a view to obtaining lower rates. There are but few journals published in this country whose rates are absolutely invariable. The RURAL NEW-YORKER is one of the few.

"While butter of one brand commands $1 per pound on account of its special flavor, pork products from clean, sound animals, as against products of doubtful origin, should find a market at paying rates. Probably there is no article of food at the present time boycotted by so many families as that coming from the pig. And there is no article from the animal so attractive and toothsome to these families as the spareribs and sausage, when not associated with filth or disease."—DR. LEARNED, page 75.

THE present duty on carpet wools is 2½ cents per pound on wool valued at 12 cents and less per pound, and five cents on that worth over 12 cents. The recent wool-growers' convention at Washington urged that the duties should be raised respectively to three and six cents in the new tariff bill, and the Senate has amended its bill, raising the duties on both classes to four and eight cents respectively. To placate the carpet manufacturers, an advance of five per cent. has been made in the duties on manufactured products, but this by no means satisfies the carpet men. They insist that sufficient carpet wool cannot be grown in this country; nay, they maintain that it wouldn't pay American sheep-men to produce this coarse, low-priced kind of wool, and that it ought therefore to be either admitted at a low rate of duty or put on the free list. The chief objection of the farmers really charges dishonesty on the woolen manufacturers. After importing this coarse class of wool, at a low duty nominally for carpet-making, it is claimed that they use a large proportion of it for the manufacture, in whole or part, of various clothing fabrics, thus bringing it into competition with higher grades of American wool. The bill which has just passed the Senate, is not likely to pass the House at this session, and the carpet manufacturers intend to use their utmost efforts to defeat this section of it in the next Congress. The wool-growers, however, are hardly likely to be caught napping.

"'The farmer feeds the world,' it is true; but he is not doing it primarily for applause; that's a sort of 'pay' that doesn't pay very well—pay debts and taxes, for instance. The sleek citizen's 'well done,' furnishes no legal-tender for the hired man."—E. T., page 72.

THE WOMENS' POTATO CONTEST.

ESTIMATED value of souvenirs contributed up to Jan. 18, $900.

THE MAPES FORMULA AND PERUVIAN GUANO CO., New York, $100 in cash for the largest yield grown with the Mapes Potato Manure, stable manure, or both.

W. A. STILES, Editor of Garden and Forest, New York, $5 in cash.

"I find that choice clover hay grown on good land and cut in full bloom or very soon afterwards, will keep work horses in good order with the work I have to do. The hay, however, must be choice. It should be three-quarters clover at least."—T. B. TERRY, page 68.

ENSILAGE.

WHILE the widening experience of farmers has put an end to the claims of such writers as Dr. Bailey, it has not prevented the practical dairymen of the country from recognizing the merits and advantages of ensilage. There was a considerable amount of truth in the claims put forth some 20 years ago, by leading dairy writers, that the "dairy belt" has its limits; although these have proved much wider than those writers thought. Dairying is the child of grazing. It has always begun, and had its strength in well-grassed and well-watered regions. When things "settle themselves," in this continent, it is not doubtful that those parts of it abounding in clear, cold, running streams will be the chief dairy regions. Grass is the basis of butter—*green* grass. Until lately, all-the-year-round butter and cheese dairying has been impossible, as a paying and practical business. It could not be done on the basis of hay and grain and dry fodder. The butter so made not only costs too much, but is too poor. The old perennial exhortation to root-growing was based upon a knowledge of this difficulty; but root-growing in America has never been a success. Both the climate and the habits of the people, are against it. Ensilage solves the problem. It is not going to flood the dairy farmers with wealth; but it is going to make their's a more steady and paying business, and extend its area over the lighter soils, in the well watered sections.

"There is no knowing what good it may do. We women may do so well that we may be asked by our husbands and fathers to do the same year after year. Is this one of the reasons why they are so interested?"—MRS. O. J. PUTNAM, page 69.

THE COST OF DOGS.

HAVE you ever thought seriously of the cost of the dogs in the country? The last census gave Hampden County, Massachusetts, a population of 104,142 in 1880. Last year 4,656 dogs were licensed there. These were, as a rule, prized animals paid for by forehanded people, and it is not unfair to suppose that the number of unlicensed curs and mongrels was nearly as large. The license fees amounted to $10,816, and the damages paid on account of injury done to stock by dogs, reached $2,140.70. The claims for damages show that 327 fowls, 221 sheep, two pigs, two calves and one horse were killed outright; while six fowls, 63 sheep, one calf and three cows were cruelly bitten and maimed. No damages were, of course, collected for the serious injury inflicted on stock by chasing and worrying. Would it be extravagant to estimate the cost of boarding the 4,656 licensed dogs at 50 cents each per week? Hardly. This would make the mere cost of their board $2,328 a week, or $121,056 a year. Add the license fees, and the owners paid $131,872 for their canine pets in that little county last year, to say nothing of the cost of keeping the horde of unlicensed mongrels. What a world of good the aggregate sum would do to the deserving poor of the county! The people of Massachusetts are, as a rule, thrifty, and the number of dogs in the State is not large in comparison with the numbers in most other States. From the above figures concerning the cost of dogs in a single small county in one thrifty State, calculate the aggregate cost of all the dogs in the 2,750 counties in the 38 States of the Union, to say nothing of the eight Territories.

"A favorite theory of mine is that seeds are best when grown in the atitude and location where they thrive best, a theory I shall hold to until it is disproved. I should therefore not hesitate to go south for some seeds, where it is not essential hat they should mature early."—ANON, page 69.

SCOURING WOOL.

THE wool production of Texas is exceeded only by that of Ohio, California and Michigan. Ten years ago Pennsylvania too was ahead of the Lone Star State in this line; but while sheep raising has largely increased in Texas during the last decade, it has considerably decreased in Pennsylvania, which has therefore fallen to the fifth place. Hitherto San Antonio has been the chief wool market of the gigantic Southern State; but Galveston expects soon to get most of the business. One of the largest wool-scouring mills in the country is to be erected there, having a capacity of 20,000 pounds of wool per day working ten hours, with a reserved capacity of doubling the work by running at night in the busy season. The advantages of such an establishment in any place are very great. In the first place, the scouring of the wool saves about 60 per cent. in freight, as the wool when clipped contains about that proportion of grease and trash. This is removed by scouring, insuring a large saving in transportation charges. Moreover, scouring removes all doubt as to possible shrinkage, a calculation that necessarily enters into every wool-purchasing transaction. There are several processes for scouring wool, in nearly all of which the staple is left rather stringy and ropy by being torn by spikes, and forks while it is washed. The Hodgson flushing flume system, which will be in use at Galveston, obviates this objection, besides, it is claimed, yielding from three to five per cent. more wool with a larger per cent. of tops and fewer noils than any other machine. To make the institution complete, it will also include a new process for bagging and packing the wool after it has been scoured. Every device for cheapening transportation charges is sure to benefit the public, either by increasing the price of the product to the producer or decreasing it to the consumer, or both.

"Let Terry go up head. That article of his in last week's R. N.-Yorker is the best of a year." *N. J.*
Cuba, Mo.

DIFFERENT FARM MANURES FOR DIFFERENT CROPS.

WHY should horse manure give better results on some crops, than cow manure when both animals are fed on the same food? Why should poultry, swine, sheep or cow manures vary in their effects upon the same soil? Is it wise economy to mix the different manures or should we apply each kind to some particular soil or crop? What animal is the most economical manure maker? These points have been suggested by friends during the past few months, and we have decided to begin the discussion of the matter in our Manure Special. It is a topic new to most of the farmers with whom we have communicated, and scientific men have, apparently, given little attention to it. Prof. Storer, in a recent letter, says:

"The subject has never been adequately studied, so far as I know. Meanwhile, there can be little doubt as to the wisdom of mixing various kinds of manures when it can be done at small cost. Hogs in the barn-cellars of New England have done a vast amount of good work in this way."

We shall be glad to have the opinions of our readers on these points. The following notes from a very prominent farmer and fruit-grower of Western New York may serve as a text.

"1. Manure is valuable partly in proportion to its fine disintegration and partly in proportion to the richness of the food used by the animals which have made it. Its value also depends much on its fine diffusion through the soil, and some manures are more capable than others of this thorough diffusion. Under all these conditions, poultry manure would stand first, then swine, sheep, horse and cow. I think it more important to ascertain by direct experiment, the nature of the soil, than to try to suit the wants of different plants. Analysis shows much similarity in the composition of the leading crops, although in somewhat different proportions; but I think all would be affected nearly alike by the different manure. But this is not so with soils. The experiments I have made show a great difference. In one region, a certain fertilizer has doubled the wheat crop; in another not ten miles away, it has never produced the slightest apparent result. The manures may be mixed or applied separately, the chief requisite being thorough intermixture."

"I would prosecute a man for damage, if I could, if he plowed my corn after it was coming in silk."—D. C. L., page 72.

BREVITIES.

READ why Mr. Bowditch chose Guernsey cattle—page 81.

WE doubt if the "cure for an egg eater" given on page 72, will prove much of a success.

THE R. N.-Y. will consider it a great favor if its readers will send the dates of any local farmers' meetings to be held during the winter and spring.

THE combs of our Red-cap roosters are immense, closely resembling the illustrations seen of them. As yet they have not frozen, the weather not having been colder than 15 degrees above zero. Red-caps are shapely, beautiful fowls.

WAIT for the RURAL'S SPECIAL on the best of the old and new vegetables; the best of the new and old kinds of crops to raise in the field; the best of the old and new small fruits of all kinds—before making out your orders for next season. These special issues, in which our best practical writers will be heard from should prove very valuable.

FROM a number of our exchanges we learn that retail merchants in Iowa are getting seriously alarmed because, in many sections, farmers are forming co-operative companies for the purpose, not only of buying farming and dairy produce, but also of selling farm implements, groceries, dry goods and other things needed in the family, at cost prices to the members, deducting just enough to pay running expenses. There's no doubt that there is a large profit in such transactions if the right sort of man manages the business, but frequent experience has shown that there is always a great risk of ultimate loss and collapse through mismanagement.

The Swineherd.

PRIZE PORK PRODUCTS.

J. B. LEARNED, M. D.

Objections to swine products due to swine diseases; these are mainly due to improper feeding and filthy surroundings; a confirmatory experiment; pigs stuffed with corn die, while those running in the woods remain healthy; raising pigs on cholera-infected ground; a compost with dead cholera hogs; an unfounded scare; breeds in use; care and feed given; baths; cleanliness; ventilation of pig-styes; ringing objectionable; feeding for growth and fat; hog cholera the punishment for neglect of hygienic conditions; "cholera lard"; our degenerate breeds capable of restoration to their original healthy condition; prime pork products sure of prime prices.

CORNED BEEF had been served with our baked beans for many months before I came to the conclusion that a pig properly cared for would produce just the kind of meat that was most needed here. The nice, crisp, pig pork of my early days had not been forgotten, but filth and disease had of late been so much associated with pork in all forms, that I had sickened of it. Swine journals talked of cholera; the daily papers recited cholera, and every body, but the meat-men, seemed to have touches of it when pork was talked. One-half of my herd of shoats, that had been counted on as safe, died within two or three weeks in the fall of 1884, and I, with the majority of particular folks, had about come to the conclusion that beef must take the place of pork, even with beans, in future. But I had the winter in which to consider this, and finally I decided to try another and more rigid hygienic plan of feeding and general care. I had divided my pigs into two sections—one to be fed for pork and the other for stores. The first received the usual unlimited rations of corn, corn-meal and wheat stuff. It lay by them in some form all the time—soft corn on the ear, etc., being scattered over the ground. The stores ran in the chestnut woods close by, and were fed sparingly. They did not sicken. In a very brief time the "pork" pigs were all buried, and the stores were all in good health and growing. Both were in the open air, and on dry ground. I was forced to the belief that *diet* had something to do in this case, as it had in many others where I had seen families of children prostrated as a whole with some disease, while others equally exposed escaped. It should be said that cholera was near by at a neighboring pen, at this time.

To make the test more emphatic, I determined to put the first sow to farrow on these same grounds, where, during the fall, the dead ones were taken off. It was April; no changes had been made in the way of burying or burning the bedding, etc. Charcoal was sprinkled over the ground, and some lime. Nine new pigs were dropped. The mother had been well treated during the winter, and she furnished the needed nourishment at once. The sow and pigs remained here, under the same roof and upon the same bedding, *plus* more as it was needed from time to time; but no cholera came. The earth was the foundation. There was no flooring. The roof was a lean-to, and a board fence the side. I had selected this particular place and these surroundings for a test ground because writers generally say that the germ remains, and is sure to get an abiding-place in sound animals that are kept on the place, unless fire or deep burial is brought to the rescue. In this immediate vicinity, several hundred pigs have since been bred and matured; but there has been no cholera. During the next spring the heap of compost—earth and dead cholera stock—was opened, handled, aired and finally spread on the surface as a fertilizer. Neither odors nor cholera germs were wanting, and pigs were not wanting to inhale them. My neighbors were more alarmed at this last exposure than they had been at the first. But I was trying this new generation, which I thought in vigorous condition, as an experiment, in an atmosphere of contagion, where the graves had given up their dead. The workman almost trembled for his own safety, and called for full rations of whisky as an antiseptic. He survived; so did the neighbors, and likewise the pigs.

Upon these grounds, not then more than 25 rods removed from the nucleus of the poison, several sows farrowed and reared all their young. The present season 40 sows with their pigs have gone on with safety. The grounds in use at any time have not exceeded 15 acres and have generally been much less. Sometimes a pig gets lame and occasionally one dies, but there has been no evidence of contagion. We are now slaughtering April pigs weighing 275 to 330 pounds. The sows are grade Chester-Whites; the boars, Cheshires and Poland-Chinas full blood. The pens are about one-third of an acre in size. We put 20 in a place and they sleep and feed together Elevated platforms of plank on sleepers hold the feeding troughs. The pigs feed from both sides. Neither mud nor filth abounds on these floors, and very little finds its way into their food. An inch-and-a-half main water pipe connects with the city supply, and gives off, at every dividing fence, a fresh stream which pours into bathing-tubs made of plank. In the warm season, these are every day resorted to, and frequently are full of pigs and water. The pigs get their drink sometimes from the falling stream. With a fair chance, they are vastly more cleanly than they get credit for being. Give them clean beds and a bath-tub and see. A running brook would be preferable, but water pipes serve well. The bath-tub is located over pits filled with cobbles, so that the surface is dry in dry weather. It isn't so this season, however.

The bedding in summer is dry earth or sand; in winter the same, *plus* sawdust, leaves or hay. The opening on the south is never closed; and the pigs never seem to suffer from cold. The roofs are water-tight, but not air-tight, hence there is always fresh air as well as clean bedding. The dung is in the open air, and is covered by rooting and plowing. Clover and rye are thrown over the surface in the spring. In the early part of the season a fair growth is kept up, cut clover is carried daily from the adjoining fields. Small potatoes are purchased in the fall at 15 cents per bushel on the grounds. These are boiled in salt water, after they have been washed, and fed with the grain. Cabbage comes later, and continues some weeks into the winter. It costs $4 per ton, on the ground, loose heads, stumps and all.

The regular rations are two per day, morning and night, consisting of bran, middlings, rye or oats, one or all, during the growing season; with butter-milk, which is brought nearly every day through the year, a distance of 10 miles. The carrying tank holds a little less than 450 gallons; and the milk costs here one cent and four mills per gallon. During the fattening season corn-meal is the leading grain, with the milk; seldom whole corn. No swill is ever brought to the grounds. Steam from the boiler at the meat-room serves to cook the winter rations. The feeding places are the same at all seasons, and are at a considerable distance from the sleeping quarters. Thus some exercise is made necessary summer and winter. Charcoal is made on the grounds or brought here. It is consumed sometimes with eagerness. The trimmings of trees from the grove close by are in winter rather palatable. When the ground is open the pig goes deep in search of what he wants if he has no ring in his nose, and generally finds it; but in winter the supply obtainable in this hay is cut off, and should be furnished. A ring in the pig's nose is no advantage to his health. All grain is too concentrated a food. The growing must be first attended to; then food must be supplied for fat making. I do not consider the pig an exception to the general rule in growing an animal body. Nature's methods must be regarded, else, sooner or later, a bill for damages is sure to be presented. Hog cholera is the form in which it comes here, and the amount of money lost in this country every year on this account is immense. The amount of "cholera lard" too in the market is quite out of proportion with the tastes of fastidious people. I think it is possible to so improve this degenerate sample we now have, in the matter of constitutional vigor, as to restore him to his normal condition. But to use him as a scavenger, as a machine for manure making, and at last as an accumulator of fat from filth, is not the way to do it. Hygiene is needed with the pig as much as with the baby. Both are often sacrificed by its absence.

But this mode of treating the pigs is expensive. The market rates will not make returns; even Strawberry Hill rates, which are almost 100 per cent. in advance of those ruling elsewhere, do not invite extensive investments with an unknown market. I have found my nearest neighbors my first patrons. From this beginning I now receive and fill orders for families in several States to a small extent. My mode of putting up sausage-meat in clean cloth, with a waxed paper covering, is more attractive to many than the use of an intestinal tube of a pig, that reminds one of filth and often of disease. The pure, clean lard from a pig not contaminated with disease, and which is itself clear of adulterants, is also prized by families who want the best. The railroad express trains make it possible to order one's sausage and lard, in cold weather, from a distant market, and while butter of one brand commands $1. per pound on account of its special flavor, pork products from clean, sound animals, as against products of doubtful origin, should find a market at paying rates. Probably there is no article of food at the present time boycotted by so many families as that coming from the pig. And there is no article from the animal so attractive and toothsome to these families as the spareribs and sausage, when not associated with filth or disease.

The improved breeds in form and outline are certainly a great advance upon the razor-back, but their constitution has degenerated. Reformation is demanded here. Breeding helps, but a higher standard of health and more wholesome surroundings are most needed. Pure water, fresh air and suitable foods are as indispensable to the pig as to any other domestic animal.

Hampshire Co., Mass.

Miscellaneous.

CORRESPONDENTS' VIEWS.

AM GLAD the RURAL favors rye. It is the best of chop feed for this part of the country. I find millet excellent feed, but it won't sprout unless the ground is damp. I feed potatoes and shorts mixed to my milch cows, and they do well on the mixture and I don't think the potatoes taint the milk. As shanty foreman, I found that horses that were fed half a pail of potatoes once a week, were better able to stand the work and strong feed than those that got none. R. O.

Kinmount, Canada.

SO FAR I have hesitated to enter my name for the Potato Contest, but I have come to the conclusion that there is no good reason why I should not. I am over 60 years of age, and since I have lived in the country, and taken the R. N.-Y.—five years now—I have always raised all the vegetables for my family, and done all the work, too, except the first plowing. So why should I not enter the P. C.? I knew nothing of gardening until I took the R. N.-Y., but I have learned a great deal since. MRS. C. H. W.

De Soto, Mo.

IN PLOWING A SEVEN-ACRE FIELD of clover sod last fall, I saw but one mouse while the garter snakes were numerous, so it occurred to me that the snakes had destroyed the mice. If so, why should we kill these harmless reptiles? JOHN WARREN.

Ohio.

R. N.-Y. It seems quite evident that some varieties of snakes are not only harmless but beneficial to agriculture.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

THANK you, Mr. T. B. Terry. That honest opinion of an honest man in the RURAL of January 19, just does us good. Very few men seem to understand how it hurts a woman when the money she has helped to earn is doled out to her as to a beggar; very few women are so lacking in sensitive pride that they do not feel it. Perhaps we would be happier if we did not feel this; but most of us would rather wear a shabby gown than beg humbly for the money to buy a new one. A wife who does her duty has as much right to the family money as her husband has. "*No true woman will ever abuse such a partnership, and there are more true women in this world than there are true men.*" So says Mr. Terry, a tribute we may be grateful for while recognizing its perfect truth. And we believe that many husbands, who now act as if afraid to trust their wives with an extra dollar, would act differently if the wives had quietly taken the right stand from the beginning. Have you read a recent story by "Josiah Allen's Wife," entitled "Luman Skinkle's Religion?"

It is a story with the very moral Mr. Terry teaches. It tells of a poor, overworked wife of a farmer, who had slaved all her life, making herself completely the servant of her husband, instead of being his companion and fellow-worker. To quote Josiah Allen's Wife: "Wall, as was nateral to one of his turn, as Luman grew fat and strong and rich, he began to act high-headed and haughty-like, and began to sort o' look down on Phila, act sort o' short and cross to her, and it madded folks dretfully, who knew what she had done fur him. But my reasonin' powers are such that I said to myself that he had some cause to do it, for from the beginnin' of their married life she had jest put herself down at his feet, and if he looked at her at all he *had* to look down. He couldn't see her by lookin' up or sideways, fur she wuzen't there. He had to look down, and then he found her. But he had no need to have looked so fur down; that I gin up."

There, there is a lot of solid sense in that, too. When we assert that a wife has a right to stand on the same level as her husband, we don't mean that she should assume his prerogatives; she has her own exclusive duties, but they should be recognized as being equal in value to the duties of the husband. A woman loses all her charms when she tries to be masculine; but let every one bear in mind that womanliness does not mean weakness. Each to the duties of the sex, whether man or woman; but remember that, after all, the partnership is equal.

NEW YEAR'S PLANS AT HOME.

THE family of Mr. Gleason were all at home to keep the New Year. Supper was over, and the work in the kitchen was done. The boys had done the chores at the barn, and now the hanging lamp was lighted and the father, mother, three boys and two girls were seated in the pleasant sitting-room. In the early morning the circle would be broken, for James was a school-teacher, and Edna was a student in Westmere seminary. Probably they would not meet again till the March winds and sun began to melt away the huge snow drifts that were heaped up, and sugaring would require their labors till the snow was gone.

"Well, children," said Mr. Gleason, as he looked around the group. "The New Year has come, and I trust will be more prosperous than the last has been. It has been a disastrous year to us, in every respect."

"Yes, father," said Elmer, the eldest son. "It did seem as if everything went against us all the year. I got quite discouraged ever so many times. No matter what we tried to do, it was just a dead failure every time."

"It was too bad the way things went. When poor old Doll died, I just cried, I could not help it," said another.

"I always thought that she had too much mea . What ailed her? She was a splendid horse, so gentle and smart," asked Edna.

"Well, it is no use to cry over her now,' said Mr. Gleason.

"I am going to take some agricultural papers this year," said Elmer, "I have subscribed for the RURAL NEW-YORKER, and the Agriculturist, so as to get the experience of wiser heads than ours."

"You had a right to take them, but we have to keep our money, for we shall be compelled to stint this spring, to get seed enough to sow, and we shall also have to buy all the corn and potatoes for planting. I declare I don't see how we shall make the ends meet."

"I know, father, that we shall have to be economical; but I have been reading a good deal this winter. They have lots of books and papers at my boarding place, and they are good farmers, and made good crops last year, and if there is a better way than ours, I want to know it."

"Father does not believe in book farming,' said Edna laughing. "You know the story he tells about Horace Greeley."

"We have followed the old way with a vengeance, and it has been a bad way for us.' Elmer replied.

"I saw a piece in a farmers' paper about onions, when I was over to Mr. Moore's the other day," said Hettie, "and I want a piece of ground for myself, to see if I cannot do something. Ellen Moore had a bed of onions last year, and she sold enough to amount to $30, besides keeping enough for the family to use."

"The maggots will eat yours all up, if you try," said the mother."

"They did not eat hers, and she said she would tell me all how she did, if father would let me have the land."

"There is land enough, but you must do the work and must not be calling the boys to help you," said her father.

"The RURAL has offered prizes for a potato contest. Edna you had better try for one," said Elmer.

"I would like to ever so much, but you boys will have to plow the land for me."

"I am not sure that that is in the bargain. I will see; but you will have to buy your own potatoes to plant, sis."

"I shall speak for the land next to the hog-yard for my onions. Ellen said that would be a splendid place for them, the ground is so rich," said Hettie.

"Why it was never broken up in the world," said her father.

"If you will let me have it for my onion bed, I will try my luck, and Hattie will help me."

"I saw in one of last fall's papers a long article on ensilage, and I would like ever so much to build a silo in the big barn; there is plenty of room for one in the big bay. I have studied out the plan."

"Well, boys, you must remember all these things cost lots of money, and you know how straightened we are."

"Yes, father, but we can build the silo ourselves, and it will take but little lumber. There is enough sawed, and a few pounds of nails. I hope you won't object."

"The last was such a mean corn season, that I kind of calculated I would not put in more than an acre this year," said Mr. Gleason, rather sadly.

"It is no sign that it will be a poor season next year, because the crop was frost-bitten last fall," said Elmer.

"Well, boys, you have all got your plans laid," said Will, and I have one that I want to talk about."

"Well, planning is the order of the evening; let us hear what you are considering, my boy," said Mr. Gleason.

"I would like to take the poultry on shares, and take care of them myself. We have 20 hens and 10 turkeys, and if I return the same number next year—"

"I shall take care of the geese myself," said the mother.

"All right. I do not want them anyway; I know the girls will have to save the feathers for their beds, and I wash my hands of the nuisances," he replied laughing.

"We shall want eggs to use, and chickens to kill—"

"Of course, but how many shall I have in the fall?"

"Who will furnish grain for them?" inquired the mother.

"I will buy half, and I shall want sour milk for the little turkeys; won't that be fair, father?" Will asked.

"I suppose so; but it costs a good deal to raise poultry."

"I intend to sell eggs enough to buy their food."

"Who has been stuffing you, my boy? You will get sick of your bargain by the time summer is half out."

"I would let him try, father," said Elmer, "I am glad he wants to try," and he passed his arm around his brother, and gave him a bright smile of encouragement.

"Now, you have all your plans laid, and I have a plan that I want carried out," said Henry, a stripling of 17, "I want to raise all the calves this year! I think it is a shame to kill them off as farmers do. The old way of raising stock was a good one, and kept the farms up, and then there were young cattle to sell, and they brought the ready cash in a heap."

"We will think about it, but we shall not have much butter to sell, or veal calves to turn off, and then the hogs——"

"Oh, I will teach the calves to drink, and after a little I can make hay tea, and give them skim-milk till they are old enough to eat oats. As to the hogs, let them go to grass in the orchard. They will do first-rate there, for there is water enough to drink, and in September we can boil up pumpkins and give them corn-stalks, and it will do the orchard good to be rooted over by them."

"I declare, boys, you have done a good deal of thinking, I must say. I hope your plans will be carried out," said Mr. Gleason, as he put a fresh supply of wood in the stove. 'Farming has not paid me for some years back; we do not get such crops as farmers used to get off the same ground. Folks complain that the soil is run out. I do not know but that is the case; but I cannot make it pay. I have run behindhand for the last ten years, and how I shall pay the interest on the mortgage next spring is more than I can tell. It plagues me more than you can think."

"Oh, I shall have money enough to pay that when my school is out, father," said Elmer, cheerfully."

"You are a good boy, but what will you do my lad?"

"Go to work and earn some more. The dear old farm shall be kept at any rate. The boys and I have talked it over, and we are going to make farming pay."

"Go ahead; carry out your plans; but don't try too much book farming."

S. H. ROWELL.

GOLDEN GRAINS.

IN the bulletin of the Iowa Board of Health they say that they verily believe not one in twenty-five who commit suicide knows anything about the comforts and sustaining power of religion. It may not satisfy all the demands of philosophy and science. It does give contentment, cheerfulness, and length and happiness of days to its fortunate possessor.

THACKERAY, in Pendennis, says the doctor stands over the patient in the fever, the wife expectant, the children unconscious, as if he were fate, the dispenser of life and death; he must let the patient off this time, the woman prays so for his respite! One can fancy how awful the responsibility must be to a conscientious man; how cruel the feeling that he has given the wrong remedy or that it might have been possible to do better; how harassing the sympathy with survivors, if the case is unfortunate——how immense the delights of victory.....

DEAN STANLEY was a firm believer in the gospel of "occupation" He said that leisure misused, an idle hour waiting to be employed, idle hands with no occupation, idle and empty minds with nothing to think—these are the main temptations to evil. Fill up that empty void, employ these vacant hours, occupy these listless hands, and the evil will depart, because it has no place to enter in, because it is conquered by good.....

THE best antidote against evil of all kinds, against the evil thoughts that haunt the soul, against the needless perplexities which distract the conscience, is to keep hold of the good we have. Impure thoughts will not stand against pure words and prayers and deeds. Little doubts will not avail against great certainties. Fix your attention on things above, and then you will be less and less troubled by the cares, the temptations, the troubles of things on earth.....

THE LORD'S Supper is the one great pattern meal. It teaches us that the family table ought to be bright and cheerful, a sort of domestic altar, where every one casts down his offering, great or small, of pleasantness and peace; where, for at least a brief space in the day, all annoyances are laid aside, all stormy tempers hushed, all quarrels healed, every one being glad and contented to sit down at the same board and eat the same bread and salt, making it, whether it be a rich repast, or a dinner of herbs, equally a joyful meal.....

THE MARCH OF PROGRESS in butter making has been wonderfully accelerated by the discovery, and placing within the reach of the Dairymen in all markets Thatcher's Orange Butter Color.—*Adv.*

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

FOOD ACCOMPANIMENTS;—AFTERNOON "TEAS";—THOREAU'S BOOKS.

MARY WAGER-FISHER.

THE success of the table largely lies in two things, the congruity of the company and the congruity of the food. The selection of the company is a personal matter; but in the serving of food a few suggestions may not be amiss.

For breakfast, omelet, eggs fried or scrambled go with broiled or fried ham; sausage with buckwheat cakes; eggs with mushrooms, or buttered toast; fried smelts with cress or slices of lemon; broiled chops with potatoes; currant, or rhubarb jelly, with venison steak; codfish balls with tomato catsup and brown bread; omelet with picked cod and potato balls; broiled salt fish with stewed potatoes; codfish balls with poached eggs; omelet with broiled sheep's kidney; lamb chops with tomato sauce; breaded chops with tomatoes; sliced cucumber with egg-plant; egg-plant with broiled tomatoes; omelet or bacon with liver broiled or fried; meat croquettes with stewed potatoes, and hash on toast with soft-boiled eggs. Fruit is as acceptable for breakfast as soup for dinner, and is preferred by most people at the outset of the meal. Then follow, as a separate course, what comes under the head of mush—oatmeal, hominy, grits, rice, graham, etc. The best and cheapest way to get wheat for a breakfast dish, is to have your miller crack it for you. On the Pacific coast cracked wheat can be had in sacks, the same as corn meal; but on the Atlantic sea-board good wheaten "grits" are differently prepared and are more expensive than oat-meal. But an obliging miller will crack the wheat for you, and you will find the grits very nice; boil in salted water.

A very nice dish of cooked fruit is coddled apples, which are relished by persons who do not care for the ordinary stewed apple-sauce. Pare and core the apples without cutting them, at least, not more than once. Pack them closely together in the bottom of a stew-pan, in one layer only. Sprinkle over them a cupful of sugar, add a little hot water, cover them tightly and steam until they are tender, lift them out carefully, pour over them the juice, and when cold they are ready to serve: delicious; also nice for dessert. For dinner, jellies go with game, mutton and fowl. In Baltimore with roast duck, fried mush, or hominy balls are served; with boiled chicken, egg sauce; with roast turkey, oyster stuffing, or escalloped oysters, cranberry jelly, boiled rice, celery, mashed potatoes, lettuce salad, stewed turnips; with mutton, boiled rice (as a vegetable), sweet potatoes, corn, lettuce salad. Stewed tomatoes go with baked mutton, baked pototoes, peas, cabbage salad; with roast goose go apple-sauce and potato croquettes; with roast beef, macaroni baked with grated cheese, or Yorkshire pudding; with beef steaks, stewed tomatoes and hot-slaw. Stewed cabbage with apple sauce, also goes with baked ham. Mashed potatoes and stewed or baked tomatoes go with broiled chops; stewed tomatoes sweet potatoes and celery with roasted rabbit. Egg sauce accompanies most boiled fish; parsley sauce, broiled; rice croquettes are nice with roasted fowl. Toast goes with broiled oysters; cold-slaw with escalloped or stewed oysters (for lunch); parsley sauce with boiled sheep's head. Cheese is a part of the dessert and is served first. Asparagus is served as a course by itself. Boiled macaroni served with grated cheese sometimes takes the place of soup at dinner. The Chinese serve their dessert first. The French serve all green salads just prior to the dessert—a fashion generally adopted elsewhere.

THE AFTERNOON "TEA."

For bringing people together at a trifling expense and trouble, the afternoon "tea" which in the East has grown into such vogue as to threaten to become a nuisance, has much in its favor. It is informal and unpretentious, and can be "managed" by people in very moderate circumstances. The essentials are one or two or more connecting rooms, pleasantly warm, but well ventilated, seats, a few cakes, thin slices of bread and butter, a small table with a pot of hot tea (coffee and cocoa may be included) the necessary cups, etc., for serving it, and a young girl to serve it. Familar guests in the way of young gentlemen, may be levied upon to help pass the refreshments which must be of a very light and simple character. From four to six P. M. are the usual hours for a "tea," and people who are asked to come, drop in informally in bonnet and cloak, although the latter as well as men's top-coats are left in the hall or dressing room. One can remain from ten minutes to two hours. It is a very good way to introduce a visiting friend to one's neighbors by asking the latter, by note, or in person, to come at a given time to meet your friend So-and-So, giving some bit of information about the friend to add to the interest. A few such "teas" in a country neighborhood during the winter season, will brighten it up wonderfully by developing the social qualities of neighbors and bringing them together. People will respond to and respect a definite invitation, who will allow the demands of every-day life to prevent them from paying visits of a general character. People who are really worth knowing care far more for talk with other people, than for something to eat, of which they are supposed to have plenty at home. Sometimes two ladies in a neighborhood pool their resources and give a "tea" jointly, first at the house of one; then, later on in the season, at the other's.

The books selected by Lawson Valentine for the "Women's National Potato Contest" happily include a number of volumes by Thoreau, than whom no writer ever told more of what there is to be seen in the country. He seems to have been all eyes, seeing every thing, and thinking nothing commonplace, as indeed nothing in Nature ever is It seems impossible that any young man or boy who reads Thoreau, can fail to find every bit of country or corner of the farm, a mine of interest, and his books ought to set young farmers all over the country to making daily notes of what they see—and women, too. John Burrough's books are capitally good also. The "laddie" finds endless entertainment in his "Signs and Seasons."

FRIGHTENING CHILDREN.

THE world in many respects is wiser to day than it was a quarter of a century ago, and happily improvements have been made in the treatment of children as well as in other things of less importance. The severity which our grand-parents practised towards their offspring, and their ignorance of the structure of the human body and of the intricate processes of the mind, make us wonder that serious consequences did not more often follow their well-meant but misguided efforts. I remember a thing which happened during my childish school days, which I think of now with a nervous horror that such a thing should have been allowed to happen a second time in an enlightened community. In a school of about 30 pupils there was a little fellow not over five or six years of age, a harmless, inoffensive child, whom the teacher, a man, seemed to have a mania for tormenting. Every few days he would call the little boy from his seat and tell him he was such a bad boy that he was going to put him in the stove. He would then open the stove door and rake the red-hot coals to the front, and seizing his helpless victim, would swing his head uncomfortably near the fire, as if he truly meant to carry his threat into execution. The boy would sob and cry pitifully, and beg the teacher not to do it, promising to be a better boy, although what fault he had committed, it would have been hard for the tyrant himself to have explained.

After a season of this, he would pretend to relent and let the boy go to his seat, as if he were doing something magnanimous. This cruelty was practiced every few days through the winter school term. Such an experience would have thrown a very nervous child into convulsions. I was a year or two older than the boy at that time, and although I felt that the teacher would not dare to do as he threatened, and roast the boy, yet my flesh would creep with fear and excitement. Whether this shameless course of conduct would have permanently injured the child, I do not know, as the little fellow died a few months afterwards of scarlet-fever. I smile now when I think how soon in these days, if such an occurrence called for it, a scalping committee of mothers would be organized to avenge the injury. Whether this story was repeated at the time in the homes of the pupils, I do not remember; but if it was, it certainly seems like criminal ignorance or carelessness, to have let it pass without calling the teacher to account. Who knows but among the increasing numbers of the insane, the causes leading to the deplorable conditions of some of them may not be traced back to some such shameful disregard of the laws of nature.

AUNT RACHEL.

WASHING.

THERE is no subject pertaining to housework upon which may be found so much independence and diversity of opinion as upon the process of making dirty clothes clean. This difference in opinions is the result of the introduction of many machines, soaps, powders and fluids, all claiming such wonderful advantages, even to the power of making dirt disappear without rubbing. While one woman finds a machine that proves labor-saving to her; to another it is the reverse, its manipulation being as laborious as the use of a pounder or a wash-board. Thus success or failure of a washing-machine must remain in doubt. One woman uses washing-fluids with the best of results; another will have nothing to do with them; but uses soap while perfectly ignorant as to its composition. One uses lukewarm water throughout; another goes to the other extreme, and puts dry clothes into boiling water. One will pound or put dry clothes to soak in almost boiling water, but will object to actually boiling them before removing the dirt; while another is willing to let water, soap and heat have the first chance. One believes that soaking clothes over-night draws out stains and loosens dirt; another affirms that the dirt comes out all the harder for the soaking.

In addition to these are those who have faith in soaking clothes over-night, or for a time in the morning, in cold or warm water or cold or warm suds. Among those willing to boil clothes first, some believe in soaking them before putting them in the boiler, before or after the water, soap, etc. have come to a boil; others, through a natural sensitiveness in handling soiled garments till they have been purified by boiling, put them directly in the boiler; and so opinions vary and processes multiply without end.

The old way to which many cling, is to pound everything through lukewarm suds, rub thor-

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

oughly through another suds, put to boil in cold suds and rinse in—I don't know how many waters. The woman who follows this process, and lives to bring the clothes in from the line, may be assured of beautifully white clothes. "What's to hinder?" as the man said to his friend, who exclaimed upon seeing Niagara Falls for the first time, "By gar! how she do come down!"

As to the different ways of washing, I have been pretty well around "Robin Hood's barn," and from my experimenting I have extracted these conclusions: The machine, soap, fluid, powder or process is yet to be invented applicable to family washings, that will extract dirt from bleached muslin bands, worn and sweated in dirt, without rubbing by hand or on a wash-board. With good suds, a powder will accomplish as much as most machines. Clothes will wash as easily after thirty minutes' soaking in warm suds as after pounding. Clothes put in strong, cold suds, with or without borax or fluid, and brought slowly to or near the boiling point will part company with more stains and dirt than is possible by pounding or soaking. Soaking clothes in good suds over-night or for a time in the morning, is a great help. White soap is better than dark soap. Borax is the best agent in connection with any soap for winter washings containing choice flannels. Flannels washed in lukewarm suds, rinsed in lukewarm water, left in hot water till cold and dried without freezing, will be wholesome and not shrink. A good fluid does not injure clothes more than hard rubbing, and will take hold of stains and all kinds of dirt better than soap. Any indication of bluing shows poor taste and may be injurious to adults the same as to infants. Clothes should be thoroughly rinsed, the last water being as nearly hot as possible, if cold, stiff fingers are to be avoided while hanging them out. The washing should never be "the event of the day" to the neglect of every other duty, especially personal appearance. A process allowing sufficient time for the usual morning's work is worthy of the consideration of every progressive housekeeper. There is a satisfaction in converting the valuable yet worthless contents of a clothes-basket into clean, sweet usefulness, and all will agree that the easiest way to do it, is sufficiently hard to satisfy every one.

The two following ways of washing I have found to be satisfactory in every respect, and as variations are admissible, they may prove the same to others. The fluid is composed of one can (pound) of Babbitt's potash, one ounce, each, of the muriate of ammonia, and salts of tartar, and one gallon of water. A gallon jug is the best thing in which to make and keep it. But little of the water is added at first; cover, and when dissolved add the remainder and cork. It can be made in a crock and kept in bottles or glass cans.

Put the clothes to soak over-night in warm water (cold will do in summer) containing one half the soap, dissolved, and two tablespoonfuls of powdered borax or one-half teacupful of fluid. In the morning wring the clothes out, put them in a second tub and pour over them the remaining soap, dissolved in sufficient water to cover. Fill the boiler and while the water is heating, do up the morning's work and make all possible preparations for dinner; then wring the clothes out and put them in the boiler to scald, either before or after looking over the wearing apparel, wash flannels, calicoes, etc., empty the tub; remove the clothes from the boiler to the tub, add water to cool, where needed rub articles not already rubbed, having rinsed the flannels in this water at the beginning and emptied the boiler and refilled it, to warm the next rinsing water and to scald the flannels. Empty this second tub, prepare the last water in the other, slightly blued, and instead of putting the clothes all in together before wringing them out, turn them in the adjoining tub and take one article at a time.

When not convenient to soak clothes overnight, put them in the boiler with cold water, the whole amount of soap, dissolved, and two table-spoonfuls of borax or one-half tea-cupful of fluid. Put unbleached pieces, if any, a-soak in a little cold water or suds from the boiler. While the clothes are coming to a boil, and the longer it takes the better, attend to the usual house-work; then remove to a tub, put the hot suds in the tub containing the other pieces, refill the boiler, throw a little water over the boiled clothes from time to time, to get them through the wringer with comfort, and in the water left, wash flannels, calicoes, etc., and empty the tub; add the first clothes and enough water in which to rinse and look them over, having rinsed the flannels first, and calicoes afterwards in the hot suds. Now put everything through one or two waters according to the size of the washing. When a washing is large and but few if any garments can go in the first boiler, put the others to soak in warm suds, and then in the boiler while rubbing the flannels, etc., after which proceed as above. The borax or fluid may be omitted from both processes.

MEDORA CORBETT.

A FARMER'S DAUGHTER'S DOMESTIC REVERIES.

CHARITY SWEETHEART.

"YOU girls do nothing but sit all afternoon and gossip." So said Burt, when Delia Crane and Alice Barber came to spend the day with me. We each had a sock for a brother to knit, and worked at it faithfully, while our conversation was chiefly of the missionary society, and how to raise money for a library, and the approaching church festival, as I remembered afterwards. But I thought how unjust it was to make such an assertion, and especially when I know that if there *is* a bit of real gossip going in the village, you may trust Burt for having it first, and telling it over to the first crowd of boys that happen to get their heads together. "I heard in the store"—or "in the blacksmith's shop"—and sometimes "at the church," are expressions that show me there is gossip among the men who profess to think it is something that is common only among women. And yet, as far as I see, girls do not trouble themselves about their neighbors' affairs, but are rather given to thinking of themselves. Poor Burt means well; but is like a good many careless people—always ready to put the blame on some one else when brought up for neglect of duty—so few people are willing to shoulder the blame when they have done anything wrong! On the contrary, they are sure to fly into a passion if any one hints that they are not right. "Endureth all things" seems to be no part of daily living nowadays.

I have, this year, a lot of hyacinths, that gave me great pleasure, watching the opening buds. One bulb has greatly interested me, for I had by mistake planted it nearly upside down; but the shoot came up, and grew toward the light, and bent out forward to the window, so that when its white flowers opened it was almost straight. I told Delia Crane about it the day we talked "gossip" and how it had seemed to me a hopeful sign for any crooked nature, and she was very much amused and said, "Why, Charity, you've made quite a little sermon out of it." And so whether it is Burt or I who is the crooked hyacinth here, I don't doubt but some day we shall be straight enough, even if our growing has been upside down.

CHARITY NOT BLAMELESS.

NOW I have often wondered, and my wonder has always increased after reading anything from the pen of Charity Sweetheart, how she (if there is really such a person,) dares to write such fault-finding letters concerning her father and brother. I, for one, would not care to see the expression on their faces, if they should chance upon certain passages in the household, that do not give much of a shine to their characters. Do you suppose their love for her would be increased or diminished? In my opinion it would fall considerably below the zero mark. And if she, a daughter and sister, can *write* such things, I do not believe her home conversation and ways are such as would be likely to inspire consideration should she see a chance for mending matters. I believe "Burt" to be a good boy, although he may be heedless; but with the right management such boys grow into good-hearted, thoughtful men. As for her father, who has probably been a hard-working farmer, and who must now be quite advanced in life and somewhat thoughtless, she ought to be especially kind; for what may seem a small thing to her may not seem so to him, and what may seem a few steps to her, will look a long way off to him. The eyes of age and youth look at things differently.

SIS.

CHEAP LIVING.

THE strangest thing about people who are obliged to live on small incomes is the obstinacy with which they cling to steaks, chops and roasts as the summum bonum of good living. This obstinacy is equaled only by the firmness with which they resent and resist any innovation which takes the form of attempting to teach them new dishes.

Miss Corson says that her most successful efforts among the lower and middle classes have been in teaching children and young girls, but that she finds women over 30, as a general thing, very unteachable and set in their ways.

A calf's head is one of the economical dishes of the Grey family. We call it a luxurious economy, so closely does it resemble terrapin. Be careful to get a fresh, white one with the skin on. In most places it costs 25 cents. Have the butcher saw it in two. Remove the brains and wash it in several waters. Cover it with three quarts of cold water, season with pepper, salt, and mace, and simmer gently until the flesh is tender. The tongue when tender can be removed, and makes a nice supper dish, sliced cold and served on a bed of parsley with slices of lemon. The flesh of the head should be removed, and the bones returned to the soup-kettle to simmer another hour. Then strain, and set aside the broth, half of which will make an excellent mock-turtle soup, while the other half will be needed in preparing various dishes from the flesh.

A LÂ POULETTE

is one of the nicest of these. Cut a quantity of the flesh into dice, and make a sauce by melting two ounces of butter in a stew-pan, and stirring in smoothly a table-spoonful of flour; add a pint of hot milk and when quite smooth, the beaten yelks of two eggs. Set the saucepan inside of another containing water, while you add the meat to heat through. If it boils it will curdle. Season with salt, pepper and mace, or grated nutmeg. At the last add a trifle of Cayenne and a tea-spoonful of lemon juice, and sprinkle chopped parsley over the top.

SCALLOPED.

Make the above sauce, omitting the eggs, and using the liquor in which the head was boiled instead of milk. Put a layer of meat in a buttered pudding-dish, moisten with this sauce, and so continue until the dish is three-quarters full. Dot with bits of butter, and sprinkle with bread crumbs on the top, and bake half an hour. It may be varied by mashing the brains (after having thoroughly washed them and removed all the membranes) to a smooth paste with pepper, salt and a beaten egg, and spreading this paste over the top of the scallop. The brains are also delicious if breaded and fried, and served with tomato sauce.

CALF'S HEAD, TERRAPIN STYLE.

Cut a pound of cold, boiled calf's head, and half a pound of calf's liver that has been boiled until tender, into small squares. Make a sauce of a cupful of the liquor in which it was boiled, seasoning it with herbs and fried, minced onions, and thickening with browned flour. Heat the meat in this, and when ready to dish it mingle with a half pint of the sauce made as directed in calf's head *à la poulette*. Season rather highly, using a little mushroom or walnut catsup if you have it. Work the yelks of two hard-boiled eggs to a paste with a little melted butter, make into small balls, and roll in flour. Make also a dozen force-meat balls of the ears chopped fine, mixed with a few very fine crumbs, half a beaten egg, and a tea-spoonful of melted butter, and seasoned to taste; roll into balls of the same size, and drop for two minutes, with egg balls, into a little of the boiling liquor. Lift out the meat with a skimmer; lay the egg and force-meat balls around it, and pour the gravy over it.

MINNIE GRAY.

Miscellaneous Advertising.

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Entered at the Post-office at New York (New N. Y.,

News of the Week.

HOME NEWS.

SATURDAY, January 26, 1889.

The Navajo Indians of Arizona own 245,000 horses and ponies, 300 mules, 3,500 cattle, 800,000 goats and 500 burros. The wool clipped for the year amounted to 1,200,000 pounds. They also sold 300,000 sheep pelts and 100,000 goat skins. The Indian farmers raised 8,000 bushels of wheat, 75,000 bushels of corn, 20,000 pumpkins and 15,000 melons.... Twenty years ago there were 92 lightning-rod factories in the United States. To-day there are but three, and those doing a trifling business.... The United States consume 160,000,000 pairs of boots and shoes per annum, 100,000,000 of which are furnished by the New England States. .... It turns out that several organizations of so-called White-Caps have been bogus, being started by witless witlings for the purposes of practical joking. During the past week there are accounts of three whippings by real White-Caps and a large number of "warnings." In three cases, the victims have started suits for damages against those who have maltreated them, and in two cases attacking White-Caps were fired upon and several were wounded and one killed. Where they met with resistance, they always fled. Later reports go to prove that a large proportion of the more reputable members are farmers..... Detroit wants a cattle inspector. Chicago and St. Louis have one.....In South Omaha 10,000 men are employed in the packing-houses.....The only Spanish moss manufactory in the United States is at Fort Worth, Texas.....The shortage in the stock of domestic wool in the United States is 48,000,000 pounds..... According to the figures furnished by the chancellors of the several dioceses, the total number of active Catholics now in the United States is 8,157,656. The number of priests is 8,818, of churches 1,353, and of chapels 1,480. There are 199 orphan asylums, 32 theological seminaries, 725 colleges, 549 academies, and 2,799 parochial schools, with 697,196 scholars. There are 13 archbishops and 73 bishops. It is customary, in making allowance for infants, minors and non-church goers, to compute the entire population of any religious body in this country as 50 per cent. greater than its number of active members. On this basis the total number of Catholics in the United States, active and nominal, would be, for 1888, 12,000,000, against 9,500,000 in 1884.....Justice Miller of the United States Supreme Court has just had an operation for lithotomy successfully performed on him. It is the second within ten years, the first having occurred in 1878..... There is a midwinter flood in Montreal. The wharves are submerged, and it is feared that the temporary dike completed last year will give way..... Owing to mild weather a part of the ice palace in process of erection at Montreal collapsed Thursday afternoon, the thermometer registering 55 in the shade. It looks as if the St. Paul ice palace would have to be built of artificial ice, if built at all.....The twenty-first annual meeting of the Woman's Board of Missions was held Wednesday at Worcester Mass. During the past year $93,941.41 were received in legacies and donations..... Those who have the George Washington centenary in hand in New York have asked the State legislature for $175,000 to defray expenses of one sort or another....."There is not a particle of rain, snow or even mist in the United States to-day," said the United States Signal Officer in New York last Sunday morning.....There are in South Carolina 15,000 whites who cannot read or write, an equal number in Tennessee, 20,000 in Georgia, 20,000 in Alabama, 15,000 in Mississippi, 20,000 in Louisiana, 20,000 in North Carolina, and 25,000 in Virginia.....High License has cut down the number of saloons in St. Paul from 763 to 361—a falling off of one half in one year .....The railroads east of the Mississippi River have made inauguration-day rates of one full fare for the round trip, tickets limited from Feburary 28 to March 8.....The Ohio legislature has passed a bill to suppress "bucket shops," and gambling in stocks, bonds, petroleum, cotton, grain, provisions and other produce—implying that a buyer or seller must receive or deliver goods which the contract calls for..... During the past 13 years 423 railway companies with 43,770 miles of lines—more than one-third of the entire mileage of the country to-day—and representing in securities almost $2,545,000,000, over 30 per cent. of the present railway capital—have been seized by the courts for the benefit of their creditors and sold at auction. The directors of nearly all of them, or the director-in-chief at any rate, have made big money out of their roads while the stockholders suffered. The roads are, for the most part, used for stock-gambling purposes, the officials in control making money by arbitrarily raising or depressing the stock, with no regard for the interests of the share-holders. Then some of them were purposely wrecked to "freeze out" the original stock-holders..... The Ford Immigration Committee favor a bill providing that all intending emigrants be compelled to give three months' notice of their intention to come to this country, and to submit to an examination by a United States consular agent or other proper officer as to their character, antecedents and general fitness, upon the result of which will depend their admission to the United States. It is also recommended that provision be made for the return to their native country of emigrants, who after two years' residence in the United States shall prove to be objectionable and the Government assumes control of Castle Garden.....No Governor, so far as we have seen, has neglected in his message to refer to the tidal wave of bribery which struck this country in November..... Nothing new with regard to the "Electric Sugar Swindle"..... The Dominion Government has decided to largely reduce, if not entirely withdraw, the amount annually expended to assist immigration into Canada. Last year $244,789 were expended on this account, and now the Knights of Labor have demanded that no more assisted passages be granted. They are urging Sir John Macdonald to introduce a measure to exclude alien labor, and he has promised to move in the matter. He states, however, that any measure he may introduce cannot exclude working-men coming into the country from any other portion of the British possessions.....The Dominion Government is now considering the question of increasing the duty on American flour from 50 cents to $1 per barrel as an offset to the proposal to impose a duty on fresh fish entering the United States from Canada..... The annual resources of Alaska are estimated by Governor Swineford in his last report at $9,000,000.....Miss Mary Garrett of Baltimore, is building, for Bryn Mawr College, a girls' preparatory school, to cost $200,000. Her father, the late Robert Garrett, of the B. and O. R.R., left her about $20,000,000..... Mrs. Jay Gould died January 14th, aged 50 years.....A vein of silver extending for miles, and showing an assay of $2,800 to the ton, has been struck within twelve miles of Duluth.....W. D. Washburn has been chosen United States Senator for Minnesota, and Anthony Higgins for Delaware; both Republicans. Matt. W. Ransom, Democrat, has been chosen for North Carolina. The farmers were opposed to the three beaten candidates..... Wednesday, Senator Hale reported from the Census Committee, with several important amendments, the House bill to provide for the taking of the 11th census of the United States. Provision is made for an enumeration of the surviving veterans of the war of the rebellion, the organizations to which they belong, and their length of service during the war. The population schedule is to include an inquiry relating to the number of negroes, mulattoes, quadroons, and octoroons. Statistics are to be taken relating to the recorded indebtedness of private corporations and individuals, and also to animals not on farms..... The House has passed the omnibus bill providing for the admission of North and South Dakota, Montana, Washington and New Mexico, and the Senate is likely to pass it also.... In the Wisconsin Senate the other day, a bill was introduced providing for the appointment of a railway commission to decide on the reasonableness of rates charged by railway companies in the State.....George Hacker, an Indianapolis anarchist, who stabbed his employer, James Bruce, because the latter expressed gratification at the election of General Harrison, was sentenced Thursday to fourteen years in the penitentiary.....In the Roman Catholic Cathedral at Philadelphia, Thursday morning, Miss Louisa Bouvier Drexel, daughter of the late Francis A. Drexel, was married to Edward De Vaux Morrell, Archbishop Ryan officiating. The gifts to the bride are valued at $250,000.....In the Illinois Senate the other day Mr. Fuller introduced bills for reducing railway fares to two cents a mile; making it unlawful, with a fine of from $1,000 to $5,000, for elective or appointive officials to accept or use railway passes.....The boomers are pouring into Oklahoma by the hundreds. Within the past week 750 wagons have crossed the Canadian River on the way to the coveted lands. The authorities appear to be doing nothing to check the invasion or expel the invaders.....

The Sunny Side.

Enough has been written on the subject of consumption, to make even a well man morbid and apprehensive.

But this has all been in its discouraging aspect.

Now, we are led, or more exactly speaking, Compound Oxpgen urges us to say cheerful things.

However, better than all we can possibly say, are the words of our patients, or we might say, our *ex*-patients, for they are relieved or cured now.

Observe the comfort and encouragement in the following brief extracts.

PORTAGE, Wis., Jan. 30, 1888.

"My wife has been taking your Compound Oxyen for over two years for consumption and has derived much benefit from its use. In fact I think she would have died long ago but for it." H. D. JAMES.

LITTLE ROCK, ARK., March 30, 1888.

"I am happy to inform you that I am of the opinion that your Compound Oxygen saved my life." MR. J. T. BAILEY.

NASHUA. N. H., Feb. 14, 1888.

"I commenced your Compound Oxygen Treatment the last of August, 1887, and was happily surprised to find at the end of one month I was almost entirely relieved."

MRS. S. K. DAGGETY.

AHENS, OHIO, Feb. 29, 1888.

"The effects of the Compound Oxygen Treatment in my case were wonderful. I feel very confident that I owe my life to the Compound Oxygen," MRS. M. E. WARDEN.

For further information regarding Compound Oxygen, send for our brochure of 200 pages, containing the full history of the treatment and a record of cures in some very interesting cases. The brochure will be sent free of charge to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa.; or 331 Montgomery street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, January 26, 1889.

In spite of the disturbed condition of French politics, preparations for the great International Exhibition that is to be opened in Paris in May next still go on. Although the display will be by no means as attractive as was that of 1867, there is every prospect that the industrial growth of the world will be amply set forth in a splendid object-lesson. There is no country to which America was more indebted during its struggle for independence than to France, and we can now, in some measure, help to repay the obligation by taking an active part in the Exposition of 1889. Germany refuses to make any official notice of it, and several other European countries will give little or no State aid to exhibitors from their own borders. Indeed this country appears willing to do more than any other .....Alessandro Gavazzi, an Italian ex-priest, who for 40 years has been denouncing the papal authority all over Europe and this country, died the other day aged 80..... Nearly a million Lebel rifles have been turned out in France, yet the manufacture of them continues, since the Government intends to have four rifles ready for each soldier when the great mobilization comes..... The Samoan, or Navigators' Islands consist of a group of nine inhabited islands about 800 miles south of the equator, and 400 miles northeast of the Feejee Islands. They have a population of 40,000 and an area of 1,120 square miles. There has been an understanding or treaty between this country, Great Britain and Germany, to the effect that the islands should remain indepedent, and the United States have obtained control of the best harbor in the islands as a naval depot. In its new lust for colonization Germany has of late been carrying things with a high hand there, deposing one king, who is still held a prisoner, setting up another, fomenting civil war, bombarding villages, arresting natives and foreign settlers, among the latter an American. It is also said that they have torn down the American flag and burned it. Much excitement in Washington. A vote just passed appropriating $600,000 to maintain American rights and treaty obligations on the islands. One United States war vessel is there now, and two others have been sent there....

Public Speakers and Singers

Can use "BROWN'S BRONCHIAL TROCHES" freely, without fear of injury, as they contain nothing injurious. They are invaluable for allaying the hoarseness and irritation incident to vocal exertion, effectually clearing and strengthening the voice. "They greatly relieve any uneasiness in the throat." —S. S. Curry, Teacher of Oratory, Boston. Ask for and obtain only "BROWN'S BRONCHIAL TROCHES." 25 cents per box.—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, January 26, 1889.

The following officers of the Association of American Agricultural Colleges and Experiment Stations were elected the other day at their Convention at Knoxville, Tenn. President, C. W. Atherton of Pennsylvania; Secretary, C. E. Thorn of Ohio; Vice presidents, S. W. Johnson of Connecticut, C. L. Ingersoll of Colorado, L. L. Maginnis of Texas, E. A. Murphree of Arkansas and W. B. Preston of Virginia; Executive Committee, Alvord of Maryland, Henry of Wisconsin, Roberts of New York, McBride of South Carolina and Goodell of Massachusetts.... ...The planters of Union and Kershaw counties, S. C., are somewhat alarmed at the prospect of a negro exodus, a number of car-loads of negroes having just left both counties for Arkansas, their passages being prepaid by railroad contractors, who have engaged them for two years under an iron-clad contract. It is expected that others will soon follow, leaving the fields without enough hands to till them..... In the last 10 years New Zealand has exported 70,000,000 rabbit skins valued at $1,375,000. In the same time the colony of Victoria, in Australia, has exported 29,000,000. There's a large market for them in London..... Inoculating hogs with the germs of the hog cholera, with a view to keeping them from taking the disease in virulent form, was a failure in Kansas. Out of 307 well hogs, 290 took the disease through the inoculation, and died..... .....Boston received 124,468 cattle, 557,613 sheep and 1,145,446 swine in 1888 ..... Kansas City received in 1888 a total of 1,056,086 cattle, 2,008,984 hogs and 351,050 sheep, an increase over 1887 of 386,862 cattle, and 141,094 sheep, and a decrease of 414 278 hogs. ..... Omaha received 1,283,600 hogs, 340,469 cattle and 158,503 sheep during 1888, against 1,011,706 hogs, 235,723 cattle and 76,914 sheep for 1887..... Numerous petitions are being circulated throughout Michigan, Minnesota and several other Western States asking the legislatures to repeal the law taxing mortgages. Borrowers and lenders are alike anxious for this needed reformation.....The Governor of Minnesota has secured the services of Prof. Lugger to visit farming communities in the northwestern part of the State and make a collection of frosted wheat from various localities for the purpose of having made, through the proper professors at the experiment station on the University farm, a thorough investigation by experiments in germination, by chemical analyses, etc., of its virtue for seeding purposes..... The Cornell University Agricultural Experiment Station, organized under the provisions of the Hatch bill, has just placed all the work of the station on fungus diseases of plants in charge of William R. Dudley, of the Laboratory of Cryptogamic Botany. He requests fruit-growers, farmers, gardeners, timber owners, botanists and others to aid him in intelligently laying the foundation of this work; .....The Illinois State Board of Agriculture has elected Prof. Geo. E. Morrow, of the Champaign University, as Secretary for the Board.....The war against the "Fertilizer Trust," is in full blast in Georgia. A large district convention of the Farmers' Alliance was held the other day at Columbus, and another at Athens, at which it was agreed not to buy fertilizers unless they could be obtained at the prices ruling last year. Recently dealers advanced prices.....Reports from 42 New-York State dealers show 326,000 barrels of apples on hand, of which only 15,000 have gone out. There are also 105,000 barrels in the hands of farmers. ..... The following farmers' institutes are arranged for Pennsylvania:

COUNTY.	PLACE.	DATE.
Lancaster	Lancaster	Feb. 5- 6
Chester	Kennett Square	Feb. 12-14
Northumberland	Milton	Feb. 14 15
Perry	New Bloomfield	Feb. 14-15
Adams	Gettysburg	Feb. 19-20
York	York	Feb. 21-22

Oleomargarine manufacturers are said to be introducing the unlawful commodity in this State by sending canvassers around to boarding houses and restraurant keepers, who agree to express the oleo in packages concealing its true character. Commissioner Van Valkenburg proposes to stop this illicit dealing also .....The Jacksonville Board of Trade wants a dollar a box tariff on oranges and lemons, and the Florida Senators and Representatives are asked to push the measure..... The Fourth Annual Meeting of the Dutch Belted Cattle Association will be held at the Cosmopolitan Hotel, New York City, February 14th, 11:30 A. M. Application for the registry of foundation animals must be made at the annual meeting to receive proper attention. H. B. Richards, Secretary, Easton, Pa..... Representative Burnes, of Missouri, received a paralytic stroke Wednesday, while in the House of Representatives, from the effects of which he died next day .....The tobacco growers of central New York assembled in large numbers in Baldwinsville on Saturday. Resolutions were passed asking Congress to protect growers by imposing a duty of 70 cents per pound on foreign wrappers and 35 cents on fillers; also in favor of the abolition of the war taxes on all forms of tobacco..... The meeting of dairymen and dealers at Springfield, Ill., was largely attended, and many encouring letters were received from all parts of the country. On motion of Mr. T. B. Wales, it was determined to organize a national dairy fair association, with a capital of $100,000, in shares of $25 each .....In conversation with some parties dealing in oleomargarine oil they had this to say, that the average amount of American oil used in Dutch markets ran about 3,100 tierces each week in 1888 and about 3,200 tierces in 1887. New shipments made this month averaged 4,665 tierces per week..... The annual meeting of the Connecticut State Board of Agriculture at Hartford recently elected these officers: President, Morgan G. Bulkely; Vice-President, Albert Day, of Brooklyn; Secretary, T. S. Gold, of West Cornwall; Treasurer, J. S. Kirkham, of Newington..... The Board of Control of the Massachusets Experiment Station met Wednesday to arrange an application to the Legislature for an appropriation of some $6,000 for a building in which experiments and investigations in vegetable physiology may be conducted, especially with reference to the causes of diseases of plants and how they may be prevented or removed.....

Crops & Markets.

SATURDAY, January 26, 1889.

Charleston (S. C.), January 22.—The News and Courier says editorially that day by day the cotton crop of 1888-89 assumes more generous proportions, and there are few who now dispute the fact that it will be the largest crop ever made. It seems not extravagant to hope that with the present outlook the crop will approximate, if it does not reach, the magnificent total of 7,500,000 bales.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, January 26, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	6¾	7	.....
Strict Ordinary	7¼	7⅛	.....
Good Ordinary	8 5-16	8 9-16	.....
Strict Good Ordinary	8 13-16	9 1-16	.....
Low Middling	9⅜	9⅝	.....
Strict Low Middling	9⅝	9⅞	.....
Middling	9⅞	10⅛	.....
Good Middling	10¼	10⅜	.....
Strict Good Middling	10½	10¾	.....
Middling Fair	10 13-16	11 1-16	.....
Fair	11 7-16	11 11-16	.....

STAINED.

Good Ordinary	6 11-16	Low Middling	8 7-16
Strict Good Ord	7⅜	Middling	9 5-16

POULTRY—LIVE Fowls, near-by, per lb, 9@9½c; fowls Western, per lb, 9c; roosters, per lb, 6@6½c; turkeys, per lb 8@9c; ducks, western, per pair, 60@90c; geese, western, per pair, $1 40@1 65; chickens; nearby, per lb, 8@9c; do, western, 8@9c.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per lb, 11@14c; do do, common to fair, 8@10c; do, iced, dry picked, choice, 11@12c. Fowls, western, do, choice, 10@11c; do, nearby, do do, 10@12c; do, western, iced, dry picked, 9c; do do do, scalded, 8@9c. Squabs, white, per doz, $4 00@$——do, dark, do, $2 50@$3 00. Chickens, Philadelphia, dry picked, 15@17c, do Jersey, do, choice, 13@14c; do nearby, do, good, 12@13c; do Western, do do, 11@12c; do do, iced, good to choice 10@12c. Ducks, nearby, choice, per lb, 14@15c; do do, good, 13@14; do Western, good, 13@14c. Geese, Western, good, 7@8c.

GAME.—Wild Ducks, Canvas back, per pair, $2 50@@$4 00; do, Red Head, do, $1 00@$2 00; Mallard, do, 75c@$1 00; do, Teal, do, 25@40c; Quail, per doz, $2 00@$2 50.

HOPS.—State, new, best, 21@23c; do, prime, 19@20c;

do, low grades, 15@17c; do do, 1887, 7@11 do do do, California, common to prime, 13@17c; choice, 20c.

HAY AND STRAW.—Choice Timothy, 90@95c; do good do, 80c; do medium, 70@75c; shipping, 60@65c; do, Clover, mixed, 55@70c. Straw.—No. 1, rye, 85@90c; short do 60@65; oat, 50@55c.

BEANS.—Marrows, new, $2 25@—; new mediums, choice, $1 90@1 95; pea, $1 85@—; red kidney, $2 10@2 20; white kidneys, choice, 2 50@2 55; foreign, mediums, 1 35@1 55; California Lima, $2 75@$3 00; green peas, $1 35@1 40.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 6½@7c, and farmers' grades at 6½@6¾c. HICKORY NUTS quoted at $0 75@$1 25 per bushel. Pecans, 6@8c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Long Island, per bbl, $2 25@$2 35; Maine, per bbl. $2@$2 25; State, per bbl, $0 95@1 50; Sweets, per bbl, $1 75@3 25. State Onions, Orange county red, per bbl, $0 90@1 00. Cabbages, Long Island, per 100, $1 50@4 00; Onions, Connecticut, red per bbl, $1 25@$——; do do, white, per bbl, $2 50@$3 00; do do, yellow, per bbl, 1 25@1 40; do State, do, do, $1 00@—. Turnips, Russia, per bbl, 80@50c. Cauliflower, per bbl, $2 50@$3 50; Celery, per doz. bunches, $0 75@$1 25; Kale, per bbl, 45@50c; Spinach, per bbl, $1 50@$2 25.

FRUITS.—FRESH.—Apples, Spitzenburg, per bbl, $1 50@2 00; do, King, do, $1 50@$2 25; do Snow, do, $1 50@$2 00; do, Baldwin, $1 00@1 25 do, Greening, $1 00@$1 50; do, common, $1 25@$1 40. Pears, Dutchess, per bbl, $——@——; Virgalieu, per bbl, $4 00@$5 00; do, Vicar, do, $2 50@$3 00; do, Kieffer, do, $3 00@$4 50. Grapes, Delaware, per lb, 2@7c; do, Catawba, do, 2@3; do, Concord, 2@2½c; do, Niagara, ——c. Cranberries, Cape Cod, choice to fancy per bbl, $6 00@7 50, do do, fair, per bbl, $6 00@$——; do do, per crate, $2 00@2 75; do do do, frosted, do, $1 75@$2 50; do, Jersey, do, $1 50@$2 15. Quinces, per bbl, $——@$——. Florida Oranges, best, per box, $2 40@$2 75; do, good lots, $2 00@$2 25; do lemons, best, $3 00@3 50; do do, common, per box, $1 00@$2 50

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5½@7c; do do, old, 5@7c; do do, new, common to prime, 4½@5¼c, do sliced, new, 4@5¼c; do, quarters, choice, 4@4¾c; do, coarse cut, 4@4¼c. Cherries, new, 13@15c. Raspberries, new, 19@21c. Blackberries, 4½@5c. Huckleberries, 10½@11c. Peaches, Delaware, evaporated, peeled, 16@20c; do do do, unpeeled, 7@9c; do, North Carolina, sun-dried, peeled, 8@11c. Plums, 7@9c.

PROVISION MARKETS.

NEW YORK.—PROVISIONS.—PORK.—New mess, 13 25@13 50, short clear, 15 50@$17 00. Extra Prime, mess, $13 00; prime do, nominal, and family mess, $14 50@15 00. BEEF—India Mess in tierces, $20@22 Extra Mess, in barrels, $7 00@7 25 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $9 00@9 50; Family at $12 50@$16. HAMS—$12 00@$13 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 7¼@7¾c; Pickled Hams, 9¼@10c; pickled Shoulders, 6@6½c; Smoked shoulders at 8c; do Hams, 10@11c. Dressed Hogs.—City, heavy to light, 6½@7½c. Pigs, 7¼c. LARD.—City steam, $6 85; December, ——; January, $7 29; February, $7 29 March, $7 29; April, $7 30; May, $7 30; June, $7 31; South America, 9c.

BOSTON.—PROVISIONS firm and steady. New Mess Pork, $16 75@$17 00; Old Mess Pork, $16 00@$16 25; Extra Prime, new, $15 75@$17 00. LARD, $9 75@$10 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes firm; Early Rose, 47@50c per bush.; Burbanks and White Star, 40@42c Provisions were steady, in moderate demand. BEEF.—City family, per bbl, $10 50@$11; do, packets, $9 50@$10; smoked beef, 11@12c; beef hams, $14 PORK.—Mess, $15 00@$15 50; do Prime Mess, new, $14 50; do, family, $17 00@18 00; Hams, smoked, per lb, 11½@12c do, S. P., cured in tierces, 10@11c; do do do, in salt, 10c; sides, clear ribbed, smoked, 9½@10c; shoulders, in dry salt and fully cured, 7½@8c; do, do, smoked, 8@8½c; Shoulders, pickle cured, 8½@9c; do do smoked, 9@9½c; bellies, in pickle, 9½@10c; do breakfast bacon, 10½@11c. LARD.—Steady: City refined, 9; do steam, 9½@10¼c; butchers' loose, 7¼.

CHICAGO.—MESS PORK.—$11 80@—— LARD.—$6 85@—— per 100 lbs; Short Rib sides (loose), $6 30; dry salted shoulders, boxed, $6 25; short clear sides, boxed, $6 75.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER.—Creamery—State, pails, best, 27@28c, do do, tubs, best, 20@26: Pennsylvania, best, 25@26; Elgin, best, 28; Western, best, 24@26½; do prime, 22@24; do good, 19@21; do poor, 16@17; do June, good to best, 16@23. State—Dairy, half-firkins, tubs, best, 22@23c; do do, prime 22@24c; do do, fine, 18@—c; Welsh tubs, fine, 21@22; do do, good, 18@19; firkins, best, @20 23c; do prime, 19@21c; do fine, 18@—c. Western—Imitation Creamery, best, 18@19c; do, fine, 16@18c; Western dairy, fine, 18@19c; do fair, 15@16c: do, poor 13c; 14c; do factory, fresh, best, 19@20c; do, prime, 16@17 do, good, 14@15c; do, poor, 11½@13½c; do, June, 13@14c.

CHEESE.—State factory, fancy, 12@12½c; do do, fine, 11½@11¾c; do do, prime, 10¾@11¼c; do do, fair to good, 10@10½c: Ohio, flat, prime, 11@11¼c; do good, 10@10½c; Skims, light, 8½@9c; do medium, 6½@7; do full, 2@3.

EGGS.—Near-by, fresh, 16½@— Canadian, 13@14c; Western, best, 16@19¾c; limed 10@14½c.

PHILADELPHIA.—BUTTER steady. Pennsylvania creamery extra, at 27@—c; Western creamery, extra at 16½@17c, B. C. and N. Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were firm Pennsylvania firsts, 16½@17c; Western firsts, 18@19½c; Cheese—steady; demand fair; New York full cream, at 9@9¼c, Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

BOSTON.—Butter firm; Western extra Creamery, 30@32c; Eastern extra Creamery, 29@30c. Cheese steady. Eggs dull; Eastern extras, 27@28c; Michigan extras 24c; Western firsts at 24c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was quiet and steady; Elgin creamery, 24@25c; choice Western, 18@20c. choice dairy, 16@18c; common to fair, 11@12c. Eggs firm at 15@15½c.

CHEESE—State factory, September made, 12c; do do do, October, fancy, 11@11¼c; do, fine, 11½@11¾c; do; fair and good, 10@10½c; Ohio, flat, prime, 11@11¼c do, good, 9¾@10½c; skims, light, 8¾@9¼c; do, medium, 6½@8½c; do, full, 2@2¾c.

GRAIN MARKETS.

NEW YORK.—WHEAT.—No. 2 Red, afloat, for milling, at 96@96¼c; do, in store and elevator, quoted 93⅞@95⅛; do, free on board, 93¾@96¼c; No. 2, January, 93⅞@——; do February, 93⅝@94⅛c; do March, 94 3-16@95⅜c; do May, 97⅜@98⅝; do June, 97⅝@95¾c; do, July, 94⅝@95¼c; do August, 91¾@92⅛c; do December, 94¼@95⅜c RYE.—Quiet and nominal. BARLEY.—Has a light demand. BARLEY MALT.—Neglected. CORN.—Rejected, 37@37½c. Ungraded, 35@45c; No. 3, 39½@40c, elevator; 40⅝@41c. delivered; Steamer Mixed, 41@41⅜c, elevator; 42 42¾c, delivered; No. 2, 43⅛@43½c, elevator; 44½@44⅞c, afloat; Steamer White, 42@42¼c; Steamer Yellow, 41½c; Low Mixed, 41½c; No. 2 January, 43⅜ do February, 43⅜@43⅞c; do March, 44⅛@44⅝c; do April, 45⅜c; do May, 45½@45⅞c. OATS.—No. 3, 2⅝@28c: do White, 29¾@30¼c No. 2, 31¼c; do White, 34@34½c No 1 White, 39c; Mixed Western, 28@33c; White do, 35@39½c; No. 2 January, 31¼c; do February, 31⅜@31⅝c; do March, 31⅝@31¾c; do May, 34⅜@32½c; do White January, 33¾c; do February, 34½c; do March, 34¼@34¾c; No. 8 do February, 30½c. FEED.—Very dull Quoted: 40 lb, 70@75; 60 lb, 70@72½c; 80 lb, 75@80c; 100 lb, 85@90c; Sharps, 90@95c; Rye Feed, 75@80c.

CHICAGO, Ills.—No. 2 Spring Wheat, 93@93¼c; No. 3 Spring Wheat nominal. No. 2 Red, 93@93¼c. No. 2 Corn, 33¾c No. 2 Oats, 24½@24c. No. 2 Rye, 48c. No. 2 Barley, nominal. No. 1 Flax Seed, $1 60. Prime Timothy Seed, $1 57

PHILADELPHIA, Pa.—WHEAT—No. 2 Red for January, 93@93½c; do for February, at 93@93½c; do for March 94¼@95½c; do for April, 95¾@96¼c; May, 96¾@97¼c. RYE nominal for No. 2 Pennsylvania, at 58c CORN quiet but steady, No. 4 Mixed on track at 37c; No. 4 High Mixed, on track, 38¼c: No. 3 High Mixed, on track, 39c; steamer No. 2 Mixed, in export elevator, 39@39½c; No. 2 Mixed, in export elevator, 41@41½c; No. 2 Mixed for January, 41@41¼c; do February, 41⅜@41¾c; do March, 41¾@42c; do April, 42¼@42¾c; do for May, 43⅛@43¾c. Oats—Supplies liberal; demand for car lots light Rejected White at 30c; Ungraded White at 33c; do Clipped at 35c; No. 3 White at 32c; No. 2 White at 34c.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, Jan. 26, 1889.

MILCH COWS.—Arrivals thus far this week 87 head. The market has ruled firm for good cows, but common stock is slow. Reported sales have been at the range of $28 to $45 per head.

CALVES.—Ordinary to Prime veals sold at 5@8½c per lb, and a very few selected at 9c. Dressed calves in moderate supply, but enough for the demand. Dressed grassers sold at 5@6c per lb; Country dressed veals at 8@11c, and little calves at 5@7c; and city dressed ranged from 9 to 13c.

SHEEP AND LAMBS.—Ohio Sheep, 84½ lb average, at $4 90 per 100 lb; do, 122 lb, at $5 50; Ohio Lambs, 75 lb at $7, do, 82 lb, at $7 15; State do, 73½ lb, at $7 12½; Indiana Sheep, 98 lb, at $5 25; Ohio do, 104 lb, at $5; Kentucky do, 115½ lb, at $5 70; Ohio Lambs, 72 lb, at $6 62½; State Sheep, 83 lb, at $5 25; Ohio Sheep, 79 lb, at $5 50; Western Sheep, 82 lb average, at $1 62½ per 100 lb; State do, 93 lb, at $5 25; do, 104 lb, at $6; Western Lambs, 75 lb, at $7 50; State Sheep (common), 83 lb, at $4 50.

HOGS.—None for sale alive. Nominally weak at $5 80@5 70 per 100 lb; Country Dressed firm for Light Pigs but dull for Heavy and Medium Hogs. Quotations are 6@6¼c for Heavy; 6½@7c for Medium; 7¼@7¾c for Light States and Lower Jerseys; 8@8½c for Upper Jerseys.

CHICAGO.—Beeves $4 00@4 80. Steers $2 90@$3 90. Stockers and Feeders $2 10@3 55. Cows, Bulls and Mixed $1 40@3 10. Texas Cattle $1 85@3 30. Western Rangers $3 00@3 80. Hogs—mixed $4 70@4 95. Heavy $4 75@4 90. Light $4 75@5 02½. Skips $3 00@5 00. Sheep—Natives, $3 00@5 40. Western Corn-fed $4 40@$4 75. Lambs $3 25@4 30.

ST. LOUIS.—Cattle—Choice Heavy Native Steers, $4 10@$4 60; Fair to Good $3 50@$4 1½. Butchers' Steers Medium to Choice, $2 70@$3 50. Stockers and Feeders, Fair to Good, $1 90@$2 80. Rangers, Corn-fed. $3 00@$3 50; Grass-fed, $2 00@$2 90.

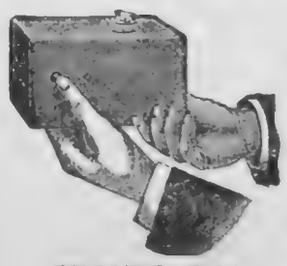
HOGS.—Choice Heavy and Butchers' Selections $4 70@4 85. Packing, Medium to Prime, $4 60@$4 75. Light Grades, Ordinary to Best, $4 60@$4 80.

SHEEP.—Fair to Choice $3 00@$4 60.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING JANUARY 26, 1889.

L. Q. A.—H. H.—A. E. V., thank you—C. L. J, thank you.—C. B. C.—M. G.—L. G. L.—H. B M.—M. T. W.—F C. W.—W. H. J.—H. C. M.—H. A. F.—G. W. H.—P. D. K.—J. M. Ma.—G. W. S. C. P. G.—H. S.—A. T. T.—W. H. H.—A. McM.—I L. D.—F. G.—S. R. C. P.—I. H. H.—C. A M.—A. M. L.—I S. I.—A. L. C—D F. C.—H. A. W.—T. V. M.—L. A. G., thank you.—C. N. B.—J. H.—W. W—L. K.—A N W.—A M.—E. C.—L. P.—C. E. C.—J. M. M.—R. W. P.—H. H. G.—P. M. A.—E. P.—C. W. G.—W. C. P.—H. S S.—A. C. F.—A. C—L. E. H., thank you.—L. E. G.—O. C.—M W. H.—A. B. C., thank you.—N. O.—C. McC—P. B.—S. M.

The Kodak.



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Send for copy of KODAK Primer, with sample photograph. Mention Rural New-Yorker.

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SEND TEN CENTS IN POSTAGE STAMPS TO
E. & O. WARD,
PRODUCE COMMISSION MERCHANTS
for Circular giving important advice about **shipping produce.** Also containing recipe for **preserving Eggs.** Established 1845.
No. 279 Washington St., New York City.

10 Packets choice Flower Seeds for J. E. BONSALL, Salem, Ohio. **25c.**

FOR SALE.—Thoroughbred Jersey Cow, **Edie of Melville,** Herd Register No. 24,433. In calf to Duke of Woodside, 13,601. Due to calve about March 1st. *This is an excellent bargain.* Address OSCAR J. CHATFIELD, 307 W. 37th St., New York.

WANTED. AN unmarried Protestant as gardener on a private place. Must understand glass, fruit, vegetables, and general care of ornamental grounds. Apply, stating wages and references, to P. O. Box 14, Hastings-on-Hudson, N. Y.

$1500 PILL PUZZLE.

Are You smart at reckoning, clever at figures? Try your skill at calculating the number of pills in boxes of different shapes and sizes:

503 prizes for the best answers.
If you want to compete for them be quick and
Send **25** cents for a box of DR. FOOTE'S
MAGNETIC ANTIBILIOUS PILLS
Full particulars and blank for reply in each box.

DR. FOOTE'S PILLS are an excellent medicine for all seasons but *especially in late winter and spring*, for cleansing the stomach and bowels, as well as the blood and secretions generally. It is the best, popular remedy for biliousness, coated tongue, dull and tired feelings, wind, sourness and indigestion, sluggish bowels, constipation, piles, sick headaches, nausea, and the common results of blood impurity such as rheumatism, skin eruptions, catarrh and malarial symptoms—in short *the best*, all round, *safe and easy* cathartic (cleansing) pill.
Dr. Foote's Sanitary Bureau, 129 E. 28 St., N. Y.

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For 1889 is the handsomest and most complete Garden Guide ever published. It is really a book of 140 pages, size 9 x 11 inches, contains *three colored plates*, and illustrations of all that is new, useful and rare in **Vegetables, Flowers, Fruits** and **Plants,** with plain directions "How to grow them," by

Peter Henderson

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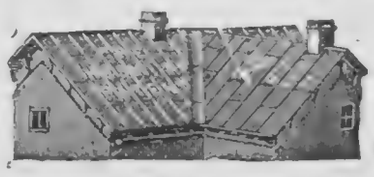
Seed large and pure white; cob red; stalk tall, tender and sweet,
CHAS. E. PRUNTY, 7-S-Main, Saint Louis, Mo.



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STEEL ROOFING.
Made of genuine Sheet Steel and Calamined Steel. Also **CORRUGATED IRON** Roofing and Siding, Beaded Iron Ceiling and Siding, Crimped Edge Roofing and Siding, Roof Paint, Roofer's Paper, etc. Send for Catalogue, Price List, and Samples. Mention Rural New-Yorker.

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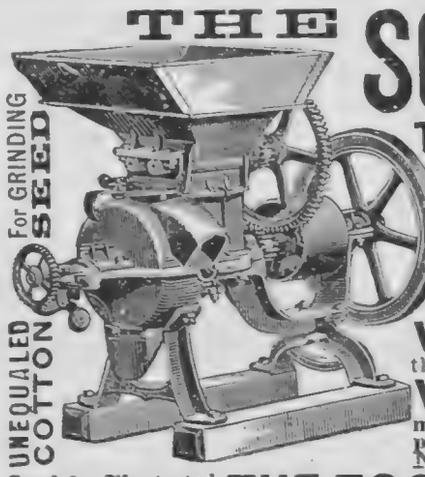

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has our SAFETY BOTTOM intended to prevent breakage should Iron accidentally get into Mill. Other improvements adapt Mill to grinding
EAR CORN with SHUCKS on.
A great saving of feed as well as labor of Husking. The coming Feed for practical, economical Feeders. Try it. Can only be made practically on the Scientific which also grinds any and all other kinds of Grain.
WE GUARANTEE Greater durability and better results than can be obtained with any other Mill.
WE GUARANTEE the strongest, the simplest and the cheapest Mill made, quality of work, life-time of plates, and other parts considered. Sent on trial to responsible parties. Numerous sizes for all Powers. All fully guaranteed.
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TREES AND PLANTS
We offer for the Spring trade a large and fine stock of every description of **FRUIT and Ornamental TREES, Shrubs, Roses, Vines, SMALL FRUITS, Hedge Plants, Fruit Tree Seedlings** and **Forest Tree Seedlings.** Priced Catalogue, Spring of 1889, mailed free. *Established* 1852.
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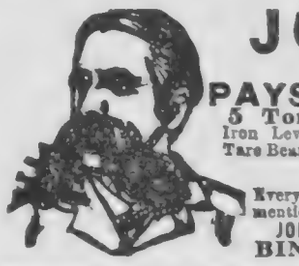
SIDNEY TUTTLE & CO., Proprietors, BLOOMINGTON, ILL.



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5 Ton Wagon Scales,
Iron Levers, Steel Bearings, Brass Tare Beam and Beam Box for
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Every size Scale. For free price list mention this paper and address
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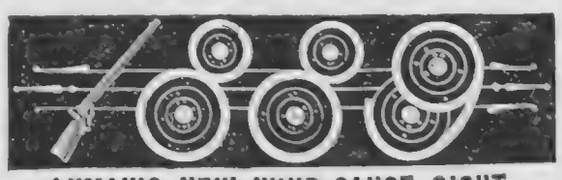
HIGH BRED Seed Potatoes. One barrel worth two of Northern Seed. All that grow Irish Potatoes should have my catalogue free with testimonials. Address J. W. HALL, Marion Station, Md.



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Send for Catalogue of Sights and Rifles.
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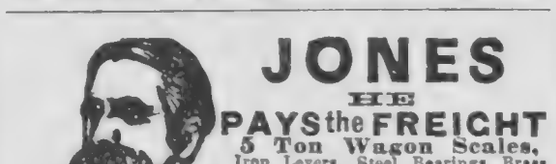
ROAD CARTS & BUCKBOARDS.

16 different kinds, and an endless variety of **BUGGIES, CARRIAGES,**



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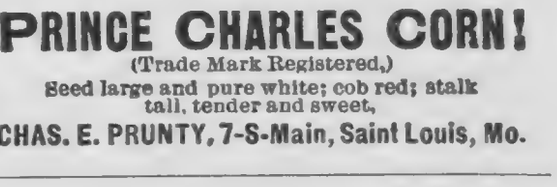
THE JEFFREY M'F'G CO.,
214 East 1st Avenue, COLUMBUS, O.
—SOLE MANUFACTURERS OF—
The Wilson Spring Whiffle-Trees.



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We offer an easy way to make hundreds of dollars between now and July 1st, 1889. We pay **Good Wages,** **$500** as a free present besides offering **$500** to the person who shall do the best work for us; **$400** to the second, and so on down. These prizes are **EXTRA** compensation to the **best** workers. A good chance to pay off that mortgage, secure a home, or start housekeeping.
CURTIS PUBLISHING CO.
PHILADELPHIA, PA.

Literary.

THE DRUM LAKE EASTER SERVICE.

A story of the Michigan Pine Woods.

BY HERBERT W. COLLINGWOOD.

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THIS was even so. Messrs. Brown and Jensen, having experienced some little difficulty in perfectly adjusting their private affairs, had decided to settle the difference in a fistic encounter. They had wisely selected Bryan's Mill as the place, and Saturday night before Easter, as the time. Tney had invited a few of their personal friends to witness the affair of honor, and were even now knocking imaginary chips from each other's shoulders.

This was a regular windfall of good luck for Jim and Ben. They decided to make the most of it, so they hurried back to the mill to look the ground over. They crept along the side of the building, and looked in through the cobwebbed windows.

I will venture to say that the great brown rafters that had held up the mill roof from its earliest history, had never looked down upon such a scene before. In one corner, where a cleared space in the piles of boards offered standing-room, the two young men whose bruised honor needed healing, were gazing defiantly at each other. Three lanterns blackened and smoky, hung from nails driven in the walls, throwing a greasy light over the bat tle ground.

Back on the dusty piles of lumber, the friends of the champions sat watching the affair with far more interest than the contestants themselves showed. Behind the audience the feeble light lost itself in the blackness of the mill. Here and there, some pieces of ancient machinery seemed to stand out from the shadow in angry protest against the unwonted invasion. Great rusty saws that had torn many a noble tree in pieces—yes, and shrieked with delight while doing it—now glared savagely at the youthful pugilists.

The battle had not become very exciting when Jim and Ben peered in at the window. Blood enough had not been shed to justify a call from the Drum Lake police force.

Messrs. Brown and Jensen were but following a well-established rule in their encounter. They spent so much time in preliminary arrangements, that now that the battle was really joined, they seemed hardly to realize it.

The first blow in such an encounter is regarded by many persons as an immense advantage. Each of the combatants, with a gallantry worthy of the Middle Ages, repeatedly invited his antagonist to take this advantage. Mr. Brown even went so far as to place a small chip upon his shoulder, and request Mr. Jensen to knock it away. Now Mr. Jensen could easily have reached this piece of wood, and he certainly possessed strength enough to knock it away, but yet he did not do so. Not to be outdone in politeness, he placed a chip of wood of even more convenient size upon his own shoulder, and requested Mr Brown to knock it away. When Jim and Ben looked in through the window, neither of the chips had reached the ground.

Both of the choir-hunters would gladly have stayed to witness the fight, but the thought of the waiting company at Cobb's drove such an idea from their minds. Jim, as manager of the expedition, made his plans for the attack as quickly as possible. He examined the audience on the lumber pile, and then whispered his directions to Ben.

"They is four boys in there that we kin git easy. They'll do the job in big shape. We'll crawl in the back door an' talk it over with 'em; but ef they run, jest coller any two an' hang onter' 'em.

Ben understood these directions, and the two men crept round to the back of the mill, and crawled in a most undignified manner through a hole in the wall. If they could only have reached the lighted space all would have been well, and Jim could have picked out his choir. But Ben, in his great anxiety to do his duty, and at the same time watch the progress of the fight, grew careless, and knocked over a huge pile of boards that lay in his path, which fell with a mighty crash that gathered volume as it swept through the mill. The angry saws clashed and rattled together as if to help swell the sound.

The noise fell with disastrous effect upon the ears of the audience on the lumber-pile, and the assembly vanished like a flash, every boy running for dear life, as if confident that the very fiends were after him.

By thus running, the audience lost the only real business part of the evening's entertainment. Emboldened by the noise or else bewildered by the loss of his audience, Mr. Jensen reached for the chip with such good aim that his fist ran directly against Mr. Brown's nose. Not to be outdone at this sort of thing, Mr. Brown sent his fist against Mr. Jensen's eye, and the ice being thus broken, they went at each other with great vigor.

At the first sound of the falling boards, Jim shouted "coller 'em, Ben, coller 'em!" and Mr. Stone at once started in wild chase after the audience, as if wishing to make amends for his carelessness. Jim leaped over the lumber and caught the two whose honor was being so rapidly vindicated. He pulled them apart, and held them by their collars at arm's length on either side of him.

"How goes it, Ben?" he shouted. "Hev ye gut 'em?"

"Wall, I ain't gut nothin' else," came the answer from somewhere far in the depths of the mill. In a very short time, Mr. Stone came clambering over the lumber pile with two more enforced candidates for the choir.

The quartette did not present a very promising appearance when brought into the light. I am forced to confess, that I, even with my slight knowledge of music, would have considered the prospect as decidedly dubious. Mr. Jensen's rapidly swelling eye and Mr. Brown's bleeding nose would be likely to neutralize any good effect the other members of the choir might introduce.

One of Mr. Stone's candidates evidently took his forcible nomination considerably to heart. "Lemme go," he whined, "I'll tell my father."

"Now, young fellers," said Jim in a tone of authority, "I've gut a job for ye. We're goin' over ter the Parson's an' yer go'nter be singers fer the next half an hour. Do jest ez I tell yer, an' I'll treat ye, when we git through, but ef ye whine, I'll boot ye." And he started the procession with Mr. Brown and Mr. Jensen on either side of him.

Mr. Stone followed with his candidates, and leaving the lanterns hanging on the wall to smoke themselves out in sorrow at the loss of the fight, the new musical organization moved in good order to the "Continental Hotel."

The choir marched directly into Mrs. McKelvey's kitchen, Jim and Ben relaxing their holds on the collars of the singers, though they kept a close watch upon them. The minister had not moved, apparently, from his seat near the stove. Mr. McKelvey had finished his potatoes, and was now engaged in slicing a large piece of pork. Mrs. McKelvey sat in the low rocking chair, try to induce the baby to go to sleep.

"Wall, Parson, here's yer singers," announced Jim, bringing his recruits up to the front, and placing himself near the door to cover any dash for liberty.

The Rev. Grayling felt his heart sink within him as he gazed upon the motley company. The choir did not improve in appearance when brought into the stronger light of Mrs. McKelvey's lamps.

Jensen's eye was well swollen by this time, and Brown's face, despite his frequent application of his coat-sleeve, presented a most blood-stained appearance. One of the Stone candidates had evidently started for the contest with a coat very much like the one worn by the minister. But during his frantic efforts to escape, the skirts of his garment, had by some accident, been torn away. As Ben afterwards confessed he "ketched him by the coat-flaps, and heared somethin' give." By reason of this curtailment, there was now exposed to view a patch of such extraordinary shape and size, that it seemed to reverse the regular order of things, and push its owner forward instead of permitting him to carry it.

"Ye can't tell nothin' about 'em frum their looks," said Jim, seeing the look of dismay on the minister's face. "Jest let 'em tune onct. When I gives the word, sing or ye'll know what ye'll ketch." It is needless to say that the latter part of this speech was addressed to the choir.

But Mrs. McKelvey at once vetoed this proposition, and the veto was most emphatically sustained by her husband. No doubt the new choir could render most delightful music, but her baby must go to sleep.

"Wall, Parson," said Jim, "thar's yer singers, an' I'll warrant 'em to do a good clean job, or ye needn't pay 'em a cent. We've done our part an' now jest shoulder yer fiddle, an' we'll show ye the way down ter Cobb's store."

The minister felt that the fates were surely against him. He had given his word, and could not break it, so he explained matters to the choir as best he could.

"My dear young friends, I am truly sorry that I am to be deprived of the great pleasure of hearing you sing this evening, but if you will call here an hour before church time tomorrow, we can doubtless arrange our music. You are acquainted with our usual Church service, I presume?"

Neither of the musicians seemed able to answer this leading question, so Jim spoke for them. "Yes, they be, Parson, I've heered 'em run it off a dozen times."

Mrs. McKelvey was very anxious to bring the rehearsal to a close. The baby was restless and excited at the sight of so many strange faces. "Wall, Parson," she said, "'adn't 'e better go an' git the fiddlin' done? We'll set up for 'e."

There was no help after this, and the minister rose with a sigh, and went in search of his melancholy hat.

"Now you fellers, clear out!" ordered Mrs. McKelvey when the door closed behind the minister. The members of the choir were only too ready to obey this command. Their exit was not characterized by that dignity that members of their profession should strive to maintain. Once on the outside, the organization dissolved never to be brought together again. Whether the singers went back to decide the contest or not, we cannot say. It is certain that the minister never saw them again.

"Now, Jim," Mrs. McKelvey urged, "I want you to look h'arter Parson, an' see 'im well used. 'E's a little man, an' don't h'understand the boys."

"I'll stay right by him, mum" promised Jim, "an' keep him right up ter the front."

(TO BE CONTINUED.)

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CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease from pimples to scrofula.

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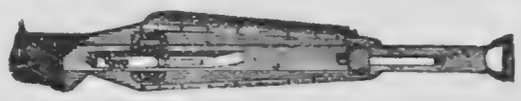

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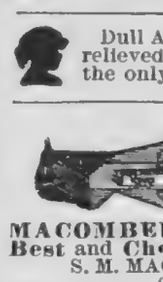
PEACH TREES OF LEADING KINDS, from Natural Tennessee Seed; general Nursery stock for sale, Currants, Grapes, Etc. JOSIAH A. ROBERTS, *Malvern Nurseries*, Malvern, Pa.

SEEDS.—8 pkts. Vegetable. 20c.; 8 Flower, 10c.; 1 pkt. Flower, 200 varieties, 15c; all for 35c This offer is good to July 1st. Wholesale price-list Free. J. O. MANSON, Harford, Pa.



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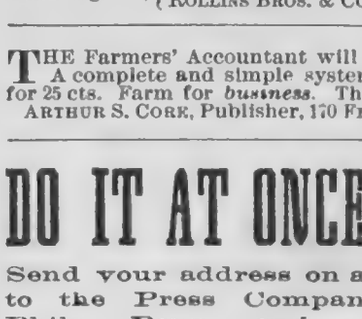

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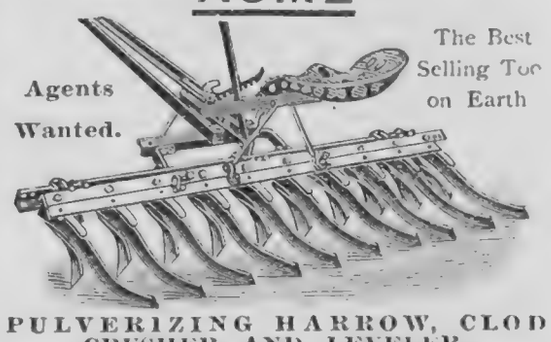

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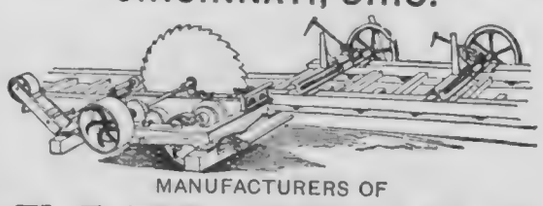

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INSECTS ON FRUIT TREES can be destroyed by spraying the trees with London purple dissolved in water. For full directions and improved outfits for Hand or Horse Power at BOTTOM CASH PRICES, address YIELD FORCE PUMP CO. Lockport, N.Y.

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ONION SEED

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Every seed Warranted New Crop 1888 Wethersfield Conn., growth, and from very best selected stocks:

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Genuine	Wethersf'ld Large red Onion Seed,	$0.15	$1 60
"	Medium Early thick red " "	.15	1.60
"	Extra Early True " " "	.15	2.00
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"	Southport Red Globe, true "	.30	2.50
"	Southport White Globe, true "	.20	2.50
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Quarter-pounds at pound rates Lots of Ten Pounds and over, 10c per pound less when ordered sent by express at expense of purchaser No seed sent C. O. D. Remit by Draft, Money Order, or Registered letter; small am'ts in Postal Notes or stamps.

Our **New Seed Catalogue** for 1889, now ready, Free to all applicants. Market Gardeners' Wholesale List sent to market gardeners only, on application.

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Saw-mills, Flouring Mills, Factories, Stores and Stocks, Hotels, etc., sold and exchanged. Real Estate Journal mailed free on application.

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I SELL AND EXCHANGE **REAL ESTATE.** W. S. HOTCHKIN, Binghamton, N.Y. 300 Exchanges sent free. Mention this paper.

FREE HOMES At the rate they have been going the Public Domains will all be gone in 5 years Now is the time to secure an Rich Land as the Sun shines on at $1.25 per acre. What better could be left for Children? Where these lands are; how to get them, as well as for information about Homes or Employment in all States and Territories. Send 10 Cents and receive the beautiful Engravings, a Picturesque Panorama of America. Address THE WESTERN WORLD, Chicago, Ill.

THE VERMONT DAIRYMEN.

(*Continued from page 68.*)

The afternoon session was principally devoted to ensilage with an apparently unanimous feeling that it solved one of the chief difficulties of cheap and continuous milk production in this country. Several inexpensive methods of silo construction, (mostly of wood) and rapid methods of filling were described; and it seemed quite generally accepted that continuous filling and weighting, are unnecessary to the production of good silage. The paper of the session was read by Mr. John Gould, on the "kind of dairying for the times," and was a rapid and graphic recapitulation of the chief points of successful dairying according to the latest and most progressive ideas.

Following Mr. Gould, Mr. E. A. Harris, of Faneuil Hall Market, Boston, who had been employed to judge the butter exhibit, gave an explanation of the rules and principles which guided him in making his awards. In regard to salting, as he had given the highest number of points to many exhibits differing greatly in saltness, he explained that the public taste required these great variations, and that if the butter was otherwise good, and the salt clean, pure, and free from grittiness, he gave the same number of points, whether the samples were lightly or heavily salted.

At the business meeting following, F. D. Douglas, of Whitny, was elected President. Alney Stone of Westford, and J. C. Oliver, of Charleston, Vice-presidents, and E. L. Bass, West Randolph, was re-elected Secretary. Some amendments were also made to the constitution, chiefly to bring it into harmony with the requirements of the Legislature in making an appropriation in aid of the association's funds.

On Friday morning, E. F. Bowditch, of Framingham, Mass., discoursed interestingly on "Why I Chose Guernseys." The gist of his story was that after trying Jerseys for a number of years, he discovered that in winter it was often necessary to color their butter. This being a proceeding unpleasant to himself, and seriously objected to by his customers, he was led, by hearing that the milk of a single Guernsey had distinctly improved the color of the butter of a number of cows with which it was mingled, to make a journey to Guernsey for the purpose of investigating the subject. Finding it to be the fact that the butter of this breed was always sold without any coloring, and that it possessed a color that was matched by the butter of Jerseys only by the addition of coloring matter, he purchased a herd of these cattle, from which his present herd has descended. Though a larger and by far less uniform breed than the Jerseys, he has found the Guernseys to quite equal the latter in productiveness for the butter dairy, and has never had the slightest inclination to return to the Jerseys. Among other matters elicited by the questions of his auditors, Mr. Bowditch gave an account of his method of breaking his Guernsey bulls to the yoke, and thus, besides making them exceedingly useful on the farm, rendering them entirely docile.

In reference to feeding his cows, he uses little besides good hay with corn-and-cob meal as feed, in addition to pasturage. He is very strongly opposed to cotton-seed-meal, not only for cows, but for any kind of stock. He approves of linseed-meal, but feeds it only occasionally, in a sort of medicinal way.

After some interesting account of Western dairy schools and conferences by Mr. John Gould, Dairy Commissioner Brown, of New York, occupied an hour in describing the progress of the dairy interests in that State, especially the active crusade against oleomargarine. He also described the method of conducting the agricultural institutes and dairy conferences, and referred to the proposed legislation in regard to the skim-cheese manufacture. He declared that in New York cotton-seed-meal is most extensively and successfully used by the dairymen, with no prejudice to their products, but with a vast improvement in the quality of the manure. He also referred to the small attendance of ladies here, and informed his hearers that the farmers' wives in New York are pretty good farmers themselves, and are numerously in attendance at such meetings, and extremely interested in the proceedings. But Mr. Brown gave us, too, some of the dark shades in the dairy of the Empire State, saying that the extensive statistics gathered in at his office proved that the average milk yield of the cheese cows of the State but slightly exceeded 3,000 pounds. These unpleasant conditions of the business, he said, had first to become known and realized, and should then be earnestly amended. It was necessary to find out all about every individual cow, by a careful record of her daily yield. Weigh the milk, and learn its quality. Unless the milk of each cow can be made to reach at least a minimum of 5,000 pounds annually for the cheese factory, or enough to make not less than 200 pounds of butter, the inferior cows should be got rid of at once, as they are being supported at the expense of the more profitable members of the herd. He insisted on the importance of procuring good thoroughbred bulls, and of feeding the calves and heifers from the start with the kinds of food which will develop the tendency towards deep and rich milking. It costs, he said, not less than 15 cents a day to feed a cow; and it makes an immense difference whether she runs dry 100 days or half that time, a difference which may cut down the profits to nothing, or less than nothing. He wound up by a most wholesome advice to every dairyman to consider his customers' interests, and to look upon them as his best friends, whose interests should be considered as carefully as his own. This was, he said, a principle in mercantile business among all honorable and successful dealers, and the farmer, being essentially a business man, should adhere closely to business principles.

Some concluding remarks were made by Mr McPherson, of Ontario, upon the importance of increasing the fertility of dairy farms by the use of rich feeding stuffs, and the careful saving and intelligent use of the resulting manurial matter. It is following the true commercial principle, which teaches us to buy in the cheap market and sell in the dear, which we can do by feeding liberally of that class of feeds from which we can extract their entire cost in the milk of the cow, and retain an equal or greater value in the fertilizing matter returned in the residuum. H.

CATALOGUES, ETC, RECEIVED.

PATENT "EAGLE" ANVILS.—Circulars from Fisher & Norris, Trenton, N. J. It is claimed that these anvils are made of the very best material, and in the best possible manner. The body is of gun-metal—which neither settles nor breaks The face and the horn are made of the best tool-cast steel welded so perfectly to its place that it is warranted to remain there. This anvil is in use by hundreds of our best blacksmiths and mechanics.

DELAWARE HORTICULTURE.—Bulletin No. 20 from the Delaware Experiment Station. In this pamphlet Prof. Beckwith outlines the work that he proposes to do in his department the coming year.

ASPINWALL POTATO PLANTER.—Catalogue from the Aspinwall Manufacturing Co., Three Rivers, Michigan. This is a new pamphlet descriptive of an old and well-tried machine. Our readers know that we consider this machine one of the most ingenious labor-saving devices ever originated.

C. N. DEMPWOLF & Co., YORK, PA.—Circular of fertilizers, poultry food, etc. Send for it.

HAMILTON MILK JARS.—Price list from W. Hamilton & Co., Pittsburg, Pa. In every city and town in this country there are people who are willing to pay 50 per cent above the price of ordinary milk if they can be assured that they are buying a pure and clean article. As a means of securing this trade, glass milk jars are indispensable. A good many milk men have discovered the secret of securing the extra price and we may say that all such use glass jars to supply milk to their customers. We may also say that the Hamilton jars are as good as any.

HENCH & DROMGOLD, YORK, PA.—Circulars describing Hench's improved riding or walking steel cultivators. These circulars contain cuts, testimonials, etc., and are full of interesting reading for farmers; send for them. This firm has in contemplation a new and improved spring-tooth harrow. The reputation of the firm is a guaranty that it will be a valuable implement.

N. C. BAUGHMAN, YORK, PA.—Circular of the celebrated Becker washing machine, one of the greatest indoor labor-saving devices of the age.

EXPERIMENTS WITH SORGHUM.—Bulletin No. 5 from the Kansas Experiment Station, contains two reports that ought to interest Kansas sorghum growers. Prof. Failyer has made some comparisons of varieties of sorghum with a view to determining the most valuable variety for the Kansas farmer—considering size, quality, feeding value of by products, etc There is a table giving the results of this test. Prof. Kellerman contributes to this bulletin an article on Sorghum Blight—a disease discovered on the college farm last summer.

TUBERCULOSIS.—This is the title of Bulletin No. 3 issued by the Massachusetts Experiment Station. It was prepared by Prof. C. H. Fernald in response to many demands for a brief and comprehensive account of this disease. The pamphlet has evidently been prepared with a great deal of care, and will be of much value as a reference book for cattlemen and farmers. That our readers may obtain an idea of the scope of the work, we give the following list of the various topics discussed.

1. Animals attacked by tuberculosis.
2. History of tuberculosis.
3. Distribution of tuberculosis.
4. Is human tuberculosis contagious?
5. Is bovine tuberculosis contagious?
6. Is human tuberculosis communicable to lower animals?
7. Is bovine tuberculosis communicable to man?
8. Are human and bovine tuberculosis identical?
9. Is bovine tuberculosis hereditary?
10. Symptoms of bovine tuberculosis.
11. Is it curable?

An examination of this list of contents will show that the subject is exhaustively treated.

"OHIO" ENSILAGE AND FEED-CUTTERS.—Catalogue from the Silver & Deming Manufacturing Co., Salem, Ohio. The manufacturers of this cutter believe they have a machine that can be relied upon to stand any reasonable test. Sensible farmers will appreciate the following statement made by the manufacturers of the "Ohio."

"In regard to the capacity of our cutters we will not use the words of a competitor: 'They will cut twice the quantity, size for size, of any other make in the world,'—because that would be mechanically impossible, in any well constructed machine over another. We will say this, however (and can substantiate the same by many actual tests), that our power cutters are heavier and stronger, consequently more durable than other machines with the same cutting surface; they are more convenient, easier to operate, less liable to breakages, and will do more work, size and price considered, than any other cutters manufactured."

This catalogue contains some excellent advice to those who are interested in silos.

AYER'S CALENDAR.—This calendar is received from N. W. Ayer & Son, Philadelphia, Pa. It is an elegant affair—one of the best we have seen. It is sent for 25 cents to any address.

EUREKA SPRING-TOOTH HARROW.—Catalogue from the Eureka Mower Co., Utica, N. Y. This is a new implement. The manufacturers state that many farmers have objected to ordinary spring-tooth harrows, for the reason that they wear out quickly and are horse-killers. The Eureka harrow was designed to overcome these objections, and after a thorough testing in rough fields it is confidently offered to the public. Our readers are invited to examine this harrow. It is well to keep informed regarding new implements.

THE POST OFFICE CLUB.

UNCLE JACOB has not had much to say of late at our meetings. The arguments of the parrot have been a little discouraging to him. Anyway he likes to let others talk first while he sifts the arguments and sums the thing up.

The parrot has grown bolder than ever Many things have gone to suit him of late. A good many auction sales have been held, and goods have been just about given away. This, to the parrot's mind is a sure indication that New Jersey agriculture is in a very poor way. So the parrot felt that he could afford to strut on the stove pipe and put a little extra force into his favorite argument.

"*Farmin' don't pay! Farmin' don't pay.*"

Uncle Jacob rubbed his head reflectively as he listened. The parrot, as usual, repeated his remark.

"Vell, vell" said uncle Jacob at last, "der fact vas dot somebody can't tell shust what brofits mit farming vas, so dot it vas a hard job to figure mit der brofits out. Dot man dot vorks mit der city in, und draws his pay effery veek or mond, vas seem to get more dan der farmer, und yet at der end off der year, how much more vas he haf left mit his bocket? I haf a frient dot vorks mit der city in. Ve vas poys togedder, und ve vas shust apout der same age old. I goes mit him mit a visit effery vinter, und he goes mit me mit a visit effery summer. Vell, vell, dot feller vas always worry about his yob und his rent und all dese oder tings. He haf a little money safed up, but not enough so dot he could stop vork und lif quietly und vell till death vas come. He says now dot vile he vas growing old und veak, yunner men vas come along und take his blace avay. Now den, I vas nefer go in mit style mit my life, but I have a goot home dot vas my own und nopody vas throw me out mit a yob. I vas an independent man, anyvay, und my home vas secure mit me vile I lifs, Dot friend off mine would not shange mit me 30 years ago, pecause der goundry vas too quiet und dere vas no money mit farming, but now he vishes dot he vas haf my home und my beace off mind. Maype dere vas not much money mit farming, but dere vas some *pay* anyway."

The parrot listened attentively, and when Uncle Jacob stopped to sneeze it filled up the spare time with:—

Farmin' don't pay! Farmin' don't pay!

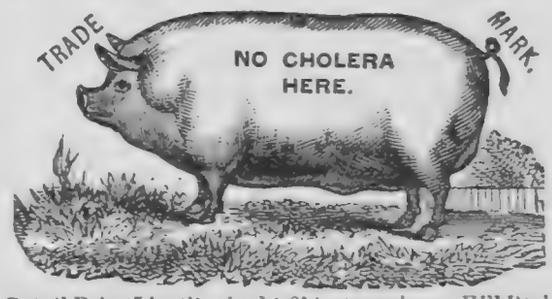
SMALL PICA.

Miscellaneous Advertising.

Aching Sides and Back, Hip, Kidney and Uterine Pains. Rheumatic, Sciatic, Sharp and Weakening Pains, **relieved in one minute,** by the **Cuticura Anti-Pain Plaster.** The first and only instantaneous pain killing, strengthening plaster. 25c.; 5 for $1. At druggists, or of POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

Newtown Double Geared, Level Tread Horse Powers.
AND THRESHERS AND CLEANERS ARE THE BEST.

We also manufacture Self-Dump Rakes, Corn Shellers, Farm Rollers, etc. Send for Circulars and Price Lists. A. BLAKER & CO., Newtown, Bucks Co., Pa



Retail Price List (Revised 1889.) Strawberry Hill Pork Products; Salt Pork, 5-lb. kegs, $3, Salt Pork, 25 lb. kegs $5; Lard, Kettle Rendered, in 2, 3, 5 and 10-pound pails, per pound, 25c.; Sausage, in 1 and 2-pound bags, per lb., 25c.; Hams, sugar cured per lb., 30c. English Bacon, sugar cured, per lb, 25c.; Loin and Spare Rib, per lb., 25c.; Scraps, per lb., 25c. Send order to—
J. B. LEARNED, Prop'r. Florence, Mass
Circulars and Press Comments sent on call.

Trees, Seeds and Plants.

RAWSON'S SEEDS.
Superior in Quality
AND
Reasonable in Price
Market Gardeners, Farmers, Florists, and all who use Seeds, will find our HOME-GROWN EASTERN SEEDS to be of the BEST QUALITY. **Try Them**
Our large illustrated catalogue (100 pages) will be mailed on application. Address
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34 So. Market St., Boston, Mass.
Rawson's New Book "Success in Market Gardening," sent post free on receipt of $1.00. This is full of important information for the gardener.

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Prettiest BOOK ever Printed. Thousands of Engravings. Best **SEED** & cheapest ever grown. *Pkts 3c Cheap as dirt by oz. & lb.* 100000 *pkts. new sorts divded* **FREE** *to Customers.* I give away more than some firms sell. Send for my Catalogue. **R. H. Shumway, Rockford, Ill.**

JERRARD'S SEED POTATO CATALOGUE
Describes the choicest **Seed Potatoes** and the Earliest **Seeds** all from the Cold North-East.
It names *Special Low Freights* and describes the **Minister** a new potato of finest quality two weeks earlier than any other.
It tells **how to Raise Potatoes and a Garden.** *Sent Free.* Address
GEORGE W. P. JERRARD, CARIBOU, MAINE.

THE ALBANY SEED STORE,
ESTABLISHED 1831,
Vegetable, Field and Flower
SEEDS
IN ALL VARIETIES.
SEND FOR OUR NEW CATALOGUE
Free to all upon application.
PRICE & REED,
Successors to Price & Knickerbocker,
ALBANY, N. Y.

Humorous.

A SUITABLE REASON

"WHAT is the meaning of this throng
In yonder clothing store?
There surely must be something wrong—
What are they gathered for?"

"The cause is plain it seems to me,"
Replied the passing wit,
"Some person in there, don't you see,
Is taken with a fit!" —*Puck.*

A person who serves us through fire and water—the cook.—*The Vineyardist.*

CHILDREN shrink from being washed. The same may be said of socks.—*Yonkers Statesmen.*

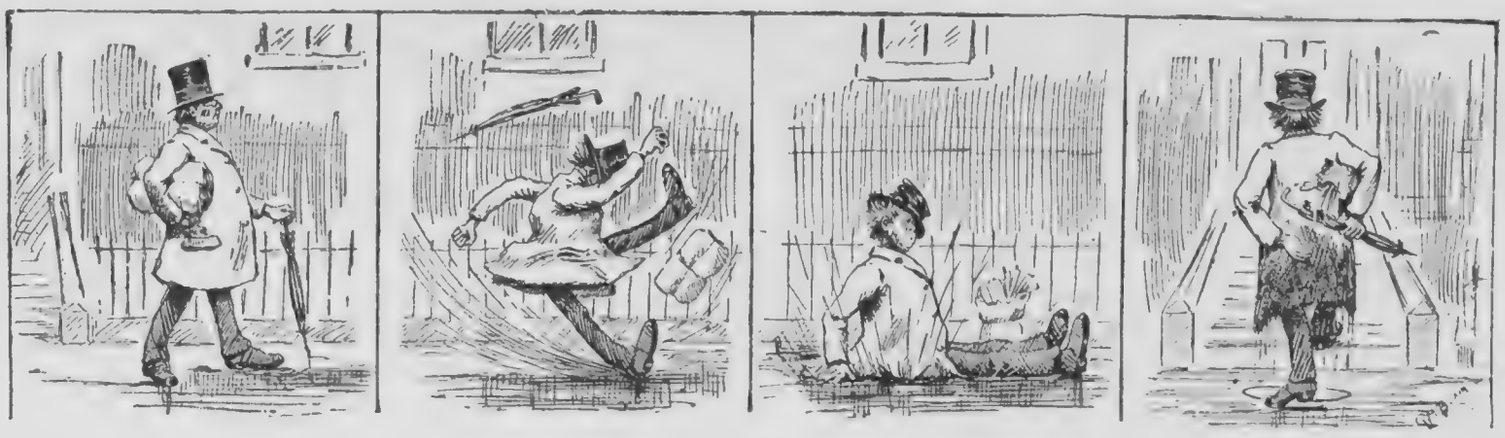
A MACHINE for pressing hops has been invented. America is the home of the hop-pressed.—*Texas Siftings.*

"MUST the churn go?" asks the New York Tribune. Why, of course it must if it is after butter.—*The Empire.*

WHY is a general housemaid like a boot? Because one is maid of all work and the other is also made of awl work.—*Field and Farm.*

LECTURES on North Pole are generally slow. The speaker does not seem able to warm up to the subject.—*New Orleans Picayune.*

WHEN a bald-headed man removes his hat to salute a lady, it does not remind one of a leafless branch, although its a naked bow.—*Salem Standard.*



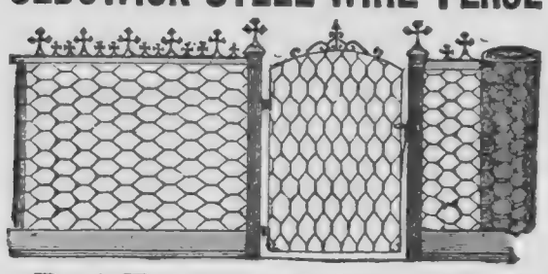
What beautiful weather! Just like spring! — Swish! — Whash!! — Don't know but it feels more like fall, though, after all!

I Cannot Find any other medicine that does me so much good as **Dr. Seth Arnold's COUGH KILLER.** Mrs. Susan Abbott, Fairlee, Vt.

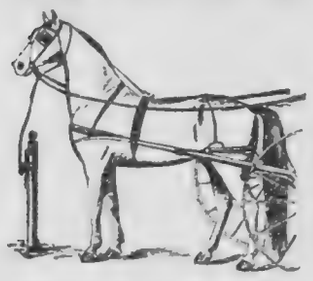
DR. SETH ARNOLD'S COUGH KILLER CURES COUGHS AND COLDS. PREVENTS CONSUMPTION

Druggists, 25c., 50c., and $1.00.

SEDGWICK STEEL WIRE FENCE



Best Fences and Gates for all purposes. Free Catalogue giving full particulars and prices. Ask Hardware Dealers, or address, mentioning this paper, SEDGWICK BROS. Richmond, Ind.



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Our CHAMPION STEEL-WALKING **CULTIVATOR.**

Name this Paper.

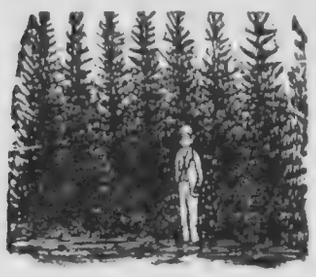
Pride of the East, **King** of the West, and **Monarch** of all. Thousands in use giving satisfaction. The best shovel beam **spring** regulating device ever invented. Shovel beams **hoisted** and held up by **springs,** alone. Agents wanted. Catalogue free. **Hench & Dromgold, York, Pa.**

200 PERCHERON —AND— FRENCH COACH HORSES

Send for Catalogue.

J. W. AKIN, SCIPIO, N. Y.

CHINESE NARCISSUS, or "**Sacred Lily**" (true). White, with yellow cup, fragrant, blooms freely in water; a most desirable bulb for the living room By mail 25c. each. $2.50 pr doz; by Express 20c, and $2 00. Address: **J. A. DEVEER, 183 Water St., New York.** Sole Agent for Hooper & Co.'s celebrated *Covent Garden* flower seeds. Catalogues free. A full line of Spring bulbs on hand.



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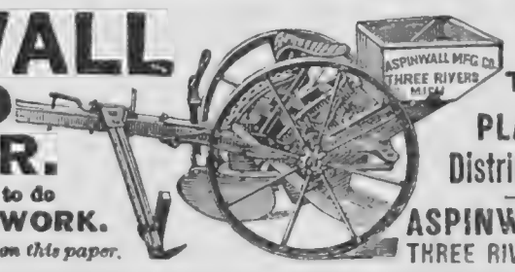

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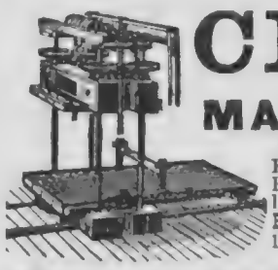

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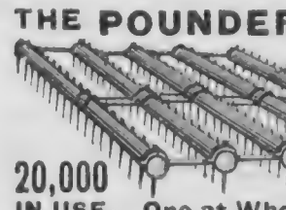

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—FOR—

Every Week During 1889.

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FROM LIEUT. GOVERNOR, EDWARD F. JONES

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"EDITOR RURAL NEW-YORKER: The Rural New-Yorker of December 29 is before me, and its effect on me is to impel me to express to you my sincere wishes for a Happy New Year for yourself, and continued success for the Rural, which, when contrasted with the agricultural papers of 25 years since, not only shows the improvement in the paper itself, but also illustrates the progress made by the agricultural class, much of which is due to the inspiration of the Rural New-Yorker, and such of its contemporaries as follow its example."

FROM THE AMERICAN GARDEN.

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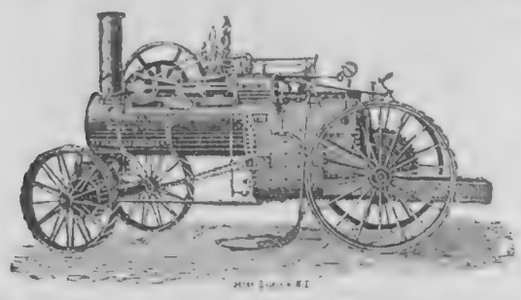

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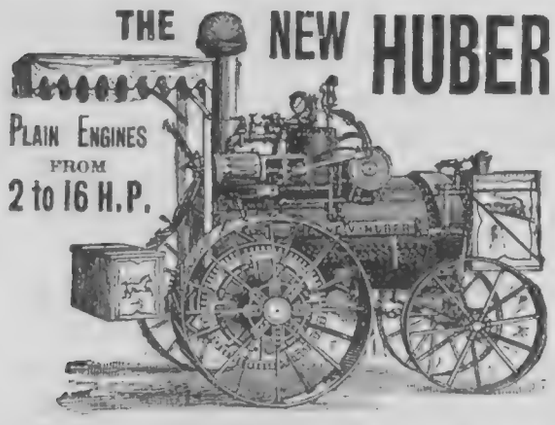

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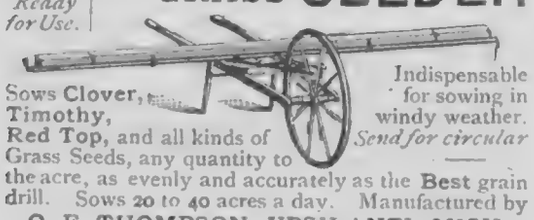

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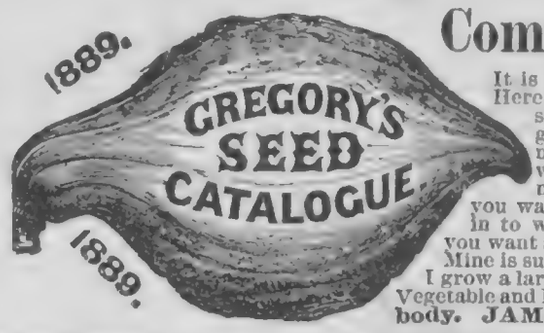

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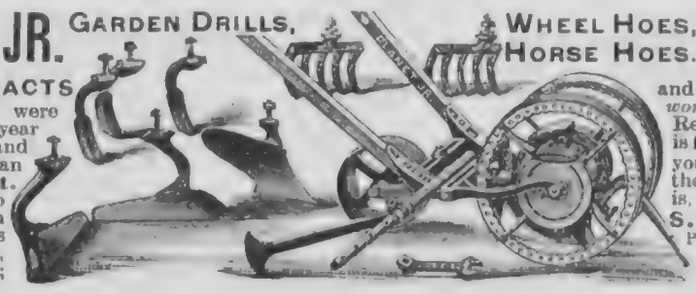

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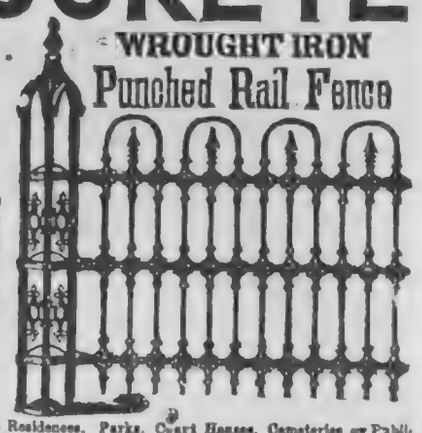

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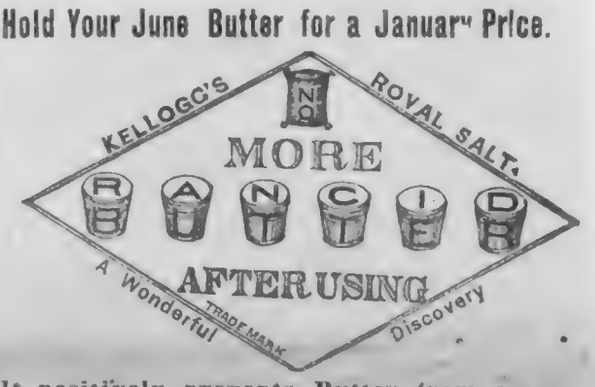

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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The Herdsman.

PURDUE PREMIER.

THIS magnificent two year old Holstein bull, shown at Fig. 27, stands at the head of the herd owned by Purdue University, Lafayette, Ind. He was dropped May 23, 1886, and weighs at the present time 1,800 pounds. His sire was Promoter (2004), owned by J. W. Stillwell & Co., Troy, Ohio. His dam, Manada (9693), was purchased in the spring of 1886. She was bred by J. Waiboer, Barsingerhorn, N. Holland, and imported in 1884.

Entomological.

CHINCH BUG DISEASES.

(*See page* 86.)

MUCH interest has been manifested in Iowa, Illinois, Minnesota, and Ohio during the past summer and fall concerning widespread "epidemic," diseases among chinch-bugs. Dr. Lugger, in a recent bulletin of the Minnesota Experiment Station, gave an illustration representing a bug attacked by the disease, together with an account of the nature of the disease, and its distribution over the State. Prof. Forbes, of Illinois, has reported chinch-bug diseases prevalent in that State, and nowBulletin 3 of the Iowa Experiment Station comes to us with an account of the epidemic as observed in that State the past season by the station entomologist, C. P. Gillette.

Fig. 28 is a life-size representation of a number of the chinch-bugs that have been destroyed by a fungus (a species of Empusa) which has almost entirely destroyed these insects in parts of the State. The white spots upon the leaf represent the bugs as found either partially or entirely covered with the mycelial threads of the fungus. The dark spots on the white are chitinous portions of the insects that the fungus can not penetrate and which in most cases remain uncovered.

The disease was first noticed at the Iowa station about the first of August, when the bugs were very numerous. Old and young were equally subject to attack. It was found by experiment that the disease was readily communicated from diseased to healthy bugs when the necessary conditions of warmth and moisture were obtained, but in dry, exposed places the disease would not spread, no matter how abundantly the disease germs were scattered about.

At the close of an article is given the following

PRACTICAL SUGGESTION:

"It will be understood from what has been said that on low ground and among thrifty, growing crops that keep the ground well shaded, chinch-bug diseases will be most common. Then, other things being equal, put those crops subject to chinch-bug attacks on low places; see to it that the ground is well prepared for the crop, and use seed of most thrifty-growing varieties. I also think it advisable, as it can be done at so trifling an expense, to preserve quantities of dead bugs to be used if necessary in the future, either in one's own locality or to be sent to some distant spot where the disease has not yet appeared. To preserve the disease, cut grass or other crops where the dead bugs are abundant, thoroughly drying the same, and then inclose in paper sacks and store in a perfectly dry place until needed."

Horticultural.

RAISING LIMA BEANS WITHOUT POLES

(*See page* 86.)

MY plan of growing Lima beans for market is shown at Fig. 29. I have never seen or heard of such a way in any place except my own, so I suppose it is an original idea. It is certainly the cheapest way of growing beans that I have ever heard of or practiced. I commence by getting three posts nine feet long—one for each end and one for the middle. With a post-hole digger I dig holes four feet deep so that the posts will fit in snugly. After a post has been put in, the earth around it is rammed solid. By making the holes deep, there is no need of bracing the end posts. The sketch represents one section of a row 300 feet long, with one end post, and one of the several small stakes sharpened at the bottom end, and driven into the ground 25 feet apart between the posts. These keep the wire from sagging. The wire should be fastened at the top of each post, (I use staples) drawn tightly and fastened to the other end post; then it should be placed on the middle post and stakes and staples should be driven on the top of them to keep the wire from slipping off. I plant the beans 18 inches apart, two together, in the row, directly under the wire. When the vines get large enough to put out tendrils, I take common wrapping twine (cotton), fasten it to the top of each end post, then carry it down and give it one turn under the leaves of the plant, then over the wire and down to the next plant, and so on until the row is completed, drawing the cord tolerably tight from plant to wire. Then I go over the row and entwine the tendrils around the cord. In a few days they will have taken hold of the wire when the hardest wind will not break them loose. When frost has killed the vines in the fall, I take a knife and cut them from the wire and lay them neatly lengthwise of the row, and with a plow throw a furrow or two on them, and when planting time comes again they will have rotted and will have made the best manure for another crop, with the addition of a little guano. I never change the rows, but plant in the same rows year after year.

E. T. IVY.

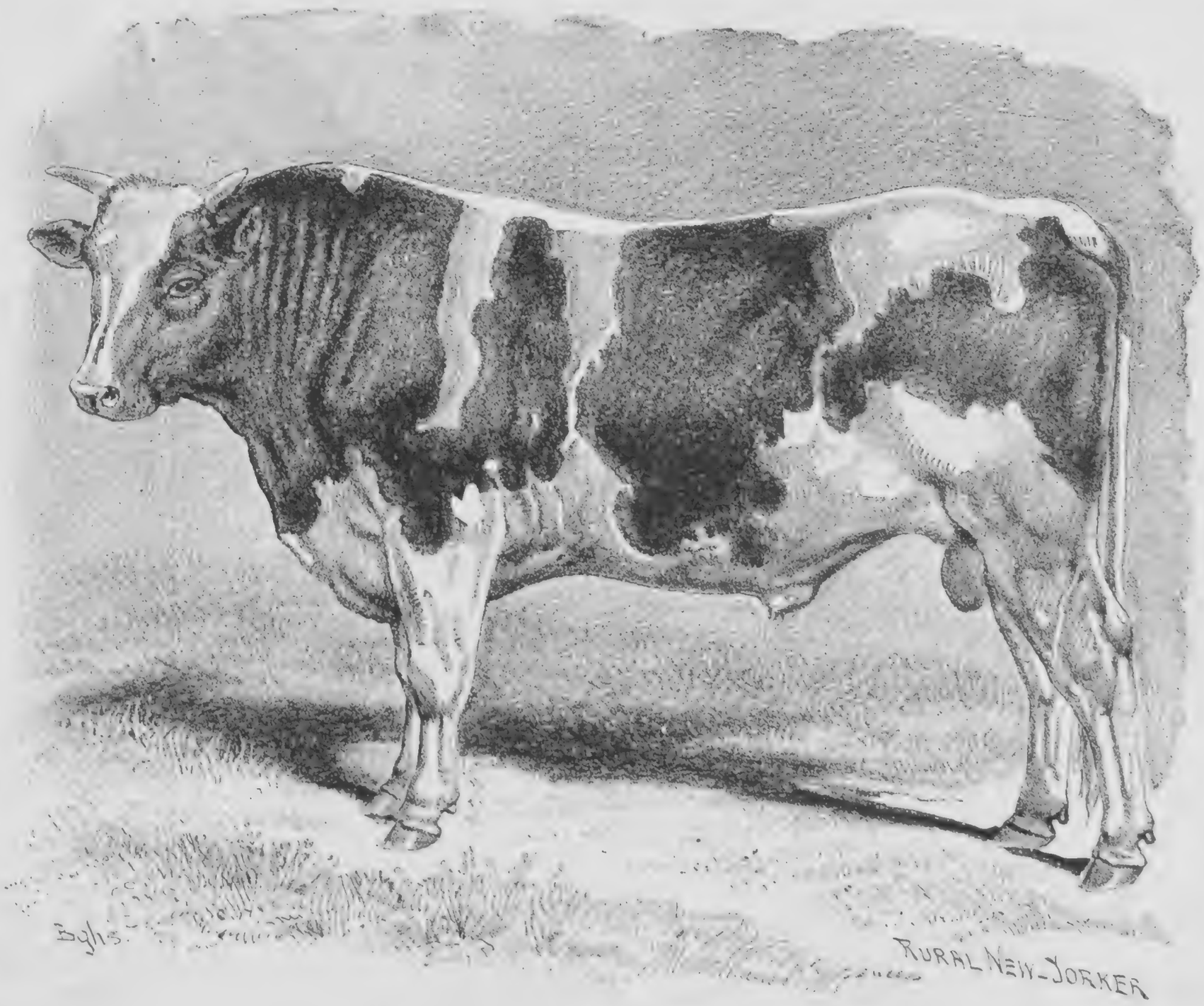
The Poultry Yard.

BUCEPHALUS BROWN'S NOTIONS AND IDEAS.

ABOUT POULTRY.—I believe that more money, much more, has been lost in attempts to make yarded poultry pay than has ever been made out of it as a business, though I am aware that some skilled advertisers do well at it. The poultry business is a good deal like women's work, about which there is so much discussion as to starvation prices. The average working woman has to meet the deadly competition of hosts of other women who are in part supported by male connections, and can therefore cut under the wages of women dependent entirely upon themselves. If it were not for the immense amount of work done by partly-supported women, at less than real cost, the working women who must live on their wages would get much better rates. So it is with those who go into poultry. They have to meet the competition of the farms, where poultry and eggs are "by-products," so to speak.

FARM POULTRY.—But farm poultry, say the hen fanciers, and farm eggs, are far inferior. Sometimes, and sometimes not. When rightly managed, farm poultry and eggs are superior to yard products, and much more cheaply produced. Within due limits, the poultry and eggs from farm flocks cost less than half those from the yards? On our average farms, where the flocks rarely exceed a fowl per acre, nearly all their summer food costs even less than nothing, for the flocks of young poultry, during the summer, consume a large quantity of injurious insects and weed seeds, besides being a decided benefit in scattering the droppings of cattle evenly in their search after grubs. Fowls that have free range are healthier and, when cared for, make a better growth, and fatten to a greater weight.

FARM POULTRY IMPROVING.—It will not do to sneer at the quality of farm poultry. Thanksgiving week I noticed, in a village street, a load of dressed Plymouth Rocks selling at 15 cents a pound, and netting the farmer who brought them in $1.50 a pair.



HOLSTEIN BULL, PURDUE PREMIER. Fig. 27.

They went off "like smoke," too, buyers seeming to prefer them to turkeys. In good locations, not far from cities, farm eggs bring quite as good prices as yard eggs; and on the poorer, sandy farms, poultry products are as much (or more) an item of profit as dairy products. Farm poultry is almost exclusively in the hands of the female members of the family, and although they are somewhat curtailed in the allowance of grain to finish them off with in the fall, yet examples, like that above, of the large price that well-fatted and skillfully dressed fowls will bring, even in the smaller markets, are tending to more liberality in this particular.

THE PROFITS.—As a main business, especially for men, except in very exceptional cases and under peculiar conditions, I repeat that it will not pay. Even on the farm it rarely pays, except on the moderate scale above indicated, where waste products and women's work are utilized. Attempts made on farms to unduly increase the flocks almost invariably result in loss. But when the true limits are understood, and the right conditions observed, a real, honest, net profit of one dollar per head may be reasonably expected in the ordinary way. Where particular skill is shown, and a wide neighborhood reputation for superior stock is gained, even more is sometimes gained.

TURKEYS AND DUCKS.—Some of our bright farm women have a real talent for raising turkeys, and although these fowls are more troublesome to the farmer than hens, wander farther, and must be more often confined, and more closely watched, yet there is some money in turkeys for some people. The same may be said of ducks. But the duck business is a trade, quite as much as the turkey business, and requires special facilities, as well as special skill in the breeder. Young ducks are much hardier than young turkeys, require less watching and can take better care of themselves. I have a duck-breeding neighbor who is particularly well located and well skilled in the art, and makes it pay. He has a slow river running close by his house, with half a hundred acres of swampy meadow on both sides of it. On this river, and in these meadows, his flocks of young ducks have nearly the same conditions about them as their wild congeners have in the wilderness, without some of the dangers. He feeds his flocks with grain in his door-yard every night, and it is a sight worth looking at, when the long squadrons come sailing down the river at night-fall for their rations. Ducks, yarded, will "eat you out of house and home;" but here hundreds are brought nearly to maturity before much expense is incurred.

PRICES ADVANCING.—The surest proof that I am right in my belief, that, as a single business, poultry-keeping rarely pays, is the continual advance in the price of eggs. Even at a distance of more than a hundred miles from any considerable city, eggs have averaged over 20 cents a dozen, the season through, for 1888. Now with all the poultry journals, the poultry departments, the constant pressure of sanguine people into the business for years, pray tell me why, among all other lines of country profit-seeking, poultry is the one only line that cannot be over-done? There was a glut of small fruits, there is a glut of apples and oranges, there is more often than not a glut of every sort of farm product; but never a time when there is not a brisk market for eggs. A sarcastic neighbor of mine insists that the rarest product of the poultry-yard is eggs. Undoubtedly the great bulk of the egg production is from the farms; but why does this not keep pace with the market? Some one tells me that cheap novels, story papers and parlor organs are diverting our women folks from their former interest in poultry. If this is the case, the men-folks ought to see to it that the inducements in that direction are increased.

HOW INCREASED?—I should say that the best way to stimulate the business is to see that every reasonable facility is afforded for it, in constructing houses and yards, in doing the things most difficult and unpleasant for women to do, and in allowing a reasonable quantity of feed, when needed. Let the poultry not only be made to pay, but see that this pay goes, in a due and just proportion to those who have the chief responsibility for its success.

MAKING HENS LAY.—A hen has to lay. You cannot keep a healthy hen from laying if you try, unless you kill her. No medicine is required for the purpose, and on the farm no special feeding, no drugs, ground bones, oyster shells, or anything whatever but plenty of natural food, clean water and comfortable quarters, to get all the eggs that the breed, be it this or that, naturally will produce, under proper conditions. And, beyond that, it is as impossible to force them as it is unnecessary to try. Hens don't average any more eggs now, if as many, as they did fifty years ago, when patent hen-food was unthought of.

Farm Economy.

HARROW HINTS.

TESTED TILLAGE TOOLS.

SOME SOIL STIRRERS.

It Pays to Pulverize.

TO WHAT WORK WILL WELL-HANDLED HARROWS HANDILY HITCH?

QUESTIONS.

1. *If you could get but one harrow, which one would you choose for general farm work?*

2. *Is the work done by the various harrows so different that two or three can profitably be employed on the same farm?*

3. *What special operations are the smoothing, disk, spring-tooth and Cutaway harrows used for in your neighborhood? What is the best work for each?*

4. *Can you suggest any improvement in the construction of harrows, that would make them more serviceable.?*

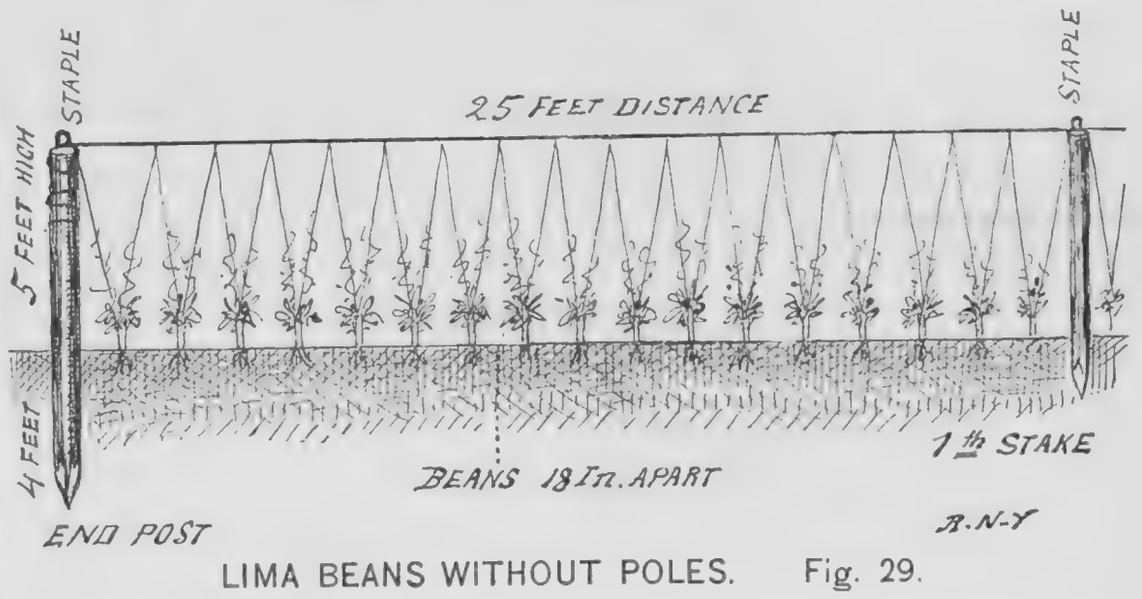
MICHIGAN MENTION.

I can hardly say too much for the Cutaway harrow. I thought the disk a great acquisition, and destined to displace most others, except the smoothing, which is for a different purpose; but the Cutaway is ahead of the disk. It is admirable for cutting up any soil, and in case of plowed greensward, it does not tear up the sod in the least. Last spring I fitted my oat ground with the Cutaway in lieu of the plow at a great saving of time and labor; every farmer knows how precious time is at the time of oat seeding. I put oats after corn, and follow with wheat. Pleased with the ease and rapidity of fitting, I waited eagerly for the harvest, to see what it would be. The season was quite dry, especially late, and yet I had a fine crop of oats But now the question arose how about plowing for wheat. The summer and fall were exceedingly dry, and I had some misgivings about breaking the dry, hard soil, especially as it was a clay loam. To my delight the plowing for wheat was in no wise difficult. I could not help seeing that the work was done with as much ease as usual. The only question remaining was as to the wheat. The other day I drove across country 28 miles, and I did not see a piece of wheat in the whole journey that looked as well as mine. So I say tally one more for the Cutaway. I have found a new and valuable way to fit my oat ground, which will greatly hasten work in the hurried spring season. A. J. COOK.

THE HARROW FOR THE PIEDMONT BELT.

STARTING just after the war with a forked tree, with a few wooden pins driven through at intervals, for a harrow, I have handled almost every kind on the market, and now have narrowed down to the Cutaway and new lever harrow with angle-steel frame, and as the Cutaway is more a plow or spading implement than a harrow, it may be seen that I have chosen the new lever for harrowing as it is as nearly a perfect harrow for general farm work as I could suggest. The 60-tooth or two-horse-size harrow is in two sections cutting 10½ feet, and can be conveniently changed to two one-horse harrows for use on very rough or stumpy land. The adjustable arrangements are so simple and perfect that the harrow can be changed to any one of a half-dozen different styles without stopping the team, or it can as easily be thrown down on its bars, teeth off the ground, ready to move from place to place on its runners without damage to the teeth, and in this position the steel cross-bars scrape the plowed land as smooth as a steel rail, and the implement is not so heavy or inconvenient. This angle-steel frame harrow weighs just the same as a wooden-framed tool of the same size, and is preferable even at an additional cost of $3.00 or more, on account of its teeth being securely fastened.

If properly understood and used both the Cutaway and new lever harrows are profitable investments on any well-managed farm, and both do not answer the same purpose except in the operation of covering grain on recently plowed land, and if the land is a little compact from rain or long standing, the Cutaway is the implement to be used. The Cutaway or disk harrow pays me best in spring, just before planting on land that has been fall or winter plowed. No other implement can do the work so perfectly or make such a saving of both horse and man power at this busy season. J. C STRIBLING.



LIMA BEANS WITHOUT POLES. Fig. 29.

HARROW VIRTUES AS VIEWED IN VERMONT.

1. I have not tried all sorts of harrows, but of those I have tried I should prefer the Acme as an all-round tool. I could not think, however, of farming with but one harrow, however good.

2. Certainly. The disk, the Cutaway, and the Acme, though they do deep and thorough work, put in small seeds too deep on broadcast sowings. They will not do the work of a smoothing harrow, or of a chain harrow, or in rough, new land, of the old, three-cornered, spike-tooth harrows. The spring-tooth harrow I have never used.

3. The Acme, disk, and Cutaway harrows are invaluable for preparing a turned sod for crops, for fining heavy soils, for burying stable manure, and mixing that and other fertilizers evenly with the soil, and also for slaying weeds on a fallow. The smoothing harrow is essentially a small weed-killer, or as an implement to work across the rows in drill culture its usefulness is unequaled, and there is no substitute. For rough, newly-cleared land, where roots, stones and stubs have to be dodged, the old A harrow must still find a place. For a harrow that will bug the ground, and follow all the inequalities on a "hummocky" field, the chain harrow is a good invention, especially for covering broadcast seedings, where other harrows, by dragging clods and trash into the hollows, bury much seed too deeply. I think perhaps the Cutaway may do this work better still.

4. Nothing, except more thorough workmanship, the use of better materials, and the uniform system which makes broken parts easily replaceable. T. H. HOSKINS.

AN OHIO OUTFIT.

1. If I could get but one harrow, I would take a Cutaway, for not only could I do all the harrowing, but at least one-half of the plowing with it, such as putting rye on corn stubble and oats on fall-plowed land in the spring. No harrow made to-day does its work so well and thoroughly as the Cutaway, and with that and a plank drag a man can keep ahead of his harrow work "and not half try."

2. The work is not so different on the farm that a dozen harrows need be bought. The trouble is to get one that will "go through" what there is to be done, and not clog but cut, slice, turn and pulverize, without killing the team and making the man broken-backed by lifting and clearing the harrow while at work.

3. A Thomas smoothing harrow can be very profitably used on a farm as an implement to finish up with before planting, dragging corn, fining manure on top-dressed land and like jobs. Since I purchased the Cutaway two years ago there has been a thinning out of drags and harrows on my farm and a sale of a No. 1 disk, and the harrowing is now all done with the Cutaway and a Thomas, and I simply smooth down with a plank drag.

3. The smoothing harrow, of course, is a finishing up machine. The disk has not in this immediate locality become popular, but those who use it do so to promote deep working of the soil, and if the soil is favorable, they "wheel in" the oats on fall-turned land The Cutaway is now being introduced, and its best work is done on almost any place where it is tried. Its draft is so light that it does good work, for the notches in the disks turn it into a "spading" machine, and it works down and deeply where a spring-tooth or a solid-wheel disk would do only slight, or unsatisfactory work. I find its best work is in superseding the plow in many things where it would be impossible to work spring-toothed harrows or the disk, without heavy weighting especially in sowing rye on ensilage stubble land, saving the plowing, etc., and doing effective and perfect work, putting in wheat after potatoes and early spring grains, completing the work satisfactorily before it would be possible to plow the same land.

4. Suggestions in the way of improvements in the harrow can be more easily made than carried into pratice. The improvement needed in drags is to get them to go down into the soil and do good work at the bottom of the furrow and far less of surface smoothing. The drag of the future must be lighter, stronger, and of less draft. The greatest improvement that could be devised for a harrow would be an attachment that would make it impossible to use it off the farm, and thus prevent its being worn out by borrowing neighbors. JOHN GOULD.

ANOTHER VERMONT MAN.

1. If I could get but one harrow for general farm work I would have the Child's spring-tooth.

2. For a second harrow to follow a spring-tooth, as a smoothing harrow, I would choose the Thomas.

3. I consider a disk harrow good for working up fall-plowed land, or in fact any hard, clay soil that has become packed by snow or heavy rains. The smoothing harrow is the most essential of all harrows, and I judge the least used by the looks of the meadows that I have seen in my travels. The spring-tooth is a very important implement in preparing the ground for planting, and when it comes to cultivating orchards, it has no equal in my esti-

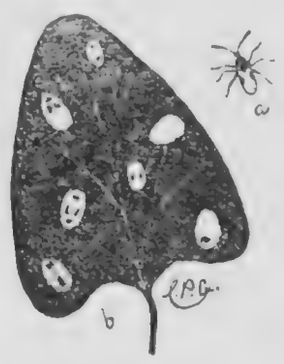


Fig. 28.

mation. When it is set to cut deep and three horses are used, it is as good as a gang plow.

4. As to changes in harrows I would suggest that the frame of the spring-tooth be so made that it would run higher from the ground, as I find those we now have are quite apt to clog.

Charlotte. W. H. H.

HARROWS FOR VIRGINIA.

Probably four-fifths of the harrows now in use in Southwestern Virginia are still the old-fashioned "A" or Double "A", with square iron teeth pointed at the end, driven through a tough oak frame. This is the case, not because our people are not alive to improvements, but because the newer implements are not adapted to the rough and broken surface of a large portion of the country. Besides, the latter are not so vastly more effective in

the work they do as is claimed for them by the manufacturers. There are quite a considerable number of Acmes in use, a few spring-tooth, and fewer still disk and Cutaway harrows. Some years ago the Thomas was considerably used for working over corn the first time and for putting in clover and grass seed on wheat. For these purposes it was a very effective implement; but for other work it was not particularly desirable. It has, however, of late been laid aside.

I have myself been using for several years a mounted spring-tooth harrow, for which strong claims were made when I bought it. Its work is not satisfactory; in fact, it works no better than the old "A," while it is far more difficult to clean when it becomes—as it does very readily—choked with vegetable matter, old straw or weeds which have been turned under. It pulls up sods even when run with the plow-furrows, and these stick in the teeth and are dragged along until they are pulled out by hand. The levers, one at each wheel and not in reach from the driver's seat, do not lift the frame high enough to admit of accumulations being dropped.

If I were confined to the use of a single implement, I would choose the Acme. For general purposes, it seems to have given more satisfaction than any other, but if I could have two harrows, I would take in addition a disk or Cutaway, preferably the latter. When it is practicable to use them, the disk and Cutaway are invaluable for chopping up an inverted sod or for preparing an oat or corn stubble for wheat without rebreaking. When followed by the Acme as a smoother and leveler, if the ground was plowed in proper condition, the work done is all that could be desired. If, however, the land is largely clay, and was broken when it was either too wet or too dry, and the clods have become hardened in the sun and wind, no harrow that was ever invented will ever put it in good conditon for a crop. Nor will the plank drag and the harrow combined pulverize the clods as one would desire. Any sort of an implement, on the other hand, will do good work when the land has been broken in proper condition and especially in spring after having been turned early enough to have been subjected to the action of frost. On account of their shape and construction none of the improved harrows can be used to advantage on steep or rough hill sides or in new ground where there are many stumps. With a wooden hoop across the broad end of an "A" harrow, it can be lifted on either side to pass over a stump or to clean it of trash, and that without stopping the team. An improvement on this form, I think, would be to have steel knives with curved cutting edges instead of perpendicular teeth pointed at the end.

Pulaski Co. H. L. WYSOR.

POINTED PULVERIZERS PAY.

If I could own but one harrow, the frame of that one would be made of hard wood, light and strong, and it would contain 72 round, sharp-pointed, hard steel teeth. Such a harrow is better adapted to general farm work than any spring, smoothing, rolling or cutting harrow now manufactured. If I could have two harrows I would add a disk. The manufacturers of the disk harrow have lately improved it by making the disks larger, which reduces friction and makes the harrows easier to draw and handle. Another improvement is the substitution of two levers for one, so that either side can be set forward or backward without changing the other. This is especially useful in making short turns, as it prevents the heaping up of earth where it is not wanted. The disk is especially useful on lumpy or soddy land, and there it does its best work. It enables the farmer to pulverize such land and reduce it to a proper condition for seeding more quickly and easily than could be done with any other implement or set of implements. I have seen fields of half-rotted, tough sod cut up, pulverized and put into first-rate condition in a very short time with a disk followed by a common harrow. Before the advent of the disk such land would ve been regarded as almost worthless for immediate cropping. I have also seen fields of stiff, clayey land which owing to being trampled by stock while wet, turned up as lumpy and cloddy as an old road, reduced and put in perfect order for seeding by the use of the disk alone. If the disk follows closely after the plow on such land, one harrowing will pulverize the soil more than half a dozen after the clods are baked dry.

On land that is wet enough to be sticky, however, the disk is a complete failure. When it first appeared many farmers conceived the idea that it would be an excellent implement for putting in oats among cornstalks in the early spring; but a trial soon taught them otherwise. The stalks and sticky soil together clog it up in short order and render it worse than useless. In this section the farmer feels quite easy about the preparation of his land for crops, so far as the harrowing is concerned, if he is the owner of a good 72-steel-tooth harrow and an improved disk.

When buying a common harrow, I would advise the farmer to get one that has a light, strong, hard-wood frame, plenty of long, sharp-pointed, hard steel, straight-up-and-down teeth, and then if he takes good care of it, housing it when not in use and repainting it occasionally, it will last him 20 to 30 years. In this section the disk harrow is used mainly for pulverizing soddy and cloddy land, and it does the work very well. Smoothing harrows are used by a number of farmers for harrowing corn land just before, or about the time the plants appear, and also for finishing off wheat land for the drill. I have not seen either Cutaways or spring-tooth harrows in operation here. The Acme has been used to some extent. FRED GRUNDY.

Christian Co., Ills.

WESTERN NEW YORK WISHES.

Forty years ago the 30-tooth harrow was the one in general use. A few years later the 40-tooth harrow was introduced, and a few years later the 48 and 56-tooth harrow was manufactured and sold in this section. It was called the chisel-tooth harrow and each section of it had four beams or scantlings, the 48-tooth had six teeth in a beam and the 56-tooth had seven. The teeth were made from bar-steel eight inches in length, half an inch in thickness and 1½ inch in width. Harrows of this kind were the best in existence till 1865, when the spring-tooth was first seen in this section. I sowed a field of cats broadcast, and commenced to harrow on one side of it with a 30-tooth and on the other side with a 56 chisel tooth harrow. The oats were sown on the furrow and the ground was harrowed once only. It commenced to rain and rained so for two weeks that I couldn't get on to the field again. Now for the results: where I used the 30-tooth you could see the furrows and the seed was only partially covered, and that section of the field did not yield more than 20 bushels to the acre, while the rest yielded 45 bushels per acre. Some of the farmers in this vicinity have been using the wheel harrows; but the dealers have stopped selling them, as they had to warrant them, and the farmers broke so many teeth that there wasn't any profit left for the dealer. The best general-purpose harrow w have now, is the Perry spring-tooth float, and if I could have only one, that would be the one. But some farmers sow grain yet broadcast, and I don't think the spring-tooth as good to cover grain as the 56-tooth, as it leaves the ground too rough, but most of our model farmers drill their grain now. Some of the farmers in fitting a heavy sod for corn or beans, use a disk harrow the first time, and then harrow once and sometimes twice with the spring-tooth, and if they plant the corn with hoes, they generally go over the last time with a smoothing harrow. I think if a farmer has a spring-tooth he can dispense with the disk harrow; but every farmer that farms from 75 to 100 acres should have at least three harrows—the spring-tooth, the chisel-tooth, and a Thomas smoothing.

Orleans Co., N. Y. J. P. C

INDIANA IMPLEMENTS.

I think that the spring-tooth harrow would be preferred if the farmer were confined to the use of only one harrow for all purposes; but the farmer who is so confined works or farms at a disadvantage. Suppose you are hurried to get your corn planted on sod ground and must harrow as soon as the plowing has been done, or harrow land by land as you are plowing, the Acme will do the work better than the spring-tooth, as it will pulverize the ground, press it down and smooth it without tearing up the sods and scattering them on top; but if the sod has been plowed some time and has become hard and settled, I think the spring-tooth would do better work than the Acme, or the common square-toothed harrow in preparing it for planting. I have an A-shaped harrow with small shovels about two inches wide made of steel, that I think fully as good as the spring-tooth to fine up ground that has become packed after plowing. After corn is planted and is to be harrowed before it is up, I would prefer the common square-toothed harrow to either the Acme or the spring-tooth.

We are not using the disk, or Cutaway harrows here to any great extent and I have had no experience with them. The disk is used some, and I have heard it praised as cutting up sod so that subsequent harrowing will not tear it up. I do not think a farmer should confine himself to the use of one harrow, and my experience has been that all the harrows I have used are not sufficient to put wheat ground in the best condition for seeding. When the clods are hard in the fall,—and on clay lands they are more or less so,—I have seen them pass through the square-toothed and Acme without sufficient breaking after several harrowings, and a roller would not by its mere weight crush them, but a roller pulverizer would. With the several harrows spoken of above and the pulverizer, I have no anxiety about getting the ground fine after I have it plowed.

As to improvements in harrows, if a harrow would not become too heavy to draw with a piece of railroad or other iron attached, it would in many cases double its efficiency; but probably on account of the draft it would be better to use such a drag separately. While I have no suggestions to make about the improvement of harrows, I have a suggestion to make about our two-horse corn cultivators. The experiment stations have demonstrated that a four-inch-wide tire will not draw as heavily in loose ground as a two-inch tire. I would suggest that some one of our manufacturers try a four-inch-wide tire on a two-horse corn cultivator and separate the shovels so that they should work separately. As they are now made, when you move a shovel to or from the row, you must move two, as they are so fastened together that you cannot move one without moving both. Separate them and let the one furthest from the corn work in the middle of the row without requiring any more attention than to set it to the right depth and then it will be very much easier to work the shovels that run next to the corn; and the labor of handling the plow will be lessened more than half, as it is the shovels furthest from the corn that run the deepest, and are for that reason harder to move to or from the corn, when one has to move to keep from plowing up the corn or to get the earth to it. With the shovels separated, it will be easier to make a better riding cultivator, as one shovel can be more easily handled with the foot than two. S. B. H.

HARROWS AT AN EXPERIMENT STATION.

Prof. J. W. Sanborn, last year, conducted an experiment to show the relative values of different harrows. He selected the Acme, a disk, a spring-tooth, a square-tooth, a smoothing harrow and the Lubin pulverizer, and tested them for draft, for depth of cultivation, for draft per inch and pound of soil stirred, and for pulverization of the soil.

An account of the tests made with these implements will be found in Bulletin No. 4 of the Missouri Agricultural College. It will be impossible for us to give all the details of this experiment. Those who wish to study them all should examine the bulletin. The following summary, made by Prof. Sanborn, will state the case briefly:

1. No one harrow is sufficient for the best tilth of a farm. 2. The harrow needed varies with soil and its condition. 3. Harrows, as substitutes for plows, do not save force. 4. Harrows till shallower than is supposed. 5. The bottom of the tilled area varies widely in regularity. 6. Wedge teeth and flat teeth with a front slant compress soil and are probably good for light soils. 7. Teeth lifting dirt to the rear loosen soils the best. 8 One harrow may break the clods best, but not leave as much fine soil as another. 6. Each harrow tried had a place to which it is best adapted, but for a general-purpose harrow on a heavy soil, depth of cut, looseness of soil, ease of draft, and pulverization, being considered the leading demands of a harrow, the disk, on the whole, proved the most satisfactory, although having the weakness of forming a bad bottom and of ridging the land.

Indust'l Societies.

NEW YORK STATE AGRICULTURAL SOCIETY.

THE ALBANY FARMERS' INSTITUTE.

Bordeaux Mixture a specific for potato rot; a recipe for it; excellent hints on the manufacture and sale of butter; the cheapest good ration for dairy cows; handling the milk and cream; swine, and swine breeding; enormous number of insects; their modes of reproduction; combating them; the process of digestion in the cow.

THE paper of Prof. C. H. Peck, upon the potato rot fungus, presented a new and seemingly very valuable remedy against the pest, which is certainly worthy of trial by every potato grower. It is known as the Bordeaux Mixture, and has proved by experiments in France to be an absolute preventive of the dread potato rot. The formula for the preparation of the mixture, is as follows:

"Dissolve four pounds of powdered sulphate of copper in 16 gallons of water; in another vessel slake four pounds of lime in six gallons of water. When the latter has cooled, it is slowly poured into the copper solution, care being taken to mix the fluids thoroughly by constant stirring. It is well to have this compound prepared some days before it is required for use. It should be well stirred before it is applied. This may be done with small brooms or wisps of slender twigs, which are dipped in the compound and then switched over the plants so as to thoroughly spray the leaves. This method is wasteful and tedious, however, and where one has a considerable area to cover it would be economy to procure a spraying pump. Make the first application when the plants are in bloom; the second a week or ten days later, and if the weather be such as will favor the development of the rot, a third and perhaps a fourth application should follow at about the same intervals. The object is to spread upon the foliage and stems minute quantities of the copper-sulphate and lime in advance of the advent of the fungus spores. Then when these do come this mixture destroys their vitality and prevents their germination and all its evil consequences. It is liable to be washed from the leaves by heavy rains, which makes it necessary to renew the treatment from time to time. It is a question whether or not the mixture may not prove fully as beneficial if a small quantity of London-purple be added to kill the second crop of potato bugs.

After a short but practical talk on farmers' gardens, by Dr. F. M. Hexamer, Hiram P. Hopkins, a young farmer of Erie County, gave his experience in the manufacture and sale of butter. He said that a cow in a badly ventilated barn, and eating poor food cannot produce first-class butter. A ration of 20 pounds of clover-hay, and six pounds of grain will cost 16 cents a day, and the manure will pay for the care. But if you feed 30 pounds of silage, five pounds of hay and five pounds of grain, the ration will cost only 11 cents per day, and this is the cheapest ration. It costs him $38 50 per year to keep his cows, that is, 1½ cent per quart of milk, or 11¼ cents per pound of butter. His cows make a pound of butter from 16 pounds of milk, and the butter averages, in the Buffalo market, 35 cents a pound the year through. Take the milk immediately from the cow to the dairy-house. If you do not, bad odors are absorbed, and he also finds that when shallow setting is used, 15 per cent. of cream is lost if the milk is left standing 15 minutes. He ripens the cream in deep vessels. Every time he churns unripened cream, he finds a loss. When the cream is a trifle acid it is considered sufficiently ripened. He prefers a concussion to a friction churn. When the butter comes he puts into the churn a gallon of water for a gallon of cream and a handful of salt. Then he draws off two-thirds of the butter-milk, adds as much water and more salt, etc., till the butter is washed. He thinks white specks are coagulated milk from bottom of cans. Wash them out. Sprinkle butter with one ounce of salt to one pound of butter. Turn the churn over a few times and let it stand half an hour; work the butter as little as possible, press it into small packages and send it to market. Butter at 35 cents per pound pays a farmer 4½ cents a quart for his milk. His 15 cows produced 4,650 pounds of butter, 100 gallons of cream and 500 quarts of milk last year, which sold for $1,742. The cost of keeping was $577.50, leaving $1,165 for profit. He keeps the thoroughbred Jerseys. [Shouldn't a "sinking fund" be laid aside to pay for the cows after their profitable usefulness in the dairy is over, deducting from their price what they may then bring for the shambles, before reckoning up the profits? How about interest on the investment in them, too? —EDS.] His grain ration consists of equal parts of corn-meal, bran, oat-meal, barley sprouts, and oil-meal. In the summer he soils his stock. He never pastures them. He is not rich enough to do that. He waters the cows twice a day after feeding. For soiling crops, he uses rye, oats, peas and corn.

The Hon. Edward Burnett, of Mass., occupied the time till the close of the afternoon session with a talk on swine and swine breeding. His main points were as follows: The pig which in the shortest length of time and with least food will make the most pork, is the best to breed for home market. Select good, clean-cut sows, with strong constitutions, and a rather coarse than fine boar. Too much pains cannot be taken in getting a boar. He prefers a finely bred Essex or Berkshire. The cross will retain the constitution and vigor of the dam and the appearance of the sire. No farmer can afford to raise thoroughbreds except to sell them for breeding, because too much capital is invested. Since he entered the business of raising hogs, eight years ago, the Boston market has changed its preference from a 700-pound hog to an eight to ten-months-old pig, weighing 200 or pounds. A dairy farmer wants a certain number of pigs. These can be raised most

profitably between March and December. At the end of that time the pig should weigh 150 to 250 pounds. "Dirty as a pig" is an old saying; but pigs prefer clean pens and food, though they will drink the foulest slops when forced to do so. They will repay one well for the care of their pens and warmth. He feeds crushed oats and oil-cake in place of bran. He begins to feed his pigs clover and green stuff as soon as they are weaned. Pigs that are soiled give the best results. Disease is largely caused by depriving our pigs of clean quarters and green food. He continues feeding clover to his pigs till fall. In September he begins feeding Indian corn. He can tell by the grain of the meat as soon as his knife touches it, whether a pig has been fed on distillery slops or on clover and grain. Hogs fattened on barley make beautiful meat, containing much gelatine, the taste resembling that of the jowl or cheek of the pig. Pigs should have plenty of pure water. Details in pig breeding are as important as in other sorts of business.

Dr. J. A. Lintner, State Entomologist, spoke on "Our Insect Enemies" and showed the true value of the study of entomology to the farmer. He said the despised worm is in many particulars more wonderfully constructed than our own bodies. The number of insects far exceeds that of all other classes of animals combined. There are no less than 25,000 species in the United States, and 335,000 species are known in the whole world; while Dr. Asa Fitch estimated that a single cherry tree ten feet high was infested by 12,000,000 plant lice. One-tenth of every crop grown is destroyed by insects. The methods of reproduction are most peculiar and varied. The larval stage is one of incessant feeding. One of the fleshy larvæ will in one day increase its own weight 200 times. There is a continual struggle between man and the insects. We do not fight the species but the individuals. We seek rather to control than destroy the insects and to prevent them from depriving us of our profits. Nearly all of our worst pests have been introduced from Europe, though their infesting parasites often fail to follow. Each year their ravages are becoming greater. Formerly no apple insects were known, now there are 223 species. Among the controlling agencies are clean culture and high cultivation; children should be taught to study the habits of insects so that they will distinguish between friends and foes and destroy the latter. Paris-green and the spraying pumps must supplement prayer or it will be of no avail.

The paper of John Gould on "Dairying Demanded by the Times" was thoroughly enjoyed by all, and will be printed in a later number of the RURAL. Pres. Adams, of Cornell University, Prof. A. J. Cook of Michigan Agricultural College, J. H. Hale, of Connecticut, and Prof. L. H. Bailey, of Cornell, also addressed the institute.

The meeting was closed by a short talk from State Dairy Commissioner Brown on "Dairying in New York." M. F. W

Miscellaneous.

CORRESPONDENTS' VIEWS.

MARKET NOTES.—In a recent tour among the commission houses and markets in this city, I noticed a few things that farmers would do well to think of. After the farmer or gardener has labored hard to grow a crop, he certainly ought to do his best to put it on the market in good shape. Failure to do this is what generally makes the difference between the high prices quoted in market reports and the low ones received by farmers. I noticed one lot of apples which were faced with wormy, knotty, inferior fruit, that should have been kept on the farm for stock feeding. Customers in search of nice fruit, looked at them, shook their heads, and passed on. It cost just as much for a barrel to put those inferior apples in; just as much per barrel for freight and cartage, and just as much for commission on that inferior fruit, as it would on first-class, nicely assorted and packed apples, while the price received was probably not half so much.

One customer wanted a barrel of extra-large turkeys. The commission merchant had two barrels of large and small, good, bad, and worse, all mixed. To get what he wanted, the purchaser must buy the whole lot, which he would not do, unless at a much lower price than was asked. One barrel of the large turkeys, packed alone, would have brought two-thirds, or three fourths as much as the two barrels mixed. It would have paid well to grade them.

I noted the generally poor appearance of the celery among the wholesale dealers. It was dirty, poorly bunched and trimmed, with a discouraged look generally. In Washington Market I noted some very fine, fresh, clean-looking. Upon investigation, I found that the retailer, (more shrewd than the grower), had some of the same kind of celery seen in the wholesale house, which he was washing, trimming, and bunching in nice shape, and he was disposing of it at a good profit.

In these days of close competition and small profits, when the mercantile classes have made a fine art of showing their goods to the best advantage, will it not pay the farmer to consider these things? I think it will.

F. H. V.

A FARMER'S NOTES.

WEATHER.—We are having strange weather for this section of the country. The ground has been barely covered with snow once during the winter, and the mercury, has been down to zero but twice. The past year was a hard one for farmers generally. We had a good crop of hay, a fair crop of potatoes, and a poor crop of corn. There is considerable complaint that potatoes are rotting in the cellars, so that there is a good demand for them at 65 cents per bushel. Apples are plentiful and cheap.

POTATO SCAB.—I have seen a great deal in the RURAL in regard to scab on potatoes. Last spring I broke up a piece of high, dry ground, furrowed it, and put shovelfuls of barnyard manure about two feet apart, and dropped a whole Clark's No 1 potato the size of an egg on each manure heap. The season was very dry, and planting in this way brought the hills above the surface of the ground; but, contrary to general opinion, I had not a very large crop; but the tubers were as smooth and handsome as any I ever saw. I also planted some of the same kind in trenches, but as the weather was so dry I did not consider it a fair test. I think I shall like that plan very well.

WHY A FARMER?—Some time ago the RURAL, asked its readers why they engaged in farming—whether it was from choice or compulsion. For myself I can say that I live on a farm from choice. Until three years ago I was in a mechanical business in a large city. My health was not very good and so I bought a farm. have worked harder and made less money; but I would not go back to the city at all, and cannot understand why any one prefers the city to the country, and Mr. Terry's reasons for living in the country, will answer for me.

BLOAT IN CALVES.—About September 1, a fine Guernsey heifer calf came along, which I wanted to raise. I did not let her suck at all. She was very hearty and did nicely for four or five weeks, when she began to bloat. After drinking about a quart of milk, she would puff up and could not drink any more; but she kept moving around and did not chew at all. I was told to try salt, charcoal, etc., but she kept bloating and grew very thin. One night, after drinking about a quart, she bloated so badly that I thought she would die. Her manure was rather hard. I gave injections, but they were of no use. I expected to find her dead, but she seemed pretty well in the morning. I put five heaping tea-spoonfuls of Epsom salts in a little warm water and turned it down her throat, and began to give her about a quart of milk at a feed, and whole oats with some hay, and I kept increasing the ration, and now she eats a quart of dry oats and considerable hay every day, and is as smart and healthy as she can be. She did not bloat after giving her the salts. I looked over a number of volumes of farm papers which I had in the house, but could find no remedy for bloat in calves. R. N. H.

Everywhere.

RURAL SPECIAL REPORTS.

Illinois.

MCLEAN, McLean Co., January 13.—The past has been a very favorable season for farmers in this section. Corn was extra good. Hay and oats were average crops, but oats were badly lodged. Potatoes enough to supply the home markets are not raised here. The deficiency is supplied from Dakota. A great many draft horses are raised here, which sell for from $150 to $250. I think the RURAL is the best farm paper I have ever seen. Success to it! A. R. T.

GURNEE, Lake Co., January 20.—The times are very close in this locality, although we have had an average crop year.

The crops last year were not up to the average. Corn, of which we do not raise enough for home consumption, was not as good as in former years, on account of drought, grubs and the wire-worms. Wheat, of which there is but little grown, was good. Potatoes gave an unusually large yield, the Rural Blush taking the lead Oats were good both in quantity and quality. The late fall and open winter have favored the farmer. More plowing has been done than for some time. We look for the RURAL as for one of the family.

W. D. W.

Montana.

COMO, Missoula Co., January 10.—As predicted last spring, the crops of 1888 were very light owing to scarcity of water for irrigating purposes. Many fields yielded no more than half as much as in '87. So far this year all the indications point to another unfavorable season, the snow-fall so far having been very light. Our soil is so productive that under very unfavorable conditions the yield is a wonderful encouragement to laziness and careless methods of farming. A neighbor seeded an acre of Bunch-grass sod to wheat last spring, irrigated it once, and last fall thrashed 52 bushels from it. Owing to pressure of work incident to opening a new farm, I allowed my potatoes and rutabagas to care for themselves last year. They were irrigated, but nothing else was done to them, and from one acre I dug 270 bushels of marketable tubers and 35 bushels of small ones; while from half an acre I took 255 bushels of rutabagas. Prices are, hay, $8.00 to $10 per ton; wheat, 50 to 60 cents; oats, one cent per pound; potatoes, three-quarters to one cent; butter, 35 to 40 cents; eggs, 30 to 35 cents. per dozen.

A. C.

New Hampshire.

MILFORD, Hillsborough Co., Jan. 21.—The weather here is very warm and pleasant. I plowed on January 1, and also the 3d. I have been to work on the land since then drawing out manure, blasting and getting out stones. We think there never was a winter when so much could be done on the land as at present. There is not much doing in the woods. A few winters like this would be a good thing for the forests, but in our section the trees grow about as fast as they can be cut down, and there are more woods than there were 25 years ago. Everything the farmer grows is very cheap. It no longer pays to keep oxen; for we cannot turn them for beef and get our money back, and sometimes we get discouraged with life on the farm, but I will not go back to the city, for we get a living here if we do not have so much money to handle, and it is much better for the children to remain here, and I just love farming and I am not as easily discouraged as some. I think when we get a good thing it is well enough to let the producer of it know that we appreciate it. Now this applies to the RURAL NEW-YORKER I think it far ahead of any other paper I ever saw, and I would not sell the old numbers of last year for $2; for with that splendid index it is invaluable. I wish that I could make our farmers appreciate it. Some of them think it is out of our latitude. I tell them that it is good for all latitudes, and that I don't want to farm without it. I know that money comes hard with many; but if they would take the RURAL and read it understandingly, they would more than get their money's worth every time and also get a paper that every member of the family could read—a clean paper, advertisements and all. P. C.

New York.

WEST SHELBY, Orleans Co., Jan. 25.—The weather is very warm and balmy like spring. Hay is selling at $15 per ton in the market. Apples are a drug in the market, though in quality they are the best we have had for years. Several thousand barrels are being held by farmers and dealers; they are worth from 75 cents to $1.00 per barrel now, and there is no demand at these figures. Farmers are plowing and trimming their orchards. Land has decreased about 20 per cent. in value in the last 10 years. There are plenty of vacant tenant houses. Labor is scarce and the laborer demands more for his work than the farmer can afford to pay. Several acres of Niagara grapes have been set in this vicinity, with a very poor prospect for the growers, as the Grape Company sold the grape-roots at a high figure, and the farmers paid the first cost of the plants down; and gave the company a lien on their vineyards for one-half of the crop, for a term of years, until the balance is paid. The Grape Company has made a fortune already; but time only can tell how the farmers will make it pay.

J. P. C.

Ohio.

EDINBURGH. Portage Co., Jan. 21—The season has been very wet since September; the roads are almost impassable. Rain and snow, freezing and thawing have been continuous nearly all winter.

Wheat on the ground looks more promising than it has for some years at this season. Corn good, but much of it is standing yet owing to the wet season. Oats good; hay about an average crop.

Wheat has been somewhat below an average in this part of the country. A. S. P.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.

PROFITABLE HARDY APPLES FOR EXPORT.

J M McA., Belton, Can.—Almost the entire profit in growing apples in this section is obtained by shipping them to the British markets. Buyers pay little regard to quality if the apples are of good size and appearance, and have good shipping qualities. With this consideration in view, which are the six most profitable varieties for export? They should be hardy enough to stand a temperature of 30 degrees below zero, and be named in the order of their merit.

ANSWERED BY DR. T. H. HOSKINS.

Six varieties of apples likely to be profitable orchard fruit, suitable for the colder parts of Ontario, and adapted to the English market, are not known, good shipping quality being included with firmness of flesh sufficient to prevent bruising in transit, and keeping qualities that allow the fruit to be held over a dull market. In the warmer parts of Ontario most of the apples grown for foreign shipment in Western New York and Michigan, such as Baldwins, Kings, Greenings and Russets, can be grown; but not where the winter temperature is as low as stated. The requirement of "good size," if it means large, or even medium size, excludes the Fameuse, which otherwise might suit, also the Shiawassee Beauty. Both of these would be hardy enough against the climate. The Fameuse is shipped to some extent from Montreal; but generally packed (choice specimens only) in patent packages like egg-boxes, to be sold at a fancy price. The Shiawassee is a Michigan seedling of Fameuse and much like it, though a little more oblate, and slightly more acid. It is more valuable than Fameuse because it spots less. Along with these, and a little larger may be placed the new Princess Louise, which is a fine fancy apple. It has not yet been much propagated, and trees are scarce. Among larger apples, the Winter St. Lawrence is pretty well thought of as an export apple in the Province of Quebec. It is a very good apple, much like the Fall St. Lawrence, but rather smaller, and a fairly good keeper. I have not found it very productive, but my trees are still young. Another very promising apple is McIntosh Red, because it is large, handsome and good, and is firm enough for distant shipment in barrels. It is of the Fameuse type, but much larger, and darker in color. Carefully handled in Northern New England, it keeps very well. In unfavorable localities it is liable to spot, but in many places it grows quite fair, and bears well. Finally, the Wealthy may be named as among the best—superior in being always fair. It is of good size, color and quality, and the tree is an early and very profuse bearer, and the fruit a pretty good shipper. Not one in this list is a long keeper, and they should all be got off on the steamers from Montreal before navigation closes in the fall, to insure their arriving at market in good order, and keeping long enough afterwards not to cause loss to buyers. Fameuse should go on even earlier: not later than early September. Among them all, Winter St. Lawrence is probably the safest as a keeper. The only real long keepers, adapted to a 30 deg.-below-zero climate, yet generally known, are Ben Davis and Scott's Winter; but the quality of both of these excludes them from the category of dessert apples. It is impossible to give the above list in the order of merit as requested, because merit depends upon more than a single quality. Size, color, flavor, firmness, fairness, and productiveness of tree, must all be considered, and no one has ever seen all the good points in a single sort.

FLOWERS FOR A WINDOW GARDEN; PROPAGATING BEGONIAS; GOOD LATE GRAPES; PARSNIPS; SHADE TREES.

S. H., Kock Hall, Md.—1. What are good flowers for a window garden? 2. How are begonias propagated? 3. What is a good hardy white grape? The Pocklington is weakly with me. What is a good late black grape? Name a red one also. 4. Why do my parsnips have many small roots instead of growing a single symmetrical root? 5. What is the best maple for shade? Should maples and other shade trees be manured now or in the spring?

ANS.—1. Begin in Octobor with carnations and chrysanthemums, and with these include in November bouvardias and lobster-claw cactus All enter December, and add callas, Paris daisies, stevias and Chinese primroses. To these in January add Chinese and white narcissus, Roman hyacinths, cyclamen and oxalis, and pass into February with petunias, fish geraniums, Begonia coccinea and B. manicata, freesias, cinerarias and tea roses. In March to many of these will be added a host of others, as tulips, "Dutch" hyacinths, daffodils and other narcissus, and dwarf deutzias and fuchsias, and in April hydrangeas in pots, mignonette in pots, large-flowering cactuses, calceolarias, show pelargoniums and many other seasonable flowers. In May it is more a question of emptying than filling the window, and we turn the plants out on the piazza to harden them off preparatory to resetting or planting them out, and in this way do the plants a good turn and give the good wife a chance to clean house. 2. All begonias can be raised from seeds. Species come true from seed, but varieties are variable. Rex and other large, fleshy-leaved begonias are usually raised from leaf-cuttings; B. insignis, B. fuchsioides and other branchy sorts from cuttings in the ordinary way, and tuberous begonias from seed. 3 Late red, Jefferson; black, Worden; white, Niagara and Victoria.

4. Land plowed shallow, a stiff subsoil, and fresh manure near the surface of the ground will cause short, rooty parsnips, salsify or other crops of that nature. But good, long, clean parsnips should be produced on land that had been well enriched for last year's crop and subsoiled but not freshly manured with barnyard manure for the parsnip crop, though a little artificial fertilizer instead, would be advisable. 5. The Sugar Maple; but the Norway Maple will give shade sooner. Shade trees should be manured preferably in fall, so that the rains and snows of winter may wash the nutriment down to the roots; but a manure dressing now or at any time will do them good. But don't manure a newly planted tree before it has "taken" to the soil and started to make good feeding roots.

CORN AND COOKED AND UNCOOKED CORN-MEAL AS HOG FEED.

J. M. C., Evansville, Ind.—About a year ago one of the Eastern agricultural colleges made some experiments in feeding corn and cooked corn meal to hogs. As nearly as I can remember, the results showed that a given amount of corn put one pound of meat on the hog in a certain time; whereas the same quantity of corn ground made 1¾ pound of meat, and the same amount of meal, when cooked, made 2¼ pounds of meat, all in the same time. Who can tell anything more on this subject?

ANSWERED BY PROF. W. H. JORDAN.

The inquirer cannot refer to the Maine experiment in feeding raw and cooked meal, as the results of that experiment, continued for nine years, were in favor of the raw meal. I give below a summary of the results for each year.

In 1870 scalded meal fed warm was to raw meal fed cold as									95.5 to 100
In 1871 value of cooked meal to raw meal as									74.8 to 100
" 1872	"	"	"	"	"	"	"	"	82. to 100
" 1873	"	"	"	"	"	"	"	"	91.6 to 100
" 1874	"	"	"	"	"	"	"	"	98.8 to 100
" 1875	"	"	"	"	"	"	"	"	72.3 to 100
" 1876	"	"	"	"	"	"	"	"	88.8 to 100
" 1877	"	"	"	"	"	"	"	"	64.2 to 100
" 1878	"	"	"	"	"	"	"	"	78.5 to 100

It seems to me that these results are conclusive. In regard to whole corn *vs.* corn meal, I can only refer to the results of our experiment on that point, which were published in the Maine Experiment Station report for 1886-7, where six pigs from the same litter were divided into two lots of three each, one lot being fed whole corn and the other the same weight of meal ground from the same corn, and the growth was almost exactly the same in the two cases. The experiment was repeated later, and the pigs fed on whole corn gained the most. The results of this latter experiment are not yet published. Take notice that the first experiment occupied 194 days and the latter about 90. In both instances the pigs were thrifty, and very uniform in size and quality. I am of the opinion that in the past much money and time have been wasted in grinding and cooking corn as food for hogs.

FEED FOR FATTENING STOCK; SEEDING TO GRASS.

W. C. M., Blackstone, Mass.—1. I am giving some three year-old steers, weighing between 1,100 and 1,200 pounds, one quart of cotton-seed-meal and five quarts corn-and-cob-meal (one-quarter oats, ground) twice a day, with good hay, rye fodder, and Hungarian Grass. I wish to fatten them. Am I feeding enough grain and a good proportion? 2. I sowed a two-acre plot last spring with rye and grass seed, but the latter caught in only a small part. Would it work to sow grass seed on the frozen ground in spring, or had I better harrow then and seed and roll?

ANSWERED BY HENRY STEWART.

1. This feeding is not sufficient to fatten animals of this weight as quickly as is profitable. The cotton-meal might easily be doubled; in fact in feeding beeves with the most profitable results it is desirable to give them all they will eat up clean; but not to overdo it lest they should get off their feed for a few days and fall off. Scarcely any bunch of beeves are found that will consume the same quantity of feed each. It would be doubtless advisable to add gradually to the cotton-seed meal above mentioned and watch each animal and fix the full ration at the quantity he will consume with good appetite. It should not be forgotten that flesh and fat contain 75 per cent of water, and consequently fattening animals should be well supplied with water of a moderate temperature, not less than 55 or 60 degrees. It hastens the fattening of stall-fed beasts to give sufficient meal stirred in the water to make a thin gruel of it. 2. It is quite possible that the failure of the grass seed was due to the want of sufficient fertility in the soil. If the land should be harrowed in the spring, with a light sloping-tooth harrow, and some fine manure could be harrowed in with the seed, no doubt a good stand might be secured. Poor soil is more often the cause of failure of grass seed than dry weather. The work should be done as early as possible,

KEEPING CARP IN A POND.

E S. A., Torrington, Conn.—I built a dam on a small stream to make a pond, covering about one eighth of an acre, of a good depth, for the purpose of supplying ice for home use. The overflow is eight feet long and four wide. At times there is a sheet of water eight feet wide and a foot deep or more; at other times a two-inch pipe would carry off all the water. The pond is stocked with carp. How can I fix the overflow so as to keep the fish in while letting the water out? The overflow is made of planks with an apron. I fear ice will clog up the passage and force the water over the banks.

ANS.—The difficulty may be met by making a double lining of the dam inside, as shown at Fig. 30, and fixing a half-inch wire gauze

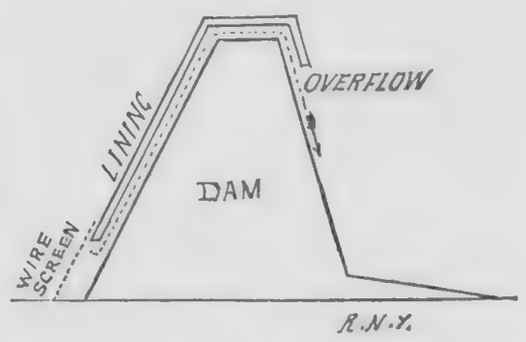


Fig. 30.

screen at the bottom to prevent the fish from coming up under the screen. The covering lining should be made with space enough to carry off the whole of the water, and if the water is carried over the face of the dam it will prevent the closing of the space by the formation of ice. If ice should form in very cold weather it should be cut away. The water in the pond would then never be up to the top of the inside plank lining, which need be made only over the waste gate. Carp will not move in the winter in your climate. They are snugly buried in the mud where they will keep warm, consequently no trouble need be borrowed about their escape in the winter. In the spring, and when there is no ice, you can put the half-inch screen on the top of the dam to keep the fish from going over.

CORN-AND-COB MEAL.

E. T. R., Swedesboro, N. J. Is cob-meal a good feed for "butter cows," say, six quarts thrice daily? Would the feed be improved if wheat-bran formed a part of that quantity?

ANS.—The cob of the corn acts as a dilutent of the corn-meal rather than as an additional nutriment. Six quarts of the corn-and-cob-meal are about equal in feeding value to 3½ quarts of clear meal, which, given alone, would be too heavy a feeding for some cows and would tend to bring on an attack of garget. The cob, however, will act in much the same manner as bran would do, but as bran is much more costly than the cobs, as a matter of ecomony, if not in every way, the cob-meal may be preferable to the bran.

HOG-DRESSED VEAL CALVES.

Several Subscribers.—What are "hog-dressed veal calves," and how are they dressed and shipped?

ANS.—The following extract from the circular of Messrs E. & O. Ward, of this city, will answer the question:

"Calves from three to six weeks old and weighing about 100 pounds, or, say, 80 to 120 pounds, are the most desirable size for shipment to this market, and should be dressed in the following manner: When all is ready for the killing, take the calf gently, (it must not be worried or chased, and should not be fed for a space of at least six hours previous.) Tie a rope to the hind legs, and hang it up clear of the ground or floor; then cut off the head just behind the ears; when thoroughly bled out, put in the gambrel stick, and cut off the legs at the knee-joint; then open the belly from just behind the kidneys to the breast-bone, then remove all the intestines, including the liver, lights and heart. If all this is well and properly done, the inside will present a clean appearance, free from blood or blood-stains. Now balance evenly on the gambrel, and place a stick of suitable length in the opening, to hold it in proper shape, then hang in a cool, dry place until the flesh is "set"—say from eight to twelve hours; it must hang until the animal heat is *all* out. The stick which was placed across the opening should now be removed, unless quite warm weather. Mark for shipment by sewing a "shipping tag" to the bag-skin, between the hind legs; it will then be ready for shipment."

BLOODY MILK FROM A HEIFER.

A. McM., Darlington, Pa.—My heifer, fresh for the first time ten days ago, has from the first given bloody milk. She was fed clover hay and one gallon of bran and corn chop, cob and all—one-third corn and two-thirds bran. A day before she came in, she refused the chop and could hardly get up. She is in good order; but her eyes seem bulged out. She eats hay and sometimes a few turnips, and apples; but she stands stupid. What shall I do for her?

ANSWERED BY DR. F. L. KILBORNE.

The blood in the milk will probably disappear in a few days. If the udder is swollen or hard, apply belladonna ointment and rub it well in. If the heifer is quite strong, give three-fourths of a pound of Epsom salts, and one ounce of ginger as a drench; and repeat in 16 hours if the bowels are not moved. Also give one ounce of nitrate of potash and 25 drops of tincture of aconite every four hours until the fever subsides. Then give two tablespoonfuls three times daily of the following powders: powdered gentian and ginger each one-half pound; powdered nux vomica, one-fourth of a pound; nitrate of potash one-half pound. If the heifer is quite weak, instead of the above, give two ounces of sweet spirits of niter and 25 drops of tincture of aconite three times daily, and four drams of carbonate of ammonia also three times daily, but alternating with the first. If the bowels are costive in this case give one quart of raw linseed oil, and follow this with warm soap-suds injections every hour until the bowels move freely.

THE ROLFE APPLE, ETC.,

J. M. M., Ont. Canada—1. Grape-growing here is very unsatisfactory on account of late spring and early fall frosts. I am thinking of growing a few of such native grapes as the Delaware, Niagara, and Concord under a cheap covering of glass. If the entire place were covered with glass, would it be too hot for the vines? Would it be better to have alternately a row of glass six inches wide and one of boards three or four inches wide? 2. What are the merits of the Rolfe apple?

ANS.—No, we should prefer all glass with suitable ventilation so that the heat could be regulated as desired. 2. The Rolfe is a rather new but promising apple, native of Abbott, Piscataquis Co., Maine. According to the Maine Pomological Society, it is a medium to large apple, shaded and striped with red on a yellowish ground. In form it is somewhat oblate (flattened) and angular. Stem short, cavity large, calyx closed, basin large and regular. Tree a good annual bearer. Flesh white, fine-grained, tender, sub-acid, core small. The tree is partly hardy, but not "iron-clad" in Northern Maine. The fruit can be kept into the winter, but is not a long keeper. Recommended as a promising market apple that succeeds farther north than the Gravenstein.

LAMENESS IN A COLT.

C. P., Howard, Dak.—My nine-months-old colt is lame in the right hind leg. I cannot locate the seat of the lameness. While running across a plowed field last fall, all at once she lifted the leg, going some distance on the other three, and she has been lame ever since. I've not been able to discover any fever, tenderness or swelling. She lets me handle the leg, bears her weight on it, and permits me to tap the bottom of the foot; but in trotting the movement is that of a hop as regards her hindquarters, and she doesn't step as far forward with the affected leg. What should be the treatment?

ANS.—Apply the following liniment over the hip-joint once daily, rubbing it well into the skin, and continue the application until the skin is well blistered. One ounce each of Castile soap and camphor dissolved in one pint of rectified spirit, add one-half pint each of strong aqua ammonia and sweet oil.

REGISTERING JERSEYS.

H. T., Erie, Pa.—How can I register the pure-bred Jersey calf I have just bought? I have his pedigree on both sides and it is first-class; but his sire has not been registered, as the owner keeps him for his own use. Will that fact disqualify my calf for registration?

ANS.—The sire of the calf must be registered before the calf itself can be considered eligible for registry in the books of the American Jersey Cattle Club. Write to F. W. Wicks, Secretary A. J. C. C., No. 1, Broadway, New York, who will supply instructions and blank forms for registration.

Miscellaneous.

J. B. C., Nashville, Tenn.—What does the RURAL know about the Pearl and Dutton Strawberries?

ANS.—The R. N.-Y. does not remember ever to have tried them.

H. J. P.—We do not sell the RURAL NEW-YORKER No. 2 potato. It is handled by J. M. Thorburn & Co., New York. The Hudson Bicycle cultivator is made by S. Terry Hudson, Riverhead, N. Y. The Newberry Potato Digger is not yet perfected, as we understand the matter.

C. W. G., Waynesboro, Pa.—1. What kind of stock is used for the Kilmarnock Willow? Would it be advisable to plant the Delaware Red Winter apple extensively? 2 Can the weeping maple be grafted on any other sorts?

ANS. 1. The Goat Willow—Salix caprea. 2. There are several Red Winter apples, but we do not know of the Delaware Red Winter. 3 We do not know of any weeping maple. Kindly tell us the specific name.

H. H. G., Nashville, Tenn.—1. Is there such a thing as a tree blackberry? 2. What does the RURAL think of the Earhart Raspberry?

ANS.—1. We made an effort to get specimens of the "tree blackberry" last year, but failed. The R. N.-Y., has mighty little faith in it. 2. The Earhart is the best ever-bearing blackcap we have ever tried. It bears fruit until after frost. With us, however, it seems to commit suicide by over-bearing and is short-lived.

R. H., Kingsville, Ohio.—How do the Red Polled cattle compare with Short-horns for beef, and are the cows good milkers?

ANS.—The Short-horn is considered the better breed for beef, while the Red Polled in this country is a better milker. In England, however, much more attention is given to milk production in the Short-horn than Americans give to this feature, and the Short-horn or its grades are more extensively used for milk production than any other sort.

E. C. C., Kane, Pa. 1. What are the names of some horse breeders in England? 2 Would it pay to import a single horse? 3. What is a good Shire stallion worth in England?

ANS. 1 James F. Crowther, Winfield, Yorkshire, England, and James Forshan, Carlton, Notts, England, are the largest breeders of English Shire horses. 2. No. We do not think it would pay to go to England for a single horse. 3 You can get one at all prices from $500 to $5,000 Why not patronize an American firm like Galbraith Bros., of Janesville, Wis.? They can, doubtless, show as fine a stock of horses as can be found anywhere.

C. A. M., Pierceville, Iowa.—In planting ten acres of corn, after getting the ground in good condition, I'm thinking of marking it out one way, and furrowing it out the other. I would put at intervals a forkful of manure and a handful of ashes, cover both with some earth, drop the corn and cover it. The ground has been under corn and oats for six years. It is rolling enough to let water run off it. It was broken in the fall. Would this kind of treatment pay?

ANS.—The R. N.-Y., can not advise such a course. We do not believe that corn on poor land ever pays when manured only in the hill. The young plants get a fine start, grow thriftily but fail afterwards. The roots extend three or four feet in every direction and when the grain begins to form they can not gather sufficient food for its growth and maturity. Better, put the ashes on top.

DISCUSSION.

ANOTHER WATER WITCH.

A FARMER'S DAUGHTER, LOGAN CO., KENTUCKY.—A correspondent of the RURAL wan's to know something about "witching' for water. "There seems to be just enough of mystery about it," he says, "to make it interesting, and enough of reality to make it worthy of study." That is what I have thought for a long time, and I have never neglected an opportunity for investigating the subject; still I must admit that it remains quite as great a mystery as ever. The method which he describes, however, as being used in Dakota, is entirely different from that practiced in Kentucky. Here our "water-witches" use a forked twig, broken off a few inches above the fork, leaving two long, slender prongs to be used as handles.

Several years ago, we needed a well on the outskirts of the farm to furnish water for a tenant's house, and employed an Irishman, named Pete Allen, to dig it. Having shown him the locality, we looked on with interest while he procured a divining-rod from a peach-tree near-by, for he was a "water-witch" as well as a well-digger, and went to work to discover the spot where the nearest underground stream approached the surface. He held the forked switch in both hands, with the palms turned inward, and the thumbs down, concealing the long ends of the supple twig, and in this position, he walked slowly across the place where it was desirable the well should be located. When he reached a certain spot, the upper extremity of the twig began to bend steadily downward, until finally its position was completely reversed, and the end that at first pointed toward the zenith, now pointed directly downward to a certain spot in the ground beneath. He walked over the ground several times with the same result, and then announced that he had found water, and a fine, bold stream at that. After prospecting around for some time longer, for the rod showed signs of great activity, Pete announced with a triumphant voice that at a certain spot, two streams, one from the southwest, and the other from the northwest, came together, and from that point there was only one stream leading off toward the east.

He also predicted that at the point of their conjunction, the limestone rock, in a fissure of which the water ran, was broken, making a vertical opening where the points of rock came together. "This being the case," he said, "the well will be an easy one to dig, and I am sure to reach water, and plenty of it too, at about 35 feet." [The "witches" or "diviners" who claim to be able to predict the depth below the surface at which water can be found, base their belief either on the force of the movement of the "rod" or on the diameter of the circle over which the movement is noticeable, one rule being that the depth is half the diameter of the circle; hence the deeper the water below the surface, the farther the influence it exerts.—EDS.] He showed his faith by his works, and at once began to dig.

Strange as it may seem, the two streams came together exactly as the "witch" predicted, except that he had to dig a few feet further to reach them, but when he did, the water poured in with such a rush that he was obliged to stop work and wait until a dry season, when the water was bailed out in tubs, the channel closed, and the well walled up from the bottom; after which the stream was again permitted to run in, and until this time the well has furnished an inexhaustible supply of excellent water. Whether the divining rod had anything to do with it, I do not pretend to say, but my experience goes to show that a well that is "set" by a water-finder, guided probably more by his own instincts than by the switch in his hands, is more apt to prove a success than when the spot is arbitrarily fixed by some one else. At any rate, that has been the case on our plantation, and as it is pretty large, there have been a good many wells dug on it first and last. So now we let people have their own way about it, for the same reason perhaps that we permit the old colored women to make soap "at the light of the moon"—because then their hearts are in their work, and they go about it in earnest. Still, in spite of all the wise ones say to the contrary, I can not help thinking there is something in the divining-rod not yet understood, for I have seen the switch move with my own eyes, and felt it with my own hands.

The "water-witches" were in great demand last summer. There was a severe drought in our section of Kentucky, the cisterns and wells were exhausted, and on our place water for the cattle became so scarce that two new wells were dug. The site of each was selected by a "witch," and good water was obtained in both instances at a reasonable depth. The divining-rod is selected from different kinds of trees in different localities; here any fruit-bearing tree is used though the peach, I believe, is rather preferred. The "witch" does not presume either to doubt his "gift," or to account for it: he simply accepts it. Neither does he appear to think there is any magic connected with it; most of them are men of little or no education except what they have learned from experience.

The divining-rod is still used in Europe for the detection of subterranean streams in times of drought, and the practice can be traced away back beyond the ken of historians; nor is its efficiency in finding water the only virtue attributed to it; for superstitious people have long employed it in ascertaining the position of silver, gold, and precious stones concealed in the earth. Mr. Fiske, the scientist, who has given the investigation of curious myths much of his attention, tells us that the divining-rod itself is but one among a large class of things to which popular belief has ascribed, along with other talismanic properties, the power of opening the ground or cleaving rocks, in order to reveal hidden treasures. In his learned way, he traces the origin of the curious superstition back to one of the many myths which owe their genesis to lightning, and claims that the forked streak of light is the archetype of the divining-rod in its oldest form. "Hence," he says, "the one thing essential to the divining-rod, from whatever tree it be chosen, is that it shall be forked."

MORE ABOUT LIME AS A "SOIL IMPROVER."

A. T. T., FRANKLIN PARK, N. J.—The article in a recent RURAL in relation to the benefits of using lime on some soils, is a matter of much interest to those who may have an opinion but who have not yet had much experience. The experience of the RURAL contributors covers a variety of soils, and therefore the reports given are all the more valuable. Lime has been extensively used in this vicinity for years, and many a farmer "points with pride" to his well cultivated and fertile fields, whose condition no amount of argument can convince him is not due to the free use of lime. The soils through this section are mainly of decomposed shale, in which limestone is an unknown quantity. They are red, and contain clay enough to render them sticky and tenacious to an unpleasant degree at certain seasons of the year. This red, porous rock lies within half a foot to four feet of the surface, and while all right during a season of abundant moisture, it is an unprofitable factor in a year of drought. Numbers of farms that were formerly overrun with wild blackberry vines and useless weeds, and which were either abandoned entirely or only farmed by starvation methods are now blooming evidences of the value of a new "sesame" that has unlocked the hidden fertility of the red fields and made them to blossom like a rose in the wilderness. Ask any of these farmers the cause of this change, and he will unhesitatingly answer—"lime." This radical improvement I am informed dates back for a period of perhaps 30 to 40 years. The staple business of these places has been that of furnishing hay for market. The yield has been good, and the Timothy offered for sale, commands the highest market price.

"How do you grow such crops?"

"I use lime"

"Nothing but lime?"

"Yes, I use all the manure I can make from the little stock I keep, and I sow lime liberally."

I mentioned this subject as a vexed question. With all this evidence of the value of lime about me, there would seem to be little doubt about the course to pursue in any contemplated treatment of my own ground. The trouble is this: for the past few years, perhaps five or six, the professional hay buyers—those with hay presses who buy as middle-men—insist that there has been a steady deterioration in the quality and a diminution in the quantity of the hay from these sections that formerly, or during the later periods mentioned, furnished such a valuable product. Lime is still plentifully used and the same quantity of manure is made and applied, but the result is not the same as formerly. The farmers themselves differ greatly in opinion as to the cause. Of course, the decreased revenue points unmistakably to some cause, whatever that may be. With these latter facts at hand, the use of lime to me is a vexed question. I have used lime at different times on different fields and in varying quantities. I have also used bone liberally. Now, why do I not in effect sow *lime* when I apply bone? Is not bone a phosphate of lime, and in applying bone, do I not also add to the application a quantity, and a useful one at that, of phosphoric acid, and in doing this am I not economizing in time, labor and cash All the advocates of lime admit the necessity of manure in conjunction with it, or if the *manure* pile is small, then they urge the use of some other form of fertilizer to supplement the shortage in manure. We usually sow 25 to 40 bushels of stone or unslaked lime per acre. This is first slaked with water and then spread broadcast either on sod for the following year's crop of corn, or on the corn crop shortly after planting. Its bulk is nearly doubled by slaking, so that 40 bushels become 80 bushels when applied. It is not easy or rapid work to haul and sow lime, neither is it inexpensive work. The price is about 13 cents per bushel of stone lime and it is admittedly necessary that manure or fertilizers must be used, therefore I do not see why I am not right and am not justified in expecting all the effects of lime in sowing either pure bone or a fertilizer whose base is largely bone, together with such manure as I may make from an understocked farm. What say others?

WHY NOT MAKE YOUR COWS PAY?

H. C. M., FAIRFIELD CO, CONN.—Prof. Roberts's statement in a late RURAL, that of the 1,534,000 milch cows in New York State seven-eighths are now dry, is true; 90 per cent. of the cows of this part of the country are so. How any dairy-man that can take a pencil and put two and two together can feed cows 150 days without any return is a mystery I am unable to explain; for I find it costs nearly as much to feed a dry cow as one in milk, to make her good for anything when she comes in; for what one saves in the meal-bin will be lost out of the hay-mow. I milk my cows nearly the year round. I cannot afford to let them run dry more than 40 to 60 days each, and every one must give a good flow of milk up to within 30 days of her time; otherwise she is too poor for me to own. I try to time my cows so that when one goes dry, I have a fresh one to take her place as nearly as possible.

Below is a statement of what my cows did in 1888. I do not expect them on a cold or stormy day to get shelter on the lee side of a stone wall, or to fill the pail from straw, cornstalks and hay too poor for market. I commenced 1888 with nine cows, some fresh and the rest two to nine months in milk; but all had calves some time in 1888. Through the year I bought a tenth cow, and I had her milk for two months in the latter end of her milking, and for two months when she came in fresh. I kept one calf with the dam until it was six weeks old, and sold it for veal, and a second until it was three weeks old. The rest were disposed of when seven days old; the cows also supplied all the milk, cream and butter consumed in a family of six persons, besides some milk and cream that were sold, yet I made 2,940 pounds of unsalted butter. Here are the figures:

Butter sold	$881.74
Milk "	9 35
Cream "	7.98
Calves "	22 40
	$921.47

BIG BUTTER BUSINESS.

G. W. H., ROCHESTER, MASS.—In answer to the RURAL'S inquiry regarding the number of pounds of milk required to make a pound of butter, here is my experience. I milk 12 grade Jersey cows. During 1888 the herd made 3,777 pounds of butter which was sold weekly to consumers at 35 cents per pound. Last week 177 pounds of milk made 11 pounds of butter, or about 16 pounds of milk for one pound of butter on an average of the whole herd. The milk from some of the cows would do much better, and I think that in a few years I can get from these a herd that will be a great improvement over what I now have. The plan to have cream weighed, will hardly work as it is raised under such various conditions. If raised by cold, deep setting, it will take more than two quarts for a pound of butter, whereas if it is raised in open pans or in the Ferguson creamer, and carefully skimmed, less than one quart will make a pound. I use the Ferguson Bureau Creamer and have used deep setting, and also the old method of open, shallow pans, and I am satisfied that about the same amount of butter can be made in all cases if the weather is favorable. Cream will rise no matter whether the milk is set three inches or three feet in depth, if the temperature is such that it will not sour in less than 36 hours. Still I think so well of the creamer that I would use it if I had to buy a new one every year.

SCOURS IN CALVES.

W. B. P., PRATTSBURG, N. Y.—Sometimes there will occur a case of obstinate scours among the calves either before or after weaning. The discharges may be light-colored, or dark and fetid. There will be dullness in the eyes and general wasting away. The best remedy I have ever found for this is from half-ounce to ounce bits of salt, fat pork according to age of calf, thickly sprinkled on both sides with ground, black pepper, and given twice a day as long as relished or until improvement is satisfactory. When I first decided to experiment with it in a case that had resisted various other kinds of treatment, I anticipated objections to the dose by the calf. To my surprise, after once getting the taste, the calf seemed to like it, and in the course of a day or two would stagger to me to seize the morsel from my extended fingers. In another case during the past season, after improvement was manifest, the calf would come from the opposite side of the field to me on seeing me with his medicine. The relish is lost when the difficulty is corrected. This remedy has been found adequate in every case in my experience. A slice of pork a half-inch thick is cut to proper sized pieces, covered all over with the pepper on a plate, and set within easy reach.

H. A. W., ERIE, PA.—I think the asparagus bed referred to in RURAL of Jan 19, must be of inferior quality and poorly managed, otherwise the family of four must be exceedingly fond of this delicacy. Several years ago I put out a bed 32 by eight feet, with two-year-old roots and the next season cut all we could use in a family of nine, and all were very fond of it. My only care of the bed was to cut the old stalks and apply a liberal amount of well rotted manure, the richer in nitrogen the better. Throw some loose boards or brush on the bed to hold the manure in place, leave the covering on until spring, then slightly fork the manure in, and so continue from year to year and I will warrant a family of four or 14 will get all they need.

What Others Say.

VALUE OF LITTLE THINGS.—Mr. J. H. Hale, of South Glastonbury, Conn, speaking in the Courant of the importance of "little things," instances a man who 15 years ago bought a farm in Connecticut for $8,000, paying down what cash he could and giving a mortgage of $4,500 for the balance. The general line of his farm operations has been the same as his neighbors', in addition to which he has been looking about the farm for brush to cut and stones to pick up, touching up the pastures with a little top-dressing here and there, gathering leaves in fall and muck in winter to add to his manure pile. With a good dairy, pigs and poultry, and a large fruit and vegetable garden, and with o her "little things" that can be picked up about the farm from time to time, he is marketing something in the village two or three days in the week all through the year, and thus always has cash to meet the daily expenses. A family of five have been well educated, the mortgage has been paid off, many improvements have been made on the place, and he is several thousand dollars ahead in money safely invested. His neighbors, who have only been able to just make a living, say that he spends too much time "fussing with little things," yet after all he has been "mighty lucky."

ANIMALS' PULSES.—In horses the pulse at rest beats 40 times, in an ox from 40 to 55, and in sheep and pigs about 70 to 80 beats per minute. So says Wallace's Monthly. It may be felt wherever a big artery crosses a bone. For instance, it is generally examined in the horse on the cord which crosses over the bone of the lower jaw in front of its curved position, or in the bony ridge above the eye, and in cattle over the middle of the first rib, and in sheep by placing the hand on the left side, where the beating of the heart may be felt. Any material variations of the pulse from the figures given above may be considered as a sign of disease. If rapid, hard and full, it is an indication of high fever or inflammation; if rapid, small and weak, low fever, loss of blood or weakness. If slow, the possibilities point to brain disease, and if irregular to heart trouble. This is one of the principal and sure tests of the health of an animal.

SAUNTERINGS.

IF you want the lowest-growing vines of any pea known to the R. N.-Y. buy the "Minimum" advertised in many catalogues. If you want a pea that will pay you for the planting and cultivation, buy some other variety .....

JAMES J. H. GREGORY says that the great mass of onion seed now sold in this country, is raised in California, and sometimes gives as good an onion as some strains of Eastern seed; but the onions do not always keep well.

MR GREGORY calls attention to the seed of the "New Queen onion," and also to the mammoth varieties. The seeds of these are

all, or about all, raised in Europe, and it is difficult to get seed of the "New Queen" that will vegetate much over 50 per cent., while those of some of the mammoth varieties are apt to fail in making well-formed, hard bulbs. It is better, as a rule, he says, to raise them from sets. In his experiment grounds, last season, where 46 varieties of onions were grown side by side, the great superiority of American varieties raised from home-grown seed was strikingly apparent.... .....

FORTY varieties of sorghum were grown at the Kansas Experiment Station. Those called Late Orange, New Orange, South Carolina Orange and Early Orange gave the highest per cent. of sugar.....

THE noted Russian writer Count Tolstoi, in his Sociology, as reviewed by the Christian Union, comes to the conclusion that for the evils of poverty the rich are responsible. They are responsible because they are evading God's law; "In the sweat of thy face shalt thou eat bread." The idle rich man violates this law, and makes other men provide bread for him. This is a curse to him, because it brings him and his children up in idleness; it is a curse to the poor, because it throws on them a double burden.....

THE Count says that the Russian preachers pretend to instruct in religion; but, in fact, they are wholly separated from the working classes, do not know their life, do not mingle with them, do not instruct them The scientific men are laboring with their intellects; but their labor is of small or no profit to the men who are battling with nature, and producing corn for lazy men to eat and wool for them to wear, and houses in which they may live.....

COUNT TOLSTOI'S remedy for all this is very simple. He would have us all become hand laborers. He would abolish the newly discovered and overpraised "division of labor;" he would have brain and brawn unite in the same worker. As the result, he would simplify life; return to natural conditions; scatter the denizens of the town in the country. Above all, he would have all brain workers recognize the fact that there is no possible way of serving society by mental labor without self-sacrifice.....

THE Editor of the Western Rural calls the attention of young readers upon the farm to the peace and safety they enjoy in what may sometimes seem to them a monotonous life. They are surrounded by no such temptations as abound in the city. They are living within their means and their conscience is clear. It is every one's duty to live within his income, and it is easier to do it on the farm than it is amidst the excitement and temptations of the city. ....

OUR respected London contemporary, the Live Stock Journal, does not believe that the "constitution," so to speak, of carefully bred, and suitably reared, domesticated animals *is* below that of their relatives in a condition of freedom. It no more believes the commonplace on this head, *i. e.*, about the unsound condition of our herds and flocks, than it does the conventional assurance of pedigree "Shorthorn cows which cannot give milk enough to rear their own calves".....

WHERE it is found (and in some cases it is found) that animals reared in a wild state survive hardships of winter or summer drought—when similar animals of domesticated origin succumb—the survival of the former is not really due to greater constitutional strength, but to intelligence more highly developed in certain directions. The bison survived the blizzard, while the ranch-cattle perished, not because it endured more cold or more privation, but because the bison retained certain traditional instincts—how to behave while the storm was raging, and how to seek food during the intervals .....

THIS inherited faculty the ranch-cattle never had; and this is what there is no means of communicating to them, the Live Stock Journal goes on to say. It is quite possible that an infusion of bison-blood *might* make the cattle in the Far West more clever at taking care of themselves in winter; but it is not in the least likely that a dash of wild blood (from any source), would make cattle and sheep more hardy for the purpose of meeting the difficulties of farm life .....

WEALTH, ancestry and brains are seldom combined in one person .....

DR WARD, a distinguished New Jersey fruit-grower, finds that the Minnewaski blackberry ripens with him as early as the Wilson. The plant is hardy and prolific, fruit large and sweet. Mr. J. H. Hale, the well known Connecticut fruit-grower, suggests, in the Hartfort Courant, that this blackberry being hardy in New England, is likely to prove to be the early sort for which they have been so long looking.....

THE AGRICULTURAL GAZETTE of London is authorized to state that Her Majesty, the Queen, has been pleased, as president of the Royal Agricultural Society, to express her intention of bestowing champion gold medals for the best stallions and the best mares exhibited in the horse classes, and for the best animals of each of the 15 breeds of cattle for which prizes will be offered at the Society's Jubilee exhibition to be held in Windsor Great Park next June In addition to the above, a gold medal will be given by Her Majesty to the first-prize winner in the champion butter-making competition to be held in the show-yard. These medals will raise the total value of the prizes offered in connection with this meeting to £12,000, or about $60,000.

A WRITER in the above journal, speaking of "chi led" p'ows, points out that notwithstanding the unblushing assertion of a certain Amer ican manufacturer, (the name is not given) instead of the invention having crossed the Atlantic from west to east, the passage was in the opposite direction .....

W. ATLEE BURPEE speaks very highly of the Red-caps. From four years' exper ence he recommends them as bo'h excellent, large and splendid table fowls. This breed has just been admitted to the Standard.. ...

PROF. COOKE (Vermont) believes that a dairyman should not be satisfied with anything less than 200 pounds of butter per cow per year, and that even that is too small. Don't have your standard at less than 200. In Vermont there are many dairies containing over 20 cows each that produce 300 pounds each per cow per year. If every dairyman in New Hampshire would weigh the milk of every cow he owns, both milkings, for a year, it would be found that one-third of the cows in the State were not worth keeping... .....

W. D. BAKER who, according to the Mirror and Farmer, received the first prize for butter from the N. H. Dairymen's Association, says that he believes in a cross of pure-blood Jersey and Holstein. The result will be rich milk and a good deal of it and an animal better adapted for the farms of New Hampshire than either of the pure-bloods.....

THE FARMERS' REVIEW says that the weighing system of live stock freight was put in operation January 3, by Kansas City roads. The rate to Chicago has been fixed at 27½ cents, and to St. Louis at 18¾ cents. Three sizes of cars have been recognized and a minimum weight fixed for each. For the small cars the smallest amount that can be shipped is 20,000 pounds: for the medium nothing less than 21,500 pounds, and for the cars 33 feet or more in length the minimum weight is fixed at 23,000 pounds. The Western roads have not yet fully fixed their rates, but will have the tariff prepared so as to follow the action of the other lines within a few days .....

LANDRETH & SONS record their protest against the name "Irish" potatoes, the plant being a native American found growing wild from Arizona to Chili.....

DAIRY WISDOM FROM AN INSTITUTE.—At one of the New York institutes it was said that silage or roots as aids to digestion were necessary to obtain the cheapest effective ration.

THE ration of Mary Anne of St. Lambert in her great butter test was given as 25 pounds of oats, six of oil-meal, 17 of pea-meal and two of bran. Fats in food all have to change in the animal to butter fats, etc. Many experiments were stated to have shown that the feed increased and decreased the yield of butter, according to the quality of the food.....

IT takes 3½ acres to keep a cow in New York State, and she gives 125 pounds of butter, on an average. With the silo one acre will keep a cow. One silo man now keeps 100 cows on the same ground on which he formly kept 25. The old way must go. Stowell's Evergreen Corn is best for silage. Cover with tarred paper, with little or no weighting. Silage if fed exclusively to milch cows will affect the milk. So will any other substance.

The cow giving most solids in her milk, and not the largest quantity, is the best. .. ..

HAIR and horn are made up of the same elements as milk, and the large t flow of milk is when the growth of hair is least. Breeds with large horns are small milkers, while small horns and fine hair are familiar characteristics of the noted butter breeds. Dehorning changes the disposition from cross or nervous to gentleness and quietness. The only function of the horn is as a weapon of defence.

ABSTRACTS.

—COLMAN'S RURAL WORLD: "Many newspapers are sent to men in the country whether they order them or not If these are taken out of the post-office from issue to issue, it is assumed by the publisher that the man getting them owes him therefor, and the law justifies him in exacting payment. "*This law affords opportunity for a most unscrupulous swindle and aids many publishers in the grand scheme of a circulation of hundreds of thousands.*"

—LONDON LIVE-STOCK JOURNAL: "It seems astonishing that well-bred British ponies do not command the attention of foreign buyers which they really ought to do. Some of the ladies of London society are the wives of wealthy Americans, and we all know that to have a beautiful matched pair of British ponies has always been the desire of society ladies in London."

—GARDEN AND FOREST: "The Revue Horticole records the fact that a nectarine tree at Montrouge, near Paris, bore the past season a crop of peaches, but no nectarines. This is not the first time that this has been observed, and it is not unusual to find an occasional peach among nectarines, a fact which seems to point pretty clearly to the varietal origin of this fruit."

—VERMONT CHRONICLE: "Nothing but his ruin, which is sure, will stop the career of a fast-horse fanatic."

—N. Y. TRIBUNE: "The sad fact is noted that while the cyclone often clears a man's land of house and barn, it has never been known to blow off the mortgage."

—A. W. CHEEVER: "The crying need of the Western farmer is more stock to consume his waste fodder. Beef raising pays something, but dairying, well managed, pays much better."

—LONDON AGRICULTURAL GAZETTE: "We can assure our readers that there is no more useful reading than honest narratives of successes won, unless it be equally honest descriptions of good intentions, which, for some cause or other have ended in at least temporary or apparent failure. There is an almost insatiable appetite for facts about farming."

—FARMERS' REVIEW: "There are dairymen who are now getting 40 cents per pound for butter and have plenty to sell; there are others who are getting but 20 cents and have very little to sell. The former have butter cows, fed with butter-making feed, the milk is set in deep cans in cold water, the cream ripened properly, tested with a thermometer before it is put into a revolving, dashless churn, the churn stopped when the butter granules are the size of No. 8 shot, the buttermilk drawn off and the butter washed and salted with brine, lightly worked, and exchanged for greenbacks at the rate of 2½ pounds of butter for a dollar greenback."

—"YOU will agree that it doesn't pay to handle a heavy hoe in the corn-field merely because it will be strong enough to grub with and has enough metal in it to sell for a few cents when worn out. But when you want to buy a butter cow you pursue a different course of reasoning; you hunt all over the country until you find a big, beefy animal, and you actually examine her beef points the first thing. If the beef points are all right you will buy her sure, as you, in your wisdom, look forward six or eight years to the day when you will sell her for old cow beef. And you carry the beef idea clear through your dairying, in your feed, in your treatment, in scant preparations for butter-making and in your rest during the winter. 'How do I know all this?' By the 20 cents you get for your pound of butter; by your saying that dairying doesn't pay; by your frantic efforts to raise a three-year-old steer, and then sell him for less than the cost, and by the fact that you are eternally sneering at 'fancy stock' and 'fancy farmers'"

Miscellaneous Advertising.

Dyspepsia

Does not get well of itself; it requires careful, persistent attention and a remedy that will assist nature to throw off the causes and tone up the digestive organs till they perform their duties willingly. Among the agonies experienced by the dyspeptic, are distress before or after eating, loss of appetite, irregularities of the bowels, wind or gas and pain in the stomach, heart-burn, sour stomach, etc., causing mental depression, nervous irritability and sleeplessness. If you are discouraged be of good cheer and try Hood's Sarsaparilla. It has cured hundreds, it will cure you.

Hood's Sarsaparilla

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100 Doses One Dollar

MAKE HENS LAY

SHERIDAN'S CONDITION POWDER is absolutely pure and highly concentrated. It is strictly a medicine to be given with food. Nothing on earth will make hens lay like it. It cures chicken cholera and all diseases of hens. Illustrated book by mail free. Sold everywhere, or sent by mail for 25 cts. in stamps. 2¼-lb. tin cans, $1; by mail, $1.20. Six cans by express, prepaid, for $5. I. S. Johnson & Co., P. O. Box 2118, Boston, Mass.

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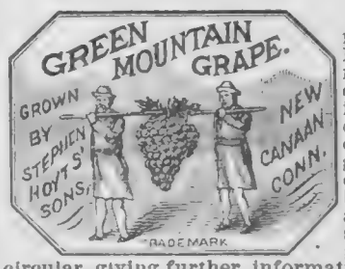

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SEED ANNUAL
For 1889

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THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, FEBRUARY 9, 1889.

BUCEPHALUS Brown presents a poultry eye-opener this week.

"*How any dairyman that can take a pencil and put two and two together, can feed cows 150 days without any return, is a mystery I am unable to explain; for I find it costs nearly as much to feed a dry cow as one in milk, to make her good for anything when she comes in; for what one saves in the meal-bin will be lost out of the hay-mow.*"—H. C. M., page 90.

THE RURAL NEW-YORKER for 1889, will be, as hitherto, invariably, $2.00 a year for single subscriptions, and $1.50 in clubs of five or more.

NEXT week's R. N.-Y. will be, in part, given up to a consideration of commercial fertilizers. Should any of our readers desire that we send this number to any of their neighbors or friends, we shall be only too pleased to do it. Send in the names.

"*Lime is still plentifully used and the same quantity of manure is made and applied, but the result is not the same as formerly. The farmers themselves differ greatly in opinion as to the cause. Of course the decreased revenue points unmistakably to some cause, whatever that may be. With these latter facts at hand, the use of lime to me is a vexed question.*"—A. T. T., page 90.

IT is suggested to R. N.-Y. readers that they do not order their seeds or plants of any kind until the publication of the RURAL SPECIAL, which will be devoted in great part to a consideration of the best of the new and old varieties offered by seedsmen and nurserymen. The subject will be treated by specialists fully competent to treat it in a comprehensive way.

"*Now with all the poultry journals, the poultry departments, the constant pressure of sanguine people into the business for years, pray tell me why, among all lines of country profit-seeking, poultry is the one only line that cannot be overdone?*"—B. BROWN, page 86.

IT has been provided in the bill making appropriations for the Department of Agriculture, that henceforth the free distribution of seeds, about which there has been so much complaint, shall be transferred from Congressmen to the National Experiment Stations in the various States. This is a step in the right direction, which has been earnestly advocated by the RURAL.

"*The greatest improvement that could be devised for a harrow would be an attachment that would make it impossible to use it off the farm, and thus prevent its being worn out by borrowing neighbors.*"—JOHN GOULD, page 86.

MR. LAWSON VALENTINE writes as follows:

"I do not know when I was so well pleased with anything in a farm journal, as with the articles in this week's RURAL on "Help." In my opinion, that is one of the most important questions to discuss, if not the most important. I have said for years that I would buy, on speculation, as many farms as I could find captains to manage, and I say it this morning seriously. I am going to read every word of the articles on "Help," and that is something I have not done for years, with articles on any other subject."

"*The experiment stations have demonstrated that a four-inch-wide tire will not draw as heavily in loose ground as a two-inch tire. I would suggest that some one of our manufacturers try a four-inch wide tire on a two-horse corn cultivator and separate the shovels so that they should work separately.*"—S. B. H., page 87.

AT present the importation of nursery stock from Canada is free, and although similar importations from the United States into the Dominion are also nominally free, it is charged that the Canadian authorities have already thrown such restrictions about the business and propose such regulations that the American producer is discriminated against, and the advantages of a free exchange are not reciprocal. It is suggested as a remedy that a duty be placed on nursery stock imported from Canada. Representative Baker, who represents Monroe County, New York, in Congress, is now in communication with the nurserymen of the country with regard to this matter, and is preparing a brief to be submitted to the House Finance Committee advocating protection for our nurserymen against any unfriendly legislation by the Canadian Parliament. One-sided reciprocity is no more relished by nurserymen than by the rest of the community.

THAT is a very remarkable report just published by Mr. Henderson, Commissioner of Agriculture for Georgia. In it he shows that during last year the farmers of the State paid only at the rate of 78 per cent. per annum interest, against 108 per cent. in 1887, and this reduction he attributes to the efforts of the Farmers' Alliance. He shows that the average cash price of bacon in Georgia last year was 9.71 cents per pound; while the credit price was 12.3 cents. The cash price of corn was 77 cents per bushel; the credit price 98 cents. The average length of credit was four months. The advance in price is about 26 per cent. for one-third of a year, or 6.5 per month, or 78 per cent. per annum. A reduction from 108 to 78 per cent. in a single year is quite encouraging, still isn't 78 per cent. a trifle high even for the South? Ten per cent. would startle an average merchant, and 15 per cent. would start him on a quick road to bankruptcy; but he has no conscience in charging the poor farmer over five times that exorbitant rate. After all, wouldn't it be better to borrow money, even by mortgaging the farm, and pay cash for supplies?

SANITATION FOR THE COUNTRY.

IN 1596 Sir John Harrington, of London, England, published a pamphlet which, under the cover of a biting satire upon things in general, contained the plans for a crude water-closet. Up to that time the pamphlet was the best argument in favor of house sanitation that had appeared. The subject was handled in such a way that Queen Elizabeth forbade the author from appearing at court, but the evils at which he directed his sarcasm were so evident and crying that it may be said that his volume fairly started the discussion of sanitary methods. While this discussion has had to do mainly with the wastes of large cities, of late years considerable attention has been given to the condition of country houses. The great increase of suburban residences has added to this interest, and many farmers are considering the advisability of adding water-closet fixtures to their houses. There is one point in this connection that demands attention. The system of washing wastes out of the house by means of a stream of water, is the cleanest and most convenient method known. In most country houses the water supply can be readily obtained and stored in tanks. But the water system carries with it a dangerous risk. There is no condition more dangerous to health than an accumulation of such wastes in the vicinity of the house. Unless the drainage is so perfect that such wastes can be at once removed to a safe distance, the water closet is a disease trap. The success of such fixtures in the city, is due to the fact that a vast capital can be employed to conduct a complete system of sewerage, through which millions of gallons of water run daily. In not one location in 50 in the country, can we depend upon a perfect drainage for a water closet. In the great majority of places the common earth closet is the best arrangement that can be devised.

RAILROAD BOND-VOTING IN THE WEST.

PROBABLY the most remarkable of the extraordinary powers conferred by the Legislatures of various States upon municipal corporations, is the authority to aid in the construction of railroads by subscribing to their stock, issuing negotiable bonds to pay their subscriptions, and taxing the inhabitants or the property within their limits to pay the indebtedness thus incurred. It has been settled by a long line of legal decisions, including several by the United States Supreme Court, that Legislatures, unless restrained by the State constitutions, have power to confer this authority on municipalities. Many of the charters provide that the latter shall not contract debts beyond a certain percentage of their valuation, or that they shall do so only upon certain conditions, and in some States this object is secured by constitutional amendments. Under such circumstances those who contract with any municipality, do so at their peril; for if the percentage is exceeded, or the conditions have not been complied with, they must suffer the consequences. It has even been held by several of the States and by the Supreme Court of the United States that this rule is applicable to bona-fide holders of negotiable bonds issued for value received, even where the holders live in distant States or foreign countries, and have had no means of ascertaining when the constitutional or charter limit of indebtedness was reached, or whether conditions of a local character were unfulfilled.

The wisdom of aiding railroad construction in this way is more doubtful than its legality. The policy has been followed much more in the West than in any other section, and in the early settlement of the territory it was justified by the growth of the country and the rate of increase in property valuation, due to the transportation facilities afforded by such inducements to railroad construction. In several of the States, however, it seems certain that the policy has been carried too far. The indebtedness in the form of railroad bonds outweighs the benefits from the construction of so many lines. In some cases, no doubt, where roads were likely to be profitable, they would have been constructed even if aid had not been given; but in a majority of instances, they were built for the bonds rather than with a view to make them profitable as regular business enterprises. In his recent message Governor Martin, of Kansas, speaks very emphatically of the evils of this policy in his own State. In that and in many others, frauds, corruptions and abuses have followed the granting of this power. There has often been a wide-spread belief that flourishing cities might be created almost anywhere simply by building railroads; and there has been an "epidemic of insanity" in running hopelessly in debt for such purposes. This has led to the bankruptcy of hundreds and the serious crippling of thousands of towns and counties, as well as to shameless attempts at repudiation of honest debts, resulting in unmerited financial losses to thousands of investors and financial dishonor to hundreds of municipalities. Isn't it time to take Governor Martin's advice, and call a halt?

A MOVE AGAINST THE DRESSED MEAT MONOPOLY.

THE Beef Producers' and Butchers' National Association proposes to have introduced into all the State Legislatures this winter, a bill requiring that all animals producing meat for human consumption in any State must be inspected there before they are slaughtered. This is a move against the Chicago dressed beef monopoly. Governor Martin, of Kansas, has just recommended such legislation, and the Legislatures of several States, notably those of Pennsylvania, Ohio, Kansas and Colorado, are seriously considering it. The opponents of the measure claim that it is almost entirely in the interests of the butchers and stock-yard owners who have lost nearly all their trade because Western cattle, sheep and hogs are now, for the most part, slaughtered in Chicago and other Western points instead of being shipped "on the hoof" to give employment to stock-yards and shambles in other parts of the country. These are not the only parties aggrieved, however, for the monopoly is just as bitterly denounced by range and other Western cattle-men who claim that while keeping up the price of meat to the consumers, it unduly keeps down the price of live stock to the producers. Moreover, the vast supplies of meat it sends to all parts of the country greatly depress the prices of local meat stock, so that in wide sections it no longer pays to raise cattle for beef. Probably the most weighty objection to the proposed legislation is that the courts are not unlikely to declare it unconstitutional, on the ground that it would interfere with interstate commerce, on which Congress alone can constitutionally legislate. It bounds the home markets by State lines, which, it is claimed, is contrary to the spirit of our institutions.

The advocates of such legislation insist that many diseases which render meat unwholesome can be detected only by close inspection of the live animals which supply it; that a proper regard for the health of the people places such inspection within the police powers of each State; and that, therefore, legislation to that end is not in violation of the National Constitution, and they point to the acknowledged constitutionality of the oleomargarine laws of various States in support of their opinion. They further charge that it is a notorious fact that large numbers of animals unfit for human food are constantly sold and slaughtered at Chicago and the other great centers of the dressed meat and canning business, and that the deleterious flesh of these is shipped to markets in all parts of the country. The dressed-meat men deny that they have anything to do with this business. They point to the fact that the Chicago Board of Health keeps three inspectors at the stock-yards all the time, who have authority to kill all live stock intended for slaughter for human food and to send their carcasses to the rendering establishments, if they are found unfit for human consumption. They show that the Live Stock Commissioners of the State have established a thorough inspection of the yards; that the State of Illinois has also stationed at the yards an agent of the Humane Society whose business it is to look after maimed and "downed" animals which may be unloaded from the cars, and to see that no unfit cattle are sold for human food; and that after inspection has been made by all these public officers, the slaughterers have inspectors of their own who reject any diseased cattle which may, by any possibility, have run the gauntlet of the other inspectors. Moreover, they demand the appointment of inspectors by the National Government, "to make assurance doubly sure." It is a fact, however, that both the producers and consumers of meat throughout the country are bitterly dissatisfied with the action of the greedy meat monopoly of the "Big Four," and State and, perhaps, Federal legislation must ere long check its exactions.

BREVITIES.

The R. N.-Y.'s notices and reviews of seedsmen's catalogues received up to that date will appear next week.

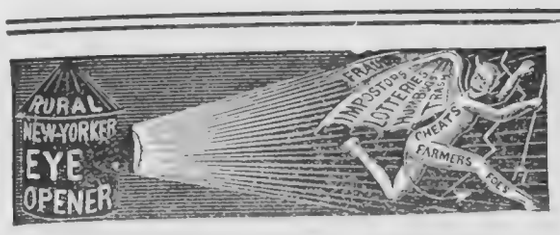
IT is with much regret that we learn that the large and finely equipped shops of the Moseley & Stoddard Manufacturing Company, at Poultney, Vermont, were burned on January 18. One ware-house filled with finished creameries and churns, was saved, so that for the present they can promptly fill all orders, and they have already made arrangements to continue manufacturing so that there will be no interruption in the business.

THE most thankless job on the farm—or anywhere else—is that of cleaning out the privy vault. We have done this job for the last time, we hope. We dug the vault out to a depth of five feet. It was then filled with stones and gravel. We shall never use the vault again. Large iron coal hods rest on the floor under the seats. A plentiful supply of coal ashes or sand will be kept constantly on hand in a box, to be used whenever required. A door at the back will enable us to remove the hods whenever it is necessary to empty them. We will have no more vaults.

OUR valued contributor E. S. Goff, of the New York Agricultural Station at Geneva, has been elected to take charge of the horticultural department of the Wisconsin Experiment Station, and also to fill the Chair of Horticulture in the University of Wisconsin, at Madison. While regretting that the New York Experiment Station is to lose the valuable services of Mr. Goff, we congratulate the University of Wisconsin on having secured them. Professor Goff is one of the most untiring and conscientious experimenters we know of.

THE bill creating a new Department of Agriculture has, for some time, been before conferees of both Houses, as they disagreed on some points. The conferees have just accepted the bill as it passed the Senate, and in a short time it will go to the President for his signature. It provides for the appointment of a Secretary of Agriculture who is to have a seat in the Cabinet, and an Assistant Secretary, who must be a practical farmer, together with other officers. The House wanted that the Weather Bureau of the Signal Service should be transferred to the new Department; but this has not been insisted on.

IN South Carolina there are two kinds of phosphate rock—river and land phosphate. In the European markets the former is preferred. In 1888, 190,274 tons of it were dredged from the beds of the rivers, and of this amount only 29,381 tons were retained in the United States. Of the land rock 259,330 tons were mined last year, and only 3,650 tons were exported. Though the soil of South Carolina is rather thin and sterile, her remarkable abundance of phosphate rock, besides rendering her own fields more productive, contribute materially to the fertilization of farm lands throughout the country. The State levies a tax of $1 a ton on the product, so that last year she obtained a revenue of $449,504 from this source.



THE BOHEMIAN OAT SWINDLE.

"I think that something about the Bohemian oat business has been published in some back number of the RURAL," writes a correspondent, "What is the character of the company?" The writer is evidently a new subscriber, otherwise he would know all about this swindle; for during the last seven or eight years, the Eye-Opener has vigorously denounced it and similar frauds at least two or three times a year, on an average. During that time upwards of a dozen "companies," with as many different names, have started in the Bohemian Oat "business" alone, in various parts of the country, and at least as many more in the Red Line Wheat and similar swindles. They flourished rankly in Pennsylvania, Ohio, Michigan, Indiana, Illinois, Iowa, and Missouri, and to a less harmful extent in Western New York, Wisconsin, Minnesota, and several other States, while the Ontario Grain & Land Company represented the swindle in Canada. A considerable number of really honest men were induced to take an interest in the various concerns at first by the plausible arguments of their promoters; but, as a rule, they were mere figure-heads, whose names among the directors, etc., were used to allay the suspicions of outsiders and to act as bait for gudgeons. The "agents" have always been the important factors in the swindles. Of late years, the fraudulent nature of the concerns has been so thoroughly exposed, and the losses they have inflicted on the public have been so outrageous, that no really honest man can nowadays lend his name to the frauds; though connected with them may still be found the names of some humbugs whose innate unscrupulous greed is hidden beneath a hypocritical garb of respectability.

The *modus operandi* of all the concerns was substantially the same. A circular glowingly set forth the extraordinary merits of the particular variety of grain handled by the company, while a list of its officers, often with bogus business ratings, bespoke confidence in the representations made and the promises offered. The agent, or a director acting as agent, sold the oats or wheat usually at $10 per bushel, though the figures varied from $5 to $15. Notes were taken in payment of the deot, and it was commonly agreed that they should not be transferred, and should be payable out of the proceeds of the crop from the grain sold. As an inducement to purchase, the company gave a bond to the purchaser, in which it agreed to sell for him the following year double the quantity he bought, and at the same price. As a rule, it was not difficult to sell on these terms, and hundreds of farmers, in various parts of the country, gave notes for $200 to $400 or more for the grain at, say, $10 a bushel. Sometimes the grain was sold only as a favor, on the ground that only a few could be selected in each neighborhood. Before the next harvest, the farmers' notes usually got into the hands of "innocent holders," to whom payment must be made. As a rule, the agent failed to call round at harvest time to sell double the quantity of grain as guaranteed, and in such cases the company's bond was always found to be worthless. To effect this a number of subterfuges were resorted to. In several cases, for instance, the company's constitution provided for an annual change of members, the old ones who had sold the grain going out at the end of the year, and the new ones—those who had bought it—taking their places, and assuming their responsibilities. Thus those who purchased the grain, *ipso facto* and without their knowledge, became, at the close of the year, the only members of the company and the only persons who were responsible to themselves for the performance of the promises the concern had made to them. In other cases, the contract or bond was so worded that the whole liability for damages came upon the agent, and he either disappeared, or was found to be entirely irresponsible, having no tangible property.

In some cases the agent appeared and sold the grain, on the same terms, to other farmers in the neighborhood, who were all the more easily gulled on witnessing the good fortune of those who had previously invested. The new buyers then became the losers next harvest, for it was very rarely indeed that the same game was played for three successive years in the same neighborhood. Frequently, however, the first purchasers really lost, even when their grain was sold for double what they had paid for it. In such cases, the agent nearly always retained 33⅓ per cent. for his share of the profits, and in many cases gave notes to the farmer for the balance, and, of course, these notes turned out to be worthless. Hundreds of thousands, yes, millions of dollars have been lost by farmers in various parts of the country by this swindle during the last eight or nine years. Ohio, Michigan and Iowa have passed stringent laws punishing all who may engage in such frauds by fine and imprisonment, and several of the other States either have already followed or are going to follow their example. All the reputable men who have figured prominently in connection with these swindles, have, without exception, lost in reputation what they gained in money. No man desirous of public confidence or of a reputation for common honesty should have any sort of connection with these concerns.

TO SEVERAL INQUIRERS.

The Eye-Opener has received several letters speaking in unfavorable terms of the Economy Shirt Company, of Pleasantville, N. Y. The gist of the complaints is that when money is forwarded to the concern, even in registered letters, the only acknowledgment returned is the official receipt for the money, and frequent letters to the "company" elicit neither the goods paid for nor any reason why they are not sent.....From all information the Eye-Opener can gather, the California & Southern Land Trust Company, of Red Bluff, California, and Cincinnati, Ohio, is one of those speculative land concerns with which no sensible man will have any dealings. The reputation of Southern California for such "enterprises" has of late years been fully as bad as that of Florida was a few years ago. No one should invest in land anywhere without having personally inspected it on the spot or got a trustworthy friend to do so..... The RURAL NEW-YORKER has refused to publish a lengthy advertisement for "The American Family" of this city. The concern advertises extensively that it will give away 50,000 genuine "solid gold" watches. Is it necessary to say any thing more about it, to induce sensible people to leave it severely alone? Even people who are not sensible may do so on learning that on visiting the address it gives in Fulton Street, this city, everybody there professed to know nothing about it .....The German Electric Belt Agency, of Brooklyn, New York, is one of those concerns which are better known at a distance than at what they claim to be their own homes. It is difficult, if not impossible, to find any one who will acknowledge he represents such concerns. The only address this "Agency" gives in its occasional advertisements in papers and frequent circulars through the mails, is a post-office box. Who ever heard of a reputable business concern giving a post-office box as its only business address? The only people who do so are those whose offices and ware-houses are in their hats; whose banks are distinguished by three gilded balls, and whose business is seldom properly stigmatized by those who fear the remote possibility of annoyance from a law-suit brought by people who never intend to prosecute it.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

A GOOD MANY of us will heartily indorse the remarks of our correspondent "Sweet Fern." Elaboration in serving is an impossibility where one woman has everything to do with the exception of such trifling aid as her children are able to give her. There should be a decent table cloth, if not a very fine one, and the table should be neatly set, for it is just as easy to put the dishes on in an orderly manner as to slam them on anyhow; further than this, a busy housewife cannot go. We like to see a growing plant or a bunch of flowers on the center of the table; but we never attempt this when setting for a lot of hungry men just in from work. It is rather apt to get in the way, and somehow it does not seem harmonious, though we have no doubt some clever writer could get up and prove that the rough men would not be so rough if they had the refining influence of flowers at meal-time.

* *

OF course, every woman would like fine and spotless table linen at each meal. But when one woman has to do everything for a household containing several working-men and a number of children, she cannot keep clean table-cloths without extravagant labor. In such case it is certainly advisable to use white oil-cloth for every day; it may be kept clean and neat, and is in every way preferable to soiled linen. Cleanliness is the first virtue of a good housewife, in our eyes.

* * *

THE "one small maid" is indeed an unattainable luxury in many country households; in fact as Mrs. Wager-Fisher noted, the lack of adequate help is one of the greatest trials a farm housekeeper suffers. In many country places it is impossible to get a woman even to do a half-day's washing; many a farmer's wife goes without help, not because she cannot or will not pay for it, but because it is impossible to find any such assistance. We personally know places within an hour's ride of New York, where there is only one woman who goes out by the day in each entire place, and she is apt to be excessively disobliging, because she knows her employers cannot get any one else.

* * *

THE childish treasures mentioned by our correspondent "B. H. G.," recall our own childish days, when we were encouraged to bring home any plant, flower, stone, moss, or wood, anything that would interest us, with the prospect of hearing all its history as soon as our mother found leisure. This leisure usually came on Sunday afternoon; after our regular religious instructions, we had a sort of object-lesson on anything we might have selected in this way. First, we were all asked to give our impressions of its appearance, which encouraged us to observe closely. We were told its uses, properties, etc., and as such discussions often called forth reference to foreign countries, we learned a good deal of geography, as soon as we were old enough to read for ourselves. We children would always hunt up in dictionaries and encyclopedias all the information possible relative to any subject we expected to discuss, the lesser ones being encouraged to ask all the questions they desired, not only relative to the object under discussion, but also concerning any other matter brought up during the talk. Our mother prepared for the subject as much as possible; when the matter was beyond her knowledge she hunted up authorities to give the needed information. A large amount of miscellaneous knowledge was thus obtained, relative to the science of common things, and we children always felt that our mother was interested in our treasures.

* * *

SEE how many things there are that children "want to know." Like James Watt, our first knowledge of the steam-engine was derived from the tea-kettle; one of our object lessons was on this subject. Then we learned something about insect wonders; about the caddis-worm, building his wonderful little house in the water; the beautiful dragon fly, which, before its gauzy wings came into being, was an ugly little water monster. We watched the tad-poles change from little tailed dots like commas, into portly and aldermanic frogs, and we were told all about frogs and toads, and all their relations. And no fairy tale could be more fascinating than the story of a lump of coal, from the time it was part of an old-world forest until it found a place in our coal-bin.

COUNT TEN.

"COUNT TEN, Tatty, count ten." These words came to my mind the other evening, but they were just too late to be of service. I knew quite well at the moment that I had spoken too hastily, and that in all probability I had been unjust, while if I had followed the rule given to "Tattycoram," and always counted ten before speaking when I felt irritated, poor little Bertie would have been saved a heartache, which I can never recall without a pang.

I had returned mentally and physically tired from a hard day's shopping for Christmas in the city. The tedious waiting at the ferry, and the over-heated and over-crowded cars had left me with a nervous headache, a trouble which I seldom plead guilty to, and to which I was trying not to succumb.

Bertie met me at the door with the cleanest of faces, with his bright curls so smoothly brushed, and with such an unusually subdued manner that but for my aching head I would have suspected mischief. There was none of the usual curiosity regarding my packages, but such a gentleness of demeanor that I stroked his sunny curls, and asked "How is mamma's little Lord Fauntleroy?"

"Please come in the parlor, I have something to show you," said Bertie, and following him there, I saw my favorite lamp shade, the costly gift of a friend, in fragments. "What a naughty, careless little boy!" I began, and without trusting myself to say another word I returned to the dining-room. A few moments later my husband, all unconscious of the tragedy, entered, made much of Bertie, asked him if he had been lonely, and if he was glad we were again at home. I saw the little chin quiver under his papa's caresses, and I began to appreciate something of how the little heart must be aching at the prospect of disclosure which he supposed would follow. Waiting until he had finished his supper, and gone into the sitting-room, I related the catastrophe. Without a word, my husband, in the brighest and cheeriest of voices, called Bertie to him, and taking him on his knee, praised him for having at once and unasked, told the truth about the accident, and in his gentle way drew from the broken-hearted child the story of how he "wanted to help Bridget" by beating the dust out of the parlor furniture, and of how he had "axindentally" hit the shade with the broom-handle; nor did his father let him relinquish his seat until smiles had chased away the grief from his poor little face. Had I lost my little boy that night, before I had had time to assure him of my full forgiveness, and to make him feel in some way that it was the headache, and not mamma that had spoken, I should never have forgiven myself. Bridget told me the next day, that after the accident he sat with folded hands, unable to play, or followed her from room to room to ask if she was quite sure that the four dollars from his bank would be enough to pay for it. "I was that sorry for him, mem," said the kind-hearted girl, "that I could have cried."

I have had my lesson, and I think I shall never again allow myself to speak even the slightest word of reproof until I have taken time to think. A wise man when asked his secret in educating his children, replied: "I have always found it desirable to be a little deaf, a little dumb, and a little blind." If you are given to hasty speeches, it is well to be a great deal dumb. PALMETTO.

A BIT OF A PROTEST.

NOW, please don't all of you put me down as a grumbler, for my feelings are not those of one. I have no doubt Palmetto is sincere in implying that meals should always be served in courses. "'Tis a consummation most devoutly to be wished," but how it is to be accomplished by any except a very few of your readers, is more than I can tell. Judging from the prevailing style followed by writers in agricultural papers, it might be supposed that nearly every farmer's wife had an abundance of help at her command: when it is a fact that even the proverbial "one small maid" that we hear so much about is almost unheard of. The other day I read in a farm journal that, as a useful present, the children might make a fire-screen for mother, to stand before the fire when she went to the kitchen to superintend the cooking!

I live in no uncivilized region, but where people have plenty of books and papers and many luxuries—some of their children enjoying a college education, but "really and truly" I know of only one or two farmers who keep a hired girl, unless in case of sickness. A very few hire their washing done and a few days' work a year. I have no reference to "gentlemen farmers'" but to "ye who till the stubborn soil and labor all day through." You don't see anything in all this about serving meals in courses and hired girls and "superintending the cooking?" When one woman does the work for from three to seven persons, keeps the house, bakes and cooks, washes and irons, makes the butter, takes care of the poultry, washes the dishes, and, in the odd minutes, mends and sews (and is a faithful mother many times beside,) how, in the name of common sense, is she to serve her meals and do many other things as she could, (and no doubt would,) if she had plenty of well-trained help at her command? Misused are these women, drudges, overworked illustrations of "the dark side of farming?" I think most of them would smile if they heard you say so. They would tell you that they work no harder in proportion to their strength than do their husbands.

I think I could suggest a method by which that well-bred gentleman who refused asparagus unless served alone, could tolerate it, viz: if he arose at four o'clock or soon after, did chores till breakfast was ready, got in the field as soon as it was light, and then worked till noon. I guess after such a course he could eat anything that was well prepared, especially with the prospect of going back to his work in an hour or less and continuing to toil till supper-time and then do chores till after dark. This steady hard work we farmers and farmers' wives enjoy is a glorious thing for an appetite.

Now, dear sisters, keep the house clean, prepare food in as acceptable a manner as possible; but remember this is only the foundation of a happy home, and all the rest depends greatly on you. It is a duty you owe to your family to be pleasing and interesting; how can you be so, if you are tired out body and mind, troubled with much serving?" I know that if one lives on a farm, there is much hard work; but with proper manage-

ment there is always some time for rest. Make the most of this and learn to do your needful work in the quickest and easiest manner.

"SWEET FERN."

CHILDREN'S TREASURES.

HOW little a thing will make children happy. Their treasures, though valueless to older, world-weary eyes, are as real to them, as our most precious possessions are to us. How carelessly we pick some dull common stone from the mantel and throw it out of-doors, with an impatient. "Oh, dear! Who put that there?" And presently one of the children will run to the mantel, and then we hear a wail of woe. "Who has thrown away my pretty stone I got out of the brook?" Sure enough, back to those long ago child hood days go our thoughts, when we too picked such pretty stones out of the brook, as we paddled bare-foot, listening to the gurgle, gurgle, of the waters as they ran in and out between the rugged banks.

I hope you all have a memory of just such a happy childhood as mine—of days when mother gave you a little lunch, perhaps it was only a slice or two of bread spread with good, sweet butter made by her own hands and you went with some favorite cousin or sister or brother to the grove where the brook ran noisily through among the trees, and sat on the soft green moss, and listened to the birds singing, and climbed the low-branched trees, and made swings of the hanging grape-vines, and came home tired and happy, laden with treasures, precious in your childish eyes. And if your mother was as sympathetic as mine, she rejoiced over them, and listened to all your little raptures, and romances over those squares of lovely green moss, perhaps two or three graceful ferns, a shell house of some defunct snail, a handful of stones or a curiously shaped stick. Oh! joyous childhood days! Though departed, still green and fresh in memory, who would not live them over again? If we cannot live them again, let us pay the tribute to their memory of giving to our own little ones just such days.

Mothers don't be over nice. If the boys' pockets run over with precious stones, let them have a box somewhere into which they can empty those pockets, even if it stands in a conspicuous place. It is better in my opinion to bend to a little disorder than to wound the childish feelings. My little seven-years-old son had a box all summer, just inside the door of my bed-room that opened off the dining-room. There was no less conspicuous place to keep it in, and although it jarred on my sense of order to see pieces of paper, strings, stones, buttons, nails, pieces of leather, etc., lying on the floor, thrown there by careless little hands, I picked them up, emptying the box from time to time of such articles as would not be missed. I kept a piece of carpet to throw over the box when I wanted the room to look very tidy. Such little indulgences will keep the little feet from forbidden paths. The boys will not want to keep bad company if home is pleasant and if their early training is pure. Presently when these little ones are done with "earth and earthly things," these little gems bathed in the water of life shall shine with an immortal radiance that shall never fade or grow dim. And in the house where there are many mansions they will be kept by the Father's hands, not thrown aside as worthless pebbles.

B. G. H.

SMOKING IN PUBLIC PLACES.

I AM writing in a smoking-car on a "limited" train on the Hudson River Railroad. The passenger coaches are crowded and I was compelled either to stand or go into the "smoker." I am not quite certain that I have by coming into the smoker chosen the lesser of two evils. The point I wish to bring out is this: why should a whole car needed for regular passengers, ladies and children, be set apart to accommodate, say, a dozen men whose filthy habits cannot be tolerated by the other passengers? What is true of trains is true also of other public conveyances. The "gentlemen's" (?) cabin on our local ferryboats occupies one half of the boat and is seldom if ever half filled, while the ladies' cabin is crowded to repletion. During the busy hours of travel, ladies and gentlemen are compelled to stand while the smokers have one-half of the boat to themselves with plenty of room and a choice of seats. There is, however, something providential in this, for they would suffocate in the foul air of the smokers' cabin if they were crowded in as they are on the ladies' side. Perhaps, properly considered, the enforced separation of men from their fellows may be like imprisonment, a sort of punishment for their filthy habits, but very few smokers look at it in this light. It is an ethical principle that no man has the right to do things which interfere with the happiness and comfort of his neighbors, yet that is precisely what those who smoke in public do.

How common it is to see a husband and father leave his wife and children in the ordinary coach while he goes into the smoker for a "quiet smoke." After a time he comes back polluted with the foul odors of the "weed" and makes his family and neighboring travelers miserable for the rest of the journey. If men must smoke, their isolation should be complete and they should not be permitted to offend others with the disgusting effluvia resulting from their detestable habit. The time is coming and I hope is not far distant, when the notice occasionally seen in public places will be the rule everywhere: "*Gentlemen will not smoke here, others will not be allowed to do so.*"

J. H. G.

GOLDEN GRAINS.

THE UNITED PRESBYTERIAN says an honest life is always the best one. Many men who would scorn to defraud even to a farthing's worth are dishonest towards themselves, and live in perpetual treachery to their consciences.... .....

LYTTON says that anger ventilated often hurries toward forgiveness; anger concealed often hardens toward revenge.....

YOU must work, says Goldsmith; nothing is to be got for nothing, and no man who chooses to be industrious need be under obligations to another, for labor of every kind commands its reward.....

INGELOW says there is nothing so sweet as duty, and all the best pleasures of life come in the wake of duties done.....

OUIDA says that where we love much we always forgive, because we ourselves are nothing, and what we love is all.....

NOTHING is so flattering to the feelings of a man as the exhaustless and quenchless regard of a sensible woman, and no incense so rich can be offered upon the shrine of a woman's ambition as the avowed and enthusiastic affection of a man of genius .....

ONE day a little girl about five years old heard a preacher praying most lustily, until the roof fairly rang with the strength of the supplications. Turning to her mother and beckoning the maternal ear down to a speaking place, she whispered: "Mamma, don't you think that if he lived nearer God he wouldn't have to talk so loud?".....

IN Norwood, Beecher says that fretting is a perpetual confession of weakness. It says, "I want to and can't." Fretting is like a little dog pawing and whining at a door because he can't get in ....

TALMAGE doesn't quote much, and yet he believes in it. He advises writers to quote from all directions. It is a compliment to have breadth of reading so as to be able to quote. But be sure to announce it as a quotation. Ah! how many are making a mistake in this thing; it is a mistake that a man cannot afford to make. "Four commas upside down—two at the beginning of a paragraph, two at the close of the paragraph—will save many a man's integrity and usefulness."....

A STORY is told of an old preacher who applied at a farm-house for lodging. The sharp old lady who came to the door refused to take him in. He asked her if she knew what the Bible said "Be not forgetful to entertain strangers, for thereby some have entertained angels unawares."

"You needn't quote Bible," said the old lady quickly; "no angel would come down from heaven with a quid of tobacco in his mouth as you have." The door was shut and the preacher unhitched his horse and rode away in the rain.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

NOW IS THE TIME.

AS I was waiting for a car at the corner of a street some time since, I heard the following dialogue between an old man and a lad. The lad, shabby and dusty, with his hands poked far down into the depths of his pockets, stood kicking the curbstone with the toe of his well-worn boot as the old man approached.

"Hey, lad," said the latter, "what ar't doing 'ere? Thee hads't better be to work than standin' sunnin' theesel'; don't thee think so?"

"Ain't got no work to do," growled the lad. "Times is dreffful hard."

"Does thee expect the work to come along and find thee?" asked the old man.

"Naw," replied the boy, giving the curb a harder kick than usual, "but 'tain't no use lookin': I've looked everywhere, but there ain't no use—they ain't no room fer boys any more; might jest as well loaf as not."

"How old be ye?" asked the old man.

"Fifteen," replied the lad.

"Fifteen!" said the old man slowly "and givin' up a'ready, where does thee expect ter end?"

"Don't know, an' don't care much; what's the use anyhow?"

The old man began to give the lad some good advice; but as my car was coming, I did not hear exactly what he said; only I did hear him telling the boy how he regretted wasting his boyhood. This set me thinking, and these old familiar lines crossed my mind as I moved along—

"Never mind the crowd, lad,
Or fancy your life won't tell;
The work is a work for a' that,
To him who doeth it well.

"Fancy the world a hill, lad,
Look where the millions stop;
You'll find the crowd at the base, lad;
There's always room at the top."

Yes, there is always room at the top; but how many of us get there! If we waste our early hours of youth, if we let the morning of life go by without an effort, without doing our very best, we may be sure that, we'll never stand on the highest point of the hill-top. So many of us want to do something great and noble: want to be a success in life; but, while dreaming and longing for the crowning time to come, we are letting the golden hours of the present glide by unheeded. Like Wilkins Micawber, many of us are 'waiting for something to turn up;" but, nine times out of 10, it never will turn up, unless we go to work and turn it up. *Now—the present time*—is all we are sure of. There may be no future for us, so let each of us do our very level best to-day. Then, when all the "to-days" of our life are summed up together, we will find we have done our best always.

To be sure all this is more easily said than done: that I know by sad experience, but, if we made a mistake yesterday, or make one to-day, we should be sorry for it of course, and try to remedy it if possible, but we should not think that because of it, we must give up. Each should just say to himself, "I'll never do that again," and each day be sure that he does not

Sometimes the tasks awaiting us seem so many that they overwhelm us. It seems as if we could not do them all; well, we cannot—all at once. Take one at a time, beginning with what seems to you to be the most important; do it to the best of your ability; then go on to the next. A dozen things *half* done won't pay. Better do what you do *right*, rather than rush from one thing to another and have a lot of unfinished things on your hands.

There! What a sermon I've preached! But I *do* wish I could impress on the boys and girls what an important thing it is to do our best *always*. Have I done it? Oh, no! That is why I am so anxious to have you begin. I've begun, too. Maybe my best won't be as good as your best, but, if it *is* my best, it is all that I can do.

The New Year is young yet, and I hope each boy and girl (as well as men and women) will see if they cannot make a better showing when 1890 dawns, than they did with the opening of 1889. DORA HARVEY VROOMAN.

HOME-KEEPERS.

SINCE J. H. G. has such really sound views on home-life for women as far as he goes, and has so evidently studied his subject up to a certain point, it seems a pity that he should not go further, and give helpful hints as to the solution of this problem that confronts: the "proper" support of the "women folks," of whom there is a great preponderance. Of the causes that produce this result we'll say nothing—we will leave that to the medical scientists—but we'll speak only of the facts as we find them. That can, perhaps, best be done by referring to life histories about us. Here is one:

Years ago there was a family consisting of father, mother and three grown daughters, well-to do, fairly intelligent, reasonably healthy. The daughters were carefully trained in housewifely duties; but taught also that it was not proper for women to know much of anything else, except a mere smattering of *accomplishments*, so called. Only one matrimonial offer presented itself; that was from the last son of a dissipated father, but was eagerly accepted by the youngest and prettiest of the trio, for "mustn't she have a home of her own, and a husband to support her? And maybe she'd never get another chance." A few years later the father made some unwise investments, lost most of his property, and died. The brother-in law who according to the legends, should have been a tower of strength to this helpless family, proved but a broken reed intent only on getting possession of the scanty portion left for his wife. This he soon spent, then left her to support herself and three children as best she could. Her knowledge of anything but a housewife's duties was too superficial to enable her to earn a living. No family would employ a housekeeper who brought three children with her, nor would the wages paid secure board and clothing for them. Nothing was left but an orphan asylum for them, and kitchen service for her, delicately reared though she was, or starvation; for hunger knows no sex, nor is death a respecter of persons. Perhaps one thinks her mother and sisters might have aided her, but as they knew nothing of "business"—that "would be so unfeminine, you know"—the small property left for them mostly disappeared as agents' and lawyer's fees Later, one of the sisters inveigled an elderly widower into the noose matrimonial, and entered his home already occupied by two "home-keepers," a widowed sister, and an unmarried daughter, for whose support the ex-widower's salary was sadly inadequate. The mother and remaining daughter still live in a tiny house on one corner of their original estate, subsisting partly by doing plain sewing, and partly by the charity of their neighbors; nor do they think, even, of doing such man's work as bee-keeping, poultry-raising, or vegetable growing, though there is with their house, a bit of land well adapted to such purposes, and they would be healthier and happier in out-door work.

This is a forcible illustration of J. H. G.'s method of training women to be "home-keepers," as I understand it. Surely these women did not "compete with men in their occupations, and so lessen their wages, and the demand for services."

Now here is another picture: Two friends—teachers—have been house-keeping together in a modest way for years. Both are "spinsters of uncertain summers"—one of necessity, as she frankly admits than no man ever proposed marriage to her—the other from choice, she having turned away two suitors with the curt remark that she "knew that neither health, nor her temper would bear the strain of domestic life of to-day."

These women, thinking as does J. H. G., that "there are too many unkempt children in our streets for the safety of the nation," propose to do their part toward the betterment of things by adopting a couple of waifs, a brother and sister, clothing, and educating them, and giving them such home training as is possible under the circumstances. Before this time, they, being thrifty women, and very economical, had "put by a bit for a rainy day," though of course their salaries were much less than those of their brother teachers beside whom they worked daily. So far the experiment of combining housekeeping, school-teaching, and bringing up children seems to work well. The children are vastly improved both in manners and morals, and seem in a fair way to become respectable citizens. The boy has a taste for drawing, which is encouraged, as, if he has talent enough, 'twill make his living by and by. The girl has a fondness for whittling and for driving nails, and that is also encouraged, for, say these guardians, "women must eat, drink, and be clothed as well as men. Our girl may find that ultimatum of human happiness, a happy, prosperous home and may not; but equipped with so good a bread-winning trade as a wood-worker's, she is ready for emergencies in either single or double life." In one respect these children are trained just alike, for these self-appointed protectors believe in men's rights, as well as women's rights. Both are taught to keep their rooms tidy, to sew on their own missing buttons, to sweep and dust, and otherwise help in doing the housekeeping that is all done out of school-hours. That boy, at last, will not need to say, as Horace Greeley is credited with saying, that if Mormonism, including a plurality of wives, ever became fashionable in the East, a man should certainly have one wife on purpose to sew on buttons

If we believe in a Creator, we can't, of course, think there are any "superfluous

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

women." Whether or no "marriage is a failure," a large number of women in this Empire State, alone, can never enter the married state, for the very simple reason that there are not partners enough to go round. [Of the 5,082,871 people in the State in 1880, according to the last census, 2,505,322 were males, and 2,577,549 females, so that there was a preponderance of 72,227 of the latter. There has been an increase since in the number of both sexes; but the proportion has remained almost the same.—EDS.] Of the fitness or unfitness of many of both sexes to enter this latter state, this chronicler saith nothing, leaving that to the moralists and reformers on various subjects. The only question herein considered is the bread and-butter question. The average man's salary will not support the quota of women who, as sisters, sisters-in law, maiden aunts, etc., will be dependent on him, if all are "home-keepers" only, though Miss Alcott did say that "it takes three women to get every man into, through and out of this world." Congress would surely have to make appropriations to maintain many of these seminaries of "home keepers;" for house rent, fuel, and lights, food and raiment, church dues and society's demands for a houseful of adults, cannot be met by just making home pleasant, however important for the good of the country that work may be. The extreme pleasantness of any home may be questioned, perhaps, in which from three to six "home keepers" make it their sole business to tinker at the household machinery. It would be as if as many engineers of the masculine gender were trying to run one rail-road engine; one would open the valves to go faster; another close them to slacken speed, the third would want to stop at every station, the fourth wouldn't want to stop at all. etc, etc., and none of them would earn "board wages."

"POSTSCRIPT."

THE CHILDREN OF THE FARM.

THE frequent repetition of the question "Why do the boys leave the farm?" goes to prove that it has not been satisfactorily answered. Perhaps no two boys leave their old life for exactly the same reason. Still there are some general principles at work to that end, the correction of not a few of which depends on the farmer himself. Quite frequently the evil influences of forces far beyond his reach may be kept out of his own circle. He cannot control or banish the speculative epoch through which the world just now is passing, but he can take up the attention of his sons and daughters with healthier interests. But he so often feels that his power is so small beside this mighty enemy that it is not worth while to try the contest. He is discouraged just, perhaps, as you, dear readers, are at this moment. But you must conquer that weakness. Don't think about your strength, but about the object you are trying for. Is that small? You must depend upon yourself, and the sooner you wake up to this, the better. Take the children in hand and teach them to love the world around them. Nature is the best corrective for such unnatural development as dreams of "idle splendor" in her creatures, and where is Nature stronger than on a farm? Here on the start you have a powerful ally.

Hardly less in power, if rightly utilized, is the cabinet collector's epoch. With some encouragement and help, the young children may be led to gather seeds; to study and label them, taking them not only from the grains bins but from the weeds as well. Indeed such study among the older members of the farmer's family might often prevent the ignorant sowing or scattering of some noxious weed. Then let them take the different kinds of forest wood, the bark, the leaves, the flowers, and fruit and study well the use and properties of each. Then let them try the stones and various kinds of soil. There is no place where so great a variety of studies can be applied as on the farm. Chemistry, geology, botany, philosophy (at least mechanics,) and many other sciences and arts come into almost daily use with the farmer prepared to use them.

As the children grow, share the responsibilities as well as the labors of the place with them. Give each one something of the common product for which to be responsible, and thus early teach all to feel that every one has duties, on the performance of which other people are dependent. Give to one the garden; to another the yard; to another the potatoes, etc. It is well to give each one a patch of land to do with as he or she pleases; but give each one some share in the common stock as well, increasing the share and extent of responsibility as fitness for it warrants. Be watchful yourself, but let it always be in a spirit of genuine interest, not from lack of confidence. Be ready with advice when asked for or absolutely needed; but in the latter case, remember that experience is a pretty thorough teacher.

If your boys see that you are willing to consider the advice of others and read that given in some good agricultural paper, they will feel the freer to come to you while you will be the better able to assist them.

If you can influence a neighbor to let out a portion of his farm among his boys, so much the better for your own. A friendly competition will be pretty sure to follow.

Nor are the girls to be forgotten in these plans. Give them something aside from the usual household drudgery so that they may also look for some returns besides the return of their tasks.

Use your leisure hours in keeping up with the times. Don't give your children chance to feel that to become a farmer means to retire from all the outer world. Youth paints all walks of life in brilliant colors and loses interest first in that which seems diverging farthest from the rest.

Don't always talk of the work on a farm never being finished. This saying is no truer of the farmer than of the true man everywhere whose work is only finished with his life. Avoid unnecessary shadows in the farm picture, but don't wholly evade comparisons with other occupations if others bring them up, as any child might suppose that in that case, you thought farming would appear to disadvantage.

Encourage originality and let your children see that as yet the room for advance is limitless. Thus by always keeping them employed with business of their own, you can tide them over the most fickle portion of their lives, at the same time teaching them self-control as well as self-reliance and making themselves into true men and women. Then those whom Nature meant for farmers will be true to her decree, and it is only those we wish to keep; while those who have some other mission to fulfill, experience has proved, will the more readily find their true calling and be the better fitted for it by the broad and generous natural education every intelligent and observant farmer must acquire.

WILDER GRAHAME.

A LIBERAL EDUCATION.

"IT is an inspiration to go through Mrs. D—'s house, and a liberal education to see her sweep and dust a parlor," said a friend, speaking of a mutual acquaintance whom she had just visited. "You see she takes the best household magazines, and profits by what she reads; in short, she *does* the things which you," with a glance at my inky fingers, and a merry laugh which robbed her words of their sting, "which you *write* about."

I looked at the ink-stains, and then at some rather dusty bric-a-brac, with a sort of *mea culpa* expression, but since I have reflected on my friend's words, I have come to the conclusion that if I am helping to make good housekeepers I am perhaps doing as much good as if I merely ministered to my own pleasure and sense of neatness by keeping my shelves and vases immaculate. In my own secret heart I know that I can sweep and dust a room as well as Mrs. D—only sometimes through stress of other duties I delegate those duties to Norah, with strict injunctions to let every breakable article severely alone. Still the readers of the RURAL are entitled to the best that I can give, so with the modesty which is a well-known attribute of my profession, I shall step on one side, and tell them just how Mrs. D—proceeds to sweep and garnish her house.

First, she arrays herself in her sweeping apron, three breadths of light print gathered on a band, and descending to the bottom of her morning dress. Next she dons a white muslin mob-cap, from which her sunny little curls escape here and there in the most bewitching manner. Lastly she draws on a long pair of wash-leather sweeping gloves, for a daintier little lady never wielded a broom, and her pink palms, and rosy nails never bear about them a suggestion of housework.

Being ready for work, Bridget is now summoned, and the heavy cushioned arm-chairs, sofas, and lounge are carried to the wide veranda where they are well beaten; tables and lighter chairs are dusted and taken into an adjoining room; rugs, large and small (there are no carpets) are also taken to the veranda, and subjected to a thorough sweeping on both sides, those that are not too heavy for Bridget's stout arms are thrown over the clothes-line and thoroughly beaten. Meanwhile our pretty housekeeper is industriously dusting and placing on the tables in the next room many precious bits of porcelain and pottery. Next, the book-cases all of which are open, are dusted, the shelves being emptied one by one, wiped with a damp cloth, and the books dusted and returned. These articles of furniture are then pinned up in dusting sheets. Portiéres, and curtains are lifted down, carried out-of-doors, shaken and laid on one side. The floors are then swept after which the picture-frames are dusted, and the glass washed and wiped; paint is wiped, not forgetting the tops of the doors, and windows are polished. The highly polished floor is then washed with warm water and now to bring order out of confusion it is only necessary to replace the already dusted and cleansed furniture and ornaments, and our education is complete.

PALMETTO.

BREAD FROM ENTIRE WHEAT.

In answer to an inquiry as to making bread from the entire grain, we cannot do better than republish the directions given by Alice Brown in the RURAL of March 31, 1888.

At night, one quart of sweet milk is heated to the boiling point and one teaspoonful of butter (or one half pint of sweet cream) two table spoonfuls of granulated sugar, and one-fourth tea-spoonful of salt are added, stirring them in well. When cooled to blood heat, a small quantity of any good yeast is stirred in, and flour enough to make a thick batter. Set where it will keep warm over-night. It is made into a stiff dough in the morning, when light, molded into loaves, raised again, and baked in a steady heat. The loaves we enjoyed were baked in one-quart fruit cans from which the rims around the tops had been removed, and but a pint loaf was necessary to fill the can, when raised, even then puffing above the rim.

EXTRACTS FROM PRIVATE LETTERS.

Amen! Amen!! Is what I want to say to Leila S. Tavlor's views on "Civil Government in Schools," and to the review of Dr. Lucy Hall's lecture on "Sanitation in the Country." One reform is almost as much needed as the other.

The millennium must be nigh when a "lord of creation" can write such an article, as did Mr. Terry, on Woman's Rightful Position, in the RURAL of Jan. 19. And the Editor endorses it! Well, well, I wish my grandfather could have lived till now; probably tho', he'd wish he *had* died before these *degenerate* days came.

MISS E. B.

As to Charity's "Reveries," the shoe doesn't pinch me. Thank Heaven! I have a wife who cares more for *my* well-being than for a dozen "blots." If necessary, the work incident to slaughtering could be done in the kitchen and she would cheerfully clean up, even if I did not.

G. H. S.

Don't omit the Sunday Evening Talks too often—they deal with such *practical* religion.

MISS E.

HAM AND POTATO CROQUETTES.

One cupful of finely chopped cooked ham, one of fine bread crumbs, two of hot mashed potatoes, two beaten eggs, a spoonful of melted or soft butter, pepper and salt if needed. Mix thoroughly together when somewhat cool, shape into oblongs, roll in a beaten egg then in cracker dust, put into a wire basket and plunge into hot fat. Cook about two minutes. Drain and send to table at once.

TAPIOCA PUDDING.

Soak a cupful of tapioca over-night in a quart of water. In the morning drain off any water left, put the tapioca and three pints of milk into a double boiler and cook 45 minutes, add a cup of sugar, a spoonful of butter and a cup or more of canned peaches or pears cut into little pieces. Cook 10 minutes longer and turn into a mold or bowl. Eat cold with sugar and cream.

MRS. ECONOMY.

Miscellaneous Advertising.

YOUNG CHILDREN

Are so liable to Croup, sudden Colds, and various throat troubles, that no family should be without

AYER'S Cherry Pectoral

It gives instant relief and effects a permanent cure.

"I have used Ayer's Cherry Pectoral in my family for thirty years and have always found it the best remedy for croup, to which complaint my children have been subject."—Capt. U. Carley, Brooklyn, N. Y.

"Four of my children were taken down at one time, the past winter, with influenza; but they were soon cured by the use of Ayer's Cherry Pectoral and Ayer's Pills."—M. Powers, Red Lodge, Montana.

Ayer's Cherry Pectoral,

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass. Sold by all Druggists. Price $1; six bottles, $5.

W.R&CO'S IMPROVED BUTTER COLOR

IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the buttermilk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere.

More of it Used than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & Co., Burlington, Vt.

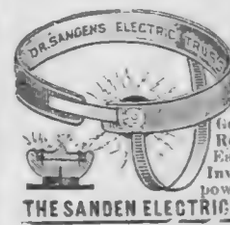
GOLD MEDAL, PARIS, 1878.

BAKER'S Breakfast Cocoa.

Warranted *absolutely pure Cocoa*, from which the excess of Oil has been removed. It has *more than three times the strength* of Cocoa mixed with Starch Arrowroot or Sugar, and is therefore far more economical, *costing less than one cent a cup.* It is delicious, nourishing, strengthening, easily digested, and admirably adapted for invalids as well as for persons in health.

Sold by Grocers everywhere.

W. BAKER & CO., Dorchester, Mass.



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Warranted Best Truss made to CURE all Curable cases or Refund Money. Only Genuine Electric Truss in World. Perfect Retainer. Gives instant relief, speedy cure Ease and Comfort day and night. This New Invention combines science, durability and power. Price $3 & $5. Illus. pamphlet free.

THE SANDEN ELECTRIC CO., Broadway & 12th St., NEW YORK.

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Or Home Talks out of the Wonderful Book. This work contains 100 Delightful Narratives of the most wonderful occurrences in the Sacred Volume, very attractively illustrated. Success of agents is astonishing. One lady has sold nearly 3,000 copies alone. Low Price. Big Terms to Agents. Apply to HUBBARD BROS., Philadelphia and Chicago.

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AGENTS LOOK HERE

and farmers with no experience make $2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made $18 one day, $76.50 one week. So can you. Proofs and catalogue free. J. E. SHEPARD & Co., Cincinnati, O.

ROUGH-COATED COLLIES.

Pups sired by our best stud dogs, full pedigreed, and entitled to registry. Prices Low. Personal inspection requested.

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Entered at the Post-office at New York (City, N. Y., as Second-class matter.)

News of the Week.

HOME NEWS.

SATURDAY, February 2, 1889.

THE Ohio House has passed a bill providing for execution by electricity .....The Massachusetts and Pennsylvania Legislatures favor Prohibitory amendments to the constitutions of their respective States.....The American Federation of labor proposes to start an eight-hour agitation to culminate in ubiquitous strikes on May 1, next year. It urges workmen to hold mass meetings on Washington's Birth-day this year and next, and on the Fourth of July and Labor Day—Sept. 2,—of this year.....The capital of Arizona has been changed from Prescott to Phœnix..... ....Oklahoma boomers are pouring into the territory by hundreds, and are being driven out about as numerously by the United States troops. Some who refuse to move are tied to wagon backs and forced to trot along. A large batch are to start south from various points in Southern Kansas today . . Charles A. B. Shepard, of the well known book firm of Lee and Shepard, of Boston, died Jan 25, aged 60 years..... Vanderbilt University, at Nashville, is to give free instruction in road-making to Tennessee county highway officials during February and March..... ...The Senate has passed the tariff bill by a strict party vote of 32 to 30.....Cabinet-making has been the busiest industry in the country since the elections. The upset at present appears to be Blaine, Secretary of State; Allison, Secretary of the Treasury; Alger, Secretary of War; Wanamaker, Post-master-General, with three other Cabinet positions to be filled from hundreds of candidates..... All the flouring mills in St. Louis have closed down in accordance with the agreement at the late Milwaukee convention, under which 250 mills in the fall-wheat belt were either to close down or run on half time during January. The Minneapolis mills are grinding only about one-third of their full capacity..... A mammoth cotton palace is to be erected in New Orleans, in which the products of Louisiana and other States will be exhibited during the carnival week. .....The reduction of the public debt during December was $14,427,595.... ....During the past year 1,800 girls have been graduated from the Boston cooking schools ...Controller of the Currency, W. L. Trenholm, has resigned, and J. D. Abrahams of Virginia, has been nominated for his place.....Upwards of 400 nominations made by the President are "hung up" in the Senate, which, it is expected, will refuse to act in nearly all of them, so that Harrison may be able to fill the places after March 4. When Cleveland came in, all Arthur's nominations had been acted on except 36.....Recently a number of German sailors were landed from a German war vessel near Apia, the chief town in the Samoan Islands, to help the native German pretender to the throne, Tamasese, against the American favorite, Mataafa. The followers of the latter attacked the Germans and killed over 20 of them, wounding about 35 more, some of whom have since died. Bismarck has declared war against Mataafa, and the Germans are searching all vessels that come near the islands for goods contraband of war. Secretary Bayard says America has no valid grounds for war with Germany on account of the Samoan embroglio. There's a good deal of Jingoism, however, about the matter. Some newspapers would plunge the country into a vast war to add a few thousands to their circulation. Bismarck wants a friendly settlement. . .. The Senate is not likely to confirm the late extradition treaty with Great Britain. Canada wants to abandon the *modus vivendi* brought about by Chamberlain's rejected Fishery treaty, which authorizes the issue of fishing licenses to American vessels..... The total number of immigrants arriving in the United States from all countries, save Mexico and Canada, during 1888 is 518,518 against 510,058 the previous year. ..... There is talk of making ex-Senator Warner Miller, of New York, the next Commissioner of Agriculture in the expectation that he may soon become a Cabinet officer. The agricultural colleges and experiment stations appear to be opposed to such a measure..... ..... Robert M. Steel, of Philadelphia, has bought the California trotting stallion Antevolo for $30,000 ..... A big street-car strike in Brooklyn and New York has greatly impeded travel during the week. The men struck simply because the companies refused to have anything to do with their labor organizations, while ready to settle complaints with the men individually. Considerable rioting in places; but the companies appear to be getting enough new men to run the cars, and they refuse all offers of arbitration.....Pennsylvania legislators propose to inflict three years' imprisonment and a fine of $1,000 on White-Caps who may send intimidating letters, circulars, posters, etc., to any person.....

A Sudden Change of Weather

Will often bring on a cough. The irritation which induces coughing is quickly subdued by BROWN'S BRONCHIAL TROCHES, a simple and effective cure for all throat troubles. Price, 25 cents per box.—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, February 2, 1889.

AT the 34th meeting of the New York State Horticultural Society held at Rochester on January 23 and 24, the following officers were elected: President, Patrick Barry; Vice-presidents, S. D. Willard, Geneva, W. C. Barry, Rochester, W. Brown Smith, Syracuse, J. S. Woodward, Lockport; Secretary and Treasurer, P. C. Reynolds, Rochester; executive committee, C. M. Hooker, Rochester, Lewis Chase, Rochester. B. W. Clark, Lockport, C. W. Stuart, Newark, Nelson Bogue, Batavia. President Barry made a munificent donation of $2,000 to the funds of the society.....The Kansas Senate has passed a bill restricting the ownership of real estate to American citizens, and limiting the area of land that can be held by corporations. The House is sure to pass it....A 20-months-old hog, recently killed at Freehold, N. J., weighed 832 pounds. The owner killed two some time ago which weighed 2,050 pounds ..... The Agricultural Appropriation Bill completed Thursday, asks Congress for $1,636,010..... The 14th annual meeting of the Ayrshire Breeders' Association will be held at the Fifth Avenue Hotel this city on February 21, at 2 P. M. W. Winslow, Secretary, Brandon, Vt. ..... The New York State Cane Growers' Association will hold its ninth annual meeting at Grange Hall, Fairport, on February 12 and 13.....Farmers in South Carolina and several other Southern States are furious against colonization agents seeking to induce their hands to move elsewhere. Several of them have been hung lately.... .....

Measuring to Emergency.

It is not well to believe all you hear. This is even a worse fault than faith in nothing. Among other dismal precedents we have long accepted, is the belief that catarrh is incurable. But precedent is seldom cheerful and often inexact. It comes to us from a time when means were unsuited to the ends in view.

We alter this proportion in these days. For success implies the ability to measure to emergency, no matter how desperate. In this way Compound Oxygen is valuable. At least such is the inference from the following:

ALMA, Neb., February 13, 1888.

"I do unhesitatingly say that Compound Oxygen will cure catarrh."

HON. H. C. GRIFFTH.

ATLANTA, Georgia.

"I still recommend your remedy to my friends who are afflicted, and why should I not? It saved my wife's life and cured my boy of catarrh." MR. WALTER T. FORBES.

COLUMBIA CITY, Ind., March 19, 1888.

"It is about three years now since I had used treatment to such good purpose for catarrh, and I find it has not lost its virtues in the least." HENRY MCLALLEN.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 331 Montgomery St., San Francisco, Cal.—*Adv.*

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, February 2, 1889

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	6¾	7	.....
Strict Ordinary	7¼	7½	.....
Good Ordinary	8 5-16	8 9-16	.....
Strict Good Ordinary	8 13-16	9 1-16	.....
Low Middling	9⅜	9⅝	.....
Strict Low Middling	9⅝	9⅞	.....
Middling	9⅞	10⅛	.....
Good Middling	10¼	10½	.....
Strict Good Middling	10⅜	10¾	.....
Middling Fair	10 13-16	11 1-16	.....
Fair	11 7-16	11 11-16	.....

STAINED.

Good Ordinary	6 11-16	Low Middling	8 7-16
Strict Good Ord	7⅜	Middling	9 5-16

POULTRY—LIVE Fowls, near-by per lb, 11@11½c; fowls Western, per lb 11@11½c roosters, per lb, 6@6½c; turkeys, per lb 10@12c; ducks, western, per pair, 60@90c; geese, western, per pair, $1 40@1 65; chickens; nearby, per lb. 9@10c; do, western, 9@10c.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per lb, 11@14c. do do, common to fair, 8@11c; do, iced, dry picked, choice, 11@12c. Fowls, western, do, choice, 10@11c; do, nearby, do do, 10@12c; do, western, iced, dry picked, 9c; do do do, scalded, 8@9c. Squabs, white, per doz, $4 00@$4 25 do, dark, do, $2 50@$3 00. Chickens Philadelphia, dry picked, 15@17c, do Jersey, do, choice, 13@14c; do nearby, do, good, 12@13c; do Western, do do, 11@12c; do do, iced, good to choice 10@12c. Ducks, nearby, choice, per lb, 14@15c; do do, good, 13@14; do Western, good, 13@14c. Geese, Western, good, 7@10c.

GAME.—Wild Ducks, Canvas back, per pair, $2 50@@$4 00; do, Red Head, do, $1 00@$2 00; Mallard, do, 75c@$1 00; do, Teal, do, 25@40c; Quail, per doz, $2 50@$2 65.

HOPS.—State, new, best, 21@22c; do, prime, 19@20c, do, low grades, 13@16c; do do, 1887, 10@11 do do do, California, common to prime, 13@17c; choice, 20c.

HAY AND STRAW.—Choice Timothy, 85@90c; do good do, 80c; do medium, 70@75c; shipping, 70@—c; do, Clover, mixed, 7 @70c. Straw.—No. 1, rye, 85@90c; short do 60@65; oat, 50@55c.

BEANS.—Marrows, new, $2 25@—; new mediums, choice, $1 90@1 95; pea, $1 85@—; red kidney, $2 10@2 20; white kidneys, choice, 2 50@2 55; foreign, mediums, 1 85@1 55; California Lima, $2 75@$3 00; green peas, $1 35@1 40.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 7¾@8c, and farmers' grades at 6½@7c. HICKORY NUTS quoted at $0 75@$1 25 per bushel. Pecans, 6@8c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Long Island, per bbl, $2 25@$2 35; Maine, per bbl. $1 95@$2; State, per bbl, $0 95@1 50; Sweets, per bbl, $1 75@3 25. State, Onions, Orange county red, per bbl, $0 75@0 80. Cabbages, Long Island, per 100, $2 00@3 25; Onions, Connecticut red per bbl, $1 00@$——; do do, white, per bbl. $2 00@$2 50; do do, yellow, per bbl 1 00@——; do State, do, do, $0 80, @$1 00. Turnips, Russia, per bbl, 30@50c. Cauliflower, per bbl $2 50@ 3 50; Celery, per doz bunches, $0 75@$1 25; Kale, per bbl, 45@50c; Spinach, per bbl, $1 00@$1 75. Peas per crate, $4 00@$5 00; Onions, Bermuda per crate, $2 00@$2 25.

FRUITS.—FRESH.—Apples, Spitzenburg, per bbl, $1 50@2 00; do, King, do, $1 50@$2 25; do Snow, do, $1 50@$2 00; do, Baldwin, $1 00@1 25 do, Greening, $1 00@$1 50; do, common, $1 25@$1 40. Pears, Dutchess, per bbl, $——@——; Virgalieu, per bbl, $4 00@$5 00; do, Vicar, do, $2 50@$3 00; do, Kieffer, do, $3 00@$4 50. Grapes, Delaware, per lb, 2@7c; do, Catawba, do, 2@3; do, Concord, 2@2½c; do, Niagara, ——c. Cranberries, Cape Cod, choice to fancy per box, $6 00@7 50, do do, fair, per box, $3 00@$4 50; do do, per crate, $2 00@2 75; do do do, frosted, do, $1 75@$2 50; do, Jersey, do, $1 50@$2 15. Quinces, per bbl, $——@$——. Florida Oranges, best, per box, $2 00@$2 25; do, good lots, $1 75@$2 25; do lemons, best, $3 00@3 50; do do, common, per box, $1 00@$2 50

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5½@7c; do do, old, 5@7c; do do, new, common to prime, 4½@5¼c, do sliced, new, 4@5¼c; do, quarters, choice, 4@4¾c; do, coarse cut, 4@4¼c. Cherries, new, 13@15c. Raspberries, new, 18@20c. Blackberries, 4½@5c. Huckleberries, 10½@11c. Peaches, Delaware, evaporated, peeled, 16@20c; do do do, unpeeled, 7@9c; do, North Carolina, sun-dried, peeled, 8@11c. Plums, 7@9c.

PROVISION MARKETS.

NEW YORK.—PROVISIONS.—PORK.—New mess, 13 25@13 50, short clear, $14 50@16 00 Extra Prime mess, $13 00; prime do, nominal, and family mess, $14 50@15 00 BEEF—India Mess in tierces, $18@19 Extra Mess, in barrels $7 00@7 25 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate $9 00@9 50; Family at $12 50@$15. HAMS—$11 50@$12 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 7¼@7¾c; Pickled Hams, 9¼@10c; pickled Shoulders 6@6½c; Smoked shoulders at 8c; do Hams, 10@11c. Dressed Hogs.—City, heavy to light, 6¼@7⅝c Pigs, 7¼c. LARD.—City steam, $6 90; February, $7 83; March, $7 86; April, $7 35; May, $7 25; June, $7 37; July, $7 39; August $7 40; South America, 9c.

BOSTON.—PROVISIONS firm and steady New Mess, Pork, $15 25@$15 50; Old Mess Pork, $16 00@$16 25; Extra Prime, new, $14 50@$14 75. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes firm; Early Rose, 47@50c per bush.; Burbanks and White Star, 35@37c Provisions were steady, in moderate demand. BEEF—City family, per bbl $10 50@$11; do, packets, $9 50@$10; smoked beef, 11@12c; beef hams, $14 PORK.—Mess, $15 00@$15 50; do Prime Mess, new, $14 50; do, family, $15 00@16 00; Hams, smoked, per lb, 11½@12c do, S. P., cured in tierces, 10@11c; do do do, in salt, 8@8½c; sides, clear ribbed, smoked 8½@9c; shoulders, in dry salt and fully cured, 7@7½c; do, do, smoked, 8@8½c; Shoulders, pickle cured, 8½@9c; do do smoked, 9@9½c; bellies, in pickle, 9@9½c; do breakfast bacon, 10@10½c. LARD.—Steady; City refined, 8¼@8½; do steam, 9½@10¼c; butchers' loose, 7¼.

CHICAGO.—MESS PORK.—$11 80@—— LARD.—$6 85@—— per 100 lbs; Short Rib sides (loose), $6 30; dry salted shoulders, boxed, $6 25; short clear sides, boxed, $6 75.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER.—Creamery—State, pails, best, 24@26c, do do, tubs, best, 20@26; Pennsylvania, best, 28@28½; Elgin, best, 29; Western, best, 27@27½; do prime, 23@25; do good, 20@22; do poor, 16@17, do June, good to best, 16@23. State—Dairy, half-firkins, tubs, best, 22@26c; do do, prime 21@22c; do do, fine, 18@—c; Welsh tubs, fine, 21@22; do do, good, 18@19; firkins, best, @20 23c; do prime, 19@21c; do fine, 18@—c. Western—Imitation Creamery, best, 20@22c; do, fine, 16@18c; Western dairy, fine, 18@19c; do fair, 15@16c; do, poor 13c@14c; do factory, fresh, best, 19@20c; do, prime, 15@16; do, good, 14@15c; do, poor, 11½@13½c; do, June, 13@14c.

CHEESE.—State factory, fancy, 12@12¼c; do do, fine, 11¾@12c; do do, prime, 11¼@11½; do do, fair to good, 10@10½c; Ohio, flat, prime, 11@11¼c; do good, 10@10½c; Skims, light, 9½@9¾c; do medium, 6@6½; do full, 1½@2½.

EGGS.—Near-by, fresh, 15½@ 15¾; Canadian, 13@14c; Western, best, 15½c; limed 10@12½c.

PHILADELPHIA.—BUTTER steady. Pennsylvania creamery extra, at 27@—c; Western creamery, extra at 16½@17c. B. C. and N. Y. creamery extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were firm. Pennsylvania firsts, 16½@17c; Western firsts 18@19½c; Cheese—steady; demand fair; New York full cream, at 9@9¼c, Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

BOSTON.—Butter firm; Western extra Creamery, 30@32c; Eastern extra Creamery, 29@30c. Cheese steady. Eggs dull; Eastern extras, 27@28c; Michigan extras 24c; Western firsts at 24c.

CHICAGO, Ill—BUTTER.—On the Produce Exchange to-day the butter market was quiet and steady; Elgin creamery, 24@25c; choice Western, 18@20c. choice dairy, 16@18c; common to fair, 11@12c. Eggs firm at 15@15½c.

CHEESE—State factory, September made, 12c; do do do, October, fancy, 11@11¾c; do, fine, 11½@11¾c; do; fair and good, 10@10½c; Ohio, flat, prime, 11@11¼c; do, good, 9¾@10½c; skims, light, 8¾@9¼c; do, medium, 6½@8½c; do, full, 2@2¾c.

GRAIN MARKETS.

The Grain Markets remain practically the same as in our last report.

SCIENCE offers the butter maker by the use of Thatcher's Orange Butter Color the means of maintaining that beautiful golden TINT that unlatches the purse strings of the cautious buyer.—*Adv.*

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, Feb. 2, 1889.

MILCH COWS.—Receipts for the week thus far, 109 head. Feeling dull for common stock, but good cows in fair demand. Sales during the week at $35 to $50 per head

CALVES.—Reported steady, with sales of grassers at 2½@3¼c per lb. of western mixed lots at 3½@4c, and of fair to choice veals at 7½@8½c.

SHEEP AND LAMBS.—Common to prime sheep at $4@$5 85 per 100 lbs, and common to prime lambs at $6 00 @$7 75, with choice State lambs, 81 lbs average, at $8 Among the sales were 210 State Sheep, 95 lbs average, at $5 18¾ per 100 lbs; 159 do, 82 lbs, at $4 75; 97 do, 72 lbs, at $4; 101 do, 75 lbs, at $5; 121 Ohio do, 91 lbs, at $5 50; 216, do, 84 lbs $5 10; 103 do, 86 lbs, at $5 25; 17 Kentucky do, 123 lbs, at $5 75; 100 State lambs, 63 lbs, at $6 50; 209 do, 80½ lbs, at $7 25; 184 do, 81 lbs, at $8; 214 Ohio do, 80 lbs, at $7 65; 226 Western do, 70½ lbs, at $6 87½, and 114 do, 66 lbs, at $6 50.

CHICAGO.—Choice beeves $4 20@$4 85; Steers at $3@$4 10; Stockers and Feeders $2 25@$3 40. Cows and Bulls, $1 30@$2 90; Texas steers at $2 40@3 20. Hogs—mixed at $4 70@$5; heavy $4 70@4 95. Light at $4 75@5 15; pigs, $4@$5 15. Sheep—Natives, $2 90@5 25; Western Corn-fed $4 40@$4 85; Texans, $3@$4 50; Lambs, $5@$6 75.

ST. LOUIS.—Cattle—Choice Heavy Native Steers, $3 80@$4 25; Fair to Good do, $3 @$3 80. Butchers' Steers Medium to Choice, $2 60@$3 15. Stockers and Feeders, Fair to Good, $1 90@$2 70. Rangers, Corn fed, $3 00@$3 40; Grass-fed, $1 90@$2 60.

HOGS.—Nominally steady at $5 30@$5 70 per 100 lbs.

HOGS.—Choice Heavy and Butchers' Selections $4 75@4 85. Packing, Medium to Prime, $4 65@$4 80. Light Grades, Ordinary to Best, $4 90@$5 05.

SHEEP.—Fair to Choice $3 00@$5 00.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING FEBRUARY 2, 1889.

C. T. W.—R. C. B.—U. S. M.—C. S. M.—R. H.—G. K. H.—L. P. S.—G. H. C—G C. L—G. W. S.—S. P. F.—H. L. D. C. M. W.—G. W. F.—C. S. P—S. P. & L.—G. A.—E. B. T.—W. H. O.—S. E. D.—L. F. A.—H. F. S.—F. D. C.—C. F. O.—M A. S.—M & S.—E. V. A.—I. P. R.—W. B. L.—H A. D.—G. D. N.—C J. W.—J. H. C.—L. A. L.—E. C. R.—D E. B. J. E.—E. M. B. A. J.—D. F. G.—Jacob Heckman, thank you—C. C.—E. E. S.—E M. D.—C. D.—S. R. H.—M. E. S.—P. E. E.—S. G. S.—J. I. B., Jr.—J. B.—H. D.—E. J., success to you.—E. A. P.—E. J. D—M. M. M T—R. F.—K. I.—L. J. T.—P. D. L.—M. R. P.—M. G. D.—Mrs. D. H., thank you.—W. B.—W. Barringer, many thanks.—J. B C.—D. A. S.—E. D R.—C, A. M.—R. M.—D. P. N.—A. P.—T. T. L.—C. C. W.

"Herbrand" Fifth Wheel for Buggies.—*Adv.*

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The Eastman Dry Plate and Film Co.
ROCHESTER, N. Y.

39th ANNUAL STATEMENT
OF THE
ÆTNA
Life Insurance Co.,
OF HARTFORD, CONN.
January, 1, 1889.

Premium Receipts in 1888,	$3,404,964.16
Interest Receipts in 1888,	1,730,120.97
Total Receipts during the year,	5,135,085.13
Disbursements to Policy-holders, and for expenses, taxes, &c.,	4,045,408 26
Assets, January 1, 1889,	33.819,234.97
Total Liabilities,	28,252,979.73
Surplus by Ct, Mass, and N. Y. standard,	5.566.055.24
Surplus by many States,	7.325,000.00
Policies in force January 1, 1889, 67.749, insuring,	102.904,303.44
Policies issued in 1888, 8,083, insuring,	16,094,587.00

MORGAN G. BULKELEY, President.

J. C. WEBSTER, Vice-President.

J. L. ENGLISH, Secretary.

H. W. ST. JOHN, Actuary.

GURDON W. RUSSELL, M. D., Consulting Physician.

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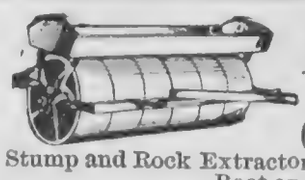

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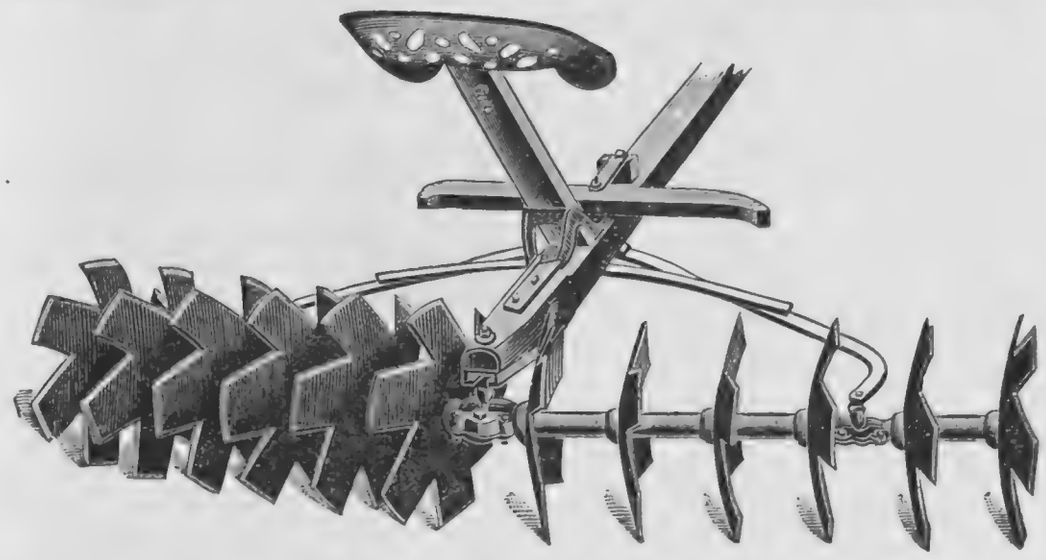

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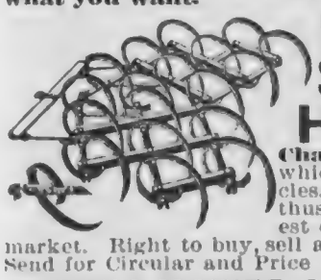

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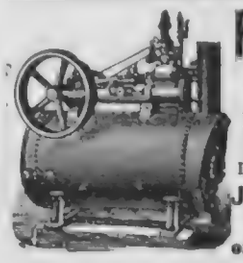

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JAS. VICK SEEDSMAN, Rochester, N. Y.

Literary.

THE DRUM LAKE EASTER SERVICE.

A story of the Michigan Pine Woods.

BY HERBERT W. COLLINGWOOD.

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IT was some little time before the minister re appeared. Jim and Ben became quite impatient, for it was getting late At last the little man re-entered the room with his violin under his arm. He did not possess a case for this valuable instrument, and so he had wrapped a number of garments about it. He looked more like a man in search of a laundress than a violin soloist.

"Wall, Parson," announced Jim, "ef yer reddy, why we be," and he opened the door at once.

With his melancholy hat dropping even more dismally than before over his face. and his long coat beating an indignant protest against his legs, the Rev. Mr. Grayling followed his conductor.

Cobb's store was located in the one "business block" of Drum Lake. Time had been when Cobb could have stated with some degree of truthfulness, that his stock of goods was "the largest and most complete ever brought into Northern Michigan." But now the great stock of goods, like the greater part of the occupation of its owner, was entirely gone.

A few dry-looking articles looked down from the great shelves, as if inviting the customer to purchase, and yet well aware of the fact that no man in his right mind would do so. The sugar barrel had lost its business grip on two of its hoops in utter hopelessness. The rusty scales had long since given up all thought of doing justice to the customer, and drooped down at one side as if weary of life. As the advantage of this droop was with Cobb, he had never tried to remedy it.

The profits from Mr. Cobb's legitimate mercantile business would hardly have supported him in elegant style, so he had been forced to add several branches to his business, that he would have laughed at years before. He had even found it necessary to give a series of social assemblies during each winter in order to eke out his expenses. He had fitted up two rooms at the back of his store for the purpose, and twice each month did he issue his invitations to the citizens of Drum Lake and vicinity, to dance and be merry.

It was into one of these rare occasions that the poor, unwilling minister was brought. His new friends led him through the vacant store, past the miserable scales and the hopeless sugar barrel, and looked in with him at the company gathered in Cobb's back room.

The merry-makers had danced to the music of Bill Gammon's voice until the musician, anxious to keep himself in trim for his contest with Jeff Price, declared "that the sound rasped agin his throat."

At the time of the minister's arrival, the floor was held by one Snooks, who had held the position of "boss fool" until Mr. Grayling came to try and "build up St. Paul's Church." There were some who still claimed that Snooks had never been fairly driven from his position,

The Drum Lakers believed in monopoly to a certain extent. There should be,according to their philosophy,but one "boss" and one "fool" in every community. Both of these important positions should be filled by some one, but it needed either a most decided superiority or a great outburst of popular feeling to bring about a change. Perhaps the Drum Lake idea of civil service reform may be of some interest to the public

Here it is in substance: So long as a man shows himself to be a fool, keep him in office, but if it is discovered that he knows more than some one else in the community, kick him out at once.

As the Rev. Mr. Grayling looked into the room, Mr. Snooks was in the very act of delivering a recitation. It was nothing from Shakespeare or any of the more dramatic authors, but that touching lit le gem, "Twinkle, Twinkle Little Star." One only needed to glance at the poor fellow to see how he came to fill the position of a fool. The half-opened mouth and vacant eye, told of a vacant, half-opened mind. The great, burly fellow stood by the stove throwing his long arms about, and moving his head in a frantic attempt to imitate the twinkling of a star. The audience sat about on the board seats shouting with laughter at the performance. Poor Snooks took all this for applause, and redoubled his efforts to please. No wonder the minister drew back at the sight. I think he would have gone to Mrs. McKelvey's had not Jim pushed him into the room. Once inside there was no escape, for Ben Stone placed himself in the door as a barricade.

There was a lull in the storm of applause as the minister made his forced entrance. Snooks took his seat, and the whole company sat looking at the reverend visitor at a loss to know how to receive him.

The little man *did* present a ludicrous appearance, with his head thrust forward in his odd way, the old hat on his head, the long coat creeping behind his legs for protection, and the shapeless bundle under his arm. He was enough, as Bil lGammon afterwards said, to "make a cat laugh."

Jeff Price who was to sing later in the evening, stood leaning against the wall. He had never met the Rev. Mr. Grayling, and knew nothing of his clerical dignity; he simply knew that before him stood the most melancholy specimen of humanity he had ever seen.

"Wall," he remarked "what bone-yard's ben opened ter day?"

Mr. Grayling showed by his manner that he did not understand.

"What bone-yard hez ben opened?" roared Jeff, thinking the little man must be deaf. The minister studied the question carefully, but "bone-yard" was too much for him.

"I fear, sir, that I fail to comprehend your exact meaning." This was too hot a volley for Jeff, and he edged away from the speaker as if fearful that the next well-rounded sentence would injure him severely.

Jim Foster who had been holding a whispered consultation with his friends, now came to the rescue. "Parson," he said, "we're ready fer ye; jest stand out an' I'll introduce ye' roun'."

Much against his will, the Parson came forward. Then Mr. Foster, with his great hand laid patronizingly on the shoulder of the minister, began his introduction.

"Gentlemen and"—noticing the few females at one side—"ladies, this is the new Parson. He's go'nter preach termorrer down ter Bill McKelvey's. Ye all wanter come, fer its go'nter be a big show. Kin anything git out Nazzereth is his idee. He wanted ter kinder git acquainted round, so I invited him up ter see how things was. He kin jerk a bow all round Hank Jacobs, an' now he'll play ye a couple of tunes. Pile in, Parson, an' show em how," and Jim came to the end of his oration whispering, as an aside to the minister, "How's thet fer a send-off, eh Parson?"

The poor, little minister was like a child in the hands of his conductor. He took the chair that Jim brought him, and, laying his hat on the floor, began to unwrap his violin. Jim rubbed his hands together in great glee at the success of his experiment. He whispered his instructions to the rest, and about half the company at once left the room, and, under the supervision of Cobb, arranged themselves for a dance. Jim took his place in the set nearest the door, so that he might encourage the minister if necessary.

Mr. Grayling was very deliberate in his movements. One by one, the garments were pulled away, and at last the beloved fiddle came into view. An ordinary musician would have said that time enough had been spent already in tuning; but Mr. Grayling was evidently no ordinary musician. In utter ignorance of the fact that the company stood waiting for him, he placed the fiddle under his chin, and began the most elaborate system of tuning to which Drum Lake had ever listened. As Bill Gammon afterwards described it, "it wuz jest saw, saw, saw with that bow agin them strings tell yer teeth 'peared ter be grittin' agin each other."

The dancers stood in silence for awhile, but at last some of them began to grow impatient. "Wake up an' pay fer yer lodgins!' Git a-goin'! Set 'em afire!" and such advisatory phrases came to the little man's ears.

Jim Foster did his best to keep order. "He's go'nter take his time so he kin do a clean job an' make lots o' chips," he explained.

At last, just as the last scrap of patience was being torn in pieces, the minister rose with his fiddle in position. Turning his back to the company, and swaying his body to and fro in time with the music, he began, not the lively tune that the company expected, but the slow beautiful music of "The Bridge."

At the first sound of the music, Jim Foster called, "Honnors to yer pardners!" and himself began a most elaborate bow to Jake Hogan who was acting as his "lady." It was a most elaborate bow, yet somehow it failed to combine with the music. It ran so far ahead of the slow, wailing melody, that it instinctively stopped to wait for the music to catch up. Not being willing to take any unfair advantage, Jim found himself in a most undignified position, with his head thrust forward, and his back bent at an unpleasant angle.

The rest of the company were in much the same predicament. Each couple stood with heads pointed at each other, not unlike two warlike roosters about to spring. The dancers straightened themselves in wonder, and looked at the musician. Who could possibly dance to such music as that? Why a lame man would have ample time to go through all the figures and take a rest before the music could ever catch him.

Jim Foster was ready with his excuse, "It's all right, boys, he's jest playin' a sorter overchewer like. He'll come out of it all right, only give him time."

Some of the dancers kept their places on the floor, but most of them went back to the seats to wait till the "overchewer" was completed.

(TO BE CONTINUED.)

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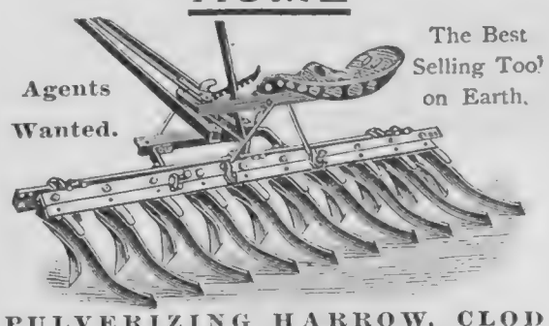

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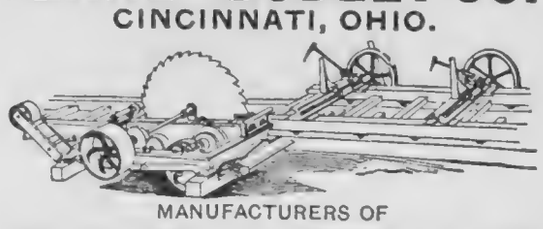

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PROPERTY OF MINORS.

A. S. M., Williamsport, Pa.—About three years ago one of my young sons got a present of a young colt from an uncle. He has petted and cared for it ever since, and it has always been looked upon as exclusively his property. Being of good stock, it is now worth several hundred dollars. Not long since it was seized for debt by a person to whom my husband—the boy's father—owed some money. I gave a bond and replevined the animal; does this bond cover only the value of the animal or the judgment against my husband; and to whom does the animal belong?

ANS.—As a general rule, when a minor receives property from any other person than his father, it is his, and his father's creditors have no right to it. In the present case, no doubt a good deal of the value of the animal came from the food supplied by the father and the labor of the boy, which belonged to the father; but so long as the father does not make any claim for compensation on these accounts, a creditor of the father can hardly make such a claim for him. Indeed it is very likely that, under the circumstances stated, any court would decide that the animal belongs to the boy. The bond given on replevining the animal covered only the damages caused by the taking of it, should it be decided in a suit at law that you had no right to take it. The measure of that damage would be the value of the animal and not the amount of the judgment against your husband, unless the value of the former was greater than the amount of the latter, in which event, if the case should go against you, the balance should be given to your husband after the costs of the plaintiff had been deducted.

AN ALIEN'S OATH OF ALLEGIANCE TO THE UNITED STATES.

A. B., Centralia, Ont., Canada.—1. Will the RURAL give the oath of allegiance required by the United States from those who want to be naturalized. 2. Would the Democratic party in the United States represent the Conservative or Reform party in Canada in regard to free trade or protection?

ANS.—1. The oath of allegiance is as follows I, A B., do solemnly swear that I will support the Constitution of the United States of America, and that I do absolutely and entirely renounce and abjure all allegiance and fidelity to any foreign prince, potentate, State, or sovereignty whatever, particularly to (give name of sovereign) to whom I was a subject. A. B. (Any title or order of nobility must also be renounced.) 2. So far as free trade or protection is concerned, the Democratic party in the United States corresponds to the Reform party in Canada; while the Republican party corresponds to the Conservative party.

A HUSBAND'S PAYMENT OF MORTGAGE ON HIS WIFE'S REAL ESTATE.

H. S., Canandaigua, N. Y.—My wife owns some real estate which is mortgaged. Can I pay off the mortgage so that at her death, if the property should be willed to her relatives, I can hold the mortgage against it? I would like to pay off the mortgage, but cannot afford to lose the money or to give it to my wife's relations. Could my wife will to me or my heirs the amount of the mortgage in case I paid it off?

ANS.—The wife could make a will giving to her husband the amount he had advanced if he survived her; but this would be no security, as women, like men, have been known to change their minds occasionally, and in this case the wife might tear up her will and make a new one from which the husband might be entirely excluded. The best way is for the husband to buy up the mortgage (not to pay it off and discharge it from record) and take an assignment of it, holding it in his own name as a lien on the property.

A LAND LEASE.

T. M. T., Troy, N. Y.—For some years I have leased a farm not far from here from A. The lease runs out on May 1, and A has just sold the land to B. The latter wants to give me another lease for five years beginning at the end of my present lease, but insists that I should pay him down $250 in cash as security, on which amount he will allow four per cent. interest, the principal to be paid back at the expiration of the lease—five years from May 1. Should B sell the land to another party before the expiration of the old lease and before the new one comes into force, would the new lease hold good with the purchaser, the lease having been made, and the security given prior to the expiration of the old lease?

ANS.—If the new lease is duly executed by B, the present owner of the farm, and is then put on record, it will stand against all changes of title until its terms are fulfilled.

AN ASSIGNEE MUST RENDER A FULL ACCOUNT.

V. L., Caledonia, N. Y.—Can an assignee be compelled to show books, papers and receipts that a creditor or creditors may see that he has done justice to them?

ANS.—Yes; an assignee is a servant of the creditors. His office is to do justice to them and the debtor, but his duty is as much to them as to the latter. Hence he is bound in justice, and is equally bound by law, to show vouchers for all he may do, and he can only be legally discharged from liability by rendering a full account with exposure of books, accounts, etc., and getting a receipt and discharge from the creditors.

S. T. L., Syracuse, N. Y.—A and B work a farm on shares. A hires a man by the month sells his share of ths crop and does not pay his help. Can the help collect his pay from B?

ANS. No; the help has no claim on B for his pay.

T. S. M, Rochester, N. Y.—In this State is a man compelled to support his aged father who is about to become a charge on the county?

ANS.—Yes, indeed, by the laws of nature as well as by those of the State, and he may be compelled to support his parents in a suitable way under penalty of fine collectable by attachment.

V. L., Caledonia, N. Y.—What justice is there in the law which permits any bankrupt concern to give preference in payment to any one besides laborers? Those who get preference nowadays are the best able to bear the losses.

ANS.—There is no feature of our present bankruptcy laws which is so frequently abused as that which enables the bankrupt person to "prefer" favorite creditors for payment. In very many cases the debts so "preferred" are bogus, nominally due to the bankrupt's wife or father or other member of his family. The bankrupt laws as a whole urgently need revision and amendment, and this provision more than any other.

CATALOGUES, ETC., RECEIVED.

TESTS OF VARIETIES; FORAGE PLANTS.—Bulletin No. 6 from the Pennsylvania Experiment Station, is an interesting one. Tests of a number of varieties of wheat, oats, barley and potatoes have been made, and the results are given in this pamphlet. Such tests are of service to Pennsylvania farmers who like to seek out new and improved varieties. It may be considered reasonably safe for them to try, in a small way at least, the varieties that do well at the Station. From last season's trial, the Station authorities conclude that the R. N.-Y. No. 2 potato is "a fine variety and worthy of more extended trial." An interesting account of the history and habits of the Manshury Barley will be found in the bulletin. The forage plants tested were Prickly Comfrey, Kaffir corn, cow peas, Teosinte, White Mustard, and Brazilian or Flour corn. The Flour corn was killed by the frost, and the Teosinte did not germinate. Comparative analyses of the other four plants are given to show the total crop per acre, the amounts of crude nutriment and also the amounts of digestible materials per acre.

INSECTS INJURIOUS TO CABBAGE.—Bulletin L. of the New Jersey Experiment Station, gives a list of the insects that prey upon cabbage plants, with good illustrations, life-histories and habits and the best known remedies. The policy of this Station is to have the Entomologist take one topic at a time and work it up carefully. This is a good plan. The present bulletin is about the best thing in its way that has yet been published.

KODAK CAMERA.—Catalogue from the Eastman Dry Plate and Film Co., Rochester, N. Y. Some few weeks ago we called attention to this camera which we classed under the head of sterling novelties. It is, in our opinion, one of the most interesting and important inventions of late years. Fifteen years ago the telephone was a novelty—practically an untried device. To-day it is a household necessity with thousands. Up to within a few years the art of photographing was monopolized by a few. Fifteen years hence the public will find that the camera will be almost as necessary as the telephone, and something very like the Kodak will be in general use. This catalogue is interesting and instructive.

GROWING CORN FOR FODDER AND ENSILAGE.—This is the title of Bulletin No. 4 recently issued for the New York Experiment Station. Do the farmers of New York State need to be told how to grow corn for fodder? Prof. Roberts seems to think so, for he says that a large majority of the farmers of the State, who annually raise a patch or a small field of fodder corn, still sow it broadcast. He claims that those who are most successful in making silage of a good quality have settled, beyond any doubt, that the corn must be grown either in hills or drills with much the same cultivation that is given the crop when grown for the grain. To present the truth of this claim as forcibly as possible, various plots of ground were planted with corn in hills, in drills and broadcast. The product of each plot was carefully weighed, and careful analyses were made at various stages in the growth of the plants. The results of these experiments are very forcibly shown in the bulletin. They are what any thoughful farmer would have expected. The drilled corn gave by far the best yield and the best quality of stalks. Plants cut September 3, gave twice as much nutriment as those cut August 8, and four times as much as those cut July 24 The subject is an interesting one well worked up.

Miscellaneous Advertising.

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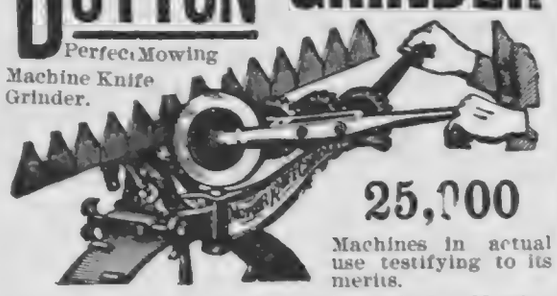

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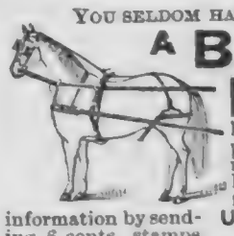

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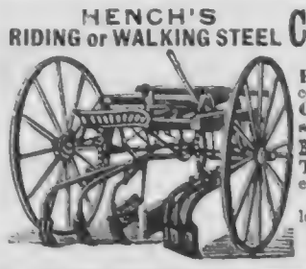

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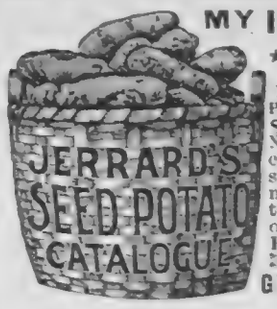

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THEY were talking about the Atlantic cable. "It reminds me of a good egg," he said. "A good egg?" "Why, yes; being so successfully laid,"—*Ocean.*

"WE never furnish a knife with pie," said a prim waiter at a Keokuk, Iowa, boarding house. "Then bring me the ax," cried the new boarder in despair.—*Mich. Farmer.*

AN applicant for a pair of boots at one of the Boston shoe-stores was asked what number he wore, and replied, as soon as he recovered his surprise: "Why, two, of course."—*The Courier.*

MRS. HOMESPUN, who has a terrible time every morning getting her young brood out of their beds, says she cannot understand why children are called the rising generation. —*Prairie Farmer.*

MISS TRAVIS: "Don't you think my new dress is too sweet for anything?" Miss DeSmith: "Oh, lovely—exquisite! I do believe your dressmaker could make a bean-pole look graceful!"—*Burlington Free Press.*

QUEVEDO: "I see the savants are about to investigate the cause of yellow fever in the South." Miss Foote (Chicago): "How noble! But I don't remember to have met them. Are they a North Side family?"—*Phila. Record.*

MISS GRACE: "Peculiar costume for a man to wear, isn't it?" Uncle George: "Yes but do you know that at one time the men in the United States wore dresses?" Miss Grace: "Why no; when was that?" Uncle George: "When they were infants."—*Harper's Bazar.*

A PROBLEM IN DIVISION: The meanest man up to date is Snifkins. He sold Jones a half-interest in a cow, and then refused to divide the milk, maintaining that Jones owned the front half. The cow hooked Snifkins, and now Snifkins is suing Jones for damages.—*Time.*

SLOOPKIN (as an illustration of the rapid growth of Western towns): "Why, Blockly, only seven years ago a band of Ute Indians held a war dance right here on this lawn! Think of that, sir!" Blockly (not to be astonished): "Why, I'd thought they'd broken the vases and trampled all the shrubbery down."—*Harper's Bazar.*

MISTRESS: "What on earth are you going to do with that scuttleful of dirt, Mary?' Mary: "Dust the pianner." Mistress: "Dust the piano?" Mary: "Yis. Didn't ye tell me to dust it 'm? An' it's takin' ivery bit of dust I can foind."—*Buffalo Courier.*

A GENTLEMAN of Americus—who, by the way, had a fad or two—was walking down town the other day with a witty lady, the intimate friend and guest of his wife, when he began to revile facetiously the gait and carriage of her sex "Even you," he said, "walk with a very mechanical step." "Yes," she instantly answered, "I am going with a crank."—*Vinton Eagle.*

THE COMING CONDUCTOR.—"Gentlemen," shouted a passenger on a south-bound suburban train a day or two ago, "keep your seats. Restrain yourselves, gentlemen. These ladies in the aisle can all stand up. They're used to it—on this line." Seventeen sheepish-looking gentlemen at once rose up and crowded forward toward the smoking car.—*Chicago Tribune.*

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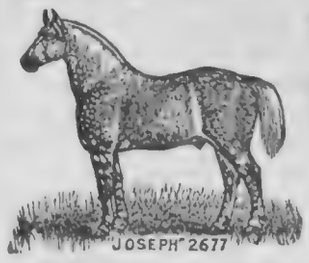

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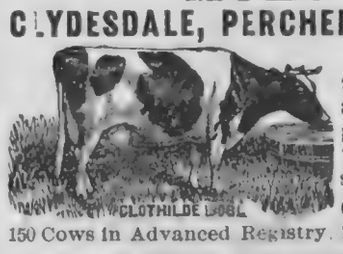

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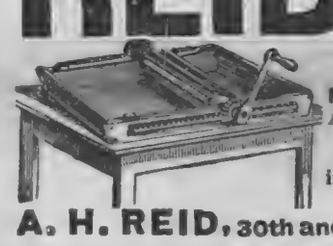

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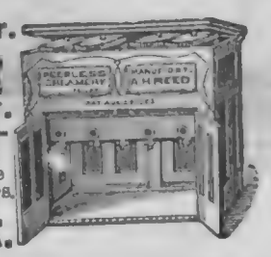

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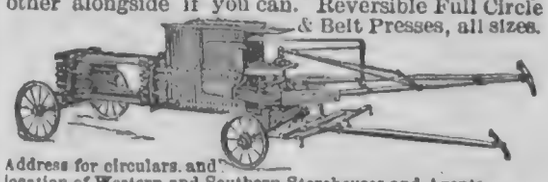

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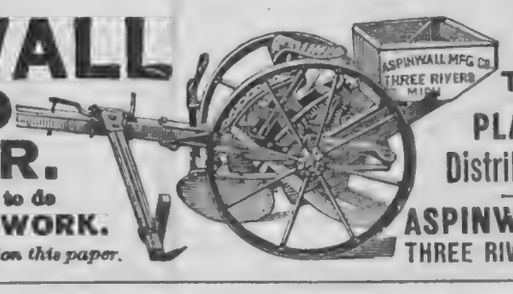

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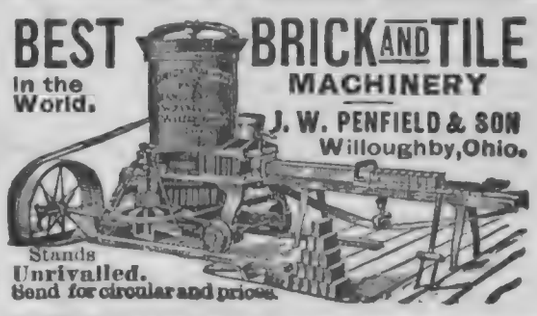

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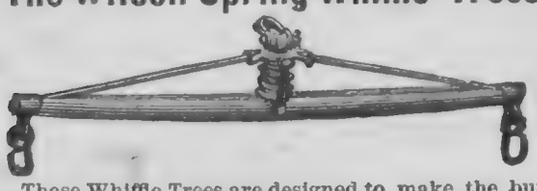

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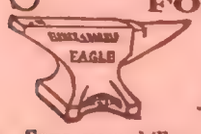

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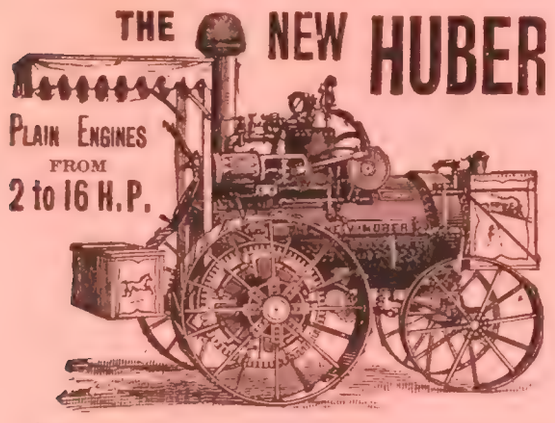

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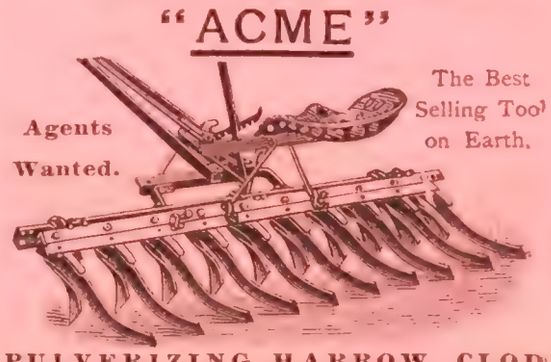

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

PHOTO ENG. CO., N.Y.

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RURALISMS

Experiment Grounds of the Rural New-Yorker.

Reports on New Potatoes.

Results of Planting in Trenches of Different Depths—Ten, Eight and Four Inches.

THE MONROE COUNTY PRIZE, has been praised very highly in several farm journals during a month or so past. It was sent to us by Sibley & Co., of Rochester, N. Y., and planted May 9. Eight hills yielded 27 pounds. There were 81 potatoes, many of which were not of marketable size. In how far the ravages of the flea-beetle caused this we can not say. The yield above stated would be at the rate of 816 bushels to the acre. In shape it is rather long and elliptical. The eyes are somewhat deep and medium as to number. Skin buff. Eaten January 11. White flesh, quality-fair. It is claimed for this potato that it is "enormously productive and by all odds the best keeper."

BURPEE'S SUPERIOR POTATO. This was originated by Mr. E. L. Coy, to whom we are indebted for many excellent varieties. It was sent to us as No. 88, by W. Atlee Burpee, of Philadelphia, Pa. It is said to be of fine quality and shape, and to yield heavily. The vines were killed in the early part of the season by the flea-beetle, and the yield was inconsiderable

MINISTER from Geo. W. P. Jerrard, Caribou, Maine. Two pieces yielded 8½ pounds, or at the rate of 1,028½ bushels to the acre. There were 18 large and four small tubers. Skin light, shape variable, inclining to oblong, flattened, eyes rather deep. This was injured slightly by the flea-beetle. Eaten January 8. Flesh, yellowish-white, fine-grained—a sort of crystalline texture, as they say of watermelons. Quality excellent.

GOLD FLESH, from W. Atlee Burpee & Co., Philadelphia, Pa. Three pieces yielded 10 pounds, of which 24 were and eight were not of marketable size. Skin purplish; raw flesh yellowish, deepening to a straw-color when cooked. Rather long, cylindrical; eyes medium as to number and depth. The above yield would be at the rate of 806.66 bushels to the acre. The vines were injured considerably, but not destroyed by the flea-beetle. Eaten January 14. Quality fine-grained and very good.

TONHOSKS (?) from Theron E. Platt, Newtown, Conn. Two pieces yielded 10⅓ pounds, 28 marketable, 19 small. This is at the rate of 1,270.50 bushels to the acre. Medium as to length, somewhat flattened. It is about the shape of the Beauty of Hebron. Eyes medium in number and depth. Skin light-buff. Slightly injured by the flea-beetle. Eaten January 6. Flesh white and mealy.

BROWNELL'S WINNER from E. S. Brownell, Essex Junction, Vt. He says it is a cross between White Star and Peachblow. But two pieces were planted. These yielded 15¾ pounds—a yield rarely exceeded in the rich garden plot which for years has been given to these tests. There were 32 marketable potatoes, and but seven unmarketable. Five of the largest weighed 3½ pounds. The characteristic shape is roundish-elliptical, slightly flattened. There are few eyes, and these while not quite even with the surface, are not deep. The skin is a rosy-pink color. Three or four of these potatoes were eaten January 20. The flesh is white and mealy, of the flavor of the Early Rose class. The center of the potatoes was a little hard, but this may have been owing to insufficient cooking. We regard this potato as a most promising variety. We shall use some of them in our next "Contest plot." The illustration (Fig. 33) is from a photograph of the average size and may be accepted as a fair portrait. It is a late variety. The vines are wide-spreading and very vigorous, and were not injured by the flea-beetle.

DANDY, from Geo. W. P. Jerrard. Two pieces gave six pounds, or at the rate of 726 bushels to the acre. Shape rather long, often smaller in the middle. Skin white. Eyes medium in depth and number. Eaten January 13. Flesh white, mealy and close-grained. Quality fair.

EARLY MAJOR was so injured by the flea-beetle that we cannot make any report as to its earliness. It was received from T. P. Thomas, Wheeling, West Virginia. Two pieces yielded seven pounds—21 of fair size; 12 small. Cylindrical, color of Early Rose. Eyes medium in number and depth.

ISLAND RED (from T. P. Thomas as above), a red potato from J. A. Everitt & Co, No. 79 from C. E. Angell, 80 High street, Oshkosh, Wis., and a seedling from J. H. Woodburn of Sterling, Ills., were so injured by the flea-beetle that anything like a fair report is out of the question.

THE ORIENTAL SPRUCE. From Nature. Fig. 34.

WHITE EARLY OHIO from T. C. Davenport, 124 Dock street, Philadelphia, Pa. Four pieces gave 13½ pounds—46 large, 20 of unmarketable size. Rather long; cylindrical. Eyes medium as to number and depth. Skin rosy-buff. A fair-looking potato. Eaten January 4. Mealy and good. Flesh nearly white. Vines died early on account of flea-beetle injuries.

This trial plot has received at the rate of from 1,000 to 1,500 pounds of the Mapes potato fertilizer each season for many years. It has also received stable manure, lime, kainit, etc., as stated in previous reports. *The R. N.-Y. potato trials during* 1888, *were, for the greater part, partial or total failures owing to the depredations of the flea-beetle which we were unable to subdue or control.* The season was a wet one throughout.

RESULTS OF PLANTING POTATOES IN TRENCHES OF DIFFERENT DEPTHS.

The soil of these plots, naturally variable, was made exceedingly so by grading, the soil from the higher parts having been carted to the lower places. It is in some parts a sandy loam, in others a clay loam, and in still other parts a stiff brick clay—all impoverished by years of cropping without any manure of any kind. It will be remembered by older readers that the R. N.-Y.'s potato experiments previous to last year were made on plots of notably uniform soil, so impoverished that anything short of a "complete" fertilizer failed to materially increase the crops.

This was proven so conclusively that there seemed to be no reason why the trials should be continued upon them.

Our present report, as might well have been supposed from the variability of the soil, seems to show that the *depth* of planting should be governed by the character of the soil. At the rate of 800 pounds of Stockbridge potato fertilizer was sown in the trenches after the seed-pieces were lightly covered.

Trench 21—4 inches deep yielded 55 pounds.
" 23—4 " " " 47¼ "
" 27—4 " " " 49½ "

Or, estimated by the acre, we have:

Trench	21.	403.33 bushels.
"	23.	348.33 "
"	27.	363.00 "

This gives an average, for four-inch-deep planting, of 371.55 bushels to the acre.

Trench 20—8 inches deep yielded 52½ pounds.
" 22—8 " " " 41 "
" 26—8 " " " 48⅓ "
" 29—8 " " " 42⅛ "

Or, estimated by the acre in bushels of 60 pounds each, we have:

Trench	20	385.00
"	22	300.66
"	26	355.66
"	29	311.66

This gives an average per acre, for eight-inches-deep planting, of 338.24 bushels.

Trench 24—10 inches deep— 36½ pounds.
" 25—10 " " — 52 "
" 28—10 " " — 38¾ "

Or, estimated by the acre, we have:

Trench	24	267.66 bushels.
"	25	381.33 "
"	28	384.16 "

This gives an average per acre, for 10-inch-deep planting, of 311.05 bushels.

SUMMARY.

Ten-inch planting	311.05 bushels.
Eight-inch planting	338.24 "
Four-inch planting	371.55 "

The variety planted was the Rural Blush. Some of the vines were greatly, some slightly and a few not at all injured by the flea-beetle. This experiment will be repeated the coming season. The question involved is important.

Farm Economy.

Farm Fertility Furthered!

WILL WISE WESTERNERS FARM FOR FUTURITY OR COME TO CHEMICALS?

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NEW NIGHT-SOIL NOTES.

Mixing Many Manures

vs.

Spreading Several Separately.

ARE ANIMALS ALIKE AS FERTILIZER FACTORS?

Exhaustive Experiments, Each Exhibiting What Willful Wastes We Warrant.

HIGH-GRADES HOISTED. LOW-GRADES LOWERED.

DIFFERENCES IN FARM MANURES.

"*Manures from various kinds of animals differ considerably in form and somewhat in composition. Is it wise economy to mix them all together, or should we apply them separately, giving to each crop the manure that seems best adapted to it?*"

FROM PROF. I. P. ROBERTS.

The value of farm manures depends on so many conditions that it is hardly possible to make any accurate comparisons between the value of the excrements of the various kinds of domesticated animals. Still, a discussion of the subject, and of the best methods of preserving and applying them, may be of great benefit. Other things being equal, the following will be found to hold true in most cases.

1. The value of manure is modified by the amount of food given to the animal. Liberally fed animals produce not only more, but better manure than poorly fed ones.

2. Animals fed on foods rich in protein—or nitrogen—and concentrated foods, furnish far more valuable voidings than do those which are fed on straw, roots and the like.

3. Animals giving large amounts of milk produce poorer manure than any others of their kind, except animals from one to four weeks old.

4. Animals fed so sparingly that they neither increase in weight nor produce anything but manure, return to the manure heap *all* of the fertilizing elements which were contained in the food consumed, but the quantity is always very small.

The following table gives a fair average of the percentage of the manurial elements of the foods consumed, found in the voidings of the classes of animals named below:

Calves—1 to 4 weeks old,	20	per cent.
Milch cows,	80	" "
Growing animals—1 to 3 years,	90	" "
Fattening animals—mature,	95	" "
Mature animals—not gaining, or producing,	100	"

The following table gives approximately the weight of solid and liquid voidings, for one year, of the animals named, according to Morton's Cyclopedia.

	Solids	Liquid	Tons
Horse,	12,000	3,000	7.50
Cow, some succulent food,	20,000	8,000	14.00
Sheep,	760	380	0.57
Hog,	1,800	1,200	1.50

At the Cornell University Experiment Station three cows, weighing 3,570 pounds, ate in three days 122 pounds of clover hay, 41 pounds of corn-stalks, 45 pounds of cotton-seed-meal, 42 pounds of corn-meal and 42 pounds of malt sprouts. The yield of milk was 285 pounds, or an average of 31⅝ pounds per cow per day, and the product of manure for each cow per day was 89 1-9 pounds, and each drank 83⅓ pounds of water. The foods were analyzed and the manure valued, according to the first table given above, and it was found that each cow produced manure worth 16 7-9 cents per day. The mixed manure of the classes of animals named above, weighs about twice as much as the air-dried food fed to them.

The value of manure computed at commercial prices for nitrogen, potash and phosphoric acid, is equal to, or exceeds one-half the cost of the food used. Manure from corn-fed pigs is an exception to this rule. The urine of herbivorous animals is rich in substances which tend to develop the stem and leaf, and deficient in those which produce seeds, hence it is often used to force plants in the early stages of their growth. Solid excrements are comparatively rich in humus and seed-forming principles and deficient in power to produce leaves and stems. Happily liquid droppings decompose much more rapidly than the solid, so if we are wise enough to apply the liquids and solids together, the plant will receive just the kind of nourishment it wants both in its earlier and later stages of development. To show the great loss of manure when not properly cared for, I quote the following from experiments conducted in Europe—

Five tons of fresh manure contained

	40	pounds of	nitrogen.
When half rotted,	35	"	"
In cheesy state,	25	"	"
Fully decomposed	20	"	"

While the nitrogen had been reduced one-half, the total weight of the manure had been reduced still more, so unless proper care is taken in the rotting of manure, it will be better to apply it direct from the stable. Few barns are yet so arranged that the manures from the various animals are economically mixed as the stables are cleaned out; but where it can be done at slight expense it should be done, for it will be found that both the drier manures and damper ones will be much improved in character, and danger from loss will be greatly diminished.

The question often arises where will sheep, or hog, or cow manure do the most good and the least harm. Fresh sheep, horse and pig manures would best be applied to grass lands in early fall, and those intended for corn, in the following spring. Cow manure would best be applied to ground intended for roots, as they love a moist, cool soil, while corn thrives best in one that is warm and dryish. There is less danger of "fingers and toes" and "scab" if cow manure, instead of horse manure, is used, though it is always safest to apply only well rotted manure in late fall or early spring, to ground intended for roots and tubers.

Hen manure does not differ materially from other manures in quantity per 1,000 pounds live weight of animal, if its dryness is considered and the foods used are of the same character as those fed to the other animals, or, in other words, the animal has no power to *create* plant food. The real value of manure is equal to the manural value of the food used, *minus* what the animal has taken out for its own use. Corn-fed hens laying eggs produce *poor* manure. The reason why hen manure is richer than other kinds is that the animal needs and uses large quantities of nitrogenous food and small quantities of water.

The best results may be expected from the application of well rotted manure to wheat and grass lands in September and October. In order to prevent waste and improve the chemical and mechanical condition of the manure, it should be rotted and preserved in a water-tight receptacle with an outlet at the lowest point so that the leachings may flow into a small cistern. The liquid manure should be pumped back upon the heap and a little gypsum or earth should be spread over the mass.

I am pleased to know that you have taken this valuable advance step in the discussion of manures and that you are trying to teach true agriculture, which consists in taking from the soil such concentrated elements of life as the world wants and replacing them in the crude, cheap and waste products so skillfully that no serious diminution of fertility will occur.

Ithaca, N. Y.

FROM W. L. DEVEREAUX.

To secure the best results by applying each sort of manure to the crop for which its mechanical condition best fits it, I incline to the use of sheep manure for wheat and Timothy meadow and as a surface application. In sheep-pens it becomes trodden down into very compact layers and is much subject to heating and fire-fang, and in that condition it is unsuited for the above use, so that it is essential that it should be carted out to the yard to be dampened and pitched over. It will be still better, however, if it is piled under shelter, made damp, and gypsum is applied. In this way it is made fine enough to be fit for spreading properly over a wide reach of surface, and in this form of a top-dressing it will be extraordinarily effective even when not distributed in a thick coat. I am not familiar with the practice of applying sheep manure directly to the land from the sheep-house in winter and spring; but I know that it will do great things for the fertility of the land whenever or however it may be applied.

I regard sheep manure as the best of all farm manures, especially if the sheep's ration consisted largely of clover hay, which makes manure twice as valuable as that from sheep fed on straw, potatoes and bran, and very much better than that from sheep fed on common meadow hay.

Cow manure mixed with barn-yard manure consisting of rotted straw and stalks, is, in my practice, used for various crops. I often use it plowed in, for wheat, and to some extent, it is drawn out to the fields in winter for spring crops.

Horse manure is suited for top-dressing in tillage for wheat, and it is valuable, when drawn to the land in winter, for bringing up poor places to the standard of a field under oats, barley or corn, and it is equally valuable for doubling the fertility of land devoted to garden crops. It has given me good results when put in trenches over potatoes, ashes being added, and all receiving at once a slight covering of soil.

For hoed crops and fertilizing in the hill, hog manure is very effective. It is the backbone of success with cabbages, melons, squashes, etc.

Having expected much of poultry manure, and, withal, having received small returns, I regard it as a puzzler. I have used it in the hill for corn, and in compost as a top-dressing for wheat. I have also used it in the drill and sown it with oats, barley and wheat without getting any noticeable returns. I have now a section in a field of wheat where it was sown by a fertilizer drill opened to its full capacity. The hen manure in this trial was mixed with well weathered muck, and on a portion ashes was also added to the mixture in the drill, just as it started up each time, so that it might be quickly buried in the soil very soon after mixing. There has been no sign of fertility about that section of wheat yet.

FROM H. M. ENGLE.

Manure even from the same animal varies much according to the food given it, and this fact makes the word manure rather indefinite. Animals fed rather sparingly on ordinary hay or corn-fodder and corn chop, if a large quantity of litter is used for absorbents, will make a very ordinary manure, especially if it is left exposed to the weather too long; while animals which, in addition to good hay and corn, are fed full rations of shorts, linseed or cotton-seed-meal, or all of these, in proper proportions, if there is only a moderate quantity of absorbents, will make a manure which will be more than twice the value of the former, and the two sorts will show different effects on different crops because the ingredients in them are differently proportioned.

The droppings of fowls fed largely on wheat and oats will show a better analysis than those from birds fed on corn only. The general custom among farmers is to mix all the manures in one heap. The mixture is then more nearly a well proportioned complete fertilizer than the manure from animals of any one kind.

As to unmixed manures, that from the horse has given me better results in sweet potatoes than that which has been mixed, or that from any other animal, while that from the hog has given the poorest, the latter causing a luxuriant growth of vines, but few fair tubers.

For celery I find no manure superior, if there is any equal to that from fowls, and it does not fail to show good results when applied to almost any other crop. Were I confined to one kind of manure, that from fowl would be my choice. That from sheep I consider next in value.

NIGHT SOIL AS A FARM MANURE.

A. HOLLAND.

"*How, when and where collected? How stored, preserved or handled? How applied to the soil, and in what quantities? What crops is it best for? How does it rank in value as compared with barn-yard manure?*"

THE above questions I am asked by the RURAL to answer according to the experience I have had in using night soil as a fertilizer.

COLLECTION OF NIGHT-SOIL.

The collection of night-soil in the city of Ottawa, Canada, is done by contract, under supervision of a health officer appointed by the Board of Health. The contractor furnishes men, teams and appliances for the work, and his services are paid for by the owner or tenant whose privy vault is emptied by him. My farm comprising 190 acres being only 2½ miles from the city limits, was offered as a dumping-ground, the city authorities having found considerable difficulty in securing a convenient place for this purpose owing to local prejudice against the use of such a fertilizer. For many years the city night-soil had been carted out on the ice on the Ottawa River, whence it was carried off by the spring floods, until finally the act against the pollution of rivers and streams was put in force and the practice was stopped.

HOW STORED PRESERVED OR HANDLED.

The night-soil is now collected in barrels made for the purpose with close covers, and is sent out to my farm at the rate of about ten tons per day. Last winter I made the teamsters dump their loads as evenly as possible on a field of black clay loam, deeply plowed in the fall. As the process went on and 14 acres of ground (across the middle of which a small creek runs) became covered with night-soil, an outcry was raised by the neighbors that it would poison the water supply of the city when the spring floods came. In vain did I urge that those piles would be frozen as hard as a rock until the flood was over: I had (to save myself from legal proceedings) to cover each load of night-soil with stable manure and gas-lime, so that on that piece of ground I am unable to say what proportion of the heavy crop of corn I raised was due to the night-soil and what to the gas-lime and stable manure. I may add that my expectations were realized as to the spring flood; long after the snow had melted and disappeared the piles of night-soil were frozen so hard that we could not spread them, and under each pile was to be found the layer of snow and frozen soil on which it was deposited, while the surrounding soil was thawed out. The remainder of the 10,000 barrels of night-soil drawn to my fields last winter I composted in two large piles with stable manure drawn from the city, and gas-lime. As I distributed

BROWNELL'S WINNER POTATO. From Nature. Fig. 33.

those heaps only last fall, I shall not be able to record the results until next season.

IN WHAT QUANTITIES APPLIED?

It is very difficult to give a satisfactory answer to this question. In our cold climate the privy vaults freeze in the winter and the contents have to be chopped out. As housemaids are in the habit of throwing all kinds of refuse into the cess-pits, the proportion of valuable fertilizer to broken glass, crockery, old boots, tin cans, slops, etc., is very hard to estimate correctly. Frequently loads of 30,000 pounds contain at least nine-tenths of ice and refuse. Last winter we applied about 40 loads per acre.

WHAT CROPS IS IT BEST FOR?

Thus far I have found it to give the best results in mangolds and corn. In one field where the night-soil was applied at the rate of at least 20 tons to the acre of a rich sandy-loam soil with a clay sub-soil, with an equal amount of stable manure, muck and gas-lime, I found that the excess of what I presume to be nitrogen (I am no scientist) had in some places destroyed the vitality of the seeds. Those which did germinate threw up a sickly-looking lot of plants (carrots, parsnips and turnips) which seemed to have a hard struggle for an existence in the extremely dry season that followed. When the rainy weather set in at the end of August, however, the transformation was marvelous. I never saw such a growth in so short a time. Many of the carrots and parsnips dug from the field were six inches in diameter, and a large proportion had split open from the rapidity of growth. Cabbages in the same field had also burst to such a degree that they could not be marketed, and had to be fed to hogs and young cattle.

COMPARISON WITH BARN-YARD MANURE.

I can hardly give an estimate of the practical value of night-soil as compared with barn-yard manure.

The night-soil seems to be more soluble and more readily available as plant food than stable manure, and composted with black muck I think it is more valuable for roots and vegetables. But there are so many objectionable features connected with the use of it—the difficulty of getting men to handle it; the prejudice in the market against buying vegetables raised by such means, and, worse than all, the danger to horses' feet from the quantity of broken bottles worked up in the soil—that I would much rather haul stable manure from the city with my own teams, if I could get it as cheap, than use night-soil. I have an idea that by building a large water-tight tank into which to dump the night-soil mixing with it as much ground apatite (phosphate of lime), and as much as it would absorb, the ammonia generated would create such a chemical change in the pulverized rock as to make the phosphoric acid available as plant food. Ground apatite containing 60 per cent. of lime phosphate, is sold at the mills in this vicinity at $8 per ton. I have used a quantity of it this winter in the stables as an absorbent, scattering it in the gutters behind the cows. Next season I shall be able to judge of its effects on vegetation. In conclusion, I may say that I am now having a twelve-acre field covered with night-soil as it comes from the city. The soil is a somewhat sharp, sandy loam, summer-fallowed last season for the purpose of getting a large quantity of boulders out of it. The field is deeply plowed, and I expect that with two men, six horses and a steel rail 30 feet long, I shall be able to spread the manure evenly and thoroughly in less than a day. I propose to plant the field with potatoes, using an Aspinwall planter for that purpose, and in due time I shall inform the readers of the RURAL of the result.

MAINTAINING FERTILITY AT THE WEST.

IN the RURAL for January 5, a correspondent writing from Athens Co., Ohio, deplored the evident depreciation in the fertility of Western soils. In closing his note he made use of the following words:

"*The question here arises: Can this fertility ever be returned to the soil by the use of commercial fertilizers? I answer, yes, but it will force the owner to mortgage his farm. Not only will he have to mortgage it, but the sheriff will foreclose the mortgage and some one else will have a rich farm.*"

The question thus raised is a most interesting one for Western farmers to consider. Here are a few of the remarks called out by this statement.

FROM PROF. F. H. STORER.

It is not easy for any one unacquainted with the soil of the locality to speak on the question here propounded. It may well be true that new methods of cropping are needed much more than artificial fertilizers. Has everything been done there with clover that can be done? Has it been proved that there are no profitable "preparatory crops" fit to precede grass and insure its catching? It is not unlikely that the good success with Timothy which the writer says he had in former years may have depended on better tilth in those days and a greater capacity of the land to absorb and hold water than it has now. Has he ever tried, on his land, Orchard grass, sown according to approved methods? Probably there are very few places in this country where phosphates can be used economically for the sake of the grass crop, though there may probably be some situations where a very cheap and fairly good phosphate, such as the "phospbatic slag" of Europe, could be employed with advantage, provided we had ready access to it.

If a farmer condemns the use of chemical fertilizers before he has tried a high grade "complete" article, he merely deceives himself and stands in the light of his own progress.

FROM JUDGE T. C. JONES.

THE conclusions of your Athens, Ohio, correspondent respecting the results that may be expected from the continued use of "commercial fertilizers" for the production of grain crops, are, in the main, correct; but I think he is wrong in concluding that the only way to maintain the capacity of the soil to grow full crops is to continue the use of the fertilizers. I have had no practical experience with lands on the sandstone formations of Eastern Ohio, living on the limestone soils of the Scioto Valley; but, I am quite familiar with the practice of the farmers in the eastern and south-eastern counties, and have never seen or heard of any difficulty in growing full crops of clover on those lands, where a proper rotation of crops has been observed—that is, where clover has been sown before the land was exhausted. And even when, by continuous tillage, the land has been "run down," as it is termed, there has been little difficulty in securing a good growth of clover by the application of the commercial fertilizers of which he speaks. And this I think is the best use that can be made of these fertilizers, or of land-plaster which I have often used with excellent results upon clover. When we once get a good stand of clover we are all right as to the future, if we keep up the proper rotation of crops, and keep a little stock—cattle and sheep—to consume our hay and fodder.

It is impossible to restore the fertility of our exhausted lands by growing Timothy or grasses for meadows. Timothy, instead of restoring the fertility of the soil, will exhaust it if the grass is mown and carried off. I never sow Timothy, or Orchard, or Rye grass without clover, or the clover without some of these grasses. When a crop of clover is grown it is a common practice to cut the second growth for seed, and sometimes after this to graze the land so as to leave it bare through the winter. This is a monstrous practice. When the season is favorable a crop of clover seed is usually very profitable; but I don't like to remove the aftermath in this way. If it is fed off (not too closely) by cattle but little injury results.

Delaware Co., Ohio.

The very best of the novelties in vegetables and farm seeds; the best of the standard varieties. This subject will be treated by our best practical writers in a week or so.

FROM A. C. GLIDDEN.

The question here started will be answered differently in different localities.

Throughout Southern Michigan, and, so far as I am imformed, over the whole State, there is no demand for chemical fertilizers, for the reason that the experiments, so far tried, have failed to show any marked increase in production from their use. My views regarding the use of commercial fertilizers, and their necessity in some cases, are different from those usually expressed. I regard them as a temporary expedient, found necessary to fill out the requirements of a soil made sterile by unwise methods of farming. I believe nature is abundantly qualified to provide all the subtile elements that enter into plant life and growth, if given time to organize her forces within the soil.

I have worked the farm I now own, as boy and man, for 36 years, and I know that its capacity for the production of crops is nearly double what it was at the beginning of this period. There have been seasons like the last two, when droughts have prevented a catch of grass, when the fields seemed to go back in quality. During this period of gradual improvement the chemical affinities have kept pace with the improved character of the soil. Never has there been a handful of chemical fertilizer sown on the farm, and I never expect to see the time when it will become necessary to use it. Fifty years ago there was a log house and a cooper-shop on the farm, where now is the middle of a field. These have been taken down, and the space they occupied has been tilled for nearly 30 years; but around this spot my best crop in the field still grows. The seed takes on a stronger growth, and grass and grain are one-third better there than on the lands adjoining. I think here is a prophecy of what the other parts of the field may become, without the aid of phosphates or any other special fertilizers. On a neighbor's farm there stood a schoolhouse with ample grounds, built and occupied when the whole country was comparatively a wilderness. The grounds about the schoolhouse were never plowed until a new schoolhouse was built in another location. Then they were united to the fields about them, and cultivated like the rest. The ground occupied as the yard back of the school-house, was sterile for years. It was in the same condition regarding fertility, as when the trees were felled. This half acre of yellow, raw soil was in direct contrast to the dark-colored land about it, and it is still behind in fertility, and shows it with every crop.

On a naturally strong soil that has been too frequently cropped, the main elements of fertility may be exhausted and here the application of chemical fertilizers has a complementary effect on the soil as a timely relief. But such expedients should be regarded by the owner of the soil as a reprimand for some neglect or remissness of duty in previous years. Land that has become valuable from its proximity to good markets for its products, may be kept producing for a time by the use of chemical fertilizers by the aid of stable manures, without the necessity of rest; but ordinary farming lands must lie in grass for stated periods of greater or less duration, according to the character and needs of the soil. During these periods of rest, the energies of the soil should be assisted by stimulating manures applied to the surface. The soil thus becomes again perfected and complete in all the requirements for the production of a crop, so that chemical fertilizers of all kinds become superfluous, and unnecessary.

To believe that the soil of the West must eventually need artificial manures, is to concede that there is a gradual and natural decadence of fertility, which carries with it the assumption that the race will eventually die of starvation. The facts warrant no such prophecy. Soils carefully and judiciously farmed, are capable of a steadily increasing fertility, and this in a ratio to correspond with the increasing wants of population. I am no pessimist, as the above will indicate, and it will take a more devastating drought than has yet overspread the earth, to convince me that seed-time and harvest with their concomitant supports, will not continue.

Van Buren Co., Mich.

What among the new kinds of strawberries, raspberries, blackberries, grapes and large fruits are actual improvements upon older varieties? This subject will be fully treated by the best horticultural writers in the country, in a R. N.-Y. special soon to be issued.

FROM PROF. J. W SANBORN.

Your correspondent is right, and right in a ringing way. Waste drops from about every finger of our Western farm policy. Above, horizontally and below waste follows hot on the heels of the plow when too much sped. Another brood of wastes follows the cropping, and as much nutrition is cast to the winds, and the "tooth of time" in corn fodder as is carried off in the corn grown. And then the wasting of straw and the animal heat floating away on every breeze, and the manure that loads every rill in its onward course to the Gulf of Mexico: these make the wastes that would go far to feed some nations. So far as the Mississippi Valley is concerned as a whole, chemicals will raise both the crops and the size of the mortgages. Few have greater faith in chemicals than the writer.

The fact of their competency to grow large crops continuously seems well established by the most competent evidence. The personal experience of my father on a hill farm in New Hampshire for 13 years has shown that chemicals on land very badly worn out will not only continuously raise fair crops but steadily increase the capacity of the soil to produce them. But the question raised is not the adequacy, but the economy of chemical fertilizers. They and yard manure combined are profitable when used in the East, but six years' use of them here has confirmed that which is apparent without trial—that chemicals cannot pay when prices for the staple products of the soil are low. It is true that chemicals will pay here for high-priced crops or that they can be used without loss; or, in more explicit terms, yard manure even then is much the cheaper source of manure. Again, there may be soils deficient in some one essential element of plant food, and if this be the low-priced potash, then it might pay to use it if other materials are abundant in the soils; but these conditions are not the rule.

I should regard it as a very great misfortune to the West to be induced to use chemical manures as yet, and I hope that it will not be advised to do so. I have steadily opposed all movements looking to the use of chemicals in Missouri. My reason is obvious and, I believe, a conclusive one, and goes beyond the mere fact that corn at 25 cents per bushel will not do more than pay the fertilizer bill, no account being taken of the cost of the necessary labor or of the rent of the land. It is a fundamental truth that stock manures are far cheaper; indeed, practically they cost only the outlay for drawing and spreading. We have had tables of manurial values of foods after feeding, going the rounds for years. Whatever may be the theoretical value and accuracy of these, I think it is true that they do not represent the practical value of manures from grain feeds. Interest, leaching, volatilization, unfortunate chemical reactions of yard manure which has to lie in soils that are close, for years before it is fully decomposed, cut down the value below that of each constituent of a chemical fertilizer; other and commercial factors enter into the calculation.

I made for the Mirror and Farmer, a short time since, a table representing the value that I believed the manure from a ton of several sorts of foods would have in practice. The value also represented the rates at which I would actually as soon have the manure from a ton of said foods as to use the same amount of money in chemicals. This table was carefully made, the several factors involved having been weighed. Here is the calculated value in actual practice of the manure made from the various kinds of stock feed:

Corn	$3.27
Corn-fodder	1.25
Clover	3 50
Timothy	2.73
Oats	3.46
Oat-straw	1.27
Wheat-straw	.98
Bran	6.47
Middlings	5.12
Linseed-meal	9.03
Cotton-seed-meal	12 61
Carrots	.45

Now I do not wish to tell my Western readers that they can afford to give the above rates for the West, but I do mean to tell them that they may as well give them as to pay the price prevailing for chemicals, and I believe that the manure trade would be the best. If I am correct, then it needs no further argument to show that it is far cheaper to save the manure now being wasted, and indeed to feed for it rather than to buy chemicals. I regard stock as still our best market for our foods, and if this be so, their manure costs nothing, and chemicals are out of the question.

Columbia, Mo.

If a farmer should buy two tons of fine ground bone and spread it evenly upon an acre of land and the crops thereon should be no better than upon contiguous land, he would not be justified in concluding that his land does not need bone. If the same ineffectual results should follow the use of a ton of sulphate of potash upon another acre, this would not prove that the land does not need potash. Combine the two upon a third acre, and if the land makes no response, the farmer may conclude that, for the present at least, commercial fertilizers don't pay.

Arboricultural.

THE ORIENTAL SPRUCE.

(*See page* 103.)

THE illustration (Fig. 34), engraved from a photograph taken early last spring, shows a specimen of this hardy and beautiful evergreen tree growing in the Rural Experiment Grounds. It was taken from the nursery some 12 years ago, and is now 10 feet high, by about six feet in diameter at the ground. It has never been injured in the slightest degree by cold, heat or drought. A casual observer would mistake it for a young Norway spruce, but an examination shows decided differences and a beauty all its own.

In the language of F. J. Scott "the multiplicity of its twigs gives the tree a superior density of foliage which its early growth does not promise; and when a large tree, its dark-green masses break into strong and irregular

lights and shades, and it is then easily distinguished from the Norway by a greater solidity of character, or, to speak more specifically, by the less distinctly marked separation of its horizontal branches."

Our engraving does not show the undulating character of the branches and leaves of the RURAL'S specimen. The thickly-clothed branches near the base are here and there quite pendulous, while again they extend out beyond a symmetrical line, making the light and shadow well defined. The writer has seen but one specimen of this tree old enough to display its mature habit and that is recognized as one of the finest of the species anywhere to be seen. It is about 30 feet high. It is dense, heavy, dark in color with none of the horizontal, leggy layers of branches which characterize the Norway.

The Oriental Spruce, (Abies orientalis of the catalogues) is a native of the region about the Black Sea, and is said to grow to a hight of 75 feet. It will be seen that the R. N.-Y.'s specimen is of slow growth. Norway spruces set out at the same time are nearly twice the hight. It is thought by some botanists to be the same as Abies (Picea) obovata.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.

SEEDING TO GRASS: SHEEP.

Subscriber (No Address).—Last spring and summer I heavily manured, with yard manure, two lots for potatoes and cauliflower. Circumstances prevented sowing rye as intended. Previously the potato lot had raised oats and the cauliflower lot was sod, soil a light loam. We need hay. Now, what course shall I pursue to get the most profit? 1. Shall I sow grass seed alone or with barley, oats or spring-wheat? 2. I have also another lot—level—terribly rocky—on which sheep have run a long time. I dislike to use a cultivator on it on account of rocks.

Shall I sow oats, buckwheat, barley, or what course shall I pursue in order to get it in grass again without the use of a cultivator. 3. Can the RURAL tell where to get some thoroughbred sheep at prices somewhat reasonable?

ANSWERED BY JOSEPH HARRIS.

I know of no grass or clover that, sown in the spring, will give a good crop of hay the first year. I happened to have just such a case last year. I had a ten-acre lot of rather low, alluvial, sandy, black soil that had been used for garden and seed-growing for some years. I wished to seed it down. Six acres were sown with Timothy seed in September; the other four acres were in corn and the corn was not off in time to sow the grass seed in the fall. I intended to sow rye and seed down with it in the fall, but press of other work delayed the husking till we thought it too late for rye and grass. I harrowed the corn stubble thoroughly in the fall and the next spring—1888—sowed two bushels of oats per acre on the snow, and a little later sowed a mixture of six quarts of Timothy seed and two quarts of Alsike clover seed per acre. Owing possibly to the unusually dry spring, the oats failed to come up as Col. Curtis and others had given us to understand they would, but the grass and clover came up well. The six acres seeded with Timothy in the fall produced a heavy crop of hay, so heavy that some if it was lodged and rotted a little at the bottom. But we got a crop estimated at three tons of hay per acre. So far as the oats were concerned, our experiment in sowing them on the snow was not a success. In some parts of the lot, wild mustard and other seeds were almost as thick as the oats, and about the first of July we cut them with a mowing machine and made them into hay. But after the oats were cut the grass and clover grew rapidly, and the ground is now covered with a good sod and bids fair to give us a good crop of hay this year. Notwithstanding this failure, I intend to give the plan another trial this spring. It is important to get grass seed in early, and if, as Col. Curtis claims, oats, in ordinary seasons can be sown with advantage on the snow just before warm weather, the plan, when grass is he main object, is well worthy of a trial. As a rule, if seeding is delayed till we can plow the land, barley and spring wheat are better crops to seed with than oats. 2. If the land is so rocky that it cannot be plowed with advantage, he should let it remain in grass and try to bring in much better grasses by sowing 250 or 300 pounds of some high-grade complete fertilizer, selecting the one that will give the most nitrogen, phosphoric acid and potash, at the least cost, giving the preference to the one containing the most nitrogen. Another far cheaper method, but not so rapid, will be to keep sheep on the pasture and give them a pound of cotton-seed-cake each, per day. Sell the sheep when fat and buy and fatten lean ones, and continue feeding cotton-seed-cake. If properly managed, the sheep will pay for the feed, and the manure from the cotton-seed-cake will greatly improve the pasture. If the field has been in grass for many years it will probably not be necessary to sow grass seed, though it could do no harm to sow a little White Clover, Alsike clover, Rye Grass, Orchard Grass, etc. on the land *very early in the spring.* 3. This question is too indefinite. You must first make up your mind what breed of sheep you want—say Merinos for fine wool, or some of the mutton breeds, such as Cotswolds, Leicesters, Lincolns (for combing wool) or Oxford, Shropshire, Hampshire or Sussex Downs. The latter are usually called "South Downs" and are one of the oldest and best of the mutton breeds, especially when the quality of the mutton is the leading object. Unless you wish to be a "breeder" you do not need to pay a high price for thoroughbred ewes. If your object is to keep sheep for mutton and wool and not for selling for breeding purposes, the better plan will probably be to select some of the best common ewes you can find at common prices, and then try a thoroughbred ram. In this way, with the use of plenty of cotton-seed cake, you can soon have a fine flock of what the English farmers term "rent-paying" sheep.

FEED FOR GROWING CATTLE AND MILCH COWS.

J. D. L., Moore's Salt Works, Ohio.—I am wintering 25 head of cattle consisting of yearlings and two-year-old heifers. My coarse feed is cut corn-fodder in the morning, and wheat and oat-straw at night. I aim to cut my grain before it is quite ripe, thinking that then the straw will be better. I also want to cut the corn before frost. All my cattle are in a good, warm stable. I have 1,000 bushels of corn ears and 200 bushels of oats. I crush my corn, and all my feed is ground. At our mills, six miles distant, I can purchase roller-process bran with all the shorts with it, for $1 per cwt., or I can get Chicago bran at the railroad station, the same distance away, at $17 per ton. The latter appears to be nothing but bran. Which is the cheaper, and in what proportion should they be mixed to make a large growth in the young stock, and to make the cows yield a fair quantity of butter? At the station oil-meal is worth $27 per ton; oats, about 40 cents per bushel.

ANSWERED BY HENRY STEWART.

Bran is the best food for the young cattle, beyond question, but it is too dry and fine to be eaten without some waste. Under the circumstances, it would, we think, be advisable to mix some of the crushed corn with it in sufficient quantity to cause the whole to be better masticated; one quart twice a day of a mixture of one part of the crushed corn with three parts of the bran might be given to a yearling. In practice this has been found excellent feeding for all sorts of young animals, including colts. At the price mentioned, bran can be more profitably used in this way than the mixture containing shorts. Roller-process bran is worth about 10 per cent. more for feeding than ordinary bran, because its fat and nitrogen are more valuable in feeding than the starch of the middlings. Starch has a feeding value of one only as compared with 2½ of fat and nitrogen compounds. But for cows fed for butter product, it has been found that corn-meal is the best standard food, and if it were not that a cow cannot so healthfully consume a large quantity of it as she can of a mixture of corn-meal and bran, it would be better to feed all corn-meal. It contains about twice as much fat as bran, and yields a softer butter which is more easily gathered in the churn. The present winter I am feeding cows, alternate months, with all corn-meal—eight pounds daily,—and then with eight pounds of mixed corn-meal and bran. The butter from the whole meal is churned in 20 minutes, and is about one pound more weekly from each cow than from the mixed bran and meal; but the butter from the latter is not so good in quality, is of a lighter color and requires 30 to 40 minutes to churn, which is too long for the best quality. Oil-meal—linseed—yields a soft and inferior-flavored butter; but cotton-seed-meal is not surpassed for the quality and texture of the butter made from it. It is so rich a food, however, containing 13 to 18 per cent. of fat and more than 40 per cent. of nitrogen compounds, that two pounds daily are as much as can be used without danger to the cow. One of the cows I am now feeding cannot take cotton-seed-meal at all without being sick and refusing food for two or three days, and cannot take eight pounds of clear corn-meal daily without the same result. This experience with cows is so common with dairymen that it is wise to test each cow in regard to the feeding, and as a rule it is safe to use a portion of bran in the feed rather than clear meal. All rules for feeding are modified more or less by the character of the cows in this respect.

INCREASING FERTILITY BY MEANS OF CHEMICAL FERTILIZERS.

F. C., Ironville, Ohio.—On page 53 of this year's RURAL, D. C. L. tells us that he owns a farm of 100 acres, of which he cultivates 90, increasing its fertility by the use of high-grade commercial fertilizers. I, for one, would like to hear more from him about the subject.

ANSWERED BY D. C. LEWIS, MIDDLESEX CO., NEW JERSEY.

It is 12 years since I first commenced the use of chemical fertilizers. Previous to that time I practiced rotation as follows: Sward for corn; oats and potatoes on corn stubble. My yard manure was broadcasted on the oat stubble for wheat with about 150 to 200 pounds of Peruvian guano per acre. I seeded down to grass with wheat. Then I pastured or mowed the land for two years, making a five-year rotation. At that time I depended on an application of 100 bushels of sand marl per acre to make the grass crop. I also purchased all the stable manure I could get about the village at $2 per load. I commenced the use of chemical fertilizers in moderate quantities, with yard manure, on wheat and potatoes only. In recent years I have changed my system of treatment, but I continue the five-year rotation of crops. I am now applying all my yard manure to the corn crop, in July, for next year's crop depending upon chemical fertilizers alone for potatoes, wheat and grass, using a special corn fertilizer on sward for corn since I sometimes run short of yard manure. When I commenced the use of chemical fertilizers on wheat, I applied about 300 pounds per acre; but I have increased the application to 700 pounds, which has doubled the yield of wheat per acre, as compared with the outcome from the old system. It has also largely increased the yield of grass per acre, so that my gross receipts from the farm have increased, over the yield under the old system, to an average of $1,000 per annum. And it appears to me that I have just learned how to use the chemical fertilizers with profit. I am now applying 1,200 pounds of Mapes potato fertilizer per acre, for potatoes, and as wheat follows potatoes, I apply about 300 pounds per acre for the wheat, making 1,500 pounds of purchased fertilizers per acre, for the potatoes. It appears to me that I may apply even 1,800 pounds, to 2,000 pounds per acre for the five-year rotation as the quantity that can be most profitably used. My present system of rotation is corn, potatoes, wheat, and grass two years. I have never used any of the ordinary superphosphates on wheat or when seeding to grass. I have always used fertilizers of the highest grade I could buy and my faith is very strong that mine is the only safe system for permanent improvement.

PROPORTION OF BUTTER IN MILK AS AFFECTED BY FEED.

E. L. B., Groton City, N. Y.—Will Col. Curtis tell us whether it takes more milk to make a pound of butter when the cows are fed on grass than when they are fed on hay or silage? It is a common opinion that more butter can be made from a given quantity of milk in the fall than in the summer, with shallow setting. How about deep setting?

ANSWERED BY COL. F. D. CURTIS.

It does not take as much milk to make a pound of butter when the cows are fed on hay, as it does when they are fed on grass, provided the hay was green when cut and was well cured and is of good quality. A cow would make more butter from less milk when fed on green, well cured clover hay, than from clover pasture from which she would make more milk. The butter is the product of the butter fats in the milk. The value of milk is in its solids and not in the amount of water. Rich, dry foods will make more solids in proportion to the water in the milk, and grass will increase the volume of milk and the amount of water in proportion to the solids. The kinds of hay and grass must all be taken into the account. When fed on good silage, cows will give more milk and make more butter than when fed all hay. The rule for feeding is, two pounds of dry fodder for every 100 pounds of live weight. As silage is full of moisture, two pounds more must be added, making 40 pounds a ration for a cow of 1,000 pounds weight. I am sure 40 pounds of good silage will make more and better butter than 20 pounds of any ordinary hay. Neither of these is a full or complete ration. They are only suitable as a maintenance or support ration. To get the best results from either hay or silage, there should be fed with them a portion of bran and either linseed or cotton-seed meal to make a better proportion of the nitrogenous and the carbonaceous foods or elements, so as to obtain a better digestion and assimilation and a better quality of butter and more of it. More butter should be made from a given quantity of milk in the autumn, when set anyway so as to get the cream all up. The cream does not rise as freely in the autumn, on account of its viscosity, or the thick, sticky condition of the milk. By putting in water heated up to 100 degrees, the cream will rise sooner and with more freedom; that is, there will be more of it.

ENLARGEMENT ON HORSE'S LEG.

W. K. L., Ovid Centre, N. Y.—My two-year-old colt has a peculiar enlargement in the inside of the hock joint. It begins abruptly about two inches below the wart or callosity on the posterior part of leg, immediately bears towards the inside of the leg. It goes up in the direction of the "wart," passes behind it, then upwards until it ends in a dome-like enlargement just in front of the point of the hock. It is elastic, and evidently contains some fluid. It began last June and is probably the result of a strain. There have never been any signs of inflammation in it and it has never made the colt lame in the slightest degree. He plays and frolics, walks or trots without favoring the affected leg in the least. I believe it to be an exudation into the sheath of a tendon which has its origin just at the point where the enlargement begins. It has been repeatedly and thoroughly blistered and fired (not with points but with "feather-edge"). It is slowly enlarging. The colt is so valuable that I am willing to incur almost any risk to have the blemish removed. How would it do to lay open the sheath of the tendon from the bottom to the top? Of course, as the fluid is emitted, the enlargement will go down. Then by making an application of a slightly escharotic nature to the inside of sac or sheath produce, as it heals, adhesion and obliteration of the sheath.

ANS. We would advise first trying the following treatment before opening into the cavity. Draw off the contents, if liquid, with an aspirator or a hypodermic syringe. Then inject a solution of the compound tincture of iodine. After a few minutes withdraw this solution and apply a wet bandage so as to compress the sac and bring the walls together. If this fails, then your proposed method of opening the sac is probably the best course to pursue. The seton if properly inserted would undoubtedly serve the same purpose.

SPOILED SILAGE.

J. D. L., Lamington, N. J.—Last summer I built a silo in a bent in the corner of my barn and lined it with oak boards and the inside with matched hemlock. The floor was two feet from the ground. I filled it with green corn without running it through a cutter. When I went to get my silage, it was all spoiled. It was covered with planks and on the top of them I had about a ton of rye straw. If I had run the corn through a cutter or if the bottom was on the ground, would the silage have kept better?

ANSWERED BY PROF. A. J. COOK.

As silage that has been put into silos whole, has come out in fine condition; it is clear either that the silo of J. D. L. is faulty or else that the corn was not put in well. It is not stated whether the silo was lined with paper. Wood alone, however well matched, would not make an air-tight silo. The right way to make a silo is to make a doubled-walled one, both walls to be lined with tarred paper inside the boards, to make it air-and-water-tight. I have had no experience with filling without cutting; but I suppose it very important to tread very thoroughly and lay in the corn very straight so that it can be compressed so as to shut out the air. The air must be excluded. My silo is built as above, and then lined with a coat of plaster with cement used for the lime just as we plaster an underground cistern. I cut all my corn, tread it down very thoroughly about the sides and corners, and cover it with straw held down by boards. My silage comes out perfectly preserved, and is relished to perfection by all stock—horses, cattle, and sheep.

ABOUT MELON CULTURE.

F. G. B., Gratiot, Wis.—My soil is a rich clay loam, and I want to raise enough melons for home use. How should the ground be prepared? Would an application of sand be beneficial and how much should be applied per square rod? What varieties should I plant?

ANSWERED BY J. S. HARRIS.

The opinion generally prevailing is that a sandy or light sandy loam soil is essential for successful melon culture. I have found the melon a plant not at all particular as to soil if it be not too wet and heavy. F. G. B. may prepare his soil for good melon crops by first giving it under-drainage unless the sub-soil is open and porous; next by plowing deep and fine, and if the surface is a dead level, he should leave it in ridges eight or ten feet wide The application of wood ashes—one bushel to a square rod—thoroughly harrowed in, or double the quantity plowed in, has a tendency to keep the soil mellow, and is a good fertilizer. If manures are required, that made from the horse-stable is the best for such a soil. The application of sand does not usually show any immediate benefit. Probably a good load of sharp sand to the rod for four or five years, if thoroughly incorporated with the soil, would in the end prove advantageous; but if all were applied at once it would prove injurious. Varieties: musk-melons, Emerald Gem, Surprise, Early Hackensack; water-melons, Kolb's Gem and Gipsy. Mountain Sprout and Black Spanish are also good varieties. Home-grown seed does not seem to be as sure as that grown South and East.

ABSORBENTS OF LIQUID MANURE.

E. A. P., Chatham, Pa.—What is the best absorbent to use in a barnyard for preserving the liquid manure?

ANS.—The "best" absorbent for liquid manures is the one calculated to add most to the value of the manure, and would evidently be one containing a fair amount of phosphoric acid. Urine is weak in phosphoric acid, that is to say, the amount of phosphoric acid in urine does not bear a fair ratio to the amount of nitrogen or potash. For example, a standard fertilizer contains six per cent. of ammonia, seven per cent. of phosphoric acid and six per cent. of potash. The urine contains such a small percentage of phosphoric acid that it cannot possibly be called a "complete" or standard manure. For use in the gutters behind cattle or horses, sawdust with which a quantity of "floats" or bone meal has been mixed, has been frequently praised. The "floats" alone have but little retentive power—they would be of but little value as an absorbent. An acid phosphate would be better than the "floats." Many farmers make a practice of wheeling the horse manure back of the cows every day. This is considered an economical practice. Stalks and straw cut into inch lengths make an excellent absorbent. These absorbents are best suited for use in the stable where most of the urine should be saved. For the barn-yard, muck, dry earth, sods, straw, leaves, etc., etc., will save much of the liquid.

ABOUT POTATO CULTURE.

J. I. B. Jr., Riverdale, N. Y.—I am thinking of trying the Rural Trench System of raising potatoes. 1. Of the Burbank, White Elephant and Late Beauty of Hebron, which would be the best; that is, the most profitable to raise? 2. What are the merits and demerits of each? 3. Have your experiments demonstrated how the seed of these varieties should be cut to the best advantage? 4. Where can seed be obtained? 5. How can trenches, etc., be satisfactorily made in a field of plowed sod?

ANS.—1. The White Elephant and Late Beauty of Hebron are essentially the same. At any rate, the R. N.-Y. can see no difference. The quality is better than that of Burbank. 2. Burbank is a good yielder. The shape of the White Elephant might be better. 3. Take medium-sized potatoes, cut off the seed-end and cut the rest so as to give two or three strong eyes to each piece and as much flesh to each as possible. 4. See catalogue notices. 5. The sod should have been turned last fall. Then a shovel plow would answer to form the trenches next spring.

SMALL FRUIT QUERIES.

F. S. W., Des Moines, Iowa.—1. What does the RURAL think of the Worden and Moore's Early grapes as compared with the Concord in hardiness, earliness and quality. 2. Is the Niagara hardy enough for our climate and how is it as to quality and productiveness? 3. Are grape vines and strawberry plants raised in nurseries in Northern Ohio and New York as good for planting here as home-grown sorts?

ANS.—1. In our soil the Worden is neither better nor earlier than the Concord, while the bunches do not average so large. Moore's Early is as good as the Concord—10 days earlier. The berries are larger, the bunch smaller. It is fully as hardy. 2. We do not think the Niagara as hardy as the Concord, and we doubt if it will stand your climate. It is very productive. In quality it is no better than the Concord and is more foxy. 3. Yes, in our opinion.

TOP-DRESSING FOR PASTURES; THE HORSE-NETTLE.

E. A. P., Chatham, Pa.—1. What fertilizer would be advisable as a spring top-dressing for pastures that were eaten off close last fall? 2. What is the best way to get rid of the horse-nettle?

ANS. 1. Unleached ashes and raw-bone flour. 2. This pernicious weed (Solanum Carolinense) is a native of the South, but is extending North. The root is perennial, the stem from one to two feet high; the flower bluish-white, berries a quarter-inch in diameter. It should be fought by continuous cultivation until the last plant is killed.

COLD-STORAGE HOUSES.

E. H. C., Highlands, N. J.—Where can I get information concerning cold-storage houses? Is it possible to keep strawberries and like fruits, green corn or other vegetables in a natural state for Christmas in a cold-storage house?

ANS.—R. J. Dean & Co., of this city conduct several large cold-storage houses. A visit to their establishments would be worth more to the observing man than a volume of information. There are other houses along the Hudson River that might be examined with profit. The plan of supplying fruits and vegetables at Christmas is certainly well worth testing.

PARSNIP-FLAVORED CELERY.

M. T. W., Sandy Hill, N. Y.—Last season I had some celery that was so strongly flavored by a parsnip taste that it was nauseating and worthless. Parsnips were growing near it; is it possible they "mixed." As they are of different genera, I can't understand how one can cross-fertilize the other.

ANS. That the celery should be parsnip-flavored is wholly inexplicable to the R. N.-Y.

Miscellaneous.

J. E. R. P., Hornellsville, N. Y.—The barley sent for name is the Nepaul variety.

W. Medina, N. Y.—What is the quality of the Queen of the Valley potato?

ANS.—We consider the quality, as the variety is grown in most places, inferior.

T. W. L., Buckingham Co., Va.—We published a special number of the RURAL devoted exclusively to ensilage last year. In this number the plan of packing whole corn stalks in the silo was described.

J. C., Hartfield, N. Y.—What shall I do for lice on cattle?

ANS.—Pyrethrum dusted into the hair will kill the lice; so will the use of tobacco water, lard and snuff, or thymo-cresol.

G. K. H., Plainfield, N. J.—Please name the best three plums for market in this section.

ANS.—Select from the following: Duane's Purple, Imperial Gage, Jefferson, McLaughlin, Washington.

H. A. D., Taylorville, Ill.—If a young mulberry tree is set out next spring—in April—would it be advisable to mulch it with straw?

ANS.—Should the season be dry, the mulch will be of service; otherwise not in the R. N.-Y.'s opinion.

G. W. S., Parisville, N. Y.—What is the address of some Guernsey cattle breeder in this part of the State?

ANS.—E. N. Howell, Poughkeepsie, N. Y.; J. L. Hope, "Ellerslie," Rhinecliff, N. Y.; S. B. Faber Willets, Roslyn, L. I., N. Y.

F. W. J., Pontiac, Mich.—Where can I get the Thomas smoothing harrow? Who sells the R. N.-Y. No. 2 potato?

ANS.—1. The Herendeen Manufacturing Co., Geneva, N. Y. make the Thomas harrow 2. Thorburn & Co., 15 John St., N.Y. will sell any quantity of the RURAL No. 2 potato as long as their stock holds out.

S. H. S., South Livermore, Me.—Near here there formerly grew some Black-Heart cherry trees, from which there are now some sprouts or young trees growing quite thriftily; but they never bear. Why?

ANS.—The young trees are seedlings probably, and may be very late in bearing.

H. D, Greenwich, Conn.—1. Is the Kittatinny Blackberry hardy in this locality 2. Is it a good bearer and a good market berry?

ANS.—1. A perfectly hardy blackberry for your climate is yet to be found. The Kittatinny often winter-kills here and further south. 2. Yes, a fine bearer of excellent berries and a good market variety.

G. K. H., Penfield, N. Y.—My land is limestone loam, and most of the stones are fast, and many tools that will work well on clear land I cannot use at all. Does the RURAL know of any cultivators that answer the following description?—A cultivator on wheels, with teeth supplied with springs, like the hoes on what is known as a "spring-hoe" drill, so that when a tooth strikes an obstruction it may draw back to a horizontal position without anything breaking, and when the obstruction is passed, it will at once spring back to its former position. The teeth should be arranged so that one or two of the center ones may be removed for cultivating drilled crops two rows at a time.

ANS.—A cultivator made by Hench & Dromgold, of York, Pa., will fill the bill.

DISCUSSION.

THE HELP QUESTION.

F. D., TRENTON, N. J.—A late RURAL is devoted in part to the labor or "help" question. It is one that will be always with us. Before all the fortunes that have been made and under all that may yet be secured, is work. Among the questions sent out in the annual circular by the executive committee of the New Jersey State Board of Agriculture, are these:

1. What are the wages paid adult farm hands per month, with board?
2. What without board?
3. Do farmers generally board their help?
4. Are there more single than married men employed on farms?
5. Are farm laborers native or foreign—*i. e.*, which class is in the majority?

The replies state that the average pay per month, with board, including bed, light, etc., is $12 to $18; without board but usually with a tenant house, garden, and sometimes a quart of milk a day or the keep of a cow and other items, $22 to $25. Farmers generally board their help, however. There are far more single than married men employed as farm hands, and this seems to stand in the way of help boarding themselves, tenant house or no tenant house. I agree in general with Mrs. I. D. C—'s statement on page 57. As a remedy for the large amount of inexperienced, inefficient, ignorant, careless, slipshod, stock-abusing and employer-and-wife-provoking help, we must—or we had better at least—give a higher price for a good, reliable, decent man, who is sufficiently competent to set himself to work occasionally without orders for every step. Only in this way will we grade up farm help, and show the large class who expect good wages on the farm without a knowledge of first principles even, that it will pay them to learn their trade thoroughly, so as to know how to assume responsibility, before they expect a journeyman's or skilled workman's wages. On this point Mr. March is right; so also is Mr. Cook's second paragraph on page 52. I am somewhat surprised, too, to find in answer to question 6, put by the New Jersey Board of Agriculture, that farm laborers are quite generally native; but one county, possibly two, in this State say that foreigners are in the majority.

JAPANESE BUCKWHEAT.

A. J. COOK, INGHAM CO., MICH.—I wish to add my voice to the praise of this excellent grain. I had to pay $3 for seed, which I did with some reluctance; but I am very glad that I did so. 1. The yield was extraordinary—far beyond my highest hopes—and that notwithstanding the fact that it was sown, in part on a very hard, poor soil. 2. The kernels are very large. I never saw such large grain before, though I have raised the common and Silver-hull kinds for some years. 3. I sowed one-half early in June, and the remainder a month later, and the early sown was as good as the other. This, of course, might not always be so. The season was cool and dry. 4. The grain weighs 45 pounds to the measured bushel. 5. The miller tells me he never ground buckwheat that turned out so much flour and so little waste. I should expect this from the size of the berry. 6. We are now eating buck-wheat-cakes from this grain, and we all agree that there is no discount on the Japanese variety for griddle-cakes. 7. I noticed that the bees worked on the blossoms all day; though not so numerously perhaps in the afternoon as in the forenoon: but to a considerable extent. It is the common opinion among bee-keepers that bees never gather from common buckwheat in the afternoon. We know that all plants that bees work on are made more productive if the bees visit the flowers freely. It may be that this very fact is one factor in the greater productiveness of this valuable variety. I am so pleased with it that I shall raise three times as much another year.

SHORT-HORNS VS. DRAFT HORSES.

G. H. C., TALMAGE, KAN.—I have read several articles lately in the RURAL about raising draft horses. The writers figure out quite a handsome profit—a good deal more than I think experience warrants. Farmers here have been breeding grade draft horses for some years, and the oldest are ready to sell out; but it shakes a man's faith in the business to be offered from $100 to $125 for the best, considering the service fee, the risk of accident from barbed-wire fences and the fact that about one-half the colts never get large enough for this trade, and a horse must be five years old or more and be thoroughly broken. I think most farmers will make more money by keeping good Short-horn cows, making good butter and the best of beef.

ANGEL OF MIDNIGHT AND "POND" CORN.

E. S. L., HOLMEN, WIS.—I planted a field with these two sorts on the same day, and, this fall, husked 140 average hills of each. I dried the corn near a stove as dry as could be. The yields of both kinds were shelled and weighed at the same time, and the result was that the Pond corn out-yielded the Midnight 14½ pounds of shelled corn. But the cobs of the Midnight corn are lighter, in proportion to the grain, than those of the Pond. Both kinds are liked here, where replanting in spring is often done two or three times ere a fair stand is secured. Oddly enough, I grow my own seed and never need to replant.

TAXES ON MORTGAGES.

P. C. L., ELKLAND, PA.—I wish to commend the article Taxes on Mortgages in the RURAL of January 12, page 24. It is as true as gospel and should convince all who read it. The tax on mortgages in Pennsylvania is only three mills; but it increases the farmers' interest from three mills to one per cent. Mortgages and notes have been in use for years in which the borrower agrees to pay the tax on the loan, with the interest.

A BEGINNER, TIOGA CO., PA.—In a recent "Discussion" a writer speaks of using a one-horse plow in root-pruning corn to hasten its maturity. I should hesitate much before practicing this system because my brother by so doing lost a valuable crop of Stowell's Evergreen. It was just silking when he went through it, and it stopped maturing ears, and stopped growing in hight. The stalks increased in size so that some of them were immense. Perhaps he doctored it too soon. The theory may be good: the practice failed. Why?

R. N.-Y.—Both theory and practice are bad in our opinion. There may be instances, possibly, when the plants have made an immense growth of leaves and stalks, when root-pruning (as it is called) would induce a larger yield of grain. This might occur in excessively wet seasons. As a rule, we approve of shallow cultivation, assuming that the corn-plant needs all its roots during every stage of its growth, but more especially when the grain begins to form.

A. L. CROSBY, CATONSVILLE, MD.—I think the RURAL is perfectly right in what it said about ensilage corn. Corn for the silo should be, as the RURAL says, short-jointed and not very tall. The tall stalks don't carry the most or widest blades by any means. I mean to try the Rural Thoroughbred Flint corn this season and see if it is not just the thing for ensilage. If it matures too early for Southern latitudes, it can be planted later and then the cultivation of the silo corn and of the corn for shelling will not come at the same time. The B. and W. corn may give a heavy yield; but the weight is in the stalks more than in the blades. It is harder work to handle such heavy green stuff, and it won't pay to do so unless it is "rich" in proportion to its weight—and I don't believe it is.

E. P. N., NICHOLS, CONN.—I notice in several late RURALS that the parrot insists that farming "don't pay," and in looking over the figures in regard to New Jersey, I think the parrot correct, as according with the table given of value of the crops, less the cost of fertilizer as $28,049,087 less eight per cent. interest on capital invested $11,034 829. Supposing it requires one man to work a $2,000 capital, his wages would be only $122.00 a year. There are many farmers in this section who if they could get eight per cent. on what their farms have cost and $1.00 per day for their wages, would make more money in a year than they now do with their farms. I think that to disprove the parrot's saying a different array of figures will be needed.

H. B., WAKEMAN, OHIO.—On page 53 of the RURAL, I note what is said about devoting a special number to discussing the combination wire picket fence and I would say that not half the farms in the United States, except perhaps in the newer settled portions, would sell for the money that has been laid out in fences on them. I believe that no other question of farm economy is of more vital importance than that of fences.

What Others Say

THE CHEAPEST NITROGEN.—Prof. Jenkins of the Connecticut Experiment Station, says that the wholesale price of nitrogen in blood, azotin and sulphate of ammonia has not been so high since the fall of 1883 as at the present time, and nitrogen in nitrate of soda is higher than it has been for two years and a-half. The nitrogen of blood, azotin and sulphate of ammonia would probably cost to-day at retail in fresh stock not far from 18½ cents per pound. A fall in prices is possible, but hardly to be anticipated,

In view of these facts it is worth while to note that the nitrogen of cotton seed meal and castor pomace is at present *relatively* very cheap. Cotton-seed meal can be bought by the car-load to-day at $26.50 or $27.50 per ton at freight centers, or five tons for, say, $137.50. If carried for four months, add for interest $2.75, making the total cost $140.25. These five tons contain about

678 pounds of nitrogen.
300 pounds of phosphoric acid,
180 pounds of potash.

If we value the phosphoric acid at six cents per pound and the potash at 4½ cents, the nitrogen will cost 16 9 cents per pound in cotton-seed-meal, as against 18 to 18½ cents in blood, azotin and sulphate of ammonia. This comparison he believes is, if anything, rather unfair to the cotton-seed-meal.

If bright fresh meal is bought, stored in a dry place and fed judiciously through the winter, it will be worth a good deal more than the above figures indicate. The prices of fertilizers may decline before spring, no one can certainly tell, but the suggestion above given is worth thinking of.

KEEPING MANURE.—Sometimes an independent thinker will burst in upon us with a statement which affronts the "science" of the past woefully. A few years ago such an audacious voice bluntly affirmed that animal manure is never again so good as when it is dropped. This, in the face of all the elaborate directions for making composts with which farmers have been favored in the agricultural papers, seemed very audacious. Nevertheless, science now backs up this assertion of plain common sense. The careful experiments of Dr. Voelcker, Chemist of the Royal Agricultural Society of England, prove that manure gradually depreciates by keeping, under the very best management, gaining in water, and losing in valuable organic matter which is spent in the fermentation. How, then, must it waste and lose under the ordinary exposure in a yard, subject to excessive heating and washing by rain!

RAGE FOR LOW-PRICED FERTILIZERS.—At the present time, says Prof. Jordan, the most serious drawback (both to manufacturer and consumer) is to be found in the foolish rage for low-priced fertilizers. Ground limestone at $8 per ton, the refuse of salt works at $12 per ton, and dear at 50 cents, raw South Carolina rock (not acidulated) at $8 to $10 per ton, the refuse of alum works at $12 per ton (and in large amounts positively injurious to land and crop), New Jersey shell marl at $10 per ton, with not enough soluble potash to pay the freight, and marl and common lime mixed and sold under misleading names, all find by far too many purchashers, who appear to mistake bulk for quality and with whom low price is synonymous with cheapness. The same farmer, when starting out to purchase a horse, would not look for the lowest-priced one which he could find, but would take the animal which he considered the cheapest for the price asked. Let us apply the same rule to the purchase of fertilizers and it will not lead us astray. We want a given result for the lowest possible outlay, and (provided we get the result needed) the smaller the bulk handled the better, for we thus save both freight and labor.

Other things being equal, Prof. Jordan finds that there is most fraud in the lower-priced and least in the higher-priced fertilizers, which [in most cases] the manufacturers keep up to the former standard. Many of our manufacturers having established the reputation of their standard brands will not reduce them to suit the demand for lower-priced articles, but still keep them up to the same guaranteed analyses. In some cases that might be named, and in more than are suspected, a lower grade has been made by mixing cheap "fillers" with the standard goods, to reduce the price per ton to a point which will satisfy the market demand, but analyses prove that in many cases the purchaser pays dearly for the reduction, and that the profits of the manufacturer are as great per ton on the lower-priced goods. We might instance a case of high-priced fertilizer placed on the market at a price, which, at the time, made it the cheapest source of phosphoric acid offered. Failing to make any sale, the manufacturer mixed two tons of cheap "filler" with each ton of the fertilizer, and, by offering the mixture for one-half the original price, obtained $180 for what he had previously asked but $120 for, and the addition had nothing of value in it.

SHORT STORIES.

FUTILITY OF ANALYSIS OF SOILS.—For a time, Mr. C. V. Mapes remarks in his treatise on "Tobacco Growing," analysis of soils was supposed to open a new era in agriculture, but it is now admitted by all the best authorities that it fails utterly to discriminate between the elements that can be appropriated by crops and those that are for the present generation as valueless as the rocks of flint stones. There are soils, one fertile and the other nearly barren, that will show the same chemical analysis. There may be some 3,000 pounds of nitrogen per acre in vegetable organic matter and other forms, and yet not enough available to yield over 12 bushels of wheat. On just such a field Dr. Voelcker, Chemist to the Royal Agricultural Society of England, tells us less than 25 pounds of nitrogen in soluble form increased the yield to more than double. One pound of the right form of nitrogen may be worth more than 100 pounds of another but inferior form, for use as plant food.....

FARMERS do not, as a rule, says the London Agricultural Gazette, seem to realize that every drop of liquid manure wasted is so much of a most valuable stimulant lost. The merest glance at the chemical analyses of the urine of the four principal kinds of British live stock—cattle, horses, sheep, and pigs—will show that 35 parts of the total solids therein contain about 37 parts of nitrogen, or rather more than 10 per cent. of the most costly manurial ingredients used on the farm. Three cwt. of the solids of urine contain almost as much nitrogen as two cwt. of nitrate of soda, or 1½ cwt. of sulphate of ammonia.....

ONE cannot use the soil as the cook makes a cake or a pie, mixing so many ingredients and getting the same results, says the Weekly Times. It varies in composition and character for almost every square foot of it. One plot or one analysis affords little information for the rest of it. The only safe way is to supply sufficient plant food—a square meal, in fact, containing everything that the crop may or might want—in due proportion. Good stable manure made by well-fed animals is the staple fertilizer, and contains everything that plants require for their fullest and most profitable growth, and in procuring a substitute for it the safest is that mixture of artificial substances which most nearly approaches it in character and is known as complete manure. Consequently it follows that the so-called "test" with artificial fertilizers as a means of getting an approximate analysis of a soil are delusive and unprofitable.....

To give the readers a fair idea of the profit made by manufacturers, Prof. Johnson of the Connecticut Experiment Station, analyzed 68 fertilizers, the average cost of which was $34.55 per ton. The Station's average valuation was $28.70, the difference being $5.85 and the percentage difference 20.3. That is, the same quantities of nitrogen, phosphoric acid and potash, which were contained in an average ton of these fertilizers, could have been bought in raw materials of standard quality in ton lots in Connecticut, for $28.70 cash; in the average fertilizer they cost $34.55, and hence the manufacturers' and dealers' expenses and profits on a ton of fertilizer averaged $5.85, or 20.3 per cent. of the cost of the materials.....

PROF. JOHNSON gives a number of analyses of home-made fertilizers, all of which show that they compare favorably in composition with the best commercial fertilizers. Adding three dollars per ton for cost of mixing, the Station valuation and the cost to the farmers who bought the raw materials and mixed them was the same.....

THESE analyses justify the statement that while it is often cheaper to buy the best commercial mixtures, ammoniated superphosphates and special manures, than to buy and mix the chemicals, yet the experience of a yearly increasing number of farmers shows that money may be saved by the seasonable purchase of raw materials and their use in home-mixtures.....

IN 30 years' continuous growing of wheat, in the world-renowned experiments of Dr. Lawes of England, the plain superphosphate, even with the addition of potash, magnesia and soda, but without nitrogen, produced an average increase for the whole time of only 1¼ bushel per acre annually above the yield from the natural soil. The yield from the natural soil was 15¾ bushels. This was the average yield for 30 years. Some years it was only three or four bushels, and some years 23 bushels. When nitrogen, in the form of salts of ammonia (sulphate of ammonia), was added to the mixture of plain superphosphate, potash, magnesia and soda, the yield went up to nearly an average of 35¼ bushels per annum, as much, within about 1½ bushel, as from annual dressings of over 15 short tons of farm-yard manure. There were no signs of exhaustion of the soil at the end of 30 years, even with this heavy continuous cropping of wheat with the chemicals alone. But in this case all the leading fertilizing ingredients were supplied, including nitrogen. Similar results followed experiments in growing barley for some 20 years with and without nitrogen....

IT is said of Faust's Improved peanut that it does not require a rich soil, and on medium land has yielded from 100 to 130 bushels per acre. The vines average from 3½ to four feet across, making most valuable forage for stock.....

ONE of our subscribers writes us that in one instance in Monmouth County, N. J., a field of 10 acres has not received any manure, except chemical fertilizers, for about 10 years, and that field is producing double the crops it did under the old system, when yard manure, marl and lime were used. Now, this result has been obtained, not by use of ordinary superphosphates; but by the application of special and high-grade fertilizers.....

SELDOM has there been such diversity of opinion as there exists at present as to what the future prices of hogs will be. Some argue that the evident shortage of supplies in the leading hog-producing Western States will undoubtedly stimulate prices. Others say that cheap corn will make hogs considerably cheaper than they are now; others, again, maintain that prices are not likely to be materially different throughout the season, as the above two influences are likely to act as a check on each other in the way of an advance or a decline. Just now this opinion seems the most likely to turn out correct.....

AMONG the many remedies for mildew, sulphur, in one or another of its many forms, is always found most efficacious, and it is used in a variety of ways. The flour of sulphur has been used for many years for this trouble by dusting it over the mildewed plants. This mode of using sulphur is undoubtedly good at times, but in Mr. W. H. Taplin's experience, as recorded in Garden and Forest, a better way is this: Take of moderately strong tobacco-water, one gallon; add to it four ounces of sulphur, then boil the mixture for 30 minutes or a little longer. After it has cooled, add one part of water to every three parts of the mixture, and syringe the affected plants. In bad cases a second or even a third application may be necessary on successive days. This mixture also tends to keep down green fly, thereby doing double duty..

ANOTHER mixture in great favor with some growers is sulphate of lime. A good recipe for this compound is the following: Take of fresh lime, five pounds; of sulphur, five pounds, and of water, six gallons. This should be boiled down to two gallons; after which it should be allowed to settle, and only the clear liquid should be used at the rate of half a pint of the sulphate to an ordinary watering-pot of water. The plants should be syringed with the latter mixture on two or three successive afternoons.....

SULPHATE of potassium has also been highly recommended, in the proportion of half an ounce of the sulphide to two gallons of water, applied in the same manner as the preceding mixture. The unpleasant odor of the potassium solution may sometimes prove to be an objection, however.....

COMMMRCIAL muriate of potash contains about 80 per cent. of muriate of potash, 15 per cent. or more of common salt. It contains about 50 per cent. of actual potash.....

SULPHATE of potash usually contains about 25 per cent. of actual potash and 30 per cent. of sulphate of magnesia and three per cent. of common salt, besides sulphates of lime and soda.....

IF we were raising peaches largely, we would use ground bone and kainit or muriate of potash.....

THE LONDON AGRICULTURAL GAZETTE says that Mr. Voss estimates that 700,000 to 800,000 tons of bone manure and superphosphate per annum are now made in England, or four times as much as was made 30 years ago. Of basic slag, Mr. Voss says that only small quantities are used there as the soil seems but little adapted for it, and most of that which is produced is exported, chiefly to Germany, where about 300,000 tons (partly of home manufacture) are said to have been used in 1887. Half the basic slag produced in Great Britian Mr. Voss declares to be of such low quality as to be almost useless as a manure .....

MR. BOWKER strongly advocates that fertilizers should be applied a little at a time and often.

The reason for this is that quick-growing crops mature in 60 to 90 days, and should have their fertilizers ready at hand to act and supply plant food when wanted. Instead of applying large quantities of soluble fertilizers at one time for successive crops, apply what each crop requires at the time each crop is planted; and, if the crop does not seem to thrive, apply an additional quantity in between the hills or rows.....

THE R. N.-Y. commends the above to the women who propose to take the prizes in the RURAL NEW-YORKER'S Women's National Potato Contest.....

THE worst thing about the fertilizer business, says Dr. Hoskins, is that so few farmers pay cash that all have to pay credit price, as all the business has to be done through local agents. Were the farmers ready to-day, as a class, to buy their fertilizers for net cash, taking the goods from the cars in January, February and March, while the roads are good and the time convenient to get them home, they could buy their fertilizers on the average $4 per ton cheaper than they now get them. In order to do this, they would have to buy by the car-load and pay the money when the goods are delivered.....

THE N. E. Homestead mentions two large New England fertilizer firms that have given up the business because the raw material of which fertilizers are made is worth from 20 to 30 per cent. more than it was a year ago, while it is impossible to sell the manufactured goods at higher prices.....

THE Homestead advises farmers who propose to buy fertilizers to make their contracts as early as possible, for it is a question how long prices will continue without an advance, especially if the value of raw material continues firm. If farmers will only club their orders and buy their fertilizers by the car-load for cash, they will get prices that will astonish them. The manufacturer can afford to ship fertilizers by car-load direct to consumers at a profit of only $2 a ton, provided he gets the cash in hand without expenses. It is the long credits and the selling in small lots that make the business so unsatisfactory to the trade, and the prices so high to the consumers.....

LAST August Prof. Roberts of Cornell University, received from seedsmen Joseph Breck & Sons, of Boston, Mass., a package marked "Economic Seed Manure for Wheat and all Seeds." It was found, on being analyzed, to contain potash, phosphoric acid and nitrogen—the potash in the form of bichromate—and to be worth per ton $31.91. The firm charges 50 cents per four-ounce package, or at the rate of *four thousand dollars per ton.* The reader may judge of the "Economy" of the manure. Prof. Roberts gave it a careful trial, however, by growing wheat in pots, soaking one lot of seeds in a solution of the Economic Manure, another in water, and a third in a solution of Bradley's superphospbate of the same strength as the "Economic." So far from having any effect on the germination or early growth of the wheat plants, the "Economic" proved to be valueless.....

WORD FOR WORD.

——S. B. KEACH: "Sometimes it seems a pretty safe rule to calculate the merits of an article in an inverse ratio to the zeal with which it is advertised."

——N. Y. WORLD: "More or less excitement prevails in the minds of some persons over the extraordinary reports from the use of sulphate of iron, or the common copperas of commerce, when used in connection with the potash and phosphate fertilizers. The Marquis of Paris, who is also a successful fruit-grower and market-gardener, has employed it extensively. His practice is, after applying other fertilizers, to sow copperas at the rate of about one ounce to the square yard of surface for all garden crops, and for trees and fruits as well. A scientist of some reputation, who has experimented with copperas, has also reported successful results. The editor of RURAL NEW-YORKER has made four experiments in the use of sulphate of iron on corn and potatoes. The yield was less in every case where the copperas was used."

——MASSACHUSETTS PLOUGHMAN: "There have been few, if any, experiments made in potato plant feeding with fertilizers that are so extensive or more conclusive than those made at the Experiment Grounds of the RURAL NEW-YORKER."

——MAPES'S CATALOGUE: "The RURAL NEW-YORKER of July 4, 1888, describes an 'Ideal Fertilizer' as 'one that furnishes the food constituents in different forms, all of which are availa

ble, though in varying degrees, for the varying requirements of plants at different stages of growth.' This is true, and we have urged its importance for many years in our pamphlets and on all occasions. This explains the failure of tankings and many other fertilizing materials, even with good analyses. Crops have varied wants and special demands in feeding."

——"WE do not recommend superphosphates for onions Whenever a superphosphate, with or without nitrate of soda, has grown a crop, it has been on land well supplied with soluble potash from previous manuring. The onion crop demands especially large supplies of potash, and this element is not supplied at all in nitrate of soda, and to a very limited extent, if at all, in average superphosphates. The land therefore, by such treatment, must become each year poorer—at least so far as regards potash. The certainties of success, particularly during adverse seasons, are largely increased by the use of a really *complete* manure, one which fully supplies the crop without getting the land out of condition."

——REPORT from the Pennsylvania State Board of Agriculture: "To many the term 'bone' conveys but one idea, viz: the bones of animals ground to a powder. This is correct, so far as it goes, but the difference in the price of the different brands of bone should convince the purchaser that there must, necessarily, be some difference in quality and value. We find on the market a variety of brands known as 'soluble bone,' 'dissolved bone,' and 'acidulated bone,' which in reality do not contain an ounce of animal bone to the ton, but which are South Carolina rock treated with acid, which is a good fertilizer for some soils and crops, but is not the bone we are looking for. Discarding these and confining ourselves to pure animal bone, we will still find a variation of ten dollars per ton in the price of the article guaranteed by reliable parties to be pure animal bone. This difference in price leads to the inference that there is some difference in quality and value, and a careful examination will show that in many cases this difference in action and actual value is even greater than the difference in price."

——"TO PREVENT misunderstanding, we would say that we have no wish or intention of being understood to assert that the brands of 'soluble bone,' 'dissolved bone,' and 'acidulated bone,' are not valuable, but we do not think it fair that the pure animal bone should be held responsible for their shortcomings and defects in plant nutrition. The name is given them for the purpose of selling them on the superior credit of animal bone and for no other purpose. They can be furnished at a much lower price and at the same time afford the manufacturer more profit, but do not furnish the same elements in the same proportions."

——"WE HAVE often claimed that nine-tenths of the fertilizers made from rock are purchased under the belief that they are made from animal bone and this belief is founded on the misleading statements in the pamphlets and circulars and also by agents. Rock should be sold by its right name. If it be not distinctly stated by the manufacturer that rock is not used it may be expected that this substitute for bone will form the basis of the fertilizer."

——"IN making the valuations for mixed goods (superphosphates, home-made superphosphates, complete manures, guanos, etc.,) it is assumed that organic nitrogen contained in the mixed fertilizer is derived from the best sources, viz.: bone, blood, animal matter, Peruvian guano, or other equally good form, and not from leather, shoddy, hair, or any low-priced, inferior forms of vegetable matter. In case of insoluble phosphoric acid, it is also assumed that it is from bone or other similar source, and not from rock phosphate. In this latter form, the insoluble phosphoric acid would be worth, commercially, only 2½ cents per pound, or a little over one-third as much as if from fine bone."

——"WE have repeatedly cautioned the farmers against placing a too literal construction on the 'valuations,' as given by the Station to the fertilizers, and we again repeat the caution, in view of the fact that it is not always practicable in an analysis of a fertilizer to distinguish some of the best from some of the poorest forms of the ingredients."

——"FOR these reasons the farmer should demand of all manufacturers a full and explicit statement of materials used, and should deal only with those whose statements can be depended upon."

——C. V. MAPES: "The use of nitrate of soda alone as a source of nitrogen on a light soil is very injudicious, as it requires very favorable circumstances to prevent a rapid waste of the costly material by leaching in solution through the soil. It loses no strength by evaporation, but by leaching."

——PROF. ATWATER in R N.-Y. of Sep. 12, 1885: "Farmers cannot afford to use commercial fertilizers at random, and it is time they understood the reason why." * * * "The right materials in the right places bring large profits. Artificial fertilizers, rightly used, must prove among the most potent means for the restoration of our agriculture." * * * "The only way to find what a soil wants is to study it by careful observation and experiments."

——STORER'S AGRICULTURE, page 235: "Almost the whole of the enormous quantity of superphosphate now used is made, not from bones, but from mineral phosphates."

——RURAL NEW-YORKER of February 11, 1888: "We have no doubt that the future will show that the best fertilizers are not those which contain a certain form of potash, phosphate and nitrogen even though provided in their highest-priced and most soluble forms, but, rather, the fertilizers that furnish the constituents in many different forms all of which are available, though in varying degrees, for the varying requirements of plants at different stages of growth."

——DR. HOSKINS, of the Vermont Watchman: "One-quarter of our fertilizing material in this State (at least one-quarter) is lost at the barn. More than another quarter is stolen by weeds, and pretty nearly another quarter that is in the soil the plants cannot get for lack of a good preparation—good plowing, harrowing, etc. Do we mean to say, then, that we farmers in Vermont do not get out of our land more than one-fourth as much as we might if we were all we ought to be, and might be, as tillers of the soil? We do mean just that."

——PROF. JOHNSON: "The difference between the excrement of fowls and that of cattle of all sorts is that the former contains in solid form all the fertilizing material of the food except what is retained in the body for growth or goes into the eggs; while a very considerable portion of the fertilizing value of the food of cattle is excreted in liquid form and is easily lost even in the stalls or barnyard. It is easy to see then why the "dung" of fowls is a richer manure than that of cattle. That of the former contains both the urinary and bowel excretions, that of the latter consists largely of the undigested food, with what of the urine may have been absorbed and retained by it."

——PROF. W. O. ATWATER: "*In those States where experiment stations or other agencies exercise a proper control over the fertilizer trade and defend honest dealers as well as consumers, there are perhaps a hundred cases of failures from using the wrong materials, or using the right ones in wrong ways, where there is one from fraud. 'Complete' fertilizers are, in a sense, irrational, but they mark the first step in the progress towards the rational use of artificial fertilizers.*"

——MASSACHUSETTS REPORT: "The state of moisture in a fertilizer exerts a no less important influence on the pecuniary value, in case of one and the same kind of substance. Two samples of fish fertilizer, although equally pure, may differ from 50 to 100 per cent. in commercial value, on account of mere difference in moisture."

——APPLETON'S CYCLOPEDIA: "The following proportional values are given by Einhof and Thaer: Eighteen tons of mangel-wurtzel are equal to 15 tons of Swedish turnips, or 7½ tons of potatoes or 3½ tons of good English hay, each quantity containing the same amount of nourishment; but the roots may be grown upon less than an acre of land, while two or three acres of good grass land are required to produce the equivalent amount of hay. The beet root is also deemed the least exhausting to the land."

——W. H. BOWKER: "Wool waste contains ammonia, but, as in hair and leather, it is in an insoluble form, and is consequently an inferior source of plant food. Those manufacturers who use it in their fertilizers are in one sense pulling "the wool" over the eyes of their patrons."

——N. Y. HERALD: "Congress is going to inquire into the low moral tone of railroad presidents. All right; but why shouldn't the railroad presidents return the compliment and investigate the low moral tone of Congress?"

——BINGHAMTON REPUBLIC: "Can a shoe that pinches a man's corn, be said to go against the grain?"

——HARPERS: "A sweet and true, a full-volumed and thoroughly trained voice is a rare gift to any man. But without a certain quality in the singer it is a perfect fruit without flavor. The singing that haunts us, which becomes part of our life, which fills the memory with tender and happy images of other days and scenes, is not necessarily that of the finest voices, but that mingling in music of voice and skill and feeling which weaves an enchanted spell."

——BOWKER FERTILIZER CO.: "Feed the plant and it will feed you." * * * "Literally, almost every drop of blood and every piece of bone are now saved throughout the country."

——"MANURE is the best fertilizer, all things considered; for it not only supplies plant food in various forms, but, being very bulky, it lightens up the soil and makes it more friable. It is, however, too slow for most quick crops, and is very ununiform in value, the manure from fat cattle being worth much more than that from young stock; and that which is housed is worth more than that which is scraped up in the barnyard. According to Dr. Goessman, a ton of stable manure averages to contain 25 pounds of plant food, while the balance, 1,975 pounds, is organic matter and water."

——"NITRATE of potash (saltpeter) contains about 13 per cent. of nitrogen, or about 16 per cent. of ammonia, and 46 per cent. of potash. This would be more extensively used as a source of nitrogen and potash if the price were not too high for agricultural purposes; but the price ranges from $100 to $140 a ton."

——"IT is claimed that farmers can buy the ingredients of complete fertilizers and mix them for themselves cheaper than they can buy the prepared fertilizers, and be more likely to get what they buy. People who urge this course forget that chemicals can be just as easily adulterated as mixed fertilizers. Of course, whether mixed or unmixed, they are now required in most States to be guaranteed by the seller; and, if the seller is responsible, the buyer will get what he pays for in one case as in the other. The question turns upon the comparative cost and whether the farmer can buy chemicals and mix them and have them in as fine a condition as the prepared fertilizers. Fineness and dryness are very important requisites for even distribution."

Horsford's Acid Phosphate

For Wakefulness,

Hysteria and other diseases of the nervous system.

Miscellaneous Advertising.

Scrofula

Probably no form of disease is so generally distributed among our whole population as scrofula. Almost every individual has this latent poison coursing his veins. The terrible sufferings endured by those afflicted with scrofulous sores cannot be understood by others, and their gratitude on finding a remedy that cures them, astonishes a well person. The wonderful power of

Hood's Sarsaparilla

in eradicating every form of Scrofula has been so clearly and fully demonstrated that it leaves no doubt that it is the greatest medical discovery of this generation. It is made by C. I. HOOD & CO., Lowell, Mass., and is sold by all druggists.

100 Doses One Dollar

MAKE HENS LAY

SHERIDAN'S CONDITION POWDER is absolutely pure and highly concentrated. It is strictly a medicine to be given with food. Nothing on earth will make hens lay like it. It cures chicken cholera and all diseases of hens. Illustrated book by mail free. Sold everywhere, or sent by mail for 25 cts. in stamps. 2¼-lb. tin cans, $1; by mail, $1.20. Six cans by express, prepaid, for $5. I. S. Johnson & Co., P. O. Box 2118, Boston, Mass.

Trees, Seeds and Plants.

If you want the best Garden you have ever had, you must sow

MAULE'S SEEDS.

There is no question but that Maule's Garden Seeds are unsurpassed. Their present popularity in every county in the United States proves it, for I now have customers at more than 31,000 post-offices. **When once sown, others are not wanted at any price.** Over one-quarter of a million copies of my new Catalogue for 1889 have been mailed already. *It is pronounced the most original, beautifully illustrated and readable Seed Catalogue ever published.* It contains among other things, cash prizes for premium vegetables, etc., to the amount of $3,500. **You should not think of purchasing any Seeds this Spring before sending for it.** It is mailed free to all enclosing stamp for return postage. Address

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Vegetable, Farm, —AND— Flower Seeds,

Besides all the desirable novelties of last season, and nearly everything else in my line of business.

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☞OVER **6,000,000** people believe that it pays best to buy Seeds of the largest and most reliable house, and they use

Ferry's Seeds

D. M. FERRY & CO. are acknowledged to be the *Largest Seedsmen* **In the world.**

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SEED ANNUAL

For 1889

Will be mailed FREE to all applicants, and to last year's customers without ordering it. *Invaluable to all.* Every person using Garden, Field or Flower Seeds should send for it. Address

Earliest Cauliflower in existence.

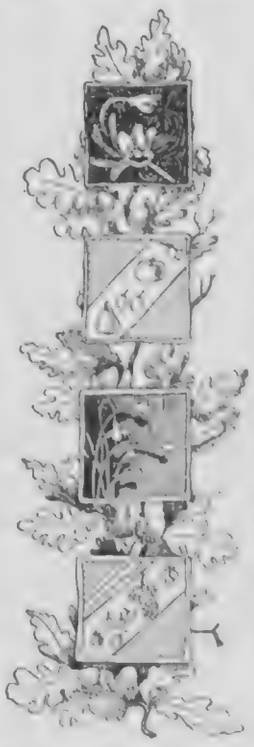
D. M. FERRY & CO., Detroit, Mich.

Beautiful Strawberries. We are now offering for the first time and only by us, the beautiful **Eureka**, and a strawberry that yielded at the rate of **127 Bushels** to the acre at one picking the past summer—60 other varieties; **80 of Grapes; Thompson's Early Prolific** Red Raspberry, the earliest of all; Palmer Rash the most productive early Black; **Thompson's Early Mammoth Blackberry**, etc., etc. If you mention this paper we will send you Catalogue free, telling about these beautiful berries & others Everybody wants it

CLEVELAND NURSERY,
Lakewood, Cuyahoga Co., Ohio

Our Only Novelty for 1889

IS ONE THAT NEVER FADES.



It is Evergreen, Perennial, Hardy and Useful.
It is Always "Standard," Never a Dwarf.
It Flowers and Fruits Every Month in the Year.

It was originated and "introduced" in 1846 by Andrew Jackson Downing, the father of American Horticulture. Improved by "culture," "selection," "crossing" and "grafting," by Dr. F. M. Hexamer, Thos. Meehan, Henry T. Williams and others, assisted by nearly all of the practical, successful workers in American Horticulture during the past 42 years. Thus it has been

THOROUGHLY TESTED by time, in nearly every land and clime, by hundreds of thousands of people. Its careful examination and use every month will make any bit of earth, in-doors or out-doors, to produce abundantly of ALL desirable growing things that are fitted for culture. This is

NO IMPROBABLE WONDER. but is the exact truth, being simply our way of describing that monthly product of knowledge, experience, skill and hard work—THE AMERICAN GARDEN Magazine (which also unites the old *Horticulturist*, the *Gardener's Monthly* and the *Floral Cabinet*)—to-day unquestionably the foremost monthly periodical devoted to horticulture.

The AMERICAN GARDEN is an illustrated Monthly Magazine rapidly taking rank in popularity and influence among the great magazines.

Subscription price, $2 a year; 20 cents a copy; Specimen for 6 cents.

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Agents wanted everywhere. Good pay to respectable persons, teachers, gardeners, farmers, etc., as agents.

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RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
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Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, FEBRUARY 16, 1889.

CHANGE OF CLUBBING TERMS.

The N. Y. Weekly World and the R. N.-Y., $2.25.

The Detroit Free Press and the R. N.-Y., $2.25.

The Courier-Journal and the R. N.-Y., $2.25.

The Weekly Inter-Ocean and the R. N.-Y., one year, $2.50.

The lowest possible clubbing rates with any journal in America will be given on application. Subscribe through the RURAL NEW-YORKER.

Good, responsible agents wanted. We are prepared to offer very liberal terms. Correspondence solicited.

A MIGHTY "COMBINE" in which the farmer may trust is "Potash, Phosphoric Acid and Nitrogen."

THE attention of the readers of the R. N.-Y. is called to our catalogue notices and reviews on page 111. They will be found of more than usual interest.

WITH their permission the photographic portraits of those women who take the first ten premiums will be presented in the R. N.-Y. of November and December next.

NEW readers may notice that there are four "symposiums" in this week's R. N.-Y. This is a feature inaugurated by us years ago. It has become more and more popular with our readers, for which reason we have made preparation to present several each week during the entire year.

WHAT'S the use of all the experiment stations doing just the same work in analyzing fertilizers? What a lot of time is in this way thrown away. Here is Experiment Station A. analyzing a sample of Mapes's or Bowker's or some other brand. Here are Experiment Stations B., C., D., doing the same thing. Who gains by this?

KEEP it before the people: A "complete" fertilizer may be composed of only one per cent. of phosphoric acid, potash and nitrogen. The word "complete" is deceptive. A fertilizer may be "complete," according to the accepted usage of the word, just the same if it contain the *lowest* per cent. of the three chief plant foods as if it contain the *highest* per cent.

IF side by side with other fertilizers bone, dissolved bone-black, kainit, wood ashes, fish, nitrogen in any form, plaster, lime or any other one-sided fertilizer will secure full crops, the farmer will be justified in using such fertilizers. But it should always be borne in mind that while a one-ingredient fertilizer is being used, the soil is all the while growing poorer in other plant constituents. It is merely a matter of time before the imperfect fertilizer will fail.

No farmer has any *right* to condemn the efficacy of chemical fertilizers until he has tried what he knows to be a high-grade "complete" fertilizer, *i. e.*, one containing as much as four per cent. of ammonia, 10 per cent. of phosphoric acid and six per cent. of potash. If such a fertilizer produces no effect in a favorable season, then the farmer may conclude that his land does not, for the present, need *any* fertilizers; neither does it *for the present need any manure of any kind.*

NEW subscribers occasionally write to us asking for prices of the R. N.-Y. potato No. 2. Some assume that we sell our hybrid wheats, shrubs, plants, etc. It therefore becomes necessary that the statement should be made from time to time that we have never in any case sold anything whatever to our subscribers, except the R. N.-Y. itself, and it is not our intention ever to do so. We hold that the advice of a journal that advertises and sells its own wares through its own columns may fairly be regarded as somewhat biased.

A PERSON (we may be obliged to mention his name later), has been industriously circulating the report that the Rural New-Yorker potato No. 2 is the same as a variety originated by him. Place a tuber of the potato in a light, warm place until it sprouts. If the sprouts be not of a dark-purple color (nearly *black*), it *is not* the No. 2. There are other varieties which give dark-colored sprouts in the light. But the sprouts of the variety above alluded to, are of the usual green color.

SUPPOSE you apply 1,000 pounds of bone flour to your land each year for 10 years. Finding it of great service for five years, it is continued. But the farmer finds, later, that it does not increase his crops at all. He might naturally, though erroneously, call his land "bone-sick." Now, let him apply potash and the land responds at once, giving the finest crops ever raised upon the farm. The trouble was, not that the land had too much bone or phosphoric acid, but too little potash. The crops had appropriated all the available potash and could not live on bones alone. So, in like manner, land might seem to become "potash-sick." In such a case bone flour would prove a specific cure. Farmers should not overlook the fact that when an imperfect food alone is furnished to plants, they cannot thrive unless the soil supplies the constituents which the imperfect food does not supply. In the course of time the land yields up its present store and a perfect food must be supplied.

ONE of the things that a gardener can get ready during the leisure of winter for the busy summer time is the coal-oil butter, or kerosene emulsion that is so serviceable against many insects, and so easily applied. Prof. Trelease recommends milk, and sour milk in preference, as it does not ferment further, but soap is preferred by some. About twice as much oil as milk is used, and they are churned violently together for 15 to 45 minutes, or until the liquid suddenly thickens into a glistening butter quite homogeneous, mixing completely and readily with water, if applied a little at a time while stirring, and keeping any length of time in a closed can, no free oil appearing in it. A pint or less of the emulsion may be used in a pail of water, mixing only as wanted. A force-pump is best to do the churning, and may be used in applying the dilution. To destroy aphides which cluster on the ends of young growing shoots, we carry a basin of the dilution in one hand and bend the shoots into it with the other, shaking them to secure complete wetting.

THE DIFFERENCE.

THE R. N.-Y. does not approve of the farmer's buying commercial fertilizers; neither does it approve of his buying cow or horse manure or any other manure, if he can manufacture enough manure at home to keep up the fertility of his soil. Can the fertility of a soil be kept up by the use of commercial fertilizers alone? Yes, readers, there is not the shadow of a doubt about it. The fact that farmer A. or farmer B. has used fertilizers without any increase in his crops is no argument against their use. Did you ever use farm manure without any increase in the crops? Do not forget—no living soul can controvert the statement—that chemical analyses show—prove positively—that farm manure is but a different form of home-produced commercial fertilizer. *Concentrate* your farm manure by slowly rotting it for many years and the product is precisely the same as the commercial article in substance. It has been conclusively shown that any soil which is deficient in any one of the important constituents of which plants are composed, cannot produce a maximum crop, no matter how well it is prepared and cultivated; no matter how favorable the season. The crop will fall short just in proportion as the soil fails to give to the plant a full and complete ration of food. Tillage is manure only in so far as tillage can render available the food already in the soil. Tillage alone, like lime, will help the father but impoverish the son.

The farmer who asserts that fertilizers have no effect upon his soil, might just as well state that horse manure or any other animal manure has no effect upon his land. If animal manure, whether from birds, sheep, cattle, or horses, will give an increase of crop; if turning under clover or any other leguminous plant or any grass of any kind will give an increase of crop, so will commercial fertilizers if they are composed of the same food ingredients. That animal or vegetable manure containing the same quantity of potash, phosphoric acid and nitrogen, used in the same quantity, will give a larger crop than chemicals, the R. N.-Y. has never doubted, for the simple and only reason that they exert a mechanical influence upon the soil, and that the food they supply may exist in a more varied and acceptable form. This, however, only holds for the present season. In a series of years there is no difference; there can be no difference (except as to mechanical condition) whether the phosphoric acid, potash, nitrogen, lime, magnesia, etc., come from barn manure or chemicals.

GOLD DOLLARS FOR FIFTY CENTS.

"I CAN'T afford to pay $40, or $45 for a ton of fertilizer," said a fine-looking, intelligent farmer in this office a few days since; "20 or 30 dollars are the most I can afford to pay."

The farmer wants *plant food*, does he not? Suppose he gets twice the amount of plant food in the $40-fertilizer that he gets in the $20-fertilizer; which is the cheaper article? Why pay for the freight and double-handling of two tons if he can get the same food value in one?

"I will," says the plausible agent, "sell you 10 tons of my 'Hifalutin' brand for $200, that will bring you as large crops as the fertilizer you have been using—10 tons of which cost you $400."

It is greatly to be deplored that such reasoning has weight with many frugal, hard-working farmers. Such statements are false, friends. The food constituents in fertilizers have a fixed value, and any firm that can make them for less would not find it necessary to send out agents to solicit trade. Other dealers would be only too glad to secure the entire stock. You cannot buy 20-cent loaves of bread for 10 cents, and if there were any one who, through a new discovery, could, by protecting his secret or by letters patent, do so, he would at once monopolize the entire trade.

Again, another point which the RURAL NEW-YORKER has earnestly tried to impress upon its readers (in this, as in the above case, without any support from its esteemed contemporaries) is that a fertilizer which costs the farmer $20 per ton and is found by analysis to be worth $15, is dearer than the fertilizer which costs $40 per ton and analyzes to be worth $35. *The difference in either case is but $5 a ton.* But in the case of the high-priced fertilizer the amount of difference between the actual value and the selling price is 14⅛ per cent., while in the case of the low-priced fertilizer it is 33⅓ per cent. *The farmer actually pays 19 per cent more for the "cheap" fertilizer than he does for the high-priced one. In other words, he loses 19 per cent., besides paying the same freight, while the cost of distribution upon his fields is just the same in the one case as in the other.* That is to say, it costs just as much to distribute $15 worth of plant food as it does to distribute $35 worth.

Does the RURAL NEW-YORKER condemn low-priced fertilizers? *By no means.* What we desire to impress upon our readers is that the services of a faithful laborer for a full day are worth more than the services of a *less* faithful laborer for half-a-day; that, if a man's health and strength can not be maintained on a full loaf, it cannot be maintained on less than half a loaf.

A $20 fertilizer may be worth half as much as a $40 fertilizer. But if so, it must contain *more than* half as much plant food in order to pay for the difference in freight and cost of distribution. Is this sound reasoning, friends? If not, why not?

BREVITIES.

SUGGESTIVE.

TO THE RESCUE.

Two interesting symposiums will be found on page 117.

THE three conservators: Potash, Phosphoric Acid, Nitrogen.

Go back upon the Triumvirate as you may, you will pay homage later.

THERE are lots of farmers on the look-out for gold dollars at 50 cents.

LET us have in our commercial fetilizers, plant food in all its varied forms.

DON'T buy chemical fertilizers if you can raise maximum crops without them.

THE R. N.-Y. presumes that the first-page cartoon to appear two weeks hence will cause the reader to "smile out loud."

Owing to the considerable space given to fertilizer topics, the Domestic Economy Dep't is curtailed and that "For Women" left out entirely.

HAVE any of our readers ever experimented with Alfalfa as silage? We shall be glad to know how Alfalfa compares with clover as an ensilage plant.

THE series of articles "New Legislation Needed Concerning Monopolies," by W. I. Chamberlain, president of the Iowa Ag College, will commence next week.

A NUMBER of carefully conducted experiments made in England show that the use of sulpbate of iron reduced the crops, thus corroborating the R. N.-Y.'s experiments made two years ago.

FRESH stable manure contains in every ton about 1,970 pounds of organic matter and water. The remaining 30 pounds are plant food—virtually potash, nitrogen and phosphoric acid. These are just what you get in chemical fertilizers.

THE extensive use of rock, etc., for phosphoric acid is what keeps the price of bone down to its present low figure. Should all the fertilizer-makers in the country decide to use bone instead of rock, the price of bone in less than a year would be $100 or more per ton.

THE R. N.-Y. wants its readers to use or not to use commercial fertilizers as they are or are not profitable. But it wants them to be positive about it. We know of no more economical way of finding this out than by using them upon a small area experimentally.

THOSE who have fertilizers to buy will find the announcements of our best fertilizer firms in our advertising columns. Only two or three fertilizer catalogues have been received up to date, reviews of which will be found under, "Catalogues, Etc., Received," on page 111.

"WHOLE" would be a good prefix to those fertilizers that contain a high per cent. of the triumvirate, potash, phosphoric acid and nitrogen. "Complete" might still be retained for fertilizers containing a certain per cent. of all three. But a "complete" might not necessarily be "whole."

NITROGEN in the most serviceable form costs 16 cents a pound; phosphoric acid 8 cents; potash 5 cents. You can't get them for less unless you buy them from a thief or a fool. If you prefer your nitrogen in hair; your phosphoric acid in S. C. rock; your potash as muriate, that is a different matter.

EVEN fertilizer men admit that farm manure is more serviceable, all things considered, than chemical fertilizers. Did you ever use a liberal quantity upon a field and yet fail to get fine crops? Was it the fault of the barn manure? "No, it was a bad, droughty season." Had chemical fertilizers been used, would you have been equally charitable?

IF the farmer finds, after a fair trial of a well-proportioned fertilizer, supplying a high per cent. of the chief food ingredients, that the crops are not materially increased, let him not be fooled into trying any of the *cheaper* fertilizers that are found in the market under fancy names, such as Azotized bone, Excelsior, Equitable Special Esmeralda, 99-cent fertilizer, Champion, Planet Brand, etc. There are no secrets in compounding fertilizers, and if the preparations of reputable firms fail to increase the crops, it may be safely concluded that the land will give you full crops without fertilizers.

CATALOGUES, ETC., RECEIVED.

PETER HENDERSON & Co., 35 & 37 CORTLANDT St., N. Y.—This "Manual of Everything for the Garden" is probably the largest and costliest catalogue ever issued by an American seedsman, and the R. N.-Y. is free to say that the descriptions and illustrations are reasonably accurate and trustworthy. Novelties and seeds of special merit take up 21 pages; the regular list of vegetable seeds 22 pages; farm seeds 18 pages; flower seed novelties 7 pages; regular flower seed list 30 pages; garden tools and implements 6 pages; plant department 50 pages; or 150 large pages in all. We can only mention a few of the most conspicuously announced novelties. First is "Henderson's New Bush Lima bean" already described in these columns. Then follow Yosemite Mammoth Wax bean, Delmonico musk-melon, Dwarf Champion tomato found to be an excellent variety at the Rural Grounds the past season; Henderson's Early Puritan potato (unquestionably a first-rate early variety); the new Japanese buckwheat, everywhere concededto be a very valuable introduction; the Rural New-Yorker potato No. 2; peas, grasses, grains, etc. The novelties and lists of flowers (plants and seeds) should be examined by our readers. One hundred dollars in four prizes are offered for plants of the Bush Lima containing the greatest number of pods. The price of this valuable catalogue is 25 cents (in stamps) which amount, however, may be deducted from the first order.

W. ATLEE BURPEE & Co., PHILADELPHIA, PA.—This catalogue (168 pages) calls for an extended notice. It announces the R. N.-Y. potato. It also announces the "Superior" potato, a seedling of that public benefactor E. L. Coy, who has originated more excellent potatoes than any other man living or dead. The Superior is a white, shapely potato as it was grown at the Rural Grounds last year. It was so injured by the flea-beetle that we could make no fair estimate of the yield. Jonathan Talcott praises it unqualifiedly. The catalogue gives a first-rate list of potatoes in general. It finds the White Elephant and Late Beauty of Hebron the same. The R. N.-Y. made this announcement many years ago.

Burpee's Quantity and Quality peas were grown at the Rural Grounds last year. They are akin to Bliss's Everbearing and Abundance. They also resemble Henderson's Midsummer pea, though distinct from it enough in some respects to show that they are not identical. Planted April 18, the first mess was gathered July 3 on Quantity and a day or so later on Quality. The vines grow abou 2¼ feet high and are of a branching habit. The pods are borne usually in pairs and are not always well filled. There are from four to six peas in a pod, yellow in color and wrinkled. Quantity gives a larger pea (seed) than Quality though less sweet. The size of the pods is about the same. Burpee's Emerald Gem is a fine strain of this best of muskmelons. The Potato-Leaf tomato will be found smoother than the Turner. The Peach tomato is an old variety revived. But it is an excellent sort for canning and very pretty in appearance. Red Victoria onion, the Matchless tomato, Delaware watermelon, Pike's Peak squash, Quaker Pie pumpkin, White Gem watermelon are among the novelties seemingly worthy of trial.

The catalogue gives a life-like illustration of the Red Caps. Last year we bought a setting of eggs of this beautiful breed of fowls and the pullets and cockerels are beautifully and uniformly marked. Their combs are immense and accurately shown in the illustration. What the breed is worth as egg-producers we cannot as yet state. The catalogue offers liberal prizes and its dollar-collections are well selected. It will be sent to all R. N.-Y. readers who apply to Mr. Burpee, and it is certainly well worth applying for.

JAS. M. THORBURN & Co., 15 John Street, N. Y.—This catalogue which without any great display is always interesting and trustworthy, is this year especially so to us for the reason that it presents a full description of the R. N.-Y. potato No. 2, with illustration, and also the R. N.-Y. hybrid wheats No.'s 2 and 3 and cross-bred wheats No.'s 50, 51, 53 and 55 with an exact photographic illustration of the six kinds. These are the first of our 150 different varieties of hybrids between rye and wheat or cross-bred wheats ever offered for sale, though we are in hopes others will be offered each succeeding year for many years to come. It is still a matter of doubt whether orders can be filled before 1890. Nothing is known of their probable value outside of the Rural Grounds, and we are glad to see that Thorburn & Co. are careful not to make any of the extravagant claims usually made for high-priced novelties. We quote:

"While it is conceded that the RURAL'S collection of crosses and hybrids is not approached by any other similar collection in the world (indeed, there is no record of the existence of any other rye-wheat hybrids) we have nothing to claim for the several varieties now for the first time offered for sale; neither have we any apology to offer for the high price which we are constrained to charge." We like that. Let these new varieties, over which so many years of work have been given, stand on their own merits as ultimately they are sure to do. In this as in every other similar case, the R. N.-Y. has no pecuniary interest in their sale whatever. We shall distribute without charge small samples of these wheats among our subscribers as the stock may enable us so to do We would call the particular attention of our readers to the following varieties offered in this catalogue as being the best of their several kinds in our opinion. Beans: Ne plus Ultra dwarf, Wardwell's Kidney Wax, Thorburn's Ex. Early Refugee, Extra Early Flat Pride of Newtown. Beets: Extra Early Eclipse, Edmand's Early Blood turnip. Carrots: Ex. Early Forcing, Half-long Stump-rooted. Cabbage: Selected All Seasons, Vandergaw's Quick-growing Flat Dutch, Thorburn's Market Gardeners' Private Stock Flat Dutch, and Improved Stone-head Red Dutch. Sweet Corn: Perry's Hybrid, Early Golden Yellow, Potter's Excelsior, Hickox Improved, Ne Plus Ultra. Lettuce: Shotwell's Brown Head and Thorburn's Market Gardeners' Private Stock. Onions: New Adriatic Barletta, Mammoth White and Red Garganus. Among tomatoes the R. N.-Y. advises its readers to try Thorburn's New Jersey and, for earliest, the Early Advance.

JAMES VICK, Rochester, N. Y.—Vick's Floral Guide (98 pages) is one of the handsomest catalogues published. The illustrations are intended to give the reader a correct idea of the plant or flower illustrated. The grossly exaggerated, absurd pictures which deface so many catalogues and reflect upon the integrity of those who issue them, do not appear in this. Four excellent portraits of the male Vicks and their residences appear as a frontispiece. A life-size colored print shows the new striped rose Vick's Caprice, the open flower of which measures four inches in diameter. The petals are white with vivid stripes of pink. It is a sport from the hybrid perpetual Archid. d' Autriche. Another colored plate shows a new ivy-leaved pelargonium "Madame Thibaut." Its flowers are very large and double—color red. A third colored plate shows the Irondequoit musk-melon and McCollum's tomato. The list of potatoes is good and several new kinds are offered, among them the Early Market. It is said to be of the Ohio class and is especially recommended for early marketing as the quality is excellent in the early stages of growth or "unripe" condition. The entire catalogue is one that the R. N.-Y. greatly commends to the examination of its readers.

W. W. RAWSON & Co., 34 SOUTH MARKET STREET, BOSTON, MASS.—A very large and elegantly illustrated catalogue (125 pages) of one of the best firms in the United States The novelties for 1889 among vegetables, which may be especially noted, are Horsford's Prelude tomato and the Alligator potato. The tomato is said to be the earliest in cultivation while it is free from rot. The potato is well named, the skin being somewhat corrugated like that of the alligator. It is medium early, of good quality, flesh white, shape round. The true seeds of potatoes are offered under the name of "Bliss's Hybridized Potato Seed," page 33. Mr. Rawson is well known as the most extensive market gardener in New England.

DINGEE & CONARD Co., WEST GROVE, CHESTER Co., PA.—This well-known firm is engaged chiefly in the propagation of roses. Roses, roses of all kinds. The catalogue of 120 pages presents three colored plates and many wood-cuts of the latest novelties as well as the best of the old stand-bys.

SAMUEL WILSON, MECHANICSVILLE, BUCKS Co., PA.—There are many announcements in this catalogue, which the reader must judge of for himself by an examination of the catalogue. The Northern Spy potato (not tested at the Rural Grounds) is a heavy yielder and remarkable in many ways if the catalogue statements are to be trusted. We have ordered a lot for trial next season. Other potatoes given extra space are Stray Beauty, Watson Seedling, Charles Downing, Early Sunrise, the Maine Rose, State of Maine, June Eating, Green Mountain, Empire State, Rose Seedling, Gen. Mc. Clellan, and Pride of the Field—all of which the R. N.-Y. has raised and reported upon.

Among poultry, remarkable claims are made for what is claimed to be a new and very distinct breed called Boston Greys or Sparrow Catchers. Mr. Wilson writes us that they invariably breed true to color; that "no other breed in the United States in any way resembles them." He further says that "they will catch and kill more sparrows in one day than a boy can shoot." He also calls attention to his German Hares. "They are certainly," he says, "a valuable animal and splendid eating. Their meat is entirely different from our common rabbit, being darker and more like venison." Mr. Wilson announced his Patagonians two years ago, a breed of fowls for which much was claimed. We sent for eggs and have half-a-dozen of the hens at this time. There are scarcely two alike and we do not find Mr. Wilson's claims for them at all substantiated. We should condemn them *in toto* but for the fact that a near neighbor—an extensive poultry dealer—bought eggs at the same time and is much pleased with the breed. The catalogue is one worthy of attention. Mr. Wilson will send it without charge to any of our readers who may apply.

JAMES J. H. GREGORY, MARBLEHEAD, MASS.—The catalogue of this favorably-known house offers its usual lists of garden and field seeds. Gregory's Hard-heading cabbage is an excellent variety. Bergen Fleetwing pea, Durkee corn, Gold-coin corn claimed to be sweeter, larger and earlier than Evergreen; New Queen, Polaris and Early Oxford potatoes are among the novelties offered. Mr. Gregory's onion seed, we happen to know, usually gives full satisfaction Among the books which he has written is one: "Fertilizers: Where the materials come from; Where to get them in the cheapest form How to compound formulas, etc.," that will interest our readers.

WM. HENRY MAULE, PHILADELPHIA, PA.—This catalogue of 75 pages voluminously illustrated, is free to all. It offers a large amount of money for the best crops or specimens grown from seed bought of this firm. Clark's Early Mastodon, it is claimed, bears the largest and deepest kernel, the greatest number of rows to the ear, and is the earliest yellow dent corn known, taking into the account the size of the kernel and ear and number of rows to the ear. It is said to have ripened in from 90 to 100 days near Lake Erie. The Polaris, Potentate, Chas. Downing, Early Puritan, Empire State, Beauty of Beauties, Dakota Red and other potatoes are placed prominently before the reader. The R. N.-Y. has tried and made reports regarding most of the kinds catalogued. Many novelties among peas, melons, sweet corn, cabbages and flower seeds are announced.

NOTE.—The Polaris potato as sent out by the Department of Agriculture, is by no means the Polaris offered by seedsmen. Four pieces of the Polaris sent to us by T. H. Hoskins, of Newport, Vermont, yielded 13 pounds, or at the rate of 786 bushels to the acre. Whole number 57, of which 45 were of marketable size. They were quite uniform as to size, with eyes medium as to number and prominence. A very good-looking potato. It so resembles the Early Puritan that a portrait of one might well serve for the other. The Polaris from Washington yielded at the rate of 680.62 bushels to the acre, the yield from four pieces being 11¼ pounds. But many of these were knobby, prongy, and irregular in shape with deeper eyes. It is also a late potato. We found the Polaris from Dr. Hoskins a trifle later than Beauty of Hebron.

JOHNSON & STOKES, 217 & 219 MARKET STREET, PHILADELPHIA, PA.—This catalogue, with its gilt covers and colored leaves of specialties and novelties and colored plates, gives a striking illustration of the enterprise and progress of seedsmen. We must ask our readers to send for this catalogue and examine it for themselves, since it is so full of the announcements and commendations of kinds unknown to us that our space would scarcely allow of their enumeration. The illustration of Kaffir corn (so-called) on page 70 is true to life as grown at the Rural Grounds, though we do not commend it except for trial.

D. LANDRETH & SONS.—This seed catalogue is issued by one of the oldest houses in America. Its illustrations are from photographs—a good idea. It presents cultural hints for every month in the year and cooking notes for all the vegetables catalogued.

B. L. BRAGG & Co., SPRINGFIELD, MASS.—In this catalogue of 80 pages we find many of the new things offered in others. It offers an extra fine selection of Longfellow, yellow, which the R. N.-Y. believes to be about the most satisfactory early yellow flint in cultivation. A new tomato, the "New Bay State," seems from the description worthy of a trial.

R. D. HAWLEY & Co., 500 MAIN STREET, HARTFORD, CONN.—There are some first-rate lists in this unpretentious catalogue of 75 pages. The new Japan buckwheat, Peach tomato, Sibley squash, Henderson's Bush Lima, Ex. Early Jersey Lima; Early Essex, New Queen, Charles Downing and Rural New-Yorker No. 2 potato, are among them. Catalogue free to R. N.-Y. applicants.

I. V. FAUST, PHILADELPHIA, PA.—Faust's Early Conqueror sweet corn is described as being as early as Marblehead, of the finest quality and having a much larger ear. Faust's 1889 potato is shown by an illustration to be of perfect shape. It is said to be a week earlier than Early Rose. An improved peanut, a new cauliflower, watermelon, Faust's American hybrid tomato, a new radish, Miller's Cream Nutmeg melon, a new cucumber for pickles, etc., are among the lists of novelties. There are also several novelties among flowers announced.

CRAWFORD & SONS, CUYAHOGA FALLS, OHIO.—A catalogue of selected varieties of strawberries. Mr. Crawford is a good man, and we should order from him feeling confident that he would send us good plants true to name.

FRANK FORD & SONS, RAVENNA, O.—A catalogue (36 pages) of seeds, small fruits, trees, etc. The list of potatoes is the longest we have seen this season. The Crandall currant is offered as a meritorious novelty. A colored plate of the Eaton grape is presented.

DE FOREST ELY & Co., 1303 MARKET STREET, PHILADELPHIA, PA.—A garden manual, 98 pages, for 1889.

COLE & BROTHER, PELLA, IOWA.—Vegetable, flower and field seeds of all kinds. A catalogue of 50 pages and 16 pages of novelties. It offers the Monroe Co. Prize Potato.

T. C. DAVENPORT, 124 DOCK STREET, PHILADELPHIA, PA.—A first-rate list of new and standard potatoes. Free to applicants. The Early White Ohio promises to be an acquisition.

GEORGE W. P. JERRARD, CARIBOU, MAINE.—A list of new and several of the best standard potatoes all grown in the "Cold North," with illustrations and descriptions. The R. N.-Y. reports upon several in this number.

V. H. HALLOCK & SON, QUEENS, N. Y.—This is a large and elaborately illustrated "Floral Annual" of 68 pages. A great deal of space is given to grasses, clovers and forage crops. Sainfoin, Crimson Clover, Lucerne, with the roots of a plant sweeping over two pages, Japan clover, Alsike, Lupins' Millets, Bermuda grass, Kaffir corn are conspicuously announced. The book abounds in startling illustrations and fervid descriptions. One of the four colored pages shows a leaf of one of the ornamental beets, flowers of Bessera elegans, Cyclobothra flava, Milla biflora and Celestial peppers. We can not attempt to point out the special features of this catalogue. Many of the novelties will be considered in our special soon to appear, which will be given up chiefly to a consideration of the merits of both the standard old and new kinds.

THE HIGGANUM MANUFACTURING CORPORATION, 189—191 WATER STREET, N. Y.—This catalogue is devoted to seeds and agricultural implements. It is to the latter that we desire at present particularly to allude. Among the implements, illustrations and a description of Clark's Cutaway harrow are given. We have tried this harrow at the Rural Grounds, and can therefore speak of it in the light of some experience. Let us take the disk harrow and cut each disk so that, instead of being *round*, it is formed into six sharp right-angled blades, each diverging from the other outwards by several inches. These angular steel disks, six of each, are fixed on two axles, which may be adjusted to form, with the pole, right angles or something less, according to the work required. The blades enter the soil deeper than the round disks, cutting through sods and tossing and pulverizing the soil in a way that the older implement can not possibly do We are much pleased with it and predict that it will be considered an invaluable harrow by all who give it a thorough trial. An examination of the several cuts of the catalogue will give our readers a better idea of the implement than any attempt of ours to describe it.

PRICE & REED, 516 BROADWAY, ALBANY, N. Y.—A large-sized catalogue of flower, field and garden seeds, with colored covers and many illustrations. Headquarters of the Early Sunrise potato.

D. M. FERRY & Co., DETROIT, MICH.—One of the largest seed firms in America. The Catalogue (130 pages) will be examined with interest by all. Fruit tree, forest tree, hedge, evergreen, deciduous seeds of many kinds. Miss Blanche Ferry is represented as the largest flower, most fragrant and most perfect in form of all sweet peas. A colored plate is given. Try the Molucca Balm, the queerest plant in existence that is easily raised from seed.

GREEN MOUNTAIN GRAPE.—Circular from Stephen Hoyt's Sons, New Canaan, Conn. This grape has been highly praised by some of

our best horticulturists. It is certainly of very fine flavor and its season of ripening, will be found very satisfactory to vineyardists who wish to supply this market. Read this pamphlet.

ECLIPSE CORN-PLANTER.—Circular from The Eclipse Corn Planter Co., Enfield, N. H. This is a machine for planting seeds and distributing fertilizers at one operation. With the improvements added for this season it is certainly one of the best machines of the kind now before the public. Write for this circular and see what the planter is.

CATALOGUES OF FERTILIZERS.

THE MAPES FERTILIZER CO., 158 FRONT STREET, NEW YORK.—A pamphlet of 45 pages. This company has probably done more to popularize fertilizers than any other in America. Station analyses show that the per cent. of plant food is as high in them as in any others manufactured, notwithstanding the fact, not always recognizable by the chemist, that inferior forms are never used, such, *e. g.*, as S. C. rock, hair, etc. The basis of the Mapes fertilizers is bone, to which are added the highest grades of plant food at present known. We are personally indebted to Mr. Mapes for a deal of advice and assistance freely given during the past 14 years of our experiment work.

The company also issues another pamphlet entitled "Tobacco Growing," which should be examined by all who are interes ed in this industry. Either treatise will be sent on application.

THE BOWKER FERTILIZER CO, BOSTON, MASS.—A pamphlet of 26 pages setting forth the merits of the well-known Stockbridge fertilizers, with interesting and instructive reading matter regarding the use of fertilizers in general. Among the latter are "Feed the Plant rather than the Soil; The 'Complete' or Blunderbuss Fertilizers; Stinted in Infancy, Stunted for Life; Ninety-day Crops; Fertilizers, Agricultural, Intellectual, Moral, Political." Besides a list of the fertilizers made by this firm, "Farm Chemicals for Home Mixing" are appended. A page(21) is devoted to an account of the R. N.-Y's Potato Con:est" which with the Stockbridge Manure gave a yield of 378 bushels to the acre in spite of the injury done to the crop by the flea-beetle. The pamphlet will no doubt interest our readers.

OLD STANDARD BONE FERTILIZERS.—Circulars from the Thompson & Edwards Fertilizer Co., Union Stock-yards, Chicago Ill. This circular states that 2,382,008 head of cattle, 65,859 calves, 5,470,852 hogs, and 1,360 862 sheep were slaughtered at the stock-yards in 1887. Think of the world of fertilizing material contained in the vast herd. Thompson & Edwards say that nothing is wasted or lost except the bellow of the bullock and the squeal of the hog. Western farmers who need bone fertilizers should patronize this house.

CANADA ASHES.—Catalogue from Munroe, Judson & Stroup, Oswego, N. Y. Why Canadians should be willing to sell so much of their hard-wood ashes—representing a good portion of the life of their soil—is a mystery too deep for the average mind to comprehend. It seems as odd as the practice we Yankees are getting into of sending our rich feeding stuffs to England instead of feeding more of them to American cattle But, however unwise the practice may seem, no reasonable man can question the fact that good unleached ashes make a valuable fertilizer, particularly valuable for potatoes and small fruits. Munroe, Judson & Stroup are fully reliable and handle first-quality ashes.

BAUGH & SONS, 20 SOUTH DELAWARE AVENUE, PHILADELPHIA, PA.—A catalogue of fertilizers offered by this well-known firm. Raw-bone meal, strictly pure, with guaranteed analysis; Baugh's New-process 10 per cent. Guano; Baugh's A. A. nitrogen; raw-bone superphosphate; high-grade acid phosphate are among the fertilizers emphasized. This firm offers a $25 fertilizer, which, according to the Station analysis, averages as high as any low-grade fertilizer we know of. The R. N.-Y. desires to be understood as to its opinion of cheap fertilizers. A $25 fertilizer must analyse higher in proportion than a $50 fertilizer to be of equal value, because the costs of transportation and spreading it upon the soil are the same.

FARMERS' MANUAL & ALMANAC.—Sent by H. S. Miller & Co., Newark, N. J. The main object of this publication is to show forth the merits of the bone fertilizers made and sold by this house. This is very successfully done and all who are interested in such fertilizers will find much to interest them here

FOREIGN CATALOGUES.

JAMES CARTER & CO., 237 & 238 HIGH HOLBORN, LONDON, ENGLAND.—A large and costly catalogue of seeds, with numerous colored plates.

WEBB & SONS, WORDSLEY, STOURBRIDGE, ENGLAND.—An elaborate catalogue of seeds of all kinds

WILLIAM BULL, 536 King's Road, Chelsea. London, S. W. England. An illustrated catologue of new, beautiful and rare plants and orchids.

LITTLE & BALLANTYNE, CARLISLE, ENGLAND.—A catalogue of flower and garden seeds— 75 pages.

THE WOMEN'S NATIONAL POTATO CONTEST.

OVER $1,050 IN SOUVENIRS Contributed up to Date.

Revised List of Contributors and Contributions, Arranged, as Near as may be, According to Value.

A SOUVENIR OF SOME KIND ASSURED TO ALL WHO RAISE LARGE CROPS.

The Project Fully Indorsed by Progressive People.

The Mapes Formula and Peruvian Guano Co., New York. $100 in cash for the largest yield grown with the Mapes Potato Manure, stable manure, or both.

Rural New-Yorker. $100 in cash or souvenirs as the committee may prefer.

Lawson Valentine, President of the Christian Union Co., New York, $75 in the following books selected from the catalogue of Houghton, Mifflin & Co., New York and Boston:

Walden, by Thoreau.
Excursions in Field and Forest, by Thoreau.
Summer, by Thoreau.
Winter, by Thoreau.
Fresh Fields, by Burroughs.
Locust and Wild Honey, by Burroughs.
Winter Sunshine, by Burroughs.
Wake-Robin, by Burroughs.
Signs and Seasons by Burroughs
A Treasury of Thought, by Maturin M Ballou.
Talks Afield about Plants and the Science of Plants, by Prof Bailey.
The Philosophy of Eating, by Bellows.
Pictures of Country Life, by Alice Cary.
The Building of a Brain, by Dr. Clarke.
Rural Hours, by Susan Fenimore Cooper.
Hints on Household Taste, by Perkins.
Castilian Days, by Hay.
The Autocrat of the Breakfast Table, by Holmes.
One Hundred Days in Europe, by Holmes.
The Common Sense of Money, by Howe.
Smoking and Drinking, by Parton.
The Gates Ajar, by Elizabeth Stuart Phelps.
Beyond the Gates, by Elizabeth Stuart Phelps.
The Gates Between, by Elizabeth Stuart Phelps.
Popular Flowers, by Rand.
My Summer in a Garden, by Warner.
The Waverly Set of Sir Walter Scott's Novels, comprising 25 volumes.

Giddings & Read, Rutland, Vt., $65, as follows:
Ten prizes of 20 bulbs each of Woodbury's choice gladioli.
Ten prizes of one peck each of Rogers's Seedling Potato.
Ten prizes of one pound each of the new potato, Vermont Wonder, not yet offered for sale.
Ten prizes of one pound each of Read's Red Giant, not yet offered for sale.
Ten prizes, $1.50 each, of seeds of any kind, to be selected from their 1889 catalogue.

Prof. J. L. Budd, Iowa State Agricultural College, $50 in 100 trees of valuable new apples, pears, cherries, plums, apricots and ornamental trees and shrubs suited to the special climate of the prize-takers.

Bowker Fertilizer Co., Boston, Mass., $42.50 in one ton of Stockbridge Potato Manure for the best acre of potatoes grown with Stockbridge fertilizer or manure,

Woodason Bellows Works (Philadelphia, Pa.), $30 in powder and spraying bellows, viz: two patent double-cone bellows, extra size; two patent double-cone bellows, regular size; three single-cone bellows, large size three single-cone bellows, regular size; two spraying bellows, regular size.

S. H Parvin's Sons, Cincinnati, O., Six of Moody's Taylor System of Dressmaking. Price of each, $5 00.

W. Atlee Burpee (Philadelphia, Pa.), $25 worth of vegetable and flower seeds, selected from their 1889 catalogue, in five premiums of $5.00 each.

C. L. Ingersoll, President of the Colorado State Agricultural College, $25, in ten volumes of the works of Washington Irving, neatly bound.

Thorburn & Co. (New York), $25 worth of seeds (flower or vegetable) from their catalogue for 1889. This may be offered as one or several prizes.

Peter Henderson & Co. (New York), $25 collection of plants or a $25 collection of seeds, to be selected from their 1889 catalogue,

H. M. Engle & Son, Marietta, Pa., $20 as follows: five Paragon chestnut trees, five "Good" peach trees, 50 peach trees, assorted leading varieties.

John A. Salzer, La Crosse, Wis., $20 in flower seeds, to be selected from their 1889 catalogue.

William B. Reed, Chambersburg, Pa, $20 in 10 collections of one dozen roses each for ten souvenirs to as many ladies.

S. Frogner, Herman, Minn., $20 in potatoes, as follows:
10 prizes of one *peck* each of Early Minnesota (new).
10 prizes of one pound each of No. 18 (not for sale).
10 prizes of one pound each of No. 64 (not for sale).
10 prizes of one pound each of No. 50 (not for sale).
The pound prizes to be sent post-paid; the peck to be sent by express at recipient's expense.

E. E Stine, Cuyahoga Falls, O., $18 in a trio of pure-bred White Holland turkeys and (2) one barrel of choicest seed potatoes in his collection grown the coming season.

Chadborn & Coldwell M'f'g Co. (Newburgh, N. Y.), one 14-inch New Model Lawn Mower.

Paine, Diehl & Co. (Philadelphia, Pa.), one 7½-pint Self-pouring, Quadruple Silver plate Tea-pot, listed at $16 50.

F. M. Hance Elyria, O., $16 in one trio of Black Cochins and one trio of Light Brahmas.

John H. Evans, Lewiston, Idaho, $12 in Idaho pear trees, one to each of six successful competitors.

P. J. Berckmans, President of the American Pomological Society, $10 in cash.

T. H. Hoskins, M. D., Newport, Vt, $10 in iron-clad apple trees (his selection) in three premiums.

John Saul, Washington, D. C., $10 in choice plants to be selected from his catalogue.

Benjamin Hammond, Fishkill, N. Y., $12, as follows: Two kegs of Hammond's Slug Shot, 125 pounds each; two packages of Grape Dust, 10 pounds each.

W. W. Rawson & Co., Boston, Mass., $10 worth of vegetable or flower seeds, to be selected from their 1889 catalogue.

D. Landreth & Sons, Philadelphia, Pa., $10 worth of seeds from their 1889 catalogue.

J. C. Vaughan, Chicago, Ill., $10 collection of flowering bulbs, selected from their catalogue for 1889.

Lieut-Gov. Jones, of Binghamton, N. Y., $10 in two platform scales.

Northrup, Braslan & Goodwin Co., Minneapolis, Minn., $10 in any kind of seeds from their 1889 catalogue.

W. S. Waite, Haley, Tenn., $10 in a pair of either of the following breeds, cooped and delivered at express station: Houdans, Langshans, Silver Wyandottes, Leghorns, W. F. B Spanish, P. Cochins, Light Brahmas.

Pomeroy & Pearson, Lockport, N. Y., $9 in one set (No, 4) Botsford Wagon Springs

Porter Blanchard's Sons, Concord, N. H., $8 in a No. 5 Blanchard Family Churn,

James Pyle & Sons, New York, $7.50 in five boxes of Pearline, one dozen pounds each, to be given as five prizes.

Henry Stewart, Highlands, N. C., $6.50 in the five works of which he is the author, viz: Culture of Farm Crops. Dairyman's Manual. Shepherd's Manual, Irrigation for the Farm, Orchard and Garden.

W. R. Norris, Sodus, N. Y., $8 in one trio of thoroughbred Light Brahmas.

Frank Siddall (Philade'phia, Pa.), one box of Frank Siddall's Soap, freight paid

Gen. Wm. G. Le Duc, Hastings, Minn., $5 in cash.

Gen. N. M. Curtis, Ogdensburg, N.Y., $5 in cash.

W. A. Stiles, editor of Garden and Forest, New York, $5 in cash.

Sec'y J. S. Woodward, Lockport, N. Y., $5 in cash.

W. B. Alwood, vice-director of the Virginia Experiment Station, $5 in cash.

Geo. B. Loring, M. D., Washington, D. C., $5 in cash,

Charles J. Wright, Fergus Falls, Minn., $5 in cash.

Prof. C. V. Riley, U. S. Entomologist, $5 in cash.

Mrs. E. E. Stine, Cuyahoga Falls, O., $5 as an extra souvenir to the lady who raises the largest crop by her own personal cultivation, hoeing and all necessary work.

Dr. W. J. Beal, Michigan Agricultural College, $5 in his two volumes entitled the Grasses of North America.

R. & J. Farquhar & Co. (Boston, Mass.), $5 worth of seeds (including the newest varieties of sweet-peas, asters, stocks, dianthus, etc.) to be selected from their 1889 catalogue.

John S. Pearce & Co., London, Ont., $5 in seeds selected from their catalogue.

Toledo Blade, Toledo, O., $5 in five yearly subscriptions.

Wilson Bros., Easton, Pa., $5 in a bone and shell mill.

Mrs. James H. Lampman, Coxsackie, N. Y., $5 in a choice between a pair of Rouen and Imperial Pekin ducks.

R. N. Lewis, Red Hook, N. Y., $5 in a trio of Laced Wyandottes.

M. Murray, Centre, O., five premiums, each consisting of two pounds of Ross's Favorite potato (new).

Theodore Neff, Bellaire, Ohio, $5 in strawberry or raspberry plants or grape vines, as may be selected.

O. P. Putnam, Leominster, Mass., $5 in one pair of thoroughbred Barred Plymouth Rock chicks.

H. L. Barricklow, Rising Sun, Ind., $5 in grape vines and ornamental shrubs.

Brainerd & Armstrong Co. (Philadelphia, Pa.), six boxes Assorted Colors Embroidery Silk put up one ounce in a box.

Mrs. D. Haskell, Exeter, Scott Co., Ill., $5 in 12 prizes of one dozen each of mixed tulip bulbs, to be sent post-paid.

Mrs. F. H. Valentine, Elizabeth, N. J., $5 in one pair of pure-bred Silver Wyandotte chicks, or three settings of eggs of the same breed.

A. P. Allen, Meadville, Pa., $3 in one Single-combed White Leghorn cockerel, delivered at express office.

Bartlett & Dow (Lowell, Mass.), one Common-Sense Milk Pail.

The White Mountain Freezer Co., Nashua, N. H., one four-quart White Mountain Freezer.

G. W. Fry, Dunlap, Mo., a choice of a setting of eggs of either Silver Wyandottes or R. C. B. Leghorns.

Mrs. O. J. Putnam, $1 in one dozen bulbs of Freesia refracta alba.

THE WOMEN'S National Potato Contest.

A Mighty Interest is Shown in the Project.

THE SOUVENIRS WILL PROBABLY AMOUNT TO OVER $1,200 IN VALUE BEFORE SPRING.

INSTRUCTIONS AND SUGGESTIONS.

THE R. N.-Y. proposes that its lady readers enter into a potato contest of their own. In the way of suggestion merely at this time, let us propose that the plot be 33 feet square, or just one-fortieth of an acre. This is a very convenient size and shape. The plot may be larger but not smaller. Each contestant will choose her own method in *every* particular, the kind and quantity of fertilizer or manure, the variety of potato, the distance apart to plant, etc., etc. It will not, of course, be required that the contestant do all or any of the actual work herself, but merely that it be done under her *direction and supervision.* The *aim will be to produce the largest quantity of merchantable potatoes on the chosen area at the least cost*; the standard of what constitutes a "merchantable" potato to be fixed hereafter. The reports (to be satisfactorily substantiated) will give the full particulars as to the kind of soil, fertilizer, manure, variety of potato and method of culture, and are to be handed in before the first of next October.

THE REWARDS.

The R. N.-Y. is collecting 500 or more rewards, or *souvenirs*, to be given to a corresponding number of the most successful contestants.

We believe this to be a very laudable project and certain to do a great deal of good in very many ways.

The R. N.-Y. begs to express the hope that those of its friends who may take the above view of the project, will continue to encourage it by donating suitable articles or by contributing such moderate sums of money as in the aggregate may enable the committee (to be appointed) to extend the number of souvenirs as far as possible, and in this way help to secure a general interest and enthusiasm throughout the entire potato growing country.

The Committee to examine the reports and to award the prizes will

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria.

be made up of persons (either men or women as preferred) whose names shall be a sufficient guaranty of strict, impartial action.

FINALLY.

All of our female readers, whether young or old, who desire to enter the lists will kindly send in their *names* and *addresses* on postal cards, *adding the words* "FOR THE POTATO CONTEST."

The value of the souvenirs already promised amounts to over $1,050, as will be seen by reference to another page. *Our lady friends are sending in their names for the contest freely and a grand national contest, likely to engage the attention of the civilized world, is assured.*

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

STRAWBERRY HILL PRIZE PORK PRODUCTS.

WE received from Dr. J. B. Learned a package of his pork products—sausage, lard, and scraps. The RURAL family rarely eat pork in any form, and so perhaps are not very good judges of these products. The lard, which was used for pastry and for frying purposes, seemed the purest, sweetest, and so the least objectionable that we had ever tried. The sausage was most savory and appetizing, and, when well browned, free from grease. The scraps we found an agreeable accompaniment to eggs, beans, etc. How much the knowledge of cleanliness and the neat manner of putting up the goods had to do with our enjoyment of this pig food, we, of course, cannot say.

We have never thought the pig the filthy, wallowing fellow he is usually set down to be. That he should be kept in nauseating filth and fed stomach sickening filth, while all other farm animals are kept moderately clean—clean by comparison at all events, and given wholesome food—and that the flesh of this inspissation of filth should constitute nine-tenths of the meat food of the farmer's family—wife and young children particularly—seems to us a highly culpable state of affairs.

We are not acquainted with Dr. Learned, but we certainly wish him all success, and trust that his humane and hygienic treatment of the pig as described in the RURAL of February 2, may be followed, the sooner the better, by all intelligent farmers.

WHAT A MOTHER THINKS.

THE tirade of "A Man" against refinement, in a late RURAL, is a proof of "many men of many minds," as the old copy-books used to say. It also proves that customs vary in regard to work in different parts of the country; for in this locality it is the housewives or housekeepers who work 16 hours a day, having to wash the dinner dishes while the men are resting, and to work two or three hours in the evening after they have finished the chores. While not agreeing with the young lady writer whom he criticises, in every particular, it is a fact beyond dispute that the reason why farmers' sons cannot hold their own among other educated people is that they lack the refinement some of them affect to despise, and then they wonder why refined people do not like to associate with them. I have often noticed the children of farmers, and always observed that the little boys while small were as shy and delicate as the girls and often bade fair to become refined men.

But as they grew to manhood, they generally liked to imitate the swagger and "tall" talk of the men who frequent the grocery, and if allowed all the liberty they wanted they soon resembled them. I know many families where the girls are refined and the boys content to be rough and uncultivated, though the latter have had better schooling than the former. These girls never went to school to learn to paint, (more's the pity!) having only the rudiments of an education, and attending to home duties faithfully, and to me there is something beautiful in the home adornment by the daughter, if she has a natural taste for such work; for life is really more than pork and potatoes.

Concerning the fish story, I only ask "A Man" if he would think it just for his wife to throw her pailful of dirty water over his harness just blackened; why then should such ill-smelling articles as fish be cleaned in the kitchen, if there was a shed or other covered place where it could be done? Most men when they dirty a kitchen, think it is only their women folk's work to clean it after them, and after a woman spends a few years in continual back-aching scrubbing and cleaning up, she is apt to get tired or go crazy, and though supposed to be good at airing their grievances, there are plenty of suffering women who practice too much self-repression, and "die and make no sign," loyal to the last to their thoughtless households.

It is no use for "A Man" to make light of, or sneer at other people's "grievances." To know how heavy another's cross is, one must feel its weight, and I know of one farmer's son who is being sent to college with the money his sisters earn in the dairy and garden. There are two sides to every question.

A MOTHER.

KINDLY THINK OVER.

SELF-IMPROVEMENT:—Are you doing anything in that line?

ARE you honestly making the most of your time?

WHAT are you reading? Anything worth thinking over or remembering?

A SCHOLAR recently remarked in our hearing that he could not understand how a person after having left school with any sort of an education could be content not to continue his studies through life.

FANCY-WORK seems to us such a poor return for time spent upon it, that we can't see how any woman can afford to spend much of her time over it.

EXTRACT FROM A PRIVATE LETTER.

THE reason given by a Stelle City, Neb., subscriber, in RURAL of January 26, is worthy of being immortalized in an adage, "I am a farmer because then I can always know where my home is, and I am never out of a job," a world of good sense and logic in a nut-shell. To see the crowds of men in every city and large town, who have no homes in any good sense of the word, and who are forever out of a job, is one of the most discouraging features of society. To know where one's home is from year to year, and never to be "out of a job" are such sources of happiness and content that only those not so circumstanced, have any idea of it. To sit in an office day after day, waiting for patients or clients is detestable, utterly so, and is enough to make a man of spirit despise both himself and his profession. The farmer from the outset has his work at his finger ends, and waits only for the patronage of nature. To always know where home and work are to be found, should give every man an immense sense of rest.

MARY WAGER-FISHER.

THE COLOR LINE is settled by the use of Thatcher's Orange Butter Color. Dairymen should never fail to avail themselves of the advantages derived from its use.—*Adv.*

Miscellaneous Advertising.

Our Grandsires
Would have appreciated a purgative at once so mild and so effective as
Ayer's Pills,
the old cathartics being too harsh and drastic for common ailments.

"Ayer's Pills are the best medicine known to me for regulating the bowels, and for all diseases caused by a disordered liver and stomach."—Philip Lockwood, Topeka, Kans.

"I have been taking Ayer's Pills and using them in my family since 1857, and cheerfully recommend them to all in need of a safe but effectual cathartic."—John M. Boggs, 807 W. Chestnut st., Louisville, Ky.

For Sick Headache and Indigestion take
Ayer's Pills,
Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.
Sold by all Druggists and Dealers in Medicine.

BROWN'S FRENCH DRESSING
The Original. Beware of Imitations.
AWARDED HIGHEST PRIZE AND ONLY

MEDAL, PARIS EXPOSITION, 1878,
Highest Award New Orleans Exposition.

W. R. & CO'S IMPROVED BUTTER COLOR
IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the butter-milk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere. More of it Used than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & Co., Burlington, Vt.

WHICH? BUTTER OR CHEESE.

If either, or both, send for J. S. CARTER'S Illustrated Catalogue, which gives full information of latest and best method and appliances for making Cheese or Butter, from the largest factory to the smallest dairy. Carter's Cream Gathering System of Butter Making is a Success. JOHN S. CARTER, Syracuse, N. Y.

IF You want to buy of first hands and so save middle profits buy your **WALL PAPER** direct from the manufacturers. Good white back papers 5 and 8 cts. Gold papers as low as 10 cts. Full line of samples sent free to any part of the United States
W. M. KAYSER & CO.,
406, 408 & 410 Arch Sts., Philadelphia, Pa.

BRIGHT RED ON COTTON WILL NOT FADE.
Enclose 25c For enough to dye Eight Pounds of Rags.
PRINTED DIRECTIONS SENT.
C. E. HELFER, *Druggist*, Akron, O.
For recommendation, write to any farmer's wife in Summit county. ESTABLISHED 1859.

"OSGOOD"
U. S. Standard Scales.
Sent on trial. Freight paid. Fully Warranted.
3 TON $35.
Other sizes proportionately low. Agents well paid. Illustrated Catalogue free. Mention this Paper.
OSGOOD & THOMPSON, Binghamton, N. Y.

GRIND YOUR OWN Bone, Meal, Oyster Shells, Graham Flour & Corn, in the **$5 HAND MILL** (F. Wilson's Patent). 100 per cent. more made in keeping Poultry. Also POWER MILLS and FARM FEED MILLS. Circulars and testimonials sent on application. WILSON BROS. Easton, Pa.

AGENTS LOOK HERE
and farmers with no experience make $2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made $18 one day, $76.50 one week. So can you. Proofs and catalogue free.
J. E. SHEPARD & Co., Cincinnati, O.

VIRGINIA FARMS and MILLS SOLD and exchanged. Free Catalogue. R. B. CHAFFIN & CO., Richmond, Va.

2 CENTS for Catalogue of hundreds of useful Articles less than Wholesale Prices. Agts. and Dealers sell large quantities. CHICAGO SCALE CO. Chicago

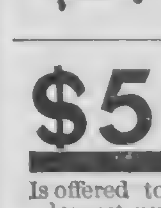
GOLD Live at home and make more money working for us than at anything else in the world. Either sex. Costly outfit FREE. Terms FREE. Address, TRUE & CO., Augusta, Maine.

99 Sample Styles of Hidden Name and [illegible] Cards, [illegible] Games, and how you can make $10 a day at home. All FOR A 2 CENT STAMP. HOME AND YOUTH, CADIZ, OHIO.

SEND for free Catalogue of Books of Amusements Speakers, Dialogues Gymnastics Fortune Tellers, Dream Books, Debates, Letter Writers, Etiquette, etc. DICK & FITZGERALD, 18 Ann St., New York.

DESSICATED FISH.
Something New for Poultry Food. The fish is cooked, pressed, dried and ground. Will keep any length of time. To be mixed with the soft feed. TRY SOME. Send for my Circular. Also send for Book on Successful Poultry Keeping. 31 pages with illustrations. Book is free. Send 2-cent stamp to pay postage. Address
C. A. BARTLETT, Worcester, Mass.

Raise No More Wheat
but make your money out of the Barn and Poultry Yard as the Dairy, Poultry and Doctor Book tells, for five two-cent stamps.
C. G. HIRNER, Allentown, Pa.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HIGH ARM AND LOW ARM. $20 and upwards. FIFTEEN DAYS' TRIAL. Warranted 5 years. Complete set of extra attachments. Don't pay agents $55 or $60, but send for circular. THE C. A. WOOD CO., 17 North Tenth St., Philadelphia, Pa.

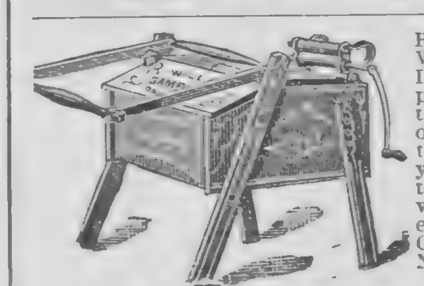
$500 IN Cash
Is offered to the person who shall send in the largest number of yearly subscribers to the
Ladies' Home Journal
between now and July 1st, 1889, at 50 cents per year—HALF PRICE. *After that date, no subscriptions received for less than $1.00 per year.* $400—$300 is offered respectively for next largest clubs. A good cash commission paid for every subscriber secured, if desired, instead of premiums. Hundreds of dollars can be made during the next six months, by men, women or children. We furnish free sample copies, posters, &c. Address
CURTIS PUBLISHING CO.
PHILADELPHIA, PA.

MUSIC SELF TAUGHT. PROF. RICE'S SELF-TEACHING SYSTEM. All can learn music without the aid of a teacher. Rapid, correct. Established 12 years. Notes, chords, accompaniments, thorough bass laws, etc. Stamp for Music Journal. Circulars free. G. S. RICE MUSIC CO., 243 State St., Chicago.

Scroll Sawyer.
On receipt of 15c. I will send post-p'd, the pattern of this Lamb Bracket size 11x14, a large number of new & b'utif'l miniature designs for scroll sawing, and my 40 page Illustrated Catalog'e of Scroll Saws Fancy Hinges, etc Any one can make this bracket. If you have no saw, send 6c. for catalogue only.
A. H. POMEROY,
Advertising Dep't,
216-220 Asylum St.,
Hartford, Conn.

Natural and Artificial Duck Culture.
By JAMES RANKIN.
This book is a complete treatise on Duck Culture, with illustrations and descriptions of breeding and brooding buildings, also cuts of the eggs in all styles of Incubators. Including an experience of nearly 30 years by the author. Price, 50c. Address, JAMES RANKIN, Maple Farm Duck Yards, South Easton, Mass. An idea of the practical character of this book will be got from the few brief extracts from it published in this paper lately.

BRIGHT, ACTIVE AGENTS WANTED
to sell the Rich Book
"DELIGHTFUL STORIES"
Or Home Talks out of the Wonderful Book.
This work contains 100 Delightful Naratives of the most wonderful occurrences in the Sacred Volume, very attractively illustrated. Success of agents is astonishing One lady has sold nearly 3,000 copies alone. Low Price. Big Terms to Agents. Apply to HUBBARD BROS., Philadelphia and Chicago.


BECKER'S Patent Washing Machine Improved, approaches nearer the old method of hand rubbing than any device yet introduced to the public. Easily work'd and washes perfectly clean Circulars free.
N. C. BAUGHMAN,
York, Pa.

Real Estate.

CALIFORNIA LANDS.
—CLOSE TO—
LOS ANGELES.
We have for sale a large body of fine farming, grazing and fruit lands in Ventura County, one of the most healthful, best watered and fruitful counties in the State. We offer lands from $5 to $60 per acre, on very easy terms to actual settlers. Special inducements to Colonists. For full information address R. W. POINDEXTER, Secretary, 19 West First Street, Los Angeles, Cal.

MICHIGAN FARMS
AND TIMBERED FARMING LANDS
In Central Michigan For Sale at Great Bargains.
Saw-mills, Flouring Mills, Factories, Stores and Stocks, Hotels, etc., sold and exchanged.
Real Estate Journal mailed free on application.
R. A. CLARK & CO., Lansing, Mich.

FREE HOMES At the rate they have been going the Public Domains will all be gone in 5 years Now is the time to secure as Rich Land as the Sun shines on at $1.25 per acre. What better could be left for Children? Where these lands are; how to get them, as well as for information about Homes or Employment in all States and Territories, send [illegible] and receive the beautiful Engravings, a Picturesque Panorama of America. Address THE WESTERN WORLD Chicago, Ill.

FOR SALE—Grazing Farm in Fauquier Co., Va., on the Piedmont Air Line R.R., 40 miles S. of Washington; 1 mile from Warrenton June. (Va Midl'd R.R.) This tract contains 1,008 Acres; 800 is highly improved, is of superior quality for grass and grain, well watered; has a handsome and commodious residence with modern improvements; all necessary outbuildings, Stone Grist Mill, Cattle House, etc. Two streams run through the Farm. This very fine body of land will be sold at a sacrifice, as a whole, or in two or three parts. For further information address
A. N. BASTABLE, 27 W. North Ave, Baltimore, Md.

I SELL AND EXCHANGE **REAL ESTATE.** W. S. HOTCHKIN, Binghamton, N.Y. 300 Exchanges sent free. Mention this paper.

2,000 ACRE FARM
in Minnesota on the Manitoba R. R., suitable for either stock or grain, good buildings, plenty of water, soil deep black, 2½ miles from market; 320 acres ready for seeding. Will sell all or part, or rent. Enquire of THEODOR NEILSEN, Winneconne, Wis.

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THE RURAL NEW-YORKER.
34 PARK ROW, NEW YORK.

The following rates are invariable. All are therefore respectfully informed that any correspondence with a view to obtaining different terms will prove futile.

ORDINARY Advertisements, per agate line (this sized type, 14 lines to the inch)..............30 cents.
One thousand lines or more, within one year from date of first insertion, per agate line, 25 "
Yearly orders occupying 14 or more lines agate space.................25 "
Preferred positions..............25 per cent. extra.
Reading Notices, ending with "Adv.," per line, minion leaded..................75 cents.

Terms of Subscription.

The subscription price of the RURAL NEW YORKER is:
Single copy, per year.......................$2.00
" " Six months.......................1.10
Great Britain, Ireland, Australia and Germany, per year, post-paid.......$3.04 (12s. 6d.)
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French Colonies.......................4.08 (29½ fr.)
Agents will be supplied with canvassing outfit on application.

[illegible] at the Post-office at New York City, N. Y., [illegible]

LATEST MARKETS.

On account of an unexpected press of advertising matter at a late hour, our market report must be very brief.

COTTON has advanced ¼c. on all grades.

POULTRY.—Live is in light supply with advanced prices. Dressed, remains about the same with slight advance on best grades.

HOPS are unchanged.

HAY is slightly lower in price, especially on lower grades.

BEANS.—Marrows are in good demand, other varieties dull.

VEGETABLES.—Potatoes remain unchanged. Bermudas, $3 00 to $6.00. Onions are very dull with prices unchanged. Cabbage, Kale, Spinach and Turnips unchanged.

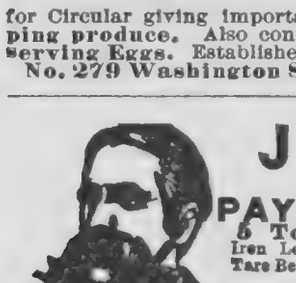
FRUITS.—The market is well supplied with all seasonable kinds, and only good grades sell readily at unchanged prices. Best Kings and Spitzenberghs sell for $2.00. Others as low as $1.00. Fancy Florida oranges are in good demand, but prices are unchanged. Cranberries are in large supply. Catawba and Concord grapes continue at 2 to 3c.

Evaporated apples and peaches are a trifle lower, but other varieties are unchanged.

Brown's Bronchial Troches

Contain ingredients which act especially on the organs of the voice. They have an extraordinary efficacy in all affections of the Throat, caused by cold or over-exertion of the voice. They are recommended to Singers and Public Speakers, and all who, at any time, have a cough or trouble with the throat or lungs. "I recommend their use to the public speakers."—Rev. E. H. Chapin. "Preeminently the best."—Rev. Henry Ward Beecher.—*Adv.*

The Kodak.



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ANYBODY can use the KODAK. The operation of making a picture consists simply of pressing a button. One hundred instantaneous pictures are made without reloading. No dark room or chemicals are necessary. A division of labor is offered, whereby all the work of finishing the pictures is done at the factory, where the camera can be sent to be re-loaded. The operator need not learn anything about photography. He can "*press the button*"—*we do the rest.*

Send for copy of KODAK Primer, with sample photograph. Mention Rural New-Yorker.

The Eastman Dry Plate and Film Co.

ROCHESTER, N. Y.

SEND TEN CENTS IN POSTAGE STAMPS TO

E. & O. WARD.

PRODUCE COMMISSION MERCHANTS

for Circular giving important advice about shipping produce. Also containing recipe for preserving Eggs. Established 1845.

No. 279 Washington St., New York City.

JONES

HE PAYS the FREIGHT

5 Ton Wagon Scales, Iron Levers, Steel Bearings, Brass Tare Beam and Beam Box for

$60.

Every size Scale. For free price list mention this paper and address

JONES OF BINGHAMTON, BINGHAMTON, N. Y.

Holstein-Friesian Cattle,

Imported and Home-bred.

My proximity to New York City gives me facilities for direct transportation by the Southern steamers. Young cows, yearlings with calf, yearling bulls, and spring calves. Prime stock. *No fancy prices. I mean business.*

G. W. THOMPSON,

Mention this paper. Stelton, N. J.

FREE READING MATTER. Unitarian Tracts and Papers sent to all who ask for them, and books by the best Unitarian writers loaned on application to

MRS. F. B. SKINNER, Box 765, Philadelphia, Pa.

'SWIFT-SURE" FERTILIZERS

are manufactured from the very best materials High-grade, Reliable and Lasting, giving good results wherever they are used, always in good drilling condition. Special prices on car-loads. For prices and further information address,

M. L. SHOEMAKER & CO., Ltd.,

Philadelphia, Pa.

GOOD-BYE, my Lover, Good-Bye, & 99 other songs, 180 sleight of hand tricks, 115 experiments in magic, and sample cards. All only 10 cents. Capital Card Co., Columbus, Ohio.

HOW WE STOOD IN 1888.

WILLIAMS & CLARK CO.'S

Americus Ammoniated Bone Superphosphate

BEATS ALL RECORDS.

We make the broad claim that there is no fertilizer now on the market and offered to farmers that compares in uniform high quality with the Americus Ammoniated Bone Superphosphate. Look at the results given below from all the Experiment Stations in the New England States that publish results of their tests of fertilizers.

We challenge any competitor to show a similar record, not only in uniform quality, but where the grade has in each and every case so largely exceeded the guarantee.

Official Analyses of the Americus Ammoniated Bone Superphosphate Made in 1888.

	GUARANTEE.	ME.	VT.	MASS.	CONN.
Nitrogen	2.4 to 3.2 p. ct.	2.74 p. ct.	2 41 p. ct.	3 26 p. ct.	2 81 p. ct.
Equal to Ammonia	3 to 4 "	3.33 "	2.93 "	3.96 "	3 41 "
Available Phosphoric Acid	9 to 12 "	10.69 "	11 11 "	10.59 "	10 75 "
Insoluble		.48 "	.54 "	none "	.32 "
Potash (K^2O)	.2 to 3 "	3.12 "	3.09 "	2.71 "	3.07 "
Valuation		$29.83	$28.89	$29 85	$30.04

Notice the wonderfully available condition of the PHOSPHORIC ACID: In Maine OVER 95 per cent. of it is available, with but ONE TWENTY-THIRD part insoluble; in Vermont 95 per cent. is available, ONE TWENTY-SECOND part insoluble; in Connecticut 97 per cent. is available, and ONE THIRTY-FIFTH part only is insoluble, while in Massachusetts there is NONE insoluble, and it is ALL AVAILABLE. This is a marvelous triumph of applied chemical knowledge, and is UNPARALLELED in the manufacture of COMMERCIAL FERTILIZERS.

The AMERICUS stands UNRIVALLED for PURITY and STRENGTH, and is the

BEST FERTILIZER ON THE MARKET FOR THE MONEY.

OUR POTATO PHOSPHATE is the Best Fertilizer for That Crop.

SEND FOR CIRCULAR.

COTTON EXCHANGE BUILDING, New York.

SCOTT'S FLOWERS

40 Years' Experience in growing our strong and reliable **ROSES** Grand specialties in **PLANTS, BULBS & FLOWER SEEDS** of extra choice quality. Handsomely illustrated **Catalogue for 1889** with colored plate sent FREE to any address. **$8,000** worth of new Plants, Bulbs, etc., given FREE this year, see Catalogue **ROBERT SCOTT & SON,** Philadelphia, Pa.

The "Dirigo" Turnip Blood Beet.

This variety was introduced by us last season, and has proved to be the best variety ever put upon the market. It is a rich, blood-red beet, with a single tap root, of fine grain and flavor, and is earlier than either the Egyptian or Eclipse. Only a limited amount of seed is offered this season. Per pkt., 10 cents; per oz, 25 cents; per ¼-lb, 75 cents; per lb., $2,

"Maine" Sweet Corn

A twelve-rowed variety, ears of medium size, quite dwarf in habit of growth. It ripens about ten days earlier than Crosby's Early and is the earliest twelve-rowed variety in cultivation. Per pkt., 10 cents; per qt., 40 cents. Seed catalogue mailed to all applicants.

KENDALL & WHITNEY, Portland, Me.

JOHN SAUL'S

Washington Nurseries.

OUR CATALOGUE OF

NEW, RARE AND BEAUTIFUL PLANTS for 1889 will be ready in February. It contains list of all the most beautiful and Rare Greenhouse and Hothouse plants in cultivation as well as all novelties of merit well grown and at very low prices. Every plant lover should have a copy.

ORCHIDS.—A very large stock of choice East Indian, American, etc. Also Catalogue of Roses. Orchids, Trees, etc. All free to applicants.

JOHN SAUL, Washington, D. C.

IF YOU WANT TO

Beautify and adorn your homes with Fruit and Ornamental Trees, Vines, &c., you can

SAVE MONEY

by buying of us. Write for our prices. Address

ARNOLD & LORD,

(Successors of GEO. B. ARNOLD),

No Agents. Benton Center, Yates Co., N. Y.

1,500 000 Strawberry, Raspberry and Blackberry Plants. old and new varieties. Headquarters for Wilson Jr., and Early Harvest Blackberry Plants, Root Cuttings.

Originators of the Hamilton or Boss Raspberry and Acme Strawberry. Fine Stock of two-year-old Concord grapes, Fruit Trees Gooseberry Vines, etc., etc. Send for Catalogue and see low prices. Address

BROOKLYN NURSERY CO.,

Office (Old No.) 229 W. Pratt Street,

CHAS. H. ANDERSON, Manager. Baltimore, Md.

EXTRA STOCK OF PEACH TREES' first-class, $35 per thousand.

Baugh's Raw Bone Meal

and ANIMAL BONE

$25 PHOSPHATE

PURE—ACTIVE—PROFITABLE

The well-known excellence of FINELY GROUND, STRICTLY PURE ANIMAL BONES, of uniform quality and fineness, makes Baugh's Raw Bone Meal and Pure Dissolved Raw Bones peculiarly valuable for grain, grass, fruits, and vegetables.

They have been used so long and acceptably that farmers need not experiment with them, but apply them freely with entire confidence in their value as superior Raw Bone Manures.

To those who mention the RURAL NEW-YORKER we will send our new book and any desired information free of charge.

BAUGH & SONS CO.,

MANUFACTURERS AND IMPORTERS,

Established 1855. PHILADELPHIA.

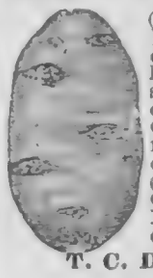
CHOICE SEED POTATOES

OF MY OWN GROWING.

Send for Descriptive Catalogue of 13 NEW and STANDARD VARIETIES, mailed free.

ALLEN WILSON, Suffield, Conn.

SEED POTATO HEADQUARTERS



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Manufacture the Old, Reliable and Well-known Brands of Fertilizers,

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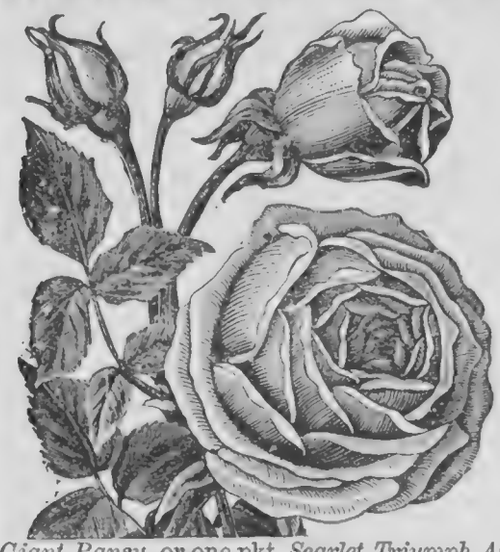
OUR MANUAL OF EVERYTHING FOR THE GARDEN



For 1889 is the handsomest and most complete Garden Guide ever published. It is really a book of 140 pages, size 9 x 11 inches, contains *three colored plates*, and illustrations of all that is new, useful and rare in **Vegetables, Flowers, Fruits** and **Plants,** with plain directions "How to grow them," by

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This manual we mail to any address on receipt of 25 cents (in stamps). **To all so remitting 25 cents for the manual, we will at the same time send free by mail, in addition,** their choice of any one of the following **Splendid Novelties,** most of which are now offered for the **first time,** and the price of either of which is 25 cts.: One packet of *Autumn King Cabbage*, or one pkt. of *Yosemite Mammoth Wax Bean*, or one pkt. *Delmonico Musk Melon*, or one pkt. *Giant Pansy*, or one pkt. *Scarlet Triumph Aster*, or one pkt. *Sunflower, "Silver and Gold,"* or one plant of the climber *Blue Dawn Flower*, or one plant of the *White Moonflower*, or one *Bermuda Easter Lily* or one plant of either a *Red, Yellow, White or Pink Everblooming Rose* (see illustration)—**on the distinct understanding,** however, that those ordering will state in what paper they saw this advertisement.

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ARE STILL OFFERING THE MOST COMPLETE ASSORTMENT OF YOUNG, SMOOTH, THRIFTY STOCK N AMERICA.

BUDDED APPLES, STANDARD PEARS, DWARF PEARS (High and Low Headed), PLUMS, CHERRIES, PEACHES, QUINCES, RUSSIAN APRICOTS, GOOSEBERRIES, CURRANTS, and a full line of

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☞ Is brimful of good things, including many RARE AND VALUABLE NOVELTIES never before offered, handsomely illustrated in natural colors; altogether the grandest and most complete Catalogue published in America. *No Market or Private Gardener can afford to be without it.* On receipt of 10 CENTS in cash or stamps, we will send it free by mail, together with a pkt. of the WONDERFUL NEW AND DISTINCT TOMATO --- BRANDYWINE; largest, smoothest and handsomest of all; the price of which alone is 20c. ☞ OUR SEEDS are the STANDARD with MARKET GARDENERS. Mention this paper when you write. Address

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Without question this **NEW LETTUCE** is the most tender, crisp, and delicious ever introduced. Grows to a **large size,** forms close, compact heads, does not become bitter, and is slow in running to seed; of quick growth, ready to cut early, and stands the heat well; remains for weeks of the finest quality. *Tried and tested* in all parts of the *United States*, and pronounced unequaled. See testimonials, page 1, of 1889 Catalogue. **Pkt. 10c.**

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The BEST MILL on EARTH

has our **SAFETY BOTTOM** intended to prevent breakage should iron accidentally get into Mill. Other improvements adapt Mill to grinding

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A great saving of feed as well as **labor of Husking. The coming Feed for practical, economical Feeders.** Try it. **Can only be made practically on the Scientific** which also grinds any and all other kinds of Grain.

WE GUARANTEE Greater durability and better results than can be obtained with any other Mill.

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New and Choice Field Corn

FIELD OF ORANGE COUNTY FIELD CORN.

This new Corn is entirely distinct from all other varieties, having the largest grain with the smallest cob of any Yellow Flint Corn ever offered. The kernels cover the end of the cob, in fact topping it over. The ears are eight-rowed, and about 15 inches long. We have compared it with all the leading Yellow Flint varieties, such as Longfellow, Angel of Midnight and Compton's Early, and find it much superior to any of these, in its immense yield. The stalk is strong and large, of medium height, three ears to the stalk being not uncommon, and during the past season the remarkable yield of 150 bushels was produced from one acre.

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Seed large and pure white; cob red; stalk tall, tender and sweet.

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Are the **PRIZE MEDAL BRAND,** because they are grown from **SELECTED SEED STOCKS,** and produce the **Best Vegetables.**

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WITH PRICES AND SPECIAL DISCOUNTS.

It contains complete list (*with illustrations*) of **leading varieties** of Vegetables & Flowers, together with collection of **NOVELTIES of superior merit.** We will mail you a Catalogue and ☞ **ONE-THIRD PINT BUIST'S MORNING STAR PEAS** (*the Earliest in the world*)

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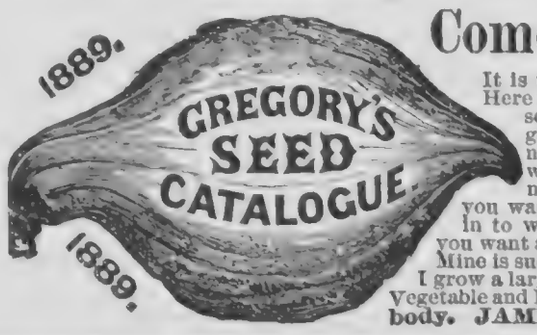
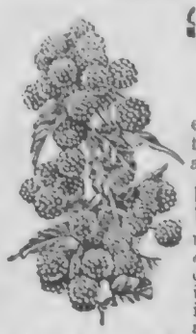
100 VARIETIES. Headquarters of the **MOYER,** the Earliest and Best, Reliable Red Grape now first offered under seal. Also **Small Fruits, Trees, Etc. 5 Sample Vines** mailed for **15 cents.** Illustrated descriptive Price List free. **LEWIS ROESCH, FREDONIA, N. Y.**



Come, Fellow Farmers!

It is the good things and the new things you want, Here is a Catalogue full of them! Do you want tested seed, raised from stock selected with extra care, grown from the best strains, got from the originators? I aim to have mine just such. Do you want new varieties that are really good, and not merely novelties? I aim to have mine such. Do you want seed that the dealer himself has faith enough in to warrant? I warrant mine, as see Catalogue. Do you want an exceptionally large collection to select from? Mine is such. Do you want them directly from the grower? I grow a large portion of mine—few seedsmen grow any! My Vegetable and Flower Seed Catalogue for 1889 **FREE to everybody. JAMES J. H. GREGORY, Marblehead, Mass.**



"MONEY IN SMALL FRUITS."

"The whole story," as told the past winter by J. H. HALE, in Lectures before vast audiences at the Farm Institutes of Wisconsin and New York, and Maine, is published for first time in our **FREE CATALOGUE,** which also describes **ALL** the **Best NEW** and **OLD varieties** of **SMALL FRUIT PLANTS** grown from **pedigree stock.**

EARHART RASPBERRY the wonderful ever-bearing black cap, has now been **tested** over the whole country. "*Would fruit the whole year through if it had a chance.*" "*Six quarts to a plant.*" "*Just ropes of berries,*" etc., are some of the reports that come to us; and it is not surprising, as it is **FRUITS FROM JUNE TO NOVEMBER** and is a prize for any family garden; and for three years past we have been unable to supply the demands for plants. Send postal at once for **FREE CATALOGUE** to **HALE BROTHERS, SOUTH GLASTONBURY, Conn.**

Literary.

THE DRUM LAKE EASTER SERVICE.

A story of the Michigan Pine Woods.

BY HERBERT W. COLLINGWOOD.

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THE little minister seemed to have forgotten the crowd entirely. With eyes half closed, and his head bent down over the fiddle, he seemed to drop all memory of his rough surroundings. He was far back in the past, living his life over again, toiling again up the sad, weary road, yet happier at the wail of his violin than he had been before. His very soul was in the music, and one almost might hear the words of the beautiful song:

"I stood on the bridge at midnight,
As the clocks were striking the hour,
And the moon rose o'er the city
Behind the dark church tower."

The moon was rising over the pines below Bryan's Mill, and the moonlight came streaming down through the desolate streets of Drum Lake. It lay with strange brightness on the white snow, and peeped in at the minister as he played, while it fell hesitatingly along the pillow of the wretched woman who was praying to die.

"And like those waters rushing
Among the wooden piers,
A flood of thought came o'er me,
That filled my eyes with tears."

The music died away in a mournful wail. What a "flood of thoughts" was sweeping through the minister's mind as he played! His eyes did not fill with tears; he was long past that.

"For my heart was hot and restless
And my life was full of care,
And the burden laid upon me,
Seemed greater than I could bear."

Perhaps the dying woman heard the music as she lay in the moonlight.

"But now it has fallen from me,
It lies buried in the sea,
And only the sorrow of others
Throws its shadow over me."

The fiddle seemed to give a shout of joy as the minister bent lower over it. Perhaps *his* sorrow had fallen from him for the time.

And so the song went on, and ended at last in a sound like a wail of despair.

"As long as the heart has passions,
As long as life has woes."

There was a profound silence after the music stopped. The little tune had somehow cast a cloud over the high spirits of the company. Even the scales drooped down more dismally than ever, and the sugar barrel seemed half inclined to let go its hold on another hoop. Cobb blew his nose. Men are wont to resort to this operation when they are deeply affected, and Cobb was thinking of the immense stock of goods that had dropped from him far more effectually than the minister's care had done. The minister took his seat, and began another series of tuning.

(TO BE CONTINUED.)

The "Burlington" is the only line running sleeping cars from Chicago to Denver without change. It is the only line by which you can go from Chicago to Denver and be but one night on the road. It is the picturesque line to St. Paul and Minneapolis. It runs daily "fast trains" to Kansas City, St. Joseph, Atchison, Council Bluffs, Omaha, Lincoln, Cheyenne, and Denver.

THE WOMEN DID IT.

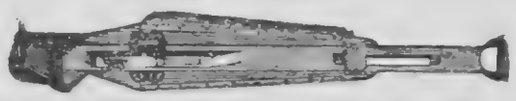
ON one of the most stormy, disagreeable days of the year, nearly seventeen thousand noble, patriotic women of Boston went to the polls and voted. This is not the first time the mothers, wives and daughters of this country have taken up the broom of reform, and done surprising work for the interests of their children and families. Although over twenty thousand Boston women registered, hardly anyone (save the women themselves) believed they would actually vote.

This proves that every year new avocations are opening where women demonstrate their ability, as well as capability, to transact business for themselves, and make money.

Women living near a village or large town can make many dollars "pin money" every year raising poultry and eggs. Mrs. James L. Burgess, Nashua, N. H., says she cleared last year, from only 16 hens, $36.58 for eggs alone. She could have cared for 160 hens easily, and made ten times as much. She attributes her success to the use of Sheridan's Condition Powder to make hens lay. There is no doubt that Powder is a great help. The manufacturers have for years offered cash premiums to consumers, and a proof of what we before said of women is the fact that every year, a woman captured one of their largest premiums. This year the first premium is $50.00 in gold, and we should not be a bit surprised if some woman got it, if not, she will get a lot of eggs to sell from using the Powder. Mrs. Mary J. Glenn, of Rustburg, Va., says: "Before using Sheridan's Powder I was getting from 40 hens, 5 to 7 eggs per week; during eight weeks, while using it, I got from the hens, 882 eggs, worth over thirty dollars."

I. S. Johnson & Co., 22 Custom House Street, Boston, Mass., (the only makers of Sheridan's Condition Powder to make hens lay) will send, postpaid, to any person, two 25-cent packages of Powder and a new Poultry Raising Guide, for 60 cents. The book alone costs 25 cents.

For $1.00, five packages of Powder and a book; for $1.20, a large 2¼ pound can and book; six cans, $5.00, express prepaid. Send stamps or cash. Interesting testimonials sent free.



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Made in Four Sizes: 10, 12, 14 *and* 16 *inch cut. Most reliable Mower in use Easy to work. Strong and Durable.*

Also Manufacturers of the **Buckeye Hose Reel** and **Lawn Sprinkler, Iron Turbine Wind Engines, Buckeye Force Pumps and Buckeye Iron Fencing.** Send for Illustrated Circular to
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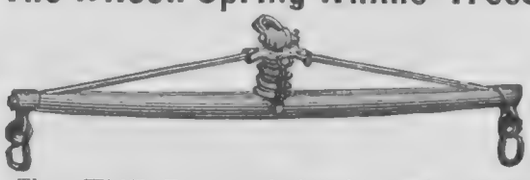
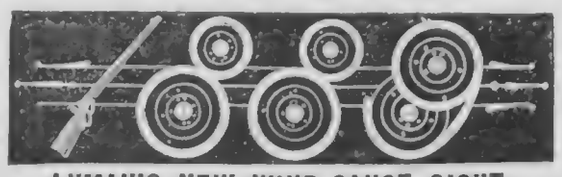
—SOLE MANUFACTURERS OF—
The Wilson Spring Whiffle-Trees.



These Whiffle-Trees are designed to make the burdens of laboring horses easier, in that all shocks and jars are taken up in the spring. They are coming into general use wherever they have been introduced, and are giving perfect satisfaction. Send for circulars. Special inducements to Agents.



LYMAN'S NEW WIND-GAUGE SIGHT.
Send for Catalogue of Sights and Rifles.
Address WM. LYMAN, Middlefield, Conn.

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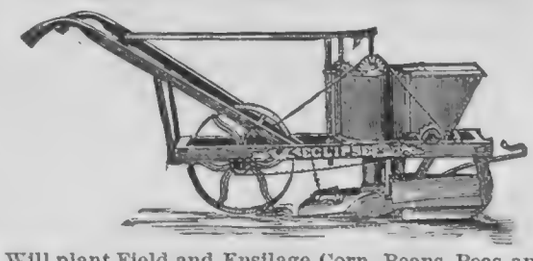

Will plant Field and Ensilage Corn, Beans, Peas and Beet Seed in **hills, drills** and **checks**—in hills up to 45 inches; in checks from 36 inches up to any distance desired. Will distribute all Fertilizers **wet** or **dry**. Farmers, send for circulars.
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For **MAPLE, SORGHUM, CIDER,** and **Fruit Jellies.** Has a corrugated pan over firebox, doubling boiling capacity; small interchangeable syrup pans (connected by siphons), easily handled for cleansing and storing; and a perfect **automatic regulator.** The **Champion** is as great an improvement over the Cook pan as the latter was over the old iron kettle hung on a fence rail. Catalogues Free. Mention this paper.
THE G. H. GRIMM MFG. CO., HUDSON, O.

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HAND-POWER SEPARATOR

The improved machine is giving universal satisfaction to all users. We **warrant** that if our instructions (which are simple) are followed, at least 10 per cent. more butter can be had than by **any** setting method in use. Also we **warrant** that quality of butter cannot be excelled.

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ROOFING SLATE.
A Fine DARK BLUE STRICTLY UNFADING SLATE.
Specially adapted to **CHURCHES, VILLAS, COTTAGES,** etc. **Slate** punched and **cut to pattern** ready for roof. Prices given, delivered at any point desired. Send for price list.
DAVID McKENNA, Manufacturer,
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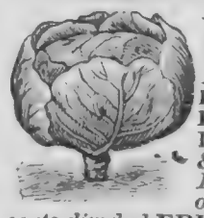
Trees, Seeds and Plants.



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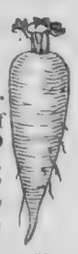

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Reasonable in Price
Market Gardeners, Farmers, Florists, and all who use Seeds, will find our HOME-GROWN EASTERN SEEDS to be of the BEST QUALITY. Try Them
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Rawson's New Book "Success in Market Gardening," sent post free on receipt of $1.00. This is full of important information for the gardener.

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TREES ROOT GRAFTS—*Everything!* No **larger** tock in U. S. No **better,** no **cheaper.** Pike Co. Nurseries, Louisiana, Mo.

J ES only $2 per 1,000. Crescent, $1; all varieties; prices *free.* SLAYMAKER & SON, Dover, Del.

SEEDS GIVEN AWAY. P'k'ge Mixed Flower Seeds, 500 kinds, GUIDE, and 10c. Certificate for Seeds, *your choice*, all for 2 stamps (4 cents.) Every flower lover delighted. Tell all your friends. W. PARK, FANNETTSBURG, PA.
Be Prompt. This offer will appear but twice.

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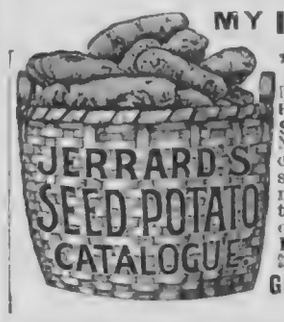

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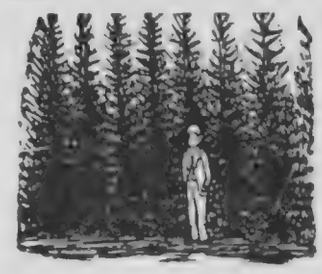

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The Vineyard.

"WOOD!"

GRAPE CUTTINGS ANSWER AS A FERTILIZER?

VIEWS OF VINEYARDISTS.

THE QUESTION.

"I have often heard that it benefited a grape-vine to bury around its roots all the trimmings and prunings, green and ripe, that are taken from the vine, there to decay and act as a fertilizer. What I would like to know is, whether the vine is benefited by such application more than it would be by applying decayed wood of any kind."

New Britain, Conn. F. G. G.

THE ANSWERS.

FROM SAMUEL ROGERS.

I deem it beneficial to cut up all grape-vine prunings and spread them broadcast about the trellis and work them into the soil with the plow and harrow. I think the grape-vine is valuable when used in this way, and better than other kinds of decayed wood, although other woods are also good. This I know from experience. I know nothing about the effects of burying the grape-cuttings around or specially near the roots of growing vines, having never done so.

Highland, N. Y.

FROM J. H. HALE.

Finely ground bone and good hard-wood ashes buried at the roots of the grape-vines, are sure to promote the growth of good healthy wood and the production of plenty of fine grapes; but that there is any special merit in grape-cuttings as a fertilizer over that of any decayed wood, I cannot comprehend, except that, possibly, they may contain, to a little greater degree, certain ash properties that would be slightly more helpful to vine growth than these to be found in other woods; yet not enough so to be worthy of practical attention.

Hartford Co., Conn.

FROM CHAS. L. JONES.

In reply to the inquiry "whether the prunings of the grape-vine, both green and ripe, are more beneficial as a fertilizer to the vine than the same amount of decayed wood of any other kind," I have to say that in my opinion they would have the preference, inasmuch as their ash ingredients contain more of the essential elements of the vine growth than any other. I think, however, that the main benefit from them will be found if they are applied as a mulch to the vine. The process of decay, and they must be decayed to act as a fertilizer, is so slow that their effect will be hardly perceptible for a long time. As a fertilizer I would not depend upon them, but I would rather give the vines a good dressing of fine bone and potash well worked in around them, and supplement it by the cuttings if there should be enough to act as a mulch, in which case they are valuable.

Newark, N. J.

FROM GEO. C. SNOW.

The danger lies in this, that if any diseased or insect-infested wood or foliage should be buried about the roots of the vines, it would be bad policy. Disease and insects indigenous to the vine increase fast enough without the protection which would be afforded them by the method proposed. Burn the cuttings first and apply the ashes. As much fertilizing value will be received in this way as by any other. Now if the mechanical condition of the soil is such that the advantages to be obtained by applying the cuttings over-balance the objection named, I would suggest running the chippings and refuse wood through an old cutting-box; the pieces can then be applied without the annoyance which would follow if the vines were buried uncut. I have no reason to think that there would be any perceptible increase of benefit from grape-wood and leaves, more than from the application of a like amount of wood and leaves of any kind.

Penn Yan, N. Y.

FROM STEPHEN HOYT'S SONS.

To bury the trimmings about the vines would be of but little value. The vine roots would be more or less cut and injured in the burying, and the food derived from the clippings would be available only after they had decayed and then it would not be enough to pay. A few handfuls of wood ashes sown over the surface of the ground, would be worth more as a fertilizer. To lightly and frequently work the soil in which the vines are planted would be beneficial; then with an application of wood ashes or a light top-dressing of manure, the vines would grow and do well. We would prefer to burn the trimmings on the ground than to bury them. Decayed wood would be better only because it could be more easily spread and it is nearer plant food than trimmings. If only partially decayed and buried near the surface, it might hold moisture a little and be beneficial in a light degree in a dry summer. We do not consider either vine trimmings or decayed wood (unless in the shape of chip manure) of value enough to spend any time in using them. Burn all such things up and reduce them to ashes and use the ashes with muriate of potash or rotted manure for the rest of the fertilizer required, with frequent stirring of the soil, and the vines will do well.

Farfield Co., Conn.

FROM WARD D. GUNN.

I cannot satisfactorily answer, even to myself, the inquiry in regard to grape-wood and prunings around vines as manure, or whether they are of more value than decayed wood of any kind. I have heard of some growers of grapes, who cut up the waste wood and trimmings short enough to be covered with the plow, and leave them on the ground to be turned under. While they are undoubtedly of some manurial value, and there is no further trouble in removing the waste from the vineyard, it is very doubtful if their application in this way would pay, counting the time required at ordinary wages. Although not relevant to the inquiry, let me state the following as incidentally touching the question: In the early days of the grape business in the Hudson Valley, the Underhill vineyards at Croton Point were noted for the excellence of their products. Mr. Wm. T. Cornell (who planted the first vineyard in Ulster County for the purpose of growing grapes for market—in 1845) was well acquainted with the Croton Point vineyardists, their methods of cultivation, etc. From him I have heard that the wood of the vines was all the manure required there; but, according to my recollection, this assertion was accompanied by the statement that the soil there was essentially different from the soil here. After that, the late Samuel Heaton and a friend from this place visited the vineyards of the late Wm. A. Underhill at the Point, and observing vines that appeared more luxuriant in foliage, vines and fruit, than the rest he called attention to them, and Mr. Underhill explained that they received the wash of a hog-pen near-by. This seemed quite satisfactory to Mr. Heaton and his friend, the latter being one of the pioneer vineyardists of the county, who had always used barn-yard manure liberally, growing No. 1 grapes.

Ulster Co., N. Y.

FROM B. WHEATON CLARK.

It would, no doubt, benefit grape-vines to bury the trimmings or any decayed wood about the roots. The application can be overdone, however, unless they are thoroughly rotted and mixed with the soil Too much decaying wood about a vine is liable to create a root fungus that would be injurious.

Niagara Co., N. Y.

Dairy Husbandry.

Burlington Butter.

WINNERS WRITE WHOLESOME STORIES, STATING SOME STERLING

DAIRY DOTS.

THE following questions were sent to the winners of the dairy prizes offered at the late Vermont Dairymen's Convention. Vermont stands in the front rank as a dairy State. Our purpose was to establish the exact pedigree of each specimen of prize butter.

1. *What breed of cows?*
2. *How were the cows fed and handled?*
3. *How was the cream cared for?*
4. *How was the butter churned, worked, colored and packed?*

HERE ARE SOME OF THE ANSWERS.

FROM GEO. AITKEN.

The butter which won the first prize, the dairy sweepstakes, and also the grand sweepstakes which was open to competitors from all parts of the United States and Canada, was made from the Billings Farm herd, of thoroughbred Jersey cows. Their feed ration was about two pounds each of oats and peas, ground, two pounds of bran, three pounds of corn-and-cob-meal, and about six pounds of corn-stalks, good, bright barley straw and clover hay cut and mixed with one-half bushel of mangolds, fed at 5 A. M. and 5 P. M. with a light feed of early-cut upland hay at noon. The cream was raised in a Cooley creamer, churned one hour in a Stoddard churn, salted with half an ounce of salt to the pound, and no artificial color was used. We have never had occasion to use any unless when short of mangolds. When this happens our butter falls off in color and most decidedly in flavor; in fact, I have never been able to make a first-class article of butter in winter without plenty of mangolds to give it a grass flavor.

The Billings Farm herd have been carefully selected with regard both to the quantity and quality of their butter. If a cow at four years of age, with her second calf, fails to demonstrate that she is capable of making two pounds of first-class butter per day, she is discarded, being sold either to the butcher or to some milkman as an unregistered cow, no transfer being given with such cows.

This matter of the quality of a cow's product is something which ought to receive more attention from breeders of dairy cattle, as one cow giving badly flavored cream will spoil the butter of a whole dairy, and if breeders and dairymen would test their cows for this purpose, they would be surprised to find how many such cows there are in their herds.

Windsor Co.

FROM F. E. LAMBERTON, WINNER OF FIRST PRIZE FOR FIVE-POUND BOX.

I have a herd of thoroughbred Jerseys which breed is the finest of which I have any knowledge for butter both as regards quantity and quality. The feed consists of 20 pounds of early-cut clover and Timothy hay per day given at three feeds, with a grain ration of 1½ pound of corn-meal, 1½ pound of bran and half a pound of cotton seed-meal in the morning and the same at night, with a ration of roots occasionally. The root crop was nearly a failure last season, else I would have fed six quarts per day in addition to the above ration.

The milk is set at present in small pans and skimmed in 36 hours. The cream is ripened 36 hours before churning. I seldom use any coloring, though at present I am using a very small quantity of Thatcher's color. The cream is churned at a temperature of 62 degrees in a barrel churn until the butter begins to separate, when the temperature is reduced to 58 degrees, and the churning is continued until the butter comes in granular form, when the butter-milk is drawn off and a weak brine is added for the first washing. After this clear water is put in and the butter is washed once. It is then salted with three-quarters of an ounce per pound of Higgins's salt while yet in granular form, and, after standing a short time, it requires but little working with the lever-worker, to make it ready for market. In order to make a prime article, perfect cleanliness must be observed and there must be careful supervision through the whole process.

Windsor Co.

FROM H. L. DAVIS, WINNER OE THIRD PRIZE FOR TEN POUND TUB.

My herd of 17 cows are all thoroughbred Jerseys with the exception of two that are high-grade Jerseys. The milk is set from 30 to 36 hours in shallow pans; but it is skimmed before souring. The cream is allowed to become slightly acid before it is churned. It is then churned in the Stoddard barrel churn, and requires churning for from 30 to 45 minutes. The latter time I think gives the better-grained butter. It is then washed in the churn while in granular form. It is salted with Higgins's salt—half an ounce to the pound—being pressed dry before the salt is added. It is worked only once, with a lever-worker, which I consider the best. At this time of year the butter is colored a little; I use three tea-spoonfuls of Wells, Richardson & Co's. coloring to 50 pounds of butter. The butter is packed in 10, 15, 20 and 25 pound tubs and sent to market every week. One man has had it all for 13 years.

Each cow has daily 18 pounds of early-cut Timothy with a slight mixture of clover hay fed at three meals; four pounds of dry corn-fodder, cut fine, fed at two meals, six pounds of corn-meal, two pounds of bran, and seven-eighths of a pound of cotton-seed-meal thrown on the corn-fodder. The grain is fed in the morning just after milking, and at night before milking. I do not dare to feed more cotton-seed-meal for I think more would injure the flavor of the butter. My cows get pure, running, spring water, twice a day. I do not find it necessary to warm it. It is natural for all animals to drink cold water, and this does not freeze in the trough. The stables are warm, never freeze, and are thoroughly cleaned twice a day. The cows are kept clean. Dry sawdust and horse-manure are used for absorbents. Cleanliness at the barn is very essential to the production of fine-flavored butter, as well as all the caution that can be used through the whole process by the makers.

Windsor Co.

FROM C. S. PAINE, WINNER OF THE THIRD PRIZE FOR FIVE-POUND PRINT.

My cows are mostly grade Jerseys. They are fed good early-cut hay, a mixture of the various English grasses and clover. Poor corn-fodder is also a part of their feed. For grain feed I have a mixture of corn-and-cob-meal, cotton-seed-meal and bran. The manner of feeding is as follows:

In the morning I give them grain. To each old cow in full flow of milk, I give about four quarts of the mixed stuff, say, about one quart of cotton-seed-meal, filling up the measure with about equal parts by measure of bran and corn-meal; then I milk, after which I feed the corn-fodder and hay. Each gets probably about 14 or 18 pounds of hay per day. I do not give them all they will eat. Next I water and tie them up in stanchions in the stable immediately after drinking. They are not fed again until about 4 P. M. Then they first get the same grain feed as in the morning; then the hay and corn-fodder come in; when the mixture is pretty well eaten I water them, and milk them about 6 o'clock.

The cream is raised in a Lincoln creamer in water at a temperature of about 40 degrees. The milk sets in 24 hours. I churn when the cream from the cold deep setting is thickened up and is in the first stages of acidity. I warm the cream by the use of hot water to get it to the proper temperature, setting the can of cream in the hot water, and stirring it meanwhile. I churn in a barrel churn at a temperature of about 65 degrees. When the butter has come in the granular form, I draw off a part of the butter-milk and pour in a pailful of water of the temperature of that in which the milk was set. This will cool the mass to about 58 degrees. I wash the butter in two more waters at about 60 degrees. Then I sift in about one ounce of Eureka salt, which I stir thoroughly into the butter. Then it is taken out and put on a lever butter-worker, and worked down about five times. It is expected that about one-half ounce of salt to a pound of butter will remain after working. The butter is immediately put into prints and sent to market next day in tin trunks The prints weigh a quarter of a pound, and are laid in trays one above another until the trunk is full.

The cows are kept in a stable where frost of any consequence never enters, and I am very particular that no barn filth gets into the pail. The cows are in all stages of milk, and all the milk goes together in one mass.

Orange Co.

Miscellaneous Advertising.

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(*From the New England Homestead, Feb. 2d,* 1889).

THE MAPES MANURES.

We have already acknowledged the receipt of the interesting pamphlet entitled "A talk with tobacco growers," written by Prof. Charles V. Mapes, vice-president and manager of the Mapes Formula and Peruvian Guano Co., but we have now received the regular annual pamphlet of these remarkable fertilizers, This pamphlet is entitled "The Mapes manures: true manures, not stimulants." Prof. Mapes says that by the continued use of the Mapes complete manures, in some cases for 10, 12 and 15 years, farmers, truck-growers and fruit-growers report their land as having speedily improved in condition, and their crops as double those formerly grown; while the quality of the crops has greatly improved and the profits largely increased. The actual statements from those who have used these high-grade fertilizers, which are given in much detail in this pamphlet, demonstrate the truth of this great claim for the Mapes manures.

LARGE YIELDS.

Last year the largest yields on Mapes manure on one acre of land or over were: Of potatoes, 500 bush. per acre; shelled corn, over 100 bush. per acre; oats, over 80 bush. per acre; wheat, over 40 bush per acre. It is because Prof. Mapes was so confident similar results could be obtained by all good farmers who would use the Mapes manures and give the land the proper preparation and the crop the proper culture, that he offers a prize of $500 in addition to an equal sum offered by the American Agriculturist for the best acre of potatoes grown on the Mapes manures. We believe the Mapes manures are of standard quality in every respect, and place implicit confidence in Mr. Mapes' statements as to their composition. The directions for the use of fertilizers on different crops, and the intelligent manner in which is presented the experience of those who have used these manures, recommends this pamphlet to every farmer, whether he uses fertilizers or not.

The prizes for 1889 offered by The Mapes Company (158 Front St., New York) in connection with those of leading journals (see AMERICAN AGRICULTURIST, FARM JOURNAL, and RURAL NEW-YORKER Feb. numbers) will enable growers of POTATOES, WHEAT, CORN and OATS who use the Mapes manures to secure prizes from $1200 to $40 per acre. Send postal for THE MAPES COMPANY PAMPHLET. Address,

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A LARGE iron spring has been discovered in the northern part of the State; it is supposed to have escaped from a Waterbury watch.—*Life.*

"PA, is it right to call a man born in Poland a Pole?" "Of course, my child." "Well, then, if a man is born in Holland, is he a hole?"—*Old Colony Memorial.*

FRENCHMAN:—"Yes, Miss Bostonia, in the Mediterranean I sailed through schools of sardines." Miss Bostonia: "Nonsense! How could they swim in those heavy tin boxes?"—*Time.*

DISCOURAGING.—Uncle James: "Well, Bobby, are you gaining any prizes at school nowadays?" Bobby: "No, sir; the other fellows get them all." Uncle James: "But you'll keep on trying, of course." Bobby: "What's the use? The other fellows keep on trying too!"—*Life.*

LITTLE FLORA, three years old, lives in the country where pigs are numerous, and are in the habit of rubbing and scratching themselves against the fence or anything convenient. Flora saw one indulging in this one day, when she said: "Oh, mamma, there is another pig sharpening himself!"—*Michigan Farmer.*

IN THE MUSIC ROOM, SUNDAY EVENING.—Mamma (at the piano): "Now, Georgie, what shall we sing—something for Sunday, you know?" Georgie (after thought): "Let's sing 'Shall we go in swimming?'" Mamma: "Why, Georgie, there's no such hymn as that!" Gertie: "I guess, mamma, he means 'Shall we Gather at the River?'"—*Life.*

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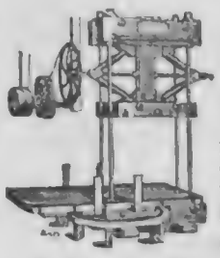

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"But the Editor of the R. N.-Y. does not stop at testing new varieties produced by others, but is producing new varieties himself, and has accomplished wonders in hybridizing. He has opened an entirely new field for investigation, the possibilities of which cannot be conjectured."

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—FOR—

Every Week During 1889.

FROM THE AMERICAN AGRICULTURIST OF JUNE, 1888.

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FROM THE AMERICAN GARDEN.

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FROM C. V. MAPES.

"Please note the unusual array of prizes offered in the coun ry this season for the best results from potatoes. The one who obtains the largest yield of potatoes will receive almost enough to buy a small farm. This unprecedented interest in potato culture is largely due to the efforts of the R. N.-Y."

FROM AGRICULTURAL SCIENCE FOR JANUARY, 1888.

"The R. N.-Y., so far as we know, is the only agricultural journal in the world that has experiment grounds established for the benefit of its subscribers."

FROM COLMAN'S RURAL WORLD.

"The R. N.-Y. has made an undoubted cross between rye and wheat. It has also hybridized the blackberry and raspberry. Different species of roses it has also crossed."

FROM E. S. GOFF, OF THE NEW YORK AGRICULTURAL EXPERIMENT STATION.

"I wish to congratulate you on your potato, the 'Rural New-Yorker No. 2.' It yielded best here the past season of 67 varieties; bore the smallest proportion of small tubers, and, so far as the varieties have been tested, it is the best in quality of all. I predict for it a great future."

FROM THE N. Y. WORLD.

"The latest hybrids between rye and wheat growing on the grounds of the R. N.-Y., develop many curious freaks, while those of previous years are still changing in a wonderful manner."

FROM LIEUT. GOVERNOR, EDWARD F. JONES

"Binghamton, N. Y., Dec. 29, 1888.

"EDITOR RURAL NEW-YORKER: The Rural New-Yorker of December 29 is before me, and its effect on me is to impel me to express to you my sincere wishes for a Happy New Year for yourself, and continued success for the Rural, which, when contrasted with the agricultural papers of 25 years since, not only shows the improvement in the paper itself, but also illustrates the progress made by the agricultural class, much of which is due to the inspiration of the Rural New-Yorker, and such of its contemporaries as follow its example."

FROM THE AMERICAN GARDEN.

"We wish that every lover of gardening could see the garden home of the R. N.-Y., which has been so great a help to thousands of farmers and gardeners the continent over."

"The Rural New-Yorker is published for progressive intelligent farmers."

FROM EX-COM., GEN. W. G. LeDUC.

"The Rural New-Yorker strives to do good."

COME WITH US, PROGRESSIVE FARMERS,

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Our lady friends continue to send in their names freely for the Potato Contest. It will be a NATIONAL Contest indeed.

GEN. WM. G. LE DUC: "The efforts of the R. N.-Y. are always based upon something for the benefit of the farmers."

The Rural New-Yorker Potato No 2 will be sent to all of our Yearly Subscribers who apply, without any charge whatever. It will be sent, as the weather permits, from time to time, so that all shall receive a tuber before the planting season commences. Applications are now in order.

SECRETARY J. S. WOODWARD: "The Women's Potato Contest is a good work."

HENRY STEWART: "The Women's Potato Contest is an excellent thing."

DR. C. V. RILEY: "The Women's Potato Contest has my entire sympathy."

PRES. P. J. BERCKMANS: "I cheerfully advocate the scheme."

PETER HENDERSON: "I am glad to hear that you are going to engage the ladies in your potato contest, and have not the least doubt that it will be a success."

Applications for the R. N.-Y. Potato No. 2 must be made upon a piece of paper separate from all other communications, and the name and full address of the applicant must be given. The offer is necessarily confined to Yearly Subscribers or those who may become yearly subscribers.

MRS. A. BATTLES: "I am certain the Women's Potato Contest will be very interesting and of great benefit to agriculturists at large, and help carry out what the R. N.-Y. has so ably commenced, viz.: improved methods of cultivation and the introduction of better and more prolific varieties."

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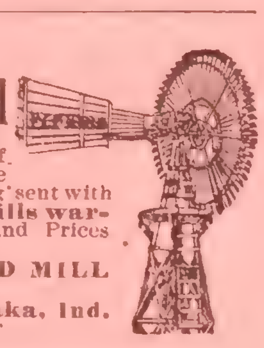

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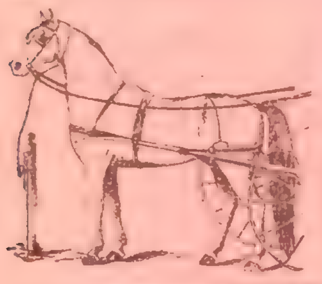

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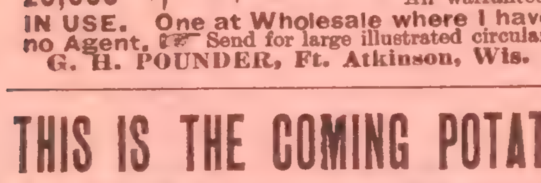

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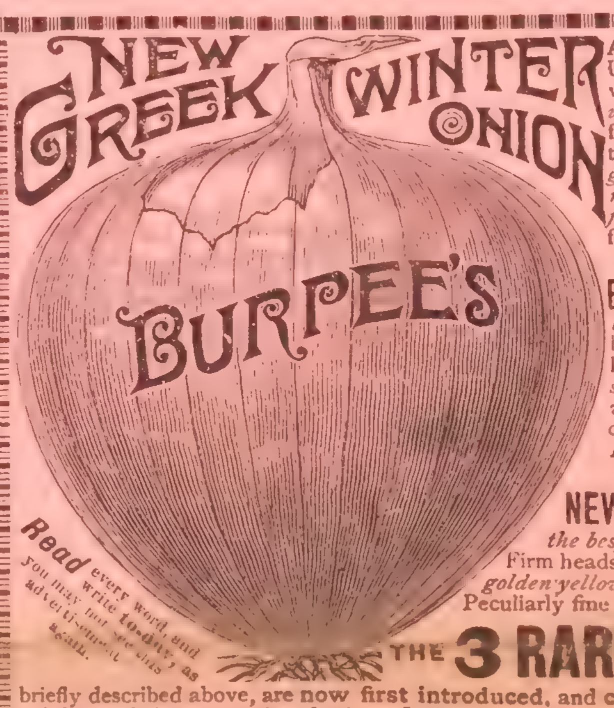

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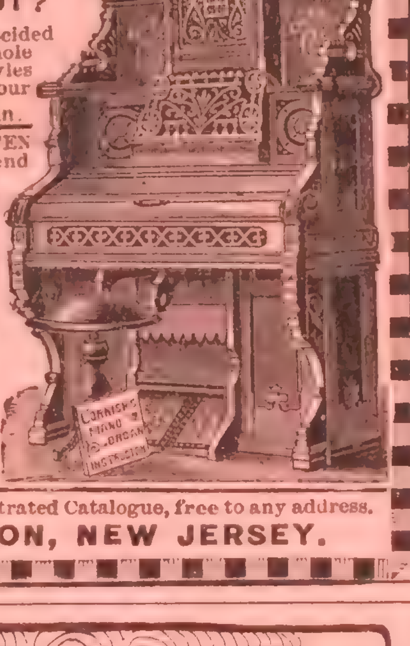

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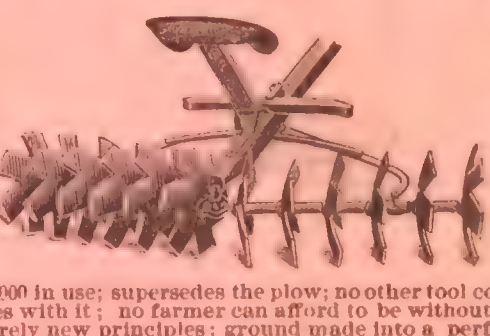

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XLVIII NO. 2039. NEW YORK, FEBRUARY 23, 1889, PRICE FIVE CENTS. $2.00 PER YEAR.

[Entered According to Act of Congress, in the Year 1889 by the Rura New-Yorker, in the Office of the Librarian of Congress, at Washington

The Naturalist.

TWO COLLIES.

WE take pleasure in showing our readers—at Fig. 36, on this page—what we believe to be one of the most life-like pictures of dogs ever printed. At the top of the picture is shown the head of "Fordhook Squire," A. K. C. S. Book, 10,454. Both his father ("The Squire E., 15,767) and his mother (Wanda, 13,879) are notable specimens of their breed. He is considered a true model for a collie in markings, temper and intelligence.

At the bottom of the picture an excellent likeness of "Clifton Chief," 10,445, is given. This dog is by "Cremorne," 21,010, out of "Barby Rose," 10,702. He weighs 63 pounds and stands 24 inches in hight. Both of these dogs are owned by W. Atlee Burpee, of Phila.

The RURAL'S position on the dog question is well known. We would like to organize and sustain an armed crusade against the miserable curs that infest our country neighborhoods, killing sheep and worrying cattle, frightening horses and making night hideous by their yelping and howling. We would like to put in the places of these pests just such animals as we have pictured on this page. We would thus substitute for a gang of noisy and worthless plunderers a band of lovable animals, worthy of man's friendship and care. The trained and well-bred collie seems to us to come, in intelligence and faithfulness, nearer to man than any of the other dumb animals. Such dogs are faithful, patient and brave. Watch a well-trained collie as he handles a flock of sheep. Watch him driving a herd of dairy cows from the pasture to the barn. On many sheep ranches in the West the collie is as important a factor as the shepherd. Through the dairy counties of New York almost every farmer finds a place for a collie. A good dog will pay a profit on the farm; a cur will prove only a curse.

COLLIE DOGS, "CLIFTON CHIEF" AND "FORDHOOK SQUIRE." Fig. 36.

Pomological.

QUEBEC FRUIT GROWERS.

(RURAL SPECIAL REPORT.)

"Importance of schools of horticulture;" 'American iron-clad apples; carelessness in handling and marketing fruit forcibly denounced; "strawberries and their culture;" "summer pruning of grapes;" ornamental tree planting; "sod in orchards;" Russian apples; Fameuse and its seedlings; "the best apples for home use."

THE Quebec Fruit Growers' Association (formerly the Montreal Horticultural Society) held its fourth annual winter meeting at Joyce's Rooms, Phillips Square, Montreal, Wednesday and Thursday, Jan. 30 and 31. This convention was well attended by members from various parts of the province and adjoining sections of Ontario, and its five sessions were devoted to a spirited and intelligent consideration of topics of practical and scientific interest connected with fruit growing. The exhibition of winter apples adapted to the "Cold North" was large and varied, and very encouraging to the hopes of orchardists in this and similar sections of North America. Prof. Penhallow, president of the association, in his opening address, pressed the importance of schools of horticulture. It is time, he thought, to place this art upon a scientific basis. He referred to the recent establishment, in the United States, of many experiment stations, which would unquestionably do much for pomology, and for horticultural knowledge generally. The fruit industry is a large and rapidly extending one, and should not Quebec do more for herself in the direction followed by other countries? He concluded with a wish that the sessions of this convention might be rich in useful information.

T. H. Hoskins, of Vermont, then addressed the convention upon "American Iron-Clad Apples," giving an account of the gradual collection, through the investigations and efforts of fruit-growers in the Union and Dominion, of a considerable number of apples of merit, which could be successfully grown more than 100 miles farther north than had before been thought practicable. His ob-

servations were illustrated by specimens of a number of the longer-keeping sorts of American origin, and an account of their qualities and availability for home use and for market. A lively discussion followed, in which the experience of many of the fruit-growers present, in regard to this class of fruits, was brought out. It was evident that the confidence of all of them had of late been very much strengthened in regard to the practicability and profit of orcharding in the St. Lawrence valley.

The evening session was opened with a paper by Mr. J. T. McBride, on "What the Market Demands of our Apple-growers," in which he severely criticised the careless way in which much orchard fruit is handled and sent to market. All apples, he said, should be put into new barrels, thoroughly shaken and judiciously pressed. Early apples often pay

Fig. 37.

better when sent in neat baskets. It never pays to put in small or imperfect fruit. The supply of choice fruit is never equal to the demand. He praised Montreal as a fruit market and believed that Canada has a great future as a fruit-producing country.

The Rev. Canon Fulton followed on the same topic, urging the more careful gathering of fruit, for the sake of the trees as well as of the crop; and an interesting paper on picking, sorting and packing fruit, contributed by Mrs. Annie L. Jack, of Chateauguay Basin (who, much to the regret of many, was unable to be present), was read by Secretary Dunlop of the society. Mrs. Jack expressed the belief that growers were beginning to learn that only honest packing pays, and she thinks that if the society could employ a few honest dealers to handle the fruit of its members, there would be less imposition by middlemen, and less danger of the market being overstocked. Mr. R. W. Shepherd Jr., an extensive orchardist at Como, on the Ottawa River, treating the same subject, deplored the hardship of having his carefully selected fruit brought into competition with the class of apples usually sold on the local market as "first quality," but which are really much under that grade. He spoke forcibly on the duty of each grower to establish a good name—the true principle of success in every trade.

The morning session of the second day opened with a paper contributed by Mrs. Jack, on "Strawberries and their Culture." Her list of berries ranged in the following order of merit for market: Wilson and Crescent about equal, followed by Manchester, Jersey Queen Sharpless, Cumberland, Windsor Chief, and Glendale for canning. Mrs. Jack does not rank strawberries very high in the scale of profit compared with other fruits, and spoke feelingly of the "cast-iron back and sun-proof skin" required by those who engaged in their cultivation.

Mr. W. Mead Pattison, of Clarenceville, Quebec, read a brief but thoroughly good and practical paper on "Summer Pruning of Grapes," enforcing the importance of careful pinching in and thinning, to get full and merchantable clusters, and especially as promotive of early ripening in the North. In the discussion following, varieties in the following order of market value were named: Herbert, Barry, Duchess, Worden, Champion, Brighton Delaware, Lindley, Wilder and Jewell. Some thought the Champion the most profitable. The Early Victor was condemned.

Mr. A. A. Wright, of Renfrew, Ont., read an excellent paper on ornamental tree planting, giving the preference to the American Linden, or Basswood, as a street tree, following in order with the white maple, the ash, the sugar maple (not quite hardy, in Canada, in exposed spots), the elm and the oak. The objection to the American elm is that it is often injured by sleety ice.

The afternoon session was opened with a paper on "Sod in Orchards," by Mr. J. C. Chapais, of St. Denis. Canadian experience had shown that trees in tilled land suffer greatly in severe winters. Mulched trees suffer less, and those in sod least of all. Mr. C. thought the best method to be keeping the ground free of grass for four or five feet around the trunk, covering tha space with mulch, and keeping the rest in sod.

A "symposium" on Russian apples was then started, and Vice-President Gibb gave a most interesting account of his experiences with the later importations, illustrated by an exhibition of specimens of the longer keepers. He thought there was not much hope of getting very long keepers here from a country where the summers were so much shorter, yet he was able to exhibit several sorts much larger and considerably better keepers than Fameuse; but few of these approached very near to that variety in quality. Dr. Hoskins, of Vermont, suggested the importance of growing seedlings from crosses between the best Russian and the longest-keeping American iron-clad apples, such as Bethel, Wealthy and Scott's Winter. In this he was supported by President Penhallow and others.

The question whether there is more than one Fameuse apple was then discussed, and the conclusion seemed to be that the Fameuse has many seedlings closely resembling it.

At the evening session, Mr. R. W. Shepherd Jr., read a paper on the "Best Apples for Home Use," recommending such semi-hardy varieties as Dyer and Early Joe, which may be grown with fair success when top-grafted on iron-clads. Red Astrachan, Oldenburg and St. Lawrence were favored for fall use, Fameuse and Wealthy for early, and Golden Russet and Scott's Winter for late winter. A general talk on winter varieties indicated that in this direction much was yet to be desired in the cold North. After some promiscuous discussion, the meeting was brought to a close with a few well chosen remarks by President Penhallow, on the educative value of meetings such as these had been. H.

AN EFFECTIVE METHOD OF GRAFTING.

I SEND the RURAL an illustration (See Fig. 37) of a Japanese mode of grafting. I noticed the graft among my collection of rare fruits imported from Japan. I find it a much more successful manner of grafting than the old way for the persimmon and all nuts, as these are difficult to graft. The graft is a combination of a graft and cutting; the graft is kept alive by being partly buried in the ground until sap circulation is established.

Marksville, La. J. L. NORMAND.

[This method of grafting is really a part of the "approach" and a part of the "layer" systems. Eds.]

Horticultural.

NEW SQUASH.

(*See page* 123.)

AMONG several varieties of seeds of vegetables received from Japan last spring were three varieties of winter squash, viz, Kikusa-tonasu, Chijinu-tonasu and Kobochia-tonasu. The first-named was the only one that proved of any special value; but it is certainly well worthy of mention. It is shown at Fig. 39, with half-section at Fig. 40, and, as the name indicates, it is flat and deeply furrowed and of a dull yellow color. It ranges from eight to 12 inches in diameter the largest way, and it is of about one-third that diameter from stem to blossom end. It proves to be a good keeper and is of excellent quality, being much sweeter than the Hubbard, Boston Turban, Bay State or Brazil Sugar, all of which were grown in the same field. The Hubbard, however, continues to be the general favorite among old and well tried sorts. J TROOP.

La Fayette, Ind.

Farm Economy.

ECONOMY OF TIME IN CALF FEEDING.

MR. A. J. MCLEOD, of De Soto County, Mississippi, sends us an account of his method of feeding calves. This plan is illustrated at Fig. 38. The picture needs no explanation. Mr. McLeod says that with this arrangement he can do in 10 minutes what would have required two hours under the common "knock down and drag out" system of calf feeding.

Miscellaneous.

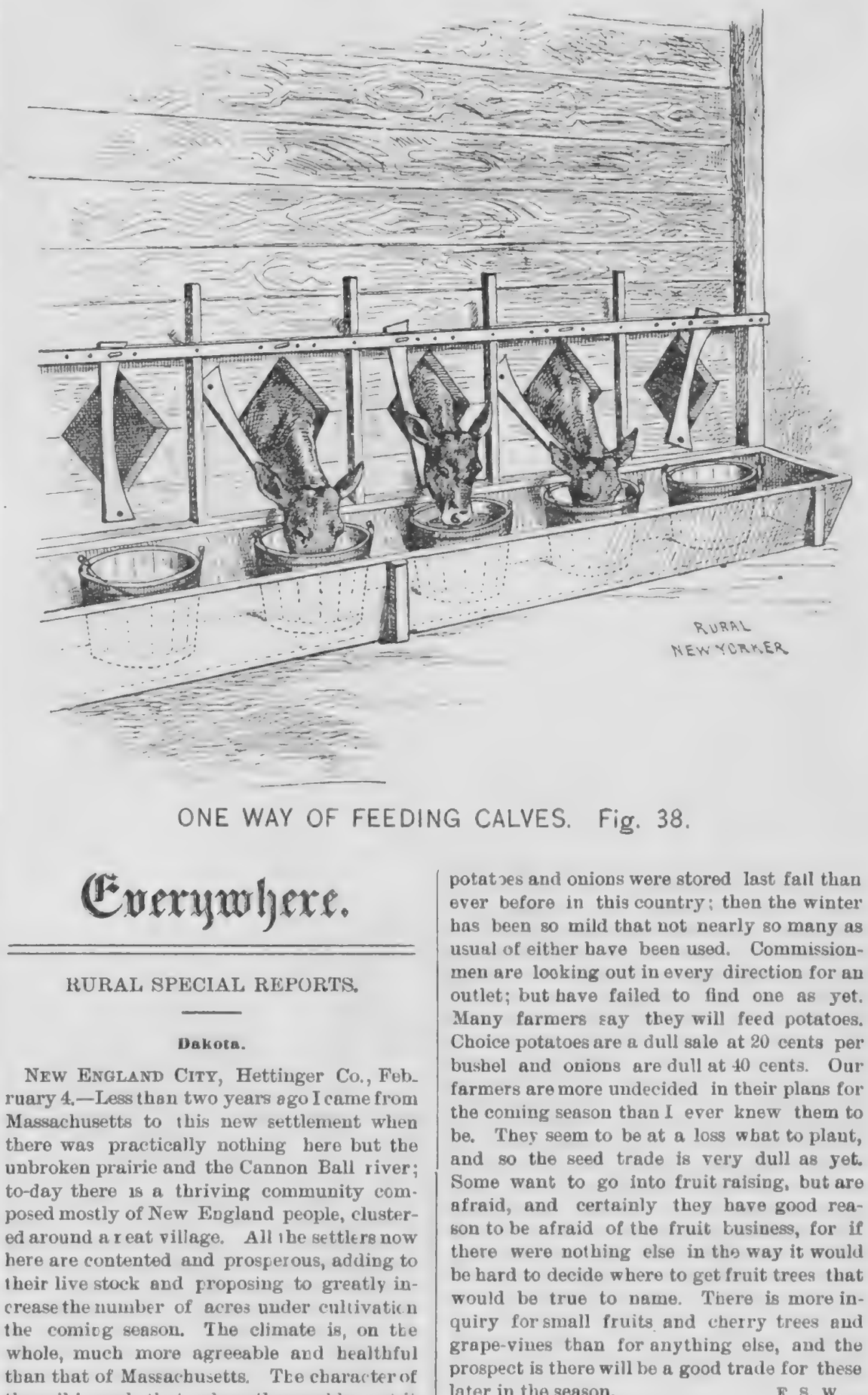
CORRESPONDENTS' VIEWS.

THE R. N.-Y. speaks of feeding two quarts of potatoes to stock per day. I am feeding nearly a bushel per day to a good-sized half-Jersey cow and two quarts to a small horse.

Uncasville, Conn. D. A. S.

MY wife says she cannot get along without the R. N.-Y. You see whenever we get into a debate she says the RURAL says so, and she thinks that puts an end to it. E. M.

Brantford, Ont.



ONE WAY OF FEEDING CALVES. Fig. 38.

Everywhere.

RURAL SPECIAL REPORTS.

Dakota.

NEW ENGLAND CITY, Hettinger Co., February 4.—Less than two years ago I came from Massachusetts to this new settlement when there was practically nothing here but the unbroken prairie and the Cannon Ball river; to-day there is a thriving community composed mostly of New England people, clustered around a great village. All the settlers now here are contented and prosperous, adding to their live stock and proposing to greatly increase the number of acres under cultivation the coming season. The climate is, on the whole, much more agreeable and healthful than that of Massachusetts. The character of the soil is such that when thoroughly wet it holds the moisture for a long time and crops do well with a much smaller number of inches of rainfall than are needed in the East. During the last two seasons, that is, during my acquaintance with the country, there has been a sufficient amount of moisture, either from melting snow or rain, to grow good profitable crops of corn, wheat, oats, millet, potatoes and other field crops and vegetables; the rains come at about the right times in spring and summer, and there have been no heavy rains during harvesting to cause trouble, extra labor and loss. This portion of Dakota has one great advantage over most sections of the prairie country, in its abundant supply of cheap fuel in the form of lignite coal, which is easily mined and costs at present only the labor of digging and hauling. There yet remains in this region a considerable amount of Government land, and energetic and thrifty people wishing to come here to make homes for themselves and aid in building up a prosperous and law-abiding community, may be sure of a hearty welcome. Success to the RURAL, which I value as highly here as I did when I was in the East.

D. T. H.

Iowa.

DES MOINES, Polk Co., February 7.—In my last I closed with the statement that New Year's Day was the prettiest ever known in this country. January held this record all the way through. The oldest settler was puzzled. The mercury went to zero only once during the month. This is a very dry winter; no rain or snow. Water is getting very low and many wells are dry; it is hard to get water for stock; streams are very low. Stock is generally in good condition. In some neighborhoods young hogs are dying of cholera. Business of all kinds is very dull—not much doing in anything. Everything is cheap and very little of anything is selling. Hogs are in better demand than anything else and bring better prices, and they are very scarce. Some corn is selling, but it is hard to get 25 cents per bushel. Potatoes, onions and most other vegetables are not worth moving; they will hardly sell at any price. Apples are very low; only 50 cents per bushel for the best choice varieties, and sales are dull at that. More potatoes and onions were stored last fall than ever before in this country; then the winter has been so mild that not nearly so many as usual of either have been used. Commissionmen are looking out in every direction for an outlet; but have failed to find one as yet. Many farmers say they will feed potatoes. Choice potatoes are a dull sale at 20 cents per bushel and onions are dull at 40 cents. Our farmers are more undecided in their plans for the coming season than I ever knew them to be. They seem to be at a loss what to plant, and so the seed trade is very dull as yet. Some want to go into fruit raising, but are afraid, and certainly they have good reason to be afraid of the fruit business, for if there were nothing else in the way it would be hard to decide where to get fruit trees that would be true to name. There is more inquiry for small fruits and cherry trees and grape-vines than for anything else, and the prospect is there will be a good trade for these later in the season. F. S. W.

Kansas.

LEON, Butler Co., February 8.—Winter thus far has been very mild—something like an old-style Kansas winter. Crops were light in this section though feed is abundant, and stock generally are wintering well. Not as

many cattle are being fed for market here as usual. Fruit buds are abundant, but it is too early to make a promise of what the harvest will be. The peach crop for several years past has been killed in March. Maybe it will again. If the RURAL No. 2 potato succeeds as well as the Blush has done, the paper will have no reason to regret having introduced it. With eight consecutive volumes of the paper by me, I can say, "Success to the RURAL and its editors!" T. H. W.

Louisiana.

BAKER P. O., Jan. 21.—We have had a pleasant winter so far. The ground was slightly frozen this morning. Planters who did not utterly fail in making a potato crop last year, are getting ready to plant for this season. There will not be one-half the area planted in potatoes, that there was last year. Money matters are tight with planters and country merchants. R. G. B.

Michigan.

ALBION, Calhoun Co., February 6.—Our winter has been very mild; not till February 5, had the thermometer reached zero. No sleighing yet. Ice is being harvested now; it is about six inches thick. Crops were very good here except corn, and the catch of clover, like corn, was a partial failure. Winter wheat is somewhat covered with ice. Stock is doing nicely. Cows fetch $30 to $50; horses $75 to $225 per head. Wheat, 94 cents to 96 cents per bushel; oats 27 cents; butter 18 to 20 cents; eggs 14 cents per dozen. S. A.

Oregon.

PENDELTON, Umatilla Co., January 23.—Our winter has been fine. The thermometer has not got down to zero yet; the nearest it got to that point was eight degrees above, and now the weather looks like spring. Wheat is worth 70 cents a bushel. It is our principal crop. We sow it either in fall or spring, and we have never had a failure, although it froze out last winter for the first time; but our average yield was 20 bushels to the acre. G. M. H.

JOSEPH, WALLOWA Co., January 27.—We had a very dry summer. Crops as a general thing were poor, although good farmers had very good crops. Some of them report as good crops as usual. All kinds of grain are scarce and high in this country: Wheat 90 cents; oats, 1½ cent per pound; barley 1¼ cent per pound; potatoes, 1 and 1¼ cent per pound; hogs, 4 cents on foot; dressed 7 and 8 cents per pound. Hay from $6 to $12 per ton according to kind and location. Grain hay is in greater demand for milch cows than Timothy. People out here prefer grain hay for cows to anything else. I think if Eastern farmers would try this kind of hay they would never use Timothy for milch cows. Stock went into winter in poor shape. There has been no snow on the winter range so far, and if the winter holds out as mild as it has been, there will not be a very heavy loss among stock. There was a heavier loss among sheep in the fall than was ever known. We had some very bad spually weather in the fall and it knocked out the weak lambs and old sheep. We have had a very mild winter—about four inches of snow and two degrees below zero once. A great many farmers are taking advantage of the good sledding and are hauling up their year's supply of wood. Others who belong to "farming-don't-pay" kind are busy running to town, and put in their time sitting around the saloons "cussing" the country and trying to borrow money to pay their store bills. There is a grand opportunity for some thrifty farmers to get cheap homes out here, as a great many want to emigrate and will sell for what they can get over and above their mortgages. They belong to the "farming-don't-pay" class. R. A. S.

Wisconsin.

DELAVAN, Walworth Co., February 8—So far this has been the finest winter we have had in a great many years. The eldest inhabitants do not remember a nicer one. At any time so far we have not had snow enough for sleighing, and up to the present time the thermometer has been below zero only twice. Stock of all kinds are doing well; but the prices are so low that it does not pay to raise them. Fodder of all kinds is plentiful and cheap. Crops were good. Wheat per acre 20 to 30 bushels; oats, 27 to 80; barley, 20 to 50. Corn was good, though a considerable amount of it was soft. Hay was a big crop. Timothy and clover are the only kinds raised here. R. R. S.

NEW JAPANESE SQUASH. Fig. 39.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.

"LOCOED" HORSES.

S. W., Coal Creek, Colorado.—I have lost three horses—one, four, and five years old respectively—by some ailment the nature of which is a puzzle to me.

I put them in a stable about Christmas, when the first snow came. I thought to fit the four and five-year-olds for sale by breaking them and getting them in flesh. They ate well for a short time and then got delicate about eating. I changed the feed from corn and fodder to oats, hay, bran, and chop corn, or rather corn-meal. They did not improve any. At times they acted like old horses, seeming to be full of life. I turned them out on fine days. Finally I gave them condition powders. They ate more; but there was no change in their appearance. As soon as the grass started I turned them out, and when they came up I fed them grain; but often they refused a feed. The grass was good and the five-year-old came out slick and lively; but the other two never shed all their coat; some of the old hair hung on in late May and early June. The four-year-old would start running; then he would eat grass for a few minutes; then lie down as if resting; get up and run a few rods. The second day he walked or ran all the afternoon. He would look back to his side now and then, and start off again, running against fences, trees or rocks, or whatever stood in his way. I did not give him anything, as he was dead when I got the medicine ordered by the doctor. The others acted in the same or nearly the same way; but they lived one day longer. The five-year-old frothed at the mouth, and at first held his head as high as possible, going round and round. He was so crazy that I cast him to force the oil down his throat. He lay as if dead for 10 or 15 minutes, then got up and started like the first, the oil coming up, and he kept going until he fell down to die. I gave the yearling nearly three pints of linseed oil and it had not operated in eight hours. I gave him a pound of Epsom salts, and in two hours it operated. Then I gave him an ounce of sweet niter. He began to feed, but in the morning he too was on the run, and died that evening. I opened the two oldest. The stomach of the first was full. At the outlet bots had formed a ring all around as close as they could get together for nearly three inches so that nothing could pass. The entire stomach was inflamed; the lower part was nearly ready to slough off, and from that to the large colon the inflammation grew less until at the point of connection there was no inflammation and none after that. The blood was as black as tar, and the liver also, with a few white lumps that appeared granular. There was but little in the bowels and what there was looked natural. There was but little in the stomach of the second and only four or five bots at the outlet: and the inflammation covered only half the stomach: but on the bowels it was as bad as it was in case of the first, only it stopped before it reached the large colon. On cutting the arteries on the back, the blood was found to contain balls that looked like grains of soaked sago. Some were white, others of a yellow tinge and some were transparent. The liver only looked black; there were no lumps in it. Some of my neighbors say the cause of the horses' death was bots. What does the RURAL say?

ANS.—The symptons given are very much like those said to result from eating some one of the "loco" plants or "crazy-weeds"—Astragalus mollissimus, Oxytropis Lamberti, and perhaps others belonging to the natural order Leguminosæ or pea family—commonly found in Colorado, Kansas, New Mexico and other portions of the West and Southwest. Of the nature of this disease very little is known, and as yet we know of no satisfactory course of treatment that can be recommended. If possible, pasture only in fields that are free from these "crazy-weeds" or "loco" plants. If you are not familiar with the plants, it would be best to exclude all plants belonging to the pea family. Thorough cultivation may be necessary to eradicate these dangerous plants from the pastures.

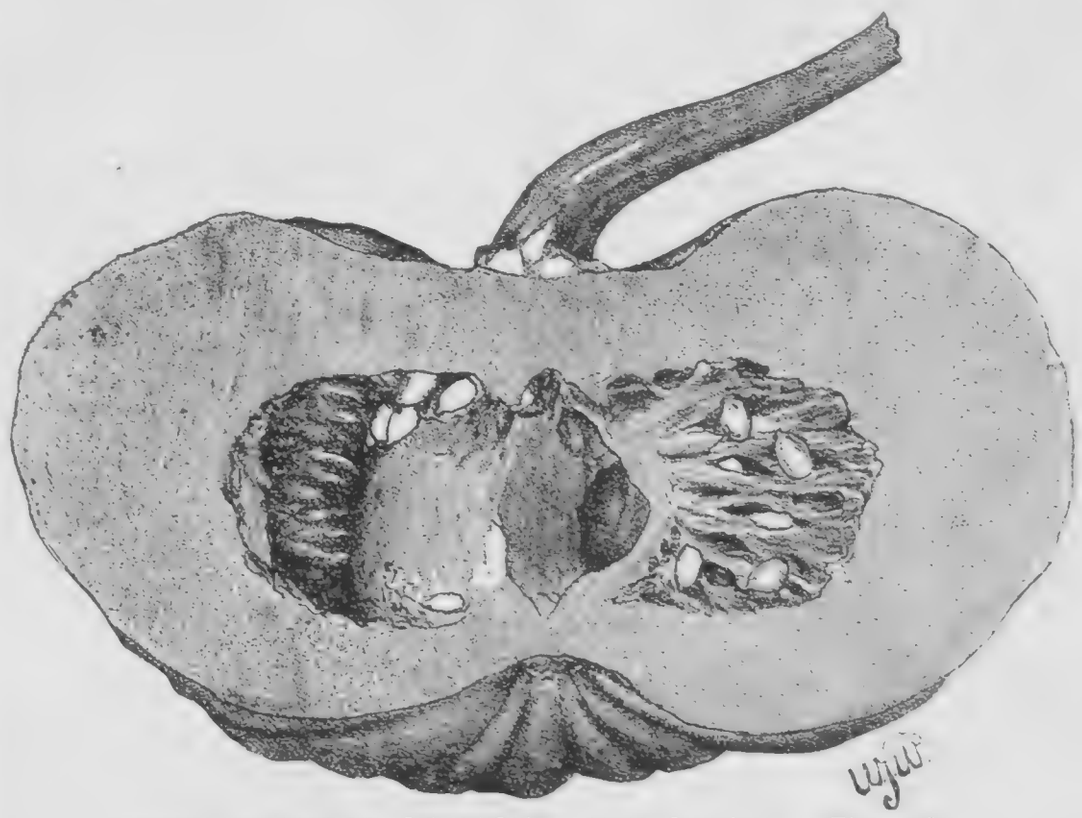
UNSLAKED AND SLAKED LIME; FATTENING SHEEP IN WINTER; HAWLEY AND PERRY RUSSET APPLES.

A Beginner, Tioga Co., Pa.—1. If I can buy slaked lime in barrels F. O. B., at 10 cents per bushel, how much should I pay for unslaked lime? I don't want to pay too much for water itself or for transporting it. 2. I want to fatten 80 sheep which cost about three cents per pound. I shall feed them four months during which I shall need how many tons of clover hay? How much oats, corn, peas and wheat bran should be fed to each? What should be the average gain in weight? Setting the manure aside for profit, will there be any more profit in the business? 3. A friend advises me to top-graft a lot of Red Astrachan trees with Doucain (pronounced here as Douse) as being a better apple in all respects. Is the Perry Russet a first-class apple for this locality?

ANS.—1. It is quite common for farmers who use lime, to buy the air-slaked lime that remains as refuse at the kilns, at a reduced price, usually seven cents a bushel, which is equal to about 10 cents for unslaked. If it has not been exposed too long—more than a month or two—it is not injured for use on the land and is in a convenient shape for spreading at once, and the labor of one handling is saved. In buying slaked lime you pay for about one-third the weight of it in water, as a bushel or 80 pounds of fresh lime will absorb 27 pounds of water in dry-air-slaking; but as the water has to be carried to the field in the spreading when the fresh lime is bought, nothing is really lost more than hauling the extra weight from the kilns in getting the air-slaked lime. As lime increases in bulk three times in the change to a hydrate by the absorption of water during the process of air-slaking, it is necessary, to prevent loss, to buy it by weight and not by measure. Many farmers pay very dearly for their lime by not knowing this fact. 2. Fattening sheep in the winter is by no means a business that can be reduced to rule. The best feeders sometimes fail to get paid for the food consumed, and sometimes incur considerable loss. For the feed of 80 sheep weighing 100 pounds each, live weight, there would be required three pounds of good hay and one pound of the mixed grain for each head, making, in all, 240 pounds of hay and 80 pounds of grain. In addition, some straw—oat-straw preferably—should be given at night for a litter, of which some would be eaten. In four months the feed used would be fifteen tons of hay and 9,600 pounds of the mixed grain. This food might bring an increase of 10 pounds for each sheep in live weight, or 800 pounds in all for each month. But the feeding season is too long for profit. A period of three months is quite long enough and perhaps too long for the most profit. If the gain in weight pays for the food and the outlay for labor (which should not be much for feeding 80 sheep,) the manure would afford a satisfactory profit. If the sheep are thrifty and good feeders and quiet in disposition—and much depends upon this—there may be a very good profit on the feeding, but as a rule, the profit of feeding thin sheep in the winter is small and uncertain, the best time being in the fall, when the flock comes off good pasture and is finished on hay and grain, and sold in January or February. 3. Unquestionably Doucain is *not* meant, but Hawley, which is known as "Dowse," or "Dows," in Pennsylvania. The Hawley, (which originated in Columbia Co., N. Y.,) is a fine, large, handsome fall apple, but very perishable. However, it may answer well for a near market. "Doucain" (properly Doucin,) is worthless as a fruit, it being a wild species, used only as a stock for dwarfing purposes. Perry Russet would be only a fall or early winter variety in Pennsylvania. It is of fairly good quality and is of medium size. In some localities it is complained of as dropping prematurely. If a keeping apple is wanted, the Golden Russet of Western New York is to be preferred.

TO PREVENT MANURE FROM FIRE-FANGING; FIGHTING THE CABBAGE MAGGOT.

F. M., South Bend, Indiana.—1. For my market garden I have to depend entirely on the horse manure I get from the city. I cannot keep it under cover and it always fire-fangs badly. What can be done to prevent it from burning? Would a heavy dressing of



NEW JAPANESE SQUASH. Half Section.) Fig 40.

salt or land plaster keep it moist? 2. What is the best remedy against cabbage maggots? I tried sulphate of potassium as was recommended by a Western market gardener in the RURAL NEW-YORKER a year ago, but the trial was not a success.

ANS.—1. Horse manure cannot be prevented from heating, if left in loose piles of even moderate size, unless they are frequently shoveled over, or are kept thoroughly saturated with water, or unless earth is mixed with the dung to the extent of at least 50 per cent. The admixture of salt, or of plaster, to any extent practically possible, would not prevent the heating. But compression will, by excluding the air, prevent it perfectly, and the best practical method of preserving and improving such manure is to keep enough swine on it to tramp it down. By trampling on it and by rooting it over, the swine will entirely preserve the dung from injurious heating, while increasing its richness by the addition of their own droppings, and of the unconsumed remnants of whatever may be fed to them. 2. There is no perfect preventive or remedy for the white maggots, which attack the roots of cabbages, turnips, radishes, etc. But they may be kept down by a liberal admixture of lime with the soil, and one should be careful also not to grow this class of plants continuously on the same ground. Where either stone lime, or oyster-shell lime, can be had cheap, it may be applied evenly at the rate of 100 bushels or more to the acre and plowed in. Where it is more costly, it will generally be sufficient to apply from a quarter to a half-pint of air-slaked lime closely around each cabbage over an area of a foot in diameter, working the lime into the soil afterwards in the course of cultivation. Unleached wood ashes have a similar effect.

SLAVERING IN A HORSE.

L. S. H., Lexington, Ky.—My six-year-old horse slavers or slobbers very badly; how should he be treated? The habit was noticed first while he was on grass and White clover late in the fall.

ANS.—Slavering or slobbering often occurs among horses fed on White clover, the flowers seeming to possess some peculiar property which renders them a source of irritation to the mucous surfaces and salivary apparatus of the animal. Some horses, however, feed on the clover without any inconvenience; and with the addition of grain they attain an excellent condition. The sharp edges of worn teeth or an ulcerated tooth or even a rough bit, will also cause slavering. So will any wound which punctures a duct of the salivary glands. It is specially liable to occur from opening abscesses in strangles and from wounds about the lower jaw. Poor food and impaired digestion are also apt to produce an increase of salivary secretion, hence slavering. It is also a symptom of several other ailments. The remedy is to remove the cause. If the trouble is due to a decayed tooth, extract it; if to the sharp edge of a tooth irritating the inside of the cheek, apply the tooth rasp until it is smooth. If it is caused by irritation of the glands of the throat or mouth, use a stimulant application of hartshorn and oil. If it is due to noxious substances in the food, change the diet. Use washes for the mouth, such as vinegar and water, or vinegar and honey. If the saliva is offensive, use water slightly tinctured with carbolic acid as a wash, and in all cases attend to the general health of the animal. In obstinate cases give a course of tartar emetic, opium, chlorate of potassa or iodide of potassium. Rub the glands beneath the ears and between the jaws with iodine ointment.

ÄERATION OF MILK.

W. C. C., Meadville, Pa.—What advantage would it be to cool milk by äerating it when it is freshly drawn from cows?

ANSWERED BY T. H. HOSKINS, M. D.

1. The rapidity with which changes injurious to milk and milk products proceed depends mainly upon the temperature of the milk. So far as äeration tends to the prompt reduction of this temperature, it is therefore advantageous. 2. It has been believed by many that there is naturally an "animal odor" in milk, which will, if retained, prove prejudicial to the quality o the butter or cheese made therefrom. Aeration is advised by those who hold this belief, as tending to purify the milk from such odor. But as excellent butter can be made from the cream of milk which has been at once placed in covered, or even submerged cans, after milking, the existence of any specific "animal odor" is seriously doubted by skilled dairymen. Foul odors in milk, contracted from the foul air of stables from unsuitable food or from filth introduced into the milk in the process of milking or otherwise, cannot be entirely removed by äeration. In these cases prevention is emphatically to be preferred to any sort of cure. 3. Aeration of clean, pure milk is therefore by no means essential in butter-making; but in cheese-making, especially in factories, äeration is considered important as a rapid means of removing the animal heat, and thus preventing the changes above referred to, which are prejudicial to the formation of a perfect curd.

FATTENING FEED FOR YOUNG PIGS.

H. F. S., Bruson, Vt.—What is a good ration for fattening five-months-old Chester-White pigs, to be killed when they are seven months old? The ration is to be made up from the following feeds: corn-and-cob-meal, wheat bran, middlings and old-process linseed-meal.

ANSWERED BY HENRY STEWART.

The best food for fattening young pigs is milk, with equal quantities of bran and meal. At the early age of five months the muscular development is not mature, and should be encouraged by food containing much lean-making material or nitrogenous matter. Without going into details, which might not be of interest, it may be sufficient to say that if milk can be procured, it may be mixed with equal parts of bran and corn-meal so as to make a slop which may be easily drank; ten pounds in four quarts of milk and two pounds of the mixed meal may be given daily to each pig in such a mess. If milk is not given the bran and meal may be steeped in water and fed in the form of a drink as with the milk; but the quantity of meal should be doubled. It should not be forgotten that fat meat contains 75 or 80 per cent. of water, and an abundant supply of drink is to be supplied to all fattening animals. No doubt the reason why so many young pigs suffer from apoplexy, and nervous diseases arising from indigestion, while fattening, is that they have not sufficient liquid food. Linseed meal or other oil-meal is not a desirable food for pigs at any time; nor is cob-meal desirable for the reason that the pig's stomach is small and naturally adapted for concentrated food.

COTTON-SEED MEAL.

F. D. C., Sandwich, Mass.—I have understood that the outsides of cotton-seeds are covered with fine, sharp points which, when ground and fed, stick in the inside of the intestines of the animals, producing more or less injury. My cows, I think, have twice been injuriously affected by the use of this article. Can the RURAL give any information in the matter?

ANS.—Cotton-seeds have no points of any kind. The fibers of the lint-cotton are all attached to the seeds, and are torn off in the process of ginning. The ends of the fibers remain on the seeds, and form a lint which cannot be wholly removed. The seed is mostly hulled and ground before it is pressed for the oil, so that the meal is usually quite free from the husk; some seeds are pressed with the hulls on, but the meal made from the unhulled seeds has no sharp points about it, although the hulls are somewhat hard and indigestible, and are objected to on that account. There is, however, an abundance of the pure meal in the market, and this is wholly free from reproach of any kind. Cotton-seed-meal is, however, an exceedingly rich food, having over 40 per cent. of albuminoids and 13 to 18 per cent. of oil in it, and for this reason it can be fed safely only in small quantities, say, two pounds daily, mixed with bran or corn-meal to enrich it. If fed more liberally it is apt to be injurious, and this is, probably, what is the matter with our friend's cows.

OBSTRUCTION IN A COW'S TEAT.

T. S. M., Newark, Ohio.—One of the teats of my young Guernsey cow is so badly obstructed that no milk can be drawn from it. How should it be treated?

ANS.—Obstructions in the teats of cows and especially of young animals, are quite common, and are generally due to improper drying off in the fall or to neglect in milking clean. Particles of the coagulated milk are arrested in the duct, and a tissue forms about the matter and adheres to the walls of the passage so as to entirely close the duct in time. There are also some other causes; but these are the most common. The only remedy is to break through the obstruction so as to unite the two parts of the duct An instrument manufactured expressly for this purpose consists of a small, round tube inclosing either a double-edged knife, or four blades at right angles to each other. The tube or sheath is pushed up the orifice of the teat until it reaches the obstacle, when the blades are pushed out, cutting through the obstruction and opening a connection between the parts, for the passage of the milk. Great care must be taken not to cut through the walls of the milk duct; for inflammation of the teat and udder would then occur, and this would be likely to injure the cow permanently for milk. For a few days after the operation it is often necessary to use the tube—after the knife has been taken out—by working it gently up the duct and through the opening made in the knot, thus keeping it opened till the parts are healed.

THE PINE GROSBEAK.

C. H., Afton, N. Y.—We have a new kind of bird here. They are a little larger than a canary and have a hooked bill. Some are brown, red and green; some are brown and yellow, and some are olive-green and flame-colored. What are they?

ANS.—They are Pine Grosbeaks. They belong to the finch family, classed by Gray among the bull-finches. Birds of this kind inhabit the northern regions of both continents, coming as far south as Pennsylvania on this side of the water, in cold winters. They do not come south as regular migrants, however, but rather as erratic visitors. At times they are plentiful in one locality, perhaps for two or three winters, whereas afterwards they may not appear there again for many years. They are charming songsters, singing toward sunset, and in captivity during the night. They are easily kept in cages and will eat most kinds of seeds, berries and fruits, becoming very familiar. In their wild state they feed on buds and seeds of various trees, especially those of firs. The female is ash-gray and brownish above with yellow tinges below and on the head, rump and tail coverts. The young resemble the female but are browner. The general color of the plumage of the males is bright carmine, with grayish-brown centers to the feathers on the back; wings blackish-brown with two white bands; the outer edges of the quills are also white. The oldest males have the most red of a rosy-carmine tint.

CANNING GREEN PEAS, ETC.

J. B., Webb's Mills, N. Y.—1 Is there such a thing as a small machine for cutting sweet corn from the cob? 2. How are green peas put up in glass?

ANS.—1. Such a device is sold by the Higganum M'f'g Co., 189 and 191 Water St., N. Y. 2. Experience in putting up green peas in glass or tins, has generally been a failure. Canners formerly had a great deal of trouble in getting them to keep, although they would boil them in cans for five hours, and they lost a large percentage of them. The plan now adopted by them, is to put the cans or jars into strong iron tanks having adjustable covers, which can be fastened down and made steam-tight. They then turn on super-heated steam, and keep the cans at a very high degree of temperature for half an hour. This process answers perfectly; but could not be used unless on a large scale. Green sweet corn is cut from the cob by the small canners by using a knife with a very thin blade, which is kept perfectly sharp, and the corn is cut off the same as a boy whittles a stick. Care should be taken not to cut too closely, as one should cut the grain leaving the hard stem on the cob. Machines used by large canneries, consisting of knives, springs and scrapers, are very expensive. Green corn requires thorough cooking in the cans to make it keep.

TREATMENT OF COWS THAT GNAW WOOD.

A. H., Castile, N. Y.—Why do cattle gnaw wood?

ANSWERED BY DR. F. L. KILBORNE.

This habit is not infrequently acquired by cows, and may be the result of several causes. Probably the most common cause is a morbid appetite or a deranged digestion, due to want of proper food, irregularities in feeding, pregnancy, exposure or other faults in the care and management of the stock. In many cases it is evidently an act of pure wantonness, simply a desire to be doing something. Animals kept too closely confined often gnaw the wood-work within reach, apparently to pass away the time. Examine into and correct the management and diet if found at fault. Then give each cow one-half pound of Epsom salts and common salt, and one ounce of ginger, to unload the bowels. Repeat the dose in 16 or 18 hours if the first produces no effect. For large cows not with calf this dose may be increased by one-half or even doubled. After the bowels have been moved, give two tablespoonfuls of the following powders in the feed, night and morning: Powdered gentian root and ginger, each one-pound; pulverized nitrate of potash and nux vomica each one-half pound; mix. Allow free access to salt and plenty of good drinking water. Exercise in suitable weather is also very desirable.

OLD AND NEW-PROCESS OIL-MEAL FOR DAIRY COWS.

D. F. C., Sandwich, Mich.—What is the difference between old and new-process oil meal and which is the better for dairy cattle?

ANS.—Old-process meal is the ground residuary cake left when the oil is extracted from flax-seed by severe pressure. On an average, it contains about 12 per cent. of free oil or fat; 30 per cent. of nitrogenous compounds and 37 per cent. of carbohydrates. New-process meal is the residuum when the oil is extracted from the flax-seed by means of naphtha or benzine, the latter being afterward expelled by high heat. On an average, it contains about 2.5 per cent. of oil or fat; 36 per cent. of nitrogenous compounds, and 34 per cent. of carbohydrates. The old-process meal, owing to the large proportion of oil it contains, is injurious to butter unless fed to the cows in very small quantities as part of a ration. The new-process meal is better for dairy cows owing to its lower oil and higher nitrogenous ratios. Either should be fed in connection with other foods, such as middlings or corn-meal, straw and hay. Unless the cows have plenty of some succulent feed, it would be better to mix the meal with boiling water and allow the mess to stand a few hours.

OVER-FED HOGS.

C. F. W., Adair, Mo.—As I was feeding my hogs the other day, one of them suddenly fell over and became rigid and insensible, but recovered in about five minutes and finished his meal, but the next morning he had lost all use of his hind parts as though they were paralyzed. He eats and seems to be in no pain except when he tries to move. What ails him and what can be done to help him?

ANS.—If the hogs are fat, the trouble is probably due to injudicious or over-feeding. Place the affected hog in a comfortable yard or pen with a dirt or ground floor. Reduce the feed one-half or two-thirds until he recovers the use of his limbs. Make a thin paste of ground mustard and turpentine and apply it to the whole region of the loins, and cover with a blanket for a few hours. Supply a mixed diet, with little or no corn for the present. You should have mentioned the condition of the hogs, how they have been kept and fed, and the feed, if you desired a definite, satisfactory answer. Under the circumstances we have been obliged to take some points for granted, instead of knowing the actual facts in the case.

GOITRE IN A HEIFER.

L. T. S., Quincy, Ill.—About three weeks since a swelling as big as a fist appeared under the jaw of my two-year-old Jersey heifer. Now it has extended upwards as far as the ears on both sides of the head. It does not appear to affect the health of the animal. What is it and what should be the treatment?

ANS.—It is a case of goitre, for which iodine given in small doses for a long period affords the only relief. This disease appears to be constitutional and hereditary, and the tendency to it may be transmitted from parent to offspring. In many cases it is due to the use of water containing magnesia in solution, derived from the soil. The only effective treatment is to give iodide of potassium in three-scruple doses daily for a long time, and apply iodine ointment to the swelling, rubbing in a piece as large as a chestnut once a day.

REMEDY FOR HARD-MILKING TEATS.

S. G. S., South Livermore, Me.—I have a valuable Jersey heifer that milks quite hard in the forward teats. Is there any way by which the orifice or milk channel can be enlarged?

ANS.—After each milking insert a hard rubber or lead plug, slightly larger than the opening in each teat, and allow the plugs to remain until the next milking. As the opening enlarges, a larger plug will be necessary. The upper end of the plugs should be rounded and slightly enlarged—probe-pointed. This will probably keep them in position, especially if the rubber plugs are used. If not, they must be made longer and V-shaped, the length of each arm being about three-fourths that of the teat, and there should be an eye in the end of the outside arm for a tape to be tied around the teat. Do not tie it too tightly.

WARBLES ON CATTLE.

L. R. H., Dighton, Kans.—What is the best treatment for grubs or warbles on the backs of cattle?

ANS.—Warbles are the larvæ of the gad-fly, and are to be found in little rounded tumors the size of hazel-nuts, on the backs of cattle in winter and spring. In the center of each tumor is a little hole through which the grub may be seen and extracted. The best treatment is to examine all cattle in winter or spring and squeeze out the grubs found in their backs, enlarging the openings with a knife when necessary. This cuts off the supply of flies for the following year, and if the practice were universally followed, the pests would soon be exterminated.

THE USE OF LIME.

J. F. C., Glencoe, Minn.—I can get air

slaked lime for 25 cents per barrel; would it pay to put it on corn in the hill after planting or after the first hoeing; or would it pay better as a top-dressing on fall-plowed land to be sown to wheat the following spring?

ANS.—The R. N.-Y. opposes the use of lime as a *fertilizer*. It acts as a stimulant by hastening the decomposition of plant food already in the soil. It *adds* nothing to fertility, unless the soil happens to be deficient in lime, which is improbable. Lime in connection with manure may or may not be profitable. We should not use lime alone unless we were willing to skin the soil.

A DESIDERATUM.

D. D., Farmingdale, Ill.—Is there any machine designed to scatter powdered substances thinly and evenly over the ground or, in other words, to scatter flour poisoned with Paris-green or London-purple over a potato field. The Woodason bellows do it too slowly. What is needed is something like a broad-cast seeder.

ANS.—The R. N.-Y. has not learned of anything of the kind that has been at all successful. It does not seem probable that such a machine could be made to throw a dry mixture accurately. The Field force-pump answers for liquid poisons.

PIGEONS.

J. D. G., Port Arthur, Ont., Can.—How should pigeons be fed and kept? Are there any works on the subject?

ANS.—There are three good works on pigeons. One is a finely illustrated book with colored plates, called "Fulton's Illustrated Book of Pigeons" 50 colored plates, $8.00. Another is an English work also finely illustrated, called "Pigeons," by Tegetmeier. The best practical cheap work is by Lewis Wright, "The Practical Pigeon Keeper," price $1.50. The first and last works can be had of the Ferris Publishing Co., 481 Broadway, Albany, N. Y.

Miscellaneous.

J. L., Factoryville, Pa.—Wm. A. Wood is located at Chattanooga, Tenn.

S. F. B., Patchin, N. Y.—A "good patent calf-feeder" can be purchased of J. B. Small & Co, Boston, Mass.

Several Subscribers.—We understand that Cornish, Curtis & Green, of Fort Atkinson, Wis., supply an outfit for testing milk by the method devised by Prof. Short.

P. E. V., Jerseyville, Ill.—Where can I get the RURAL No. 2 potato?

ANS.—From either Peter Henderson & Co., and Thorburn & Co., of New York; T. C. Davenport, 124 Dock street, Philadelphia, Pa., or Frank Ford & Sons, Ravenna, O.

Subscriber, Elva, Va.—Which is the most profitable willow to grow for sale, on moist river flats, liable to over-flow, and where can cuttings be bought?

ANS.—The Osier Willow is the one generally grown. We do not know where cuttings can be obtained; probably of any grower. This subject was discussed on page 364, of the last volume of the RURAL.

O. K. T., Lebanon, Conn.—Is the Japanese hybrid catalpa advertised by W. Atlee Burpee & Co., hardy enough to resist the winter climate of this section?

ANS.—We can not speak of this tree from experience, never having grown it. In what way it is superior to the Hardy Calalpa (C. speciosa) Mr. Burpee's announcement does not record. The latter will endure your climate.

G. S., Chautauqua, N. Y.—What are the relative values of bone-meal made; 1, from slaughter-house bones; 2, from Chicago steamed bones; 3, from horns and hoofs only? What would be needed to make each of these a perfect fertilizer for bearing grape-vines on a sandy-loam soil rather run down?

ANS.—A loss of nitrogen attends the steaming of bones. Choose first, No. 3; second, No 1; last, No. 2. Add two to three per cent. of nitrogen and five per cent. of potash.

W. C. M., Blackstone, Mass.—1. Will pop-corn "mix" with other varieties of corn? 2. Is Dunlap's Marrow among the earliest and best of fall squashes? If not, which is the earliest?

ANS.—1. Pop-corn will mix with *any* other variety that blooms at the same time. We have ears of pop-corn containing both sweet and several colors of field corn. 2. White Bush and Yellow Bush are the earliest we know of. Dunlap's Marrow the R. N.-Y. has never raised.

F. H., Union Hill, Ill.—Are there tree forms of the gooseberry and currant, and if so, has a nursery in Lamars, Iowa, really got them for sale?

ANS.—Any of the more erect-growing currants or gooseberries may be grown into a miniature tree form. The suckers must be destroyed from time to time. The best way to secure the tree form is by using the Missouri currant as a stock. We have seen both currants and gooseberries grafted on stems of that species, six feet high. We do not know as to the nursery inquired about; but we have seen a considerable number of complaints with regard to its dealings.

W. H. A., Clyde, N. Y.—My 32x36-foot wagon-house has an earth floor which is not altogether satisfactory, as the dirt will stick to the boots; what would be the cost of asphalt for a floor, and how should it be put down? Would the services of an expert be needed?

ANS.—Asphalt for the purpose mentioned will no doubt give excellent satisfaction; but will probably cost 25 cents per square foot. The material necessary and full directions for applying it can be had of the Neuchatel Asphalt Co., Astor Place, New York City. We would not recommend any mixture of coal tar and gravel, as so far as we know, poor results have always been obtained with this material. We are of the opinion that a good road gravel thoroughly rammed in place would not be open to the objection raised by our correspondent.

E. P. N., Nichols, Conn.—1. I have some asparagus roots from seed sown in 1888. They are rather thick in the row; which would be the better plan—to set them out in the field next spring or let them remain in the seed-bed? 2. Is there any public library in New York city which contains the statute laws of the various States, particularly those of Kansas and New Jersey?

ANS.—1. Is the seed-bed to be the permanent bed? Then, by all means thin out. If the plants are to be transplanted to a permanent bed, then we should let them remain in the seed-bed until that time. 2. Probably the Astor Library contains the published laws of the various States; but old laws are constantly being changed or repealed and new ones are passed, so that it is very unlikely that a complete list of all the laws in the various States passed to date can be found anywhere in the country. Probably the most likely place to find such a work would be the Law Library, of the Equitable Life Assurance Society, 120 Broadway, New York.

J. B. L., Maysville, Ala.—1. My eight-year-old blue plums bloom profusely every spring, but bear no fruit; why, and what should be done for them? 2. How late can parsnips, salsify and beets, be planted here?

ANS.—1. There are well known instances of plums bearing imperfect blossoms, in which case fruit can not set unless the deficiency is made up by the contiguity of other trees. It is thought, also, that in some, the pollen does not mature when the stigmas are receptive. 2. Much depends on local circumstances. If salsify is sown in spring, a hot, dry summer may arrest its growth, and a genial, moist fall may excite a vigorous second growth and cause many of the plants to bloom, which would greatly impair the quality of the roots. But as salsify needs a long season of growth to mature good roots, a sowing may be made in late spring, and the main sowing after the first soaking summer rain. Spring-sown parsnips are good for use in late summer and fall, but parsnips for winter should not be sown till after a soaking summer rain; indeed, if not sown till the first of August we may expect good roots, as they can remain and grow in the ground till Christmas, or all winter. Sow long beets early in August; turnip beets, in August or the first of September.

DISCUSSION.

HIRED LABOR IN THE PIEDMONT BELT OF S. C.

J. C. S., PENDLETON, S. C.—Our hired labor here is entirely different from any mentioned in the RURAL. Nine-tenths of it comes from colored natives. Wages are $5 to $7 per month for boys, and $7 to $10 for men, and all get 12 pounds of meat, one bag of corn-meal, one gallon of molasses and three pounds of salt for rations, which now amounts to about $2.25 in addition to the above wages. Our help is generally hired from our tenants on our own or adjoining farms, and we are not bothered about boarding and washing for hands, save board for one select hand who takes his meals in the kitchen instead of rations, and does chores about the house and barn morning, noon and night every day and Sundays, too, though all the regular monthly hands join in helping about the barn except on Sundays when our select hand "Friday," picks up one or two boys that are nearly always passing or hanging around, to help a little just for the privilege of riding the "boss's" horse to water or a chance morsel from his table. Our man "Friday" is generally the best all-purpose hand on the farm and holds the balance between the household and farm, and the cook (who is generally colored) has about as much control over "Friday" as the "boss" has, for "Friday" thinks as much of his eating as he does of his wages. And when "old miss"—the mistress of the house—speaks to him, her word is law with him, for he will stop anything for her, to whom he looks continually for nick-nacks, and who gives him now and then a cast-off garment that the "boss" used to wear. Our regular force of hands are hired for the year, and it sometimes happens that we do more work during a dry winter than during a wet spring. Our climate admits of profitable farm work all winter except during exceptional spells of continued wet weather. We pay for our day labor 40 cents to 50 cents for ordinary field hands, and 65 cents to $1 for harvest hands, and the hands generally board themselves. Written contracts are seldom drawn up. The better plan and the only one to insure the farmer in his busiest season is to reserve part of the wages, and this is best for both, though some object, and give their reasons by saying that they might die before the year was out, and in that event they would be deprived of the benefit of part of their wages. They evidently believe in administering on their own estates. The drift of the hired young men is to marry (but few married men hire by the year) and to rent, or, as they call it, "run a farm," which with good management never fails to bring a man better returns for his labor; but unfortunately for him he has but little knowledge of frugality and with his increased income come temptations to live more extravagantly, and, as a rule, when working for himself he has no more money to save than when he worked for wages, though a few men buy a few acres to call a home, but continue to rent land and travel long distances to work, which makes their home a source of inconvenience to them, whereas by the usual plan of renting they have just as good homes free of charge near their work. Cheap labor is too much on the order of the monkeys which were imported by a cotton planter to pick cotton, who after a time reported a success so far as getting the animals to pick cotton was concerned, but the financial part was a failure as it took two men to make one monkey work. So it is with our poor class of laborers; they are not usually paid less for a day's work, but they are not wanted, and are never employed when it can be avoided and they float around from place to place hunting work.

Altogether, our colored labor is the best that we have tried, and when properly managed it is efficient for all common work on the farm; but is is generally lacking in intelligence on the stock, fruit and vegetable farms where it is necessary to pay higher wages to more intelligent white labor, but this class of white labor does not stay with us long, as the men soon learn the value of their better judgment and management and leave us to rent land, hire and utilize our cheap labor for themselves, and soon become land-owners or large farmers on rented land. To my mind there is not another section of our country where cheap lands and cheap efficient labor are to be found together, or where good management gets a better premium or poor management is so general. Our colored laborers are good workers, but poor managers, and unless the farmer is with his hands all the while he cannot expect good, fore-handed work, and when I hear one abusing negro labor I am at once convinced that he does not know how to manage this labor, or is too lazy himself to go with his laborers; and when I see a white man past 25 years of age, who has been in this section long wanting work on the farm for wages, I know at once that there is something lacking in his make-up to make a first-class farmer, and if I were to hire him I certainly would not expect to get a man with good judgment and management, for if he had such qualifications he would not at that age be in such circumstances as to seek work at farm wages.

WORDS OF CHEERING APPRECIATION.

W. B., DAYTON, OHIO.—Among the editorial items in the RURAL of January 12, is the remark that "the subscribers of the R. N.-Y. are, more and more, with each succeeding year, of the more intelligent, progressive, alert, well-to-do class." Well, for my part, I cannot see how it could be otherwise. Any wide-awake farmer of to-day, who is a RURAL reader, must take an advanced position among his co-workers, as certainly as the sun shines. Under the RURAL's practical teaching, assisted by the most eminent corps of horticulturists, agriculturists, and writers in all other pursuits pertaining to agriculture, no other result could be expected. There is not an agricultural college in the land capable of employing such reliable talent, nor is there any institution under State or Federal auspices able to inspire its pupils with the confidence every reader has in the RURAL'S every-day, practical and wholesome lessons. No subject can be agitated with regard to which it cannot bring forth teachers whose experience has taught them the best way to success, and the best means of avoiding that which is unprofitable. Particularly do the special numbers contain the very essence of the practical ideas of many whose reputations have become national and to whom we are only too willing to look for instructions in some particular branch of farm work. Not only does the professor, but also the every-day worker, gladly assist in extending knowledge for the betterment of every one who wants to learn. Here we are taught how to economize to get better results with less labor and expense, as well as to adopt and practice new ideas; while each is told how to experiment for his own purposes. There are, of course, some who know everything, and to whom an encyclopedia would be an incumbrance. These the RURAL could not assist, and as a general thing they are the people in whose fields and fence corners the rankest weeds grow; who see no use in sheltering the plow or harvester, and who deride the tiling of land as a useless expense. Nature sometimes does assist such, and they get along; yet how much more could they have prospered had they assisted nature a little. I have yet to hear of the failure of one who has taken up a certain branch of farm work, and pursued it intelligently and persistently; while I know of many failures where persons have tried to engage in and prosecute every branch of farm work, such as running a dairy, gardening raising cattle, and practicing all sorts of farming at once. In such cases one or more of the different interests will suffer, and eventually, in nine out of ten cases, the profits of all will disappear. Against such mistakes as these the RURAL is continually cautioning its readers, and in this way it shows good hard sense, and an evident intention to do nothing that might cause hardship among the agricultural community. It is this that is drawing thinking farmers and all others interested in out door pursuits increasingly towards the paper, as each year shows more plainly the earnest desire of its Editor to benefit the public regardless of cost or favor.

STEELE'S RED WINTER APPLE.

T. T. LYON, SOUTH HAVEN, MICH.—In the RURAL of February second, at page 71, replying to L. A. E. of Vermont, the fact is stated that the Baldwin apple and also the Red Canada are known by the above synonym. The statement made by the inquirer, that the cions growing in Vermont were received by him from Michigan, renders it almost if not absolutely certain that they are genuine Red Canadas. I have never known or heard of a case in Michigan in which the name Steele's Red Winter was applied to the Baldwin; and I very confidently express the opinion that even in New York where the synonym had its origin, the name Baldwin is no longer applied to that fruit, save that when Western planters sending to New York State nurseries for trees of Red Canada, mistakenly call it Steele's Red Winter, the orders are filled with Baldwins.

A brief explanation of how this synonym came to be applied to the Red Canada in Michigan, and from there found its way to many other Western localities, seems proper in this connection. Sixty or 70 years since tramping grafters, from Ohio, grafted a tree in a large commercial orchard near Plymouth, Michigan, with cions of what purported to be Rhode Island Greening. On coming into bearing, the fruit proved to be an unknown brilliant red apple. It was placed in the cellar, and, during the ensuing winter, was shown to a visiting friend from Western New York, who identified it as Steele's Red Winter. Coming from a region where the Baldwin was, at that time, known by this name, he evidently supposed the apples to be Baldwins. The fruit rapidly grew into popularity in the vicinity, under this name; and was widely distributed from this orchard, by grafting upon the numerous seedling orchards of that early day. In this manner both the fruit and cions were very widely distributed through this and adjacent States always as Steele's Red Winter, under which name it acquired great popularity in the markets of Detroit, Chicago and other Western cities. When, about 1847 to 50, the writer planted extensive trial orchards at Plymouth, Michigan, he included this variety, and at the same time planted trees of the true Red Canada under that name. When the trees came into bearing the discovery was made that they were identical. Specimens were at that time sent to the late Charles Downing, who found them so superior to those he was accustomed to see, that he hesitated for a time to acknowledge their indentity. Specimens of this variety of the previous year's growth were shown at the opening of the Centennial Exposition at Phil-

adelphia, and it was one of the varieties upon which Michigan won the meed of superiority for its exhibit of long-keeping apples.

ANOTHER TEST FOR MILK AND BUTTER.

C. F. O., DARIEN, CONN.—I have tested the weight of milk, cream and butter, obtained from one of our average churnings. Five milkings furnished 242 pounds of milk, from which we got 63½ pounds of cream and 12 pounds of butter, so that there were 20 1-6 pounds of milk to one pound of butter. The above is the result from 12 cows, four of which are due to calve within the next eight weeks; four are farrow, and two are to calve before June 1st. They are grade Jerseys, from four to ten years old, and are fed a mixture of two parts of corn-and-cob meal, one part of oats, two parts of wheat bran, one part of cotton-seed meal and one part of linseed meal; they get two quarts mornings and two quarts nights, dry. Then we cut corn-stalks and hay three-quarters of an inch long, mix them and feed each cow one bushel four times a day, as follows: One bushel before milking in the morning; then each gets the ground feed, and then another bushel of stalks and hay. About 10:30 A. M. they are let out in the yard, where they stay till about 3 P. M., when they are put in the stable and fed a bushel of stalks and hay. Then, before milking, they get their ground feed, and after milking another bushel of stalks and hay. They do not get warm water, but what they do get is drawn from a cistern under the barn just before the cows are let out. We try not to let any water stay in the troughs to freeze, as we do not think ice-water quite fit for cows to drink. They are carded every day before they are let out. As soon as possible after milking, the milk is set in a Cooley creamer. The cream rises in 12 hours, and is kept sweet till the night before we churn, when it is all ripened together. It is churned in from 30 to 40 minutes in the Davis swing churn at a temperature as near to 68 degrees as possible. It is washed in three or four waters when in granules, and salted with Higgins's salt—one ounce to the pound. The salt is lightly worked in, and then the butter is set away for 24 hours. Then it is worked dry with the Eureka butter-worker, then printed in half-pound cakes and sent to New York, where it sells for 60 cents per pound. I believe if I had silage or roots to feed, I could feed more cheaply, but as this is my first year here, we have not things in proper working order yet. This, together with the misfortune of having two barns with *all* our crops burned, puts us in bad shape for a record of any kind this winter.

ORIGIN OF THE POTATO, ETC.

L. H. R., RUTLAND, VT.—A recent article entitled "Whence came the potato?" in the Vermont Watchman, makes several statements with which I cannot agree. Among others, it assigns the origin of the tuber to China. If I am not mistaken, the potato is found in a wild state in many sections of Mexico and in Arizona and Colorado to-day. Geo. Pinney of Evergreen, Door Co., Wis., introduced last spring, a new variety of potato which he claims came from the cultivation of a wild variety procured either in Arizona or New Mexico, I have forgotten which. As to the potato having been grown in China from time immemorial, has anything ever been found which was not an old thing in China, according to the claims of some? I wish the RURAL would have another Potato Special this winter, as I think it has done an immense amount of good by its many experiments with potatoes. I consider the potato one of our most valuable crops, and if every one would wake up to the idea that the older varieties, like the Early Rose and Early Ohio, had seen their best days, growers might double their crops by keeping up with the times and growing the newer and better-yielding varieties of recent introduction. Among other varieties, those that have proved especially valuable with me, are Early Albino, New Queen, Hampden Beauty, Sunlit Star, Polaris and Rising Sun, for early; Summit, Everitt and Rose's No. 74, for medium; and Green Mountain, Delaware, Alexander's Prolific, State of Maine, Bonanza, Morning Star, White Lily, Empire State, Thunderbolt, Tioga Point, Newton Seedling, Chautauqua Seedling, and Fearnaught, for late or main crop varieties. Of the novelties of this season Rogers's Seedling and Tenhocks for early, and Ben Harrison and Burpee's Superior for late, are very promising and are worthy of an extended trial.

R. N.-Y.—In so far as the RURAL's information goes, the potato is a native of the Andes of South America, and also of Arizona, New Mexico, and other parts of Western North America. Whether it was found in the East prior to its discovery here, will be a pretty difficult problem to solve.

"LIMA BEANS WITHOUT POLES."

STODDART, NEW YORK CITY.—I have used a device for raising Lima beans and other creeping plants, even tomatoes, similar to that described by E. T. Ivy in a late RURAL; but, instead of common wrapping twine, I used a sort of hempen cord tarred and prepared for fishing use, which I purchased from a dealer in fishing tackle. It was not expensive and has proven indestructible by wet and inaccessible to rust. It also possesses a certain stiffness which facilitates the undoing of the vines without destroying or cutting the twine, after the plant has wilted, and so allows the use of the same twine year after year without removing and replacing it in fall and spring. It is easy enough to draw it taut whenever and wherever required, and the labor of putting it up as well as the expense of new twine is saved. In tying plants on walls or fences I drive in galvanized staples or galvanized nails. On brick walls the nails are better, but on fences I prefer the staples. In training tomatoes against a fence I tie southern reeds about a foot apart horizontally into the twine netting along the wall. They are sold about eight feet long for $1 per 100, and, if carefully handled, they may be used over and over again. Short sticks or rests fastened to them and against the wall will keep the vines and fruit at a sufficient distance from the wall or fence to allow tomatoes to spread without hindrance. In this way I saved space in a small garden spot and made vegetables serve as ornamental plants in the place of morning-glories and other little weeds.

WILL BONE ANSWER?

D. C. L., CRANBURY, NEW JERSEY.—I notice what A. T. T. of Franklin Park, N. J., says on page 90 of his experience and that of his neighbors for 30 or 40 years of the effects of lime applied to their land. His article would lead me to the conclusion that the exhausting process has been going on all these years. I believe it is conceded that lime represents no plant food—it merely prepares for use what is already in the soil. In speaking of his own use of fertilizers, he refers to bone, or it may be a plain superphosphate with a small percentage of ammonia and potash. Is not the proper inference to be drawn from his experience that the nitrogen and potash in the land have, in that vicinity, been exhausted in a degree, and while the farmers may apply "bone" in large quantities, thereby largely increasing the phosphoric acid, yet if the ammonia and potash are not applied through yard manures in sufficient quantities, can they look for any other result than partial failure of crops? This question of keeping up the balance in our soils, to insure average crops, is one of vast importance to the farmer. I believe it cannot be done with lime and bone, or the ordinary superphosphates.

WATER FOR FATTENING ANIMALS.

J. B. P., NEW LONDON CO., CONN.—On page 89, in Mr. Henry Stewart's answer to questions relative to the fattening of steers, he states that they should be "well supplied" with drinking water of a moderate temperature. This "moderate temperature" would increase the palatability of the water, causing them to drink more than they otherwise would. But to come to my point: In Prof. H. P. Armsby's book on "Cattle Feeding," which is considered a standard book, we are told that "excessive drinking of water increases the consumption of both fat and protein in the body." He cites several experiments which go to prove his statement. This increase of consumed fat and protein goes from the body as waste matter, while, but for the excessive amount of water drank, it would have remained in the body as so much toward the desired end, *i. e.* the production of a fat animal. To avoid this extra demand for water, conditions must be adopted to annul the wants of the system. Thus, to quote Prof. A. again, we must avoid "too watery fodder, too high temperature of stall, two much salt, etc., and, withal, remember to keep the animal as quiet as possible."

J. P., FITCHBURG, MASS.—I have never known an egg to be eaten by any of my hens since I adopted for a nest a nail-keg or its equivalent, nine to eleven inches deep. A hen may break an egg in such a nest, but she cannot get into a position that permits her to eat an egg.

What Others Say

OPEN AIR AND SUNLIGHT FOR CATTLE.—OUR highly-valued contemporary, the Weekly Press, gives some forcible reasons why cows should have regular exercise in the open air and sunlight. Sunlight and pure air are essential to health. They are among the most important blessings we enjoy, and nothing in the animal or vegetable kingdom can thrive without their influence. A sun bath is a positive luxury to every animal from man down. Watchmen and others who have to spend the night hours on duty and sleep in the day-time soon suffer in health, and, unless relieved by a change, break down. Exercise is just as important to animal vigor as pure air and sunshine. We should bear these things in mind when we talk of keeping our cows confined to the stables for months together. Cows so confined may give just as much, possibly a little more, milk than if allowed exercise, but they certainly must deteriorate in vigor and become fit subjects for tuberculosis and other diseases. The ill-effects of this enervating treatment, if not very marked in the present generation, must show themselves in the offspring. There is no earthly reason why exercise is not just as essential to the health and well-being of a cow as to that of a man or a horse. Giving milk is a drain on a cow's system, but it will not take the place of exercise; in fact, the cow needs the exercise all the more to strengthen her for the demand upon her constitution. Some cows endure close confinement better than others, just as some men enjoy an indoor life that would be intolerable to their more active fellows of a different temperament, but that does not make the indoor life healthful; it is only a matter of degree. In the writer's own dairy the majority of the cows become very restless as the hour for release from the stalls approaches, and the capers they indulge in when turned into the shed yard for a frosty morning show that they appreciate the advantage of having a chance to stretch their limbs.

EIGHTY-CENT BUTTER.—E. F. Bowditch is a wealthy farmer of Framingham Center, Mass. He makes 80-cent butter and can readily sell at that price more than he makes.

The Mirror and Farmer, a Journal published in Manchester, N. H., tells how his butter is made. There is no secret about Mr. Bowditch's butter. He tells the public everything there is to know about the cows, and the cream manipulations. R. N.-Y. readers will remember what has been said in these columns as to his herd of Guernseys, numbering 19 and averaging 8⅓ quarts of milk a day.

They are fed four quarts of corn-meal each in two feeds, morning and night, and all the Timothy hay that they can eat. The milk is strained seven times before it is placed in the cans of a Cooley Creamer, once being run through four thicknesses of cloth. It sits from 12 to 24 hours, the latter period being in the summer and the former in the winter. Twenty-four hours are allowed for ripening.

At present, churning is done every other day. The cream from two days' milk is placed in a pail and warmed up to 80 degrees, being then placed in a warm room for 12 hours, the temperature of the room being about 60 degrees. After remaining there for that length of time, all night, it is churned in the morning in a Davis Swing Churn from 30 to 40 minutes. After the butter comes, several pailfuls of water at 45 degrees, are poured into the churn and the churn is given a few swings and then allowed to remain at rest for a few moments when the butter-milk is drawn off and the churn filled with water and the previous process of swinging and resting repeated. The butter is washed three times, the last time in brine, the strength of which is that obtained by putting a pint of salt into two pailfuls of water. Then the butter goes to the butter-worker, a Eureka, when it is salted in the granular form, one ounce to the pound, Ashton's salt being used. The salt is raked in with a wooden rake. The butter is then placed in a tin box, a clean cloth being used to prevent the butter from coming in contact with the tin, which causes sticking. In this box, tightly covered, the butter remains 24 hours, when it is worked into half-pound pats, pressed with a Rapp press into bricks, wrapped with clean cloth, placed in a refrigerator and soon thereafter sent to market. At present 105 pounds of butter are turned out each week. The creamery in which the butter is made, is cemented on the bottom, double-walled and kept scrupulously clean. Mr Bowditch has a very large farm, in a superior state of fertility, handsomely and conveniently appointed, with buildings, fences, etc., and stocked with fine blood animals. Mr. Bowditch served his apprenticeship as a hired hand on a farm; his employer never suspected during the boy's faithful term of service that his young assistant was a child of wealth. This practical spirit has followed Mr. Bowditch all through life, and has made him familiar with all the details of "Millwood Farm." It is that kind of spirit that enables him to turn out 80-cent butter.

SORGHUM EQUAL TO CORN FOR STOCK FEED.—DR. PETER COLLIER, in an address delivered before the Farmers' Club of Elmira, as reported in the Husbandman, pointed out that the nutritive value of corn and sorghum is practically the same.

It is obvious, then, that for every purpose for which corn is used, sorghum seed may be substituted; and, in fact, Dr. Collier has abundant testimony that sorghum seed has been so used. For example, at Rio Grande, 500 head of hogs were fed and fattened upon sorghum seed. The late Col. Aiken, of South Carolina, assured him that for 25 years he had always grown sorghum enough to furnish feed sufficient to fatten his swine, and that for the seed alone he regarded sorghum as far superior to corn in his section of the country. Now, our corn crop is the cereal of this country. The yield for 1888 was almost exactly two thousand millions of bushels. About 38 per cent. of all the cultivated land of the United States, even including the grass land, is devoted to corn. While we of the East make much account of the stalks for increasing our stock of rough fodder, it is probable that at least 90 per cent of these stalks are regarded throughout the Prairie States of the West, where the bulk of corn is grown, as a nuisance to be got rid of in the easiest way possible. Corn, therefore, with us, is grown, we may say, almost solely for the grain which it yields. The average acreage yield of the United States for 25 years has been about 27 bushels. It is interesting in this connection also to observe that 95 per cent. of our corn is consumed within the country, and for several reasons for which it is used, sorghum seed, were it produced, might be in every case substituted. Now, again, while much yet remains to be determined in regard to the character of the soil best adapted for the sorghum plant, it is generally accepted that any land which is suitable for corn is also adapted to the cultivation of sorghum: in fact, that the demands upon climate and soil of the two crops are practically the same, with this important difference, however, which is in favor of sorghum, namely, that no crop will stand as severe drought as sorghum Indeed, a few years since, on the northern Atlantic sea-board, the corn crop was practically a failure: over thousands of acres not a bushel of corn per acre was harvested; and yet that very season sorghum was found to be unusually rich in sugar, and the only effect produced by this prolonged drought was to diminish the crop of cane to the extent of about 25 per cent.

The cost of cultivation of the sorghum is practically identical with that of corn, but Dr. Collier thinks that if a quarter more labor were given to it, the improved character of the crop would justify the additional expense. The grain of sorghum may be prepared for market or for feeding at an expense no greater than attends the cost of harvesting corn. The average of seven extended estimates as to the yield of sorghum, and one of these estimates included returns from 21 States, gives an average yield of 29⅝ bushels of seed per acre. We may, then, safely conclude that inasmuch as it pays to grow corn in this country for the seed alone, so too will the seed of sorghum pay all the expense in the cultivation and harvesting of the crop. Indeed, says Dr. Collier, there is abundant testimony to prove that such is the case.

ROAD IMPROVEMENTS IN NEW JERSEY.—Efforts are being made to reform the present system of road making in New Jersey. The road laws, according to Bradstreet's, are now being revised and codified by a committee of the State Board of Agriculture, which will recommend, among other things, the abolition of the office of road-overseers. The feeling seems to be general that the road-overseers have been obstacles in the way of road improvement. Another change suggested is the taking of the authority over the roads from the towns, and vesting it in the county authorities. One plan brought forward at several local meetings, contemplates empowering the Board of Freeholders to select and improve the important roads, and thereafter control and repair the same, sharing the expenses of the work between the counties and the municipalities through which the roads run. Road improvement should be taken up in a like vigorous and intelligent way in other sections of the country.

THE LATEST AND BRIEFEST.

Mr. E. H. Libby says that the would-be philanthropist can benefit his fellow men of all sorts and conditions in no better way than by building them a good road. His memory

will be revered after he is gone, and if there is any trust in the belief that the good-will of those left on earth will benefit those who have gone, his path through eternity will be made as smooth as good wishes and friendship can make it and his act go far to atone for wrong-doings.....

THE GARDEN, through Mr. William Falconer, gives a very interesting practical note respecting celery. Mr. Grant, of Mamaroneck, grows celery in the good old English way, two rows to the ridge. Late in the fall he banks them up high, and on the tops of the ridges lays a A-shaped board cap to throw off rain and snow water, and over all a thick mulching of salt hay. In digging out celery he brings in a month's supply at a time and stores in a frost-proof shed. Celery kept in the ridges in this way is never apt to damp or rot off in winter, as is often the case with celery that has been lifted and stored in trenches. But, then, while we can get along very well with this method in a moderate way, it would be impracticable on a large scale. Mr. Grant is emphatic in praise of Major Clark's pink celery, and declares that it surpasses in quality any other variety he grows. Mr. Falconer, too, bears testimony to its excellence, for he has grown it for years; indeed excellence of quality is pecular to all our red varieties of celery. But many people object to the pink tinge in the leaf celery on the table, and to the dark color of pink celery when it is cooked. Appearance goes a long way in vegetables, as well as in fruit; indeed, the finest-appearing of all celeries—the self-blanching ones—are, Mr. F. thinks, the poorest in quality. .....

IT is not unlikely that there will be a good European market for American wheat in July and August if not earlier. .....

PROF. A. J. COOK believes when we take expense and all into consideration, buckwheat will pay a better profit than will wheat. But, aside from this direct profit, buckwheat has an indirect value. It is an excellent honey plant, and thus its production adds to the profits of the bee-keeper, and just so much to the wealth of the country. .....

JAPANESE buckwheat is just now attracting much attention, and many are inquiring as to its value. The past season Prof Cook tried it, and recommends it very heartily. He has stated in the R. N. -Y. and also to the same effect in the Albany Cultivator, that the berry is very large, and the plant is astonishingly productive. All who have examined the plant say that they have never seen anything to compare with it. .....

To add to the value of his experiment he sowed one-half of his field the first of June and the balance the first of July. Thus he prolonged the season of bloom, greatly to the advantage of the bees. He could see no difference in the productiveness of these two pieces. The early sown filled as well as that sown late He also noticed that the bees not only worked on it continuously, but all the day from morning until night It is a well known fact that bees do not usually work on common buckwheat after noon. Whether this peculiarity was owing to the variety or to the season, he does not know. He has tested the Japan buckwheat for griddle-cakes, and pronounces it superb.....

A PLAN of blackberry growing which Matthew Crawford says, in the Michigan Farmer, is very extensively practiced in the West, is to give the new plantation clean culture the first year, and seed to clover the second spring. This makes its growth before the berries are formed, and it draws lightly on the soil in the summer when the berries need all the moisture. It prevents a late growth of the canes and causes them to ripen thoroughly. The fruit is always clean and there is no growth of weeds. Mr. Crawford thinks that with pretty close pruning this method might work well anywhere.....

THE AMERICAN GARDEN has the following: "THE COMING POTATO.—The Rural No. 2 potato, which yielded at the rate of over 1,000 bushels in the famous "Rural Potato Contest" of last season, deserves a thorough trial by every potato grower. The phenomenal yield in itself, on the very rich soil of the test plot, may not be conclusive evidence of its phenomenal prolificacy, and the variety may not rise more prominently among our general-purpose varieties than did the Green Mountain, which a few years ago on the same plot yielded at the rate of more than 1,300 bushels per acre. But we have really made so little progress for several years in the improvement of potatoes, at least so far as varieties of the general adaptability of the Early Rose, Burbank, White Elephant and White Star are concerned, that every grower should be on the lookout for the "coming potato," may this be Rural No. 2, Monroe Seedling, Crown Jewel or any other not yet named. By the way, is the Bural No. 2 potato going to carry that euphonious name all through its life? Why not call it Contest or Carman? No. 2 is too suggestive of second-grade, when we want A. No. 1."

The R. N.-Y. No. 1 was sold to a seedsman several years before the No. 2 was sold. But the next season it developed faults and, with the seedman's consent, was given up. It was very early. The No. 2 was so named as being an *intermediate*. No. 3 not yet introduced, is later and No. 4 is late. It is a notable fact that the Nos. 2, 3 and 4 are all from the same seed ball. No. 2 is the shapeliest, but Nos. 3 and 4 were, two years ago, the largest yielders, in our rich soil plot, we have ever seen. Last year they failed on account of the injury inflicted upon the vines by the flea-beetle. The R. N.-Y. has determined, though well knowing the objections thereto, to introduce not only its potatoes, but its wheats under number-names.....

A RECENT decision of the New York City Court is to the effect that no recovery can be had even by a *bona-fide* holder, upon a note, check or draft which has been fraudulently altered by increasing the amount. Not only is this frequently done in notes given by farmers to various kinds of sharpers; but often the whole body of the note is fil'ed in. Such notes, it seems, should never be paid without recourse to the courts .....

"WHAT has become of the 'blue' gladiolus that was said to be in possession of Monsieur Lemoine, at Nancy, France, some time ago? Are we to have the real 'blues' in gladioli and roses or not?" asks the editor of the American Garden. Several blue gladioli have been originated during the past 10 years. But the corms do not propagate and dwindle away and die.....

ALL things considered, we should choose Moore's Early for the earliest black grape....

MR. PADDOCK, in Hoard's Dairyman, says that when he has sufficient cream gathered for churning, he heats it to nearly blood heat, stirring it occasionally while heating, so as to mix it thoroughly; then he sets it away to cool and lets it stand until the next day; then he warms it to about 65 degrees and churns. As soon as the butter begins to show like grains of sand he cools it at once, by putting a little cold water in it. For several years his wife has followed this plan, and the butter generally comes in pieces the size of a small pea in about ten minutes, seldom 15. He finds the butter much better than when he churned 30 minutes or more.....

JOHN BOYD says that refrigeration prevents the formation of acidity in the cream, especially if submerged; while stirring merely interrupts and retards, but does not prevent acidity. In fact the bad effects of stirring are so apparent that it astonishes him to hear men advocate the practice who claim to be not only practical, observant workers, but who lay claims to be in the first rank. It makes him think their butter-making is based more on theory than on actual work. This excess of theory has been the curse of the dairy business for years.....

MR. RAWSON says that onion seed should be thrown into water and that only those which sink are fit to sow.....

WE would respectfully inform our later friends (the older ones are familiar with the fact) that the R. N.-Y. offers nothing whatever for sale except the paper itself. The R. N.-Y. No. 2 potato was disposed of over two years ago (a single bushel) and is now in seedsmen's hands .....

DIRECT.

——N. Y. WORLD: "The Commissioner of Agriculture at Washington in a recent report declares that a well regulated system of public roads throughout the United States is daily becoming a great necessity and merits the earnest attention of Congress, and that while our railroad system has become the most perfect in the world, our common roads are inferior to those in any other civilized country. The road-tax system is characterized as a relic of feudalism, borrowed from the 'statute labor' of England, and its evil results are apparent in the neglected and ill-conditioned common roads of the country."

——WESTERN RURAL AND STOCKMAN: "If the whole people could be made to realize the fact that there is the largest sum of money in the hands of our government that was ever seen on earth, or probably ever will be seen, there would be an inquiry into our financial management that would come with the force of a cyclone."

——HOARD'S DAIRYMAN; "There are some things, about farmers' institutes, in Wisconsin,—they can't be any more lively, unless they run wild—which would be a bad thing to do; and they can't be any larger in most places, unless there is a general enlargement of public halls."

——PUCK: "Whence does the Trust derive its power? Mainly from the Senate of the United States. It is in that body, forbidden by the Constitution to originate measures affecting the revenue, that the customs tariff of the nation is practically shaped. There it is that whatever the House of Representatives may offer in the way of legislation is trimmed and clipped and cut and changed end for end, if need be, to suit the demands of the Trusts which have seized upon the business of the country. In that body, which was once supposed to represent the conservative sense of the nation, every measure designed to forward the prosperity of the people is turned into a law for the benefit of the Trusts"

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——"FROM personal observation I do not doubt that the income from our orchards could be doubled by better management, and this consists chiefly in better cultivation, more manure, spraying, with arsenical poisons, careful pruning, and, above all, placing the fruit on the right market at the proper time."

——HOARD'S DAIRYMAN: "One reason why there is so much truth in the oft-reiterated remark,—'Farming don't pay,'—is, that there is not another business on the face of the earth that, in proportion to the number engaged in it, supports so many incompetents"

——COLMAN'S RURAL WORLD: "There is no freedom on earth equal to that of a man in this country who owns his farm and is out of debt."

——LIFE: "We have said that if all Americans were consistent in their Americanism, we could not be conceited enough; but, as Mr. Howells has pointed out, we are a race of snobs. We all have yet a sneaking reverence for rank and title, although we have demonstrated to the world that only where rank and title do not exist may the highest plane of manhood be reached."

——N. Y. HERALD: "A State Dairy School to instruct young men and women how to produce milk? Watertown would be an appropriate location for it."

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SATURDAY, FEBRUARY 23, 1889.

THE RURAL NEW-YORKER for 1889, will be, as hitherto, invariably, $2.00 a year for single subscriptions, and $1.50 in clubs of five or more.

Mr. Stewart on page 106 *says:* "*All rules for feeding are modified more or less by the character of the cows.*" *Don't forget this when studying the rations proposed by chemists.*

THE President has signed the bill making the Department of Agriculture an executive Department with a seat in the Cabinet for its head. Very properly the honor of being nominated the first Secretary of Agriculture in the National Government has been conferred on Norman J. Colman hitherto Commissioner of the glorified Department. The business of demonstrating that the change is likely to be beneficial to the greatest industry of the nation, and that there is a broader mission for the new member of the Cabinet must, however, fall upon the man whom President Harrison may appoint after the fourth of next month.

The "Parrot Painfully Pounded" on page 135

IF governments find it wise and necessary to suppress gambling dens which take money from the idle and the dissolute who have never learned any noble or proper use of money, how much more and how much stricter should be the suppression of that diabolical modern form of gambling which keeps the prices of grain and other necessaries of human existence in fluctuation, and always robs either the poor consumers by enhancing prices, or the struggling and ill-paid producers by suddenly lowering them. Our people, patient as they are, cannot long tolerate such monstrous wrong.

"*I believe it is conceded that lime represents no plant food—it merely prepares for use what is already in the soil.*"—D. C. L., page 126.

IF, as is reported, the proportion of farmers who attain an age of 80 or more years is 461 in a total of 1,000, and of farmers' wives 800, the figures do not show by any means that farm-house work wears out the women. Both women and men rust out faster than they wear out. The returns are said to show that out of 1,000 women over 80, all but 50 were busy house-wives. On comparing the looks and manners of ladies from town and country making purchases in a popular store the other day, a striking difference was manifest between the country women, ruddy with good health, lively in manner and vigorous in movements, and their pallid, distressed-looking, and slow-moving sisters from the close rooms of the town.

"*I believe if I had silage or roots to feed, I could feed more cheaply.*"—C. F. O, page 126.

IT is true that we see and hear comparatively very little of late years, of the pretty, lively birds that used to fill the air with warblings and chirpings more welcome to most ears and more pleasant to most nerves than the costliest piano thrumming. But whether the crows are the cause is very doubtful. They are as scarce here as any of the small birds have become. The children, however—bless them!—are sempiternally full of chirp; and they, and a canary here and there, are now the chief sources of the genially animating chirrups that are left; for the grown-up girls, who used to be the warblers supreme of all, when singing over their work without caring for listeners, seem to be now taken up, even before they are young women, with premature questions of fashion, dress, and company; and are, for the most part, only heard in song as evening screechers over the keys of an instrument.

"*As lime increases in bulk three times in the change to a hydrate by the absorption of water during the process of air-slaking, it is necessary, to prevent loss, to buy it by weight and not by measure.*"—page 123.

THE other day Mr. Cottrell introduced into the New York Assembly a bill providing for the establishment by the State Dairy Commissioner of not more than four dairy schools for the purpose of giving instruction to young men and women in the management of dairies, the production of milk, and the science and art of making butter and cheese. It authorizes the Commissioner to hire farms, cows, churns, pans and all other needful dairy implements and appliances. The product is to be sold, and the proceeds to be paid into the State Treasury. The Commissioner is also authorized to appoint an assistant, well acquainted with the chemistry of butter and cheese, who is to superintend the dairy school system, for the support of which an appropriation of $30,000 is provided. Many of the political papers—in their non-agricultural issues, of course—are strongly opposing this measure; but if the farmers really approve of it—and why shouldn't they?—they can certainly secure its passage by making their wishes promptly and emphatically known to their representatives in both branches of the legislature.

WE have seen a number of men working on country roads during the past few weeks. The mild winter has been good for road-making. Last week we saw a gang of men trying to macadamize a road through a swamp. Stones were piled on the frozen surface to the depth of a foot or more and gravel was to be placed on top of these. The road-makers may not know it, but this piece of road-making will result in nothing but a painful failure. The macadam-road is made of stones and gravel, they say. Sure enough! So is a house made of bricks, wood and nails, but unless the bricks, wood and nails are put where they belong, the house will be good for nothing. It is folly to put the stones on the road unless they can rest on a solid foundation. It's true that the frozen ground is solid enough at present, but when the frost comes out, in the spring, the stones will be sure to work out of place and the road-bed will be worse than before. If we are to use stones on the road it is absolutely necessary that we dig out the surface of the road to such a depth that the stones will not be thrown out by the frost. Anything less than this is half-way business and will give less than half satisfaction.

IN the effort to make personal property bear its just share of taxation, the Ohio legislature proposes that the assessors should actually administer oaths as to the real value of the personal property owned by tax-payers. When this plan was tried in England about 200 years ago, the result was that the returns were actually less than before. Is it likely that subterfuge and perjury are more abhorrent to the Ohioans of to-day than to the Britons of two centuries ago? It is marvelous how movable taxable property often disappears. In 1882, 118,286 watches were listed for taxation in the Buckeye State, but in spite of the increase of population and wealth in the interval, only 114,631 were listed in 1887—a disappearance of 3,655 taxable watches in five years! In Hamilton county, consisting mainly of Cincinnati with its city population of about 325,000, the number of watches decreased from 9,283 to 8,659; while in Geauga county with its farmer population of 15,000 or thereabouts, the number had increased from 845 to 922. The same rule applies to pleasure carriages, money on hand, credits and all sorts of personal property. Any moral deductions from such a state of affairs?

NOW, TAKE IT BACK, SIR.

LAST week's R. N.-Y. referred to a person who has industriously circulated the report that our No. 2 potato is really a variety originated by him some four years ago. He now—perhaps from fear of having laid himself open to prosecution—moderates his claim. Still he advises all to *purchase both kinds and try them side by side.* The R. N.-Y. is exercised over this matter for the one reason that both innocent and unprincipled parties may plant and sell the spurious for the genuine R. N.-Y. No. 2, thus causing the confusion and uncertainty necessarily arising from the dissemination of two very distinct varieties under the same name. All seedsmen and others who are interested may readily determine one kind from the other by sprouting one tuber of each in a warm, light room. The sprouts of the No. 2 will be dark purple, nearly black; those of the other green. The price of the No. 2 is $16 a barrel and the entire supply, we are informed, is nearly exhausted. The R. N-Y. has evidence that the person who up to a late date claimed the No. 2 to be one of his seedlings, *knows* them to be entirely distinct. We now call upon him in justice to the R. N.-Y. and to the public, to make an explicit statement to that effect. Otherwise, in due time, we shall publish our evidence and abundantly show his method of seeking to benefit himself at the R. N.-Y.'s expense.

ACCIDENTS AT GRADE-CROSSINGS.

THE large number of accidents due to railroads crossing other roads at grade, so forcibly illustrated in the cartoon in the RURAL of January 7, 1888, has directed the attention of the legislatures of many of the States to the necessity for legislation to do away with this fruitful cause of disaster and death. In 1887 there were 41 persons killed and 57 injured at such crossings in this State, and in 1888 the killed numbered 28, and the injured 34. In the three years ending with 1887 the total number of deaths at the grade-crossings in the single city of Philadelphia amounted to 133; while in the same year the number of deaths in Chicago reached 142, of which 16 occurred in a single month! A special committee appointed, some time ago, by the Massachusetts legislature, in its report just made, shows the great difficulty and expense of altering the existing grade-crossings. Of these there are 2,260 in the Bay State, and the expense of altering them is estimated at $48,131,000. This enormous sum is nearly equal to one-third of the aggregate capital of the 60 corporations that reported to the Commissioners in 1887, and is nearly 90 per cent. of their gross income for that year, while it is six and one-half times as much as they paid in dividends. The Commissioners advise that the making of new grade-crossings should be absolutely prohibited, and that the alterations of the old ones should be made gradually, the dividend-paying roads abolishing five per cent. and the non-dividend-paying roads 2½ per cent. of their crossings every year. Their plan proposes to put the work under State authority and to divide the cost between the railroads and the cities, towns and counties benefited by the change, limiting the tax to be imposed on any community to some fixed proportion of its assessed valuation, and leaving the proportion to be paid by each party to be determined by the circumstances in each case. New York and a considerable number of other States are likely to make laws relating to this matter this year. Whatever concessions may be made to the railroads with regard to crossings at grade already made, the construction of new crossings of the kind should be absolutely forbidden. The aggregate list of killed and wounded owing to this cause every year in the whole country, must be as heavy as that in many an important battle, and no further extension of the evil should be permitted.

AN UNJUST ATTEMPT TO ABOLISH DOWER.

DOWER is the provision the law makes for a widow out of the land owned by her husband, and the word has reference exclusively to real estate. Dower is allowed in all the States except six, and in all the Territories except four. The amount of it is generally a life interest in the use, income and profits of one-third of the husband's real estate; but it varies greatly. In Nevada the widow takes the entire community property after the payment of debts and other obligations; in Washington Territory she takes half the common property, subject to the debts of both; while in Wyoming she takes the entire estate, real and personal, after paying the debts, provided it does not exceed $10,000. In all the States and Territories where dower is allowed, it is necessary that the wife should join in a conveyance of the husband's real estate in order to give the grantee, mortgagee or purchaser, a good title. As a rule, if there is no statement in the conveyance or mortgage that the wife releases her "dower, and right of dower," she can enforce her dower on the death of her husband.

Under existing laws in New York, the wife is assured of one-third interest in any real estate her husband may own at any time after the marriage, and of this she cannot be deprived without her own free consent.

Mr. Eugene F. O'Connor, of Brooklyn, has just introduced a bill into the New York State Senate, which, instead of giving the widow a life estate in one-third of the lands which the husband may own at any time during his married life, provides for giving her the use, income and profits of a third of the lands which the husband owned at the time of his death. The effect of this provision would be to enable the husband to deed away all his real estate at any time during marriage without his wife's consent and free from all claim on her behalf. The husband would be left absolutely free to do what he liked with the land during his life-time without hindrance from his wife.

This bill may be good for the husbands, but it certainly is not good for the wives of the State; nor is it just to the thousands upon thousands of shrewd, earnest, hard-working, helpful wives who have contributed a fair share towards the support of their families and the acquisition of whatever property may have been accumulated. The RURAL NEW-YORKER is strenuously and earnestly opposed to it. It is with no doubtful voice that it calls upon all the wives and other women of the State to join with all the manly husbands, fathers, sons and brothers of the grand old Empire State to see to it that such an unjust law shall never find a place on her statute books.

BREVITIES.

THE Guernsey cow is gaining a reputation as a butter colorer. She is said to be superior to the Jersey in this respect.

ONE of the finest apple orchards the R. N.-Y. has ever seen was mulched every three or four years six inches deep with salt-meadow hay. The hens were turned in periodically to give it a thorough scratching over.

ENTOMOLOGISTS, pray give us a practicable mixture that will kill the flea-beetle. The R. N.-Y. has little hope of raising at the rate of over 700 bushels of potatoes to the acre, if these pests prove as numerous and unattackable as last season.

A GOOD many farmers trace much of the fertility of their farms back to the hog-pen. Every load of manure carried to the field is first worked over by the hogs. The hog-pen is thus the gate to the farm. One can make plenty of manure by this system. Can you make first-class pork as well?

A STRENUOUS move is being made by cattlemen and butchers of Texas, New Mexico, Arizona and Colorado to establish direct communication with meat consumers everywhere, in opposition to the costly system of sending the cattle to Chicago for butchery and meat distribution. As it would give large room for reduction of prices of meat to the eaters, and prevent what would otherwise be a gigantic and overpowering monopoly, it is to be hoped that these Southwesterners will be fully successful.

INTIMACY with nature favors health, strength, happiness and length of life. Adam Dietrick born near Jena, in 1711, was a plain farmer; but so close an observer of plants and plant life as to become a valued correspondent of the botanists of the universities, including Linnæus. His descendants have all been plant lovers. His son Friederick, was Professor of Botany at Eisenach till 82 years of age. His grandson David, was custodian of the herbarium at Jena University until his death lately at 90 years of age. He was vigorous in mind and body to the last, and an especial desire and delight of young students was to have his company on botanical excursions, and this he seldom declined. He knew all about every plant of the region and where to find it.

A BILL now pending in the New York legislature provides for the increase of the salary of the Dairy Commissioner from $3,000 to $5,000 a year. It also gives him and his assistants in tracking "oleo," free access, ingress, egress and regress to and from all places of business, factories, farms, buildings, carriages, vessels and cans in the manufacture and sale of dairy products or any imitation or substitute, together with:

"Power and authority to enter and open any place of business, factory, building, store, bakery, hotel, tavern, boarding house, restaurant, saloon, lunch-counter, place of public entertainment, carriage, car, boat, package, vessel, barrel, box, tub, or can containing or believed to contain articles manufactured, sold, or exposed for sale."

With such ample inquisitorial powers on the side of the law-enforcers, surely the law-breakers should have a slim chance of escaping detection and punishment

A NEW and highly disturbing factor has come prominently into our grain markets. For some time several railroads have been buying grain both as a speculation and for the sake of the addition its transportation would afford to their traffic. It has been done so quietly, however, and to such a moderate extent as to escape general public attention. The Baltimore and Ohio, however, under its new management, has embarked in the business so heavily as to increase the grain trade of the Monument City to an extraordinary extent at the expense of Philadelphia and New York. It is charged that this new departure has been taken, not so much out of railroad greed and need of business as for the private and personal gain of those who run the road. It is believed that the policy is in direct violation of the law, and a demand is made on the Inter State Commerce Commissioners to take prompt and efficient measures against it.

Dairy Husbandry.

MORE BUTTER WINNERS.

LAST week we gave some notes from dairymen who won prizes at the meeting of the Vermont Dairymen at Burlington. Here are a few more:

FROM H. W. WALKER, WINNER OF FIRST PRIZE FOR 10-POUND TUB.

My cows are high-grade Jerseys. They are watered twice a day and are fed morning and noon on Timothy and clover hay, at night on cut corn-fodder. Their grain is 4½ parts corn-and-cob meal, 1½ part bran and one-half part linseed-meal. Of this mixture they are fed, twice per day, four quarts in the morning and four at night. I shall very soon increase the bran to two parts and the linseed-meal to one part.

I use the Cooley creamer. The milk remains in the creamer 24 hours, at a temperature of 42 degrees. The cream is ripened until acid, churned in a Stoddard barrel churn, washed in granular form, and salted in the churn. I endeavor to leave in the butter, after it is worked, one-half ounce to the pound. I use the lever worker, and Thatcher's butter-color. I market in ten-pound boxes lined with dairy cloth.

To produce prime butter after a nice herd of cows is secured, it is imposed upon the workman, in the manufacture, to very carefully watch all the different changes through which the milk, cream and butter have to pass, and to see that all requirements are strictly conformed to in the varied processes. If one point is neglected, the whole work is destroyed or very much impaired.

Windsor Co.

FROM STEPHEN HEWITT, WINNER OF THE SECOND PRIZE FOR FIVE-POUND BOX.

My cows are high-grade Jerseys I give them all they will eat up clean of a good quality of English hay, and a mixture of, say, 500 pounds of Western corn-meal, 100 pounds of cotton-seed-meal, and 300 pounds of wheat bran, fed dry twice a day, in rations of from two to three quarts per feed—in the morning after the hay, and in the evening before the hay, with good spring water. The milk was set in a Stoddard creamer 24 hours, in running water, and the cream was ripened by warming from 12 to 20 hours before churning. It was churned in a Stoddard churn 30 minutes, at a temperature of 66 degrees, and washed while in a granular form, in the churn.

I colored my butter with Wells & Richardson's butter color, using in the cream about three tea-spoonfuls for from 40 to 50 pounds of butter, and I used about three-quarters of an ounce of Higgins's salt to the pound, dry. It was worked with a lever worker just enough to salt it evenly. I pack my butter in five-pound boxes lined with a parchment paper made in Philadelphia I consider it of the utmost importance that the feed and water should be good, and that the stable should be light and airy and moderately warm, and that everything should be quite clean, and the milking quiet.

Windsor Co.

FROM F. D. DOUGLAS, WINNER OF THE SECOND PRIZE FOR FIVE-POUND PRINT.

My cows are mostly grade Jerseys, bred up from grade Short-horn and native stock. I have a few registered Jerseys. I milk usually from 40 to 50, all told; but as I raise my own stock, selling annually such as fail from old age, or do not test satisfactorily, I always have a large proportion of young animals. I raise from 15 to 20 heifers annually, the most promising of which are retained until maturity, and then disposed of, if they do not give satisfactory returns for food and care. My herd last season did not represent over 35 mature cows, estimated by the weight of milk produced by the heifers, as compared with the average of the mature cows. By this estimate, the herd produced an average of over 300 pounds of butter per head.

I manage so that my cows come in, as far as practicable, in September. I raise my own hay and grain, and in favorable seasons buy little but cotton-seed meal. The food ration for my cows in milk is made up of early-cut hay, and a mixture of corn, barley, oat, pea and cotton-seed meal, the proportions depending somewhat upon the amount of each of the four first named produced. I seldom feed more than two quarts of cotton-seed meal per head, per day, never more than three quarts, and it is always mixed with lighter food. The amount of the grain ration depends upon the flow of milk given at the time, the deepest milkers receiving the most. Two and three-year-old heifers get but one-half to two-thirds as much as mature cows. I find that every judicious increase of the grain ration, up to the point where the digestive organs begin to be over-taxed, is followed by increased profits, provided always that the cow is worth keeping.

The grain ration is always divided into two feeds, and placed upon the hay. I do this to compel the cows to eat it slowly, and thus secure a more perfect mastication and complete mixture with the saliva. This first step in the process of digestion is an important one. Injury to stock from heavy feed is often caused by want of attention to this matter.

The cream was raised by the original "deep-setting" process brought out by myself in 1868, usually called the Douglas method. This method attracted much attention at the time, but as no patents were secured upon any of the devices used in connection with it, and no effort was ever made to introduce it, it has never been extensively adopted. By this system, the milk is set 12 inches in depth, at a temperature of 63 degrees theoretically, though, practically, at a range of temperature from 61 to 66 degrees. By this system, a more perfect separation of the cream is secured, with a much smaller consumption of ice, with much less labor throughout the entire process, and with better keeping qualities in the butter product, than by any other process of cream raising yet devised.

The butter was churned in a Mosely & Stoddard barrel churn. It required about 30 minutes to churn the batch from which the sample was taken; but with batches of from 150 to 175 pounds, it usually requires from 45 to 60 minutes. It is churned by horse-power, and the duration of the churning depends somewhat upon the number of revolutions per minute. It was washed and salted while in the granular state, particular pains being taken not to allow it to mass until after the salt was thoroughly incorporated in it. It was then worked sufficiently to expel the brine, using pressure rather than a grinding process. It was colored but slightly, with Wells & Richardson's butter-color.

Windsor Co.

SHALL DAIRYMEN COMBINE?.—Yes, combine Thatcher's Orange Butter Color with your cream every month in the year and you will advance the price of your butter. This is the best combination.—*Adv.*

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

ALL the shops are now displaying their spring goods, although New York is far from balmy, as far as the weather is concerned. Among the newer fabrics are what our mothers used to know as Grecian lustres, now called brilliantines. They are very soft and fine, with a lustrous, silky gloss. They suggest Irish poplin, but are finer. There is no doubt they will make very useful and handsome summer gowns, for they throw off dust, and wear a long time. A black brilliantine, trimmed with black and white surah, would make a serviceable summer gown for a woman who expects her one best dress to serve for some time. A large hat or small capote of black lace would go with it. The hat might be trimmed with for-get-me-nots or violets, the latter being the most fashionable flower at present. Another handsome gown could be made of pearl-gray brilliantine, trimmed with white or silver braid, the ornamentation consisting of a braided vest and skirt panel.

* * *

MOST girls like a nice white muslin for hot days. White frocks of all-over embroidery have been almost done to death; one may display more style with less elaboration. A pretty model is somewhat of the Directoire style, fine India linen being the material preferred. The gathered skirt is perfectly plain; and no bustle is worn, only a small pad. The plain, round waist has a falling-over frill about two inches deep around the neck and down the front. The sleeves are full and puffed, about three-quarters length; a frill about four inches wide finishes them. A wide sash, which may be of muslin, is worn, tied in the back—in the front it is pulled out to double the width at the sides, and held in place with ornamental pins. This is very becoming to a slender figure. A surah sash, either moss green, golden green, dull yellow, or pale terra-cotta, is lovely on the white gown. Pale blue ribbons, which used to be the ambition of most girls with their white gowns, are now rather out of date. Lavender or lilac is very pretty, and seems growing in favor; but it is a color that fades too soon to be very serviceable. A pretty addition to a white muslin frock is a hat of shirred white mull, either a poke or a flat Directoire. It is not difficult to make, and may be trimmed either with a bow of ribbon or a bunch of flowers. It is becoming to most youthful faces, and may often be contrived at small expense, as a means of saving a better hat.

* * *

SUMMER is certainly a season for economy in dress. One may contrive a sufficiency of changes at a small expense. Cotton fabrics are coming more into wear every year, as they increase in beauty. A very convenient summer garment is a flannel blouse waist. It can be worn with so many different skirts, being comfortable enough for warm days if desired, while in chilly weather it may be worn either with cotton or woolen skirts. The color must be chosen with some idea of harmony; plain cream-white goes with anything, but it is naturally very easily soiled. English girls are very fond of these blouses in different shades of red. They come in pretty mingled stripes also. Of course, a handy woman can make one of these garments easily enough They have full sleeves with deep cuffs, just like those on a boy's shirt, except that the cuffs do not button. They have a large, flaring sailor collar, the open space at the neck being filled up by a plastron with a high collar. This plastron is hooked into place, so that it may be moved if desired, the place being filled with a gay silk handkerchief or fichu by way of change. For country excursions one of these blouses, worn with a plain flannel skirt and little sailor hat, makes the prettiest and most suitable costume a girl can wear. A pretty combination may be made with a gray and pink striped skirt of tennis suiting and a plain gray blouse with striped collar and cuffs.

* * *

ONE cannot answer all the questions a child asks; but an intelligent interest in what he wants to know will teach observation; it makes all the difference between eyes and no eyes. When a child comes in exclaiming over the dear little pussy-willow, it is no trouble to admire it with him, and to tell him that the pussy is the blossom. It is the same with everything else; the child whose mother encourages powers of observation in this way is always better informed than one whose treasure is greeted with "Don't bring that mess in here! I don't know what it is." Everything in nature is wonderful to children; thrice happy are they whose country homes enable them to find "tongues in the trees, sermons in stones, books in the running brooks, and good in everything."

A LETTER FROM EUNICE WEBSTER.

WHAT a fight is being made over that Thanksgiving cartoon, and, like the rest of belligerent humanity, I want a hand in it. I wonder if J. H. G. thinks that women ought to be three steps lower when it comes to a fight. Probably it would depend on whether he thought he could whip his opponent on a level.

How much we read or hear to the effect that man and wife are one; but it seems in many cases that they are two, or ought to be according to J. H. G. viz., the "supreme ruler" and the "chief cook." J. H G. would like to know why so many women are "always and eternally" dissatisfied with their positions in life. I'd like to know why so many men are "always and eternally" afraid that a woman will have an idea or venture to undertake anything without first pleading, on bended knees, for the sanction of some pantalooned biped with regard to the matter. If women ought not to figure prominently in out-door scenes, why didn't the artist put her on the piazza? Such a position would have been nearer "the music of the tea-kettle." According to J. H G's views, perhaps it would have been still more appropriate to have her looking out of the kitchen door or window, admiring instead of sharing in the scene. I wonder if J. H. G. thinks a woman ought to figure in the milking stable. That would be quite distant from "the music of the tea-kettle," and she wouldn't be in her realm either; but perhaps he would condescend to accept her assistance in order to humor her, or make her think she is of some use to him.

I wonder why an apron was put on that woman. Probably after the voices of the cattle and swine had ceased to fill her ears with their rich melody, she went back to "the music of the tea-kettle." Maybe she thinks she will have to clean up the yard when the barnyard choir has retired from the scenes. I wonder which choir she likes best—that in front, or the one that is gathered around the family?

It seems that all the animals and the family can sing without a book; or perhaps there was only one and, of course, the leader and head of the house must have that. Perhaps he wouldn't dole out money enough for her to have one, too. As the man is the real and only head of the family (or ought to be according to J. H. G.), why doesn't he go and do all the trading for the family, instead of trusting the "chief cook" with the money he sees fit to dole out to her? Besides, she would be out of hearing of "the music of the tea-kettle" while she was gone for some cloth for his shirts and some necessary articles for the family use. There is a very self sacrificing man around here, who goes to the city every fall and gets himself a nice suit, and for his wife he gets some limpsey cotton fabric, and then wonders why her dresses don't look like those of the rich folks. Truly, we "chief cooks" admire such thoughtfulness, and if the "supreme ruler" comes home drunk, swears, abuses us, and spends his money on other "chief cooks," surely we ought to be contented with "the music of the tea-kettle" and our positions generally. If "the lord and master" doesn't spend all before he dies, we can have the use of one-third of what is left, and if he is thoughtful he will select some black cotton fabric, so that we'll not have to go to any extra expense in case that time should soon come

THE GOSSIPS' CLUB.

A DOZEN ladies in the widely-spread little village of B—, have formed a woman's club, the design of which is not by any means a new one In order to nip in the bud the criticism of husbands who might be inclined to sarcasm, they have called it "The Gossips' Club" They do not claim that it is for mutual improvement, and there is not the slightest pretence made to the study of Shakespeare or Browning, or Emerson. The only requirement for membership is a promise that the candidate will never take the floor when another woman has it, that she will bring work, either fancy or useful, and that when the club is held at her house, only tea, coffee or chocolate, and wafers shall be served. There is a fine of 25 cents for the first offence and 50 for the second; said offence to consist in mentioning the name of a neighbor coupled with any remark that the speaker would not make if the other person were present. Peculiar rules and restrictions for a gossips' club, thought I when invited to join, mentally deciding that I would go and learn what these remarkable women would talk about.

After a few preliminary remarks about the health of their children, etc., the ladies settled down to their work. Now, thought I, either some one will be kept busy collecting the fines, or there will be awkward pauses. I was, however, so agreeably disappointed in the intellectual status of my sex that I will mention some of the subjects discussed at this meeting.

"Did it ever occur to you," began Mrs. A—, a lovely, white-haired lady of 50, "that women plan too much? As head of the house, we decide upon a certain system and method which we carry out though we may walk rough-shod over the habits and propensities of every other member of the family. That the washing shall be done on Monday is a law as inexorable as that of the Medes and Persians. It has taken me a good many years to discover it, but I have learned that there is such a thing as too rigid an adherence to a plan that may have been a very good one originally. If in the morning you portion out a certain amount of work that you wish to accomplish before night, and then find your plans upset by inevitable little mishaps, you are very apt to feel annoyed, and if you were very much bent indeed upon carrying out the plan, your annoyance will amount to an irritation of feeling that will not be slow in communicating itself to the rest of the family. One of the best managers, with the happiest families, and the best ordered house, that I know of, tells me that her rule through life has been: 'Whatsoever thy hand findeth to do, do it with thy might.' She says her duties so unfold themselves from hour to hour, that she never feels the necessity for making plans ahead"

"The education of our daughters," said another lady whose apparent occupation was the making of a set of crocheted table mats, "is a subject that must always be dear to every mother's heart. Children need a certain amount of letting alone, but they also need our care and guidance, and a certain amount of culture. They are the plants which God has given to us and we must prevent them from being choked by weeds. I think that every girl, no matter how happy her home or how rich her parents, should be taught some vocation that will enable her to make a living if necessary. A man if he be in any sense manly, will not care the less for his wife because he feels that she is able to care for herself and if he is not manly, she may care for herself whether she is able or not. Two years, after a girl has finished her studies, will be

sufficient to instruct her in any of the dozen or more trades or professions for some one of which she will almost certainly develop an aptitude. In Europe the sons and daughters of some kings and queens are taught trades. A woman who is a skilled engraver, stenographer, or nurse, or who understands telegraphy, book-keeping or dentistry, will never suffer for means of support. Then, too, if the years intervening between leaving school and marriage, are filled with the pursuit of some useful study, there will be fewer temptations. It is the girl who has nothing to do but dress, flirt and visit with her companions, who so often brings sorrow to the hearts of her parents."

Mrs. C. found the scarcity of woman's pockets a matter for immediate legislation. "Miss Anthony," said this staunch supporter of woman's rights, "has condensed a long statement of the woes and inabilities of woman into the one glaring fact that she has not pockets enough. The only pocket which fashion allows us, is so secreted that it is only at the expense of a disjointed collar bone or a curved spine, that we can make daily and hourly use of it. We are obliged to make use of muffs, a corsage or satchel, and I have seen women on shopping expeditions stow away small articles in the crowns of their round hats. We carry change in our gloves, and I have seen ladies, not over-particular, secrete small silver in their mouths. A sensible writer who sees no reason why a pocket should disturb either the symmetry of style or a lady's gown says a very fascinating design for a pocket of very bulky dimensions capable of carrying the house keys, the scraps for memoranda, unpaid bills, the 67 different samples to be matched, the addresses of a few dear friends and the lady's pin-money, can be made of an alligator skin extension to the corsage, either pendent on the outside of the skirt along the line of the waist belt, and tastily decorated with wide apple-green ribbons, or attached to the inside of the skirt and supported by wire attachments similar to those in a hoop-skirt. These designs are just as cute as anything the dressmaker can devise.

A pretty cynic brought up the matter of so-called "society;" for you must know that this little village of B. is noted for its fashionable lunches and receptions. There is no greater beauty or elegance of dress to be found in the adjacent metropolis than that which assembles at its charity ball. The cheerfulness with which its great ladies spend a hundred or many hundreds of dollars on a toilet for this ball for charity's sake, gives evidence of the beautiful spirit in which they carry out the words of our Saviour: "Inasmuch as ye have done it to one of the least of these, ye have done it unto Me."

My fair cynic, however, took exception to the present state of society, and asked what was gained by undertaking to make and receive formal visits from people of whom you know little and you care less, and whom for the most part you do not even wish to see? Why if a woman can count upon the fingers of one hand all the people she really wishes to see and know, should she pretend to want to see and know others? Why when she makes her tedious round of calls, does she breathe such a sigh of relief when the servant says, "Not at home"? I often think of a question I once saw in an article in Harper's, "If all the artificial rounds of calls and cards should tumble down, what valuable thing would be lost out of anybody's life?" Out of some lives everything would go, for, strange as it may seem, this same artificial round is the "life" of some people. Did you ever stop to analyze a fashionable "At Home," for instance? Fifty or a hundred people crowded together, each without anything special to say to any one else, but each trying to say it in a Babel of noises that compels her to raise her voice like a fish-woman. Conversation in an ordinary tone would be impossible. No one hears the music. No one hears anything that does her any good. All wander round in an aimless sort of fashion, go out to supper, sip bouillon, eat pâtés and croquettes, salads, cake, cream and fruits, bid their hostess adieu, and say, "What a charming time we have had," and go home with this lie on their lips, for I do not think so ill of my sex as to believe that one woman in 20 really enjoys this sort of thing.

There were practical "gossips" on housewifely thoughts intent, who exchanged ideas of worth on the domestic machinery, but of these I must tell you at some future date.

ALICE CHITTENDEN.

GOLDEN GRAINS.

As the Pittsburgh Advocate says, what a wonderful sense of peace comes to those who, far from human friends and in the midst of desolation, realize the truth of the Master's words, "Lo I am with you alway!" There are certain phases of religious experience which we cannot know until we find the presence of the Redeemer in an apparently empty world.....

Dr. Collyer recently preached from the text, "Live joyfully with the wife whom thou lovest." He said there is no question of deeper moment than that which many are asking now with sinking heart, and reading about in the returns of the divorce courts, Is marriage a failure, and if so what then? We love to think that husband and wife stand for more than father or mother or children, because they are the fountain-head. We have to wonder, however, whether the new generation are not looking on marriage as a sort of rollicking holiday business, because they feel that if they like, they can throw off the yoke and run free.....

We must teach and you must learn, young friends, that the truest and best wedded life can bloom only out of the best and purest unwedded life. The remedy lies not in any doctrine of go-as-you-please, nor finally in the enactments of the law, which cannot reach the root and heart of the evil; nor does it lie in the church, but with you and me and yours and mine, and in this shall we be pioneers. Only to the pure are all things pure. Only to the true, loving heart are all things possible. All true love is blent with reverence, as heavenly light is blent with heavenly dew....

The Texas Advocate says that if you can live gently, patiently, unmurmuringly, amid all your frets and irritations, day after day—that is heroism. That is your task. You are to resolve to do it. No one, not even God, will do it for you. Heaven does not put features of beauty in our lives as the jeweler sets gems in clusters. The unlovely elements are not drawn out and replaced by lovely ones, like slides in the stereopticon. You must win your way through struggles to all noble attainment. It is he that overcometh that is made a pillar in God's temple..... .....

The Richmond Advocate says we have been witness to a sermon served like an ox roasted whole—horns, hide and hoofs. It was weighty. There was inertia of avoirdupois. The cooked carcass, stuffed with extracts from countless commentaries and classic criticisms, offended rather than invited to a banquet. A single sirloin brought out brown, with the juice bound up with the crust, would have tempted the palate and nourished more than the huge mountain of beef..... .....

Napoleon is reported to have said that he feared the newspapers more than a thousand bullets.....

Wendell Phillips was a living example of his statement that no man really believes his own opinions who does not give free scope to his opponent. Persecution is a want of faith in our creed.....

Isaiah Strong says ancient civilization was sedentary and contemplative; ours is active and practical. In point of experience, results, acquisitions, enjoyment and sorrow—in all that makes up life, save the mere factor of time, the antediluvians were the children, and the men of this generation are the aged patriarchs.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

EXTRACTS FROM SUNDAY EVENING TALKS AT THE RURAL GROUNDS.

Proverbs 25—32: "He that refuseth instruction despiseth his own soul, but he that heareth reproof getteth understanding."

It occurs to me that one of the worst misfortunes that some of us fall into is that of setting too high a value on our own opinions. "A *little* knowledge is a dangerous thing!" We see almost daily evidences of the truth of this old saw. Almost every smatterer misjudges his own powers, and believes that he knows about three times as much as he really does. In every class that graduates from our Normal Schools or our colleges we find men and women who might well serve as models for the person described in the text.

"He that refuseth instruction despiseth his own soul." People of this kind are narrow, superficial and bigoted. They have memorized a great many books and can repeat their lessons glibly. This makes them believe that they have fully mastered what they have studied, and we get a class of dogmatic men and women who go through life so eager to pick out and criticise the little, insignificant mistakes they discover that they render themselves incapable of grasping large ideas or developing large, kindly hearts or broad, generous natures.

This world has now been in operation for a good many years and several billions of people have been adding from year to year the results of their thinking and investigation to the store of knowledge. Years ago when books and papers were practically unknown, it was quite possible for the fortunate few who could obtain access to the secrets of the learned to be dogmatic and overbearing in their assumption of wisdom. Wisdom in those days was simply a trade secret. It is impossible, for example, to conceive of any man in this age who could, by his superior knowledge of chemistry, acquire such a power as that possessed by the men who knew the secrets of Greek Fire in the Middle Ages—or the first uses of gun-powder later on. Yet almost any of our modern chemists knows more than these old fellows ever dared to dream about. Thus we see that if there was any sense in this old proverb at the time it was written, there is double sense in it now. I believe it to be a fact that the more a man investigates and digs at the root of a subject, the greater respect he has for the opinions of others and the more perfectly developed in him are the charity and kindly feeling that go so far to hold the world together and make society truly strong.

Now just a word about the second part of the text. "He that heareth reproof getteth understanding." It is a characteristic of your "know-it-all" friend that he never can consider himself deserving of reproof. Speak to him ever so kindly about his faults and he feels insulted at once. This is a very unfortunate condition to fall into. Next in value to a fair and candid friend is the ability to take a criticism or a reproof in the proper spirit.

Going to other persons and telling them our opinions about their faults or mistakes is not at all a nice business to be in for the man or woman who attempts to cultivate any refinement of feeling, and yet there can be no doubt but that a good square bit of fault-finding, earnestly and forcibly expressed, will sometimes prove the kindest and most considerate thing we can do for a friend.

There are different ways of finding fault, different methods of reproof. One who would do it in the way calculated to bring the best results, must study his friends. Any teacher of ordinary discernment must know that it requires a variety of punishments in order that a reproof may bring understanding regarding the rules of the school. The coarse, rough, brutal boy may need his reproof in the shape of a whipping; while the little girl, conscientious and faithful, might cry her eyes out at a sharp word or a stern reproof. As a rule, we all need somebody to "keep us straight." The people who can gauge their own conduct just right and who are not helped by a little friendly criticism are mostly too good for this world If a man has good friends upon whom he can rely, I don't know but it is a good plan for him to depend upon them a little for rules of conduct.

We cannot get much "understanding" from reproof administered by a stranger, although I can conceive of a case where a blunt and forcible criticism from an unknown person might set one to thinking in a way that would lead to good results.

* * *

I have always felt that the rudest shock to our sensibilities, or the bitterest stroke of misfortune might be considered as a reproof from which we may gain "understanding," if we will only look at it in the right way. Some people only grow sour and bitter and hateful in the face of repeated misfortunes; others grow patient, with a deeper trust and a larger hope. It seems to me that to each one is given, to a certain extent, the power of taking reproof or misfortune in either of these two ways.

* * *

The man who has no friends, who is simply so unlovable that others would sooner be away from him than with him, may be said to be preparing for himself a life that will be simply horrible in its loneliness. While he has vigor and energy and unimpaired powers of body and mind he may get on very well with his own thoughts and his own estimation of himself; but when he reaches the summit of life and begins to walk down the other slope! Good, true, sound friends who take an interest in one's welfare and can give the kindly sympathy, the disinterested advice and the generous criticism—are there any better influences with which one can be surrounded?

How are these friends secured—how is the generous and helpful friendship picked up? Why should we feel impelled to think and work for the comfort and pleasure of one person while we must be impelled by some strong stimulant before we can bring ourselves to come to the help of another? What is the cost of friendship? This world must be made up of equal bargains. Nature never intended to give something for nothing, and she never will do it.

Friendship is based upon gratitude—the golden rule. It is the warm, generous nature who delights in doing good, who is constantly on the lookout for a chance to perform little kindnesses and courtesies, who never stops to consider the cost or inconvenience to himself when a chance for being polite or useful offers itself—such is the one who attracts friends and feels a pleasure in attracting them, that is keen beyond all expression. Such a nature is well worthy of cultivation.

CONCERNING LIGHT, CUSHIONS, AND RATS.

MARY WAGER-FISHER.

There is a pretty story told of the late Emperor William of Germany in connection with kerosene. When the lamps for burning this oil were first introduced into the living-rooms of the palace, the Emperor, when leaving his apartment in the evening, turned down his lamps in order to economize in the oil burnt. When he returned, he found his room pervaded with an unwholesome odor, and upon inquiry, his servant told him that it came from turning low the wicks of the kerosene lamps, and that it should not be done.

"Then, I will not use them," exclaimed the Emperor. "My mother taught me always to turn low the wick of my lamp when not needing the light, and I would not willingly forego the practice of her economical training. So take these new-fangled lamps away!"

Since then there have been lamps of all sorts for burning this coal oil, and people have learned either to blow out the lamp, or to use a small night lamp for full burning, when leaving the room for a length of time. But one of the greatest troubles with the use of these lamps, is the care and breakage of chimneys. Not long ago all the chimneys of the student lamps in the house snapped into flinders, and I audibly expressed the wish that there were lamps that would burn without chimneys, whereupon Anaximander described one he saw lately in Seattle, Washington Territory, in the house of an ex-army officer, which had been used for many years in his family with entire satisfaction. It burned without a chimney, gave a fine, odorless light, was wound up like a clock, and could be used also as a stove for cooking. All these qualities especially fitted it for camp life. But the name of this lamp, and where it could be had, he did not know.

Some days later, however, upon returning from his office in the evening, he was encumbered with a package which he deposited upon the library table, remarking:

"M—— came into my office to-day, and brought me this lamp, which burns without a chimney, and is probably a descendant of the lamp I saw in Col. H's house in Seattle."

"And what is this curious metallic thing, which looks like the bonnet of a Salvation Army woman?" I asked.

"That's a shade to be used with it, and that other contraption fits on top, for the coffee pot, if you wish to make coffee or tea.'

"And what's this key for, down at one side?" asked the laddie. "Why there's something inside going! I can hear it when I put my ear close!"

"That key winds up machinery inside, which propels a fan, and I don't know how to stop it. But I will fill it with oil and start it going. M—— says half a pint of oil will feed it for six hours, and give a 50-candle-power light; that it can't explode, or break, or smoke"—and paterfamilias proceeded to fill and light the prodigy. When it was lighted, the room was flooded with a light of peculiar brilliancy and clearness.

"Oh that's boss!" cried the laddie. "That's like sunlight!"

Then the S. A. bonnet was put on, shading one side only of the flame, so that by turning the shade, light or shadow could be turned on any part of the room. One could sit in the shadow and still have the light fall on his book or work.

"The great thing about this lamp," said Anaximander "is that the combustion of the oil is perfect, and there can be neither smoke nor odor. The little fan inside explains the

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

whole business, feeding the flame with air. See what a white flame it is!" And during the whole evening we were profuse in our expressions of admiration of the new lamp which seemed to be faultless. A—— knew nothing of its origin, nor where it could be had, but stamped in the electroplated body of the lamp was, "Wanzer Lamp." When we went out to dinner, the red wick, about one inch across, was turned low, to see what would be the result. When we returned, no odor was perceptible.

"If this lamp continues to behave in this fashion, we'll have no other henceforth," I said, as visions of its multiplicity of uses rose before me. All that was more than a month ago, and the opinion first formed of that wonderful lamp has not in any degree been modified, but fully confirmed. We prefer it vastly to any lamp in the house for reading, and we have also the Rochester lamp which gives an excellent light. In fact I do not see how the lamp can be improved upon in its effect, and it certainly cannot be expensive, as lamps go. My only object in writing in detail of it, is to make the fact known to RURAL readers, that such a lamp has been invented and manufactured, and is probably on the market or will be, and it is so economical in oil, such a salvation for the eyes, such a saving of money and of labor in glass chimneys, and a lamp that can be turned to so many noble uses, no word of praise can be too emphatic in regard to it. One must wonder, if such a lamp was invented years ago, why it did not become at once generally known. Of the mechanical part of the lamp I cannot speak; but, judging from the longevity of its ancestor in Col. H's family, it is to be inferred that the machinery which drives the fan inside, is simple in construction and not easily worked out of order. None of it appears to view and the external appearance of the lamp is in no way peculiar and it admits of being made as handsome and fanciful as one could desire. The only thing about it that does not entirely please me, is the name on it. Wanzer is German, and the name should be that of a Yankee—some good old New-England name. But whoever be the inventor, blessed be his name, for he is a benefactor of the human race.

I ripped apart an old cushion lately that was a family heirloom, a cushion that I always liked, for it was a solid, settled sort of cushion, that kept its shape and never had to be shaken and patted into an orderly form, so I was curious to see if there was anything peculiar in the feathers worn by geese or hens 50 years ago. When I had it open, there lay the contents, a mass of feathers and carpet-rags so interlaced and matted together as to be almost inseparable; evidently feathers were scarce at the homestead when that cushion was made, and the equal proportion of carpet rags well mixed, filled the cushion case to the desired plumpness I thought it a method well worth repeating.

As we have lately been sorely pestered with rats—too smart by far to be caught by cats or traps—a gentlewoman sent me word to catch a rat in a wire trap which would make of him a prisoner; then to keep him in the trap until he starved to death, when all the other rats would leave and never in their lifetime return. We haven't tried this plan, because the would-be-vicarious rat does not enter the trap, and, then, how could one deliberately starve even a rat to death! The world is sadly out of joint in one way, one set of animals killing another set in order to live comfortably. With all due respect to Leviticus, Chapter 11th, I never felt that I had a moral right to take the life of anything which enjoyed life.

"The barren life, so soon as its barrenness is absolutely hopeless, becomes a literal death."

OVERHEARD.

"MISS C. *is* homely, that's a fact. But what a pity it is that she doesn't know enough to dress in black or dark colors at least. It would improve her looks 50 per cent. That bright green dress that she is wearing this winter intensifies her natural sallowness and seems to sharpen her features. It certainly is too bad that with a moderately well-filled purse she should clothe herself so unbecomingly."

"Do you remember those old cashmere dresses of mine—blue and garnet? I was up in the garret the other day looking over old clothing, and I found that there was enough good stuff in those dresses to make me two morning sacks. I shall box-pleat and belt in one, and the other will be tight-fitting in the back, with a loose front drawn in with ribbons which start from the under-arm seams, and tie in front in a bow. I shall use black ribbon because I have it, and the same good reason has decided me to have collar and cuffs of black velvet."

"YES, I am tired of wearing white skirts, or rather I am tired of the washing and ironing of them, and so I am going to wear a black satine skirt with my dark frocks. I saw recently some very nice ones in the city. They were embroidered in white and warranted not 'to run,' and were marked, I think, $1.25."

HELPS.

A LITTLE ICE-CREAM.

ICE CREAM is often the best food to take in certain fevered conditions, and a simple method for making it when only a pint is wanted is the old-fashioned one of placing a tin bucket inside a larger one of either tin or wood and packing the salted ice between them. The modern improvement applied to this way is to use an egg beater to stir the cream. When it is thoroughly beaten it will freeze with a fine grain, and very quickly, the quantity of cream being so small.

OLD COLLARS.

SIX collars with frayed edges stared up from my collar-box and not one of them was worn out except on the edges, but I dropped them in a heap into the rag-bag and went to buy a new one. I did not think I could afford more than one just then. The saleswoman showed me several different styles and among them one with a binding of marseilles on the edge, and as it looked strong and serviceable I chose that one and carried it home. Getting there in time to examine it closely, I decided that such a strip of marseilles might easily be put on my discarded collars, so they were rescued from the rag-bag and 10 cents' worth of ribbed marseilles made them all over new and enriched me very greatly.

A COLORED SKIRT.

Jennie Lane bought six-and-one-half yards of skirting and carried it home last week. She used five yards in making a long, plain skirt and reserved the rest to renew it around the bottom when it is worn off. The skirt is intended for every-day service, and as a substitute for a white skirt with all but very light dresses.

FOR A WASH-STAND.

Coarse, unbleached muslin can be made into a neat cover for a wash-stand by decorating it with a border of drawn work and figures worked in dark-yellow embroidering wash cotton. The heavy muslin fringes very nicely too. Such a cover is pretty and inexpensive, and can be washed an unlimited number of times. It should not be starched, for if stiff it will not hang gracefully about the corners of the stand.

BAKED APPLES.

Mrs. Brown has lately served the apples for supper in a new style that has proved very popular in her family. The apples are pared, quartered, cored and sweetened, and a little water is added and they are baked until tender in a baking-dish; then the whites of two or three eggs well beaten are poured over them and they are set in the oven until the eggs are of a light-brown color. Eaten cold, with or without cream, they are delicious.

A FASCINATING TOY.

Mr. McDonald at a sale bought an old clock for a few cents and gave it to his little son for a plaything, and the hours of absorbing pleasure the little fellow spent over it could hardly have been afforded by any ordinary toy. It must have been an instructive amusement too.

DARNING-COTTON MITTS.

Mitts knit of white darning cotton are a great protection to the hands in winter and are easily washed and kept clean. They can be worn while making beds or hanging clothes. They save the hands in sweeping and churning, or in carrying fuel—either coal or wood. When the work is finished, if they are washed and hung by the fire to dry, they will be ready for the next day's service. They can be kept cleaner than woolen mitts and will wear longer.

OLD CLOTHES

Winter days grow long enough in February to allow some time for examining the family stock of clothing, and for putting in order or making over all that is still useful. Then the useless garments can be cut into carpet-rags or sold for paper rags, and the spring cleaning will be easier if the closets are all relieved of their unnecessary burdens.

NEW CLOTHES.

A great deal of the year's sewing can be done in the winter in many families, and a good seamstress employed for a week or two at this season, will enable a housewife to borrow some of the burdens from the load that spring and summer always bring, and lay them on the less burdened back of winter. The virtuous woman described by Solomon is praised for her care in clothing her household, and she did not defer her sewing until the need for it was pressing, for we are told, "She is not afraid of the snow for her household, for all her household are clothed in scarlet," and the same kind of forethought will provide thin garments for the summer heat, and medium clothing for the spring.

A. B.

AN EXCELLENT KALSOMINE.

AS it is nearing the season of spring cleaning, I will give my formula for kalsomine which I have never seen excelled.

Seven pounds of zinc-white, one half pound of white glue, and water to make of the consistency of thin cream. Cover the glue with cold water; when soft, turn off and cover with boiling water. Stir until dissolved, add water and zinc-white. A small quantity of ultramarine blue added to the mixture improves it for my eyes. MRS. ECOMONY.

WORTH KNOWING.

IN buying whale-bones for a waist, select those that are flexible rather than those that are stiff. The former bend to the shape, yet hold the waist in position. If a bone becomes very much bent, do not throw it away as useless, but hold it close to the fire or lamp chimney, and the heat will straighten it out as good as new. I find it best to buy bone by the yard and cut it in lengths to suit. You can buy casing or covering for them at five cents per yard. It is double so that the bone can be slipped down the center. The metal "bones" are very good when put in at first, but they are very apt to break and then the jagged ends pick holes in the dress material.

PURPLE violets are the latest craze in millinery. Two-thirds of the women one meets have a cluster of them somewhere, on hat, at throat, or pinned to the muff.

D. H. V.

Now is the best and cheapest time of the year to buy white goods—towels, bedding, table linen, etc.

THE back breadths of the overskirt are no longer looped. Gather or lay the goods in pleats.

IT is prophesied that black lace dresses are to be as popular the coming season as they were last. Chantilly lace will be used.

IN dress goods, spring woolens show stripes both wide and narrow. The large plaids shown are said to be for children's and misses' wear.

WHITE and gold furniture is as popular as ever and to this fad we may now add that for white fur rugs. These rugs serve not only for floor coverings but for covering lounges and easy chairs as well.

HARPER'S BAZAR says that wash dresses for large girls are made with high belted waists with a yoke or with the shoulders quite plain, or else gathered there on a band like the full Russian blouse. The sleeves are full and these are turned over cuffs and collar or else pleated frills form the finish for neck and wrists.

Miscellaneous Advertising.

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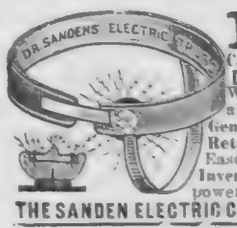

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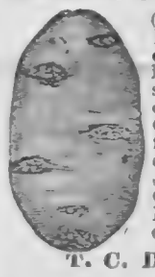

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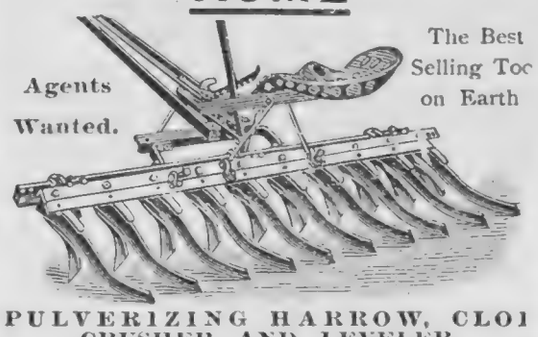

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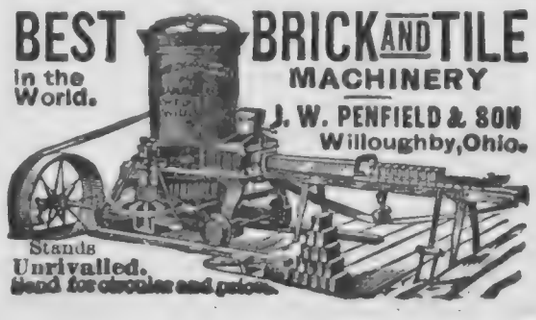

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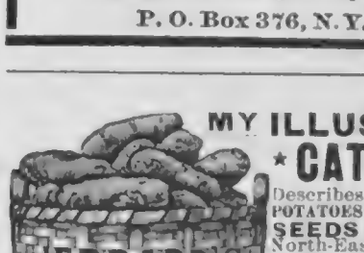

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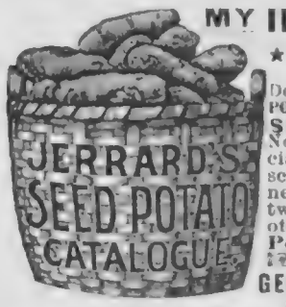

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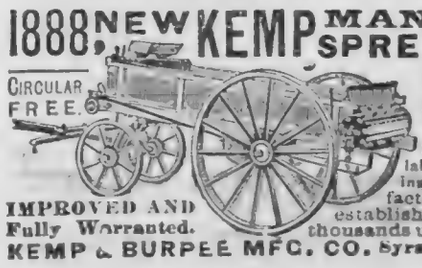

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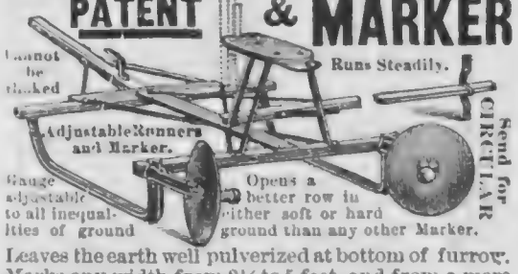

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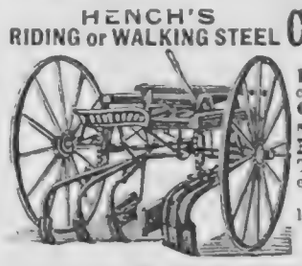

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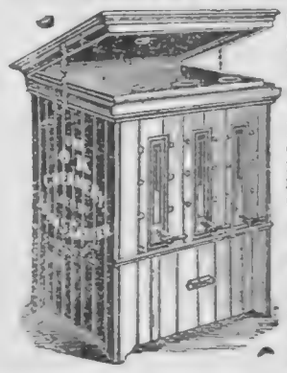

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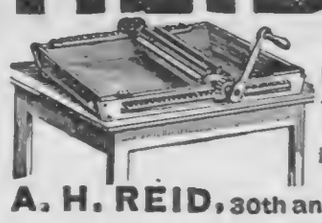

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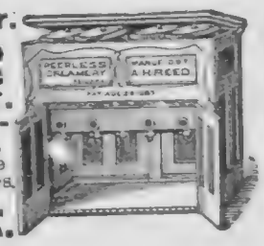

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Literary.

THE DRUM LAKE EASTER SERVICE.

A story of the Michigan Pine Woods.

BY HERBERT W. COLLINGWOOD

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I HARDLY know what the company would have done, had not Hank Jacobs, at that crisis, pushed his way unsteadily through the door. He carried his violin under his arm, and felt his way along the side of the room towards an empty seat in the corner. When he had safely deposited himself in the chair, he caught up his fiddle under his chin, and called, in a decidedly thick and uncertain tone, "Git partners fer a two-by-four."

Hank was strict business to the last. No doubt some one had told him about the minister's visit, and he had roused himself by a supreme effort, for he did not desire to see the laurels he had so deservedly won, pass from his own head to Mr. Grayling's.

The coming of the new musician gave the minister a good opportunity to resign his position as violin soloist. Jim Foster invited the little man to stay and enjoy the dance, and even offered as a special inducement to dance with the minister himself.

The Rev. Mr. Grayling declined the great honor with thanks. He carefully wrapped his garments about the violin, and then with a grave bow to the company, he groped his way through the dimly lighted store, out into the pleasant moonlight, glad that his promise had been fulfilled. He walked slowly down the desolate streets towards Mrs. McKelvey's house.

He had come to this lonely place, to "build up a church," and it seemed a hopeless task He knew well that he never could succeed. How grimly the houses frowned upon him! Brooding there in their loneliness, they had no sympathy to offer him. But the moon smiled down upon him as it climbed higher and higher over the pines. It seemed anxious to cheer him, for it cast a flood of light far ahead down the street to Mrs. McKelvey's door. The windows of the old "Continental Hotel" flashed back the light with something of their old fire.

But the minister did not seem to care for the kindly sympathy. He walked slowly on with his head thrust forward, and muttered half to himself as he went "Perhaps I shall find it here; perhaps this is the last. I do not care, I think I am ready."

The company at Cobb's was not sorry to see the minister go. He was decidedly out of place at a dance, for there was something about him that filled them with awe.

As Jim Foster, in the capacity of manager, placed the minister's chair back to the side, he saw two pieces of paper lying on the floor. They had evidently fallen from Mr. Grayling's pocket, and were further specimens of his verses.

Jim picked up the little pieces of paper and glanced over them. "Boys," he cried, "here's some verses Parson has writ."

"Line 'em off," urged Bill Gammon, thinking no doubt that it might run to the tune of one of his three masterpieces.

Jim solemnly spelled out the verses, while the rest listened. The first was an extract from Enoch Arden; but the audience did not recognize it as a quotation. They gave the minister full credit for it.

"No gladlier does the stranded wreck
See through the gray skirts of a lifted squall
The boat that bears the hope of life approach
To save the life despaired of, than he saw
Death dawning on him, and the close of all."

This was evidently the worst that the company had yet seen. Bill Gammon gave it up. When Jim first started, it seemed as if the verse would run to the tune of "The Little Widder Dunn," but after a careful trial, Bill found something wrong in the combination. The next selection was evidently original:

As one who gazing on the ocean's breast,
Where the gray boulders butt the angry sea,
Feels in his heart a vague, a strange unrest
To think how mean and poor his life must be:
Yet sees the sun die o'er the distant bay
With a new splendor kindling all the sky—
Sees some poor spar that men have thrown away,
Hold up a life the world would not have die;
Knows that some better life through his may flow,
As mountain flowers grow upward through the snow.

The other piece of paper had evidently been torn from a long poem. There were only a few lines on it. Perhaps it was just as well for the company:

"When in his life some blighting shadow falls,
Some cruel care that will not take its hand
From off his heart—why should he care to live?
There is one hope alone—he yet may know
The mighty secret men must die to win."

At the conclusion of this reading, Jim looked at his audience. The boys were unable to express their feelings.

Jim danced the first set with Jeff Price. While the "sides" were going through the first figure, Jeff remarked confidentially "I've ben backin' this yer Snooks heavy fer a fool, but after them verses been read, I'm go'nter change my vote an gin it ter Parson."

The Easter sun came climbing over the trees in good season. It stopped for a moment at "St. Paul's Church," as if to give that ruin a word of friendly greeting. Then as if to make up for lost time, it flashed over Drum Lake, and darted a long golden wedge into the Rev. Mr. Grayling's room.

But if the sun expected to catch the minister napping, it was sadly mistaken, for he had been up ever since the first streak of dawn, and had already built a fire in his "audience room." The sun had better luck with Mr. McKelvey. A stray beam that forced its way in through the window, fell directly upon his face, and caught him with his mouth open in a most suspicious manner.

The sun was bound to find the minister, however. It crept in through the patched windows of the old dance hall, and found the little man at last kneeling in front of the altar. Strange to say, the sun did not seem to have the least reverence for the minister, and it went dancing and sparkling over the clean, white surplice and played along the letters of the motto on the wall. At last it settled down somewhat, and nestled comfortably in the green bower that had been built for the choir.

The Rev. Mr. Grayling remained up stairs until the call for breakfast Then he walked, slowly and carefully down stairs, and took his place at the table.

The McKelveys had "turned themselves loose," as Jack Gray said, over the Easter breakfast, for such a meal had hardly ever been seen in Drum Lake.

The boarders were so interested in the discussion of the meal that they had little time to plague the Parson. He ate but little, and after timidly announcing his Easter sermon and inviting all the boarders to attend, he went up stairs again. The boarders did not notice his departure. When such a breakfast was placed on the table, who could conscientiously ask them to think of anything else?

(TO BE CONTINUED.)

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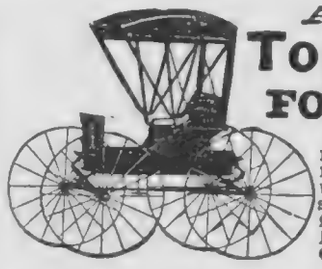

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"Farmin' Don't Pay."

A CARTOON CRITICISED.

PARROT PAINFULLY POUNDED.

VARIOUS VIEWS.

FROM OHIO.

The "Parrot" came to the front in the RURAL of February 27, and on first view it has the best of the argument that "Farmin' don't pay." The "Parrot" would still get its work in more effectually if that cartoon were lithographed, framed and hung up in the dining-room of every farmer's home in the land, and also in some conspicuous place at each agricultural college, where they are endeavoring to educate boys so that they will return to the farm. Even if it be true that the farmer is borne down by an unjust share of taxation; even if it be true that he is compelled to pay a higher rate per cent. for the use of borrowed capital than other men do, I would yet question whether the farmer's position in society can be elevated, or his material and pecuniary welfare improved by such pictures.

But is it true that the farmer pays an unfair share of the taxes levied for the support of the State government? Here, in Ohio, a re-valuation of the real estate for taxable purposes is required at the beginning of each decade, the practical result of which is—at least in this part of the State—that our farms are listed on the tax duplicate at, on an average, about one-half their actual value or selling price. Owing to the prevailing low prices of agricultural products during the last four years, our farms have decreased in real value, and as a result we are now paying a disproportionate share of the taxes as compared with the owners of real estate in the towns and cities. Perhaps in no other period in the history of our State has this anomalous condition of affairs occurred, and this, it is confidently expected, will be corrected at the ensuing re-valuation of the real estate next year. Now, will it be said that this depreciation of farm values—or in other words over-production—has been brought about by a vicious governmental policy?

Taxes collected on farms in this part of our State, range from one to 1½ per cent., on city property from two to three per cent. on assessed valuation We think that they are excessive. Taxation constitutes a problem in the solution of which all honest taxpayers, whether farmers or others, are alike interested. Two reasons exist here for oppressive taxation: 1st, high levies for local purposes; 2nd, the large aggregate of personal property which evades taxation. Our legislature has sought and is still striving to correct the latter; so far with relatively meager results. That body is also trying to adjust the levying of the taxes, so that the requirements for State purposes will be indirectly assessed, while for local purposes the assessments will be mainly by direct taxation. Concerning local taxation we farmers are largely responsible for the large rates here. We want and demand good school-houses, good roads and bridges which we have generally secured; so, according to the old saying "those who dance should expect to pay the fiddler." "The stream cannot be purer than the fountain." Whether a government is corrupt or beneficent will usually depend on the character, virtue and intelligence of the people of all classes, who compose it. "The noble people will be nobly ruled, and the ignorant and corrupt ignobly."

Our monetary affairs are fortunately in such a sound condition that money commands a definite price in the market, and this is much less than it was 30 years ago, when farm products averaged about the same prices. The price of money here now secured by farm mortgages is from six to seven per cent., while it more readily brought from eight to 10 per cent. on the same kind of security 30 years since, when the currency was less stable and consequently less valuable. Now are we to understand that the holders of farm mortgages—many of whom are farmers—are avaricious and hard-hearted because they sell money at market prices? And are such mortgage claims to be denounced as oppressive and unrighteous? To do so would seem like communism. And yet the recent cartoon implies as much.

Our civil courts wisely guard with zealous care the interests of the debtor class, and will not permit usurious interest to be collected by any subterfuge if it can be detected. Thousands of dollars have been lost in this section by investing in farm mortgage notes on account of the subsequent depreciation of the security. Have the investors conspired to bring about this depreciation?

I do not sympathize with the effort which is constantly put forth, to saturate the farmer's mind with the idea that somebody is trying to hurt him. It has been dinned into our ears almost from time immemorial that the farmer is only a hewer of wood and drawer of water, that he is compelled to bear the burdens of all other classes. The jocular observation of Sir Geo. Campbell, the English traveler, that "among the Americans, for every man who really works with his hands, there seem to be two who seek to live by speculating upon him," is literally construed to mean that the farmer is the victim of the other two men.

The inculcation of such ideas must manifestly prove detrimental to the best interests of the farmer, and, besides, they are void of the truth. Farm produce always has a market value. It is also a cash article, which can scarcely be said of any other class of merchandise. Can the farmer reasonably expect more for his goods than what they are worth? It is true that it sometimes happens that the market value of an article of farm produce is below the cost of production. Does this not more frequently happen in the traffic in other merchandise? Even the vicious combinations of capitalists to abnormally affect the prices of the products of the farm, usually result in forcing them above, rather than below their real value in the markets of the world. The cornering of wheat last October in the Chicago market affords an illustration. Farmers who sold their wheat during that period, or soon afterwards, realized much more for it than it was really worth. Had I not "turned speculator" I might have obtained $1.15 per bushel for my 1,000 bushels of wheat in the Cincinnati market, which was nearly 16 cents per bushel more than it was worth the same day in Liverpool, England. The abnormal price was the direct effect of the Chicago "flurry."

That the pernicious and abominable trusts and combinations, which seek to interfere with the natural laws of trade, prove injurious to the great mass of people, I do not for a moment question; that they prove more detrimental, in the aggregate, to farmers than they do to a vast majority of other citizens remains to be demonstrated. These mercenary combinations should be regulated and controlled in the interests of *all* the people and not of any *particular class*. With this object in view, the tillers of the soil can very wisely and justly unite and cöoperate with the other classes, in securing equal rights for all.

In that good time coming, when the rings, monopolies and trusts, that seek through stratagem and tyranny to set aside the laws of supply and demand, shall be subjected to salutary laws, even then we tillers of the soil will find that our business, our prosperity, depend, to a great extent, on what we ourselves make them. We will find that social advancement is the result of individual advancement. We will find that virtue, knowledge and freedom must spring from ourselves; and that it is not by socialism but by individualism that the world is impelled forward. We will find that the road of human welfare lies along the old highway of steadfast well-doing, and that they who are the most persistent, and work in the truest spirit, will usually be the most successful. We will find that well directed toil, frugality and prudence will alone subserve our best interests. S. E.

Montgomery County.

FROM INDIANA.

Among the many cartoons that have appeared in the RURAL, none, it seems to me, among them all is, or was, more telling and to the point than that of February 2.

It cannot be denied that, in his relation to a great many other class interests, the farmer is made a patient, plodding beast of burden.

In this cartoon, the post of honor among the parasites is given to the money-lender, and very fitly, I think. The lesson intended to be taught is, not that the farmer shall consider his relation to other interests, as shown in the cartoon, as proper and just, and to be thankfully accepted by him, but to show him more clearly that a great many other interests have, in some way, got him in their power and are using him for their own selfish ends, as a beast of burden. But suppose this object-lesson should accomplish the object for which it is presumably intended—to open his eyes to the wrongs and injustice done him; what will it avail him? A goodly number of farmers clearly comprehend the burdens pressing down the agricultural classes, who feel themselves powerless to remedy the evil. Suppose the cartoon should open the eyes of all; have we any hope that they would right the wrongs? Is it not too much to hope that they could be sufficiently united to cast off the parasites, one by one, or restrict them to be content with what they could justly claim, and so no longer be parasites?

Let us suppose that the cartoon has done its work, and that there is a general feeling among the farmers that the work of reform should be commenced. Suppose at a great convention of farmers a resolution is offered that no interest should be allowed in any case whatever.

It would undoubtedly be voted down because the States have fixed the rate of interest the people can afford to pay,—or at least it might be said that is a reasonable view of it. On the other hand, whenever any of the States have proposed to lower the rate of interest, capitalists have threatened to withdraw their capital from those States, and thus greatly diminish the circulating medium. So we find the rate allowed by law to be from about five to 12 per cent., though different States fix the rate as high as six or eight per cent in the absence of contract, but allow the parties to make contracts for as high as 12 per cent. As the borrower is the servant of the lender, the highest rate allowed by law is the rate generally paid, yet it seems to be a well established fact that the annual increase of wealth does not exceed three per cent.

If we apply the examples in our lessons at school such as "If a rabbit runs at the rate of 100 yards a minute and a hound gives chase at the rate of 120 yards a minute, how long will it take the hound to catch the rabbit, the latter having a start of 100 yards?" It is only a question of time when the rabbit will be caught.

If we state the example in a different way, thus, "If a community is possessed of property worth $100,000,000 that increases at the rate of three per cent. per annum, how long would it take $10,000,000 of capital to absorb the property, the capitalists loaning to the property owners at the rate of 10 per cent?"

As in the case of the rabbit and the dog, it will be only a question of time.

The difference between the two examples is, that the former is only a supposed example, while the latter is in actual process of solution.

When the farmer clearly understands that as the problem goes on he will be ruined, he will insist that it be discontinued. But what is he to do? The capitalist is so powerful that he can force State legislatures to enact such laws as he desires.

This cartoon will no doubt suggest many remedies, and here is my suggestion as a beginning: Have Congress enact a law that no Federal court shall be allowed to render judgments on any note or other acknowledgement bearing a higher rate of interest than three per cent. and gradually the States will adopt the same reform, and the influence of such a law would be a gradual lowering of the rate of interest generally to a rate more nearly in agreement with the general rate of increase of property. S. B. H.

Crawfordsville.

FROM NEW JERSEY.

I have been listening to the parrot's "Farmin' don't pay," until I have wished some one would build a good strong fire in the stove, and make it too hot for him; but no one appears to have the fuel to spare. The parrot is right, but he is too much like the prosecuting attorney, who always tries to make the case look as black as possible. Farming doesn't pay in many instances, and, as effect follows cause, I will endeavor to point out some of the causes that produce failures.

1st.—Too large farms. Many a person thinks that he must have at least 100 acres, or he will not be considered a farmer. So he purchases a farm, but, as he has not sufficient capital to pay for the farm and stock, he pays half cash, and gives a mortgage for the balance. I see the RURAL has the right idea in its cartoon of February 2. That big, burly fellow with all his evil followers pressing the farmer to the earth like a cart beneath its sheaves is, I think, ready to indorse the parrot and say: "Farmin' don't pay," whereas, if he had bought less land, paid the cash, stocked his farm well, bought $100 worth of fertilizers and used them judiciously, he could sit down in a cosy corner with Uncle Jacob, and laugh to scorn the parrot's remark, "Farmin' don't pay."

2nd.—The old-rut routine of farming. Some men are so firmly attached to their fathers' modes of farming, that, if you introduced the subject of improved methods, they will "Po, Ho," stick up their noses at you, and call it book farming, and the parrot may well say to such men, "Farmin' don't pay."

3d,—Routine farming, such as growing one crop after another, selling everything off the farm, and returning nothing in the line of fertilizers except the little made from the stock on the farm, which is not one-half what it might or would be if all useful materials were utilized. This class of men will always tell you that farming doesn't pay.

4th,—Another class of farmers like to take things easy. They never have any system, or any plans laid for the season's work. To them, "sufficient unto the day, is the evil thereof." To them, the easiest way is the best, consequently the straw and other valuable materials are burned to get rid of them; the fields are overrun with noxious weeds, and there is a row of briers growing each side of the fences, often occupying a space six feet wide. The fences are in bad condition, and when the pasture is well eaten off, over go the cattle into the standing corn, or other crops, and the men and dogs destroy as much as the cattle eat, in getting them out. When the cattle once get started, it is a hard matter to stop them, so valuable time is lost, the profits of the crops are greatly diminished, if not entirely lost, and at the end of the year, the farmer finds it difficult to meet expenses. The next thing is a chattel mortgage at 15 to 25 per cent. bonus, and he very naturally concludes that "farmin' don't pay."

I think that the parrot must have lived for a considerable length of time with this class of farmers.

Kingston. J. P.

Miscellaneous Advertising.

CHEST PAINS
COUGHS, COLDS

Chest Pains, Coughs and Colds, Weak Lungs, Backache, Kidney Pains, Rheumatism and all Muscular Pains, **relieved in one minute** by the first **Cuticura Anti-Pain Plaster.** and only instantaneous pain killing, strengthening plaster. 25 cts.; 5 for $1. At druggists, or of POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

Poultry Supplies,
Such as **Ground Beef Scrap, Granulated Bone, O. Shell, Bone Meal, Animal Meal, etc.** For prices and particulars send for my Circular. Rendering Works and Mills, Worcester, Mass.
C. A. BARTLETT,

WANTED.—Practical gardener as partner near large Western city; first-class market. Address "S." Box 804, Sioux City, Iowa.

Farmers,
Stock Raisers,
Lawyers,
Doctors,
Mechanics,
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Of all Trades, Professions and Ages Read

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—AND THE—

WEEKLY DETROIT FREE PRESS,

BOTH FOR ONE YEAR FOR

$2.25!

Address the

RURAL NEW-YORKER,

34 Park Row, New York.

INCREASE IN THE PRIZES OFFERED BY THE MAPES COMPANY.

We desire to increase the amount of the prizes offered by us in connection with those offered by THE AMERICAN AGRICULTURIST, and as the entries to the published prize schedule are closed, we herewith amend our prizes, to read as follows:

Special Prizes.

MAPES POTATO MANURE OR GOLD COIN—If the AMERICAN AGRICULTURIST Grand Cash Prize of $500 in gold coin goes to potatoes grown exclusively on Mapes Potato Manure, the Mapes Formula and Peruvian Guano Co., of 158 Front Street New York City, will give $600, making the total cash obtainable for the Prize Crop, under these circumstances, in gold coin, **$1100.00**

MAPES POTATO MANURE OR GOLD COIN.—Provided the above premium is not taken, the Mapes Formula and Peruvian Guano Co., of 158 Front Street, New York, will give $600 in gold coin for the second, third fourth and fifth Prize Crops for the largest yield of potatoes grown in this competition with the Mapes Potato Manure exclusively; second prize, $225; third prize, $175; fourth prize, $125; fifth prize, $75. Total - - - - - - - - - - - - - **$600.00**

Our new pamphlet (1889) contains full detailed description, with illustrations, of **best methods used in growing potatoes**, field and trench methods, also for corn, grain crops, tobacco, fruits, etc. SOME LARGE YIELDS WITH THE MAPES MANURES: CORN—4 424-1000 acres (season 1888) 1040 bushels corn (ears); equal to 116¾ bushels shelled corn per acre. POTATOES—On one measured acre (1888) 501 bushels (with a severe drought). Over 1000 bushels per acre on 1-8 acre plot. Over 300 bushels per acre, common field culture. OATS—80 bushels per acre. WHEAT—Over 40 bushels per acre. The Mapes Manures are True Manures, and not Stimulants.

"Our own experience with various commercial fertilizers has convinced us that with judicious use of the Mapes Manures worn out lands can be **restored to fertility quicker and with less expense** than in any other way."—*American Agriculturist.*

"The remarkable success which has attended the Mapes fertilizers has given them an enviable reputation and standing, not only in the United States and Provinces, but in Great Britain and other European countries."—*American Agriculturist.*

"Under averge conditons, and in far the greater number of cases, we do not hesitate to name the Mapes Potato Manure as the **best and most profitable** fertilizer for potatoes."—*American Agriculturist.*

Send postal for pamphlet. No charge.

THE MAPES FORMULA AND PERUVIAN GUANO CO., 158 Front Street, New York.

THE QUESTION OF THE HOUR.

"Tilly, how are you going to have your new spring hat trimmed?"

Humorous.

The RURAL NEW-YORKER *is prepared to offer very liberal terms to good, responsible,* PERMANENT *agents. Correspondence solicited.*

YOU cannot expect a man to tell which way the wind is, simply because he is a little vain.—*Boston Com'l Bulletin.*

"I—AW—wahnt a tie, doncher-know, to match my eyes." "Let me see. Blue eyes and—er—sorry, sir, but our blue ties with red edges are all sold. Have some in next week."—*Bazar.*

WE know of a man who actually kept a diary through to the 31st of December; but he didn't commence it until May; so the New Year offers a chance to anybody who wishes to make a record.—*Puck.*

A SOUTHERN hotel advertises among its attractions a "parlor for ladies thirty-five feet wide." We trust this paragraph will catch the eye of the woman who occupies three seats in a crowded car.—*Yonkers Statesman.*

HOUSEHOLDER (to tramp): "No, you can't have anything to eat here. Go right away!" Tramp: "That's what they told me over the way. They said you had only one meal a week here. Sorry I troubled you. Ta-ta!"—*New York World.*

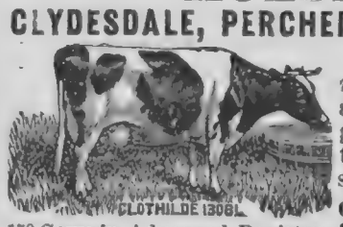
THE craze for whistling among girls is seriously troubling the humorous editor of the Boston Transcript. He says it is almost impossible to tell whether a girl is soliciting a kiss, or is only preparing to pucker. He ought to give the girl the benefit of the doubt.—*Youngstown Herald.*

A THANKFUL SPIRIT.—Teacher: "Johnny, can you tell me anything you have to be thankful for in the past year?" Johnny (without hesitation:) "Yessur." Teacher: "Well, Johnny, what is it?" Johnny: "Why, when you broke your arm you couldn't lick us for two months."—*Life.*

For rates on the TRY ME, the *best* hand lever Feed Cutter (3 sizes). Ad's G. S. GARTH, Mill Hall, Pa.—*Adv.*

Dr. Seth Arnold's
COUGH KILLER
is the Very Best Remedy
For a Cough
I ever used.
Mrs. A. J. Church, Sherborn, Mass.
Druggists, 25c., 50c., and $1.00.

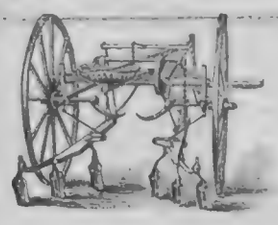
The Great Butter Herd!
HOLSTEIN-FRIESIAN CATTLE,
CLYDESDALE, PERCHERON, FRENCH COACH AND HAMBLETONIAN HORSES.



The **Lakeside Herd of Holstein-Friesians** *stands unrivaled in average production of Milk and Butter.* All interested are invited to send for Catalogue, giving complete records and pedigrees of every animal in the herd, and to personally investigate the truth of this statement before purchasing. A large and very choice stud of **Clydesdale Horses of all ages, fine young Percheron Stallions, elegant Imported French Coach Stallions, Standard Bred Hambletonian Stallions,** of the best trotting strains. Prices low for quality of stock.
150 Cows in Advanced Registry.
SMITHS, POWELL & LAMB, SYRACUSE N.
In writing always mention THE RURAL NEW-YORKER.

ASPINWALL
POTATO PLANTER

Better than Ever.
Absolute Guarantee given to do
PERFECT AND RAPID WORK.
PLANTS CORN
DISTRIBUTES FERTILIZERS
Write for illustrated circular. *Mention this paper.*
ASPINWALL MANUFACTURING CO.
THREE RIVERS, MICHIGAN.



THE GREAT POTATO CULTIVATOR
(Hudson's "Bicycle" Patents)
THE GREATEST LABOR-SAVER IN CROPS, IN 20 YEARS.
No more holding the plows with the feet. No more rein-snatching and horse-guiding, and tearing out plants. No more difficulty in getting around at ends. No trouble on side hills.
Any boy now can "hoe" potatoes, cabbage, corn or cotton, any depth, or shape, on the Hudson "Bicycle" Cultivator as fast as horses can walk.
T. B. Terry says: **"It is perfect childs play to use it. Beats our Planet, Jrs. four hours to ten—same work."**
Send early orders. **We Warrant Fully.**
R. H. AGRICULTURAL WORKS, Riverhead, N. Y.

Syracuse Plows.

SULKY PLOWS, REVERSIBLE SULKY PLOWS,
SIDE-HILL PLOWS, SPRING TOOTH HARROWS,
STEEL FRAME CULTIVATORS, WING SHOVEL PLOWS,
SINGLE AND DOUBLE SHOVELS, ROAD SCRAPERS,
HORSE HAY FORKS AND CONVEYORS,
UNEQUALED BY ANY OTHERS MANUFACTURED.
Agencies in All Cities and Towns. Send for Free Illustrated Catalogue.
SYRACUSE CHILLED PLOW CO., Syracuse, N. Y.

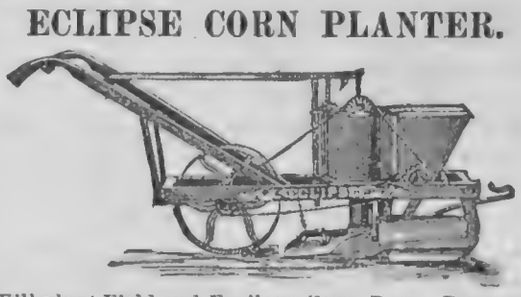
Send for large Illustrated Catalogue.

The Belcher & Taylor
AGRICULTURAL TOOL COMPANY,
Box 75 CHICOPEE FALLS, Mass.
Hay Tedders, MANUFACTURERS OF
Horse Rakes,
Feed Cutters,
Vegetable Cutters,
Reversible Sulky Plows,
Right Hand and Side Hill Plows,
Harrows, Tobacco Ridgers & Cultivators.
Etc., Etc. Send for Circulars, Price List and Terms.

Help Wanted.

We offer **GOOD PAY** to **WOMEN** for special work up to **JULY** next. Besides good pay for **work** performed, **$500** will be given as an **EXTRA** present to the agent doing the best work; **$400** to the second, and so on. Men, boys and girls can make hundreds of dollars between now and July 1889. This is a **SPECIAL** chance, and holds good only until July. Address
CURTIS PUBLISHING CO.
PHILADELPHIA, PA.

ECLIPSE CORN PLANTER.



Will plant Field and Ensilage Corn, Beans, Peas and Beet Seed in **hills, drills** and **checks**—in hills up to 45 inches; in checks from 36 inches up to any distance desired. Will distribute all Fertilizers **wet** or **dry.** Farmers, send for circulars.
ECLIPSE CORN PLANTER CO.,
Enfield, Grafton Co., New Hampshire.

PERFECTION MOLE TRAP.—I. A. Baker, of Magnolia, Ark., writes that he has caught 19 Moles since last August. Please send me 20 more traps for my neighbors. It does its work complete. Send for circulars. Address JOHN F. TURNER, 4514 Main Street, Germantown, Philadelphia, Pa.

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PIANO FORTES
UNEQUALLED IN
Tone, Touch, Workmanship and Durability.
WILLIAM KNABE & CO.,
BALTIMORE, 22 and 24 East Baltimore STREET.
NEW YORK, 112 Fifth Av. WASHINGTON, 817 Market Space

PHENOL SODIQUE
Is a reliable disinfectant, preventing or arresting every contagious or infectious virus. It destroys atoms or germs of diseases in the air. When **Small Pox, Measles, Scarlet, Typhoid, Typhus or Yellow Fever, and Cholera** prevail, the spread of contagion is promptly prevented by
PHÉNOL SODIQUE!
For descriptive circulars and testimonials, address the
Proprietors, HANCE BROS. & WHITE, Philadelphia.
For sale by Druggists and General Merchandise Dealers.

The Worcester Buckeye Mower

Has **Patented Self-Oiling Pitman, Patented Hardened Steel Chafe Plates,** maintaining the **Shear Cut** throughout the life of machine. A new device for carrying the weight of Cutter Bar lightly over the ground, preventing its dragging, and lightening draft.

A NEW SCYTHE
Which will not break at heel. Many other new and valuable improvements. Don't fail to see it. Send for 1889 Circulars. Agents wanted in unoccupied territory. Manufactured by
The Richardson Manufacturing Co.
WORCESTER, MASS.

ISLAND HOME STOCK FARM.

Savage & Farnum, Importers and Breeders of Percheron and French Coach Horses, Island Home Stock Farm, Grosse Isle, Wayne County, Mich. We offer a very large stud of horses to select from, we guarantee our stock, make prices reasonable, and sell on easy terms. Visitors always welcome. Large catalogue free. Address
Savage & Farnum,
DETROIT, MICH.
Percheron Horses.
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GALBRAITH BROS.,
JANESVILLE, WIS.,
—Are the Largest Importers of—
BRITISH HORSES

in the world. Have imported three times the number of first-class prize winning horses of any firm in the United States and have now on hand for actual sale over **220** head of
CLYDESDALE, ENGLISH SHIRE, SUFFOLK PUNCH, CLEVELAND BAY and HACKNEY STALLIONS.
Prices moderate, terms easy. Correspondence solicited. Send for Catalogue No. 9.

200 PERCHERON
—AND—
FRENCH COACH
HORSES
Send for Catalogue.
J. W. AKIN,
SCIPIO, N. Y.

SPRAY YOUR TREES
We make the cheapest and best Spraying Pumps in the market. Send for illustrated circular.
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GOOD NEWS TO LADIES.
Greatest inducements ever offered. Now's your time to get up orders for our celebrated **Teas** and **Coffees**, and secure a beautiful Gold Band or Moss Rose China Tea Set, Dinner Set, Gold Band Moss Rose Toilet Set, Watch, Brass Lamp, or Webster's Dictionary. For full particulars address
THE GREAT AMERICAN TEA CO.,
P. O. Box 289. 31 and 33 Vesey St., New York.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

PHOTO ENG. CO., N.Y.

VOL. XLVIII NO. 2040. NEW YORK, MARCH 2, 1889. PRICE FIVE CENTS. $2.00 PER YEAR.

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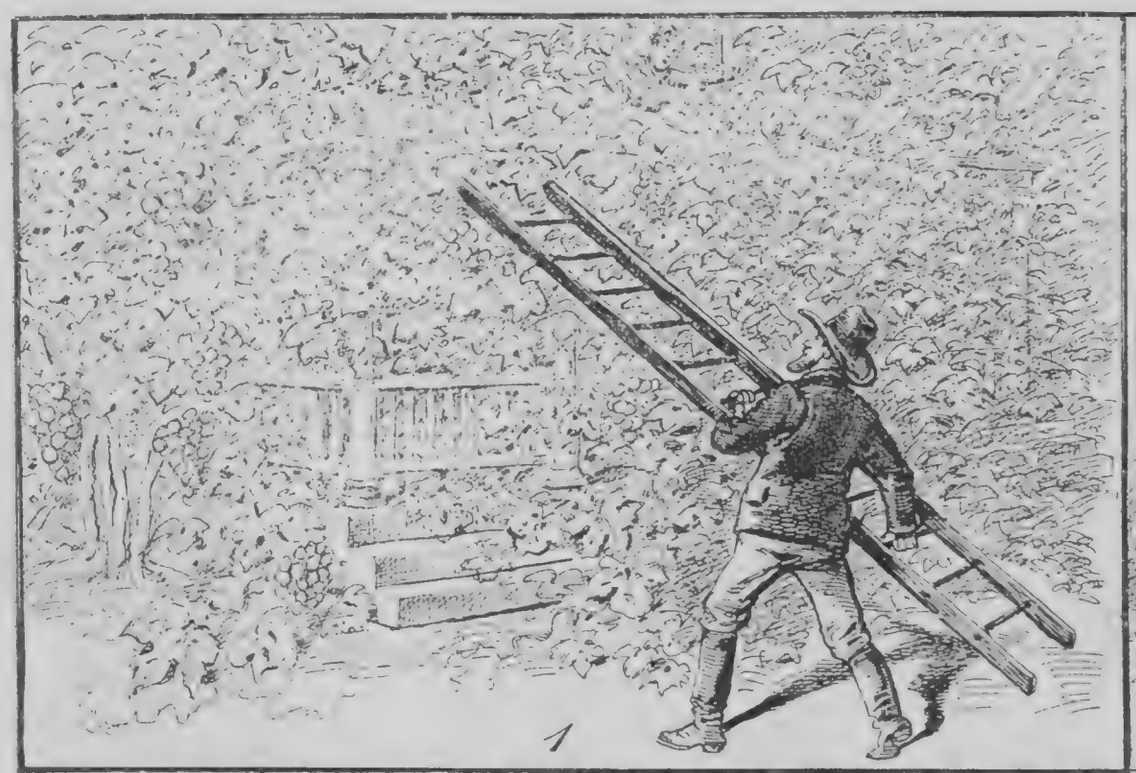

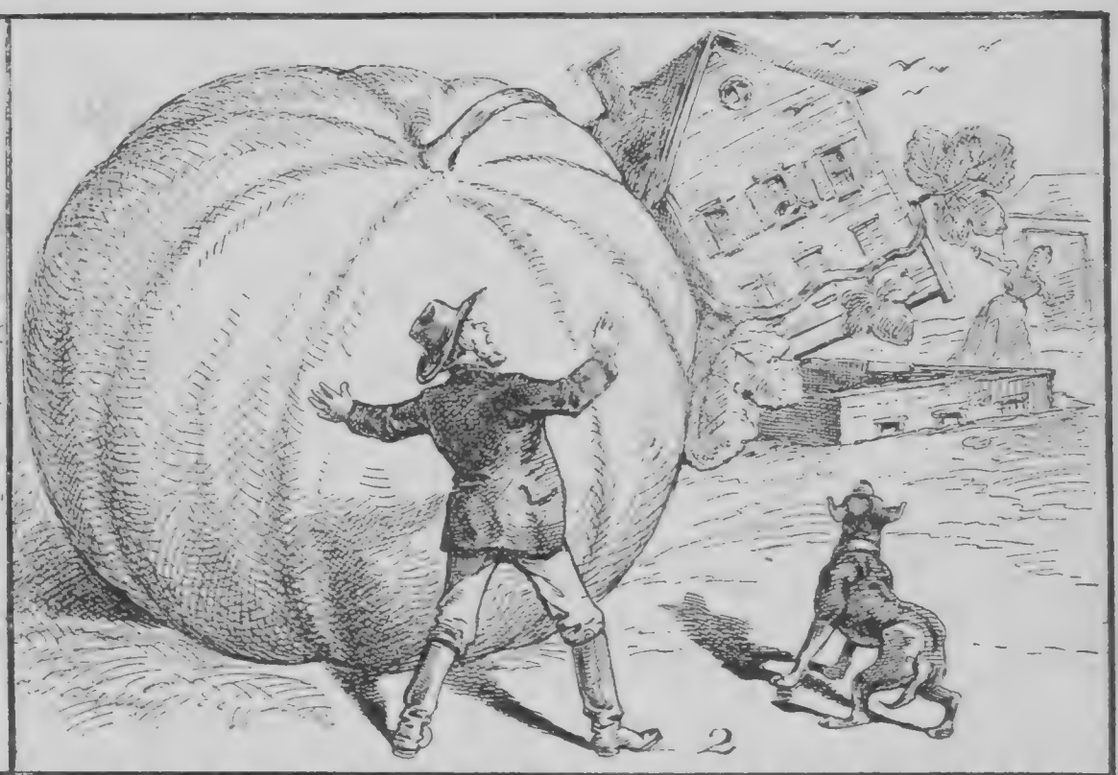

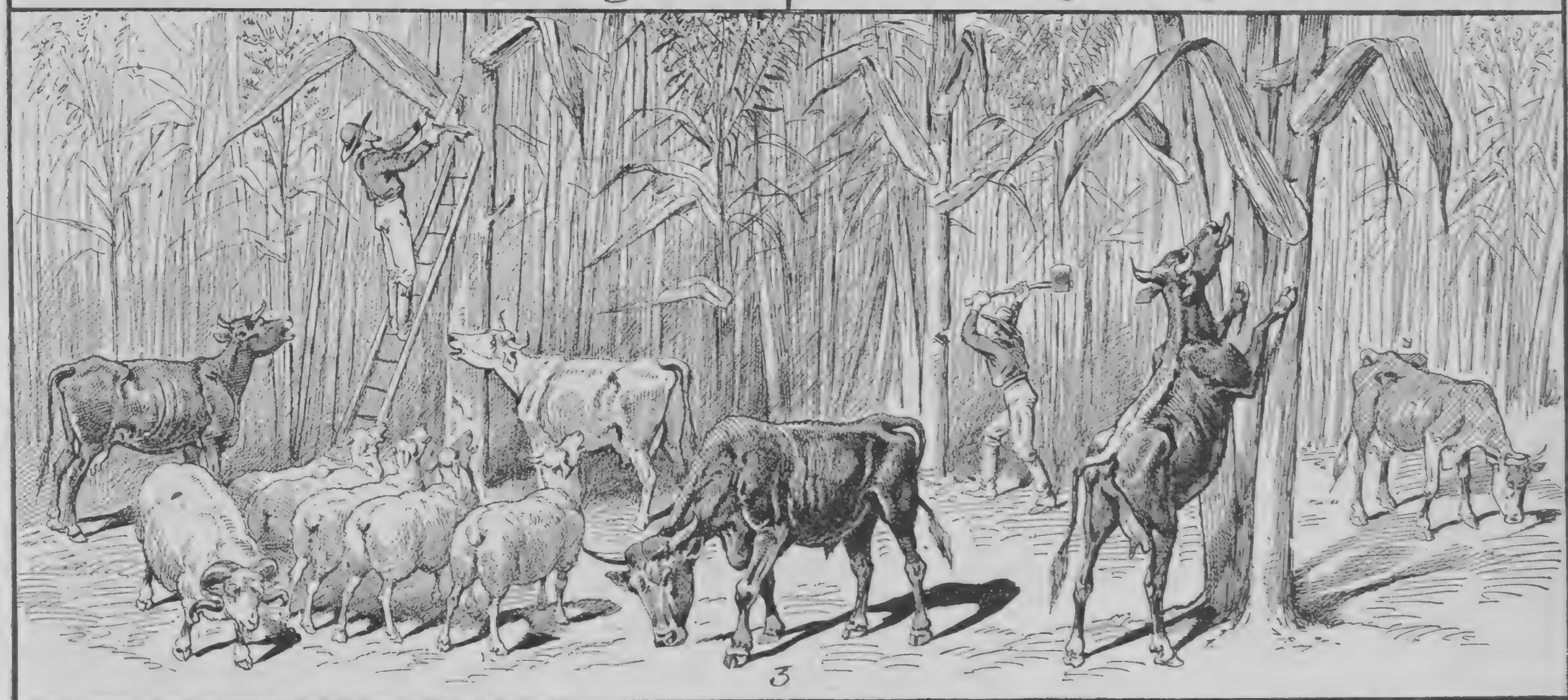

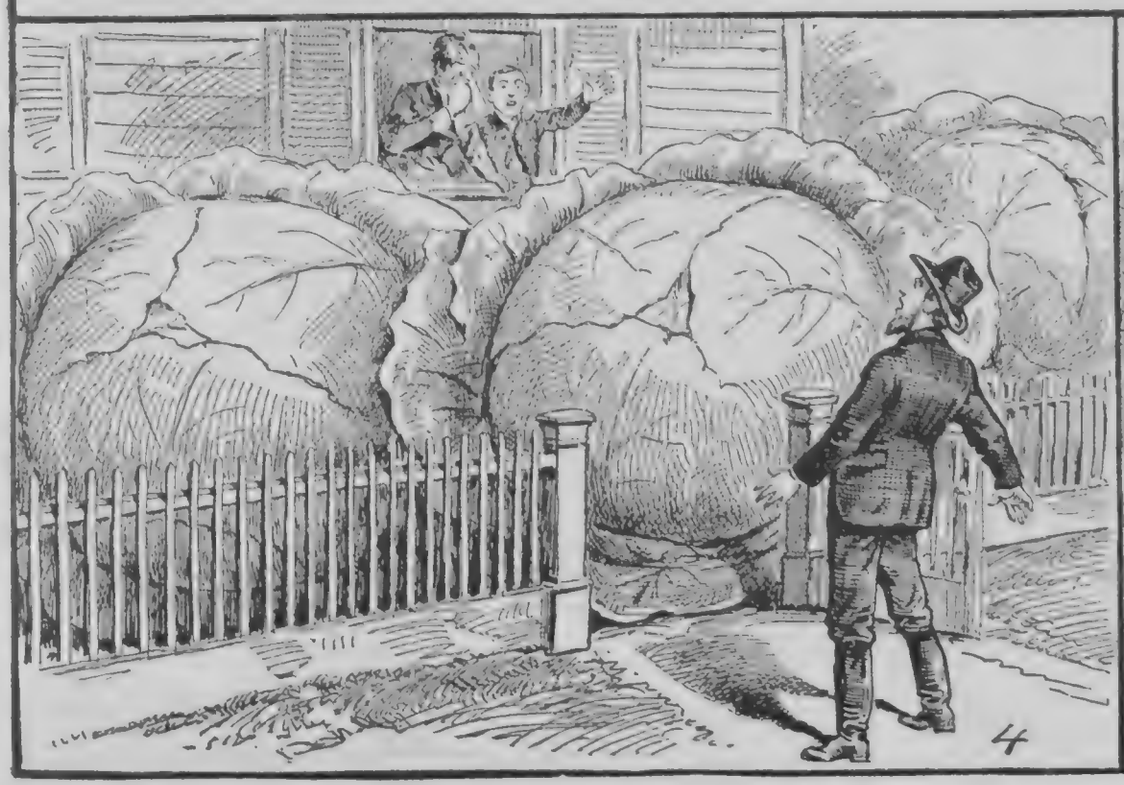

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1. The "Great Grape." 2. The "Prodigious Pumpkin." 3. The "Wonderful Fodder Plant." 4. "Yard-filling Cabbage." 5. "Blindingly Brilliant Flowers."

Stoddard CREAMERY
WITH SURFACE SKIMMER

Superior to all others. Sold on its merits.

Send for Free Catalogue of Butter-Making Goods for PRIVATE DAIRIES AND FACTORIES.

MOSELEY & STODDARD MFG. CO.,
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SOMETHING TO HAMMER ON
FOR FARMERS.

ANVILS.

Save your bills at the Blacksmith's and Machine Shop by having on the farm one of these celebrated ANVILS—*fully warranted*, and of the best material.

Best Hardened Cast Steel Face and Horn.

All sizes, from 10 lbs. to 90 lbs., at from $2.00 to $8.00 each. Larger sizes at 9 cts. per lb. Address, for Circulars, &c., **FISHER & NORRIS,**
Original and Only Manufacturers, Trenton, N. J.

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NEW YORK STATE DRAIN TILE AND PIPE WORKS,
MAIN OFFICE, 76 THIRD AVE., ALBANY, N. Y.

ROUND, SOLE AND HORSE-SHOE TILE
Over 18 inches long. By cargo or smallest quantity. Our new improved machinery makes superior round and sole tile, excelling anything offered heretofore First Premium wherever exhibited. Price list on application. Vitrified Glazed Pipe and Tile Machines.

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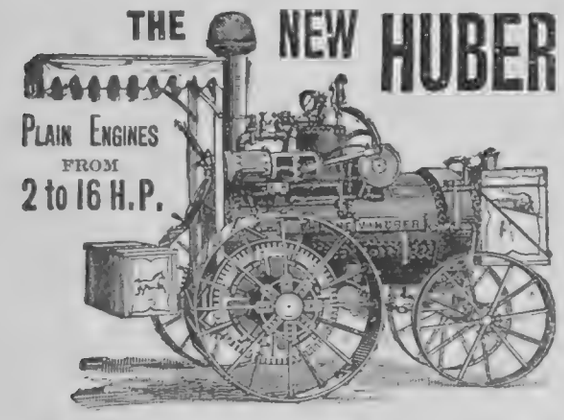
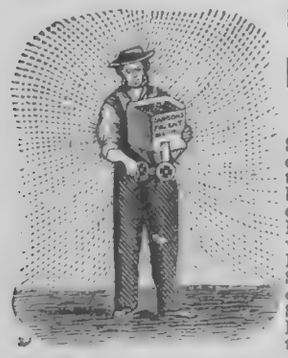


PLAIN ENGINES FROM 2 to 16 H.P.

Has Patent Return Flue Boiler; Wrought Iron and Steel Wheels, with the Springs between the bearings of the Hub; 14-inch Steel Tire; Cushioned Gear and all Latest Improvements. 8, 12 and 16 H. P. Ask for Catalogue, Free. Threshers of all sizes.

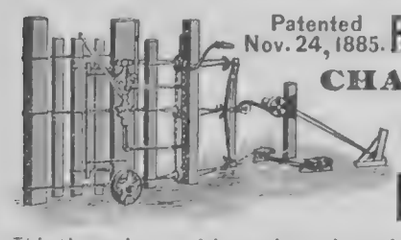
THE HUBER M'F'G CO.,
60 Morton Street, Marion, Ohio.



PEARCE'S IMPROVED CAHOON'S
BROADCAST SEED SOWER

Sows all kinds of grain and cleaned grass seed; does better work than can be done by any other means whatever. Ten acres of wheat have been sown in one hour with it. Saves its cost with less than one day's use. Saves seed. Any one can operate it. Price only $5. Send for descriptive circular. **GOODELL CO., Antrim, N. H.,** Sole Mnfrs.

For Sale by the HIGGANUM M'F'G CORP., New York.



Patented Nov. 24, 1885. **RICHMOND CHAMPION FENCE MACHINE**

It is the only machine using wire cable for tension. It can use heavier wire than any other machine made. Can make fence from two to six cables. Can weave a picket ¼ inch in diameter, or a board 3 inches wide without changing the machine in any particular. For special prices, circulars, etc.,

Address **WAYNE WORKS, Richmond, Ind.**

FORTY-FOURTH ANNUAL REPORT

OF THE

NEW YORK LIFE INSURANCE CO.

Office: Nos. 346 & 348 Broadway, N Y.

JANUARY 1, 1889.

Amount of Net Assets January 1, 1888.....$79,912,317.17

REVENUE ACCOUNT.

Premiums	$22,301,931.11	
Less deferred premiums, January 1, 1888	1,174,340.36	—$21,127,590.75
Interest and rents, etc	4,762,169.67	
Less Interest accrued January 1, 1888	488,477.59—	4,273 692.08—$25,401,282.83
		$105,313,600.00

DISBURSEMENT ACCOUNT.

Losses, by death, and Endowments matured and discounted (including reversionary additions to same)		$5,425,926.78
Dividends (including mortuary-dividends), annuities, and purchased insurances		5,547,143 27
Total Paid Policy-holders	$10,973,670.05	
Taxes and re-insurances		303,062.84
Commissions, (including advanced and commuted commissions), brokerages, agency expenses, physicians' fees, etc		3,558,440.80
Office and law expenses, salaries, advertising, printing, etc		654,690 12—$15,489,263.81
		$89,824,336.19

ASSETS.

Cash on deposit, on hand, and in transit		$3,695,836.94
United States Bonds and other bonds and stocks (market value, $58,222,751.94)		54,566,901.58
Real Estate		9,308,152 08
Bonds and Mortgages, first lien on real estate (buildings thereon insured for $13,800,000 and the policies assigned to the company as additional collateral security)		16 966,932.50
Temporary Loans (market value of securities held as collateral, $2,144,670)		1,676,250.00
*Loans on existing policies (the Reserve on these policies, included in Liabilities, amounts to over $2,600,000)		378,874.10
*Quarterly and semi-annual premiums on existing policies, due subsequent to Jan. 1, 1889,		1,435,734.86
*Premiums on existing policies in course of transmission and collection. (The reserve on these policies, included in Liabilities, is estimated at $1,500,000)		4,045 089.46
Agents' balances		298,959.43
Accrued Interest on investments, January 1, 1889		451,605.24—$89,824,336 19
Market value of securities over cost value on Company's books		3,655,850.36

*A detailed schedule of these items will accompany the usual annual report filed with the Insurance Department of the State of New York.

TOTAL ASSETS, January 1, 1889, - - - - - - - - $93,480,186.55

Appropriated as Follows:

Approved losses in course of payment		$555,555.62
Reported losses awaiting proof, &c		302,964.77
Matured endowments, due and unpaid (claims not presented)		56,511 88
Annuities due and unpaid (claims not presented)		26,865.69
Reserved for re-insurance on existing policies at the Actuaries' table 4 per cent. interest		78,985,757.00
Reserved for contingent liabilities to Tontine Dividend Fund, January 1, 1888, over and above a 4 per cent. Reserve on existing policies of that class	$5,315,720.83	
Addition to the Fund during 1888	2,043,665.84	
DEDUCT—	$7,359,386 67	
Returned to Tontine policy-holders during the year on matured Tontines	935,609.54	
Balance of Tontine Fund January 1, 1889		6,423,777.13
Reserved for premiums paid in advance		46,504.21
		$86,397,936 30
Divisible Surplus (Company's new Standard)		**$7,082,250.25**
		$93,480,186 55
Surplus by the New York State Standard (including the Tontine Fund)		**$13,500,000.00**

From the undivided surplus, as above, the Board of Trustees have declared a Revisionary dividend to participating policies in proportion to their contribution to surplus, available on settlement of next annual premium.

RETURNS TO POLICY HOLDERS.	INSURANCE IN FORCE.	ASSETS.	NEW POLICIES ISSUED.
1886.....$7,627,280.	Jan. 1, 1887.....$304,378,540.	Jan. 1, 1887.....$75.421,453.	1886 ..... 22,027.
1887..... 9.535,210.	Jan. 1, 1888..... 358,935,536.	Jan. 1, 1888..... 83,079,345.	1887.....28,522.
1888..... 10,973,070.	Jan. 1, 1889..... 419,886,505.	Jan. 1, 1889..... 93,480,186.	1888.....33,334.

Number of policies issued during the year, 33,334. Risks assumed, $125,019.731.
Total number of policies in force January 1, 1889, 129,911. Amount at risk, $419,886.505.

TRUSTEES:

WILLIAM H. APPLETON,
WILLIAM H. BEERS,
WILLIAM A. BOOTH,
HENRY BOWERS,
JOHN CLAFLIN,
ROBERT B. COLLINS,
ALEX. STUDWELL,
ELIAS S. HIGGINS,
WALTER H. LEWIS,
EDWARD MARTIN,
RICHARD MUSER,
C. C. BALDWIN,
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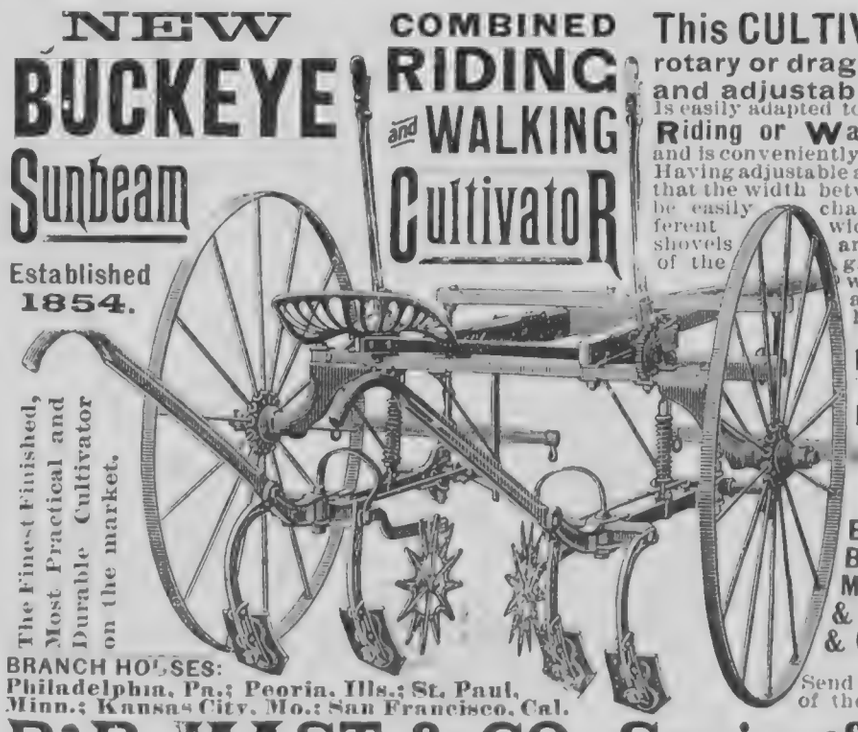

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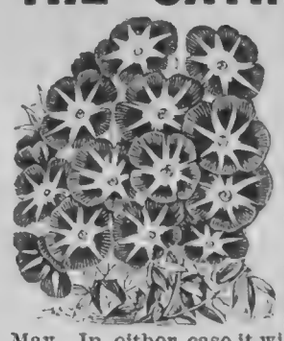

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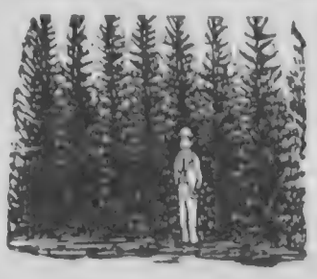

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Horticultural.

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Communications from Matthew Crawford, of Ohio; J. M. Smith, of Wisconsin; William Falconer, of Long Island, N. Y.; J. A. Foote, of Indiana; Dr. T. H. Hoskins, of Vermont; Prof. Goff of the N. Y. E. Station; E. S. Teagarden, of Iowa; H. M. Wysor, of Virginia; Fred Grundy, of Illinois; H. M. Engle, of Pennsylvania; Jonathan Talcott, of New York; A. B. Coleman, of Kentucky; F. H. Valentine, O. H. Alexander, A. C. Bates, et al.

FROM M. CRAWFORD.

Four years' service, in my youth, in a market garden of 100 acres gave me such a love for the work that it has continued until to-day, although it is more than a quarter of a century since I gave it up for another branch of horticulture, that is even more inviting. I am still delighted to receive a seedsman's catalogue, and always feel under obligations either to patronize the sender or influence some one else to do so. Each season I cheerfully yield to the temptation of buying several times as many seeds as I need. I suppose it will always be so, for two nice catalogues that came to-day make me impatient for the coming of spring so that gardening may commence. Were it not for the necessity of earning a living, my inclinations would lead me to spend my entire time in testing new things, raising seedlings and seeing what perfection could be reached regardless of cost. Fine specimens of flowers, fruits and vegetables are brought for exhibition, at the monthly meetings of our county horticultural society, and their merits, with the methods used in their production, are freely discussed. This is another incentive to the testing of new things. I have grown a large number of varieties of squashes and have never yet found anything superior to the Hubbard, although the Marblehead and Butman are about equal to it in all important points. When the Hubbard was introduced, 30 years ago this spring, I procured seed and raised over 300 fine ones. In the fall and early winter I ate of them so freely that my skin was colored almost to an orange tint. I had some doubts as to whether this was due to the squashes, but these doubts were all removed the following winter when I saw a number of persons affected in the same way, and all of them were exceedingly fond of Hubbard squashes.

I raise from one to three new varieties of tomatoes every year, and the Volunteer has proved to be the finest I ever had. It combines about every desirable quality. The Champion of England pea is as good a variety as I ever raised, but I prefer those that need no support. Of this class we have found nothing better than the Yorkshire Hero for the main crop. The American Wonder and Blue Peter are desirable early sorts. The Lima is our best bean, but it is too late unless started in a frame. A late frost killed ours last year, and the second planting was of little account. The Amber Cream sweet corn pleases me as well as any variety I have tested. This, with the Cory for early, and the Egyptian for late gives a good supply. The Early Paris has been our favorite cauliflower, and I have seldom if ever seen as fine specimens of any other variety. When the season is moist enough, it is about as certain as cabbage. When in Ontario, last September, I saw a block of 21,000 of the French Erfurt and Henderson's Early Snowball that were finer as a whole than any lot of Early Paris I ever saw.

If confined to a single variety of cabbage, my choice would be Fottler's Brunswick. Last season I had Maule's Surehead and it is very fine. I never raise early varieties. To have the best success with cabbages and cauliflowers it is important to have good plants. My plan is to sow the seed, about May 10, in a shallow box containing about two inches of potting soil. This is set on a shed roof and kept watered until the plants are three inches high. They are then pricked out a few inches apart until needed. The fly never gets to them, there are no worms at the roots, and they grow right along when transplanted.

Last season I had the Eclipse, Lentz and Arlington Favorite beets. The last is the finest turnip beet I ever raised, and the Eclipse is the best early variety for us. There being no great pleasure in raising cucumbers, I do no experimenting in that line, but let the White Spine answer for all purposes.

I take real pleasure in raising onions, and had 10 varieties last season on about three square rods of land. Of the lot I would choose two—the Wethersfield for home use, and the Yellow Danvers for market. The former is of fine flavor, a good keeper and may be cooked in a few minutes. The Danvers is rather earlier, and more salable. Each of these yielded at the rate of over 800 bushels per acre. The Spanish King yielded at the rate of over 1,200 bushels per acre; but the variety is not well fixed in color or shape. Many of them were lemon-shaped and had thick necks. The Mammoth Pompeii are very large, flat, and ripen well, but they were of several shades of color. The Early Pearl, Giant Rocca, Prizetaker and Silver King, were not a success here.

I never fail with common strap-leaf turnips. My plan is to clear off a place about the first of August, and put on a good allowance of dissolved bone and wood-ashes, and then go over it with a wheel-hoe until the surface is very fine. It is best to sow after a rain. The White Russian has given us great satisfaction as it is of fine quality and a late keeper.

I have a weakness for *good* potatoes, and test a great many. Of over 20 varieties grown last season, the Delaware gave the greatest proportion of large, fine-looking tubers. The quality is good, too. The Puritan seems to be all that was claimed for it, and it must become a favorite. The Monroe County Prize and the Everitt are very productive and seem to be quite desirable. I am greatly pleased with two Ohio varieties that are to be offered this spring—the Gov. Foraker and Mrs. Foraker. The former resembles the Burbank, but is even more uniform in shape and size, while the latter is like a fine specimen of the Snowflake, with eyes even with the surface. I think that the Mrs. Foraker is the most beautiful potato ever introduced. We have relied upon the Beauty of Hebron for our main crop, but the Clark's No. 1 is about as desirable. The Empire State is perhaps the most profitable market variety grown in this vicinity.

Summit Co., Ohio.

FROM WILLIAM FALCONER.

BEANS, SNAP.—Mohawk and Valentine are favorites of mine; because both are green-fleshed and of capital flavor, and they do not ripen up all at once; and as the Mohawk is a few days earlier than the Valentine, by sowing a couple of rows—one of each kind—once a week, I can have an unbroken succession of good beans. The Golden Wax is as good as any yellow-fleshed snap bean I have grown.

POLE BEANS.—I love to grow the red-flowering Scarlet Runners for their blossoms more than for their pods. Giant Wax is a good sort to grow for pods, but for shelled beans I think all varieties pale before the Limas.

BEANS, LIMA.—Dreer's Improved is my first choice, because it is the best flavored. The pods are short and the beans are small and plump, but the variety is a heavy cropper.

BEETS.—Eclipse I consider the best for a turnip beet, and Long Smooth Blood for a long beet. With turnip beets more depends upon the purity of the strain than on the variety.

BORECOLE is better known as kale. Of Extra-curled Dwarf Erfurt I got a packet from Thorburn & Co. a few years ago, and thought so well of it that I have ever since kept my own seed. It is a real dwarf, very curly, hardy, and capital to eat. Ordinarily, kales are too lanky-stemmed.

BRUSSELS-SPROUTS.—For dwarfs we have lots of varietal names, but the names don't amount to anything; each name simply means a strain. The smaller and harder the sprout, the better; the bigger, the poorer.

CABBAGE.—Early Jersey Wakefield I prefer for early; All Seasons or Early Summer, for mid-season; and Drumhead Savoy for late. I have lots—Vandergaw, Flat Dutch, and other varieties all bedded in the ground now—but I don't eat any of them, because I also have lots of Savoys, and the Savoys are immensely superior to plain cabbages.

CAULIFLOWER.—For early, for fall, for holding over in frames—it's all the same—I have come right down to Erfurt. Well, you may take it under the name of Snowball, Seafoam, or any of many others; to me these are all strains of Erfurt.

CARROTS.—Early Scarlet Horn I select for early, also for a small sowing for summer and fall use. When young and tender they are cooked whole. Half-Long Stump-Rooted I like for the main crop, because it is a capital carrot to eat, satisfactory in growth, and never too large. Big carrots are all right for the cattle, but they are not so good for the kitchen.

CELERY.—Give me White Plume for use between September and December; Golden Heart for use from December till spring opens; Clark's Pink or London Red, for a red celery. The red celery is the best flavored.

CELERIAC.—The Prague I think the best, because it is the largest-bulbed variety, and the "bulb" isn't so rooty near the top as are the Paris or Erfurt varieties.

CUCUMBER.—If confined to one variety, I would take Nichol's, because it is good for slicing or pickling, and very prolific. For size and fine appearance I like Tailby's, and for growing in frames or green-houses, Telegraph, because of its long life and free cropping tendency, but the seeds are too costly. It is useless out-of-doors.

CORN.—The choice in this is much a matter of taste and land. Cory is excellent for early; Concord for summer crops, and Stowell's for latest. Concord is always reliable with me, but not so with some of my neighbors. I like white corn and medium-sized ears.

EGG PLANT.—New York Improved comes first with me because the plant is vigorous and the fruit handsome, and if the latter is cut when but a little larger than a Duchess pear, it is just as good to my taste as the Black Pekin. I grow several other varieties, but regard them as being more odd than useful.

GARLIC.—The common sort I grow. Two or three other varieties are cultivated in Europe, but, so far as I have learned, they have not found their way to this country. The "loudest" of the onion race; never use it when you expect company!

LEEK.—I prefer what is sold here as Large American Flag. All the leeks do well.

LETTUCES.—Boston Market is fine for winter, because it hearts well, can be planted closely and is pretty hardy. Salamander can't be surpassed for summer, because it is as good as any other cabbage lettuce, lasts as long without "bolting," and I have found the strain to be good. A good strain has a good deal to do with good lettuce.

MUSHROOMS.—The English Gray is my choice, because it is the most delicious vegetable on the face of the earth.

OKRA.—Dwarf Green can be recommended, because it takes up less room than the six or seven-feet-high tall varieties, also because in my opinion green pods are much to be preferred to pale or whitish pods.

ONIONS.—Yellow Danvers, Large Red Wethersfield and Southport White Globe are my selections, because I want to have red, white and yellow-skinned onions and I don't know three better varieties than these. I wouldn't

be bothered with top onions as a crop, and of recent years potato onions in this neighborhood have become more or less diseased. This is a pity as they were a safe crop to have, although one of very poor quality.

PEAS.—Improved Daniel O'Rouke (it is the same as First of All, Extra Early, Earliest of All and lots of other synonyms) is my choice for the first four or five days' peas, and Alpha for the next fortnight. McLean's Advancer comes in eight days or thereabouts after Alpha which is useless in hot weather, but Advancer continues throughout the pea season. Champion of England from the 20th of June till the middle of July cannot be excelled for quantity or quality, only it must have brush. Stratagem and Bliss's Abundance are splendid peas. Blue Beauty, Midsummer and Quantity, new peas of last year, gave me much satisfaction, but require further testing.

PEPPER.—Give me Red Cayenne for pickling and Ruby King as a large pepper, as it is the largest pepper, and I find this is the sort most called for.

RADISHES.—Among turnip-rooted radishes French Breakfast is good at all times, so is Scarlet Turnip. Among long-rooted radishes Wood's Early Frame is very fine, succulent and early; but for midsummer work Beckert's Chartier may be better, as it lasts longer. A word here about radishes:—They are more appreciated in cold than in hot weather; a radish with a white, gray, purple or black skin is not appreciated; red skin is the only sort we want in radishes; furthermore, mildness is a very poor quality in a radish. The best radish should have a bright-red skin and be extremely tender and juicy and at the same time pungent. Violet-skinned Olive-Shaped was the best radish so far as quality was concerned in about twenty kinds in my trial grounds last year, but the color of its skin will "kill" it. Scarlet Chinese is the best variety for storing in winter; but stored radishes of any kind are pretty poor vegetables.

RHUBARB.—Monarch is to be preferred for size and quality, and Victoria for its beautiful red color. We usually raise rhubarb from seed and keep what comes; for the seedlings are not always the same as the parents. There is a current idea that St. Martin's, Monarch and some others are new varieties, but this is not so; although but recently disseminated here, they have been grown in Europe for many years.

SPINACH.—Viroflay, which is a large form of the Round-seeded, is my choice. The market gardeners around here grow a good deal of the Savory-leaved; but with me it does not yield as much spinach as does the Viroflay. For hard winter weather take the Prickly-seeded; for hot, dry summer weather, the New Zealand, and sow it in fall and cover over the seeds (which will not germinate till the following spring) with a mulching; or delay sowing till June and scald the seeds before sowing them.

SQUASH.—Bush Summer Crook-Neck for early; Pine-Apple for late summer; Boston Marrow for fall and early winter, and Hubbard for general winter use, can hardly be excelled. Cheese pumpkins make fairly good pies. The selection of squashes is a matter of taste. If less weight were given to squashes and more recognition to other garden vegetables by our horticultural and agricultural societies, it might be better for us all.

TOMATOES.—Trophy, Perfection and Acme or selections of them. Burpee's Glen Cove, a careful and long-continued selection from Trophy by Scudder & Townsend, is one of the finest tomatoes I have ever grown. The Volunteer is the best form of Perfection, and Favorite appears to be a good selection of Acme. At least this is how they have appeared in my trial ground. I am very well pleased with the Lorillard as a winter-forcing variety, on account of its round, even form, firm texture, and bright-red color. It is a selection by Mr. John G. Gardner of Jobstown, N. J., and a couple of months ago I saw with him there hundreds of plants in every stage, and bearing heavy crops of fruit ripe and ripening, and greenhouse after greenhouse filled with them.

TURNIPS.—Red-Top Strap-Leaf is a capital flat turnip; Purple-Top White Globe is, all things considered, the best of all the soft turnips. Milan and Munich turnips have recently had a good deal of reputation because of their earliness, but they are among the very poorest of turnips, hot and bitter. Improved American is a very good Ruta-baga.

Queens Co., Long Island, N. Y.

FROM J. M. SMITH.

The following embodies my experience with the different varieties of vegetables grown by myself during a term of about 30 years:

PEPPERS.—After having tried a number of varieties of this plant, I have settled upon the Bell or Bull-Nose as the best, all things considered. It is large, mild in flavor, and certainly as productive as any that I have tried. I have occasionally had a fine growth of plants and plenty of bloom and not a single fully developed pepper during the entire season, and very few poor, small specimens unfit for market. I am unable to give any reasons for these failures, and I have never seen in any book or paper any explanation that threw any light on the subject.

RHUBARB.—I prefer the Linnæus. It is very early, a good yielder, and of much better quality than the very large variety known to us as the Cohoon, which has a much larger stalk and leaf, but it is later, very coarse, and exceedingly tart. Its redeeming quality is that, owing to its very large leaves and stems, it is much less expensive to gather and pack than the Linnæus, though I doubt if it yields more weight during the season than the Linnæus, as it has a much smaller number of stems and leaves.

SQUASHES.—For first early I prefer the White Bush Scallop; then a few of the Boston Marrow for early fall, and the Hubbard for the main crop. The Hubbard has become such a favorite with us in the Northwest that nothing but something remarkable in its line could displace it. It is a strong grower, very productive, and of good quality, and a good winter keeper.

TOMATOES.—The new varieties of tomatoes, like the new varieties of strawberries, come and go like the summer clouds. I have tried many of the new varieties within the last 25 years; but am now growing the Acme and Trophy almost exclusively. If compelled to choose any single variety, I would take the Acme in preference to any other that I have ever grown. It is a good bearer, and is a few days earlier than the Trophy. It is a little more showy in the basket, and about equal in quality. With me the early-ripening sorts have not rotted quite so badly as the Trophy, though both have rotted badly for the last two years. I know of no method of protection against the disease that causes rot. Perhaps when we are sure of the cause, we may find a remedy.

PEAS.—For my first early, I order the Extra-Early Daniel O'Rourke. I have more than once ordered a number of the so-called earliest varieties of different growers, and planted them, side by side at the same time, on the same kind of soil, and treated them precisely alike in every way, and they have grown and matured so entirely alike that they might all have been taken for the same variety. Even when tested on the table, they seemed the same, and I am by no means sure that they were not, each seedsman having given them a name to suit himself. Hence I order Daniel O'Rourke, as I have so far always obtained them true to name, which is more than I can say of some of the other so-called new varieties. For second early, and for late varieties I prefer Bliss's American Wonder. The Daniel O'Rourke may be sown as soon as the ground is in good condition in the spring, as the plants will not be damaged by slight freezing weather after the seed has been sown. The Wonder is rather tender in getting started, and if sown too early may rot in the ground, or be so damaged that it will not mature a large crop. Hence the seed should not be sown until freezing weather is entirely over. When fairly started, the vines are with me good bearers, and the peas are of excellent quality. The Champion of England is a very fine late variety, but the vine grows quite tall, and will not do its best without support, which increases the expense of growing so much that I have nearly discarded it, and prefer a second sowing of the Wonder for a late crop, as it is nearly as good as the Champion, and is a low-growing variety. McLean's Advancer and a number of others are very good, but too many varieties I do not consider desirable.

BEANS.—I prefer the Golden Wax to any of the bush varieties that I have grown. Wax beans are fairly early, and much finer in appearance than any of the green varieties that I have tested, and also of good quality, so good that it is useless for me to offer the green varieties in our market, as my customers will not buy them. The Limas are undoubtedly the best of all pole beans, though we sometimes have a season too cool for them to do their best in our latitude. In 1888 we had such a season; I left a portion of mine without poles, cutting back the vines once, and when we came to gather the crop, we found the finest and best beans on this portion of the plot. I intend to experiment still further and see if the result will be the same.

SWEET CORN.—The Cory is the earliest sweet corn I have tried, that has a moderately fair-sized ear. It is not first-class in quality; hence I only grow a small piece of it to last until the Early Minnesota is ready for market, and of this I grow only enough to last until the Crosby is fit for use. The last-named is my standard, being better, I think, than the Evergreen, producing a larger number of good marketable ears to the acre than any Evergreen that I have tried.

CAULIFLOWER.—The Snowball does better with me than any of the old varieties. Like others of its kind, it requires a very rich, moist soil to enable it to do its best.

CELERY.—The White Plume has become very popular, and I am growing it to some extent. It is very quick-growing, very showy upon the table, and will sell with less bleaching than the other kinds; but it is, in my opinion, very indifferent in quality, and a very poor winter keeper. Hence I grow it only for fall use. The Golden Dwarf is my standard of excellence. It may be set as late as August 5, and still it will make a fine crop. I grow it entirely as a second crop: the past season after early potatoes.

CABBAGE.—Jersey Wakefield is my standard for first early, Newark Flat Dutch, and Henderson's Summer for second, and also for late fall varieties. The old Premium Flat Dutch does well, but requires nearly the whole season to mature, and I cannot afford to give it the entire season on such high-priced land. Hence I do not grow it largely. I can turn under my strawberries after the fruit is gathered, and rely upon a good yield of Newark Flat Dutch, while under the same circumstances the Premium Flat Dutch would be likely to fail entirely to mature. I consider it safe to set the former as late as July 15.

LETTUCE.—I use the Boston Market almost exclusively for hot-beds, as being the most desirable of all that I have tried for that purpose. It is a quick grower, and forms a nice head of excellent quality; but not quite large enough for out-door summer use. For this purpose the Curled Simpson has been my standard for years, though the Black-Seeded Simpson is an excellent variety. Neither of these is, strictly speaking, a header, though both form large masses of leaves of excellent quality. The Boston Curled is very showy, but not equal, in my opinion, to the Simpson; hence I grow the latter almost exclusively.

BRUSSELS-SPROUTS, BORECOLE AND CELERIAC are used very little here, and I have grown them to no extent. They require about the same soil, care and culture as cabbage and celery.

CARROT.—For first early I grow the Early Scarlet Horn, as it is a very pretty root, and nice for bunching; but I use it for no other purpose. For the main crop the Half-Long Stump-Rooted is my favorite. It is a quick grower, has a small top, and the seed may be sown more thickly than that of either the Long Orange or the White Belgian. It does not grow quite so large as either of the others; but the greater number that will grow upon an acre, will, I think, make the yield equal to that of any other variety. It is excellent for the table, and also as feed for stock.

CUCUMBERS.—The Early Frame is the earliest of the really valuable varieties for the table, and is also largely grown for pickles. The Early Russian is about one week earlier than the last-named, but is so worthless after the first two or three pickings, that I have discarded it entirely. For the main crop for the table I consider the White Spine the best of all. It is of good size, smooth and firm, and will, if properly cared for, keep in good condition for a number of days after picking. For several years I have grown very few of any other variety.

EGG PLANTS.—I have tried several kinds, but have succeeded best with the New York Improved. Egg plants are not largely grown here, the demand being very small. They require very rich land and thorough cultivation, and, in addition, hot summer weather to enable them to do their best. Their worst enemy here is the Colorado potato beetle.

ONIONS.—There has been, I think, a very foolish effort for a few years past to boom some of the large, coarse and rough-growing varieties of onions. For sets for first early spring onions, I grow a variety of shallots which I plant in late summer or early fall, to get them well started before cold weather and they remain in the ground with little or no damage from cold. They come on very early and are used until we can get better ones from sets of the Yellow Danvers or some of the other black-seeded varieties, though the last-named is my standard. For the main crop, I use the Early Red Globe for early, and the Globe Danvers for the bulk of my crop, with also a small quantity of the Red Wethersfield, as some prefer it. With us in the Northwest, the Yellow Danvers is the most popular variety, usually selling for a few cents more per bushel than any other sort. It is useless to try to grow a large crop of onions upon poor land; neither will it do to neglect them when very young. I know of no plant more impatient of a little neglect when young than the onion, as it rarely recovers from any serious check to its continual growth.

GARLICS AND LEEKS.—These are not grown to any extent here, and I rarely have any calls for them. They require good land and thorough cultivation.

BEETS.—I use the Early Egyptian for my first early, and the Early Blood Turnip for second early and for the main crop, both being good growers, of good quality, good keepers, smooth, and of good size, though not too large. They will grow to be of fair size for table use and of excellent quality if sown as late as June 15, if the land is in good condition, and they are well cared for, and they are much preferred, with us, to any of the long varieties.

POTATOES.—For first early I have found nothing equal to the Early Ohio. It is with us a quick grower, of large size, fair in quality, and when planted and cultivated according to its requirements, it yields largely. It has a straight, bushy top, and generally there are few potatoes to a stalk. I plant in drills 30 inches apart, with the potatoes cut to one or two eyes each, and one piece in a place, about 10 or 12 inches apart in the rows. The land is rich and they are kept well and thoroughly cultivated. The result is uniformly large crops. I am not satisfied with less than 250 bushels per acre, and with a favorable season there should be more than that. For second early, and late crop, I prefer the Beauty of Hebron to any other that I have tried. If the land is very rich, it would not be safe to plant "seed" as closely as directed for the Early Ohio. Make the rows a few inches farther apart, and they will yield large crops of choice potatoes. I do not think it best to plant potatoes two years in succession upon the same ground. I have heard it stated that there are some varieties that are bug-proof, but I have never seen any such.

RADISHES.—I raise a few of the French Breakfast for very early, and sometimes for particular customers during the season; but for the main crop I rely on the Long Scarlet Short-Top. It is a quick grower, showy and attractive in appearance, and of good quality, and gives better satisfaction in our markets than any other that I have tried. For winter radish, I grow the Chinese Rose, but the demand for any variety of winter radish is small. Radishes prefer a light, sandy soil fairly fertilized, though they will do fairly well on a thinner soil than any other of our garden crops; but the proper fertilizer brings them on much more quickly.

SPINACH.—This is not grown largely here. I prefer the Round-Leaf variety. Asparagus is generally used, and, as a rule, is much preferred by our customers as an early dish in the time of greens.

TURNIPS.—I have of late years grown the Purple-Top Strap-Leaf almost exclusively, as it is a quick grower, of good quality, making nice feed for stock, being also good for the table. It is grown mostly as a second crop, and may be sown as late as August 15 with good results, if the necessary conditions are complied with, viz., good soil in good condition, good seed sown in drills 14 to 16 inches apart, and then good cultivation after the plants come up; the roots are cheaply grown, and with me they are almost a sure crop.

OKRA.—This plant is so little used here that I have never grown it to any great extent. Ground that would grow beans and peas would grow okra with reasonable care.

CONCLUSION.

DURING an experience and a constant study of about 30 years, I have learned a few things that I think I am sure of: First, growing either fruits or vegetables in such a manner as to make a success of either or both, is no business for a lazy man. Second, the business is no better for an ignorant man than for a lazy one. Third, it is not a business that one can successfully take up as a temporary thing, to be dropped again when there is an apparent prospect of something that may prove a little better for the time being. Fourth, no man, however extensive his reading may have been, is at all safe in attempting the business on a large scale, unless he has had some considerable personal experience in growing the articles with which he hopes to attain success. Fifth, the difference in price between a first-rate article nicely prepared for market, and a fairly good article only half prepared, constitutes success on one hand, and failure on the other. Sixth, success on poor land is impossible. Finally, a man with good soil, well cultivated, having intelligence and ceaseless industry, and an almost tireless energy and perseverance, and a growing market within his reach, will be as certain to reach success in this business, as in any that he could follow.

Brown Co., Wis.

FROM J. A. FOOTE.

As to the best varieties of vegetables, it is difficult to make a choice in some cases; but the following I regard as the very best for the garden, restricting the number to a few sorts.

DWARF BEANS.—Improved Red Valentine I think the best green-podded, having a round pod and being fleshy, tender, early and productive. The White Valentine is also good. I should plant no flat pod dwarfs. For wax or yellow-pod the Black Wax is one of the best as to quality. Golden Wax is good and very productive, but it is more liable to rust. Of the newer wax sorts I think Detroit Wax is one of the best.

POLE BEANS.—Horticultural remains a standard, especially for shelling. The old Speckled Cut-Short is hardly surpassed by any of the new sorts. A bean still somewhat local that goes sometimes by the name of Rhode Island, is first-rate in quality for a snap besides being early and productive. For a yellow-pod the Giant Wax is excellent and should be used more extensively than it is; but I feel inclined to place Dreer's Early Golden Cluster at the head of all. Its immense, beautiful and tender pods borne in great profusion, entitle it to the first place.

LIMA BEANS.—I have not thoroughly tested the newer sorts of these. I prefer a good stock of the regular Large Lima to Dreer's Improved. If the Extra-Early is really earlier, that is a great advantage in the Northern States. The Dwarf Lima I have not tried.

PEAS.—All of the extra-early white peas offered under a variety of names are almost identical, and any one of them is to be placed among the sorts to be chosen. The Alaska for a blue pea, being perhaps earliest of all and a fair pea as to quality, may be substituted for the whites. I know of no pea that excels the Advancer in delicate flavor, and being a large pea and only about five days later than the earliest, it should be in every garden. This should be succeeded by the Stratagem, one of the largest and finest of wrinkled peas. Then comes Champion of England for a tall, late pea; fine quality and great productiveness belonging to it in large measure. For dwarfs, American Wonder is excellent for earliest and Little Gem for second early. There are many other good kinds, but I would never give a place in my garden to the old-fashioned Early May or Marrowfats under any name as long as I could get seeds of the kinds named above.

SWEET CORN.—The Cory is decidedly the best very early. It should be followed by Perry's Hybrid, a fine sort both in size and quality. For late it is difficult to choose between Evergreen, Egyptian and Mammoth. The first remains soft the longest, but is not so sweet as the others. Mammoth is the largest and sweetest, but it has a shallower grain. Egyptian is prolific.

BEETS.—Egyptian, Eclipse and Bassano are all about equally early. Bassano is so much sweeter and tenderer that I prefer it, although it cooks light in color. Early Blood Turnip is the standard, and no other is needed beyond those named.

CABBAGE.—Early Jersey Wakefield, Early Winningstadt and Henderson's Early Summer are all early and good—so good as to leave little room for choice. All Seasons has proved to be first-rate and doubtless, is good for early, medium and late, as its name indicates. A good Late Flat Dutch, whether called Premium, Excelsior or by the name of some seedsman, will complete the list for any garden. Anything larger than these is not wanted. The Drumhead Savoy, however, may be added as superior in quality.

CAULIFLOWER.—Early Snowball and the genuine Extra-Early Erfurt are well-known to be good in all respects, in giving fine, large heads and in their reliability in heading. I think, however, that Long Island Beauty is a little superior.

CELERY.—Golden Heart, Half Dwarf and White Plume are the best for general use in a long list. I should want also a red—London Red or New Rose.

CARROT.—For early, Early Horn; for the main crop, the Danvers.

CUCUMBER.—Some variety of White Spine should be chosen for early, and Nichol's Medium for later use both for table and pickles. Of the long kinds Long Green Turkey is much the best, being very straight, and of a dark-green color.

LETTUCE.—Black-Seeded Simpson is most desirable for the earliest and for forcing, being rather superior to the white-seeded. Early Cabbage for a heading sort, Green Fringed for garnishing. Hanson is good, also Marblehead Mammoth for size and quality.

MUSKMELONS.—When I speak of melons, I must remind myself that we are talking now of home gardens, and not of market gardens. I should therefore choose one or both of these two, Osage or Early Hackensack. Some of the newest introductions are, without doubt, fine, such as Emerald Gem and Champion Market.

WATERMELON.—For the garden, out of all the varieties in the catalogues, I should take the Icing, either the Dark-Skin or the Light, a melon of medium size, with very crisp and tender flesh of delicious flavor.

ONIONS.—The old favorites remain—Red Wethersfield, Yellow Globe Danvers, and White Portugal. There are several foreign onions that seem to give good satisfaction, but I cannot speak of them of my own knowledge.

PUMPKINS.—I do not know any variety superior to our common Sweet Field or Cheese pumpkin.

PEPPERS.—Sweet Mountain, Golden Dawn and Ruby King are good large peppers (the last being the largest) of good shape and productive.

RADISHES.—For earliest I prefer a turnip variety, and of such kinds the Earliest Erfurt is the best in color, crispness and quickness of growth. Then come Long Scarlet Short Top and Mammoth Long Rose, the latter being good for any season. To these may be added White Stuttgart for a large summer solid radish.

TOMATOES.—For a purple crimson tomato I would choose the Essex Hybrid in preference to the Acme, because it is a little earlier and freer from rot. For a scarlet the Perfection is good enough for me. The Mikado although it furnishes some rough fruit, is prolific and the fruit is fine and very large and the variety is, withal, early. Optimus is first-rate. From one season's trial, I think highly of Dwarf Champion with its tree-like stalk and perfectly smooth pink fruit in abundant clusters.

TURNIPS.—For spring sowing, Earliest Bloomsdale Red-Top and Early White Dutch are my choice; for fall Red-Top Strap-Leaf and Red-Top Globe. No turnip surpasses the latter in quality, and it will yield 50 per cent. more than the flat sorts.

POTATOES.—There are so many good potatoes that to make a selection is difficult, and in various soils and climates there must be a great difference in choice. From my own observation I would not hesitate to choose Early Ohio for sandy soil, and Beauty of Hebron for a heavier one. Then from one season's trial I would take Charles Downing for its many good qualities—earliness, smoothness and table quality. In rich soil it proved very productive. There are many other good sorts old and new, (the Early Rose is yet hard to beat) but my preferences are as above.

Montgomery Co., Ind.

FROM T. H. HOSKINS, M. D.

OKRA.—Even the earliest dwarf sort amounts to nothing so far north as this (45°). It will grow and fruit but the pods are hard and woody.

PEPPER.—In warm seasons we get pretty good crops of the earlier varieties. Cayenne and Bell do best.

SQUASH.—Summer Crook-Neck for early. Essex Hybrid and Hubbard are the most satisfactory, though Boston Marrow is also popular. They all require a rich, light soil, and do best on a slight southern slope. I grow them to succeed early peas, the hills being made six to 12 feet apart, and thinned to two plants, as soon as danger of striped bugs is over. The larger squash bug is not yet known here.

TOMATOES are treated the same as peppers, the plants being grown under glass, and set out the second week in June. They get no pruning or training; but old barrel staves are crossed around the plants, as they branch out, to keep the fruit off the dirt. A paying crop one year in two is about all we expect here.

PEAS.—Rawson's Clipper is our earliest, followed by Vermont Wonder, Telephone, and Aroostook Marrow. Squashes follow the Clipper, and late cabbages the Wonder. No support is used, but the taller sorts are planted in double rows (20 inches asunder,) and the vines in these are bent toward each other until they cling, and thus support themselves. The alternate spaces are made wide enough to accommodate pickers; and in these the hills in which squashes are planted are made. The early dwarf peas, planted between cabbages, are not gathered for market, but are left to ripen. Telephone is preferred to Stratagem among the large-podded kinds, because it holds its pods clear off the ground; while Stratagem must be mulched to keep the pods clean and prevent their rotting. Champion is too tall to be grown without brush or wires, and a second planting of Telephone is therefore preferred, its quality being satisfactory to buyers who object to Marrows. The Aroostook Marrow is much better in quality than the old sort.

BEANS.—The Limas are an impossibility in our short seasons unless started in pots under glass and our trade will not pay for such. Our summer hotels use canned Limas. Our best market pole beans are the Speckled Horticultural, of which we have an extra-early strain, and the Mont d'Or. Of dwarfs for snaps, the Golden Pod Yellow-Eye (the "Golden Prize" of some and otherwise named), is the earliest, closely followed by Purple-seeded Flageolet, the later crop being from the pole, Mont d' Or. Our dwarf shells are Speckled Horticultural for the earliest, and the Boston Favorite, or Goddard, as a succession, the early pole Horticultural, mentioned above, being intermediate. Ferry's Golden Wax was abandoned on account of spotting, as have been many other kinds. Low's Champion is a good bearer and early, but the pods are unattractive, and will not sell alongside of the Crimson-striped Horticulturals.

SWEET CORN.—King of the Earlies and Cory are both planted, and come nearly together. The last has the larger kernels, but the other sells in preference, to those who make much account of quality. In succession, we next have Early Dean and Marblehead coming nearly together, with the same difference in quality; but in this case both size and quality are with the Dean. For later, a second planting of Dean and Moore's Concord, with Triumph for latest, our green corn season almost invariably being closed by frost before the end of September.

CELERY.—The early, self-blanching sorts have the preference. Our market for celery is not large yet, but is growing rapidly.

CABBAGE.—I keep trying new sorts, but my principal crop of late has been Rawson's Early Summer, and Warren's Stone-Mason. As an extra early, I tried, last season, Rawson's Volunteer, but it failed to head well. Jersey Wakefield has not done much with me.

LETTUCE.—Our trade is satisfied with Boston Curled for early, and Hanson for late.

PUMPKIN.—The only kind grown is the small Sugar pumpkin, which is early, very uniform in size, looks and quality, keeps well, and is almost as rich as a squash. It requires no boiling down, and entirely supplants the old field pumpkin for pies.

BEETS.—Egyptian, Bassano, Eclipse and Dewing are all planted, and all liked in their season. Bassano holds its grip well against the darker sorts.

CARROT.—Early Scarlet Horn is grown for market, and for coloring butter; Half-long Danvers for market, and Long Orange for stock. They are easily grown on our light soils, and are usually a profitable crop. Occasionally, when prices are high enough south to surmount our high freights, a few car-loads are shipped.

CUCUMBER.—Early Russian, White Spine and Long Green are the standard sorts. The last is used mostly for pickles: small for green pickles, and ripe for sweet pickles. A few of the long English sorts are grown in heat, but there is not yet a large market for them at a paying price.

POTATOES.—This is a great potato region, and the potato is our chief shipping crop. We claim that we raise, in Northeastern Vermont, as good table potatoes, and as many to the acre, as they do in Aroostook, and we are about 300 miles nearer to the consumers in Southern New England. Many varieties are grown, but at present Hebrons take the lead for shipping. As a market gardener, I find the best profit in growing Pearl of Savoy for early, Polaris for second, and Pecan for long-keeping and spring sales. The last, which is full brother to Snowflake, (the seed being from the same potato-ball), is much like it in looks, but heavier, even better in quality, and it does not seem to know how to sprout until it is put in the ground. Like all potatoes of this class, it must have the best soil and culture to be profitable, and will not be grown much, except for home use, or a fancy trade that will not be too particular about price. Besides the above named, our farmers grow Early Rose, Extra Early Vermont, Early Ohio, Burbank and other sorts, but mostly those that resemble the Rose enough to be shipped under that name. It is to avoid this mixture, I think, that buyers pay extra for Hebrons, which are strictly recognizable.

RADISHES are very difficult to grow here except under glass, on account of the white grub, which attacks them and turnips, and makes them unmarketable, except on newly cleared land. Only the red radishes, short and long, are in demand.

TURNIPS.—There is no more popular vegetable than the turnip, and large quantities are sold, both for home use and for shipping. When they can be grown fair, they pay quite as well as potatoes.

SPINACH.—There is a fair and growing demand for spinach; but buyers do not yet distinguish varieties. The Round-leaved and Long Standing are most grown.

ONION.—This is a leading vegetable with us, and stands next to potatoes and cabbage in area planted. The crop was a good one, the past season, and netted an average of about 80 cents at home, or delivered within wagon distance. Most of the crop is grown near the lake (Memphremagog), where the soil is well suited to it, and the culture is best understood. The main crop consists exclusively of Danvers; but sets and multipliers are planted for an early crop by our gardeners. Early Red is also planted as an intermediate between these and the Danvers. We are all careful to get an early strain of seed for the last, and I have not known the crop to be a failure, near the lake, for many years. As this is a railroad center and county seat, we have a wide market, and the production is increasing rapidly, onions bearing a higher rate of freight than potatoes. But they are not a safe crop in any of the hill country of this section. Our lake is 800 feet above sea level, and the surrounding country is 400 to 600 feet higher.

Orleans Co., Vt.

FROM PROF. E. S. GOFF.

Among the okras, I tested the past season two varieties that pleased me better than any I had previously tried. One was called Little Gem and the other New Dwarf Density. Both were very dwarf and early in maturing. The seeds were planted in the open ground May 23, and the pods were fit for use in the latter part of July, and both ripened their seeds before frost. I have much better success in growing okra by planting the seeds in the open ground than in the hot-bed or greenhouse. The young plants are extremely liable to damp off when started under glass.

In a row containing eight differently named rhubarbs the one bearing the name Scarlet Nonpareil has proved earliest and most productive. As far as I can see, it is equal to any of the others in quality.

Of the squashes I prefer Boston Marrow for autumn, and the Hubbard for winter, both being reliable and excellent in quality. I am not sure that some of the more recent strains of Boston Marrow are not more productive than the old one. I thought, from a single trial made last season, that the Dunlap's Early Marrow and Extra-Early Orange Marrow, both of which differ little from the old Boston Marrow, were rather more productive than the latter, and they were also a few days earlier in maturing.

I was much pleased with the Dwarf Champion tomato the past season. It may not be wise to recommend any variety unconditionally from the experience of a single garden test, but I have thus far no fault to find with it. I was especially pleased with the dwarf habit and hardiness of the plant, and the smoothness and uniform size of the fruit.

Next to our own first early wrinkled pea which takes the premium at our Experiment Station, I consider the Alaska one of the very best for the first crop. I would follow it with a planting of American Wonder or Little Gem, to bridge the gap between it and the Station again for the late crop.

Among cauliflowers I have succeeded best with Henderson's Early Snowball. This has proved satisfactory both for early and late, and in fairly favorable seasons the plants have headed almost as reliably as those of a good strain of cabbage. As a rule, I am not in favor of using seedsmen's names in connection with varieties, but in this case the name seems to bear some merit, at least other Snowball cauliflowers have not headed so well.

For early celery I still adhere to the White Plume. It is slightly strong in flavor and a little hard unless it is banked up; but the ease with which it is grown and its attractive appearance compensate for these defects. For use after Christmas, I am much pleased with the Golden Heart Half-Dwarf. This variety keeps well, and is excellent in quality, and its delicate creamy tint is very pleasing.

For earliest cabbage I have found nothing to equal the Early Wakefield. In a careful comparative test, this variety equaled the Etampes in earliness; while the heads were slightly larger and rather more compact. For medium I have found nothing superior to Fottler's Brunswick, and for late, Premium Flat Dutch and Late Drumhead have proved as reliable as any.

For an early out-door lettuce I am much pleased with the Black-Seeded Simpson. It is a very rapid grower, attractive in appearance and of excellent quality. For summer I like the Buttercup best. For the past two seasons I have had a bed of several different varieties growing in the garden, and the Buttercup has continued fit for use rather longer than any other; while its table quality was the best of

all and its delicate yellow color is most attractive.

For pies I have found the Mammoth Red Etampes pumpkin much superior to the common yellow field variety. The flesh is richer and more meaty, cooks more quickly and is less stringy. This variety keeps till about Christmas in a cool cellar.

Of the varieties of celeriac that I have tested, the Apple grows most regular and uniform in size. Celeriac is too little appreciated. It is as easily grown as cabbage, may be kept throughout the winter, and is surpassed by few other vegetables in flavor.

Of the egg-plants the Extra Early Dwarf Purple is decidedly the earliest and most productive variety I have grown. It may be depended upon to mature a large crop every year. The fruits are small, but I do not know that they are inferior in quality to the larger varieties.

The spinach known as Viroflay is decidedly more vigorous than other varieties when grown on very rich soil. I regard it as one of the best. The Long Standing is also excellent and is especially late in running to seed.

I have been much pleased with the Early Albino potato. It has proved very early, excellent in quality and as productive as other early varieties.

Geneva, N. Y.

FROM FRED GRUNDY.

RHUBARB.—I have found it best to open a trench 18 inches deep, and about the same in width, fill to within six inches of the top with well rotted manure and fine soil mixed and trampled down; on this I place large pieces of roots, having one strong bud, three feet apart, and cover with good mellow soil, rounding it up in a ridge. This ridge will settle four to six inches and cultivation levels the surface. Planting is done as early in the spring as the ground can be worked. The soil is kept mellow and free of weeds with cultivator and hoe, and the plants make a rapid growth. Late in the fall they are covered with six inches of strong manure, which is raked aside early the following spring. Rhubarb sells well and brings a fair price very early in spring. The demand ceases when strawberries begin to come in. Two *good* crops of *large* stalks are all I expect from one planting. In the rich, mellow soil of river bottoms it is not necessary to trench and manure as I do. The variety I first set out was called Linnæus, and I have used the same stock ever since. Once I grew a large number of seedlings, but not one proved superior in any respect to my old stock. I have also tried some of the highly lauded new (?) varieties and found them so nearly like the old that only an expert microscopist could detect the difference. Only the richest of rich soil will make large rhubarb.

PEAS.—Every seedsman has the earliest pea for sale, and he names it to suit his fancy. It may be "First and Best," "Lightning Belle," or simply Dan. O'Rourke, but it is the same pea all the same. The ground is plowed in the fall, harrowed smooth as early in the spring as possible, furrows two inches deep and three feet apart are drawn out and the peas are sown with a hand-drill, and covered with one inch of soil. They can be sown too early. Nothing is gained by sowing them in our soil before spring fairly opens, or before the ground is entirely thawed out. I have lost several sowings by rushing the season. The wrinkled varieties are sown when the ground is somewhat warm. They are cultivated almost exclusively with an A-harrow and light cultivator. For earliest, the Extra Early, or something to that effect, is best. American Wonder and Premium Gem do very well for second, and they take up little room. For a late pea to eat I like Champion of England. It must have plenty of room, frequent cultivation and *high* brush to climb on. I have seen it in Minnesota fully seven feet high and yielding good pickings until frost.

BEETS.—I grow only Early Blood Turnip. It is ready to sell as early as any beet grown, and, what is better, it is *smooth* and easily cleaned. The ground is enriched in the fall, plowed, harrowed and fined with a plank drag in the spring, and the seed is sown with a drill in rows five inches apart. The plants are thinned to about four inches apart at the first weeding. Cultivation is done with hoe and steel rake. I tried a wheel cultivator one season and dropped it.

CARROTS—Land is prepared as for beets, and the seed is sown at the same time and the cultivation is the same, except that it is continued longer. Stump-rooted sorts are best because easiest to dig, handle and store.

ONIONS.—Of these I grew hundreds of bushels some years ago. I grow but few now. The Yellow Globe Danvers yields well and sells best of all. The preparation of the ground and cultivation are the same as for beets. The seed must be got in early or the crop will assuredly be failure. Onions must get most of their growth before the hot, dry winds of July strike them and cut short their career.

SQUASH.—For summer use I plant the Summer Crook-Neck; for winter I use the Perfect Gem. Some people do not like the Gem, but ten of it are sold for one of any other variety. There is a vast difference in the flavor of Gem squashes. Some of them taste like a water-logged sweet potato; others are stringy and tough, and still others have a sickly sweet flavor. It must be brought up to the eater's standard by careful and continued selection. I tried Boston Marrow one season and had the pleasure of feeding the crop to the cows. I plant squash seeds, at the same time I do corn, in hills five feet apart, 10 seeds to the hill, and the ground is kept loose and free from weeds with the cultivator, which is always run the same way when working among Gems. The plants are thinned to four to the hill when they get two rough leaves, and when they are ready to take complete possession of the ground cultivation ceases. Striped bugs are the worst enemies of squashes. They will destroy every plant in two days if not checked. A thin mixture of fresh cow-dung and water, sprinkled over the plants with an old broom, has always proved effective.

TOMATOES.—I have tried 15 or 20 varieties and settled on Acme. Favorite, Beauty and Perfection rotted badly. Others are objectionable in size, form or color. Acme has always done well. The plants are grown in boxes under glass, hardened off and then set three feet apart in rows four feet apart, and cultivated the same as squashes.

BEANS.—I grew two good crops of Navy beans when this country was new, and before the weevil arrived. When that pest came he came to stay, and he destroyed the bean-growing business. For snap beans, Black-seeded Wax gives the best satisfaction. The cultivation is the same as for early peas. For pole beans I plant Large Lima, one good bean in a place, eye down, one inch deep, and two feet from the next. A small pole is stuck by each bean, and three of these poles are tied together at the top. It takes quite a cyclone to overturn them when the vines have climbed up.

SWEET CORN.—Moore's Early is good for first, Evergreen for second. Some other varieties mature a few days before Moore's Early, but the ears are too small. The past two seasons I have started 30 to 40 hills under glass in pint berry-boxes filled with rich soil. When danger from frost was over, these hills were set out close by the earliest outside plantings, the sides of the boxes being simply broken down and mellow soil drawn around the plants, which were three to four inches high. The roots were not disturbed in the least, and the corn grew on without a check. Last year, corn started in boxes was ready for eating six days before the first from outside planting. Two years ago the former was ready eleven days before the latter. I plant all sweet corn two feet apart in rows three feet apart, two to three grains to the hill, and cultivate with the horse.

CABBAGE.—Early Wakefield is my choice for early, Henderson's Summer for second early, and Premium Flat Dutch for late. Plants of the first two are started in boxes under glass, hardened off and set out as soon as the ground is ready. Flat Dutch plants are grown in the open ground and transplanted early in June. Early cabbage generally does well. Late cabbage is not always a blooming success owing to cabbage worms and drought.

CUCUMBERS.—I prefer White Spine for slicing and Early Russian for pickles. There is not much demand for either. Cucumbers are grown like squashes.

TURNIPS are generally grown on oat ground, which is plowed and prepared in the latter part of July. Red-Top Strap-Leaf is the favorite. The roots sell at 10 to 25 cents per bushel.

MANGELS.—Yellow Globe is decidedly the best. The ground is prepared and the seed is sown the same as for beets. The rows are three feet apart, and cultivation is done with hoe and cultivator. The seed must be got in early, or not half of it will ever grow.

POTATOES, like most other vegetables, must be planted early to insure a crop. I grow early varieties exclusively. Late succeed about once in five years. Beauty of Hebron and Early Ohio seem to do best and yield very good crops. I tried the trench system once, but was obliged to earth up some to save the tubers that were exposed by heavy rains. I shall try it again. It is best to plow the ground in spring as early as it will turn up mellow. It is worked down fine; shallow furrows are made three feet apart, and large seed-pieces, cut the same day, are dropped 15 to 18 inches apart and covered with two inches of mellow soil. When the first weeds appear the ground is curried over with the back of a harrow which puts a quietus on them for a couple of weeks, and by that time the plants are large enough for the cultivator. But little hoeing is done, it is cheaper to use horse implements early and often. Beetles are treated to a solution of London-purple.

FIELD CORN.—The two varieties of field corn most extensively planted in this great corn region are yellow and white. There is great diversity of opinion as to which is best. With good soil, thorough cultivation and a favorable season, either will yield a good crop. If planting yellow, I would select the pure quill—perfectly yellow, with a large deep grain and small red cob. If white were my choice, I would select pure white, large deep grain and white cob. Continued careful selection, aided by rich soil and good cultivation, will do wonders with corn The best bred and most wonderfully named corn on earth will rapidly deteriorate when grown on poor soil or only half cultivated. If the soil is rich and strong we put four to five grains in a hill. If it is somewhat run down two to three are sufficient. We begin to cultivate as soon as the corn is planted, and keep at it until the plants are two feet or more high. I never saw corn that was cultivated too much or too often. Three to four inches are deep enough for any corn cultivator to run. When the farmer comes out of his corn-field to hang up his cultivator, he should leave the corn at least two feet high, the soil perfectly loose and mellow to a depth of four inches, and not a weed visible. The thread-like feeding roots of the plants will then take entire possession of the soil, and the growth will be rank and rapid.

NOVELTIES.—Not one in 50 is better than the old varieties. I expend about a dollar a year on them, for amusement mainly. If they are valuable they will remain on the lists and become cheap in due time. If not, they will disappear.

Christian Co., Ills.

FROM H. L. WYSOR.

It is only within a period comparatively recent that the business of market-gardening has assumed any noteworthy proportions in this section of the State. Owing to the fact that there was no market for vegetables, the country was given up to the raising of stock, which, requiring little outlay in labor or other expense, gave very profitable returns up to the time of the severe decline in cattle. Since, however, the development of our iron industries, the building of furnaces, the opening of mines, etc., the area devoted to growing vegetables has been yearly increasing to supply the demand for them occasioned by the large number of laborers employed in these works. For some kinds of vegetables—such as rhubarb, egg plant and squash—there is still no market, and these kinds are not grown. The following, however, are grown here to a considerable extent.

BEANS.—For snap bush beans no kind surpasses the Early Valentine, and none equals it in quality. The wax sorts are productive, but spot badly in wet seasons, and are without any pronounced flavor. As compared with green beans, they are tasteless. For dry beans, the Navy or Pea bean is grown almost exclusively. It is generally sown broadcast, no cultivation being given, and it is harvested with the reaper. Some yields have been reported as high as 25 bushels per acre. Pole beans are planted with some of the taller field corns as a support. The Southern Prolific is the kind mostly used. No Limas are grown except for home use.

BEETS are raised to a very limited extent. The Blood Turnip is the best and sweetest.

CABBAGES are more largely grown than any other vegetable, principally for Southern markets. Till this season they have been far more profitable than tobacco in the eastern part of the State. Owing to the great drought in the West in 1887, such profits were realized from sales of cabbages here that a large increase in area was brought about in 1888—no less than 6,000 acres are said to have been planted in Wythe county, alone. Consequently they were a drug in the market, in many instances shippers having to pay the freight. The Flat Dutch is the kind usually grown, and it is the best adapted to this climate. One of the best late cabbages I have ever grown is the Hard-Heading introduced last year by Gregory. It is very hard and heavy, seldom bursts or rots, and keeps remarkably well. It will, no doubt, be largely grown here when its merits become known. In growing cabbages here fertilizers are largely used. They are placed in the hill when the seeds are sown. The area is too large for the economical use of barn-yard manure, even if it were to be had in sufficient quantity, and for the same reason no transplanting is done. The seeds are sown in checks 2½ feet each way, giving nearly 7,000 hills to the acre. The plants are dusted with ashes or plaster to prevent the attacks of the flea-beetle, and are thinned when out of danger, "missing" hills being filled at the same time.

CORN.—The Leaming is the best I have ever tried, and is now largely grown for stock, yellow corn meal not being palatable to Southern taste. It has a comparatively large cob, which is, however, light and pithy, drying out readily and rapidly without spoiling the grain On further trial, the Brazilian Flour corn proved to be utterly worthless except as a forage plant. The [illegible], of which the yield is not great, dries so slowly and is so soft that it spoils in curing. Of sugar corn for a succession, I prefer the Cory, Early Concord, Stowell's Evergreen, and Late Mammoth.

ONIONS.—The potato onion is almost exclusively grown throughout the State. It is set out in the fall—in November—is protected by a covering of pine brush or other coarse litter, and is harvested in July. Onions from the black seed are not to be relied upon here. I have, however, frequently succeeded with the Large Red Wethersfield sown early in the spring. It is the best keeper of all, though of rather strong flavor. The Italian onions are such poor keepers that they are not worth planting. They begin to grow again almost as soon as matured.

POTATOES.—Early Rose is still the leading early variety and commands a higher price than any other in our markets. I have always regarded it and its class as tasteless, but it seems to suit the popular idea, being dry and mealy. I myself grow potatoes largely for market, but do not plant early varieties as the late kinds are more productive and are better keepers. For some years I have planted the State of Maine, which, as the RURAL is aware from its own tests, is a very heavy yielder. [Yes, it is a fine variety.—EDS.] It is smooth, of good shape, and seldom knobby. It is better adapted to level cultivation than any other, since it never grows out of the ground to become sun-burned. An objection to it is the scattering habit of the tubers. I tried, last season, Rose's Beauty of Beauties. The name is a misnomer. There was not a single potato in the peck which I purchased that was not ill-shaped. In my soil it has become much smoother; but still it does not come up to my idea of a beauty. The tubers are few, but average very large, and the quality is excellent, fully equal, if not superior to that of the old Peachblow. My plan of planting is in rows 32 inches apart, and two-eye pieces are drilled in 12 inches apart. In cultivation, the ground is kept as nearly level as possible and free of weeds until covered by the vines.

PUMPKINS are grown in the standing corn. The large Cheese is the best, being thicker-meated and of better quality than the Connecticut Field. Pumpkins are grown for stock—principally milch cows.

Pulaski Co., Va.

FROM H. M. ENGLE & SON.

Potatoes are not confined to the garden; but what farmer's wife will not have some planted in the garden so as to be sure to have some for the table in advance of any of her neighbors. The same rivalry applies also to peas. The variety that matures first is, of course, selected, and in this there is a wide difference of opinion.

We have thus far found no potato that has matured earlier than the Early Ohio. Side by side, we have grown Early Rose, Early Maine, Early Vermont, Early Beauty of Hebron and others. The Early Ohio can be planted closer than any we have yet tried, and has in some seasons yielded more than the Early Rose. Moreover, it does not sprout in the cellar as soon as the latter, and in quality it is about equal. We do not plant medium crops, as they generally mature in the hottest part of the season, which is not congenial to their nature. We plant the early varieties as soon as the weather and soil will permit, so as to have them mature before heat and drought set in. For the later varieties we calculate their period for maturing, and plant so as to extend their season as nearly as possible to the first frosts. In such a case they rarely fail to get the benefit of the fall rains and cool weather, thus securing, almost without fail, good crops. For late crops we have been growing Peerless and Mammoth Pearl—which are almost identical—White Elephant, White Star, Burbank, Snowflake, Peachblow and others; but the Peerless and Pearl have given us the best satisfaction.

PEAS.—Almost every seedsman has the earliest with his name prefixed, and the difference is so little that we have no choice. For succession, we grow McLean's Advancer which combines about as many good qualities as any we have yet tried. The pea is of the

best quality and the vine is productive, and of medium hight.

BUSH BEANS.—Early Six-Weeks has no merit except earliness. Black Wax is but a little later, and is showy and of good quality. For succession, the old Valentine will not be soon crowded out. For pole the Giant Wax is still a favorite. There has not been much improvement on a good strain of the common Lima. Dreer's is not popular here, as it is hard to shell.

SQUASHES.—The White Scalloped Bush for earliness will no doubt hold its own for some time. For quality, Perfect Gem has no superior. Boston Marrow, Hubbard and Marblehead still remain favorites, though many excellent varieties have appeared since their introduction.

TOMATOES.—Among the many varieties we have found none superior to Livingston, Paragon, Favorite, Perfection, Beauty and Acme. The last is unexcelled for quality, but it is rather tender for shipping. From the former varieties we have by careful selection secured a strain that we believe to be unsurpassed, and consequently we buy no seed except for testing.

CELERY.—We have tried many varieties, but have found nothing that suits us better than Golden Dwarf. We grow some White Plume for early, and some red for the best quality.

CABBAGES.—The best strain of Wakefield is as yet unexcelled if equaled for early. Large Wakefield and Early Summer are prime for medium, and the best strains of Flat Dutch for late.

CAULIFLOWER.—Snowball, Erfurt and Long Island Beauty are all fine.

BEETS.—Egyptian and Eclipse for earliest, Early Blood Turnip for medium and late can hardly be surpassed.

CUCUMBERS.—White Spine for slicing and Green Prolific for pickles are our choice. The latter is exceedingly productive.

EGG PLANTS.—Good strains of New York Improved are as yet unsurpassed. Black Pekin is a trifle earlier, but it is not a profitable market variety.

CARROTS.—Early Horn for earliest, and Improved Long Orange and Half-long Red for the main crop have given us best results.

RADISH.—For forcing, we prefer Early Scarlet Turnip to French Breakfast, Olive-Shaped or any others, as it does not get spongy so soon. For out-door culture Long Scarlet, and Beckert's Chartier, and for winter Rose China.

TURNIPS.—Early Purple-Top Strap-leaf for early and White Globe for late are our preference.

SPINACH.—We have tried several varieties, but have settled on the Savoy-leaved varieties as being the hardiest, and of the best quality.

ONION.—Yellow Danvers is the best for bulk of crop. Silver-Skin is more salable, but it is not a good keeper. Extra Early Red is our best early variety.

CORN.—There are so many varieties of sweet corn claiming first honors for earliness as almost to confuse the inexperienced planter; but they bear almost invariably small ears. Of this class we grow a small percentage; but for several years we have selected Crosby's Early as the earliest that will produce ears of good size. For the main crop or succession we consider Stowell's Evergreen the best. It combines more good qualities than any other.

Lancaster Co., Pa.

FROM A. B. COLEMAN.

There are so many good vegetables that it is difficult to say which are the best. Many of the old varieties are about as good as any of the much lauded new kinds, if not better. Our seedsmen seem to have contracted a mania for the introduction of new varieties of vegetables, whether they are meritorious or not. The catalogues give us something new every year, at a high price. Now and then we stumble upon a novelty which proves a little better than anything of the kind we have before struck; but, more frequently, than otherwise, we pay out 25 cents per packet and get something altogether inferior to a five-cent packet of an older variety. New vegetables, new fruits, and new implements are desirable if they possess special merits; otherwise they should never be thrust upon a confiding public with such high-sounding, eulogistic, and, it may be said, false descriptions, simply to fill the pockets of the introducers. The introduction of a new bean, tomato or melon does not always carry with it the assurance that the novelty is, in all respects, superior to anything of the kind ever catalogued. As often as otherwise, the newcomer is, in all respects, inferior to many other varieties which preceded it many years. It is best to touch new things lightly, unless the testimony of their superiority is indisputable, and unimpeachable. The following vegetables have proved about as valuable here as any ever tried in this section for field culture.

BEANS.—Early Valentine, Early Mohawk, and Refugee are my selections for bush varieties. Sow them in drills 2½ feet apart. Drop the seeds from five to six inches apart—(many plant closer), cover an inch and a-half. The soil should be well fertilized. Give level and shallow cultivation after every rain. For pole beans I prefer Horticultural, Southern Prolific, Dutch Case-Knife, Southern Crease Back, Red and White Cut-Short. The last three are excellent varieties and are planted almost exclusively here in corn-fields, where they do splendidly. When poles are used, drill in rows four feet apart, and drop the beans 15 inches apart. Cultivate as for bush beans, and when the vines are 10 inches high stick a pole seven feet high in each hill. Sieva or Small Butter does better here than any of the Limas. It is enormously prolific and early, and bears until frost. These beans are planted and cultivated as ordinary pole beans. Some, however, make a trellis for them as for grapes, and plant in the same place for several years. Beans should not be planted until the ground is fairly warm, as they are quite sensitive to cold. The Navy and White Kidney are grown here almost exclusively for winter use.

BEETS.—Extra Early Egyptian and Bastian's Early are as good as any. Sow them as early as the ground can be worked, in rows two feet apart. Thin them out to four inches apart. Use those pulled out for "spring-greens." The soil should be very rich. Give level surface cultivation.

SWEET CORN.—Early Minnesota and Stowell's Evergreen are the favorites here. I have never regarded sugar or sweet corn as making the best roasting-ears, and I have never grown this kind extensively for this purpose. A good variety of field corn, to my taste, makes a better, more palatable and more substantial dish than any sweet corn I have ever tried. For such a dish, I do not know of anything better than Pride of the North. I have been using it for roasting-ears ever since its introduction by the late Hiram Sibley. It is very early, prolific and fine-flavored, while the ears are of good size. It makes a choice pudding. It should be planted for a succession.

CABBAGES.—Hereabouts we prefer Early Jersey Wakefield, Henderson's Early Summer, Fottler's Improved Brunswick, Premium Flat Dutch or Burpee's Surehead. For the early varieties I sow seed in hot bed or cold-frame in February and set out plants as soon as they are large enough, 2½ feet by 18 inches apart. For late cabbage I sow the seed in April and plant in May or June, three feet apart each way. Give level cultivation, keeping the surface stirred after every hard shower, so that the loose surface soil may act as a mulch and preserve the moisture. This is a crop that will not materialize on thin land. The soil must be rich—very fertile Good loam, well-drained, but inclined to moisture, is the best. The cabbage is a heavy feeder and drinker. It requires an abundance of plant food and water. Good composted stable manure is the best fertilizer I have ever tried for this crop. The following preparation is the best preventive of the cabbage worm: Take an ordinary coal-oil barrel and fill it two-thirds full of water, and stir in it a gallon of coal or gas-tar. Mix it thoroughly. Let it stand three or four days, stirring every day three or four times. With a garden sprinkler put a little of this mixture on each plant. It should be applied once a week, about the time of the first appearance of the cabbage fly.

CUCUMBERS.—Nichol's Medium Green for table, and Green Prolific for pickles are my choice. Plant five feet apart in good soil and cultivate until the vines cover the ground.

SQUASH.—Summer Crook-Neck for summer use, and for winter use I would substitute the Sweet Potato pumpkin which is about as good as the winter Squashes, besides being very prolific, a fine keeper and a sure cropper. It is not disturbed by the Squash-bug. Plant seven feet apart each way.

POTATOES.—Early Rose and Potentate for early use, and Mammoth Pearl for medium or late, can't well be excelled.

TOMATOES.—I have never grown any better sorts than Essex Early Hybrid and Optimus. They are early, of good size, smooth and of fine quality and prolific. Set the plants four feet apart each way, in good soil. Put a teaspoonful of salt in each hill and mix it thoroughly with the soil. Drive a stake five feet long in each hill, and tie up the vines as they grow.

FIELD CORN.—I prefer Mammoth Cuban, yellow; Gould Hill Prolific, white. Mammoth Cuban is a very early yellow dent variety, very prolific and is practically drought-proof. It is the best corn with which I am acquainted. Its feeding value is unsurpassed. The Gould Hill Prolific is a large pure white corn said to be a cross between Blount's Prolific and Mountain Giant. It has a large grain, large ear and large stalk. It makes the very finest snow-white meal. It is the most prolific white corn I have ever grown. Plant the seeds from three to four and a-half feet each way according to the size of the stalk; or drill in rows three to four and a-half feet apart and thin to one stalk every 15 or 20 inches. Thorough preparation of the soil is absolutely essential to make a good corn crop. Level, surface cultivation should by all means be practiced. If I could do so, I would cultivate my corn after every heavy shower, just deep enough to effectually break the surface crust, and put the soil in condition to absorb and radiate heat and not reflect it. The reflection of the rays of the sun from a hard, glazed surface soil, is fatal to any growing crop, particularly corn. Shallow cultivation after every hard rain will break up this reflective condition of the soil, and, besides, the stirred surface will act as a good and effective mulch to prevent the rise and escape of moisture. These shallow cultivations may be continued with profit until the corn is in the roasting-ear state. Plowing the corn from five to 10 inches deep, in deep cultivation, multilates and tears the roots to pieces. All cultivation should cease before the corn is a foot high. Corn roots should never be disturbed by cultivation; but if they are to be wounded at all, let it be done when the corn is small.

Caldwell Co., Ky.

FROM JONATHAN TALCOTT.

RHUBARB.—Victoria suits me as well as any; yes, rather better.

SQUASH,—summer, Yellow Crook-Neck; fall, Essex Hybrid; winter, Hubbard.

PEAS.—Bliss's American Wonder for early; McLean's Advancer, for second early; Champion of England for late. Plant at different times for succession.

CABBAGES.—Early Winningstadt is an excellent sort for family use, but for sale, a Drumhead is preferable. Gregory's All Seasons is a good sort for me.

PUMPKINS.—The common field pumpkin, generally called Connecticut Pumpkin, suits me best.

BEETS.—Bassano has been the standard, but some of the darker sorts are now preferred.

CARROTS.—The Danvers is my choice.

CUCUMBERS.—White Spine is my favorite.

ONIONS.—Yellow Danvers.

BEANS—For white I prefer the Mountain Bush or Marrow; for string, the Golden Wax. I do not raise pole beans.

CORN.—Early Minnesota I like best for early; Moore's Early Concord for medium, and Stowell's Evergreen for late. Use a succession of plantings.

TOMATOES.—Rawson's Puritan.

FIELD CORN.—Dutton.

MANGELS.—Globe.

BEANS.—The Speckled Cranberry for a pole variety is best with me.

Oneida Co., N. Y.

FROM F. H. VALENTINE.

Any list of garden vegetables which I might select from positive knowledge would not include many varieties of most recent introduction, for this reason: When I first began gardening I studied the seedsmen's catalogues intently and, in my innocence, was carried away by the glowing descriptions of their wonderful new varieties. I was led to buy many seeds at exorbitant prices, only to find afterward that many of them were no better than the old varieties which were sold at moderate rates, if, indeed, some of them were not identical. To be sure, I got some good things among the novelties, but my ardor was cooled to such an extent that I have invested very sparingly of late, preferring to let others bear the expense as well as the disappointment of a trial. I can recommend the following as good in our locality, although other varieties may be as good, or even better.

PEPPERS.—The Golden Dawn Mango is the best I have tried. I like its yellow color, and it is not so fiery as some of its more ruddy relatives. Peppers must have a warm, rich soil, must be kept in a hot-bed until the weather is quite warm, and should be of good size, even in blossom, when transplanted.

RHUBARB.—Linnæus I find as good as any. It should have a warm exposure to bring it on early in spring when we need it most. Half a barrel set over the hill, and surrounded with fermenting horse manure, as soon as the ground is bare, will push it on several days.

SQUASH.—I like White Scallop best for a summer variety, although some prefer the yellow ones because they "look better." The W. S. is a little earlier than the Crook-Neck, and is good in the fall after the shell hardens. Mix well-rotted manure in the hills, hoe often, and sprinkle with a weak solution of Paris-green to kill the bugs. This is a good remedy for bugs on all similar vines; but needs to be about half as strong as for potatoes, to avoid injury to the vines. The Hubbard is good enough for me for a winter squash. Plow under all the manure you can, no matter how coarse, plant in hills ten feet apart each way, or in drills 10 or 12 feet apart. Rotten manure in the hill won't hurt the squashes. They are excellent for stock, producing very rich milk, and can be grown very cheaply. Farmers should grow them more extensively for this purpose. As they yield heavily, much valuable feed can be grown on a small area. Handle very carefully those stored for winter, as they will decay if bruised, store only the hard-shelled ones in a dry cool place, and they will keep for a long time.

TOMATOES.—I would plant some of the Golden Queen for home use, on account of a preference for its flavor, and also because it makes a pretty contrast to the red varieties. The Mikado is early, large, very productive, but very irregular in shape. There is not much choice between Essex Hybrid, Cardinal, New Red Apple, and Livingston's Favorite, excepting, perhaps, that Essex Hybrid and Favorite do not rot quite so badly here. I have tried the Station, originated at Geneva, but it is no earlier or better with me than the older varieties, while it is smaller. I don't take any stock in "tree tomatoes" so liberally puffed by some seedsmen. Do not transplant tomatoes until the ground is warm, even though it be the middle of June. They will not grow when it is cold, and serve only as food for the omnipresent Colorado beetle. Plant a few potatoes nearby beforehand to have them ready for "bug feed." A trellis for tomatoes will pay in securing both early ripening, and exemption from rot. A good hot-bed made the first week in April, will give plants quite large enough for transplanting as soon as the weather is suitable.

PEAS.—For early, plant Carter's First Crop; for medium, Premium Gem; for late, Champion of England. Plant early ones shallow, and late ones deep. Plant in drills at intervals of two weeks.

BEANS.—I wouldn't plant bush varieties for my eating as "snaps," although they make good succotash. The Golden Dwarf Wax I call the best. Different seedsmen give a half-dozen variations on the "Wax" bean, but they are all practically the same. The Golden Butter Pole is incomparably the best bean I ever saw. It bears early, and holds out late large, beautiful, translucent pods, which are very tender and sweet for snaps. This is the only variety I would raise for green beans for my own use. Do not plant beans too thickly, or hoe them when wet.

CORN.—The Cory is the earliest I have yet found. The ears are large and sweet for so early a variety. A little sugar added to the corn while cooking, will improve it, and the same is the case with early peas. For second early, Perry's Hybrid is the best. It has very large ears of 10 or 12 rows, and is quite tender and sweet. The greatest objection to these two varieties is their red cobs, but this feature can be bred out by care in selecting seed. For late, the Mammoth is the sweetest corn I have ever tasted. It is later than the Evergreen, and has much larger ears. If these three varieties are planted at the same time as early as the ground is warm, they will furnish a succession lasting a long time. Plant some Mammoth early in June for late use, and for winter use also, according to some late writers in the RURAL.

CAULIFLOWER.—The Early Snowball forms the most solid and best heads of all I have grown; it is good both for early and late.

CELERY.—I am much pleased with Early Arlington, which is an improved Boston Market, but several weeks earlier. White Plume is an early sort, and is very ornamental, but it is a poor keeper. The red varieties are coming into favor, but I have never tried any of them.

CABBAGES.—Extra-Early Wakefield has always been my standard early sort, but last season I tried New Express, and was so well pleased with its good quality, its solid heads, which stood long without bursting, and it good size, that I shall plant it again for extras early. For intermediate and late, I would plant All Seasons and Fottler.

LETTUCE.—Prize Head and Hanson furnish all the variety I care for. They are both tender and sweet, and without that bitter taste so often found. Sow some in a hot-bed for early use.

PUMPKINS.—Connecticut Field makes pie which is good enough for me.

BEETS.—Eclipse for an early "bottoms" very rapidly, and is of good quality. Sow thickly, and thin out for "greens." For the main crop and winter use, the Bassano cannot be beaten.

CUCUMBERS.—I like Tailby's Hybrid better for the table than any other variety I have tried. It is very productive, solid, and fine-flavored. For pickles I grow Green Prolific on account of its prolificacy, and good keeping qualities, although an occasional customer complains that it is "too chunked."

EGG PLANTS.—I never grew any but once when I planted New York Improved Purple, and had nearly as many different kinds as I had plants. I wouldn't take the trouble of keeping the beetles off the plants for all the satisfaction I could get by eating the fruit.

POTATOES.—The Early Maine is about as early as any, and is of good quality. Beauty of Hebron is a fine potato for a general crop. It is of good quality in the fall, and keeps solid and good through the winter and spring. The New Queen under very unfavorable conditions, did so well last season that I shall try it again.

RADISH.—The Scarlet Turnip White Tip is a very nice early sort, crisp and tender. It can be raised very early in a cool hot-bed. Long Scarlet for later, is a most excellent variety. The Shepherd was a complete failure with me, while a neighbor called it the best radish he ever ate. Radishes *must* grow quickly to be tender.

TURNIP.—Yellow Swede is the only variety I would grow for my own use. For best quality, sow rather late, so as to insure rapid growth. The roots will be better if only of medium size. Those who want a quicker-growing variety, and also one which may be sown later, will find Purple Top Strap-Leaf or Purple Top Globe very good varieties, though they are rather watery when cooked.

Wayne Co., N. Y.

A FARMER'S GARDEN.

A good garden is little appreciated by the average farmer, yet nothing on the farm is so valuable in all respects in proportion to the labor and expense as a well selected, well kept garden. Profit, pleasure and health may be realized and promoted by it. After the location has been determined, drainage becomes a matter of the first importance. If natural drainage is offered by the lay of the land, nothing more will be needed; but if this is not the case, tile drainage should be employed. This would be the most perfect and would secure the best possible results. Aside from making the ground dry, it will have the effect of making it ready for use probably two weeks earlier than if it were not drained. This of itself would constitute a very great advantage. The very first thing that ought to be done after the ground has thawed out, is to sow or plant those garden vegetables that are not easily affected by frost or freezing, such as beets, lettuce, peas, radishes, cabbage, onions and spinach, and as early as possible all the other vegetables should be put in, such as sweet corn, beans, tomatoes, turnips and others suited to garden culture. Every garden should have a bed of asparagus. Nothing is more valuable, palatable and healthful, coming, as it does, the first *thing* in the early spring at a time when the system and the appetite demand and crave something of the kind, which is a departure from the winter living. A bed of rhubarb also is a godsend and both of these should always be found in such abundance as to supply the requirements of the family. Yet how seldom are these "luxuries" found in the farmer's garden, and how insignificant is the outlay necessary to obtain plenty of them! When once possessed, they prove a permanent blessing, and this is an additional reason in favor of at once deciding to obtain them. It is important to secure the best seeds of the very best varieties of every thing for the garden. An inferior article is dear as a gift as compared with the best at its just value. Very great advances have been made in recent years in the improvement of all garden vegetables and fruits. When the best seeds of the best varieties are obtained, it is a good plan to plant a portion of each kind for the production of seed, giving wider distances to these than to the seeds for the ordinary crop. In this way the seeds are improved. Successive plantings should be made at intervals of sufficient length to have a supply continually. Especially should this be done with the leading and most desirable kinds. Fruits of all kinds suited to garden culture should belong to the farmer's garden.

Enlightenment, civilization, refinement and a first-class fruit and vegetable garden go hand in hand.

After growing the seed in the best manner—giving extra space, care and attention to the plants that are intended for seed-bearing—it should be properly cared for. Get a sack of sufficient size to hold all the papers of seeds, and when it has been filled hang it up in a safe and dry place. Get as many small paper sacks as may be needed—these can be had at the grocery-store—save the seeds when fully mature, and dry them carefully in the shade, and pack them in small paper sacks, marking on the sack the kind of seed and the time of saving it. This mode of caring for the seeds will be comparatively inexpensive, and will preserve them in good condition. If the best seeds of the best kinds are obtained at first, and proper care in growing them is given, and home-grown seeds are carefully saved, the quality and yield of the crops will improve each season, for the law of improvement requires us to choose the best kinds and give them the best care and culture.

Our enterprising seedsmen are constantly bringing out new and desirable varieties of vegetables, and it is the best economy to obtain seeds of the new kinds, and not only preserve but increase their good qualities, by careful growing. It is important that the seeds should be on hand in good time for early planting. One week's enjoyment of fresh vegetables and fruits, as early as it is possible to have them, is worth as much as two weeks' enjoyment of them in the middle of the season. It is therefore of the first importance to plant early.

The garden should be well plowed in the fall, so that no time will be lost in the spring, yet it would be well to give a shallow plowing in the spring also, and a thorough preparation for the seed by several harrowings until the soil is made perfectly fine. No part of the work is more important than this. It facilitates planting and enables the roots to take hold, and gives the plants a good send-off, which is essential to the most perfect growth. The plowing in the fall should be deep and the furrows narrow, leaving a portion of the bottom soil at the top, and a portion of the top soil falling below. In this way the soil may be deepened and made rich, making it much more valuable for the production of all garden vegetables and fruits. By breaking up the top soil deep and keeping the surface fine and mellow, the best conditions will be secured for the attraction to the surface of plant food and moisture from great depths in the earth, and for obtaining a supply of plant food from the air, which is a reservoir of fertility. Thorough culture of the garden is of great importance. Frequent culture will insure moisture in times of drought, and is valuable at all times for supplying mellowness and moisture to the soil for the use of plants. One of the reasons why many farmers pay little or no attention to having a garden is the fact that so many attempt the cultivation of more land than can be well tilled; the consequence is that they are compelled to give all their time to ordinary farm work, and have no time to make a garden. The ecomony of this course may well be doubted. The better way would be to attempt no more than can be done in the best manner, and in determining this question, one should allow the garden to come into the account.

Scott Co., Iowa. E. S. TEAGARDEN.

FROM O. H. ALEXANDER.

PEPPERS.—Taking all things into consideration, I prefer the Bell or Bull-Nose variety. It is a large, early sort, of mild flavor. It is the best for pickling. The new Celestial kind is also good for pickling. Peppers need rich soil. They succeed nicely on fine clay loam.

SQUASHES.—I prefer the Sibley for quality, though in Vermont this kind is not so productive as the Hubbard.

TOMATOES.—I prefer for this section for early, Laxton's Early. The vines are completely loaded with fruit, and I am confident that whoever wishes an early tomato will be much pleased with this. The quality is rather inferior to that of our American tomatoes. I value it for Vermont, because it is early. I find Livingston's Beauty and Autocrat fine varieties for our climate; so is the Optimus.

BEANS.—The new Golden-Eyed Wax is the best and most prolific variety of bush beans that I ever raised. I raised this year 1¼ bushel from 1½ quart without any extra care or cultivation, and without manure of any kind; soil a clay loam. I would advise all growers to try it next season. The pods grow uniformly handsome without a spot, and keep extremely well after they have been picked. All who prefer a wax bean will find this variety a gem. Wardwell's comes next. Golden Wax and Black Wax are good old varieties, but they are not prolific and it is quite expensive to raise them.

PEAS.—Having tested 80 varieties this last season, I consider the Telephone the best for bush. For dwarf early varieties Cable, Gem, Early Prize, Maud S., Early Hartford, Alexander's New Dwarf, and Rural New-Yorker are all good. For intermediate I prefer the Dwarf Champion, Stratagem and Burpee's Quantity. The latter variety is my wife's favorite. I consider all of those I have mentioned the cream of the field. I will also add Satisfaction (Sutton's)

POLE BEANS.—Dreer's Golden Cluster Wax pole, a new variety, I am well pleased with. I find it very prolific, and the quality cannot be surpassed. I am confident all who test this variety will be much pleased with it. The Jersey Extra Early is earlier than the Golden Cluster, but it is not so prolific or so profitable.

CUCUMBERS.—Rand's Improved White Spine is the finest that I know of. It is the best for the table and the most perfect in form and is very prolific. For pickling, I would grow the Green Mountain.

CABBAGE.—Gregory's All Seasons cabbage gives the best satisfaction. The Montreal Market is also a favorite in this section wherever it has been tested. The plants are sure to head. I would like the former better if the heads would harden up a little better. The latter is a new variety not yet known to many. It gives good satisfaction wherever tested.

BEETS.—Jewell and Eclipse are my favorites. They are early; the tops are small; the roots red, smooth and globe-shaped, and much larger than the Egyptian. They are superior to any I have tested.

LETTUCE.—Hanson's Improved gives me the best satisfaction. It is large, solid, sweet, crisp and tender.

POTATOES.—For this locality and almost all others, I consider the Charles Downing, Puritan, Garfield, Polaris and Albino the best for early varieties. For intermediate, Delaware, Green Mountain, Alexander's Prolific, Rural New-Yorker No. 2. and Ben. Harrison are my choice.

Chittenden Co., Vt.

FROM A. C. BATES.

After 30 years of cultivation and observation, I would recommend the following as the best vegetables for our locality. The main difficulty in the growing of vegetables as well as fruits is the desire to grow too many varieties. Next season I shall grow only those mentioned below, except that perhaps I may test a few of the advertised novelties in the way of fruits and vegetables.

RHUBARB.—Linnæus.

SQUASH.—Hubbard.

TOMATO.—Mikado, Early Hybrid, and Golden Queen.

PEAS.—Alaska, Laxton's Alpha, American Champion.

BEANS.—Bush: Valentine Improved, German Wax; pole: California Wax, Refugee.

SWEET CORN.—Farquhar's First Crop, Squantum, Stowell's Evergreen.

CABBAGE.—Wakefield, Henderson's Summer, Henderson's Succession, Fottler's Brunswick.

BEETS.—Egyptian Blood, Lentz.

CARROTS.—Hollow Horn.

CUCUMBERS.—Early Russian, Nichol's Medium Green.

EGG PLANT.—Early Pekin.

ONIONS.—Yellow Danvers, Red Wethersfield.

POTATOES.—Pearl of Savoy, Puritan, White Star.

TURNIP.—Purple Top Strap-Leaf.

FIELD CORN.—Leaming.

MANGOLD.—Golden Tankard.

What Others Say.

SHORT AND FRESH.

THERE are some catalogues, profusely illustrated with highly-colored pictures of vegetables and flowers accompanied by glowing descriptions of monster specimens which can easily be duplicated, so it is stated, by an investment in the seeds offered for sale. Such publications are apt to be the cause of much disappointment to those unversed in the culture of crops. Now, too, that seeds can more easily than ever, owing to the reduction of postage by one-half, be procured direct from the growers, there is no need for resort to the irresponsible grocery store.....

DON'T fail to get Henderson's Bush Lima, says W F. Massey in Orchard and Garden. He saw little bushes loaded with pods growing last summer, when the old climbing sort had not started to bloom. It is the vegetable novelty of the decade.....

SCARLET NONPAREIL, among eight different kinds of rhubarb, proved with Prof. Goff the earliest and most productive. He speaks a good word for the Dwarf Champion tomato. At the Rural Grounds it was among the best. Henderson's Early Snowball is his favorite cauliflower. For early celery he still adheres to the White Plume. The Early Dwarf Purple is decidedly the earliest and most productive variety of egg-plant he has grown.....

TRY the Viroflay spinach.....

"CORN ROOTS should never be disturbed by cultivation; but if they are to be wounded at all, let it be done when the plants are small," says Mr. Coleman..... .....

MATTHEW CRAWFORD says, on another page, that when the Hubbard squash was introduced he ate of it so freely that his skin was colored almost to an orange hue.....

MR. CRAWFORD pronounces the Volunteer the best tomato. The Spanish King onion yielded with him last season at the rate of over 1,200 bushels to the acre. The variety is not well fixed. He calls the Mrs. Foraker the most beautiful potato ever introduced.....

THE stump-rooted kinds of carrots are best because easiest to dig, handle and store.....

MR. GRUNDY says that the best bred and most wonderfully named corn on earth will rapidly deteriorate when grown on poor soil or only half cultivated.....

THERE are few better peas for second early than Advancer..... .....

GREGORY'S All-Seasons cabbage is a fine variety.....

DR. HOSKINS, of Vermont, finds the most profit in growing Pearl of Savoy for early, Polaris for second, and Pecan for long-keeping and spring sales. The last does not know how to sprout until placed in the ground. It needs a rich soil.....

MR. WYSOR, of Virginia says that the Italian onions are not worth growing. They begin to grow again almost as soon as matured.

Mr. WYSOR condemns the Brazilian flour corn.....

YELLOW DANVERS, Large Red Wethersfield and Southport White Globe are Mr. Falconer's choice of onions, because he wants red, white and yellow-skinned, and does not know three better kinds.....

MIDSUMMER, Quantity and Blue Beauty peas are praised by those who have tried them—the R. N.-Y. among the number.....

RUBY KING is the largest pepper..... ....

THE R. N.-Y. prefers Monarch rhubarb for size and tenderness though rather late....

VICTORIA rhubarb suits the venerable Jonathan Talcott rather better than any other kind.....

THE Purple-Top Strap-Leaf turnip is a quick grower, of good quality and is first-rate food for stock. See Mr. Smith's remarks.....

MR. SMITH commenced gardening in Green Bay, Wis., on less than one acre and without means. But he has increased his business until he now cultivates a splendid garden of 40 acres and all of it under a very high state of cultivation.....

H. M. ENGLE & SON say that Crosby's is the earliest good sweet corn that will produce sizable ears..... .....

Mr. J. M. Smith of Green Bay, Wis., left a portion of his Lima beans without poles, cutting back the vines once. When he gathered the crop, he found the finest and best beans on this portion of the plot.....

TRY Potter's Excelsior sweet corn.....

HALF-LONG STUMP is Mr. Smith's favorite variety of carrot. It is also the favorite of many others who have tried the different kinds side by side..... .....

HE considers the White Spine the best of all cucumbers.....

MRS. & GOV. FORAKER are among the new potatoes. These potatoes originated with John Nagle, Plymouth, Richland county, O. several years ago.....

THE Osage muskmelon, we learn, is largely grown about TerreHaute, Ind. It has been quoted in daily market reports of Chicago for two years past and has brought nearly twice as much as other melons. J. C. Vaughan of Chicago, Johnson & Stokes and W. A. Burpee & Co., of Philadelphia, Pa., catalogue it. Mr. Burpee thinks it is the same as Miller's Cream. He says it is a late variety .. ..

W. ATLEE BURPEE & Co. (Philadelphia, Pa.) control the stock of seed of two new onions, the Red and White Victoria. They are alike except in color. The onions are said to weigh from 2½ to 4½ pounds each, the quality "mild and sweet." They are further said to be good keeping varieties..... ....

BURPEE'S Golden Beauty corn seems to the R. N. Y. worthy of trial. It is a yellow dent

with very large kernels and a small cob. The tips and butts are well covered with grain, and the butts, instead of being larger than the ear above, are somewhat smaller, a very desirable characteristic. It is said that Mr. C. W. Holman, of West Willington, Conn., raised in 1885, 158 bushels of shelled corn on an acre .....

WM HENRY MAULE (Philadelphia, Pa.), claims for his Everbearing sweet corn that after the first ears are taken off when mature, one to two and four more ears will set and develop on the same stalks during the next two to four weeks, single stalks producing in this way "during the *entire* season frequently as many as six large, well-developed ears." The R. N.-Y. proposes to try this remarkable variety next season. We don't see where the "silks" (pistils) of the later sets get their pollen from. Or do the stalks produce a second "tassel" (male flowers)?.....

MR. GRAY, of Minneapolis, Minn. considers the onion next in importance to the potato. In preparing the soil he would use 75 tons of cow manure to the acre, and after planting top-dress with wood ashes and bone dust. He would plant sets instead of seed, and prefers White Portugal. As the bulbs begin to ripen he covers to a depth of two inches with earth to protect them from the direct rays of the sun. Thus he is reported in the Farmer's Review .....

THE TURNER HYBRID TOMATO.—"I see some subscribers object to this on account of its roughness. My experience with tomatoes is that we may raise rough or smooth tomatoes from the same variety. My plan is to remove the rough fruit as soon as the shape is seen; by this means those left will be much better." The above is from a writer in Popular Gardening. It may be well to repeat what the R. N.-Y. has previously said. The *shape* of a tomato may be determined before the flower falls. The ovary will show to a certainty whether the fruit will be smooth or many-lobed and ill-shapen.....

IT is now time to sow cabbage, cauliflower and tomato seeds in hot-beds. Potato seeds (from the ball) may also be sown now.....

JOHNSON & STOKES (Philadelphia, Pa.) give an illustration and a description of a mangel called the Chirk Castle. While in Scotland one of the firm saw "hundreds of specimens taken from the field, weighing *over 60 pounds each*, while whole crops averaged 38 to 40 pounds per root, producing a yield of over 60 *tons to the acre*".....

FORD'S New Mammoth podded Lima is claimed to be "absolutely the largest, finest-flavored and most productive of all Limas....

S. F. LEONARD (Chicago Ill.) announces the Golden Wonder millet, the heads of which are said to be 18 inches long, the hight of the plants about six feet. It is said to yield "enormously" both of grain and fodder.....

JOHN A. SALZER'S (La Crosse, Wis.) Earliest of All tomato is said to ripen in 80 days. Salzer's Iron-clad potato is represented as yielding prodigiously, as having remarkable keeping properties, few eyes, excellent flavor, etc. It is late.....

PRICE & REED (Albany, N. Y.) catalogue the following potatoes in their list: Queen of the Valley, American Giant, and Green Mountain. The R. N.-Y. has found them heavy yielders though of inferior quality. In the same list New Queen, Early Maine, Ohio Jr., and Stray Beauty, are worthy of trial.....

R. D. HAWLEY & Co., (Hartford, Conn.) claim that Hawley's Improved East Hartford is positively the earliest pea in cultivation....

MR. SAMUEL WILSON (Mechanicsville, Pa.) is the introducer of the much-advertised Northern Spy potato. Mr. Wilson has sent us a number of these potatoes some of which we shall plant. The others were cooked a few weeks since. The quality is good, the flesh white. It is claimed that this potato is a great yielder.....

THE R. N.-Y. has suceeded in raising very fair crops of peanuts. It is not beyond the possibilities that improved kinds may be made profitable in the North. We call attention to J. V. Faust's (Philadelphia, Pa.) "Improved Peanut." It is claimed to be very early and prolific, yielding fewer imperfect pods than any other.....

W. W. RAWSON & Co. (Boston, Mass.) offer Pringle's American Triumph and Pringle's Progress oats, also the Rural Branching sorghum which some seedsmen prefer to call Millo Maize—an absurd and unjustifiable name. The firm is headquarters for the Alpha potato, claimed to be the earliest variety in cultivation.....

REMEMBER, R.N.-Y. readers, that Teosinte (announced in every catalogue) will not mature seed north of Texas or Florida.....

QUEEN OF THE PRAIRIE is the same as Pride of the North corn, as stated by the R. N.-Y. some eight years ago. As we remember, they were sent to us the same year, the first by B. K. Bliss, the other by Hiram Sibley .....

J. J. H. GREGORY, (Marblehead, Mass.,) as we understand it, is the introducer of the much praised All-Seasons cabbage, so called because it is said to be just as good for late market, or to keep over winter, as it is for early market.....

HIS Hard-Heading cabbage is conspicuous for not cracking open and for remaining green longer than other kinds except the Savoys.....

THORBURN & Co. (New York) offer cow-peas, Canada field peas, tobacco seed of various kinds; also the Rural Thoroughbred Flint which we regard as the best variety of corn for ensilage. It is, however, too late to mature ears if grown in a much shorter season than that of New York.....

LANDRETH & SON (Philadelphia, Pa.) consider Landreths' Earliest cabbage 10 days earlier than any other. Landreths' First is claimed as the earliest long field cucumber in cultivation. This firm introduced the Garfield and State of Maine potatoes. The R. N.-Y. considers Landreths' Boss watermelon unsurpassed for family use.....

D. M. FERRY & Co. (Detroit, Mich.) consider Ferry's Early Puritan cauliflower the earliest, the surest header and the best for market or family use. Ferry's Optimus, in the R. N.-Y.'s estimation, is as good as any tomato in cultivation.....

THE Tomato egg-plant now advertised at a very high price for a few seeds, is the old Scarlet Chinese egg-plant of 30 years ago.....

PROF. A. J. COOK can hardly say enough in praise of the new Japan buckwheat. The millers say it is superior to any other kinds. It weighs 45 pounds to the bushel. For griddle-cakes it is A. No. 1.....

JAMES VICK (Rochester, N. Y.) places the Ohio Junior at the head of his list of early potatoes. See R. N.-Y., report, page 161, 1888.

Mr. VICK, after sufficient trial mentions the Irondequoit muskmelon as "a fruit of great merit." He deems the Ideal cauliflower the earliest and, all things considered, the best variety in cultivation.....

Too much can scarcely be said of the cabbage "All Seasons." .....

PETER HENDERSON (New York) says the Cylinder Wax bean is earlier than any other stock. Autumn King is claimed as the finest strain of late cabbage ever offered.....

MR. HENDERSON claims that his New Bush Lima is at least two weeks earlier than any climbing Limas .....

PETER B. MEAD says of the Bush Lima that it grows exactly like the ordinary bush bean and that it will find a place in thousands of gardens where the old climbing bean is unknown, as few will go to the expense and trouble of providing and sticking poles. The beans are the size of the Sieva or small Lima. The bushes grow 18 inches high and produce a continuous crop in this climate (N. Y.) from July 15 until frost.....

YOSEMITE MAMMOTH WAX bears beans, as stated, eight inches long or even longer. The pods are all nearly solid pulp and absolutely stringless .....

GOLDEN CUSTARD squash, Jonathan pumpkin, Puritan potato, Japan buckwheat.....

ACCORDING to the Wisconsin Station, of 13 varieties of dent corn most of which were advertised to mature in Southern Wisconsin, only three were found sufficiently early to depend upon for general crop, viz: Pride of the North, North Star Golden Dent and Queen of the North. The first two varieties have been indorsed by the Station for several years. The Queen of the North is a larger form of the Pride of the North, and consequently a few days later than the last-named variety, but in an ordinary season it can be relied upon to mature in Southern Wisconsin.....

FOR that portion of the State that can not mature the dent varieties, the Station has found nothing superior to the King Phillip, unless it be Sibley's White Flint, a variety that attracted much favorable comment from visiting farmers who saw it growing on their grounds the past season.....

FOR the very earliest use, the Station mentions three varieties with preference in the order given: Cory, Early La Crosse, Early Narragansett.

For second early: Early Minnesota and Perry's Hybrid are recommended.

Stowell's Evergreen and Henderson's Sugar Corn are very superior for extremely late varieties.....

THE thickness of the hull of oats should be taken into consideration. A study of 26 varieties grown by the Wisconsin Station the past season, resulted in finding a difference of 10 per cent. in the weight of hulls of different varieties; this fact though rarely thought of when selecting a new variety, is worthy of consideration.....

ANOTHER year's experience warrants the Station in continuing the White Schœnen, so often commended by the R. N.-Y., at the head of the list. The reason for urging this variety is, that the seed may be obtained in any quantity at reasonable prices, of Wisconsin farmers themselves.....

SWEDISH OATS have been grown by the Station three years and proved constant in their yield; they stand up well and have thin hulls. The Welcome is prolific and hardy, but it has a thick hull. Salzer's White Bonanza the Station pronounces very promising....

EARLY DAKOTA WHITE was one of the earliest to ripen and it stood up beautifully. It has a thin hull. The American Banner bought of J. C. Vaughan of Chicago, Ill., yielded at the rate of 72 bushels per acre, weighing 32 pounds to the bushel. Hull thick.....

OF 10 kinds of barley, the Wisconsin Station found that the Manshury won an easy victory. It is the best variety for a general crop .....

ATTENTION is called to a new medium-ripening potato, the Summit, which originated with E. E. Stine, Cuyahoga Falls, O. "It bids fair," the Station says, "to do him much credit." See R. N.-Y., report, page 281, 1886.

THORBURN and Early Sunrise potatoes are praised as productive and of good quality for early kinds.....

ABSTRACTS.

——POPULAR GARDENING: "I have at hand a catalogue from a responsible firm, showing a geranium with 34 clusters of bloom in sight and a small plant at that. I find almost everything in this way. How can the buyer get any knowledge of a variety by these cuts? We certainly want new sorts: we want varieties that are free bloomers, but when the dealer gives us to understand that 50 clusters of bloom on a small geranium are possible, we get disgusted, and I for one cannot trust other statements, some perhaps that are true."

——O. C. FARMER: "A good garden is an obligation which no wise farmer will deny his family. On the score of profit, it stands at the head, while its effects on the family health are invaluable. Less pork and animal food generally will give us better men and women, mentally, morally and physically."

——"The horticulturist who can read the glowing catalogues of our seedsmen and gaze on their attractive pictures without getting a little "enthused," is made of unmalleable clay, or else has had his enthusiam chilled by experiments in former years. We could wish our seedsmen would be a little more temperate in praise of their novelties; but, after all, it is the 19th-century way of doing business, and the seedsmen are not worse than men in other lines of trade. They certainly tend to excite interest in the garden, even if disappointment follows the experiment."

Horsford's Acid Phosphate

A Healthful Tonic.

Used in place of lemons or lime juice it will harmonize with such stimulants a are necessary to take.—*Adv.*

Miscellaneous Advertising.

Hood's Sarsaparilla

This successful medicine is a carefully-prepared extract of the best remedies of the vegetable kingdom known to medical science as Alteratives, Blood Purifiers, Diuretics, and Tonics, such as Sarsaparilla, Yellow Dock, Stillingia, Dandelion, Juniper Berries, Mandrake, Wild Cherry Bark and other selected roots, barks and herbs. A medicine, like anything else, can be fairly judged only by its results. We point with satisfaction to the glorious record Hood's Sarsaparilla has entered for itself upon the hearts of thousands of people who have personally or indirectly been relieved of terrible suffering which all other remedies failed to reach. Sold by all druggists. $1; six for $5. Made only by C. I. HOOD & CO., Apothecaries, Lowell, Mass.

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Earliest Cauliflower in existence.

D. M. FERRY & CO. are acknowledged to be the *Largest Seedsmen* in the world. D. M. FERRY & Co's Illustrated, Descriptive and Priced **SEED ANNUAL For 1889** Will be mailed FREE to all applicants, and to last year's customers without ordering it. *Invaluable to all.* Every person using Garden, Field or Flower Seeds should send for it. Address

D. M. FERRY & CO., Detroit, Mich.

Beautiful Strawberries. We are now offering for the first time and only by us, the beautiful **Eureka**, and a strawberry that yielded at the rate of **127 Bushels** to the acre at one picking the past summer—60 other varieties; **80 of Grapes; Thompson's Early Prolific** Red Raspberry, the earliest of all; Palmer Rash the most productive early Black; **Thompson's Early Mammoth Blackberry**, etc., etc. If you mention this paper we will send you Catalogue free, telling about these beautiful berries & others Everybody wants it

CLEVELAND NURSERY,
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JESSIE only $2 per 1,000. Crescent, $1; all varieties; prices *free.* SLAYMAKER & SON, Dover, Del.

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SATURDAY, MARCH 2, 1889.

CHANGE OF CLUBBING TERMS.

The N. Y. Weekly World and the R. N.-Y., $2.25.

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The Courier-Journal and the R. N.-Y., $2.25.

The Weekly Inter-Ocean and the R. N.-Y., one year, $2.50.

The lowest possible clubbing rates with any journal in America will be given on application. Subscribe through the RURAL NEW-YORKER.

Good, responsible agents wanted. We are prepared to offer very liberal terms. Correspondence solicited.

THOSE of our friends who have not tried the Crosby sweet corn should do so. The R. N.-Y. has tried it for two years and finds it, though an early variety, one of the very best in every way.

"Were it not for the necessity of earning a living, my inclinations would lead me to spend my entire time in testiny new things, raising seedlings and seeing what perfection could be reached regardless of cost."

MR. CRAWFORD, page 139.

FOR home use, or even for market, the R. N.-Y. prefers the Advancer or Alpha for early wrinkled peas to the American Wonder so popular with many. There is no material difference in the time of ripening, and all are of excellent quality, while the first two will yield three times as many peas as the Wonder.

THE next R. N.-Y. Special will be published week after next. It will consider the questions: 1. What varieties of small fruits may be considered improvements over the older varieties, and (2) what are the best of the older sorts—all by experienced growers.

IN the R. N.-Y.s experience, the Early Ohio is the earliest potato. It is of very good form and quality. The vines are rather dwarf and the seed-pieces may be planted closer together than those of other early kinds. We have always hesitated to commend this variety, however, for the reason that while it produces abundantly in some places, it fails in others. It needs a light soil.

Mr. J. M. Smith, during his 30 years' experience, concludes that growing either vegetables or fruits, in such a manner as to make a success of it, is no business for a lazy man. It is no better for an ignorant man, than for a lazy man. Success on poor land is impossible. The difference in price between a first-rate article nicely prepared for market, and a fairly good article only half-prepared, gives success on the one hand and failure on the other.

THE R. N.-Y., in this issue, calls the attention of its readers to the best new and standardvarieties of vegetables, etc., as estimated by a number of experienced growers and as they have been judged at the Rural Experiment Grounds. This we have done regardless of advertising patronage—those who do not advertise in this journal being mentioned as originators, introducers, etc., the same as those who do. It is to be hoped that our readers will be aided by this special number in making selections that will better their crops.

IN some of the English seed and plant catalogues we see in mighty type and in the most conspicuous parts: "Seedsmen to His Most Gracious Majesty the King of Italy; seedsmen to His Most Gracious Majesty the King of Portugal; seedsmen to His Imperial Majesty the Sultan of Turkey; seedsmen by Royal Warrant to Her Majesty the Queen; seedsmen by Royal Warrant to His Royal Highness the Prince of Wales, having been honored with His Royal Highness's Commands for nearly 20 years." "What fools we mortals be."

FROM MR. JOHN H. EVANS, one of the owners of the promising "Idaho" Pear, we learn that two specimens were sent to France, September 20, from Lewiston, I. T., to prominent nurserymen. They were received October 16. The specimens weighed 16 ounces. The quality was pronounced "exquisite." Such testimonials, after the pears had traveled 7,000 miles, speak pretty well for it. We are led to doubt whether the R. N.-Y. will ever have occasion to regret having been the first to bring this remarkable variety to prominent notice.

CATALOGUE notices appear this week on page 147. It will be well for our readers, by an examination of the leading catalogues published, in connection with the articles presented this week, to learn what may be a consensus of opinion regarding the varieties praised or condemned. All novelties are more or less extravagantly praised, else they would command little or no attention. While a large per cent. are not superior to better-known and lower-priced kinds, it must not be lost sight of that all improvements are made through the trial of novelties. The very best of the seeds or plants of any kind grown to-day were novelties once. It is very plain, therefore, that those who denounce them unqualifiedly are likely, sooner or later, to fall behind their more progressive neighbors. The alert gardener or farmer must know what is the best early or late potato, sweet corn, field corn, tomato, cabbage, bean, celery, beet or onion; and this can be ascertained only by trial. It is the R. N.-Y.'s opinion that all intelligent, earnest farmers or gardeners can afford—taking one year with another—to try, in a small way, all of the novelties annually announced that seem, by the claims made for them, however manifestly overdrawn, to offer one chance in 20 of being superior to standard varieties.

TO THE WOMEN WHO PROPOSE TO ENGAGE IN THE R. N.-Y. POTATO CONTEST.

A CORRESPONDENT alluding to the Women's Potato Contest, suggests that it is manifestly unfair to award the premiums to those who raise the largest crop *at the least cost.* "What chance," she asks, "has a woman on some of New England's barren fields in competition with her sisters in situations where the soil has all its virgin fertility?"

The position is well taken undoubtedly. The R. N.-Y. is in favor of cutting out that saving clause and allowing all contestants to use all the manure or fertilizer, or both, deemed desirable. The R. N.-Y. may safely assure its lady friends that the utmost fairness shall prevail in making the awards. Meanwhile any further suggestions will be welcomed.

THE DRESSED MEAT TRADE AND THE LIVE STOCK INTERESTS.

AT the present time there is no other subject more seriously agitating the great cattle interests of the country and especially those of the West than the action of the dressed meat "combine" and its depressing influence on the prices of live stock. At the invitation of Governor Darling, of Missouri, the Governors of Pennsylvania, Ohio, Indiana, Kansas, Colorado and Nebraska have already agreed to appoint representative delegates to a convention to be held next month in St. Louis to devise the most effective legislation on this matter, and it is very likely the Governors of several other States will soon follow their example. Already measures against the dressed meat trade have been introduced into the legislatures of several of the States, and it is intended to introduce similar bills into all the others before long. Hitherto the success of such measures has not been great. The Ohio Senate has decidedly defeated the bill requiring the official inspection, at the place of slaughter, of all animals furnishing food for human consumption within the State, and the Judiciary Committee of the Pennsylvania Senate has reported adversely on a similar bill. In the Missouri, Kansas and Colorado legislatures, however, bills of the same nature now pending are likely to meet with a more favorable reception.

The other day a dozen or more cattlemen representing most of the largest cattle interests of the West, met at Kansas City to form a "combine" for the purposes of handling their stock themselves, thus relieving them from the incubus of the "Big Four," and doing away with the expensive commission system now in vogue. They proposed to form an organization with headquarters at Omaha, Kansas City, St. Louis, Chicago and New York, with branches at Wichita, Kansas, and Fort Worth, Texas, where stock will be received and sold on the commission plan. Last Thursday representatives of the stock-raising industry from every State and Territory west of the Mississippi and from Illinois and Kentucky, met at Kansas City and completed the organization. The members of the Association have now 163,000 head of cattle ready to send to market. The new company will not confine its business to its members, but will do a general commission business in live stock on a large scale.

HARD WORK—POOR PAY.

IT was about ten years ago, as the R. N.-Y. remembers, that the Emerald Gem Market Garden pea was first announced by Carter & Co., the London seedsmen. It was tried at the Rural Grounds, and, every season since, a few (not over half-a-dozen) of the *largest, earliest* and *best-filled* pods have been selected for seed for the next season. This has resulted in increasing the *size* of the pods and the *number* and *size* of the seeds in the pods perceptibly; but the strain does not seem to be any *earlier* now than the original variety. The seeds raised last summer were presented to a firm of this city and the strain will be introduced in due time. The vines, which, in rich soil, grow two feet high, are peculiar in having no "bloom" upon either stems or leaves, so that the color is of a delicate "emerald" green, which doubtless suggested the name.

The object of this note is to show that in many cases those who originate or improve plants are very inadequately paid for their labors. Had the writer of this note been paid one dollar a seed for the dozen pods given to the seedsman, it would not have compensated him for the time spent in his endeavors to improve the original Emerald Gem. We raised potatoes from seeds for 10 years before a variety was produced that promised to be superior to those in the market. We crossed wheats six or seven consecutive seasons without producing any varieties of unusual worth. Some 14 years ago we commenced to cross gladioli. The work was continued for four years with some success. By an accident every bulb (corm) of the new cross-breeds was destroyed. We spent the better part of three entire winters in crossing geraniums (pelargoniums, properly) with the reward that not one of the kinds so produced is known to-day. The third year there were no less than 1,500 cross-bred seedlings in this collection. There were odd and beautiful plants among them, but we were not willing to be satisfied with anything less than something *wonderful*, failing in which, the whole lot was destroyed. We grieve over that destruction even now; for, in the light of a more enlightened judgment, there were many seedlings among them which might well have been propagated and introduced.

We have now some 70 hybrids with the Ramanas rose, Rosa rugosa—the *first* hybrids of this kind known in so far as any printed record shows. The hybrid Rugosa, Madame G. Bruant, was not announced until nearly two years after the first announcement of the R. N.-Y's hybrids, though among the novelties in the new catalogues it is called "the *first* of a new race of hybrids originated by crossing the single Rugosa with the tea-rose Sombreuil." It is true we have never used this tea-rose in crossing, and therefore Bruant is really the first of that particular male parentage. But it is *not the first hybrid Rugosa.* Besides the RURAL'S 70 Rugosa hybrids, we have 150 or more seeds, the result of further crosses with Rugosa, made the past summer. What will be the outcome of this work remains, to be seen. Next summer it is hoped, will throw some little light on the question. We have also about 20 plants which are hybrids between the blackberry and raspberry, besides another lot of hybridized seeds produced last (the third) season. The three or four of the first lot which fruited give no evidence that these hybrids will mark an advanced step in horticultural progress. Even a brief account of our incessant, though, for the most part, useless, endeavors during the past 15 years to hybridize other fruits and ornamental plants would weary the reader. We may say, however, that the work has been carried on patiently, perseveringly and at a considerable cost in time and money. As *one* result of all this, the R. N.-Y. can at least sympathize with other conscientious workers in the same field, who, when they come to *dispose* of the new varieties of seeds or plants over which they have toiled for years, receive a mere pittance for their "novelties" and the assurance that the public are sick of them, and regard the "exorbitant" prices asked as a flagrant imposition!

And a good share of the farm and garden writers—those, of course, who have never engaged in the lottery-work of originating or improving our economical plants—join in the howling chorus. So it happens, friends, that this inexhaustible field, this land of promise that yields more and more the more it is worked, and to which the world must in a great measure look for pomological, horticultural and agricultural improvements, attracts only the few—the big-hearted few who lose sight of themselves and their worldly goods in their efforts to benefit mankind.

BREVITIES.

DWARF GREEN is the best Okra.

NEW YORK Improved Egg-plant is the best.

NICHOL'S cucumber for pickles; Tailby's for sliced cucumbers.

ALL else being equal, a medium-sized ear of sweet corn should be preferred.

THE R. N.-Y. still prefers the Stratagem for an intermediate pea—vines 2½ feet high.

"THE Savoys are immensely superior to plain cabbages," says W. Falconer on page 139.

A. B. COLEMAN gives a simple and what he deems the best remedy against the cabbage worm.

MR. FALCONER calls the English Gray Mushroom the best vegetable on the face of the earth. Is he right?

FARMER'S CLUB SPECIAL next week. This special number will exceed in interest and value any farmers' institute that ever was held. See if it does not.

IF your asparagus bed needs food and you have faith in salt, use kainit and raw-bone flour. The kainit will supply both salt and potash; the bone flour, phosphoric acid and nitrogen—a "complete" fertilizer with lots of salt in the bargain.

ALL else being favorable, we would select our list of seeds from the catalogue giving the most conservative illustrations and descriptions. Exaggerated, impossible claims for the seeds and plants offered should give rise to suspicions rather than captivate the intelligent, truth-loving would-be purchaser.

ALLUDING to the gross exaggerations of the illustrations in the catalogues of several seedsmen, the American Florist says that, in justice to the honest catalogue men, some means should be taken to remedy the present state of affairs. It is unjust to them that swindlers should be permitted to bring obloquy upon the whole profession and lower it in the eyes of the public.

THE noted market gardener J. M. Smith, of Green Bay, Wisconsin, finds no difference between good strains of the old Daniel O'Rourke and the current varieties of "First Early" peas known by as many names as there are seedsmen. The R. N.-Y. is of the opinion, however, that the O'Rourke has been notably improved by the careful selections of those seedsmen who attach their names to the "First Earlies," and that it is manifestly to their interest to continue these careful selections from year to year.

THE improved breeds of cattle have stamped their distinctive features upon the common cattle of the country to such an extent that any farmer can distinguish the various markings, and tell whether a cow is a Jersey, a Devon or a Holstein grade. How is it with horses? Except in the West, where increased interest in draft horses has made a study of horse breeding necessary, few farmers can tell what breeds their horses have come from. Would they be better off if they could tell?

THE bonded railroad debt of Muhlenberg county, Indiana, has been allowed to grow until it now amounts to $1,000,000. The sheriff of the county has been removed from office because he refused to collect a tax to pay the interest on the county bonds, and no one can be found willing to discharge the unpleasant duty. All attempts to compromise have failed, and the creditors are likely to ask the Federal courts to foreclose their mortgages on the real estate of the tax-payers. This will impoverish the great majority of them, and there is likely to be trouble. It is now becoming more and more forcibly realized that railroad bond voting has been carried too far in the West.

CATALOGUES, ETC., RECEIVED.

INDIANA INVESTIGATION.—A number of bulletins have been received from the Indiana Experiment Station. Among them are the following:

Experiments With Vegetables, by Prof. Troop. A number of experiments with commercial fertilizers on potatoes and with various varieties of potatoes, are here recorded. In planting the potatoes Prof. T. used the same system that the RURAL has always used in its experiments. The results are conflicting, to say the least. Experiments with sweet corn, peas, beets and onions are also recorded.

Spotting of Peaches and Cucumbers, by Prof. J. C. Arthur. This is an important and well gotten up bulletin, showing the result of considerable research. Unfortunately no remedies have yet been discovered for either of the fungi causing these diseases.

Experiments in Cross-Fertilization and with Tropical Ferns, by Prof. Van Landeghen. All experimenters will be pleased with this bulletin. The pictures are all well calculated to add to the value of the text.

Parturient Apoplexy, by Dr. Hinebaugh. We are receiving a number of questions regarding treatment of cows for milk fever. The following from Dr. H.'s bulletin will be valuable just now.

"This disease is easily prevented, but somewhat difficult to cure. For two weeks previous to calving diminish the food. Keep the bowels active by small doses of Epsom salts or a laxative diet. Avoid all highly nutritious food. The common practice with some people of giving extra food at this period to increase the flow of milk is, without doubt, the most prolific cause of this disease."

ROBERT SCOTT & SON, PHILADELPHIA, PA.—This attractive catalogue is mostly given up to popular plants. The list of roses comprises the best of the new and the best of the old varieties. A new double geranium, "Centaure," is represented as the "largest and finest in cultivation." A colored plate shows Primula obconica, the new rose Madame Etienne, Salpiglossis grandiflora, sweet pea Princess Louise, and the pelargonium above alluded to, Centaure. The catalogue gives prominence to Crozy's new cannas, which on account of their dwarf habit, large flowers and long season of bloom, must rank as our most satisfactory bedding plants.

The following "introduction box" of roses is offered for one dollar. The Bride, Sunset, La France, Marie Guillot, Etoile de Lyon, Queen's Scarlet, Coquette de Lyon, Comtesse Riza du Parc, Hermosa, Catherine Mermet, Madame Camille, and Mad. Caroline Custer.

MICHIGAN FORESTRY.—Report of the Directors of the State Forestry Commission, sent by Dr. W. J. Beal, Lansing, Michigan. This is an important publication. In 1887 the legislature of Michigan passed an act giving the State Board of Agriculture power to act as an independent forestry commission. It was proposed that this commission should take steps to ascertain how much loss is being sustained by the forests of Michigan from fires and wasteful cutting, and also as to the effect of this diminution of the wooded surface upon ponds, rivers and water-powers. Dr. Beal and Chas. W. Garfield were appointed directors to begin this investigation, and this volume is a record of their labors up to the date of publication. The book contains notes on a great variety of topics, a report of a convention held at Grand Rapids and a "symposium" arranged by Dr. Beal. The illustrations give very accurate pictures of life in the lumber regions. The first picture, representing what is left of a great pine forest after the lumbermen have taken all they want, is almost sad in its truthfulness.

NEW MODEL BUCKEYE MOWER.—Catalogue from the Richardson Manufacturing Company, Worcester, Mass. This is what the manufacturers say about the machine they are making: "New England farmers are a thrifty, saving class, and they demand implements that will endure. In other localities, where farmers are more lavish, and little care is taken of farm machinery, a cheap mower, to last a single season, is accepted. If a good machine is bought it is ruined by one season's neglect. The Buckeye is built for critical New England farmers, who demand that a machine properly cared for, shall last a lifetime. We do not compete with the builders whose machines can have but a short life, but we offer the Buckeye, confident of its durability at every point." The catalogue is an elegant affair with excellent illustrations, showing the mower in every position.

S. F. LEONARD, 149 WEST RANDOLPH ST., CHICAGO.—This large and voluminously illustrated catalogue gives well-selected lists of spring wheats, oats, potatoes, field corn, sorghums, millets, grasses, clovers, etc. Sixteen pages are devoted to novelties. The $250 prize collection of seeds is sent (one packet of each) for $1.00. Osage melon, Chicago Market Sweet corn, Upright Champion tomato, Leonard's Bridgeport Drumhead cabbage, Leonard's Globe Danvers onion, Edmand's Blood beet, Westerfield Chicago pickle are illustrated in colors, and $25 each for the best yields are offered. The catalogue will be sent without charge to all R. N.-Y. readers who apply to Mr. Leonard.

HENRY A. DREER, 714 CHESTNUT ST., PHILADELPHIA, PA.—This is a large (150 pages) handsome and costly catalogue of seeds of all kinds as well as hardy and greenhouse plants, fruits, etc. It is finely illustrated throughout. A colored plate and engraving show Dreer's Eclipse asparagus, a bunch of which is shown to be made up of stalks two inches in diameter and 15 inches high. It is said to be the largest asparagus ever sent out. The seed is 15 cents per packet; two-year roots $2.00 per 100. The R. N.-Y. is trying every kind of asparagus side by side in its test grounds. Dreer's Golden Cluster Wax pole bean is placed before the reader as the *best* pole bean. Among hardy plants attention is called to Aristolochia ornithocephala and A. cymbifera, the Bird and Boat-flowered Aristolochia, also to A. elegans. This is one of the most interesting catalogues we have examined.

JOHN SAUL, WASHINGTON, D. C.—This is a catalogue (80 pages) of new, rare and beautiful plants—musas, clerodendrons, aphelandras, alocasias, passifloras, anthuriums, yuccas, dracænas, begonias, montbretias, dieffenbachias, nepenthes, hoyas, ornamental asparagus, crotons, ferns, new cannas, palms, abutilons, marantas, primroses, hardy trees and shurbs, clematis gloxinias, geraniums of all kinds, fuchsias, dahlias and innumerable other choice plants. We are indebted to Mr. Saul for the introduction of many valuable novelties. Also a catalogue of roses of all sorts.

THE STORRS & HARRISON CO., PAINESVILLE, O.—This is one of the best and largest nursery firms in America, and its name is everywhere respected. The present catalogue (140 pages) is one of unusual interest and merit: 23 pages are given to seed and plant novelties and specialties. The firm puts up certain collections at greatly reduced prices which may be forwarded by mail. Thus, 15 roses all different, will be mailed for $1.00; an assortment of 14 different bedding plants for $1.00; one dozen different kinds of fruit trees (apples, peaches, plums, cherries, apricots, grapes, strawberries, blackberries, etc.,) for $2.00. Not only does the firm offer the usual lists of vegetable, flower or farm seeds, but also all kinds of fruit, evergreen and deciduous trees. The catalogue should be examined by all R. N.-Y. readers.

J. T. LOVETT, LITTLE SILVER, N. J.—A handsome catalogue of 80 pages with several colored plates and many wood-cuts. One colored plate shows the Abundance and Spaulding plums, Gandy and Monmouth strawberries, Early King and Erie blackberries. Collections of fruits are put up at reduced prices. Thirty pages are given to small fruits, 17 pages to large fruits, two pages to nuts and the rest to ornamental trees, shrubs, roses and the like. The Wonderful peach is praised as a large, handsome and productive, *very late* peach, as large as the Crawford, as late as the Smock, and a reliable bearer. A large engraving shows the Lawson or Comet pear, the largest and handsomest of early pears, though the quality is not of the best.

JOHN LEWIS CHILDS, FLORAL PARK, QUEENS CO., LONG ISLAND, N. Y.—This showy catalogue delights us with three colored plates, one of very large and beautiful, hardy carnations, Childs' New Jubilee Phloxes—a very pretty picture, indeed—and a colored cover of roses, etc. Mr. Childs offers the Crandall currant, the Japan chestnut, filberts, pecans, and a selection of the best small fruits. There are a number of interesting plants, such as Brugmansia arborea ("Giant Ghost Flower"), the Yellow calla, new varieties of hardy hibiscus, etc.

JOHN A. SALZER, LA CROSSE, WIS.—A large, extremely showy catalogue of seeds and plants. Much space is devoted to cereals, fodder plants, etc. White Wonder and White Bonanza are among the new kinds of oats. Assiniboia Fife, Okanagan Valley Velvet Chaff, French Imperial Spring Saskatchewan Fife are among the wheats offered. They are all spring varieties. The large sum of $3,260 is offered as prizes for the best yields, so distributed that there seems a fair chance for all competitors.

LUCIEN SANDERSON, 87 LONG WHARF, NEW HAVEN, CONN.—This firm sells *fertilizing materials* in any quantities. The farmer mixes them, and in this way saves paying others for the labor which he performs himself. Mr. Sanderson puts up four formulas, one or the other of which will meet the purchaser's wants. We would advise our friends to read this pamphlet. It tells *how* to mix economically and gives some valuable hints.

HORSES, CATTLE, SHEEP AND SWINE.—This is the title of an attractive volume just issued by Prof. Geo. W. Curtis, of the Texas Agricultural College. It gives a concise and readable history of the various breeds of live stock, with excellent hints as to breeding, feeding, and training. It is an excellent book containing many origina features. Price $2.50; For sale by the author, at College Station, Brazos Co., Texas.

MILK AND VINEGAR IN MASSACHUSETTS.—Thirtieth Annual Report of the Inspector of Milk and Vinegar, sent by James F. Babcock, Boston, Mass. This is an interesting volume, as several timely topics are discussed in it. The present position of the oleomargarine question, the wisdom and morality of coloring butter and the methods employed in purifying and preserving butter are questions that are ably discussed.

TAXATION.—This is the general topic discussed in the Consular Reports, Numbers 99 and 100 (November and December), just issued by the State Department. Fifty-two of our representatives in foreign countries give the modes of taxation employed in the countries in which they live. It is a very important and interesting volume.

ELLWANGER & BARRY, ROCHESTER, N. Y.—A descriptive catalogue of select roses and one of the most conservative and trustworthy of all similar catalogues published. Practical, brief instructions are given as to planting, pruning, insects, etc. A list of new and recently introduced roses is appended. Among them is the rose Mad. G. Bruant, a hybrid between R. rugosa and the Tea rose, Sombreuil.

F. C. HUNTINGTON & CO., INDIANAPOLIS, INDIANA.—A catalogue of farm, garden and flower seeds. Huntington's Improved Earliest Red Valentine Bush-bean is represented as 10 days earlier than the Early Red Valentine. Wardwell's New Kidney Wax, King of the Garden Lima, the Lentz beet, improved strains of cabbage, onions, lettuce, musk and watermelons, peas, radishes, are among the specialties.

C. I. HOOD & CO., LOWELL, MASS.—Calendar for 1889. There is a peculiar charm about the beautiful baby face which looks at us with such life-like love and innocence, from these calendars. One never tires of such faces. They are as fresh and attractive in December as they are in May. Send for, or call at a drug-store and get one.

NEW JERSEY HORTICULTURE.—Proceedings of the Fourteenth Annual Meeting, sent by Secretary E. Williams. A very good report of this meeting was given in the first issue of the RURAL for this year. The New Jersey horticulturists are generally considered about the best authorities on horticultural matters that we have.

VILMORIN-ANDRIEUX & CO., No. 4 QUAI DE LA MÉGISSERIE, PARIS.—An illustrated catalogue (182 pages) of all sorts of vegetable, flower and farm seeds. A long list of wheats. Probably one of the most conservative and reliable catalogues published.

ALABAMA AGRICULTURE.—Report of the Commissioner of Agriculture for the year ending September 1888. This report is not as interesting as it might be. The agricultural resources, climate and needs of Alabama would warrant a much more attractively displayed statement.

ALFRED BRIDGEMAN, No. 37 EAST NINETEENTH ST., N. Y.—A plain, clear, condensed, trustworthy catalogue of an excellent house. The best of all vegetable and flower seeds are listed without hifalutin comment.

JOEL HORNER & SON, DELAIR, CAMDEN CO., N. J.—A catalogue of grape-vines and small fruits. Eaton, Moore's Diamond, Moyer, Nectar and Downing are mentioned among the newer grapes.

G. H. & J. H. HALE, SOUTH GLASTONBURY, CONN.—A catalogue of choice small fruits. Five pages are given to an interesting essay on "Money in Small Fruits" by Mr. J. H. Hale. Only the leading kinds are catalogued.

IOWA SEED CO., DES MOINES, IOWA.—An illustrated catalogue of seeds, etc., 70 pages. A new potato called the Eyeless and a second, Wide-awake, seem to give promise of merit.

CHAMPION VEGETABLE CUTTER.—Circular from John R. Whittemore, Chicopee Falls, Mass. This is an excellent implement. The circular also contains illustrations and descriptions of the Victor feed-cutter and the Improved Champion harrow—three good implements.

PENNSLYVANIA AGRICULTURE.—Report of the Pennsylvania State Board of Agriculture for 1888, sent by Secretary Thomas J. Edge, Harrisburg, Pa. This is one of the best volumes of the kind we have ever examined.

R. & J. FARQUHAR & CO., BOSTON, MASS.—An excellent catalogue of 125 pages and 16 pages of specialties. Seeds of all kinds, ornamental grasses, bulbs, plants, shrubs and trees.

Miscellaneous Advertising.

The Kodak.

PRICE $25.00.

ANYBODY can use the KODAK. The operation of making a picture consists simply of pressing a button. One hundred instantaneous pictures are made without reloading. No dark room or chemicals are necessary. A division of labor is offered, whereby all the work of finishing the pictures is done at the factory, where the camera can be sent to be re-loaded. The operator need not learn anything about photography. He can "*press the button*"—*we do the rest.*

Send for copy of KODAK Primer, with sample photograph. Mention Rural New-Yorker.

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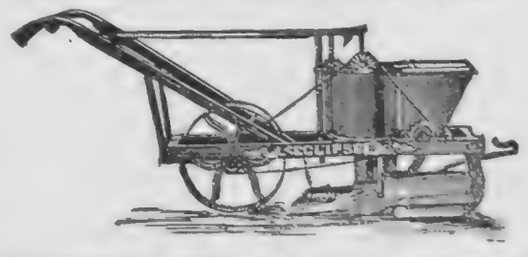

Will plant Field and Ensilage Corn, Beans, Peas and Beet Seed in **hills, drills** and **checks**—in hills up to 45 inches; in checks from 36 inches up to any distance desired. Will disirtbute all Fertilizers **wet** or **dry.** Farmers, send for circulars.
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NOW IS THE TIME TO BUY. SEND FOR CIRCULARS. AN EXPERIENCE OF THIRTY YEARS PERMITS US TO OFFER THE BEST

Indust'l Societies.

WESTERN NEW YORK HORTICULTURAL SOCIETY.

(RURAL SPECIAL REPORT.)

The society decides to retain its old name; "the slovenly fruit-grower must go;" comments on small fruits; a large peach orchard; avoidable causes of unremunerative markets; faulty packages for Europe; a good apple picker; spraying all fruit trees insisted on; plum culture for market; grapes; cold-storage; insecticides and how to use them; the canning industry; indorsement of nitrates and of J. S. Woodward.

A well attended meeting of this society was held at Rochester on January 23 and 24, 1889. The election of officers resulted mostly in a re-election: Patrick Barry, president; S. D. Willard, W. C. Barry, W. Brown Smith, J. S. Woodward, vice-presidents; P. C. Reynolds, secretary and treasurer. The President's annual address, read by chairman W. C. Barry, spoke of the failure of the efforts made to obtain State aid for the society, and recommended the reconsideration of the resolution by which the society was to organize as the New York State Horticultural Society. The question was considered towards the close of the meeting, and as a result the Western New York Horticultural Society still lives. The address mentions the slovenly fruit-grower as the one who raises the cry of overproduction, and "the slovenly fruit-grower must go."

In a report on Garden Vegetables, Mr. E. S. Goff has a good word to say for the Danish Bald-head winter cabbage, the Gilt-edge, Snowball, and Snowstorm cauliflowers, the California Cream Butter lettuce, the Baltimore Nutmeg, Emerald Gem, and New Orange Cream melons, Childs' Celestial pepper, White Chestnut and Sibley squashes, Dwarf Champion tomato, etc. Chas. A. Green, in his ornithological report, again champions the cause of the birds as doing more good than injury.

From the county reports we learn that a large part of the large crop of Western New York apples is yet in the growers' hands and ready to put on the market as soon as prices advance sufficiently. Concord, Delaware and Catawba are yet taking the lead among grapes. Niagaras are fine. Worden is a bad shipper; but has been successfully carried long distances when a leaf was put under each cluster in the basket. Among newer strawberries Bubach and Jessie take the lead Wilson is yet the old stand-by. The more barn-yard manure for strawberries, the better the results. Where nothing is done to destroy the crop of worms, the worms destroy the currant crop. Cherries are still a good paying crop. Grapes are easy to produce as insects trouble them but little.

Mr. J. P. White, of Mount Morris, N. Y., tells of his 140 acres of peach orchard. The 30,000 trees are now eight years old, and have given him five crops. The most valuable and profitable varieties with him are Waterloo, Alexander, Early Rivers (all clingstones and very early), Foster, Early Crawford, Oldmixon and Late Crawford. He finds a good market at his own door. The yellows are more serious on rich than on poor soil. Every affected tree is at once cut down and left until spring, then it is removed and disposed of with other orchard trimmings.

Mr. C. M. Hooker, of Monroe county, reports the last strawberry crop poor and light; but higher market prices made up for the inferiority. This seems to have been quite generally the case all through Western New York, and perhaps elsewhere. The peach yellows continues to be destructive; but in spite of it the crops are yet satisfactory and remunerative Evaporated fruits have brought a very low price; yet the industry compares favorably with others in regard to remuneration. Nobody should engage in it, however, who is in a hurry to get rich.

Ontario county, according to Mr. E. Bronson's report, has now reached the point where the fruit crop is larger than all other crops combined. Currants give good profits. The Golden Queen raspberry is quite hardy, and good for home use. No crop is more remunerative than cherries. Windsor is yet among the best of its kind. It sold for 25 cents per pound in Eastern markets. It is free from rot. Imperfect cultivation of available markets, faulty distribution of fruit crops, want of proper sorting and of packing in attractive shape are the chief causes of unremunerative prices. Vermont Beauty is named as a good pear, McIntosh Red and Longfield as good apples, and Yellow St. John as an early yellow-fleshed peach.

Mr. C. H. Perkins, of Newark, a large dealer and exporter, in replying to an inquiry about foreign markets, bitterly censures Western New York methods of packing and shipping, and says Western New York produces and might ship the best fruit in the world, and be well paid. Pony barrels, nail kegs, and packages differing widely in width of head and length of stave won't do. Canada sends uniform barrels holding plump three bushels, and the fine fruit of Western New York should be shipped to Europe in similar uniform packages. When Mr. Perkins has sent his own men to put up the apples, he has made money on them; when he bought apples already put up he generally lost. Members emphasize the necessity of thoroughly shaking the apples when packing for export, and of heaping the barrels more than for domestic market; also of keeping the barrels dry after packing. It is said that Western New York apples for export are often branded "Canada Apples."

Cook's apple-picker (made in Byron, N. Y.) was favorably spoken of by many growers, who think apples can be gathered with it as well as by hand and at half the cost. One of these machines, with five men, in a common orchard, can gather 200 barrels in a day. Price of machine $50. One member says it is as good for pears and plums as for apples; but it takes good men, not green help.

Spraying all fruit trees (not apple only) is urged by Mr. Chas A. Green, who thinks that a spoonful of Paris-green to 40 gallons of water is about the right proportion. Mr. S. D Willard makes his druggist put Paris-green up for him in three-ounce packages he uses one of them to 40 gallons of water, and says it is quite enough.

For the cultivation of plums for market, Mr. S. D. Willard names as requisite "best trees regardless of cost," attention to adaptability of soil, thorough cultivation and liberality in the use of manures, and proper regard to the wants of the available markets. Reine Claude is a fine plum, good for canning, but canneries are hardly ever willing to pay as much as can be got elsewhere. The tree is not a rugged one, and is rather short-lived. It is especially subject to the curculio, hence it is often not profitable. Lombard is good; the newer Stanton gives great promise. The jarring process, if persistently followed for some weeks, will save the crop from the curculio. The spraying method is safe only in very careful hands as the foliage is very sensitive, and subject to injury by burning. Green aphis is bad on plums. Leaf blight is often very destructive. Good culture and properly enriched soil are the best preventives. The knife and fire yet constitute the only known sure remedy for black knot. More care is required in handling plums than is generally given; when properly handled and marketed, the crop will pay. Plum trees in poultry yards are not troubled with curculio. Shallow culture is best. The Horse plum stock is a good one. Mr Willard would not use the Wild Goose stock, or grow Wild Goose plums where better kinds succeed. He believes in setting the trees rather close. The more food you give plum trees, the more and better are the plums. Mr. Green says manure is just the cause of Mr. Willard's success in plum culture.

In an essay on Chautauqua Vineyards, Mr. Watson names Concord as yet leading all other grapes. Worden. Moore's Early, Pocklington, Brighton, and the new Moyer are much liked and grown.

As the best early variety of grapes, prominent grape-men name Moyer, Brighton, Worden, Rogers's No. 14, Wyoming Red, Green Mountain, and Winchell.

The drift of the discussions on "Methods of Cold-storage and Construction of Buildings," indicates that dead-air-spaces have been found superior to sawdust packing, and that building paper is better and cheaper than other materials for partitions between the spaces. By a system of sub-earth ventilation the temperature in a hill-side cellar or storage-room may be kept uniformly at 45 degrees.

Prof. Cook, of Michigan, in an excellent lecture on "Insects and Insecticides," urges the use of London-purple instead of Paris-green or white arsenic—one pound to 200 gallons of water. It should be put on after the blossoms have fallen from the latest tree (Northern Spy). A sufficient quantity of the liquid must be applied with considerable force to make thorough work. He recommends the Field force-pump with the Moody attachment as giving the best satisfaction. It throws the liquid on the trees with a tremendous dash, just as it should. To protect apples against the attacks of the curculio, plant plums in the apple orchard, then spray the plum trees with London-purple solutions repeatedly and thoroughly to save the plums. Spraying is a much better remedy for the curculio than jarring. Another sure remedy for the curculio is a mixture of crude carbolic acid and plaster (one pint to 50 pounds) thrown over the trees. This also is better than jarring. For aphis, apple tree bark louse, scab louse, thrips, etc., Prof. Cook recommends the kerosene emulsion as a sure and safe cure. It is made by churning a quarter of a pound of hard or one quart of soft soap, one pint of kerosene and two quarts of water until an emulsion is formed. This is diluted with water (one to 15) and should be thrown on with force. A carbolic acid emulsion is recommended as a tree wash for keeping out the flat-headed borer, and for killing bark lice and perhaps other insects. Concerted action of peach-growers is needed to fight the peach tree borer with lasting success. The trees should be examined in September and again in May, and the borers should, each time, be cut out. The only sure way of protecting radishes from maggots is to grow them in cold-frames covered with cloth.

The "Canning Industry" was treated by Mr. Curtice of Rochester, who states that the supply of fruits of fine quality does not keep up with the demand. Cherries and plums pay well. The sorts wanted for canning are Bigarreau, Spanish and Napoleon cherries; Imperial Gage, Monroe, Egg and Reine Claude plums; Bartlett pears; Wilson strawberries, Dutch currants; of peaches any good yellow-fleshed fruit, Crawford, Wager, Allen, Foster, etc. Prof. Caldwell, of Cornell University, in the Report of the Committee on "Chemistry" spoke strongly in favor of nitrates, as also did Mr. Joseph Harris in his paper on "Manures for the Orchard and Garden." Nitrates should be applied in small quantities, and only as fast as the plants can take them up. With sulphate of ammonia, however, there is little danger of loss.

As it is expected that the incoming administration will appoint a new Commissioner or a Secretary of Agriculture, the society by unanimous vote recommended Mr. J. S. Woodward, of Lockport, for the position.

A Convincing Quintette.

We want to make several statements in regard to Compound Oxygen but are restrained to limits of time and space.

In other words you have not the time and we lack the space, so we stand aside for our patients. Observe what they say of us:

Mrs. S. M. Anthony in reply to query in the Housekeeper, of Minneapolis, Minn., issue of July 15, 1888.

Mrs. W. E. Eddy.—"I have used Compound Oxygen several years for lung trouble. I believe it will cure consumption if taken in time. Durhamville, Mrs. S. M. Anthony.

Philadelphia, Pa., April 15, 1885.
"To make a long story short, my health was fully restored"
Rev. Victor L. Conrad.
Editor of *Lutheran Observer.*

Rochester, N Y., Jan. 11, 1884.
"I began the use of Compound Oxygen and have much reason to be grateful for it."
Rev. Chas. W. Cushing.

Philadelphia, Pa.
"Thanking you for renewed health, strength, and the hope of years of comfortable life, I remain your grateful friend."
Hon. Wm. D. Kelley.

Chicago, Ill., April 24, 1886.
"You ask my opinion of Compound Oxygen; perseveringly and continuously used, it will work wonders.—*Chicago Inter-Ocean.*
William Penn Nixon.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing Drs. Starkey & Palen, 1529 Arch St., Philadelphia, Pa., or 331 Montgomery St., San Francisco, Cal.—*Adv.*

The Garden.

SMALL FRUITS FOR FAMILY USE.

PRES. T. T. LYON.

A List of fruits selected for home use, should, beyond question, be chosen with primary reference to quality. Vigor, productiveness, size and beauty are all desirable qualities, even for the purpose specified; still the children's clubs will find lodgment in the "best tree," rather than in that yielding the largest or most beautiful fruit.

THE STRAWBERRY.

This must, of course, head the list, as the earliest of fruits. There are a number of very early varieties of fair quality but so very small or so persistently unproductive as to be essentially disqualified for a place on even the family list. The earliest fairly productive berry of good quality, among the more than 200 varieties which I have tested, so far, is Alpha, a seedling of the late Charles Arnold, of Ontario, Canada. Duncan is another older variety, of fine quality, satisfactory size and productiveness, which closely follows, and occasionally even precedes the foregoing. If we follow these with Bidwell, Bubach, Belmont and Mount Vernon, with perhaps Wilson for canning, the season for this fruit may be made to last at least four weeks; or, in latitude 43°, from June 1st to July 1st; possibly longer.

RED RASPBERRIES.

The earliest of these in most seasons, is Hansell, closely followed by the sweet and delicate Turner. These followed by Cuthbert and a few plants of Golden Queen, for variety of color, will fully cover the season of this fruit. I am not a little surprised to learn that so sound and judicious a horticulturist as President Smith, of the Wisconsin Horticultural Society, puts forward the, with me, third or fourth-quality, Marlboro, for home use. I regard it as scarcely fit for the market, save, perhaps, in appearance.

BLACK-CAPS.

These will be in season with the later red raspberry. The earliest is Souhegan or Tyler, the two being, for all practical purposes, identical. The old Doolittle is, however, but two or three days later; while it is in most respects superior. Follow these with Hilborn for the medium crop, and close the season with Mammoth Cluster, and perhaps Nemaha. Gregg, which is by some commended for home use, is a typical, low-grade, market berry, dry and poor in flavor, with only size and ability to bear rough handling to recommend it. New Rochelle and Shaffer are purple varieties akin to the black-caps, and ripening with them. Although not attractive in color, they are of good quality and of especial value for canning.

DEWBERRIES

are in season nearly with the earlier black-caps, continuing till the advent of their near relation the blackberry. The only variety yet generally successful is the Lucretia.

THE BLACKBERRY

season commences before the raspberries are past, and practically closes the season of the cultivated small fruits, if we except currants and gooseberries. Early Harvest is the first to ripen. There is a wide difference as to the hardiness, and consequently as to the value of this variety. In Southern Illinois, where it is said to have originated, it is hardy; while in Michigan, and many other localities, both East and West, it proves to be extremely tender. This discrepancy may perchance be explained, by supposing, as it is alleged, that Brunton—a similarly early, but tender variety—has been disseminated under this name. Kittatinny is the largest and best variety available to take the second place on the list; but it will require protection against very low winter temperatures Ancient Briton will perhaps take this place at the West, where greater hardiness is required, although it has a tendency to excessive productiveness, and the fruits are consequently liable to be small. Taylor, as the latest good variety, will close the blackberry season. It is hardy in production and of excellent flavor.

CURRANTS

are in season with the later raspberries and blackberries, and are usually used in a green state even earlier. Modern improvements of this fruit are only manifest in increased size. Red Dutch, one of the oldest varieties, still claims the meed, among old varieties, of superior quality; while White Dutch successfully asserts its claim to superiority over all others for rich mild flavor. Victoria is slightly later in ripening, and for this reason, and on account of its comparative exemption from the attacks of the borer, it may properly fill a niche in the list for family use. White Grape is slightly larger than White Dutch, but of lower quality. This, together with Cherry, Versaillaise, and perhaps the new Fay currant also, is mainly valued as a market variety, whose superior size attracts the fancy of the greedy city purchaser.

GOOSEBERRIES

correspond, in season with currants. Although almost universally used before ripening, it is believed that they would be found even more desirable if allowed to ripen before they are used. The large and attractive En-

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

glish varieties prove unfitted to our hot, dry, summer climate, being more or less liable to mildew of the foliage as well as fruit. Houghton is the earliest of the American varieties, but is small in size. Smith is a larger fruit, of excellent quality, although the plant is somewhat lacking in vigor. Downing is of a more vigorous, spreading habit, and very thorny, indicating a possible cross-hybridization with a foreign variety. Industry is a foreign variety, which is commended by very high authority as capable of resisting mildew in our climate; but time is requisite to properly test its capacity in this respect.

Van Buren Co., Mich.

SAVED.—Over six thousand creamerymen have been saved from ruinous prices by the use of Thatcher's Orange Butter Color; it is used from Maine to Georgia, from the Atlantic to the Pacific.—*Adv.*

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

WE decline to respect the man who can't find time to plant vegetables for home consumption. It is a lamentable fact that many country families go without all early vegetables because the head of the house wont take time and trouble to put into shape a suitable piece of ground for a garden when the "women folk" stand ready and are willing to plant the seed. It is a penny-wise-and-pound-foolish policy that we have small patience with, and we can't help wishing that such men were fed three times a day for three hundred and sixty-five days in the year on pork and potatoes, bread and molasses! But no, the wives of just such men will scour the fields for dock, cowslips and dandelions, that they may set before their "lords and masters" a *dish of greens*! And then with what eagerness these same good souls watch the growth of the early apples that "he" may be treated to his favorite pie; for his appetite is not good and he wants a change. How many test trips are made to the corn lot lest the field corn should harden before "His Highness" has had his fill of roasting ears! Is it a wonder that the wives and daughters of some country men fail to see the bright side of farm life? A good supply of vegetables in succession materially lessens the housekeeper's burden. We know it doesn't if one pair of hands, in addition to other duties, must pick and shell peas for a lot of hungry men or go to the lower lot for corn, but the man who supplies his wife with vegetables and fruits, usually sees her supplied with needful assistance too.

VEGETABLES.

TIMELY, TRIED AND TRUSTWORTHY.

ASPARAGUS.

CUT the stalks of equal length, rejecting the woody parts. Tie into bunches with tape, or in a piece of coarse net and put into boiling, salted water. Boil from 20 to 35 minutes according to age. Before it is done toast a few slices of bread, dip into the liquor in which the asparagus is boiling, butter and lay on a hot dish. Drain the asparagus, untie the bunches and place upon the toast with a few bits of butter. A favorite accompaniment to boiled asparagus is a white sauce as follows: Two ounces of butter, one ounce of flour, a small tea-cupful of milk, two tablespoonfuls of cream and a tea-spoonful of salt. In a saucepan mix the flour and butter, add by degrees a-half pint of boiling water. Stir until the mixture boils, add the milk, boil two minutes longer, season with salt, take from the fire, stir in the cream and pour over the asparagus, or serve in a gravy-boat.

When eggs are plentiful prepare in this wise: Cut as many tender stalks as you will need into half-inch bits, boil in salted water 20 minutes, drain, pour over a cup of rich drawn-butter and turn into a buttered pudding-dish. Break a half-dozen eggs, or as many as required, carefully over the surface, strew over bits of butter, season with salt and pepper and put into a quick oven until the eggs are set. Serve at once. Or make an omelette as follows: the green part only of a good-sized bunch of cold, boiled asparagus, a half-dozen eggs beaten very light, two tablespoonfuls of milk and a little salt. Chop the asparagus very fine, stir in the beaten egg and milk. Put a tablespoonful of butter in a frying-pan, heat and pour in the mixture; shake and loosen with a broad knife as it forms. Fold over in the middle and turn upside down upon a hot platter.

A tempting way of serving plain boiled asparagus is as a salad. Boil, untie carefully, place upon a flat dish and make very cold by standing in the ice-box. Serve with a dressing of vinegar, pepper, salt and salad oil.

STEWED.—Cut into bits, rejecting the hard part, and cook slowly in milk until tender. Season liberally with butter, pepper and salt.

BEANS, LIMA.

BOIL in a little water until tender, drain, add a cup or more, according to the quantity, of thin cream. Boil up and season. Delicious.

BEETS.

WASH carefully and do not break or cut the skin. Boil until perfectly tender. Remove the skin, cut into thin slices and serve with pepper, salt and vinegar, or make a drawn-butter sauce and turn over just before sending to the table.

CABBAGE.

SELECT a crisp head. Cut into shreds and cook until tender. Turn off the water, add a little milk, a lump of butter, pepper and salt. Bring to a boil and serve. Very nice if cooked until perfectly tender.

CARROTS.

SCRAPE, wash, and boil with corned beef. Serve cut into lengths as a garnish around the meat. Or, cook in salted water until tender, take out, cut into bits and cover with a sauce made of milk and butter, slightly thickened with a little corn-starch and seasoned with salt and pepper.

CAULIFLOWER.

CUT off the outside leaves and let stand in salt and water for an hour or more. Put the head into a piece of net and boil until tender. Put a pint of milk into a sauce-pan, bring to a boil, add a lump of butter, a little thickening, a half cup of grated cheese and salt to season. Arrange the cauliflower on a flat dish and pour the sauce over it.

CELERY.

CUT into inch lengths and stew until tender. Drain off the water, and just cover with sweet milk. When it begins to boil, thicken with a lump of flour and butter rolled together, season with pepper and salt and boil a few minutes longer.

CORN.

BOIL as soon as taken from the stalk, if sweetness is a consideration. Making a corn pudding is a favorite way of serving this excellent vegetable. Use while tender. Draw a sharp knife through each row lengthwise and scrape out the pulp. To a pint of the pulp add a quart of milk, three beaten eggs and a lump of butter. Put into a moderately hot oven and stir until it begins to thicken, then add salt to season and bake until lightly browned. Time an hour and a half in a moderate oven.

CUCUMBERS.

PARE and place in cold or ice water for an hour. Cut lengthwise into half-inch slices. Dry on a cloth, sprinkle with pepper and salt, and dredge with flour. Fry to a delicate brown in butter or dripping.

EGG PLANT.

PEEL, cut in thin slices, sprinkle with salt and let drain for an hour. Dip the slices, first in beaten egg and then in cracker dust and fry in as little butter or dripping as possible.

ONIONS.

BAKED.—Wash and skin very large onions. Parboil half an hour, drain, push out the hearts, chopping them fine with a little bacon, add bread crumbs, season with pepper and salt, and moisten with a little cream. Fill the onions with this, put into a dripping-pan with a very little water, and cook until tender in a slow oven, basting often with melted butter. Stewed.—Select small ones of the same size Skin and throw into cold water. After an hour put on to boil, when half done drain, again cover with water. When tender, turn off the water, and add a cup of milk, a piece of butter, and season with pepper and salt.

PARSNIPS.

Scrape, and if large, cut in halves, boil in salted water until tender. Mash, and to a quart of the mixture, add two beaten eggs, a tablespoonful of flour, and salt and pepper to taste. Form the mixture, when cool, into small cakes, and fry brown, turning, in a little butter. Or, cook until tender, cut in rather thick slices, dredge with flour and fry until brown. Season.

SPINACH.

Look over carefully, picking the leaves from the stems. Wash and cook 30 minutes in salted water. Drain chop fine return to the fire, season with butter, pepper and salt, press into a mold or bowl, turn out and garnish with sliced egg.

TOMATOES.

BAKED.—Scald and peel a sufficient number of smooth round tomatoes; put into a deep earthenware dish, sprinkle plentifully with salt and pepper; have a teacupful or more—according to the quantity of tomatoes—of fine cracker crumbs, and spread over the top. Bake in a quick oven from 30 to 45 minutes. Drop a few lumps of butter into the tomatoes and serve.

GREEN.—Slice thin, roll in flour, season with salt and pepper and fry in hot butter.

ON THE HALF-SHELL.—Have toasted a few slices of bread nice and brown; butter, cut in halves, and place where it is warm. Select tomatoes which are smooth, and not over-ripe; cut in two—flat-wise—and put, skin down, on a hot gridiron. Cook slowly until done through. Serve on the slices of toast with butter, pepper and salt.

SALAD.—Skin, remove the seeds and pulp from fresh tomatoes, chop what is left with the heart—if it may be so called—of a cabbage and a little parsley, and serve with a good salad dressing.

SCALLOPED.—Peel as many ripe tomatoes as required; cut into slices, and place in a pudding dish first, a layer of tomatoes, seasoned with butter, pepper and salt, then a thick layer of crumbs, also seasoned with butter, pepper and salt. Thus alternate the layers until the dish is nearly full, having tomatoes last; cover tightly, and bake one hour or longer if the oven be not hot.

SOFT water is better than hard for cooking vegetables. If the water is very hard, add a pinch of soda.

When boiling cabbage, drop a piece of charcoal into the water. It will lessen the unpleasant odor.

To preserve the color of vegetables, French cooks add to the water in which they are boiled as much carbonate of ammonia as can be taken up on the point of a penknife.

Miscellaneous Advertising.

VERY OFTEN

Life has been saved by a bottle of

AYER'S Cherry Pectoral

The best emergency medicine, it should be within reach of every one, young and old.

"Several years ago, on a passage home from California, by water, I contracted so severe a cold that for some days I was confined to my state-room, and a physician on board considered my life in danger. Happening to have a bottle of Ayer's Cherry Pectoral, I used it freely, and my lungs were soon restored to a sound and healthy condition. Since then I have invariably used and recommended this preparation, and always with beneficial results."—J. B. Chandler, Junction, Va.

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass. Price $1. Six bottles, $5. Worth $5 a bottle.

BROWN'S FRENCH DRESSING

The Original. Beware of Imitations.

AWARDED HIGHEST PRIZE AND ONLY

MEDAL, PARIS EXPOSITION, 1878.

Highest Award New Orleans Exposition.

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IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the buttermilk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere. More of it Used than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & Co., Burlington, Vt.

FLINT GLASS MILK BOTTLES

Manufactured by

W. H. Hamilton & Co.

PITTSBURGH, PA.

IN FOUR SIZES:

½ & 1 Pint, Quart & ½ Gallon

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LYMAN'S NEW WIND-GAUGE SIGHT.

Send for Catalogue of Sights and Rifles. Address WM. LYMAN, Middlefield, Conn.

BRIGHT RED ON COTTON WILL NOT FADE.

Enclose 25c For enough to dye Eight Pounds of Rags.

PRINTED DIRECTIONS SENT.

C. E. HELFER, *Druggist*, Akron, O.

For recommendation, write to any farmer's wife in Summit county. ESTABLISHED 1859.

"OSGOOD"

U. S. Standard Scales.

Sent on trial. Freight paid. Fully Warranted.

3 TON $35.

Other sizes proportionately low. Agents well paid. Illustrated Catalogue free. Mention this Paper.

OSGOOD & THOMPSON, Binghamton, N. Y.

GRIND YOUR OWN Bone, Meal, Oyster Shells, Graham Flour & Corn, in the $5 HAND MILL (F. Wilson's Patent). 100 per cent. more made in keeping Poultry. Also POWER MILLS and FARM FEED MILLS. Circulars and testimonials sent on application. WILSON BROS. Easton, Pa.

AGENTS LOOK HERE

and farmers with no experience make $2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made $18 one day, $76.50 one week. So can you. Proofs and catalogue free. J. E. SHEPARD & Co., Cincinnati, O.

VIRGINIA FARMS and MILLS SOLD and exchanged. Free Catalogue. R. B. CHAFFIN & CO., Richmond, Va

2 CENTS for Catalogue of hundreds of useful Articles less than Wholesale Prices. Agts. and Dealers sell large quantities. CHICAGO SCALE CO., Chicago.

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34 PARK ROW, NEW YORK.

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Single copy, per year	$2.00
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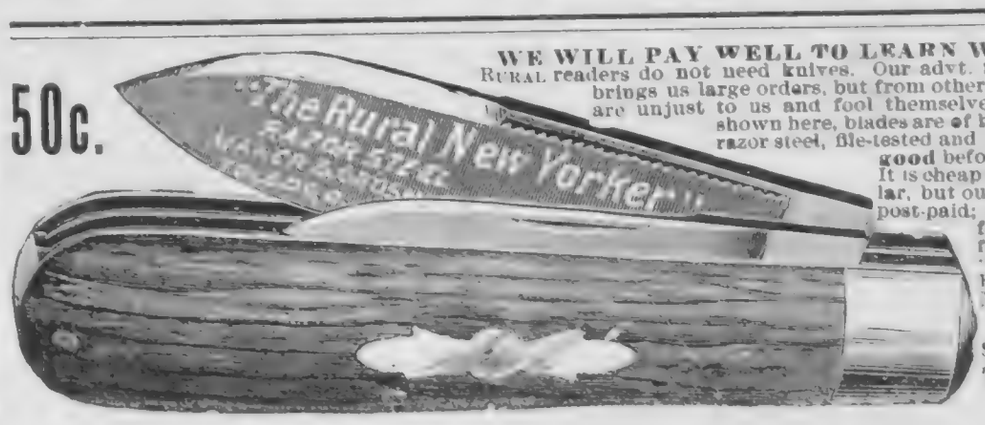

WE WILL PAY WELL TO LEARN WHY IT IS RURAL readers do not need knives. Our advt. in some papers brings us large orders, but from others few. Readers are unjust to us and fool themselves. Take knife shown here, blades are of highest quality razor steel, file-tested and known to be good before sending out. It is cheap for a silver dollar, but our price is 50c. post-paid; 5 for $2. Send for our 64-page free list, also, "How to Use a Razor."

MAHER & GROSH, 80 S Street, TOLEDO. OHIO.

News of the Week.

HOME NEWS.

SATURDAY, February 23, 1889.

HAIL! ALL HAIL!! to the four new members added to the glorious sisterhood of States on Washington's Birthday, 1889! Hail, all hail! to North Dakota, South Dakota, Montana and Washington, the lusty new additions to the Union one and indivisible.

AGRICULTURAL NEWS.

SATURDAY, February 23, 1889.

SENATOR Spooner, of Wisconsin, has introduced into Congress a bill which proposes to establish a system of farm institutes, to be held annually in the different States. They are to be under the direction of a Superintendent of Institutes, with a salary of $6,000 a year. He is to have two Assistant Superintendents at $4,000 apiece a year, and 15 district clerks at $3,000 each per annum. The scheme embraces lectures, instructions, experiments, illustrations and agricultural discussions, and the Superintendent is to have authority to hire lecturers at fair rates of compensation for the time actually employed. After the circuit of Institutes is completed every year, the Superintendent is to publish reports of the proceedings. The circulation of these reports is to be limited to 1,000,000 copies a year. Exclusive of the cost of maintaining this publication, an assistant account amounting to $59,000 a year, the annual expenses of conducting the Institutes are not to exceed $500,000. The system is to be under control of the new Department of Agriculture, but it will require a strong expression of opinion on the part of the farmers of the country to secure its establishment..... At last a bill is now pending before the New York legislature providing for an official inspection and analysis of all fertilizers offered for sale in this State. Of course, it should pass..... There is considerable trouble among the barbed-wire fence monopolists. It has lately been discovered that Louis Janin took out a patent on barbs for wire fences as long ago as 1865, in France. Under our patent laws no invention or discovery can be patended in this country, which was patented or published in any other country two years before the application for a patent for it was made here. The chief patent of the monopolists embraces a "broad claim," covering all forms of barbed-wire fencing, and the Janin patent must be fatal to this. Of course, the matter will be contested to the "bitter end," and owing to the slowness of the law, especially before the United States Supreme Court, it is likely that it will take four or five years to obtain a final decision. The "broad claim" patent will then have nearly expired. Washburn & Moen, the arch-monopolists, hold over 100 other patents on barbs, fencing and machinery, so that they are likely to have a great advantage over other manufacturers for years to come..... .. St. Clair county, Missouri, incurred a heavy debt some years ago, to aid in railroad building. It is now trying to get rid of its obligations. Some time back it refused any longer to pay interest on the bonds it issued to pay its subscription to the road, and the United States Court to which the bond-holders took the case, ordered Judge Peters, of St Clair county, to levy a special tax to pay the interest on the bonds. The Judge, backed up by the inhabitants, refused to do so, and for his refusal he has just been arrested by United States officers for "contempt of court." Such attempts to repudiate debts incurred in aiding in the construction of railroads have been very frequent of late in many towns and counties in the West and Southwest..... There's trouble in the beet-sugar business in California Last season Claus Spreckels's factory, at Watsonville, paid only 25 cents per bushel for beets containing the highest percentage of sugar, and only from 10 to 12 cents per bushel for the average crop. Land thereabouts is worth from $300 to $500 per acre, and only half the number of farmers who grew beets last year are willing to make contracts for this year. Spreckels threatens to close the factory and take the machinery elsewhere. He intends to build his next factory in Shasta or Tehama county in Northern California, where land is only $30 an acre, and where therefore he can raise his own beets if necessary..... At a convention of nearly 300 growers of the Niagara grape, held at Rochester, N. Y., the other day, a stock company was formed, with a capital stock of $10,000 in shares of $1 each, stock-holders to be allowed one share for each acre of Niagaras they may grow .. .... Prof. F. Lamson Scribner, late Chief of the Section of Vegetable Pathology of the Botanical Division of the United States Department of Agriculture, is now Director of the National Agricultural Experiment Station of the University of Tennessee, at Knoxville..... .... The planters of Wayne County, N. C., are up in arms to prevent negroes from leaving that section to work in other States. All the emigrant agents have been driven away; two companies of militia have been called out; 1,500 negro emigrants who have sold everything, are at the railroad station at Goldsboro, waiting for the fleeing agents to furnish transportation. More trouble is feared as the planters are mad at the danger that they will be left without help enough to take care of their crops.....Professor A. J. Denton goes direct from post-graduate work in the botanical department of Harvard University, Cambridge, Massachusetts, where he held a Fellowship in Science, to take the Chair of Botany in the Colorado Agricultural College at Fort Collins.... ... Large shipments of Western corn are being made into different parts of the South ... ... Old-time cattle dealers, with recollections of the trade running back 30 years or more, say that prices of beef are the lowest within that period for the winter seasons ....Philip Armour, the butcher king of Chicago, has thrown the meat-market men of St. Louis into consternation by opening five markets in the busiest part of the city, with more to follow..... The Massachussetts agricultural and finance committees have both reported in favor of an additional annual appropriation of $10,000 for a labor fund and new professorships at the Agricultural College..... Mr. J. William Belcher has retired from the firm of B. & J. W. Belcher of Chicopee Falls, Mass. The business will be continued by Benj. E. and J Wilson Belcher under the same firm name. The firm will make a speciality of the "See, Bee Won" (formerly known as the Brooks) swivel plow with an improved shitting clevis.. During the last session of Congress bills were introduced in the House "to punish dealing in futures in agricultural products" and "to prohibit fictitious and gambling transactions on the price of articles produced by American farm industry." The bills were referred to the Committee on Agriculture, which heard arguments in their support Last Wednesday the Committee decided to report against both bills on the ground that Congress has no jurisdiction over the subject; that the limitations imposed by the Consitution make it improper for Congress to pass the proposed measure, and that it is a matter for State legislation exclusively..... At the 22nd convention of the American Pomological Society which opened its sessions last Wednesday, amid much local enthusiasm, at Ocala, Fla., Prosper J. Berckmans of Georgia, was re-elected President; while T. T. Lyons, of Michigan, was chosen first Vice-president; B. G. Smith, of Massachusetts, Treasurer; and A. A. Crozier, of the Iowa Experiment Station, Secretary..... .. The French Chamber of Commerce has adopted resolutions urging the importance of steps being taken to increase the export of Canadian butter to Europe. Of late France has been doing a great deal to secure the good-will of the French of Lower Canada; but Upper Canada would be the chief gainer by the increase of the Dominion's foreign butter trade..... Members of the Canadian Pork Packers' Association claim to have assurance that the duty on American lard is to be increased. If this change is made several Canadian firms are prepared to furnish a new article composed of 90 per cent. of the best prime lard and 10 per cent. of lard stearine, which they claim is superior to the "juggled concoction" now called American refined lard.....

For rates on the TRY ME, the *best* hand lever Feed Cutter (3 sizes), ad's G. S. GARTH, Mill Hall, Pa.—*Adv.*

LATEST MARKETS.

NEW YORK, Saturday, February 23, 1889.

GRAIN MARKETS

WHEAT.—The market is slow with light demand from millers. Very little export trade. Sales of No. 2 red at 99½ cents to $1.01¼, and of No. 3 red at 94 cents.

RYE.—The market is very dull. Quotations are 55 to 59 cents for State, 52 to 57 cents for Western.

BARLEY.—Quoted at 70 to 72 cents for two-rowed State; Canada ungraded, at 78 to 81 cents.

CORN.—The price has been somewhat lower, but prospects are good for an advance. Sales of Steamer white at 42½ to 43 cents; Steamer yellow 42¼ cents; ungraded, 40¼ to 44¾ cents.

OATS.—Market firmer; sales of White from 30 to 39 c.; mixed 28 to 32½ c.

BUCKWHEAT.—50 to 52 c.

BEANS.—Market strong at outside quotations. Marrows, $2.20; Mediums, $1.75 to $1.80; Pea, $1.75 to $1.80; Red Kidneys, $2.00 to $2.05; White Kidneys, $2.30 to 2.35; California Limas, $2.75 to $3.00.

FRUITS.—Fresh. Apples are in good supply, but best grades equal or exceed outside quotations. Best Spitzenburgs, Spies and Greenings, bring $1.50 to $2.00 per barrel but common grades range down to $1.00, and even lower. Catawba grapes are quoted at three to four cents per pound. Cranberries from 75 cents to $2.00 per box. Florida oranges range from $2.25 to $3 25 per box. Strawberries 50 cents to $1,25 per quart. Dried fruits are very quiet. Evaporated apples are from four to six cents; raspberries 17 to 19 cents; peaches from five cents for unpeeled to 18 cents for best peeled, evaporated.

VEGETABLES.—Potatoes and onions continue in good supply Onions are unchanged except white, which are a trifle higher. Potatoes are quoted from 80 cents to $2.00 per barrel; Sweets $2.25 to $4.00; Cabbage $3 50 to 4.50 per 100; Kale 40 to 80 cents per barrel; Spinach $1 50 to $2.25; and Turnips 30 to 45 cents per barrel. Red Onions are from 45 cents to $1.00 per barrel, yellow, 80 cents to $1.00, and white $2.50 to $3 50.

BUTTER.—The market is well supplied with all grades, and prices show little change. Pennsylvania and Elgin best from 29½ to 31c.; State dairy from 18 to 27c.; Imitation Creamery from 19 to 23c.; Western dairy from 13 to 20c.; while poor butter is sold as low as 12c.

EGGS.—The colder weather has stiffened the market, but prices remain low for the time of year Nearby, fresh gathered, 14½ to 14¾c. Fall packed 10 to 11c., and limed 9 to 11.

SHEEP AND LAMBS.—Heavy receipts have given the market a very dull tone, with lower prices. Sheep sold at 3¾ to 5⅝ cents per pound; lambs at 5½ to 7⅛ cents.

CALVES.—Moderate receipts, and prices about steady, at 6 to 8½ cents per pound for veals, and 2¾ to 3¾ cents for others.

SEND TEN CENTS IN POSTAGE STAMPS TO
E. & O. WARD,
PRODUCE COMMISSION MERCHANTS
for Circular giving important advice about **shipping produce.** Also containing recipe for **preserving Eggs.** Established 1845.
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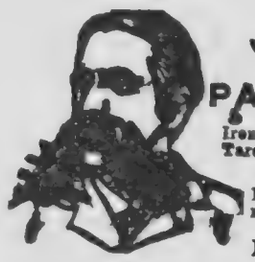
The Best Gardening Periodical is the AMERICAN GARDEN, 751 Broadway, New York.
Price, $2.00 a year; with R. N.-Y., $3.00; Specimen number, price 6 cents.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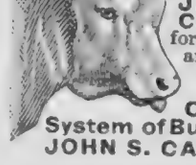
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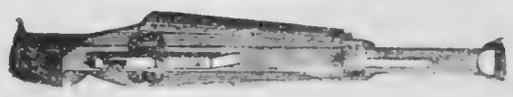
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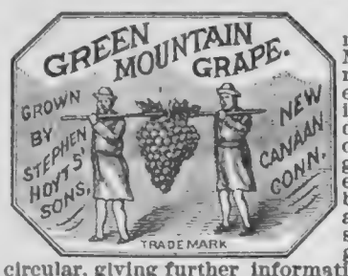

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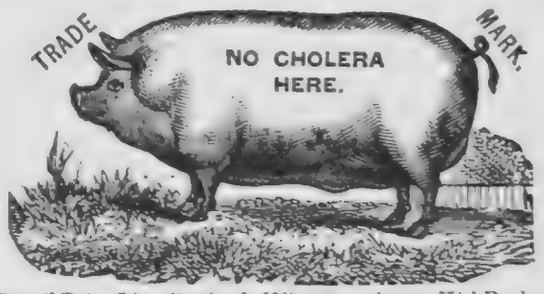

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Literary.

THE DRUM LAKE EASTER SERVICE.

A story of the Michigan Pine Woods.

BY HERBERT W. COLLINGWOOD.

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THE meal came to an end all too soon, and with many a sigh of satisfaction, the boarders filed out of the room. Jim Foster informed Mrs. McKelvey that he was "getting fat enough to kill." He considered this the highest compliment he could possibly give to her cooking.

Jack Gray had been remarkably silent during the meal. The men had all noticed it. After breakfast, he walked slowly down the street with his hands in his pockets, and halted in front of Sarcy Sal's house, glancing hesitatingly up and down the street. There was no one in sight, so he walked carelessly through the yard, and entered the house without ceremony, and knocked at the door of the inner room.

The door was opened by little Mamie. She looked up at him with something of fear in her face.

"Whar's your marm, little gal?" asked Jack in his pleasantest tone.

"She's in here," said Mamie doubtfully, and a weak voice on the inside called, "Come in, Jack."

Jack pushed the door open and passed in. He did not take off his hat as he would have done in the presence of Mrs. McKelvey. At a gesture from the woman, he brought a chair up to the side of the bed, and sat down.

Little Mamie stood near the foot of the bed, with her finger in her mouth, looking at him with great distrust.

Jack sat and looked at the woman in silence for a time. "Wall, Sal, how be ye?" he said at last.

"I don't know, Jack," she answered feebly, "I don't think I shall ever get well. I wish it was all over," and she turned wearily on the pillow.

Jack could offer no consolation. "I s'pose yer right Sal," was all he could say.

"Say, Jack," she said after a pause, "Who is this new Parson? What's his name?"

"The new Parson," said Jack contemptuously, "is the biggest fool that ever struck Drum Lake. It beats all. He don't know enough to pound sand into a rat-hole. He don't know nothin'. He's gut some four-story name, jest about three times as big ez he is."

"It isn't Grayling, is it?" whispered the trembling woman.

"Some sech name ez that—a little bunched-up chap—but what's the matter with ye Sal?" he asked almost kindly as the woman covered her face with her hands, and burst into tears. "Ye ain't thinkin' of goin' to his church be ye."

"Yes, Jack, I think I will go. You won't let them hurt me, will you?" and she held out her hands appealingly to the rough man.

"They won't hurt ye," Jack said kindly. "There won't be nothin' there ter hurt ye, 'cept its the Parson's sermon. I'm sorry ter see yer so bad, Sal. Yer way down ter the end of the rope, but I wish I could pull ye up. I don't s'pose I kin though. I don't s'pose nobody kin."

The wretched woman buried her face in the pillow without a word. Jack tilted back in his chair to watch her, while little Mamie came and held her mother's hand.

"I say, Sal," broke in Jack at last, "what a terrible pretty woman you *might* hev been. Yes" he added, slowly, "terrible pretty, an' good too."

The weeping woman shuddered, yet she did not speak, for she was thinking of what might have been. She might have been a good woman. She might have made the minister's life a success. She might have made this man before her a better man. She might have done it, and all three knew it well.

Jack was talking as he had not talked for years. I doubt if he ever spoke in like manner again.

"It beats all what you wimmen cud do ef ye would only be *wimmen*. Ye cud lead us right up ter death without winkin' ef ye only wanted ter. But ye don't want ter, an' so we loses faith in ye. A dry goods clerk wavin' a bottle of perfumery kin draw nine out of ten gals away from the men they orter be bracin' up. When a real woman comes along, she's ketched up afore we poor fellers has any show. But what be I talking about? Here I be goin' on ter preach a sermon. Guess I'll quit afore I gets ter takin' Parson's bizness away frum him," and Jack started up ashamed to think that he had spoken so freely.

He stopped at the door. "I'm sorry for ye, Sal, an' I wist ye could brace up, but I don't s'pose ye ever kin. Yer too low down fer that. But ef ye ever wants any kelp, jest let me know."

The Rev. Mr. Grayling waited long and patiently for the coming of his choir. The organization did not put in an appearance, and at last he went down to ask Mrs. McKelvey's advice.

The good English woman did not like to tell him how he had been imposed upon, so she gave some imaginary reason for the non-appearance of the singers, and finally gave him to understand that they probably would not be able to come at all.

The minister was very sorry for he had hoped to make the musical part of his service very attractive. He looked so sorrowful that Mrs. McKelvey's heart was touched.

"I'll tell ye what I'll do," she said. "Them Chase gals is great singers, an' p'raps we kin git 'em to come and sing fer 'e. Run down an' see, Bill."

Mr. McKelvey gladly started on this errand of mercy. He was glad to show Drum Lake what he could do in the way of clothes when he fairly put his mind to it. For the first time in many years, he had resurrected the long black coat and high cravat that formed part of his Sunday suit in England, years before.

Mr. McKelvey felt that he had filled a somewhat inferior position in Drum Lake society so far. To-day he proposed to show his fellow-citizens just what his proper sphere was. His clothes were not perhaps all they might have been, yet they were a step in advance at least. The great collar looked out most solemnly through his thick beard. Time had written deep wrinkles on the long coat, and Mr. McKelvey had grown portly of late years. By a desperate effort he had succeeded in buttoning the garment about him, but the seam at the back was put to such tremendous work that it seemed gasping for breath.

The Parson went back to the audience room to complete his arrangements. He arranged the rude benches, and fastened back a spray of evergreens that had fallen down over one of the windows. It was not long before a curious stumping on the stairs warned him of the approach of some visitor. He opened the door and peered down the narrow passage.

Mr. McKelvey and two women stood at the entrance. The black coat and collar had evidently proved too much for the "Chase gals."

"Ere we be, Parson," announced Mr. McKelvey. "Parson; this 'ere is Miss Lucy Chase, Parson, Miss Mary Chase." Mr. McKelvey did his best to make the introduction in the most approved style. His tight coat was against him, but he did his best.

The Parson bowed gravely to his new friends. The outside appearance of the new choir was hardly more prepossessing than that of the old one. Miss Mary was a cripple, and walked by the aid of a crutch. Her face was thin and sharp, and seemed to give one notice that her tongue was as keen as a razor. Miss Lucy's face was disfigured by small-pox. They both wore flaming red hoods on their heads and great, cloth mittens on their hands

But Mr. Grayling was too much of a gentleman to let the ladies see that he considered them ill-looking. "I am glad you are come, ladies," he said gravely. "Perhaps it will be well for us to look over our music, a little."

(TO BE CONTINUED.)

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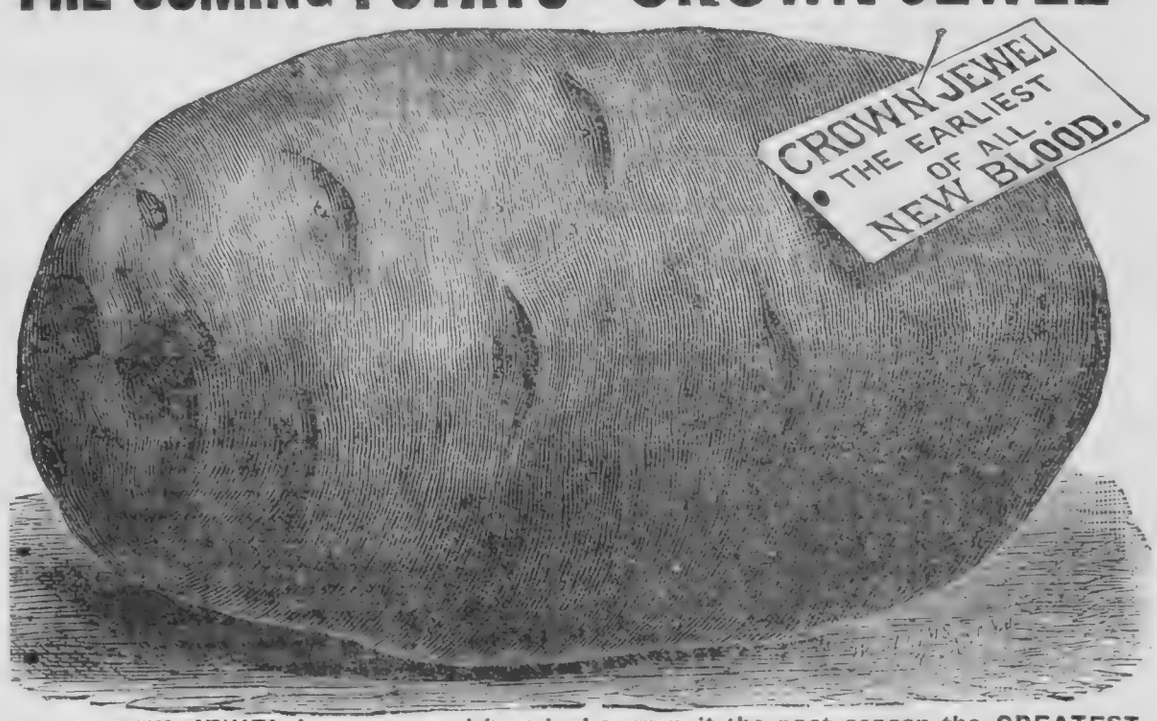

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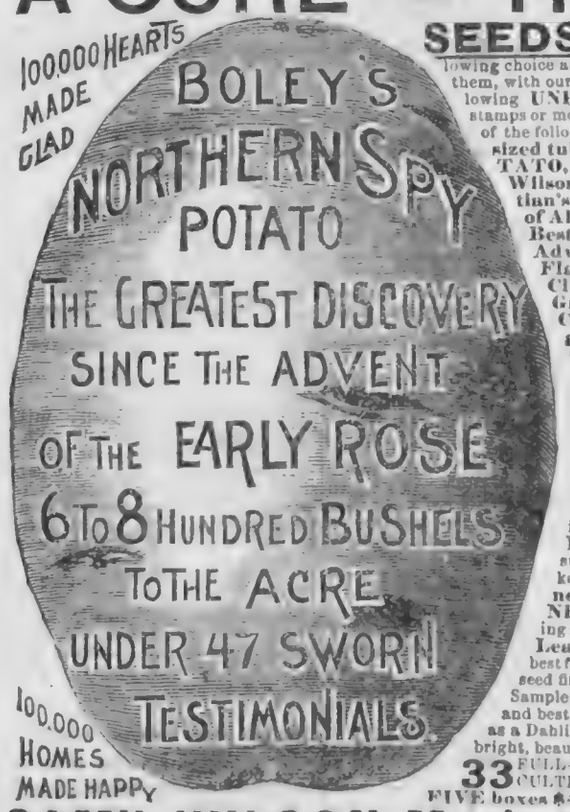

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First ascertain whether the stone hangs plumb, by getting some one to turn it slowly while you examine it. If it wobbles sidewise while turning, you will then have to remove the crank pinion and clamps and make a new block for the square hole in the center of the stone. This should be made with care, and the hole should be quite square. For a two-inch stone a piece from the end of a scantling will answer. When of the shape and size required, draw two lines from opposite corners of the block, and the spot where they cross will be the exact center. Place it in a vice and bore an inch hole straight through Put it in the stone, replace the clamps and pinion; screw up snug and again test the stone. It should run "plumb-steady." If it does not, any little irregularity can be corrected by unscrewing a little and placing pieces of leather between the edge of the clamps and the stone. Do not be satisfied till it is perfect in this respect.

Now to dress down the stone: first mark a perfect circle on each side of it near the edge. To do this, find the side and spot where the stone is most worn; then take a scratch-awl or any sharp-pointed tool and hold it flat and firmly on the frame at the side of the stone so that the point will just touch the edge at the point most worn. Now turn the stone carefully and the point will scratch a perfect circle and show the part to be removed. Repeat the operation on the other side. The stone is now ready to be dressed, and all you will need is a two-foot section of an old scythe blade or corn-cutter. Sit astride the frame with the stone against your chest, and shave off that part outside the marked circles just as you would use a drawing-knife on a stick of hard wood, and you will be surprised at the speed and effectiveness of the operation. First shave off the corners, then the center, and so continue, constantly changing the angle of the blade and the direction of the cut, change also the part of the knife used, occasionally, so as always to have a sharp cutting edge. Draw the knife with a slanting, cutting motion, not with a square, dead pull. If you have ever tried any other means, you will at once see the advantage of this method. No doubt some will smile at the idea of cutting stone with a knife, but remember "the test of the the pudding is in the eating"—try it. After you have carefully removed all down to the circles, there will still be some slight irregularities. To remove these, take a piece of soft iron as wide as the face of the stone, and having some one to turn the latter, hold the iron firmly against the face of the stone so that each revolution will remove the rough places. In a short time the iron will touch the stone all the way around, and the job is done, and your stone should run as steadily as a balance-wheel. Then take care of it. Don't allow it to stand out exposed to the weather with one side in the water, for if you do it will be softer on that side and will wear faster. Having your stone in good running order, do not fail to attach a treadle, for it will then run quite easily, and you can do a good job. Do not, if you can avoid it, impress the small boy into your service, for no job is more irksome to him than turning the grindstone unless it be operating the old dasher churn.

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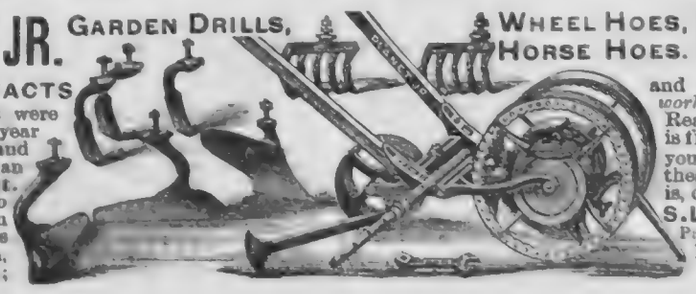

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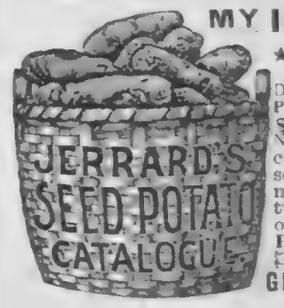

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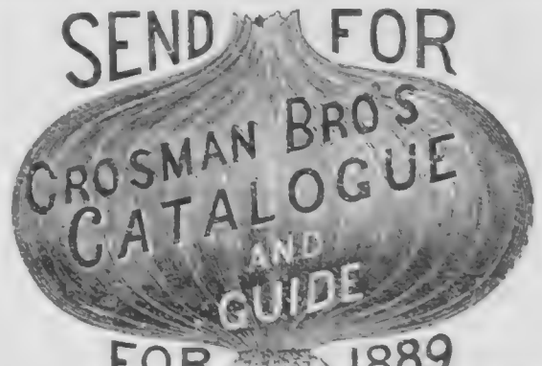

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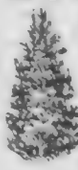

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2. Growth and anxiety.
3. Ah! Ha!
4. Oh! Ho!
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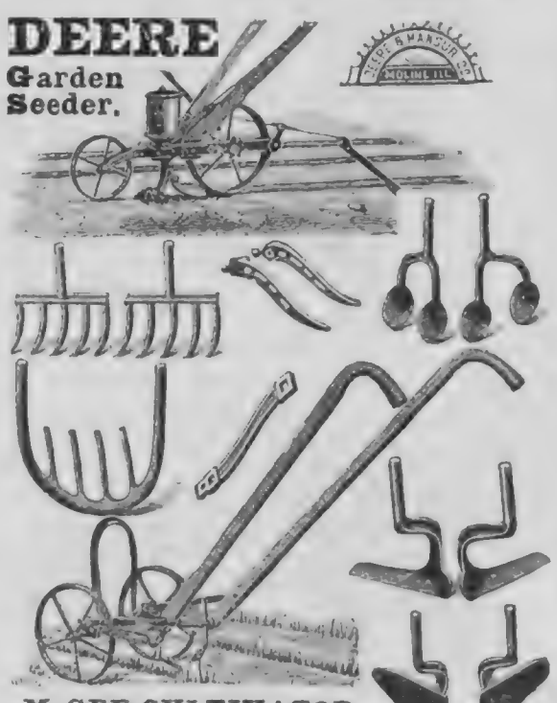

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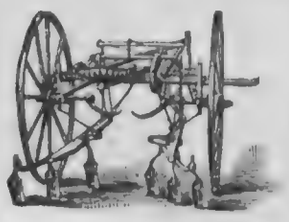

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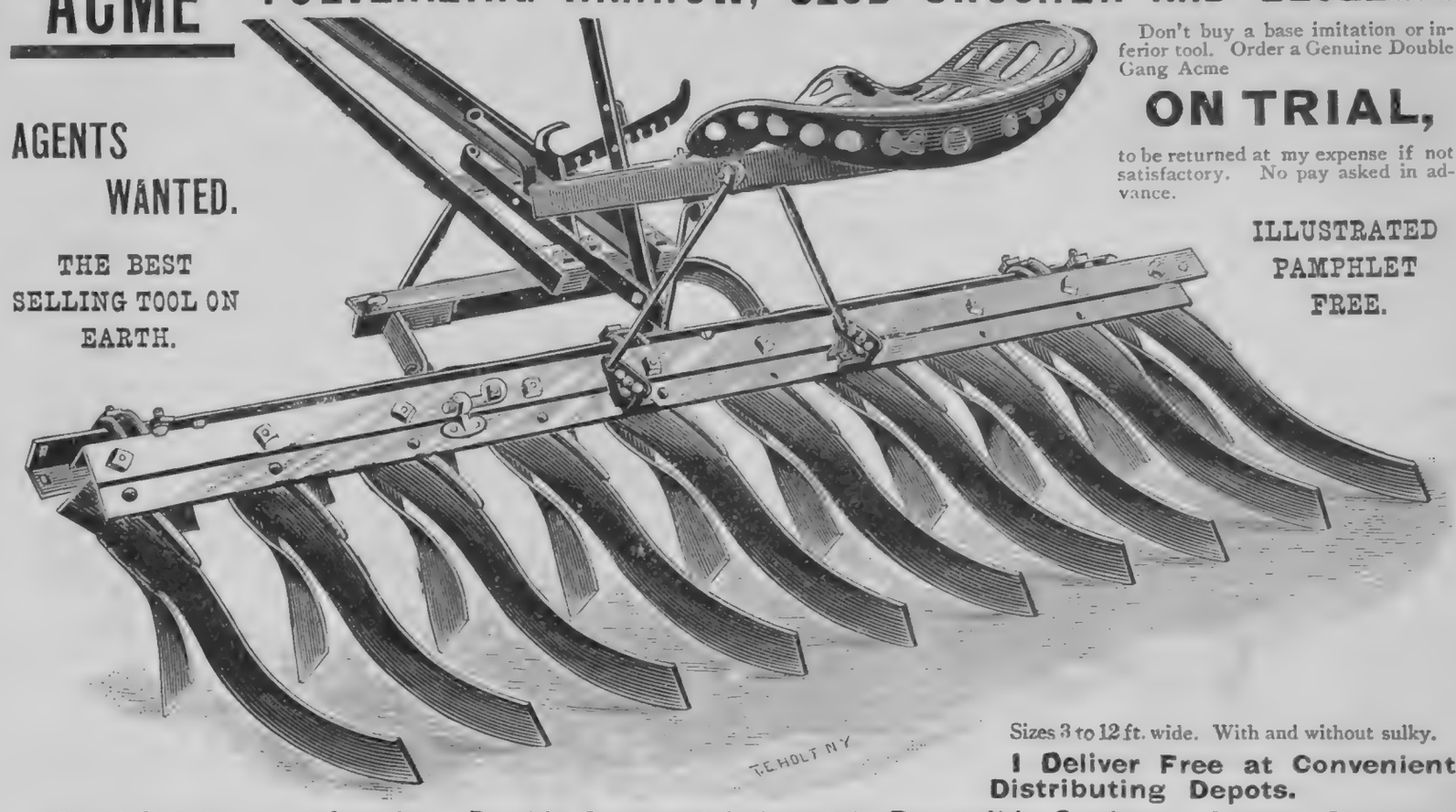

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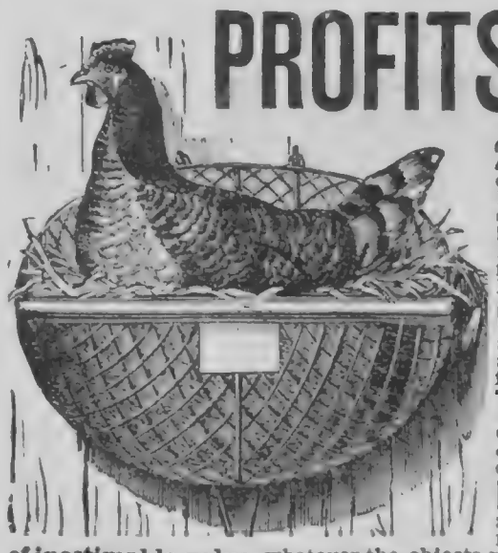

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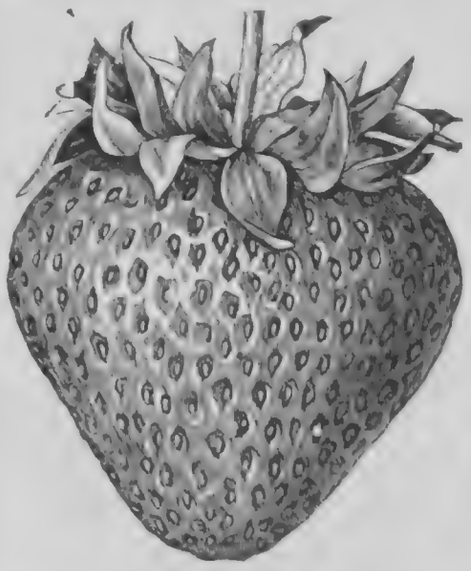

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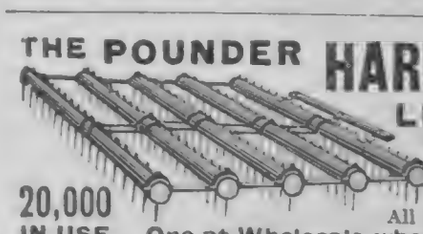

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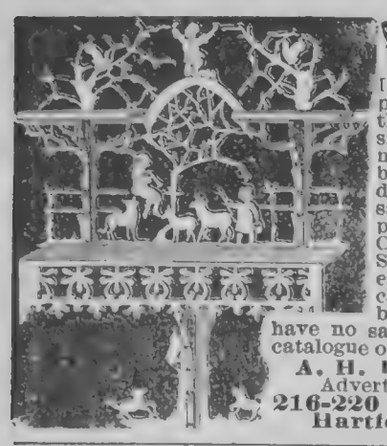

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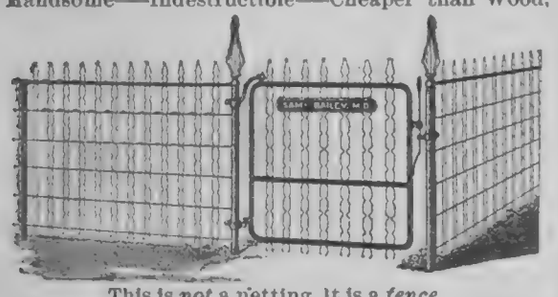

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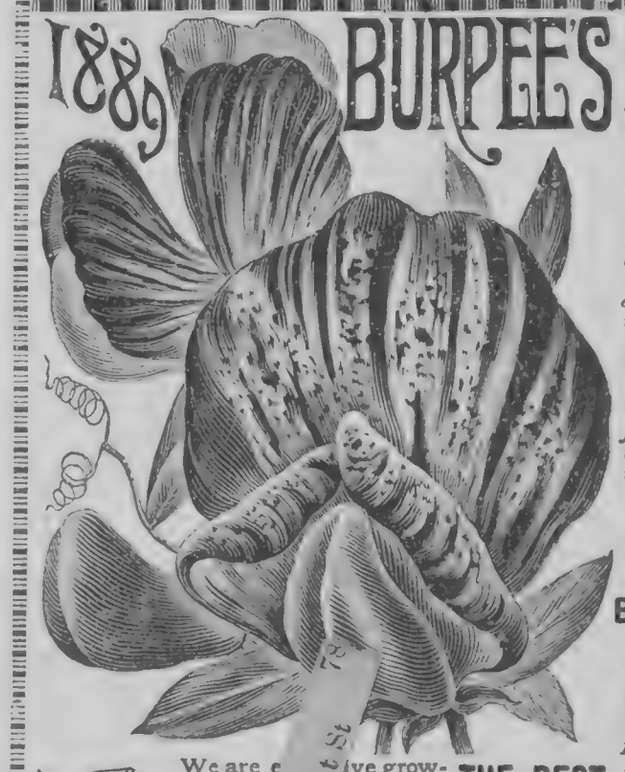
The special feature in the new catalogue of the Stockbridge Special Complete Manures is the great prize of $1,100 in gold offered for the largest yield of potatoes on one measured acre. This prize is offered in connection with the American Agriculturist prize of $500 for the largest yield of potatoes, so that if the prize crop is grown on the Stockbridge Potato Manure, the grower will receive $1,100 in gold coin. This is the largest prize ever offered for this or any other crop. The Bowker Company also offer $600 in prizes of $225, $175, $125 and $75 for the second, third, fourth and fifth largest crops grown on the Stockbridge Potato Manure. What may be expected from this fertilizer is well shown in a trial made at the Rural New-Yorker grounds last year. A measured half-acre of run-out soil was planted with poor specimens of the Pride of the Valley potato, manured with 850 pounds per acre of Stockbridge Potato Fertilizer. According to the Rural's report. the measured half-acre yielded 200 bushels, or at the rate of 400 bushels per acre. It should be remembered that this was a practical test on a half acre, and the result is therefore of great value.

The catalogue is illustrated with numerous fine engravings of crops grown on these fertilizers, and the quality of the matter on the general subject of fertilizers may be inferred from the liberal quotations we have heretofore made from it.—*From the New England Homestead, February* 9, 1889.

Write for Pamphlet. Mailed Free.
BOWKER FERTILIZER CO., Boston and New York.

1889 BURPEE'S New Sweet Peas



Every one loves and admires the *Sweet Pea,* but very few are aware of the great improvements recently attained in this favorite flower. From extensive trials at our *Fordhook Farm,* and our recent visits to the leading growers in Europe,we have obtained **The Best New Sweet Peas,** including *Eckford's Finest New Hybrids* and other rare varieties of *surpassing beauty.* See *colored plate* and illustrations from nature in **Burpee's Farm Annual for 1889.** We offer *our own mixture of the choicest named varieties* at 10 cts. per pkt., 20 cts. per oz., 4 oz. for 75 cts.

ROYAL PRIZE PANSIES. *A new and original idea.*
We have carefully selected the best varieties of English, French, and German *Show Pansies, fancy, striped, spotted,* and *Giant-flowered Pansies,* of which we sell seed *of our own blending,* at 15 cts. per pkt. of 100 seeds, or 2 pkts. for 25c.

BURPEE'S FORDHOOK PHLOX.
A new strain of our own growing, pronounced by expert florists *the finest ever seen,* both in *brilliancy of colors* and *large size.* Pkt, 10 cts.

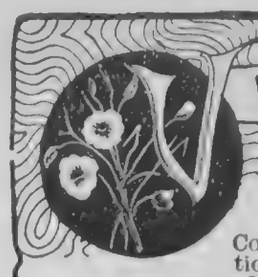
BURPEES' SUPERB NEW BALSAMS
The *largest in size, most perfect in form,* and *most beautiful in colors.* Per packet, 10 cents.

NEW FIRE-FEATHERED CELOSIA.
Strikingly handsome, with magnificent *feathery plumes* of an intense *fire color* of rare beauty.

We are e... ive grow-ers as we ...porters, of **THE BEST FLOWER SEEDS,** and in order to induce flowers to... ...r seeds a *thoro... ...al,* for **50 Cents** we will send by mail, *postpaid,* to any address, **ALL the above FIVE Beautiful New Flowers AND ... ...O one packet each** of the *New Little Gem Sweet Alyssum,—Improved Scarlet Ornamental Foli... ...et,—Striped and Blotched Petunia Hybrida,—New Large-flowering Dwarf Quaker City Mignon... ...Double Rose-flowered Portulaca,—New Dwarf Double Pulchra Marigold,—Improved Double M... ...oppy,—Giant Perfection Stocks,—New Miniature Sunflower* and *Extra Fine Mixed Verbena.* ...tion and directions for culture p... ...n each packet. At regular prices the **FIFTEEN PACKETS**—all the Choice Flower Seeds named in this advertisement—would cost $1.60, b... will mail the entire **DIAMOND COLLECTION** for **50 Cents**—*only one-third their retail value,* or **FIVE Complete COLLECTIONS for $2.00.** Try to get up a Club of Five. *Postage stamps accepted same as cash.* If you do not want all the Seeds, give some to a friend, as separately four or five varieties would cost as much as the entire assortment. **ORDER NOW,** and if you have not already received it, write also for **BURPEE'S FARM ANNUAL** for **1889.** A handsome book of 168 pages, with hundreds of illustrations and beautiful *colored plates, painted from nature.* It tells all about the **BEST SEEDS, Bulbs, Plants,** &c., including **Rare Novelties** that cannot be obtained elsewhere. Entirely free from sensational and exaggerated descriptions, is a *trustworthy Guide,* of great value to every one who cultivates a garden in town or country.

W. ATLEE BURPEE & CO., Seedsmen
Nos. 475-477 N. 5th St. and 476-478 York Ave., PHILADELPHIA, PA.

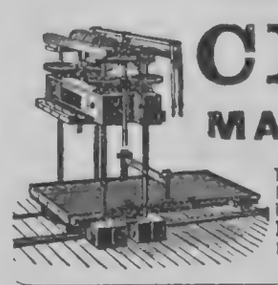
VICK'S FLORAL GUIDE



The Pioneer Seed Catalogue of America.
1889.
Complete list of Vegetables, Flowers, Bulbs and Small Fruits, with descriptions and prices. **New Shape, New Type, completely revised and improved.** Contains more varieties than any other Catalogue printed. *Three Elegant Colored Plates,* 8x10½ inches, and a frontispiece. Every person who owns a foot of land or cultivates a plant should have a copy. Price of VICK'S FLORAL GUIDE, containing a certificate good for 15 cents worth of Seeds, only 15 cents. **JAMES VICK SEEDSMAN Rochester, N. Y.**

SCAB

H. C. & J. C. GROOME, of Locust Hill Stud Farm, Wythe county, Va., say of THYMO-CRESOL (The Cold-Water Dip): "*It has been with us notably successful in curing Scab in Sheep, in an advanced stage. We have found the growth of the wool materially promoted by dipping Sheep in it early in autumn. It destroys Lice on Colts, is a most useful dressing for the Hoofs of Horses, and a valuable remedy in cases of Grease and Thrush. We have found it a speedy cure for Mange, and as a Disinfectant and Purifier its merits cannot be too highly commended. In fact, the limits of its usefulness to the stock-breeder are difficult to realize, and here we should be inclined to feel quite helpless without it.*" Imported only by **T. W. LAWFORD & CO., Baltimore, Md.** Sample by mail for 50c.



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Knuckle Joint and Screw Presses. Graters. Elevators, Pumps, etc. Send for catalogue.
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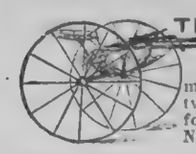

THE I X L COIL SPRING ROAD CART
Beyond a doubt is the easiest riding cart made. Springs can be adjusted for one or two passengers. Before purchasing write for wholesale prices. A. L. PRATT & CO.,
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WHITMAN AGR'L CO., St. Louis, Mo.
We also make the best **Steam Power Press** in America.

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ST. JOHNSVILLE AGR'L WORKS,
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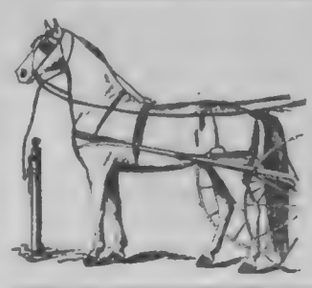
THE PERKINS' Wind Mill

is the Strongest and Best Self-Regulating Wind Mill made. Full instructions for erecting sent with the first mill. **All Wind Mills warranted.** For Circulars and Prices address
THE PERKINS' WIND MILL AND AX CO.,
Agents Wanted. **Mishawaka, Ind.**
Mention Rural New-Yorker.



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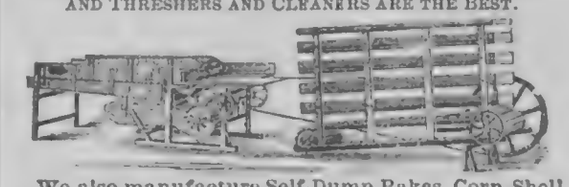
When you can buy **HARNESS Handmade,** Best Oak Leather, for $7, $9, 10, $12, $13.50, $15. Double Sets, $20, $25,30 Shipped subject to approval, A 60-Page Catalogue Free.
KING & CO.,
Wholesale M'f'g Co.,
Owego, N. Y.

Newtown Double Geared, Level Tread Horse Powers.
AND THRESHERS AND CLEANERS ARE THE BEST.



We also manufacture Self-Dump Rakes, Corn Shellers, Farm Rollers, etc. Send for Circulars and Price Lists. A. BLAKER & CO., Newtown, Bucks Co., Pa

Fence for Poultry and Garden

Made of Galvanized Wire Netting, is the best and cheapest. All widths. Only five-eighths of a cent per square foot. In rolls 150 feet long.
PETER DURYEE & Co.,
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DESSICATED FISH.
Something New for Poultry Food. The fish is cooked, pressed, dried and ground. Will keep any length of time. To be mixed with the soft feed. **TRY SOME.** Send for my Circular. Also send for Book on **Successful Poultry Keeping,** 31 pages with illustrations. Book is **free.** Send 2-cent stamp to pay postage. Address
C. A. BARTLETT, Worcester, Mass.

IDEAL FEED MILL
AND POWER COMBINED (IMPROVED).
Grinds all kinds of Shelled Grain and Ear Corn, drives Feed Cutters, Wood Saws. Etc. Lightest draft, strongest and best, fully warranted. Send for catalogue showing full line of Feed Mills, Two and Four-Horse Powers, Wood Saws, etc.
STOVER MFG. CO., Freeport, Ill.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL XLVIII NO. 2041 NEW YORK, MARCH 9, 1889, PRICE FIVE CENTS, $2.00 PER YEAR.

[Entered according to Act of Congress, in the Year 1889, by the Rural New-Yorker, in the Office of the Librarian of Congress, at Washington.]

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RURALISMS

A VIEW IN THE RURAL GROUNDS.

THE present illustration is engraved from an imperfect photograph. Still it shows quite well what it is designed to show, viz., the mingling and grouping of deciduous and evergreen trees in a pleasing and effective way so as, at the same time, to conceal boundary lines. Grounds, even though very limited, may be so planted as to give a different view from almost every change of position. This is strikingly exemplified by photographic views. The Rural Grounds (proper) are but a trifle over two acres in extent, and yet there is such a variety of trees, shrubs, arbors, walks and lawns, so many little hills and valleys, that scores of different views might be taken, no two of which would be recognized by the stranger as a part of each other. This is a point well worth studying by those who are arranging new grounds or who intend to do so. Few, without experience, are aware to what an extent a small place may be made to present an ever-interesting, ever-changing appearance, by a judicious arrangement of plants wisely selected. The small evergreen tree in the middle of the picture is a Small-leaved Hemlock (microphylla). Behind it is Nordmann's Fir, back of which is a Pyramidal oak (Quercus rober fastigiata) and various shrubs. On the left of the path are a Golden retinispora, a Weeping Norway spruce, a Maiden-hair tree (Salisburia adiantifolia) roses, lilacs, etc. On the extreme right is a White Pine which has been cut back for several years and which is now as thickly clothed with foliage as a Common Hemlock. The lawn in the foreground slopes gently to the east.

The photograph was taken in early spring.

Farm Economy.

TWO DESIGNS FOR THREE-HORSE POLES.

(*See page* 158.)

A NEW YORK METHOD.

THE sight of the device shown at Fig. 8 on page 35, of the RURAL, induces me to give an illustration of the three-horse thills, whiffletrees and neck-yokes that I have used for several years with much satisfaction. Each horse has to do his share of the work, and no shirking is permitted, as is very often the case when the draft is stationary.

In the drawing—see Fig. 55—A A represent the thills; B B B are three single whiffletrees; C is a two-horse evener or whiffletree; D is a three-horse evener or whiffletree; E is a 2½-inch plank made to fit the hounds to a wagon and halved and fitted on top of the cross-pieces and bolted with four half-inch bolts; F F are neck-yokes. G G are turning bolts. The whiffletrees to be used for any purpose without the thills are the same as those on the thills, only the three-horse evener has a clevis for chain, plow, harrow, etc. B. M. G.

A MICHIGAN DEVICE.

In a recent RURAL I saw a three-horse pole which I think is very crude, as it is rigged; for while one horse may be doing all it can, the other two may be doing almost nothing. I send a sketch of my three-horse rig, with which I have been hauling some very heavy loads. (It is shown at Fig. 54). With it I consider three horses abreast equal to four, two on the pole and two to lead. The wagon I use is a heavy farm truck with four-inch tires, rigged for two horses. I took out the pole, made a stub, A, to fit in the hounds, B; then I made a pair of straight thills 12 feet 10 inches full length, 2 feet 10 inches over all at the cross-bar, and clipped them to the axle-tree at C C. I have a set of Gale equalizers, but they are too light for heavy work, so I made a heavy set that would stand heavy work. I think that as a three-horse rig this device has no equal. Every horse has to do his share. The neck-yoke is five feet four inches long, has rings fitted to each thill, and a ring at each end and two in the center three inches apart to let the pole strap draw in the center; the hold-back irons should be set 10 inches from the end so that if one horse backs up and the other goes ahead, he cannot throw the neck-yoke off the thills. Three good 1,200-pound horses on a fair road will haul five tons without any trouble with this arrangement. L. L. DAVISON.

Grand Blanc, Mich.

A MASSACHUSETTS HOG TROUGH.

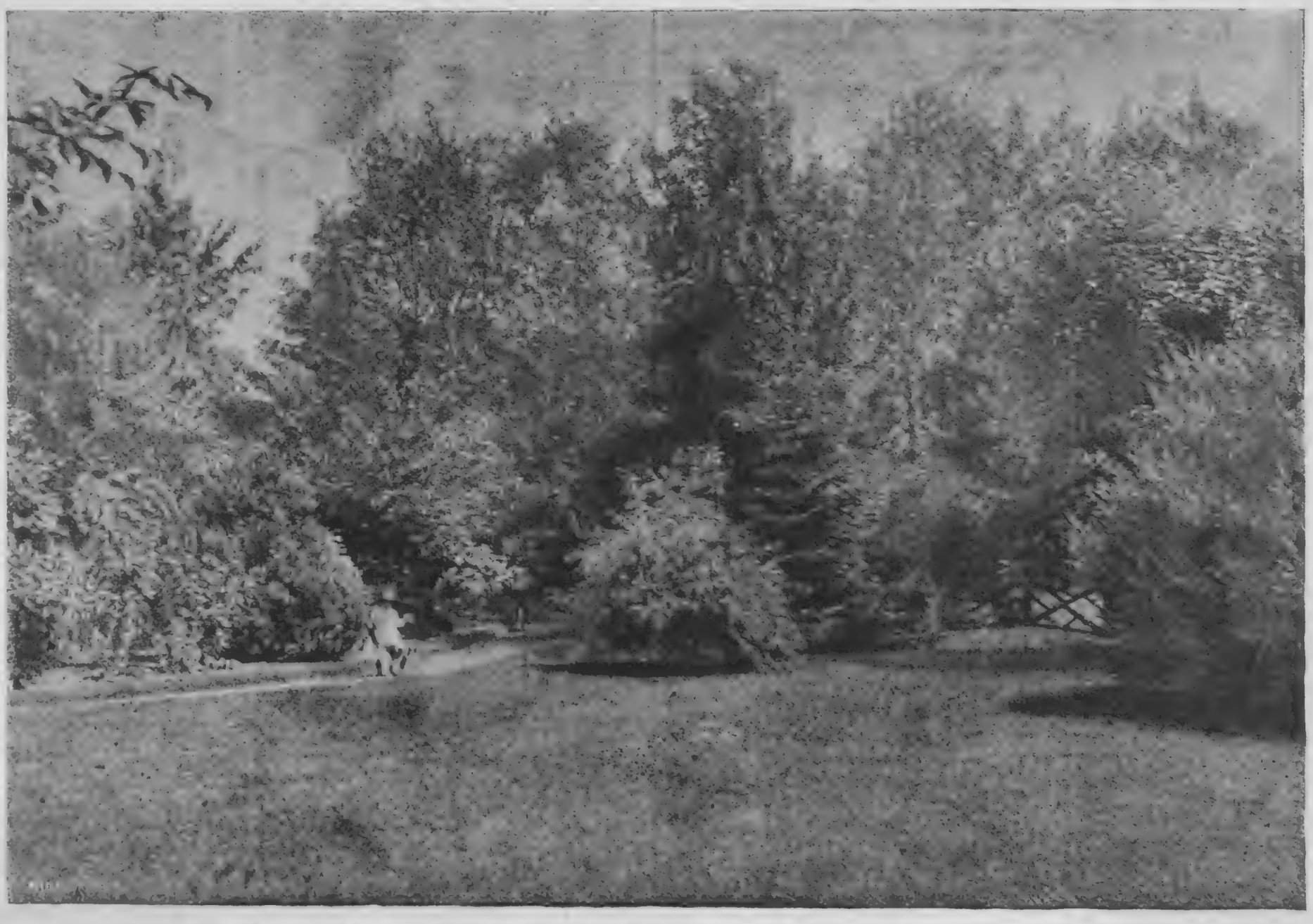
At Fig. 56 is shown an excellent hog trough with a swinging cover, which has the following advantages over those ordinarily used: 1. It is so placed in the partition that a hog cannot get into it or even place his feet in it with any comfort whatever; hence it is always much cleaner than a trough which is wholly inside the pen. 2. It affords great ease and convenience in feeding or in cleaning it from refuse feed or accidental filth, the swinging cover shutting away the hogs while the trough is being cleaned from the outside, and, moreover, feed can be placed safely in it without spilling it on anxious heads or noses. 3. Whether the cover be swung out or in, the trough may be as tight as the partition itself, and no current of air can blow upon the animals should the trough open from the outside of a building. It is very simple, and readily constructed. Make a common V-shaped trough out of two-inch planks one foot wide, letting the end pieces extend an inch or more higher than the sides, to give a place for holes for the bolts which serve as hinges of the cover. Make the latter out of the same plank and just the length of the inside measure of the trough, with two triangular pieces firmly nailed, one at each end, with holes bored to correspond with holes in the ends of the trough. Fasten the cover to the trough with suitable bolts; set the trough lengthwise of, and directly under the opening in the partition cut to receive it. Nail it there firmly, and with a button to hold the cover back while the hogs are feeding, the article is finished. A. A. R.

Mt. Hermon, Mass.

CORN-DRILL.

(*See page* 158.)

At Fig. 57 is shown a two-horse corn-drill used in the West for planting sod. It is not



PHOTOGRAPHIC VIEWS IN THE RURAL GROUNDS, CONTINUED. Fig. 53.

patented, is simple in construction and gives perfect satisfaction. Good oak wood should be used in its construction. The dimensions may be varied to suit one's fancy, but are usually about as follows: Plank, forming the main body, five feet long, one foot wide and two inches thick; cross-bar in front 3½ feet long, three inches wide and three inches thick; diameter of wheel 12 inches; extreme length of shoe 18 inches. The shoe is made and attached like that of the ordinary two-horse corn-drill. The wheel should be 1½ inch thick, and encircled with a good, heavy tire. The long iron slide, extending through the box and connected with the propelling arms of the wheel, as shown in the cut, slides back and forth directly on top of the plank, and is provided with a suitable sized hole to hold two or three grains of corn, which are drawn back under a thick piece of leather (nailed across the bottom of the box), and dropped down through the shoe. The stirrups at either end of the cross-bar should be made of iron or steel, and should be not less than two inches wide and a quarter of an inch thick.

Rexford, Kansas. E. K. M.

Horseman.

THE THOROUGHBRED STALLION, Q. C.

WHILE the Trotter successfully competes in popularity with the Thoroughbred in this country, the latter still holds, unchallenged, the first place among horse flesh in the British Isles. Every animal of any particular merit is widely known; his characteristics, history and pedigree are retailed repeatedly in the papers, and his likeness finds a prominent place in the illustrated journals. At present a prominent favorite is the Thoroughbred stallion Q. C. (Queen's Counsel) the property of Mr. William Edwin Litt, of Shropshire. He was foaled in 1883, and was got by Wisdom out of Brenta. He was exhibited at the Nottingham show of Thoroughbreds last year, and was awarded one of the Queen's premiums of $1,000. His likeness here has been re-engraved from the London Live Stock Journal.

THE FARMERS' CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.

HOW TO MAKE BUTTER "COME."

V. A. S., Benton Harbor, Mich.—My three cows have been giving milk since last July or August. Their feed consists of corn-meal and oat-meal once a day, and straw, corn-stalks and marsh hay alternately, with salt nearly every day, and plenty of clean spring water at all times. The milk is kept in a pantry off the kitchen where it is too cool to sour and too warm to freeze. It is scalded. and we churn twice a week, with the cream at a temperature of 60 degrees. We churn with a dasher and stone churn all day, but the butter doesn't "come." Why doesn't it "come", and how can we make it do so?

ANSWERED BY HENRY STEWART.

There are two reasons why butter will not come: one is because the cream is too cool and sweet; another is because the cream is too warm and sour. In the first case the cream becomes granular as if it were filled with sand, and it dashes about without foaming. In the second case, the cream gets very thick, foams and swells and soon becomes very strong and sour-smelling. In the first case, the remedy is to keep the cream in a warm place until it becomes distinctly sour, and then to churn it at 65 degrees. When the cream goes at 60 degrees into a cold churn and is churned in a cold room, it can easily fall to 50 degrees, when the small particles of butter are too hard to adhere and they dash about in the butter-milk without gathering. If a quart of water at 80 or 90 degrees is thrown into the churn the butter comes very soon, as it is already well separated. When the cream is too sour and warm and foams in churning, a quart or two of cold water will remove the difficulty and bring the butter; but under these circumstances the butter will not be good.

ANALYSES AND COST OF FEEDS FOR MILCH COWS.

D. D. B., Ringtown, Pa.—1. What is an analysis of rye chop? 2. Do equal parts of rye chop, wheat-bran and corn-meal make a good food for milch cows? 3. Is bran at $20 per ton equal as feed to wheat middlings at the same price?

ANS.—Rye chop and the other materials mentioned contain the following nutritive elements by which their feeding values may be compared·

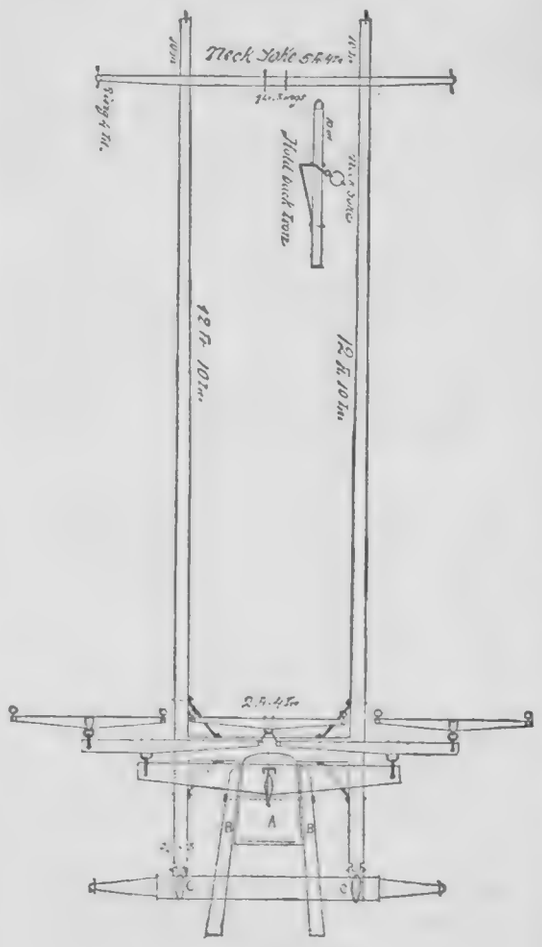


Fig. 54.

	Nitrogenous matter.	Carbohydrates.	Fat.	Feeding value.
Rye chop per cent..	11.0	67.4	2.0	$1.08
Wheat-bran	12.9	59.1	3.5	1.01
Corn-meal....	10.0	62.1	6.5	1.11
Wheat middlings...	11.4	66.8	2.9	1.00
Cotton-seed meal...	41.5	24.4	13.0	2.30

As a matter of practice, corn-meal and wheat-bran, mixed in equal parts, make an excellent—perhaps unexcelled—food for cows kept for milk or butter. If anything at all might be added to improve it, it would be one-fourth as much cotton-seed meal, which would largely increase the nitrogen and the fat. Wheat middlings tend to make a white and crumbly butter, although for milk alone they are very good feed, if the price is right. By consulting the feeding values given and the market prices, one may be guided in choosing the most economical foods. It is seen that cotton-seed meal is a very cheap food at $25 per ton, but on account of its extremely rich and concentrated character it cannot be fed safely in any but very small quantities.

PEAS FOR A HOG PASTURE.

C. W. E. B., Fowlerville, Pa.—How much peas should be sown per acre for a hog pasture? Would this be a good plan? Where can the peas be obtained for seed?

ANS.—Peas make very good pasture for hogs, but it would be better to sow oats with them, by which means the vines are held up from the ground and the yield of the crops is nearly double, both crops yielding almost as much as if sown alone. Pasturing swine in this way is a wasteful practice unless it is done for the improvement of the soil, as the herbage is trodden down into the ground in great part. As the crop cannot well be pastured until the growth is quite large, it would be far better to cut the fodder and feed it to hogs on a part of the land and then turn them in to consume the second growth. Clover is the very best pasture crop for swine. Any seedsman who advertises in the RURAL can supply peas for seed.

AILING CHICKS.

J. C. F., Minneapolis, Minn.—My chickens hold their heads on one side as if something were in their ears. After doing this for a few days, they become worse, until they turn necks and heads clear around four or five times. Then they fall down and each neck and head seems to have a fit. After the first attack they seldom live over a week.

ANS.—This is a trouble that often occurs, especially among Plymouth Rocks, the cause of which is not conclusively determined; but it seems to occur when chicks are from eggs laid by over-fat hens. The large lice also cause the trouble, as well as dampness or exposure to cold drafts. Sulphur in the food, or over-heating of the eggs during incubation, has also been assigned as a cause, the latter being probably nearer the solution than anything else.

COW-PEA HAY.

M. F. A., Chelsea, Ky.—As to pea hay, how much seed per acre should be sown? When should the "hay" be cut? Where can I obtain seed and at what price?

ANSWERED BY HUGH L. WYSOR.

Hay made from cow-pea vines requires a longer time and is more difficult to cure than that made from other forage crops. The quantity of peas necessary to sow an acre would depend very much upon the variety used, some kinds growing only in bunches and others making vines 12 to 25 feet in length. The Conch pea, which is the variety usually sown in the South for forage crops, will cover the ground if planted two or three in a hill six feet apart. Sown broadcast, a peck to the acre would be sufficient. It does not mature seed in middle Georgia. Plant the seed from May 15 to June. Cut in favorable weather when the the vines have matted over the ground. For prices and decription of varieties, write to the Alexander Drug and Seed Co., Augusta, Ga.

THE GAERTNER GRAPE.

J. B., West Park, N. Y.—Has the RURAL grown and fruited a grape called the Gaertner—(Rogers No. 14)? If so, can it recommend it for general cultivation? It is very handsome and of fine quality. What I want to know is as to its healthfulness and productiveness?

ANS.—The Gaertner (Rogers's No. 14) has never done well at the Rural Grounds. But in some places it is a magnificent grape, bearing large bunches, large berries of a light-red color and translucent. It is also of very good quality, the pulp being tender, pleasant and rich. The vine grows vigorously and it is in many places very productive.

ABOUT ROSES.

B. A. B., Afton, N. Y.—1. How are Perpetual roses propagated? 2. What is the best way of protecting a tender rose bush in winter? I built a small house around mine and covered it with glass, and the bush is now quite green. Was that a good way? 3. What is the difference between Hybrid Perpetual and Monthly roses? 4. What are the names of one or two of each kind that would do well here?

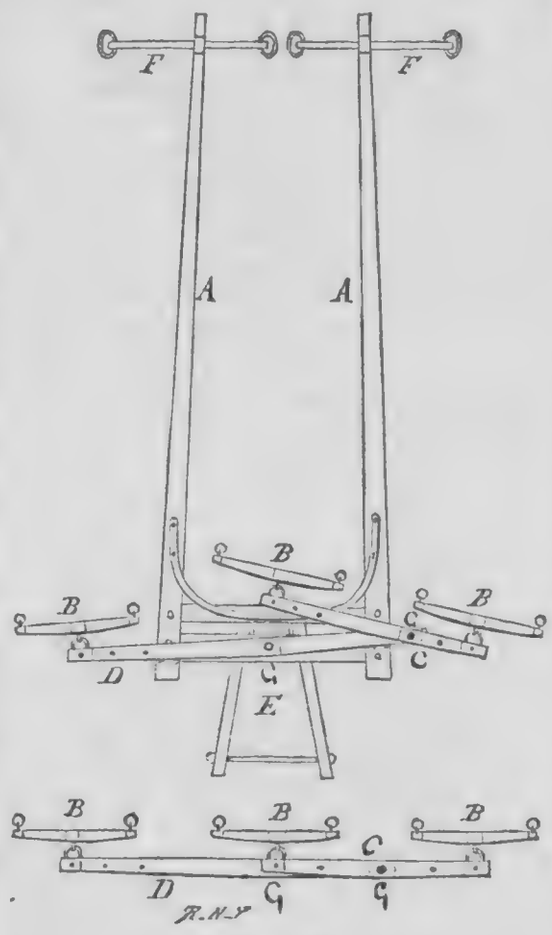


Fig. 55.

ANS.—1. By budding and by cuttings. 2. They may be taken up and wintered in pits or cold-frames, or in the cellar. They may also be protected by glass houses as our inquirer has done. They may also be wintered in trenches. Some are successful in keeping tender roses through the winter by heaping soil around the bushes and covering them with long manure, leaves, etc. The R. N.-Y. has not been successful by this method. 3 The Hybrid Perpetuals or Remontants were originally crosses between Bourbons, Hybrid Chinas and Damask Perpetuals. Then followed crosses innumerable of Bengals, Teas, etc., upon them. Recrossing was continued until this class of roses is mixed up beyond the possibility of being straightened out. They are, for the most part, hardy without protection in any climate similar to that of New York. The Monthlies are the real perpetual bloomers, but few of them will stand a zero temperature. The Teas belong to this class. For Monthlies: Bon Silene, Catherine Mermet, The Bride, Isabella Sprunt, Perle, La France. Hybrid Perpetuals: Alfred Colomb, Gen. Jacqueminot, Mabel Morrison, Charles Lefebvre.

STOCKED OR SWOLLEN LEGS IN A BROOD-MARE, ETC.

G. C. L., Lawton, Mich.—1. What should be done for a mare with foal, troubled with a swollen hind leg? 2. Another mare with foal has rubbed the root of her tail till she has worn through the skin. How should she be treated? 3. What is the best work on horses, especially for the treatment of brood mares?

ANS.—1. The condition is not uncommon in mares with foal. Very little medicinal treatment is necessary, as the swellings will usual-

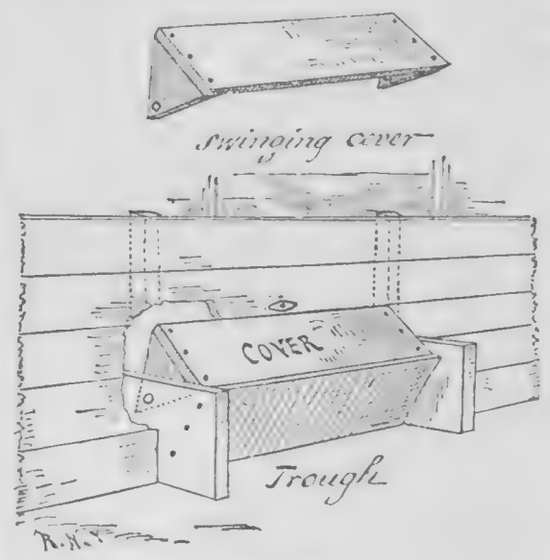


Fig. 56.

ly disappear after foaling. Where this tendency to stocking of the limbs occurs, special attention should be given to the care and diet of the mares. They should have moderate daily exercise when the weather is suitable. Light work is best, but the run of a yard will do fairly well. Do not feed too heavily, especially with corn or other heating foods, as over-feeding favors the stocking. A restricted, laxative diet, to consist in part of roots or mashes, is the most suitable for such cases. If the swellings become very bad, give three drams of the best aloes every other night until the bowels are loosened. Then give one table-spoonful of the following powders in the feed once or twice daily: nitrate of potash eight ounces; iodide of potash four ounces. Bathe the swollen limbs occasionally with diluted compound tincture of iodine, or spirits of camphor. It is best not to use the internal remedies unless it becomes necessary, especially during the latter part of gestation, because of the tendency (usually slight, however) to produce abortion if the bowels or kidneys are unduly excited. 2. For the present we would advise some such simple treatment as thoroughly washing out the tail with warm Castile soap-suds and then sponging over with coal oil or kerosene. If the skin is much abraded, apply zinc ointment. If the trouble continues after foaling give a course of treatment for intestinal worms. See Intestinal Worms in a Horse in the Farmers' Club, of May 12, 1888. 3. "Horse-Breeding" by J. H. Sanders, to be had of the J. H. Sanders Publishing Company, Chicago, Ill., price $2 00.

CHRONIC BLOATING IN A COW.

F. D., Southampton, N. Y.—During the past month the body of a medium-sized cow of mine has swollen so much that it fills a stable door three feet wide as she passes through. She is expected to come in about April 20. She eats and drinks as usual. A neighbor says one side appears to be filled with water, and the other with air just under the skin. She is very much bloated. What should be done for her?

ANSWERED BY DR. F. L. KILBORNE.

Give the cow one-half pound each of Epsom salts, and common salt with one ounce of ginger as a drench in a quart of water. This dose should move the bowels freely. If it does

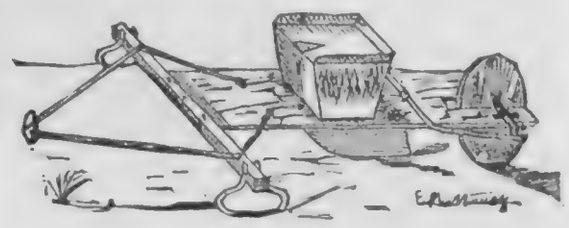


Fig. 57.

not, repeat it in 24 hours. Then give three table-spoonfuls of the following powders in the feed night and morning, or as a drench if she refuses her feed—sulphate of soda and powdered gentian root each one pound, niter and carbonate of soda each one-half pound, nux vomica one-fourth pound, mix—continue until relieved. If the bloating becomes very

bad, give half-ounce doses of carbonate of ammonia in one-half pint of cold water every three hours until relieved. If the breathing becomes difficult and there is danger of suffocation, the paunch must be punctured through the abdominal wall on the left side, at a point equally distant from the point of the hip and the last rib, where the swelling is most prominent and the skin very tense. The best instrument for this purpose is the trocar and canula. But in the absence of this, a pocket-knife with a narrow, two-inch blade, may be used. Plunge the blade in the full length and hold it in the opening until a long quill can be introduced to allow the escape of the gas. This should be held in position until the gas ceases to escape. There is very little danger in this operation, and almost any one can safely perform it. The diet should be light for at least two or three weeks. Roots or scalded bran once or twice daily will be excellent.

HOW MUCH SEED POTATOES.

J. V. C., Lysanaer, N. Y.—In planting potatoes for flat culture, how many bushels of seed are needed per acre? I never took such interest in farming as I have taken since I began to read the RURAL.

ANS.—The question in the above can not be answered. All depends upon the size of the potato, the number of eyes to be planted, the number of eyes in the variety of potato and the distance apart. The best way to find out is to count the potatoes in a barrel, and multiply the number by the number of pieces each potato will give. Then estimate the distance apart at which it is proposed to plant. If to be planted one by three feet apart, 14,520 pieces will be required for an acre.

HOW TO GET THE LARGEST POSSIBLE YIELD FROM ONE POTATO.

C. F. P., Brenner, Kan.—How can I get the most out of my sample of the R. N.-Y. No. 2. potato? Would it be advisable to plant in a hot-bed and transplant, or should I cut the tuber in pieces with, say, two eyes to a piece? I am anxious to get the best results possible.

ANS.—The best (largest) quantity can be obtained by sprouting the potatoes in a hot-bed and planting the sprouts until the tubers are exhausted.

THE RURAL TRENCH SYSTEM OF POTATO PLANTING.

J. W, Oglethorpe Club, (no address).—1. Could the RURAL's method of planting potatoes be profitably used on about 10 acres? 2 What potato fertilizer did the RURAL use in its late "potato contest?" How much ammonia, potash, and phosphoric acid did it contain? 3. What is the RURAL's theory as to putting half the fertilizer in the trench, mixing it with the soil, then planting the seed-pieces and putting the other half of the fertilizer above the "seed," instead of putting the whole amount in the bottom of the trench and mixing it with the soil? 4. What is the best tool with which to open the trenches 15 inches wide? 5. How should barn-yard manure be applied?

ANS.—1. Yes. 2. We use a fertilizer which is guaranteed to analyze 3½ per cent. of nitrogen, 12 per cent. of phosphoric acid and six per cent. of potash—the potash being in the form of a sulphate, the phosphoric acid in bone (not rock) and the nitrogen from blood, sulphate of ammonia and nitrate of soda. 3. It was done in the way of an experiment. If we were raising potatoes as a regular farm crop, we would apply *all* the fertilizer broadcast and harrow it in *before* plowing the trenches. 4. A shovel plow, costing about six dollars. Any plow can be used by throwing a furrow both ways thus forming a trench. 5. If the land is level we should apply it in the fall and plow it under. Then plow again in the spring, returning the manure to the surface in great part.

INFLAMMATION IN A HORSE'S EYE—"HOOKS."

L. E. D., Annapolis Junction, Md.—Over the right eye of my young horse a skin has been growing for some months. It started at the inner corner and it isn't attached to the ball, but slips over it; it sometimes covers the sight. A neighboring horse doctor, after examination, pronounced the trouble hooks, and cut a portion of the skin off. Since then it has grown very fast, and now it is nearly as large as it was before it was cut. What is the malady and what causes it? What should be the treatment?

ANSWERED BY DR. F. L. KILBORNE.

There is probably chronic inflammation of the eye, the result of some injury or disease, the nature of which we are unable to give from your description. The skin you mention as growing over the right eye, and which your "doctor" pronounced "hooks," is a natural, membranous rptection or covering for the eye, which is always present in the horse, and can be seen in the inner angle of the eye at any time. This natural protector of the sensitive surface of the eye is the *Membrana nictitans*, commonly called the "third eyelid" "winking eyelid," or "haw." The use of this membrane is to extend or protrude over the eye for the purpose of removing dust and any foreign bodies that chance to pass the eyelids proper. It probably also serves to moisten and keep the surface in a healthy condition. Inflammation in the eye and a few diseases may cause this haw to be temporarily protruded, as in the present case. The proper course of treatment is to reduce the inflammation, when the haw will usually return to its natural position. The person you employed to treat your horse should be designated by his proper title "quack," since it is only ignorant quacks that still follow the old barbarous practice of cutting out the haw or "hooks." Besides being painful, and destroying one of the natural protectors of the eye, the operation is very often injurious, and rarely if ever followed by any good results, as practiced by such operators. Without knowing the cause of the trouble, we can only give general treatment which may or may not be successful in this particular case. Give the horse five drams of Barbadoes aloes to open the bowels. Then cover the eye with a light bandage and keep it wet with a solution of 30 grains of sugar-of-lead and 10 grains of morphia, in one pint of water—the solution to be milk-warm when used. Watch the eye closely and report results and condition in two or three weeks.

RATIONS FOR MILCH COWS.

T. G., Sharon, N. Y.—What is a well balanced ration for milch cows, composed of the following grains, with Timothy as fodder—oats and peas; oats and rye; oats, peas and rye? What alterations should be made for feeding young animals to the best advantage?

THOROUGHBRED STALLION Q. C. Fig. 53.

Re-Engraved from the London Live Stock Journal.

ANSWERED BY HENRY STEWART.

The standard ratios of nutrients, while they have a general application to feeding cattle, horses and other domestic animals, cannot be applied with any certainty to the production of milk. In regard to this there is something to consider beyond the mere supply of a certain quantity and kind of nutritive elements. Digestion, assimilation, and the effect of the food upon certain organs must all be considered, and in the feeding of cows these come before the mere nutritive elements of the food. In feeding for milk we undoubtedly require a large portion of fat and nitrogen, with a less proportion of such carbonaceous matters as starch. Thus the composition of the dry matter of 100 pounds of the best milk may be taken, on an average, as four pounds of caseine, four pounds of butter, four pounds of sugar and three-quarters of a pound of various mineral matters. In these substances we have about four ounces of nitrogen only in the 100 pounds of milk against eight pounds of carbon and water. Hence, for the purpose of procuring a large quantity of rich milk, one might suppose it necessary only to feed a large amount of fat in the food and so gain the largest product of butter. This, however, will not do in practice, for the animal cannot healthfully dispose of the food thus selected, because the digestive organs cannot prepare it and the blood which receives and distributes to the various organs the aliment assimilated, would be overloaded with the excess and the animal would become diseased. Consequently, in considering the composition of foods, we must take into account not alone the nutritive elements of the foods, but also their effect upon the digestive organs, and, most especially, their effect upon the quality of the butter. The first consideration is chemical in its relation to the question; the others are physiological, and cannot be considered from a chemist's point of view. For this reason we sometimes fail to realize our expectations in feeding cows for milk, and especially for butter. It is a well known fact in physiology that the fats of food are emulsified in the process of digestion by intimate mixture with the pancreatic fluid, and are absorbed by the intestines and pass directly into the blood. As they are not subject to change in the blood, they must pass at once into the tissues and the milk glands, and thus affect the character of the butter of cows and the fat of animals fed for meat. It is thus that the fat of pork is made soft when the pigs are fed on beech nuts, of which the oil is very limpid and fluid; while it is harder when the pigs are fed on peas than when they are fed upon corn. The very same thing applies to butter, and explains why some foods make white and soft butter, while others make yellow, firm, and well flavored butter. In my very careful and long-continued experiments I have found that foods affect the butter in the manner following:

Buckwheat bran: white, crumbly butter.
Linseed oil-meal: soft, oily, flat-flavored.
Bran and middlings, both wheat and rye: light, rather soft.
Corn-meal: firm, yellow, high-flavored.
Cotton-seed meal: hard, rich-flavored and yellow.
Oats: light, crumbly, poor-flavored.
Peas; yellow, rich, soft.

For quantity of milk, brewers' grains, malt-sprouts, corn-meal and bran, buckwheat-bran, wheat or rye-bran or middlings, corn or rye-meal stand in the order mentioned. Now, to come to the point of the inquiry as to the result of feeding the substances named, it would appear that oats and peas mixed would be the best food that could be selected; and to reach the desired ration we might take 400 pounds of oats and 100 pounds of peas and grind them together and get this nutritive ratio.

Oats alone	1 to 6.1
Peas alone	1 to 2.9
4 of oats to 1 of peas	1 to 6.

The mixture gives almost exactly the same ratio as oats alone, but as the effect of oats upon the butter is not desirable, the mixture of the peas is an improvement in this respect while it keeps the ratio in a healthful proportion. As a rule, whatever foods are best for the product of milk are best for feeding young animals which require precisely the same elements of nutrition as are found in the best milk.

KAFFIR CORN AND "MILLO MAIZE."

Subscriber (address mislaid.)—What does the RURAL know about the culture and benefits of Kaffir corn and Millo Maize for forage, the after-growth serving for fall pasture? Farmers who have tried both in this State highly commend them.

ANS.—The R.N.-Y. can speak of Kaffir corn only from its own trial. It grew to the hight of about five feet—one stalk, Some of the stalks were cut back and the second growth did not amount to much. The leaves are broad, like those of corn, and the stalk is close-jointed. It matured seed easily. The only advantage of this kind of sorghum over corn is a greater drought-resisting capacity. Otherwise corn is greatly to be preferred. Its culture is just like that of corn. Milo or Millo Maize is another absurdly-named sorghum. Its legitimate name is the Rural New-Yorker Branching Sorghum since it was first introduced to the trade under that name. It is a luxuriant variety of sorghum, that, when cut back, will not only continue to grow as fast as ever, but will send up two or three shoots for every stalk cut back. It is a grand fodder plant. It will not mature seeds in the North, and fails even in South Carolina during unfavorable seasons. To call these two sorghums by the names of Millo Maize and Kaffir corn is altogether absurd and misleading.

GOLDEN QUEEN RASPBERRY, ETC.

W. A. D., Winnipeg.—The nurserymen all claim that the Golden Queen raspberry is of unexcelled beauty and firmness; but in a late RURAL the statement was made that it isn't good for market. I was thinking of planting two acres of it on my farm in the province of Ontario for a market 100 miles away; would it be advisable to do so? 2. Will the Parry strawberry do well on light land; and will it bear shipment to a distant market. 3 Do unleached wood ashes and ground bone furnish everything needed by strawberries and raspberries? About 100 loads of leached wood ashes have been lying for many years within two miles from my farm; are they worth carting?

ANS. 1. The R. N.-Y. would not advise its friend to plant two acres of Golden Queen raspberry. Yellow is not a favorite color in the market and this berry is too soft—softer, decidedly, than the Cuthbert of which it is a sport. 2. The Parry strawberry is of good quality and fairly—only fairly—productive. It is firm enough for market. It needs rich soil and probably one that inclines rather to clay than to sand. 3. Yes they do. The leached ashes will give you lime and a little phosphoric acid—that is all.

TREATMENT OF AN OLD NEGLECTED ORCHARD.

C. F. A., Darien, Conn.—What is the best thing to do with a 20-year old apple orchard that has probably never been pruned or cultivated since it was set out? Some trees have made a fair growth; but most of them are not over eight to 10 feet high, and not more than 12 feet in spread of tops. Would it pay to try to bring the trees into bearing; or would it be better to set out new ones?

ANS.—Much depends upon the healthfulness or lack of it in the trees. If in spring it is found that they are loose at the base and have an extremely stunted appearance, it would be well to remove them. On the other hand, if they stand firmly and have not been attacked by the *apple-borer* and if they are free from the scale insect and other pests and maladies, being fairly healthy, cultivation may be judiciously given, and pruning the trees may yet yield good results. But the orchard will never be what it might have been with good culture and pruning from the first. If four-fifths to nine-tenths of the trees are condemned, it would be as well to clean out the whole, and, selecting some choice trees, start on new ground, pruning the trees and cultivating the orchard well from the beginning.

BRAZILIAN FLOUR CORN.

A. F., Williamsburg, Ind.—1. How are flowers and other plants hybridized? 2. Is the Brazilian flour corn superior to common field corn?

ANS.—1. We are constrained to refer our friend to back numbers of the R. N.-Y. for explicit directions. In brief, remove the anthers of one flower while they are immature. Generally the floral leaves of the bud must be opened in order to do this. Then procure pollen from the flower with which it is desired to make a cross, and apply it to the pistil (stigma) of the other. To prevent the interference of insects or the wind, the mother flower should be covered. 2. The R. N.-Y. raised Brazilian Flour corn the first year it was announced. It is rather late for our climate. The ears are small, the grain white. From two to six ears are borne on each stalk. The grain makes an excellent quality of flour (see back numbers—Domestic Economy Editorial notes, and communications from contributors) better than that of any variety of corn we have tried.

THE AUSTRIAN PINE.

W. H. S., Oakville, Can.—What sort of a hedge would Austrian pine make? Will it stand clipping back the same as the Norway spruce? How far apart should the trees be planted to make a wind-break?

ANS.—Yes, they will stand cutting back the same as Norway spruce. We would not use

either for a hedge. As a wind-break they would prove serviceable. The Austrian pine cannot be confined within hedge limits and live many years. For a wind-break we should plant 30 feet apart.

A POSSIBLE PROGENITOR OF A POLLED JERSEY BREED.

A. G. R., Alpena, Mich.—My high-grade Jersey cow never had any horns. A month ago she dropped a calf which has no sign of a horn, though its sire was a full-blooded Jersey. If she continues to drop hornless calves, would she be more valuable than if her progeny had horns? She is nearly pure-bred, is a fine milker, and has all the "points" of a Jersey except the horns.

ANS.—We should value that cow highly as being the possible ancestor of a race of polled Jerseys. Now, if you could but find a hornless Jersey bull, the basis for such a race would be secured. Otherwise it will have to be effected by in-and-in breeding.

ABOUT THE WOMEN'S POTATO CONTEST.

J. A. B., Lima, N. Y.—In the Women's Potato Contest must the plot be square? How near the edge must the first hills be—that is, should the 33 feet be measured from the first to the last hill or would it include a space outside equal to the width of the row?

ANS.—Suppose you make 11 rows, each three feet from the other (measuring from the middle), and in each row plant 33 pieces. You will find you have just one-fortieth of an acre, or, in other words, 363 "hills." The plot need *not* be square, though it is probable that not less than seven rows will be settled upon by the judges. In this case there would be 52 hills in six rows and 51 in the last. The R. N.-Y. will give full instructions in a short time.

ORIGIN OF ISOLATED ROCKS.

Subscriber, Genesee County, N. Y.—On a farm in this section are two rocks of porous limestone with some flint, which weigh several tons each. They are three rods apart, and there is no other rock within 100 rods of them, and no rock of the same kind in this entire region. Where did these two come from?

ANS.—These rocks are evidently relics of what is known as the glacial period when the surface of the earth in the greater part of the northern hemisphere was covered with vast beds of ice or glaciers. As the climate gradually changed this ice melted and formed floods which poured down the slopes carrying rocks, gravel and sand which were deposited over great spaces, forming what geologists call the glacial drift, which is made up in great part of rounded masses. But as the ice broke off from the faces of the glaciers—of the extent of which we can form no conception from anything existing now—large rocks adhering to or frozen in the ice were floated off until the ice grounded in shallow water and, melting, dropped the rocks where they are now found. The general direction of the current was from the northeast, as is shown by grooves and scratches worn in bare, smooth solid rocks over which the ice and floods passed; and if the origin of these masses of loose rock is sought it will be found in this direction. Geologists have never failed in detecting the birth-places of these strange rocks by following the rules indicated by patient and skillful investigation. Lyell's Principles of Geology gives an interesting account of this glacial period of the earth's history. The rocks have probably come from the neighborhood of Labrador or the region about Hudson's Bay or further south in Canada, a distance of 300 or 400 miles.

RAISING ONIONS.

G. W. L., Napoleon, Ohio.—How can onion sets be raised so as to have them the right size and shape? A great many onions are raised here every year; but none of the growers knows how to raise the sets, all of which are imported from other places.

ANS.—There are four different kinds of sets used by market gardeners and ripening in succession as follows: 1. The potato onion or multiplier; 2. The rareripe or medium-sized set; 3, The top or tree onion; 4. The pip, or button set. They are produced or raised as follows: The potato onion is grown by setting out the onions in rows two feet apart and eight inches in the row. Each onion divides and splits up in the ground, forming a bunch or cluster of eight or 10 large and small onions. The smallest ones are kept for seed. 2. The rareripes are any of the seed onions of small size; usually the size of a black-walnut. They are set out in rows two feet apart, and three to four inches apart in the rows, the old onion growing and forming stalks, a new one forming in its place. These are used only for early onions, as they will not keep long.

3.—Top or tree onions are set out the same as potato onions. When this onion ripens it forms a cluster or bunch of from 10 to 20 small onions on top of the stalk. These are used for seed for next season's planting, for the purpose of raising market onions from them. 4. For pip or button sets, prepare the ground in the same way as for seed onions: rake it down smooth and lay it off in beds 18 inches wide, with alleys or paths 18 inches wide in which to walk when weeding. Drill the seed in the beds from three-eighths to one-half inch apart, and about a quarter of an inch deep; roll down tightly to facilitate the sprouting of the seed. The seed will sprout in about two weeks and show above ground. Then go over the ground and clean out all weeds and grass. Continue to keep the bed clean until the onions are ripe, which will be seen by the tops wilting and falling down. They should then be pulled and cleaned from the soil, by throwing them in a coarse sieve and they should then be left to dry thoroughly, after which they can be spread out on a floor under cover about two or three inches deep, until frost comes. Then pile them up in heaps, covering them lightly with coarse bagging or straw. Increase the covering to prevent freezing. They must be kept as dry and cold as possible, without freezing. The yellow Strasburg is the best for sets. The planting of the seed so closely exhausts the nutriment from the soil and prevents the bulbs from growing large. The distances of rows stated above are for raising sets so that they can be tilled by a cultivator or plow. For garden beds, place the rows one foot apart.

THE RURAL BLUSH POTATO, ETC.

J. S. G., Red Bank, N. J.—The inclosed potato is called the Rural Blush hereabouts where it is extensively grown and well liked for its good quality and productiveness. Last year it grew hollow-hearted on heavy soils, and was inclined to rot, and on this account shippers objected to handling them. Is the specimen sent Rural No. 2? If not what name should it go by?

ANS.—The specimen sent fairly resembles the Rural Blush in every way. The Blush and the R. N.-Y. No. 2 must not be confounded. The RURAL NEW-YORKER introduced the Blush years ago. It did not originate with us at all, but with Mr. E. S. Benham, of Attica, N. Y. The Blush has shown this tendency before. When cutting seed *every potato showing a decayed center or "hollow heart" should be rejected.* In this way this serious objection may be entirely overcome.

GRASSES FOR EASTERN OREGON, ETC.

R. A. S., Joseph, Oregon.—My soil is a black sandy loam with some gravel in it. I have plenty of manure and lots of water for irrigation; what grasses should I sow for a permanent pasture? Will buckwheat mature here?

ANS.—If any one can answer these questions without experimenting he will confer a great blessing on the farmers of Eastern Oregon. Oregon is such an enormous State, embracing such a diversity of climate, soil and physical characteristics and, withal, so sparsely populated, that accurate experiments have not been conducted. Prof. Grimm, of the Oregon E. S., states that no grasses that he knows of have been found to take the place of the native Bunch-grasses of Eastern Oregon. The Fescues have been recommended. For irrigated land he thinks Alfalfa is the very best crop. He says these questions are often asked, but as yet no one has been able to answer them. The country surrounding Joseph is new and but little is known of its agricultural capabilities.

"CURCULIO-PROOF" PLUMS: THE LE CONTE FOR GRAFTING.

C. C. W., Grand Bay, Ala.—1. Are there any curculio-proof plums, and if so, what are they? 2. What has been the result of grafting the older sorts of pears upon Le Conte roots both as to growth of tree and quality of fruit? 3. Is it true that the grafting of Le Conte cions upon common pear stock has resulted in producing a fall-blooming tree, and in consequence a failure of the spring or summer crop of fruit?

ANS.—1. There are, properly speaking, no curculio-proof varieties of the plum; though the Chicasaw and Americana species have each numerous varieties which are believed to be less attractive to this insect; and in which the eggs frequently, if not even generally, fail to develop into mature larvæ. There are also several varieties of the Domestica or *Garden* plum, for which it is alleged, (with how much occasion it is yet impossible to determine), the "Little Turk" has a dislike. The same is alleged to be true of some or all the recently introduced, and, as yet, imperfectly tested Japan plums. How far all or any of these claims will prove valid in practice, is yet to be determined, but it is safe to assume that the apparent evidence is the mere result of preference; and that, when short of pasture, this persistent enemy will be sure to attack even these to him least desirable.

2. At the extreme South, (doubtless as the result of climate and the consequent temperature and moisture of soils), the Le Conte pear is readily propagated by cuttings, which root promptly, and make fine stocks on which other varieties may be grafted. As we go northward, this method of propagation becomes less and less practicable; till, in the more northern States, this variety is more conveniently increased by working, in the usual way, upon stocks already rooted. Not infrequently the occurrence of warm, moist weather, after growth has apparently closed for the season, causes a resumption of growth and the consequent fall blooming of the fruit buds formed for the next season's crop. This occurs occasionally at the North; and, possibly, even more frequently at the South, insuring the loss of a crop the next season. We are not aware that this is peculiar to any one variety; to the use of any particular kind of stock; or to any particular combination of varieties.

FOR THE LARGEST CORN YIELD.

A. H. H., Rayville, Md.—I have a piece of ground I am thinking of planting in corn. It is rich enough to yield 20 bushels of wheat per acre by the use of fertilizers. It was in cabbage and beets last year and produced fair crops. I am putting manure on it over again to be plowed under. 1. How should corn be planted on this land so as to get the largest yield? 2. Would the RURAL recommend the Mapes potato fertilizer in preference to others? Could I use half a ton per acre with profit? 3. When and how should the fertilizer be applied? 4. What kind of corn should be used?

ANS.—1. In four feet apart. Drill in the seed about three inches apart, then cut out at the first hoeing to 14 inches apart. We should give *frequent shallow* and *flat* cultivation. 2. We know of no fertilizer better worth the price. Half a ton per acre would be about right. If expense be not regarded, use 1,500 pounds. 3. Make the first application before harrowing. Use 1,000 pounds. Make the second application (500) when the corn is knee-high. 4. If you don't mind gigantic stalks, Chester Co. Mammoth will give you as large a yield of grain as any kind we know of.

THE LAWSON PEAR.

E. R. P., Conway Center, N. H.—1. Will the Japan hybrid catalpa be hardy as far north as this place? Our coldest weather is 20 degrees below zero. 2. Is the Lawson pear as good as the Bartlett? Would it be advisable to plant it for a home market?

ANS.—1. No. We do not believe it will stand your climate. 2. No, its quality is inferior. It is a showy pear and of large size for one so early. It is therefore valuable for market.

PEACH AND APPLE QUERIES.

G. W. D., Fallsburg, Ohio.—1. Would peach trees do well on land just cleared—a sandy loam on top of a hill? 2. How old should the trees be? 3. What varieties? I want some for market and some for home use. I also wish to plant 30 more apple trees. 4. What kinds should I get? 5. Would a good mulch do instead of plowing the orchard?

ANS.—1. The land described would be well adapted to peach growing, assuming that the subsoil is sufficiently porous not to be wet or springy. 2. Peach trees should never be planted older than one year from the bud. 3. George the Fourth, Coolidge, Grosse Mignonne, Morris's White and Druid Hill will afford a good succession of peaches for home use. Mountain Rose, Crawford's Early, Crawford's Late, La Grange, President, Shockley's Early, Stump the World, and Ward's Late are all popular market varieties for Ohio. 4. Belmont, Ben Davis, Benoni, Chenango, Grimes's Golden, Jonathan, Maiden's Blush, Oldenburg, Peck's Pleasant, Rambo, Red Astrachan, Red Canada, Rhode Island Greening, Rome Beauty, Smith's Cider, Summer Queen, Willow Twig and Yellow Bellflower are all double-starred for Ohio in the catalogue of the American Pomological Society. The proposed addition to the apple orchard should probably be made up from these; the selection to be made to supplement what our friend already has, and with reference to the season and varieties most in demand. Before making up the lists, he will do well to learn which of these varieties have proved most profitable in the vicinity, on similar soils. 5. An orchard should be thoroughly cultivated with hoed crops, if any, till the trees have been five or six years planted. Mulching would doubtless be a benefit, by keeping the soil cool and moist during the hot season, if cultivation be not intermitted in consequence. In an old orchard, mulching may be profitably practiced, at least as a partial substitute for cultivation.

CHICKS.

W. H. A., Walton, Del.—I want to raise chickens by means of an incubator and brooder. Taking into consideration my distance from market, and the severity of the winters in this section, which would I be likely to find the more profitable—to raise my chickens in the winter and sell the cockerels for broilers, or to raise them in the spring, and caponize them? 2. Do all dealers require broilers to be dry-picked? 3. Can broilers be shipped alive, and would the prices make it profitable to raise them? 4. What is the address of a reliable dealer to whom I could send broilers?

ANS.—Unless you have had experience it will be more difficult to raise broilers in winter than in spring. It will pay well to caponize the cockerels. 2. Yes. 3. They cannot endure exposure while *en route* to market if alive: some of them will perish. It is easier and cheaper to ship them dressed, by express. 4. There are so many dealers that it is almost impossible to name any claiming to be more reliable than others. E. & O. Ward 279 Washington St. and A. & M. Robbins, Fulton Market, do a large broiler business, and are quite trustworthy.

THE CUCUMBER FLEA-BEETLE.

E. F. G., East Hampton, L. I.—What is a description of the Flea-beetle which was so destructive to potatoes at the Rural Grounds and elsewhere during the past season?

ANS.—The Flea-beetle was illustrated in the R. N.-Y. of August 18, 1888, to which our inquirer is referred. It is a small black flea that hops away as soon as disturbed and then hops back. It eats holes in the leaves which finally become so numerous that the tissue is destroyed and the leaf blackens and dies. This beetle is known to have been destructive (during particular seasons) for 50 years or more, though in most cases it was not suspected to be the cause of the destruction. The R. N.-Y. was the first to make known its depredations the past season and to show that many vines thought to have been killed by "blight" were in reality killed by the beetle.

MONEY FOR EX-SOLDIERS.

D. K. G., (no address).—Where must soldiers apply for their mileage home from the place of discharge, pay for extra duty between April and October 1862, and the 28 cents per day while in prison or on furlough?

ANS.—The above inquiry was doubtless prompted by remarks made about New Year's by Private Dalzell. At the time the RURAL said that a telegram just received from Washington, cast considerable doubt on the correctness of the "Private's" statement. We sent the inquiry to General Black, Chief of the Bureau of Pensions, Washington, D. C., and have received the following answer:—"There is no law allowing five cents a mile, or any mileage to soldiers or enlisted men. Nearly *all* those soldiers entitled to commutation of subsistence and travel pay, act of July 22, 1861, have already been paid it. No transportation pay is due to soldiers while traveling on furlough.

"Nearly all volunteer soldiers entitled to extra duty pay have received it, and section 35, act March 3, 1863, repeals all laws in force as to such pay for *volunteers* for extra service performed *after* March 3, 1863, with only a few exceptional cases.

"Nearly all soldiers who were prisoners of war, and their heirs, under act July 25, 1866, and act March 2, 1867, have received pay for rations allowed under said acts. The Commissary General, U. S. A., War Department, and the *Third* Auditor of the Treasury, have jurisdiction of these claims, and also for pay for subsistence while soldiers were on furlough."

GOOD HARDY APPLE TREES.

O. S. F., Mt. Dora, Fla.—I have an apple orchard in Western New York, on a hill high up, at the head of lake Chautauqua, and my Baldwins and R. I. Greenings winter-kill a good deal. I wish to plant substitutes that will be hardier and yet as good in quality and size, and I have thought of Ben Davis and Wealthy for red apples, and Pewaukee and Peck's Pleasant as substitutes for the Greening. Which would be the better? Perhaps the RURAL can suggest better kinds.

ANS.—Ben Davis is too poor in quality, and Wealthy would not keep long enough for a shipping apple, though it is all right for a near market or an early winter or late fall sort. Of the two, Ben Davis would pay the better as it will keep until apples begin to get scarce in the spring. McIntosh Red is fully equal to the Wealthy as a keeper, and might prove more profitable, as it is of the highest dessert quality. In some places it is subject to spotting, but in many it grows quite fair. It is as large as the Baldwin. There is no first-class long keeper that is truly iron-clad,

but where the Ben Davis succeeds the Golden Russett of Western New York can generally be grown. Pewaukee is a coarse apple that would be hard to introduce. Peck's Pleasant is not hardy enough, we fear.

Miscellaneous.

C. A., Medina, N. Y., can get Hamburg fowls from D. S. Baird & Sons, Johnstown, N. Y. or P. P. Oster, Batesville, Ohio.

F. J. P., De Smet, Dakota.—The bulletin on turberculosis, which is very complete, is issued by Prof. C. H. Fernald, Amherst, Mass.

E. P. N., Nichols, Conn.—Good wire netting can be obtained from Peter Duryea & Co. or Brockner & Evans, Vesey Street, New York.

A. G. S., Dover, Del.—Will some reader of the RURAL who lives in a section where peanuts are extensively grown, tell us "all he knows" about their culture and marketing.

R. L. H., Brighton, N. Y.—What is the newest and best late potato?

ANS.—We consider the R. N.-Y. No. 2 the "newest" and best late potato.

H. S., Fort Collins, Col.—Who manufactures the new lever harrow spoken of in a late RURAL?

ANS.—The Moline Plow Company, Moline, Ill.

H. M. M., Vienna, Austria.—The Secretary of the American Pomological Society is A. A. Crozier, Washington, D. C. Copies of the report of the society can be obtained from him.

A. H. H., Brunswick, Me.—You can obtain from the United States Fish Commissioner at Washington, D. C., a set of pamphlets giving pretty full information regarding carp culture.

J. W., Park Lake, N. Y.—How can I get rid of little black flies on house plants? I have tried hellebore, soap-suds and ammonia, in vain.

ANS.—Tobacco water is the remedy. Spray it upon infested parts.

J. W. D., Baden, Pa.— Would it be advisable to apply a good coat of well-rotted sawdust to corn stalk ground, principally clay, to be cultivated with a sulky cultivator and sown to oats?

ANS.—*Well rotted?* Yes, it would lighten the soil and furnish plant food as well.

E. A. B., Kittanning, Pa.—Is the Brownell's Winner potato, so favorably mentioned in the RURAL of February 16, for sale by seedsmen?

ANS.—It is not yet offered for sale. E. S. Brownell, of Essex Junction, Vermont, is the originator.

W. A. McC., Rozetta, Ill. Which kind of White-oak posts will last the longer in the ground—those newly made and set at once, or those well seasoned?

ANS.—It seems to be pretty well established that, other things being equal, the seasoned posts are likely to outlast those set while green.

G. R., Johnson's, N. Y.—Can potash be applied to a young peach orchard in any other way so as to have the effect of wood ashes?

ANS.—Yes, use kainit or muriate of potash. Add bone or South Carolina rock (dissolved) for phosphoric acid, a small proportion of which the ashes would supply in addition to the potash.

F. A. B., Erie Co., N. Y.—What amount of barley or oats should be sown per acre in seeding to grass?

ANS.—The R. N.-Y. has had no experience with barley. Would be glad to hear from our readers. We use 1½ bushel of oats. Much depends upon the land. If rich, use less seed; if poor, more.

Subscriber, Kingston, N. Y. —It has long been argued by growers of celery at Kalamazoo and elsewhere, that artificial fertilizers, without stable dung, would not grow celery. What says the RURAL?

ANS.—The R. N.-Y. has used both stable manure and chemical fertilizers—never the latter alone. We shall be glad to hear from others on the subject.

C. W. G., Canterbury, Conn.—1. Is the white strawberry any good? 2. Has the RURAL had any experience with it? 3. Is Burpee's Louise as good as the recommendation says it is?

ANS.—1. Yes, it is of the finest quality, but a poor yielder. 2. Yes. 3. We are inclined to think it is. We shall know more about it next season, as our plants were set last season.

L. S., Prescott, W. T.—In an influential paper here there appears an advertisement of White's Northern Muscat grape, which is said to be "the grape for the people all over the United States." Is this claim well founded?

ANS.—The claim is absurd. We don't know anything about this variety; but we do know that any grape of Muscat parentage will mildew away from such a climate as that of California.

M. N. Mc. N., Sherwood, Ohio.—Where can I get the Chili pine, called the Monkey tree by some, because a monkey cannot climb it?

ANS.—Araucaria imbricata. This is a native of South America. It is a fast grower under suitable conditions, thriving in the Southern States. It should be planted in northerly exposures. It thrives among rocks and in gravelly soils. Try P. J. Berckmans, Augusta, Ga.

W. D P., Camp Springs, Md.—What is the best kind of soil for the Bubach strawberry?

ANS.—The RURAL plot consists of a soil that may be called a mellow loam; that is, not clayey enough to become baked and hard, or sandy enough to be called a sandy loam. It rarely suffers from either drought or too much rain. Bubachs thrive well. We learn that the variety succeeds well in stiffer soils, but can not say as to sandy soils.

F. C., Ironville, Ohio.—1. The RURAL, in a late issue, recommends cutting off the seed-end of "seed potatoes;" does it recommend their rejection for planting? 2. In feeding ground grain to cows, should it be fed dry, or moistened, or quite wet?

ANS.—1. Yes, we would reject them except in the case of new and high-priced kinds. The seed-end gives too many sprouts, and, as a consequence, too many small tubers. 2. It should be moistened throughout, but not *wet*.

G. S., Union City, Mich.—Can the Bartlett pear be grafted on the crab apple? If not, what fruit can be successfully grafted on the crab?

ANS.—Yes, it can be, but the cion will make a short-lived growth. You can graft the edible quince, also the ornamental quince, all sorts of cratægus, the amelanchier (Juneberry, Shad-bush, Service-berry.) We do not know of any valuable fruit, except all kinds of apples, that can be worked on the crab.

B. N., Broadalbin, N. Y.—Last fall I plowed a piece of sandy loam land on which sheep had pastured for 12 years. I intend to plant it with potatoes and corn; what would it be advisable to use in the drill—some commercial fertilizer or plaster and ashes?

ANS.—If ashes (unleached) were used, we should add bone—not plaster. Besides the ashes and bone, nitrate of soda and sulphate of ammonia would help the crop, as the ashes do not furnish nitrogen and the bone does not furnish enough.

C. Y., Bangor, Me.—1. Would it be advisable to plant the Rural Thoroughbred Flint corn for ensilage in this latitude? 2. Would it pay to plant the Rural New-Yorker No. 2 potato by the trench method in preference to the Beauty of Hebron at their respective prices?

ANS.—1. No; the Rural Thoroughbred Flint corn will not mature ears with you. 2. The No. 2 is now, we learn, $16 a barrel. That is too much. The difference from the trench would not pay you. It might be well, however, to plant enough to find out how it will turn out in your section.

H. R., Brookfield, Mass.—I can buy steamed ground bone for $30 per ton and unleached wood ashes for 20 cents per bushel; what shall I add to make a complete fertilizer, and would the mixture be cheaper than the average commercial fertilizer?

ANS. This question cannot be answered without an analysis of the bone. Much depends upon the nitrogen left in the bones. The price for the ashes may be low or high. This depends upon their purity and from what wood they come. The mixture would probably need nitrogen in some form to render it a well-balanced "complete" fertilizer.

R. H. S., St. Joseph, La.—1. What is the character of the Green Mountain, Everitt, and O. K. Mammoth potatoes? 2. We plant potatoes here in January and February; which two kinds would be preferable for extra-earliness and productiveness? 3. Has the R. N.-Y. its No. 2 potato for sale?

ANS.—1. Our first reports are corroborated by trials since. All three are fine yielders. The quality of the Everitt is good—that of the O. K. Mammoth fair; of the Green Mountain fair also. 2. Our inquirer is referred to the Vegetable Special for the best of the early potatoes. 3. The R. N.-Y. No. 2 is offered by several seedsmen. See catalogue notices Feb. 16. We have never sold seeds, potatoes or anything whatever except the R. N.-Y.

Several Subscribers—We have seen several references to a machine for picking apples. Is it of any practical benefit to fruit growers, or is it on a par with a milking machine for usefulness?

ANS.—We have never seen the picker, but have heard it well spoken of. It was described on page 594 of last year's RURAL. As to its usefulness, those who have handled it must speak. Mr. J. Harris, a well-known fruit grower of Orleans Co., N. Y., writes: "I used it for gathering my apples last fall and was highly pleased with its work. It is so constructed that it receives the apples as they are shaken from the tree and rolls them carefully into baskets in good condition without bruising, and, futhermore, it does not cost over half as much to gather apples with this machine as it does to pick them in the usual way."

R. W. G., Woosung, Ill. 1. What firms manufacture harvesters for cutting standing corn? 2 Who makes a corn-husking machine? 3. Would cooked pumpkins make good feed for hogs, especially for fattening hogs? 4. Who makes a pumpkin-seed-planting attachment for a corn-planter?

ANS. 1. Few if any of the harvester manufacturers care to advise farmers to use their machines for corn cutting. Some farmers do this work with the heavier machines, and with small fodder corn it might work; but the ordinary harvester is too light for cutting large field corn. 2 A corn-husker and stalk-crusher is made by the Keystone Manufacturing Co., Sterling, Ill. 3. Not if fed alone. They should be fed with some grain. Bran would make an excellent addition to a feed of pumpkins. 4. Try the Spangler Manufacturing Co., the Pennsylvania Agricultural Co., and N. C. Baughman or Hench & Dromgold, all of York, Pa.

S. J., Fairmount, Ind.—Can you tell me why, when a reader of the —— Farmer asked the editor to name the five best farmers' papers published in the United States, he left out the RURAL? Why does he talk so slightingly of the RURAL'S trench-mulch system? Does he offer us anything better? Can he do anything in that line that will compare with what the RURAL has done? The best crop of potatoes I ever raised was when I followed, as nearly as I could, the lessons I had learned from the RURAL.

ANS.—It may be that the editor of the —— Farmer thinks there are five better papers than the RURAL. This is a free country and this editor has a perfect right to his own opinion. As thousands of our best farmers think otherwise, the R. N.-Y. doesn't propose to feel sad about it. Why does he speak slightingly about the trench system? We must give that up. If he has offered anything better we have failed to notice it.

J. H. S., Hillman, Mich.—1. How do the Wealthy and Pewaukee apples compare with the Wagener as to hardiness of tree and quality of fruit for dessert, cooking and keeping? 2. Can the plum curculio be destroyed by poison?

ANS.—1. Wagener is about the same in season as the Wealthy, but is not comparable with it, or even with Pewaukee, in point of hardiness against winter cold. Wagener, when well grown and properly thinned, is a fine dessert apple; and the same may be said of the Wealthy, but both are prone to overbear. Pewaukee is a coarser apple, not so hardy as Wealthy, but a better keeper. In quality it cannot be ranked as a dessert apple. 2. So far as reports go, early spraying of the leaves of plum trees with Paris-green appears to be fatal to the parent curculio beetles, and in this way protects the fruit. It is a cheap remedy, and well worth trying. It should be applied several times, beginning before the flower buds open, and be repeated occasionally until the young fruit is as big as peas, at least.

DISCUSSION.

DIFFERENT BREEDS OF POULTRY.

D. M. K., SHIMERVILLE, PA.—Within the last ten years I have learned that it pays to raise pure-bred poultry, and that it doesn't pay to raise common fowls which one must sell at eight or ten cents per pound. Last fall I had one dozen pullets, one dozen cockerels, and nine hens that I did not wish to keep over winter, so I sold them to a poultry huckster at eight cents per pound; the 33 head brought $11. I was satisfied that I did not make 33 cents on the lot. If I had have 33 head of my pure White-Crested Black Polish birds to spare I could have got $33 a little sooner than I got the $11. I have not sold one of my Polish fowls for less than $1 apiece, and often I got from $3 to $5 apiece. I can also raise them much cheaper than I can raise the larger breeds, and in number of eggs per hen my Polish always come out victorious. During the hot summer months when the hens of the large breeds are broody and one has much trouble in preventing them from sitting in a box or sometimes on the bare ground, he will find Polish hens laying almost every day. At least this has been my experience for the last ten years.

RIGHT TO THE POINT.

M. H. W., MOORE'S HILL, N. Y.—If the cartoon on the first page of the R. N.-Y. for February 9, could be rightly understood by every one, it might help to enforce a sound principle; viz. the necessity of keeping out of debt. But I fear that by far too many will see in that picture some of the evils that affect them, and overlook the fact that the worst ones are self-imposed. Who compels the farmer to run in debt? Does he buy more land than he can pay for, without knowing it? Are farmers so dull that they do not know the nature of a debt when they assume it? If they assume it understandingly and cheerfully, then why do we hear and say hard things about mortgages and lenders? I would place heavy indebtedness by the side of drunkenness, and a man would be far better off by not contracting either. In fact, I think if the riders on that poor typical farmer's back had been named "Intemperance" "Lost Time" "Waste" "Dishonor" "Ill-health" "Crime," the moral would read, "Avoid these evils by not contracting them to start with."

One of the best of rules is to pay very nearly as we go. But some will ask about those who are always in debt. S. E., on page 135, truly says that well directed frugality and prudence will alone subserve our best interests. I have been a farmer continuously for 41 years. Inheriting a farm quite heavily mortgaged and run down too, and living not only to lift the mortgage but to loan to some who need, my experience teaches that S. E.'s saying should be printed in large letters, framed and hung in a most conspicuous place in every farm house. "Farming don't pay" the weak one who spends his money to make a vain show or the one who always "sees a lion in the way;" but farming does pay the man who is strong enough to do right and brave enough to live within his means.

R. N.-Y. AMEN!!

TURNIPS FOR BEEF CATTLE IN THE EAST.

C. P. W., WOODRIDGE, N. Y.—We listen to a good deal of advice to dairymen about growing turnips and mangels for stock food. How about the use of these roots for feeding beef cattle? Are any Eastern farmers making beef with the aid of turnips? In spite of all that is said about the changes in the beef business produced by the dressed beef trade, it seems as though farmers might still make the business pay.

R. N.-Y.—Mr. R. H. Van Deusen, of Hartford County, Conn., has made quite a success of steer feeding. He writes us the following account of his method of growing and feeding turnips for the purpose of beef production:

"I select a piece of run-out mowing land that has produced a crop of hay, turn the sod flat, put on the roller to make it solid, and apply 15 common cart-loads of stable manure per acre. Then I use the wide spring-tooth harrow, which pulverizes the soil deep, and makes it a friable seed-bed. If I intend to mow this field, I seed with 16 quarts of Herd's-grass seed per acre, having thoroughly mixed three pounds of New Globe turnip seed with it, sowing broadcast on August 1. It is a good plan before sowing to mark out the plot with a chain in lands ten feet wide so as to make sure all the land is covered with seed; then apply a light brush; then roll it with a light roller. By this method I have almost invariably harvested 400 bushels per acre without one dollar of extra expense and with no perceivable harm to the following hay crop. I take particular pains to harvest my turnips in a dry and clean condition. Turnips should be kept convenient to the feeding stable. I house mine under the feeding floor in the barn. I have a root gouge cutter; with turnips cut by this 'machine' there is no danger of choking the cattle. I feed to a 1,000-pound steer one peck of turnips per day; to a three-year-old steer 12 quarts per day. For the evening feed I add three quarts of wheat middlings. In the morning I feed the middlings clear with hay. The middlings prevent the steer from being too loose. The turnips save one feeding of hay per day and make better beef than hay and grain can make. To prove this I have this present winter fed 81 steers and sold them for 50 cents per 100 pounds more than the best refrigerator beef sold for in this market, so says the butcher that bought them. My success in feeding beef steers I attribute to the feeding of Globe turnips. It keeps the animals in a growing healthy condition."

THOSE "SYMPOSIUMS."

F. S., HYDETOWN, PA.—In the RURAL of February 16th I find the following:

"New readers may notice that there are four 'Symposiums' in this week's R. N.-Y. This is a feature inaugurated by us, etc." *I* am an *old* reader of the RURAL, perhaps *too* old to understand all the new inventions of the day. But in Webster's Unabridged Dictionary, published in 1878, the only definition I can find of the word "symposium" is, "A drinking party feast, to drink, a drinking together, a merry feast." Does not the RURAL'S use of the word need a little explanation for old men who are not initiated into these new inventions? Surely we can not bring ourselves to think that the paper would induce all farmers, potato growers, ladies, in short all the multitude of readers of the RURAL to go into a "drunk" two or three times a week, on any cause, or for any purpose. Won't the RURAL please explain, lest we should all go into the gutter together?

R. N.-Y.—We have a Webster's Unabridged of the edition of 1886. On page 1580 of this volume we find the following: "Symposium, *n.* [Add.] 2. A collection of short essays by different authors on a common topic; —from the appellation of the philosophical dialogues of the Greeks." Thus it is seen that the RURAL proposes during 1889, to invite its readers to a weekly feast of wisdom, and to frown, as usual, upon all "drunks."

FERTILIZERS FOR FLOWERS, ETC.

A. B., HARTFORD, CONN. I am sorry that while the subject was up somebody did not say something about the kind of fertilizers best suited for flowers, or rather for the flower garden. I am well aware that this is not very important, still how many are interested in the subject. It is very difficult to get good barn-yard manure. Coarse stuff that will do for spreading over the ground and plowing in for crops in general, will not answer at all. Last summer I used some that I thought was good because it was fine; but I am inclined to think the goodness had been washed out. There are now thousands of chrysanthemums grown every year. These generally are taken up and put into their blooming pots about September 1. The soil should be rich and they also require liquid manure; finally when the pots are filled they contain literally a mass of roots. What kind of fertilizer is the best for them? Of late years great attention is given to dahlias. The United States Nurseries at Short Hills, N. J., issue a special catalogue of these plants. It would seem that an entirely different manure would be suitable for them. The foliage beet advertised quite extensively last season by Hallock & Son, is very ordinary. My opinion is that it is a humbug. Many novelties advertised with flaming illustrations are good for nothing Persons are simply fooled when they buy them.

R. N.-Y. We should use for hardy flowers of all kinds a high-grade complete fertilizer—the same as those advertised for cereals or even potatoes. They do not differ in plant food materially. The ornamental beets when *true to name* are beautiful plants. We began raising them for borders and even for solid beds 14 years ago. Their variegation and distinct colors are not much surpassed by any plants used for the same purpose.

DISEASE ON SWEET POTATOES.

E. G. B., PENN'S GROVE, N. J.—Since reading the RURAL'S remarks on the use of sulphur to prevent scabby and worm eaten potatoes, I have wondered if it would do any good in preventing "ground rot" in sweet potatoes. This disease has never struck my land, and has shown itself only in those fields that have produced Southern potatoes, either for several successive years, or which have been so cropped year after year, or with only little intermissions, and as I practice rotation, I have never seen it in my fields.

The first symptom of "ground rot" is noticed in digging the crop, when some potatoes appear to have been eaten by worms just as white potatoes are eaten by the pests. At first only a few show the marks; but more are affected in the next crop, and in succeeding years the matter grows worse and worse. At first the vines die only when nearly full-grown; but year after year the disease takes them earlier and earlier until the crop is an entire failure. If the ground is allowed to rest for several years, the rot will not show itself again until the field has been heavily cropped for some years again.

I have heard many theories advanced to account for this condition of things. It is thought by some to be due to the exhaustion of some of the available plant-food ingredients of the soil; while others attribute it to the ravages of insects, and others again think it is the result of fungus growth. I have known crops to be grown on "diseased" land by the use of commercial fertilizers, without any stable manure. Some crops grown with Mapes fertilizers showed little signs of rot where previous crops had been total failures or nearly so. What do RURAL readers think of the matter? Is the use of sulphur likely to prove beneficial in this case?

THE MONTANA HIRED MAN.

A. C. C., LIVINGSTON, MONTANA.—The articles regarding "help" have been very interesting. In the East the hiring seems to be conducted principally on the time-contract system. Men are in this manner bound to their employers for at any rate the period contracted for. Here the system is different. The employer simply employs a man. He may demand his wages at any moment, under the influence of the go-west fever; and however scarce labor may be, however well the employer is suited, the check is written and one has to begin the search for another man into whose ways one must get, and whom he has to instruct in his. Wages are high—$35 a month all the year round, are what I pay in the vain hope of retaining the services of a good, steady man, and during plowing, seeding and haying I have had an additional hand. The work is not hard, consisting of milking 10 or 12 cows, looking after a couple of teams, and being generally handy upon a ranch of small size. I am a bachelor, do all my own cooking and house work, look after the garden and dairying, as well as lend a hand with pigs, poultry and other work. The day's work commences at six in summer, and is always over by the same hour at night, as far as the help is concerned. In winter the stock are fed at 7 A. M. and all are housed, fed, and chores done by sunset. The house is comfortable, there are plenty of books to pass the evenings with, and every comfort I have I share with my man. Suddenly the help is seized with a craving for change, and announces his intentions of "going away visiting." Whether he will return or not, he is unable to say, and so, just when labor is scarce, work plentiful, and I am looking forward to spring duties, there I am *planté la.* My help is just leaving, after nearly 12 months. He knows my ways; I his, and we are good friends in every respect. He has been steady, trustworthy, kind to the stock, and a good worker. He has saved money. In my inmost heart I guess he wants "a woman" and is starting off on the hunt! Then he will go to Washington Territory and spend his savings as soon as he arrives or before. Where can I get a successor—an honest hard-working conscientious farm hand who can appreciate a good home, and who if he so choose may educate himself considerably in more ways than one? Hardly can such a one be found in town by inquiry of saloon-keepers or stable-men. What becomes of the farmer's young sons? Do they always share in the parental acreage, or do they always aspire to the *dignity* of city professional or commercial life? Are there no farmers and dairymen in embryo to whom a good home, wages, and experience would be a benefit before a personal undertaking? When countrymen all flock citywards they may help the city, but they kill the country. What sort of a physical corporation is that in which the best blood rushes to the heart and stays there?

SOME IDEAS OF HARROWS.

W. V., FRANKLIN, N. J.—I feel quite interested in the talk about harrows, and am an advocate of spreading manure as fast as it accumulates, and now I believe most farmers think that manure should not be put too deep under the surface. When I was a boy my father used to plow in his manure; but at this day most farmers plow first and spread the manure on top, in which case the manure must be very short or any spike-tooth or spring-tooth that I am acquainted with will drag it up in heaps. If a spike-tooth harrow has the teeth set at such an angle that they will not heap the manure, then they will be of very little use except to smooth the surface. If oats are put on corn ground or corn is grown on sod, one should plow in the fall; spread the manure in the winter and in the spring use a disk or Cutaway harrow. I think I prefer a Cutaway. For preparing corn ground in the fall for rye or wheat, use a Cutaway harrow, and lap half, then use a light, smoothing harrow and the ground will be in good order and the manure where it will do the most good, and at the least outlay of time and expense; at least that is my experience.

WANTED—A SMALL, CHEAP ICE-MAKING MACHINE.

E. E. B., NORFOLK, VA.—We Southern dairymen sadly need an ice-making machine suitable for private dairies of 25 cows and upwards. Ice has to be bought, and $4 to $5 per ton and waste make a heavy tax. Ice is made artificially already by wholesale in many of our large cities, but we want a machine for private use. I have an eight-horse-power engine that I use for grinding grain, cutting fodder, etc., and it seems as though some of the inventors or manufacturers of the wholesale ice machines, could easily devise one of smaller proportions that could make ice cheaply for farmers' use; it would find ready sale. I know of several dairymen who want to buy such machines, and I think there are other branches of business that would do so. For instance, during the past two or three years, the leading truckers pack ice with their late shipments of radishes, spinach etc., and find that it pays them. Can't the RURAL agitate the matter?

R. N.-Y.—Such a machine is certainly a desideratum and if invented and sold at a moderate figure, would certainly have a large sale.

KILLING HOGS IN OREGON.

R. A. S., JOSEPH, OREGON.—I must tell Charity Sweetheart how we kill hogs out here. Perhaps by next hog-killing time she can persuade the men folks to have a like arrangement. In the first place, the person who intends to kill wants a sheet of galvanized iron; then he must make a box out of 2x14-inch plank. It must be wider at the top than at the bottom. Let him nail the sheet of iron on the bottom and let it turn up somewhat at the ends, as this makes it stouter there. It is better to have the sides of the box project over three inches. Then some tin or sheet-iron should be nailed under and over the ends to prevent burning. So much for the vat. Now dig a hole a little longer than the box, set the latter over it, put in some stove-pipe at one end of the hole, bank the dirt around it, and you are ready for fire and water. Build a platform on one side on which to dress the hogs, and make a small one on the other side on which a man can stand. When you are ready you want a long rope; double it and spread it out over the vat with a man at each end. Roll your butchered hog on the rope, and roll him in and keep turning him around until he is ready to be taken out. Stand on the rope on the platform and you can roll the hog out with perfect ease. Two men can handle a large hog in this way without any difficulty.

CLOVER SEED AND THE MIDGE.

J. W., OHIO.—In this vicinity the clover midge appears in numbers on the first crop, that usually cut for hay, and again on the crop grown for seed after the hay has been cut. I noticed that for two years, clover in my yard, cut in May, had no midge in the heads and the seed was fine and abundant. In 1887 I cut nine acres of Medium clover about the middle of May, and let it lie as a mulch. From this I harvested, about August 10, 46 12-60 bushels of seed, or 5 8-60 bushels per acre. Last year I cut seven acres of Mammoth clover in the same manner, and harvested it about the same time, and the yield was 41 22-60 bushels, or 5 54-60 per acre. I could find no midge in either of these crops, while the pests nearly destroyed the seed crop grown after the hay cut in June.

(*Continued on Page* 165.)

What Others Say.

COST OF WHEAT PRODUCTION IN MICHIGAN.—From data furnished by the State authorities and the National Department of Agriculture, it appears that the cost of wheat production in Michigan in 1888, including plowing, fitting, fertilizers, seed-drilling, harvesting, stacking, thrashing, marketing, interest at seven per cent. on the land, insurance, taxes and repairs, was $12.98 per acre, and for the five years ended with 1888, the average cost in the State was $14.22 per acre. The average yield of wheat in the State for the same five years was 18.53 bushels. Deducting from the total cost per acre the value of the straw and the rental of the dwellings, and dividing the remainder by the average yield per acre for five years, the net average cost for five years of producing and marketing a bushel of wheat was 66 cents for the southern tier of counties, 63 cents for the central counties, 60 cents for the northern tier, and 64½ cents for the State. The average net cost for all the farms in the State for five years was about 70 cents per bushel. The Agricultural Department places the average home price at 84 cents in 1885; 73 cents in 1886; and 74 cents in 1887. In the above calculation the labor of the farmer and of his work animals has been allowed full prices; still there doesn't seem to be much money in wheat-growing in Michigan. Michigan is a winter-wheat State, as very little spring-wheat is raised there even in the Nothern counties. Now the January crop reports of the Department of Agriculture put the average yield of winter-wheat in the country at only 10.3 bushels per acre in 1888. The average allowed Michigan in the above calculation is nearly eight bushels more than the average for the entire country last year. It is conceded by all that profit comes only from the surplus over the cost of production. A large number of farms must have produced considerably less than 10 bushels per acre last year. If Michigan which produced eight bushels per acre over that figure, made only a small profit on the crop, how stand those States and farmers who were a long way from being so fortunate?

FARM LIFE AND MUSCULAR MANHOOD.—Horace wrote nearly 1,900 years ago, extolling the life and occupations of a farmer living on his own land as the truly happiest life on earth. It is a happier and securer life now than it was then or down to within a century of our present time; for then the quiet, patient ruralists were victims of lordly pride and power. Now, and here, where there is acknowledgment of men's general equality, the farming class is felt to be the main-stay of national strength and is proportionately respected. But, as Horace said, the too fortunate *agricolæ* know not what advantages are theirs; and that is true still. They have but to unite to prove and use their present power in the State. Their youth, ruddy with health and strength, are beginning to cease envying the dapper dandies who flit about town streets or are shut up, pale and enervate, in stores and offices.

In France, where the terrible defeat of 1870 changed, to a great extent, a gay and fickle, pleasure devoted people into serious, earnest carers for their own and their nation's strength and life, and where a final life or death struggle over lost territory and humbled pride is in constant prospect, every effort is made to strengthen the minds and bodies of all the people. The schools are made in the highest degree effective for both, and after school age every young man, of every occupation and standing, without any exception, must go through years of military discipline. All students are exercised in gymnastic exercises in addition to manual training as part of their school drill, and we read of the President of the Republic encouraging the young men of Paris in those exercises of their muscles and lungs by attending exhibitions of them in the public parks. An afflictive experience often benefits us individuals, by checking the wantonness and indolence that prosperity breeds; and it is so, too, with nations.

PROHIBITION STRENGTHENED IN IOWA.—Another legal victory has been gained by the State of Iowa, in its contest with the liquor dealers, by a decision just rendered by the Supreme Court of the State in the "original package" case. The point involved, as condensed by Bradstreet's, was whether dealers could import liquor from other States into Iowa and sell it there in bottles or cases of bottles. The trial court held that the liquor dealers could sell beer in cases just as it was delivered by the carriers, and that such selling was beyond the power of the State to prohibit, as falling under the head of inter-State commerce. It held, however, that whisky which had been imported in bottles packed in cases and barrels could not be sold in bottles, though it could be sold in the bottles in the original packages. The Supreme Court, however, decides that in neither case can liquor be sold in Iowa; that the method of packing is not material, and that the only question is whether the dealers have a right to sell liquor in the State, a question which it answers decidedly in the negative. Of course as a Federal question was raised—that of the State's control of inter-State commerce—an appeal may be taken to the United States Supreme Court. The decision would have a very important bearing on the question of one State's legislation against importations of dressed meat from another State—which is very likely to arise before long. .....

SUGAR BOUNTY AND GLUCOSE.—The Senate Tariff Bill now pending before the House gives a bounty of one cent a pound to the manufacturers of sugar from sugar-cane, sorghum or beets. The glucose or "grape sugar" men are demanding a similar stimulus to their industry. They claim that they make 550,000,000 pounds of "grape sugar," every year, furnishing a market for nearly as much corn as is now sent out of the country. They say, therefore, that while comparatively few farmers will, in the near future at any rate, be benefited by the bounty on the other kinds of sugar, all the corn-producers will be more or less benefited by a bounty on glucose the manufacture of which now consumes about 100,000,000 bushels of corn. "Corn-sugar" is now to a large extent used by confectioners,

and competes with other sugars, when price will permit, for use in manufacturing, as in the making of size. Most of the sirups now sold are a mixture of cane and glucose sirups. On the basis of last year's production of grape-sugar, the annual bounty would be $5,500,000. The makers of maple sugar are also putting in claims for a bounty on their product.

SAMPLES AND COMMENTS.

EDUCATION AN INSURANCE. Adequate and universal education alone can make life and property safe in our cities. The wealth and display of the rich are, as a writer says, combustible matter, and the neglected children growing up in vice and ignorance will become the incendiaries who in some day of wild excitement, will combine to use the torch and the blast, unless we take them by the hand and by the heart while they are yet young, and lead them into safe and satisfying lines of life. We must have such education at any cost; it is indispensable to our continued existence as a prosperous people In French cities the homeless children are cared for by the authorities, fed, clothed and schooled, not alone in book learning but especially in industry and geniality, and they borrow the money to do it. It is not a matter of benevolence so much as of self-protection. We are mad if we think that we are doing enough with the schools we have. A terrible future is before us if we go on in giddy pride amassing individual wealth with no adequate insurance against its destruction by future desperate mobs of our own induction.....

MT. CARMEL is on a promontory which juts out on the eastern shore of the Mediterranean, in the Holy Land. A German colony of fruit-growers is established there. The situation renders it pleasantly breezy and it is becoming a health resort. A German lady who once recovered health there, left a large sum to build a pleasure-house and health-cure, and a good roadway, The monks of Mt. Carmel brought an action against the colonists when they began to build the road. This was decided at last in the Turkish court in favor of the Germans, but the costs consumed much of the legacy. The work will go on, however, and the monks will soon see more light than they have for centuries .....

PROF. HULST, at the last meeting of the N. J. H. S., was asked how to destroy the cucumber flea-beetle. He replied that the "ordinary poisons might be applied." The Professor ought to read the R. N.-Y.....

MR. O. F. BRAND, of the Minnesota E. S. (Faribault), says that he has planted an orchard of 900 Oldenburg apples. He believed this variety to be greatly superior to the newly introduced Russian varieties, and says that if any one will go through the country where 10,000 Russians have been planted, and then look where 10,000 Oldenburgs have been planted, he is confident from his observations that the observer will find 100 of the latter alive to one of the Russians.....

MR. E. N. MOUNIER says that if you want a hog with an eye that will roll up at you. with the look of a maniac and an expression of countenance that will make you shiver, breed to scrubs. But if you want stock that will carry the largest amount of corn to market in the way of pork—stock that will eat and be happy and if not fed will not squeal about it, breed Poland Chinas, and remember that as "eternal vigilance is the price of liberty," so eternal watchfulness is essential to successful pork raising. .....

MOST of us make a mistake by feeding at the wrong end of the hog's existence. We don't get down to business in the way of feeding until a month or two before we sell him for pork. This is all wrong. The main secret is in giving the piggy a good send-off during the first two or three months of his existence. During the first week of a pig's life it is quite important to feed the sow so as not to start too great a flow of milk, a handful of shorts twice a day in less than half a pailful of warm water being the best feed at the time. .....

THE AMERICAN FLORIST is raising its voice, the R. N.-Y. is very glad to see, in a positive way against the exaggerated pictures of catalogues. A man, it says, who publishes an illustration of a plant or flower which represents that plant or flower several times better than it really is, must be designated by the same name as he who sells goods from an extra sample and then fills the order with fourth-class stock. We cannot object to any one representing the best actual development that can be made of the plant or flower illustrated, but when that boundary is overstepped he who does it is dishonest and a swindler, for he is attempting to obtain money under false pretenses.....

THE New York Experiment Station says there is 12.29 per cent. less digestible albuminoids or flesh-and-muscle-forming food, in hay that has been kept over one year as compared with new hay.....

THE severe laws against "green goods" sharpers in New York and New Jersey have made Philadelphia, Pa., their headquarters of late, though they still frequently bring on their dupes to New York to finish the job. The Pennsylvanians now propose to get rid of the pests by the passage of a law like that passed in New Jersey last year. It provides that if any correspondence—letter or otherwise—be found on a suspected offender, it will stand for *prima-facie* evidence, and on conviction the punishment is not to be less than one year in prison, or more than five years, and not less than $100 or more than $2,000 fine, or both fine and imprisonment. It is expected the bill will pass soon.....

JUST as many dairymen and other cow-owners cannot tell, with a reasonable degree of certainty, which of their cows are sources of profit, and which of loss, so many farmers cannot certainly tell whether they gain or lose by this or that crop. Would it not pay to pay a little more attention to this matter? Might it not be as wise to cull one's crops as to cull one's cows.....

THE general impression conveyed by remarks in all sorts of papers is that more horses will be sold at public auction this winter and next spring than ever before in one season. Breeders seem to take more and more to this mode of disposing of their surplus stock .....

LAST year it cost 26 cents to produce and market a bushel of oats in Michigan, and 19 cents to produce and market a bushel of corn .....

IN talking about the prices of wheat and other farm crops of late, it is wonderful to see how anxious the papers are that the farmer should not "rob the poor." If there is an advance of 40 cents a bushel in wheat to be divided between the speculator, the railroad company, the middleman and the farmer, straightway there is an outcry that the farmer is lining his pockets with the hard-earned wages of the poor, although probably the farmer gets the smallest share of the advance. Why isn't as much solicitude displayed about the margin of profits in other pursuits? How many of those who carp at the farmer's profits, would be willing to work equally hard and invest the same amount of capital for returns so small? .....

WORD FOR WORD.

——O. C. FARMER: "A dog has no business being away from home any more than has a cow or horse."

——JOSEPH HARRIS: "We all know that fermenting manure sometimes gives off a little ammonia; but it should be remembered that one pound of nitrogen in manure, if converted into ammonia, would produce 44,700 cubic inches of pure ammonia gas, and that each inch of gas mixed in the air of a room or barn would be readily detected by a good nose. It requires very little ammonia to make a great smell."

"Can we use manure for a hot-bed without loss of ammonia or other valuable plant food? This question is very satisfactorily answered by an experiment of the late Dr. Voelcker, Chemist to the Royal Agricultural Society of England. Five tons of good stable manure contain over 60 pounds of nitrogen. Dr. Voelcker found that five tons of manure (10,000 pounds) placed in a heap in November, and kept out of doors, exposed to rain till April 30, lost less than half a pound of nitrogen or ammonia. The following are the results:

	When put in heap Nov. 3.	Same heap April 30.
Total weight of Manure.....	10,000 lbs.	7,138 lbs.
Water.....	6,617 "	4,707 "
Soluble Organic Matter.....	248 "	305 "
Soluble Mineral Matter.....	154 "	207 "
Total Organic Matter.....	2,824 "	1,678 "
Total Nitrogen, in heap.....	64.3 "	68.9 "
Nitrogen in Soluble Matter.	14.9 "	21.4 "

The heap lost by fermentation nearly one ton of water, and 1,126 pounds of dry organic matter that was slowly burnt up in the heap, and which would give out about as much heat as half a ton of coal burnt in a stove. This organic matter has no manurial value. There was practically no loss of plant-food. On the other hand, the heap of fermented manure is of more value than the raw manure from which it is produced, because the nitrogen and min ral matter are more soluble and more readily available for plants. There s, therefore, no loss in making a hot-bed."

——GARDEN AND FOREST: "American plant-buyers suffer perhaps more than those of any other country, from exaggerated statements regarding new plants, which too often appear in trade-catalogues, because Americans are, as a rule, more easily misled by glowing advertisements than Europeans, and because in America, trade-catalogues are too often the only sources of information about new plants and horticultural matters generally, with which plant buyers provide themselves."

——PRESBYTERIAN: "A man was once appointed a committee of one to examine his own conduct. Later he reported progress, and asked to have the committee continued as it had found more to do than it expected."

——JOHN WILLCOX before the New Jersey H. S.: "What we want, in my judgment, is a law forbidding, absolutely, under heavy penalties, the killing of harmless, innocent birds I may not see all the facts which lie at the foundation of this subject, but if the gentlemen present feel as deeply as I do, they must feel that it is our duty to memorialize the legislature to enact a law sufficiently strong to cover the whole subject."

——I. J. BLACKWELL: "Unless we try the new things that come up there will be no improvement on the old, and there will be no progress made towards that time when the wilderness shall bloom as the rose, and every man sit under his own vine and fruit tree."

——PROF. P. T. AUSTEN: "Let no man disregard the value of a new truth because *he* cannot see any immediate application for it. Truth is truth, and must always come of value, soon or late. Some one asked the great Faraday what was the use and practical value of a certain remarkable discovery which be made, but which was totally in the realm of pure science. 'What is the use of a baby?' replied Faraday. So do not let us despise a new fact because *we* cannot see its value, for we are at best but too prone to be stupid, as the best of us are ready to confess, and when we see the new fact made of immense importance by the cunning of some other men, let us, when we cry out peevishly, 'Why how simple! We could have done that,' also add manfully, 'If we had but known how to do it!'"

——PROF. SHELTON, OF KANSAS AGRICULTURAL COLLEGE: "We raised at the Station last year, a number of sorghums and several of their near relatives, including the Rural Branching sorghum and African millet. These sorts of cane have the sorghum's ability to resist drought, and give a heavy yield of grain and fodder. Farmers living in the western and southwestern counties of Kansas, ought not to allow other seasons to pass without giving these sorghums a thorough trial. The seed is inexpensive (a bushel, costing $2.50, will plant a dozen acres), while the cultivation given corn or common sorghum is sufficient to make the crop."

——PUCK: "'Almost' is the difference between the conscientious man and the liar."

LIFE: "The fact is that New York State is governed by a lot of rascals and ignoramuses. It is a serious fact, too."

For Seasickness
Use Horsford's Acid Phosphate.

Dr. PRICE, of the White Star S. S. *Germanic*, says: "I have prescribed it in my practice among the passengers traveling to and from Europe, in this steamer, and the result has satisfied me that if taken in time, it will, in a great many cases, prevent seasickness."—*Adv.*

Miscellaneous Advertising.

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Does not get well of itself; it requires careful, persistent attention and a remedy that will assist nature to throw off the causes and tone up the digestive organs till they perform their duties willingly. Among the agonies experienced by the dyspeptic, are distress before or after eating, loss of appetite, irregularities of the bowels, wind or gas and pain in the stomach, heart-burn, sour stomach, etc., causing mental depression, nervous irritability and sleeplessness. If you are discouraged be of good cheer and try Hood's Sarsaparilla. It has cured hundreds, it will cure you.

Hood's Sarsaparilla

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Prettiest Illustrated SEED-CATALOGUE ever printed. Cheapest & best SEEDS grown. *Gardeners trade a specialty. Packets only* 3c. Cheap as dirt by oz. & lb. 100 000 pkts new extras free.
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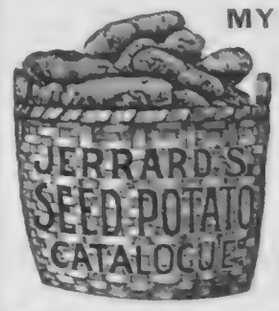

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THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, MARCH 9, 1889.

NOTICE TO THOSE WHO DESIRE TO ENTER FOR THE R. N.-Y.'S WOMEN'S NATIONAL POTATO CONTEST:

All who desire to enter for the Women's Potato Contest are respectfully requested to send in their names before the 20th inst Full instructions and a list of the contestants will be published at about that date.

THIS number of the R. N.-Y. is a regular Farmers' Institute.

THE RURAL NEW-YORKER for 1889, will be, as hitherto, invariably, $2.00 a year for single subscriptions, and $1.50 in clubs of five or more.

ONE of our subscribers writes that she thinks the souvenirs should be divided between the East and West. That is also the opinion of the R. N.-Y.

"Are there no farmers and dairymen in embryo to whom a good home, wages, and experience would be a benefit before a personal undertaking? When countrymen all flock citywards they may help the city, but they kill the country. What sort of a physical corporation is that in which the best blood rushes to the heart and stays there?

A. C. C, page 162.

TWELVE different varieties of tomatoes were grown last season upon a poor soil which had not been manured for many years. The soil was given a liberal dressing of a high-grade complete fertilizer. The vines grew thriftily and bore abundantly. What we cannot account for is that all of the tomatoes were of a yellowish red instead of being of various shades of red peculiar to the varieties.

QUITE a noted French dairy authority has recently advanced the theory that milk can be most readily and safely shipped and stored in a frozen state. Experiments in France go to show that frozen milk can be transported with the greatest ease, and that when thawed out, after days or even weeks in a frozen state, it retains all the characteristics of fresh milk. A number of experts attempted to pick out the thawed milk from specimens that had never been frozen. They were unable to do so. The application of the principles of cold storage has about revolutionized the fruit business. Shall we witness a similar revolution in the milk business?

A LARGE advertisement is appearing in many papers which displays a three-column picture of "a view of Fulton Row, Washington Market, New York City," and which offers to send seeds to *any* address trusting to the honesty of the recipient for pay. It is signed "New York Market Gardeners' Association, No. 39 Dey St., New York City." The R. N.-Y. has refused this advertisement simply because of its peculiar character and the fact that a letter-box in the hall was all that a RURAL representative could find as a materialization of the association.

ATTENTION is called to the remarks of J. W. on page 162, in relation to the clover midge. His observations seem to establish the fact that a crop of seed may be secured from Medium clover, by making the first cutting very early. W. L. Devereaux, an observing young entomologist of Western New York, arrived at the same conclusion two or three years ago, by studying the habits of the insect. He advocated making the first cutting early in June, thus enabling the second crop to escape the attacks of the midge. When practical farmers and scientists both arrive at the same conclusions by different methods, the results reached are worthy of the attention of farmers generally. The importance of this subject may be inferred from the fact that many farmers who formerly secured a considerable revenue from cutting the second crop of clover for seed, have been unable, for the past few years, to secure seed for their own sowing. If early cutting is a solution of the problem, it is well worthy of adoption.

THE new "American Meat Company" has already bought nearly 2,000,000 acres of grazing land in Mexico together with large herds of cattle closely resembling Texans. It is likely to make still heavier investments just across the border, in the near future. The import duty on Mexican cattle is 20 per cent. on their value. Animals intended for breeding purposes, for the improvement of our native stock, are alone admitted free. Even a gigantic syndicate will hardly have the impudence to claim that imported Mexican steers or even long-horned cattle-frame-works can be intended for breeding purposes. The prices for Mexican cattle are so low that they will hardly average $10 at the frontier; but even at $10 per head the duty would add $2 to the cost of each—if it is paid. There have been a multitude of complaints of the smuggling of live stock from Mexico into Texas, New Mexico and California, and for some time there has been a great need of greater official vigilance and more customs officers on the frontier. The necessity for both is now considerably greater than ever, especially along that part of the line separating the New Mexican and Mexican property of the syndicate.

UNDER date of February 9th, Sir J. B. Lawes writes the R. N.-Y. as follows: "I am forwarding to you, by book post, our results of potato growing. I know that you have paid much attention to the potato plant and take a great interest in its cultivation. You will be surprised to find how much there is to learn about a plant of this sort. My soil is not at all suited to the potato; it is too heavy and the rainfall is not large enough. You will observe that we are trying to connect the production of starch and sugar with the supply of nitrogen in manure. Sugar in the root crop, and starch in the cereal crop and potato are the greatest products which the agriculture of the world aims at producing. The soil itself is the main source of the nitrogen, but if the soil does not yield enough, or if we require larger crops, we must then have recourse to some compound of nitrogen."

The R. N.-Y. has found by its potato experiments, in a soil that needs all kinds of food, that nitrogen alone does not increase the crop. It has further found that when a liberal supply of nitrogen, phosphoric acid and potash is given, additional nitrogen does not materially increase the crop.

ONE thing is becoming painfully evident in the warfare against wealthy monopolies—the extreme difficulty of checking their career of extortion by legislative enactments. Take the telephone monopoly for instance. Some time back the legislature of Indiana fixed the maximum rate for telephone rent at a reasonable figure; but the company at once met the movement by suspending the service in the Hoosier State altogether. In view of the inconvenience to which the people are thus subjected, the legislature is considering the repeal of the law. Warned by her neighbor's experience, Ohio has rejected a similar bill. A bill before the Illinois legislature fixes the maximum telephone rent at $6 per month. There are two bills before the Missouri legislature, one fixing the rent at $4, and the other at $3 per month. In that State there are 6,000 telephones and the annual rent is now $100 apiece. If either of the bills pass, the telephone company threatens to give Missouri the same treatment that has proved so effective in Indiana. When, a few years ago, Rochester, N. Y. was at war with the same telephone company, and the latter suspended business there altogether, it was forced at once to yield when the authorities and citizens ordered that all telephones should be removed from offices and other buildings, and that all the wires should be promptly taken down. This would entail a large permanent loss. Why doesn't Indiana try what the effect of such a drastic remedy would be?

IN the vicinity of the Rural Farm in New Jersey are to be found all sorts of dairy cows—grade Jerseys, grade Holsteins, grade Short-horns and scrubs. We are making tests of the milk of as many of these cows as we can get. These tests will make very interesting reading when they are completed.

ABOUT OUR ROADS.

A PENNSYLVANIA subscriber sends us the following:

"Give us another Road Special in the spring. You have no idea of the amount of good the last one did. It waked up nearly all the other papers; but they took good care not to give the RURAL any credit. I have seen everything portrayed in the RURAL's cartoon, except the card-playing, and that omission was due to the mishap that no one was thoughtful enough to bring his cards with him. We are getting road machines in nearly all the districts, which means good roads in the near future."

This road question is getting to be a very serious matter. Every discussion of it brings to light some remarkable facts. Take the township in New Jersey in which the writer lives, for example. Every citizen admits that during five months of the year it is impossible to haul 60 per cent. of a full load over our roads. Various "enterprising" people want to have the roads macadamized. The great majority of the voters violently oppose this for two reasons:—1. Because the town cannot afford it. 2. Because the present system gives, in the course of 10 years, a good proportion of the citizens a good chance to draw the road money as salaries for performing the duties of road-master. Investigation shows that during the past 18 years the sum of $45,000 has been expended for the roads in this township. It is estimated that for $30,000 every foot of road in the township could be graded and macadamized. There is a tendency noticed in our State legislature to place the control of roads in the hands of the county or even the State authorities. In many districts, where the worst roads are to be found, such a change would meet with violent opposition, though it is highly probable the roads would be greatly improved. Imagine some skilled road engineer, backed by State or county authority, going into a township where for years the inhabitants have comfortably divided up the road money while "visiting" on the roads. Such an engineer would not meet with the most cheerful reception in the world; but who will deny that he would make the roads better?

ANOTHER GIGANTIC BEEF SYNDICATE.

THE most gigantic association ever formed in this or any other country for the purchase and production of cattle and the sale of beef, has just been organized under the laws of New Mexico, and by the name of the "American Meat Company." The chief projectors and backers of the scheme are magnates of the Standard and Cotton-seed Oil Companies. Stephen Dorsey, Col. Robert Ingersoll, and other New Mexican ranchers who own large herds of cattle and over 50,000 acres of grazing land, have put their property in the pool at from $12 to $20 per acre, and, of course, have made a large profit by the transaction. Osmond Hammond Jr. has entered by pooling his Western Dressed Beef Company with slaughter-houses at Kansas City, 1,000 acres of land, and 12 markets in Baltimore. The concern has purchased 1,828,000 acres of grazing land across the upper Rio Grande, in the State of Chihuahua, Mexico. This vast tract consists entirely of ranches whose owners have become stockholders. Fifty miles from Kansas City, 10,000 acres of grazing land have been purchased.

The idea is to ship their own cattle from their ranches and purchased cattle from other places to this grazing farm, fatten them there, and reship them to Kansas City, where they are to be slaughtered, and from that point the meat is to be distributed in refrigerator cars to Eastern markets. The scheme contemplates the establishment of markets in all the principal Eastern towns and cities and the sale of meat direct to the consumer. The capital of the organization is put at $25,000,000, divided into 250,000 shares at $100 a share. The actual capitalization, however, is only $15,000,000, of which $7,000,000 have been already subscribed at $75. Of the balance of $8,000,000, one-half will soon be put on the market, also at $75 per share, for public investment. The authority to add $10,000,000 more to the capital stock was obtained in view of the possibilities of further growth suggested by the desire expressed by many other ranchmen to come in. The "Big Four" have already a capital of over $50,000,000 in their business, and a lively competition both in the East and West is assured between the new and old concerns. In the West the competition for cattle will probably have a beneficial effect in raising the prices of stock; while in the East the competition for customers is pretty sure to lower the prices of meat to consumers, and consequently still further depress the prices of home-raised stock for the shambles.

BREVITIES.

WE shall be glad to know more about cow-pea hay.

IT appears that the "horse doctors" are still cutting out "hooks" from horses' eyes!

THE Farmers' Club has a rousing attendance this week, and the discussion is a lively one.

Is your experience in the use of different foods for butter the same as that given by Mr. Stewart on page 159?

WE are informed that a farmer in Niagara county, this State, has been indicted for neglecting to destroy peach trees diseased with the yellows. A test case will be made of the matter.

OF good-sized potatoes with a medium number of eyes, cut to two-eye pieces, the R. N.-Y. estimates that eight bushels will plant an acre, if the pieces be dropped every foot in drills three feet apart.

WE can understand why small fruits are not raised on every farm; why celery, cabbage, etc., are not. But there is no reason that occurs to the R. N.-Y. why asparagus should not be raised on every farm—a plot large enough to supply the family with this splendid vegetable. If there is any vegetable that can be raised with less trouble and cost, kindly mention it.

THE Hon. Charles L. Flint, of Boston, Secretary of the Massachusetts Board of Agriculture for 25 years—from 1853 to 1878—died at the age of 65, last Tuesday, at Gilman Ga., to which place he had gone for the benefit of his health. Among his published works are "Manual of Agriculture," "Milch Cows and Dairy Farming," "Grasses and Forage Plants". Esteemed by all in life, Mr. Flint is honored and mourned in death.

THE people of Pennsylvania will soon have an opportunity to vote on the adoption of a prohibitory amendment to the State constitution. A telegram from Reading in that State tells us that at a public meeting of farmers held at Schæfferstown on last Wednesday evening, the drift of the argument was that "the passage of the amendment would lead to bankruptcy among the agricultural classes," and it is proposed to effect an anti-prohibition organization in every township in Lebanon County. Surely that could not have been a representative meeting of farmers? Was it "packed" by village loafers; or was it composed of only the bibulous handful of soil-stirrers with whom "farmin' don't pay" in that neighborhood?

DURING the week the delicious qualities of oleomargarine and its vast superiority to mere butter have been set forth with glowing eloquence before the legislature of Massachusetts. For cleanliness, wholesomeness, purity, freshness, aroma, palatableness and many other virtues, it is claimed that nothing equal to it in the way of fat can be placed before pauper or plutocrat. Why, then, should the champions of such a paragon of conglomerate perfection insist that their favorite should pass to the public under the guise of an inferior article! Let it go on its own merits, and be sold under the nice, appetizing pink color which the dairymen and butter-men demand. Let "oleo" and butter each have a fair show, and give the "dear public" a chance to select one or the other without danger of deception.

THE anti-dressed beef bill has been slaughtered by the Republicans in the Pennsylvania legislature, and "there's music in the air" about Harrisburg. It is well known that the "Big Four" have had a well stocked lobby working earnestly and persuasively with the legislatures of all the States where bills of this kind have been introduced, and it is charged that it cost the Chicago syndicate $60,000 to defeat the measure in Pennsylvania. Some allege that this sum was given to State Chairman Andrews for distribution among bribable Solons, and that he has kept all but $15,000; while others maintain that it was sent to Senator Quay, Commander-in-Chief of the Republican National forces in the late campaign and "boss" of Pennsylvania politics, as a part of the campaign fund, for which thanks were to be returned by defeating legislation hostile to the donors. A committee of the legislature has been appointed to investigate the scandal; but there's little doubt as to the nature of its report.

FARMER'S CLUB.

(*Continued from Page* 162)

GIVE THEM A REST—LIGHT BRAHMAS.

J. S. I., SALEM, MASS.—A great mistake in the management of domestic fowls is constant forcing. All living creatures require certain periods of rest. The trees and all vegetation have their rest. If we wish the rose that has flowered through the past season to flower also in winter, we allow the leaves to drop and place it in the cellar for a few weeks to rest, before forcing it again into active growth. The same should be done with our fowls; after laying through the warm weather they should be allowed, at moulting time, eight weeks rest to renew their strength. This may be accomplished by feeding stimulating food, but not forcing the laying propensities. By this method we get more eggs yearly, and lose fewer birds by exhaustion. Many fowls, especially the Leghorn varieties, often die without any apparent disease, having actually layed themselves to death owing to this artificial mode of treatment. Allow the birds to rest during November and December and you will have healthy fowls and strong chickens the following spring. I class myself among the old breeders of the country, being one of the first to introduce and breed the Light Brahma fowls, which I have bred for upwards of 40 years. The Brahmas of 1845 were quite different from the beautifully pencilled-necked birds of the present day. At that time 50 per cent. were discarded on account of color, form, etc., but by careful breeding we have attained perfection; and uniformity in color, size, form, etc., is established. This breed stands first on the list of Asiatic fowls. While other breeds have been introduced only to be discarded, the Light Brahmas have increased in popularity until now no breed is in such demand. As winter layers and poultry for the market they have no equal.

THE WORDEN AND CONCORD GRAPES.

F. H. V., CLYDE, N. Y.—I think there is considerable misapprehension in regard to the Worden grape. It should not be compared with the Concord as taking its place, but as supplementary to it. Were I to plant a vineyard for market purposes I would plant both. With me, during the past unfavorable season, the Worden ripened perfectly; the Concord did not. The Worden is sweet and good as soon as black, while the Concord must hang several days to be at its best. On the other hand, the Worden is at its best but a short time, losing its flavor rapidly after ripening, while the Concord may be kept in good condition well into the winter. The berry of the Worden is larger than that of the Concord, but I do not think that, on an average, the clusters are larger, or the vines more vigorous. The Worden suffered considerably in reputation when first introduced, by unscrupulous parties buying Concord vines at low figures and selling them for genuine Wordens, some leading growers being in this way deceived for a time.

GOOD COWS, GOOD BUTTER, GOOD PROFITS.

H. C. M., FAIRFIELD CO., CONN.—Since giving, on page 90, a statement of my dairy record for 1888, I have read Mr. Pratt's statement, which makes a very good showing; but I think I am somewhat ahead of him. I have no way of estimating the milk, cream and butter consumed in the family, as I use a Cooley creamer, and whatever milk is wanted for the family is saved out of each milking. There is no limitation as to the quantity. My wife uses nothing but new milk for all her cooking purposes. When she wants cream she goes and gets it without thinking whether butter is selling for 20 cents or for 40 cents per pound. If a farmer who produces good things on his farm cannot consume all he wants of them, what is the use of having a farm? That is my wife's opinion, and mine too. As to butter, we use I think about four pounds a week. At any rate we have used at that rate for the last three weeks. I could not say how many pounds I have sold, as I merely kept an account of the cash as the butter was disposed of. I have sold $133 worth of pork and pigs, but it would be very unfair to give the credit of it all to the cows, as besides a good many pounds of skimmed milk fed, it took a great deal of coarse stuff to make that pork. I have also raised three calves in the year. I think Mr. Pratt's estimate of the value of skimmed milk too high. As to his fears of milk fever, he need not have any. I have had 15 years' experience in keeping cows, and I have never had a case; but I have seen plenty of it around me. All the precaution I take against it, is not to let the cows get too fleshy in the latter end of their milking period. When they are dry, if they are inclined to fatten up I give them short pasture and plenty of fresh water, and all the shade from the sun they want, and they come in during July, August and September without any trouble. After calving I do not feed anything in the line of mill-feed for seven days. If pasture is good, it is sufficient; if not, I piece out with drilled corn, waste vegetables from the garden, etc. It is better to feed too little than too much through this period; but one should see that his cows have all the pure water they want.

MORE ABOUT LIME.

G. S. S., MIDDLEBURGH, PA.—In a late RURAL I saw another article on liming land. I feel like adding my experience for the benefit of those who contemplate the use of lime. This calcareous formation is natural to this county. It extends almost its entire length from east to west. In fact, over the whole county it crops out. We also have the red shale and light shale, or light gravelly soil. At the east end of our small town there are 12 or more kilns; moreover, some farmers have lots on which they erect stacks and burn lime. A number of years ago these were the most of the time in full blast; while at present there are only a few in the business and those only on half time. On our limestone land the effects of the first and second applications are very marked, while those of the third and so on can hardly be noticed. It has a tendency to make the land hard. In drought it bakes so hard that all clover and young grass will die out. About eight years ago I had ten acres which seemed entirely exhausted of all fertility. Neighboring farmers said it should be limed, and 100 bushels were applied per acre on sod. In the spring clover was sown, but it would not catch. I turned the stubble again in hopes it would do better; but the result was the same. For the third time (I am ashamed to say it) it was stubbled. This time it got a light dressing of fine barn-yard manure, with 200 pounds of good fertilizer and this brought it out all right. I got a heavy crop of grass on it afterwards. Since then I have tried 70 bushels on oat stubble on the plowed ground, and the effects were the same. The advocates of lime will, no doubt, say the quantity applied was too great, or that poor judgment was used. I will admit all this; but even those who apply it on a clover sod begin to see that its use will eventually make their land hard and unproductive. Some farmers are still using it, and raise from 12 to 15 bushels of wheat per acre. Last season I averaged 25 bushels of wheat per acre, with barnyard manure and a light dressing of fertilizers. On our light soils the effects of lime are about the same. One sees no manure piles, every bit of grain is sold and then the farmers haul out lime thinking it a manure. But every such farmer will sooner or later see his folly.

R. A. S., JOSEPH, OREGON.—Almost every one advises us to use corn-cobs for smoking meat. If people will try green willow for this purpose they will never use anything else. I learned this from an old trapper and hunter. The willow gives meat the most delicious flavor. Green cotton-wood is superior to corn-cobs any time.

W. C. M., BLACKSTONE, MASS.—Quite frequently I wish to refer to some article which I have read in the RURAL, so I have taken a small blank-book and started a simple alphabetical index; and now each week as I read the RURAL, I index such matter as I may need for reference. It takes no time to speak of, and if one wishes to find something he has read, it will save considerable time and trouble.

A. J. P., JOHNSTOWN, N. Y.—Reading Bucephalus Brown's Ideas on poultry in a late RURAL set me thinking whether poultry pays. I have 251 fowls—108 one-year-olds and 143 pullets. In January we got 75¼ dozens of eggs. There is no colder month in the year and during it we do not expect many eggs. A part of my pullets were hatched late and are not yet old enough to lay. The eggs last January averaged 27 cents per dozen.

A. H. S., MELROSE, N. Y.—Here is my experience with the RURAL'S trench system: I planted one bushel of Pearl of Savoy, cut to two pieces with three eyes each, about 15 inches apart, and got 30 bushels of as fine potatoes as I ever saw. I used 100 pounds of bone superphosphate. The soil was a rich sandy loam. I am thoroughly satisfied that it is the only right way to plant potatoes to get a big result. I am going to try it on a larger scale this year. Success to the RURAL!

H. R., BROOKFIELD, MASS.—Mr. Brown says that for poultry on the farm no special feeding whatever is needed; that with plenty of natural food, clean water and comfortable quarters they will lay all the eggs they could lay under any conditions. I would like to ask him what this natural food is, and how it differs from yarded poultry feed in the winter. I don't know what advantage the farmer has over the fancier for making hens lay. Perhaps he can tell us?

E. K. M., REXFORD, KAN.—I have of late noticed several reports in the press which, if true, would indicate that peanut culture in this State may become a very profitable industry. Will those who have "raised 40 bushels to the acre" please report their method of culture and handling to the RURAL. I have resided in the State the past four years and have raised a small quantity of peanuts for my own use each year, but have never tried to raise them on a large scale. They grow nicely, but seldom mature more than three-fourths of the nuts.

J. N., OUTAGARNIE CO., WIS.—Last year I undertook to raise about two acres of pop-corn. It was planted about the end of May, came up well, was cultivated and hoed and made a fine growth. I felt sure of at least 50 bushels of ears to the acre; but the early frost caught it before it was ripe, and instead of getting 100 bushels of fine pop-corn I got about 30 that was fit for market. First-class, nice pop-corn is worth two to three cents per pound in the ear. A bushel of ears thoroughly dried will weigh about 40 pounds. It requires to be thoroughly cured I shall try again next season and will plant about two weeks earlier.

W. A. M., ERIE, VA.—I shall stick to the old theory of feeding only twice in 24 hours until I can see better results than I ever have seen by feeding three or more times. In all instances regularity in the hours of feeding should be carefully observed and the quantity must be what the animal will consume with a relish. When the amount fed is greater than the animal consumes, then there is unavoidably a waste, for when food is once breathed on and mussed over the creatures must get very hungry before they will eat that left from the previous feeding. Clean mangers are always a great stimulus to a hearty relish of whatever is fed. A variation in substances fed gives relish as well as thrift.

R. G. CHASE & Co., GENEVA, N. Y.—We have just received the following note from Mr. Hyatt, of Yates County, N. Y.:

"I have just seen in the RURAL a cut of the Geneva which is a disgrace to the grape. I could have sent you half a dozen bunches far better. But I want to speak of its keeping qualities, particularly. I kept some till about New Year's, and they not only improved, but *changed* in quality greatly for the better. And while I left some of them until they began to shrivel, not a berry would drop or shake from the stem. All were delighted with the fine flavor they acquired by long keeping.

R. N.-Y. The bunch was drawn and published simply because the specimen was an average of the several bunches sent to us. It has not yet fruited at the Rural Grounds.

G. D. N., NEW MARKET, ALA.—I use what is called cotton motes (the waste in ginning) as a covering to preserve Irish and sweet potatoes through the winter. When dug I put them up in conical mounds under a shelter open on the Southwest and East, and cover them all over with cotton motes to a depth of one or two inches. This covering will protect them from our severest winters. Frequently the chickens scratch about the mounds and expose the tubers, but no frost injures them. Perhaps there is something in the fibre which prevents damage. I have put up all kinds of fruit in open jars, heating the fruit as if going to can it; but after filling the jars to the top I simply cover them with bats of carded cotton wool, and they have kept as fresh for months as if they had been sealed in cans. According to Prof. Tindley even microscopical germs, microbes, etc., cannot pass through cotton.

"W.," TYRONE, PA.—The RURAL says (P. 71, 2d. col.) "Don't use a hedge of any kind nowadays, as a cattle fence." But what is the matter with a hedge that merely masks a real fence of three or four barbed wires? Such a hedge need not be thorny, or strong, or even. Its purpose is to show animals their dead-line plainly, and to shelter and beautify the field. If in pasture land only such plants as cattle dislike should be used, such as barberry, briar roses, purple osier. They won't touch Japan quince or privet unless famished. Privet is so nearly evergreen that it would come very near meeting Snowdrop's wishes, especially if some deutzias, mock oranges, shrub honeysuckles, altheas are set in it here and there. Spiræas would aid its floral beauty, but they widen the hedgerow by their habit of stooling. (P. 73, 3d col.) Another reason for recommending the cherry for roadside planting is that boys can't pelt off the fruit, and if they climb they risk being caught.

E. W. G., WAYNESBORO, PA.—I asked, 1. What kind of stock is used for the Kilmarnock Willow? 2. Would it be advisable to plant the Delaware Red Winter apple extensively? 3. Can the weeping maple be grafted on any other sorts? To those inquiries the RURAL answered: "1 The Goat Willow—Salix caprea. 2. There are several Red Winter apples, but we do not know of the Delaware Red Winter. 3. We do not know of any weeping maple. Kindly tell us the specific name."

The Delaware Red Winter apple is described in the catalogues of Lovett, Phoenix, and other nurserymen. Ellwanger & Barry advertised the weeping maple. A neighbor of mine purchased two trees, but their habit is not very "weeping" or pendulous. I can't find the varietal name.

R. N.-Y.—The Delaware Red Winter referred to is probably the Lawver. There is a maple known as the Palmate Weeping Japan, that may be the kind referred to. This we believe is slow-growing and not very pendulous. The Kilmarnock may be worked on any willow stock, but the Caprea suits it best.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

A GOOD many industrious people think that it looks lazy for a woman to sit down at her work, but what a mistaken idea this is. Most industrious women suffer more from being constantly on their feet than from any other exertion. Actually, we have seen women standing to peel potatoes, when there was no earthly reason why they should not sit down. And they wonder that they feel dragged out! We believe that it is the positive duty of a busy housekeeper to rest all she can, and she ought to sit down when preparing vegetables, wiping dishes, or even ironing. We can imagine a chorus of indignant protests at this last statement; but we know plenty of women who would feel very much better both in health and temper if they tried it. So often what seems to be ill-temper in a woman is merely over-tasked nerves and over-tired body. We don't always think a woman is fretful when she shows care-worn lines in her face; they are often a sign of tender cares and loving work for others. But it is her duty to care for herself while caring for others, and one of the necessities of such care is rest when rest is possible.

OUTINGS IN NEW ENGLAND.

MARY WAGER FISHER.

THAT every loyal American should feel a particular interest in New England and what pertains thereto, is well understood. Although it is not altogether true that on her soil was the cradle of liberty rocked more vigorously than elsewhere, still there is a general sentiment to that effect. It was there that the Pilgrim Fathers and Mothers landed on that bleak December day in 1620, making of the spot a Mecca to which thousands of people turn their steps yearly, and which is indeed to many the most hallowed ground in all the country.

When one is free to enjoy a summer outing as he likes, it is not always easy to define why he chooses a certain locality, or the circumstances that drift him to some place where he least intended to go, so when for three successive summers I have found myself on the rock-bound shore of New England, it has seemed more like a happy fatality that has drawn me to a region so abounding in historical associations, than any prearranged plan. The first summer we planned to spend in the beautiful Chester Valley in Pennsylvania, but we actually spent but one day there. We then directed our steps toward the Atlantic seaboard, tarrying for a time in the old town of Burlington on the Delaware, which is claimed to have been Penn's original site for Philadelphia. James Fennimore Cooper was born there, and so was Admiral Lawrence, and the dwellings which were their birth-places are still standing. It is a pretty town because of the old trees which shade the streets, and there is much of interest of a local character connected with the old families and homesteads a few of them built before the Revolution, and some of them have the added attraction of old-fashioned gardens now so rarely seen in these days of "modern improvements;" but none of these equals in simple and lasting charm the garden walk with flower borders, and vine-wreathed arbors for resting-places arching the walk at intervals. One of the most amusing old things which we saw in Burlington was a doll which was brought over from London in 1760—a family heirloom. Being of wood, it had borne the brunt of hard

usage with marked self-preservation and now in its advanced age sits in a place of honor, clad in silk, to be gazed at by admiring visitors.

From Burlington we went on a hot July day to New York to embark for Boston without any definite idea in what direction we should radiate after reaching the Hub. "We will go to Boston first," decided Anaximander, "It is the center of everywhere in New England and when there, we will decide where to go." Although we had in years gone by been in New England and had traversed Long Island Sound in what are called the Sound steamers, still so much had come in between that it was like a fresh sensation to ride out from the pier in a boat carrying half a hundred passengers, a band of music playing on deck and the watery way for an hour or more lying between the great cities of New York and Brooklyn. As many times as I have made the trip I always feel that the view is most magnificent—the vessels in port, the towers and spires, the great warehouses, the hurrying ferries loaded to the edge with human beings and the Brooklyn Bridge that looks too low for the steamer to pass under without losing her smoke stack; but there proves to be room enough and to spare. Finally the after-glow of the sunset dies away, night has come and although the music of the band continues, it is bed-time. The laddie climbs into his berth and is quickly asleep. But I am a poor sleeper at sea, and the night rolls slowly away in a succession of fog whistles, signal bells and the swash of the waves. Finally at early dawn Newport is reached, or one can go on to Fall River and thence go by rail to Boston.

As a sea-side resort Newport has the advantage of a splendid situation. It is practically at the door both of New York and Boston. Its air is delicious, its villas magnificent, its water views superb, its drives and its bathing all that could reasonably be desired. I once spent a delightful fortnight there, and in many ways it is unsurpassed as a pleasure and health resort. But on this occasion we simply drove about the town to refresh our memories of it. The laddie went into the surf for a bath, and we left at three in the afternoon *via* the Old Colony R. R., for Boston, passing through many "factory" towns and seeing no end of stone walls in stony fields. It is a curious thing that, in a region where there is no end to stone, a stone house is almost never to be seen. The stone fences are picturesque, with vines and brambles trailing over them, and there were many old apple orchards, but the ground had a hard and unyielding look. A curious incident of this ride was furnished by a man in the car, engaged in reading a magazine and who incessantly beat a stick about a foot long between his mouth and the page he was reading. The movements of the stick back and forth were made with perfect regularity. We puzzled our brains quite a little over the performance, but never arrived at any satisfactory solution of it. We reached Boston after a ride of three hours, and after settling ourselves in a hotel and dining, we went out in the evening to stroll about and sit on the Common. As we visited the Common every evening for a week, we came to have a true Bostonian affection for it, and of all the parks I have been in, it is the most get-at-able and enjoyed by the people. It is in the heart of the city. It is full of fine old elms, and there are seats, drinking fountains, an artificial lake in which even dogs can plunge for a bath without fear of the police, and a bank of green whereon ball-players have full swing for their game. Adjoining the Common is the Public Garden in which the people have less liberty. It is more like a parlor with its bric-a-brac of flower parterres, while the Common might fittingly be called a family sitting-room. In the latter is the Soldiers' Monument, surmounted with a statue of Liberty. The inscription on this monument, written by Elliot, President of Harvard University, is a model of its kind. "To the men of Boston who died for their country on land and sea in the war which kept the Union whole, destroyed slavery, and maintained the Constitution,—the grateful city has built this monument that their example may speak to coming generations." In the Public Garden is the Ether Monument—American doctors being especially prominent in the application of anæsthetics—Godman in 1822, Jackson in 1833, Wood and Bache in 1834. Dr. Horace Wells, of Hartford, Conn, a dentist, was the first, I believe, to make a practical experiment in the use of nitrous oxide gas in tooth extraction. He was a brave man and personally underwent the operation of having a tooth pulled out after being rendered insensible by the inhalation of the gas. But being afterwards unfortunate in its use, he abandoned further trial. Soon afterwards Dr. Morton, of Boston, tried the vapor of sulphuric ether in tooth extraction, which marked a great era in surgical operations. But the Ether Monument is more particularly in commemoration of the "discovery of anæsthetics" at the Massachusetts General Hospital in 1846.

ON INVITATIONS.

IN that very delightful corner of the RURAL, called "Chat By The Way," under date of January 5, 1889, the writer says "The most exasperating invitations we receive are those asking us to come 'some time,' which when we have accepted we generally find to mean no time." I do not think I have quoted the words exactly, but I know I have not misstated as to their meaning, because it struck home. I want the fair writer after she has heard my statement to agree, if possible, that there are exceptions to all rules, after which I will willingly concede that it is the exception that proves the rule. I have a way of saying,—only to my very dearest friends, however, "Come and see us at any time to suit your own convenience. 'The latch-string always hangs out.' If I am not at home, make yourself master of my castle (it has seven rooms, small ones,. If you can give me a day's notice I shall take care to be at home, but be sure that when the spirit moves you to come, I shall give you a right royal welcome."

Now the most delightful visits I receive are in response to just such invitations, and I think no one will ever accuse me of meaning "no time," by my "some time." I never invite any one unless I really want him or her, and when any one does come, I never cease to feel grateful for the favor. There are so few people whom I care to visit myself, that I always appreciate the compliment paid me when a friend comes "to supper or to dine."

ALICE CHITTENDEN.

GOLDEN GRAINS.

IT is as true now as it was when Lincoln said it, that you may deceive all the people some of the time, and some of the people all the time, but not all the people all the time....

IT is true that the pleasantest things in the world are pleasant thoughts, and the great art in life is to have as many of them as possible.....

SOUTHEY said that if one would be pungent he must be brief; for it is with words as with sunbeams, the more they are condensed the deeper they burn.....

HOW true was Emerson's conclusion when he said that the best part of health is a fine disposition. Nothing will supply the want of sunshine to peaches, and to make knowledge valuable, you must have the cheerfulness of wisdom.....

THE INDEPENDENT says that mental and moral worth consists not in houses and lands, or in high station, but in the thoughts of mind and in the feelings and affections of the heart. Some rich men in the wordly sense are really very poor in the moral and spiritual sense....

A FUGITIVE paragraph reminds us that anybody can soil the reputation of an individual, however pure and chaste, by uttering a suspicion that his enemies will believe, and his friends never hear of; a puff of the idle wind can shake a million seeds from the thistle and do a world of mischief which the husbandman must labor long to undo. Such are the seeds of the slanderer, so easily sown, so difficult to gather up, and so pernicious in their fruits....

THE SUNDAY SCHOOL TIMES says that one of the meanest modes of lying is by making the truth lie; by saying that which is true as far as it goes, but which intimates that which is utterly false. And while this mode of lying is a favorite mode with the willful slanderer and backbiter, it is not altogether abjured by thoughtless persons who are without malice in its using. It is strictly true, for example, of any woman that "she is no better than she should be." Yet when that truth is uttered concerning any woman of ordinarily good character, it is equivalent to a foul falsehood agianst her.....

EXPLICIT details of truth in a narrative may be given in such a way as to amount to a cruel and baseless lie. If a man were to say of another that he saw him in the surf when a companion was drowning, yet, although he was a strong swimmer, that he never moved a hand to help his drowning companion, it would be equivalent to a charge of cold-blooded heartlessness, if not a practical murder. The concealed fact, however, being that the strong swimmer was just then struggling to save his own child from drowning,—the truth so far as it was told, was made to lie. .....

THERE is a good deal of this lying by truth-telling in social comments on acquaintances and neighbors. It is not enough that we guard our lips lest we speak that which is false. We must also guard minds and hearts, lest we make the very truth to lie by our lack of a spirit of Christian love in all our utterances.

It is said that the great Theodore Parker, when uttering the Lord's Prayer, used to say; "Forgive us our trespasses as we should forgive those who trespass against us." He also prayed; "Lead us from temptation," instead of "Lead us not into temptation."....

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Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

IF you are not happy, dear friend, it is because there is something wrong with your stomach, your conscience, or both.

DID you ever see a perfect profile of a face, the full view of which proved to be positively ugly? *Moral*: Take a full view before you judge.

DOMESTIC ECONOMY favors the use of the word *woman* or *gentlewoman* in lieu of the much-used and ill-applied word "lady."

Personally we object to the word "Thanks," as an expression of one's indebtedness. We might as well say "How?" For "How do you do?" or "Good" for "Good night." There is something snobbish about it. If one cannot express his sense of obligation in a full sentence, he had better not say anything.

EXTRACTS FROM SUNDAY EVENING TALKS AT THE RURAL GROUNDS.

SPOKEN WITHOUT NOTES BY A FIFTEEN-YEAR-OLD GIRL.

MY little talk to-night entitled, "OUR AIM IN LIFE," was suggested to my mind by several trifling incidents which have occured in my own life.

About three weeks ago I went to the city, and spent part of the day in papa's office He and I had lunch together and then we started out. I had no idea where we were going; papa said for a little walk. In 10 or 15 minutes we came to Peter Henderson's large seed-house and as papa had a little business to transact we went into Mr. Henderson's private office. He greeted us *very* pleasantly and he and papa at once began to talk about various roses, potatoes, etc., etc. In the meanwhile *I*, of course, had to remain a patient listener, for I could take no part in the conversation. Finally papa stepped into the other office for a moment, and Mr. H. turned to me saying: "This weather must be very pleasant in the country." You can imagine my thoughts as I answered: "Yes, indeed." I wanted to say, "Mr. H. *I don't want to talk about the weather.*" Previously he had been talking of something he supposed I took no interest in, and knew nothing about. He was right, and therefore he changed the subject to that *interesting* (?) and never-failing topic, the weather. Just then papa came back and I was left to my own not very pleasant thoughts. How I wished that I was well posted so that I might join in the conversation, and show that I, too, was interested in roses, potato experiments, etc. But, no, I must wait and, in the meanwhile, keep my aims in mind and remember that being a good listener is next to being a good talker. Several times this desire for knowledge has come over me. I experienced the same feeling on the day of the "potato contest." As you all know, there were persons here from all parts of the United States, men of culture, influence, wealth; literary men and thrifty farmers. After the first excitement was over, I felt like a stray sheep among those men. After making a few common-place remarks, no one cared to talk to me, for I could *interest no-one*. How I longed for an education and experience so that I could talk interestingly to those people. I remember when riding over to the station on the night of that memorable day, to see them off, that Dr. Hexamer, one of the nicest men in the world, talked all the way over to me, telling me of his travels, etc. But I could say nothing but "Yes," "No," "Indeed!" "Is that so?" I like to be among cultured and refined people; it does me good; at such times my short-comings stand out with such prominence that I always feel displeased with myself.

If we would make anything of ourselves in this life, we *must* aim high; keep our aims in mind and live in a way each day that will bring us nearer to that for which we are aiming. When Joshua led the Children of Israel out of the wilderness to conquer the promised land, the Lord was constantly commanding the people to be strong and of good courage, and, as a guide to prevent the people from getting astray while traveling through a strange land, the Ark of the Covenant was carried by priests in front of them that all might see it. In like manner should we keep our aims in mind and be *very* strong and courageous lest we fall backwards down the hill of life toward destruction, and, as in running down hill, the further we go the faster we go, and the harder it is to stop ourselves, so it is in life; the more wicked deeds we do the easier it is to keep on doing them and the harder it is to turn about and struggle upward. But if our aims are *good* and we are *strong enough* we are sure to climb up faster than we fall back and, at last, reach, not the *top*, for no one is *perfect*, but a high point.

When we find fault with our servants and wonder, in a blind way, why they do not take more interest in things and why they are so often careless, thoughtless and cross, if we would put ourselves in their places and consider their ambitions and what their aims in life are, we would wonder *rather* why they were so dutiful and considerate.

One thing more before I close—When we have *fully* made up our minds to *do* anything we should *stick* to it until it is accomplished, and remember that every *failure* weakens our resolution and our character. So let us all strive to walk the path of life with *high aims* and *strong hearts* and the rest we may trust with our Creator.

WOMAN.

"Be a woman! On to duty!
Raise the world from all that's low;
Place high in the social heaven
Virtue's fair and radiant bow,
Lend thy influence to each effort
That shall raise our nature human;
Be not fashion's gilded lady—
Be a brave, whole-souled, true woman!"

WOMAN is the name applied to the female gender of mankind; the opposite of man. To be a *true* woman should be the aim of every girl; yet the word "woman" has almost disappeared, and to call any one by that good, old-fashioned name, is to insult her. They all want to be "ladies" now. A girl who earns her living by standing behind the counter of a store would be indignant if you called her a sales-woman; she is a "*sales-lady.*" The "fore-woman" of the past has also disappeared, and the "fore-lady" has taken her place. This is just as ridiculous as "wash-lady." Not but what there may be many a lady who, by adverse circumstances, is compelled to stand behind a counter in a store, and, simply because she does work for her living in this way, it does not make her one whit less the lady—but this is the exception rather than the rule. "Lady" is from an old Saxon word meaning "loaf-giver," or one who went about giving bread to the hungry. As only rich women were able to do this, the term was gradually applied to one who was rich enough to give alms. Still later it was applied to all females who were able to live without labor. It was a mark of distinction; but now when it has become so broadened in its use and is applied to every female, it has lost its significance.

Webster says a lady is a woman of gentle and refined manners. One can be a woman without being a lady, but certainly one cannot be a lady unless she is a woman. I once heard a minister say from the pulpit, that "the ladies and gentlemen went out and walked by the sea of Gallilee." I don't think, could those men or women of old come back, that they would have felt flattered by being called "ladies and gentlemen."

I would far rather be a woman—a true-hearted, upright woman—than the gayest "lady" in the land. Yet, notwithstanding this, I own that I felt a little cut a short time ago when I heard that I had been referred to as, "a young woman in the 'RURAL' office." Not that I objected to the term "woman," but I felt that a slight was intended. And then, too, I have the temper that usually goes

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

with a red head, so I was aflame in an instant. But, after thinking it over, I concluded that, should a question arise as to which was the lady, I'd run as good a chance of being one as the person who could, unprovoked, slur another.

Girls, be little women! Do not imagine because you may live far out in the country on some lonely farm that it will not matter much. It *will* matter. God watches you in your lonely home just as much as He does those in the crowded city. You may think that you haven't any mission in life; that unless you can do some great thing, there is no use doing anything at all. But it is not so, for "Great things from small beginnings rise;—Sands make the mountains, and trifles, life."

Do your duty always, as nearly as you can. Of course, it becomes awfully tiresome to wash the dishes three times a day—to sweep and dust, to make beds, etc., day in and day out, and sometimes we feel like saying "What's the use?" But if you don't do it maybe mother will have to, and don't you think that mother is tired of it as well as you are? Do you ever think of the years she has spent working from early dawn till late at night? She never says "What's the use?" but goes on patiently, year in and year out. The gray hairs as they come one by one, the wrinkles as they creep into her face, show the care she has endured. Even if you never do a thing that is heard of outside your own village, don't you think you have done good by helping to bear the burdens for mother? Then, too, the sad day may come when those patient hands are folded, those tired eyes closed, and mother's work is done. Will your life be wasted if you are able to take up her work and do as she would have done—care for father and the boys? Or, perhaps, before she goes you may be able to brighten her life a little. Poor, tired mother! Girls, again I say, BE WOMEN!

Before I close let me also whisper a word to the mothers. Do not exact too much from the girls. Remember they *are* girls, and if you want them to be a blessing to you in your old age, be patient with their faults. Do not be forever nagging and scolding them. Remember you were a girl yourself once.

DORA HARVEY VROOMAN.

"Every woman is happy with her work well laid out before her for some few straight-going hours; her occupation is ordinarily so apt to consist chiefly in interruptions."

RAG CARPETS.

As my rag carpets have called forth many highly complimentary remarks from city as well as country friends, I thought that as the time for coloring and making such carpets is near at hand, I would give directions according to my way: First, don't let the rags accumulate until there are enough to cause disorder and dust for days while tearing and sewing. When a garment that is useful for nothing but carpet rags, has been washed and ironed, I tear it up and sew the pieces together if I can. If I have not the time do the sewing then, I put the rags into a basket I keep for that purpose, and the first time that is not filled, I put into work on my rags, and then when the time comes for making a carpet, they are all ready, and I can hardly tell when the work was accomplished. In tearing the rags, tear them entirely off; *do* not tear and tear back, for if you do, little rough ends will stand up until the carpet is nearly worn out. Tear into narrow strips; for then the carpet will not be so heavy, can be handled more easily, will wear just as well and will look much prettier. Don't use any fulled cloth, as it wears out much faster than cotton. Allow one and one-fourth pound of rags to the yard, and you will probably have some left. I do. The finer the rags the less weight of rags to the yard. Shaded strips of brown, drab, or, in fact, any of the colors are pretty and can be made by removing some of the goods from the dye sooner than the others.

One living near rubber works where rubber tubing is made, can procure the cotton strips after they are done with them very cheap. The strips are from nine to 30 feet long and from four to six inches wide. After a thorough washing they are ready for use. I presume most people are familiar with the coloring of brown, drab, green, blue, and yellow rags, therefore I will not give the recipes unless desired. If the rags for green are made blue first, you will have a blue-green, and if yellow first, a yellow-green. Unless you want a blue-green, color all the rags yellow together that you want for yellow, orange and green; make your orange by dipping the yellow into what remains of the red dye. It is much safer than lime-water, for if the latter is a little too strong it makes the rags tender. For wine color, for five pounds of goods, I use two pounds of camwood. Boil 15 minutes and dip the rags one-half hour; boil again and dip half an hour longer; then darken with blue vitriol, 1½ ounce. If not dark enough, add half an ounce of copperas. For red, I use the "Bright red on Cotton" that was advertised by C. E. Helfer in the RURAL of February 16. It is cheap and beautiful and I consider it a great boon to rag-carpet makers.

Be sure to have your goods wrung out of clear water before putting them into any dye. I use plain brown warp, thinking that shows up all colors better than any other, and it is a kind of which I do not tire so quickly. I buy it already colored.

ADELLE BUTTON.

BREAKING THE WILL.

Another mistake formerly made in the rearing of children was the practice of what was called "breaking the will." The outline of the work was this: The young child was allowed to do whatever it pleased (supposing, of course, that it could not be trained by gentleness and firmness) without any effort to govern it until it was three, four or five years old; then, when the fit took them the ignorant, unthinking parents, swayed by the old idea of despotic rule, and a mistaken sense of duty, upon the refusal of the child to do their bidding, fell on it with whippings, shakings and the like until the poor little thing too confused to know exactly what was required of it, narrowly escaped convulsions, and if really obstinate, it either gave up the contest only when its strength was exhausted, or, having worn out the time and patience of the parents, the attempt to break its will was adjourned until some other day.

Many children of originally sound minds in healthy bodies came out of such contests with their wills broken indeed, but with shattered nerves, and a vacillating purpose. Many lost in their ill-advised struggles the energy, which well directed, would have carried them triumphantly over the ills of life. It was then often said of a child who had disagreeable manners, that its will had never been broken, as if it had missed one of the great blessings of life. Fatal delusion of parents who stoically desired to do their duty by their children. The high spirit which needs only drilling to be a blessing, is ruined if broken. The intelligent horseman deals more wisely with the colt he wishes to train to drive in harness.

It is obvious, however, that this mistaken severity of our elders cannot be charged against the present generation of parents. Is it not owing to a reaction against the undue haste and despotic severity which was the rule 40 years ago, that now children's wills are hardly checked, to say nothing of being "broken?" Too often they are not even *trained* to habits of obedience and respect for their elders. Perhaps in the growing enlightenment on such subjects there may be a change to a middle ground between rigid rule and no rule at all, so that the true development of children may arise from a habit of obedience and order, due to love of what is good, and not to fear of punishment.

AUNT RACHEL.

CHARITY'S CROOKED HYACINTH.

Charity moralizes very prettily over the attempt of Mother Nature to correct a bit of carelessness, which probably happened while she was enwrapped in the mystic vail of one of her wonderfully entrancing "domestic reveries." Poor Burt! the unconscious butt of ridicule for a "refined" and gentle sister! I never knew a sister's love; but had I one like Charity, how grateful I should be for the affection that would exhibit me to thousands as altogether unlovely. How my heart would thrill with brotherly love when I read of the numberless tokens of sisterly regard which have emanated from her ready pen! How pleased I should be to know that "culchah" regarded my father and myself as having "no more brains than so many calves!"

Burt *may* be "the crooked hyacinth"; but Charity should know that the bulb was good until her carelessness placed it in an unnatural position, and even then Nature had done much to repair that fault. So with Burt; it seems that he is rude, etc., etc. Naturally, he is good and kind, and "means well, but"—ah! that "but." What a convenient peg upon which to hang uncharitable criticism, together with a goodly amount of self-esteem. Placed unnaturally by the superior "refinement" of his long-suffering sister, the good in him will take its natural course, and we will see it developing under adverse circumstances into a nearly straight plant, and when the time of maturity arrives, we shall probably behold it expanding into a white hyacinthine bloom very like that intended by its Creator.

Charity may make herself easy on one score, and that is; no one will ever take her for a hyacinth, either straight or crooked. Two years ago I planted some African marigolds. When in bloom the flowers were a beautiful shade of yellow, and of a good form. One day I pulled a few blossoms, but I soon threw them away. Pretty to look at, but, faugh!—what an odor! Charity's a marigold, not a hyacinth.

A MAN.

TWO GOOD RECIPES.

At a recent dinner the company being especially pleased with the two principal dishes—rabbit pie and snow-flake cake—I give the recipes, hoping thereby to benefit some housekeeper who may be puzzled about what to cook or how to cook it. I would add that veal, as well as chicken, makes an excellent pie of this sort, omitting only the soaking and parboiling required in cooking rabbit. For the pie:—After the rabbit is nicely dressed, joint and put it to soak in cold water so as to cover it well, adding a handful of salt. Next morning wash the meat in clear water, put in a kettle with cold water to cover, adding a scant tea-spoonful of saleratus. Let it come to a boil, then throw away the water, wash the meat and kettle, replace the meat, cover with cold water, adding a table spoonful of butter, some salt and a good dust of pepper. Cook till tender, keeping it covered with water. When done, remove the meat, add more water if necessary, and thicken the broth with a table-spoonful or so of flour stirred smooth in a little cold water, adding more salt if necessary. Have ready a crust made of wheat flour and one cup of thick sour cream, two cups of sour butter-milk, a tea-spoonful of salt, a heaping tea-spoonful of saleratus dissolved in a little warm water. If butter be used for shortening instead of cream, one-fourth of a pound to a quart of butter milk will be about the right proportion. Mix as for biscuit, roll out about half the crust and with it line a buttered four-quart pan, put the meat in, having first cut it in suitable pieces; fill the pan perhaps one-third full of the broth, adding a good lump of butter and another dust of pepper. Roll the remaining crust to cover the pan, slashing it in the center to allow the steam to escape. Pinch the edges together and bake in a moderately hot oven till done. The remaining gravy, of which there should be at least a bowlful, should receive a lump of butter and be reserved to fill the pan when the pie is baked (using a tunnel to do so). Serve hot.

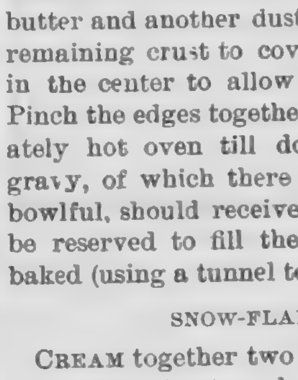
SNOW-FLAKE CAKE.

Cream together two cupfuls of sugar and six ounces of butter; beat in the beaten yelks of two eggs: add one cup of sweet milk, and beat in three cups (scant) of sifted flour, to which have been added two heaping tea-spoonfuls of baking powder. Last of all, add a tea-spoonful of lemon extract and the well beaten whites of two eggs; beat well and bake in a deep basin well buttered and the bottom lined with buttered paper—white, or the light brown wrapping paper will do. When the cake is done and partly cool, cover it with a frosting made in the proportion of five table-spoonfuls of granulated sugar to the white of one medium-sized egg, adding the sugar, spoonful by spoonful, to the stiffly beaten white of egg; and, after frosting, immediately sprinkle thickly with desiccated cocoanut, and set the cake in the open oven a few minutes to set the frosting. Keep well covered in the cellar till used.

GLADDYS WAYNE.

"Nothing's 'catching' that you haven't got the seeds of in your own constitution."

Miscellaneous Advertising.



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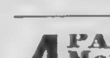

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PEERLESS DYES Are the BEST. SOLD BY DRUGGISTS

News of the Week.

HOME NEWS.

SATURDAY, March 2, 1889.

THE train bearing President-elect Harrison to Washington, left Indianapolis at 3 19 on Monday afternoon. There were various brief stops along the route, and at several places Gen. Harrison made short speeches. All along, his passage attracted large crowds and excited much enthusiasm. The party arrived at their temporary residence, the Arlington Hotel, Washington on Tuesday afternoon. President and Mrs. Cleveland entertained President-elect and Mrs. Harrison at a dinner in the White House on Wednesday night. Gen. Harrison has been crowded with visitors—friends, acquaintances, curiosity-hunters and office-seekers—during the week. Great preparations have been made for his inauguration next Monday. Military, political and other organizations from all parts of the country will be largely represented. Immense crowds are teeming to Washington fr m all points of the compass, and the spectacle promises to be the largest and finest thing of the kind ever witnessed on this Western Continent!........ J. W. Arkell, chief owner of the New York comic illustrated paper "The Judge" has just bought Frank Leslie's Illustrated Weekly Newspaper, paying $300,000 for the English, and $100,000 for the German edition. It will come under his management on May 1....... Dr. G W. Bliss, physician-in-chief during the last 80 days of President Garfield's suffering, died at Washington the other day aged 64.... ..James Russell Lowell has just passed his 70th birthday....... The United States Government pays $900 000 a year for its weather service—nearly 12 times as much as any European Government....... .... Rumor says that the English Government realizing the importance of having at Washington a representative thoroughly posted in North America affairs, has offered the post of British Minister to succeed Lord "Burchard" Sackville, to Sir John Macdonald, the Canadian Premier. This would be a capital appointment. If accepted, doubtless Sir Charles Tupper would assume the leadership of the Dominion Parliament..........A bill has been read the first time in the Canadian Parliament providing for the extradition of boodlers and other criminals whose crimes are not covered by the present list of extraditable offences—only seven offences on the list now. Canada is getting tired of being the receptacle of the moral dregs of this country and Mexico...... There is a strong movement in many parts of the country for the introduction into Congress and the passage there of a salutary national bankruptcy bill. At present bankrupt laws are exclusively matters of State legislation.. ....The widow of the late Richard A. Proctor, the astronomer, who is now living in Florida, has been granted a life pension of $500 a year from Queen Victoria's civil list, as a mark of consideration for her husband's great services to science and education.......

What We Sing.

"Arma Virumque Cano," said Virgil; but in a more practical vein, "We sing the virtues of Compound Oxygen."

In these instances we sing by proxy: our patients are the proxies:

PORTAGE, Wis., January 30, 1888.

"My wife has been taking your compound Oxygen for over two years for consumption and has derived much benefit from it. In fact I think she would have died long ago but for it.

H. D. JAMES.

WALLA WALLA, W. TER., April 9, '88.

I have used your Compound Oxygen treatment. My lungs hold double the amount of air they did at the time I first tried it. I know your agent is all you claim of it.

N. K. GABRIEL.

SUMTER, S C., March 24, 1888.

"I believe I owe my life to your treatment.

CHAS. L. WITHERSPOON.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 331 Montgomery St., San Francisco, Cal.—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, March 2, 1889.

THE fight against the Chicago dressed meat trade was started in the Delaware legislature last Monday by the introduction of a bill requiring the inspection of meat on the hoof under penalty of $50, unless such meat be from cattle, swine, etc., raised or fattened by Delaware farmers........... The Ohio Senate has given a black-eye to the bill requiring the official inspection, at the place of slaughter, of all animals furnishing human food within the State.......... .The Missouri legislature has adopted a resolution denouncing the Big Four dressed meat monopoly, and appointing a joint committee to investigate the best means to knock out the hateful "combine"........... The last day for the entry of cattle, sheep and swine at the great Paris International Exposition has been postponed till April 1.... A petition circulated by Canadian pork packers and signed by 2,000 farmers was presented to the Minister of Customs at Ottawa, Ont., this week. It sets forth that the exclusion of the American hog products will revive the Canadian industry. A government supporter says their representation will be successful. ....There's a chance for a botanist in the Department of Agriculture. Salary $1,800 a year; examination at Washington on March 2. March 12, is the time and St. Louis the place for holding the great inter-State conference to investigate the beef, pork and mutton "combine." The convention will be composed of joint committees of two Senators and five Representatives from the legislatures of Kansas, Nebraska, Missouri, Ohio, Indiana, Illinois, Wisconsin, Michigan, Minnesota, Arkansas, Texas, Colorado, New Mexico, Arizona and Wyoming.............Arrangements are being made for holding a convention of siloists at Cleveland, Ohio, on March 6 and 7. Secretary Bonham, of the Ohio State Board of Agriculture, Prof. Weber, State Chemist, Chas. E. Thorne, Director of the Ohio Experiment Station, John Gould, the silo champion, and other prominent men will deliver addresses. The railroads leading into Cleveland have granted reduced rates to all members of the convention, who will pay full fare going and one-third returning.......

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, March 2, 1889

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands	New Orleans, and Gulf.	Texas
Ordinary	7 7-16	7 11 16	......
Strict Ordinary	7¾	8⅛	......
Good Ordinary	8 13-16	9 1-16	......
Strict Good Ordinary	9¼	9⅛	......
Low Middling	9¾	10	......
Strict Low Middling	10	10¼	......
Middling	10 3-16	10 7-16	......
Good Middling	10 11-16	10 15 16	......
Strict Good Middling	10 15-16	11 3-16	......
Middling Fair	11⅜	11⅝	......
Fair	12	12¼	......

STAINED.

Good Ordinary	7 5-16	Low Middling	8⅞
Strict Good Ord	7 15-16	Middling	9 11-16

POULTRY—LIVE Fowls, near-by, per lb, 12c; fowls Western, per lb 12c roosters, per lb, 7@11c; turkeys, per lb 12@13c: ducks, western, per pair, 75c@1.00 geese, western, per pair, $1 50@1 90: chickens; nearby, per lb. ——c; do, western, ——c.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per lb, 15@15½c do do, common to fair, 10@14c; do, iced, dry picked, choice, 11@12c. Fowls, western, do, choice, 12@—c; do, nearby, do do, 12@13c; do, western, iced, dry picked, 9c; do do do, scalded, 8@9c. Squabs, white, per doz, $4 00@$4 25 do, dark, do, $2 50@$3 25. Chickens Philadelphia, dry picked, 13@20c, do Jersey, do, choice, 14@15c; do nearby, do, good, 13@14c; do Western, do do, 11@12c; do do, iced, good to choice 10@12c. Ducks, nearby, choice, per lb, 15@16c; do do, good, 14@16; do Western, good, 14@16c. Geese, Western, good, 8@12c.

GAME.—Wild Ducks, Canvas back, per pair, $2 50@$3 50; do, Red Head, do, $1 75@$2 00; Black, do, 75c@$0 90; do, Teal, do, 25@40c; Quail, per doz, $2 50@$2 65.

HOPS.—State, new, best, 21@22c: do, prime, 19@20c, do, low grades, 13@16c; do do, 1887, 10@11 do do do, California, common to prime, 13@19c; choice, 20c.

HAY AND STRAW.—Choice Timothy, 85@90c; do good do, 80c; do medium, 70@75c; shipping, 65@70c; do, Clover, mixed, 55@70c. Straw.—No. 1, rye, 80@—c; short do 60@65; oat, 50@55c.

BEANS.—Marrows, new, $2 25@—; new mediums, choice, $1 90@1 95: pea, $1 80@—: red kidney, $2 10@2 20; white kidneys, choice, 2 20@2 25: foreign, mediums, 1 35@1 55; California Lima, $2 75@$3 00; green peas, $1 35@1 40.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@——c, and farmers' grades at 6½@7c. HICKORY NUTS quoted at $0 75@$1 25 per bushel. Pecans, 6@8c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Long Island, per bbl, $2 25@$2 35; Maine, per bbl. $1 75@$2. State, per bbl, $0 95@1 50; Sweets, per bbl, $2 25@4 00. State. Onions, Orange county red, per bbl, $0 50@0 75· Cabbages, Long Island, per 100, $4 00@5 00; Onions, Connecticut, red, per bbl, $0 80@$1 00; do do, white, per bbl. $2 00@$2 50; do do, yellow, per bbl 0 80@1 25; do State, do, do, $0 80, @$1 00 Turnips, Russia, per bbl, 40@55c. Cauliflower, per bbl $——@ —; Celery, per doz. bunches, $1 50@$2 50; Kale, per bbl, 60@75c; Spinach, per bbl, $2 00@$2 50.

FRUITS.—FRESH.—Apples, Spitzenburg, per bbl, $1 50@2 00; do. King, do, $1 50@$2 25; do Snow, do, $1 50@$2 00; do, Baldwin, $1 25@1 65 do, Greening, $1 25@$2 00: do, common, $0 90@$1 00. Cranberries, Jersey, fine, per box, $1 75@$2 00; do, common to good, 75c@$1 50. Grapes, Catawba, per lb, 4@5c. Florida Oranges, best: per box, $3 00@$3 25; do, good lots, $1 75@$2 25; do lemons, best, $3 00@3 50; do do, common, per box, $1 00@$2 50

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5¼@6¼c; do do, old, -@-c; do do, new, common to prime, 4½@5¼c, do sliced, new, 4@5c; do, quarters, choice, 4@4½c; do, coarse cut, 4@4¼c. Cherries, new, 13@15c. Raspberries, new, 17@19c. Black berries, 4½@5c. Huckleberries, 10½@11c. Peaches, Delaware, evaporated, peeled, 15@17c; do do do, unpeeled, 5@6c; do, North Carolina, sun-dried, peeled, 8@10c. Plums, 7@9c.

PROVISION MARKETS.

NEW YORK.—PROVISIONS.—PORK.—New mess, 12 50@12 75, short clear, $14 00@16 00 Extra Prime mess, $12 00@$12 25; prime do, nominal, and family mess, $14 50@15 00 BEEF—India Mess, in tierces, $18@19 Extra Mess, in barrels $7 00@7 25 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $8 50@8 75; Family at $12 50@$15. HAMS—$12 00@$13 00, Winter packing. CUT MEATS. Quoted 14 lb average, Bellies, 6¼@—c; Pickled Hams, 9¼@10c; pickled Shoulders, 6½@-c; Smoked shoulders at 8c; do Hams, 10@11c. Dressed Hogs.—City, heavy to light, 6¼@7½c. Pigs, 7½c. LARD.—City steam, $6 85; February, $——; March, $7 13; April, $7 13 May, $7 14; June, $7 16; July, $7 18; August, $7 19; September, $7 20; South America, 9c.

BOSTON.—PROVISIONS firm and steady New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25 LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes dull; Early Rose, 45@—c per bush.; Burbanks and White Star, 35@—c Provisions were steady, in moderate demand. BEEF.—City family, per bbl. $10 00@$—; do, packets, $9 50@—; smoked beef, 10@10½c; beef hams, $14 PORK.—Mess, $15 00@$——; do Prime Mess, new, $14 50; do, family, $15 50@——; Hams, smoked, per lb, 11½@12c do, S. P., cured in tierces, 9½@10¼c: do do, in salt, 7½@8c; sides, clear ribbed, smoked, 8¼@8½c; shoulders, in dry salt and fully cured, 6@6½c; do, do, smoked, 6¾@7c; Shoulders, pickle cured, 7@7½c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8¼@8½; do steam, 9½@10½c; butchers' loose, 7¼.

CHICAGO.—MESS PORK.-$11 80@—— LARD.-$6 85@—— per 100 lbs; Short Rib sides (loose), $6 30; dry salted shoulders, boxed, $6 25; short clear sides, boxed, $6 75.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER.—Creamery—State, pails, best, 27@28c, do do, tubs, best, 20@26: Pennsylvania, best, 29@30; Elgin, best, 30; Western, best 28@28½; do prime, 24@26; do good, 19@21; do poor, 16@17; do June, good to best, 16@23. State—Dairy, half-firkins, tubs, best, 23½@27c; do do, prime 22@24c: do do, fine, 18@20c; Welsh tubs, fine, 21@22; do do, good, 18@19: firkins, best, @22½ 28c; do prime, 20@22c; do fine, 18@—c. Western—Imitation Creamery, best, 20@23c; do, fine, 16@18c; Western dairy, fine, 18@19c; do fair, 15@16c: do, poor 13c@14c; do factory, fresh, best, 19@20c; do, prime, 16@17; do, good, 14@15c; do, poor, 11½@13½c; do, June, 12@14c.

CHEESE.—State factory, fancy, 12@12¼c; do do, fine, 11@11¼c; do do, prime, 10¾@11¼; do do, fair to good, 10@10½c· Ohio, flat, prime, 11@11¼c; do good, 10@10½c; Skims, light, 8½@9c; do medium, 6½@7; do full, 2@3.

EGGS.—Near-by, fresh, 15@15¼; Canadian, 13@14c; Western, best, 14½@14¾c; limed 9@12c.

PHILADELPHIA.—BUTTER steady. Pennsylvania creamery extra, at 28@29c: Western creamery, extra at 16½@17c B. C. and N Y. creamery extra, 17c: Western factory 14@15c: packing butter, 11@12c. Eggs—Were firm. Pennsylvania firsts, 14½@15c: Western firsts 17@18½c: Cheese dull—steady; demand fair; New York full cream, at 9@9¼c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

BOSTON.—Butter firm; Western extra Creamery, 28@29c; Eastern extra Creamery, 27@28c. Cheese dull. Eggs firm; Eastern extras, 19@—c; Michigan extras 18c; Western firsts at 15@16c.

CHICAGO, Ill — BUTTER.— On the Produce Exchange to-day the butter market was quiet and steady: Elgin creamery, 25@26c; choice Western, 20@21c, choice dairy, 20@21c; common to fair, 11@12c. Eggs firm at 12¾@13c.

CHEESE—State factory, September made, 12c: do do do, October, fancy, 11@11¼c; do, fine, 11½@1'¾c; do fair and good, 10@10½c; Ohio, flat, prime, 11@11¼c; do, good, 9¾@10½c; skims, light, 8¾@9¼c; do, medium, 6½@8½c; do, full, 2@2¾c.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, March 2, 1889.

MILCH COWS.—Receipts for the week thus far, 106 head. Dull and weak at $22 50@$40 per head, with selected bringing in some cases $45@$50 per head.

CALVES.—Market unchanged, and extremes for veals were 5@8¼c per lb. No Fed or western were sold. Dressed calves in liberal supply and prices weak: Country Dressed Veals sold at 7@10½c and best Bucks County up to 11c: City Dressed at 8@12c, and a few choice at 12@13c. Little country calves are selling at 5@6c.

SHEEP AND LAMBS.—Common to Choice Sheep sold at $4 75@$6 12½ per 100 lb, and 3 carloads of Extra do at $6 15@$6 25. Lambs ranged in price from $6 to $7 62½ and one carload brought $7 65. About 45 Spring Lambs in market, and selling slowly at $3@$7 50 per head, with an exceptional sale of two head at $8 each. Dressed Mutton 7½@9c. Dressed Yearling Lambs sold slowly at 9@10½c, with extra carcasses bringing in some cases 11c. Dressed Spring Lambs dull and lower, selling at $3@$7 50 per carcass State Sheep, 98 lb average, at $5 50 per 100 lb· Western Lambs, 82 lb, at $7 25; State do, 71½ lb, at $6 75 Michigan Lambs, 62½ lb, at $6 62½; Ohio do, 87½ lb, at $7 69½; Michigan Sheep, 112 lb, at $6; Michigan Lambs, 84 lb, at $7 50.

HOGS—Market firm at $5 40@$5 60 per 100 lb, for fair to good Hogs, and a bunch of Light State Pigs sold at $5 75. Country Dressed firm at 6c for Heavy·6½@7c for Medium; 7¼@7¾c for Light States and Lower Jerseys; and 8@8½c for light Upper Jerseys.

CHICAGO.—Beeves $3@$3 55; Steers $3@$3 80; Stockers and Feeders $2 15@$3 35; Cows, Bulls, and Mixed $1 75@$3 10. Hogs—mixed $4 40@$4 65; Heavy $4 40@4 65; Light $4 45@4 75; Pigs $4 50@$4 85. Sheep Natives $3@5 25; Western Corn-fed $4 40@$4 85; Texans $3 25@$4 25, Lambs, $4 75@$5 50.

ST. LOUIS.—Cattle—Choice Heavy Native Steers, $3 80@$4 20; Fair to Good, $3@$3 75. Butchers' Steers Medium to Choice, $2 50@$3 30 Stockers and Feeders, Fair to Good, $2@$3 Rangers, Corn fed, $2 75@$3 40; Grass-fed, $1 80@$2 90.

HOGS.—Choice Heavy and Butchers' Selections $4 40@4 55. Packing, Medium to Prime, $4 35@$4 55. Light Grades, Ordinary to Best, $4 50@$4 65.

SHEEP.—Fair to Choice $3 00@$5 40.

For rates on the TRY ME, the *best* hand lever Feed Cutter (3 sizes), ad's G. S. GARTH, Mill Hall, Pa.—*Adv.*

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING MARCH 2, 1889.

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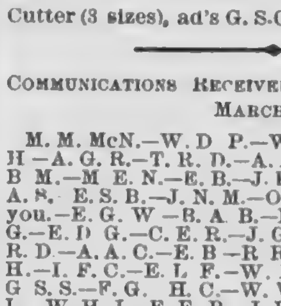

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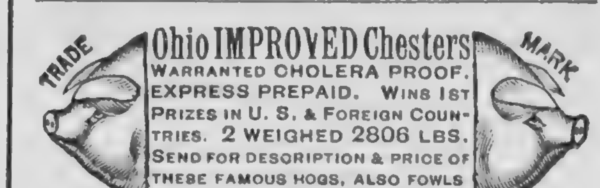

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Patent Steel Picket Fence and Gates.
Handsome—Indestructible—Cheaper than Wood.

This is *not* a netting, it is a *fence*.

Our Lawn Fence, the only fence that *protects* a lawn without *concealing* it.

Our Field Fence, the only *good, cheap* Fence that is *harmless to stock*. Made in various styles, heights and sizes of pickets. Ask nearest dealer for circular and price list or send to **Hartman Mfg. Co., Beaver Falls, Pa.** For handsome picture calendar for '89 send 2c stamp.

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DRAIN FERTILIZER Drill.

Warranted the most perfect Force-Feed Fertilizer Drill in existence. Send for circular. A. B. FARQUHAR, York, Pa.

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TRADE MARK. A complete outfit. Easy to put up, always reliable and fully warranted to meet the wants of any farmer.

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GREATEST IMPROVEMENT OF THE AGE.

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NO BACK BREAKING as the digger is driven by the handle easily through the hardest ground. Send for Circular and Price List. Address **LAGONDA MFG. CO. Springfield, O.**

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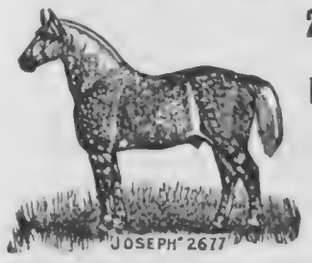

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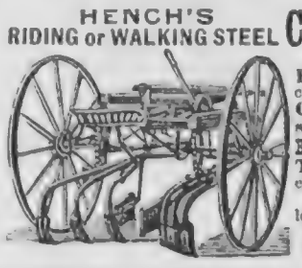

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KING of the CORN FIELD Thousands in use giving entire satisfaction.

Agents wanted. Catalogues free. Name this paper **HENCH & DROMGOLD, York, Pa.**

HIGH BRED Seed Potatoes. One barrel worth two of Northern Seed. All that grow Irish Potatoes should have my catalogue free with testimonials. Address J. W. HALL, Marion Station, Md.

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COMMISSION MERCHANTS,

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Splendid Location. Good Salesmen. Prompt Returns. Reference—Sixth National Bank.

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THE COOLEY CREAMER

AGAIN PROVES ITS

SUPERIORITY OVER EVERY OTHER APPARATUS

AS A CREAM RAISER AND SEPARATOR.

The **ANALYSIS** of the **SKIMMED MILK** at the Granite State Dairymen's Association's Annual Meeting, Jan. 8th-10th, shows that the **COOLEY CREAMER** got the cream from the milk the most thoroughly, the next nearest competitor had 12⅛ per cent. more butter fat left in the skimmed milk. The **CENTRIFUGAL SEPARATOR** had 32⅓ per cent. more butter fat left in the skimmed milk, proving conclusively that the **COOLEY CREAMER** is the best **Cream Raiser** or **Separator.**

This agrees with test made by the committee at Amherst, Mass. Creamery in Oct., 1882, when the skimmed milk from the **COOLEY CREAMER** analyzed by **Prof. Goessmann** of MASS. AGRICULTURAL COLLEGE showed that the **COOLEY SUBMERGED CREAMER** was the best **Cream Raiser** or **Separator.**

Also with **Prof. Short,** of WISCONSIN AGRICULTURAL COLLEGE, who tells the Farmers of his state: **"Submerged setting of milk is preferable to any other system;** as, if the milk is submerged promptly as soon as drawn from the cow, and the water kept cold, it produces more cream than by any other process, and prevents contamination by any impurities in the atmosphere."

The above confirm all public tests.

The **COOLEY CREAMER** always shows that it extracts the cream from the milk **more thoroughly** than any other apparatus, and consequently makes the most butter. **SEND FOR CIRCULARS GIVING FULL PARTICULARS.**

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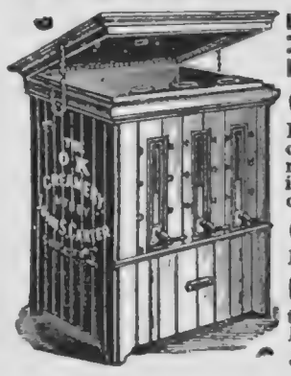
PERFECTION IN BUTTER MAKING.



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O. K. CREAMERY Has the largest cooling surface, takes less cooling material, less labor, and gives best results. All cream raised between milkings. Skimming glass whole depth of can, **showing condition of milk** without touching creamery.

O. K. CHURN Has improvements over the best. Easy to clean, **easy to operate.** Made of White Oak. **Cover Castings will not break.**

O. K. BUTTER WORKER Made on scientific principles. Adjustable bed. Preserves the grain of the butter. **Solid wood rollers. THE MOST PERFECT Butter Worker** ever put on the market.

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$1500 IN GOLD

FOR THE BEST ACRE OF

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$500 offered by American Agriculturist. $1000 offered by the Quinnipiac Co.

In event of the *American Agriculturist* Prize of **$500** not being taken by a crop grown exclusively with

QUINNIPIAC FERTILIZERS, WE OFFER $750 in Gold

for 2d, 3d, 4th and 5th Prizes in this competition. For circular with full particulars free, apply to our local agents, or address

THE QUINNIPIAC COMPANY
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SOWS EVENLY and ACCURATELY.

LIGHT. STRONG. DURABLE.

CROWN WHEELBARROW GRASS SEEDER

The very **BEST Machine** ever made to sow **Clover** and **Timothy. All iron wheel,** 40 in. diam.; like a Bicycle wheel. Hoppers 14 ft. long. No Gearing. No friction. Send for circulars of this Seeder, and the **"Crown Grain and Fertilizer Drill,"** the best on the market.

CAM HUB. VIBRATORY LEVER. This Machine can be set to sow the desired quantity (from 4 to 25 lbs. per acre) instantly. Wire agitator not affected by weather. **Saves** seed and time, and insures good hay crops. Every one *warranted*

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RUSTLESS IRON WATER PIPE.

Send for catalogue. **THE WELLS RUSTLESS IRON CO.**
Braman, Dow & Co., Boston, Ag'ts for New England. 12 Cliff Street, New York

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THE SCIENTIFIC GRINDING MILL

The BEST MILL on EARTH

has our **SAFETY BOTTOM** intended to prevent breakage should Iron accidentally get into Mill. Other improvements adapt Mill to grinding

EAR CORN with SHUCKS on.

A great saving of feed and labor of Husking. **The coming Feed for practical, economical Feeders.** Try it. **Can only be made practically on the Scientific** which also grinds any and all other kinds of Grain.

WE GUARANTEE Greater durability and better results than can be obtained with any other Mill.

WE GUARANTEE the **strongest, the simplest** and the **cheapest Mill made, quality of work, life-time of plates, and other parts** considered. Sent on trial to responsible parties. Numerous sizes for all Powers. All fully guaranteed.

Send for Illustrated Catalogue. Address **THE FOOS MFG. CO. SPRINGFIELD, O.**

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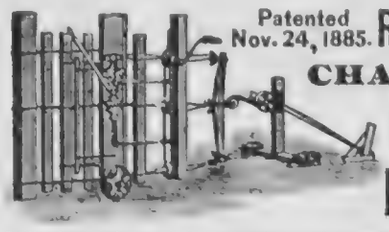

Patented Nov. 24, 1885. **RICHMOND CHAMPION FENCE MACHINE**

It is the only machine using wire cable for tension. It can use heavier wire than any other machine made. Can make fence from two to six cables. Can weave a picket ¼ inch in diameter, or a board 6 inches wide without changing the machine in any particular. For special prices, circulars, etc.,

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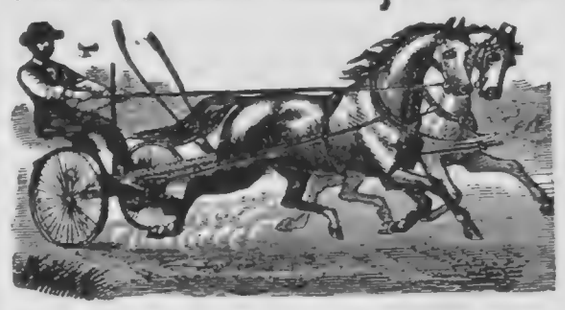
SENT ON TRIAL.

A Double Gang "ACME" Pulverizing Harrow, Clod Crusher and Leveler will be sent to any responsible farmer and if it does not suit may be sent back at the expense of the manufacturer. No pay is asked until tried on his farm. Farmers should not, therefore, let dealers palm off on them a base imitation or inferior tool under the assurance that it is better. **See advertisement on page 171.**

The Worcester Buckeye Mower



Has **Patented Self-Oiling Pitman.** Patented **Hardened Steel Chafe Plates,** maintaining the **Shear Cut** throughout the life of machine. A new device for carrying the weight of Cutter Bar lightly over the ground, preventing its dragging, and lightening draft.

A NEW SCYTHE

Which will not break at heel. Many other new and valuable improvements. Don't fail to see it. Send for 1889 Circulars. Agents wanted in unoccupied territory. Manufactured by

The Richardson Manufacturing Co.
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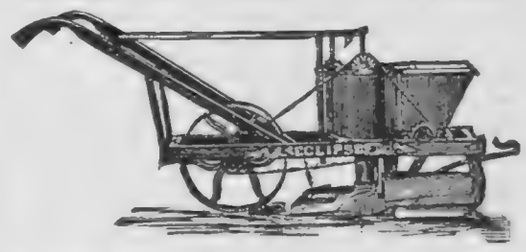
ECLIPSE CORN PLANTER.



Will plant Field and Ensilage Corn, Beans, Peas and Beet Seed in **hills, drills** and **checks**—in hills up to 45 inches; in checks from 36 inches up to any distance desired. Will distribute all Fertilizers **wet** or **dry.** Farmers, send for circulars.

ECLIPSE CORN PLANTER CO.,
Enfield, Grafton Co., New Hampshire.

CUTTON GRINDER

Perfect Machine Knife Grinder.

25,000

Machines in actual use testifying to its merits.

Can be carried into the field and attached to Mowing Machine Wheel. Send for new Descriptive Catalogue.

HIGGANUM MANUF'G CORPORATION.
MAIN OFFICE: HIGGANUM, CONN.
Successors to R. H. ALLEN & CO., 189 WATER ST., N. Y.

WILLIS SAP SPOUT.

One piece, with hook. *Handiest to use.* Will obtain **MORE SAP than any other.**

Send for Circular of Maple Sugar goods.

CHAS. MILLAR & SON, Utica, N. Y.
Also manufacturers of
Cheese and Butter Making Apparatus.

Farmers,
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Men,
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Children,

Of all Trades, Professions and Ages Read

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SOME read it for Profit,

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RURAL NEW-YORKER

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BOTH FOR ONE YEAR FOR

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Address the

RURAL NEW-YORKER,

34 Park Row, New York.

Literary.

THE DRUM LAKE EASTER SERVICE.

A story of the Michigan Pine Woods.

BY HERBERT W. COLLINGWOOD.

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MISS MARY was evidently the speaker of the choir. To give the minister some idea of their musical ability she brought out a well-worn copy of "Gospel Hymns," with the assurance that they could "sing all the tunes betwixt the leds of that book." She added that she sang the "air" while Miss Lucy sang the "counter."

The Parson looked dismally at the little book, for, like most ministers of his class, he had a sort of mild horror of the ringing tunes in that remarkable publication.

"As we have music of our own, I have never used the book you mention," he said slowly.

"But we're agoin' ter sing 'em today," said Miss Mary with an emphasis that left other discussion out of the question.

Miss Mary quickly made herself mistress of the situation. She walked about the room inspecting the decorations, her crutch beating a spiteful accompaniment to her sharp criticism.

"What's this fer?" she asked stopping in front of the green bower.

"I had expected that the choir would select that for their place," said the minister timidly.

"Think I'm gonter set in there?" asked the sharp-tongued "air" quickly, "Not much; I ain't no hen," and she raised her crutch, and with a few well-directed blows utterly demolished the rustic structure.

"We'll set right here, an' when you wants any singin', jest wink at us an' we'll sing fer ye."

Argument was useless, for at this moment Mr. McKelvey, or rather his voice, was heard calling Drum Lake to worship. The minister had hardly time to run to his room and put on his white surplice before the audience arrived.

It was a most punctual congregation. In ten minutes from the time of "McKelvey's holler," the religious portion of Drum Lake had assembled, and the little minister from his seat on the platform looked down with a queer feeling upon his congregation.

Just before him sat the "Chase gals," with Gospel Hymns open all ready for the signal to plunge into melody. Mr. McKelvey as usher, stood just before them, where his coat could show to advantage. On the first two seats sat some half dozen or more women, each one holding a baby. Several small children played about the floor, and one of them had toddled to the front, and grasped Miss Mary's crutch. Mrs. McKelvey sat with the group of women, with her baby on her arm, and an old copy of the service in her hand. Back of the "reserved seats," sat a crowd of men drawn there by curiosity, and the Parson's reputation as a fool. They all wore their every-day clothing, bright-colored shirts, overalls, and heavy boots.

A nod from the minister, he could not bring himself to wink, started the "Chase gals" into song. They sang "Only an Armor-Bearer" in a way that fairly captured the audience, and their voices blended so sweetly that even Mr. Grayling himself forgot the dreary poetry of the song as he listened.

Then the Parson rose to conduct the usual service, but there was nothing exciting about this. Mr. McKelvey was great on the responses. Not being a classical scholar, some of the longer words bothered him somewhat, but by shouting the difficult words in a louder tone than the rest, he got along bravely. The larger part of the audience soon became tired of rising as often as the service demanded, and after a time, Mr. McKelvey was obliged to do all the extra work himself, and he did his duty nobly.

When the Parson paused for the beautiful "As It Was In The Begining"—he was somewhat surprised to hear the choir, in response to his nod, begin, "Pull For The Shore." As the greater part of the congregation joined in with the chorus, the change was not so very bad after all.

The service went slowly on. The Parson had taken out his sermon and signalled the "Chase gals" for another song, when a woman came slowly in at the door, and staggered feebly to one of the rear seats.

She was dressed in a gaudy blue dress, and a wide flashy hat with a drooping white feather—her only clothes, and what a costume for a dying woman! Her hair was caught up behind in a great coil of gold, while her face was as pale as death, and her eyes glittered with a fearful and unnatural light. Little Mamie held her hand, and tried to steady her as she staggered to the seat. A whisper of horrified wonder ran through the congregation. "Sarcy Sal!"

(TO BE CONTINUED.)

Miscellaneous Advertising.

INFANTILE Skin & Scalp DISEASES cured by CUTICURA Remedies.

FOR CLEANSING, PURIFYING, AND BEAUTIFYING the skin of children and infants and curing torturing, disfiguring, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair, from infancy to old age, the CUTICURA REMEDIES are infallible.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease, from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c. RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., Boston, Mass.

Send for "How to Cure Skin Diseases."

Baby's Skin and Scalp preserved and beautified by CUTICURA SOAP.

KIDNEY PAINS, Backache and weakness cured by CUTICURA ANTI-PAIN PLASTER, an instantaneous pain-subduing plaster. 25c.

Real Estate.

Go South Young Man and **Buy a Home.** Stamp for particulars. E. C. LINDSEY & CO., Norfolk, Va.

A NEW COUNTRY!

The opening of the new **"SOO"** railway across Wisconsin and Michigan, gives access to desirable agricultural lands and large bodies of **Pine, Hemlock and Hardwood Timber.**

Superior Advantages Given to Parties Who Will Erect Saw Mills or Factories.

Choice farming lands cheap and mostly on time. **Railway Company pays cash for cordwood.** For further information address

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CALIFORNIA LANDS.

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LOS ANGELES.

We have for sale a large body of fine farming grazing and fruit lands in Ventura County, one of the most healthful, best watered and fruitful counties in the State. We offer lands from $5 to $60 per acre, on very easy terms to actual settlers. Special inducements to Colonists. For full information address R. W. POINDEXTER, Secretary, 19 West First Street, Los Angeles, Cal.

2,000 ACRE FARM

in Minnesota on the Manitoba R. R., suitable for either stock or grain, good buildings, plenty of water, soil deep black, 2½ miles from market; 320 acres ready for seeding. Will sell all or part, or rent. Enquire of **THEODOR NEILSEN, Winneconne, Wis.**

FOR SALE.—A fine farm, 555 acres, good improvements, plenty of water and hay. Apply for particulars to **R. J. GWILLINS,** Gwillinville, El Paso Co., Colo.

EXECUTORS' SALE.

The farm of the late Wm. W. Stacey in Fayette, Seneca Co., N. Y., 3½ miles from Geneva, N. Y., will be sold at public auction, at the Franklin House, Geneva, N. Y., on Thursday, March 7th, 1889, at two o'clock, P. M.

J. GEO. & D. L. STACEY, Executors.

CHOICE TEXAS LANDS

Rare Chance for Settlers.

The Railroad System of Texas having developed so as to bring within easy access of good interior and seaboard markets the lands granted to the

HOUSTON & TEXAS CENT'L RY. CO.

It has been determined to offer to settlers the

Renowned Agricult'l Lands

Located along the line of the Fort Worth & Denver City R. R., beginning with Wilbarger County, comprising

200,000 ACRES

In farms of 160 acres and upward. These lands were located by the Company among the earliest, with especial care as to soil, timber and water. They are adapted to the growth of cotton, corn, oats, wheat, barley, rye, vegetables, orchards and gardens and the various domestic grasses.

Situated in the elevated and healthy region known as the Southern Panhandle of Texas, they possess a ***genial climate,*** favorable to man and beast, where outdoor work can be carried on the year round, and are in marked contrast with regions of early and late frosts or of destructive "blizzards."

Population is fast pouring in, and local government is already established, with schools, churches, &c.

TERMS OF SALE: One-fifth cash, balance in four equal yearly payments, with interest on deferred payments.

For further information as to these and lands in adjacent counties, apply to

J. S. NAPIER, Vernon, Texas,

(who is prepared to show to purchasers); or to

C. C. GIBBS, Land Ag't, Houston, Tex.

Trees, Seeds and Plants.

SEEDS, SEEDS, SEEDS

The THORBURN POTATO

Earliest and Best.

See CATALOGUE OF VEGETABLE SEEDS FOR 1889.

MAILED FREE.

J. M. THORBURN & Co., 15 JOHN ST. NEW YORK.

If you wish A SUCCESSFUL GARDEN try

DREER'S RELIABLE SEEDS

Plants, Bulbs and **Garden Requisites,** which have been **a standard** *for over 50 years,* with the most critical gardeners. Our trial grounds enable us to test all, and to offer only varieties of merit. Good new sorts a specialty.

DREER'S GARDEN CALENDAR FOR 1889

is the finest Seed Catalogue issued. A complete guide to the *Garden, Farm* and *Pleasure Ground;* contains two colored plates, and 170 pages. Is mailed for **15c.** in stamps, and includes your choice of **one packet** of the following novelties; **Dreer's Golden Cluster Bean,** the finest pole bean; **Golden Self-Blanching Celery; Seminole Watermelon,** the most luscious grown; **Princess Beatrice Sweet Pea,** the new blush color; the lovely **Dahlia Gracilis,** blooms from seed the first season; **Nasturtium Empress of India,** the richest colored sort; **New Pompone Zinnia,** in all colors mixed. Will mail one packet of each of these varieties, including the *Calendar,* for **60c.** Mention paper and if a market gardener.

HENRY A. DREER, 714 Chestnut St., Philadelphia.

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40 Years' Experience in growing our strong and reliable **ROSES** Grand specialties in **PLANTS, BULBS & FLOWER SEEDS** of extra choice quality. Handsomely illustrated **Catalogue for 1889** with **colored plate** sent FREE to any address. **$8,000** worth of new Plants, Bulbs, etc., given FREE this year, see Catalogue **ROBERT SCOTT & SON,** Philadelphia, Pa.

SEEDS ROSES PLANTS

PLANTS AND TREES

GRAPE VINES, FRUIT and ORNAMENTAL TREES

CHOICEST OLD. RAREST NEW.

Among the latter we introduce the **CRAWFORD STRAWBERRY.**

YOU WANT IT! If you want **PURE TESTED SEED** or anything for **ORCHARD, GARDEN, LAWN or PARK,** send for our

VALUABLE FREE CATALOGUE

containing about 140 pages with hundreds of illustrations. **IT'S A BEAUTY! ORDER DIRECT. Get the best at honest prices,** and save all commissions. Thirty-fifth year; 24 greenhouses, 700 acres.

THE STORRS & HARRISON CO., Painesville, Lake Co., O.

ENSILAGE

PRINCE CHARLES CORN!

(Trade Mark Registered.)

Seed large and pure white; cob red; stalk tall, tender and sweet.

CHAS. E. PRUNTY, 7-S-Main, Saint Louis, Mo.

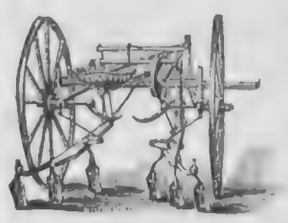
FAY CURRANT HEADQUARTERS GRAPES LARGEST GROWER OF GRAPE VINES IN AMERICA.

NIAGARA, EMPIRE STATE, EATON, MOYER and all others, new and old; also small fruits and first-class establishment. Lowest prices, highest grading, warranted true. In every respect a model. Free Illustrated Catalogue. **GEO. S. JOSSELYN, Fredonia, N. Y.**

Bless Your Souls!

My brother farmers, why pay **10** or **20** cts. for a seed catalogue, when you can receive one containing **just as many and very probably more varieties** and all new vegetables that are really valuable, for just **NOTHING?** It may have less paint about the covers, but, great Scott! we are not after **paint,** but **seed,** fresh and true to name, such as will make with a master's hand its own picture all over our farms and gardens; seed I am not afraid to **WARRANT** on the cover of my catalogue. Come, my fellow farmers, and join the thousands, who for thirty years have been users of my seed; why, we were a goodly company and having pleasant times together before the great majority of the present race of seedsmen (bless the boys!) had left their nurse's arms! Send for a catalogue.

JAMES J. H. GREGORY, Marblehead, Mass.



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(Hudson's "Bicycle" Patents)

THE GREATEST LABOR-SAVER IN CROPS, IN 20 YEARS.

No more holding the plows with the feet. No more rein-snatching and horse-guiding, and tearing out plants. No more difficulty in getting around at ends. No trouble on side hills.

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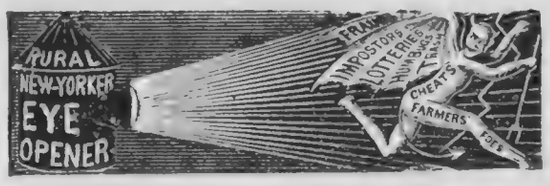

CONCERNS CENSURED.—Under this caption the Eye-Opener will, from time to time, give the names of various dubious concerns it has seen denounced in other papers, but which have not been investigated from the Rural Office. Marquand City, Mo., according to several papers, is one of those bogus paper cities that have been often exposed and denounced in this department. It is the offspring of a paper called the Mutual Helper, which purports to be issued in Ohio. This catch-penny affair is $1.50 a year, and every subscriber of this pittance is entitled to receive as a premium a clear deed of a $50 lot in Marquand City, Mo.! Is there any need of saying anything more about the fraudulent nature of this bogus place? If so, surely everybody should be satisfied that it is a swindle, on learning that Bain, the notorious Ohio "chicken swindler" is the editor of the alleged paper.....
A Chicago contemporary finds reason for censuring the method of doing business practiced by the R. W. Sears Watch Company of the Windy City.....Mr. B. Van Raub, of Boerne, Kendall County, Texas, who advertises ponies for sale, opportunities for young men to find employment on his "stock ranch," etc., etc., has for years been denounced by Eastern and Western papers as a humbug and fraud, but he must still find dupes, as he still finds it profitable to go to the expense of advertising pretty extensively in some papers and by circulars through the mails.....

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

REMARRIAGE OF DIVORCED PERSONS.

"A Reader" (no address). If a husband or wife gets a divorce in New York State, does it give the other party a right to remarry in another State? How is it in Illinois?

ANS.—Where a divorce is granted in New York State, the Court in some cases allows the libellee or defendant the right to remarry; but, as a general rule, this is not granted. If, however, the person goes to another State and gets married there, the marriage is valid, whether the party resumes his domicile in New York State or remains elsewhere. If a divorced resident of this city whom the Court has forbidden to remarry, crosses the North river to New Jersey, and there gets married and returns at once to New York, the marriage is valid in this as well as in every other State in the Union, and the person is not liable to any punishment, whereas if the party remarried in New York State he or she would be guilty of contempt of court and subject to punishment, and the marriage would be void. If people are divorced in Illinois, either party may remarry in that or any other State.

ALIEN LAND-HOLDERS IN PENNSYLVANIA.

L. T., Williamsport, Pa. Can an alien buy and hold a farm in this State, even if he has no intention of becoming a citizen?

ANS. In Pennsylvania an alien may purchase and hold real estate not exceeding in quantity 5,000 acres or in net annual income $20,000. The object of the law is to prevent foreigners from holding large bodies of land in the Commonwealth either as landlords or for speculative purposes. An alien, however, may hold any amount of land which he may have acquired by devise or descent.

"X" Burlington, N. J.—In another part of this State a female relative of mine lately died intestate, leaving personal property and a small but valuable farm. 1. Does the husband inherit the personal property? 2. Does he get the farm? 3. If he has only the use of the real estate during his life-time, should he not first be obliged to pay off all his wife's debts including the mortgage, with the personal property or the proceeds thereof?

ANS.—1. When a married woman dies intestate in New Jersey "the husband may demand and have administration of her rights, credits, and other personal estate and may recover and enjoy the same." 2. The husband in case the wife has borne him children, has the common-law right of courtesy in the wife's real estate, which is a life tenure. 3. The husband must pay from the personal property all the lawful debts due by the deceased wife except those secured by mortgage on the real estate, and the person who takes the real estate must take it with the burthens attached to it while in the hands of the deceased, and cannot put these burthens on the personality.

L. M. S., Medina, N. Y.—A marries and through the thrift and energy of himself and his wife manages to accumulate a considerable fortune. Then he dies. His widow marries again. On her death before that of her husband, what claim would the latter have on the property?

ANS.—He would have no interest in the property of the first husband except in the part of it which the widow may have received by bequest or inheritance. After the death of the first husband, his estate would be settled. What portion of his estate would go to his widow would depend on his will, or if he died intestate, on the number and relation of the heirs entitled to share in the property. When the widow dies, if she leaves no will, her second husband, if he survives her, will have no interest in her real estate unless she has borne him children, in which case he would have a life use of it. He would be entitled to one-third of her personal property and even more under certain conditions specified in the laws of descent. All this, of course, applies to this State, as the laws of descent vary considerable in the different States.

M. L. T., Beaver, Utah.—A man died here lately leaving a fine farm and a wife, but no will, children, father, mother, sisters or brothers. Who are his legal heirs?

ANS.—The laws of Utah for succession to the estate of one who dies intestate provide that if the deceased leave a surviving husband or wife, and neither issue, father, mother, brother nor sister, the whole estate shall go to the surviving husband or wife.

Miscellaneous Advertising.

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Of which are constantly being manufactured into

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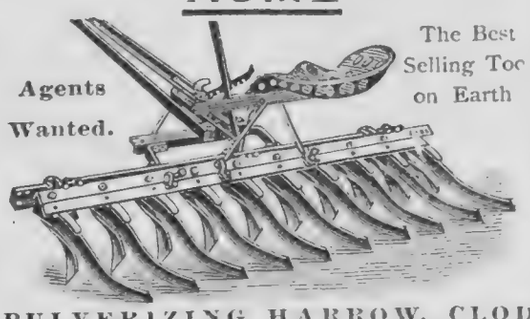

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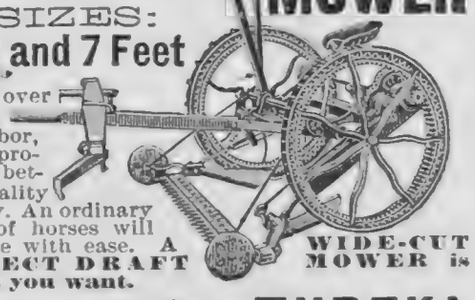

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Channel Steel Frame which clears all obstacles. Does not bury itself thus making it the lightest draft Harrow in the market. Right to buy, sell and use guaranteed. Send for Circular and Price List. Address

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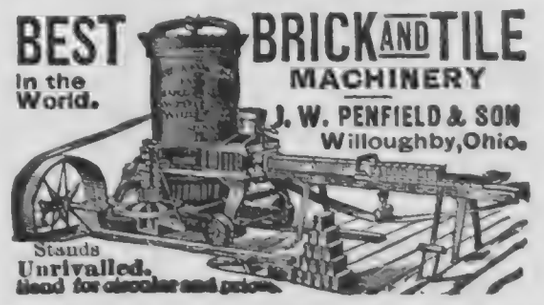

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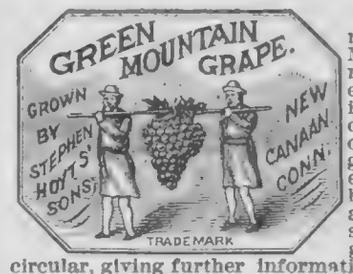

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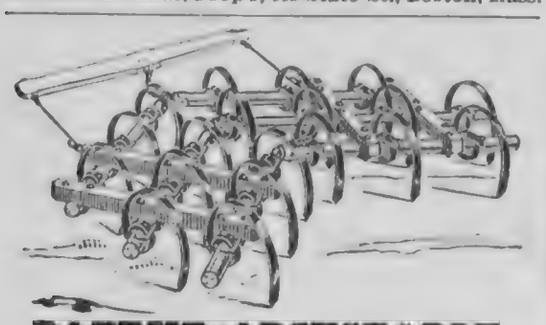

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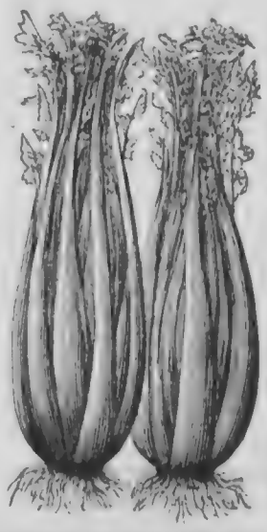

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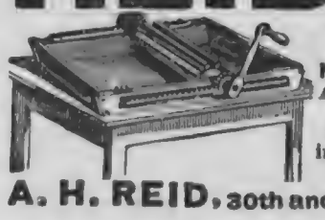

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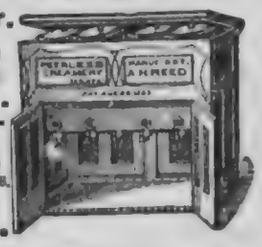

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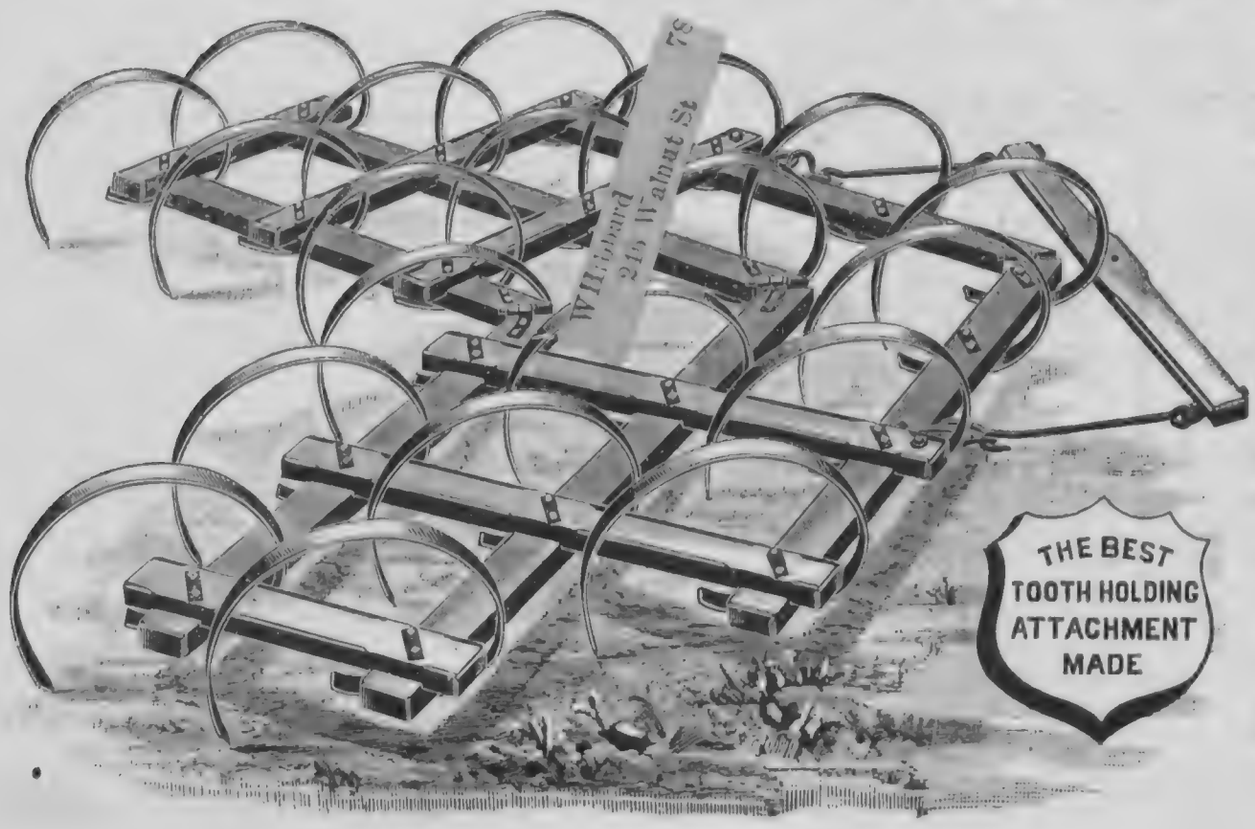

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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Spring

Once more, through God's high will and grace,
Of hours that each its task fulfils,
Heart-healing Spring resumes its place
The valley through, and scales the hills.

A. De Vere.

C. A. King

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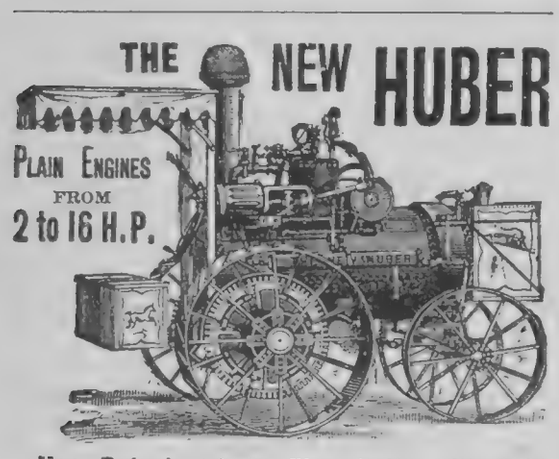

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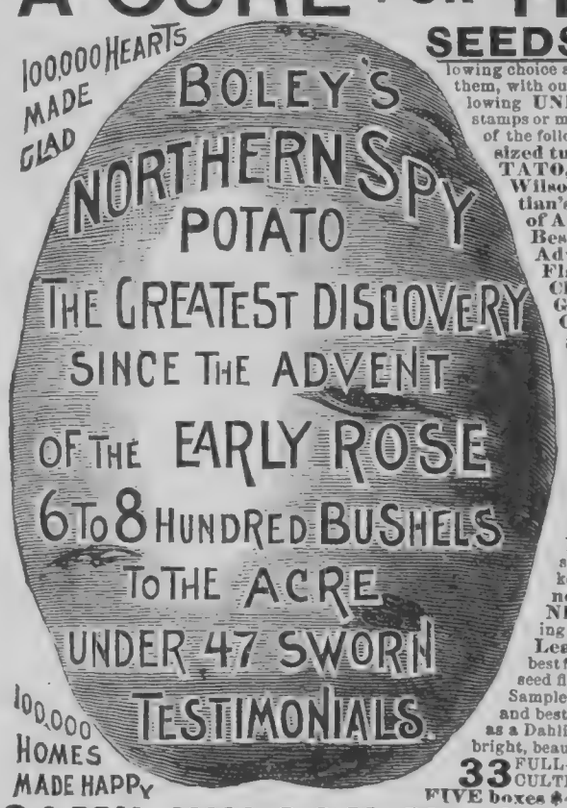

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL XLVIII NO. 2042 NEW YORK, MARCH 16, 1889, PRICE FIVE CENTS, $2.00 PER YEAR.

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Pomological.

THE WAYLAND PLUM.

OUR friend, T. V. Munson, recently sent us a photograph from which our engraving, Fig. 61, was made. Mr. Munson writes as follows regarding this plum:

"The Wayland plum originated with Prof. H. B. Wayland, Cadiz, Ky., many years ago. It was sent by him to J. S. Downer & Sons, of Todd Co., Ky. who named and disseminated it. In Southwestern Missouri, here in Northern Texas, and near Austin, in Central Texas, it has made a remarkable record for vigor, productiveness, beauty and excellent quality as a late plum, free from injury by the curculio and rot. It ripens about with the Heath Cling peach, and possesses the characteristics, in a large degree, of the Prunus umbellata, as do the Golden Beauty and Kanawha plums, which are equally successful in the South. The Wayland and Golden Beauty begin ripening together; but the former continues longest, and stays on the tree more tenaciously when ripe. The Golden Beauty was found wild on the Colorado river in Western Texas during the late war. Last summer I found a clump of bushes of a character similar to that of the Wayland plum, full of similar fruit, on the Little Wichita river in Clay Co., Texas. I consider them as belonging to the Prunus umbellata species, and not to the Chickasaw, as some do.

We have in the South another species of large-growing, late plums, which is, by some botanists, classed as Prunus Americana; by others as Prunus umbellata; but they agree in description with neither. They are commonly called 'Hog plums.' A dwarf, earlier-ripening plum (Prunus pygma), is also called 'Hog plum.' There is as yet considerable confusion about our native species of Prunus among botanists. They readily hybridize with each other, producing fertile progeny, and occasionally they cross with the peach, producing infertile progeny, so far as known. I have produced a number of such hybrids myself, and all are 'mules.' A large and promising field is open to the experimenter among native and foreign plums; for example, in handling the Wayland and Kelsey; Lone Star or Marianna, and the Ogon, Wild Goose and Botan, or Hattankin, or Satsuma, or Forest Garden and Prunus Simonii. Who will work it? It is rich in promise for the South and West." The engraving below is an exact photographic portrait of the Wayland plum, and is therefore true to nature.

A FRUIT TALK.

AT our house the other day, among other guests, was the well known horticulturist, Mr. Charles Gibbs, of Abbottsford, Province of Quebec, Canada, and I was surprised to find that his Duchess grape and other varieties were, as he said, nearly a week behind ours in ripening qualities. We could not save for our table in late November a bunch of the Concord or Niagara, and all early sorts had separated from the stems. But Salem (red) and Wilder (black) with the big black grape Herbert and the red Agawam, held very well to the stems. All the guests appreciated the Duchess, and the fruit has not lost anything in flavor or appearance. I am sorry we have not enough yet to put them upon the Christmas market, but we are of those who believe in using at home the best we can produce, and so the Duchess is our family grape, and it takes a good many to go around.

Among pears the Flemish Beauty was fair to look at, but the flesh was soft and decayed at the heart. So the best pear we found for our table that day was a russet, firm-fleshed variety called Mount Vernon. It certainly is a pleasant-flavored pear, and the tree bears every year. As we talked of fruit, we discussed some of the grievances to which growers are subject. "Why," exclaimed one, after looking over the markets, "the retailer gets more for weighing the grapes than we do for growing them;" and all felt the unfairness of the wide margin between grower and consumer. My husband related a disagreeable incident in his experience, which was that while going down on the steamer early this season, he saw a number of barrels bearing his full brand, and on inquiry found they were full of wild inferior fruit, all branded as our "Choice Fameuse." Some one had bought up the empty barrels and willfully neglected to scrape off the brand. This was certain to mislead buyers, as the name is well known on the market, and doubtless this trick is often practiced. But what can one do about it?

Prov. Quebec, Canada. ANNIE L. JACK.

STRAWBERRIES.—I fruit in limited quantity some 30 varieties of strawberries. If I were to grow but one variety *for my own use*, it would be Prince of Berries. If limited to four varieties, I would include Crawford, Belmont and Ontario. These are all large kinds that require as rich soil and high cultivation as onions, and plenty of room for each plant. Last season Jessie, Jewell and Mammoth were complete failures in the same plot and under the same conditions in which Crawford, Belmont and Ontario succeeded.

Litchfield Co., Conn. REUBEN C. HART.

THE WAYLAND PLUM. From Nature. Fig. 61.

IMPROVED FRUITS

Has any Real Advance Been Made During the Last Decade?

Correct Judgment Rendered Difficult by the Avalanche of Novelties Introduced Every Season.

PETTED NOVELTIES AND SPECIAL TREATMENT.

THE ALPHA STRAWBERRY FOR EARLIEST; THE MOUNT VERNON FOR LATE; THE BUBACH FOR SIZE AND PRODUCTIVENESS.

Hansell valuable chiefly for earliness; Cuthbert heads the list; Shaffer the best for canning; Golden Queen the best hardy yellow; Tyler and Souhegan essentially the same and scarcely superior to Doolittle; Hilborn has few superiors; Earhart the best ever-bearing. The Lucretia Dewberry valuable for its earliness.

Early Victor, Ulster, Nectar, Moyer, Poughkeepsie Red, Woodruff, Potter receive favorable mention. The best varieties in the South illustrated by Prof. Munson.

PLUMS AND APRICOTS. THE WAYLAND ILLUSTRATED.

The Lawson Pear is handsome and early—that is all. Le Conte and Kieffer in the South.

IDAHO VERY PROMISING.

Improved Varieties of Apples for Various Sections.

FROM PRES. T. T. LYON.

Since a fruit can scarcely be said to have thoroughly established a reputation within much less than 10 years, the specifying of different kinds, together with their valuable qualities, must necessarily be a difficult undertaking, and one respecting which conclusions will be very liable to differ. Such undertaking is rendered more difficult by the avalanche of novelties, each heralded as possessing new and superior qualities; while the difficulty is further increased by the self-deception of very many purchasers, who make pets of such novelties, and, by special treatment, secure results quite above the proper average, and these afford a warrant for higher commendations than those justified by the results of ordinary treatment. Only thus can transient success followed by ultimate failure, in very many cases, be rationally explained.

STRAWBERRIES.—To our earliest fruit, the strawberry, the foregoing remarks apply with peculiar force. After testing and rejecting numerous "earliest" varieties, I have found Alpha the earliest one which has proved reasonably productive, with the needful size and quality, and with satisfactory vigor of plant. I have not yet found its equal in these respects. Arnold's Pride, Bright Ida and Maggie are all seedlings by the late Charles Arnold, of Ontario, Canada, differing in season, though with a family resemblance, vigorous and exceedingly productive. Fruit of large, to very large size, and pleasant flavor; but lacking brilliancy of color. To insure the proper maturity of the crop, rich soil and thorough culture are necessary. Parry, Belmont, and perhaps Gandy are of good size, and superior quality, which render them valuable as family berries, and for this purpose they may be allowed a place among the improvements in question; although, with respect to some of them, there may be room for doubt.

MARKET VARIETIES.—Among these the Crescent holds high rank, but its advent was hardly within the decade. Summit, on strong soils, with liberal treatment, overcomes a lack of vigor, which is its most serious fault. The regular form, uniformly large size, and bright color of the fruit, with satisfactory productiveness, render it one of the most desirable of the later varieties where it has been fully tested; but its success generally is yet to be determined. Mount Vernon, on heavy soils, is one of the most valuable of the late varieties. The plant is vigorous and very productive. Bubach, for vigor and productiveness and for the uniformly large size of the fruit, is not excelled, if even equaled, by any of the older varieties. It seems destined to take rank among the very first upon the market list. Ontario, if it continues as it has begun, seems likely to excel its rival, the well known Sharpless. Jessie, Warfield and Haverland are receiving very high praise; but their performances are yet mainly in the future.

RASPBERRIES.—Hansell may be considered an improvement; but if so, on account of earliness only. Cuthbert, although nearly or quite outside the ten-year limit, heads the list of red varieties, whether for dessert or market. Shaffer, despite its forbidding color, takes precedence as the berry for canning. Golden Queen, on account of its pretentious name, for a time fell under suspicion. It is rapidly winning favor for vigor, productiveness and size. It retains its clear, bright color unusually well when overripe.

BLACK-CAPS.—Tyler and Souhegan are, for all practical purposes, identical. If accepted as an improvement, it must be on account of earliness. They are, however, but slightly earlier than Doolittle, which is, in certain other respects, their superior. Hilborn is apparently attracting less attention than it deserves. It has few superiors in size; while its clear, bright color and high quality are scarcely equaled. Nemaha is much like Gregg. If its equal in productiveness and superior in hardiness as claimed, it will rank among our best market black-caps. Earhart is the best of the everbearing black-caps, none of which are valuable save as producers of fruit out of season.

DEWBERRIES.—Lucretia is the only dewberry that has thus far proved generally successful. It ripens with the early black-caps, quite in advance of most blackberries, and derives its popularity from this fact.

BLACKBERRIES.—There are no recent introductions superior to the older ones, unless Erie or Minnewaski shall prove to be such. This is yet a question for the future.

CURRANTS have received no additions of established value since the advent of the Fay; and the relative value of this can hardly yet be said to be determined.

GOOSEBERRIES present no novelties, save perhaps the Industry, which must as yet be considered of very uncertain value in this climate.

CHERRIES.—Several novelties have received notice through the press and in the catalogues of nurserymen, among which are Olivet, Dougall's Seedling, and the introductions of Prof. Budd; but none of these can be said to have passed beyond the experimental stage.

GRAPES.—Of this fruit the mass of recent varieties is so great, and the status of many of them yet so unsettled, that it is in many cases impossible to determine to what extent, if at all, they are really improvements upon the past. The question of ability to resist cold, together with the various diseases to which the vine is especially subject, further complicates the question, demanding time for a proper solution.

BLACK GRAPES.—Early Victor is acquiring a reputation as one of the best, if not the best, very early black grape. Downing, although not generally introduced, is large both in bunch and berry. This, combined with high quality, promises much for its future. Ulster is, I think, entitled to rank as one of the best in quality. The plant is also satisfactory. Nectar, (heretofore known as Black Delaware,) is of superior quality; although not yet generally planted.

RED GRAPES.—Moyer is of fine appearance and good quality. It is put forward as a hardy and very early variety; but its performances, in these particulars, are yet in the future. Poughkeepsie is very promising, and seems destined to assume a leading position among varieties of its color, should it show itself free from the weaknesses of its rival, the Brighton. Woodruff, on account of its great vigor and hardiness, together with the large size of the fruit, both in bunch and berry, as well as its fair quality and great beauty, is sure to assume a leading position as a red market grape.

WHITE GRAPES.—Jessica comes from Ontario, with a reputation for hardiness and general good qualities. It will doubtless prove valuable, if it shall be found to excel the Lady in either of these important particulars, which is yet uncertain. Empire State and Diamond are both reported to possess exceedingly valuable characteristics, upon the future realization of which their status must depend. It may doubtless be reasonably anticipated that both will take precedence of the Niagara, at least so far as quality is concerned.

APRICOTS.—The recently introduced Russian apricots afford the only probable improvement of this fruit so far as adaptation to our American climate is concerned. They were introduced and for a time propagated from seed. Recently selections from the best of these have been propagated by budding and grafting; but the quality as well as the true value of these selections is yet but imperfectly known.

PLUMS.—Few additions have recently been made to the Domestica species of plums, and these mainly of varieties alleged to be curculio-proof or for other reasons specially desirable for the market.

At the Northwest where the varieties of Domestica generally fail, several valuable selections have been made from the native Americana species, among the more recent of which are Rollingstone and Hawkeye; but I cannot undertake to specify the qualities of each which specially characterize them. Numerous varieties of the Chickasaw are being introduced, but few if any of the more recent ones are yet so well or generally known as to warrant special recommendations. Pissardii is a variety of Myrobolan or Cherry plum, which is valued only as a curious bush or shrub, on account of its dark-purple foliage. Simon, Botan, Agon and others of a recently introduced distinct species from Japan, are put forward with the claim of superiority in certain particulars—a claim yet to be substantiated.

PEACHES.—Of this fruit the only recent varieties that are claimed to be specially valuable are such as from large size, showy appearance or other specially attractive characteristics are found to be profitable for market purposes. Of such almost every peach-growing locality has its special favorites; and, since these, in general, have but a local reputation, a comparison of their valuable qualities is impracticable, and mention of such is therefore omitted.

PEARS.—Of these very few recent introductions have been chronicled, and of such none has been generally disseminated and fruited. Lawson may perhaps come within the prescribed limit; but its chief value would seem to consist in its extreme beauty, which constitutes it a tempting object upon the market. Idaho is a variety originated in the Territory of that name. It has not yet fruited outside of its original locality; but specimens, as grown there, are of very large size, and of unusually high quality for so large a fruit. If equally successful elsewhere, it must prove very valuable.

APPLES.—At the East and North there is little activity in the origination and introduction of new apples, although at the extreme North and West, where the older varieties fail to withstand the severities of the climate, many newer and hardier varieties are being put forward to supply their places. Among these I may mention Scott's Winter, Fameuse Sucré, Decarie, and Canada Baldwin as popular at the Northwest; and at the extreme North, both East and West, I may name, in their order of maturing, the crab seedlings originated by Peter M. Gideon, of Minnesota, and especially commended by him as hardy in that trying climate; viz., Low, August, Florence, Excelsior, September, Cherry Red, Martha, October, Wealthy, Gideon, Peter. To these must be added the extensive importations of Messrs. Budd and Gibb, from Southern Central Russia, which are now being extensively tested, with varying success. Many accidental seedlings originating here, are also being tested, with what degree of success remains to be determined. West of Lake Michigan, and farther South in the newer regions west of the Mississippi also, a distinct class of seedlings is growing up, especially adapted to the climate and soil. Among these I mention McMahon, Wolf River, Pewaukee, Salome and Northwestern Greening as esteemed in Wisconsin, Illinois and Iowa; and Loy, Gano, Mammoth Black Twig, Early Colton, Indian, Red Bellflower, Shackleford, and Forest as valuable from Missouri southward; while Lincoln is said to be almost the sole variety adapted to Southwestern Texas.

Van Buren Co., Mich.

FROM SEC'Y M. CRAWFORD.

GRAPES.—Ten years ago the Delaware was, all things considered, our best grape, and I think it is yet. A skillful grower can bring it to perfection anywhere in the United States; but the great majority will make a failure with it anywhere. The Catawba and Iona are harder to raise, and the Brighton fails in many places. We want a grape as good as the Iona and as easily grown as the Worden or Concord; but I fear it is a long way off. The Jefferson is all right for quality, but not very hardy, and far too late for Northern Ohio. The Poughkeepsie Red and Ulster Prolific have not made a satisfactory growth here. The former is little more than a reproduction of the Delaware. The Lindley is as good as any, but not very hardy. I have seen no black grape as good as the above, but the Potter comes the nearest to it, and it may be grown wherever the Concord flourishes and with as little skill. It is of the Concord class with as large berries, but rather smaller bunches. It is two weeks earlier and as good a grower and with far better foliage. We have no white grape that fills the bill. Niagara and Pocklington are not good enough, Lady Washington is too late, and Jessica is too small and has been condemned at the Rural Grounds. With me it is the most desirable of all white grapes, being a good grower, perfectly hardy, very prolific and very early, while it never drops from the cluster, and is of the most delicious flavor. The Woodruff Red, although discarded at the Rural Grounds, is all and more than was ever claimed for it, on my place. For vigorous growth, hardiness and mildew-resisting foliage, it is all that could be wished. It was never claimed to be very good, but really it is good, and almost free from foxiness. The clusters are not very uniform, but the color is beautiful. It is a favorite with all who ever ate it here. So among grapes, I consider the Potter, Jessica and Woodruff Red, all introduced within ten years, as valuable acquisitions.

BLACKBERRIES.—We have a number of varieties that combine every desirable quality save one. The Agawam and Taylor lack nothing but size, while the Wilson Jr., Lawton, and Erie are deficient only in hardiness. The Early Harvest is very early, but so small and so tender as to be worthless in Northern Ohio or the Northwest. Leaving out the Minnewaski, which I have not fruited, I can see no gain in ten years. During that time, however, the Agawam has been coming to the front, and many have found out that it is perfectly hardy, wonderfully productive, of the very best quality, quite early, larger than the Snyder, and almost as large as the Taylor. I am speaking of the *genuine* Agawam, which is comparatively scarce, although nearly twenty years in the market. The genuine Lucretia has just what we want in an upright grower; but its trailing habit is hard to put up with, and it as hard to kill as the Canada thistle.

CURRANTS.—The Fay currant is an improvement on those that came before it in combining large clusters and large berries. I have seen the Versaillaise as fine as I ever saw the Fay, but the latter has fewer unproductive bushes.

RASPBERRIES.—The Hilborn is better than any black-cap ever before introduced, as it has all desirable qualities in a high degree. It has not a single weak point.

STRAWBERRIES.—There was never any room for improvement in the strawberry except in the directions of size and productiveness. The best berry then is the one that combines these two points together with the natural characteristics of this fruit. The two varieties that do this most satisfactorily are the Bubach and Jessie. These have been introduced within ten years. I might also name the Jewell and Haverland, but the former makes so few runners and needs such high culture, and the latter is so new that I will risk all on the two first named.

Summit County, O.

FROM T. V. MUNSON.

GRAPES.—Early Victor is superior to Ives in earliness and quality. Woodruff is superior in size, hardiness and earliness to other early

red grapes. Poughkeepsie is earlier and finer in quality and cluster than Delaware, as well as a stronger grower. Progress is large in bunch and berry, quite early and in quality and color almost exactly like Catawba. It is a fine grower and less inclined to disease. Lady Washington is excellent for size and beauty of cluster and fine quality. It is a good grower and altogether a magnificent grape in Western Texas. Triumph is of fine size of berry and of cluster. It is very productive, of fine quality and the vine is good. On the whole, it is the best late white grape in Texas. Empire State is praiseworthy for its rich yellow color, good quality and vigor of vine, but it is not prolific enough. Ulster is a fine pale red grape of medium season and rich flavor; but it is not a strong grower. Niagara is the best of the greenish-white grapes, with "foxy" flavor. It is superior in shape and compactness of cluster and a successful market grape. Excelsior is a grand pinkish late red grape with immense clusters and large, meaty berry of the highest flavor. It is successful in the Western part of Texas and will rank high in comparison with Vinifera varieties and is far more successful here. Jefferson is the most successful late, handsome, excellent red grape. Jaeger's No. 70, is a hybrid between Jaeger's Post Oak grape (V. Linsecomii), No. 13, and Vitis rupestris, (Jaeger's No. 60,) an exceedngly hardy, prolific black grape of medium size, free from disease. It makes one of the finest of clarets. It is a most valuable new strain of pure native blood for the experimenter to use in hybridizing. The flower needs fertilization to secure a full crop.

PEARS.—Le Conte deserves high commendation for earliness, prolificacy, beauty, fruitfulness, great vigor and fine appearance of trees, and it is a very profitable market variety in the South. Indeed it has revolutionized pear culture in the Gulf regions. Kieffer is better in tree than Le Conte, and is equally prolific, beginning to bear at a younger age. For very late canning it has no equal, and is passable for eating when properly ripened.

APPLES.—Arkansas Black is a fine dark-red winter apple; tree vigorous and prolific. A good keeper. Gano appears to be a decided improvement in color and quality on Ben Davis. Tree equally good. Fanny has fruited here two years, and sustains all the good things said of it by Charles Downing as a vigorous, prolific, large, handsome, good, very early, bright-red variety, much finer than Red Astrachan. Probably the most unique and desirable novelty of the decade is the bloomless, coreless, seedless apple. It is of good size and quality, and a good keeper. It originated in Virginia, and its character is vouched for by numerous reliable persons. The tree bears well annually. Among apples this promises to equal the Sultana seedless grape from which the high-priced seedless raisins are made. The Loy apple, which secured the prize at the New Orleans Exposition as the finest new variety over many others, is highly indorsed by all acquainted with it as a very fine winter variety. Wealthy in vigor of tree, productiveness, hardiness, beauty and goodness, has taken a first place where known. Bledsoe is a variety of Texas origin. It possesses great vigor, fine size, good quality, and is a certain and quite persistent bearer. It is a midsummer and fall apple in the South. It may be over 10 years since the Missouri Pippin was first introduced, but it is new, and takes a high rank as a good, red winter apple in the Southwest. The tree bears very young and profusely.

PEACHES.—The Peen-to along with the Chinese Honey and their seedlings now becoming numerous, have enabled the extreme South, especially Florida, to grow peaches profitably. Elberta is probably the most valuable yellow peach especially in the South, (also fine in the North) in cultivation. Onderdonk is some weeks later than Elberta. It is a clear lemon-yellow peach very successful in the extreme South. The Family Favorite is of Texas origin and is similar to the Thurber, but less acid and earlier. It is a very certain and prolific bearer. Sylphide Cling is a seedling of the Chinese Cling, but of better quality. It is not quite so large but of better color; it is very certain and prolific and ripens about with the Oldmixon Cling. The Bequett Free, from California, is a peach resembling the Oldmixon Free, but larger, a week or ten days later, and if anything better in quality and color; the tree is fine and prolific. Henrietta or Levy is a cling of a fine yellow color with a red cheek, about 15 days later than the Heath Cling; a very prolific peach where it will ripen. Bonanza is a white-fleshed free, a vigorous, prolific, good peach a week later than the Salway. Topaz is a large yellow free; similar to Salway, three weeks later, with large bloom. It is certain and prolific. Valuable South and in California. Barnes is an orange-yellow cling of good size and quality, productive, successful in the South; two to three weeks later than the Henrietta.

PLUMS.—Lone Star is a decided improvement upon the Caddo Chief and other extra-early Chickasaw varieties. It is nearly as large as Wild Goose, quite as good and productive, but not a strong grower. Marianna comes to fruiting more slowly than other Chickasaw kinds, and reports with regard to it have been very conflicting; but with several this year in Texas it fruited very finely, and ripened with the Wild Goose. It is nearly the same in size. With other people it produced little, and was smaller than the Wild Goose, and not so early; but in these cases the trees were too rank and leafy. In all cases the tree is a marvel of beauty and healthfulness. It grows readily from cuttings, and trees from these never sprout from the root, nor are they troubled by borers. It makes a very fine stock for other plums. Botan ripens about with the Wild Goose, is nearly the same size; a dark handsome purple; quality of fruit fine, tree excellent. Ogon is a little later than Botan, but much larger. It is of a clear light yellow, fine, rich quality. Tree good. Wooten is a fine Chickasaw, found on the Colorado river, Texas. It ripens about two weeks later than the Wild Goose, is not quite so large, but of better quality. In color the fruit is a bright red; and hangs on well. The tree is immensely prolific. Forest Garden is a pure Prunus Americana, and tested here with Quaker, De Soto and many others of its class, it stands first for vigor of tree, productiveness and persistency in bearing and freedom from disease, as well as in quality of fruit, which is nearly as large as any, being larger than the De Soto. Golden Beauty is a peculiar type or species, being neither Chickasaw nor Americana, and though Southern, yet hardy. It seems to embody the botanical characteristics of Prunus umbellata more nearly than any other. It is wonderfully prolific and ripens much later than other classes of American plums—about with the Heath Cling or Salway peaches. It is a clear orange yellow when fully ripe and good in quality, fine for jellies, jams or preserves, and is nearly as arge as the Wild Goose when fully developed. It is nearly a freestone. Wayland is of the same class as Golden Beauty, a little later and larger, bright crimson, with white specks, and to my taste it is the best in quality of all of our native plums. Its productiveness and vigor are astonishing.

BLACKBERRIES.—Early Harvest has enabled us to begin the season of blackberries about three weeks earlier than before its introduction, with a good berry and very profitable shipping market. Erie has a finer berry than Kittatinny and a healthier plant.

STRAWBERRIES.—Nothing has yet displaced Crescent and Capt. Jack here for market, owing to their productiveness, hardiness, and good market qualities; but Jessie, Bubach No. 5, Eureka, and above all the Parker Earle of Texas, are hot contestants for the field and doubtless will long hold important places. Warfield No. 2, from Illinois, Mrs. Cleveland, from Ohio, and Cloud, from Mississippi, likewise promise splendidly. Of all the very recent kinds the Parker Earle is the most distinct in characteristics, and at once the finest in plant, berry and productiveness.

FIGS are of interest chiefly in the South. Among many kinds the Magnolia, Adriatic, San Pedro and Black California head the list for fine size, quality, and the faculty of producing a crop on young wood from the ground the first season.

JAPAN PERSIMMONS.—Many varieties are doing well all through the South and doubtless the persimmon will become in time an important fruit, especially for home consumption.

Grayson Co., Texas.

FROM STATE POMOLOGIST P. M. AUGUR.

There can be no doubt that as much improvement in the production of new fruits has been made during the past 10 years as during any previous decade. One point, however, is sadly overlooked by most cultivators, viz., that a highly organized variety capable of the best results under appropriate treatment is more likely to fail under neglect than one of less than half its real capacity, even as a 74-pounder with a small charge of powder would be a failure. Hence the Belmont, the Jewell and the Jessie strawberries, and even the Sharpless, often fail for just this reason.

The requirements of any variety must be fully met to obtain complete success. Any variety forming large crowns and therefore capable of an enormous crop of large berries is for that very reason susceptible of greater injury than other sorts from exposure to severe vicissitudes and violent extremes of weather. An intelligent application of this principle is of the highest importance. I do not care, in making selections, to be critically limited to 10 years, as it takes more than that time to determine all the merits or demerits of a variety. The Baldwin apple 10 years after its first introduction had hardly attained its merited standing as the leading apple in the country, and the same may be said of the Bartlett or the Anjou pear.

Among apples I would mention the Yellow Transparent as a most decided gain in earliness and for market. There are several other favorable candidates which I forbear to name. The early Margaret pear is early, excellent and extremely productive.

Among grapes which, of course, date back more than 10 years, are Moore's Early and Worden, Niagara and Pocklington, Brighton, Ulster and Hayes. Some of these need better culture and care than the average planter gives; but they are all valuable when properly treated.

Among peaches there are several candidates of great promise, which I forbear to mention till they have been more fully tested. Fay's Currant is valuable beyond question.

The Nemaha and Dillon raspberries are both good, hardy and productive. The same may be said of the Erie and Minnewaski blackberries. The Jewell, Jessie, Bubach No. 5 and Belmont I have found valuable, but neither of them will stand neglect like the Crescent; nevertheless, they are valuable to those who can give them the needed attention.

What the cultivator needs, especially in these days, is improvement in methods more even than in varieties. Indeed the former is needed to give success to the latter; and if this is done we have new varieties that greatly eclipse the older ones.

Middlesex Co., Conn.

FROM SEC'Y. L. A. GOODMAN.

APPLES.—The Gano is an improvement over our most profitable apple, the Ben Davis, because it is equal to it in all other respects, and is a handsomer apple and of better quality. The Babbitt is the equal of the Baldwin of the East, and is the Baldwin for the West, and that is saying a great deal for it. The Baldwin is entirely worthless with us here. The Howell is an improvement on the Minkler, (which is one of our best keeping varieties) because it is a little larger.

PEARS.—We have a pear or two—seedlings of Missouri—which seem to be improvements, but they have not been tested enough. The Kieffer succeeds remarkably well.

PEACHES.—Elberta is an improvement on any of our old peaches, because it is more hardy and prolific, and if the tree be well cut back, the fruit will be of very fine size. Bonanza is also in the lead, because it is a remarkably good late peach and ripens well.

GRAPES.—The Niagara is an improvement on our white grapes, because it is so hardy and such a good bearer. Mr. Burr, of Leavenworth, Kansas, has brought out the best early grape I know anything about. Because it is so early, prolific and hardy is reason enough to call it an improvement.

RASPBERRIES.—Hopkins is a long way ahead of any of the older kinds with us, and many people have discarded all others. It is early, prolific, hardy, regular in ripening and lasts a long time in fruit.

Jackson County, Mo.

FROM REV. L. J. TEMPLIN.

This locality is becoming famous for the fine fruits that are raised here. It is nearly surrounded by high hills and mountains, which protect us in a great measure from all violent storms, and extremes of cold. Our winters are mild and dry, sunshine prevailing almost constantly from September to March. Our soil varies from very tenacious, calcareous clay to drifting sand. The prevailing kind, however, is a rich loam varying in degrees of quality. Apples and strawberries succeed well on the clay soil, and all common fruits, peaches excepted, do well on our loam.

APPLES.—Nearly all varieties that have been tried succeed well here. The most popular for market are Ben Davis, Jonathan, Missouri Pippin, Rawle's Janet, Winesap, Pewaukee, Yellow Transparent, Duchess, Maiden's Blush, etc.

PEARS have been a fair success, though most of the trees are too young to enable us to determine positively what they are to do for us in the future. The worst danger seems to be from their early blooming, which exposes them to spring frosts. Our very warm spring sunshine, running up into the eighties in March and into the nineties in April, so warms up both soil and atmosphere as to bring on vegetation very early in the spring; and our contiguity to the snow-covered mountains, and the rare, dry atmosphere render spring frosts somewhat liable.

PLUMS of the cultivated varieties, and cherries have not yet made themselves a sure standing as profitable crops. The Morellos seem to be the only cherries that we can rely on for profit. The Wild Goose plum is not a success yet. It may do better in the future. It needs something else near at hand to fertilize it. The Marianna has given excellent satisfaction. We have some native kinds that are about equal to any of these, being hardy, prolific and of good size and flavor.

BLACKBERRIES.—The Lawton and Kittatinny are too tender for us. The trouble seems to be due not so much to the degree of cold as to the extreme dryness of our winters, which exhausts the vitality of the plants. Snyder is generally hardy, but the vines were severely injured by the severity of last winter, which was the severest ever known, killing all our grape-vines to the ground—even our hardiest kinds. This never occurred before. Stone's Hardy blackberry I have not tried, but those who have tried it speak well of it. Lucretia, though injured on my grounds, is the most promising thing in the blackberry line. I shall plant largely of it this spring. I shall set posts and draw a wire along each row and tie the vines up like grape-vines. This will facilitate cultivation and the gathering of the fruit.

RASPBERRIES.—The Doolittle is hardy and prolific, but too small to be profitable. Mammoth Cluster is vigorous, hardy, prolific and profitable. Gregg is too tender and has been generally discarded. Tyler is early, very hardy, and immensely productive. It is our most profitable kind. The reds have not proved a success. The Turner is too tender. The Crimson Beauty is on trial. I intend to try Shaffer's and Johnston's Sweet this year.

STRAWBERRIES.—Of this fruit we have tried a great many varieties. The Jucunda, Manchester and Crescent are the most popular. The Lacon is one of the most profitable for me, giving as many large berries as any other and small ones "too numerous to mention." The Jumbo is only a shy bearer with me, and too soft. Old Ironclad makes plants and but little else. I shall discard it. Big Bob does only fairly well with extra culture. The Jewell produces but little fruit and no plants to speak of. I shall give it another trial and a better chance, and if it does not do better it must go. I expect to plant five acres this spring mostly of Manchester, Jucunda, Crescent and Lacon; but I shall also set some Bubach, Kentucky and Jessie.

Fremont Co., Colo.

FROM T. H. HOSKINS, M. D.

APPLES.—The Wealthy, though the seed of the first tree germinated about 20 years ago, has become generally known, and is hailed, along the northern border, as well as in Canada, as the most valuable apple yet introduced, for that section of our continent, within the limit given. In early bearing, productiveness, size, beauty and quality of fruit, the Wealthy stands among the very best of American apples. To this I would add the McIntosh Red, which, where not affected by fungous spots, is even superior to the Wealthy. As an early apple, the Yellow Transparent has risen into view, and its culture has extended all over the country within the same time.

PEARS.—My own direct personal experience is limited to the New Russian sorts, introduced in 1883-4. These are the only pears that have yet been found to endure 40 degrees below zero unharmed; and a large extent of populated North America requires this endurance of all its tree fruits. Bessemianka and Sapieganka are two fall pears of medium size and very good quality, good growers, and though not yet yielding more than a few specimens, evidently early bearers, and quite at home in the "Cold North." From them will undoubtedly be produced a new class of iron-clad seedlings, extending pear culture at least 200 miles further north on this continent. In that region all other known pears have proved to be, practically, hopeless failures.

CHERRIES.—The newly imported "Griottes" (Mazzards), from North Germany, Poland and Russia, have given to the same section a good class of fruit of this race. In size and quality some of them, at least, are decidedly superior to any hitherto known in America under this name; while they prove themselves not only able to endure our hardest winters uninjured in tree, but also in their fruit buds, giving a full crop without failure. It is too soon to give a selection by name from among these, but out of nearly 40 kinds in hand, such selections will be possible within a few years. They all seem to be good growers and bearers, and the selection will turn, therefore, on their other points of value. Some of them are distinctly sweeter and larger than any of the Mazzards before known to me.

PLUMS.—Moore's Arctic, though not large, or of superior dessert quality, has acquired a high repute for early and profuse bearing. It is rather over-named as indicative of its

hardiness, though it is probably the hardiest of the American seedlings of Prunus domestica. Several new sorts from amoi g our native plums have appeared, and of these, for the North, De Soto seems to be the most valuable variety, either for home use or market. A considerable number of the plums of Northeastern Europe are now undergoing test, and the prospect is fair that we shall find among them some very useful recruits for far northern orchards.

STRAWBERRIES.—The Crescent is very widely accepted as the most generally successful among the early sorts. Sharpless, for size, has taken the palm; and, among other sorts, Manchester and Windsor Chief seem to have acquired general and permanent acceptance. These are non-staminate. No staminate sort yet seems able to push Wilson from its throne; though there are many aspirants under trial.

RASPBERRIES.—Turner, Cuthbert and Shaffer are positive and, I think, permanent additions to the list of valuable reds; while among the blacks I have yet to see any real advance beyond the old Doolittle.

BLACKBERRIES.—I recognize no notable addition among these since Snyder. We have nothing positively new and valuable among gooseberries; but among currants, Fay's Prolific is a great gain, giving us a fruit equaling the largest in size and the most productive in crop and vigor of growth. I much regret that very little, if any, gain can be recorded so far as American gooseberries are concerned, a thing much to be wondered at in so improvable a plant.

Orleans Co., Vermont.

FROM A. B. COLEMAN.

During the past ten years many new varieties of fruit have been introduced, yet comparatively few have proved valuable. Thousands of dollars have been spent by professional fruit-growers as well as by amateurs in efforts to procure something a little better than anything before tried. It is unfortunate that the record does not show more successful results than the absolute facts would indicate. A new variety of fruit always sells at a high price when first introduced. Many of such introductions possessing no other merit than that of proving remunerative to the introducers, are speedily discarded as worthless or unprofitable. The present seductive method of advertising, with judiciously selected descriptive adjectives and handsomely-colored plates, does its work very effectively and catches many a tyro as well as professional in the fruit business.

I am not prepared to say just what progress has been made during the past ten years in the production of new fruits. The list has been lengthened, but the improvement has not been in proportion. The lists of all kinds of fruit cultivated in this country are too long, and the descriptions given by many nurserymen are so extravagant and misleading as to confuse the uninitiated in making selections. Were we to take the descriptions as we find them in the catalogues, as our guide, we would invariably select fruits of recent introduction, as they are made to appear far superior to any of the older sorts. Fortunately we have a few faithful sentinels who tell the truth, unvarnished and unadulterated, about new fruits as they appear, stripping them of all the false and fanciful claims made for them by those directly interested. No one has rendered more efficient service in this direction than "THE RURAL NEW-YORKER." It has fought vigorously and valiantly for truth, right and justice, regardless as to whom its action hurt or offended.

It is questionable if a better apple has been produced in the last ten years than Ben Davis, Winesap, Limber Twig, Baldwin or Nickajack, Winter Pearmain, Grimes's Golden or Newtown Pippin.

Perhaps no better pear has been brought out than the Bartlett, Angoulême, Louise Bonne de Jersey, or Seckel, and no better peach than Oldmixon, Heath Cling, Crawford's Early and Late, Flater's St. John or Amsden. The Yellow Transparent Apple has grown popular on account of its extreme earliness—and in this respect only, is it superior to the Early Harvest or Red Astrachan. Many Russian apples have been introduced which, it is thought, will prove valuable in the Northwest on account of their hardiness.

Among small fruits the strawberry and grape lists are growing very long. The Empire State, Pocklington, Jefferson, Francis B. Hayes, Moore's Early, Diamond, Triumph, Eaton and Woodruff Red, among the newer grapes, will doubtless prove very valuable; but not more so than many older varieties. The new strawberries are almost innumerable. We have large additions to the list every year, coming from all parts of the country. In the introduction of new strawberries, quality seems to have been sacrificed for size and productiveness. The old Charles Downing and Kentucky are yet popular all over the country. They do well everywhere and yield good crops of excellent berries when treated with even moderate consideration. The Kentucky is still regarded by many as the best late berry, all things considered, yet introduced, although it has had strong competitors in the Glendale, Windsor Chief, Daniel Boone, Manchester, Ohio and others. The Crescent has perhaps yielded more money to the professional fruit-growers since its introduction than any other variety ever did during the same length of time. Its great productiveness, when well supplied with pollen from another variety, and its capacity to take care of it self under adverse conditions of culture soil and season, have made it popular over a wide range of territory. But its rival is coming; in fact, it is already here. Cloud's Seedling is its name. This "Cloud" is rising over the Southern horizon. It is making its way to the North, the East and the West. It is dark and ominous, and will evidently develop into a cyclone. It is going to sweep the country. It has all the characteristics to enable it to accomplish the task. It has vigor and strength; it needs no petting, or stimulant. It asks for no fancy picture of itself, for no indorsement from Messrs. Dick, Tom or Harry. It is coming forward upon its own merits, and will consign many a sad and sickly novelty to that bourne from which no berry ever returns. Let us wait and watch the fun. The Bubach, Jessie, Haverland and Summit seem to be making a fine impression wherever they have been introduced, and will doubtless become very popular.

Among raspberries the Tyler and Souhegan are perhaps the best early, and the Gregg the best late of the black-caps. Turner and Cuthbert are the best of the reds. Shaffer is the largest of all raspberries, and a very excellent sort. The berry is purple and the vine is a vigorous grower, very prolific and the best of all for the family garden. It makes an excellent jam. The pleasant acid flavor is very refreshing.

Caldwell Co., Ky.

THE CRANDALL, THE NEW BLACK CURRANT.

A SEASON'S trial of this new currant shows that it really has some very desirable qualities. In spite of the severe drought of last summer, it made a vigorous growth, fruiting on the one-year-old wood. It is like the common black currant in being absolutely free from insect enemies, either here in New York State, or in Ohio, or in Kansas, its original home, but it differs from it in not having that peculiar odor, resembling that of a bed-bug. The taste is like that of a ripe gooseberry, with something of a sub-acid quality of the red currant. For pies, jellies and jams it is not inferior to any of the small fruits which are similarly treated, and unlike raspberries, it has but few seeds. As far as the disseminators, Messrs. Frank Ford & Sons, of Ravenna, O., are able to learn, the Crandall is a hybrid from the Red Cherry currant, (Ribes rubrum) and the Missouri Yellow (Ribes aureum) and with me its habit and productiveness confirm that idea. The color is a shiny bluish black; the size ranges from a half-inch to three quarters of an inch in diameter. It greatly resembles a Concord grape, and as a market fruit, seems almost without a rival.

E. E. S.

WESTERN NEW YORK APPLES.

IRVING D. COOK.

Present discouragement owing to heavy production and consequent low prices; hopes for the future arising from mismanagement of orchards, and room for improvements in planting, care, and marketing.

IN view of the enormous quantity of apples harvested the present season in Western New York, and in nearly all other localities adapted to their growth, the ruinously low prices prevailing at the present time, and the discouraging outlook for those unable to take advantage of the earlier and more remunerative markets, it is but natural that the orchardist should be forcibly impressed with the thought that perhaps this industry, which once seemed to insure pecuniary success to those engaged, was, after all, to result in disappointment, failure and loss. And were the vast and numerous orchards that have been planted during the last two or more decades properly cared for in all the essentials necessary for their productiveness, and in full bearing every year, there would indeed be sufficient cause for apprehension.

But when we consider that thousands of trees thus planted, owing to neglect in various ways, die before arriving at bearing age; while as many more, after struggling for existence for a few years only, produce partial crops of small and inferior fruit, and that it is only in exceptional years like the last, we are likely to have a full and nearly universal crops in all parts of our fruit sections, we may well conclude that he who wisely and perseveringly adopts the methods calculated for success in this direction, and produces for market the best varieties of first-quality fruit, will be amply rewarded.

Experience is the best of all teachers, as many of us have learned in reference to some of the best methods: for we now discover that our bearing trees are, many of them, much too near together for the full development of the fruit, and we unanimously agree that 40 feet is as near as they should have been planted, and many who for years have cultivated and tenderly cared for their orchards, are now reluctantly, after they have arrived at bearing age, engaged in cutting out alternate trees, which is seemingly the only alternative left; for it is becoming fully demonstrated that light, air, and the uninterrupted rays of the sun are essential for the production of the most desirable fruit. And, again, we are becoming thoroughly convinced of the fact that we cannot reasonably expect to grow fruit thoroughly well, unless the tree maintains a healthy and vigorous growth, which can be attained only by the required cultivation, or a free application of surface manure spread evenly over the ground as for other farm crops, thereby acting as a mulch and furnishing food for the myriad rootlets constantly reaching out for nourishment.

Insect enemies must also be persistently fought, for, no matter how large and well developed an apple may be, if defaced by worm holes, its market value is materially lessened. Paris-green and London-purple, if properly applied, have proved effectual insecticides in numerous instances. In the matter of sorting and barreling the fruit for market there is undoubtedly great need of reform, and when buyers discriminate properly between first-class, selected fruit, and that ordinarily put up, and the producer is fully remunerated for so doing, then only can we hope for improvement in this direction.

Let all of us, then, who are engaged in this branch of farm industry, learn lessons of profit from past experience, and adopt whatever methods will tend to promote the growth and productiveness of our orchards, grow more and better fruit, besides giving us the conscious satisfaction of having so well performed our part that, notwithstanding the discouraging present outlook, perhaps the balance sheet will yet be in our favor.

Genesee Co., N. Y.

Miscellaneous.

NEW LEGISLATION NEEDED CONCERNING MONOPOLIES.

No. 1.

PRESIDENT W. I. CHAMBERLAIN.

JUST laws are of slow growth. They must rest upon the solid basis of philosophic justice and ethical right, and must regard all the varying circumstances involved. New laws grow out of changed conditions. The growth of irrigation in Colorado and in California, for example, revised and almost reversed the old code of "riparian rights" or laws of watercourses. It is therefore perhaps not strange that our legislation, for the past 50 years, has lagged far behind the giant strides of progress in invention, manufactures, agriculture, population,—in short, it has fallen behind the growth of scientific knowledge and industrial skill, and the increase of material wealth in this amazing nineteenth century.

Clearly many of our laws must be modified, and new laws must be passed to meet our changed conditions. Nowhere is this more needed than in fixing the *right* of capital invested in monopolies, and its *limitations* necessary to protect society under Republican government. Now since ours is a government "of the people, by the people and for the people", it is clear that the people themselves must grasp the underlying principles; or the laws made by them and their representatives will not be just to all conflicting personal and society interests involved. Let us study briefly some of those underlying principles The farmers must grapple with existing evils springing from monopolies or these evils never will be righteously prevented.

OWNERSHIP.—All ownership rests upon the fundamental, axiomatic right of every human being *to live by work;* that is, to have, enjoy, sell, give, keep or bequeath the results of his labor expended upon natural material. This individual ownership, however, *is never absolute and unlimited.* It is always subject to the needs of society and the support of the government; for men by their very nature and limitations must live in society in mutual interdependence of rights and duties; and society must have a government. Now, a just government renders valuable service to the individual in the way of defence, protection, redress, diffusion of knowledge, promotion of agriculture, mining, manufactures, navigation and commerce; that is, it promotes the creation, diffusion and enjoyment of wealth in its widest and best sense. It makes property possible and valuable.

TAXES.—This all costs money, and taxes are the price paid by persons and property for this aid and protection; and since all persons and all property are protected all should be taxed. As to property, the just principle seems to be to tax all actual, tangible property, where the property itself lies, at its actual value with no exemptions of private property and no duplicate taxation as, for example, of land, and then of a mortgage resting on it without any offset on the land. Taxes are a just limitation upon the ownership of all private property, and avoidance of them by false oath, concealment or otherwise, is theft from society and from government, its representative. I assume these principles as granted and therefore do not argue them.

PROPERTY IN LAND.—From the very nature of land it is a *possible monopoly*, and hence requires special limitations, for reasons to be given further on. Land is both *fixed in position and indestructible in form and matter.* In these respects it differs from other forms of property. But society must have roads, streets, railways, docks, bridges, sites for public buildings and the like, and these must often pass through or rest upon land till then owned by individuals.

"EMINENT DOMAIN."—The right of the government to take, or to empower railway or other companies to take, such private land as is needed for public uses, even without the owner's consent, is called the right of "eminent domain." This right, I think, does not grow out of the fact that society was the original owner of the land before it was divided by original sale to individuals, but from the nature of land noted above, and the needs of society. All our property and even our services and lives in war are subject to the needs of government, to protect *its* life and promote *its* usefulness to society. Now, when government needs our other property or our services we may commute in kind, that is, pay a cash tax, or send a substitute to war. But when it needs our land for roads, etc., it needs that particular land. We cannot commute in kind or in cash. The difference lies in the nature of land, not in the origin or extent of the right of the government to take our property.

When the government takes the land of individuals, however, for public uses, since the present owners paid society, its original owner, the value of the land when thus purchased, and since they have labored or paid for labor to improve it to its present condition and give it its present value, it is clearly just that society, if it need the land again for public uses, should pay its present owners its present value, and the damage, if any, to adjacent land that is cut, divided or injured. If you sell me a calf, and I rear it to an ox, and you need it back, you should pay me the value of the *ox* and not of the *calf.*

This right of "eminent domain," not only does not deny, but establishes the individual ownership of land. Not even society through government, its agent, may take or empower any one to take private land needed for public uses, except by paying the present owner its present market value, and damages, if any.

LAND A POSSIBLE MONOPOLY.—But property in land is still further limited for the good of society, from the fact that it is by its very nature and by the constitution of man a possible monopoly. Now, the right to life by labor involves as a consequent corollary, the right of needed access to and use of the materials and forces of nature, God's gifts to the race. The world does not "owe every man a living." It does, however, I think, owe him a fair and equal chance to earn one if he can and will. That is, it owes him the possibility of needed access to nature's materials and forces, that he may earn such living if he can by skill and toil of brain and hand combined. Land is made up of these materials, and gives access to these forces. But in order that all men may have needed access to land, no one man or class of men should be permitted by Government to have a local or national monopoly as against the right of society or of individuals to purchase and use needed portions.

But in England, for example, there are some 32,000,000 acres of land and some 25,000,000 people, not quite one and a-third acre to each inhabitant, scarcely enough to give sustenance to the people even if all the land were devoted to agriculture. But ten thousand men own two-thirds of all this land, and keep much of it in parks, game closes and the like, to the exclusion of agriculture, population, schools, churches and social life, to the increase of poverty and crime and to the serious damage of society. These ten thousand landed aristocrats own, each, on the average, *five thousand times as much* as each of the rest of the people can own on the average unless they emigrate. This outrageous inequality dates back to the Norman Conquest when the king, so to speak, carved up the island and dished it out to favored courtiers and captains, who with their descendants did their best to hand down the outrage and make it permanent by ingeniously devised laws of primogeniture, entail and difficult land conveyancing.

Such facts gave rise to Herbert Spencer's, and later, to Henry George's, views to the effect that *all* individual ownership of land is fundamentally wrong, a robbery of society. But manifestly government may control individual land-ownership to any extent needed, without destroying it. The fact that such ownership has not always been properly controlled in the interests of human progress does not prove that it cannot be, or that it is wrong *per se*. Since property is the result of labor wisely expended on material, and since land is material, philosophy seems to show that property may vest in improved land as justly as in other improved material, while history seems to show that individual ownership of land, as of other things, is best if properly controlled; that it is the best incentive to individual effort, to the creation, distribution, preservation and rational enjoyment of wealth, to human progress and to the highest and best civilization.

HENRY GEORGE'S PLAN.—In this country the original distribution of land by the Government to actual settlers was, on the whole, wisely planned to correct the great evils of English land tenure, though it has not always been so wisely executed Measures may yet need to be taken to prevent, or even break up without injustice, the ownership of large tracts of contiguous land by individuals, companies or syndicates, especially non-residents. On the whole, however, the tendency of our laws of inheritance, land tenure and transfer, and the drift of our free institutions, is to break up large landed estates rather than to accumulate them. Mr. Henry George's plan of practically confiscating land values to the State, by removing all tax from all other property of every sort, and putting it all on land values in form of *rent* paid to the State, does not seem just. It will not meet the approval of the millions of small farmers who have put into their improved farms, in purchase cost and subsequent labor and expense, all that the farms would sell for now. They do not like to *buy* their farms of the State, and afterwards, by *ex-post facto* law, be forced to *pay rent* on them to the State, while railways, steamships, city blocks and palaces, and all other property of every sort go untaxed. That in substance is Mr. Henry George's plan. Farmers and all just-minded men should, I think, resist this. They should just as earnestly resist all tendencies towards a monopoly of land in the hands of a landed aristocracy.

State Agricultural College, Ames, Iowa.

Everywhere.

RURAL SPECIAL REPORTS.

Delaware.

DOVER, Kent Co., February 20.—February 20, and not a sleigh ride yet, and but a very small amount of ice has been housed. This is enough to as onish the oldest inhabitants and cause them to take a retrospective view of the last decade or so, to produce its equal. January was mostly warm and pleasant weather; but February so far has been better winter weather. We have had several light snowfalls, but not enough snow for sleighing. The mild winter seems to have a depressing effect on the market for farm produce. Never before do I recollect eggs being as low as 12 cents per dozen. Fruit prospects good so far. The cold weather this month kept the peach buds from starting This has been a fine winter for farmers to do work, but it seems that little is ever done till the usual time to start spring work, let the weather be what it may. Cattle are unusually high and in good demand. Dealers asking $300 and $450 per pair for Western mules, and from $125 to $175 apiece for horses. Hay and other feeds are in demand. Wheat looks unusually well. Farmers are looking up help for the coming season. Every year help seems to be more scarce. I think this State would be a good place for many a strong young foreigner to come to, as the hired-hand question is certainly becoming a troublesome one to solve. It is almost impossible to get help in the kitchen also. A. G. S.

Indiana.

PENDLETON, Madison Co., February 16.—Wheat has been continually exposed to the vicissitudes of the weather, there being no snow to protect it. The mercury has been down to zero only once during the winter, though there has been the usual amount of freezing and thawing. If the weather continue mild, we may have average crops. Natural gas is so plentiful that all the towns in this region have fuel and lights in such abundance that factories are being located on an extensive scale, giving employment to many hands, and adding largely to the population, and the home market. S. W. H.

Michigan.

HART, Oceana Co., February 21.—So far, this has been a very mild winter—no snow for sleighing till February 1. Winter wheat was looking well when snow came. The thermometer has been at zero only twice this winter. Prospects for the fruit crops are good. Farm products of all kinds are very cheap, except hay which brings $10 to $20 per ton. Oats, 34 cents; wheat, 80 to 85 cents; Corn, 35 to 40 cents; potatoes 18 to 20 cents, and no market at that. Plenty of snow at this time. M. A. I.

Pennsylvania.

NEWCASTLE, Lawrence Co., February 21.—Last fall was very wet and winter brought no snow to amount to anything until within the last week. Now there are about six inches, and sleds and sleighs are running quite lively. Wheat looked well when the snow fell. There was not quite an average acreage on account of so much wet weather in the fall. Potatoes were a fair crop, but they rotted badly and there are still some in the ground, as it has been so wet that they could not be got up. They are 40 cents per bushel; eggs 20 cents per dozen; butter 25 to 30 cents per pound. E. A.

Missouri.

DUNLAP, Grundy Co., February 14.—I have read the RURAL for nearly 20 years, and for two-thirds of that time, I have resided in Missouri. I realize that an unjust feeling is entertained against Missouri by the people of the East—a feeling in which I shared once, before I came to this State. It is a fact that society here was at one time somewhat demoralized. The James gang ran at large. But that has passed away. The State now enjoys peace and prosperity. Civil, religious and educational privileges are as good here as they will usually be found anywhere. The prairies are dotted with school and church buildings. We have five State schools on the Normal plan, tuition free, and nearly one hundred private schools of high grade. The population is largely made up of Eastern people. One neighborhood near me is said to contain 200 families from Ohio. A man can talk his politics as freely here as in New York and no one interferes. To be brief, we have nice, smooth, productive land, on which we can raise any crop that will grow in latitude 40 degrees north. Fruit is a certain crop, excepting peaches. Apples never fail and usually bring a good price. They are shipped to Idaho, Nebraska, Dakota, Colorado and Texas. The prairies here are high and rolling and lie in strips. The streams are all skirted with timber. Land is very cheap, considering its quality and advantages. The fools are not all dead and we have our share of parties well-fixed who want to sell out and go West. People are just as restive here as farther east on that point. A man can buy a better farm here for a given amount than in any place I have seen or read of. G. W. F.

Ohio.

XENIA, Greene Co., March 1.—We raise potatoes, corn, wheat, oats, rye, barley and some other cereals. Corn and wheat are our principal crops. Last year we had in about the usual number of acres. Corn was up to the average in bushels, but not in quality. Wheat was below the average in yield and poor in quality. Oats good. Hay below the average, but very good in quality. Fruits abundant. Potatoes good both in quantity and quality. We planted about our usual number of acres of wheat last fall. I do not think wheat ever looked so well at this time in the year. It is just about as green and thrifty as it was last fall. We never had a better prospect for good crops than we have now. D. D. M.

Wisconsin.

APPLETON, Outagamie Co., February 12.—Lots of snow in this vicinity two feet deep or more. We have had no very cold weather yet this winter. Winter wheat was a full crop with us; spring wheat was spoiled by Chinch bugs. Oats were not a full crop; neither was corn. Potatoes were good. Hay and other fodder crops are plentiful. Prices: wheat, 90 cents to $1; oats, 25 to 28 cents; corn, 40 cents; potatoes, 25 to 30 cents per bushel. Our farmers are going into dairying more extensively every year. Stock raising and dairying are about the leading interests here now. Preparing fire-wood for home use and for market is the order of the day at present. Maple wood is worth $5 per cord at Appleton. E. N.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.

PRUNING APPLE TREES.

A. A. C., Christiana, Del.—How should apple trees be pruned? How many branches should be cut off or left on?

ANSWERED BY DR. T. H. HOSKINS.

The art of pruning fruit trees is considerably simplified by a knowledge of its principles. What is sought for in pruning are,—first; to preserve the health and prolong the life of the tree; second, to secure plenty of good fruit; and, third, to promote the convenience of the orchardist in regard to the position of branches. When a tree's branches are ill-placed and crowded, there is a tendency with some of them to dwindle and die. In this way a tree becomes, to some extent, self-pruning Some orchardists regard this as sufficient, and only seek to aid nature by neatly removing branches that are beginning to perish. It is easy to be seen that these failing branches will produce but little fruit, and that of inferior quality; so not only the first principle, but also the second, requires their removal These ill-placed, weak and unproductive branches are also much in the way of gathering the fruit. They are mostly either in the interior of the tree, or near the ground, in both cases being shaded by exterior and superior branches of more vigorous growth. If these principles are kept in mind from the first, and the owner has enough imaginative power to form in his mind's eye a picture of the tree, as it will become in its successive stages of growth, he will be able to select for removal such growth as will clearly become injurious as the tree enlarges. In thus anticipating the work of nature, he will be led to remove evidently ill-placed branches when quite small, thus obviating the necessity for large wounds, which heal slowly, and meantime give a chance for fungi to enter, and produce decay of the trunk. As he proceeds with this work, he will be led to see that the trees he is operating upon often have their main branches improperly placed, either forming a forked trunk, (sure to split down under a load of fruit, and sometimes by its own weight, or the action of the elements,) or being too near together, and too numerous. The formation of forks with a sharp angle should not be allowed, either in trunk or branches. The main limbs should be few, and so placed that even when they become large they will not be opposite to each other, or too near together. Some trees have an erect habit of growth; others a low, spreading habit and still others a straggling, irregular manner of growth. It is possible, to some extent, to modify these peculiarities by pruning; but it is not well to remove large branches for this purpose alone. Nature will have her way; and if we try too much to interfere with her purpose, she has a way of avenging herself by striking work, and leaving us with a dead or comparatively worthless tree. Pruning for fruit is much treated of in the books, but in the ordinary way of managing apple orchards in this country, if the above named principles be adhered to, we have done about all that can be done to promote fruitfulness. With peaches and pears it is somewhat different. The peach especially requires severe cutting back, owing to its peculiarities of growth; while with the pear, pruning for fruit is more efficacious than with the apple. Pruning for a high trunk is insisted on for apple orchards by many; and in sections of the country where the climate is mild and equable, this convenience may be secured without other loss than what results from delayed fruiting. But where the winters are very cold, and especially in spots where the sun's rays reflected from the snow cause the destruction of the bark on the southwest side of the trees, low heads will often be preferred. As varieties best adapted to such localities are usually moderate growers, or short-lived, the disadvantage of low branching is not so manifest as elsewhere.

AZOTURIA IN A HORSE.

A. P. G., Fennville, Mich.—My horse seemed all right when taken from the stable and he was driven at a moderate gait two miles with an empty wagon. He commenced sweating and when stopped, showed signs of sickness and on being immediately unhitched, he lay down. After a few minutes he seemed all right again except for a tendency to drag his hind feet as he walked. He was hitched up and driven more than a mile, when the movements of his hind feet suddenly became more difficult and he gradually bloated somewhat. He then gave out entirely and had to be hauled to the barn, not having any control of his hind legs. He was in intense pain and at times would stagger up on his feet and strain as though trying to pass water, standing on his hind toes as though unable to straighten the hoof down to its usual position when standing. His hind parts would then slowly settle, and he would suddenly fall and lie on his side, apparently exhausted for some time. He passed dung somewhat dry and hard, but he passed no water. I gave pain-killer to ease him and next day when he seemed to try to pass water I injected a decoction of slippery elm back into the bladder. Urine passed after this and was very dark, almost black in color. His right hind leg then swelled from the hip to below the hock and a swelling extended from the flank, along the inside of the leg, being very sore to the touch as was the flank. At no time did he show any soreness along the back in the region of the kidneys. On the night of the fourth day he got on his feet again and could walk fairly well, though the leg and flank remained very sore. He ate well, had condition powders in bran and seemed doing well for four days when he suddenly gave out as before, but could not get on his feet at all this time. I gave him one dose of pain-killer and after twenty-four hours he got up and has been up days apparently gaining. He was hungry all through the sickness. He is in good condition and has been in the stable most of the time for two weeks. He never had any sickness before except an occasional belly-ache. He is 23 years old. He did not show signs of intense thirst, but did not refuse water. What ails him and what treatment should he have had in the beginning and what now to aid in his recovery?

ANSWERED BY DR. F. L. KILBORNE.

The disease was azoturia. The attack was probably brought on by being exercised after standing idle in the stable a few days on a full diet. This high feeding during idleness overloads the system, the liver is unable to perform the extra work thrown upon it and a form of blood-poisoning results. The high-colored urine was due to this condition of the system and not to disease of the kidneys. When first attacked the horse should have been quietly taken to a near stable and a dose of five to eight drams of the best aloes should have been administered to move the bowels and unload the system. Had this been done the horse would probably have recovered in three or four days with no farther treatment. After the second severe attack, the aloes might have been followed by one-ounce doses of liquor of acetate of ammonia with two drams of chlorate of potash every three or four hours. Until the animal was well on the road to recovery, very little food should have been given and that largely in the form of mashes or scalded oats. Now it might be well to give the following powder night and morning. Pulverized nux vomica one-half dram, pulverized gentian root and ginger each two drams. The attacks of this disease can usually be avoided with a little care. When the horses are idle, reduce the feed, especially if they are being well fed. If this precaution has not been taken, the attack may still often be avoided by working the animal slowly for a few hours, after which an attack is not likely to occur.

DROPSICAL SWELLING OF ABDOMEN IN MARE WITH FOAL, ETC.

E. C. A., Aberdeen, Dak.—1. My 12-year-old mare, due to foal about April 1, has for some time had, in front of her bag, a slight swelling covering a surface as big as both my hands, and from one-half inch to an inch thick. Since Christmas it has swelled nearly all over the belly, extending to within a few inches of her front feet, and on each side to a line drawn from the front to the hind feet. When I press the point of my finger against it, a dimple is left for quite a while, and when

the whole hand is used, it leaves an impression. The swelling began for the first time to be tender a few days ago, but now it can barely be touched with the comb or brush. Otherwise the animal appears to be in good health, and she has a fine appetite. Her feed is wild hay morning and noon with oat straw at night, and about two quarts of good oats per meal. The left side of the bag is swollen, while the right is in a normal condition. The mare has done no work whatever since fall. What is the trouble, and how should it be treated? 2. The same mare injured her coronet by calking it nearly two years ago, and when the hoof grew out, a ridge, like an old crack, appeared right down to the toe. I dare not drive her fast for fear the hoof would split. How should this trouble be treated? Should the place be opened again to induce healing? 3. Which of the draft breeds of horses are the most profitable for crossing on other horses so as to produce animals weighing 1,300 to 1,600 pounds?

ANSWERED BY DR. F. L. KILBORNE.

1. The swelling is of an anasarcous or dropsical nature, and is not an uncommon occurrence in the mare during the latter part of the period of gestation. It would be much better for the mare if you could work her a little daily. If this cannot be done, she should at least have some daily exercise in a large box-stall, or the run of a yard. Bathe the swelling daily with camphorated spirits, and rub it well with the hand or a stiff brush for 15 to 20 minutes. Give one table-spoonful of the following powders on feed twice daily: nitrate of potash, chlorate of potash and iodide of potash each four ounces, pulverized nux vomica, one ounce; pulverized gentian root, eight ounces; mix. The swellings will probably disappear after foaling if not before. 2. It would not be advisable for you to open the cut again. You would be liable to make it worse rather than better. Such blemishes are usually permanent when once healed. 3. Read the articles which appear in the RURAL from time to time, wherein the good qualities and desirable points of each breed are in turn given. Compare the claims made for each breed by rival breeders. If possible examine each breed in person at the stables of such breeders. After looking the ground fairly over, you must be your own judge as to which breed will be the most profitable for your purposes. While you might prefer one breed, your neighbor might succeed better with another. And as to which would be the most profitable breed, more depends upon the breeder than upon the breed chosen.

MORE ABOUT POTATOES.

E. D. B., Cylon, Ind.—1. What potato now before the public gives the greatest yield regardless of quality? 2. What does the RURAL think of the Green Mountain as regards productiveness and earliness? 3. What has been the largest yield on an acre of potatoes at the Rural Grounds? 4. What variety of potato should I plant with a view of obtaining the $500 premium offered by a New York publishing concern? 5. What fertilizer concern sells the best fertilizer and how much should be used per acre on potatoes, to obtain the largest yield? 6. Which would give the best results—level culture or ridging the potatoes?

ANS.—1. The R. N.-Y. cannot say. The following have yielded most heavily: New Queen, G. W. P. Jerrard, Caribou, Maine; Minister, from the same; Tonhosks, from Theron E. Platt, Newtown, Conn.; Brownell's Winner, from E. S. Brownell, Essex Junction, Vermont; Delaware, from J. J. H. Gregory, Marblehead, Mass.; Taylor, from E. D. Putney, Brentwood, N. Y.; Early Puritan, from Peter Henderson & Co., N. Y.; Niagara, from O. H. Alexander, Charlotte, Vt.; Everitt, J. A. Everitt & Co., Indianapolis, Ind.; Summit, E. E. Stine, Cuyahoga Falls, Ohio; Cream of the Field, A. Williams, Homer, N. Y.; Corliss Matchless, T. Corliss, Lockport, N. Y.; Montreal, O. H. Alexander; Green Mountain, now offered in several catalogues; Hodgman's Seedling, Horace K. Hodgman, Mason, N. H.; Nott's Victor, R. Nott, E. Charlotte, Vermont; State of Maine, Landreth & Sons, Philadelphia, Pa.; Late Beauty of Hebron or White Elephant, Rural Blush, Thorburn & Co., N. Y. The above are mentioned without regard to quality. 2. It is a heavy yielder, of *fair* shape and fair quality. 3. We have never raised a full acre with the view to the largest yield. 4. We would advise Brownell's Winner. But we do not know whether he will sell so many, as the potato is not yet in the market. We should next select any one or all of the following: State of Maine, Puritan, White Elephant, Green Mountain, New Queen, Summit. We are assuming you cannot get the R. N.-Y. No. 2. 5. We should use not less than 1,000 pounds to the acre of a high-grade potato fertilizer. We prefer not to answer the question which firm supplies the best fertilizers. 6. In a light, well-drained soil we prefer deep planting and level culture.

COLLECTION OF CANCELED POSTAGE STAMPS.

C. S. B., Hillsboro, O.—For some time there has been a craze hereabouts for the collection of old postage stamps. Some say there is a standing offer of $250 for a million canceled stamps; is that so? During a recent visit to New York I saw a bushel or more of canceled postage stamps in a window on Broadway; has that had anything to do with the craze?

ANS.—There is a considerable number of people who collect curious things of little or no intrinsic value, and frequently the rivalry between these "collectors" for the possession of something rare makes them willing to pay a high price for something of no real value. Some collect rare old books, others pistols, swords, hangmen's ropes, etc., etc. In all cases the rarity of similar articles is the chief factor in regulating the price. Many are devoted to philately, or the collection of rare postage stamps, domestic or foreign, and high prices are often paid for some unique or extremely rare thing of the kind. There are a number of dealers who supply these "collectors" and who are ready to act as middlemen between them and the possessors of such curiosities, and doubtless that Broadway stamp-laden window belonged to one. For ordinary canceled postage stamps, however, there is no market. The belief that there is a standing offer of a certain sum for such things, which varies greatly in amount according to different reports, has absolutely no foundation. Neither is there any hospital or other charity which can be benefited by such collections, as urged by others. There is also a report that dishonest persons are ready to buy stamps for the purpose of "washing" them; that is obliterating the Post Office stamp marks, and reselling them; but the risk of such a business is too great while the profits are too small from postage stamps, to induce shrewd rascaldom to have anything to do with it. The collector of ordinary canceled postage stamps must be content with the pleasure of the hunt and the satisfaction of accumulation as payment for the trouble incurred.

"GRAIN HAY."

M. H. C. G., Johnson's, N. Y.—In the RURAL'S Special Report of February 23d, a correspondent from Wallowa County, Oregon, says: "Grain hay is in greater demand for milch cows than Timothy. People out here prefer grain hay for cows to anything else. I think that if Eastern farmers would try this kind of hay they would never use Timothy for milch cows." What does the writer mean by "grain hay" and does the RURAL agree with him as to its utility for Eastern farmers?

ANS.—The correspondent referred to evidently meant by "grain hay" a grain crop cut and cured before the grain was fully formed. We have seen samples of rye hay, oat-hay and wheat-hay cured in this manner, that made excellent fodder. In many parts of the country oats are never thrashed, but are cut before fully ripe and fed out in bundles, grain and all. Indeed, in many dairy sections, oats are being fed largely in this way as the cost and labor of thrashing are saved. We should say that the value of this practice would be measured by the price of grain and straw. At the Rural Farm rye straw commands such a good price that it is wiser economy for us to let the rye mature, and to sell it as grain and straw and buy hay if need be. At a greater distance from market where straw has less value and grain is grown to feed, the practice of making "grain hay" might be profitable. We will get our correspondent to tell us more about his practice.

IMPROPERLY FED AILING PIGS.

W. S. P., Forrestville, N. Y.—I am wintering ten five-months-old pigs in three lots. About a month ago some of them became lame in the hind legs, and now they seem to be sore and stiff all over. They do not eat very well. They have been kept dry and warm, and have been fed boiled potatoes, meal and bran. Except this trouble they appear to be in good order. What's the matter?

ANSWERED BY COL. F. D. CURTIS.

These pigs have been confined too closely on a hard floor. They should go out upon the ground and have more exercise. Their food has been too heating and there has not been enough bone material in it. Leave the meal out and feed a smaller portion of potatoes. Make one-fourth of their food linseed-meal; one half of the balance middlings and one-half bran. Give a fourth of a pound of Epsom salts to each pig in the swill, every other day three times. Turn them out daily and drive them about for a half hour. One-third of the food of all pigs and hogs should be bran and linseed-meal; give salt daily. We cannot expect our pigs to stand the strain due to hard floors, and heavy bodies with feeble bones and delicate joints. It is against nature. We must feed for bones while our animals are growing and do it with the foods indicated. Their is no bone in fat.

INFLUENZA IN A HORSE.

M. M., Fergus Falls, Minn.—A fortnight ago one of my horses got a shiver just as he was led out to be hitched up. I put him back in the stable and blanketed him. The next day he refused feed and could not drink. He kept his head stiffly forward, the tendons felt hard; there may have been a little swelling in the larynx; the fever was not very high. We have no veterinary surgeon here and I put some wet pack around his throat and neck and gave bran-mash, warm drink and carrots. The fever is over, the swelling has gone down and he drinks all right; but he does not show any appetite, is weak and there is a muco-purulent discharge from both nostrils and he has a kind of snorting cough, or may be it is hawking. I tried some gentian, calamus and sulph-ferros on his feed, but then he will not take the feed. Is it influenza or catarrh, and what should I do to bring him in good condition and stop the discharge, which comes most after he has been led around a little.

ANS.—The symptoms indicate influenza. Steam the nostrils each night by feeding a hot bran mash. Give as a drink night and morning, one ounce each of liquor of acetate of ammonia and sweet spirits of nitre, and 25 drops of tincture of belladonna. Later give ounce doses of powdered gentian root and ginger, or two-dram doses of powdered nux vomica if the appetite does not return. Feed some green food, or roots or potatoes, once or twice daily if convenient.

A WEAK-LEGGED COW.

H. A. A., Drownville, R. I.—A cow of mine dropped her calf over a fortnight ago, and since then she has been growing weaker in her legs, so that at times she has to be helped up. She seems to be well in other ways; except that while she eats hay and roots very well, she refuses grain, wet or dry. She didn't eat grain well last summer so that I had to stop giving it to her in August and September. She had corn-stalks with corn on the ear while she was dry—all she would eat—and was in fine condition at the time of calving; but I think she has been growing weak in the legs for months. How should she be treated?

ANS.—Give one-half ounce each of liquor of acetate of ammonia and sweet spirits of niter, three times daily, then night and morning for three days give one tea-spoonful of pulverized nux vomica on the feed. Increase the dose by one tea-spoonful every three days. Continue for 10 to 15 days if necessary. Reduce the dose if twitching of the muscles occurs. Perhaps you have overfed on grain. After the cow recovers, feed a reduced ration, which should consist in part of light shipstuff or middlings and little or no corn. Feed only so much as she will readily eat at each feeding.

LAMENESS IN A HORSE.

H. S., Plainville, Conn.—One of my horses became lame in one foot. It kept growing worse. At first she appeared to be better after traveling some distance; later she was so lame that I had to keep her in the stable. The muscles of the shoulder appeared stiff. Thinking the trouble was in the foot, I bandaged the hoof and applied cold water. There was some heat in the region of the large pastern bone. Since applying cold water the heat has gone down into the foot, which now feels soft and watery at the coronet or around the top part of hoof. There is some stiffness in the loins. What should be the treatment?

ANS.—You give no symptoms as to the position of the lame member when standing, or the action during movement; without a careful description of such symptoms we cannot locate or judge of the character of the lameness. If we attempt to do so, from the description given, any course of treatment advised would necessarily be equally vague and general.

FOUNDER IN AN OX.

H. J. B., Birmingham, Conn.—My ox, which has been used hauling loads over a bad hilly road, is lame, being stiff in the fore-legs and hardly able to get out of the stable. Some say the trouble is due to "holding back" coming down hills; others say he is foundered. What does the RURAL say, and how should he be treated?

ANS.—The trouble is probably not due to the "holding back." Such stiffness frequently occurs as the result of founder or a chill, and this is very likely the cause in the present case. Give the ox a purgative to open the bowels—two pounds each of Epsom and common salts, and two ounces of ginger, to be given as a drench. Follow by a restricted, laxative diet and daily exercise in a box-stall or small yard. Rub the limbs once or twice a week with a mild liniment.

THE RURAL'S WAY OF PLANTING POTATOES.

A. C. L., Windfall, Ind.—What, in brief, is the RURAL'S method of planting potatoes, and which is the better application—stable manure or well rotted straw?

ANS.—We must refer our friend to previous numbers for a full explanation of the R. N.-Y.'s method. Briefly, plow or spade the land 10 inches deep. Harrow or rake level. Then dig the trenches a foot wide and six inches deep. Rake in one or two inches of soil. Set the pieces one foot apart. Cover lightly. Spread the fertilizer. Fill the trenches. This for garden culture. If manure alone is to be used, spade it under. Stable manure is far better than the straw.

WEAK-ANKLED COLT.

J. M. P., Suffolk Co., N. Y.—My two-year-old filly knuckles badly in her fore ankles. The joints slip backward and forward when she walks, so that her fore legs are of very little use to her. If she takes any exercise, she becomes lame. The short pasterns are very straight and the ankle doesn't slant back as it generally does. What should be the treatment?

ANS.—Apply the following liniment to the fetlock once daily. Hard soap, one ounce; cut up and dissolved in one pint of proof spirit then add one ounce of camphor gum and two ounces each of aqua ammonia and sweet oil. Shake well before using.

JOHNSON GRASS.

L. C. S., Bainbridge, Ohio.—Has Johnson grass been tested in this climate? A Southern friend has recommended it.

ANS.—The RURAL NEW-YORKER began testing it about eight years ago. It was also raised at the Kansas Agricultural College, at Manhattan, by Prof. Shelton. He condemns it as inferior to many other forage plants. The roots are nearly hardy at the Rural Grounds with protection. The original little plantation is still alive.

Miscellaneous.

C. C. N., Cambridge, Neb.—Will different varieties of potatoes planted side by side "mix?"

ANS.—No; potatoes *can not* mix except through the blossom and true seed.

J. A. B., Butler Center, N. Y.—At what time shall I cut apple tree grafts?

ANS.—At any time when they are not frozen, before the buds swell. They may be preserved in sand in a cool cellar.

C. N. R., Canton, Pa.—Would it injure a high-grade fertilizer, with S. C. rock as a base, to mix gypsum with it?

ANS.—No. It would not harm the fertilizer in any way. Neither would it add to its value.

W. F. G., Cleveland, N. Y.—1. What does the RURAL know about the Erie blackberry? 2. If the RURAL were about to set out some blackberries, what varieties would it select?

ANS.—1. It is thought to be the Lawton or New Rochelle. 2. We should try Agawam and Dorchester.

E. M. D., Walden, N. Y.—1. When seed potatoes have sprouted, does it kill their vitality to break off the sprouts? 2. Who publishes a weekly or monthly paper devoted exclusively to horses?

ANS.—1. Every sprout weakens the potato. 2. The Horseman, 182 State Street, Chicago, Ill.; weekly; subscription price, $4 per year.

N. R., Creswell, Col.—Should potatoes infested with wire-worms or scabby potatoes be planted at all?

ANS.—It would make no difference. Scabby potatoes are just as good for seed as any others unless they are too much injured by the scab. The beetles do not deposit eggs in or upon the potatoes at all.

M. L. F., New Hurley, N. Y.—What force-pump and nozzle will do the best work in spraying grape-vines with the Bordeaux Mixture for black rot or mildew?

ANS.—Prof. A. J. Cook who has given careful study to the matter, mentions the following: Perfection Force Pump with Perfection Nozzle. This runs with gearing, cost $30. Field Force Pump Co. (Lockport, N. Y.), Large force hand pump, same firm; Nixon Pump Co., Dayton, Ohio. He prefers the Perfection and Nixon nozzles.

J. B. G., Spokane Bridge, Washington.—A year ago, just after a very cold snap, I found a one-year-old colt very lame. He was running on the range, so I took him home and placed him in a warm stable. He grew worse for a few days and had to be helped up and

down. In about a week he began to emit a very bad odor, and the skin began to slough off his legs near his hoofs, and two running sores broke out on each of his thighs. I commenced treatment by washing the sores with warm water and Castile soap, then applying a poultice; but the sores did not heal. It seemed as though there was proud flesh. I then used burnt alum, bluestone and diluted carbolic acid until I supposed that he was well, when I sent him to the pasture. Afterwards I noticed that his hind feet were not well; the sores just above the hoofs were rough, dry and callused. What should be the treatment?

ANS.—Apply benzoated oxide of lime ointment daily until a healthy healing action is established. Then dress with pine tar, covering the whole hoofs, and rubbing well into the hair around the top of the hoofs.

DISCUSSION.

LIME FOR THE CABBAGE MAGGOT.

E. S. GOFF, GENEVA, N. Y.—On page 124 of the RURAL the statement is made that slaked lime mixed with the soil in which cabbage plants are set, will prevent damage from the cabbage maggot. This is contrary to my experience. During the summer of 1887 my colleague, Mr. Beckwith, placed about half a pint of air-slaked lime in the hills prepared for two rows of cabbage plants in the Station garden, leaving those of a third row without the lime. The soil and lime were mixed together with a trowel just before setting the plants. Now, for the result. The plants treated with the lime actually suffered more from the cabbage maggots than did the others. An examination made on June 18, showed that the plants in the rows that received the lime contained, on the average, more than five maggots each, while the plants not treated had but little more than two maggots apiece. It is certain that in this trial the lime was not beneficial.

S. N. R., HADDONFIELD, N. J.—In the Farmers' Club, Feb. 23rd, page 124, the bird described by C. H., of Afton, N. Y., is identified as the Pine Grosbeak. If the inquirer's description is correct, the bird in question is certainly not a Grosbeak, but a Crossbill, most probably the common, red species (Loxia curvistrata minor). Contrary to the description given by the correspondent, the Pine Grosbeak is as large as a robin, has not a hooked bill and never shows any green in its plumage coloration. The RURAL'S description of the habits and distribution of the Grosbeak may apply in great part also to the Crossbill, except that the latter bird is more evenly distributed during winter throughout the Eastern States, and migrates as far south as the Gulf, whereas the former is only an irregular winter migrant, rarely penetrating into Pennsylvania.

A. J. GALE, WAUKESHA, WIS.—The plan of blackberry growing that Mr. Crawford thinks might work well anywhere (as described in the RURAL of February 23,) would hardly work well here in Wisconsin. We have no blackberry that will stand unprotected and bear a crop of fruit, no matter how well ripened the wood may be. The wood may winter well, but the buds are always damaged more or less. The plan followed by growers here is to give clean cultivation the entire season, and just before the freezing of the ground bend over and cover the canes entirely with earth. Then uncover them in early spring. We treat the Cuthbert and other tender raspberries in the same manner, and have to do so to secure a good crop.

R. B., ST. HENRY OF MONTREAL, CANADA.—I very much admired the picture of the collie dogs in a late RURAL, but I would like to speak a good word for the Scotch terrier. If a couple of them are around, one will not need to protect the young apple trees with tar, felt or wire netting to keep off the field mice and moles. The Scotch terriers will save all that work. The owner can always see them hunting around in the grass wherever rats, mice or moles are to be found. As watch dogs, too, they are better than a burglar alarm. They will not let themselves be tampered with or bribed.

What Others Say.

PITHS AND SUGGESTIONS.

TRY the Agawam blackberry.....

TRY the Pearl strawberry.....

TRY the Hilborn black-cap.....

J. T. LOVETT, of Little Silver, N. J., calls the Carlough the handsomest and longest-keeping sweet apple in existence.....

MR. LOVETT describes the Abundance plum as a remarkable variety. The tree is worthy of being planted as an ornamental tree. The trees bear while very young—the nursery trees often being loaded. The curculio, he says, has no effect on the fruit—the eggs do not hatch. The fruit is large, showy and beautiful, of an amber color turning to bright cherry. The stone is small and parts freely. Season very early.....

MR. LOVETT also claims that the Spaulding is curculio-proof. It ripens three weeks after the Abundance.....

THE Wonderful peach is said to be *very* late, as large as Crawford's Late and as late as Smock .....

THE Champion quince is too late for the North. It thrives south of Penn. and bears while young.....

TRY the Paragon chestnut. It's probably of Japanese origin. The nuts are twice as large as the American chestnut and of good quality. The trees bear when three years of age .....

TRY the Louise strawberry.....

THE Monmouth for early and the Gandy for late are valuable strawberries in many places.....

TRY the Minnewaski blackberry.....

TRY the Eaton grape; try Bundy's Colerain as soon as it is offered for sale. The R. N.-Y. is inclined to regard it as the best early white, all thing considered.....

THE Berckmans grape (color of Delaware) is a healthy, vigorous variety.....

THE R N.-Y. is trying several of Macomber's pears which we believe to be of decided promise, notably Grand Isle, Dr. Hoskins, Little Gem, Macomber and Refreshing. These have been described and illustrated in the R. N.-Y., see pages 242, 203, 279, 263 and 242 in the volume for 1885.....

"THE JESSICA GRAPE.—The RURAL-NEW-YORKER mentions Mr. E. P. Powell, of Oneida county, as saying of the Jessica grape that it is a 'miserable fraud,' and the R. N.-Y. calls it an 'early good-for-naught.'" We had never supposed that earliness was an objection to a grape, for so the R. N.-Y. appears to put it. Why it is good for naught does not appear. It may be so on the poor soil of the R. N.-Y.'s place, but on good grape land it is a very excellent fruit; in fact, we doubt if the most expert grape taster could tell the difference between the Jessica and the Delaware without seeing them. So much for its quality. It proves, with us, to be a heavy cropper, resembling Delaware, also, in this respect. It is a good grower and has firm, healthy foliage. The bunches are rather loose, and the green color is not attractive for a market grape. For the family garden, where quality is wanted, we think it is a most desirable variety."

The above is from Vick's Magazine. We called it an "early good-for-naught" because that is just what it is (or was—it has been discarded) at the Rural Grounds. The few berries that ripened *were* very early. But rot destroyed most of them. It is now apparent that the variety succeeds admirably in some places, and fails in others. The attention of the reader is called to Mr. Crawford's article in this issue .....

THE Storrs & Harrison Co., of Painesville, O., say that the Wonderful peach will keep three weeks after it is gathered. They speak of the Peter apple as "Gideon's Best of All." It originated, as our readers have been informed, at Excelsior, Minn., from seed of the Wealthy. It has endured 45 degrees below zero without injury. It promises to be *the* apple for the Northwest. The above firm say that the Ogon and Botan plums are hardy. They regard the Kelsey as less hardy than the peach.....

THE Storrs & Harrison Co., offer a new grape called the Leader. It is said to be mildew-proof, as hardy as Concord, and a vigorous grower. The bunches and berries are of good size and sweeter than any other white grape they cultivate.....

PALMER'S SEEDLING, (black-cap), is represented as perfectly hardy, as early as Souhegan or Tyler, while the berries are larger, and the canes far more productive. This variety is Matthew Crawford's first choice.....

MR. CRAWFORD says that the Hilborn black-cap has not a single weak point. He fully supports the R. N.-Y.'s opinion of the Lucretia dewberry.....

SECRETARY GOODMAN (Missouri) regards the Gano as an improvement over the Ben Davis, being equal to it in all other respects and superior in appearance and quality.....

THE BABBITT, he says, is the equal of the Baldwin of the East and is the Baldwin for the West.....

AMONG gooseberries the Orange (H. M. Engle, Marietta, Pa.) is a new variety of real value. It is thought to be a seedling of Houghton. It is one of the earliest to ripen, if not the earliest. It is of a medium size, sweet and tender. The color is a dull yellow. Plant hardy and free of mildew. The Dougal No. 2 is a very distinct and valuable gooseberry. The bush is an upright grower and as nearly thornless as any kind the R. N.-Y. has seen. Berries are of medium size, hairy, light-green shaded with purple. It never mildews..

THE fruit committee of the N.J. Horticultural Society report favorably on the Crystal raspberry (originated by the late A. J. Caywood). It is a few days earlier in ripening than the Golden Queen and a handsomer berry, though, Dr. Ward thinks, not quite so heavy a bearer. He pronounces Cohanzick strawberry a failure in every way. The Hilton strawberry was favorably regarded. The R. N.-Y. can tell its friends that it is a large, prolific berry of fine promise.....

MR. WARD gives well deserved praise to Dana's Hovey pear. It is an old variety though one of the highest-flavored on the list.

The Quinn pear has been tried in various parts of New Jersey and found to be one of the very best varieties for the amateur.....

AMONG sour cherries Dr. Ward recommends the Montmorency, as it comes in after the Early Richmond. He deems the Canfield the very best for a long-keeping sweet apple.....

THE Industry gooseberry introduced four or five years ago, mildews badly in many localities while in others it does not. Ellwanger & Barry, of Rochester, N. Y., regard it as the best foreign variety ever introduced. This firm has recently introduced the Mills grape, a cross of the Muscat Hamburg upon Creveling. The bunch is very large, some clusters weighing over 12 ounces. The berry is large, round, jet black, with a thick bloom; flesh firm, meaty, juicy and rich. The vine is vigorous and productive, foliage large and healthy. It ripens with the Concord and keeps well.....

ELLWANGER & BARRY regard the following as the best of the Russian apples: Arabskoe, Titovka and Yellow Transparent.....

THE Windsor cherry introduced by the above firm (it originated with the late James Dougal, of Windsor, Canada,) bears large fruit remarkable for firmness. It is of fine quality. The tree is hardy and prolific. It is a valuable *late* variety for both market and home use.....

MR. MCCANN, Ex-President of the Elmira Farmer's Club, (N. Y.) says that, with him sorghum yields, on an average, a crop of more value per acre than corn. In every respect it is fully equal to corn as food for fattening stock or dairy cattle. It will yield 40 bushels of seed per acre.....

A WRITER in the Albany Cultivator says that generally a catalogue the whole of whose contents is quoted low, evidently with a view to undersell, had better be laid aside for future reference if required.....

Horsford's Acid Phosphate
Useful in all forms of Dyspepsia.—*Adv.*

Miscellaneous Advertising.

Scrofula

Probably no form of disease is so generally distributed among our whole population as scrofula. Almost every individual has this latent poison coursing his veins. The terrible sufferings endured by those afflicted with scrofulous sores cannot be understood by others, and their gratitude on finding a remedy that cures them, astonishes a well person. The wonderful power of

Hood's Sarsaparilla

in eradicating every form of Scrofula has been so clearly and fully demonstrated that it leaves no doubt that it is the greatest medical discovery of this generation. It is made by C. I. HOOD & CO., Lowell, Mass., and is sold by all druggists.

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SHERIDAN'S CONDITION POWDER is absolutely pure and highly concentrated. It is strictly a medicine to be given with food. Nothing on earth will make hens lay like it. It cures chicken cholera and all diseases of hens. Illustrated book by mail free. Sold everywhere, or sent by mail for 25 cts. in stamps. 2½-lb. tin cans, $1; by mail, $1.20. Six cans by express, prepaid, for $5. I. S. Johnson & Co., P. O. Box 2118, Boston, Mass.

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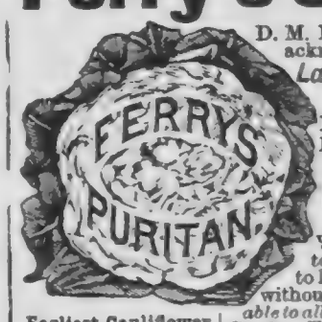

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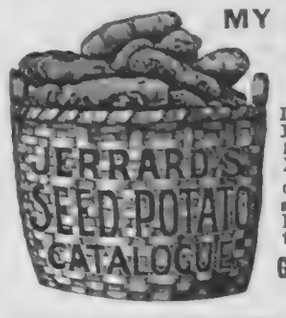
PUTNEY & WOODWARD, BRENTWOOD, N. Y.



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BEWARE of a silent dog and still waters. The impure blood flowing silently through the system is a dangerous enemy to health.

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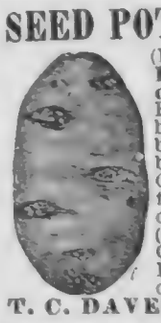
SEED POTATO HEADQUARTERS



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ELBERT S. CARMAN.

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THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, MARCH 16, 1889.

NOTICE TO THOSE WHO DESIRE TO ENTER FOR THE R. N.-Y.'S WOMEN'S NATIONAL POTATO CONTEST:

All who desire to enter for the Women's Potato Contest are respectfully requested to send in their names before the 20th inst Full instructions and a list of the contestants will be published at about that date.

READ what Mr. Crawford says of the Potter, Jessica and Woodruff Red grapes.

"I still think the Delaware our best grape" says Mr. Crawford.

IF there *is* an Orange quince which is distinct from the Apple quince, and we believe there is, then the so-called Meech's Prolific quince is the Orange.

Prof. Munson, of Texas, says that the Seedless apple is probably the most unique and desirable novelty of the decade. It is bloomless, coreless and seedless. It is of good size and quality and a good keeper.

READ Pres. Chamberlain's article—"New Legislation Needed Concerning Monopolies"—the first of a short series on a topic of absorbing interest.

"The world does not, I think, 'owe every man a living.' It does, however, owe him a fair and equal chance to earn one if he can and will." PRES. CHAMBERLAIN'S article, page 178.

WE like Red-caps for their beautiful plumage and shapely forms. But the immense pea-combs of the roosters are, without doubt, a decided objection to the breed. They are so large and heavy that the birds can only see laterally, while they seem to cause the roosters to keep up a perpetual twitching of the head.

State (Conn.) Pomologist, P. M. Augur, says elsewhere that a highly organized variety of fruit, capable of giving the best results under appropriate treatment, is more likely to fail under neglect than one of less than half its real capacity—even as a 74-pounder with a small charge of powder would be a failure.

PROF. MUNSON, of Texas, says that of all the very recent kinds of strawberries, the Parker Earle is the most distinct in characteristics and at once the finest in plant, berry and productiveness. This is not the variegated-leaved variety introduced under the same name. This has been discarded as unworthy of introduction.

"Fortunately we have a few faithful sentinels who tell the truth, unvarnished and unadulterated, about new fruits as they appear, stripping them of all the false and fanciful claims made for them by those directly interested. No one has rendered more efficient service in this direction than "The Rural New-Yorker." It has fought vigorously and valiantly for truth, right and justice, regardless as to whom its action hurt or offended." A. B. COLEMAN, page 178.

A CANADIAN subscriber suggests the following: "I would like all the ladies who try for the potato prizes to send their photographs to the RURAL so that their likenesses may be given in the form of a pamphlet to be sold to all of the RURAL subscribers on as easy terms as possible." That would be a souvenir worth having; but we doubt if all the ladies would be willing to have their pictures printed.

FOR 15 years past the R. N.-Y. has tried every kind of new strawberry it could hear of. Some seasons over 100 different kinds have been under trial. Reports have been made every season. The Sharpless, Hilton, Cumberland and Bubach are the ones that, at this time, we can recall as improvements over older kinds. During all these years we have raised a great number of seedlings not one of which has shown that it was worthy of introduction.

MATTHEW CRAWFORD, of Cuyahoga Falls, Ohio, says that the Jessica is with him the best of all white grapes—a good grower, perfectly hardy, very prolific, very early; the berries never drop from the clusters, and it is of the most delicious flavor. The Vicks, of Rochester, also speak in high terms of this grape. There seems little doubt that the Jessica is well worth a trial in different parts of the country. It is worthless at the Rural Grounds.

Now that considerable is being said about the cause and remedy of scab in potatoes, it may be well to remind our readers that six or eight years ago our trial potato plot was, in part, covered with a thick spread of leaves that had been gathered the preceding spring. The potatoes raised on that part of the plot were absolutely worthless. They were covered with scab caused by the wire-worms with which the soil was alive. The potatoes on the rest of the plot were not unusually scabby.

How is the path from your front door to the gate? Mud? Does it give your friends a good idea of your hospitality to make them wade through mud in order to reach your door? You ought to make a miniature macadam road of that path—you people who live in a country where stones abound. Dig the path out to the frost depth, put in stones and ram them down hard and cover them with gravel. The person who, years ago, fitted up the R. N.-Y. New Jersey Farm, laid out a series of wide flag-stone walks. We believe such walks are condemned by most landscape gardeners. We notice, however, that in this muddy weather visitors are very glad to walk on them.

FOR the first four days of the past week millers representing the winter-wheat States held a secret meeting in St. Louis for the purpose of forming a "combine" to control the flour output and influence the price of wheat. Missouri, Kansas, Iowa, Arkansas, Texas, Illinois, Tennessee, Minnesota and Wisconsin were represented and delegates from the Southern States joined the meeting on Wednesday. The men deny that they have formed any Trust, and while this is true in so far that the profits will not be divided, it is equally certain that an organization has been formed to control the flour and manipulate the wheat markets. Indeed, it is stated that for some time back the millers, by agreement, have been influencing the price of wheat, especially of the winter sort, and no doubt their action has had no small effect on the great and steady depression in the market of late.

SO OHIO BORN, 59-year-old, ex-Governor Jeremiah McLain Rusk, of Wisconsin, a man of herculean stature, with shaggy, iron-gray hair and beard, deep blue eyes, broad shoulders and heavy tread, and the simple and unaffected manners of a child, is the first Secretary of Agriculture whose action can justify the creation of the new Executive Department of the National Government. In early life he struggled on a farm for a livelihood for a widowed mother and two sisters. When 23, he moved to Mount Vernon County, Wisconsin, where he has since lived. He has always been a farmer, though incidentally a stage-line and hotel owner, a sheriff, a soldier, State bank controller, twice a member of Congress, and twice Governor of his adopted State. A man of wide experience, great determination, resolute action and unimpeachable record, the farmers of the country appear to have reason to be satisfied with their representative, and to expect a fair degeee of success in his administration.

AS FILES of the R. N.-Y. will show, nearly every kind of blackberry has been placed under trial at the Rural Grounds during the past 15 years. What is the result? Snyder and Taylor are the hardiest, though the berries are small. Early Harvest is the earliest blackberry, but it is killed to the ground about every other season. It is a feeble grower. The berries are perfect in shape and of fair quality. Wilson Jr. is the same as Wilson's Early, except that it is a little hardier. The Lucretia dewberry is worthless where standards will thrive. Crystal White is tender. Kittatinny is the best variety for the climate of New York. Minnewaski promises to be hardier. In other respects it is not superior to the Kittatinny. The Cut-leaved, largely advertised two years ago, is worthless. The Dorchester is hardier than the Kittatinny, but less productive. The Erie resembles the Lawton, and is said by some to be the same. It appears to be hardier and a trifle earlier at the Rural Grounds. Thus, we have told you, good reader, in a few lines, what the experience of many years has taught us.

FARMERS, who have more intercourse with Nature and with the dumb creatures of the fields and the woods than with mankind at large, are sometimes inclined to feel ashamed of the simplicity of their own honest ways, when they go to town and encounter the gay chatter, the fluent blarney, the smoothness and quickness, and the stereotyped smile of the lively throng, where only tokens of ease and content are allowed to come to the surface. But let the farmer adhere to his rugged virtue, his sincerity, his straightforward "yes" and "no," and his partnership with Nature's own self. Not only does he feed and clothe the well-kept bodies of the butterflies as well as the bees of the town, but it is from his ranks that their force is recruited, and it is his brave and simple honesty that keeps moral and political virtue from perishing among men. A gentleman of Springfield, who sent 100 postal-cards to as many of the most conspicuous business men of that city, inquiring about their homes during the first 15 years of their lives, received answers from 88, and 74 of them had been raised on farms.

JUST before the adjournment of Congress, the House of Representatives passed a resolution in favor of a commercial Union with Canada whenever the latter shall express a willingness to conform its tariff to that of the United States. A large proportion of the Canadians—no doubt a majority—regard such a proposition—which would discriminate against imports from even the "Mother Country" in favor of the United States—as a bid for political union also, which, they say, would be the inevitable sequence of its acceptance. Agitation for free trade between the two neighbors, or, at any rate, for a cutting down of import duties, has hitherto been confined chiefly to the other side of the frontier, and most of the strongest supporters of such a measure have been farmers. When it comes to a matter nearly touching or likely to touch their own pockets, however, they are very like farmers on this side of the line, or, indeed, men in general—they look out for what they suppose will directly promote their own interests in a particular case, regardless of their views on a general line of policy. This accounts for the signatures of 3,000 Canadian farmers to a petition presented the other day to the Dominion Government for the exclusion of "American" pork products.

HE TAKES IT BACK—A CAUTION.

IT is inexpressibly annoying to the R. N.-Y. to see such statements as the following in print:

"The Green Mountain potato, as tested by the Editor of the R. N.-Y., *on a poor, worn-out soil*, yielded almost 1,400 bus rate per acre." We copy word for word.

Again: "Cream of the Field, as tested in the Rural Grounds, in a *poor soil*, rate of yield over 1,000 bushels to the acre." The italics are ours.

What must intelligent farmers think of such stuff! Fourteen hundred bushels of potatoes to the acre on a *poor soil*!

The circular from which we are quoting is being distributed by a Mr. Alfred Rose. He was one of the parties who, in an adroit way, virtually claimed, in the earlier part of the year, that the R. N.-Y. No. 2 was in reality one of his seedlings. Not until of late have we been able to induce him to contradict the statement. He offers the R. N.-Y. No. 2 at $3.50 per bushel. Neither he nor any other person or firm can supply the genuine No. 2 at that price. Our readers are cautioned accordingly.

PROSPECTIVE IRRIGATION OF THE "ARID REGIONS."

LAST year Congress appropriated $250,000 for the purpose of investigating the extent to which the "arid regions" of the West can be redeemed by irrigation. It is proposed to dam up the canons of the Rocky Mountains so as to form immense reservoirs of water from the melting snows and heavy rainfalls of the region, to be used for the irrigation of the arid lands west of the 100th meridian, embracing an area of 150,000 square miles. The location of the reservoirs and the selection of the courses of irrigating canals are under direction of the originator of the gigantic scheme, Major Powell, of the Geological Survey, and will ultimately cost between three and four million dollars, while the construction of the works must entail an outlay of hundreds of millions of dollars; but, in return, it is estimated that the full realization of the plan will reclaim for profitable agriculture an area equal to four fifths of the present cultivated land in the United States.

The first appropriation was made chiefly to obtain more data for determining whether the scheme was so feasible as to justify further expenditure. Congress has now virtually committed the country to the execution of the project by making another appropriation of $250,000 for continuing the survey. The Governors of all the Territories to be first and chiefly benefited by the project, speak loudly in favor of at least the present work, and urge local co-operation. The Governor of Wyoming, in his last annual report, declares that the most important subject for legislation for that Territory relates to water storage, and he urges additional surveys of public lands for that purpose. The Governor of Utah states that all the lands granted in that Territory for University purposes had been selected during the year, but that they were "almost valueless without irrigation," and recommends further legislation on the matter. The Governor of New Mexico says the two most urgent needs there, are the settlement of land titles, and the storage of water. He thinks that of the 79,000,000 acres in that Territory, 60,000,000 can be rendered fit for profitable agriculture by irrigation on a grand scale. The Governor of Arizona, in urging the need and advantages of irrigation in that Territory, says that recent discoveries have shown the existence of ancient irrigating canals which sustained so extensive an agriculture as to support, in prehistoric times, a dense population in a region now almost uninhabited.

Indeed, other recent discoveries go to prove that a great population once inhabited what is now called the "arid region," and that a gigantic system of artificial irrigation was in practice there. Whatever may have been the extent and the results of artificial irrigation in that vast region in bygone days, there is now little doubt that the not very remote future will see there a system of irrigation transcending not only that of the ancient Indians, but even that of the old Egyptians, Romans, Hindoos and Chinese.

BREVITIES.

THERE is no thornless blackberry worthy of cultivation in the R. N.-Y.'s opinion.

THE Princess Louise, illustrated and described in the R. N.-Y. of January 7, 1888, is a fine Christmas dessert apple. It will keep until February. It has the excellent flavor of the Fameuse and a beauty excelling that of the Maiden's Blush.

"I CAN see no gain in the varieties of blackberries introduced during the past 10 years. During that time, however, the Agawam has been coming to the front and many have found out that it is perfectly hardy, wonderfully productive, of the very best quality, quite early, larger than the Snyder and *almost* as large as the Taylor." Here is tip-top praise from an impartial and authoritative source. See M. Crawford's article, page 176.

AS soon as the great Russian mulberry was announced, the R. N.-Y. hastened to procure half a dozen trees. In three years some of them fruited. We pronounced the tree worthless. Others fruited later. It was then found that they were of different kinds (seedlings probably) very inferior to the Downing for fruit. The trees are perfectly hardy in our climate, but what of that? The Russian mulberry was still boomed and the R. N.-Y. was scoffed at by several boomers.

THE best road or drive-way on the Rural Farm, in New Jersey, during this muddy weather, is one upon which large quantities of pine needles fall every year. The mud is seldom bad here and the road is never rough. In all the books on road-making, road officers are informed that straw, hay or pine needles are most useful for protecting sandy roads in summer or deep clay roads in spring. This drive-way on the R. N.-Y. Farm is the best possible proof of the truth of such statements.

Horticultural.

A GARDEN NOVELTY OF MERIT.

ELMER E. SUMMEY.

STACHYS affinis or tuberifera is the botanical name of a novel vegetable, which has but ately attracted some attention, first in

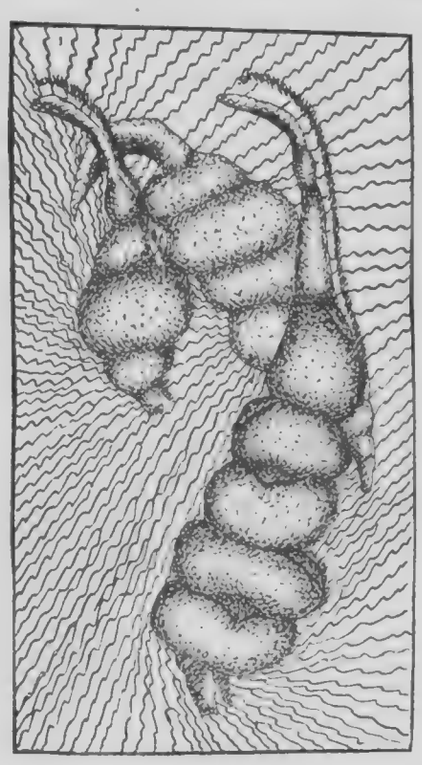

Fig. 62.

Europe, then in this country. It is a native of North Africa, but comes to us from Japan, where it is called Choro-Gi. It is allied to the English ornamental woundwort, (Anthyllis arvensis) and belongs to the same family as the coleus, and the sweet-scented herbs, lavender, thyme and mint; but differs from all of its relatives in that it yields edible tuberous roots. These are formed of ring-like ridges, so that they have the appearance of a one-horned caterpillar (see Fig. 62) and vary in length from one to three inches, and in diameter from one-half to three-fourths of an inch. The skin is thin, smooth, and semi-transparent.

This peculiar vegetable requires no more special treatment than do potatoes, and it will thrive even on poorer soil, though, like everything else, the more attention that is given, the greater and more satisfactory will be the result. Planted, a single whole tuber in a place, in hills two feet apart each way, a yield of nearly 500 bushels to the acre has been reported, each plant yielding from 200 to 300 tubers, which may be planted like potatoes, though each joint of the stem may be used as a set. The plant, growing about a foot in hight, has a round, bushy habit, having medium-sized, oval-shaped leaves, and many small, pink flowers, which in themselves are not unattractive.

As for the use of these roots, they probably will never become a staple article for the market, but may add a variety for the table in winter. When pickled alone and properly seasoned or mixed with small cucumber, onion, pepper and cauliflower pickles, they are excellent; then again, when cooked as vegetable oysters, they are delicious; or boiled, mashed and seasoned like egg-plants, they form a novel side dish, having a pleasant and somewhat spicy flavor, midway between that of the Jerusalem artichoke and boiled chestnuts. In preparing them, washing only is necessary, as the thin, tender skin renders peeling needless. A point not to be overlooked in favor of their general use and cultivation is that they may be kept as well, as easily, and as long as potatoes, requiring only a cool, dry cellar; and they keep their fresh appearance best if covered lightly with earth.

Indust'l Societies.

THE TWENTY-SECOND SESSION OF THE AMERICAN POMOLOGICAL SOCIETY.

(R. N.-Y. SHORT-HAND REPORT.)

An enthusiastic reception; valuable courtesies from all; the Sub-tropical Exhibition; re-election of former officers; Florida, the land of fruits as well as flowers; the Government and pomology; organization of the society.

THE twenty-second session of the American Pomological Society began at Ocala, Florida, Feb. 20. It was the first greeting of this time honored and influential association to the land of citrus fruits and of flowers, and the orange, the queen of fruits, flung open wide the gates of her sunny and fragrant realm to welcome her guests from the frozen North and West. Never was a body of men more hospitably received. The people seemed delighted to honor this distinguished company of American fruit-growers, and even the conscienceless railway companies were melted into surprising courtesy, as the members were given free excursions to all important points, besides being granted free transportation to all points in Florida for ten days after the close of the meeting. Without questioning motives, it is only just to say that this courtesy was highly appreciated by every visitor and was universally used. Had Northern and Western railway lines been thus kindly disposed, the attendance of members would have been much larger. As it was, only about half the States and Territories were represented in the convention. Many were deterred by the expense of the trip, and others were prevented from leaving their nurseries at this busy season.

The first business session opened at the new Semi-tropical Exposition building amid a varied and magnificent display of citrus fruits and a most interesting collection of other curious products of the South. The orange-wood gavel of President Berckmans called the members to order at eleven A. M. Rev. C. B Wilmer made a brief prayer, which was followed by an address of welcome by President Dudley W. Adams, of the Florida Horticultural Society. As a loyal subject of her bright realm, he welcomed the society to the domain of the Queen of Fruits—the orange. He referred to the pine-apple, guava, banana, lemon, pomelo, peach, pear, grape, mango and strawberry, as a bouquet of pomological aristocracy. He invited all to travel all over the State, from Ocean to Gulf, from Georgia to the Keys, without money or price. A welcoming telegram from Governor Flemming, extending the freedom of the State, was read; Mayor Garey, of Ocala, opened wide the city gates and President Wilson of the Semi-tropical Exposition, pushed aside the huge doors of that fine building, the materials of which all stood growing in the native forests here less than three months ago. To all this feast of welcome Vice-president W. C. Strong of Massachusetts, fittingly responded in behalf of the visiting society. A recess was then taken after an appointment of the nominating committee. During the interim the members wandered through the Exposition display and examined the exhibits carefully and with peculiar interest. Of these some notice will be given in another report.

The afternoon meeting was held in the Ocala Opera House, that place being more quiet and better adapted for the purpose. The biennial address of President Berckmans was then read by him. It was a lengthy, interesting and important document, containing useful suggestions and observations. Its publication in full would be of value to fruit growers. He sharply contrasted the condition of European with American fruit-growers, showing how vastly more advantageously the latter labored than the former by reason of their owning the land they tilled. He said the society had long been considered by European pomologists as the most influential of its kind in existence, its reports being quoted as models by foreign horticultural publications. Florida fruit-growers were congratulated for the honor of adding more materially to the development of the State than any other class. The Government was commended for the recognition of our pomological products in the approaching Paris Exposition. The works of the U. S. Pomological Division, and the experiment stations were also praised. The utilization of surplus fruits was still a problem to be solved in some localities, and in a measure it discouraged increased production, but the abundant supply brought good fruits within reach of those otherwise debarred from their full use, which, he argued, would in time increase the demand. The incorporation of the society has been legally effected in accordance with the requirements of the legacy of the late President Wilder, and the $2,000 he bequeathed have been safely invested entire. The society is now free from debt and has a handsome balance in the treasury. The address was received with hearty applause. Officers of the society for the next term were then elected, or rather re-elected, as the list remains practically the same as before.

Then the reading of essays began. Dr. J. C. Neal, of the Florida Experiment Station, opened with a very instructive treatise on "Cross Fertilization."

(To be Continued.)

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

"I DON'T think Nellie is very tidy," said a girl of her friend. "Her veils somehow look as if she crumpled them up and jammed them into a drawer, instead of folding them up." We think that might be said of many girls; yet it is very poor economy to be untidy. One's things get so "mussy" if thrown aside carelessly when taken off. This is especially true of veils; they ought to be carefully folded and wrapped in soft paper, or put in an envelop whenever taken off. Gloves should be stretched out, and folded flat, any loose stitches being repaired. Hats, jackets and gowns should be brushed and looked over, after each time of wearing. These little trifles make all the diff-rence between shabby attire and the reverse.

* * *

THE "men folks" have had such a good time lately discussing their varied interests in the RURAL, that we begin to think the women ought to follow their example. Why shouldn't the women have a "Special" too? Mr. T. B. Terry's manly article previously alluded to in this column, calls to mind the constant worry too many women suffer for lack of a settled household allowance or pin-money. Let us have a RURAL symposium on this subject, and hear what the women folks have to say about it. It is a matter that touches most of us, one way or another.

* * *

CLEAN, stiff collar and cuffs often brighten a shabby gown wonderfully; but for general wear nothing is better than the sensible fashion of putting picot-edged ribbon in neck and sleeves. Orange, primrose, old pink, pale blue, golden green, terra-cotta, or cardinal are all good colors for wearing thus. Ribbon thus worn saves washing and also saves trouble in dressing. It is tacked in double, but is not folded quite in the middle, so that it shows both edges.

* * *

A PRETTY German idea mentioned in Good Housekeeping is the "wonder ball" for a little girl learning to knit. All sorts of little trifles were hidden away in the ball, to be disclosed from time to time as the wool was unwound in knitting. There was a little poem, a bright new dime, a glove buttoner, a tiny booklet, a thimble, a packet of court plaster, a string of beads, a pair of doll's shoes, a packet of doll's hair-pins, and several other tiny gifts. Of course, the ball was pulled about and pinched a little at first, to feel some of the wonders it contained, but the resolute little girl to whom it was given made no attempt to take out any of the mysterious gifts before she came to them by the unwinding. This is really a very good idea in encouraging a child learning to knit, and causes much innocent pleasure.

* * *

AN amusing variation for the game of bean-bags is to use, instead of the board, a small hoop, about a foot across. This is hung in a door-way, three feet from the ground; a small bell is hung in the upper part of the hoop. The bags are to be pitched through the hoop, ringing the bell. It is a game provoking much merriment, even among sedate grown-ups. Another indoor game that gives both exercise and merriment is shuttlecock and battledore, the very thing for a stormy winter day, if there is a vacant room available. It is a time-honored game, but more popular in England than America.

THE GOAL OF HOME.

OLIVE E. DANA.

WE hear much about the childhood homes of poets and statesmen, of artists and authors. These dwellings are idolized by love and memory, till the lonely New England farm, or Western log-house, or quiet village home, loses its dreariness or dullness, in the associations it has for its children, and through them, for the world. We hear more of those homes that lay behind the men and women that the world honored than of the homes which beckoned them onward, and the winning of which was often one of the strongest of incentives to effort. Yet the latter were often as potent in their influence as the earlier. If we could know what the majority of those who are rich or famous prize most as the reward of their diligence, or as the best thing wealth or success has brought within their reach, I wonder if it would not, very often, be the comfort and the joy which they seemed to see in some setting of household delight. How many of them, after all, have realized that "Home is the kingdom, and love is the king."

It may be that their achievements were inspired by home influence, or it may be that the dream of home is realized only in later life. The ideal in either case is wrought out as earnestly. Such homes, whether the makers of them are conscious of it or not, seem to pre-figure the Heavenly City of which it is written. "The kings of the earth do bring their glory and honor into it."

Bayard Taylor dedicating his translation of Faust to his wife, likened her influence to that of the sun and rain and dew, nourishing the flower of song. He gave the soil and she the atmosphere. It is well known that the passionate desire of the poet-traveler for a fitting "poet's home", with beauty and luxury without and within, with grove and lawn and spacious grounds, led to the purchase and adornment of the famous "Cedar-Croft." And although the fulfillment of this desire brought a weight of care and toil which he was glad afterwards to relinquish, as far as possible, yet it was a wish and aim that befitted a warm, true heart like his.

It is said that even as a child, Charles Dickens "nourished an ambitious fancy for becoming the owner of the house at Gadshill. His father had told him that if he worked hard and minded his book he might one day live in such a home, and the speech sank deep into the child's heart." It was many, many years afterwards when he had become the successful novelist, and yet had not lost his boyish fancy or affection, that it came to pass that at a time when he was about to remove into the country, a friend, who knew his old desire, met at dinner a lady who wished to sell an estate she had lately inherited. Noting what was said of the place, and its strange resemblance to that for which Dickens had had so strong an attachment, the friend "found it was the very place of Mr. Dickens' boyish dreams," of which the author of Pickwick Papers became the genial and hospitable master.

It is said of Mrs. Mary Clemmer, that "one of her great ambitions was achieved when she was able to have a house of her own in Washington, with a door in the middle, and to take her father and mother to her own house." She had written of Alice Cary that "hers was essentially a feminine soul, shy, loving, full of longings for home," and had pictured the beautiful home of the Cary sisters,—perhaps the dearest tangible reward of their long, lonely life struggle. Yet that this home love and longing is not a weakness of "feminine minds," is abundantly proven. They may have finer walks, and ampler grounds, those dwellings men's brains or brawn have earned or built,—but they embody the same home ideal.

It is lately stated, in an interesting sketch of his career by Mrs. Sarah K. Bolton, that Mr. Geo. W. Childs, owner of the Public Ledger, of Philadelphia, a paper whose yearly profits have been $400,000, after fortune and fame had come, built homes, elegant ones, in Philadelphia and at Newport; "not simply places in which to spend money, but centers of hospitality and culture." The one is a city house, with a luxurious and charming library, whose wood-work is of carved ebony with gold; "with book-cases six feet high on every side, and the ceiling is built in sunken panels, blue and gold." The other is "a lovely country seat, the house in Queen Anne style, surrounded by velvety lawns, a wealth of evergreen and exquisite plants, brought over from South America and Africa." "The farm adjoining is a delight to see, the dairy built of white flint stone, with stained glass windows, as though it were a chapel." And here have been entertained Herbert Spencer, Dean Stanly, Hughes, Dickens, Evarts and Grant—"the famous of two hemispheres." James T. Fields who also won his way to distinction, was master of a home famous for its literary treasures, its souvenirs of travel and friendship, and the wise, witty, and renowned it had sheltered. The outlook from his summer home, at Manchester-by-the-Sea, is described, it is said, in one of the novels of William Black.

A PLEA FOR OUR DAUGHTERS.

S. J. L.

I THINK the next question before the people will be "What shall we do with Our Fathers." The subject as to the disposition of "Our Girls" and "Our Boys" has been (apparently) disposed of, but the subject of "Fathers" has never been broached, and yet they are an important factor as regards the domestic finances. What is to be done with the father who is perfectly willing that his daughter should work hard at home, doing all and more than a hired girl would do, and yet who is aghast at the suggestion that he

pay her regular wages, saying to himself gravely, "What can she want with money? I *give* her her board and clothes; any girl with a spark of gratitude or common sense would be satisfied." Heaving a resigned sigh, he adds "But that's just the way with my women folks; they cannot be made to see I am managing for their interest; they are working for themselves and what is saved by their labor will come to them in future years."

Now I would ask what man would contentedly work year after year, his clothing bought for him without consulting his wishes, never allowed to use his own judgment in selecting implements to work with, not a cent in his pocket to gratify a wish, but buoyed up by the knowledge that when he was too old to enjoy it, he would then reap the benefits. Men would consider that tyrannical, but they can look upon a daughter taking that part with conscientious fortitude little realizing to what wells of humiliation they consign her. It reminds me of an adopted daughter—a faithful and reliable worker—being magnanimously presented with $5 at Christmas time, for the purchase of gifts, accompanied by a list of what things to give and to whom to give them, leaving out a dearly beloved aunt, and giving presents to those where they would make the most show. And those people felt that they had been gloriously generous!

Give your daughter an interest in her work; show confidence in her ability to exercise common-sense, and you will be surprised at the rapid development of self-reliance and judgment. Never hesitate to trust your daughter with household expenses: if you put confidence in her she will reward you with faithful service.

How is a girl to have judgment if you do not trust her? How is she to fill the place of wife and mother if she is entirely ignorant of the personal distribution of money?

A girl who has a dollar in her own pocket is far happier than the one who earns two dollars kindly kept for her future use by a philosophic parent. In security there is rest, and I know of no feeling that is more restful than the security of having a few dollars of your own in your purse to do with as you please. A settled sum, small though it may have to be, that will enable her to make calculations as to its distribution, will engender great tranquility of spirit, and do away with that uncomfortable balancing upon that point between hope and despair. It is a question of right and wrong, and may all fathers keep to the right!

GOLDEN GRAINS.

CHAPIN offers consolation in the truth that out of suffering have emerged the strongest souls; the most massive characters are seamed with scars; martyrs have put on their coronation robes glittering with fire, and through their tears have the sorrowful first seen the gates of heaven.....

SOMETIMES, says Spurgeon, a fog will settle over a vessel's deck, yet leave the topmast clear. Then a sailor goes up aloft and gets a lookout which the helmsman on the deck cannot get. So prayer sends the soul aloft; lifts it above the clouds in which our selfishness and egotism befog us, and gives a chance to see which way to steer.....

THE CONGREGATIONALIST gives pertinent advice when it says that there is hardly a person who cannot be drawn into church, sooner or later, by being studied attentively, approached in a friendly way, and followed up as opportunities occur.....

THE woman who has found a man to whom she can be an inspiration, making him toil easily and happily for her sake, has found the widest possible sphere. The instincts of every woman lead her to seek this; whatever else women seek is probably sought because they have been denied or disappointed in finding this.....

Be sure, no earnest work
Of any honest creature, howbeit weak,
Imperfect, ill adapted, fails so much;
It is not gathered as a grain of sand
To enlarge the sum of human action used
For carrying out God's end.
I count that heaven itself is only work
To a surer issue.
Let us be content in work
To do the thing we can, and not presume
To fret because it's little.
—*Mrs. E. B. Browning.*

THE little dwarfed flower that springs into life in the crevice of some rock, shut in from sun and rain, grows struggling toward the light, and as it withers gives forth a perfect seed, which the winds bear to more favorable soil. So it is that the influence of a word may not be felt by the nature on which it falls, but its spell may be borne to a more yielding heart, and there blossom in gladness.

WHAT greater compensation can be asked for a life of devoted well-doing, than the glory that it imparts to the dying hour, as the traveler looks back upon the way he has come?.....

A LITTLE girl died here a few years ago, and, as her mother held her wrist and noted the faint and flickering pulse, a smile came to the wan face and the child whispered: "There is no more desert here, mamma, but all the world is full of flowers." A moment later the smile became transfixed.....

IN an Eastern city, not long ago, a Sister of Charity was dying, and at last from a stupor she opened her eyes and said: "It is strange; every kind word that I have spoken in life; every tear that I have shed, has become a living flower around me, and they bring to my senses an incense ineffable."....

PURE words in unclean surroundings are like the beautiful lilies that grow up straight and tall beside a stagnant pond, with their beauty reflected in its sluggish depths .....

ONE of the happiest faculties a human being can possess is that of looking upon the bright side of everything, and when Tom Moore wrote

This world is all a fleeting show,
For man's illusion given:
The smiles of joy, the tears of woe,
Deceitful shine, deceitful flow—
There's nothing true but heaven!

he certainly was looking upon the dark side of everything: he had a decided "fit of the blues," which tinged all things with the same sombre hue, and, the worst of all, made a sad mistake; for this world is as true as Heaven, if we but make it so.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

EXTRACTS FROM SUNDAY EVENING TALKS.

THE MAN WITH THE UMBRELLA.

(By a young lady of eighteen.)

STANDING on the wharf of a commercial city of the Connecticut, one afternoon, watching the steamers pass up and down the river, and looking across the meadows, dotted with farm houses, we became almost unconscious listeners to a conversation going on near us. A sea captain who had given over the dangerous calling he had loved, for a quiet life among the luxuries of his home, and his family, was recalling, for a friend, many a reminiscence of his earlier years. And among other things, he told how he had learned to carry his ship successfully to and fro, along the southern Atlantic coast, even in the most stormy and foggy weather.

"I never made a trip," said he, "in which during all the clear weather, I was not studying every rock, and headland, and island and sand-bar on the coast, and from each I drew angles with my eyes, until by gaining the slightest glimpse of a light or a bit of land, I could tell precisely in what direction and how far from it I was, and therefore, precisely what point I was opposite. I soon grew so familiar with my own angles and my mental chart of that coast, that I felt as sure of my course in the darkest night and the foggiest weather as on a sunny day."

"In short", laughed his friend, "you always carried your umbrella with you when the sun shone, and so you were always prepared for a storm."

And there is an immense amount of practical truth in that last remark, if one only stops to consider it. The man who carries his umbrella when the sun shines, is indeed always prepared for the storm. The incident related by the sea captain recalls to my remembrance, a dear, good man, a city missionary of that same city, who never left his home on his round of daily visits without taking with him his umbrella. When the sun shone down upon the paved street with a sultry glare, he sheltered himself beneath the brown canopy of that trusty friend, and when sudden showers came plashing down, he calmly pursued his way, protected by his unfailing companion.

We girls,—that means the irreverent speaker and as irreverent a friend—used to make all manner of fun of the dear parson; we dubbed him Paul Pry and familiarly spoke of him as the man with the umbrella. But, ah! how many a dying bed has been cheered, how many an outcast gathered into a sheltering fold, how many a hungry family fed and clothed, how many a Sunday-school founded, how many a chapel built by that man with the umbrella, or through his tireless effort; and for all our nonsensical jesting, I doubt if he could have accomplished half the immense amount of good he did, were it not that he was always prepared for the storms.

And, metaphorically, how many of us go through life carrying umbrellas while the sun shines? Youth and health and prosperity all represent sunshine; but do we carry an umbrella while we are young and healthy and prosperous, that we may be prepared to meet the ills of life, however suddenly they may overtake us? While we are young, are we fitting ourselves to resist temptation, to support ourselves under all circumstances? While we are well, are we strengthening our muscles, developing our constitutions to their best extent, laying by stores of health, good habits, and temperance principles for coming seasons? While we are prosperous, are we saving up for rainy days; are we doing good, and helping others and cultivating self-denial and thrift? Many a young man, had he carried an umbrella when the sun shone, when the storms of temptation came would have been saved from their fury—would have been saved from ruin and death. Many a young woman, had she cared about her health when she was healthy, would have been saved years of invalidism. Many a family, had they practiced thrift and economy when they were prosperous, would have remained unharmed during the hard times instead of being reduced to penury.

After all, the man with the umbrella, either in a metaphorical or literal sense, is not to be despised. When we are caught in a drenching shower, we do not despise any proffered share of it. Indeed, we wish we had been Paul Prys ourselves, to the extent of carrying a protection against the rain, even before the rain set in. But if our pride results in occasional damage to our dry goods, pray do not let our inclinations run away with our common sense, and prevent any young man or young woman from giving serious thought to the fact that he or she who strives in youth to be strong, healthy, learned, virtuous and independent, honest and honorable, is the one who will not make shipwreck of life in coming years, but by having carried an umbrella in the sunshine, will have been provided for and protected in every storm of temptation and under all circumstances.

A SHINGLE SOCIAL.

THE president of the Ladies' Church Social Society and the vice-president were consulting together to decide who should give the next social. The church used its pleasant chapel for its social gatherings. At one end of it were three small rooms, one of them fitted up as a kitchen and the other two with sliding doors that could be opened so as to make the two rooms parts of the main room.

The Social Society owned a cooking stove and a closetful of dishes, and giving a social was not so great a drain upon the resources of those who gave it, as it had been before the chapel was built and its kitchen stocked and furnished.

So when the consultation of the heads of the society resulted in the choice of ten young ladies to give the social, they could not refuse, though, in truth, more than one at first wanted very much to be excused. A bright, new carpet was to be laid in the chapel and the social would be the occasion of its first public appearance. This made the event a special one and the committee soon became interested in making the social the best of the season. They met and discussed meats, bread, sugar, cream, coffee and fruits, their prices and their fitness, and, after much talking, settled that the meats should be roasted ham, sliced cold, and chicken salad; that there should be white and brown bread and baking-powder biscuits, canned pears and jelly for the fruit, and cucumber pickles. Coffee, cream, sugar and tea must be furnished besides. No cakes or rich sauces would be furnished, for the refreshments were to be served from six to seven as a plain supper, and as the admittance would be only 10 cents it was thought that many would come to the social without their suppers, knowing a light, wholesome meal awaited them there When it had been settled who would furnish the eatables, one of the committee suggested that a wide shingle given each one who came to supper, would be very convenient, as it would be long enough to hold a plate, a coffee-cup and a sauce dish. The plan was decided upon, and the shingles were engaged from a lumber merchant in the town. The girls on the committee then told their friends that the entertainment was to be a shingle social, but they would give no explanation of the name, and much funny surmising went on outside the committee circle. The brothers of the girls on the committee had been invited to become working members of it, and one and all responded with hearty good-will and practical help.

The morning of the day set for the social they all met to bring together the provisions and to get a table ready in the little room next to the kitchen where everything was to be arranged, so that the waiters need not go to the kitchen for supplies when their time for action came. A little window between the kitchen and this room made it a very convenient place to set the table. Great dismay fell upon the committee when the ham was cut into, for it was found to be spoiled at the bone, and entirely unfit for use, and a chorus of cries arose, from the first exclamation "It's spoiled!" through all shades of dismay and disgust, to a vigorous order to take it out of doors, "It is scenting the whole place!" And the offending meat was carried into the yard, covered with a basket and a stone was laid on the basket to prevent any stray dog from appropriating the dainty morsel. Then the question was discussed, "What shall we have instead?" Salmon, sardines, boiled tongue, beef loaf, dried beef, and scalloped oysters were discussed in turn, and at last hot scalloped oysters were decided on. Three of the committee were each to do a share of the preparing and baking, and bring them as soon after five o'clock as possible, when they would be kept hot in the oven of the chapel cooking-stove.

The young lady who suggested having the shingles, prepared badges for the committee and for all who were to help them to wait on the—not tables—shall I say wait on the shingles? These badges were miniature shingles with the word lettered on them, which indicated the duty of the wearer. The girls who took the fee at the door had "dimes" on their badges; "plates," "bread," "salad," etc., were lettered on others and the wearers had only to fulfill the one duty specified by their badges. Two young ladies wore badges of welcome, and they received every one with a cordial greeting and directed all to the third little room where wraps and hats could be laid aside

A little after six the pile of shingles and Japanese paper napkins were distributed and the merriment the former caused drove away any vestige of stiffness that may have lurked among the company. The room filled very fast and by seven o'clock a busy hum from more than 100 animated voices assured the committee that the social was proving a success. The bread, the coffee, the oysters—everything held out "just beautifully," as one of the providers expressed it, and the fear that something would be used up while it was still in demand, vanished. To be sure, there was no chicken salad left for the committee when they ate around the big table after every one else had been served; but there was plenty of everything else and more than enough of the scalloped oysters.

Nearly 150 had been served and there were still some things in the chapel kitchen. Seven loaves of white bread had been provided and eight of brown, 100 biscuits, about six quarts of chicken salad, six quarts of pears, four glasses of jelly, three pounds of coffee, four quarts of cream, four pounds of sugar and about four of butter; and six quarts of oysters were used for the scalloped oysters.

When the supper was over, the sexton's wife, who had been an able helper all the afternoon and evening, took charge of the dishes and returned them clean and shining to their cupboard.

The committee were free to enjoy the social features of the evening and as they moved about among their friends they stopped occasionally to give each other little congratulatory smiles and nods, or to say in a happy under-tone, "It *is* a success; isn't it?"

ALICE BROWN.

WHY FRET.

WHAT'S the use in fretting? Some people go around with a perpetual pucker between their eyebrows—a constant frown on their brows; and what good does it do? Did fretting ever cure any evil? No, never in this world. I don't say, What's the use in caring? One *must* care; one must have life's work at heart enough to think about what is the best to do—but to fret, fret, fret, from morn till eve, just because things don't suit you, won't make them suit you a bit better than if you didn't fret. When things are unsatisfactory, first find out the cause. If you can remedy it in anyway, go to work man-

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
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When she had Children, she gave them Castoria

fully (or womanfully) to bring about the desired remedy. But if you find you cannot accomplish what you wish, will fretting avail you aught? Remember that

" For every evil under the sun,
There is some remedy—or none.
If there be one, resolve to find it—
If none, submit and never mind it."

It is not always easy to "never mind it," but if it is inevitable, we *must* submit. Sometimes it seems hard and bitter—sometimes the burden given us to bear seems heavier and greater than we can bear, but does fretting lighten it? Ah no! It only adds care to those around us, and lifts the weight from ourselves not one whit. While we struggle against the inevitable we become tired and weary with the struggle and so become unfitted for anything. It is like a caged bird dashing its head against its iron bars. Does it help the poor tired thing to freedom? On the contrary, it only weakens and prostrates, so that, if freedom should at last come to the caged creature, it would not be able to avail itself of the longed-for boon.

"Another rainy day! I hate rain! And it is always raining!" How often we hear such exclamations as these. (And let me whisper—How often I grumble so myself!) Do you suppose there are many people who love rainy, cloudy, muggy weather any more than you do? Do you suppose your constant fretting about said rains and clouds makes your companions more cheerful over the weather? It is selfish to fret. If we are unhappy, does it make us happier to make those around us miserable? If you have nothing else to do, you had better go at once and hunt some work that will keep you busy, for those who are busy don't have time for fretting. "Do with your might what your hands find to do." Enter heart and soul into your work and by and bye you will outgrow the detestable habit of complaining. As I've said in the RURAL before—don't go poking around in some dark hole in search of a spook of some sort to haunt you; for when a *bona fide* ghost is ready to come, he'll not need any "poking" after—he'll walk right out and face you. Life is filled with thorns, some of them very sharp—some of them seem to pierce our very souls, but are there not also roses?

"There's never a thorn without a rose," said some one (I'm sorry I can't say who) in reply to a pessimist who was complaining that there was "never a rose without a thorn." That seems to me to be the best way to look at things.

Some fret because it is cold, or because it is hot, or because it is wet, or because it is dry. Does fretting alter it any? No. Then what does it do? It makes us ill-tempered and disagreeable. It makes those around us, whose lives we ought to brighten, far more unhappy than they otherwise would have been. If we have an unfortunate nature that makes a mountain of every mole-hill, let us try and keep our "mountains" to ourselves, and not shift the weight of them on everybody who comes in contact with us.

" How easy it is to spoil a life—
And many are spoiled ere well begun—
In some, life darkened by sin and strife,
Or downward course of a cherished one;
By toil that robs the form of its grace,
And undermines till health gives way:
By the peevish temper, the frowning face,
The hopes that go and the cares that stay.

" A day is too long to be spent in vain;
Some good should come as the hours go by—
Some tangled maze may be made more plain,
Some lowered glance may be raised more high.
And life is too short to spoil like this—
If only a prelude, it may be sweet.
Let us bind together its threads of bliss,
And nourish the flowers around our feet."

Has it been another sermon? Well, I am preaching to myself as well as to you, for I fear the seed of discontent has taken pretty deep root in my garden patch. But I am fighting to keep it from yielding a large crop.

DORA HARVEY VROOMAN.

HARPER'S BAZAR would remodel a black silk dress in Directoire fashion in this way: Cut off the back of the basque in a blunt point, and have the fronts short like those of a round waist. Over the front add in the shoulder seams, and under the arms a short square-cornered jacket cut off straight at the waist line, and extending up to the highest point of the shoulder seams, where it must turn back in short revers made double, and the edges below are then widely faced all around to the side seams. Under this jacket front place a full vest of black net wrought with gilt figures, gathered to the standing collar of silk. This net is costly, but it is very wide and only a quarter of a yard is required for the vest and for trimming the sleeves. The vest disappears below under an Empire sash of the silk, which may be in wide wrinkles straight across at the waist line, or else it is in diagonal folds, being much higher on the right side than on the left. The sleeves are over an easy coat-shaped lining of silesia or satteen, but are cut three or four inches longer at the top than the lining, and are slightly wider there, so that the added silk can be laid around the arm in easy, careless folds—not set on stiff—and pushed up high above the arm-hole. At the wrists a slightly flaring cuff is added of the silk doubled and interlined, and is turned back, with its opening on the inside or the outside of the arm, as the wearer chooses. Below this cuff, coming out from inside the sleeve, is a puff finished with a narrow ruffle of the black and gold net. The skirt has four straight back breadths partly gathered to the middle of the blunt point of the waist, then laid in pleats toward the sides. Tapes underneath across these breadths hold them in place. The front of the skirt has a slightly draped tablier of two or three breadths, or else it is pleated at the top and finished with a Spanish flounce below.

AGREEMENT.

SOME ten years ago, in gathering grasses for winter decoration, I chanced upon a tuft of ferns with very small leaves; these I gathered and pressed in a large book, and some of them are there now. Whenever I open that book the room is filled with a delicately sweet odor from those pressed ferns. Their color is as fresh as if it were only a few weeks since they were gathered, instead of ten years.

The incident was recalled to me upon reading "Sweet Fern's" letter in the RURAL of February 9. Being of the opposite sex, I suppose I have no business meddling in the department claimed by the women, but allow me to thank the writer for her sensible and practical letter. There are too much theorizing and too little practical economy displayed by many who write for the delectation of themselves and the guidance of others. A good wife, in my estimation, will look well to the ways of her household, caring for her loved ones, and causing each member of her family to regard home as the dearest spot on earth. A true woman will continue to increase in attractiveness to her dear ones as the years go by, even though they bring lines of care to her face, and old Father Time slowly deprive her of youthful personal graces. Some aged ladies of my acquaintance have in their fullness of years a charm that I am sure they never possessed in "the auld lang syne." In consciousness of duty done, they placidly wait the coming of the time when they shall pass through the shadowy vale to the "beautiful home beyond," when they shall put on a glorious immortality.

A MAN.

NOTES.

THE new shade of green is so glaring that it will require the complexion of an angel and the courage and strength of a Hercules to wear it—so says one of our fashion chroniclers.

THERE are not less than 1,500 women who are regularly enrolled as art students here in New York. They come from every State in the Union, many of the Territories, Canada, Mexico, and South America—and one comes from Japan.

THE "horrible hump of deformity," as Annie Jenness-Miller calls the bustle, is gradually growing smaller. In the latest and most fashionable gowns the reeds are omitted. Still, it doesn't seem as if we could do away entirely with the bustle.

D. H. V.

BREAKFAST AND LUNCHEON CAKE.

THE following seems so well adapted to the breakfast table, that I, who have a weakness for cake at breakfast, often give it a place there. It is also nice at luncheon, and is well liked by the men-folks when work necessitates "carrying dinner."

THICK CAKE.

Two cups of sugar, one cup of unmelted shortening, mix, add one tea-spoonful of salt if the shortening is fresh, two cups of sour butter-milk, nutmeg or other flavoring, and one tea-spoon, rounding full, of saleratus dissolved in a spoonful or two of warm water. Use sufficient wheat flour to form a dough as soft as can be easily handled. Roll out from one-fourth, to one-half inch in thickness, cut any size desired (the edge of a tea-cup or the top of a tin pint can is a good cutter) place the cakes close together in buttered tins and bake in a quick oven. If granulated sugar is used, one-fourth to one-half cup less in measure may be taken.

Fried cakes, ginger cookies, and ginger-bread, are sometimes liked at breakfast.

MOTHER'S FRIED CAKES.

ONE heaping cup of sugar, one and one-half cup of butter-milk, three or four table-spoonfuls of melted shortening, one scant tea-spoonful of saleratus dissolved in a table-spoonful or so of warm water. Nutmeg. Flour to make a middling but not too stiff dough. Roll about one-half inch thick and cut into strips half an inch or so wide and six or eight inches long. Double and twist to form a sort of a half-double figure 8, and fry in hot lard.

SISTER MARCIA'S FRIED CAKES.

THREE rounding cups of sugar, one pint of butter-milk, four or five table spoonfuls of fried meat gravy, one level tea-spoonful of salt and one tea-spoonful of saleratus in warm water enough to dissolve it—cinnamon or nutmeg and flour sufficient to roll out. Cut the dough to any form desired and fry in hot lard.

GINGER COOKIES NO. I.

ONE-FOURTH of a pound of butter, one cup of sugar, one-half cup of sour cream, two cups of molasses, one egg (that may be omitted, using a trifle more saleratus if eggs are scarce), a pinch of salt, a spoonful each of ginger and cinnamon, one heaping tea-spoonful of saleratus dissolved in a spoonful of warm water. Flour to form a dough as soft as can be easily rolled.

GINGER COOKIES, NO. 2.

ONE cup each of sugar, molasses and butter (lard or fried meat gravy may be used instead), one egg, or none, as preferred, one table-spoonful each of ginger and vinegar, and one table-spoonful of saleratus dissolved in a little warm water. Cinnamon or not as you like. Flour to form not too stiff a dough.

If these are too "rich," try "Christie Kriss," ginger cookies without shortening. They are good. Two cups of molasses, a tea-spoonful of soda and one of salt, an even tea-spoonful of ginger and other spice if desired, and flour enough to roll easily.

GINGER-BREAD.

ONE tea-cupful each of butter and butter-milk, three tea-cupfuls of molasses, one table-spoonful of ginger, one table-spoonful of saleratus dissolved in a spoonful or two of water. Mix with wheat flour to form a dough as soft as can be handled. Put it in three long pie tins, mark the top of each in bars, crosswise, and bake.

GLADDYS WAYNE.

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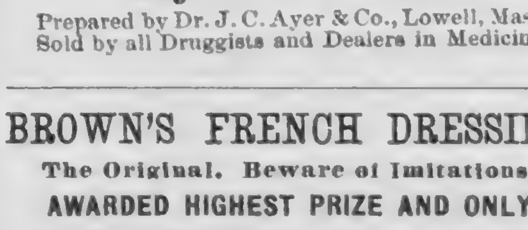

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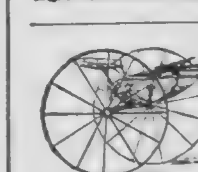

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PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, March 9, 1889.

NEW YORK MARKETS.

POULTRY--LIVE Fowls, near-by, per lb, 12c; fowls Western, per lb 12c· roosters, per lb, 7@11c; turkeys, per lb 12@13c; ducks, western, per pair, 75c@1.00; geese, western, per pair, $1 65@2 00; chickens; nearby, per lb. ——c; do, western, ——c.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per lb, 15@15½c: do do, common to fair, 10@14c; do, iced, dry picked, choice, 11@12c. Fowls, western, do, choice, 12@—c; do, nearby, do do, 12@13c; Chicks and Fowls, mixed, 11@14c; do do do, scalded, 8@9c. Squabs, white, per doz, $4 00@$4 25 do, dark, do, $2 50@$3 25. Chickens Philadelphia, dry picked, 13@20c, do Jersey, do, choice, 14@15c; do nearby, do, good, 13@14c; do Western, do do, 11@12c; do do, iced, good to choice 10@12c. Ducks, nearby, choice, per lb, 15@16c; do do, good, 14@16; do Western, good, 14@16c. Geese, Western, good, 8@12c.

HAY AND STRAW.—Choice Timothy, 95c@—; do good do, 80c; do medium, 70@75c; shipping, 65@70c; do, Clover, mixed, 60@65c. Straw.—No. 1, rye, 80@—c; short do 60@65; oat, 45@50c.

BEANS.—Marrows, new, $2 25@—; new mediums, choice, $1 80@—; pea, $1 80@—; red kidney, $2 10@2 20; white kidneys, choice, 2 15@2 20; foreign, mediums, 1 35@1 55; California Lima, $2 75@$3 00; green peas, $1 35@1 40.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Long Island, per bbl, $2 25@$2 35; Maine, per bbl. $1 75@$2: State, per bbl, $0 80@1 50; Sweets, per bbl, $2 25@4 00. State. Onions, Orange county red, per bbl, $0 50@0 75· Cabbages, Long Island, per 100, $4 00@5 00; Onions, Connecticut, red, per bbl. $0 80@$1 00; do do, white, per bbl. $2 50@$3 50; do do, yellow, per bbl, 0 80@1 25; do State, do, do, $0 80, @$1 00. Turnips, Russia, per bbl, 50@$1 00. Cauliflower, per bbl $——@——; Celery, per doz bunches, $1 50@$2 00; Kale, per bbl, 35@50c; Spinach, per bbl, $1 50@$2 50.

FRUITS.—FRESH.—Apples, Spitzenburg, per bbl. $1 50@2 00; do, Spy, do, $1 50@$2 50; do Snow, do, $1 50@$2 00; do, Baldwin, $1 25@1 65 do, Greening, $1 25@$2 00; do, common, $0 90@$1 00. Cranberries, Jersey, fine, per box, $1 75@$2 00; do, common to good, 75c@$1 50. Grapes, Catawba, per lb, 4@5c. Florida Oranges, best: per box, $3 00@$3 25; do, good lots, $1 75@$2 25; do lemons, best, $3 00@3 50: do do, common, per box, $1 00@$2 50 Strawberries, per qt, 30@65c.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5½@6¼c; do do, old, -@-c; do do, new, common to prime, 4½@5¼c, do sliced, new, 4@5c; do, quarters, choice, 3¾@4⅜c; do, coarse cut, 4@4¼c. Cherries, new, 13@15c. Raspberries, new, 17@19c. Blackberries, 4¼@4½c. Huckleberries, 10@—c. Peaches, Delaware, evaporated, peeled, 14@16c; do do do, unpeeled, 5@6c; do, North Carolina, sun-dried, peeled, 8@10c. Plums, 6½@9c.

DAIRY AND EGG MARKETS.

NEW YORK.-BUTTER-New, Creamery, State, pails, best, 27@28c, do do, tubs, best, 20@26: Pennsylvania, best, 29@30; Elgin, best, 30; Western, best 28@28½; do prime, 24@26c; do good, 20@23c; do poor, 18@19c. State, Dairy, half-firkins, tubs, best, 26@27c; do do prime, 24@25c; do do fine, 20@23c; Welsh tubs, fine, 23@24c; do do good, 20@22; firkins, best, 22½@23c; do prime, 20@22c; do fine, 18@—c. Western—Imitation Creamery, best, 22@24; do fine, 18@20; Western dairy, fine, 20@21; do fair, 16@17c; do poor, 13@14c; do factory, fresh, best, 19@20c, do prime, 17@19c; do good, 15@16; do poor, 11½@13½c. Old butter from 2 to 4c. lower.

CHEESE.—State factory, fancy, 12@12¼c; do do, fine, 11@11¼c; do do, prime, 10¾@11¼; do do, fair to good, 10@10½c: Ohio, flat, prime, 11@11¼c; do good, 10@10½c; Skims, light, 8½@9c; do medium, 6½@7; do full, 2@3.

EGGS.—Near-by, fresh, 15@15¼; Western, fresh, 14¾c Southern, fresh, 14@14¾c; Canadian, 13@14c; Western, best, 14½@14¾c; limed 9@12c.

Encouraging Evidence.

In matters relating to Compound Oxygen to which we call attention so frequently, you are asked simply to judge by evidence. Other affairs of practica existence, which proceed on this basis have no difficulty in the way of adjustment, no more do our claims for Compound Oxygen.

We are helped over obstacle by such impetus as the following afford :

PRINCE'S BAY, N. Y., April 1, 1887.
"My wife had neuralgia going from head to heart, sick all the time night and day for several years. Used two home treatments of Compound Oxygen and in less than three months she was fully relieved."
J. W. ANDROVATT.

BEWLEYVILLE KY., November 21, 1886.
"I write to inform you of my health and good feelings towards you as helpers of the afflicted ; have not had a severe cold since I have been under the Compound Oxygen treatment." MRS. ETHEL H. COX.

LARKIN, W. VA., July 31, 1888.
I must say your Compound Oxygen has done me much good. You may use my name in any way you wish. REV. T. F. HOLT.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 331 Montgomery St., San Francisco, Cal.—*Adv.*

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, March 9, 1889.

BEEVES.—Dressed beef at 5@6¾c per lb for sides.

MILCH COWS.—Receipts for the week thus far are 117 head. The market has ruled dull at $25@$40 per head, and Inferior stock has sold as low as $22. Now and then a Choice or Extra Cow goes to a private customer at $45 or $50.

CALVES.—Steady; 4½@7c per lb for veals and 2½@3c per lb for western calves.

SHEEP AND LAMBS.—Common to Choice Sheep sold at $4@$5 75 per 100 lbs, and 1 carload of Extra do at $6 05, and lambs at $5 50@$7 25. State sheep, 91 lbs average, at $5 30 per 100 lbs; Ohio do, 85 lbs, at $4 75; do, 81 lbs, at $4 87½; do 83 lbs, at $5 25; Michigan do, 88 lbs, at $5 30; Western do, 97 lbs, at $5 10; Ohio lambs, 83 lbs, at $7 25; Michigan do, 80 lbs, at $7; Western do, 74 lbs, at $6 62½.

HOGS.—State Hogs, 194 lbs average, at $5 per 100 lbs' Common to good are nominally quoted at $4 80@$5 20.

EXTRAORDINARY LICENSE.

"IT seems to me," remarked one of our citizens the other day, "that physicians are allowed extraordinary license in the manner in which they juggle with the welfare of their patients."

"Now here is Dr. —— who was attending Mr. —— up to the time of his death, and if he treated him for one thing he treated him for a dozen different disorders. First, the doctor said pneumonia was the trouble; then it was consumption. Then the patient was dosed for heart trouble, and so on until just before he died it was ascertained that disease of the kidneys was the real trouble, and that which had been at first treated as pneunomia, consumption, heart disease, etc., were but the symptoms of kidney disease.

"But then it was too late."

"This is only one case in a hundred, and I am beginning to lose faith in the doctors altogether. In fact I haven't had any need for their services since I began to keep Warner's Safe Cure in my house, a little over three years ago. Whenever I feel a little out of sorts I take a few doses of it, confident that the source of all disease is in the kidneys, which I know Warner's Safe Cure will keep in good order, and will eradicate any disease that may be lurking there. Had Mr. —— followed a simliar course, I have no doubt that he would be alive to-day; but, of course, all people don't think alike."

"One thing is certain, however, and that is the doctors are allowed a little too much freedom in the way they have of pretending to know that which they really know nothing about. If they don't know what is the real trouble with the patient, they should admit it and not go on and experiment at the cost of the patient's life."

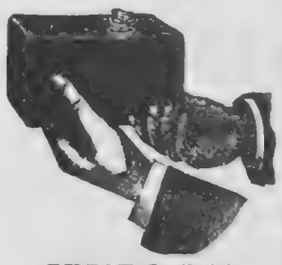
For rates on the TRY ME, the *best* hand lever Feed Cutter (3 sizes), ad's G. S. GARTH, Mill Hall, Pa.—*Adv.*

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING MARCH 8, 1889.

J. N. L.—H. C.—O. H. A.—A. A. G.—A. J. A.—J C.—C. H. M.—B. L. B.—J. C.—J. W. G.—M. E. G.—C. N. R.—S. H. W.—A. F. C.—A. B. S.—N. R.—E. P. C.—D. C S.—J B. P.—S. H.—A. K. S.—J. E. E.—C. S. C.—E. E. W.—E C. B.—J. E.—E R. A.—J. W. B.—M. M.—C. E. S.—L. M. G.—R. F.—M. A. T.—T. C. D.—W. G. B.—S A. B.—I. V.—J. B. N.—A. J. S.—M. P.—A. J. N. P.—E. L.—M. C. H.—Z. H. R.—J. H. W.—L. O. Q.—

A COMMON MISTAKE in butter making is carelessness in selecting and using artificial color. The best on earth is none too good. Use Thatcher's Orange Butter Color and you have it right every time.—*Adv.*

The Kodak.



PRICE $25.00.

ANYBODY can use the KODAK. The operation of making a picture consists simply of pressing a button. One hundred instantaneous pictures are made without reloading. No dark room or chemicals are necessary. A division of labor is offered, whereby all the work of finishing the pictures is done at the factory, where the camera can be sent to be re-loaded. The operator need not learn anything about photography. He can "*press the button*"—*we do the rest.*

Send for copy of KODAK Primer, with sample photograph. Mention Rural New-Yorker.

The Eastman Dry Plate and Film Co.
ROCHESTER, N. Y.

WANTED.—A person to represent F. G. Anton Fgg Preservative Co., Lebanon, O. Steady work during Spring and Summer. Salary $50 to $65 a month. Salary allowed assistant where business will justify. Full particulars and necessary papers mailed for 12c.

C. S. Cooper,
SCHRAALENBURGH, N. J.
Breeder of P. Rock, White P. Rock, Laced and W. Wyandotte and Patagonian. Eggs $2.00 for 13; $3.00 for 26.

ANDRUS BROWN'S **AZTEC TEA.**

The Only Living Person Who Knows Its Secret Culture. Used as a Bandage, Vapor, Drink or Syrup, in **Consumption, Asthma, Catarrh, Rheumatism, Neuralgia, Malaria,** Marvelous beyond human belief. No testimonials asked. Tells its own. Bag **$1.00** by express, charges paid, by my only U. S. Agent. Small Sample by Post, 10c. Chew it if nervous.

JAMES BROWN, CLEVELAND, OHIO.
P. O. BOX **106,** **Or ask your Druggist.**
Explanatory circular mailed for 2c. stamp.

The "Burlington" is the only line running sleeping cars from Chicago to Denver without change. It is the only line by which you can go from Chicago to Denver and be but one night on the road. It is the picturesque line to St. Paul and Minneapolis. It runs daily "fast trains" to Kansas City, St. Joseph, Atchison, Council Bluffs, Omaha, Lincoln, Cheyenne, and Denver.

SEND TEN CENTS IN POSTAGE STAMPS TO
E. & O. WARD,
PRODUCE COMMISSION MERCHANTS
for Circular giving important advice about **shipping produce.** Also containing recipe for **preserving Eggs.** Established 1845.
No. 279 Washington St., New York City.

JONES
HE
PAYS the FREIGHT
5 Ton Wagon Scales,
Iron Levers, Steel Bearings, Brass Tare Beam and Beam Box for
$60.
Every size Scale. For free price list mention this paper and address
JONES OF BINGHAMTON,
BINGHAMTON. N. Y.

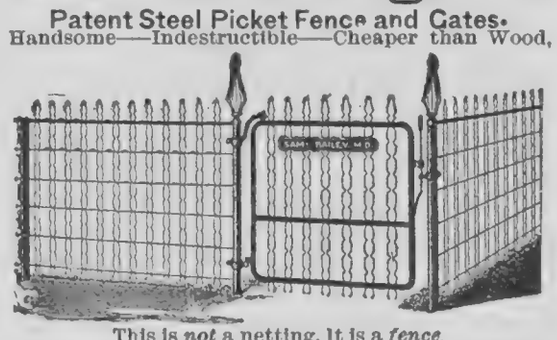
Established 1852. | **JACKSON BROTHERS**
NEW YORK STATE DRAIN TILE AND PIPE WORKS,
MAIN OFFICE. 76 THIRD AVE., ALBANY, N. Y.

ROUND, SOLE AND HORSE-SHOE TILE,
Over 13 inches long. By cargo or smallest quantity. Our new improved machinery makes superior round and sole tile, excelling anything offered heretofore. First Premium wherever exhibited. Price-list on application. Vitrified Glazed Pipe and Tile Machines.

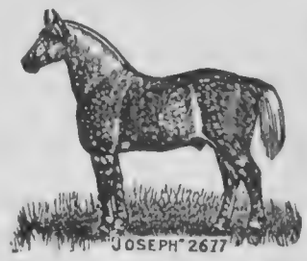
DO YOU WANT TO BUY A
FIRST-CLASS JERSEY BULL CALF?
——IF SO, APPLY TO——
MILLER & SIBLEY, Franklin, Pa.
The youngsters are sired by the following Bulls: **Michael Angelo, 10116,** cost $12,500 cash, when six weeks old. Represents the full blood of his dam, **Eurotas,** who made 778 pounds of butter in 341 days on moderate rations, and dropped a living calf 359 days from the beginning of the test. **Ida's Rioter, of St. L., 13656,** inbred son of Ida of St. Lambert. Official butter test, 30 pounds 2½ ounces in seven days. **Stoke Pogis 5th, 5987,** sire of six young cows; testing from 14 pounds 1½ ounces to 22 pounds 12 ounces of butter in seven days. Full and only living brother of Stoke Pogis 3d, now dead sire of 27 cows, averaging over 20 pounds of butter apiece per week Almost full brother to Matilda 4th. **Matilda 4th's Son, 20214,** by Ida's Rioter of St. L., 13656, out of Matilda 4th, 12816, who made 73 pounds 1½ ounces of butter for January, the tenth month after calving, and undoubtedly made over 950 pounds of butter during the year. No bull calf sold for less than $100. You cannot afford to use a cheaper one.
Write for what you want. No general catalogue. Mention this paper.

PILES. Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository. Sufferers will learn of a simple remedy FREE by addressing
TUTTLE & Co., 78 Nassau Street, New York City.

Hartman Mfg. Co.
Patent Steel Picket Fence and Gates.
Handsome——Indestructible——Cheaper than Wood,



This is *not* a netting, it is a *fence.*
Our Lawn Fence, the only fence that *protects* a lawn without *concealing* it.
Our Field Fence, the only *good, cheap* Fence that is *harmless to stock.* Made in various styles, heights and sizes of pickets. Ask nearest dealer for circular and price list or send to **Hartman Mfg. Co., Beaver Falls, Pa.** ☞ For handsome picture calendar for '89 send 2c stamp.



200 PERCHERON
——AND——
FRENCH COACH HORSES.
Send for Catalogue.
J. W. AKIN,
SCIPIO, N. Y.

SWIFT-SURE" FERTILIZERS
are manufactured from the very best materials High-grade, Reliable and Lasting, giving good results wherever they are used, always in good drilling condition. Special prices on car-loads. For prices and further information address,
M. L. SHOEMAKER & CO., Ltd.,
Philadelphia, Pa.

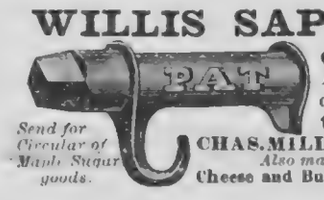
SEND for free Catalogue of Books of Amusements Speakers, Dialogues, Gymnastics Fortune Tellers, Dream Books, Debates, Letter Writers, Etiquette, etc. DICK & FITZGERALD, **18** Ann St., New York.

JOHN N. CHOLFANT & SONS, of **LENOVER,** Chester Co., Pa., Have improved their THRESHER and CLEANERS for Steam and Horse Power. Send for our 1889 Catalogue.

AGENTS WANTED to sell the DODD ROTARY STEAM WASHER. **Best Machine Made.** Easiest operated. **Every Machine Guaranteed.** Diplomas at Pa. State Fair and Phila. Novelty Exhibition. Send for circulars and terms. Manufacturer,
EDWIN P. MILLER, 132 Juvenal St., Phila., Pa

$1 PER SETTING, from Pure FELCH Eggs—Light Brahmas.
Box 106. **C. J. SPALDING,** Greenville, Conn.

WILLIS SAP SPOUT.



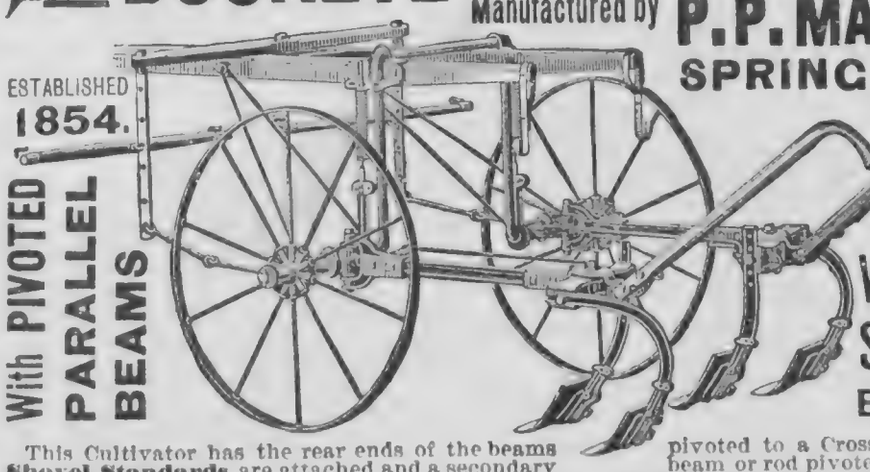
One piece, with hook. *Handiest to use.* Will obtain **MORE SAP than any other.**
Send for Circular of Maple Sugar goods.
CHAS. MILLAR & SON, Utica, N.Y.
Also manufacturers of
Cheese and Butter Making Apparatus.

BRACG! HE PAYS THE POSTAGE!!
Send for Our Seed Catalogue.
B. L. BRACG & CO., Springfield, Mass.

ENSILAGE **PRINCE CHARLES CORN!**
(Trade Mark Registered.)
Seed large and pure white; cob red; stalk tall, tender and sweet.
CHAS. E. PRUNTY, 7-S-Main, Saint Louis, Mo.

H. S. MILLER & CO.,
——MANUFACTURERS OF——
Pure Animal Bone FERTILIZERS,
For All Crops and Soils.
Factory and Principal Office.
ON PASSAIC RIVER, NEWARK, N. J.
Baltimore Office:
202 & 206 Buchanan's Wharf, Foot of Frederick St
Write for "Farmer's Manual," **Mailed Free.**

NEW BUCKEYE SUNBEAM CULTIVATOR
Manufactured by **P. P. MAST & CO.**
SPRINGFIELD, O.
ESTABLISHED 1854.



With PIVOTED PARALLEL BEAMS
With METAL WHEELS and SPRINGS at Ends of Beams.

This Cultivator has the rear ends of the beams pivoted to a Cross-head to which the **Shovel Standards** are attached and a secondary beam or rod pivoted to the coupling in front and to the Cross-head in the rear, by which the Shovels are carried parallel with the axle, whatever may be the position of them in being moved sidewise. The spring at the front end of the beams supports them when in use, and enables the operator to move them easily from side to side and assists in raising when he wishes to hook them up while turning at the end of the row. We attach these Beams also to our **Riding** and **Tongueless Cultivators.** This Cultivator has no equal in the market, and can not fail to be appreciated by any farmer who sees it. We also manufacture the
BUCKEYE DRILL, BUCKEYE SEEDER, BUCKEYE CIDER MILLS AND HAY RAKES.
Branch Houses:—**Philadelphia, Pa.; Peoria, Ills.; St. Paul, Minn.; Kansas City, Mo.;** and **San Francisco, Cal.** ☞ Write for Circular to either of the above firms or to
P. P. MAST & CO. SPRINGFIELD, OHIO.

LINSEED OIL MEAL
FOR FEEDING ALL DOMESTIC ANIMALS.

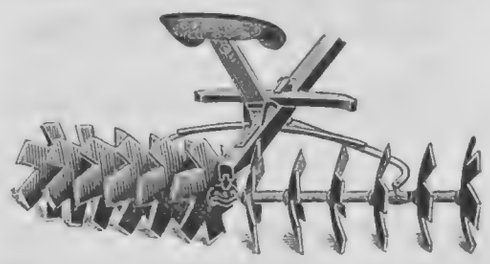
'Tis true the winter has been an easy one for stock; but be watchful lest the closing and opening spring weather does not pull down your
CATTLE, COWS, PIGS AND HORSES.
Use, with your other feed, at least

ONE-THIRD LINSEED OIL MEAL.

Please remember that this meal has an intrinsic value equivalent to three times over that of corn or oats Write us for prices and other particulars, and mention the RURAL NEW-YORKER.

DETROIT LINSEED OIL CO.,
Detroit, Mich.

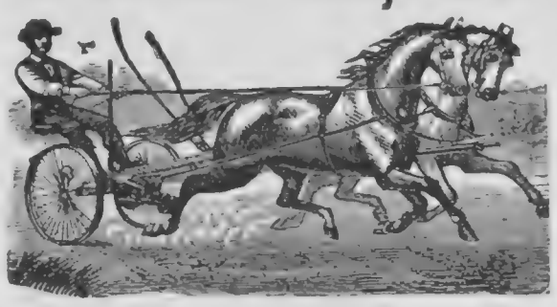
SAVE YOUR MONEY
BY USING
Clark's Cutaway Harrow.



10,000 in use; supersedes the plow; no other tool compares with it; no farmer can afford to be without it; entirely new principles; ground made into a perfect seed-bed; has a seeding attachment for sowing all kinds of grains. Send for new descriptive circular.

HIGGANUM M'F'G. CORP., Higganum Conn.
Sole Manufacturers. New York Office, 189 and 191 Water Street; Boston Office, 88 South Market Street.

The Worcester Buckeye Mower

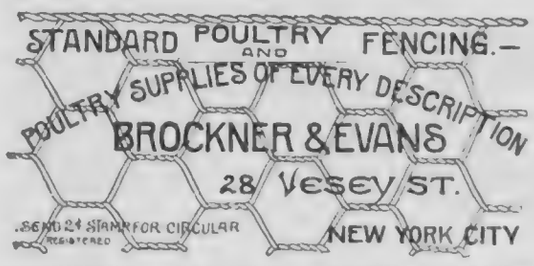


Has **Patented Self-Oiling Pitman,** Patented **Hardened Steel Chafe Plates,** maintaining the **Shear Cut** throughout the life of machine. A new device for carrying the weight of Cutter Bar lightly over the ground, preventing its dragging, and lightening draft.

A NEW SCYTHE

Which will not break at heel. Many other new and valuable improvements. Don't fail to see it. Send for 1889 Circulars. Agents wanted in unoccupied territory. Manufactured by

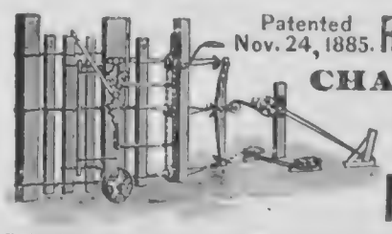
The Richardson Manufacturing Co.
WORCESTER, MASS.



WHEN you bury animosity don't set up a stone over its grave. Cure that cough at once and effectively with

Warner's Log Cabin COUGH AND CONSUMPTION REMEDY,

and forget your sad hours of pain. It is an old-fashioned but reliable compound. Try it.



Patented Nov. 24, 1885. **RICHMOND CHAMPION FENCE MACHINE**

It is the only machine using wire cable for tension. It can use heavier wire than any other machin made. Can make fence from two to six cables. Can weave a picket ¾ inch in diameter, or a board inches wide without changing the machine in any particular. For special prices, circulars, etc.,

Address WAYNE WORKS, Richmond, Ind.

Champion EVAPORATOR

For **MAPLE, SORGHUM, CIDER,** and **Fruit Jellies.** Has a corrugated pan over firebox, doubling boiling capacity; small interchangeable syrup pans (connected by siphons), easily handled for cleansing and storing; and a perfect **automatic regulator.** The **Champion** is as great an improvement over the Cook pan as the latter was over the old iron kettle hung on a fence rail. Catalogues Free. Mention this paper.

THE G. H. GRIMM MFG. CO., HUDSON, O.

$20 Picket Fence Machine for $10.00. *Guaranteed.* Hundreds in use. Freight paid. Circulars free. **S. H. Garrett, Mansfield, O.**

SEEDS, SEEDS, SEEDS

IMPROVED BRUSSELS SPROUTS SEEDS

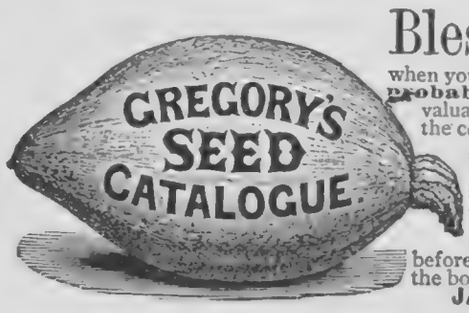
VEGETABLE, FLOWER AND TREE SEEDS FOR 1889

MAILED FREE.

J. M. THORBURN & Co., 15 JOHN ST. NEW YORK.

SEEDS PLANTS AND TREES ROSES PLANTS

GRAPE VINES, FRUIT and ORNAMENTAL TREES
CHOICEST OLD. RAREST NEW.
Among the latter we introduce the **CRAWFORD STRAWBERRY.**
YOU WANT IT! It combines more good qualities than any other. If you want **PURE TESTED SEED** or anything for **ORCHARD, GARDEN, LAWN or PARK,** send for our
VALUABLE FREE CATALOGUE
containing about 140 pages with hundreds of illustrations. **IT'S A BEAUTY! ORDER DIRECT. Get the best at honest prices,** and save all commissions. Thirty-fifth year; 24 greenhouses, 700 acres.
THE STORRS & HARRISON CO., Painesville, Lake Co., O.



Bless Your Souls!

My brother farmers, why pay **10** or **20** cts. for a seed catalogue, when you can receive one containing **just as many and very probably more varieties** and all new vegetables that are really valuable, for just **NOTHING?** It may have less paint about the covers, but, great Scott! we are not after **paint,** but **seed.** fresh and true to name, such as will make with a master's hand its own picture all over our farms and gardens; seed I am not afraid to **WARRANT** on the cover of my catalogue. Come, my fellow farmers, and join the thousands, who for thirty years have been users of my seed; why, we were a goodly company and having pleasant times together before the great majority of the present race of seedsmen (bless the boys!) had left their nurse's arms! Send for a catalogue.
JAMES J. H. GREGORY, Marblehead, Mass.

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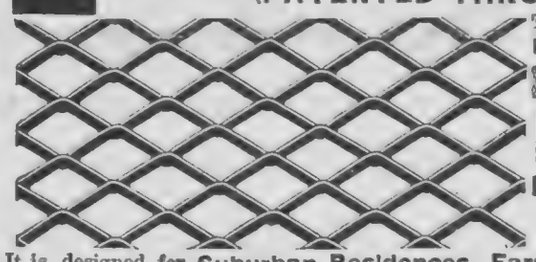

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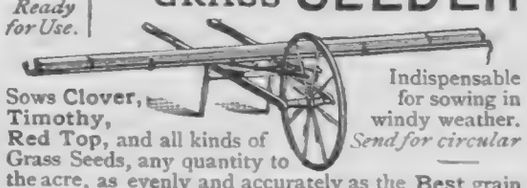

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Literary.

THE DRUM LAKE EASTER SERVICE.

A story of the Michigan Pine Woods.

BY HERBERT W. COLLINGWOOD.

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THE women looked indignantly at the intruder. Some of the men laughed, while others showed a disposition to drive the woman away, but Jack Gray rose from his seat, and helped her to the rear bench.

Little Mamie saw Mr. and Mrs. McKelvey and the baby in front and started to run to them, but seeing her mother left alone, came back and nestled up at her side. The woman placed her arm about the little girl, and sat with her head bent down as if to hide her shame.

I think the minister recognized her at once. He turned as white as snow, and dropped his manuscript on the floor. Recovering himself with an effort, he bowed before the altar, while the choir sang "Rock of Ages." The congregation thought he was praying, but I do not think so, for prayer would have brought forgiveness to his heart. He rose at last with a stern look on his face. He would not forgive her!

He came forward to the board desk and began his sermon in a voice that somehow had a clear ring in it. His face was white, but his voice never faltered, his hand never trembled.

The sermon would have been well received in Boston or New York, but it went very wide of the Drum Lake mark. Even zealous Mr. McKelvey nearly went to sleep in spite of his tight coat. No one knows how the wretched woman at the back received it, for her face was hidden. She trembled at times, but that may have been because of her weakness.

There is but one passage that I shall quote, and that perhaps has not much to do with the text. It might possibly have been effective in the hands, or rather the mouth of a more accomplished orator, but as it rolled from the lips of the Rev. Mr. Grayling, it seemed by some subtile chemical agency, to acquire sufficient narcotic properties to produce sleep.

"This life of ours, my friends, religious and social, its victories and its defeats, is not unlike the campaign of an army. We begin our real life, we go from college, or from preparation of any kind, with grand hopes of success It is like the army marching away to battle. Down through the crowded streets they go in bright, new uniforms, with flags waving, and inspiring music to lead them on. Up above them on the balcony, lips they love are trembling; eyes they would die for are filled with tears; hands that somehow hold them away from wrong, are waving them a last farewell. Their hearts are filled with courage; could they but meet the foe then, how complete would be the victory! But all these sentiments do not win the battle. It is the slow, monotonous drilling till a man is changed into a machine, the weary marching through rain and mud, the digging in the dismal trenches, it is *preparation*. It is the walking on the lonely sentry beat, when the thoughts of home come like the moonlight streaming through the pines. It is vigilance. It is the power to obey. Sometimes we fail in spite of years of preparation, in spite of watchfulness, in spite of years of devotion. We know that success is impossible, and yet we fight on, we know not why. Is it not because we feel that to the meanest, humblest, saddest life some mighty joy, some wondrous good may come?"

The minister finished at last, and sat down in his chair. The congregation began to stir, and make ready to go away. At the signal from the minister the "Chase gals" rose to sing the last hymn. It was Miss Mary's favorite, "Whiter Than Snow," and she meant to make it the best of the service.

They sang the first verse and then began the refrain.

"Whiter than snow,
Whiter than snow,
Wash me and I shall be
Whiter than snow."

They had sung but two lines when a wild cry from the back of the room, startled them into silence, "Sarcy Sal," who had struggled with her feelings, in silence all through the sermon, now threw both arms into the air with an awful cry: "My God, what can I do?"

The minister covered his face with his hands. He did not leave his place, nor did he look at the woman; but Mrs. McKelvey handed the baby to her husband, and ran to the side of "Sarcy Sal." She raised the wretched woman, and half carried her through the crowd of men, down stairs to the kitchen.

The song was finished, the minister with trembling lips pronounced the benediction and the congregation went stamping away. The Rev. Mr. Grayling waited until all the rest had gone, then he went slowly down to his own room.

He had hardly closed the door, when there came a light tap, and Mrs. McKelvey looked in. There were tears in the good woman's eyes, and her mouth worked in spite of her efforts to control it.

"She wants to see 'e Parson," said Mrs. McKelvey. "Jest fer a minnit; jest to say a few words—poor critter she can't live much longer," and Mrs. McKelvey's apron went up to her eyes in spite of all her efforts to keep it in place.

The minister drew himself up as he had not done before. There was a determination in his voice which startled Mrs. McKelvey. "You may send her away Mrs. McKelvey. I will never see her again."

Mrs. McKelvey went away without a word, but a moment later another step came along the passage. The door was opened and "Sarcy Sal" herself stood looking in. She held out her hands appealingly to him, but he turned away from her that she might not see his face.

"Henry," she whispered, "I have come to ask you to forgive me before I die. Will you not take that one stain at least out of my life? I know what I am, I know I have to die, I know you hate me, but please forgive me, Henry." Her arms were held out all the while, and her eyes were full of tears.

The minister shook his head. He did not dare to speak to her; he was afraid the old feelings would come back.

There was something in his manner that told her there was no hope, so she did not beg again. She was now only the hopeless, desperate, abandoned woman.

"Yer won't, eh?" she said with a wild laugh. "Yer a pretty Parson, ain't ye? Can't do what ye preach others ter do. A pretty Parson! Yer all alike. I'm glad I ruined ye; I wish I could do it again," and with another wild burst of laughter she went down the passage,

A moment later he saw her from his window, walking with unsteady steps down the street, with the little girl holding her hand.

The minister waited in his room till dinner was nearly ready. Then he went out in the sitting-room. Somehow, his own room seemed close and stifling. Quite a number of the boarders were gathered together, apparently discussing the sermon. Jim Foster considered it his duty to communicate the views of the company to the little man.

"Ye done well, Parson," he said, as he brought his chair up to Mr. Grayling's. "Ye done yerself proud, an' set up a big thing, but I'll tell ye one pint whar ye cud improve." Jim was like Iago, "nothing if not critical." "Ye don't throw yerself nigh enough. Ye wanter wake up an' pay fer yer lodgins. They wuz a Parson come up here last year, an' he preached it off so that yer might hev played a game of cards on his coat-flaps. That is what tells, Parson."

Before the Parson, could digest this wholesome criticism, Mr. and Mrs McKelvey rushed in from the kitchen.

"They's some trouble down town, boys," said the landlady, "I 'av 'eered the crowd yellin' and seen 'em running by. There they goes now."

Jim Foster ran to the door. Three men were running at full speed up the street. "What's the row?" called Jim.

One of the runners shouted back without stopping: "They're havin' some fun with Sarcy Sal; come on!" Jim and the rest caught up their hats, and ran at once for the scene, nearly tumbling over poor little Mamie who ran in at the door and crept into Mrs. McKelvey's arms. "Mamma! Mamma!" she sobbed, as the good Englishwoman drew her up to her breast.

The Rev. Mr. Grayling walked slowly back to his room, and took his hat from its nail. He then came back to where Mrs. McKelvey sat.

(TO BE CONTINUED.)

AN OPEN QUESTION.

IS HARRISON A DESCENDANT OF POCAHONTAS?

It is popularly believed that President Harrison is descended from Pocahontas and from the Parliamentary soldier and regicide General Thomas Harrison, who was executed in 1660.

Pocahontas, daughter of Powhatan, manifested a friendliness for the early white settlers of Virginia when she was but a girl. The story of how she saved the life of Captain John Smith, who had been captured and condemned to death by her father—how she, on several occasions, made known to the settlers their danger when about to be attacked—is well known to all acquainted with the early history of America. Her subsequent marriage with John Rolfe, an Englishman—her removal to England, where a son was born, from whom numerous wealthy families of Virginia claim descent—is the basis of the opinion that President Harrison is one of her descendants.

Whether this be true or not it is, however, well-known that President Harrison is a descendant of a noted family, distinguished alike in peace and war. The name of Harrison is already indelibly written upon the pages of American history, for General Wm. Henry Harrison—the ninth President of the United States—was the grandfather of Gen. Ben. Harrison.

The election of another member of the Harrison family is but another proof of the prevailing disposition of the public to return to healthy administration of public affairs so characteristic of the earlier years of government. A similar desire has been manifested for a revival of early manners and customs in many various ways, of which mention in particular can be made of the prevailing demand for those old-time preparations which were so successfully employed in the prevention and cure of the ills and ailments which frequented the early log-cabin homes.

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Pocahontas during her life-long friendship for the white settlers of Virginia, besides her many acts of kindness, is said to have contributed much valuable information to the log cabin home concerning the successful methods employed by the Indians in the treatment of disease and it matters little whether the alleged relationship between herself and the President be true or not for the name of Pocahontas is already immortal.

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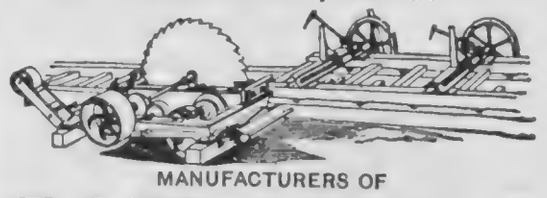

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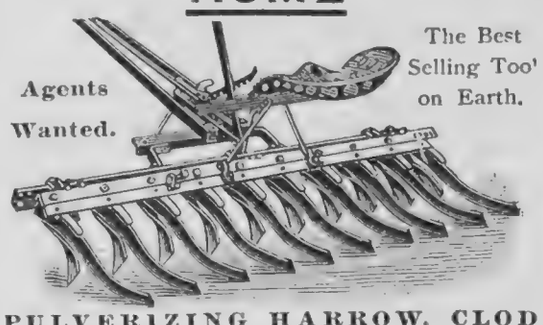

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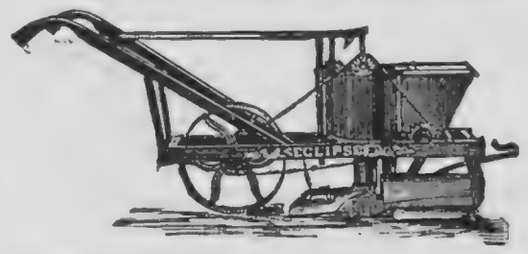

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SYRACUSE SULKY PLOW.—Catalogue from the Syracuse Chilled Plow Co., of Syracuse, N. Y. There are two lines of business employed by this company that have greatly added to the popularity of their goods. 1. They have never attempted to make cheap stock. They have endeavored to turn out nothing but the best goods. As a consequence, very few complaints are ever heard from those who use the "Syracuse" tools. 2. They make such a variety of plows that each farmer can select one particularly adapted to his peculiar soil or surroundings. Let the soil of the farm be light or heavy; let it be as mellow as meal or as stony as an old New England pasture; let it be level or hilly, a Syracuse plow can be found of such peculiar shape or construction that it will do better work on that particular farm than any other. This business policy has attracted customers and made warm friends. It will pay you to read the catalogue sent out by this house.

"REVIEW" OF THE DEPARTMENT OF AGRICULTURE'S REPORT.—By Frank E. Billings, Lincoln, Nebraska. "Not being a coward and fearing no power this side of the grave or beyond it, I propose to enter once more upon this disagreeable task." With this very modest and cheerful remark, Mr. Billings proceeds to resume his old attack upon Dr. Salmon. If this pamphlet is issued with the authority and sanction of the Nebraska Experiment Station, the evidence is complete that that institution has already outlived its usefulness. If there is any authority that can keep this man Billings quiet, it should be exercised at once.

LINSEED-OIL MEAL.—Catalogue from the Detroit Linseed-Oil Co., Detroit, Michigan. This is a very readable little pamphlet in which the value of oil-meal as a food for animals is well brought out. Oil-meal is a valuable food for stock—that point has long been settled. American farmers are beginning to recognize the fact that this substance, skillfully mixed with coarser products, will pay a good profit to any feeder. Send for this catalogue.

STANDARD SPRING-TOOTH HARROW.—Circular from Chase, Taylor & Co., Kalamazoo, Michigan. This implement is advertised as being the strongest and best spring-tooth harrow made. It combines all the latest improvements, the tooth-holding attachment being superior to all others. It is a first-class harrow. In our "Harrow Hints" published a few weeks ago, a number of parties stated that were they confined to the use of a single harrow, that one would be a spring-tooth. Send for this catalogue and see what the "Standard" is.

NEW YORK LIFE INSURANCE CO.—Forty-fourth Annual Report. It appears from the report that this company enjoys the snug little income of $25,000,000 a year. It wrote $125,000,000 worth of insurance in 1888, and paid about $11,000,000 to policy holders. These figures are enough to startle one—into an insurance policy.

KEY TO THE FAMILIES OF INSECTS.—A pamphlet by N. M. Eberhart, published by the Popular Publishing Co., Chicago, Ill. This is one of the most comprehensive little scientific books we have ever examined. It affords a rare opportunity to those who wish to interest boys and girls in the study of entomology. The names of the more common insects can be traced through this Key and such work will surely lead to a desire for further investigation.

BENNETT'S STUMP-PULLER.—Circular from H. L Bennett, Westerville, Ohio. It is stated in the circular that with this machine, a big man can raise 20 tons! Mr. Bennett appears to be ready to pay $100 if he cannot balance a ton with five pounds or less.

KANSAS AGRICULTURE.—Sixth Biennial Report of the Kansas Board of Agriculture, from the Secretary of the Board at Topeka, Kansas. The following topics were discussed: The Sorghum-sugar Industry; Salt, its Discovery and Manufacture; Moisture Economy and The Water Supply of Central Kansas. Like most of the Kansas reports, this volume is well worthy of study and preservation.

LAWN AND FIELD STEEL PICKET FENCE.—Catalogue from the Hartman Manufacturing Co., Beaver Falls, Pa. This is said to be "the cheapest and best fence in the market." It is not a netting, it is a fence. For full particulars regarding this novelty read the catalogue.

HAVE YOU A SISTER?—This question is asked in the catalogue of O. S. Chaffee & Son, Mansfield Center, Conn. The man who is fortunate enough to be able to answer in the affirmative, will, it is assumed, desire to make the lady a present. What could be better for this purpose than a black silk or satin dress. Send for samples.

IMPROVED FARM BOILER.—Notice from J. K. Purinton & Co., Des Moines, Iowa. This firm has recently removed from Dallas Center, Iowa. The R. N.-Y. will soon give a special on the value of cooking and steaming food for stock. This will prove a most interesting topic for discussion.

PRACTICAL GARDEN POINTS.—This is a collection of excellent essays which have appeared from time to time in Vick's Magazine. They are all written by experienced people. Some of the topics treated are the following: Root Crops, Keeping Celery, Cabbage, Raising Onions, Field Culture of Onions, Peas, Asparagus, Growing Mushrooms, Grape-vines, Small Fruits, The Rose, Calceolaria, Chrysanthemum, Cineraria, Gloxinia, etc.

A. W. LIVINGSTON'S SONS, 143 North High St., Columbus, Ohio.—An illustrated catalogue of seeds of all sorts. This firm originated Livingston's Beauty, Acme, Paragon, Perfection, Favorite, Golden Queen and Potato-leaf tomatoes. The last is smoother than the Mikado or Turner's Hybrid. It was tried at the Rural Grounds and reported upon before it was announced for sale. Several new potatoes are catalogued.

WM. H. SMITH, 1,018 MARKET ST., PHILADELPHIA, PA.—An illustrated catalogue (100 pages) of all kinds of seeds, garden implements, etc. Sent to all R. N.-Y. readers who apply.

PUMP AND HAYING TOOLS.—Catalogue from T. E. Meyers & Bro., Ashland, Ohio. This pamphlet contains a very interesting and carefully written description of the Meyers pump, which is a tool containing several distinctly typical features. About every conceivable appliance that can add to the efficiency of a pump is here illustrated. In haying tools also there is an astounding array of useful tools In short, this is a pamphlet that the business farmer will want to add to his library.

QUINNIPIAC FERTILIZER.—Catalogue from the Quinnipiac Company, New London, Conn. The main feature of this pamphlet is a statement of the methods by means of which a farmer can make $1,500 in gold from a single acre.

AMES PLOW CO.—The catalogue of this excellent company is sent from Boston, Mass., and is well worth an examination. An excellent index is a feature of this volume. One can readily find any desired description or illustration. When we state that over 225 articles in use upon the farm are illustrated and described in this pamphlet, an idea is obtained of the scope of the business done by the Ames Plow Co. It is a good house to deal with.

Miscellaneous Advertising.

How to Cur Skin & Scalp DISEASES with the CUTICURA REMEDIES.

THE MOST DISTRESSING FORMS OF SKIN AND scalp diseases, with loss of hair, from infancy to old age, are speedily, economically and permanently cured by the CUTICURA REMEDIES, when all other remedies and methods fail

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c; SOAP, 25c; RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

Relief in one minute, for all pains and weaknesses, in CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster. 25c.

WARREN, HARPER & BRO.,
Fruit and Produce
COMMISSION MERCHANTS,
110 Dock Street,
PHILADELPHIA, PA.
Splendid Location. Good Salesmen. Prompt Returns. Reference—Sixth National Bank.

A WONDERFUL PROCESSION
Of what? Why the constant stream of **Hogs, Cattle and Sheep** continually passing into the
Union Stock Yards, Chicago,
—THE—
BONE AND BLOOD
Of which are constantly being manufactured into
RAW BONE
FERTILIZERS
During the past 25 years, by the
Thompson & Edwards Fertilizer Co.
For pamphlets giving full information, address
W. J. RUSSELL, Gen. Ag't for W. Pa., N. Jersey & Conn,
PHILLIPSBURG, NEW JERSEY.

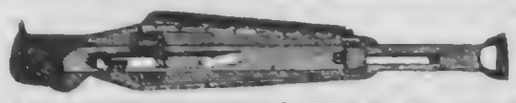
WORTH KNOWING.
GRIFFING'S
METROPOLITAN
FERTILIZER
Sold at $25 00 per ton, F. O. B., N. Y.
Send for Circulars.
H. B. Griffings Sons & Co.
70 Cortland St., N. Y.

BEAT THE "FARMERS." It can't be done. Our Fertilizers always ahead—Bones, Meat, Potash. Agents Wanted. Write. Farmers' Fertilizer Co., Syracuse, N.Y.

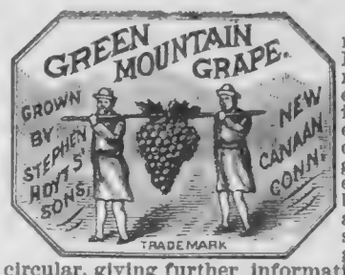
A GOOD man is kinder to his enemy than bad men are to their friends. A kind friend to the Catarrh sufferer is

Warner's Log Cabin ROSE CREAM,

for it may be relied upon to give permanent relief. Elegant, effective.



MACOMBER'S CORN & BEAN PLANTER
Best and Cheapest on earth. Send for Circulars.
S. M. MACOMBER, Adams, Grand Isle Co., Vt.
Gen'l Agents, { A. C. STODDARD, N. Brookfield, Mass.
ROLLINS BROS. & CO., Chicago, Ill.



This grape originated in the Green Mountains of Vermont. It is very early; color, greenish white; pulp, tender, sweet and delicious. The only grape yet introduced that ranks **first**, both in earliness and quality. It should be in every garden. Send for circular, giving further information. We also offer a full assortment of other nursery stock. Address
STEPHEN HOYT'S SONS,
New Canaan, Conn.

ROCHESTER COMMERCIAL NURSERIES. Address **W. S. LITTLE Rochester, N. Y.**
TREES NEW and RARE OLD and RELIABLE
Both Fruit and Ornamental. ROSES, Vines, Clematis, Rhododendrons, etc. Two illus. Catalogues 6 cts. Free to customers. Wholesale List, FREE.

10 Pkts. Flower **SEEDS, 10c.** 5 Pkts. Vegetable Seeds, 10c. *Cat. Free.* J. J. BELL, Windsor, N. Y

TREES FRUIT AND ORNAMENTAL.
HEDGING, SHRUBS, GRAPES, SMALL FRUITS, A FULL ASSORTMENT. ORNAMENTAL STOCK and BEARING AGE TREES a specialty. Descriptive catalogues free. **W. H. Moon,** Morrisville, Penna.
MOON'S GLENWOOD NURSERIES.

EVERGREEN HEDGES
All varieties of Evergreens used for Hedges, Seedlings, and Transplanted.
BEAUTIFUL EVERGREENS
50 Varieties, all sizes. Seedlings by the million.
ORNAMENTAL TREES
and shrubs in great variety. All at prices below competition. Catalogues Free.
Evergreen Nurseries, Evergreen, Wi

CELEBRATED ROCHESTER SEEDS. **Our Latest Offer.**—We give one packet each Beautiful Moonflower, German Pansies, Sweet Peas, Surehead Cabbage, American Beauty Lettuce, Green and Gold Water Melon, Rosy Gem Radish, Sibley Squash, Mikado Tomato, and our Illustrated Catalogue, all for 25 cents. Why can we give so much for 25 cents? Because we want you to see our Catalogue. You will want more seed; we have them (Monroe County Grown). Address
MOREHOUSE & ANNIS, Rochester, N. Y.

DR. WM. ROBERTS, Professor of Medicine in the Owen's College, Manchester, Eng., in writing of Bright's disease, says: "The blood becomes speedily deteriorated by the unnatural drain through the kidneys. It becomes more watery and poorer in albumen, while urea, uric acid and the extractives are unduly accumulated in it." Warner's Safe Cure will restore the kidneys to a healthy condition and purify the blood.

Farmers,
Stock Raisers,
Lawyers,
Doctors,
Mechanics,
Literati,
Men,
Women,
and
Children,

Of all Trades, Professions and Ages Read

THE DETROIT FREE PRESS.

SOME read it for Profit,
OTHERS for Pleasure,
ALL, because it is the

Best General Newspaper in America.

Ever mindful of subjects of domestic economy—ever mindful of the serious questions in science, letters, business and art—ever mindful of life's sober phases—it always comes to you with its inimitable wit and humor to illustrate the cloud's "golden lining." The

RURAL NEW-YORKER
—AND THE—
WEEKLY DETROIT FREE PRESS,
BOTH FOR ONE YEAR FOR
$2.25!
Address the
RURAL NEW-YORKER,
34 Park Row, New York.

Humorous.

A SERIOUS QUESTION.

In reading the story of Jonah and the whale,
There arises the serious question:
Was it ground for a solemn, miraculous tale,
Or merely the whale's indigestion?
—*Merchant Traveler.*

A RUSSIAN sigh—Siberia.—*Texas Siftings.*

"MAN overbored!"—The editor.—*Advertiser and Farmer.*

A TUG is the only thing that has its toes behind.—*Toronto Empire.*

QUERY: Is the wheelwright better than his felloes?—*Advertiser and Farmer.*

IT is wrong to call a dude a donkey. He is merely a clothes horse.—*Valley Chronicle.*

A MISS may be as good as a mile; but she's lucky in not having to buy stockings for as many feet.—*Puck.*

WHY not call them hay widows? Hay is grass with the greenness squeezed out. —*Peoria Transcript.*

A SLENDER woman should make an economical wife, because there is so little waist about her.—*Burlington Gazette.*

SOME men are like toads—you have to poke them with a stick before they make their biggest jump.—*The Judge.*

A LITTLE girl being asked, "What is nothing?" replied: "Shut your eyes and you will see it."—*Texas Farm and Ranch.*

WHY may carpenters reasonably believe there is no such thing as stone? Because they never saw it —*Michigan Farmer.*

"GEORGE, dear, what kind of fruit is borne by an electric-light plant?" Electric currents, of course."—*Terra Haute Express.*

EVERYTHING is at least a century old in Philadelphia Even the principal street of the village is called "Chestnut."—*Somerville Journal.*

POLITE CONDUCTOR: "Your fare, madam." Miss Cossy Cobb (from Stamford): "You'd orter see me before I got sun-scorched at Aunt Hanner's clam-bake."—*Time.*

IN SHALLOW WATERS.

SHE: "I must show you my new clock before you go."

HE (facetiously): "Some of my friends tell me I am homely enough to stop a clock."

SHE: "Oh, that won't matter! It can be started again."

I have no hesitation in recommending **Dr. Seth Arnold's Cough Killer.** A few doses cured me of a cold and tickling in the throat.
G. L. Walker, Pawtucket, R. I.
Druggists, 25c., 50c., and $1 00

IMPROVED BILLINGS Corn Planter and Fertilizer.

Perfect work whether stony, sward or mellow land. Time saved. Better work. Quicker results. Made only by **Ames Plow Co.,** BOSTON AND NEW YORK.
Send for circulars and catalogue.

Owing to the great demand we are having for these Planters we make the following *special offer* for orders placed *before* April 5th.

Planters drop Corn, Beans and Peas, as follows:

14 in. wheel,	5½,	11. 22 or 44	ins. apart,	$13.50 net.
16 " "	6,	12, 25 or 50	" "	14.25 "
18 " "	7,	14, 28 or 56	" "	15.00 "
20 " "	7½,	15, 31 or 62	" "	15.25 "

Cash to accompany orders and *we will prepay the freight* to any station on main railroad lines in New York, Pennsylvania or N. Jersey. No deviation from these prices. This advertisement will not appear again.

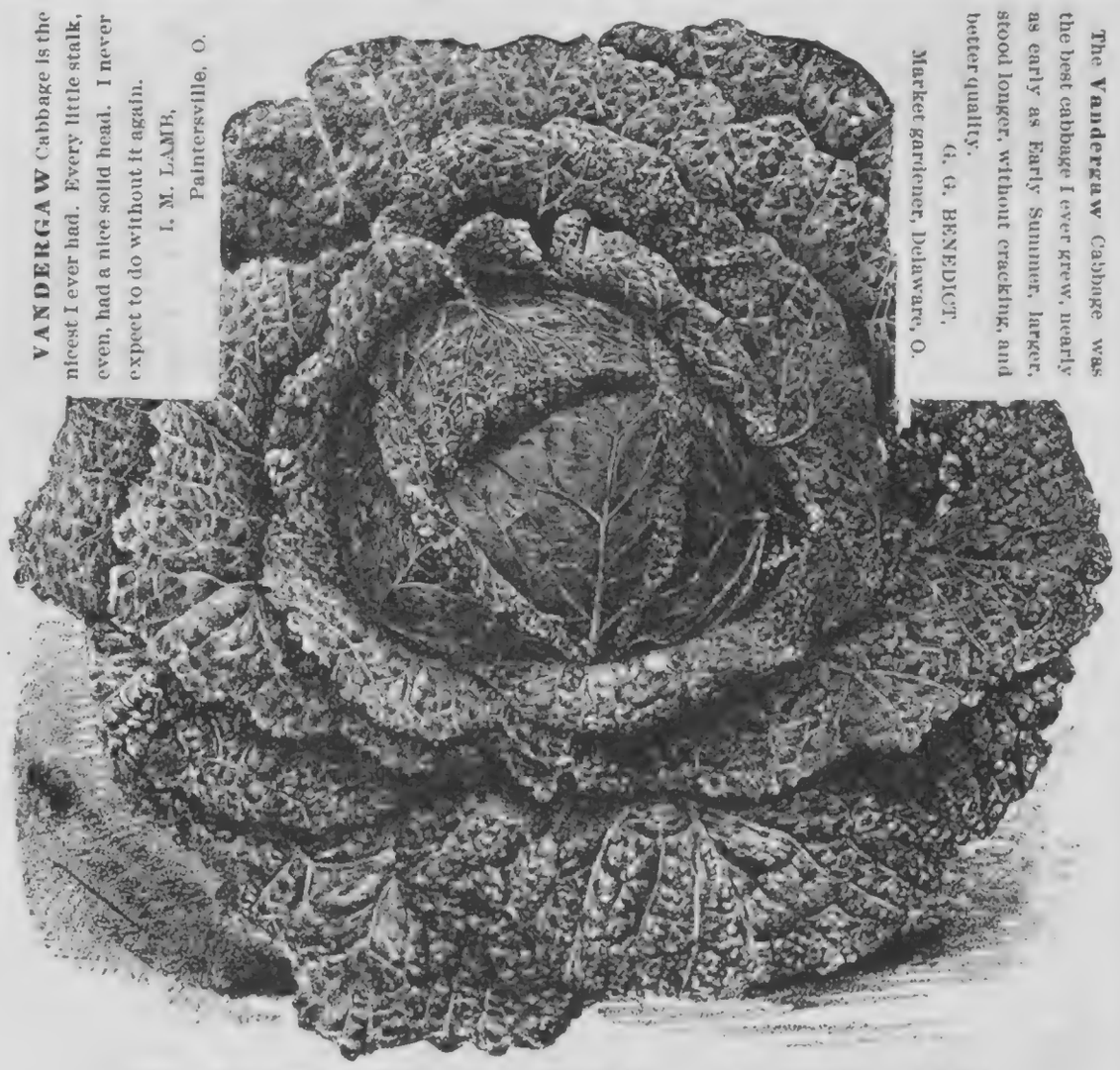
PROF. WM. H. THOMPSON, of the chair of Materia Medica in the University of the City of New York, says: "Bright's Disease has no symptoms of its own, but has the symptoms of every other disease." Disorders apparently remote and distinct from kidney disease are removed by using Warner's Safe Cure.

PARSONS & SONS CO.
(Limited),
FLUSHING, N. Y.
Offer Selected Specimens of
Japanese Maples, Climbing Hydrangeas, Rhododendrons, Golden Oak,
And many other Rare Trees and Shrubs.
Catalogues free for four cents postage.

LADIES
IF YOU WISH TO SEE THE CHEAPEST LIST OF
Plants, Seeds & Cuttings
in America, send name on postal card. Address
CHAS. W. BUTTERFIELD,
Florist and Seedsman, Bellows Falls, Vt.

VANDERGAW Cabbage is the nicest I ever had. Every little stalk, even, had a nice solid head. I never expect to do without it again.
I. M. LAMB,
Paintersville, O.

The **Vandergaw** Cabbage was the best cabbage I ever grew, nearly as early as Early Summer, larger, stood longer, without cracking, and better quality.
G. G. BENEDICT,
Market gardener, Delaware, O.



MARVIN'S SAVOY CABBAGE.

HALLOCK'S FAMOUS LONG ISLAND SEEDS.

Our finest strains of seed can only be procured from us. We have many specialists who raise seed for us exclusively, selecting the cream from many acres of stock. The following is an extract from the report of the New York Experimental Station on

Marvin's Savoy Cabbage.

"Among several excellent new varieties of Cabbage, Marvin's Savoy (Hallock) yielded twelve heads from twelve plants averaging nine inches in diameter and weighing six pounds each. This is an extraordinary production for the Savoys, which are decidedly superior to common cabbages in table qualities."

We sell this Cabbage 10c Pkt., 1-2 oz. 35c, 1 oz. 60c, lb. $8.00.

Finest strains of Long Island Vegetable seeds. Beautiful flowers, Bulbs and Plants. Catalogue free.

V. H. HALLOCK & SON, Queens, N. Y.

ISLAND HOME STOCK FARM.

Savage & Farnum, Importers and Breeders of Percheron and French Coach Horses, Island Home Stock Farm, Grosse Isle, Wayne County, Mich. We offer a very large stud of horses to select from, we guarantee our stock, make price reasonable, and sell on easy terms. Visitors always welcome. Large catalogue free. Addres **Savage & Farnum** DETROIT, MICH.
Percheron Horses. *French Coach Horses.*

GALBRAITH BROS.,
JANESVILLE, WIS.,
—Are the Largest Importers of—
BRITISH HORSES

in the world, Have imported three times the number of first-class prize winning horses of any firm in the United States and have now on hand for actual sale over 220 head of
CLYDESDALE, ENGLISH SHIRE, SUFFOLK PUNCH,
CLEVELAND BAY and HACKNEY STALLIONS.
Prices moderate, terms easy. Correspondence solicited. Send for Catalogue No 9

THE PERKINS'
Wind Mill

is the Strongest and Best Self Regulating Wind Mill made Full instructions for erecting sent with the first mill. **All Wind Mills warranted.** For Circulars and Prices address
THE PERKINS' WIND MILL AND AX CO.,
Agents Wanted. **Mishawaka, Ind.**
Mention Rural New-Yorker.

SALESMEN WANTED TO SELL OUR SEEDS. NO EXPERIENCE NECESSARY. LADIES DO WELL. SEND 10C. FOR SAMPLE PACKETS OF VEGETABLE AND FLOWER SEEDS AND TERMS. Our Catalogue Free.
MOREHOUSE & ANNIS, Rochester, N. Y.

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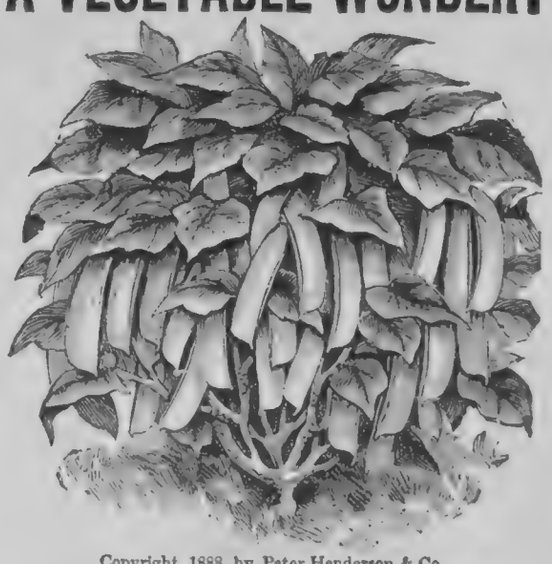
GOOD NEWS TO LADIES.

Greatest inducements ever offered. Now's your time to get up orders for our celebrated **Teas and Coffees**, and secure a beautiful Gold Band or Moss Rose China Tea Set, Dinner Set, Gold Band Moss Rose Toilet Set, Watch, Brass Lamp, or Webster's Dictionary. For full particulars address
THE GREAT AMERICAN TEA CO.,
P. O. Box 289. 31 and 33 Vesey St., New York.

A VEGETABLE WONDER!



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HENDERSON'S NEW BUSH LIMA BEAN

Can and Should be Grown in every Garden on the Continent.

Of all the *Novelties* in *Garden Products* ever sent out, there is nothing so entirely distinct and valuable as this *New Vegetable.* The old Lima Bean can only be grown on poles, while the *NEW BUSH LIMA* grows and is cultivated exactly like the common bush or snap bean (growing only 18 inches high), and from the time of its bearing in July, produces in abundance delicious Lima Beans throughout the entire season until frost. It has, besides, an additional value, in that it is *two weeks earlier* than any other Lima Bean, being fit for the table in from 40 to 50 days from time of planting.

Price (by mail) 25 cents per packet, 5 packets for $1.00, 12 packets for $2.00. 12 packets sufficient for an ordinary-sized family for the season). Directions for growing on each packet. Remittances can be sent either by Post Office Order, Postal Note or Stamps.

Every purchaser of *Henderson's Bush Lima Bean* will be sent, *without charge,* our MANUAL OF EVERYTHING FOR THE GARDEN, a book of 140 pages, size, 9 x 11, containing 3 colored plates (the price of which is 25 cents), *on the distinct understanding,* however, that those ordering will say in what paper they saw this advertisement.

PETER HENDERSON & CO.

35 & 37 Cortlandt Street, New York.

OUR NEW

SEEDS CATALOGUE SEEDS

FREE —ON— APPLICATION.

NEW Novelties, Choice Grown.

Higganum Mfg. Corp.

P. O. Box 376, N. Y. City.

THE WEEKLY COURIER-JOURNAL

—AND THE—

R. N.-Y.

The character of the Courier-Journal under the editorial management of HENRY WATTERSON is thoroughly known.

Both papers will be sent to any address one year, for only

$2.25!

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THE RURAL NEW-YORKER

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THIS IS THE COMING POTATO

Send for Catalogue of this and over 100 other kinds. Also, Farm, Garden and Flower Seeds Address

Giddings & Read,
RUTLAND, VT.

IT WILL PAY YOU

—BEFORE BUYING YOUR—

SEEDS

—TO SEND TO—

PRICE & REED,

ALBANY, N. Y.,

For their NEW CATALOGUE.

GOOD SEEDS, LOW PRICES

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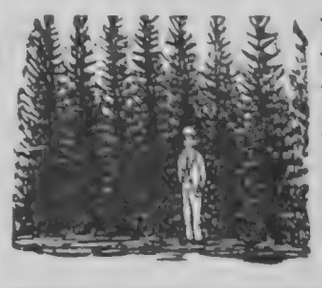
379 VARIETIES OF FRUIT TREES, VINES, PLANTS ETC.

Apple, Pear, Peach, Cherry, Plum, Quince, Strawberry, Raspberry, Blackberry, Currants, Grapes, Gooseberries, &c. Send for Catalogue.

J. S. COLLINS, Moorestown, N. J.



FOREST TREES.

Catalpa Speciosa, White Ash, European Larch, Pines, Spruces, Arbor Vitæs, etc., etc.

Catalpa Speciosa Seed.

Forest and Evergreen Seeds.

R. DOUGLAS & SON,
Waukegan, Ill.

EXTRA!

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NEW YORK WEEKLY WORLD,

12 Broad pages and 84 Long Columns, Publishing each week a COMPLETE NOVEL by a Popular Author, and the

R. N.-Y.,

FOR ONE YEAR,

ONLY

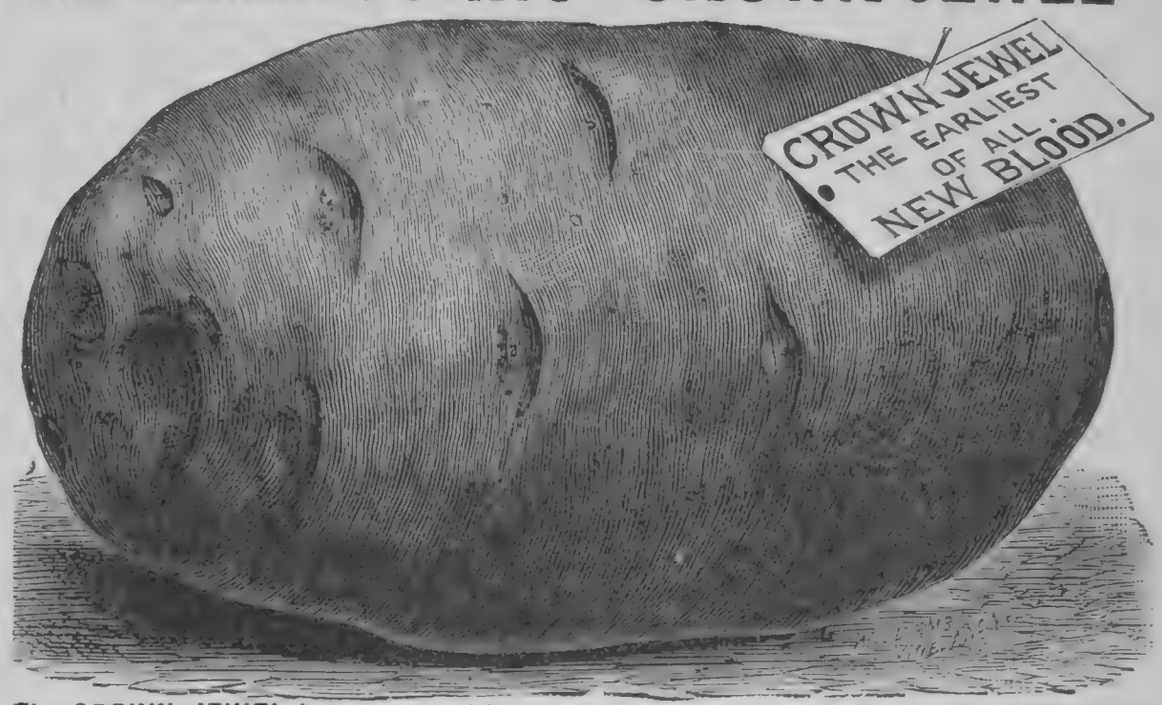
$2.25.

The Rural New-Yorker No. 2 Potato will be sent to all joint Subscribers. Address

RURAL NEW-YORKER,

34 Park Row, N. Y.

THE COMING POTATO "CROWN JEWEL"



The CROWN JEWEL is pronounced by all who grew it the past season the CREATEST POTATO INTRODUCED SINCE THE EARLY ROSE, yielding in all cases where grown on a large scale from 500 to 625 bushels to the acre, and on the grounds of the "RURAL NEW YORKER," (see report of Potato trials published in that paper) at the rate of 726 bushels per acre--grown in competition with Early Ohio, Early Rose, Sunrise and other popular varieties, it more than doubled the yield of any of them and was ready to dig fully a week earlier. A strikingly beautiful Potato of finest table quality. The vines grow vigorously, roots extending very deeply into the ground thus resisting drought. PRICES: Per lb. 40c. 3 lbs. $1.00 by mail postage paid. Peck $1.00; bushel $3.00; barrel $7.00. Order now. Our GARDEN AND FARM MANUAL FOR 1889, accompanies all orders. Address **JOHNSON & STOKES, Seedsmen,** 217 & 219 Market St., Philadelphia, Pa.

850,000 GRAPE VINES

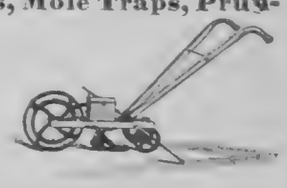
100 VARIETIES. Headquarters of the MOYER, the Earliest and Best, Reliable Red Grape now first offered under seal. Also Small Fruits, Trees, Etc. 8 Sample Vines mailed for 15 cents. Illustrated descriptive Price List free. **LEWIS ROESCH, FREDONIA, N. Y.**

Gardening Tools.

WE ARE HEADQUARTERS FOR ALL SUPPLIES OF THIS KIND. Being both wholesale and retail dealers, we get the benefit of lowest car-load rates of freight, and can make the best prices in the U. S. on everything in **SEED DRILLS,**

Cultivators, Lawn Tools, Weeders, Mole Traps, Pruyers, Fertilizers, Insecticides, Etc.

Send 15 cents in stamps, and receive with our new 90-page catalogue a packet of the new Dahlia Gracilis; blooms first year.



VAUGHAN'S SEED STORE,
BOX 688, CHICAGO.

SPRING-TOOTH HARROWS

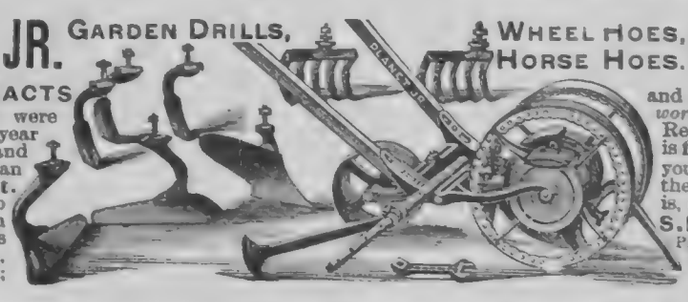
SPECIAL PRICES TO INTRODUCE

SEND FOR ILLUSTRATED PAMPHLET

WE MAKE 6 DIFFERENT HARROWS

HERENDEEN MF'G CO. GENEVA, N.Y.

PLANET JR. GARDEN DRILLS, WHEEL HOES, HORSE HOES. FIREFLY



Set down for FACTS That these Tools were more popular last year than ever before, and and are this year than last. Another Fact. Not one in ten, who ought to own them knows it. Such as do not own them, ask those who do; and examine them *at work*, they bear it well. Read our catalogue; it is free and *reliable.* If you have no use for these Tools, our advice is, do not buy them.

S. L. ALLEN & CO
Patentees & Manufrs.
129 Catharine St.
PHILADELPHIA.

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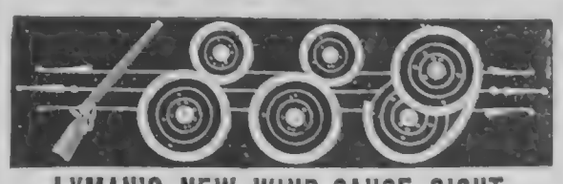

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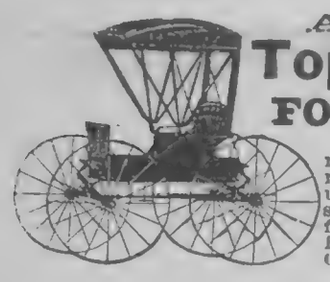

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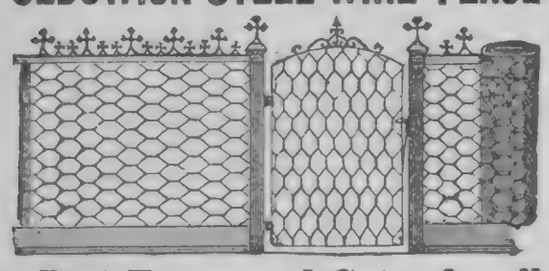

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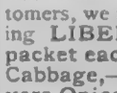

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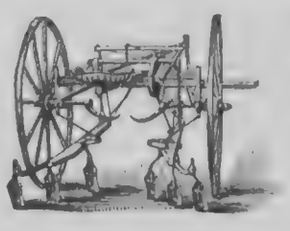

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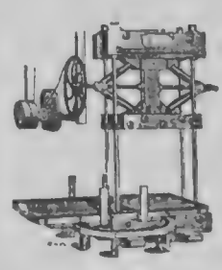

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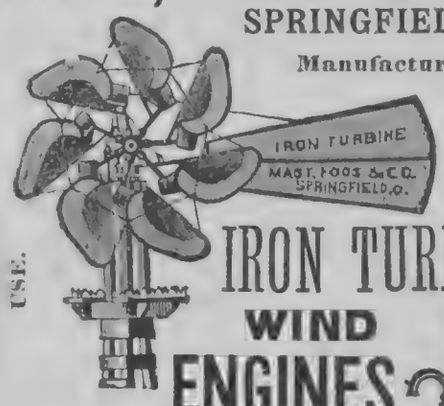

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THE RURAL NEW-YORKER

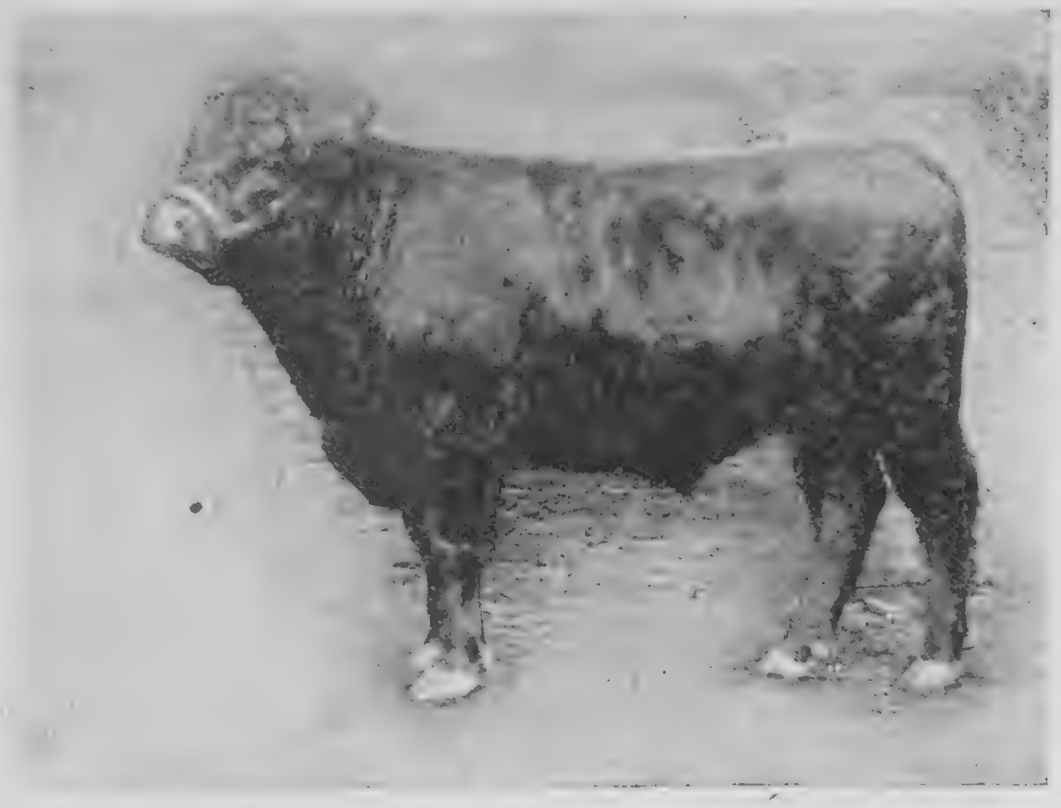
A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII NO. 2043. NEW YORK, MARCH 23, 1889. PRICE FIVE CENTS, $2.00 PER YEAR.

[Entered according to Act of Congress, in the Year 1889, by the Rural New-Yorker, in the Office of the Librarian of Congress, at Washington.]

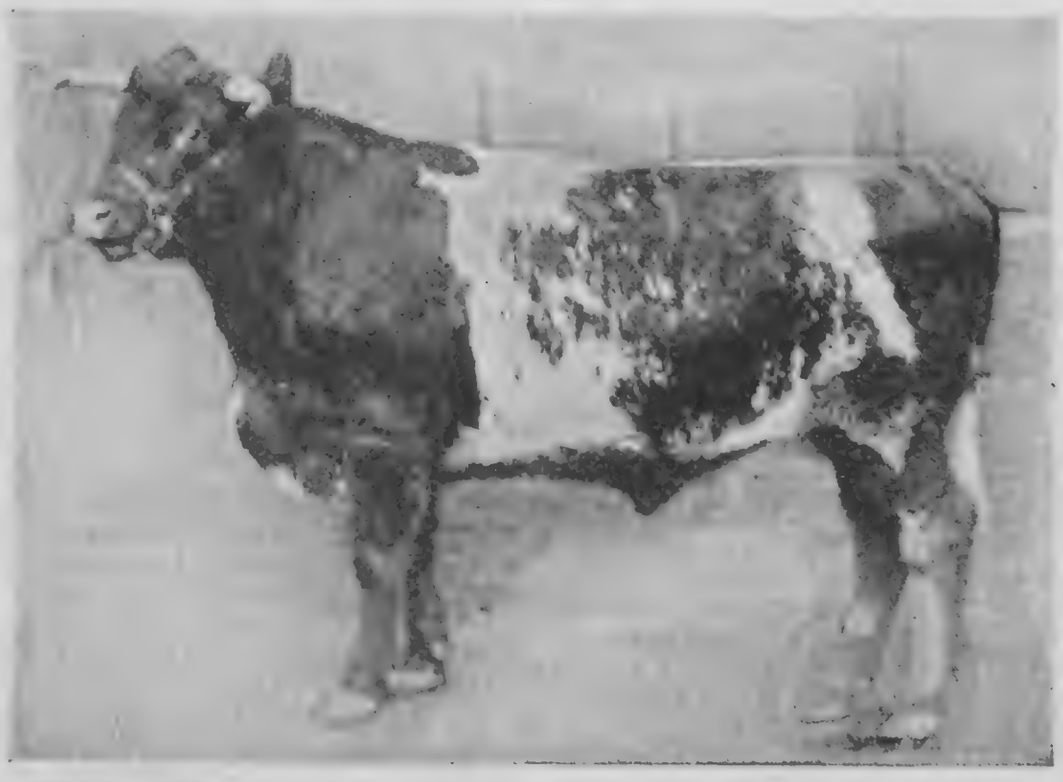
Hereford steer, HENDRICKS. Age in days, 1,100. Weight, 1,450 pounds. Gain per day from birth, 1.32 pound. Dressed weight, 927 pounds. Per cent. dressed to live weight, 64.8. Fig. 65.

Jersey steer, ROSCOE. Age in days, 1,161. Weight, 1,490 pounds. Gain per day from birth, 1.28 pound. Dressed weight, 868 pounds. Per cent. dressed to live weight, 59.4. Fig. 67.

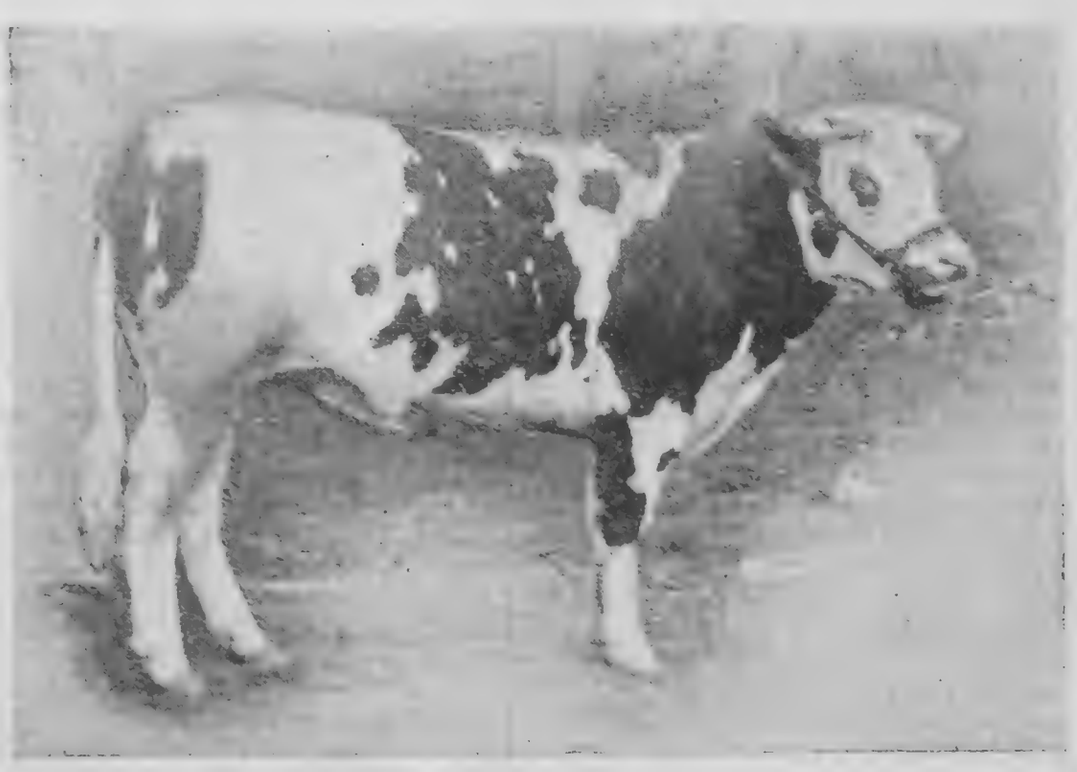


Galloway steer, KING JUMBO. Age in days, 987. Weight, 1,620 pounds. Gain per day from birth, 1.64 pound. Dressed weight, 971 pounds. Per cent. of dressed to live weight, 61.8. Fig. 66.

Devon steer, LATITUDE. Age in days, 953. Weight, 1,270 pounds. Gain per day from birth, 1.33 pound. Dressed weight, 795 pounds. Per cent. of dressed to live weight, 62.6. Fig. 64.



Short-horn steer, HOMER. Age in days, 1,071. Weight, 1,870 pounds. Gain per day from birth, 1.74 pound. Dressed weight, 1,210 pounds. Per cent. dressed to live weight, 66.5. Fig. 69.



Holstein steer, NICHOLAS. Age in days, 976. Live weight, 1,660 pounds. Gain per day from birth, 1.70 pound. Dressed weight, 1,014 pounds. Per cent. dressed to live weight, 62.8. Fig. 68.

Photographic Illustrations of Steers of Different Breeds fed at the Michigan Agricultural College.

The Herdsman.

BREED AGAINST BREED!

Beef-Making Experiments

AT THE

Michigan Agricultural College.

SOME SURPRISING FACTS DEVELOPED.

THE RURAL'S ENTERPRISE ILLUSTRATED.

MOST of our readers are aware that during the past three years a novel experiment has been in progress at the Michigan Agricultural College. Various ideas are held at the different agricultural colleges as to the character of the live stock that should be kept in order to give the most useful instruction to the students. At some of the colleges, for example, the aim is to develop a good herd of the breed of cattle that seems, by general consent, best adapted to the general agriculture of the State in which the college is located. Others maintain specimens of each of the beef breeds, while still others are to be found handling only the dairy breeds. The policy of the Michigan College has been to keep in the herd choice specimens of every distinct breed of cattle so that students may study the characters of each. For a number of years, Prof. Johnson, of the Michigan College, has desired to conduct beef-making tests similar to the dairy tests which are quite common. His plan was to select young calves that should be average specimens of the different breeds, and as nearly alike in age and general condition as possible. These calves were to be fed, side by side, to the age of three years or thereabouts, using the same kinds of food for each, though of course, different quantities would be fed to the different animals. An exact record of the amount and value of the food consumed by each animal should be kept, and accurate weighings of the animals should be made from time to time so that a correct estimate of the gain for each period of feeding might be made.

It will be readily seen that such a test would provide a basis for some very valuable reckoning in live-stock economy. The advocates of the various beef breeds are loud in maintaining that their pet animals will make the cheapest pound of beef. The advocates of some of the dairy breeds are equally loud in maintaining that their bull calves can be profitably fed for beef. Most of the tests that provide figures for these claims have been made under exceptionally favorable circumstances where the question of profit did not enter. Consequently a test, conducted on a basis somewhat like that to be followed by a farmer, would be doubly valuable.

Three years ago Professor Johnson was able to begin the desired test. After considerable delay he succeeded in securing bull calves of Short-horn, Hereford, Devon, Jersey, Galloway and Holstein breeds, that were considered average specimens. With these calves the trial was conducted. They were kept in a thriving condition, and were never forced as show cattle usually are. The steers were exhibited at a number of fairs and were slaughtered at the Chicago Fat Stock show last November. Great pains were taken to obtain trustworthy opinions as to the relative merits of the animals. A committee composed of some of the most experienced feeders in America, and another committee composed of Chicago butchers carefully examined the steers and the quality of meat was judged by the cook and the guests at the Sherman House, Chicago. In fact, it may be justly said that this is one of the most important tests of cattle that has ever been made. It is not fully complete; it does not fully decide the queston, and determine which is the profitable beef-making breed; but it does open the discussion in a solid business-like way, devoid of guess-work and estimated figures. We hope the test will be repeated and elaborated. We are sorry that the Ayrshire cattle were not represented, and that a lot of scrubs or natives were not fed with these thoroughbreds that the value of good blood might be more forcibly illustrated.

On another page the RURAL gives accurate pictures of the six steers selected for the test. The cuts are made directly from the photographs and are absolutely true to life. The RURAL pays more for these cuts than many of its contemporaries pay for all the cuts they use in a year. We also give exact pictures of the choice cuts of meat from the different animals.

It is not proposed to give, in these pages, anything more than a general outline of the experiment. Those who wish to obtain Prof. Johnson's full statement should send to the Michigan College for bulletins 24, 30 and 44.

THE ANIMALS.

SHORT-HORN, HOMER.—A picture of this steer with figures regarding his weight, etc., is given at Fig. 69. At Fig. 75 are shown two sections of his carcass. This steer was dropped November 25, 1885. He ran with his dam—a good milker— until July, 1886, though in the meantime he had been taught to eat meal and hay. He was castrated December 28, 1885. He came from excellent stock. It may be said here that the grain fed to all the steers was composed of two rations: one made up of wheat bran, oats whole or ground and old-process oil-meal; the other of a mixture of two-thirds corn and one-third oats ground together, in the place of the oats. They were also fed clover and Timothy hay and corn silage.

HEREFORD, HENDRICKS, (see Figures 65 and 71), was dropped October 27, 1885. He ran with his dam, taking all her milk, and at eight weeks began to eat meal—a mixture of oats and barley. He was castrated when four months old.

DEVON, LATITUDE (see Figs. 64 and 70) was dropped March 23, 1886 and castrated July 6, same year. He was taken from his dam three days after birth and fed new milk for 10 days. After he was two weeks old he was fed four quarts of creamery skim-milk twice per day and taught to eat meal and hay.

JERSEY, ROSCOE (see Figs. 67 and 73) was dropped August 27, 1885 and castrated October 13. He was fed milk for 122 days, consuming 1,259 pounds up to February 23, 1886. He had in addition to the milk, 165½ pounds of hay and 165½ pounds of grain. He weighed 306 pounds.

HOLSTEIN, NICHOLAS (see Figs. 68 and 74) was dropped February 26, 1886 and was castrated April 22. He was reared on the pail and fully weaned from milk July 10, when he was fed oat-meal and "calf-meal."

GALLOWAY, KING JUMBO (see Figs. 66 and 72) was dropped February 17, 1886, and was castrated March 30. He was taken from the cow but drank about all the milk she gave During the third month he ate, in addition to the milk, five pounds of oil-meal and five pounds of wheat-bran. During the fourth month he ran at pasture and had skimmed milk and ate eight pounds of oil-meal and 50 pounds of bran.

REPORTS OF JUDGES.

FROM A FEEDER'S STANDPOINT.—The Short-horn steer, Homer, we rank first in the lot so far as profit from the feeder's standpoint is concerned. He weighed 1,870 pounds at 1,071 days old, a gain of 1.74 pound per day. Homer also ranks first in value for the market as well as the block. On most markets, he would outsell any of the others.

The Hereford steer, Hendricks, as a butchers' bullock is equal to the Short-horn, He has not made growth enough for age, weighing 1,450 pounds at 1,100 days, a daily gain of 1.32 pound, to make a profitable beast for the breeder. On account of the lack of weight he would not bring quite so much as the Short-horn in the market.

The Devon steer, Latitude, we should place third as a butcher's bullock and a seller in the market. While he is a well fleshed and even steer, he has not made growth enough to be profitable to the feeder, weighing 1,270 pounds at 953 days, a gain per day of 1.33 pound.

The Galloway steer, King Jumbo, on account of his rapid growth, weighing 1,620 pounds at 987 days, a daily gain of 1.64 pound, should be ranked second as a profitable beast for the breeder. While he lacks somewhat the finish and quality of the Devon, on account of his greater weight he would rank with him in market value. As a butcher's bullock we should rank him fourth, his finish not being quite equal to the Devon.

The Holstein steer, Nicholas, has also made rapid growth, weighing 1,660 pounds, at 976 days old, a growth of 1.70 pound per day, which would class him with Galloway, from the standpoint of giving good returns to the feeder. He, however, lacks the quality which makes the best type of a butcher's bullock. He is too coarse, in the opinion of the committee, to make a profitable bullock, for the reason that, when finished and placed on the present markets, he would have to sell at a reduced price, from $1.00 to $1.50 per hundred less than the Short-horn or Hereford.

The Jersey steer, Roscoe, while an excellent specimen of the breed, should rank lowest as a feeder, weighing only 1,420 pounds at 1,161 days old, a daily gain of 1.28 pound. In the present markets we think he would sell for the same price as the Holstein, while, as a butcher's beast, on account of his finer bone and ripeness, he would be superior.

FROM A BUTCHER'S STANDPOINT.—"The committee selected to report on the respective merits of the carcasses of six steers, each of a different breed, exhibited by the Michigan Agricultural College, respectfully report: That as to quality and percentage of edible meat combined, making a profitable carcass for the butcher and consumer as well, we place first, the Hereford; second, the Devon; third, the Galloway; fourth, the Jersey; fifth, the Short-horn; sixth, the Holstein."

FROM A COOK'S STAND-POINT.—Mr. Pearce of the Sherman house, says: "Taken as a whole, the beef was very good. My head cook, who is an unusually intelligent and experienced handler of meats, says (and I have bought beef at every one of the Fat Stock Shows held here) that it was the best flavored and most profitable, from having the least waste meat, of any that I have ever bought at these shows.

"I found the Jersey gave me a larger proportion of edible meat than any of the other carcasses, in fact there was no waste to it. No person tasted the meat without speaking of it. I was astonished at the amount of favorable comment it excited in regard to its tenderness and fine flavor. The poorest parts were better than ordinary choice cuts. The fats were good and profitable for use in cooking. Our pastry cook called it equal to butter.

"Next in order came the Galloway in quality and flavor and amount of edible meat; then the Hereford, the Holstein and the Devon in the order named; the Devon, in amount and flavor of the edible meat and quality of the fats, being equal to either of the other bullocks, except the Jersey, but lacking that tenderness found in the others. The Short-horn was fine in flavor and as tender as any one could desire, but would be very unprofitable to the consumer. There was a very large waste in fats; much of what we call the corning pieces were so spongy and fat that we could not corn them or otherwise use them except to render them for fat which we could not use in cooking, and that is a product of little value to the consumer."

FIGURES.

From the many tables of figures given by Prof. Johnson we have compiled the following which give the most interesting feature of the experiment.

	Pounds of hay Consumed.	Pounds of Grain.	WEIGHT. First Year.	Second Year.	COST PER POUND. To Nov. 1st 1888.	Average for the whole period.	Gain per day.	To Nov. 1st 1888.	Second Year.	First Year.
Devon	5389	5318	521	1009	.08	.058	1.33	1270	1.09	.025
Hereford	6588	5847	705	1105	.117	.053	1.30	1424	1.05	.01
Galloway	5703	6711	738	1222	.076	.049	1 64	1620	1 22	.02
Jersey	7118	6793	571	1007	.11	.062	1.26	1383	1.07	.02
Holstein	6687	7300	731	1316	.093	.053	1.70	1660	1.16	.022
Short-horn	7798	8142	801	1367	.105	.055	1.74	1870	1.67	.015

NOTES.

As a result of this trial, Prof. Johnson concludes that there is but little difference in the cost per pound of raising steers of the different breeds under the same conditions. The superiority of the beef breeds rather lies in their early maturing qualities, which enable the feeder to turn them off, well ripened, at two instead of three years. Calves brought up on the pail, when properly fed, will make as much growth and be as valuable for feeding as if they were allowed to suckle their dams.

The lesson is very emphatically taught that average native steers, weighing from 1,100 to 1,300 pounds at three years, or often much less, cannot be raised and fed with profit. Well bred steers weighing from 500 to 800 pounds more at the same age may be. The value of good blood for beef production cannot, then, be over-estimated. It, only can, with good care and skillful feeding, in these times and with the present markets, bridge the margin between loss and profit for the grower and feeder.

The quality of beef produced by a combined grain ration, in which wheat bran, oats and some oil-meal form the principal part, is preferable to that produced by a corn ration exclusively. He believes these animals would have had a much less percentage of meat valuable to butcher and consumer if corn had entered largely into their grain ration.

The cost per pound of production is greatly increased with each succeeding year. Certainly under most favorable conditions steers of early-maturing breeds should reach the limit of profit at from 24 to 30 months at latest. This may be modified in ordinary feeding by the fact that the yearling steer will need more expensive food than older ones. The latter will consume more rough fodder profitably than the former.

The largest per cent. of dressed to live weight does not always indicate the best quality of meat, or the most profitable carcass for the dealer or consumer. The commonly received opinion that the steer that shrinks least in killing, is the best for the butcher, must be more or less modified by other conditions.

Horticultural.

WARRANTED SEEDS.

EVERY season brings hundreds of complaints from parties who claim to have been unfairly used by seedsmen and nurserymen. Seeds and plants have been bought, often at high prices, that have been carefully planted and cared for only to produce the most disappointing results, because they were untrue to name and either carelessly or intentionally mixed. With a view to arriving at some fair method of lessening these mistakes and giving some basis for satisfactory settlement, we sent the following question to a number of seedsmen, nurserymen and farmers. Many of the seedsmen, wished to be excused from answering; the answers given, however, may serve to start the discussion at least.

What guarantee should the reputable seedsman give that his seeds or plants are sound and true to name?

If a seedsman or nurseryman by accident sends high priced seeds or plants untrue to name, thus entailing loss and disappointment upon purchasers, should the seller be held responsible, and what would be a fair basis for settlement?

FROM ROBERT BUIST, JR.

I think that the purchasers of seeds or plants should be protected to a certain degree, that is, if the seeds or plants do not give satisfaction, the purchaser should either have his money returned or the seeds or plants replaced. This is my manner of treating customers. A reputable seed house rarely sends out anything which is untrue to name and character.

FROM J. M. THORBURN & CO.

We fail to see in what respect our business as seed merchants differs from that of any other reputable merchant who buys and sells any other kind of merchandise. The risk the farmer or gardener assumes is incidental to his business as such, and his best guarantee is the reputation of the seedsman from whom he purchases.

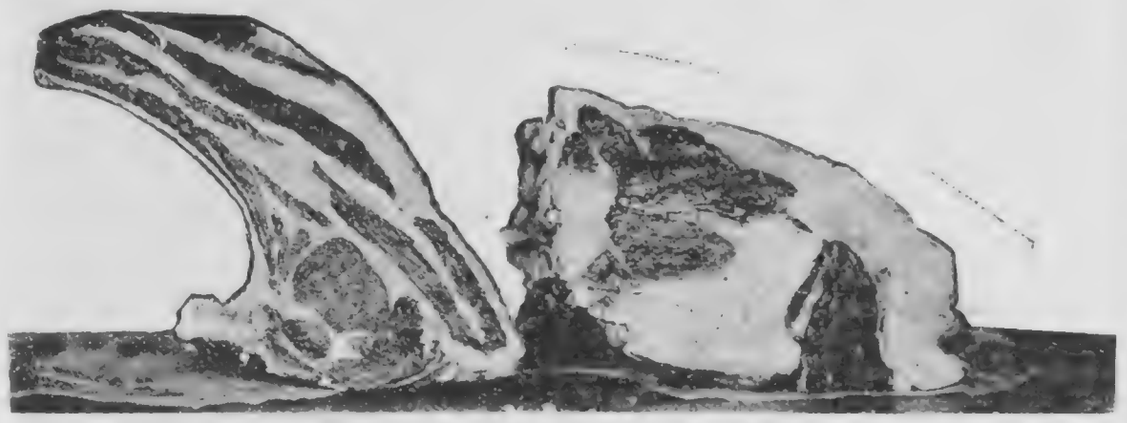
FROM J. A. FOOTE.

The question as to a warranty of seeds and plants is an exceedingly difficult one, especially as to seeds. Plants are mostly grown, or should be, by the seller, and he should know whether they are true to name and in good condition when they leave his hands. But as to a warranty that they will grow under all the conditions that may befall them from the elements and the ignorance and neglect of those who plant them, that would seem to be too much to ask. Much more is this true of seeds. No seedsman, not even the most exten-

sive one, grows all the seeds he sells, and thus no dealer can always know the genuineness of all his seeds. Then, there are hundreds of seedsmen who buy all the seeds they sell. The law perhaps takes no cognizance of ignorance in anything, and holds the seller responsible. As I take it, this inquiry is not as to the law, but as to the moral right that should govern the law, and when I come to that point I do not feel able to express an opinion on it. It seems that there should be some responsibility on the seller, but the whole burden seems too great. Of course, the seedsman should be responsible for putting out seeds known to be defective or untrue; but as to mistakes, mixtures or supposed lack of vitality, there should I think be at least a division of loss.

CHOICE CUTS FROM DEVON BEEF. Fig. 70.

In regard to the growth of seeds probably nine times out of ten the failures are due to other reasons than a want of vitality. Certain seeds are very susceptible to conditions—for instance, sweet corn and wrinkled peas. These planted in heavy soil when cold and wet are sure to rot before sprouting. But even sorts that are hardy are uncertain. A single illustration will show this. A customer reported to me that he sowed part of a package of turnip seed in a bed, and they grew well. He sowed the remainder of the package in another bed on the same day, and they failed to grow. Supposing that there was both good and bad seed in the package, it was impossible that he could have separated them; but he never knew why one failed and one grew. Had all been sown in the second bed the failure would have been charged to the seed. These represent some of the difficulties in warranting seeds. The seedsman may, however, as policy, warrant seeds to a limited extent, taking the risk of ignorance, neglect and bad conditions to the extent of replacing the seeds or even refunding the money. Counting that the outlay for doing this one time in 20 or 50 or 1,000 cases, might be made up by increased sales. This question of expediency every seedsman can settle for himself. The question of right is so difficult that no iron-clad rule should be made. I think that in most cases the presumption should be on the side of the seedsman—that is, that the fault of failure is not his. It is right on the other hand that he should use great care, and I think that honesty is so recognized to be the best policy in this trade that care is generally exerted, and if so, then few will suffer except by their own fault or circumstances that cannot be overcome.



CHOICE CUTS FROM HEREFORD BEEF. Fig. 71.

FROM W. ATLEE BURPEE & CO.

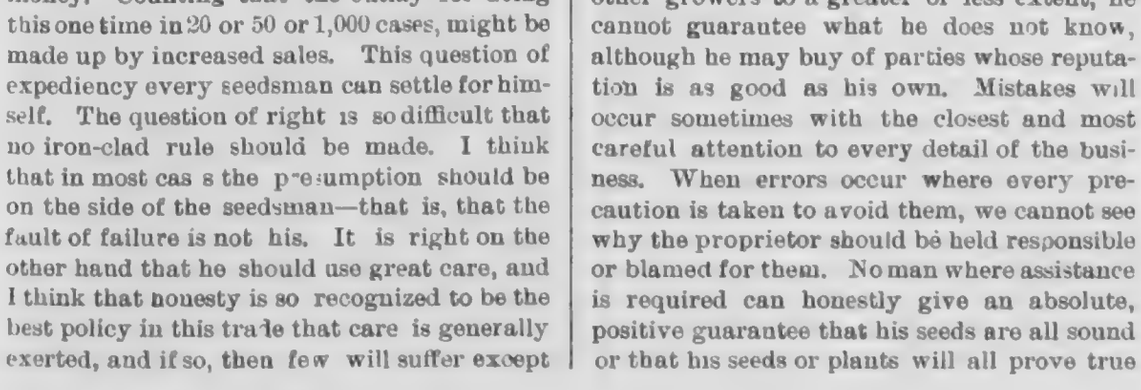
The best answer we can give to these questions is to state our own method, which is that we warrant all seeds to be first-class, pure and true to name, in so far that should any prove otherwise, we will refill the order, or return the price paid, at the option of the purchaser. Of course, mistakes will occasionally occur; but the conscientious seedsman will surround the handling of seeds with all possible safeguards, so that the chance of errors is reduced to a minimum, and when an error does occur, he cannot of course assume the responsibility for the estimated possible results of a good crop in a good season—that is, he cannot be held responsible for possible consequential damages.

FROM W. H. MAULE.

I have always guaranteed my seeds to be just as represented, insomuch that should they prove otherwise, I will refill the order free of charge. It must be understood by all my customers, however, that I never guarantee a crop of anything further than that should the seeds prove unsatisfactory, I will refill the order, and I do not consider more should be asked.

FROM STEPHEN HOYT'S SONS.

We do not think a seedsman or a nurseryman can give a positive guarantee that his seeds are all sound or that his trees will all prove true to name. Of course, any reputable or responsible seedsman or nurseryman will do all in his power to have everything correct and honest; but when the work has to be largely entrusted to others, as it is at the present day, or when one's sales are larger than his own resources for growing seeds or plants, and he is therefore obliged to buy from other growers to a greater or less extent, he cannot guarantee what he does not know, although he may buy of parties whose reputation is as good as his own. Mistakes will occur sometimes with the closest and most careful attention to every detail of the business. When errors occur where every precaution is taken to avoid them, we cannot see why the proprietor should be held responsible or blamed for them. No man where assistance is required can honestly give an absolute, positive guarantee that his seeds are all sound or that his seeds or plants will all prove true to name. No honest person will make such a guarantee. A responsible seedsman or nurseryman should be required only to make such a guarantee as he can live up to, which is that every care and precaution shall be taken to have all seeds sound and all plants true to name.



CHOICE CUTS FROM HEREFORD BEEF. Fig. 71.

If by accident high-priced seeds or plants are sent out which prove untrue to name, as soon as the fact is known others which are true should be given free to replace them, but no damages should be required. "Do unto others as you would that others should do unto you," and none will be wronged and all will be satisfied.

CHOICE CUTS FROM GALLOWAY BEEF. Fig. 72.

CHOICE CUTS FROM BEEF OF JERSEY. Fig 73.

believe parties so doing should pay heavy damages. Here is a field of action for our Nurserymen's Association.

FROM P. M. AUGUR.

The characters of most of our seedsmen and nurserymen are so well known that we should be slow to believe an intentional fraud would be perpetrated by them. In introducing novelties, of course, confidence has to be felt in the care and good faith of the disseminator, and here the "golden rule" should always have sway.

In case of satisfactory evidence of a mistake, few if any firms exist that will not do

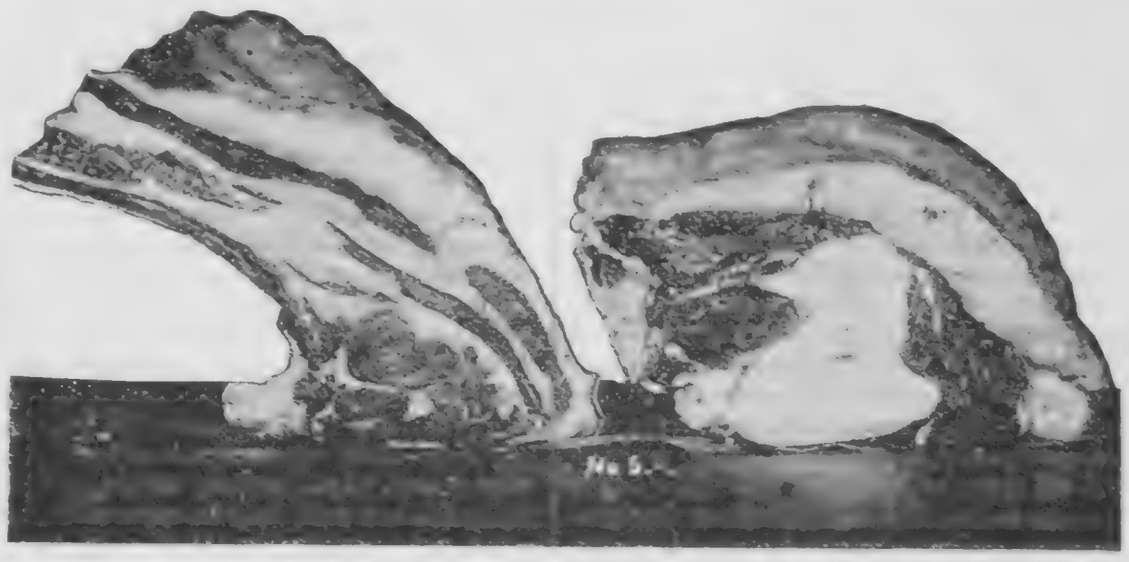
CHOICE CUTS FROM HOLSTEIN BEEF. Fig 74.

FROM PUTNEY & WOODWARD.

We answer the first question by quoting the following from our price list.

"We warrant our stock true to label to the extent that if found otherwise, we will replace the stock or refund the money paid."

We would guarantee to a greater extent were it not that a number of parties would be apt to take advantage of it. To the second question we would say that the seller should be responsible for any accident or carelessness of the grower, digger, packer or book-keeper. It is a costly matter to the seller to replace the objectionable seed; so that the buyer, although he may have lost heavily, can hardly expect more. When a buyer of seeds expends a large amount of money in preparing the soil, and sows seeds that should germinate but which fail, or prove spurious, he certainly feels like demanding damages in full, and we cannot blame him; neither can we reimburse him.



CHOICE CUTS FROM SHORT-HORN BEEF. Fig. 75.

Trees and plants untrue to label need not be sent out if the nurseryman sells only what he himself raises. We believe it is a mistake for the nurseryman to catalogue what he has not of his own growing. True, he will lose much trade that naturally gravitates to the grower who is supposed to have the largest stock and greatest variety. Sending out old varieties under new names we heartily condemn and believe parties so doing should pay heavy damages. Here is a field of action for our Nurserymen's Association.

FROM JONATHAN TALCOTT.

A seedsman's good reputation for honesty, and his endeavors to send out only such seeds and plants as are true to name should be his guarantee, especially when seedsmen have had a reputation for such dealings for a series of years. If a seedsman or nurseryman by *accident* sends high-priced seeds, or plants untrue to name, thus entailing loss and disappoint-

the fair thing in regard to the error. The public would not be benefited by a severe or cast-iron law in this matter.

We once sold a lot of beautiful ornamental trees for a new street in a neighboring city. We were pressed to warrant those trees, and knowing the probabilities we cheerfuly did so. The next spring we were mortified on finding that nearly half of them had failed. We suspected that something was wrong, but supposed that the mishap was due simply to carelessness in setting them out. We replaced them, however. Some time afterward we learned that the man who planted them out, put each tree in a saw-horse and systematically sawed off the roots so that the trees would go into very small holes. Thus we were victimized. If the "golden rule" were applied in all cases, there would be little trouble.

Be honorable and deal with honorable men, and there will be little cause of complaint.

ment upon purchasers, the price of such seeds, or plants should be refunded, or seeds and plants true to name should be furnished, as soon as the accident was discovered. That, in my opinion, is all that should be demanded or expected under such circumstances. It would be impossible for any man to determine the loss or damage resulting from such an accidental sending out of such seeds or plants. The purchaser no doubt would place his loss or damage at very much more than the seller, or than even disinterested persons. There might be a case where no loss or damage would occur; other causes might combine to destroy a crop of the best and purest seed; hence no person or persons would be competent to assess such loss or damage on its true basis.

FROM T. H. HOSKINS, M D.

1. The fact that the seedsmen of highest character and repute in America all refuse to give any broad warranty of their seeds is, I think, sufficient proof that to do so is not practicable; for certainly any well established and reputable house which would break through the universal custom could greatly increase its trade. But to do so would so surely wreck the best business in the country that an association, combination, or "trust" arrangement, is needed to insure good faith all around, in this matter. The tremendous risk of insuring a pound, or even an ounce of some kinds of seed, is so utterly disproportioned to any possible profit, that no seed seller can undertake it. A careless or angry clerk might ruin the richest concern in a single season. In its practical results, this refusal to warrant leads rather to the selling of better and purer seeds; for good houses, feeling that they must refuse to warrant, also feel that in every other way they must endeavor to satisfy their customers.

But any seedsman or nurseryman, who by accident sends high-priced seeds, or plants untrue to name, having refused to warrant them, must naturally feel very sharply the danger to his business which a "high and mighty" indifference to the disappointment and loss entailed upon the buyer will cause. Every reasonable satisfaction ought to be made; but in the case of seeds, especially, the loss to the buyer in consequence of the error is often so very large, compared with the price of the seeds, that the necessities of the case must leave by far the greater part of that loss with him, and he must bear it as he bears other inevitable misfortunes. As a matter of practical experience, I think the risk of a judicious buyer dealing with a house of established repute, is not great. When loss occurs, while the seller must have the protection which he gets by refusing to warrant, yet every effort ought, I repeat, to be used by him to make that loss as light as possible, consistent with the nature of the business.

FROM T. B. TERRY.

The seedsman should guarantee, first, that all seeds will grow. If they fail he should agree to refill the order without further charge, or return the money paid, at the buyer's option. All seeds should be tested and the seller should know what he is selling well enough to be willing to make this guarantee. Now, on the other hand, the buyer should purchase all seeds in time to test them before planting, unless he is willing to take the risk. If he finds them poor he has time to get others. The loss, beyond disappointment, is small. He must put his disappointment against that of the seller and call it square.

In regard to plants sent out, if they are manifestly unsound when received (like a bunch of grape-vines sent me last spring, with moldy, dried-up roots,) the seller should be willing to furnish good plants promptly, or to return the money, and in either case to refund the expenses to which the buyer has been put. If thrifty-looking plants are received by the buyer, and they seem to be in good order, but afterwards fail to do well, I see no way but for the buyer to stand the loss. How can it ever be decided who was to blame? The presumption would be that the trouble, as a rule, would be at the buyer's end, as a "reputable nurseryman" would be likely to understand the management of plants or trees better than most buyers. Then again, his reputation would be at stake. Plants sent out that failed to grow would hurt him more than what he made on them would help him.

In regard to the second question: I send my man out to clear up some land. He sets fire to a brush heap that is two or three rods from the line fence. Not far off stands a neighbor's hay stack. The wind is blowing towards it. If it burn I must pay for it, according to Ohio law and justice. I am responsible for what my employés do in the course of their regular business. Now, again, suppose the wind was blowing right away from the stack when my man set the fire but, suddenly, at just the wrong moment, and without warning, it changed and thus my neighbor's hay is burned. This would be a pure accident. I have a right to clear my land with reasonable precautions and could not be made to pay for the hay. I should, of course, be very sorry, but could hardly be blamed.

Again, supposing my man in driving along the highway with a heavy load on a good wagon, carelessly runs into some one and breaks off a wheel from his vehicle. I must pay for it. He is my employé. I put him in a position to do this damage. But suppose just as he was turning out, an axle broke and he could not go farther. The other man was too near to do all the turning in time. Now I could not be held responsible. It was purely an accident.

Let us apply these rules to the seedsman or nurseryman who sends out by accident high-priced seeds or plants untrue to name, thus entailing loss and disappointment on the purchaser.

If it was as purely accidental as the two cases mentioned above; if the accident was something that human foresight could not have prevented, or foreseen, like the changing of the wind that caused the hay-stack to burn; then I should say "no" to the second question. But, as a rule, and practically always, are not these "accidents" caused by the carelessness of some of the employés of the seller? If they are, he should certainly be held strictly accountable for them. He put his employés in a position where they could injure those who bought of him.

But now comes the question: "What would be a fair basis for a settlement?" There is the rub. From the nature of the business, the carelessness of one man, for a single day, might get a seller, if he is to be held responsible for all damages, into no end of trouble and lawsuits, from one end of the country to the other. To enforce this seemingly just rule would drive every man out of business, for he never would know when he was safe. What can be done, practically? The seller should be responsible, always, to the amount of what was paid him for plants or trees. This would insure all reasonable precautions against carelessness. Then he might say to the buyer: "In consideration of your taking all risk of accidents, beyond those that would be covered by the cash paid me, I sell you the goods at such and such prices." The buyer buys on this basis, and, of course, far cheaper than any reliable firm could sell to him and positively guarantee them all right or they would pay all future damage.

Certainly little or no business would ever be done in this line if sellers were to be held for consequential damages in case of carelessness, although when one looks only on the other side this seems but right. But the buyer must remember he is not buying on such a basis of prices. He gets his trees cheaper because the contract is limited; just as he buys a railroad ticket cheaper because it is limited, or sends his produce to market at a certain low rate, partly because the company does not agree to get it there in time for any particular market. He must take some risk himself, or pay an extra price for sending his stuff on a time freight. For the extra pay the company takes the risk.

FROM HENRY STEWART.

The question of purity and freshness of seeds is a very serious one to farmers and market gardeners. Some enormous losses—in the aggregate—are incurred every year by failure of seeds, and I believe these failures are not so much the fault of the farmers as of the sellers of the seeds. Some guarantees are, of course, very desirable, as in other kinds of business, in which the seller is held responsible for the genuine character of his wares. But what guarantees are possible in this respect? It has been thought, that if a farmer—as I have done—goes to a large expense in preparing and fertilizing some acres of land for any crop—let us say mangels—and purchases a lot of seed, which from its nature, (as with mangel or beet seed) may be apparently good when it is entirely worthless, only empty capsules being left instead of well filled ones, the farmer is entitled to be repaid all his loss by the seller of the worthless seed, who may be himself perfectly honest, but has made a mistake—perhaps through one of his salesmen. This, however, involves the question of indirect damages, which I believe the law ignores in great and small cases, from the well-known Confederate cruiser case against England to the sale of an ounce of cabbage seed. The legal maxim, *caveat emptor*, "let the purchaser look out for himself," applies, and the United States Courts have so settled cases brought before them. It may seem to be unjust, but looking at it impartially, it seems that if the purchaser will not take the trouble to examine the seed carefully and test it, before sowing his land prepared at large expense, he is not doing his share of the mutual duty and obligation.

Certainly if any seedsman sells, even unknowingly, any imperfect or wrong seed the least he can do is to return the money paid for it, under certain conditions; and these should be the return of the package within a time sufficient for the purchaser to test the seeds. But even this is open to objection. The purchasers frequently do not know how to test many seeds, and some ignorantly kill the seeds in preparing them for sowing. I have known cases in which boiling water has been poured upon corn for the purpose of hastening the germination, and of other very hard seeds being sown without this preparation which would have hastened their growing.

Every seedsman, I think, should stake his reputation upon these guarantees; first, that the seeds have been grown by competent, careful and experienced persons, with every care to prevent mixture, and in the best manner to procure healthy and vigorous growth; second, that all seeds sold are fresh, and no old stock that may have lost the power of germination by age or by ravages of vermin of any kind, is offered for sale. Similar guarantees should be given as regards plants, shrubs and trees.

If an accident happens and loss is incurred by the purchaser, the seller is now held liable by the common law for the direct damage sustained, and any respectable seedsman would no doubt make due reparation for such loss, taking into account, of course, the offset of whatever part of the loss should fall upon the purchaser for his carelessness in certain circumstances. It is easy to test seeds and the purchaser ought to do this before he sows them. If he fails to do this he necessarily waives any claim upon the seller in any way. If he tests them and finds they have been damaged, or are old and worthless, he has a just claim to get his money back on return of the seeds at the earliest practicable moment.

With fruit trees there is much more uncertainty and greater necessity for some trade regulation. If a man sells 100 Bartlett pears or Baldwin apples and the purchaser has no means of verifying the truth of the labels on the trees, and after waiting seven or eight years, finds he has other and inferior trees, he has been very seriously wronged, and has a just claim to compensation. The law would give him damages to the amount of the difference in value of the trees, but no more; but what would be a fair basis of settlement is exceedingly difficult even to suggest. I rather think the whole business is something like a man trying to jump a ditch in the dark; he may land all right on the firm ground, but he may go up to his neck in the slush midway. He takes the risk, which, however, is very small when he deals with well-known persons. I have been buying seeds, plants and trees largely for more than 30 years, and have had only one "accident," which I would have discovered had I been careful.

A BUCKWHEAT POINTER.—I prepared a field for sowing buckwheat. On July 7, 1888, I sowed half of it with "Japanese Buckwheat," and on July 10, I sowed the other half with the common buckwheat. One of the best farmers in this town laughed at me for getting it in so early. He said that July 18, was as early as he thought it profitable or safe to sow buckwheat in this section. The exceptionally early frosts of 1888, blighted his buckwheat, while from my Japanese I saved a splendid yield of first-quality grain; but the common kind by its side was white with bloom when the frost spoiled it. Only two farmers showed buckwheat at our town fair. Mine took the first prize, and richly deserved it. E. A. M.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.

RAISING MANGEL-WURZELS.

L. B. S., East Springfield, N. Y.—I am going this spring to raise two acres of mangel-wurzels, on a deep limestone loam with a loose sub-soil. The land was plowed last fall to the depth of eight inches, and manured at the rate of 60 two-horse loads to the acre. I intend in the spring to spread on the manure 200 pounds of Cayuga plaster, brush-harrow thoroughly, and then plow it under about four inches. I will then sow 600 pounds per acre of salt and 1,000 pounds per acre of Henderson's rotten bone manure, harrow thoroughly with an Acme harrow, and roll. I have chosen the Henderson Colossal Long Red mangel for planting. Now, what I want to find out is, whether I can raise a larger crop by planting in rows 30 inches apart and thinning to 14 inches in the row; or by planting in rows 21 inches apart and thinning to 21 inches in the row. There is little difference in the number of plants. In the latter case, I will cultivate both ways with a Planet Jr. hand-cultivator, and the labor will be greater than it would be if I could use the horse-cultivator. But I am willing in this case to take the extra trouble if I can get a larger crop.

ANSWERED BY GEORGE AITKEN, MANAGER BILLINGS FARM.

The raising of mangel-wurzel should never be attempted on a flat or level surface, as it is almost impossible to grow a profitable crop on such land. This is one of the reasons why so few farmers raise this crop in this country. The land being prepared as L. B. S. proposes, should then be thrown up into ridges about 27 inches apart. This is done by running the plow moderately deep and leaving about 27 inches between the furrows, which should be done by an experienced plowman, so that the ridges will be exactly the same distance apart throughout their entire length. The seed is then sown on top of the ridges and rolled lengthwise of the ridge with a common roller. Just before the plants appear, it is well to go over the piece with a light dressing of nitrate of soda—about 100 pounds per acre—sprinkling it only on top of the ridges, which will give the young plants a good start ahead of the weeds. As soon as the plants appear the cultivator should be started with the teeth set slantingly so as to leave the ridge narrow on top and wide at the base, and if the ridging has been properly done the cultivator may be set within an inch of the plants on each side leaving the ridge only two inches wide on top. When the plants are about three inches high they should be singled out to about 10 inches apart by striking a hoe across the top of the ridge. This is where a great many fail in growing roots: they are too careful not to disturb the plant. I have seen them carefully pull the plants away from the one left standing so as not to disturb the ground around the growing plant, which is a mistake, as the soil ought to be taken away to a depth of an inch and the plant allowed to fall over. There is no danger of killing it, as the root has struck down three or four inches by this time and by taking the soil away in this manner, we get rid of the weeds and no more hand hoeing is needed, as the horse cultivator will do all the rest. This is the method I have practiced for the last 20 years, growing from two to five acres every year, and very few crops have yielded less than 30 tons per acre, while some have gone as high as 40 tons, and they have never cost over four cents per bushel.

HUSKING CORN BY MACHINERY.

E. B. S., Hydetown, Pa.—I would like to hear from Mr. A. C. Glidden in regard to the work he had done with the corn-husker which he fully described in the RURAL of December 15. How about his mow of cut fodder? If it did not all spoil, I want to know how he packed it.

ANSWERED BY A. C. GLIDDEN.

I think I fully described the work of the husker in the article alluded to. I find occasionally an ear with the husks on as I am feeding the corn, but it is cleaner than the average of husking. But I must now disclose the fact that the machine did not do as perfect work husking later on, when the husks had become perfectly dry, and the husking pins had become somewhat worn. The grasp on the husks was uncertain when they were dry. Some improvements are necessary to hold the ear down rather than to allow it to rest on the huskers by its own weight entirely. I am feeding on the last one-third of the cut fodder and so far it has all been eaten except to the extent of a dozen bundles perhaps on the front side of the bay where it kept wet until it froze. The mow steamed some for three weeks, but I kept the doors shut to the barn. If perchance they were opened, if only for a few minutes, the fermentation would increase, in the same manner that fresh air adds to a blaze. The barn is battened tight, and some hay was placed in the bottom of the mow, so that no draft of air could come from below. I have been feeding off the mow every day this winter, and find the fodder has kept perfect, except just in front, and where I stood under the carrier to throw the fodder back. Here it has been somewhat moldy from top to bottom. I think the heavier parts of the fodder were left here—the piths of the stalks that held the most moisture. These were packed hard, and the water could not

escape so well. I fed from this moldy place this morning on purpose to see if the stock would eat it. The sheep sniffed at it rather daintily, but the cows ate it as well, seemingly, as any part of the mow. Along the front of the mow it is discolored somewhat, but on the back side and ends it looks as fresh almost as when it was placed there. I am thoroughly pleased with this way of managing corn fodder, and shall never handle it in bundles again. I had a few loads husked by hand before the machine came, and it seems more of a nuisance than ever after feeding this prepared fodder.

TREATMENT OF GULLIED, LEACHY HILL-SIDE: A HOME-MADE HAY PRESS.

J. W. F., Pike Co., Ill.—1, I have just taken a hilly piece of land on which the hill-sides have been washed into big ditches some of them 20 feet deep. Some of them are close together. The soil is a light clay very easily washed. Brush and straw are very scarce; what is the best way to bring the field into grass, or make it tillable. The land has been abused till the life seems to have been knocked out of it. 2. Is there any hay press for $25 or under for farm use?

ANS.—1, Deep plowing will prevent washing by affording sufficient absorbent soil to take in the water. The land in such a case should be plowed across the slope to avoid making channels for the water to gather. A plan that would no doubt put the land in question in good order again would be as follows. Plow the gullies from top to bottom, beginning at the middle and finishing at the sides. One horse may be used by employing a light hill-side or swivel plow and going back and forth. When the sides are reached the process is repeated until the hollows are filled as nearly as may be; then the other land should be plowed with the same plow, beginning at the bottom and going back and forth. Then sow clover, with oats or millet or buckwheat, to afford some resistance to the heavy rain until the clover has taken a stand. After the clover has stood a year or two, the land should be plowed again wholly across the slopes, if possible, and sown to Orchard grass and clover and Blue-grass seed may be sown with these; Red-top would make a substitute for the Blue grass if thought more desirable. Such land should be kept in grass, and Orchard grass and Blue grass are the most permanent varieties for this kind of soil. 2. No hay press in the market can be bought for $25, but a very good one can be made by any carpenter, to be worked with a lever with pawl and ratchet-wheel to raise the bottom of the press. The sides of the press must have openings in the proper places to put in the wires for binding; strong tarred strings may be used, that could be saved for another season and are not dangerous as wires are.

WHEAT BRAN AND BUCKWHEAT BRAN FOR MILCH COWS.

W. W. S., Denton, Mich.—Which is the cheaper feed for milch cows—wheat bran at $15 per ton or buckwheat bran—with middlings—at $13? My coarse feed is drilled corn, some of which is heavily loaded with ripe ears, run through a cutting box and mixed with a little cut straw. I also give one feed a day of bright hay. I am feeding from six to eight pounds of bran per day. Is that amount enough for a 1,000-pound cow giving a full flow of milk, cream being the object?

ANSWERED BY HENRY STEWART.

Buckwheat bran is a nutritious feed and so are the middlings of this grain; but this feed makes a poor quality of butter. Wheat bran is a better food for cows although it bears a less proportionate value than buckwheat bran in the ratio of $1.01 to $1.15 per 100 pounds for its nutritive elements; but it has better results in regard to the quality of the butter, this being of a better color and texture. With the corn in the fodder, six to eight pounds of bran per day are quite sufficient, if the corn—which is whole—is all digested. This, however, is doubtful, judging from experience in feeding such fodder or whole corn. Whatever corn passes through the animal is, of course, wasted; hence I would suggest that four pounds of corn-meal and four pounds of bran should be given rather than eight pounds of bran. Under similar circumstances I have found this the best feeding for cows kept for cream and butter. The coarse food is excellent except for the objection in regard to the escape of some of the grain in it from digestion.

GRASSES FOR PERMANENT PASTURE; OAT CHAFF AS FEED.

B. K. A., New Providence, Pa.—1. I want to plow a piece of ground and sow on it oats for a permanent pasture. Clover soon freezes out and Timothy soon dies out. A part of it is upland, and a part of it sometimes wet. 2. Will oat chaff injure a horse if mixed with chop and made wet.

ANS.—1. For permanent pasture mixed grasses are more desirable than any one kind. But as some of the best grasses do not reach their best stage the first year it is better to sow some clover—say, six or eight pounds with six of Timothy, 18 of Orchard grass and 12 of Red-top, which would make a good mixture for both dry and moist land. From the fact that this land freezes out the clover and most probably the Timothy, it evidently needs drainage. This might be afforded by plowing it in flat lands four rods wide, with open furrows between them; these furrows should be plowed twice, and deepened, and made broad so that a wagon would pass over them easily, and they would, if plowed right as to the slope, carry off the surface water. 2. Oat chaff is more nutritious than any other kind of chaff, being softer and more digestible. It has no injurious properties, and horses eat it very readily; but it would be better eaten if a little cut hay were mixed with it. The only objection to its use as mentioned is that when wet and mixed with chop, or coarse grain feed, it would be swallowed without sufficient mastication, and ferment in the stomach and cause indigestion and a fit of colic.

SEEDING TO GRASS ON AN "OLD FIELD."

Subscriber, Elva, Va.—How can the best grasses and clover be grown on an "old field" without plowing and sowing with a grain crop? Will it do to harrow the existing coarse grass thoroughly, sow 400 pounds of bone-dust per acre, then sow the grass and clover seed and roll?

ANS.—Grass and clover require as good preparation of the soil as any other crop, if not a better one. We consider grass and clover, or either alone, the most important and valuable of all crops, and for this reason, if not for the fact that they insist upon it, the best preparation should be made for them. It is impossible to get a satisfactory stand in the manner suggested. Our plan would be to plow the land, turning under the present coarse growth, make the soil fine and compact by thorough harrowing with a light sloping-tooth harrow, or one that cuts rather than tears the surface, so as to avoid disturbing the sod; and sow a peck o clover seed and the same of Timothy or two bushels of Orchard-grass seed, without any grain crop. This should be done as early as possible. A plank drag to smooth the surface and cover the seed, or the light sloping-tooth harrow would finish the work. In the fall there would be a good growth that might be pastured down and a full crop of hay the next season. Orchard grass would make a meadow that would last many years with an occasional top-dressing of manure and a little fresh seed now and then.

WOOL WASTE FOR BEDDING AND MANURE.

P. G., Oswego Falls, N. Y.—Is wool waste good bedding for horses and cows? What is the best way to use it, and with what should it be mixed to make a complete fertilizer?

ANS.—Yes, it is excellent for bedding. This is one of the best ways of utilizing this valuable material. Wool waste is rich in nitrogen, sometimes containing as much as 12 per cent. The trouble is that it decomposes so slowly, when left to itself, that its nitrogen is not readily available and consequently its value is rated below that of other substances containing less nitrogen in a more available form. When stock are kept on hard floors, the wool waste may be used to absorb the urine. This it will do exceedingly well. It may then be composted with horse manure, or it may be composted with wood ashes. We have been trying a small experiment in this line the past winter. A quantity of old rags were to be "reduced." A part of them were placed in a box with horse manure, first a layer of manure, then a layer of rags and so on. The rest were placed in a large barrel with layers of ashes in the place of the manure. Liquid manure from the stable is poured over the tops of the two receptacles from time to time. To the ashes and rags we should add bone meal in the spring.

DISARRANGED BAROMETERS.

E. B. S., (No address).—What is the matter with my mercurial barometer? After a faithful service for 16 years, last summer the mercury all of a sudden began to rise and in about six hours it had all climbed into the top of the tube where it has remained ever since. The barometer is firmly fixed to the house, and has never been meddled with since it was fixed there. What is the matter with the mercury?

ANS.—After 16 years of service probably the cistern of the barometer got disarranged and admitted air, after allowing some of the mercury to escape, the air taking its place. The remaining portion of the mercury is held in the position described, by the pressure of the atmosphere, there being a vacuum at the top of the mercurial column. The pressure of the atmosphere, being greater than the weight of the mercurial column, it has pushed the latter up and holds it in its present position. It can be set right only by an expert implement maker. Guiseppe Tagliabue, 302 Pearl St., New York City, can do the job in first-rate style.

HOW TO FIND THE NUMBER OF BUSHELS OF CORN IN A CORN CRIB.

L. H. W., Welcome, W. Va.—How many bushels of corn in a crib 25x6x6 feet?

ANS.—361 shelled or 722 unshelled. A rule is to find number of cubic inches in the crib and divide by the number of cubic inches in a bushel. In this problem we would have 25x6x6x1,728 = 1,555,200, divided by 2,150.4 = 722. It is customary to allow one-half for the cobs, so that to find the bushels of shelled corn we would divide by the number of cubic inches in two bushels—4,300.8. Another rule sometimes used is to multiply the number of cubic feet in the bin by four and mark off the right-hand figure. This gives the number of bushels of shelled corn.

THE NEW QUEEN POTATO.

S. M. B., North Cohocton, N. Y.—Is G. W. P. Jerrard's New Queen potato so much better than the Early Beauty of Hebron as to justify an ordinary farmer in paying the difference in price for seed for a field crop this year?

ANS.—Here is the R. N.-Y.'s report not hitherto published:—New Queen; from Geo. W. P. Jerrard, Caribou, Maine. Two pieces gave a yield (in two hills) of 10 pounds in our rich garden soil, which is at the rate of 1,210 bushels to the acre. There were 21 large; four small tubers. Light skin, medium in length, cylindrical, shapely. Eyes not deep. Quality not tried.

SODA ASH AS A FERTILIZER.

E. S. L., Buffalo, Ia.—Has soda ash any value as a fertilizer?

ANS.—Professor Collier, Director of the New York Experiment Station, at Geneva, to whom this question was referred for an answer, writes us: "We are at present experimenting with soda ash, and hope to be able to speak concerning it from results of personal experience soon. It is not unlikely that through a chemical action upon the soil constitutents it might prove a very valuable indirect fertilizer."

GLUTEN MEAL.

W. S. H., Easton, Pa.—What is gluten meal?

ANS.—Gluten meal is the refuse from starch or glucose factories. It contains the hull and germ of corn with a portion of the starch. As the hull contains all the fat of the grain and the germ contains most of the nitrogen, it will be readily seen that gluten meal is a nutritious and healthful food for stock.

Miscellaneous.

J. S., Drysdale, Canada.—We think you can obtain the peas from any of the leading seedsmen.

H. F. S., Ceres, N. Y.—Potato boxes like those used by Mr. Terry, can be procured of A. I. Root, Medina, Ohio.

J. B. T., Whiting, Maine.—Bulletin L., of the New Jersey Experiment Station, can be obtained from Prof. G. B. Hulst, New Brunswick, N. J.

J. A. B., Butler Center, N. Y.—I have a flock of hens that have scales on their legs; what shall I do for them?

ANS.—Mix equal parts of lard and kerosene oil, warm slightly, and apply for several nights after they have gone to roost.

L. O. Q., Goshen, N. Y.—What varieties of strawberries are best for a rather heavy soil for family use? 2. What muskmelon is best for home use?

ANS.—Try Prince, May King, Charles Downing, Miner, Bubach and Louise. 2. Emerald Gem. It is small but delicious.

J. E., Warren, Conn.—Are pumpkins of different sexes and, if so, how can the sexes be distinguished? From which should seed be selected?

ANS.—Yes, each vine bears both female and male flowers. Now, as only the female flowers can form fruit, it doesn't matter as to selection.

H. C. B., Westernville, N. Y.—Is it worth while to get a wheel cultivator and seed drill for a family garden of about half an acre? Which would the RURAL recommend?

ANS.—There are a dozen different kinds. The Planet Jr. Combined will suit you as well as any. Yes, indeed, this implement in such a garden will soon pay for itself. See any of the catalogues announced.

J. B. D., Eldred, Pa.—Last year I seeded about five acres to clover and Timothy with oats, using fertilizer at the rate of 300 pounds to the acre. The land being somewhat run down, I got a very poor stand. I have covered it with stable manure and intend to sow more grass seed; had I better sow it now on the snow or wait until the ground dries, and run the harrow over it.

ANS.—We would prefer the latter.

D. L. O., Logansport, Ind.—1. What is the best practical work on carp culture? 2. What is the best work of moderate cost on the diseases of domestic animals and their treatment, for non-professional use?

ANS.—Send to the United States Fish Commissioner for the pamphlets printed by the Government. 2. Law's Farmers' Veterinary Adviser; price $3. To be obtained from Professor James Law, Cornell University, Ithaca, N. Y.

A. L. R., Horseshoe Bend, Idaho.—Will the Agricultural College of Michigan accept students residing outside the State? If so, under what conditions? Though a surveyor and engineer, I am a great lover of farm life. I was reared on a farm and have one of my own. There is a great opening here for true farming. There is too much haphazard farming all through the great West. I now seek a place where I can prepare myself for the work and better management of a farm?

ANS.—Agricultural College P. O., Ingham Co., Michigan, is the address of this college. Students are admitted from any State or country. The examinations are alike for all.

J. W., Sand Lake, N. Y.—I have 60 hens in a hennery 13x14 feet. In spite of warmth and good care I can get only from three to eight eggs a day. The hennery is cleaned twice a week, warm water is given to the hens each day, and they get warmed corn for the first meal, and boiled potatoes mixed with meal at 4 P. M. Oats and bone-dust are sometimes fed, and a dust-bath is provided. The birds look in fine health; but a couple of weeks ago they had cholera, when I fed lime and salt with the feed, and they are now all right. My neighbor gets 28 to 30 eggs a day, feeding corn and loppered milk. Is tar-paper a good lining for a hen-house?

ANS.—The food given is too exclusively carbonaceous causing a tendency to fatten. Vary the diet lessening the grain one half, and allowing a plentiful supply of clover, chopped fine, and scalded, in the morning, with butchers' meat—a pound to 15 hens—three times a week. The tarred paper will be found excellent.

J. W. (no address).—Is crude petroleum a fertilizer for grass or any crop? During last haying season I mowed with a scythe a very heavy crop of grass on land at the bottom of which was a small hollow at the head of which was a fine spring of water. The hollow was very wet and on the surface of the water was a "scum" that looked like crude petroleum. After working all day in the water, my boots used to be completely soaked, and next morning they looked as if they had been oiled—why?

ANS.—Neither petroleum nor any other oil, or fat, is a fertilizer, as none of such things contain any essential elements of plant food. It is most probable that the oily matter referred to is a very common product of decomposition of vegetable substance of which swampy ground contains a large quantity. It is quite common to see this oily matter spread on pools of stagnant water in marshes, giving brilliant iridescent colors similar to those afforded by crude petroleum, and this quite common occurrence sometimes affects people with the old-fashioned "oil fever." But this is not petroleum, though it is so often deceptive. Marshes abound in hydrocarbon products, as marsh gas, and this is probably a condensation of it.

DISCUSSION.

IN FAVOR OF LIME.

H. T., ERIE, PA.—I was very much interested in an article, in a recent RURAL, on lime as a soil improver. It recalls to my mind my own experience with lime. About 15 years ago I took charge of an old garden, and was told by my gardening friends, that I had struck, a poor place that I need not expect to grow good fruits and vegetables in that garden, for the land was worn out. It was strawberry-sick, raspberry-sick and everything-else-sick. I speedily found that the soil was very unproductive; peas were all vines; potatoes were all tops; onions invariably ran to scallions, and on inquiry I found that this had been the case for years, not a good prospect for a young and ambitious gardener. I set about at once to find the cause of this

state of thinsg. Neighbors told me the land was worn out. Now how could that be? It certainly was not for the want of organic matter, for the soil was full of it. Large quantities of leaf mold had been used annually; cow manure, horse manure and pig manure were used in abundance. The land was full of manure which from some cause or other failed to give good results. Suspecting the cause, I ordered a quantity of lime; but was met by the owner of the land who forbade me to use even a small quantity, "Lime" he said "is a positive injury in this district, and I have never allowed any lime to be brought on my land. Why, the crops would all burn up." But I was more than ever satisfied that lime was necessary for mixing with the black mass of humus contained in the soil, not as a fertilizer but as a solvent for liberating the stored-up forms of plant-food and rendering it available for the support of the crops. The soil was full to repletion of food for plants, but that food was sealed. I asked and at last obtained permission to withhold manure from a small part of the garden only, and to use lime instead. Note the results: on that part of the garden where the lime was used, there was an immense yield of large, clean potatoes instead of small, waxy, grub-eaten tubers previously obtained. The onions were the finest grown in that neighborhood, and when I returned from the local Horticultural Exhibition with several first premiums, my employer was forced to own that for once he had been mistaken, and he gave me free permission to use what kind of manure I chose in future. Next spring the whole garden was limed at the rate of 30 bushels per acre and no manure of any kind was used for three years, with surprising results, and although I am many miles away from the old place now, I hear it still has the reputation of being the best garden in the neighborhood instead of being the worst. The land was full of unavailable plant food and lime was the necessary agent to render it available.

I think the RURAL correspondent is mistaken in expecting the same result from lime contained in bone as would be obtained from an application of 30 bushels of quick-lime per acre Less would be useless. One thorough application should last for several years. My plan of applying unslaked lime is as follows: The ground is paced off and a bushel-basketful is emptied at regular distances over the field. Then with a shovel I throw enough soil over the lime to completely exclude the air. The natural dampness of the ground will be all the moisture necessary to slake the lime. For the job, I always choose fine dry weather. Then I watch carefully until the lime will fall to pieces the size of walnuts, when I at once spread and plow it in hot. It is not spread faster than I can plow. The chemical action of lime used in this way will have an altogether different effect on the soil, from that of slaked lime or the refuse from the kilns. My advice to my agricultural and horticultural friends is to give lime a trial on a small portion of their land, even if they do think it already contains all the lime that is necessary. One should not by any means use lime extensively at first; he should use only enough for trial, and note the result. In some land a vast amount of wealth is locked up and lime is the key to unlock it.

RAINBOW-CHASING IN AGRICULTURE.

E. T., EDWARDSVILLE, KAN.—Referring to the Manure Symposium in the RURAL of February 16, I wish to ask whether the manurial values given by Prof Roberts have ever been verified by crops? He estimates the voidings of a 1,200-pound cow, fed a given ration, to be worth 16 7-9 cents a day, which would be $61.23 per year. Those figures are much above the returns of the average farmer from that product. I suspect they are too large by several diameters. An out-door test of their correctness on a scale large enough for comparison, would be interesting. Might one inquire how the Professor knows that manure for corn is best applied "fresh," in the spring? What corn-field data has he in support of that practice? For my part—for corn—I would not haul and spread in the spring fresh barn-yard manure if it were given me. He touches lightly upon the "best method of treating manure:" *viz*, by rotting it in a water-tight pit, with a cistern for catching the drippings, which are to be pumped back upon the heap now and then. It would be mighty entertaining reading, if, speaking in the past tense, he could tell us how much wheat, for instance, 100 cords of manure, so treated, *did make* over the yield produced by 100 cords of manure not composted, the other conditions being identical, giving the cost of composting, and the comparative expense of applying the two lots of manure. When a boy, I was greatly excited over that same scheme as set forth in "Bohmer's New Method of Making Manure." But my father had small faith in innovations put forward without a backing of fact, and discouraged my chasing after every rainbow that an agricultural writer said "might, could, would or should" be caught; when the writer himself had caught one, I had leave to try. If this particular specimen has been captured, I hope the RURAL NEW-YORKER will give us all the particulars

WATER FOR FATTENING CATTLE.

H. STEWART, MACON CO., N. C.—J. B. P. seems in a late RURAL to object to my remark that fattening steers should be *well* supplied with drinking water of a *moderate* temperature and I italicize these two words because J. B. P. completely mistakes my meaning and very unfairly suggests an application of the term the very reverse of what was intended. "Well supplied" is properly supplied; neither too little nor too much. Water of a moderate temperature is not ice-cold, which would largely increase the consumption of food, arrest digestion and prevent fattening cattle from making the most of their food. And then he quotes Prof. Armsby against the excessive drinking of water, which is not at all or in any sense applicable to my remarks and my advice that cattle should be well supplied with water of a moderate temperature. If J. B. P. thinks it best to give his cattle ice-cold water to prevent them from drinking too much, he will very soon find his mistake in his cattle shivering, with their hair standing on end, and wasting food and losing money for him. Possibly he will be better satisfied if I explain that a moderate temperature, in my view and in the sense in which I used the word, is just that at which water comes from a well; (the animal will be *well* supplied then in a double sense) and not from a trough or from a stream through a hole cut in the ice. Fattening animals should have just what water they will drink when supplied to them twice a day, and they will never drink any more than is necessary for them. I have now a few head of steers being fattened by stall feeding. They are fed on cut hay wetted and mixed with corn-meal and dry hay and dry meal alternately. They are supplied with water fresh from a running spring and some days they will not drink at all, while on other days they drink half a pailful, but it is offered them, nevertheless, and that is what I call being well supplied.

CHINCH BUG DISEASES.

J. R. H., WELLSVILLE, KAN.—I think that all other insect pests together do not do to the farmer of Eastern Kansas half the damage done by the Chinch-bug. Hence any practical plan that would destroy the pest would be very welcome. The disease spoken of in the RURAL of February 9, will not, I am afraid, help us, because this fungoid disease (we call it mildew) has been here for years, and yet the bugs are as plentiful as ever when the conditions are favorable. We never fear the bugs in a wet season. We are told that at the Iowa station "It was found by experiment that the disease was readily communicated from diseased to healthy bugs when the necessary conditions of warmth and moisture were obtained, but in dry, exposed places the disease would not spread, no matter how abundantly the disease germs were scattered about." That I think is all there is in the disease. Anything will mildew if you keep it warm and wet long enough. The idea of preserving dead bugs and grass where they have died, I think is anything but practical, because it is admitted that the disease will not spread unless the weather is favorable. Bugs do the most damage when the weather is dry; then they are very healthy. The only remedy I have to suggest is to burn over all the ground that can be burned, and where it can't be burned to rake the trash, and then burn it. This should be done in the fall after the bugs have gone into winter quarters. The burning will not kill so many bugs, but it will leave them exposed to the weather which will kill most of them by spring. I think this plan will work if it is extensively practiced, but there is the rub. Farmers will not unite in an extensive plan for their own interest.

ROADS AND ROAD MAKING.

W. V., FRANKLIN, N J.—I see on page 96 of the RURAL that the Vanderbilt University at Nashville, is to give free instructions in road-making to Tennessee county highway officials. This is a matter that interests most of us and I hope the RURAL will pay attention to it. It interests us as tax-payers, freighters and travelers. I also see by a late RURAL that the New Jersey legislature is trying to have the principal roads under the supervision of the freeholders, which is well if the work is done economically. As a tax-payer of New Jersey for nearly 50 years, I would make a few suggestions. Don't do too much grading. Don't disturb the old bed of a road when it can be avoided. Don't argue that a road needs to be wide to prevent rutting. You don't find ruts where the travel is considerable and wagons often meet or where the grade is sufficient to press the wagon against the team.

What Others Say.

GIRDLING GRAPE VINES.—On the 13th of September last, remarks a writer in Garden and Forest, an excellent opportunity was afforded to a committee of the Massachusetts Horticultural Society to observe the effects of the process of girdling the branches of the grape for the purpose of hastening the maturity of fruit. Among other vineyards, they visited one situated in the south part of Concord. On the southern slope of a hill which runs down to the river they found a plantation of several acres of Concords. The elevation was about 75 feet above the level of the river. The plants in the eastern half of the vineyard had been girdled for this and the two preceding seasons, while those in the western half were growing in their natural way. The girdled plants were more irregular and thinner in foliage, and upon general view, did not look as vigorous as the normal growth. A closer inspection showed that the girdling process had been severely practiced upon every fruit-bearing branch, producing a very marked effect in developing the size and hastening the maturity of the fruit. Though the season was so late and unfavorable that they found Moore's Early, in this and in other vineyards, to be barely ripe, yet the girdled Concords were in quite as good condition. On the other hand, the Concords of normal growth were much smaller in size and hopelessly behind time. It was evident then, as the event proved, that the natural crop would be ruined by frost. Here was an instance of a crop saved by girdling, and of another, side by side, which was lost by neglect of this process. Without going further, it is then evident that, under some circumstances and with some varieties, there are decided advantages in the process. Such excellent varieties as the Iona and the Jefferson may be hastened to maturity by girdling But in ordinary seasons we should scarcely think it worth while to be at the trouble to hasten the Concord, when we have equally good varieties, like the Worden and the Moore, which are early without this treatment. Yet there is a larger development of the fruit by the process, which is of much importance to the marketmen. This is so material a consideration, that it would be likely to govern were it not for another consideration which must be taken into account. What will be the permanent effect upon the vineyard of a continuation of this process? In the instance before us the work had been so thorough, not to say severe, that the effect upon the future of the vine could be predicted with confidence.

Not only were the branches above the ring largely developed by the arrest of the descending sap and also the limbs below seemingly shrunk to the size of a pipe stem, but the renewal-canes appeared to have an enfeebled growth. It was evident that the saving of the crop was likely to prove a serious injury to the health of the vineyard. But this was an extreme practice, where the crop had evidently been treated as of prime importance, and the renewal-canes had been neglected. But this by no means determines whether a judicious use of this method may not often prove harmless and of great practical advantage. Our native grape is so superabundant in the production of foliage that checking becomes necessary. The fact, also, that a large amount of old wood has to be removed every autumn, has a bearing upon this question. Add to these the consideration that the renewal-canes, under proper encouragement, will give a large supply of nourishment to the roots, and it does not seem unreasonable to conclude that a moderate portion of the descending sap may be arrested just below the fruit without material injury to the vine. Indeed, the case which has been here cited, and many similar ones which are known, so far from disproving, rather go to prove that a well-considered and moderate girdling would often result in decided advantage. At all events, it is desirable that there should be continued experiments in this direction.

COPPER SULPHATE AND LIME SOLUTION AS AN INSECTICIDE.—The Hans and Bauernfreund, of Milwaukee, Wisconsin—a German farmers' weekly—states that by accident it has been found that the copper sulphate and lime mixture which has lately proved so useful against grape mildew, is also deadly to insects generally. F. Bascarolli, a grape-grower in the Tyrol, had sprinkled his vines in June, but a shower washed them soon after. A second sprinkling was given in July. Grasshoppers abounded in the vineyard and after the copious sprinkling they were found hanging dead to the vines and stakes, and other insects with them. The common naked snail (slug), so injurious in gardens, dies directly, it is said, if touched at all by the very dilute solution; the proportions of which are given as an ounce and a-half of sulphate of copper (blue vitriol), dissolved in hot water and then diluted with cold to four quarts; three ounces of lime made into a thin white-wash with four quarts of water. Mix these after straining, making two gallons. Apply with any sprinkler. This will serve for a trial. It is strongly recommended for use on potato-tops against the rot, and is said to have proved fatal to the beetles, also to currant worms.

VALUE OF TREES IN GERMANY.—In stories from German farm life in the same paper, the great value set on trees in Germany, comes to view. A boy, ill-treated on a farm and burning with revenge, can think of nothing that will secure it so well as cutting down some trees. The foresters are important personages there, and have police power. They have as much trouble in saving their wood and securing its growth as they have in guarding the game. Country families who work during the winter season at carving kitchen utensils, furniture, toys, etc., for sale, are closely watched, for they are given to taking the wood they use without asking or paying for it.

THE IGNOTUM.—The "Ignotum" tomato, according to Prof L. H. Bailey (excellent authority), in the American Garden for March, has a promising future. It may be said to be a sport of the German variety called Eiformige Daner, seeds of which Prof. Bailey imported while he was Professor of Horticulture in the Michigan Agricultural College. In 1887 one plant bore "fruits of remarkable beauty, solidity, size and uniformity. Among about 170 sorts shown that year at the State Fair, this was the best." Prof. Taft, Mr. Bailey's successor, is inclined to think from last season's trial, that it deserves a front rank among tomatoes. As compared with Mikado, it is larger, smoother, more solid, less subject to rot, more productive and more desirable, both as an early and late variety. Prof. Taft has several hundred plants growing on a dry, sandy knoll and, although it was a dry year, the plants gave a very heavy crop, and continued ripening until the frost destroyed them about the first of October. The Ignotum still sports somewhat, for which reason Prof. Bailey hopes that seedsmen will not offer it for sale until it becomes fixed.

PITHS AND REMINDERS.

MR. LIBBY very appropriately calls the seedsmen's catalogues "Paper Gardens."....

PRESIDENT LYON, in the Michigan Farmer, very sensibly objects to calling Simon's and Pissard's plums, Prunus Simonii and Prunus Pissardii. The objection to such use of these names consists in the fact that such appellations are strictly botanical terms, indicating distinct species, the application of which to mere varieties is a usurpation and misuse of scientific terms, calculated to mislead those who may not have acquired a previous knowledge of the facts in the case.....

A WRITER in Popular Science News says that one morning he found on his plate at the breakfast table a boiled egg, evidently reserved for "papa" on account of its unusual size. On breaking the shell he found a liberal amount of albumen, but no yelk. Instead of the yelk was a fully-formed medium-sized egg, with a shell of ordinary hardness, containing albumen and yelk as in any ordinary egg. Upon inquiry, he learned that the egg had been procured from a neighbor's poultry-yard, and that the hen which produced it had laid one or more other eggs of an abnormal character, but he was unable to learn in what the deviation consisted .....

TO KILL the cabbage-worm, hot water from 140 degrees to 160 degrees, is again coming to the fore as a most economical remedy. The trouble is, not to kill the cabbages as well as the cabbage-worms.....

AT the Wisconsin Dairymen's Annual meeting, as reported in Hoard's Dairyman, Prof. Robertson said he had proved there was a loss in churning cream sweet rather than slightly acidified. In 100 parts of butter in cream, 97 were obtained in acid cream, while but 77 parts were secured in sweet cream.....

MR. JOHN BENDER asked the Professor how much water he would add to cream that was one-fourth butter, before the cream was churned. Reply: from 15 to 25 per cent. How does he detect the sufficient amount of

acidity in the cream to determine when it should be churned? It will be acid enough for churning when it will trickle off the end of a stick, like sirup.....

MR. MONRAD said that half of a litter of pigs were fed on sour, the other half on sweet milk—equal quantities—and the latter were by far the better lot .....

PRES. ADAMS said that farmers and farmers' boys are fast learning they cannot work at farming as their fathers did, and get profitable returns for their toil. They have found they must mix brains with the brawn, or the intelligent ones distance them in the race. It is brains and good wages on the one hand, an uneducated brawn and low wages on the other. This is the inevitable that all must face in farming as in everything else.....

DR. J. B. LEARNED, the pig reformer, says that an over-fed baby feels about as any one does when he is over-full of dinner, and his temper is affected about the same way. He is cross, and doesn't smile. So it's not a Providential act that makes a cross baby. Lay the baby in a clean crib, with no rockers and no rocking. Let him be by himself always. Do not bury him in flannels to keep him from catching cold; this is the way to give him a cold. Let his head be uncovered. A baby fed and cared for in this way requires comparatively little of the mother's time, and none of the grandmother's, or aunty's or the doctor's.....

THE Doctor holds that the average mother's milk is not as good as that from a healthy well-fed cow. Besides, generally, the mother cannot furnish milk without great loss to herself. Give the cow's milk whole with no sugar or water. Give it every three hours whether awake or asleep. The baby will often take it and continue his nap.....

OUR medical journals abound in the best and most approved samples of infants' foods. Our chemists, our professors, and numerous M D s have their names attached, testifying to their purity and fitness. Dr. Learned thinks we can afford to exchange all these for one good cow on the hill-side, in raising babies. .....

IN 1865 Henry Stewart succeeded in feeding 11 cows the whole year on the produce of 14 acres of land by means of a succession of forage crops, grown continuously through the season, and a small plot, not much over two acres, of mangels for winter feeding with the surplus of the summer fodder. A large part of the land produced three crops in the year, and manure enough was made from the 11 cows to go over the whole 14 acres.....

ONE-YEAR-OLD asparagus roots, prepaid by mail 75 cents a hundred. So the seedsmen's catalogues tell us. Can't you afford a little plot? Such a plot will furnish enough asparagus for a family of two. Perhaps you do not care for it. .....

TRY pinching back a hill or so of Lima beans when the plants are a foot or so high .....

JAMES TAPLIN says, in the London Garden, that the notable failure of the past few years among new roses, such as Her Majesty, Princess Beatrice, and, with a majority of growers; Puritan also, has brought about a much more conservative temper on the part of the large rose growers, and in the future, it is highly probable that many of them will test new varieties by the dozen instead of by the hundred.

THE R. N.-Y. has been looking over its little lot of Monroe Co. Prize potatoes so much praised at this time for their heavy yield. They have kept well—so much in their favor. Their shape is against them.....

MR. JOSEPH HARRIS tells, in the American Agriculturist, how he would fit his land for a prize oat crop. He would sow half a ton of Mapes or Bowker potato, or corn manure—it doesn't matter which. Then on separate acres he would sow all the way from 200 to 500 pounds of nitrate of soda or sulphate of ammonia. The R. N.-Y. would not use over 200 pounds to the acre of ammonia or nitrate in addition to the 1,000 pounds of "complete" fertilizer. If we applied the larger amount, unless the season proved dry, we would expect the oats to lodge before the grain formed....

HOWEVER intricate and irregular in shape a lawn may be, says J. C. Olmsted, in Garden and Forest, it should, as a general rule, have a predominating, central, unbroken area, in order to give its characteristic qualities of breadth and repose. The element of openness is essential. It is not uncommon to leave many existing trees scattered over a lawn, or a single tree in the midst of it, or to plant trees promiscuously over it. This is usually done either from a love of trees as beautiful objects, or from the dread of a bare, unfurnished look. No greater mistake could be made .....

A LAWN is at its best when there is no evidence of the handiwork of man—no formality in the grading, none in the planting, no exotic plants, no fountain-jet or basin, no vase or statue, no nicely trimmed path, no fence or formal terrace. Such a lawn conveys the purest impression and gives the most lasting satisfaction. One who cultivates a taste for formality and things evidencing the skillfulness of man is apt to tire of any one object or composition of that kind. It is true that there is a certain kind of refreshment to be obtained from variety in such things, but it is a stimulating, nerve-consuming kind of refreshment, the opposite of that which is encouraged by repose. But to one who cultivates a taste for the beautiful and picturesque in Nature, a single, purely natural scene is never tiresome if seen again and again. The infinite variety in the details and in their disposition, the difference of aspect caused by changes of weather, and by the seasons, by the growth of plants, by birds and other animal life—all are harmonious with the natural scene, are not conspicuous enough to injure any artistic impression which the scene may give, and yet make the scene endlessly interesting .....

IT is not an uncommon thing, continues Mr. Olmsted, to see a formal bed of scarlet geraniums in the midst of a lawn that would otherwise have had much suggestion of a natural breadth and repose. The bed of flowers may be a good thing in itself. It is bright and gay, enlivening and stimulating, and it is well set off by the surrounding turf, but the lawn is sacrificed to it—that which has a permanent worth is made to give way to that which has but a passing value, a source of endless satisfaction to a pretty toy of which every one soon tires. Again, consider the case of a lawn "decorated" with statuary. A beautiful nymph splashing in a fountain, were it not a very hackneyed idea, and where it is the work of a true artist, would be a most enjoyable and valuable possession; but a poor, cheap, painted, cast-iron imitation of such a piece of sculpture, placed so as to dominate a fine lawn, is a barbarism which it is hardly conceivable that any intelligent person could be guilty of. The same thing might be said of almost all the usual so-called "decorations" of lawns. To decorate the face of a beautiful woman with painted ornaments would not be one whit more savage. Our civilization is spotted all over with the relics of barbarism; good taste is always striving to get rid of them, and they should be particularly avoided when we set about making a natural lawn .....

How is your hot bed progressing? Have you a cold-frame? They don't cost much and will greatly assist you in forwarding cabbage, tomato, celery plants, etc., not to speak of flowers. Have you a wheel hoe? It is an invaluable implement in any small garden that cannot be cultivated by horse power.....

THE only objection Mr. Joseph Harris makes to sugar beets is that they will not keep as well late in the spring or early summer months as yellow mangel-wurzels, etc. The latter he grows principally for the ewes and lambs and he likes to have some for the lambs till June or July. Sugar beets are ripe and in good condition to feed earlier than mangel-wurzels. For feeding early in the winter he prefers sugar beets to mangel-wurzels, and if kept in pits or in a cold cellar they can be kept in fine condition till the middle of May. Weight for weight, sugar beets are more nutritious than mangel-wurzels. On the whole, however, he has not yet the necessary facts to determine which is the most profitable kind to grow. We are safe in saying that no farmer, and especially no sheep, cattle or pig breeder, will regret raising a good crop of *both of them*. If he wants to commence feeding early in the winter, he should raise the greater proportion of sugar beets. If he does not wish to commence feeding roots till near spring, he should raise more mangel-wurzels. No breeder ever has too many of either... .....

NEW strains of asters, phlox, verbenas, pansies, zinnias and sweet peas are the most conspicuously announced common flowers in the catalogues of 1889.....

THE color of the new American rose Souvenir de Wootton, is said to be nearly that of the Jacq. with an exquisite odor. It is a perpetual bloomer. It is a vigorous grower. The flowers are sometimes six inches in diameter. Pity that any American rose of value should carry a French name.....

DIRECT.

——WEEKLY PRESS: "We think that red clover does better for being sown with Alsike."

——HOARD'S DAIRYMAN: "Look at the men who are really making the most money in keeping cows. How is it with them? Are they dull and indifferent about keeping posted in their business? Not much. You will find that they value knowledge and they are as willing to pay for it to feed their minds as to pay for bran to feed their cows. Starved cows are generally owned by men who have starved heads. They may be well posted on politics, but they certainly are not well posted dairymen. You will find that with all their experience they have not learned how to breed a profitable dairy cow. They have not learned how to feed a good cow up to the point of profit. They know scarcely anything about the latest and most profitable ways of sheltering, handling and caring for a dairy cow. They have learned but little concerning the latest and most profitable ways of handling the milk, making the butter and selling the product."

——N. Y. HERALD: "A correspondent of the New England Farmer suggests a freight express throughout the New England States that will enable farmers to ship small quantities of produce and truck at low rates to consuming centers. The project, if adopted by the railroad companies, will undoubtedly prove beneficial to both parties—to the farmer by increased facilities for disposing of his product, and to the transporting companies by the increase in their traffic. It is needed by the one and should be granted by the other."

——J H. HALE: "About 1,000 plants equally divided between five best varieties, two early-ripening, one medium, and two late-ripening varieties, will make a grand family fruit patch that will supply a very hungry family of six or eight persons, and during the hight of the season furnish a surplus for canning, and to give to the family of the busy neighbor who 'has no time to fuss with little things.' A fine family fruit garden that would cost on most farms from $15 to $20 a year in manure, labor and plants, would furnish plenty of fruit, fresh and canned, the whole year round, that would be worth at low prices not less than $100. Surely here is a 'home market' worth considering."

——HARTFORD COURANT: "Strawberries should yield 4,000 quarts per acre, raspberries 3,000, blackberries a little more than raspberries, and currants should yield 1,500 to 2,000 quarts per acre."

——"How is it that I dislike the things I dislike so much more than I like the things I like?"

——TERRE HAUTE EXPRESS: "Disgusted Husband—'Is there no way to stop you from kissing that nasty little pug dog?'

Wife—'You might teach him to chew tobacco.'"

——AMERICAN GARDEN: "Some one asked an old florist a question about plants. He frankly answered: 'I don't know,' and added, 'The most experienced of us always find something to learn.' It is impossible for a woman to have 'nerves' or 'tantrums' if she turns her attention seriously to plants."

For Malaria

Use Horsford's Acid Phosphate.

Dr. E. G. DAVIES, De Smet, Dak., says: "I have used it in slow convalescence and prevention from malarial diseases, where the drinking water was bad. I believe it to be beneficial in preventing summer complaints; also one of the best agents we have to rectify the bad effects of the drinking water upon the kidneys and bowels —*Adv.*

Miscellaneous Advertising.

Purify the Blood.

We do not claim that Hood's Sarsaparilla is the only medicine deserving public confidence, but we believe that to purify the blood, to restore and renovate the whole system, it is absolutely unequalled. The influence of the blood upon the health cannot be over-estimated. If it becomes contaminated, the train of consequences by which the health is undermined is immeasurable. Loss of Appetite, Low Spirits, Headache, Dyspepsia, Debility, Nervousness and other "little (?) ailments" are the premonitions of more serious and often fatal results. Try

Hood's Sarsaparilla

Sold by all druggists. $1; six for $5. Made only by C. I. HOOD & CO., Lowell, Mass.

100 Doses One Dollar

MAKE HENS LAY

SHERIDAN'S CONDITION POWDER is absolutely pure and highly concentrated. It is strictly a medicine to be given with food. Nothing on earth will make hens lay like it. It cures chicken cholera and all diseases of hens. Illustrated book by mail free. Sold everywhere, or sent by mail for 25 cts. in stamps. 2½-lb. tin cans, $1; by mail, $1.20. Six cans by express, prepaid, for $5. I. S. Johnson & Co., P. O. Box 2118, Boston, Mass.

$20 FENCE MACHINE FOR $10

Freight paid. *Guaranteed.* Hundreds in use. Circulars free. S. M. Garrett, Mansfield, O.

"SWEET HOME."

"THERE is no place like home" runs the old song, and we know how true it is.

Go where we will—encounter men in whatever circumstances we may—we shall be apt to find a reference to their homes will immediately secure their attention, and will give you favor in their eyes.

The impressions made in the home are lasting. A mother's words never pass from the mind. A father's counsel remains fresh so long as life lasts. The last benediction of parental love and solicitude—with what tenacity it clings to the memory when almost all else has gone.

How important therefore, that the home be maintained intact as long as possible—a haven of loving counsel of peace and joy to the growing children. How sad when death invades, when the fire goes out on the hearthstone and the family is scattered. What the children lose by death of a parent only those realize who have grown up without that love and advice which a parent alone can bestow.

No doubt, tens of thousands of parents have found premature graves, who might have lived years of usefulness, had they but known what was sapping their strength, and slowly but surely pushing them into the grave.

There are tens of thousands of parents today in agony of mind through fear of death from kidney disease, who do not know they are doctoring only symptoms—such as wakefulness, nervousness, a splendid feeling one day and an all-gone one another, dropsy, weak heart action, pneumonia, neuralgia, fickle appetite, etc., while the real trouble is poisoned blood caused by diseased kidneys. Unless purified with Warner's Safe Cure they will just as surely die, as though poisoned with arsenic.

If you are suffering as described, and have been for a length of time, you are, unless you get relief right speedily, stricken with death, whether you know it or not.

Doctors publicly admit that they cannot cure advanced kidney disease; they are too bigoted to use Warner's Safe Cure because it is an advertised remedy; consequently, unless you use your own good judgment, secure and use Warner's Safe Cure, a specific, which has proved itself in tens of thousands of cases to be all it is represented, your home, through your death, will be broken up and your loved ones deprived of that which money cannot purchase or friends supply.

Already too many loving parents, noble, kind and true, have gone down to premature graves through ignorance of their condition, and the bigotry of physicians. It is time to cry halt, and we beg of you, for the love you bear your home and the duty you owe yourself, to give this matter your careful and conscientious consideration.

Trees, Seeds and Plants.

OVER **6,000,000** people believe that it pays best to buy Seeds of the largest and most reliable house, and they use

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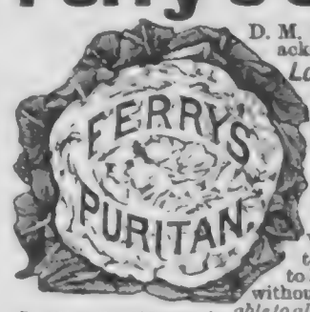

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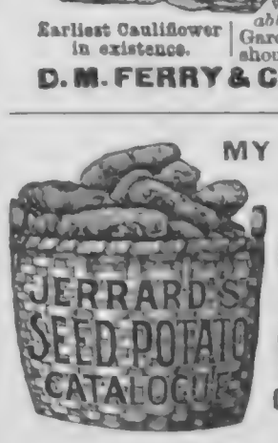
SEED ANNUAL

For 1889

Will be mailed FREE to all applicants, and to last year's customers without ordering it. *Invaluable to all.* Every person using Garden, Field or Flower Seeds should send for it. Address

Earliest Cauliflower in existence.

D. M. FERRY & CO., Detroit, Mich.



MY **Seed Potato**

CATALOGUE

Describes the choicest SEED POTATOES and the earliest Seeds, grown in the Cold North-East. It tells of the wonderfully early **MINISTER** and names special *Low Freights* East and West. It tells how to raise potatoes. *Sent free.*

GEORGE W. P. JERRARD,

CARIBOU, MAINE.

EVERY 5th PERSON

who sends for my **500 Varieties** will receive a **new** variety of POTATOES by simply naming this paper. **FREE**

Catalogue of over

G. D. HOWE, North Hadley, Mass.

GROWERS AND DEALERS IN SWEET CORN, ATTENTION! Genuine Connecticut grown Stowell's Evergreen Sweet Corn by express, $2.25 per bushel, $1.25 per half bushel, 75c. peck.

C. E. CHAPMAN, Westbrook, Conn.

THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, MARCH 23, 1889.

A SWINDLE.

MR. Alfred Rose, of Penn Yan, N. Y., is said to be over 70 years of age. He is reputed as having been a successful potato grower for 30 years or more. For reasons best known to himself, he began early in the year to circulate among the chief seedsmen of the country and others a report that the R. N.-Y. potato No. 2 was in reality one of his seedlings. With adroitly-worded sentences and a shrewd avoidance of laying himself amenable to the law, although not stating it positively, the person or parties addressed were led by his cunning statements to *infer* that they were.

Mr. Rose was well known to the R. N.-Y. and to several other journals as one who often sought to advertise his potatoes by sending for publication articles which in one part or another would rarely fail to mention in high words of praise one or more of the kinds he sought at the time to sell or to popularize. For this reason the more conservative and careful editors of the farm press were wont to reject his communications without even reading them.

When Mr. Rose first made the claim that the R. N.-Y. No. 2. was the same as one of his productions, we wrote him in an emphatic though kindly way that he was mistaken. We pointed out how he could easily ascertain they were different; that it was absurd to say they were the same from any real or fancied resemblance of his potato to the R. N.-Y. *illustration*, (necessarily his only basis for the claim) and finally that he must write to those whom he had misled and frankly confess his error. This he failed to do for a considerable time, while, in the interim, many letters were written by him to seedsmen and others, some of which were forwarded to us, stating that a number of his patrons believed them to be the same and that the Editor of the R. N.-Y. himself had said, "There is no doubt about it."

It now became apparent that Mr. Rose was simply advertising his potato upon the reputation of the No. 2. A demand in consequence appeared on this page several weeks ago that unless he wrote us for publication a statement acknowledging his error, we should expose his groundless pretensions. This called forth from him a letter dated February 25, from which we quote as follows:

"I wrote you, by your request to-day, that the R. N.-Y. No. 2 and my ——— were *not* alike."

This would have ended the matter in so far as the R. N.-Y. was concerned. But later we received from several sources a printed potato-circular, issued by him, from which the following extracts are taken:

"RURAL NO. 2.—This potato, Carman says, was grown on the Rural Grounds in 1886, but does not say from what variety. Spring of 1886 I sent Carman some of my ——— and my customers write me No. 2 is precisely like my ———; also they write Carman that their potatoes are precisely like No. 2."

Again Mr. Rose says: "It is no wonder, some writing me (*sic*) that they have received a potato under a new name, saying it is precisely like my ———. I notice Mr. Carman says he has a new potato, and says since they have been sent out, he has received many letters saying their own (*sic*) potatoes were precisely like his. Carman says there is no doubt about it. If so, where did he get the new potato?"

It is needless for the R. N.-Y. to say that every statement in Mr. Rose's circular alluding to Mr. Carman or to what he said, is false and without the slightest foundation in fact. We regret exceedingly to be obliged to dwell upon this matter at such length in these columns. But we think that our readers will see that though it may matter little that Tom, Dick or Harry may seek to give prominence to his own potato by striving to show a probable identity with one that has a promising future, it is of the *first* consequence to the R. N.-Y. that an inferior variety should not be disseminated as the Rural New-Yorker No. 2. Mr. Rose advertises in his circular that he will supply the R. N.-Y. No. 2, at a price considerably less than that which other seedsmen charge—at a lower price, indeed, than he can purchase them for to-day. His entire stock of this variety was *one peck*, and the reasonable inference is that he will send instead of the No. 2, some variety which originated with him of which he may have a full supply. All who may have ordered of him the No. 2, and who find that another variety has been substituted, are notified that they will have a legal cause of action against him for damages.

THE RURAL NEW-YORKER for 1889, will be, as hitherto, invariably, $2.00 a year for single subscriptions, and $1.50 in clubs of five or more.

THE notes on "Warranted Seeds" in this week's R. N.-Y. are timely and interesting. We are sure that the best of our seedsmen desire to do a fair and honorable business. Mistakes will occur in every business, no matter how careful one may be. It is right that such mistakes should be rectified by the party making them.

We have just been reading an account of a curious lawsuit that occurred in England recently. A seedsman was accused of dyeing clover seeds. His practice was to buy quantities of old and worthless clover seed and subject it to a chemical process by means of which the color of the seed was changed so that it resembled bright, new seed. A very profitable business was being done by means of this fraud, and the reputable seedsmen determined to break it up. Accordingly, several sacks of old seed were sent to the "chemist to be colored." This was done, and the most complete evidence obtained against the guilty party, who was found guilty and heavily fined. The only defense made was the statement that the responsible head of the firm did not know what his employes were doing. This did not hold. We do not know that there are any seedsmen in this country who are invoking the aid of chemistry to defraud their customers, but there are plenty of other schemes that would not stand a lawsuit. We believe that the most economical way to try seeds is to deal only with seedsmen of known and well-established reputations for honesty.

THE RURAL NEW-YORKER'S NEXT POTATO CONTEST.

IT is proposed that the potatoes of the next "Contest" plot be dug on the last Friday of September next. The plot will be more than twice the size of last year's plot, and the effort will be, as then, to raise at the rate of over 700 bushels to the acre. The following gentlemen have consented to act as judges:

LIEUT. GOV. EDWARD F. JONES, N. Y.

PROF. GEO. H. COOK, Director of the N. J. Agricultural Experiment Station.

L. H. BAILEY, Professor of Horticulture at Cornell University.

Dr. BYRON D. HALSTEAD, Professor of Botany, at Rutger's College, N. J.

E. H. LIBBY, Editor of the American Garden, N. Y.

E. L COY, N. Y.

HON. JOHN A. WOODWARD, Pa.

J. S. WOODWARD, Secretary of the New York State Board of Agriculture.

PROF. HENRY E. ALVORD, Director of the Maryland Agricultural Experiment Station.

COL. F. D. CURTIS, New York.

HON. J. G. WEBB, Justice of the Peace, N. J.

BEET-ROOT SUGAR IN NEBRASKA.

A GOOD deal of interest is shown by the farmers of Nebraska in the establishment of an immense beet-sugar factory, at Grand Isle. It will represent an outlay of $500,000, and have at the outset a capacity for using up 350 tons of beets per day, and by means of additional machinery the quantity may be increased to 600 tons. The company has been experimenting for two years and is satisfied from its investigations, that, as far as soil and climate are concerned, Nebraska is better suited for the growth of sugar beets than any sugar-producing region in Europe. Samples of the experimental sugar have been sent abroad, where strong testimonials were received of its superior quality. So firm is the faith of many of the farmers about Grand Isle in the enterprise, that they are ready to exchange their farms for stock in the company. It is estimated that well-cultivated land will yield 15 to 20 tons of beets per acre, and that they can be sold at the mill for $5 per ton. If the project proves successful other factories will be established. A bill is now pending in the legislature, which proposes that, at the end of two years, the State shall give a bounty of half a cent per pound on all sugar manufactured within her borders. If Congress gives the proposed national bounty of one cent per pound on all cane, sorghum and beet-sugar of domestic manufacture, there is little doubt that the amount of home-produced sugar will be immensely increased, and of these three sources of sugar, the increase in the beet-root product is likely to be the greatest.

THE BINDING TWINE TRUST.

ALL over the West there is a good deal of indignation among farmers at the action of the manufacturers and large dealers of binding twine. These have formed a Trust which is slowly but surely tightening its coils on the farmers of the country, but especially on those of the West where self-binding reaping machines are most extensively used. Not only has the whole prospective output of binding twine been bought up by the agents of the Trust, but nearly all the stock on hand at different points has been secured at low figures by agents of the monopoly disguised as farmers, store-keepers, etc., so that the vast majority of dealers are in the same plight as the farmers. In Minneapolis alone 50,000 bales of twine are reported to be packed away in warehouses, the local dealers having been induced to part with their stock to disguised agents of the syndicate. An agent of the Minnesota Farmers' Alliance who was sent East to the factories to contract for a supply, has been unable to do so, as an extortionate price was demanded. For twine which could be bought last year for nine cents per pound, 25 cents are demanded this year.

What can the farmers do in the matter? Well, they can secure legislation against such infamous combinations in the future; but for the present, the only plan they can adopt is that which many of them have resolved to follow—to boycott the Trust, and as the cotton-planters of the South acted last year with regard to "cornered" jute bagging, refuse to buy binding twine. Twine, however, has become, in a few years, almost a necessity in easily, cheaply and safely harvesting grain, and it is hardly probable therefore that a boycotting movement can be general, while much loss and inconvenience must be experienced by those who adopt it. Binding twine is made of sisal or jute, and the import duty on foreign twine made of either fiber is 35 per cent. There are many who believe that the most effective way to combat Trusts is to remove the duty from foreign goods that compete with the "cornered" products of domestic manufacture. The number of farmers holding this opinion is likely to be largely increased by the exactions of the binding twine Trust. Would it not be advisable for the Farmers' Alliance, the Grange and other agricultural associations to combine and seek relief in foreign markets? The Trust has put up the price of twine 177 per cent.; surely importers of foreign twine, even after paying the duty of 35 per cent., could afford to sell the article at a lower figure than that demanded by this greedy and unscrupulous monopoly.

The farmers of Dakota contemplate the construction of a large factory for the manufacture of twine from flax fiber, of which there is an abundance. Some of the large dealers in Chicago deny the establishment of a Trust, and allege that the enormous rise in price is due to the scarcity of supply and the great demand for the article. The amount of hemp in sight for the present season is 120,000 bales more than last year, while there is a demand for 160,000 bales more, making a shortage ef 40,000 bales; but surely the tremendous increase of price cannot be due to this small shortage? If so, a little boycotting or even economy on the part of farmers will equalize supply and demand.

BEEF MAKING EXPERIMENTS.

THE pictures of cattle given in this number of the RURAL ought to interest cattle feeders. There are many interesting things about Prof. Johnson's experiment. We want cheap beef and we want good beef. In the estimate of expenses of the R. N.-Y. household, a certain sum is assigned for the purchase of beef. Our experience is that it pays to buy with this money a less quantity of good beef rather than a larger quantity of poor beef. There is altogether too much tough, stringy, leathery beef sold in our markets. Experiments that tend to show the principles that must be followed in the production of good beef are highly commendable. The main facts brought out by the experiment are all given on another page. There are only one or two points that we desire to refer to here. It is evident that a great many cattle are kept too long for profit. If some of the animals pictured on our first page could have been sold six months before they were killed, the cost per pound of their beef would have been considerably reduced. This is a point that cattle feeders generally will agree upon. The amount of hay and other coarse forage required to feed one of these animals to maturity is surprising. It hardly seems possible, as we feed the usual ration from day to day, that the grand total of all these feedings will amount to three or four tons before the steer is ready to kill. These figures teach the desirability and economy of providing some cheap and bulky food like silage, roots or corn fodder.

The facts demanding most thoughtful consideration are those respecting the Jersey and Holstein steers. Everybody knows that the Holstein is a large, heavy animal, but the impression has become quite general that the Holstein steers are too coarse and bony to be of first value. The figures given for this test certainly indicate that this impression is erroneous. The Holstein steer made almost as much gain per day as the Short-horn, his beef cost less per pound, and his per cent. of dressed to live weight, was greater than that of the Devon and the Galloway, and equal to that of the Hereford. The quality of the beef was considered good. The value of Holstein cows for milk is unquestioned. The value of Holstein steers for beef, as indicated by this test, would stamp this breed of cattle as strong candidates for the position of "general-purpose" breed. Will Short-horn cows average as heavy milkers as Holstein cows?

The figures respecting the Jersey steer are also very interesting. The Jersey steer has always been regarded as a sort of "lazy brother." His sister, the butter cow, was expected to be so superior in her chosen field, that she could support herself and her brother too. Has this impression been a sound one? "Roscoe" ate more hay than any of the other steers except the Short-horn, and more grain than any except the Short-horn and the Holstein, and yet he made the poorest gain per day and his beef cost the most per pound. His heart, his lungs and his intestines, were as large as the corresponding parts in the big Short-horn, and he had but little less blood than the big fellow; yet his beef was considered best of all, so much better in fact that there was no comparison. We have no desire to begin the business of raising Jersey steers in the hope of securing an extra price for their beef. It may be that it would pay some of our enterprising Jersey breeders to try it, and develop a business for fine Jersey beef, in connection with their Jersey butter. It might be worth trying, at any rate.

BREVITIES.

THE R. N.-Y.'s dairy department will be good this year.

WE did a little plowing on March 12th in the "contest plot" of one of the R. N.-Y. women folks.

ONE lady in North Carolina says that her "contest" potato plot is already planted. Think of this, ye Northern contestants, whose patch is now under a foot or more of snow!

SOME of our best horsemen and farmers are going to tell us what they think of Mr. Terry's idea of keeping his horses on clover hay. Mr. T. will also tell us how he cures his hay to make it so good.

HERE is the way an Illinois friend puts it:

"*No algebra about this.*—Certain Agricultural Papers—50 cents a year—RURAL NEW-YORKER—$2.00 a year—*Therefore*, you will have to take the other papers four years to learn as much as you can learn in the RURAL in one year."

A MINNESOTA subscriber sends us the following note:

"A rod of barbed wire wound around a tree prevents a person from tying horses to it and also keeps boys from climbing it, and it looks far better than a box around the tree." This is one of the latest schemes for handling the much-feared "small boy."

A BILL prohibiting the sale of liquor "within half a mile of the State Fair Grounds" is before the Minnesota legislature, and is likely to pass. Minnesota is steadily tightening her grip on the liquor traffic, and in no place should that grip be more fatally throttling than about the fair grounds, to which simple country people flock for instruction and amusement, but often find instead demoralization and disgrace. If such a law is right and good as regards the State Fair Grounds, why shouldn't it be equally right and good as regards the county fair grounds?

Indust'l Societies.

THE TWENTY-SECOND SESSION OF THE AMERICAN POMOLOGICAL SOCIETY.

(R. N.-Y. SHORT-HAND REPORT.)

Cross-fertilization; different opinions as to the first year's effects of cross-fertilization—very slight or wholly unnoticeable, as a rule; cost and advantages of bagging grapes; the Japan persimmon; progress of fruit growing in the South; oranges and other Southern fruits; fertilizers for oranges; bird and insect enemies and diseases of the orange; a newly imported orange borer; varieties of oranges.

The essay of D. M. Neal on cross-fertilization was full of suggestions to the progressive fruit-grower. He was flooded with questions, many of which could not be answered. "As a rule," he said, "you get vigor of growth and flavor from the maternal parent." The great point in which all were most deeply interested, was as to the visible effect of crossing, the first year. Many did not believe in any such effect at all. Some knew for a fact that an effect could be noticed, others were on the fence, and open to conviction. Dr. Moore had seen the Navel orange affected at once. Mr. Van Deman had yet to see any effect the first year in any fruit or plant. Ex-Gov. Reed, of Florida, had seen oranges on his Navel trees without the mark and with seeds, and also on the same branch oranges with the mark, but no seeds. Since the advent of the Navel in Mr. Moore's grove, he has found it scattered all through the place. Mr. Van Deman alluded to its deficiency in pollen; in 100 good flowers only three or four stamens had been found. Rev. Dr. Phelps, the orange expert, was undecided as to the direct influence being visible the first year, but he felt sure that nearly all oranges would in a few years, show Navel marks. A Navel with numerous seeds and otherwise like the wild orange, was already among his seedlings. President Berckmans reported strange sports of the pear on a Vicar of Winkfield tree which had been planted among Seckels and Flemish Beauties. A single branch bore specimens of each—one being russet like the Seckel, another an apparent Flemish, a third a true Vicar. The same thing between the peach and nectarine had come under his eye, and he wanted to know the reason of it all; but he got very little light on the subject. Mr. Phelps had, years ago, learned to see how very much he didn't know. Dr. Neal said there was a striking analogy between plants and the human species, and he cited an instance of the marriage of a black man to a white woman, where both in time became mulatto in color.

One cent a pound Mr. Parry thought was the cost of bagging grapes. Mr. Newman got ten cents for bagged grapes, and four for unbagged fruit. He preferred this rot remedy and thought it would pay in a commercial vineyard. The Ives's quality is vastly enhanced by bagging. He sold all such this year for ten cents net, while every uncovered berry rotted.

The Japan persimmon was the subject of the next paper by B. F. Livingston, Florida. No other fruit grows so vigorously in the State, he said, and without fertilizer, at least if grown on native stock. No manure is needed. His grafts began to fruit when five months old. His 600 one-year-old trees were eight feet high. There is no trouble to grow them. Varieties are numerous, there being about 46 distinct sorts known in Japan. But marketing, packing and shipping are yet problems. He advised wrapping the fruits in tissue paper, and that they should be packed at once when fully ripe, in trays one layer in each.

On Thursday morning the reading of the report of the Sub-Tropical Committee was first in order. The document was a very complete and instructive review of the progress of fruit growing in the South, and included special reports from separate States in detail. Many of the fruits named were unknown to many of the Northern delegates, and they listened closely to the descriptions and characteristics of each. The strawberry is the only small fruit grown much in Florida. New plums of the oriental strain are promising. Lemon culture is rapidly increasing. The lime deserves more attention. The shaddock is grown only as a curiosity, being without value for the table. The guava is very popular, and is extensively grown. It cannot bear any frost and is very perishable. Figs are also raised with profit. Olives do well near Fernandina. Dates may be found in a few gardens, and the cocoanut is largely grown near Lake Worth and the Keys. The pineapple is the most important tropical fruit raised in Florida and some of the "pineries" are successful and very profitable. There are several varieties in cultivation.

The minor citrus fruits were then described and reported upon in an excellent essay by the Rev. Dr. Moore. He spoke of the antiquity of the citron. It was the first member of the family brought to Europe and preceded the orange there by a thousand years. Its blossom is superior to the rose in fragrance, and very salutary. It is easily grown and handled, and he thought there was no excuse for the present neglect to grow it. We should export it largely instead of importing it as we now do.

The lime, originating in the West Indies, has never been properly appreciated here. Quanquat—a small oblong yellow fruit—is most delicious and refreshing in flavor and excellent preserved in sugar. Pomologist VanDeman made an earnest protest against the use of the term "Grape-fruit" which was not only incorrect but unreasonable as a name for that friut. The true name being Pomelo, he urged the society to adapt the latter name and avoid further question and confusion.

Then followed one of the most interesting and valuable essays of the session, especially on the subject of sub-tropical fruits to which the extra day was practically devoted in deference to the Florida people. It was by Senator C. F. A. Beilby, of Florida, and was also a scholarly production. He gave a complete history of the great "Orange Industry in Florida," with much valuable data and careful details of culture and general management. The further east you go, he said, the further north you may venture to plant oranges. The possibilities of orange culture here are limitless. Nearly all soils will produce oranges; no one can decide which is best; fertilizers are not absolutely necessary until the trees begin to bear. The notion that oranges cannot be successfully grown on the flat lands is erroneous. The trees should be set high with the crown roots at the surface, without exception. The supply of moisture should determine the method of culture. Too much ammonia is now used as a rule. It makes the fruit coarse and impairs the vitality of the tree. Such an amount would answer only on dry pine lands. Pure raw bone is the thing to use. It is slow but sure, and perfectly safe in all cases. Cotton-seed meal, and potash in the form of sulphate should also be used. The "foot-rot" and "die-back" are the most troublesome diseases in the State. Three-fifths of the latter come from improper fertilizing. The "scale" and the "rust" are not serious as yet. In closing he paid a glowing and beautiful tribute to the orange, to Florida and her wonderful climate. He was roundly applauded by North and South, and was the target for an avalanche of queries for some time afterward. Dr. Neal considered "foot-rot" a fungoid disease. Growers were warned by him of the approach of a borer from Mexico *via* Texas, which, he said, was most dangerous. It bores into the orange much as the codling moth bores into the apple. The Rev. Dr. Phelps said it was already here and it was high time to talk about its extermination. The Woodpecker and Jaybird were also credited with an increasing appetite for oranges, and the wild cat bounty was advised to be transferred to these feathered "insects." The sap-sucker girdling the tree at the base with holes, is another enemy in the orange grove. E. H. Hart followed with a somewhat humorous and ingenious paper on "Varieties of the Orange." The late P. W. Reasoner, of Manatee, had compiled a list of 150 kinds. There is fashion in oranges as there is in ladies' bonnets, he said. Few growers know which is best to plant. For flavor the Maltese Blood and Navel strains were mainly preferred. California growers pride themselves on being able to supply our markets when our Florida crop is gone, but what will they do when with proper care and selection of varieties, we drug the markets all summer? H. H.

(To be Continued.)

Everywhere.

RURAL SPECIAL REPORTS.

New York.

FORESTVILLE, Chautauqua County, March 6.—The sugar season has at last arrived. The indications are right for a good long one, yet it is quite liable to be otherwise. The great want of the maple sugar producers in this part of the country is knowledge of the markets *i. e.*, where to send the sweet. There are plenty of good markets all over the land, but the average farmer has no time to spend in looking up these places. The only way to solve this question practically, would be for the producers in each county or locality to organize themselves into an association, electing one of their number as head officer, whose business it should be to obtain the best markets possible for the use of the association—said officer to be paid for his time and trouble by an assessment upon all of the members. The outlook for the coming season is comparatively good, there having been a little more activity in the money market for the past six months. This has had a tendency to brighten the hopes of all in regard to the near future. At least it will be safe to say that this will be no worse than the last season for the farmer in general. It is always best to look on the bright side when we can. C. H. F.

Pennsylvania.

SAEGERSTOWN, Crawford County, March 5.—We have had an unusally good season for crops in this section. Hardly in years have our crops been more generally good than they were last season. Hay was an average crop, and put up in good order. Winter wheat was good. Corn and potatoes were never better. I raised on six acres 954 bushels of ears of as good sound corn as I ever saw—level culture. Potatoes were a good crop; but there is no sale for them at any price. I raise the Rural Blush sent out by the RURAL. It is the best potato so far as yield is concerned I have ever had. Oats were a good crop—very heavy. Apples were a fair crop. We have had a very mild winter. Ice-men began to think that they would "get left;" but they have got some at last. Feed is plentiful and stock low. I have been a subscriber to the RURAL for 21 years. Success to it! D. A. K.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

"CLEANLINESS is next to godliness." But a woman who considers her surroundings clean, merely because she scrubs around and sweeps and dusts, may ignore some essential rules of health, in spite of her housewifery. We have gone into many houses, clean enough otherwise, where the entire place was haunted by the ghosts of dead and gone dinners. There were the aggressive odors of the cabbage they had yesterday, of the fried steak of that day's breakfast, of smoked bacon from a previous meal, and an under-current of vegetable odors remaining from weeks past. The air in the rooms seemed dead, and somehow the entire family gave the impression of sleeping in their clothes. Maybe they were clean. The children wore clean pinafores, and the mother a neat gown, but it was evident enough that ventilation was a thing unknown. Now, from experience of poorly-heated country houses, we know that it often seems quite an infliction to throw open the windows in the bitter winter weather: the ventilation seems enough to chill everything in the house. But it is a certain fact that you cannot warm foul air, and make it fit for breathing. Certainly, there is danger from drafts, but it is a good deal better to go about one's work wearing a shawl, while the rooms are well aired, than to continue absorbing into the sensitive lungs noxious gases charged with all sorts of impurities. There is always a stuffy odor about these unaired houses, and the dwellers therein always seem to carry this atmosphere with them. Pure air and clean water—plenty of both—then there is no trouble about stuffiness or staleness.

* * *

SAYS one of our correspondents: "I want to add a word of approval, or appreciation, of 'J. H. G.'s' sentiments expressed in the article Smoking in Public Places, on page 94. It is a very lamentable fact that so many men are lost to reason, right, and regard for others' feelings, that they allow this one ruinous habit to so blind them to justice that they will with their impudent impunity, force innocent people, aye, in many cases, hapless babes, to breathe air so loaded with filthy and disgusting tobacco smoke that it becomes almost unbearable. When will all men aspire to be GENTLEMEN? I hope 'J. H. G.' may—as Gail Hamilton once said—have frequent 'spasms of sense' on this same subject. It is so closely allied with that great question, or issue, which now interests every good Pennsylvanian—*Prohibition*."

* * *

WHILE we are, in popular phrase, "pitching into" the men for their tobacco, we want to add a few deep-felt remarks on the girl who chews gum. Everywhere we go now, on the street-cars, the ferry-boat, in the concert-hall, and even the church, we meet the girl who chews gum. We won't say anything about the hygienic side of the matter; but simply regard it as a matter of looks. Can you imagine anything uglier than the constant contortions of the face, caused by the mastication, especially when in a jolty car. The jaws seem tireless. And the worst of the matter is that gum chewers never seem to know how to masticate properly. They open and shut their mouths, twist their tongues, and make every ungainly face it seems possible. Perhaps if they only knew how ugly they look, they *might* give up the habit. The fact that it is vulgar, annoying to others, and plain evidence of ill-breeding, does not affect them in the least.

* * *

A VALUED correspondent offers a suggestion for another Women's Special, viz: "The Health of Children: How best Secured; Its relation to present modes of eating, drinking, studying, playing, working, resting, bathing, etc."—a very important subject, too. In spite of objections to the rigorous training of our grandmothers' days, the children of that age seemed to make more vigorous men and women than the present generation. Singularly enough, in spite of their disadvantages in dress and the like, the girls in small towns and villages are apt to be finer physically than the boys in corresponding circumstances. So many of the young men we know among people in easy circumstances are narrow-chested or are under-sized, while their sisters are comparatively robust. But then it is fashionable nowadays to be rosy and muscular.

* * *

THE French fashion of wearing artificial flowers on winter hats and bonnets seems on the increase; they certainly brighten up the headgear wonderfully. Violets are first favorite, especially on a black hat, and they make a charming finish for a velvet toque. A pretty hat was a turban of sage-green cloth, the covering being laid in folds along the sides, while it formed a high shirring in front. Down the center of the crown was a very natural spray of dog-roses and foliage, and a bunch of the same blossoms was in front. It was very pretty, though dog-roses do seem a little summery for February. A very dainty capote bonnet was completely covered with single violets put on flat; at the top were rosettes of black lace, with a bunch of violets in the middle. A bonnet having a puffed tulle crown, and a brim covered with violets, can be readily made by a handy girl; it will cost but little, and is very dressy.

ONE THING AT A TIME.

OLIVE E. DANA.

DON'T train yourself to do two or three things at once, my dear Mrs. Busy Hands, especially if one of them is unnecessary. Yes, I know that it is very enterprising of you; it seems so much time gained if you do the spring cleaning and alter the children's spring clothing within the same fortnight, and maybe tack a comforter or two beside Or, again, does it take away the sense of drudgery and satisfy your intellectual aspirations to read Tennyson or Macaulay while you darn the stockings? Or have you found that you can take the Chautauqua Course by having a book always at hand—propped above the kitchen-sink, open by your work-table, pinioned near the bread board, or, maybe, under your pillow?

But you would better not do these things in this way. If you cannot do them one at a time, it would be better to leave them undone, most likely.

"Whatsoever thy hand findeth to do, do it with thy might." The old rule of "the next thing" is the best, wisest, most Christian. One thing at a time, and toil is sweeter, sleep sounder, life nobler. Most of us cannot use two or three faculties at once without undue drafts upon our strength and vitality. Don't imagine you must plan out that article, if you are a writer, while you do the morning dishes; or arrange the details of the day's work even, dear, busy mother, while you eat your breakfast. Wait for the real opportunity and season for the article. Sit down a bit between tasks and take life easy, especially if you are tempted to hurry. You will find the day's work unfolding as you go on, and your strength will last better.

It is hurry and worry that wear and strain and kill. There will, very likely, come a time when you will be supremely thankful to be able just to go out to that kitchen-sink and wash those dishes, a work that now seems so distasteful a task, and when you would esteem it bliss to "be half a day doing the chores."

Just "bide a wee and dinna fret."

OUTINGS IN NEW ENGLAND.

II.

MARY WAGER-FISHER.

HOWEVER objectionable the east winds of Boston may be in winter, they are very fresh and agreeable in summer, and render the city a most tolerable place for the summer saunterer. Boston always seems to me to be just the right size for a city, and with a nucleus or center to which all Boston brains gravitate. In years gone by the book store of Fields, Osgood & Co , was a general resort for literary-minded folk, and now their successors in the business continue to maintain the old-time attractions. There is nothing new fangled or fine about the place; but it is home-like and hospitable to a famous degree. One finds there all the new things turned out by the printing press, and there is no charge for information, or for looking at things. Dr. Oliver Wendell Holmes, when in Boston, can be seen there almost every day, a spry little man nearly 80 years old, just five feet three inches tall, and his portraits look very like him. He is a wonderful man in physical and mental activity, and his four-score years have not aged his heart—the right way to live, *not* to grow old! The loss of his wife a few years ago was a heavy blow, for she had been of the greatest value to him, taking such complete charge of all household and sublunary affairs, that his mind was left entirely free for intellectual work Most of the literary men of this country have been fortunate in their matrimonial partnerships, and it would seem that men more than women, depend upon smooth surroundings for the development of their genius. There is probably not a man alive (or dead!) that would write anything of the value of "Uncle Tom's Cabin," under the conditions in which the author of that famous story wrote, and it is probably true, that when any soul is charged with a message for the world, he will manage to deliver it in spite of unfavorable environment. I think Boston people feel that there will never again, after the passing away of the coterie of poets of which Emerson and Longfellow were two, and of which Lowell, Whittier, and Holmes are still shining members, be so much of the heavenly fire burning at the same time in New England. From the newer life of the West and South will undoubtedly arise the men and women who in the next century will add most to our national glory in the way of science, literature and art.

Naturally, in a locality so abounding in historical interest, one turns to things of the past, to Faneuil Hall, with its sanded floor, its walls now hung round with portraits of the worthies who fanned into a flame the revolutionary sparks, and were at the time denounced as mischief-makers and brewers of trouble. But where and what indeed would we now be if the revolution had not been brought about and the country cut loose from England? One of the portraits is a large picture of Webster making the speech in the United States Senate in which he cried "Liberty and Union now and forever," etc. Just above this hangs the portrait of another worthy with a puckered face and hair at each side of his head like a bunch of sponge or coral. There's far more interest in the Old State House, because the Boston Society has lodged therein its own precious relics: a cannon fired by Lafayette, a drum beat at the Battle of Bunker Hill, a looking-glass brought over in the Mayflower and which belonged to John Alden, and cases of china, pitchers, punch bowls of colonial times, photographs, portraits, maps, etc., in great numbers. One of the attendants was kind enough to bring from a private room John Alden's looking-glass for us to see, and it was with a strange feeling that I looked in it, half expecting to see John's or Priscilla's face reflected, instead of my own—a good glass set in a gilt frame, with a strip of wood across it to cover the union of two pieces of glass as usually seen in old mirrors. Judging from some of the furniture brought over by the forefathers there must have been quite a number among them who were well-to-do, and could afford luxurious surroundings. But the thing that most impressed me in this collecton was the last photograph taken of Abraham Lincoln, March 6, 1865, a face fuller of trial and of burden-bearing than the pictured face of any other being, human or divine, that I have ever seen.

The little old cemeteries in the midst of the city are stuffed with graves marked by small headstones, mostly of gray slate—one stone often serving for several graves. In the Granary burying-ground which is just around the corner from the church where "Adirondack" Murray used to preach, are the graves of Paul Revere, Peter Fanueil and the parents of Benjamin Franklin. Anaximander took the "laddie" one day to see the window in the old Church where Paul Revere hung his lantern. There is no inscription on his headstone but "Here lyes the body of Paul Revere," with the date of his death and his age. The stone Benjamin Franklin put up to mark the graves of his parents, fell into decay, and so a number of Bostonians erected a monument of more lasting character and had cut in a bronze tablet, the inscription on the original stone, which runs thus:

"Josiah Franklin and Abiah his Wife.
Lie here interred.

They lived lovingly together in wedlock fifty years, and without estate or any gainful employment, by constant labor and honest industry, maintained a large family comfortably and brought up thirteen children and seven grandchildren respectably. From this instance, reader, be encouraged to diligence in thy calling and distrust not Providence. He was a pious and prudent man. She was a discreet and virtuous woman. Their youngest son in filial regard to their memory places this stone. J. F. born 1655 died 1744 Æ. 89. A. F. born 1677, died 1752 Æ. 85."

Most of the stones bear on the top a death's head, cross-bones, or the death's head blossomed into a suggestion of a winged angel. Many inscriptions are obliterated and some of the graves are sunk into oblivion. But the people who sank into them had their day and must have foreseen something of the splendor of the nation they were founding. It was all in all a very good time in which to live.

A GREAT CONVENIENCE.

E. S. LINCOLN.

A HINDERANCE greater even than tan, sunburn and freckles, to daily work in field and garden, is the inconvenience of our dress. White underclothing is so soiled as to be destroyed in cleansing; dress skirts are "draggled" in the dew of a sweet, cool summer morn; shoes soaked out of shape, grass stains and mud stains incurred, outweigh the actual benefit of fresh air and exercise. Many ladies avoid this difficulty by wearing a 'work suit," made of thin brown denims or heavy ginghams. No white underclothing at all is worn with this. The suit consists of waist and drawers conbined; the waist is made with yoke and loose belt, high in the neck, and long-sleeved. A short, full skirt, reaching from two to six inches below the knee, is buttoned to the waist at the belt, which should fit very loosely.

If you wish to experience the very "poetry of motion" while doing really hard work, go a step further, and cut your sleeves and the shoulders of your work-suit waist in "Raglan" or some such style as will give perfect freedom to the arms and shoulders. The peasant woman of Switzerland who sings at her task, is dressed for her work in short skirts and easy-fitting bodice waist that leaves the shoulders as free as a man's vest. The linen undervest worn with this is made with the old-fashioned "gusset" at the armhole, so there is no confinement of the arms.

Until last year I defied "tan" by wearing a deep sun-bonnet, and frequent bathing of the face in cold, soft water caused free perspiration in the heat of that cavernous bonnet, and kept me "blanched" to the proper degree—whiter than I could have been staying indoors. With such a work suit as above described, I always wear linen collars or lace ruches, and it is a wonderful lightener of work in house-cleaning times, or wash days, and is nice to wear if you go nutting, fishing, berrying, botanizing, or geologizing.

GOLDEN GRAINS.

JULIA WARD HOWE thinks that the greatest defects of American girls are the neglect, first, of religious instruction; second, of hygienic discipline; lastly, of what Socrates calls "the temper of a guardian," by which she understands a habit of combining forethought with presence of mind, strictness with sympathy, the power to assume responsibilities with the power to bear up under them.

THE CHRISTIAN UNION says that the world breaks the hearts of its best benefactors, and then, after many days, builds them sepulchers. If you would raise the age in which you live, you must live above it, and to live above it is to be misunderstood, perhaps persecuted....

DO RIGHT, says Robertson, and God's recompense to you will be the power of doing more right. Give, and God's reward to you will be the spirit of giving more. Love, and God will pay you with the capacity of more love, for love is heaven and the spirit of God within you.....

FISKE reminds us that every temptation that is resisted, every noble aspiration that is encouraged, every sinful thought that is repressed, every bitter word that is withheld, adds its little tem to the impetus of that great movement which is bearing humanity onward toward a richer life and higher character .....

THE most real hell and deepest hell is selfishness. This is the great gulf fixed between the evil and the good, which cannot be passed over.....

KINGSLEY'S advice is never to hurt any one's self-respect. Never trample on any soul, though it may be lying in the veriest mire; for that last spark of self-respect is its only chance, the last seed of a new and better life; the voice of God which still whispers to it, "You are not what you ought to be, and you are not what you can be; you are still God's child, still an immortal soul. You may be a man yet, after the likeness of Christ who died for you." Oh, why crush that voice in any heart? If you do, the poor creature is lost, and never tries to rise again .....

HOME MAKER advises us not to say a rough word when a smooth one will serve our purpose as well. Before indulging in retort, or sly thrust, or "crusher"—whatever the provocation let each of us ask him or herself: "Would I wish this unsaid if I were never to behold his living face again?" Common sense ought to have proved to us by this time that oil is a better lubricant of household machinery than vinegar or caustic.....

WHEN we are coldly discussing a man's career, says Geo Eliot, sneering in our self-righteous, self-opinionated way, at his mistakes, blaming his rashness, and libeling his opinions, words, and actions—yes, his thoughts, that man, in his solitude, is perhaps shedding hot tears because his sacrifice is a hard one, because strength and patience are failing him to speak the difficult word, and do the difficult deed.....

THE following stories are vouched for by a good blue-stocking Presbyterian minister of Pennsylvania:

SUNDAY SCHOOL TEACHER:—"Who was Esau?"

SMALL BOY:—"Esau was a man who wrote a book of fables, and sold his copyright for a bottle of potash." During the Christmas review exercises, at a mission school for track hands, in Pennsylvania, the question was asked, "Where was Christ born?" A boy, raising his hand, said "In Mauch Chunk." The horrified superintendent answered; "Oh, no, Christ was born in Bethlehem." "Well I knew it was somewheres on the Reading Railroad." He referred to the little town of Bethlehem, Pa., on that road.....

THE BEST COW in June gives milk of a rich orange tint. From this milk butter is made as nearly perfect in color as the buyer could wish. With Thatcher's Orange Butter Color this tint can be maintained the entire season. —*Adv.*

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

EXTRACTS FROM SUNDAY EVENING TALKS AT THE RURAL GROUNDS.

FOR the enlightenment of our new subscribers, we again state that the extracts under this heading are taken from essays or talks read or given extemporaneously at what we call our "Sunday Evening Devotional Exercises" by the different members of the RURAL circle, who, as our old readers know, live in a lonely country place and some distance from a church. These exercises consist of Bible reading, discussion of the matter read, reading and explanation of the International Sunday-school Lesson, reading of the paper prepared by one of the members, and singing, ending with repeating in concert the Lord's Prayer.

Our readers will kindly consider that our extracts are taken alike from young and old. While we intend to quote from time to time from these talks, many of them are of too personal a character to allow of so doing As a matter of course, the RURAL NEW-YORKER does not hold itself responsible for the principles advocated or denounced in these talks.

"And if a house be divided against itself that house cannot stand." St. Mark 3-25.

(*Spoken without notes by a woman of* 37.)

"Did you get the evening paper?"
"No, I forgot it" was the answer.

"Ah! you forgot it, I suppose, because you knew that I particularly wanted to see it," came the cutting retort. For some reason, probably the injustice of the words, this bit of dialogue with my father and mother as speakers is remembered with the vividness of yesterday, though nearly 20 years have passed since the words were spoken. It cannot be possible that parents can realize the everlasting effect that their own uncongenialities and inharmonies have upon their children, else for humanity's sake, they would agree to disagree peaceably without the daily encounters that render life a burden and home a charmless place.

With a girlhood the happiest times of which were passed away from home, was it a wonder that I hailed with delight the prospect of a home of my own, to be shared with a companion to whom I had given all the love my nature was capable of? Was it strange when I found the peace of an undivided house, that I should have been content and happy there, although that house stood in what our city friends were pleased to call a wilderness? Now, I fully appreciated my good fortune and made many silent vows that I would do my part and a little more; in fact, should the occasion demand it, I would cheerfully yield personal likes and dislikes, rather than strike the first inharmonious chord. Had I not had full confidence in my companion's honesty of purpose, and a firm belief that he studied my interests from an unselfish point, my personality would never have allowed me to think of accepting unchallenged his "say-so." So much for untried, non-tested intentions. But the atmospheric effects of the divided house followed me into the entire house, and owing partly to the faulty training of 20 years and partly to natural peculiarities, I haven't the slightest doubt that, but for the judicious and just treatment accorded me, my house would not only have divided, but gone all to pieces.

It amuses me to hear a married woman assert that she will meet a man half way every time, but further she will not go! No need to be told more; the story is short but pages could not have explained the situation better. No couple ever lived peaceably upon the meet-me-half-way platform. In every real and true union, either the husband or the wife yields to the other's opinions and prejudices, but love and devotion take from the yielding every sting, making it an almost spontaneous act, but it is yielding all the same. Of course, I have taken the premises that the husband and wife are just and right-minded persons.

It is not to be expected that persons having different blood in their veins and having been brought up under different conditions and traditions should feel and think alike in every little thing; it would be absurd and neither husband nor wife has any right to expect or require anything of the kind. But if their hearts be right they will not stray far apart, and love, confidence and respect are strong rivets that will withstand many a petty wrench.

"You go your way and I'll go mine." Dangerous paths for man and wife to take. "You have your interests, and I'll have mine." Breakers ahead! The house *will not stand.* Divided interests are dangerous—the house first shakes, then totters and falls. To be plain-spoken, if their house is to stand, man and wife must be united on all important matters. There must be unity of interests—no pulling in different directions, but good, steady drawing together, no matter how rough the road or how steep the hill.

When I hear a couple say that they have never quarreled or differed one with the other, I at once conclude one of two things is true, that either the statement is altogether false or that one of the parties is a wishy-washy person, void of decided characteristics. I have sometimes thought that the deeper the affection the fiercer the quarrel.

Whether married life proves a failure or not de ends altogether upon the goodness of character of both husband and wife. There must be a metal underneath that neither tarnishes nor wears away, something to which each can anchor, for the storms of every-day life so beat against the structure that if it be not founded upon the unalloyed rock of goodness, it cannot withstand the strain—it parts and the dearest, most sacred relations known stand exposed to the curious gaze of the world.

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria

A TALK TO THE GIRLS.

I WAS very much interested in what our little friend says in "Our Aim in Life" under Domestic Economy (in the issue of March 9) Yes, we must all have an *aim* in life if we would succeed The man or the woman who drifts along from day to day without caring for anything or anybody—who is willing to float with the crowd—who never takes the trouble to think or act for himself or herself, will never amount to anything. The use of our muscles strengthens them and gives them more power. So with our reason, our mind, our intellect. The more we *use* them, (not *abuse* them) the greater power and strength they gain.

Our little friend spoke of the desire to learn; to obtain knowledge, and from what I know of her I am sure she is on the right track. But don't imagine because Miss So-and-So is studying this or that "ology" and you are not, that, consequently, she knows ever so much more than you do. Perhaps she knows more of that *one* thing than you do, but if you study each thing as you come to it *earnestly* and as thoroughly as you can, conquering as you go, you will finally succeed. The number or kind of books one studies does not determine how much one knows. It is how much one can grasp and understand; how much one can assimilate, as it were, that determines this.

Studying by rote, committing long pages to memory is not, as many suppose, the best way to learn. Of course, it is better to learn that way rather than not at all, for perhaps the understanding may come later. But to take paragraph by paragraph and *understand* it, is the true way. Perhaps in a month you might not be able to repeat a single line *verbatim*; but, if you thoroughly understood what you studied, you could at once, in your own words, explain it. Don't try to do too many things at once, but do what you do, *thoroughly*. Study your grammar, the construction of sentences, and punctuation. These three things will be of great importance to you in all your after life. Read—broaden your knowledge in this way. Don't read all the trash you come to, but read every good thing you can find time to read. If a thing is worth reading at all it is worth giving your whole attention to it. The habit of "skimming" through dozens of trashy novels should not be indulged in by any one who cares to improve. Some say, "Oh! I only read them for pastime or recreation"—but do not do it for "pastime" even Go out of doors and take a brisk walk if you do not feel like reading anything that will require thought. Have a romp with your dog. Play with baby—or, if you cannot do any of these things, get your needle and thread and mend up some neglected garment, or write a letter to some neglected friend or relation. If you are not in a condition to read anything that will benefit you, you certainly are not in a condition to read at all. "We must either progress or retrograde" as our dear old Sunday School Superintendent used to say to us every Sunday of our lives, (and I remember wondering if I "retrograded" every week where I'd finally get to). It is so in all things. We do not stand still. If we do not improve with the days and weeks as they come and go, we go backwards. Time does not stand still, and even if we did not go backwards, it would soon have left us far behind, carrying others ahead in the march of improvement

Read the daily papers—not accounts of murders and crimes, but topics of general interest throughout the country or State. Know what is going on around you; keep yourself posted as to all important events relative to both National and State Government; for it is just as important for a girl to know who rules her as it is for a boy. If you do this you need never resort to the poor old weather for a topic of conversation (unless your acquaintances don't know anything about these things.) To keep up with the times is important for many reasons. Suppose you were the finest musician in the world, you couldn't be forever at an instrument, and it would be, as well as seem, very egotistical always to talk of the one thing you excelled in. Suppose you were the best botanist in your State, you could not talk "botany" to everybody, for everybody couldn't appreciate it. Suppose you were a fine Latin or French scholar, you could not talk Latin or French to every one you meet, for nine out of 10 could not understand you.

The greatest gift one can ask for is "*Adaptability*" To be able to put yourself in harmony with whatever condition you meet with as you journey through life, is the greatest blessing possible. To be able to sit on a rickety chair and talk to a dirty youngster with as much ease as to rest on the softest of velvet couches and converse with a cultured friend, or *vice-versa*, is a gift which some possess; and some, too, whom I know have had very little chance for education, outside of what they have gained by their own hard work and determination. Always come down to the level of the one to whom you are talking, or else try to get up.

Talk to a child so that he or she can understand you. If any one talks of something you do not understand, be brave enough to own the fact; ask for the information you crave, and remember it when received. That is, of course, supposing you are alone in conversation with one or two. If you hear things spoken of where you cannot ask for information, go as soon as you can do so and endeavor to find out. If you do this *always*, you will learn far more than you ever dreamed of, and your knowledge will be far more varied and extended than it could be by studying from a text book. Keep your eyes and ears open. "He that hath ears to hear, let him hear, etc." Many of us, with bright eyes, too, go along from day to day seeing nothing but what is called to our notice, while others take in everything that comes along. Perhaps they don't say anything about it at the time, but what they have seen (or heard either) is stored away for some time in the future.

Wake up! Use the faculties God gave you. Make the best of what you have. Nobody need be stupid in these days unless born an idiot, and even then, with a little trying, he needn't be as big an idiot as some "other feller." DORA HARVEY VROOMAN.

KITCHEN TALKS.

ANNIE L. JACK.

THE bread was white and sweet, but the last panful of biscuits were sour.

"The dough was too long standing before the fire," said one.

"The biscuits were too slow cooking in the oven," said another cook. Then we talked of the different degrees of heat of the oven for baking, and how to ascertain the proper temperature.

"I used to put my hand in and hold it till I counted 20," I said; but an easier and less troublesome plan is to sprinkle a little flour on the baking sheet. If it browns in two minutes the heat is about right. The temperature cannot be easily told by the thermometer; but one of 550 degrees is good to begin with.

Some of the family are fond of potato scones, which are very nice for breakfast or tea. They are made by rubbing one pound of cold boiled potatoes through a sieve. The "dough" is put on the baking board and eight ounces of flour are scattered over it. Next, it is worked with the rolling-pin till smooth, then rolled and cut into squares or corner-shaped cakes the thickness of half a dollar. These are placed on a clean, hot stove and, when a little brown, turned over. When done, serve hot in a napkin.

There are some who insist that the soup course at dinner takes away their appetite, and who do not believe that it is nourishing: but this is a mistaken idea, and a good soup should be taken every day, as it helps the food to assimilate.. It should not be regarded as a luxury, or as used only by the poor; but it should be considered indispensable to a complete dinner. A soup, or rather, stock kettle should be on every kitchen range to hold all the bits of meat and bones. Some people are careful to remove the albumen or "scum" as it is called. A favorite soup which has a very distinctive flavor is made from a calf's or sheep's head. There is one thing certain—in a large family there is nothing more economical than soup, yet it is often found that several members of such families refuse it for one reason or another, and as one of the rules at table is that all must have a serving, the refusal of it by any sometimes leads to waste.

A good potato soup can be made in three-quarters of an hour with a little soup stock. Nothing is needed but six large potatoes, a little chopped parsley and celery and a tablespoonful of browned flour put in with the seasoning. It is a soup that some of the children prefer to any other.

What a steady care the three meals are. They crowd upon us during the short days of winter, and in country places, where no markets exist, happy is the household that has been forehanded enough to have sufficient stored away to last the season through.

What shall we have for dinner cannot be settled by any of the cook books. To decide, needs constant and intelligent thought when the means of the household are so limited as to make economy necessary. Meanwhile the kettle boils, and the sunshine streams into the windows There is a feeling in the air of mild brightness—and an old Scotch neighbor tells me that "the back o' winter is broke" I am sorry when spring comes for one thing, and that is, the loss of our long, quiet evenings. But every drawback has its compensations, and the lingering rays of sunshine, the long spring days, should be full recompense for the length and quiet of winter evenings.

BABIES.

"BABIES are natural travelers" said a friend, and I was quite inclined to believe it when I found with how little fatigue my own five-months-old baby endured a journey of 2,500 miles. Three days and three nights we were on the wing—of course, we took a sleeping car. A nursing baby is at home with its mother almost anywhere, and when baby was once behind the curtains, away from the glitter and light he was quiet, and asleep even sooner than in his own home, for after the first night the motion of the train had a lulling effect How I dreaded to expose the baby to the dangers of such a trip! Fears of colds and contagions rose up like a night-mare; but it was run the risk or never see a dear friend again in this life, so at a few hours' notice we were off. Older babies—those who can walk—are harder to take care of on a journey. One mother kept her babe of 17 months quiet with a

SCRAP-BOOK

In which the little one's favorite pictures were pasted. The leaves of the book were perhaps 12 inches square, and were made of differently-colored cambric, and pinked around the edges. These were fastened into strong cambric-covered covers, and the baby had a very serviceable picture book to occupy herself with. The best

TOILET-POWDER

ever used for a chafed child is sub-nitrate of bismuth. It will adhere to the flesh until it is healed unless washed off. S. E. H.

DOUGHNUTS.

ONE quart of flour, one cup of sugar, one teaspoonful of salt and one of soda, half a teaspoonful of cinnamon or the same quantity of grated nutmeg. Mix these ingredients thoroughly together, then stir in one pint of sour milk, partly cream, and roll out. Cut in shapes and fry in hot lard. MRS. B. C.

BAKED INDIAN PUDDING.

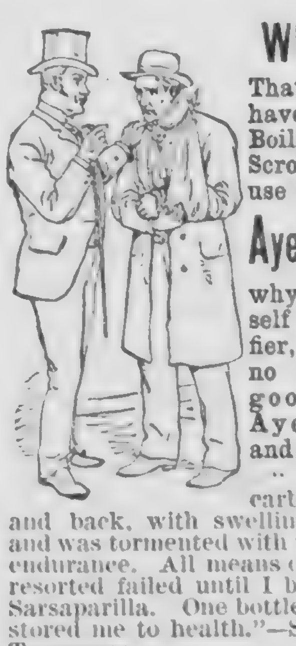
A SCANT half-pint of sifted Indian meal, a half-pint of molasses, two tablespoonfuls of butter, one quart of milk. Bring the milk to a boil in a double boiler, or pail, set within a dish of hot water, and then stir in the meal. Beat until smooth, add the molasses and butter and stir until the mixture thickens. Add a little salt and pour into a buttered earthen dish. Bake slowly two hours, then stir up from the bottom and bake a half hour longer.

CARAWAY SEED COOKIES.

ONE cup of butter, two cups of sugar, four eggs, whites and yelks beaten separately, one cup of creamy sour milk, one full tea-spoonful of soda and one of salt, two table-spoonfuls of caraway seed and about seven cupfuls of sifted flour. Mix salt, soda (made smooth) and butter and seed through the flour. Beat the yelks of the eggs with the sugar, then the whites and drop the mixture into the flour. Stir in the milk slowly, mixing all thoroughly together. Roll out, sprinkle sugar over the top and cut in rounds or strips.

MRS. ECONOMY.

Miscellaneous Advertising.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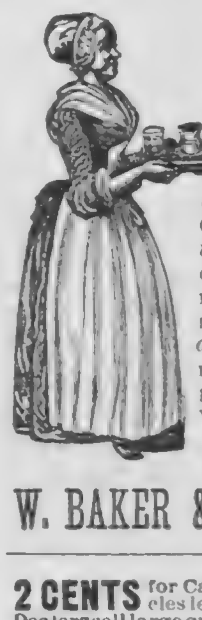
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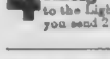
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News of the Week.

HOME NEWS.

SATURDAY, March 16, 1889.

AMONG the measures which died with the dead Congress was the bill creating the Territory of Oklahoma, and opening it to settlement. Some of its provisions were, however, incorporated with the Indian Appropriation bill. No Territorial government is to be established, but an area of about 4,000,000 acres in the Indian Territory is to be thrown open to settlement by proclamation of the President, when commissioners to be appointed shall have bought it from the Indians on terms mentioned. It is to be settled exclusively by actual settlers, under the Homestead Law, but no person is permitted to enter upon or occupy any part of the land before the President shall have proclaimed it open to settlement, and anybody violating this provision shall never be permitted to "enter" any part of the land or to acquire any right there. It was at first supposed that all the provisions of the Oklahoma bill had been embodied in the Indian Appropriation bill, and the "boomers" in the Southwest were vociferously jubilant; now they are justly despondent or desperate. A large number of them have already taken up claims in the land. Others have been waiting for months or years to do so. Lots of them have been waiting on the confines of the Territory, in Texas, Kansas and Arkansas, and nothing can hold them back. Within a week, over 2,500 of them will be in the country, and additions will be constant and multitudinous. The U.S. troops at Fort Reno are preparing a campaign to expel the intruders, but the latter say it can't be done. Much trouble is feared.....

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RICHMOND, VA., March 26, 1887.

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RICHMOND, VA., May 18, 1887.

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MRS. W. L. WARING.

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AGRICULTURAL NEWS.

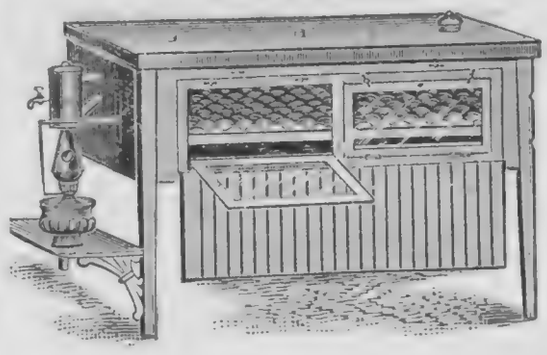
SATURDAY, March 16, 1889.

WITH regard to crop outlooks, in the West all the frost in the ground is the result of recent freezing. There is very little snow except in Michigan, portions of Wisconsin and some parts of Minnesota and Dakota. The impression in the spring-wheat section is that farmers will seed every acre possible. The season is unusually early and in some places farmers have been seeding during the past week. Owing to scarcity of good seed, the bulk of the crop will be sown with frosted seed, and farmers are anxious as to the results on the yield and quality of the crop..... Professor Green, of the Minnesota State Agricultural College, has completed a series of experiments to ascertain the value of frosted grain for seed. His report shows that from 40 to 90 per cent. of the total amount planted will sprout and grow. He says that his experiments may be relied upon and that hereafter farmers may plant frosted grain with the assurance that it will grow, rather than run into debt for seed. Oliver Dalrymple, the bonanza farmer, of Dakota, and the largest wheat-grower in the Northwest, is inclined to believe that the experiment can be safely relied upon, and will make further experiments on his 40,000-acre farm..... The new Meat Inspection law, framed with a view of prohibiting a sale of "Big Four" products in New Mexico, went into effect Wednesday. The law provides for the inspection of live animals intended for human food, prohibits the sale or use of uncured meat of uninspected cattle and hogs, and forbids the sale of imported fresh meats.....The Iowa State Experiment Station has expended every cent of its $15,000—$3,000 for building, $4,958 for books and apparatus, $1,418 for equipments, $2,084 for salaries, $2,631 for supplies and expenses, $813 for labor, and $96 for printing ..... The Farmers' Alliance of Nebraska has adopted some doleful resolutions which have been referred to the State legislature, and by that body in turn to Congress, calling attention to the fact that while the production of wealth in the country is unprecedented, the condition of the producers of wealth is not improving, but on the contrary retrograding. The farmers, says the Alliance, are sinking deeper and deeper in debt; many who were once owners are now tenants; mortgages are increasing and now amount to over $150,000,000 on the farms of Nebraska; and, withal, country merchants, artisans of all classes and laborers as well are losing ground in the anti-poverty struggle. The Alliance says that money lenders and railroad officials and owners are about the only classes safely prosperous. They ask for legislation that shall save them from ruin, and among other things pray that Congress will make money more plentiful by issuing more greenbacks.....

THE BURLINGTON'S "ELI."

The formerly popular Vestibule Fast "Eli" Train of the Burlington Route has been resumed between Chicago and Kansas City, St. Joseph and Atchison, leaving Chicago daily at 5.30 P. M. The Burlington's Vestibule Trains to Omaha, Denver and St. Paul will continue as before. They are the best trains between Chicago and the points mentioned. Tickets can be obtained of any ticket agent of connecting lines, or by addressing P. S. EUSTIS, G. P. & T. A., C. B. & Q. R. R, CHICAGO, ILL.

Imp. Monitor Incubator and Bristol Brooder.



Has the best Regulator, best Egg Turner, all acknowledge, of any machine made. $500 reward for a Brooder that will raise more chicks than the Bristol. Address A. F. WILLIAMS, 52 West St., Bristol, Conn.

WANTED.—A person to represent F. G Anton Egg Preservative Co., Lebanon, O. Steady work during Spring and Summer. Salary $50 to $65 a month. Salary allowed assistant where business will justify. Full particulars and necessary papers mailed for 12c.

200 PERCHERON —AND— FRENCH COACH HORSES. Send for Catalogue. J. W. AKIN, SCIPIO, N. Y.

THE NEW WHITE GRAPE DIAMOND $2.00 EACH FREE BY MAIL AGENTS WANTED. THE FINEST GRAPE EVER INTRODUCED.. LARGE, EARLY, HARDY, PRODUCTIVE. ADDRESS DIAMOND GRAPE CO. BRIGHTON, N.Y.

Wanted at a Sanitarium

near New York, a man competent to take charge of the out-door work. Must understand gardening, horses, and dairy management. Good habits indispensable. Address, stating experience, wages required, references, etc.,

Dr. DRAYTON, 775 Bd'way, N. Y.

"Acme Bail" & "Boss Churns" Make more butter, better butter, churn easier and clean easier than any other churns. The "BEST WASHER" is warranted to wash collars and wristbands clean Special terms to introduce. Descriptive circulars free. H. H. PALMER & CO. 120 Mulberry St., ROCKFORD, - ILL.

FOR A DIME I will tell you of a **Remarkable Cure** for indigestion and constipation which the Bible mentions. It grows in your gardens and fields in abundance. MILTON COOK, New York City.

The Kodak.

PRICE $25.00.

ANYBODY can use the KODAK. The operation of making a picture consists simply of pressing a button. One hundred instantaneous pictures are made without reloading. No dark room or chemicals are necessary. A division of labor is offered, whereby all the work of finishing the pictures is done at the factory, where the camera can be sent to be re-loaded. The operator need not learn anything about photography. He can "*press the button*"—*we do the rest.*

Send for copy of KODAK Primer, with sample photograph. Mention Rural New-Yorker.

The Eastman Dry Plate and Film Co.

ROCHESTER, N. Y.

NINE GOLD MEDALS

IN ONE SEASON, AWARDED BUTTER MADE BY THE

COOLEY CREAMER PROCESS

as follows in 1888, viz:

KANSAS STATE FAIR,	F. O. MILLER.
MINNESOTA STATE FAIR,	C. LE VESCONTE.
IOWA STATE FAIR,	A. M. BINGHAM.
VIRGINIA DISTRICT FAIR,	M. ERSKINE MILLER.
MAINE STATE FAIR,	B. F. & F. H. BRIGGS.
BAY STATE FAIR,	H. E. CUMMINGS.
NEW JERSEY STATE FAIR,	HOLLY GROVE FARM.
DELAWARE STATE FAIR,	C. FREAR & SON.
VA. A. & M. EXPOSITION,	JOS. B. ANDERSON, JR.

ENGINES, BOILERS, CHURNS, BUTTER WORKERS, AND EVERYTHING USED IN CREAMERIES OR DAIRIES. SEND FOR CIRCULARS GIVING FULL PARTICULARS.

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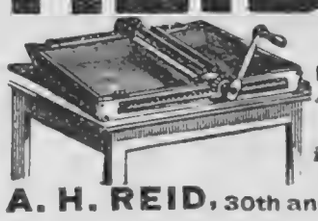
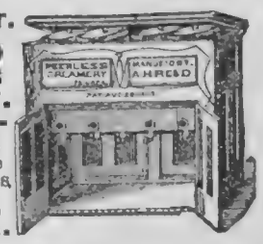
REID'S PEERLESS CREAMERY Absolute Perfection for Best Quality Butter.



BUTTER WORKER MOST EFFECTIVE and CONVENIENT. Also CHURNS, POWER BUTTER WORKERS, PRINTERS, SHIPPING BOXES, Send for my Illus. Catalogue, containing valuable information for Creamery men and Butter Factories. CREAMERY SUPPLIES.



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PERFECTION IN BUTTER MAKING.

THE O. K. OUTFIT EXCELS THEM ALL.

O. K. CREAMERY Has the largest cooling surface, takes less cooling material, less labor, and gives best results. All cream raised between milkings. Skimming glass whole depth of can, showing condition of milk without touching creamery.

O. K. CHURN Has improvements over the best. Easy to clean, easy to operate. Made of White Oak. Cover Castings will not break.

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GRAPES Plants of Best Quality, Warranted True to Name. LOWEST Prices, and Largest Assortment of old and new varieties. At dozen rates, Free by Mail. Special attention called to Promising Novelties. *Send for Price List.* Address, BUSH & SON & MEISSNER, Bushberg, Jefferson Co., Mo.

GRAPE VINES My specialty for 32 years. Over 100 best new and old kinds: Empire State, Diamond, Jewel, Eaton, Moyer, Niagara, Witt, Woodruff Red, Moore's Early, Nectar, Brighton, Pocklington, Delaware, Catawba, Elvira, Ives, etc. Nice, medium 1 year Concords, $10 per 1000. Also, Strawberries, Raspberries, Blackberries, Gooseberries and Currants. *Best Plants. Low Prices.* Catalogues free. GEO. W. CAMPBELL, Delaware, O.

GRAPE VINES Nectar, Woodruff, Eaton, and all the best varieties. Gandy and other Strawberries. Blackberries, Raspberries, Wonderful Peach, and other nursery stock Descriptive catalogue giving *Instructions for planting* free JOEL HORNER & SON, Delair, Camden Co., N. J.

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OHIO IMPROVED CHESTER WHITE SWINE—Pure Blood, Choicest Strains. Sock of all ages for sale. Send for circulars and testimonials of this breed before you buy. We deliver to any point by express prepaid. Ask for 1889 Catalogue of HERBERT A. JONES, Himrods, N. Y.

SEEDS GIVEN AWAY, P'k'ge Mixed Flower Seeds, 500 kinds, GUIDE, and 10c. Certificate for Seeds, *your choice*, all for 2 stamps (4 cents.) Every flower lover delighted. Tell all your friends G. W. PARK, FANNETTSBURG PA. Send at once. This notice will not appear again.

PERFECTION MOLE TRAP.—I. A. Baker, of Magnolia, Ark., writes that he has caught 19 Moles since last August. Please send me 20 more traps for my neighbors. It does its work complete. Send for circulars. Address JOHN F. TURNER, 4514 Main Street, Germantown, Philadelphia, Pa.

WARNER'S LOG CABIN REMEDIES.—Old-fashioned, simple compounds, used in the days of our hardy forefathers, are "old-timers," but "old reliable." They comprise

Warner's Log Cabin Sarsaparilla,

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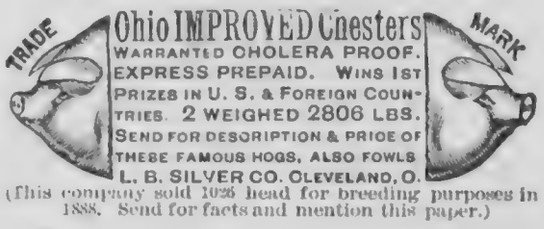
DO YOU WANT TO BUY A **FIRST-CLASS JERSEY BULL CALF?**

—IF SO, APPLY TO—

MILLER & SIBLEY, Franklin, Pa.

The youngsters are sired by the following Bulls: **Michael Angelo, 10116,** cost $12,500 cash, when six weeks old. Represents the full blood of his dam, **Eurotas,** who made 778 pounds of butter in 341 days on moderate rations, and dropped a living calf 359 days from the beginning of the test. **Ida's Rioter. of St. L., 13656,** inbred son of Ida of St. Lambert. Official butter test, 30 pounds 2⅝ ounces in seven days. **Stoke Pogis 5th, 5987,** sire of six young cows; testing from 14 pounds 1½ ounces to 22 pounds 12 ounces of butter in seven days. Full and only living brother of Stoke Pogis 3d, now dead sire of 27 cows, averaging over 20 pounds of butter apiece per week Almost full brother to Matilda 4th. **Matilda 4th's Son, 20214,** by Ida's Rioter of St. L., 13656, out of Matilda 4th, 12816, who made 73 pounds 1½ ounces of butter for January, the tenth month after calving, and undoubtedly made over 950 pounds of butter during the year. No bull calf sold for less than $100. You cannot afford to use a cheaper one.

Write for what you want. No general catalogue. Mention this paper.



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(this company sold 1026 head for breeding purposes in 1888. Send for facts and mention this paper.)

Poultry Supplies, Such as **Ground Beef Scrap, Granulated Bone, O. Shell, Bone Meal, Animal Meal, etc.** For prices and particulars send for my Circular. Rendering Works and Mills, Worcester, Mass. C. A. BARTLETT,

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BENNETT'S IMPROVED **STUMP PULLER** Sent anywhere in the U. S. On Three Days Trial. On runners. Worked by 2 men. LIFTS 20 TO 50 TONS. Five sizes. Price, $35 to $70. Circulars free. Man'f'd by H. L. BENNETT, Westerville, O.

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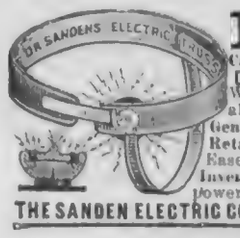

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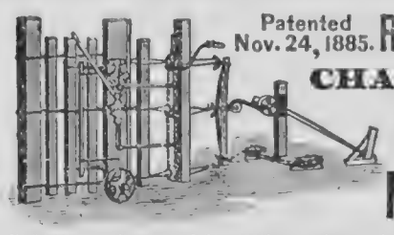
Handsome—Indestructible—Cheaper than Wood.

This is *not* a netting, it is a *fence*.

Our Lawn Fence, the only fence that *protects* a lawn without *concealing* it.

Our Field Fence, the only *good, cheap* Fence that is *harmless to stock*. Made in various styles, heights and sizes of pickets. Ask nearest dealer for circular and price list or send to **Hartman Mfg. Co., Beaver Falls, Pa.** ☞For handsome picture calendar for '89 send 2c stamp.



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It is the only machine using wire cable for tension. It can use heavier wire than any other machine made. Can make fence from two to six cables. Can weave a picket ¼ inch in diameter, or a board 6 inches wide without changing the machine in any particular. For special prices, circulars, etc.,

Address WAYNE WORKS, Richmond, Ind.

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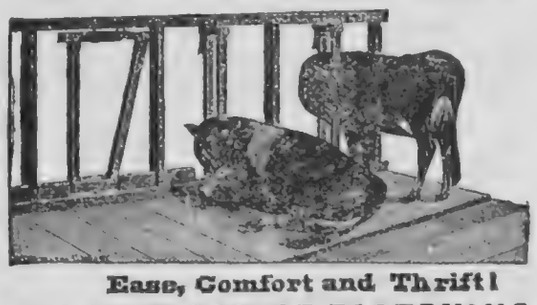
of two Acres at a sitting. A man, a boy and a horse can operate it. **No heavy Chains** or rods to handle. The crop on a few acres the first year will pay for the Machine. It will only cost you a postal card to send for an Illustrated Catalogue, giving price, terms and testimonials. Address the Manufacturers,
JAMES MILNE & SON, SCOTCH GROVE, IOWA.

It is unsatisfactory work preaching to an empty stomach. No need of starving to rid yourself of your dyspepsia. Eat moderately, and use

Warner's Log Cabin HOPS AND BUCHU REMEDY.

Price $1.00 a bottle. 150 doses.



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THE BEST CATTLE FASTENING.

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The only practical *SWING STRANCHION* invented Thousands in use. Illustrated Circular free.
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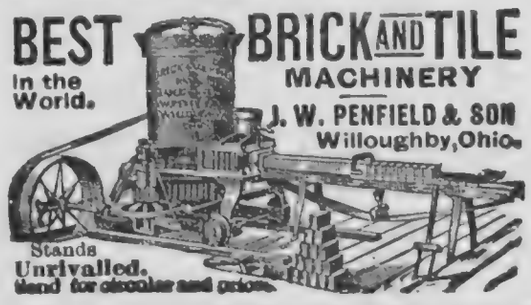

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Stands Unrivalled.
Send for circular and prices.

IMPROVED EXCELSIOR INCUBATOR

Simple, Perfect and Self-Regulating. Hundreds in successful operation. Guaranteed to hatch larger percentage of fertile eggs at less cost than any other hatcher. Send 6c for Illus Cata. GEO. H. STAHL, Quincy, Ill.

Circulars free

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One piece, with hook. *Handiest to use.* Will obtain **MORE SAP** than any other.
Send for Circular of Maple Sugar goods.
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DUTTON GRINDER

Perfect Mowing Machine Knife Grinder.

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Machines in actual use testifying to its merits.

Can be carried into the field and attached to Mowing Machine Wheel. Send for new Descriptive Catalogue.
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THORBURN'S EXTRA EARLY MARKET PEAS

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See Catalogue of VEGETABLE, FLOWER AND TREE SEEDS FOR 1889.

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PLANTS AND TREES

GRAPE VINES, FRUIT and ORNAMENTAL TREES

CHOICEST OLD. RAREST NEW.

Among the latter we introduce the **CRAWFORD STRAWBERRY.**

YOU WANT IT! It combines more good qualities than any other. If you want **PURE TESTED SEED** or anything for **ORCHARD, GARDEN, LAWN or PARK,** send for our

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LARGEST GROWER OF GRAPE VINES IN AMERICA.

NIAGARA, EMPIRE STATE, EATON, MOYER and all others, new and old; also small fruits and first-class establishment. Free Illustrated Catalogue. Lowest prices, highest grading, warranted true. In every respect a model. **GEO. S. JOSSELYN, Fredonia, N. Y.**

ENSILAGE

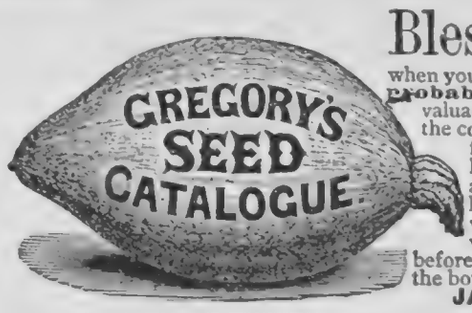
PRINCE CHARLES CORN!

(Trade Mark Registered.)

Seed large and pure white; cob red; stalk tall, tender and sweet.

CHAS. E. PRUNTY, 7-S-Main. Saint Louis, Mo.

Bless Your Souls!



My brother farmers, why pay **10** or **20** cts. for a seed catalogue, when you can receive one containing **just as many and very probably more varieties** and all new vegetables that are really valuable, for just **NOTHING!** It may have less paint about the covers, but, great Scott! we are not after **paint,** but **seed.** fresh and true to name, such as will make with a master's hand its own picture all over our farms and gardens; seed I am not afraid to **WARRANT** on the cover of my catalogue. Come, my fellow farmers, and join the thousands, who for thirty years have been users of my seed; why, we were a goodly company and having pleasant times together before the great majority of the present race of seedsmen (bless the boys!) had left their nurse's arms! Send for a catalogue.
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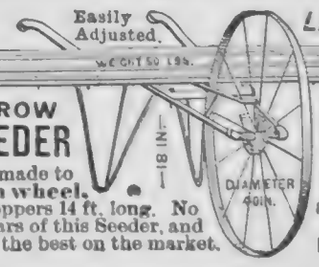
SPECIAL PRICES TO INTRODUCE

SEND FOR ILLUSTRATED PAMPHLET

WE MAKE 6 DIFFERENT HARROWS

HERENDEEN MF'G CO., GENEVA, N.Y.

SOWS EVENLY and ACCURATELY.



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The very **BEST Machine** ever made to sow **Clover** and **Timothy. All iron wheel,** 40 in. diam.; like a Bicycle wheel. Hoppers 14 ft. long. No Gearing. No friction. Send for circulars of this Seeder, and the "**Crown Grain and Fertilizer Drill,**" the best on the market.

CAM HUB. VIBRATORY LEVER.

This Machine can be set to sow the desired quantity (from 4 to 25 lbs. per acre) instantly. Wire agitator not affected by weather. **Saves** seed and time, and insures good hay crops. Every one *warranted*

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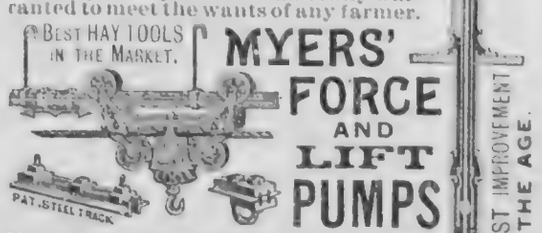
RUSTLESS IRON WATER PIPE.

Send for catalogue. **THE WELLS RUSTLESS IRON CO.**
Braman, Dow & Co., Boston, Ag'ts for New England. 19 Cliff Street, New York.

MYERS' REVERSIBLE STEEL and WOOD TRACK HAY CARRIERS

TRADE MARK. A complete outfit. Easy to put up, always reliable and fully warranted to meet the wants of any farmer.



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Simple, durable, powerful, easy to operate never affected by frost. **Patent GLASS VALVE,** will never corrode. Ask your dealer for our goods. Write for catalogue.
F. E. MYERS & BRO. ASHLAND, O.

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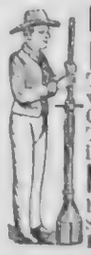

The greatest labor saving tool ever invented. Unlike anything in the market. Capacity, 200 to 300 holes, 2 ft. deep, per day. The only digger that works successfully in sod, stony or rocky ground.

NO BACK BREAKING as the digger is driven by the handle easily through the hardest ground. Send for Circular and Price List. Address
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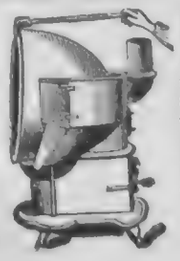

With Dumping Caldron, empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also make **Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Caldrons, Etc.** Send for circulars.
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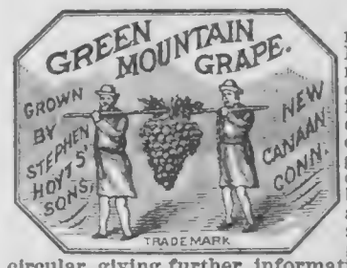

This grape originated in the Green Mountains of Vermont. It is very early; color, greenish white; pulp, tender, sweet and delicious. The only grape yet introduced that ranks **first,** both in earliness and quality. It should be in every garden. Send for circular, giving further information. We also offer a full assortment of other nursery stock. Address
STEPHEN HOYT'S SONS,
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ROCHESTER COMMERCIAL NURSERIES.
Address
W. S. LITTLE
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TREES NEW and RARE OLD and RELIABLE

Both Fruit and Ornamental, ROSES, Vines, Clematis, Rhododendrons, etc. Two illus. Catalogues 6 cts. Free to customers. ☞ Wholesale List, FREE.

CELEBRATED ROCHESTER SEEDS.

Our Latest Offer.—We give one packet each Beautiful Moonflower, German Pansies, Sweet Peas, Surehead Cabbage, Ameri-Beauty Lettuce, Green and Gold Water Melon, Rosy Gem Radish, Sibley Squash, Mikado Tomato, and our Illustrated Catalogue, all for 25 cents. Why can we give so much for 25 cents? Because we want you to see our Catalogue. You will want more seed; we have them (Monroe County Grown). Address
MOREHOUSE & ANNIS, Rochester, N. Y.

BIG BUCKEYE FIELD CORN. **NEW TOMATOES** GOLD COIN SWEET CORN.

Our illustrated Annual of **Tested SEEDS, BULBS, TOOLS, &c.,** mailed free to all seed buyers. **Two Colored Plates.** It tells all about **SEEDS & Gardening** The best Guide. **Prices Low.** Seeds Reliable. Used by Thousands of Farmers and Gardeners and no complaints. Originators of Paragon, Acme, Perfection, Favorite, Beauty and other Tomatoes.
A. W. LIVINGSTON'S SONS, P. O. Box 809, Columbus, O.

OUR HOBBY

TREES *The best for* **Street** *or* **Ornamental Planting.** *The finest hardy* **Rhododendrons, Azaleas, Japanese Maples, Evergreens, Shrubs, Roses** *and* **Fruits** *at reduced prices. Catalogues on application.* **FRED. W. KELSEY,** 208 B'way, N.Y.

DON'T BUY YOUR SMALL FRUIT PLANTS, TREES or seeds until you get our Catalogue It will interest you. Send for one Free.
COE & CONVERSE, Fort Atkinson, Wis.

VEGETABLE PLANTS—Standard Sorts, at reliable rates. Send for Price List.
M. GARRAHAN, Kingston, Pa.

TRADE 1 MARK DER FUL

POMONA NURSERIES. 1838 FIFTY YEARS 1889.
Trade mark label of "WONDERFUL PEACH." *None reliable without it.* Large stock of Raspberry, Strawberry & Blackberry Pl'ts, Niagara, Moore's Early, Diamond, Eaton & other Grapes KIEFFER & LECONTE PEARS, SPAULDING & JAPAN PLUMS. All the worthy old and promising new varieties. Catalogues free.
WM. PARRY, Parry, N. J.

SEED POTATOES. New varieties. Low prices. List free.
S. FROGNER, HERMAN, MINN.

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10 Pkts, Flower **SEEDS, 10c.** 5 Pkts. Vegetable Seeds, 10c. *Cat. Free.* J. J. BELL, Windsor, N. Y

SALESMEN WANTED TO SELL OUR SEEDS. NO EXPERIENCE NECESSARY. LADIES DO WELL. SEND 10C. FOR SAMPLE PACKETS OF VEGETABLE AND FLOWER SEEDS AND TERMS. Our Catalogue Free.
MOREHOUSE & ANNIS, Rochester, N. Y.

HIGH BRED Seed Potatoes. One barrel worth two of Northern Seed. All that grow Irish Potatoes should have my catalogue free with testimonials. Address J. W. HALL, Marion Station, Md

---

READER If you love **RARE FLOWERS,** *choicest only,* address ELLIS BROS., Keene, N. H. It will astonish and please. **FREE.**

TREES ROOT GRAFTS—*Everything!* No larger stock in U. S. No better, no cheaper. **Pike Co. Nurseries, Louisiana, Mo.**

THE jug goes to the water until it breaks. That neglected cough may rack you until it breaks down the entire system and consumption is fastened on to you. A sure cure is found in

Warner's Log Cabin COUGH AND CONSUMPTION REMEDY.

Two sizes, $1.00 and 50 cents.

Literary.

THE DRUM LAKE EASTER SERVICE.

A story of the Michigan Pine Woods.

BY HERBERT W. COLLINGWOOD.

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"DON'T 'e go there, Parson," she said to him.

"I must, Mrs. McKelvey, it is my duty," he said gently.

The woman looked at him curiously for an instant. "Did 'e h'ever see 'er before Parson?" she asked quickly.

The minister looked her full in the face as he answered: "I have."

She understood him.

Mr. McKelvey, unseen by his wife, had stepped out at the back door, and was now on his way to the trouble. The minister saw him just ahead as he walked up the street.

It was a terrible scene they looked upon at last. The Drum Lakers seemed to have been suddenly seized with a fit of virtuous indignation. Such fits are common to our northern civilization. I do not know whether it was the minister's sermon that roused them or not, but they had determined to purify the place by removing all the objectionable characters. They had begun with "Sarcy Sal." Finding her just after her interview with the minister, she was in the condition to provide great port.

It was indeed a dreadful scene. A crowd of a dozen or more men were gathered in front of a dry-goods box on which stood the dying woman. Her eyes were ablaze with fever. The gaudy hat had fallen from the head, and the beautiful hair hung down over her face and neck. With bitter taunts, she held the crowd at bay, all but one man, a great, black-bearded fellow who stood directly in front and urged the rest to pull her down.

No wonder the Parson hesitated and half turned back at the sight. Could that be a woman, and the woman he had loved so well?

Mr McKelvey pushed his way into the crowd just as the black-bearded man caught sight of the minister.

"Look here," the ruffian cried tauntingly, "here's the parson come to see yer?"

The woman replied with a taunt so bitter that the man caught up a lump of ice and threw it in his anger directly at her. It struck her full in the face. She staggered, threw both hands to her head and fell from the box headlong into the snow.

Two men pushed through the crowd and bent over her. They looked at each other as she lay in the snow—Jack Gray and the Parson.

The black-bearded man tried to push his way to her side, but brave little Mr. McKelvey stepped in front of him.

"Stand back," roared the little Englishman; "s'and back or I'll whip 'r all."

"Git out the way Bill McKelvey, jist go an' air yer voice," and he pushed the little man back.

Jack Gray was on his feet. "Stand back, boys," he shouted. "You've had yer fun; now quit. She's bad enough, I know, but she's a *woman* boys arter all."

The majority of the men were ready to stop, but the black-bearded man still pressed forward.

"What's the matter with you, Jack Gray? How long sence you hev ben Sunday School Superintendent? Superintendent Gray, boys; crowd up!"

Jack's hand went like a flash into his pocket. An instant more, and the barrel of a revolver, flashed in the black-bearded man's face. There was a sharp click as Jack coolly said:

"You bet I'm Superintendent Gray, an' I'm a superintendin' *you*."

The black-bearded man held up both hands and stepped away. This manner of object teaching was not to his taste at all.

(TO BE CONTINUED.)

Miscellaneous Advertising.

CHEST PAINS
COUGHS, COLDS

Chest Pains, Coughs and Colds, Weak Lungs, Backache. Kidney Pains. Rheumatism and all Muscular Pains, **relieved in one minute** by the first **Cuticura Anti-Pain Plaster.** and only instantaneous pain killing, strengthening plaster. 25 cts.: 5 for $1. At druggists, or of POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

SHREWD ADVERTISERS.

READERS of the newpapers of the day cannot fail to be impressed with the fact that the modern advertiser is progressive.

He is compelled to be, else competitors more active in the invention of new advertising devices, will outstrip him in public favor.

The value of printer's ink judiciously and scientifically employed cannot be overestimated; it is the medium whereby a meritorious discovery is raised from local fame to a position in the public esteem. Hence the columns of the newspapers are daily used by hosts of advertisers and in the competition which is indulged in to attain the desired end, the reader is oftentimes amused.

The greatest of American advertisers, and it may as well be said in the world, is H. H. Warner of Rochester, N. Y., whose name has been made everywhere familiar in connection with Warner's Safe Cure, widely advertised because of its merit in the prevention and cure of kidney diseases.

By printer's ink, this great discovery has achieved world-wide popularity and thousands feel grateful for the knowledge thus acquired of this greatest of modern remedies.

Furthermore, the public has been taught that disorders of the lungs, brain, heart and liver which have hitherto been regarded and treated by the profession as distinctive diseases are not so in fact, but are the attending symptoms of disease of the kidneys; therefore, the consumptive, the apoplectic, paralytic, and the sufferer from nervous disorders can be restored to health by Warner's Safe Cure, which will remove the true cause of those disorders by restoring the kidneys to healthy action.

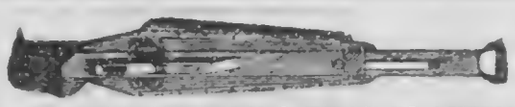
The advertising methods employed by this greatest of advertisers are invariably instructive and, although the reader may sometimes be "caught" in reading an advertisement, which was not at first supposed to be such, there is nevertheless no time lost since useful information is invariably gained concerning life's great problem.

A WONDERFUL PROCESSION
Of what? Why the constant stream of **Hogs, Cattle and Sheep** continually passing into the
Union Stock Yards, Chicago,
—THE—
BONE AND BLOOD
Of which are constantly being manufactured into
RAW BONE
FERTILIZERS
During the past 25 years, by the
Thompson & Edwards Fertilizer Co.
For pamphlets giving full information, address
W. J. RUSSELL, Gen. Ag't for W. Pa., N. Jersey & Conn.
PHILLIPSBURG, NEW JERSEY.

SWIFT-SURE" FERTILIZERS
are manufactured from the very best materials High-grade, Reliable and Lasting, giving good results wherever they are used. always in good drilling condition. Special prices on car-loads. For prices and further information address,
M. L. SHOEMAKER & CO., Ltd.,
Philadelphia, Pa.

WORTH KNOWING.
H. B. GRIFFING'S
METROPOLITAN
FERTILIZER
Sold at $25.00 per ton, F. O. B., N. Y.
Send for Circulars.
H. B. Griffings Sons & Co.
70 Cortland St., N. Y.

BEAT THE "FARMERS." It can't be done. Our Fertilizers always ahead—Bones, Meat, Potash. Agents Wanted. Write. Farmers' Fertilizer Co., Syracuse, N.Y.



MACOMBER'S CORN & BEAN PLANTER
Best and **Cheapest** on earth. Send for Circulars.
S. M. MACOMBER, Adams, Grand Isle Co., Vt.
Gen'l Agents, { A. C. STODDARD, N. Brookfield, Mass. / ROLLINS BROS. & CO., Chicago, Ill

We Sell DIRECT to FAMILIES
By avoiding Agents you save their enormous expenses and profits which double the costs on every first class Piano they sell.
PIANOS, $150 to $1500.
ORGANS, $35 to $500.

Sent for trial in your own home before you buy. GUARANTEED SIX YEARS. Catalogues Free.
Marchal & Smith Piano Co., 235 E. 21st St., N. Y.

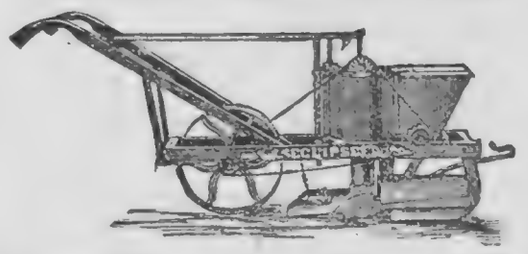
PEERLESS DYES Are the BEST. SOLD BY DRUGGISTS.

150,000 FARMERS HAVE USED AND APPROVED THE "ACME"

Agents Wanted.
The Best Selling Tool on Earth

PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.
Steel Crusher and Leveler. Double Gangs of Adjustable Reversible Coulters. Lumps Crushed. Soil Cut, Lifted and Turned in one operation. No Spike or Spring Teeth to pull up Rubbish. No Wearing Journals. Practically Indestructible. Sizes 3 to 12 ft. wide. With and Without Sulky.
I Deliver Free at Convenient Distributing Depots West and South.
FAIR PLAY. Don't Buy a Base Imitation or Inferior Tool. Order a Genuine Double Gang Acme on TRIAL, to be Returned at my Expense if not Satisfactory. No Pay Asked in Advance.
Illustrated Pamphlet FREE.
DUANE H. NASH, Sole Manufacturer, Millington, New Jersey.
☞ MENTION THIS PAPER.

ECLIPSE CORN PLANTER.



Will plant Field and Ensilage Corn, Beans Peas and Beet Seed in **hills, drills** and **checks**—in hills up to 45 inches; in checks from 36 inches up to any distance desired. Will distribute all Fertilizers **wet** or **dry**. Farmers, send for circulars.
ECLIPSE CORN PLANTER CO.,
Enfield, Grafton Co., New Hampshire.

THE LANE & BODLEY CO.
CINCINNATI, OHIO.

MANUFACTURERS OF
SAW MILLS AND ENGINES
NOW IS THE TIME TO BUY. SEND FOR CIRCULARS. AN EXPERIENCE OF THIRTY YEARS PERMITS US TO OFFER THE BEST

What Paint to Use!
ASK THE
ESSEX PAINT WORKS,
ESSEX, CONN., U. S. A.

Bright Agents to sell the New Work Entitled
LIVING LEADERS OF THE WORLD
Graphic biographies of **Sovereigns, Statesmen, Millionaires, Inventors, Orators, Railroad Kings,** etc. Written by the *foremost* authors, and **elegantly illustrated. A masterly work** of matchless interest. For terms, etc., Address J. W. KEELER & CO., Philadelphia, Pa.

A NEW COUNTRY!
The opening of the new **"SOO"** railway across Wisconsin and Michigan, gives access to desirable agricultural lands and large bodies of **Pine, Hemlock and Hardwood Timber.**
Superior Advantages Given to Parties Who Will Erect Saw Mills or Factories.
Choice farming lands cheap and mostly on time. **Railway Company pays cash for cordwood.** For further information address
W. W. RICH, Chief Engineer,
"Soo" Railway, Minneapolis, Minn.

CONSTIPATION, followed by fitful diarrhœa, shooting pains in the breasts, drawing down aching pains, burning sensation in the small of the back, scanty, dark-colored fluids which scald in passing, and many deposits—sand, mucus, tube casts, and fluids covered by a greasy scum; any one of the foregoing signifies advanced kidney trouble. Prof. Wm. H. Thompson, M. D., of the University of the City of New York, says: "More adults are carried off in this country by chronic kidney disease than by any other one malady except consumption." The late Dr. Dio Lewis, in speaking of Warner's Safe Cure, said over his own signature: "If I found myself the victim of serious kidney trouble I would use your preparation."

SPRAYING FRUIT TREES
to destroy injurious insects is recommended by all experienced Horticulturists and by this system only can perfect fruit be secured. For full directions and outfit for hand or horse power, address
FIELD FORCE PUMP CO. Lockport, N. Y.

Real Estate.

2,000 ACRE FARM
In Minnesota on the Manitoba R. R., suitable for either stock or grain, good buildings, plenty of water, soil deep black, 2½ miles from market; 320 acres ready for seeding. Will sell all or part, or rent. Enquire of
THEODOR NEILSEN, Winneconne, Wis.

FARM FOR SALE—480 acres on Missouri Pacific Railroad. Good buildings. Water and Timber, plenty; 38 head of cattle, 23 horses. Address, CHAS. KETCHUM, Langley, Ellsworth Co., Kansas.

KANSAS SMALL FARMS. valuable ranches and unimproved lands for sale and exchange. Prices moderate, terms very easy. It is a good time to invest. Write for list.
RUMSEY BROS., Emporia, Kan.

VIRGINIA FARMS and MILLS SOLD and exchanged. Free Catalogue. R. B. CHAFFIN & CO., Richmond, Va

Go South Young Man and Stamp for particulars. **Buy a Home.**
E. C. LINDSEY & CO., Norfolk, Va.

CHOICE TEXAS LANDS
Rare Chance for Settlers.
The Railroad System of Texas having developed so as to bring within easy access of good interior and seaboard markets the lands granted to the
HOUSTON & TEXAS CENT'L RY. CO.
It has been determined to offer to settlers the
Renowned Agricult'l Lands
Located along the line of the Fort Worth & Denver City R. R., beginning with Wilbarger County, comprising
200,000 ACRES
In farms of 160 acres and upward. These lands were located by the Company among the earliest, with especial care as to soil, timber and water. They are adapted to the growth of cotton, corn, oats, wheat, barley, rye, vegetables, orchards and gardens and the various domestic grasses.
Situated in the elevated and healthy region known as the Southern Panhandle of Texas, they possess a *genial climate,* favorable to man and beast, where outdoor work can be carried on the year round, and are in marked contrast with regions of early and late frosts or of destructive "blizzards."
Population is fast pouring in, and local government is already established, with schools, churches, &c.
TERMS OF SALE: One-fifth cash, balance in four equal yearly payments, with interest on deferred payments.
For further information as to these and lands in adjacent counties, apply to
J. S. NAPIER, Vernon, Texas,
(who is prepared to show to purchasers); or to
C. C. GIBBS, Land Ag't, Houston, Tex.

$20 Picket Fence Machine for $10.00. *Guaranteed.* Hundreds in use. Freight paid. Circulars free. S. H. Garrett, Mansfield, O.

WHO laughs last laughs best. Before you lost your hair you laughed at your friend's bald head. Now your friend laughs at you. Use **Warner's Log Cabin HAIR TONIC** and renew your hair, then you can laugh again. $1.00—of all druggists.

Farmers,
Stock Raisers,
Lawyers,
Doctors,
Mechanics,
Literati,
Men,
Women,
and
Children,

Of all Trades, Professions and Ages Read

THE DETROIT FREE PRESS.

SOME read it for Profit,
OTHERS for Pleasure,
ALL, because it is the
Best General Newspaper in America.

Ever mindful of subjects of domestic economy—ever mindful of the serious questions in science, letters, business and art—ever mindful of life's sober phases—it always comes to you with its inimitable wit and humor to illustrate the cloud's "golden lining." The

RURAL NEW-YORKER
—AND THE—
WEEKLY DETROIT FREE PRESS,

BOTH FOR ONE YEAR FOR
$2.25!

Address the
RURAL NEW-YORKER,
34 Park Row, New York.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

ARREARS OF TAXES.

L. T., Albany, N. Y.—A short time ago, I came by collateral inheritance into possession of a small but valuable farm which I supposed was free of all "incumbrances." Not long afterwards, however, just in time to prevent its sale at public auction, I discovered that there were against it claims for arrears of taxes which had been standing on the Tax Commissioner's books for 25 years. Wasn't such a debt outlawed by the statute of limitations the same as any other debt? Isn't it the duty of the Tax Commissioner to serve a notice, or cause any arrears to be noted on the first tax bill rendered after any assessment has been levied or any deficiency of payment or charge against the property has occurred? If this is not the case, the present condition of the law exposes the owners of taxable property to a liability to much annoyance and heavy loss.

ANS.—The statute of limitations does not run against debts due under the statutes for the collection of taxes. There are two provisions of the laws of this State, however, which, if properly enforced, afford some protection to tax-payers. It is the duty of the Clerk of Arrears of Taxes, upon requisition of any person, to furnish a bill of all arrears of taxes due prior to the first of June last past. Moreover, "whenever any tax and interest thereon shall remain unpaid for two years from the first day of May following the year in which the same was assessed, the Controller shall, as soon thereafter as he shall deem it for the best interests of the State, proceed to advertise and sell such lands". Notice of the sale must be given to the owner. Probably the courts would not hold that such a clause as the above would give the Controller a right to delay the sale for 25 years, especially as it is the duty of the tax collectors to make diligent search for property on which to levy for the payment of a tax as soon as it is over-due. All tax bills rendered in this city must contain a record of the arrears of taxes on the property covered by the bills, and this practice should be of general application.

INHERITANCE OF A POSTHUMOUS CHILD.

T. S. M., Medina, N. Y.—A gave by will half of his large farm and other property to his second wife and half to his child by the first marriage, no child having been born by the second marriage at A's death. About six months after his death, however, his widow bore a child. The will was contested on behalf of the second child against the other child by the second child's mother, and, in default of an answer or appearance, the second child received his share of the property bequeathed to the first child. Shortly afterwards the child by the second marriage died Who is now entitled to the second child's property—the mother alone or the first child, or is the dead child's share of the property to be divided between them? If the mother is entitled to the whole; could the child of the first marriage re-open the contest, which was lost by default?

ANS.—The child of the first wife and the mother of the second inherit the property share and share alike. There could be no valid defense to the claim in behalf of the posthumous child. It legally inherited that portion of its deceased father's estate it would have received if there had been no will, as every child born under such circumstances in this State must do if no provision is made for it in the will.

DRAINAGE FROM UPPER TO LOWER LAND.

J O., Henry Clay P.O., Del.—I have a piece of land that needs drainage. The water from the drains would run on my neighbor's land, as the inclination of the field is in that direction. Have I a right to let the water flow on his land in case he is unwilling to grant permission? Can I legally discharge the drains at one point on my own land, near my neighbor's line fence?

ANS.—The drainage laws of the different States vary considerably. The statutes of most of the States provide for the construction of county and township ditches, but in only a few is any provision made for private ditches, like that here referred to. The principle governing such cases is that when two fields are adjacent, and one is lower than the other, the owner of the upper field has a legal right to have the surface water—the water that falls upon his land—flow off upon the land below it; but he has no right to collect the water by drains or other artificial means, and discharge it upon the land of his neighbor to his injury. By so doing he renders himself liable to an action for damages.

DEEDS AND MORTGAGES MUST BE RECORDED

"*M*," *Gilbertsville, N. Y.*—A gives B a mortgage on his real estate. Thirty days afterwards he gives C a mortgage on the same property. B neglects to record his mortgage until after C has recorded his. Which has the first claim?

ANS.—B must suffer for his negligence. Washburn on Real Property, page 536--537, and 4 Kent 173, agree that the records of a town or county in which lands lie are supposed to give full information of grants or liens affecting a title, and any one who has a deed or mortgage which he fails to put on record, is liable to have his rights cut off by a subsequent deed or mortgage from the grantor. This record constitutes public notice to all future mortgagees or purchasers of the land. Had B recorded his mortgage, the record would have given C notice of the previous mortgage, and if he was not in any way notified of the existence of such mortgage, his own mortgage having been duly recorded must take precedence of B's. B's remedy is now against A.

TAXATION FOR RAILROAD-BUILDING BONDS.

L. S, Hastings, Neb.—Ten years ago a town in which I own a farm, under the general railroad law issued bonds to aid in the construction of a railroad through the town, the bonds to be payable in 30 years and the interest thereon annually. Are the bonds a lien on the real estate within the boundaries of the town at the time of bonding?

ANS.—Bonds issued by a town for the construction of a railroad or any similar purpose, are not a lien on the real estate of individuals. The town, however, must pay the interest and the principal when due, and the proper officers can be legally compelled to levy a tax sufficient for the purpose, and in case they refuse to do so, they can be punished for contempt of court, by the judge who ordered the assessment. Such taxes when laid, are a lien on the real estate upon which they are assessed, and must be paid before a good title therefor can be given, and of course the property may be sold for unpaid taxes.

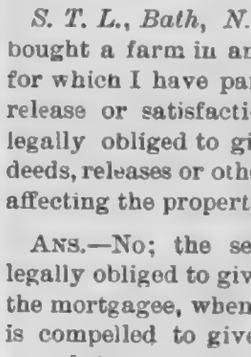
S. T. L., Bath, N. Y.—A short time ago I bought a farm in another part of this State, for which I have paid in full and received a release or satisfaction piece. Is the seller legally obliged to give up to me any former deeds, releases or other kinds of receipted bills affecting the property?

ANS.—No; the seller of the property is legally obliged to give only his own deed; and the mortgagee, when a mortgage is canceled is compelled to give a satisfaction piece to cancel the mortgage. Neither party is obliged to give up any former deeds or releases that may be in his possession.

C. H. M., Bristol Springs, N. Y.—There are no public landings on the shores of Canandaigua Lake. Those who ship grapes and other freight without owning land on the lake must ship from private docks. Should this privilege be denied, would the aggrieved party or any one else have a right to build a dock on the lake where a public highway comes to the edge of the water, without the consent of the owner of the adjacent land?

ANS.—No. Unless there is a law already relating to the matter, the only relief is through the legislature by getting the Assemblyman for the District to introduce either a special bill for this case or a general bill applicable to all cases of the kind in all the waters of the State.

Miscellaneous Advertising.



MANLY PURITY AND BEAUTY

CUTICURA REMEDIES CURE SKIN AND BLOOD DISEASES FROM PIMPLES TO SCROFULA.

NO PEN CAN DO JUSTICE TO THE ESTEEM IN which the CUTICURA REMEDIES are held by the thousands upon thousands whose lives have been made happy by the cure of agonizing, humiliating, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair.

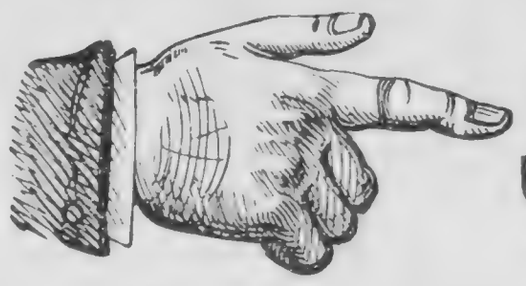
CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, are a positive cure for every form of skin and blood disease, from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c. RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., Boston, Mass.

Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

Rheumatism, Kidney Pains and Weakness speedily cured by CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster.



JULY 1st

The subscription price to the LADIES' HOME JOURNAL will be doubled. It will be better and larger. We shall double its value and give you more of it for your money. You may have the APRIL, MAY and JUNE numbers for the merely nominal sum of TEN CENTS, and if you like them, a yearly subscription can be had for half what it will cost after July 1st.

This is the last opportunity to try the *Journal* at so small a cost. This advertisement appears but once.

Special Features are,—AN ILLUSTRATED ARTICLE ON NEWPORT,

—BY—

Florence Howe Hall,

Showing life there in the gay season — the beach, dinners, balls, musical parties, polo, life on the yachts, beautiful villas, &c.

Another feature will be STATE BANQUETS,—Presidential porcelain of a century, illustrations showing pieces of every state dinner set from *Washington to Harrison*, also the conservatory,—a state dinner, &c.

AMATEUR PHOTOGRAPHY—Profusely illustrated, is another practical subject to be found in May and June numbers.

HOW TO GO ABROAD with the least trouble and expense. Explains just what is necessary to take with you for use on ship board, and on the Continent, and what *not* to take. Money matters in detail. Valuable advice on custom inspection, care of baggage, fees. Tells how to avoid a thousand and one mistakes and inconveniences suffered by inexperienced travellers.

These special numbers contain KATE UPSON CLARK'S story, "TOO MUCH ENTERTAINED." "JOSIAH'S OBITUARY," by JOSIAH ALLEN'S WIFE. Concluding chapters of "MILDRED'S AMBITION," a story of social ambition by Mrs. MARY J. HOLMES. "WEDDING BREAKFASTS," by ELIZA R. PARKER. "HOME DRESS MAKING," a complete fashion department. "ARTISTIC NEEDLEWORK." "FLOWERS AND HOUSE PLANTS," by EBEN E. REXFORD. "TALKS WITH MOTHERS," by Eminent Physicians.

CURTIS PUBLISHING CO., Philadelphia, Pa.

EXPANDED METAL

(PATENTED THROUGHOUT THE WORLD.)

This product is made of the BEST QUALITY OF MATERIAL by a new and novel process forming a

SOLID STEEL FENCING MATERIAL

DURABLE, RIGID, ORNAMENTAL and MODERATE IN COST.

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Station.	Brand.	Ammonia. Guaranty. Found.	Ammonia. Guaranty. Minimum.	Phosphoric Acid. Guaranty. Found.	Phosphoric Acid. Guaranty. Minimum.	Potash. Guaranty. Found.	Potash. Guaranty. Minimum.
Conn.	MAPES TOBACCO MANURE, W. B.	8 52	7.50	5.42	4.50	11.45	10.50
Conn.	MAPES ONION AND VEGETABLE.	6.91	6.00	10.13	8.00	6 84	6.00
N. J.	MAPES COMPLETE FOR HEAVY SOILS.	5.71	6 00	11 85	10 00	3.60	3.00
Penn.	MAPES POTATO MANURE.	5 14	4.50	13 69	8 00	7.77	6 00
Conn.	MAPES FRUIT AND VINE MANURE.	3.32	2.00	9.82	7 00	11 92	11 00
N. J.	MAPES CABBAGE MANURE.	6 00	5 50	9.58	6 00	8 07	8 00
Conn.	MAPES GRASS TOP DRESSING.	5.65	5.00	12 23	7 00	5.93	5.00
Mass.	MAPES CORN MANURE.	4.40	4 50	13.45	10.00	6 36	6.00
N. J.	MAPES PEACH TREE MANURE.	3 29	2.00	10 28	8.00	9.11	8 00

No salts of Potash combined with Chlorine are used in any of the above Manures for Tobacco, Potatoes, or Fruits (excepting the Peach Tree Manure).

It will be noted that in the above Manures there is a range of composition that enables the grower to select a grade suitable to almost any want; Ammonia from 3.00 to 8.52 per cent. Phosphoric Acid from 5.42 to 13.69 per cent. (nearly all soluble and available), Potash from 3.00 to 11.92 per cent. and free from Chlorine for use on Tobacco, Potatoes and Fruits.

For comparison in strength between the Mapes Manures and other brands, see pages 39 and 40 **in the Mapes Pamphlet, 1889.**

All of the Mapes Manures are in DRY, fine mechanical condition, and at the same time contain **more soluble and available plant food in a ton** than any other special crop, complete manures, or any superphosphates made, and pound for pound will go over more ground and prove more effective than if **moist, coarse or sticky.**

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See increase in the combined prizes of the Mapes Company and the AMERICAN AGRICULTURIST in March number AMERICAN AGRICULTURIST inside of front cover.

Humorous.

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When we are far apart, my love,
The world is very wide;
But it assumes a different shape
When we are side by side.

For then 'tis so diminutive
To our ecstatic view,
We half imagine it was made
Just large enough for two.

—*Life.*

IF a church be on fire, why has the organ the smallest chance of escape? Because the engine cannot play on it.—*Michigan Farmer.*

"I WISH I could sell all I write," remarked a certain author to a lady. "There are those," replied his companion, sweetly, "who say you can't write all you sell."—*Life.*

"THERE is one paper that will destroy the polish of any one it may come in contact with." "Bless me my good man, what is its name?" "Sand-paper, madam."—*Boston Bulletin.*

UNCLE HARRY: "Well, Johnnie, and how did you like the ride on Uncle Harry's knee?" Johnnie: "Oh, it was very nice; but I had a ride on a real donkey yesterday."—*Harper's Bazar.*

"IT says in the paper," quoth Mrs. Spriggins, "that they are pushing the Poughkeepsie bridge very hard. I suppose they want to see if it is real good and strong."—*Harper's Bazar.*

"NOW, Tommy," said the teacher, "if there are seven peaches on the table and your little sister eats three and you eat four, what will be left?" "The stones," replied Tommy.—*New York Sun.*

ANOTHER OLD CUSTOM GONE: "I regret to see that it is not the fashion to send valentines any more," remarked the maiden lady of 43 as she watched all day in vain for the postman.—*Harper's Bazar.*

IT is said that one pound of banana contains more nutriment than three pounds of meat. And yet meat will build a man up, while a small piece of banana will bring a man down.—*Statesman.*

IRATE PASSENGER (as train is moving off): "Why the — didn't you put my luggage in as I told you, you old —?" Porter: "E—h, mon! yer baggage es na sic a fule as yerself. Ye're i' the wrang train?"—*Punch.*

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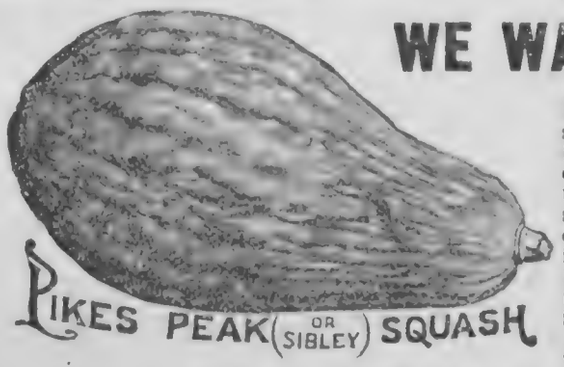

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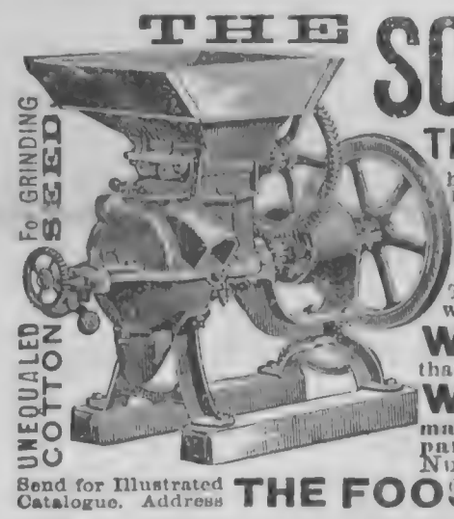

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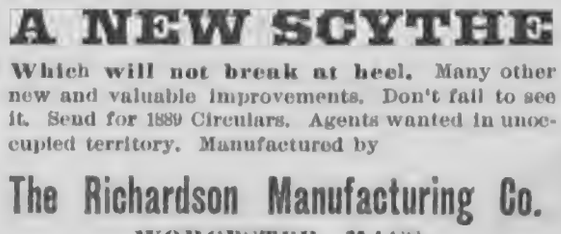

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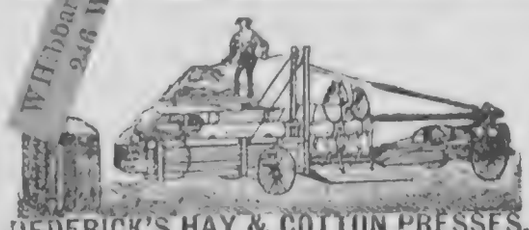

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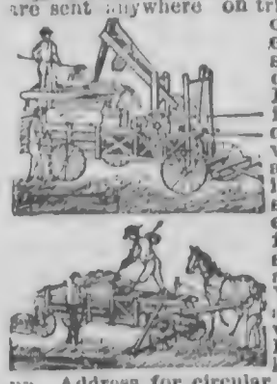

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CORN IS KING! Fig. 76.

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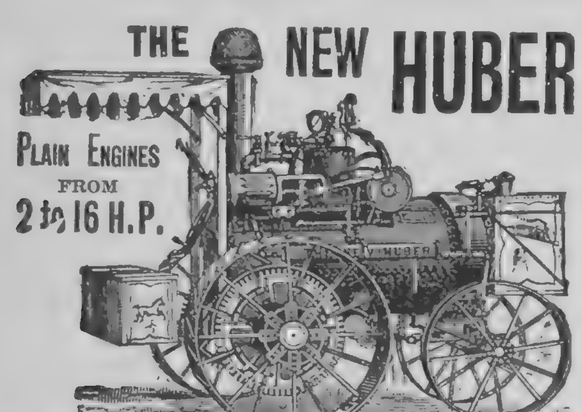

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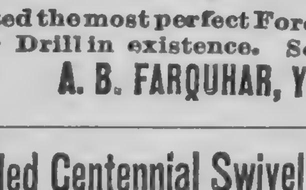

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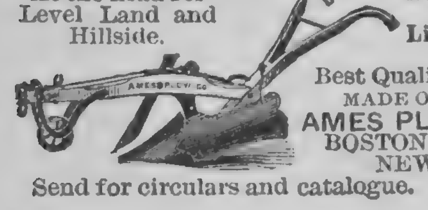

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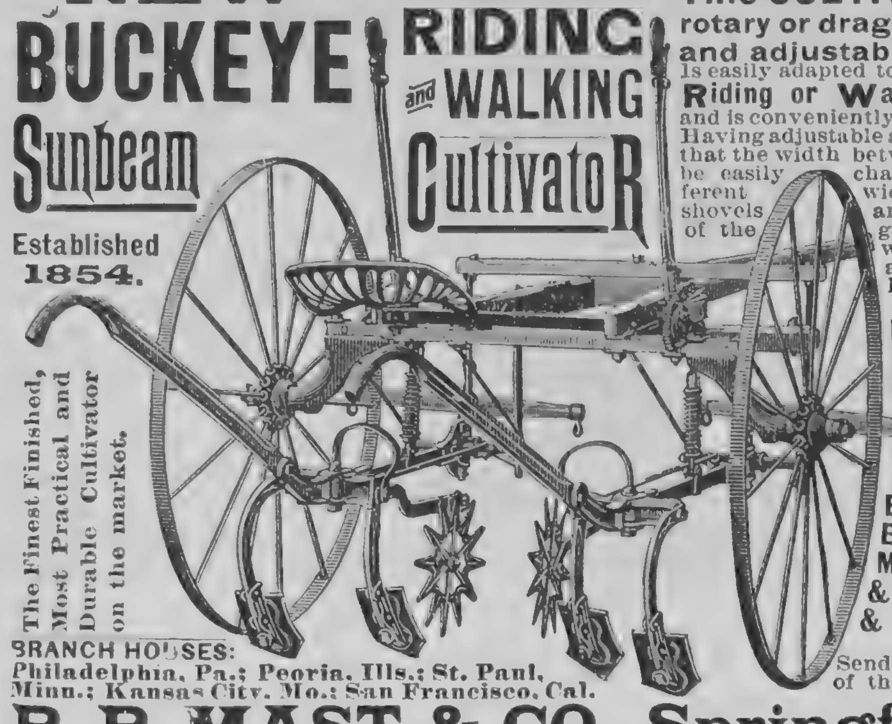

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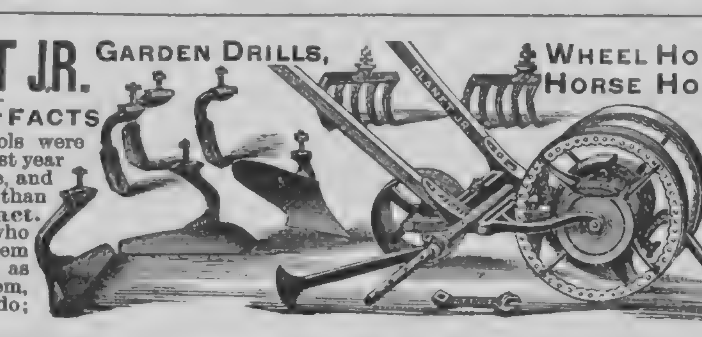

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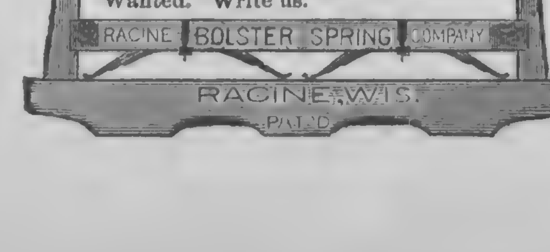

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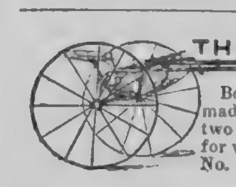

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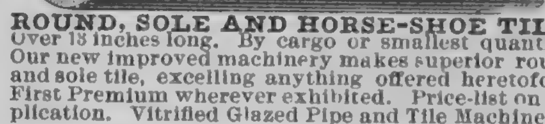

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Biographical.

THE NEW SECRETARY OF AGRICULTURE.

JEREMIAH McLAIN RUSK, the new Secretary of Agriculture, was born in Morgan County, Ohio, on June 17, 1830, and is therefore in the 59th year of his age. He is six feet two inches in hight, and massive in proportion, active, bright, and—the ladies say—handsome. On a horse, or heading a procession, or in a promiscuous gathering, he certainly is, with his white, flowing hair and beard and ruddy complexion, a man of marked and attractive personal appearance. An excellent picture of him, engraved directly from a photograph, is shown at Fig. 77. His public career, from the incisive and courageous manner in which all duties, especially in sudden emergencies and trying times, have always been performed, is pretty generally known. That we shall therefore touch lightly.

In 1853, at the age of 23 he settled on a farm in Vernon County, Wis., which is still his home, where his shrewdness, good sense and natural aptitude for leadership at once placed him at the head of pioneer improvements and public affairs. He was successively elected to several county offices; sent to the legislature in November, 1861; elected State Bank Controller in 1866, holding the office four years during the trying time of bank reorganization; served in the 42d, 43d and 44th Congresses, promoting during that time some of the most practical and important pension legislation on the statute books; was appointed by Pres. Garfield and confirmed by the Senate Minister to Paraguay, which office he declined, as he did also the Mission to Denmark; was elected Governor of Wisconsin in 1881; re-elected in 1883 and again in 1886, holding the office seven years.

Of course, he went into the war, having enlisted early in 1862 as major of the 25th Wisconsin regiment. He was soon promoted to the colonelcy. After suppressing an Indian revolt in Minnesota, his regiment was sent South, and he served with Sherman from Vicksburg to the close of the war. During the last campaign he had charge of the advance of the 17th corps, and was breveted Brigadier General for bravery at the battle of Salkehatchee. He was a dashing and intrepid soldier having the full confidence of his men as well as of his superiors. He never ordered the boys to "go," but always led the way and bade them "Come on!"

After his father died, in Ohio, Rusk while still a boy, was compelled to put forth extra exertions to help support his mother and two sisters, and for that purpose, as the nearest and best thing at hand, learned the coopers' trade. It is a fact not generally known that he became a first-class cooper, and to this day can put up a "tight" or "loose" barrel as well and quickly as the best journeyman. He always made money from his farm, and during his long and busy public career never relaxed his active interest in agriculture. Though especially fond of fine horses and cattle, he also directed attention to other branches of farming, and it was common fame that there was no man in the country who could match him with the scythe or cradle, or at raking and binding grain. In fact, his quick, sure eye and superior physical strength and activity gave him easy and graceful mastery of almost everything his hand found to do. In short, he was equal to every emergency.

When he first proposed to be a candidate for Congress the late Wm. T. Price, the most tenacious and crafty fighter of his time, was his opponent for the nomination. Buffalo county seemed solid for Price; but Rusk must know for himself whether that county was invulnerable. Therefore, in company with a political friend named Bryant, he journeyed over into the fastnesses of Buffalo to "see about things." Finding the local leaders had gone to a particular neighborhood to test and observe the workings of a new thrasher, the General and his friend sought them out. The crowd, as had been reported, was perverse, obdurate. "We're all for Bill Price—don't want no Rusk in ourn."

Pulling off his coat, the General stepped up to the man who was feeding and observed: "You go down and talk with Bryant awhile and just let me show you fellows how to feed a thrashing machine." The crowd laughed derisively, for the candidate had on his "store clothes" and hardly had the appearance of a thoroughbred "thrasher." But the feeder descended to the ground and brightened up the steam, thinking he would "have a little fun with the fine politician," while the latter mounted the platform and began to toss in the grain in a style the boys had never before seen equaled. While he was putting in the bundles Bryant was putting in his persuasive language and the crowd was captured. They hurrahed for Rusk, saying a man who could stuff a thrasher like that was good enough for them. He had a solid delegation from Buffalo, and was nominated.

Many years later Governor Rusk—for he was Governor then—went with Henry Villard and his party to drive the golden (last) spike in the Northern Pacific railway. The settlers were holding a large thrashing "bee" near the scene of the golden spike ceremonies, to which the visitors were ultimately drawn. The Governor stripped off his broadcloth and began to put through the "No. 1 Hard" more rapidly and scientifically than the best professional feeder in the crowd, as much to the amusement of the distinguished party as the astonishment of the natives. Besides being able to milk cows, break, and drive oxen, and teach a pig-headed calf to drink, he is a magnificent horse-back rider and an enthusiastic expert with a coach and four. He loves his children and his horses and never goes back on his friends.

While he was Governor of Wisconsin he accomplished more of practical value to the agricultural interests than all of his predecessors combined. Amid the general ridicule and carping of that time, he stood manfully by Magnus Swenson's earliest experiments with amber cane sirup, out of which grew more specific knowledge and valuable machinery han the country had theretofore possessed. Indeed, so anxious was he to see Professor Swenson succeed, that when the experimental boilers and machinery reached Madison he mounted one of the loaded wagons and rode to the State Farm and there helped to locate the plant and begin active operations.

Governor Rusk was one of the earliest friends of the Wisconsin Farmers' Institutes. He always recommended and helped to secure liberal appropriations for them, watched and helped to guide their management and actively participated in many of their sessions. In fact, not only were these institutes, now so popular and effective in Wisconsin as educators, conceived and brought to fruition during his incumbency of the gubernatorial chair, and by his help, but the valuable improvements at the State Farm and Agricultural Experiment Station, the enlarged appropriations to the Dairymen's, Sheep-breeders', Horticultural and other Associations of that kind were recommended by him as well as the office of State Veterinarian, with power to control and condemn diseased horses and cattle and to preserve the general health of domestic animals.

The new Secretary is essentially a man of ideas, of action, of insight, and of executive ability. While performing his duties and carrying out his plans with promptness, he never falls into serious mistakes. His judgment of men and his power to anticipate results are as remarkable as his independence of thought and general breadth of policy. He is always practical, always patriotic and public-spirited, always generous and humane, always looking into and building for the future, always studying and ministering to the needs of the people. And in his new position, if he shall not be too much hampered by musty old statutes and red-tape regulations, he will be as popular with and as useful to the people of the nation as he has for years been to those of his own State, Wisconsin, who think there is nobody in the world like "Uncle Jerry Rusk."

JEREMIAH McLAIN RUSK,
Secretary of Agriculture. From a Photograph. Fig. 77.

The Poultry Yard.

POULTRY NOTES.

PROFIT IN FARM POULTRY.—I think Mr. Bucephalus Brown is away off in regard to the price of eggs this winter. Here (Dayton, O.) the price of eggs was highest at Thanksgiving. Two weeks later they began to drop from 25 cents until in the fore part of February they were retailing at 12 cents per dozen. I got 15 cents all last summer. I credit the high prices of last summer to the packers (cold storage and otherwise) who gathered large stocks and had to unload them in an open, warm winter's market; hence the low prices. They are selling at 14 cents. I predict that they will go still higher.

NEW BLACK JAVAS.—I have five Rose-Combed Black Java hens that now are laying an average of four eggs per day, and this too in the coldest weather this winter; four degrees above zero. I have never heard of any Black Javas with rose-combs but mine. I have had hens to weigh in laying condition nine pounds and six ounces. The largest Plymouth Rock hen I ever saw weighed eight pounds five ounces. "W."

The Red-Caps for their size lay a large egg. It is nearly white and eight eggs weigh one and one-sixteenth pound. The only objection to them is their heavy combs.

Field Crops.

"CORN IS KING."

SURFACE MANURING.
DRILL PLANTING.
SHALLOW AND LEVEL CULTIVATION.

THE COUNTRY'S CORN CROP.

VARIETIES, MANURES, TOOLS.

IMPROVING SEED CORN.

SILOS AND ENSILAGE.

CORN AS A STOCK FOOD.

HENRY STEWART.

It is the misuse rather than the use of corn which is objectionable in feeding stock. When fed in reasonable quantities it is a healthful and nutritious food. Its composition is such that it is of itself a healthful food when fed in moderation, and a food well adapted for a working animal or one that is fed for fat. It contains of

Digestible albuminoids	8.4 per cent.
Carbohydrates	60.6 "
Fats	4 8 "

giving a nutritive ratio of 1 to 8.6 and affording an excess of about 50 per cent. of carbonaceous matters above the normal maintenance ratio. Thus for fattening animals it is just about what is required, and for working animals it affords a large supply of sustenance for respiration and the production of heat.

These figures are taken from the German tables, which somehow reduce the actual nitrogenous matter (albuminoids) about one-fifth, or from 10 to 8.4 of digestible matters. In practice I don't think this is consistent with facts, for a large number of animals are fed wholly upon corn for the grain food, with very poor hay or blade fodder, which is as poor as the poor hay of the South, and yet the horses, mules and cattle are extremely healthy and do an enormous quantity of hard work. Falling into the custom of the people since I have been in the South, I have fed a large quantity of corn to working oxen, horses and beeves, and have found it in every way a desirable grain food. I think the past season my colts have made more growth upon wheat bran than they had previously done upon corn; but corn is very much cheaper and more easily procured in many places than bran.

It has been claimed, and I think with justice that excessive feeding of corn to hogs is productive of disease. But then excessive fatness is a disease, and I have been sometimes obliged to kill pigs to prevent them from dying of excessive fatness, especially those belonging to the small white breed which become fat at a very early age, so that it is the case that corn is really too effective a food for fattening, and this has been very clearly shown by the experiments made by Professors Henry and Sanborn. The animals fed upon corn were largely defective in the development of the most important vital organs, and consequently were fated to die early from disease if not quickly slaughtered. Poorly developed heart, liver, kidneys, and spleen, are incompatible with robust health, and cannot fail to provoke fatal disease or encourage its development on the first attack by contagion, which might be resisted by a better developed vital system. Thus I think it is a well established fact that too long-continued corn-feeding must result in disease, and this applies to all animals except those that are hard worked or exposed to cold, by which a large consumption of carbon in the system is made necessary.

No doubt there is a great temptation to use corn when four pounds of it will make a pound of live weight of pork, and no harm will happen if the feeding is practiced with young animals and only up to a safe point, but this very character of this grain makes it necessary to exercise caution and keep within bounds, or to feed with it more nitrogenous foods. The best of these theoretically are skimmed milk and cotton-seed meal (decorticated). These have the following composition:

Digestible.	Skimmed milk.	Cotton meal.
Albuminoids	3 5	33 20
Carbohydrates	5.0	17.6
Fat	0.5	16.2
Ratio	.9	1 to 1.8

The nutritive ratios of these foods are practically the same; but their effect upon the digestive organs may be very different, and hence in practice some allowance must be made. As regards cotton-seed meal this objection prevails to so large an extent as to wholly prohibit its use for feeding any stock except cows and fattening cattle; but for these a mixture of this meal with corn-meal is a most excellent food, and to make a desirable ration four pounds of corn-meal and one pound of cotton-seed meal might be mixed; the ration would have the following nutritive ratio:

4 Equivalents.	Albuminoids.	Carbohydrates.	Fat.
of corn-meal	33.6	242.4	19.2
1 of cotton-seed meal,	33.2	17 6	16.2
	66.8	260.	35.4
average	13 3	52	7.1

Giving a ratio of 1 to 5.

But the large quantity of digestible fat and the quiet in which fattening animals are kept, assuming that some of the albuminoids are disposed of in the production of fat, would make this mixture an excellent one both for dairy cows and fattening cattle.

Another popular mixture both in the dairy and for fattening beeves is corn-meal and bran. These substances are not far apart in nutritive character; as bran contains of digestible

Albuminoids	.10	per cent.
Carbohydrates,	48.5	" "
Fat	3 1	" "
with a nutritive ratio of	1 to 5.6	

Then equal parts of bran and corn-meal would have a ratio of one of albuminoids to seven of carbohydrates, but while the latter are in excess, not so large a proportion of them is in the form of actual fat, and the favorable action of bran on the digestive organs renders this mixture rather better than that with cotton-seed meal (which has a costive effect upon the bowels) and altogether better for horses.

Lastly, for feeding swine or calves the mixture of corn-meal and skimmed milk in the proportion of 10 of milk to two of corn, will be found very appropriate and useful. The nutritive ratio of this food is one to five, an excellent one for young growing animals, and one that makes the very best pork for domestic use. I have fed pigs for many years on this kind of mixed food and had them fit for market at any day from an age of four months up to 10 or 12, and without carrying them over the winter, excepting those that are farrowed late in the fall or early in the winter and which are kept over the first winter at very little cost.

On the whole, corn is the most valuable feeding grain we have. If used with intelligent discretion, it is a safe food alone; but when mixed with other foods it may be made more profitable under a wide range of possibilities.

"PATENT SILAGE" AGAIN.

Our readers know that we have several times referred to the "patent silage" prepared by means of the silo governor—an invention of Mr. S. M. Colcord, of Massachusetts. We have long believed that this process of preparing silage will, some day, revolutionize the ensilage business, enable siloists to prepare a more generally uniform article, and make baled silage almost as important a product as baled hay.

The early frosts of last fall cut many a corn-field that would have been almost a total loss but for the silo. On page 832 of last year's volume of the Rural, Prof. Storer gave an excellent account of the action of frost upon corn fodder. He suggested that frosted corn fodder might be saved from harm by putting it into the silo while still frozen. There were many who objected to this, and some have reported partial failures with silage from the frozen stalks. The following letter from Mr. Colcord will be read with interest by those who mean to farm with such skill and judgment that they may not be beaten by the frost

"The best preserved samples of corn forage that I have yet seen were made from the poorest corn fodder I ever raised, which was very badly frost-bitten early in September. I send you herewith a sample of silage together with a bottle of juice drawn from the bottom of the silo at the center, after I had drained off two gallons to wash out the pipes. This juice is free from acid, and has been so all the time it has been in the silo, and I presume it will remain so when you get it. The real odor and taste of it you may get by leaving the cork out of the bottle 24 hours or longer. There is not a particle of waste in the silo or at the feeding trough. The cattle are each eating 60 pounds daily and would eat 75 if they could get it, and are gaining very fast upon it, and yet the corn looked so bad in the field that a neighbor told me that if I would give it to him he would not harvest it, though it was a great deal better than his, and better than an average of all raised around here.

Now the point is, if the silo will save a crop like this, corn is the surest crop to raise for cattle, as well as the best and most economical. My silo is now arranged so that I get any pressure I want at any time, the juice can be made to run from the bottom like cider from a cider-mill. This gives me uniform pressure, consistence and moisture throughout, and I am able to get the conditions for capillary attraction to work perfectly, so that I can wring out the juice from the silage with one hand from any part of the silo. There is no heat or fermentation in the silo and no silage odor in the barn, the silo, or on the hands or clothing. I take the temperature, measure the juice, and weigh every ration given to the cattle daily, and I weigh all the cattle every 30 days. All things are arranged to do it with less loss of time and less trouble and labor than by any other method, with better results, greater economy and greater assurance of success."

The R. N.-Y. can only say that the sample of silage was in perfect condition—sweet and fragrant. The Experiment Stations should test this patent system of silage-making side by side with the ordinary silo. The R. N.-Y. is of the opinion that the difference in the quality of the product will surprise the experimenters.

IMPROVING SEED CORN.

A. C. GLIDDEN.

This has always been a favorite project with farmers and seedsmen. The facility with which changes in its character can be made, has fostered the plausible theory that an ideal corn could be produced, that would become universally popular, and suited to the wants of all sections. Some have honestly, no doubt, thought this ideal corn had been found and have disseminated what they believed to be it through advertising agencies, in the expectation that it would sustain its local popularity wherever planted; but the history of every such enterprise is that, except in similar climate and latitude, the variety has proved a failure, and been condemned as a fraud. The Leaming corn is a case in point. That came to the front with a brass-band accompaniment. Michigan farmers invested largely in it, but it was never planted a second time. The long ear and kernel of the original samples, became here a short ear with a big butt, something of the form of a pine-apple, having much shorter kernels than the seed planted. It is quite possible to improve the local varieties into the ideal corn for each locality, but length of season, degrees of humidity and of temperature, work greater changes than is possible by manipulation by the hand of man. Corn brought from the south and carried only a degree of latitude toward the north, is about 10 days later, grows taller, and has a greater spread of leaf; but grow this corn continuously, planting every year from the last year's crop, and it will in a few years approximate to the native kinds. It is quite as likely to be less valuable on account of some peculiarity of ear or stalk than the old tried sorts that have become native, or suited, by long cultivation, to the environment.

The Hathaway dent, for instance, seems best suited for the four counties of Michigan bordering on the Indiana line; but as we go east to the three bordering on Ohio it loses its popularity, and regains it further south in Ohio, following isothermal lines. This variety was sent by Mr. Hathaway to the Michigan Agricultural College, several years ago, for trial there. Lansing is 70 miles north, and the same distance east from the home of Mr. Hathaway in Cass county. The corn was planted continuously for several years, and became at last quite desirable for that locality. The seed was lost a year ago, and they sent to Mr. Hathaway for a fresh supply, and this proved another failure at the college last year, when compared with the home-grown kinds. It was several days later, and not like the corn bred by them from the first sample seed. This had become indigenous, as it were, or adapted to the soil and climate.

I attended the Grayling institute this winter, 80 miles north from Lansing. To illustrate his subject, one local essayist had samples of corn which had proved best adapted to that locality. It was an eight-rowed flint variety, with short ears, but was early enough to ripen before frost. He had tried the Dutton, but while that was his ideal corn, the season was not quite long enough for its perfect maturity. The tendency there, he said, was toward a shorter ear and kernel, and he conceived the idea that if the native variety and the Dutton were taken to the college farm, and mixed together and planted about three years, there would come a resultant variety especially adapted to the Grayling climate. He thought the Dutton would gain in earliness by the hybridization, and the native corn becomes patterned after the Dutton in length of ear and kernel, and that these traits would become fixed in its growth and that they could be transferred to another locality where they would become permanent. Here is just where the breeding of plants and animals differs. When the former are transferred from native to alien soil and climate, a constant evolution is going on suiting them to the changed conditions. Seeds of Lucerne coming direct from Germany and planted here furnish plants that will not stand our winters, but the evolution going on in the plant from Germany to Chili, and thence up the Pacific coast, and across the mountains to the table-lands of Colorado, has transformed the tender Lucerne to the hardy Alfalfa.

I believe corn has no characteristic of value, that will bear transportation across one degree of latitude and remain. I think it more vacillating and changeable than any other of our grain crops. There is a vast deal in selection from each individual crop for seed for the next crop on the same farm. I have the same variety I have planted for 20 years on the same farm. It was originally what was then called the large yellow dent and came from further south. At first the stalks grew 14 feet tall and the ears were breast-high on the stalks. It gradually moderated its extreme height and set ears nearer the ground. By selection I have secured ears of more uniform diameter from end to end, and the corn is more plentiful and less indented. It formerly had red and white cobs mixed; now, the cobs are all red. I have tried new sorts occasionally alongside of it; but have never seen any quality in the new that induced me to change. A well grown ear—one that has had a chance to grow to its normal size—will assume the type of the ideal seed ear, while a starved plant coming from a kernel off the same ear as the first, will generate a nubbin, "no good" for seed.

The efforts of seedsmen to breed a type of field corn that shall prove valuable when widely distributed is futile. There is a more universal opportunity for effective enterprise. Every farm should be an experiment station to improve the native sort. This duty cannot be delegated to some person over the line in another county even, but must be an individual enterprise for individual use. To grow good seed corn, plant fewer kernels to the hill, and do everything on your part which nature seems to demand, and leave the breeding to the forces of nature, that always act consistently with the surroundings.

Van Buren Co., Michigan.

PROF. G. E. MORROW.

There are many excellent varieties of corn. I have not thought the production of new varieties especially important—especially for farmers generally. Neither have I thought change of seed necessarily desirable. I have steadily advised farmers to keep tested and well-liked varieties as pure as possible, trying new claimants to favor on a small scale. The plan of having a small plot especially for seed corn is a good one. If not convenient to have it separate from the regular fields, specially selected seed may be planted at one side or in one corner. Cutting the tassels from, or entirely removing undesirable stalks would tend to improvement—reducing the percentage of barren stalks, for instance.

Unless replanting is necessary, I would not favor planting at different times or planting different varieties in order to keep up the supply of pollen. Sometimes good results would doubtless be secured, but, I doubt if much gain will usually result. This opinion is not based on personal experience.

Purposed or accidental cross-fertilization of varieties sometimes gives very satisfactory results; but I have some prejudice in favor of keeping varieties pure in all ordinary cases. Selecting a good variety—good in its adapta-

tion to the locality—and then careful and persistent selection of seed with reference to its having all the qualities desired—hence selection from the stalk rather than from the crib—and giving the crop the best possible "conditions of life" in the way of soil and cultivation, I believe the most practicable means by which to improve corn by most farmers.

Ordinarily, on any but an experimental farm, I think I should cultivate but two varieties of field corn, and those alike in color and general type; one being an early-ripening variety; the other a medium-late variety, but usually larger in stalk and ear and yielding a few bushels more per acre than the early variety, to which about one-fourth of the total acreage in corn would be planted, for early autumn feeding. Such a variety we also find valuable when unusually late planting is necessary from any cause.

University of Illinois, Champaign.

ENSILAGE NOTES.

TWO QUESTIONS ANSWERED.

G. S. N., Middleburgh, Pa.—I wish to try an acre of ensilage or maybe two, and do not wish to go to a great expense. How can I construct a cheap silo? I have plenty of room at one end of my barn and I have a stable for which there is no particular use—bank barn. Could I construct a silo in there by running it up into the mow—say 15 or 18 feet—and lining it with heavy paper. On two sides there is a stone wall eight feet high. I suppose the silo must be air-tight; above it (the mow) joins the barn floor and I could cut the corn-stalks right into the pit without any trouble. I would prefer to grow roots, but my land is not adapted for this crop, while corn or clover can grow. Must the silage be packed very tight, and must the silo be filled right along without stopping? How large should the silo be for 12 to 20 tons from an acre? At what stage of growth should the corn be cut? Dry corn fodder is a poor feed for milk, and on one or two acres I could grow as much as I need.

ANSWERED BY JOHN GOULD, OHIO.

YES, you can construct a silo admirably in the stable of the bank barn. Put on false girts so as to bring them out flush with the inside edge of the silo. Set up 16-feet-long studding, letting them go down *inside* of the wall, but resting against it. Set them 16 inches apart: 2x4 inch stuff will be heavy enough Line this up with cheap inch pine or hemlock lumber. Paper this with ordinary tarred paper, then put on another layer of cheap lumber over this paper, and nail the two boards and paper strongly to the studding. This arrangement avoids all bother and failure in making an air-tight joint between the wood and stone and makes an air space, not only between the wall but the barn, and is all the protection that a silo needs from cold weather. When the silo is complete, paint it thoroughly on the inside with gas-tar and resin, using about three or four pounds to the gallon. Melt it over a slow fire, and apply boiling-hot. This makes an air-and-moisture-proof wall. It would be well to paint the lower end of the studding with the same "drop" before setting up.

This is the cheapest silo yet built that is both durable, and superior to a stone wall for keeping silage. Ensilage has now become so established that for cows or sheep one cannot afford to raise roots. Prof. Sanborn's figures on my silage crop make silage cost about half as much to raise and pit as roots; and he makes it worth over three times as much to feed stock.

The silo can be filled fast or slow, as the farmer may be situated. The corn for the silo should be allowed to become mature—commencing to pass out of the milk stage—before silo filling should commence. If you plant the Virginia corn (and I doubt if you can afford to plant any other), plant early and do not use over eight quarts per acre, and do not root-prune it—cultivate as shallow as possible. You can easily put an acre—20 tons of silage—in a box 10 feet square; but don't build a silo so small! Build one 12x12 and 16 feet deep at least, and keep stock enough to eat what it will hold—say 50 tons, which 10 cows will eat in 20 weeks, or longer, if some dry feed should be given along with the silage corn.

Packing silage very closely in the pits when filling is not as popular now as it once was. Tramp as little as possible when filling, but when it gets *hot*, then tramp along the walls and sides. When the silo is filled, do not cover it at once. Let it remain uncovered four or five days to allow the silage to settle, heat, and throw out the air. Then you can cover it, or not, as you choose. In any event, do not put on more than a foot of straw tramped down, and a few old boards to hold it in place. If no cover at all is put on, little damage will be done—not more than three inches will mold, and the molded layer of itself makes an air-proof cover; so, taking time, labor and material into account, I doubt if so cheap a cover can be used as no cover at all.

F. M., Springford, Ontario, Canada.—I wish to build a silo; would it be advisable to build it of brick and stone, as I have these and wood is scarce? If I have not enough brick and stone to build it, could I finish the walls with wood? If so, how could the wood be joined on the brick and stone so that the silo will be air-tight? Would it be advisable to build it partially underground, the soil being sandy? What kind of a floor would it need? Would it be necessary to plaster inside of the brick, and how? Which is the better for ensilage corn—Mammoth Southern sweet or our common northern field corn, letting the field corn stand till in the glazing state?

ANSWERED BY JOHN GOULD.

Judging from what I saw and heard during my recent trip to Canada, I doubt if you can profitably build either a stone or brick silo. Lumber is not so scarce that you cannot get good fair pine or hemlock for about $12 per 1,000 feet and the silo if built in the barn, need not cost more than $75, all told. You can, however, make the walls of brick or stone, but I would line them with wood inside: even then, in your cold climate, the frost would go through stone or brick again and again, and more or less damage would be done to the silage by repeated freezings and thawings along the walls, and this is almost wholly avoided by the use of wooden walls and an air-space. I think that a silo built of wood, the studding set 16 inches apart, lined upon the inside with two thicknesses of inch lumber, with tarred paper between, and covered on the outside with ordinary matched, or "drop" siding, will make the best and cheapest silo. Gas-tar and resin melted together and applied to the inside, boiling hot, will make the silo wholly durable. It is hard work to so join brick and stone with wood that, in the end, your silo will not practically amount to a wooden one; for from the wooden superstructure you will need to run "spurs" down the inside of the wall to the ground, and start the "lining" from the bottom; else the lateral pressure will start the wooden addition off from the wall, and under it more or less air will enter, that will be fatal to more or less silage. Make all the silo either of wood or stone. The uniting of the two usually ends in a sort of a "new-wine-in-old-bottles" affair,

There is no advantage in building a silo partially underground. It only involves extra labor and expense, for which no one gets pay. The silage doesn't keep any better by using a cellar silo. The man who has a silo below ground, and has to elevate the silage to the cattle, will soon find that it is far better to let the carrier of the cutter put the silage high enough at the start, by having the bottom of the silo as high as the feeding floor. The silos built on the surface of the ground, or built in the barn, starting from the basement or ground floor, are now most popular.

A silo does not need any floor beyond the natural soil, well pounded down. It may be dug out from the center a few inches, and the surplus dirt may be thrown up around the inside walls so as to make the bottom somewhat concave. This is superior to stone, grout, or a cement bottom. A half inch of straw may be thrown over the bottom, but this is wholly unnecessary. If the silo is built of brick or stone, you will need to plaster it, and make a very smooth face, or else the silage will bind against the rough walls and "drag," and not settle properly. This cement plaster should be the best. The walls may be laid up with a rough face to which the plaster will cling and harden.

Possibly in Canada you might find that your own best, most rank-growing kinds of field corn might be best. I think if you will plant "B & W" Southern corn thin—about eight quarts per acre—early, if you can "chance it" until September 20, you will have little difficulty in getting a large yield of good silage from it; but you will not go wrong with your own kinds, only you may fail in getting so large a crop. Let the crop, whatever the kind of corn it may be, get mature, passing out of the milk stage; then fill the silo.

A good many lath and plaster a silo using what is known as bevel lath put on a little bias so as to have the lath cross the cracks of the sheeting or inside lining boards. The cement plaster is made very strong, and given a smooth finish. In the event of the cement proving poor, it makes a bad job, and I doubt if the plastered silo will, in the end, prove superior to one double-boarded and painted with hot asphalt, or gas-tar and resin.

POTATO GROWING IN WISCONSIN.

PROFESSOR E. S. GOFF.

Profits from a poor soil; culture; varieties; insecticides; digging; storage; marketing.

WAUSHARA and Marquette Counties in Central Wisconsin offer a striking illustration of what may sometimes be accomplished upon a poor soil by growing a special crop that is adapted to it. The soil of these counties consists largely of a poor, yellow sand, of little value for ordinary mixed farming. By the help of the fertility furnished by clover, however, it yields good crops of potatoes of superior quality, and these two counties are becoming famous in the Northwest as the home of this most important article of food. It is not very uncommon to find a grower who raises 100 acres of potatoes in a single season, though it must be confessed that the largest net profits have not generally come from these extravagantly large plantations. During a recent visit to this region, I had an opportunity of learning something of the methods of culture practiced there, and thinking the information may have some interest to RURAL readers, I send an abstract of it.

The potatoes are generally grown upon clover sod. After having been well plowed, the ground is marked one way with an ordinary corn-marker, and the other way with the riding cultivator having its shares arranged to form a furrow four to six inches deep. The hills are spaced three to three-and-a-half feet apart both ways. A single two-eye cutting from a tuber of medium size is dropped in each hill, when the row is covered with the cultivator. It is thought necessary to plant at least four inches deep A few growers prefer to use whole potatoes of small to medium size, but the majority appeared to favor the two-eye cuttings. After the planting, the smoothing harrow is started, and its use is continued at intervals until the tops are two to three inches high. The Colorado beetle is destroyed with Paris-green either mixed with land plaster, or suspended in water. Many growers think that the fertilizing value of the plaster is sufficient to repay its cost. Machines for applying the Paris-green mixtures are being tested, but have not as yet come much into use.

The crop is dug exclusively by hand, the potato digger not having yet been tried to any considerable extent. In the light, sandy soil, the cost of digging by hand is not great, and some growers regard the picking up as a more serious matter than the digging. The varieties most grown appeared to be White Star and Early and Late Beauty of Hebron. The Empire State is being tested, and seems to be generally satisfactory. But few sorts are grown, as the market calls for but three or four standard varieties. The crop is quite largely purchased by local buyers who store the potatoes in elevators at the railway stations. I visited one of these elevators which was said to contain 20,000 bushels. It was a long, rather narrow building, only one story high, but with a cellar extending under the whole. The potatoes were stored in huge bins reaching nearly to the ceiling and occupying the entire floors, with the exception of a narrow walk next to the outside.

The building was built with double walls, and the potatoes were kept from freezing by stoves. Potatoes are shipped from these elevators to Milwaukee and Chicago, the principal markets for this region, during moderate weather throughout the winter. The production of potatoes in these counties appears to be rapidly increasing. It would probably increase faster than it does, but for the fact that potatoes being a very bulky crop, can be profitably grown only within a few miles of a railway station. The price at present rules low—from 18 to 20 cents per bushel—but it is claimed that at these figures the crop is fairly profitable. The price occasionally rises to 50 and even 75 cents per bushel, and then the crop proves highly remunerative. About 200 bushels to the acre are considered a good yield, and the net profit from such a crop when sold at a fair price is often sufficient to pay for the land that produced it.

Geneva, N. Y.

Rural Topics.

LIST OF HORTICULTURISTS AT THE EXPERIMENT STATIONS.

THE Committee appointed by the recent convention of Agricultural Colleges and Experiment Stations, held at Knoxville, Tenn., to further co-operative work in horticulture, have as yet been unable to get the list of the Horticulturists of the stations completed, and have, also, not been able to learn the line of work which the different Stations intend to pursue; but as there is a strong desire on the part of many originators and growers of specialties in horticulture to enter into correspondence with the Stations concerning the testing of new fruits and vegetables, the committee have decided to publish this incomplete list of those having the horticultural work in charge at the several Stations mentioned below:

Alabama, Auburn, P. H. Well, M. E., Ph. D, Horticulturist and Meteorologist.

Arkansas, Fayetteville, E. S. Richman, B. S., Horticulturist.

Colorado, Fort Collins, James Cassidy, P.S., Botanist and Horticulturist.

Delaware, Newark, M. H Beckwith, Horticulturist and Entomologist.

Illinois, Champaign, T. J. Burrill, Ph.D., Horticulturist and Botanist.

Indiana, Lafayette, James Troop, M. S., Horticulturist.

Iowa, Ames, J. L. Budd, M.H., Horticulturist.

Kansas, Manhattan, Edward A. Popenoe, A.M., Horticulturist.

Kentucky, Lexington, A. R. Crandall, Ph. D., Botanist.

Maine, Irons, F. L Harvey, M.S., Botanist and Entomologist.

Maryland, Agricultural College P. O., William H. Bishop, B. S., Horticulturist.

Massachusetts, Amherst, Samuel T. Maynard, B. Sc., Horticulturist.

Michigan. Agricultural College, L. R Taft, M. S, Horticulturist.

Minnesota, St. Anthony Park, Samuel B. Green, B. S., Horticulturist.

Mississippi, Agricultural College, A. B. McKay, B S., Horticulturist

Missouri, Columbia, J. W. Clark, B. S., Horticulturist and Entomologist.

Nebraska, Lincoln, Charles E. Bessey, Ph. D., Director and Botanist.

Nevada, Reno, Walter McNab Miller, B. S., Botanist.

New York, Ithaca, Liberty H. Baily, M. S., Horticulturist.

New York, Geneva, Emmett S. Goff, Horticulturist.

New Jersey, New Brunswick, Byron D. Halsted, Sc. D., Horticulturist.

North Carolina, Raleigh, Gerald McCarthy, B. Sc., Botanist.

Oregon, Corvallis, E. R. Lake, M. S., Botanist and Horticulturist.

Ohio, Columbus, William Green, Horticulturist.

Pennsylvania, State College, Centre County, George C. Butz, M. S., Horticulturist.

South Carolina, Columbia, G T. Atkinson, Ph. D., Botanist and Entomologist.

Tennessee, Knoxville, T. Lamson Scribner, B. S., Botanist and Horticulturist.

Texas, College Station, T. L. Brunk, B. Sc., Horticulturist.

Vermont, Burlington, C W. Minott, B. Agr., Horticulturist.

Virginia, Blacksburg, Wm. B. Alwood, Botanist and Entomologist.

MYSTERY OF THE SEED TRADE.

NO. II.

Multiplication of varieties:—by giving new names to old or undeserving new kinds; by introduction of the same sorts by different seedsmen under different names; by tacking on special names to European varieties; by reviving by-gone kinds under new names; catalogues to be cut down one-half with profit to seedsman and customer; choice kinds of peas, tomatoes; fraudulent deception; a matter worthy of grave consideration.

To the criticisms of seedsmen in a former article, may be added one on their multiplication of varieties. This is done in two ways—by giving a new name to a variety already named, or by naming one that by reason of its slight variation from a well known kind is undeserving of it. Take peas, for example. The R. N.-Y. has often remarked that many so-called varieties were one and the same. This applies particularly to the extra early white peas that have almost as many names as there are prominent seedsmen. The difference, in the whole, is no greater than must be under a close or careless selection of seed stock. Numerous tests by the writer have convinced him of this. The moment one seedsman puts out a new sort, others follow suit; that is, they put out a pea just like the newcomer under another name. This is illustrated in the Alaska. The year after its introduction numerous other extra-early blue peas appeared, all equal if not superior to it! It was said by them to be nothing but the

Kentish Invicta; still they had names for their introductions besides Kentish Invicta.

Sometimes the same thing is introduced simultaneously by two seedsmen, as the Mikado and Turner's Hybrid tomato, and the Chartier and Mammoth Long Rose radish. If these are not identical, they are so nearly alike that it is to be regretted that they came out under different names.

In introducing new vegetables from Europe it is very common for the dealer to tack on a name of his own, the consequence of which is that there will be two or three names to the same thing.

Then a slight variation even if an improvement, does not justify a new name. There are cases where a sort has been dropped for some years and then appeared under another name. I think the Green-and-Gold watermelon is a case of this kind. Thirty years ago the writer grew a melon that answers the description of this sort, even to its granular flesh, and this melon was the leading market melon of the vicinity. It was superseded by red-fleshed melons and it is doubtful whether a seed of it can be found there now. It went then under the name of Yellow Mountain Sprout. This is not meant to antagonize the Green-and-Gold which is a very good melon, large and early.

It seems to me that a seedsman who would cut down his catalogue one-half, putting in his list only the best sorts of each vegetable, and never adding a new sort until it has been thoroughly proved that it is a real improvement, could establish a business. It would perhaps tax him at first for a year or two; but this course would bring unusual confidence, and he would retain his old customers and add new ones. See what a cutting down could be made with profit. Many catalogues have from 40 to 50 varieties of peas. Take for extra-early one white and one blue sort, the Advancer for an early wrinkled sort, the American Wonder and Little Gem for dwarfs, and for later, Stratagem and Champion of England; in all, seven varieties. How many more need be added to this list? Say three more of your choice and make an even ten—that would be better for the seller and the buyer too, for the latter would not fail to have the best of the lot. Take the tomato, of which 30 or 40 sorts are catalogued. A half dozen of the best should fill all wants. For a purple sort, Acme or Essex Hybrid, about the same thing; for a scarlet, Perfection; the Mikado for size and productiveness; the Optimus as a combination of good qualities, and that new bush variety, the Dwarf Champion. These would be my choice. The remainder are not so good or at least no better. Why cumber the books and drawers with them?

There are cases without doubt where actual deception has been practiced by palming off an old variety for a new one. Not long since a case was told me of an Eastern dealer who advertised a new sort of potato. I can name it, but perhaps it would be better not to do so. It was described as much earlier and better than the Early Rose. His scheme was successful; many orders came in and his profits went up into the thousands. Many of his customers reported splendid crops, finer and earlier than Early Rose. All the same, he had filled his order from Early Rose potatoes bought from the commission merchant around the corner. How about the indorsement of his customers? That is easily explained—they had given them better soil and culture than usual. This, as the fable writer says, teaches two lessons—that there are tricks in all trades, and that a common sort by good culture may appear so good as to be thought new.

This is really an important matter concerning both buyer and seller, as already intimated. Of course, these lists must vary somewhat from one section to another, and some sorts that should be obsolete would still be called for; but in time the relative values of varieties could be established by honest representations, and then our catalogues would be reduced to at least half their present size.

ANON.

CORN FAILURE.—On land seemingly well prepared for corn, and on which it comes up well, looking green and even rank, it not infrequently fails to ear well; or if many ears are set, they are short, or the tips, even for several inches, are bare of grain. This has been my own experience once or twice; and subsequent experience has shown me the probability of what seemed to be taught by Prof. Atwater's Connecticut experiments, that corn requires (at least on our light soils) potash and phosphoric acid much more than nitrogen. If there is any crop that is better grown with chemicals than with dung, corn is the one. It "looks good" to see the corn have a very dark green shade, such as rich dung or nitrogen salts will give it; but when harvest comes, a field that is almost yellow by contrast will often show a much better earing. H.

Everywhere.

THE COUNTRY'S CORN.

VARIETIES, TOOLS, MANURES, CULTURE.

QUESTIONS.

1. *What variety of field corn do you prefer? Why?*
2. *How much shelled corn will it give per acre?*
3. *How far apart do you plant?*
4. *What manures give you the best results for corn? Give a list of the tools you use in its cultivation.*

ANSWERS FROM FARMERS.

RURAL SPECIAL REPORTS.

Canada.

WILSONVILLE, Ont.—1. Having tried the three varieties commonly grown around here—namely the common yellow, King Philip and Red Glaze—I have fallen back on the last variety because it matures a week or ten days earlier than the others. It is also a heavier cropper, the ears being longer on an average. 2. As far as the crop of 1888 is concerned, I am not able to tell the amount of shelled corn per acre; of corn in the ear, from 4½ acres I harvested 550 bushels of sound, hard corn and about 75 bushels of inferior. The crop of '87 averaged 50 bushels of shelled corn to the acre. 3. I plant in hills three feet 10 inches apart each way. 4. No manure is better for corn than well rotted barn-yard manure plowed under. After the corn is up I top-dress in the hill with plaster, hen manure and unleached wood ashes. After the corn is up I use no tool but the Champion one-horse cultivator and hoe. I usually fall-plow my corn ground, cultivate frequently in the spring about the middle of May. I draw on manure at the rate of 15 loads to the acre and plow about six inches deep. I plant from May 20 to 24. After the corn is up I cultivate twice before hoeing. When hoeing I thin the corn to four plants in a hill. After this I cultivate once a week until the corn is too large. H. F.

BOX GROVE, Ontario.—In this part of Canada we don't depend much on corn. I live about 20 miles north of Toronto. Some farmers don't grow any and others only one or two acres. I have for a few years past been growing Compton's Yellow and have found it as early as any we have had in this locality. I have not been particular to learn the quantity raised per acre. One of the neighbors had a field put in on shares, on which the measured yield was 120 bushels per acre. We plant about three feet apart. We use no fertilizer but barn-yard manure. The Planet Jr. cultivator and other tools of similar construction are mostly used for cultivating the soil.

G. F.

BRAMPTON, Ont.—1. White flint, because it ripens evenly and is a good yielder. 2. I can't answer. We don't grow much of it. 3. Three feet each way in the rows. 4. Hog manure well worked into the soil. The plow scuffler and hoe, working the scuffler both ways in the row. Red-cob corn is used for ensilage.

J. K.

RENFREW, Ont.—We are too far north to make the growing of corn a success as a field crop. Only the early varieties, such as Compton's Early, can be grown successfully.

A. A. W.

CHIPAWA, Ont.—1. On my soil (a clay loam), I prefer eight-rowed yellow corn or Red Glazed, because they are hardy, early, and productive. 2. Yield per acre, 35, 40 or 50 bushels. 3. We plant three feet six inches each way. 4. Cow manure of a good quality we find best. We use about 15 good square loads per acre, and a liberal sprinkling of wood ashes on top of the hill after planting. Before planting, we put the land in a complete state of fallow, and if the weeds come in abundance with the corn, we give it a dressing with a light harrow. If the land becomes packed with heavy rains, we break the center of the rows with a two-horse cultivator, removing such blades as are unnecessary, to avoid injuring the young corn. We use the Cock Shull Cultivator. We cultivate at least six times—the oftener the better. The last dressing is with a shovel plow. Some parts of the township are excellent for corn and two or three of the farmers tried Western corn, but the location must be favorable, or it will not ripen perfectly. The crop of 1888 was excellent, and the average yield per acre was about 100 bushels of ears. G. G.

Colorado.

STEAMBOAT SPRINGS, Routt County.—Corn is not a product of this country. We are west of the Rocky Mountain range—altitude 6,500 feet. The nights are too cool and the seasons too short. For such small grains as wheat and oats, our climate is good. I am about 14 miles from the summit of the range.

L. D. C.

PARKER, Douglass County.—1. I plant a yellow dent, as it suckers abundantly, making a large amount of nice fodder. Moreover, it matures early and shells with much ease. 2. In this dry country without irrigation I raised, last season, a little over 30 bushels to the acre on a piece of 11 acres which had been planted to corn 22 years without any manure until last year, when I spread on a little over 200 loads of barn-yard manure and plowed it in. The season being very dry, I think the result not as good as it would have been if it had been more moist. I used only barnyard manure. 3. I planted my corn three feet 10 inches apart both ways. 4. I used a one-horse cultivator and gave perfectly flat culture. I would not use anything else in corn or potatoes. J. W.

Connecticut.

CORNWALL, Litchfield County.—1. Golden Dew Drop for earliness and small-cob for meal; Tuscarora for feeding without grinding, as it is not flinty, and poultry, horses and cattle prefer it to any other. 2. Sixty to 75 bushels. The crop has been blown down badly for two years, which lessened the yield one-third or more. 3. Three and one-half feet. 4. Barn-yard supplemented with commercial fertilizers. Acme harrow and cultivator. C. P. S.

NORTHFIELD, Litchfield County.—1. I prefer a kind that my father before me used. It is almost exactly like the Pond corn in all respects. I prefer it because it ripens early and the stalks are small with small cobs and large kernels. I have tried many kinds; but none appears to equal this in combined results. 2. I cannot say how much shelled corn it will yield per acre, but I know it yields well. 3. I plant 3½ feet apart each way with four or five kernels to the hill. 4. Barn-yard manure gives me better results than anything else I have tried. I use a Hillsdale swivel plow to plow the land, turning the latter all over one way, then I harrow it down with a square harrow of my own make, and bush it as smooth as possible. Next I mark it with a pole and chains four rows at a time. I plant it with a northwestern corn planter, and cultivate it with a cultivator made at Ithaca, N. Y. I cultivate it both ways, leaving but little to hoe by hand. E. M. C.

CLARK'S FALLS, New London County.—1. I am growing a variety of my own production having the old Rhode Island White Cap corn as a basis, crossed with the yellow Longfellow and a short variety of White Cap corn. This gives an ear about 10 inches long, eight to 10-rowed with a medium cob, well capped over. I prefer it for this soil, as it gives better results. 2. Under good culture it averages 50 bushels of shelled corn per acre. 3. 3½x3½ feet; four stalks to the hill. 4. In a series of experiments begun last season, but not completed on account of bad weather, superphospate gave a little the best results. I formerly used Bowker's Hill and Drill phosphate and obtained better results than with any other complete manure. The land is plowed and harrowed thoroughly and allowed to remain for a few days, then marked both ways and planted. The crop is cultivated until waist-high, being in the meantime hoed twice. For tools I have used plow, harrow, cultivator and hoes. J. B. P.

Idaho.

ALBION, Cassia County.—This is not a corn country. Sweet corn alone is raised here. It grows very nicely and is entirely clear of any insects that are in the habit of eating inside of the husk. The only tool we use is the common garden hoe. W. H.

Illinois.

CHATSWORTH, Livingston County.—Corn is one of the principal crops raised here. Soil a vegetable mold dark colored on stiff yellow clay subsoil. There has been a good deal of tile-draining on the low grounds during the last five years. All raise dent corn, mostly early varieties, growing from eight to 10 feet high. Large varieties such as Shoe-peg and Chester County Mammoth, make large stalks, but fail to mature when we have a cool, wet summer. Season, manner of culture, variety and brains have so much to do with the yield that it is hard to estimate the average; but it will not vary much from 35 bushels of shelled corn per acre. I have seen large fields that would make 75 bushels and others that would not make 15. It is all planted with two-horse planters and check-rowers, and we plant two rows at once three feet six inches to three feet 10 inches apart. No commercial fertilizer has ever been used in this neighborhood on corn. Stable manure is mostly spread when hauled, and when a good coat has been plowed under, its effects can be seen in a stronger growth of corn for a number of years. Most farmers have not learned the value of manure. The best crops are raised by fall plowing, stirring the surface in the spring with cultivator, and harrow, or with an Acme or disk harrow. All use two-horse cultivators cultivating both sides of the row at once. Most of them use shovels which work too deep for a large corn. Some use the gopher which ridges up too much. Some have knives which work much like the Acme harrow. J. R. B.

JERSEYVILLE, Jersey County.—We have no special name for our corn except Gold Drop yellow, or large 16-rowed, white. These are the only kinds largely planted. The yellow made 65 bushels on plowed land; the white three years from sod, 60 bushels per acre. Our corn is planted with a common planter three feet six inches apart, and checked the same distance apart. All manures we make are put on grass or wheat land. When we think the land is tired out for wheat, we use it for clover. We have been using a two-horse cultivator to a very large extent, as we are satisfied that it gives better results than a double-corn plow. M. C. S.

BEVERLY, Adams County.—1. I use the common yellow corn, because it turns out as well as any, and is better for stock. 2. I do not shell my corn; but I get 60 bushels to the acre of corn in the ear. 3. I plant three feet 10 inches apart. 4. I always use stable manure. Tools: the three-horse plow, and I harrow as much as possible, and cultivate. W. B.

BELLEVILLE, St. Clair County.—1. I plant yellow dent, because it matures early and yields more than any other large variety I can get. 2. From 40 to 60 bushels per acre. 3. The rows are 3½ feet apart. I plant with a drill, and leave the plants standing 12 to 15 inches in the row. 4. We apply all the barn-yard and stable manure we can get and turn under a clover sod to get the best crop, and give a rotation of crops. We use the two-horse harrow with straight teeth, either before or after the corn has come up. Next we use the two-horse cultivator, giving three plowings, following the second plowing with the hoe, cutting every weed missed by the cultivator, and all supernumerary stalks of corn. E. J. M.

Indiana.

BURLINGTON, Carroll County.—We prefer the largest-eared corn that we can get, which will ripen by the middle of September. Such corn will produce more per acre with us than small varieties. Our corn will average 60 bushels per acre. We plant 3½ feet apart each way, with three stalks to the hill. We use only stable manure. We stable most of our stock in winter, using plenty of straw for bedding, making all the manure we can. The best fertilizer that we have for our soil is clover. We plow up a clover sod for corn; seed the corn to wheat in the fall; sow the wheat ground with clover in the spring; let it lie one summer in clover and plow again for corn. I was taught in my younger days to cultivate corn by plowing deep with the double-shovel plow or the two-horse cultivator; but from reading the RURAL'S experience I have learned better. Now I use the spring-tooth cultivator; if I think the ground needs stirring deeper I plow the second tending, then use the cultivator again. J. M.

WATERLOO, De Kalb County.—1. I have grown for several years a large yellow variety of field corn streaked with red, with a small red cob and deep, wide grains—evidently a mixed sort. I prefer this to any other I have tried, because it yields well, is a sure grower, and will mature here if grown on rich, warm soil, and on any ground in a favorable year

The stalks are medium and don't sucker, and, barring its slow maturity, it pleases me as well as any I could get. 2. About 60 bushels on an average. 3. 3½ feet each way. 4. So long as I feed all crops raised on the farm to sheep and other stock, I have all the stable manure I can use, and, of course, have no need of commercial fertilizers. My soil—a sandy loam—is in a high state of cultivation, and hence the more simple tools do me, such as a cultivator, common harrow and plank drag. The latter is seldom used except as a leveler.

C. C. B.

Indian Territory.

OO-WA-LA, Cherokee Nation.—I prefer large white dent corn, because it supplies all demands for corn on the farm, being liked by horses and hogs as well as any, and it is much the best for corn-meal which is a staple article of diet in this country. I cannot give the average yield. My yield the past season was fully 50 bushels per acre. I plant 3 feet 10 inches to four feet each way. I have never used any manure for corn. The tools used in raising a crop differ somewhat, according to the ability of the farmer, and also according to the number of acres to be cultivated. The really necessary tools for 40 acres would be a turning plow, harrow, two-horse cultivator, and, possibly, a hoe, yes, and a corn planter, a two-horse check-rower preferred.

J. A. F.

Iowa.

LIME SPRING, Howard County.—1. Yellow dent, because it is early and will ripen here. 2. From 30 to 35 bushels. 3. Three feet eight inches apart each way. 4. Barn-yard manure. Drag, Monitor sulky cultivator or four-shovel plow. A. M.

BELLE PLAINE, Benton County.—1. I prefer a yellow red-cob, dent variety, which I have raised for 15 years and improved by selection, because the cob is small, and it yields well, and I have never had any trouble with the seed. 2. On ordinary soil with good cultivation the yield will be 40 bushels of shelled corn per acre. 3. Three feet nine inches apart both ways. 4. Coarse barn-yard manure drawn in spring and plowed under as soon afterwards as possible, gives the very best results. We use a harrow first, then the double-shovel walking or riding plow, which cultivates one row at a time. H. B.

SIBLEY, Osceola County.—1. Any of the medium early dents. The flints are too hard and do not do well here. 2. Forty to 50 bushels well cared for. 3. Three feet eight inches each way. 4. Nothing but stable manure is used here. For tools we use a plow, smoothing harrow, four-row marker, two horse corn-planter and a two-horse cultivator. I prefer the walking. G. S. D.

Kansas.

HOWARD, Elk County.—1. For rich bottom land I prefer large yellow dent, and for thin high land the large white dent, because they yield more per acre than the small, early varieties. 2. From 30 bushels to 75 bushels or more per acre, according to the nature of land and the season. 3. Three feet eight inches apart each way. 4. I use nothing but barn-yard or stable manure for any crop, commercial fertilizers being almost unknown in this country. In cultivating I use a common harrow and two-horse cultivator.

J. C. T.

Maine.

SKOWHEGAN, Somerset County.—The eight-rowed flint is the kind of yellow corn planted here on account of its earliness. Sweet corn is taking its place, as it will purchase more yellow corn than can be grown on the same ground, and be earlier disposed of. The usual practice is to break the ground just before planting, seven inches deep; from 20 to 25 two-horse loads of barn manure are put on per acre. Some put it on the sod and plow it in, and others on the furrow and harrow it in. About 400 pounds of superphosphate are applied in the hills at the time of planting. If no barn manure is used, 200 or 300 pounds more of phosphate are used, half broadcast. The rows are 3½ feet apart; the hills 2½ to three feet apart in the rows. The crop is worked twice thoroughly with a cultivator, and hand hoe, and once or twice more with a common one-horse walking cultivator. From 30 to 40 bushels of yellow corn is the usual crop, and from 1,000 to 2,000 cans of sweet corn per acre. Price to farmers three cents per can of 26 ounces. The wheel-harrow has been and still is a great favorite; but the spring-tooth is being purchased more of late. Barn manure and phosphate used together give better results than either used alone.

J. H. L.

WEST FARMINGTON, Franklin County.—1. The 10-rowed field corn and Dutton corn are used. I prefer the 10-rowed because it is earlier. 2. Average yield 40 to 50 bushels of shelled corn per acre. 3. We plant in hills three feet apart. 4. I use the finest rotted barn-yard manure—sheep manure mostly. We plant mostly by hand, and use a horse cultivator in cultivating. G. J. P.

CARIBOU, Aroostook County.—We are in the far Northeast of Maine and don't raise any field corn. F. P. K.

Maryland.

SWANTON, Garrett County.—1. The King Philip and several varieties of the white flint, because my altitude is about 2,500 feet. 2. From 50 to 80 bushels. 3. 3½ x 3½ feet. 4. Barn-yard manure plowed under and ground bone and hard-wood ashes sown broadcast and harrowed in, with a little ammonia to each hill as a starter. We use the Thomas Smoothing harrow till the corn is five or six inches high and then a five-shoveled cultivator. My part of the State is not a corn section. C. T. S.

BALTIMORE, Baltimore County.—1. White, because it yields better than yellow in this soil, a sandy loam. 2. Two feet eight inches by three feet. 3. From 40 to 50 bushels; one lot of 10 acres this year, yielded 57 bushels per acre. 4. Barn yard manure. For tools we use the Oliver chilled plow, two horses, a spring-tooth harrow, an ordinary harrow and roller; then cover with a small plow. Cultivators, Iron Age one way, and double-furrow plow the other. S. H.

Massachusetts.

FARNUMSVILLE, Worcester Co.—1. The corn I raise and prefer is a mixture of Longfellow and a twelve-rowed variety, the name of which I don't know. I prefer it because I get the best results from it. I get from 65 to 75 bushels per acre. 2 Forty-two inches each way. 3. Stable manure. The land is plowed fine; then I spread the manure, harrow both ways with a spring-tooth harrow; next, run a stone-boat over it to smooth it; after which I use a four-toothed marker both ways. I plant with a hand machine. When the corn is about two inches high, I cultivate with a spring-tooth cultivator; then again when it is about three feet high. It would be better to say that one should cultivate any time when the weeds start. I keep the ground just as level as possible—no hilling up for me. I plant about one inch deep, as near May 26 as possible. D. S.

BYFIELD, Essex County.—1. The variety I prefer is a cross, or mixture of Longfellow with a low-growing, large-eared variety, the name of which is unknown to me. I like this because it gives more grain in proportion to fodder than any variety I have ever tried. 2. From 50 to 60 bushels per acre, on light land. 3. About 3½ feet each way. 4. High-grade complete fertilizers for profit. I use barn-yard manure when I have it, because I have it. I use a common five-tooth cultivator and hand hoe. A. P.

PEPPERELL, Middlesex County.—1. Northern flint 90 days, is the only corn to grow here. 2. 75 bushels. 3. Three feet each way. 4 Mixed barn manure is all the kind I use. All kinds of tools are used for cultivation. There is very little difference between them so long as they accomplish the end—to work the soil well. A. K. S.

Michigan.

WEST CAMPBELL, Ionia County.—1. The variety of corn generally cultivated here is known as oil dent, or yellow dent. This seems better adapted to our soil—a greater portion of which is sandy loam—and climate than any other kind. It is seldom caught unripened by early frosts. 2. The yield in shelled corn ranges from 40 to 60 bushels per acre—making perhaps an average of 45 bushels. 3. We plant in rows four feet apart. A spring-tooth cultivator made for this purpose is commonly used in the first and second cultivations; next a double-shovel cultivator and then a single-shovel plow. Some farmers are using Reed's double corn cultivator. 4. I do not know of any one using artificial or manufactured fertilizers. The only manure used is barn-yard manure accumulated from the horse, cattle and sheep stables. A clover sod is selected for corn as a general rule, and it is plowed in the fall and spring according to the convenience of the farmer. Opinions vary as to the results of plowing at these seasons.

C. F. H.

BIRMINGHAM, Oakland County.—1. Tucker dent, a yellow corn, is used here. It matures early, has a small stalk, is medium to good hight, has no suckers, and has small cobs which weigh but 10 pounds to the bushel of 70 pounds of ears, which break easily in husking. It excels all other varieties for quantity of shelled corn to a bushel of ears. viz; 60 pounds. 2. From 45 to 50 bushels per acre on an average. 3. Three feet nine inches, with from three to five stalks per hill. 4. We don't use any manure or fertilizer. I always turn over yearly an old meadow of 30 to 40 acres, plowing it about five inches deep, and cultivating it well before planting. Then I follow this with a rotation of crops and use barn-yard manure with all succeeding crops. For tools I use the Oliver chilled and subsoil plow, and a 40-tooth drag, followed by a stiff two-horse frame cultivator. Then I smooth with a drag, mark and plant with a hand planter. When the corn is well out of the ground and we can follow the rows, we use the Deere two-horse wheel cultivators, and keep at it until the corn is too large. Then we follow twice or more—as needed—with a one-horse cultivator, keeping the ground well cultivated and free from weeds at all times. O. P.

Minnesota.

HERMAN, Grant County.—1. In this part of Minnesota we plant mostly Compton's Early flint corn. Angel of Midnight, King Philip, Canada Early and Minnesota White Flint are also used as well as Pride of the North dent, North Star dent and Dakota yellow dent. Compton's, however, is preferred because it is the surest to ripen in this Northern corn belt. It takes about 90 to 95 days from planting to ripen. 2. From 35 to 75 bushels per acre. 3. Generally 4x4 feet apart each way. 4. Barn-yard manure, no other is used here. A few use two-horse hoe cultivators, and many use one-horse cultivators of different makes. The Planet Jr. new pattern horse-hoe cultivator is the best here for corn and potatoes. E. S.

MINNEAPOLIS, Hennepin County.—1. The common eight-rowed yellow dent is raised here because it is the best for feeding and selling in market for milling purposes. 2. About 35 bushels per acre on an average when manured. 3. From 3½ feet to four feet apart each way. 4. Common barn-yard manure is the only fertilizer used here Where it is liberally used it gives results. The tools used are the common harrow and for after culture the sulky cultivator. W. S. MCL.

Missouri.

OZARK, Christian Co., February 25.—The winter in Southwestern Missouri was very mild until the middle of February. Only about two inches of snow had fallen, and the ground had frozen but an inch in depth An unusual amount of rain had fallen and the creeks had been impassable for fording six times during three months. Out-door work, such as clearing, logging and fencing, was pursued with much comfort, with scarcely the loss of a day. It was feared that feed would be scarce, and grain, hay and fodder were held at high prices in the fall; but the long-continued mild weather has caused a drop instead of an advance in prices. Plowing could have been done every week except that part of the time it was too wet. Fruit buds were kept swollen and fears were felt of the effects of possible severe cold weather. Wheat was bare all the time, but in spite of sudden changes, it has kept quite green, though not looking quite as well as in previous years.

It has been a splendid time for getting a supply of summer fuel, as the only expense for it here is the work of preparing it. Freighting over the road from Arkansas and the counties contiguous to Springfield, which is the metropolis of this section, continued all the time. Large amounts of cotton pass almost every day. Hogs, poultry, hides, dried fruit and cedar posts seem to form the bulk of freighting. Very few cattle pass over the road. Camp houses at convenient distances are to be found where for 25 cents bunks for sleeping are provided, with fire and water for warming and cooking purposes. Each freighter carries his own provisions, coffee-pot and frying-pan. There are sheds for the teams, but feed is generally carried along; although corn, sheaf oats, or corn blades, Timothy and clover are raised on many farms, but not as a general feed as yet. While there are quite a number of railroad lines, some counties having three or four, yet there are other counties and sections that are 50 to 100 miles from a good market. Springfield with its better market facilities, packing-houses and manufactories draws trade from a large section and there are cheap accommodations for the poorest freighter and wool and timber haulers, and in the various feed and wagon yards are gathered every night hundreds of men and teams, and the Missourian or "Arkansaw traveler" that cannot around the camp-house stove prepare the to him luscious meal of meat, eggs, bread and coffee, is the exception. Among the outfit the men have often found a deer or its hide and on rare occasions a bear to sell, while "coon and possum" and wild turkey are quite common. Since Feb. 15th we have had freezing weather every day, the thermometer having dropped for a few hours below zero. Six inches of snow fell on February 17 and it was not entirely gone when more began to come to-day. Quite a large immigration is tending this way, some stopping here where timber land can be bought at from $4 to $8 an acre, from which good farms can be made or improved, and partially improved farms can be bought for from $10 per acre upwards. There are fair schools in the country for six months in the year, with high schools, academies and colleges in the towns and cities. There is preaching by some denomination in almost every school-house, and in the towns and some places in the country, good church buildings are found. There are some pieces of very rough land that can yet be homesteaded, and many of the immigrants are going still further south, where land is still cheaper, though rougher, and vacant lands are more frequent. Living expenses are quite low here as compared with further west, but the probability of one's doing well depends much on other things. When market facilities are better developed, canning factories and evaporators more common, this will undoubtedly be a great fruit country. At present while almost all kinds of fruits do well, yet fruit raising is in a very crude state, and I have yet to see a well-cared for orchard or fruit garden, though I have seen green and dried fruits that compared favorably with the best. J. M. R.

DE SOTO, Jefferson County.—1. I am a "new" farmer, having made only one crop. I used Leaming corn for hills, and a variety called Gourd-Seed (white) for bottom land. 2. From 40 to 50 bushels. 3. Three feet. 4. I have had experience with barn-yard manure only. For tools I use a double-shovel and five-tooth cultivator. E. F. W.

KING CITY, Gentry County.—The yellow dent is the most used here, as it is the best for cattle and hogs, as it is not so rough and hard as some of the flinty varieties, and hence it is used almost exclusively for fattening stock, giving better satisfaction than flint kinds. It makes from 30 to 65 bushels per acre according to the season. In checking corn we generally plant three feet 10 inches, and where we "list" we put in the seed from 12 to 16 inches apart in the drills. No manure is used here except stable manure, as the country is mostly "new" and it does not pay to use costly fertilizers, at least, the farmers think so. The listers are used to plant about half of our corn and a corn planter and check-rower most of the remainder. A harrow is used considerably after planting, and a two-horse cultivator to finish. A. S. M.

Nebraska.

BROKEN BOW, Custer County.—1. The Bloody Butcher variety is chiefly used because it matures early and stands drought well. 2. About 40 bushels. 3. Three feet 10 inches each way. 4. I have used no fertilizers but stable manure. The harrow and walking cultivator are our tools. We have such dry weather here that corn never fills out well. "SUBSCRIBER."

WESTON, Saunders County.—1. Yellow dent field corn gives the best result. 2. From 50 to 75 bushels per acre. 3. Three feet eight inches each way. 4. Barn-yard manure alone is used if any fertilizers are applied. We plant with a two-horse Brown planter and check-rower, use a square-tooth harrow and a heavy roller and a two-horse tongueless cultivator. P. T. N.

New York.

SANDY HILL, Washington County.—1. An early yellow dent. 2. It will generally bear two ears on a stalk and has small cobs and large kernels. It will yield 75 to 100 bushels on rich soil with good cultivation. 3. Three and one-third feet each way; but I intend to plant 3½ feet by 18 inches. 4. Twenty loads per acre of farm manure plowed in, and 400 pounds or more of phosphate broadcast. I use the smoothing harrow, and Planet Jr. cultivator. M. T. W.

GOLDEN'S BRIDGE, Westchester County.—1. White and yellow flint corn is planted in this vicinity. 2. From 30 to 50 bushels per acre of shelled corn are raised on good ground. 3. Corn is planted usually 3½ feet in check rows. 4. Barnyard manure alone is used on sod and plowed in. I don't think 10 tons of fertilizers have been used in 10 years—ninety-nine-hundredths of the work is done with a common corn plow. H. A. C.

OTSELIC CENTER, Chenango County.—1. Canada eight-rowed we consider the earliest variety. 2. Fifty to 75 bushels per acre. 3. Three and one-half feet each way. 4. I have used nothing but poultry manure; most farmers use fertilizers for the crop (Bowker's Hill and Drill;) others use stable manure, hog manure being preferred. I am now using a cultivator made at Ithaca, an old-style tool. Not much corn is grown here, as the season is rather short for it. W. A. S.

FORT ANN, Washington County.—1. Compton's Early; it is early and yields the best with me. 2. From 40 to 60 bushels per acre. 3. Three and one-half feet each way. 4. Stable

manure. The Acme for fitting the ground and a Michigan hoe and five-tooth cultivator for the cultivation. Soil clay. T. H. J.

JAMESTOWN, Chautauqua County.—1. I raise a flint corn thinking there are more of the fat-forming elements in it. 2. About 50 bushels per acre. Three feet eight inches apart in order to sow Early Munich turnips between the rows. 4. I have never used any fertilizer but barn manure. My tools are an Albany drill for drilling in, and a Whipple two-horse harrow with two teeth out. I sow turnips in August. J. E. L.

MINAVILLE, Montgomery County.—1. Longfellow eight-rowed yellow flint. The ears are better than in other sorts and there are more bushels of shelled corn in proportion to the ears. 2. Ordinarily from 50 to 60 bushels of shelled corn per acre without manure on sod land. 3. Three feet and a-half apart. 4. Manure from cows. I use Wright's patent one-horse cultivator, and give level cultivation. H. W.

JAMAICA, Queens County.—We use Blount's Prolific and Mountain Giant, because they have large ears and large stalks. Yield, on an average, 70 bushels to the acre. Distance 4½ feet between the drills and from 12 to 15 inches between the grains. We use mixed barn-yard manure. Tools used in working, plow, cultivator and hoe. J. T. M.

STOCKTON, Chautauqua County.—1. I prefer King Philip, for its adaptability to my soil and situation. 2. From 50 to 100 bushels, the yield depending on the season a good deal. 3. Three and a half feet each way. 4. Hog, horse and hen manure if used with care are good enough. I furrow out with a shovel-plow and put a forkful in each hill. I use level culture. Phosphates do not answer with me nearly so well as manure. I use a shovel-plow for marking out the furrows and the Planet Jr. cultivator, with hilling teeth, to hill up a little the last time and I brush around the hill sometimes with the hoe.

F. M. V.

SPRINGWATER, Livingston County.—1. Red-Glazed white flint or Smut-nose, because it has small cobs, suckers little and is early. 2. Forty to 60 bushels per acre. 3. Forty inches each way. Hen manure and plaster in the hill. I use the Ithaca or Planet Jr. cultivator with five straight teeth, and give level culture. R. J. R.

Ohio.

GUYSVILLE, Athens County.—1. Leaming, because its cob is small and it is early and its deep, yellow kernels with large germs make a very rich feed. 2. On our upland, 40 to 50 bushels to the acre is a fair crop; on river and creek bottoms the yield reaches 80 bushels. 3. We plant Leaming 3½ feet each way. We had a fine crop last year planted 2x4 with two stalks to the hill. 4. Barn-yard manure. I have never tried any commercial fertilizer, but it has not given satisfaction when used here. I use nothing in cultivation but a spring-tooth cultivator made by myself from the teeth from a spring-tooth harrow, five of which are used. This gives level culture during the entire growth. A. B. S.

MARSHALLVILLE, Wayne Co.—1. I have not yet found my ideal field corn. I am growing a cross between the Golden Beauty, Leaming, and an early, short and thick-eared yellow variety; all things considered, it suits me as well as any I have tried. 2. I use a two-horse planter and make the rows three feet eight inches apart with the hills about three feet apart in the row. 3. I get from 45 to 70 bushels of shelled corn per acre. 4. I obtain the best results from a liberal application of well-rotted stable manure. I aim to plow the ground early in the spring; then fit it ready for planting with the Acme harrow. About the time the corn commences to show, I go over it once or twice with a fine-toothed smoothing harrow. I then use the one-horse Planet cultivator and work in the level system of cultivation. E. B. Q.

GALLIPOLIS, Gallia County.—1. I use a large white corn, without name, because it gives more shelled than any other. 2. I think the yield is as high as 100 bushels per acre on good ground. 3. Three feet nine inches. 4. Only manure from the hog-pen and from the horse stable. I cultivate with treble-shovel plow with narrow shovels, as nearly level as possible. W. H.

Pennsylvania.

JOHNSTOWN, Cambria County.—I cannot afford to raise field corn. What I use comes from the West. My main products are cream, for ice-cream and town consumption, fruits and maple sirup. G. M. W.

BAINBRIDGE, Lancaster County.—1. I prefer the Leaming corn, because it is early and productive. 2. It gives from 60 to 70 bushels of shelled corn per acre. 3. I plant 18 inches apart in the row, and the rows 39 inches apart. 4. I have not used anything but a light dressing of stable manure plowed under. In cultivating, a Thomas harrow is used, and next a one-horse shovel-harrow; then a two-horse scraper plow. I would prefer to drill in some fertilizer before I plant the corn. J. C. E.

NORTH EAST, Erie County.—I have two small farms—one on gravelly land near Lake Erie, and the other two miles further south on a hill-side. Here the soil is clay or clay-loam. On the first dent corn of medium size, with deep kernels and small cobs, yields from 80 to 110 bushels of ears per acre. The land for it is manured with barn-yard manure with some home-made compost composed mostly of hen manure, wood ashes and gypsum, in proportion of two-fourths of the former and one-fourth of each of the latter. On the clay land a yellow eight to 10-rowed variety of flint corn thrives best. The treatment of the land is the same as in the other case except that some complete fertilizer, in addition to the ordinary manure, is drilled in at the rate of 200 pounds per acre after the ground has been well fitted for planting. The yield here is about the same as on the other farm. The corn kernels are planted three feet eight inches apart. The tools employed are the Syracuse steel beam plow, the Acme pulverizer, a square harrow and a Buckeye two-horse spring-tooth cultivator. G. W. G.

BRANDYWINE SUMMIT, Delaware County.—1. The corn that I have been growing for several years is a mixture of Gourd-seed and shallow-grain varieties, my aim being to get a large, long cob and deep grain. By planting a mixed corn I think the blossoming period is lengthened, giving the pollen a better chance to fertilize the ears and making them fill better. 2. My yield, on an average, is about 75 bushels per acre without manure. I have grown 106 bushels on a measured acre with stable manure. 3. Four feet each way. 4. Stable manure and good bone superphosphate. H. T.

Tennessee.

WARTRACE, Bedford County.—1. White Southern, Shoe-peg and Durham varieties of corn are raised here. I prefer the first as it sells most readily and makes the best meal. 2. In field culture the yield is from 50 to 80 bushels of shelled corn per acre. 3. Three and a half feet each way, with two kernels in a hill. 4. I use no manure except on places inclined to "wash" and there barn-yard manure is applied. I rotate with clover, wheat and corn, once in about six years on the same land. I use the Oliver chilled turner, the Thomas harrow, a gopher, a one-horse harrow and a double shovel. T. A. S.

SCOTT, Henderson County.—1. I prefer the Centaur corn—a dent red cob variety—because it yields more shelled corn to the bushel of ears than any other—62 pounds to 70 pounds of ears. 2. I think that with proper manuring a yield of 100 bushels per acre could be obtained. 3. We plant about three feet ten inches by four feet and a half apart. 4. Very little fertilizer has been used, and not much stable or yard manure. J. Y. M.

Vermont.

WILLIAMSVILLE, Windham County—1. I use the small Holden Improved, because then I am sure of a good growth of sound corn. 2. Fifty bushels of shelled corn per acre. 3. Generally three feet four inches both ways. 4. Barn-yard and stable manure from cattle, horses and hogs. I also use the Bradley or Pacific Guano in the hill. Belcher & Taylor's cultivator and horse-hoe are run both ways, and I use hand hoes when necessary. S. M.

HANCOCK, Addison County—1. An old variety of yellow flint corn which I have raised a good many years. No dent variety is grown here because the seasons are too short. 2. The last corn we raised on the hill yielded about 40 bushels of shelled corn per acre. Corn is raised mostly on river land. 3. About three by three feet apart, and we cultivate both ways. The small Canada corn we raise on the hill is planted three by two feet and cultivated one way. 4. Bradley's and Stockbridge's, mostly Bradley's. I use hog and hen manure and ashes. Wheat, oats, buckwheat and potatoes are the crops mostly raised on our hill land. Improved tools are sadly scarce on most of our hill farms. E. A. F.

Virginia.

PEAKSVILLE, Bedford County.—1. I use a cross between the Poor-house, Mammoth and White Surprise corn. It is better adapted to our soil and climate than any I have been able to find, because it gives one very large ear to each stalk which we think better than two small ones, besides saving labor in husking, etc. This corn has a large cob and deep grains. 2. From 20 to 40 bushels of shelled corn under general cultivation. 3. In drills 3½ to four feet apart, and 18 to 24 inches in the step distance, varying in accordance with the quality of the land. 4. Clover and stable manure. I cultivate very deep until the corn is six or eight inches high; after that time I cultivate as shallow as I can to keep it clean. I use double Malta plows with the attachments. R. K.

RINER, Montgomery County.—1. I prefer the Fleming yellow corn for soundness and early maturity. It yields on our lands, without fertilizer, from 40 to 60 bushels per acre and sometimes more, according to the quality of the land. I have never used any fertilizer on corn. I plant the grains 18 inches apart. In cultivation I use Hench's double-row planter and cultivator and the Cutaway harrow. I prepare my land in early winter with the Oliver chilled plow and plant on April 25th. W. S. S.

CROCKETT'S DEPOT, Wythe County.—1. Leaming, because it yields as well as any. Yellow corn always does best with me. 2. From 20 to 50 bushels per acre according to the land. 3. 2½ x 3½ feet; two stalks to a hill. 4. I have had no experience with any fertilizer except barn-yard manure which always gives good results, especially on clover sod. I use a double-shovel plow on rough land and the Planet Jr. horse-hoe on smooth land in cultivating, and always the hand-hoe more or less. E. A. A.

Wisconsin.

RIPON, Fond du Lac County.—1. I plant yellow dent and Canada Smut. The yellow dent yields more corn to the acre and better fodder than any other dent I have tried. The Smut yields as much corn and better fodder than the dent. 2. Yield from fifty to sixty bushels per acre. 3. I plant in hills forty inches apart each way, with from three to four kernels in a hill. 4. I use manures made on the farm—20 large loads to an acre. It is hauled out in the fall, spread and plowed under. I cultivate in spring, using a two-horse Monitor cultivator. J. B.

CLINTON, Rock County.—1. Medium yellow dent, because it is the surest to get ripe. 2. The yield varies in different seasons. 3. Three feet ten inches apart each way. 4. We use all the stable manure we have, promiscuously, as we can draw it in winter. I have had as good success on good heavy sod—either Timothy or clover—as with manure. I use a slanting-tooth harrow and a six-shovel two-horse riding cultivator. J. C. B.

What Others Say.

THE R. N.-Y.'S LARGE YIELDS OF CORN IN 1880.

REPORT OF THE JUDGES.

Copied from the R. N.-Y. of November 13, 1880, page 750.

"REPORT on a field of corn at Hewlett's, Long Island, belonging to the R. N.-Y., made October 12, 1880. Size of plot, 310 feet by 122 4 or .87 of an acre of corn—Blount's Prolific—sown by machine in rows four feet three inches apart and each single kernel intended to be 5 inches from its neighbor. Flat culture, with, as we understand, 300 pounds of Mapes's special corn manure harrowed in broadcast upon planting, 100 pounds of the same when the corn was six inches high, and 100 pounds of potato fertilizer when about 18 inches high. From a judicious selection of stooks and careful measurement and weighing, we find the total yield was 227 bushel baskets of ear corn, or 261 bushels upon an acre.

We also shelled and weighed a quantity and ascertained the gross weight of 3⅞ baskets to be 136 pounds or 35.1 pounds to one bushel, and further that 35 pounds of corn in the ear gave 28.95 pounds of grain and 6.05 of cob and measured 17.1 quarts. This calculation showed that the equivalent of 261 bushels of corn on the cob was 139 4 bushels of grain and about three bushels or a little more which Mr. Carman had selected from the most prolific stalks, and had already placed in the barn, or a grand total of about 142 bushels of shelled corn per acre.

ROBERT J. DODGE, C. E.,
Pres. Farmers' Club, American Institute.

W. N. HABIRSHAW, F. C. S.,
Chemist N. Y. State Agricultural Society.

L. C. BENEDICT,
Editor New York Weekly World."

"Upon the same day we also examined a field adjacent containing four and a quarter acres of Chester County Mammoth, and found from a measurement of one acre the yield to be 236 bushel baskets of ear corn per acre. Time pressing, we were unable to shell and weigh the net proceeds."

SIGNED AS ABOVE.

THE R. N.-Y.'S SYSTEM.

The R. N.-Y.'s system of raising large yields of corn in the most economical way, was announced in 1877, viz.:

1. *Thorough preparation of the land.*
2. *Drilling in the seed.*
3. *Flat cultivation—no hilling up whatever.*
4. *The preservation of a mellow surface.*
5. Shallow cultivation, *i. e.*, as little interference with the roots as practicable while preserving a mellow surface.

THE VALUE OF CORN AS FOOD. Why should not corn be made a staple article of domestic food? The grain when well ground and bolted makes excellent meal and flour for cakes and bread, and if the French cook could invent a hundred ways of cooking eggs, a thousand might be found for cooking this valuable grain. And yet it does not become popular, in spite of every effort to make it so. Mr. Henry Stewart says, in the N. Y. Times, that in the South, where corn bread is the staple food of the poorer people, it is discarded for wheat flour as soon as an unlooked-for and exceedingly rare dollar comes to hand with which this more popular "breadstuff" can be purchased. It is proposed by the New York Produce Exchange to get up a grand exhibit of corn for the coming Paris Exhibition this year and to add a kitchen for preparing corn foods in every known way, for the purpose of making them popular among Europeans. But why not begin at home? If Americans do not use corn as their daily food, how can it be expected that foreigners can be induced to do it? It would certainly be most desirable that our exports of corn should be increased "fifty-told," as is thought possible by some persons if this scheme shall be carried out. But it should not be forgotten that an enormous area of land in Southern Europe is suitable for growing corn, and if Europeans can be induced to make it a common food every bushel required by them can be produced on their own lands. So that, after all, we may not be able to get any tangible benefit from this laudable enterprise.....

MULTUM IN PARVO.

Keep the surface of the corn field mellow, let the season be wet or dry.....

IF one proposes to use only two or three hundred pounds of fertilizer on corn, it is best to mix it with the soil in the hill to "give the plants a start." It is perhaps better to do this than to sow so small a quantity broadcast, in which case the older plants will receive scarcely any perceptible benefit.....

WE doubt if *fresh* farm manure is to any great extent serviceable to the corn plant, when applied in the spring.....

IN 1879 the R. N.-Y. offered a large amount in prizes for the best yields of Blount's White Prolific. The first prize was awarded to Dr. W. H. Chamberlain, of Medina, N. Y. He planted 100 kernels (the number planted by each contestant) and raised therefrom 295 pounds as sworn to.....

SHOULD we strive for one large ear to a stalk, or two? The R. N.-Y.'s experience is that generally the one large ear will give as much grain as the two which, as a rule, are not over half the size. Let us say that Blount's Prolific (so-called) will yield two ears to a stalk. These two ears will not give so much grain as one average ear of the Chester County Mammoth or similar late Southern dents.....

THE average weight of corn is about five ounces to the ear. It should be at least eight ounces.....

How far apart the corn plants should stand must be answered by each farmer for himself. The richness of the soil and the kind to be planted must, in the main, be the determining factors.....

REPLANTED corn does not, as a rule, bear large ears. The reason is that the plants are too much shaded by the earlier plants. It is like raising corn under the shade of a tree....

THE valuable elements of corn are starch, sugar, gluten and oil. Southern corn contains most starch. White corn contains about 70 per cent. of starch. Sugar corn has but little starch and this is the cause of its

shriveling. Yellow corn has the most oil and a large per cent. of gluten. The hard or flint kinds contain the most gluten and the soft the most starch. Small kinds contain the most oil.....

How many corn plants in your field do not bear ears?.....

WITH the wheat crop there is no alternative but to haul it to market, and take what it will bring: while with corn the farmer is more nearly master of the situation, for if the market price does not suit, the thrifty farmer will find a way to feed it at home, and market the proceeds in a concentrated form..

MANURING in the hill is a trifle like heaping manure about the stem of a fruit tree. Better spread it out as far as the roots extend .....

THE R. N.-Y. once raised 90 bushels of Longfellow (flint) corn on a measured acre. It was not planted until June 8th.....

IN drill planting, there are some of the roots —those running lengthwise of the rows—that are never broken by cultivation.....

DON'T allow the corn field to become hidebound.....

Is it sensible to cut and slash the roots, depriving the plants of their mouths by which they feed, or to confine them to a narrow strip of soil two feet wide? If so, cultivate deep.....

THOSE readers who may refer to files of the R. N. Y. of 1879, 1880 and 1881, will see that the impetus given to corn culture and the revolution of methods since are largely due to its efforts. In like manner, it may be said, that owing to the R. N.-Y.'s potato investigations of late years, and the great yields it has shown to be practicable, this great industry is receiving an amount of attention and intelligent investigation which might, otherwise, have been delayed for years.....

IF you propose to use chemical fertilizers on corn, apply not over 500 pounds to the acre at first. It is not well to stimulate the young plant to a too luxuriant growth. Later give it another dose, and a third and last just before the sets appear .....

MR. HENRY TALCOTT, Assistant State Dairy Commissioner of Ohio, finds his silage an excellent feed for his horses, which eat it in preference to hay and thrive thereon, the only precaution necessary being to begin feeding gradually. As mentioned in the Farmers' Review, corn silage is proving a most satisfactory food for horses in the stables of Mr. M. W. Dunham, Wayne, Ill., and it seems very probable that it will soon be widely used in wintering horses in the West. Silage being succulent, seems to successfully take the place of roots, which are so beneficial, to growing colts in particular, and can be supplied at much less cost.....

CORN plants have been known to grow 28 inches in a week.....

THE average shrinkage of corn in a year is about 25 per cent. It would, then, be as profitable to sell corn at 75 cents per bushel after harvest as at one dollar the next summer.....

FIRST fertility, then seed, then cultivation.

DOES over-manuring diminish the crop?...

How much more valuable is one kind of seed than another?.....

DR. E. L. STURTEVANT says that so far as his personal knowledge goes, silage adds no nutritive of material value to ensilage.....

THOSE who have relied upon silage as the main food, and who have fed little else, have often found failure; those who have fed silage in moderate quantity in conjunction with other food, have almost to a man reported favorably of its effects. To get the best effects from feeding silage, therefore, from a theoretical as well as practical point of view, one must feed it in such a quantity that the animal shall be able to consume sufficient weight of dry food and albuminoid to supply the demand for maintenance and product....

IF acid be fed under trial, give the pickle, but because one pickle is good, says Dr. Sturtevant, do not assume that a bushel of pickles at a feed would be better, and two bushels better still. It requires brains to feed properly as in every other act in life, and brains have to be fed on experience in order to be at their best .....

MR. J. J. H. GREGORY favors the Stockbridge theory: Feed the plants what they need, just as you feed animals according to their needs. Young, growing animals require different food from mature animals kept in idleness. So squashes require different food from beans. He uses fertilizer for squashes, that contains from nine to 12 per cent. of ammonia, while bean manure is better with but two per cent. Beans manured like squashes would grow leaves and vines but not many pods, while squash ground manured for beans would grow little worth harvesting. If one knows not the condition of his soil he should apply a complete fertilizer suited to the crop to be grown.....

FERTILIZERS can not be used in place of manure for indefinite periods, as soils need humus to keep them in good condition. Mr. J. J. H. Gregory has grown onions on the same ground on fertilizers till the humus was all consumed, leaving the soil hard and difficult to cultivate. Rye or some other leafy crop should be grown occasionally and plowed in to keep the ground light.....

KAINIT IS UNSAFE TO USE for its potash, because it contains so much common salt that seeds are destroyed. It is also a dear form of potash, as the freight is the same as on the more concentrated forms. All fertilizers applied liberally in the hill or drill should be well mixed with the soil or the crop may be lost. This is especially true of nitrogenous fertilizers. South Carolina rock must be dissolved before application or it will do the crops little good the first year. Undissolved fine bone may be used for laying down grass land and it may be used liberally with perfect safety. Small doses of fertilizers where large ones are needed do but little good. Applications of 200 or 300 pounds on his land would be lost. The prices of commercial fertilizers are as low as they can be under the present system of long credits. Competition is keeping the prices down and two large firms have come to grief recently. If farmers would club together and pay cash it would be better for all parties. Take no stock in cheap fertilizers offered, as they will disapppoint every time All of which, Mr. Gregory, is, in the R. N.-Y.'s humble estimation, good, true advice.

PLANT in drills and cultivate close up to the young plants. The increase from drill planting of fodder alone, even if nothing is gained in ears, is enough to commend it. But the increase in grain ought to be at least 20 per cent.....

EVERY farmer should experiment for himself. Because farmer Brown raises 125 bushels of shelled corn per acre, it is not wise for farmer Green to assume that he can do the same by the same methods. Different soils, seed, climate, and manure are to be considered.....

TEST the vitality of seed-corn. The R. N.-Y. finds that a considerable part of its Chester County Mammoth is worthless for seed. It has been kept in a crib. An unusually warm, damp fall and winter is supposed to be the cause.....

How to test it. Pry out kernels from the ear with a small knife-blade. Place these between folds of heavy porous or blotting paper. Keep the paper constantly moist and warm. All the sound kernels will sprout in a few days.....

PRIDE of the North or Queen of the Prairie (they are the same) is probably the earliest variety of yellow dent corn. The R. N.-Y. was instrumental in introducing this variety some nine years ago.....

THE R N.-Y. again reminds those of its readers who are looking for the best ensilage corn to try the Rural Thoroughbred Flint. Several leading seedsmen offer it for sale. As already stated, it will not mature with any certainty north of Southern New York.....

THE ears often grow to the length of 13 or 14 inches—eight rows. The plants in rich soil grow to the hight of about eight feet. The joints are rather close together; the leaves very broad. Each kernel sends up from three to five stalks all of which grow to about the same hight. The R. N.-Y., beyond having introduced it a few years ago, has no interest in it.....

SUBSOILING for corn has never been shown to pay by trusty experimentation.....

WE repeat a question which the R. N.-Y. asked in 1879: "What good does it do to hill up corn on a well-drained soil?".....

SHOULD the rows of corn when drilled in, run north and south or east and west? Most farmers will answer north and south. The R. N.-Y.'s rows of Blount and Chester Co. Mammoth, which gave one of the heaviest yields on record, were east and west.....

ALL the manure in the world will not produce good corn if the plant cannot draw breath while feeding.....

No, chemical fertilizers alone will not bring a heavy crop. The same year that the R. N.-Y. raised its heavy yield of Blount and Chester Co. Mammoth, a near neighbor (a first rate farmer, too) applied 1,200 pounds of Lister's fertilizer per acre besides "a handful in the hill." His yield was about 75 bushels of shelled corn to the acre.....

ABSTRACTS.

——E. W. STEWART, in the Albany Cultivator: "The reason why corn-and-cob meal will produce as good a result in milk as pure corn-meal, is simply that the ground cob separates the particles of meal and gives bulk to it in the stomach, making it porous so that the corn-meal is more perfectly acted upon by the gastric juice. But the same weight of the cob in short-cut oat-straw mixed with the fine corn-meal, will produce even a better result, because it has a greater bulk according to weight than the cob, and carries the meal into the stomach in a still more porous condition, and will cause the meal to be raised and remasticated by the cow."

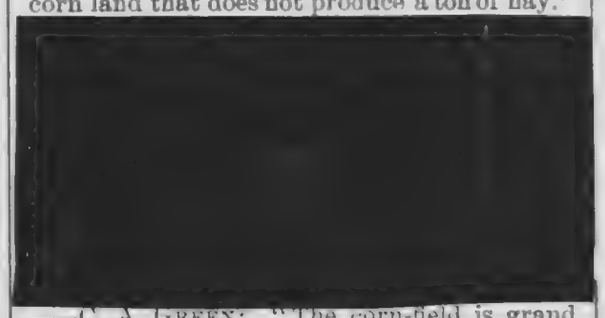
——"FEEDERS have been very slow to recognize the fact that nature feeds grain and stalk together. Animals in a state of nature eat whatever there is of grain or stalk together. When the animal is placed under artificial conditions and the concentrated grain is fed separately, there follows a large waste of the nutriment in the grain. Western cattle fed upon corn in the ear require three times as much grain to produce the same result as when the grain ground is mixed and fed with coarse fodder, and is raised with the cud and remasticated."

——N. E. FARMER: "Some of the papers speak of the Secretaryship of Agriculture as the least important place in the Cabinet. They may find themselves mistaken."

——HUSBANDMAN: "Mr. Rogers, of Binghamton, feeds his cows the year round. His silage is just as good in summer as in winter and is much preferred to green fodder by his cattle."

——"THERE is a great saving in feeding cows in summer. They will eat silage before they will taste green corn fodder, and do not drink more than one-fourth as much water. Last year I had one acre of hay and one of Stowell's Evergreen sugar corn in one field. The corn yielded six times as much in value as the hay."

——N. E. HOMESTEAD: "Corn may prove the salvation of Vermont agriculture. It should be raised for the silo on every acre of corn land that does not produce a ton of hay."



——C. A. GREEN: "The corn-field is grand to look upon in its August glory. It resembles an army of tasseled knights, decorated gracefully with ribbons, each member of which sports a silk handkerchief."

Horsford's Acid Phosphate,

The Best Tonic

known, furnishing sustenance to both brain and body.—*Adv.*

Miscellaneous Advertising.

Hood's Sarsaparilla

This successful medicine is a carefully-prepared extract of the best remedies of the vegetable kingdom known to medical science as Alteratives, Blood Purifiers, Diuretics, and Tonics, such as Sarsaparilla, Yellow Dock, Stillingia, Dandelion, Juniper Berries, Mandrake, Wild Cherry Bark and other selected roots, barks and herbs. A medicine, like anything else, can be fairly judged only by its results. We point with satisfaction to the glorious record Hood's Sarsaparilla has entered for itself upon the hearts of thousands of people who have personally or indirectly been relieved of terrible suffering which all other remedies failed to reach. Sold by all druggists. $1; six for $5. Made only by C. I. HOOD & CO., Apothecaries, Lowell, Mass.

100 Doses One Dollar

$20 FENCE MACHINE FOR $10
Freight paid. *Guaranteed.* Hundreds in use. Circulars free. S. H. Garrett, Mansfield, O.

POOR PEOPLE'S CHANCES.

SOME years ago a city missionary was crossing one of the parks in New York on the Sabbath day and said to a lad; "What are you doing here, breaking the Lord's day? You ought to be at Church and worshiping God instead of breaking the Sabbath in this way." The poor lad in his rags looked up at the city missionary and said: "Oh, sir, it's very easy for you to talk that way, but God knows that we poor chaps ain't got no chance."

The sentiment seems to be growing that in the United States the time has arrived when "the poor chaps don't have no chance."

There is some truth in it. The poor are not shut out from making a livelihood, but the gulf between riches and poverty continually grows more difficult to cross. As the country becomes densely populated keen business competition decreases the chances for accumulating wealth by ordinary business methods.

But the same conditions vastly improve the chances for great success to those who can strike out in new paths, can furnish something to the world that others cannot.

True merit, in commodity or ability, will win easily and with grand results in this country, if the masses can be induced to recognize it. This recognition can only be accomplished by what are sometimes sneeringly alluded to as advertising methods.

What a marvelous success has attended the thorough introduction to the world of the merits of that wonderful remedy for kidney disease—Warner's Safe Cure. Hon. H. H. Warner first came to know of its curative power by being restored to health from what the doctors pronounced a fatal kidney trouble. He concluded the world ought to know of it and in the ten years since he began its manufacture he has spent millions of dollars in advertising the Safe Cure.

His methods have been ingenious—sometimes, perhaps, open to criticism, but they had a purpose, which has been accomplished.

But, mark! he never would have secured a four-fold return of the vast sums thus expended if the real merit of the remedy had not been fully proven to the millions of people reached by his advertisements.

Ten years of increasing success of Warner's Safe Cure is due, first, to intelligent and pleasing advertising, by which the people were made acquainted with the remedy. Second, to the true worth of the remedy, proved by actual experience, showing it to be *the only specific* for kidney disease, and all diseases growing out of kidney derangements.

Mr. Warner has something the people want, tells them so, then proves it to their satisfaction—success follows as a matter course.

A Good Thing for Somebody.

MR. EDITOR:—Please inform your readers that we have steady work on salary for honest, temperate, energetic men, soliciting orders for our nursery stock. Our stock is first-class. Satisfaction guaranteed. For particulars, address

R. G. CHASE & CO.
1430 S. Penn Square, Philadelphia, Pa.

SILO AND SILAGE.

This little book describes what is surely going to revolutionize farm methods Its every statement has been proved by the author on his own farm. "It is a missionary for good and ought to be in the hands of every farmer," B. G. Buell. "It is capital, like an egg, full of meat," Col. F. D. Curtis. Mailed for twenty-five cents.

A. J. COOK, Agricultural College, Mich.

IVES' THOROUGHBRED BRAHMAS.

Having bred Light Brahmas for the past 40 years I pride myself in having as pure and fine stock as any in this country. Also White and Brown Leghorns—"Superior Stock." Eggs $2 per doz., or three doz., $5.
JOHN S. IVES, Salem, Mass.

READER If you love RARE FLOWERS, *choicest only*, address ELLIS BROS., Keene, N. H. It will astonish and please. **FREE.**

MR CARMAN'S PORTRAIT.—The editor of the Rural New-Yorker *has modestly refused to publish his portrait in R. N.-Y., but a very fine one, beautifully printed, appears in the March issue of* The American Garden *with a sketch of his work. We have only a few hundred left. Let your subscriptions begin with that issue.* $2.00 *a year;* 20 *cts. a number. With R. N.-Y.* $3.00.

E. H. LIBBY, 751 Broadway, N. Y.

Wasting the flavoring Oils of Butter, by overworking, injures its keeping quality and market value. Use Higgins' Eureka High Grade English Salt. It dissolves quickly and does its work completely.

THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, MARCH 30, 1889.

$25!

TWENTY-FIVE dollars are offered by the R. N.-Y. as follows: Fifteen for the largest and best shaped R. N.-Y. No. 2; $10 for the second best. Reports should be sent in before November next. Those entitled to the prizes will be asked to forward the prize potatoes to the R. N.-Y.

CATALOGUE NOTICES this week will be found on page 225.

INCOMES AND OUTGOES: The one is as necessary as the other. Whether we be successful or not in our farm life depends upon which side of the scales we place the heavier weight.

THE sprouts of *all* potatoes, so far as the writer knows, are light-colored if they grow in a dark place. To find out the true color of sprouts, *sound* potatoes must be placed in a light (sunny) warm room.

PROF. E. GALE: "I cannot repress an expression of the belief that those who have been so eagerly moving out upon the wheat lands of the Far West, beyond the corn belt, have made a financial blunder that many, when too late, will sorely regret." So wrote Professor E. Gale in the R. N.-Y. of March 8, 1879. How is it friends? Was he right?

WE are all prone to give too much thought, and to attach too much importance to a favorite theory. One man pays great attention to plant food and too little to other considerations. Another attaches undue importance to tillage. A third attaches too much importance to the variety or to "pedigree." A single factor of great crops is made to stand for all factors. The wise farmer will divide his thoughts duly between *all* the essential conditions that belong to maximum crops.

The R. N.-Y. has ever held that an agricultural journal cannot sell the seeds or plants or farm implements it announces or praises in its editorial or advertising columns and still inspire a high degree of confidence in the minds of its readers respecting the disinterestedness of its opinions touching the articles thus offered for sale.

AN instructive case, which shows how easy it is for farmers to arrive at erroneous conclusions in regard to the effects of fertilizers, occurred to a poor German farmer living within a short distance of the Rural Grounds. He began with "one-sided" cheap fertilizers. They were not worth a cent so far as he could discover. He would not touch fertilizers of any kind for a year or so; but was at length induced to try a small quantity of a "high-grade complete." Last spring he bought $200 worth of this same fertilizer and proposes to increase the quantity this spring.

SOME 10 years ago the R. N.-Y. began its advocacy of level and shallow culture for corn, drilling in the seed instead of planting in hills and cultivating both ways, and surface manuring or fertilizing. Was the system new? Many had practiced the one or the other of the several sub methods. We had never heard of any one who claimed to have practiced the *entire* method. The R. N.-Y. raised 142 bushels of shelled corn to the acre in that way. Hence its persistent advocacy of the method since. Many farmers practice it now.

AN Indiana subscriber writes as follows:

"I am a new subscriber to the RURAL, and I must say I am well pleased with my new investment. I had never taken a farm paper before, and now I don't intend to do without one, as I get very many valuable ideas of farming and gardening both from the RURAL'S experience and that of its many correspondents."

There are thousands of farmers in the country just like this one. Let them really become acquainted with a good paper and it will seem too much of a friend for them to leave it.

A RATHER queer freak developed in one of the plants of our plot of corn last season. The variety is the one that the R. N.-Y. has been endeavoring to improve for 12 years. The plant grew about 10 feet high and bore two ears about four feet above the soil. A third ear was borne within six inches of the tassel or nine and one-half feet high. As soon as the set was discovered it was supported by tying the top of the plant to a stake; the set developed into an ear of the average size. Imperfect ears or a few kernels are not uncommon in the tassel, but this is the first instance we have seen of a perfect ear from the topmost node of the corn plant. It helps to show that, under certain conditions, any node may develop and mature an ear.

WHERE CORN IS NOT "KING."

WHILE "corn is king" in this country, there are places and countries where the proud monarch is called upon to take a back seat. It may be said that America has a monopoly of the corn crop. Here all recognize its great value as a food for man and beast. In England, opinion as to its value is by no means settled. The English have never become eaters of corn-meal to any great extent. Corn has never been able to supplant the wheat of England, the potato of Ireland or the oat-meal of Scotland. The higher price of wheat has increased the amount of corn brought into England to some extent, but not by any means in the proportion that one might reasonably expect from the increase in the price of wheat As a feeding-stuff corn was first sent to England in 1833, when something like two tons was imported. As the result of careful experimenting with the grain the demand increased until, in 1847, over 75,000 tons were demanded. The largest shipments were made in 1878 when 225,000 tons were sent. Then the demand fell off until in 1888 but 140,000 [redacted] ing country and corn from that country is sold in England at one shilling per quarter (eight bushels) less than the price of our own product.

A. C. GLIDDEN believes that *corn has no characteristic of value that will bear transportation across one degree of latitude and remain.*—page 212.

BETTER HOLSTEIN BULLS.

AT the meeting of the Holstein-Friesian breeders held in this city last Wednesday, a hot debate took place over a proposed change in the registry fee for bulls. After considerable talk the following was agreed upon:

"For the registry of males dropped after March 20, 1889, $5.00; for the registry of females $1. For persons not members of the Association such registry fees shall be $6.00 for males Payment must accompany the application. And the sum of $5 shall be paid by the association for each American-bred male eligible for registration born after March 20, 1889, that is killed or castrated while in good health after it is over five days old and before it is 50 days old, on application and affidavit of the owner of the dam, on forms furnished by the Secretary and approved by the board of officers, stating date of service and birth, name of sire and dam, and date of slaughter or castration and by whom performed.

The stated object of this change is to raise the standard of Holstein bulls offered for sale. It is proposed to encourage the slaughtering or castration of inferior bull calves in the belief that, by so doing, the general standard of the breed will be raised. The discussion brought out the fact that the cheaper bulls had done good service in educating the public to the merits of the breeds. Many farmers had used them who never would have touched high-priced animals. By the use of these animals farmers had been taught the true value of better ones. The measure is rather a bold experiment and its results will be carefully examined.

RESULTS THAT DON'T HARMONIZE WITH THEORY.

SOME 12 years ago the R. N.-Y. planted, in a five-acre field, every kind of field corn it could secure. There were, according to *names*, over 60 different varieties—early, medium, late; yellow, white and red flint; yellow, white and red dent; long ears, short ears; ears with many rows; ears with few. It was a motley crop to be sure—about 75 bushels of shelled corn to the acre. It was found at that time that many varieties matured the pollen and the silk simultaneously; others did not. In some the silk matured before the pollen, in others the pollen matured and shed, before the silk was receptive. The fact, however, of simultaneous development of silk and pollen (pistils and stamens), does not insure that such plants are self-fertilized. A gentle wind is sufficient to blow the pollen from the tassel of one plant to the silk of another. This may, or may not be a provision of nature in favor of cross-impregnation. Later trials with many different kinds of sweet corn showed that the difference between the dates of the male and female maturity was more marked than in the field varieties, though in some, the maturity occurred the same day. In some, there was a difference of two days. It was found, however, that this difference was not constant in the same variety in subsequent seasons. Probably soil or thermal changes peculiar to different seasons, are the cause. It will appear, then, that the kernels on a cob are not generally brothers and sisters. They are all borne by the same mother, certainly, but it may be among the possibilities that every kernel owes its existence to a different father. Unquestionably, there are few ears of corn every kernel of which can claim the same father. It will appear to our readers, therefore, that in improving corn, it is just as necessary to regard the male as the female parentage. In every field there are many barren stalks, that is, those which produce male flowers, but which do *not* produce female flowers. Such a union could scarcely be expected to improve the prolificacy of the progeny. *Theoretically*, if we would produce a more prolific strain; if we would increase the number of ears to the stalk, or the size of the kernel or ear, we must also select the males. This can be done only by destroying the tassels of unacceptable plants as soon as they appear and before their pollen is shed. Plausible and forcible as this theory seems, the R. N.-Y. has persistently and scrupulously followed it in practice for a dozen years without results at all commensurate with its expectations.

We are led to infer that the fact that a corn plant does not in a given season develop so-called "sets" (female flowers), is not very good evidence that its pollen will exert a sterilizing influence on other plants. The experience of others, as we find it recorded, is very different. Prof. Blount claimed to have produced his so-called Blount's Prolific by this destruction of tassels on sterile plants more than by selection, crossing or cultivation. The subsequent discovery that his "Blount's Prolific" was in reality the old Tennessee Prolific, pure and simple, invalidated this claim a trifle.

Dr. E. L. Sturtevant records in the R. N.-Y. of March 8, 1879 as follows:

"In 1877, we cut out from our seed field about one-half the stalks; in 1878 we found it necessary to cut out only about one-fifth. Think of this gain: 50 per cent. of barren stalks one year and only 20 per cent. from the field planted with this seed the next year!"

Yes, farmers may, indeed, well think of it, if this mighty change were brought about as Dr. Sturtevant assumes it to have been.

I was taught in my younger days to cultivate corn by plowing deep with the double-shovel plow or the two-horse cultivator; but from reading the Rural's experience I have learned better.—page 214.

BREVITIES.

WHEN "farmin' don't pay": when a poor soil is worked by a lazy farmer.

FERTILITY, good seed, thorough cultivation. That is the way to produce a fine yield of corn.

WE have yet to meet the industrious, level-headed farmer that has made a failure of farming.

DO you know whether you are using the variety of seed-corn which will bring you the most crop?

BURPEE'S Gold-flesh potato reminds one of a sweet potato, in color, when baked, and the quality is excellent.

THE leaves on the privets are still clinging and, for the most part, green. In all previous seasons they have fallen before January 1st.

THE series of articles on "What are you farming for?" will prove one of the brightest and most thoughtful symposiums we have yet printed.

FERTILIZE THRICE. If you propose to use 1,200 pounds of fertilizer to the acre, sow 400 before planting; 400 when the plants are knee-high; 400 just before the tassels appear.

THE R. N.-Y. people, more and more every year, pity the lives which city people lead—as if by choice. The worst of prison life is the sense of imprisonment. City people are in prison without knowing it.

WE recall four experiments (one our own), in which corn from which all suckers were removed yielded less grain than other plots of the same corn cultivated in the same way, upon which the suckers were allowed to remain.

IF the land is rich and the season wet, "root-pruning" or deep cultivation may be helpful in inducing more grain and less plant. In a dry season, no matter how rich the land, the practice has, in the R. N.-Y's experience, proven notably harmful.

THE proceedings of the Engilage Congress lately held at Cleveland, Ohio, are both interesting and instructive, giving full information on the whole question of ensilage. Fortunately they have been published in pamphlet form and can be obtained for ten cents from the Secretary, W. H. Lawrence, 85 Wood street, Cleveland, Ohio.

HILLS three feet by three feet apart give nine square feet for each. Drills four feet apart and seed two and a quarter feet apart give also nine square feet. By planting 18 inches apart in drills four feet apart, there are 50 per cent. more plants on the same land. Will the yield be proportionately increased? Each farmer should be able to answer for himself.

FOR over 12 years the R. N.-Y. has (each season), saved several ears of corn from plants that seemed perfect or as nearly so as could be found. These have been planted on a little plot as far away from other corn as practicable. Care has every season been observed to cut off the tassels as soon as they appeared from all the plants of this little plot, which were too far away from the ideal sought. This is old news to our old readers, but it may be new to new readers.

To every ovule of corn is attached a long thread-like stile. This is the silk. There are, therefore, as many silks as there are ovules. Later there will be just the same number of kernels of corn. These silken threads appear to be very smooth. A better examination through a glass will show that they are not. They are provided near the top with minute hairs so arranged as to help to secure the pollen dust as it falls upon them. This pollen no sooner rests upon the end of the silk than it sets out to reach the ovary through the tubular silk. If it succeeds in its course (growth), it joins its mate, so to say, the ovule, which is at once fecundated and a kernel of corn begins its growth. If the pollen grain be arrested in its course, the ovule perishes and the result is that a "miss" will be formed on the cob.

Indust'l Societies.

THE TWENTY-SECOND SESSION OF THE AMERICAN POMOLOGICAL SOCIETY.

(R. N.-Y. SHORT-HAND REFORT.)

Latin botanical nomenclature ridiculed, reviled and defended; names long and difficult, but universal; foreign markets for oranges; fig culture and marketing.

THE second morning session of the society closed with the reading of a most ingenious and amusing paper on "Botanical Names," by Dudley W. Adams, of Florida. A radical nomenclature reform was strongly urged and the innovation proposed caused a lively sensation in the convention. In part he said: "The experiment of using dead languages in the description of plants is a disastrous failure: 999 out of 1,000 know nothing of these languages; not five in a thousand can understand these botanical names. These things have accomplished nothing for the fruit and plant grower. Every plant has five long botanical names. (Several illustrations were given, with the common name for each.) This jargon stands in the way of our nurserymen in this country to-day. Must the science of Botany ever be monopolized by a select circle or scientific clique, or shall a society of this nature take hold and apply the remedy? I ask for a Botany in English text. I stand here to demand the whole thing spread in our mother tongue. I plead for the toiling mechanics, the wild cowboys of the plains, for the millions of farmers, the child that plays amid the flowers, in behalf of the judge, the genuine scientist, the student, the youth, the middle-aged and the poor. I plead for an English Botany for an English-speaking people." He continued thus at length, being loudly applauded at the end. But much disapproval was also manifested. Mr. F. L. Temple, of Cambridge, Mass, arose before the applause subsided with protest in his eye and voice. "I don't think this paper ought to go out in this way without protest. How shall we nurserymen order stock from France and other countries? In a local community where the common names are well-known the plan might work. You can't handle the plants of the world unless you use what is called 'Scientific Botany.' Cut down names, but leave something that will distinguish each plant. The statement that five names are required for each plant is untrue. It is known to be the fact that very few have more than two names. We must have a name that can be used all over the world. We must work hard and learn Botany. You can't have anything without hard work; you can't grow oranges without work." (applause). Rev. Mr. White thought the essay ingenious enough to patent. "The same objection lies against every science you can name. Shall we, then, throw away geology, chemistry, physiology and all these sciences?" Dr. Moore thought some good points were made in the essay, but he believed in clear-cut scientific terms, with simple names for common plants. Botanical names should, however, be anglicized and simplified, so that every farmer and every farmer's child can understand. Mr. Steele said Prof. Gray had made such an attempt in his School Botany; but so far as nomenclature is concerned, we cannot do without it. Dr. Neal said, "Until Volapuk comes in use universally we can't do away with the present botanical names. Until all the nations of the world speak a common language this reform cannot be established." President Berckmans agreed that our nomenclature should be simplified, but opposed the radical change.

"American Fruits in Foreign Markets" was the subject of an essay by Henry Foster of Lake Charm, Florida, read by Mr. Lee. The orange was the only fruit alluded to. He had found a ready market for Florida oranges over the water. Some fruit was lost by decay on the way. Direct shipment from Florida to Europe was necessary. Rev. Dr. Moore thought the subject important. He said too often the fruit was not picked at the proper time, but often in bad weather. If picked when dry, and fumigated with sulphur, oranges could be shipped anywhere in the world, he thought, with safety.

Ex-Gov. Reed, of Florida, read an instructive and interesting paper on "Fig Culture." He began to grow figs in 1872 on a farm near Jacksonville. He found there some trees bearing poor fruit without any care. He said:

"The fig will grow and produce fruit in the South on any thoroughly cultivated land. The amount and character of the fruit will depend on the food furnished the trees. The roots grow near the surface, and the soil cannot be much disturbed near the tree. The fig is easily grown from cuttings. By fertilization I have improved the size and quality of all the poor varieties with which I started. I have removed trees and planted cuttings at all seasons of the year. I have one tree which has received the slops of the house, from which I have gathered annually for the last 10 years an average crop of 10 bushels of marketable fruit besides the ordinary waste. The fig industry labors under one difficulty here; frequent rains during the fruiting seasons often preclude picking at the proper time. I market from 40 to 50 bushels annually in Jacksonville and get three to four dollars per bushel. Cuttings planted in January, February or March will in 10 months produce fruit." Discussion followed. Mr. Steele said he had planted cuttings in March and gathered ripe fruit from them in the following September. Mr Mead had been growing figs for 15 years, using considerable fertilizer, but he had yet to get his first ripe fig. Mr. Williams had failed with figs on the Indian river. Various other conflicting reports came from different parts of the State. One gentleman thought an acre of figs in Louisiana would be as productive as 20 acres in Florida. He thought it too cold, and that the land was not rich enough for the fig in Florida.

(To be continued.)

Veterinary.

A FIGHT WITH THE MICROBES OF LUNG PLAGUE.

Microbes of lung plague; prevention of liver-rot in sheep; lung plague in cattle strictly contagious; its long prevalence in Europe, and recent introduction into America; slaughter of affected and exposed animals and thorough disinfection of contaminated objects indispensable for its eradication; victory over it in Cook County, Illinois; treatment of it in New York State.

AT the Albany Institute Dr. James Law read a paper on the above topic. In dealing with an animal plague the first consideration is to ascertain and determine its nature and cause. If we had to deal with a plague of "liver-rot" in sheep, the knowledge that the trematodes on which it depends must pass their early existence in certain fresh-water snails, would lead us to drain the ponds and marshes where such snails are bred, to place the sheep upon salt meadows, or to furnish a very liberal supply of salt with their food. So in dealing with the lung plague of cattle, the first consideration relates to its nature and cause. Certain leading facts in its history, clearly demonstrate that this affection is the product of a continuous and unbroken generation as truly as the race of cattle on which it preys. The disease can be traced in Europe for a period of over 2,000 years; but in all this period it can only be traced along the lines of cattle transit, and never can it be shown to have occurred where there has been no communication with a previous center of infection. A comprehensive view of the subject like this demonstrates that this is a disease which is propagated only by a continuous succession of cases, or, in other words, by a seed which is transferred more or less directly from animal to animal, and without which the malady has never been known to arise If further proof of this were wanted, it is furnished in our American experience of 40 years with this disease, during which it confined itself strictly to the Atlantic sea-board where it was first planted and toward which all cattle traffic tends, until in an evil day a shipment of Jersey cattle from the infected center of Baltimore, Md., carried the disease into Ohio, whence it was transferred to Kentucky, Missouri and Illinois. For four years the plague maintained its foothold in the Mississippi Valley, and at each infected center it was only crushed out by the most radical measures of destruction and disinfection. If we would deal with lung plague therefore, all measures for its restriction and extinction must be conceived and executed in view of this fundamental fact, that the disease is but the harvest of a specific seed sown and that all effective measures for its control must secure the destruction of this seed and of its developed product.

1st. Diseased animals are the field in which this seed is multiplying into an inconceivably abundant harvest. The growth must be stopped even if this should demand the destruction of the field as well as the harvest.

2nd. Chronic cases of the plague usually continue to carry dead masses of lung charged with the germ which lives therefore an indefinite length of time. These are therefore store-houses or granaries of the seed and must be thoroughly purged of their baneful contents even if the granary too must be destroyed.

3d. Every bovine animal that has had contact direct or indirect with the plague or with a place where the plague has been, must be held as open to suspicion for a long series of months, as also must cattle that have come in contact with her. She may bear the germ on her surface though she may personally escape the disease. She may carry it four months and then fall a victim to its infection. She may pass through a mild and unnoticed attack of this affection, and though apparently recovering may continue for many months to carry an infecting mass in the chest, which constitutes her a veritable store-house of infecting material.

4th. Every building, yard, and article of whatever kind, and every man or other animal that has been in contact with the diseased or suspected animals or their products, must be looked on as liable to transmit the infection and must accordingly be subjected to a thorough disinfection. When called to undertake such a work in Illinois in 1887, I looked over the ground and found much to deter and only a little to encourage. The General Government which held the purse-strings, and the State Cattle Commission which held the power of operating within the State, had not been able to work in harmony, and only by great trouble could I secure the adoption of laws that would allow me such power as would enable me to handle the plague with hope of success.

(To be Continued.)

LARGE YIELD OF POTATOES.

Thos. O'Hanlon, of Chinook (Dawes) in the Mile river valley of Montana, raised 108,000 pounds of potatoes on three acres of land, in 1888. Yield, 600 bushels per acre. This land is all open for free settlement to home-seekers. Get a free farm from the government land. For further information call on F. I. Whitney, G. P. & T. A., St. P. M. & M. Ry., St. Paul, Minn.—*Adv.*

Miscellaneous.

NEW LEGISLATION NEEDED CONCERNING MONOPOLIES.

No. 2.

PRES. W. I. CHAMBERLAIN.

ALL property invested in monopolies has, as hinted in a former article, need of special limitations. A monopoly is the right or power, natural, taken or conferred, to have exclusive use or sale of certain commodities or to render certain services for pay in certain localities. Monopolies are of various sorts, and may be absolute or partial; as, for example, copyrights, patent rights, ra way and street car service, gas and water service, express, telegraph and telephone service, pools, trusts, etc. Now in the case of a monopoly of any necessity or urgent convenience of life, the good of society seems to require that it be regulated by law as to cost and quality of service or commodity, or else individual greed will lead to extortion from society. Greedy human nature cannot be trusted with power unlimited to levy tribute.

COPYRIGHT.—Here Government simply protects the author in his natural right to the labor of his brain and to its exclusive sale in printed form. Copyright, however, needs few limitations. Books are not necessary to physical existence, and the supply seems equal to the demand. Indeed proper reward to authorship would seem to require that this monopoly be not further restricted but rather extended and made international.

PATENT-RIGHT.—This gives the inventor exclusive ownership and sale of his invention for a certain time. His invention is the product of his toil of brain and hand combined. Patent right is a full monopoly, and requires far closer limitations than copyright to guard the public welfare, for two reasons; first, because patented articles usually supply physical wants, which, though lower than the intellectual and spiritual, are more imperative, indeed essential to our very existence, and, second, because an inventor makes use of laws, forces and materials of nature already existing; not created by the inventor but free gifts of God to the race. To the inventor belongs the discovery of some law, force or material hitherto unknown, or of some new means or instrument for utilizing those already known. But he may not justly charge so high a price as practically to exclude society from the advantages of his invention or to work extortion. To him belongs simply the invention, the discovery; but the laws, forces or materials he discovers or helps the better to utilize belong to the race, to society; and had not he discovered them some other man would, no doubt, nave done so soon. He may not play "dog in the manger" as against society. Our patent laws should amply protect and reward the inventor and thus encourage invention. This they now do. They should also protect society from deprivation, extortion and black-mail. This they certainly do not at present do. Sharper limitations, I think, should be placed upon this kind of monopoly in three directions. 1, The inventor and his assignees should be compelled to put the invention on the market in manufactured form within a reasonable time definitely fixed, or forfeit the patent; 2, they should be forced to sell the articles at a reasonable price compared with the cost of manufacture; 3, the patent should expire in a shorter time than now, with no chance of renewal.

The first point above would prevent the patenting of a mere simple, obvious idea in mechanism, with the sale of the farm or personal right to make and use the patented device at will, and with no intimation on it that it is patented. Property inheres really only in tangible substance worked by brain and hand. The maker and seller, and not the buyer and user, of a patented article should be held responsible for infringement. Still further, as hinted, every patented article should bear in plain sight upon it the word "patented," with the date of the issuance of the patent, or the copying and use of the article should not be punishable as an infringement. Patenting a simple idea, as, for example, the "drive-well" "slip-gate," etc., has been a fruitful source of the worst forms of extortion and black-mail under the cloak of law.

The limitation noted in the second point above, would prevent extortions like those of the telephone monopoly, that vastly enrich those who "get in on the ground floor," and cruelly tax the general business interests; while the limitations on number three would prevent corrupt renewals purchased by companies already grown immensely rich on a patent, as, for example, by the "gimlet screw" monopoly, a renewal that for 17 years more "taxed without representation" consumers in every corner of our wide domain, and vastly enriched a close monopoly-corporation in one of our small Eastern States.

Our patent laws were perhaps wise and just for the slow times when they were enacted; but they are in some respects now a sad anachronism and a curse for these changed times of steam and lightning. They need thorough and wise revision. This will not come, however, until it is imperatively demanded by a public sentiment that is clear-headed, just and strong. Free discussion through our public press, and clear instruction in our schools and colleges alone can teach the great body of our citizen rulers to scan with intelligent care the philosophic basis of just law, and to demand such laws—wherever they do not now exist.

The next article will discuss Railroad property.

State Agricultural College, Ames, Iowa.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

HOUSE-CLEANING—that is the next affliction. How did it leave you last time, Mrs. Busy — with a heavy cold, or a lame back, or a sprained wrist, or an attack of nervous prostration? It usually leaves some affliction. We believe that too many women hurry and rush to get their cleaning over, without due thought of the evils that may follow it. First, there is the risk of taking the stoves down too early; we usually have a period of wet, cold weather in May, and damp, fireless rooms cause many an ailment that may be clearly laid to early cleaning. Then, there is the risk of over-work. We know by personal experience how hard it is to get any help in the country, even when one is willing to pay well for it; yet it is better to drag out the cleaning for two months rather than to half kill oneself in the effort to be done as soon as the neighbors. Let it be one room at a time—closets and drawers first. See that everything needful is in the house—tacks, kalsomine, varnish to touch up the furniture, etc., and, *please*, don't try to move heavy pieces of furniture all by yourself. We have seen too many women permanently weakened by such over-ambition. In putting down the carpets, sprinkle a little salt over the lining, especially around the edges; this will prevent Buffalo moths. One of the best things for laying

away winter clothing in is a wrapping of prepared tar-paper. It is really better than camphor, and without the disagreeable odor. Of course, all the garments thus laid away must be both cleaned and mended.

* * *

DID you read what Dora H. Vrooman said in a recent RURAL about fretting? We believe in her doctrine. As somebody—we think it was Dr. Johnson—once said, the ability always to see the bright side is worth £5,000 a year. If there is no bright side, we can always shine up the dark one. Nothing is so bad that it might not be worse—in any case fretting will not mend it. Fretting not only makes us all miserable, it injures the digestion, spoils the complexion, and drags our faces into wrinkles. So, since it does no good and much harm, let us abjure worry, and sing like Autolycus:

"Jog on, jog on. the foot-path way,
And merrily hent the stile—a!
A merry heart goes all the day,
Your sad one tires in a mile—a."

* * *

AMONG cotton fabrics the loveliest styles are among the challies. They are as beautiful in patterns and colors as any of the printed silks, very handsome ones costing about 17 cents a yard. Many are in close oriental patterns of mingled color; others resemble the French flowered silks. They may be trimmed with a little ribbon or velvet; a girl who can make her own gowns—we hope all the RURAL girls can do that—may make a challi gown handsome enough for "best," without exceeding the sum of four dollars.

OUTINGS IN NEW ENGLAND.

III.

MARY WAGER-FISHER.

AS the laddie had been greatly interested in reading the Life of Agassiz, he was eager to go to Cambridge and see the remarkable museum there established by him, and which since his death has been supported by his son, Alexander Agassiz, out of his own private fortune. Agassiz, *père*, said that he never had time to make money, but the means whereby he prosecuted his scientific researches came to him as if by magic from the pockets of the rich, while the son, who is almost as famous as was his father in science, is undeniably wealthy. A daughter of Agassiz, the elder, is now Mrs. Quincy Shaw, and she is at the head of the Boston Kindergartens. Another daughter married a man named Higginson, who, in the secession war, received a sabre cut across his cheek and lip. A gentleman once said to him, "Mr. Higginson, I would give a thousand dollars for a cut like that!"

If it were not for crossing the Charles river—bridged for horse-cars and other vehicles—one would never know that Cambridge was not a piece of Boston, and in crossing the Charles we could but recall Longfellow's poem.

"Thou hast taught me, silent river,
Many a lesson, deep and long:
Thou hast been a generous giver;
I can give thee but a song."

As neither the laddie nor myself had been in Cambridge, we counted on our fingers the places we wanted to see—the Museum, Harvard University including its Memorial Hall, the house which was Agassiz's home, the Longfellow house, the elm under which Washington took command of the army, and Mount Auburn which probably holds the ashes of more famous people than any other American cemetery.

As Cambridge is an old university town—as age is reckoned in this new country—it is the very sort of place about which one would hope to find nothing new or smart, and indeed there are no show places, but there's a quiet, unpretentious, informal air about it, that is exceedingly solid and respectable. Memorial Hall, Harvard's Valhalla, is the most pretentious and conspicuous building, and because of its collection of portraits its interior is of great interest. As it was vacation time, the bronze image of John Harvard, sitting in a bronze chair in the University Campus, was the only suggestion of a college man about. This statue represents a young and handsome man—and I could but contemplate the bigness of the oak that had grown from the little acorn that he planted. Harvard was an English clergyman who died in Massachusetts in 1638, and he left by will the half of his estate and his library to a "college" to be established at Cambridge, for the establishment of which £400 had been voted by the Colony Court some eight years before. The half of Harvard's estate amounted, according to some statements, to £800; according to others, to much less, and I have somewhere read that Harvard was the son of a man so illiterate that he could not read. The college charter of Harvard declared the object to be "the education of the English and Indian youth of this country, in knowledge and godliness." Probably more than 10,000 men have graduated from Harvard, but the craving of the Indian youth for knowledge has not drawn very heavily on any of the educational institutions originally designed for his benefit.

The Agassiz Museum contains a great many wonderful things arranged in scientific order—and the arrangement was the great point with Agassiz—but the things that I found most beautiful were specimens of the ocean bed flora, brought up by deep-sea dredging. When plants are put in jars of alcohol for preservation, the coloring matter in them is changed or destroyed, and they are left white and translucent, their beauty being entirely of form and structure, but nothing could well be more exquisite. A botanist gave me, not long ago, a native orchid in bloom, the seed stalk of the previous year still standing from the root, preserved in alcohol in a glass jar, and it is ever a thing of beauty. A clear glass fruit jar does very well for the purpose if taller than the plant, and the alcohol should be diluted with three parts of water to one of alcohol.

The wooden house which was Agassiz's home, stands on a corner and is directly on the street, with no yard intervening. It is high and rambling and was evidently "added to" as more room was needed. The university buildings constitute quite a village in themselves. The yellow house that was Washington's headquarters, and which was still further immortalized by Longfellow's residence in it, would at once be recognized by any one familiar with the pictures of it. It is at a discreet distance from the street, and the horse-cars pass it. It is still occupied, I am told, by one of Longfellow's daughters, of whom the eldest, Alice, is a moving and controlling spirit in the Harvard Annex for Women. The two younger daughters are married. Their mother was a Miss Appleton, of a wealthy Boston family, and the Longfellow children also inherited quite a fortune from their mother's brother, familiarly known as "Tom" Appleton, a very witty and attractive man, and Boston people still love to repeat his witty sayings. A son of the poet, Ernest Longfellow, is an artist, and his pictures are peculiarly poetic and dreamy in theme and treatment. He married a girl of exceptional beauty, with decided artistic talent, and she was a great comfort to the father in his declining days.

Across the street from the Longfellow house is the Lowell estate; but I was told that the poet had lived there but little, and neither that nor the Longfellow place had the trimmed and sheared look which is popularly termed "swell," and there was an evident intention on the part of the present guardians to let things comfortably grow at their own sweet will. I believe that the Longfellow house has been painted in the same shade of pale yellow ever since the poet's purchase of it, and yellow was probably its original color.

The old elm under which Washington took command of the army, is girdled with tar, to protect it from insects, and all the "sacred" elms in New England are encompassed with similar contrivances. It bears a tablet recording its greatness. The elm tree in the Common, that was older than Boston, was blown down 10 or 12 years ago, but a descendant quickly grew up in its place, and is protected by an iron fence. It is a pleasure to be in a city where trees are revered, and in the Common, with its 48 acres, are 1,300 trees, maples, lindens, tulip-trees, sycamores, oaks, aspens, etc. Both the Botanic Garden and the Arnold Arboretum were left for another time.

GOLDEN GRAINS.

TALMAGE says every wise woman buildeth her house. As no boy ought to be brought up without learning some business at which he could earn a livelihood, so no girl ought to be brought up without learning the science of self-support. * * * His advice to all girls and all unmarried women, whether in affluent homes or in homes where most stringent economies are grinding, is to learn to do some kind of work that the world must have while the world stands.....

WHEN a plant is alive, says Drummond, it finds both the sun and the rain beneficial, and they both co-operate in making it grow; but if it is dead, the very sun and rain, which before nourished it, now rot it. If the love of God is in a soul, whatever comes, be it the sunshine of prosperity or the rain of calamity (for, as Longfellow says, "Into every life some rain must fall,") all things work together for good; but if the soul is dead, the dealings of God with it seem only harmful. Blessing bestowed awakens no gratitude, and affliction only hardens and embitters.....

THE CHRISTIAN UNION reminds its readers of a truth which cannot be repeated too often, when it says that all the world loves a lover, and it loves him even more if he is a married lover. Married lovers have courteous, lovable children. The world grows gentle before them, and the prosy people who scoff at flowers and poetry after marriage look at the married lovers with a sigh and wonder if it is possible to turn back the written pages in their life's history. No; but it is possible to begin a new chapter on the blank page of tomorrow..... .....

THE CENTRAL CHRISTIAN ADVOCATE says there are few things more difficult than to manage persons who are always stirring up strife. They are rarely fully conscious of the effect which they are producing, and so take offense at the slightest intimation that they are not conducting themselves in the most Christian manner. They generally act as if they were on the defensive, and take to themselves the credit of forbearance. In fact, they are partly the victims of their own imaginations, and being of a suspicious character besides, they constantly provoke persons to resist their criticisms and encroachments on others' rights.....

BISHOP HUNTINGDON says that if the Church would have her face shine she must go up into the mount and be alone with God. If she would have her courts of worship resound with eucharistic praises she must open her eyes and see humanity lying lame at the temple gates, and heal it in the miraculous name of Jesus.....

THE N. Y. OBSERVER says that in imitating Christ we are to remember that we cannot copy his character in all its points; as, for example, his sufferings can never be ours, nor can we make an atonement for our own or others' sins. We cannot work miracles, nor become like Christ in his knowledge and power.....

WE cannot upon the other hand, take Christ as our example in the works of repentance and sanctification, for he knew no sin, neither was guile found in his mouth, and therefore, he had no need of repentance; he was always holy, and therefore cannot offer us an example of change of heart and of progressive sanctification.....

As it would be futile to attempt to imitate God in knowledge, and perhaps might lead to unholy pride, so it would be vain for us to attempt to imitate Christ in the peculiar attributes of his official character as Saviour and Mediator.....

AN INTERESTING ORIGIN.—Thatcher's Orange Butter Color was originated and perfected in the study of colors in grasses and traced to cream and butter with one of Beck's fine London microscopes.—*Adv.*

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

The poorest god that a woman ever worshiped is her own face. TALMAGE.

EXTRACTS FROM SUNDAY EVENING TALKS AT THE RURAL GROUNDS.

"A SOFT ANSWER turneth away wrath, but grievous words stir up anger." Prov. 15., 1.

My own faults and short-comings are brought to my notice so frequently and forcibly, and the imperative necessity of fighting them is impressed upon me so urgently, that when subjects of moral and religious moment are considered, my thoughts immediately turn "towards home."

This text has suggested itself to me a great many times of late. No one needs thoroughly to learn and fully to appreciate it so much as I. Naturally impulsive and quick-tempered, I am too apt to make the first reply that comes to my mind, and I am obliged to confess it is more often a "grievous word" than a "soft answer." At one time I fully believed that one "might as well *say* it as to *think* it." *Now*, I known that a hasty, harsh, cruel thought is far better unspoken, for the feeling which gives rise to such words dies away more quickly, and leaves not one half so much to regret. Moreover, one's thoughts do not cause pain or anger in another; whereas one's words may.

The truth of this proverb is apparent. Its practical bearing on things of every-day occurrence is evident. We all know that "least said soonest mended." Ah! if we lived up to it, how many unpleasant differences, fierce quarrels and broken friendships would never occur!

I recall two instances in Bible history, which enforce the truth of the proverb.

When Gideon's army of 32,000 men had been reduced to 300, and the army of the Midianites (his enemies) lay along the valley like grass-hoppers for multitude, Gideon was enabled, by his stratagem of trumpets and lamps in pitchers, to put the Midianites to flight. Then he sent messengers to the men of Ephraim on the mountain, saying, "Come down against the Midianites and take before them the waters unto Bethabara and Jordan." This the men did and on the way took two princes of Midian and slew them and brought their heads to Gideon on the other side of Jordan. The men of Ephraim said to Gideon, "Why hast thou served us thus, that thou calledst us not when thou wentest to fight with the Midianites? And they did chide with him sharply."

Gideon replied, "What have I done now in comparison of you? God hath delivered into your hand the princes of Midian, and what was I able to do in comparison of you?" Then their anger was abated toward him when he said that. "A soft answer turneth away wrath."

An incident in the life of David furnishes an instance of "grievous words" stirring up anger. Immediately after the death of Samuel, David with a few of his men went to the wilderness of Paran. Not far away there lived a very wealthy man whose name was Nabal. He and his wife are described thus: "Abigail was a woman of good understanding and of a beautiful countenance; but Nabal was churlish and evil in his doings." On a day especially appointed for feasting and giving portions one to another, David sent ten of his men to Nabal with this message, "Peace be both to thee, and peace be to thine house, and peace be to all that thou hast. And now I have heard that thou hast shearers; now thy shepherds which were with us, we hurt them not, neither was there aught missing unto them all the while they were in Carmel. Ask thy young men and they will shew thee. Wherefore let the young men find favor in thine eyes, for we come in a good day; give, I pray thee, whatever cometh to thine hand unto thy servants, and to thy son David."

Nabal said to the men, "Who is David? and who is the son of Jesse? There be many servants nowadays that break away every man from his master. Shall I then take my bread, and my water, and my flesh that I have killed for my shearers, and give it unto men whom I know not whence they be?"

When the men told David how Nabal had received his message, he was *enraged* and immediately started with 400 armed men determined to kill Nabal and all his servants. "Grievous words," etc. When Abigail was told by her servants how Nabal had replied to David and how David's men had protected them when they were keeping the sheep, she resolved to try to appease David's wrath. She gathered together a quantity of bread, wine, sheep ready dressed, corn, raisins and figs, and started out with her servants to meet David. When she came near to him, she bowed down and besought him to take no notice of Nabal's words, but to accept the food she brought for himself and his men. David received the offering, and said to her, "Blessed be the Lord, God of Israel, which sent thee this day to meet me: and blessed be thou, which hast kept me this day from coming to shed blood, and from avenging myself with mine own hand. Go up in peace to thine house." Her "soft answer" turned away his wrath; her husband's "grievous words" stirred up "anger."

CHERISH THE HOME-LIFE.

THE discussion of hired help in a recent RURAL, only touched lightly on one point—a point that many seem to think of little importance. It is the introduction very often of a totally inharmonious element into the home, when the hired man eats with the family of his employer. It may often seem a necessity; but a family that can be satisfied to have a succession of such men always at its board, has lost or never possessed

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria.

the feeling that there is a sacredness in the home-life. Please understand at the start that I offer no disrespect to the many faithful, unobtrusive farm laborers whose principles and general conduct are above reproach.

A family cannot grow into unity of thought or feeling without some opportunity for its members to express their opinions and feelings fully and sympathetically. To busy people, meal-time is often the only time, for weeks in succession, when the family is together. The table talk can and should be such that there is an exchange of thought and experience between all the members of the family. The children will hear in school something of the questions of the day and at meal-time they can learn just what 'mother thinks" about them, and just how "father stands." But, supposing a workman sits at the table whose sympathies are known to be with the saloon men; would it be possible to enter into an argument with the hot-headed, out-spoken children on the burning evils planted and fostered by the saloons? It would be taking the man at a very unfair disadvantage and be striking him over the shoulders of the children if they were permitted to talk of the subject.

Children are sensitive to an antagonistic element, and will not express their thoughts freely in the presence of a man they cannot at all respect, and the parents thus lose the chance to learn the thoughts of their children, and lose the opportunity to shape them while they are not yet hardened into convictions. Without a knowledge of children's thoughts, older people make no impression upon them by their advice. A sympathetic atmosphere will bring out the questions and perplexities of child-life; but without it children will cover up everything belonging to the inner life with silence that is often unwholesome.

How many children there are who think as their school-mates do, as their teachers do, or as some older friend does, and scarcely know what their parents think on the same questions. There are not enough homes where unity is cherished and cultivated where there is, in any strict sense, a family life, a home-heart that pulses alike in every breast. This is the deepest loss that is insured when a family has no hour in the day for spontaneous and sympathetic talk. No man ought ever willingly to do anything that will make such an hour quite out of the question. I have known of families in which rough, ill-mannered hired men commented on every remark made by any member of the family in their presence, and whenever it was possible monopolized the talk. Such men would set little children the example of rising out of their chairs at table to help themselves to food beyond their reach, and then, of sinking back and devouring it with loud, smacking noises.

Some men bring with them to the table the odors of ill-smelling work and a noisome odor of dead tobacco fumes and perhaps of whisky, besides. The farmer who hires such a man, except under the severest pressure of work and scarcity of help, when he knows he must sit at the table with his family, ought to be made to swallow red-hot every dollar he gains by it. There are torture and slow starvation of minds, hearts and souls for the family of such a man, if they possess minds, hearts and souls to be tortured and starved. This is not an extreme picture, though I hope its like is not so common as observation would lead me to fear.

A hard-working man who by his work and frugality has risen from the position of hired man to be the proprietor of a thrifty little place, hired, one season, an evil, filthy, ill-smelling man, who was half-drunk or wholly so whenever he could obtain liquor, and placed him at the same table where he sat down with his neat, wholesome wife. Whether she made any sign of disapproval I do not know. But that man's thrift was base when it led to sharing the few minutes he could spend with his wife in the presence of such a man.

When it is the custom to seat the hired men with the family at table, a man's principles and his personal habits ought to be considered at least equally with his other qualifications as a farm laborer. The farmer has no moral right to offend his household by introducing into it a jarring, torturing element when it can be avoided. By one who realizes the value of the true companionship possible in a family some way will be made for its expression; if the table talk cannot be free and unhindered, some evening or a part of Sunday will be held sacredly in trust for the family life, for the development of the true home spirit. Too many children can say, in bitter truth, "Father never talks earnestly to me except when he has to punish me." Too many fathers do not know how to approach their children. Their busy lives have left them only a little leisure, and it has been spent over the newspaper or talking with neighbors, and the men are not acquainted with their own children. They find them grown up some day with ideas wholly at variance with their own on many subjects, and wonder bitterly why it is so, why the boys and girls hate the farm and call it a lonely, desolate place. A home on the farm is the place, if it is made so, for the most beautiful development of home-life; its isolation even gives the better opportunity for unity and harmony, and there is employment suited to every one if it is rightly shared. There are many homes where the home-life is strong and constant, and there will be many more as their beauty is felt and understood.

A. B.

Apropos of the article on "Woman," in the issue of March 9th, is the following, which is taken from the Lincoln Journal.

There were laughter and dancing at Hominy Hall,
And the ladies were happy—but gayest of all
The cook lady was as she frolicked around,
While the nurse lady scampered with panther-like bound;
The wash lady sat at ease in her chair,
While the lady who cleaned up the floors fixed her hair,
But, alas for their joy!—it was brief and short-lived,
For the woman whose servants they were had arrived.

"DOLINDA MIX."

A FARMER'S DAUGHTER'S DOMESTIC REVERIES.

CHARITY SWEETHEART.

"WELL, Charity, you're catching it. I declare I never knew I was such a good boy till 'A Man' took up my defense," said Burt, laughing and flourishing the RURAL. "Well, little sister, I deserve all you said and more too—and I should like a chance to knock 'A Man' down, if I am 'only a boy.' He would be a very nice house-mate I should think, to keep *nagging* that way. There's one thing, Charity, I think you *have* made a mistake in, and that is in waiting on me too much"—and with a kiss he went off, leaving me the paper. And I thought to myself that I was greatly to blame for the carelessness of the household, as Burt said, in not making them keep things in their places from the first. They were small when mother died, and we had to work so hard that I felt it was easier to pick up after them than to tell them to do it, and, of course, my authority was not very much to speak of, and so they grew up to think it didn't matter. When I first began to write for the RURAL, it was my *want* of culture that was commented on, and such derisive terms as are now applied to my small strivings after better things, are only amusing to us in the light of our very simple and homely surroundings. And it is the first time I ever knew it to be a subject for censure that one does not want a slaughter-house made just outside the kitchen door, with blood tracking in at every footstep, and the offensive *débris* in sight for a long time afterward. Why, in the city any man would be taken up by the police and fined for creating a nuisance, and I do not see why the country people should rebel against being as neat as their city neighbors in their home surroundings, when they modestly try to follow the city fashions in less important ways, with the very best of intentions.

In most country society it is a constant aim of the young folks, to resemble city people and the many squibs and caricatures of the awkwardness of rustic simplicity are very much resented. But it is of far more importance to have one's door-yards sweet and wholesome, for if we care not for these things, are we any better than the animals, calves, for instance? Our opponent knoweth not how high these pets of the barnyard stand in my estimation, or how natural it is to speak of them; for I have had to raise a good many of them by hand, and for years it was the only *culture* I knew, and having never been away from home to school (and Burt has) I cannot truthfully judge what the effect of a higher culture would have been. I should never imagine "A Man" knew anything about a sister's love even if he had not said so, for his sentiments lack a refining influence.

His writings amuse father very much, but he always ends by saying—"He's on the wrong track; isn't he Charity, my girl?" For father begins to realize now how few chances I have had for mental improvement, having alone all the care of the household, and he tries to make things easier somehow for me, and appreciates our improved surroundings.

I looked in the Floral History for the word marigold because if there is anything I despise it is one who *would* marry gold for gold's sake, and I wondered at the meaning of the flower. It was not so bad after all, the "fragrance being balsamic;" but the meaning cruelty—I leave to the readers to judge where it comes in. The poem reads:

"Thou art come to answer
A stony adversary—an inhuman wretch
Incapable of pity—void and empty
From every drachm of mercy."

Shakespeare wrote this, not marigold—and after all it doesn't really matter that "A Man" threw away the flowers—"what's one man's meat, is another's poison," all the world over, and there is one kind of marigold that is even useful, the petals of the flower being thought worthy as a seasoning "in the soup."

FOR STORMY DAYS.

I ONCE knew three children to play "Christmas-tree" for hours at a time, and day after day. They had a small, pretty pine fastened in a stool, and this they covered with their little playthings, picture books, cards, pretty caps, mittens, handkerchiefs, etc. Sometimes they hung on a little joke, as the stove handle for mamma, and the like. When all was ready, they held the song book up high, sang a few verses, and then stripped their tree. One dark, lonesome day, the tree was extra nice for "father" helped to trim it.

EAR-ACHE.

IF one of your little ones is troubled with the ear-ache, heat his pillow hot every night. This will often prevent a serious aching spell. When the poor ear really aches hard, toast a piece of bread, moisten it, bind it over the ear as hot as can be borne. Have a second piece ready as the first cools. Or, bake an onion without removing the outer layers; when soft, cut in halves; bind on the ear, having first wrapped it in soft cloth.

MRS. L. H. NILES.

ROLLS.

Two quarts of flour, one and a half pint of milk, one table-spoonful of lard, one-third cup of sugar, pinch of salt, one cake of compressed yeast. Rub the lard, salt and sugar through the flour. Dissolve the yeast in a little cold water. Warm the milk. Mix and cut out with a biscuit cutter, then roll each on one side so that it will be long enough to lap over. Put a small piece of butter under the part that laps over. Let rise two or three hours. This quantity will make 40 rolls.

MRS JENNIE DOWNE.

COLORING RECIPES WANTED.

I WISH that Mrs. Adelle Button would give to the RURAL readers her recipes for coloring cotton so that it will not fade. JENNIE W.

Miscellaneous Advertising.

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Are so liable to Croup, sudden Colds, and various throat troubles, that no family should be without
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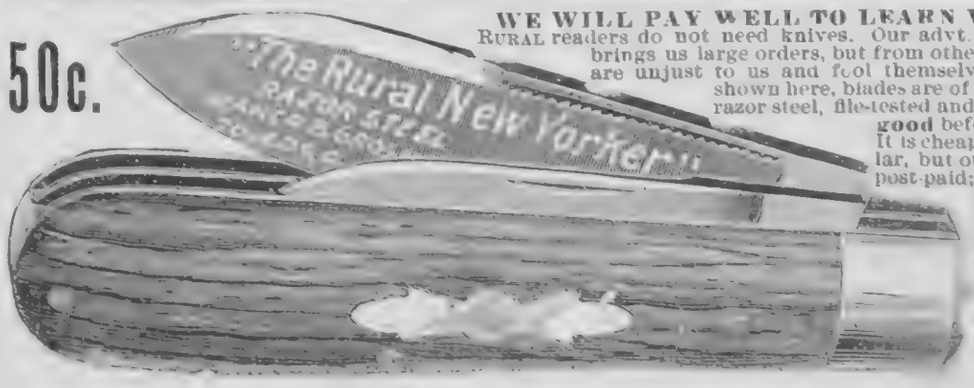

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RURAL readers do not need knives. Our advt. in some papers brings us large orders, but from others few. Readers are unjust to us and fool themselves. Take knife shown here, blades are of highest quality razor steel, file-tested and known to be good before sending out. It is cheap for a silver dollar, but our price is 50c. post-paid; 5 for $2. Send for our 64-page free list, also, "How to Use a Razor."
MAHER & GROSH,
80 S Street,
TOLEDO,
OHIO

News of the Week.

AGRICULTURAL NEWS.

SATURDAY, March 23, 1889.

Seven per cent. is the legal rate of interest in Kansas, though 12 per cent. may be stipulated for in writing. There is a bill now before the legislature reducing the legal rate, and a number of persons and concerns that have been lending large amounts of money on bonds and mortgages are preparing to withdraw from the State, finding more profitable openings in other places. Farmers, the chief borrowers, think Eastern capitalists should be content with five or, at the most, six per cent. with good security, since it isn't easy to get safe investments paying even four per cent. at home .....Many object to the deductions drawn from the Minnesota Experiment Station's experiments with frosted seed wheat The seed sprouted all right in a green-house; but none of the plants eared. Under ordinary conditions it is held to be doubtful whether they would sprout as well and whether, if they did, the plants would not be too weak to withstand the hardships of the season and to mature full heads of plump, sound grain. It is held to be too risky to trust for so important a crop to such poor seed ..... Owing to his doctor's strong opposition, Professor Brewer, of Yale, who had accepted the office of Assistant Secretary of Agriculture, has been compelled to resign it. Ex-Governor Furnas of Nebraska and President Atherton of the University of Pennsylvania, declined the place, and now Professor Hillgard, of the Agricultural College of California, is the strongest candidate, being highly recommended by Professor Brewer and Senator Stanford of California.....The Illinois State Board of Agriculture has located the State Fair at Peoria for the next four years. It has elected Chief Clerk W. C. Gerrard, Secretary, in place of Col. C. F. Mills. It will offer $21,000 in prizes, or $3,000 more than in 1888..... The determination to boycott the binding twine Trust is spreading and hardening among the farmers of the West, among whom a strong agitation on the matter prevails. A big factory has been started at St. Paul, Minnesota, which, the telegraph tells us, "makes excellent binding twine from the fibres of common weeds" It is offered at 12 cents per pound against from 18 to 25 asked for manila. Last year while sisal twine was held by the manufacturers at 12 and 14 cents per pound one quarter inch rope made of exactly the same material, in the same factory, by the same machinery, was sold at eight to 10 cents per pound. At the close of the season, too, the unsold twine for which 14 cents has been demanded, was twisted into quarter-inch ropes which were sold for nine cents per pound in spite of the extra work! Few contracts have hitherto been made by either dealers or farmers..... Philadelphia and Germantown horse owners are denouncing the workings of the Pennsylvania Mutual Live Stock Insurance Company as fraudulent.....Cattlemen from all parts of the country attended the fourth annual meeting of the Holstein-Friesian Association in this city last Wednesday. The election of officers resulted as follows: President, Edgar Huidekoper; First Vice-President, G D. Wheeler; Second Vice-President, Jere Allis; Third Vice-President, John A. Fryl; Fourth Vice President, D. H. Burrell; Directors for two years, C. W. Hoer, C. R. Payne and M L Sweet; Treasurer, W. Brown Smith; Secretary and Editor, Thomas B Wales; Superintendent of Advance Registry, F. Hoxie. It was decided to hold the next annual meeting in New York on the third Wednesday of March, 1890. Fourteen new members were elected .... . The New York State Brewers' and Malsters' Association held its semi-annual convention here Wednesday. The brewers and malsters pledged themselves to give preference to hops grown in this State over those grown elsewhere, particularly in foreign countries; to buy New York hops from members of the county associations only; to encourage the growing of hops in this State, and to petition Congress to regulate the duty on foreign hops to protect home growers. The legal tare on a bale of hops is 3½ pounds. The Produce Exchange tare is seven pounds. It is proposed to enact by law a compromise tare of five pounds and then stick to it ..... It is proposed to join hundreds of large fruit houses throughout the country in a company which will have sufficient capital to buy the entire orange crop of Florida, and guarantee not only rapid delivery of the fruit in the markets throughout the country, but also insure a uniform quality of the fruit. The company will send a representative to Florida about September to inspect the groves and advance not more than 75 per cent. of the value on three-quarters of the estimated crop of each grove, as security for which they will take from the grower an iron-bound contract for delivery of the fruit at a large packing-house, which they propose to build at Sanford, Fla. The fruit will be shipped to this point in car-loads, where it will be carefully selected and packed according to its quality. It is proposed then to distribute it by fast freight trains throughout the country, and negotiations are now pending with the Pennsylvania Railroad Company for an efficient train service for this purpose. If such an association is formed for the sale of oranges, why shouldn't it advantageously handle peaches and other fruits also? But isn't there some risk of danger to producers from such a combination of middlemen? .... The New Secretary of Agriculture, General Rusk, was married at the age of 18 to Mary Martin, by whom he had three children, before her death shortly after the removal of the family to Wisconsin. In 1856, he married Elizabeth Johnson by whom he has had four children, two of whom are living..... ..... Owing chiefly to intense competition between themselves and hard collections from their victims, an unprecedentedly large number of the money-lending Shylocks of Dakota and Nebraska are coming to grief. Every fellow with from $2,000 to $5,000 in ready money has found little difficulty in making a living by lending it in small sums to distressed farmers, and eventually many of these usurers have become owners of everything within reach; but the "business" seems to have been overdone.... ..... A Farmers' Alliance meeting at Des Moines, Iowa, last week, recommended to farmers of the Northwest three things, anent the binder-twine Trust: First, to change their binders into harvesters with platforms for hand-binding; second, to change self-binders into headers; third, to curtail the out-put of small grain whenever experience shows that there is a doubtful profit.. Mr. Rockwood of Wisconsin, Editor of the State Gazette, Portage City, has been selected Chief Clerk of the Department of Agriculture.....

Dr. Jekyll and Mr. Hyde.

Since that delightful author, Mr. Stevenson, has so suggestively written of Dr. Jekyll and Mr. Hyde we find ourselves holding our natures in closer regard, and we discover other lurking Hydes to mar the sweetest disposition and turn the most earnest and direct of us away.

Disease takes up its residence in us and developes into the most malignant and destructive of lodgers, cruel, obstinate and defiant. We will not recall the various and expensive expedients to which you have vainly resorted in the desperate endeavor to expel this obnoxious tenant, but briefly call attention to a most effective agent to drive away the vandal Hyde.

We refer to Compound Oxygen already well-known to be curative and restorative to that delightful degree so long sought by the invalid, as the following would indicate:

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"I still recommend your remedy to my friends who are afflicted, and why should I not? It saved my wife's life and cured my boy of catarrh." WALTER F. FORBES.

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HON. H C. GRIFFITH.

MEDIA, PA., July 3, 1888.

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"I feel that the Home Treatment is doing me great good, in fact I am confident that it invigorates every function."

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We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 331 Montgomery St., San Francisco, Cal. —*Adv.*

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, March 23, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	7⅜	7⅝	.....
Strict Ordinary	7 13-16	8 1-16	.....
Good Ordinary	8¾	9	.....
Strict Good Ordinary	9 3-16	9 7-16	.....
Low Middling	9 11-16	9 15 16	....
Strict Low Middling	9 11-16	10 3-16	.....
Middling	10⅜	10⅜	.....
Good Middling	10⅝	10⅞	.....
Strict Good Middling	10⅞	11⅛	.....
Middling Fair	11 5-16	11 9-16	.....
Fair	11 15-16	12 3 16	.....

STAINED.

Good Ordinary	7¼	Low Middling	8 13-16
Strict Good Ord	7⅜	Middling	9⅜

POULTRY—LIVE FOWLS, near-by per ℔, 10@10½c; fowls Western, per ℔ 10@10½c roosters, per ℔ 7@11c; turkeys, per ℔ 12@13c; ducks, western, per pair, 75c@1.00 geese, western, per pair, $1 65@2 00; chickens; nearby, per lb. ——c; do, western, ——c.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per ℔, 15@15½c: do do, common to fair, 10@14c; do, iced, dry picked, choice, 11@12c. Fowls, western, do, choice, 11@—c; do, nearby, do do, 11@12c; Chicks and Fowls, mixed, 11@14c; do do do, scalded, 8@9c. Squabs, white, per doz, $3 50@$3 75 do, dark, do, $2 50@$2 75. Chickens Philadelphia, dry picked, 13@22c, do Jersey, do, choice, 14@15c; do nearby, do, good, 13@14c; do Western, do do, 11@12c; do do, iced, good to choice 10@12c. Ducks, nearby, choice, per lb, 15@16c; do do, good, 14@16; do Western, good, 14@16c. Geese, Western, good, 8@10c.

HOPS.—State, new, best, 21@22c: do, prime, 19@20c, do, low grades, 13@16c; do do, 1887, 10@11 do do do, California, common to prime, 13@19c; choice, 20c.

HAY AND STRAW.—Choice Timothy, 95c@—; do good do, 85c; do medium, 75@80c; shipping, 65@70c; do, Clover, mixed, 60@65c. Straw.—No. 1, rye, 80@—c; short do 60@65; oat, 45@50c.

BEANS.—Marrows, new, $2 00@—; new mediums, choice, $1 75@—: pea, $1 80@—; red kidney, $2 10@2 20; white kidneys, choice, 2 10@——; foreign, mediums, 1 35@1 55; California Lima, $2 75@$3 00; green peas, $1 35@1 40.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@——c, and farmers' grades at 6½@7c. HICKORY NUTS quoted at $0 50@$1 00 per bushel. Pecans, 6@8c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—POTATOES.—Long Island, per bbl, $2 25@$2 35; Maine, per bbl. $1 75@$2: State, per bbl, $0 75@1 50; Sweets, per bbl, $2 25@4 00. State. Onions, Orange county red, per bbl, $0 50@0 75. Cabbages, New, per bbl, $1 00@$1 50; Onions, Connecticut, red per bbl $0 80@$1 00; do do White, per bbl, $1 50@$2 50; do do, yellow, per bbl. $0 70@$0 85; do State, do do. $0 80@@$1 00. Turnips, Russia, per bbl, 40@55c: Cauliflower, per bbl $——@——; Celery, per doz. bunches, $1 50@$2 00; Kale, per bbl, 40@55c; Spinach, per bbl. $1 50@$2 50. Peas, per crate, $2 50@$6 00. Beets, per crate, $1 50@$2 00. Asparagus, per bunch, 50@90c.

FRUITS.—FRESH.—Apples, Spitzenburg, per bbl. $1 50@2 00; do. Spy, do, $1 50@$2 50; do Snow, do. $1 50@$2 00; do, Baldwin, $1 25@1 65 do, Greening, $1 25@$2 00; do common, $0 90@$1 00. Cranberries, Jersey, fine, per box, $1 75@$2 00; do, common to good, 75c@$1 00. Grapes, Catawba, per lb, 2@4c. Florida Oranges, best: per box, $3 00@$3 25; do, good lots, $1 75@$2 25; do lemons, best, $3 00@3 50; do do, common, per box, $1 00@$2 50 Strawberries, per qt, 40@80c.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5⅝@6⅛c; do do, old, -@-c; do do, new, common to prime, 4½@5⅛c, do sliced, new, 3½@4⅛c; do, quarters, choice, 3⅝@4⅜c; do, coarse cut, ——c. Cherries, new, 13@15c. Raspberries, new, 16@18c. Blackberries, 4¼@4½c. Huckleberries, 10@—c. Peaches, Delaware, evaporated, peeled, 12½@16c; do dodo, unpeeled, 5@6c; do, North Carolina, sun-dried, peeled, 8@10c. Plums, 6@7c.

PROVISION MARKETS.

NEW YORK.—PROVISIONS.—PORK.—New mess, 12 50@13 50 short clear, $14 00@16 00 Extra Prime mess, $12 00@$12 prime do, nominal, and family mess, $13 25@14 00 BEEF—India Mess in tierces, $13 50@14 Extra Mess, in barrels $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $8 25@8 50; Family at $11 50@$14. HAMS—$12 00@$13 00, Winter packing. CUT MEATS.—Quoted 14 lb average, Bellies, 6¼@—c: Pickled Hams, 9¼@10c: pickled Shoulders, 5½@-c: Smoked shoulders 6½@6¾c: do Hams, 10@11c. Dressed Hogs,—City, heavy to light, 6½@6⅝c. Pigs, 7c. LARD.—City steam, $6 85; February, $——; March, $7 23; April, $7 24 May, $7 25; June, $7 27; July, $7 29; August, $7 32; September, $7 33; South America, 8c.

BOSTON.—PROVISIONS firm and steady New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25 LARD, $8 50@$9 50.

PHILADELPHIA, PA.—PROVISIONS.—Potatoes dull; Early Rose, 35@45c per bush.; Burbanks and White Star, 28@35c Provisions were steady, in moderate demand. BEEF.—City family, per bbl. $9 50@$10; do, packets, $9 00@—; smoked beef, 10@10½c; beef hams, $14 PORK.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 50@——; Hams, smoked, per lb, 11½@12c do. S. P., cured in tierces, 9½@10½c; do do, in salt, 7½@8c; sides, clear ribbed, smoked, 7¾@8c; shoulders, in dry salt and fully cured, 6@6½c; do, do, smoked, 6¾@7c; Shoulders, pickle cured, 7@7½c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady: City refined, 8¼@8½; do steam, 9@9½c; butchers' loose, 7.

CHICAGO.—MESS PORK.—$11 80@—— LARD.—$6 85@—— per 100 lbs; Short Rib sides (loose), $6 30; dry salted shoulders, boxed, $6 25; short clear sides, boxed, $6 75.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New, Creamery, State, pails, best, 27@28c, do do, tubs, new, 20@26: Pennsylvania, best, 25@26; Elgin, best, 27; Western, best 24@25; do prime, 22@24c; do good, 19@21c; do poor, 16@17c. State, Dairy, half-firkins, tubs, best, 24@25c; do do prime, 22@24c; do do fine, 18@—c; Welsh tubs, fine, 22@23c; do do good, 18@19; firkins, best, 20@23c; do prime, 19@21c; do fine, 18@—c. Western—Imitation Creamery, best, 21@23; do fine, 16@18; Western dairy, fine, 18@19; do fair, 15@16c; do poor, 13@14c; do factory, fresh, best, 19@20c, do prime, 16@17c; do good, 14@15; do poor, 11½@13½c; do June, 13@14. Old butter from 2 to 4c. lower.

CHEESE.—State factory, fancy, 12@12¼c; do do, fine, 11@11¼c; do do, prime, 10¾@11¼c; do do, fair to good, 10@10½c: Ohio, flat, prime, 11@11¼c; do good, 10@10½c; Skims, light, 8½@9c; do medium, 6½@9; do full, 2@3.

EGGS.—Near-by, fresh, 13; Western, fresh, 12¼@12¾c. Duck, 28@30.

PHILADELPHIA.—BUTTER dull. Pennsylvania creamery extra, at 25@—c: Western creamery, extra at 16½@17c B. C. and N.Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs—Were dull. Pennsylvania firsts, 12@1½c; Western firsts 12@——c: Cheese dull—steady; demand fair; New York full cream, at 9@9¼c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

BOSTON.—Butter firm; Western extra Creamery, 28@29c; Eastern extra Creamery, 27@28c. Cheese dull. Eggs firm; Eastern extras, 19@—c; Michigan extras 18c; Western firsts at 15@16c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was quiet and steady; Elgin creamery, 25@26c; choice Western, 20@21c, choice dairy, 20@21c; common to fair, 11@12c. Eggs weak at 11½@12c.

CHEESE—State factory, September made, 12c: do do do, October, fancy, 11@11¼c; do, fine, 11½@11¾c; do fair and good, 10@10½c; Ohio, flat, prime, 11@11¼c; do, good, 9¾@10½c; skims, light, 8¾@9¼c; do, medium, 6½@8½c; do, full, 2@2¾c.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, March 23, 1889.

BEEVES.—City dressed beef a trifle firmer at 5@6¾c per lb for ordinary to prime quality.

MILCH COWS.—55 head received thus far this week. Prices steady at $25@$45 per head (trash as low as $20).

CALVES.—Market steady at 5@8c per lb for veals. Dressed calves unchanged at 5@10c for country dressed veals, and as low as 2½@4c for little calves; city dressed sold at 6@11c, and even up to 11½@12c for choice.

SHEEP AND LAMBS.—Good to prime sheep sold at $5 05@$5 50 per 100 lb; and fair to choice yearling lambs at $6 50@$7 50. Spring lambs in better demand, and reported sales were at $3@$7 per head, the market ruling firm for good stock. Dressed mutton slow at 7@8c per lb; dressed yearling lambs firmer at 9@10c, and extra quality sold up to 10½c. Dressed spring lambs are doing a trifle better and may be quoted at $2 50@$7 per carcass. Sales of Ohio Sheep, 105 lb average, at $5 25 per 100 lb; Michigan Lambs, 74 lb, at $6 50; State do, 90½ lb, at $7 50; State Sheep, 89 lb, at $5 25; Michigan do, 101 lb, at $5 45.

HOGS.—Steady at $5@$5 40 per 100 lb. Country dressed unchanged at 5¼@6c for heavy; 6¼@6¾c for medium; 6¾@7¼c for light lower Jerseys and States, and 7½@8c for light upper Jerseys.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING MARCH 23, 1889.

W. F. F.—S. M.—R. C. H.—A A. A.—J. B. D.—G. C. S.—A. A. G.—H. H.—A. O. R.—S. M.—I K.—S. M.—L. A.—A. C. L.—Mrs. O. J. P.—C. F. H—W. E. R.—F. A. H.—A. C. B.—J. H.—M. H. W.—H. B. T.—H. W. H—M. F. P.—D. B.—E. J. F.—A. T. T.—C. T. G.—L. H.—P. K. S.—F. C. F.—J. S.—N. C.—G. W. S.—D. S. D.—M. H. S.—F. O. C.—H. G.—J. McK., thanks.—T. H. H.—G. O. G.—J. R.—M. H. B.—B. S. W.—E. S. L.—M. A. S.—Z. M.—E. W. J.—W. W. P.—A. F.—N. R. T.—L. E. D.—W. L. A.—S. M. J. J. E. C.—A. J. M.—H. H.—S. A. D.—E. A. E.—M. McC.—E. A. McC.—J. S. A.—L. M.—J. H. V.—J. D. I.—G. A. S.—M. E. B.—L. L. Johnson, in time.—A. L. M.—E. H. C.—M. E. W.—M. L. D.—G. B. F.—J. M. G.—E. H. H.—W. H. McC.—E. K. L.—C. E. H.—J. E. D.—E. W. P.—J. B. C.—M. W.—E. K.—S. H. M. G.—L. M.—A. G.—S. A. L.—M. N.—R. T. B.—J. H. S.—Mrs. E. A. F., thank you.—A. A. G.—E. A. T.—C. E.—W. H.—J. H. H.—J. H. W.

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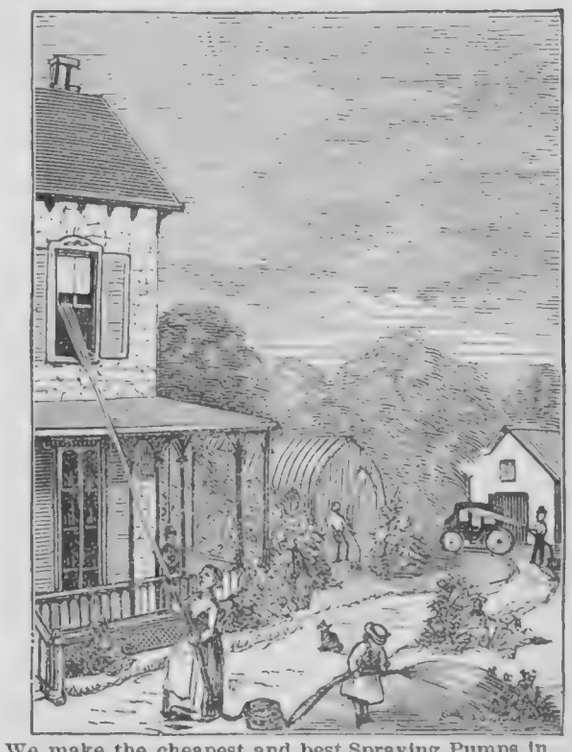

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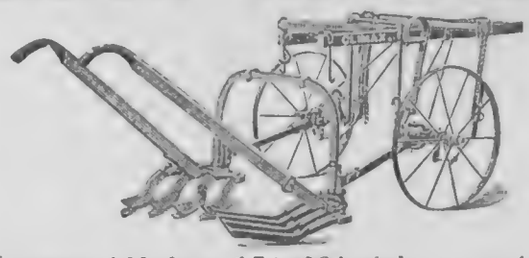

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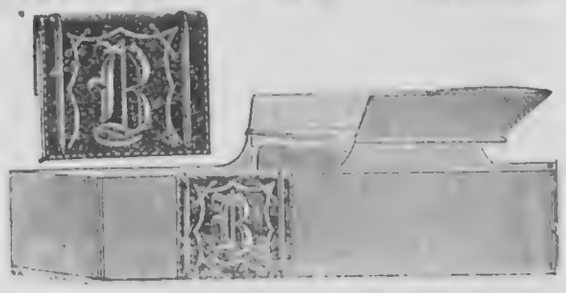

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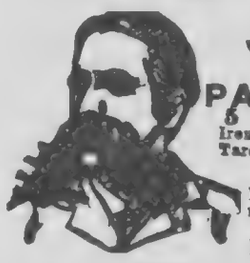

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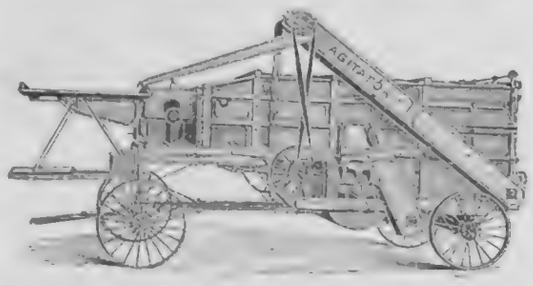

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FOR FEEDING
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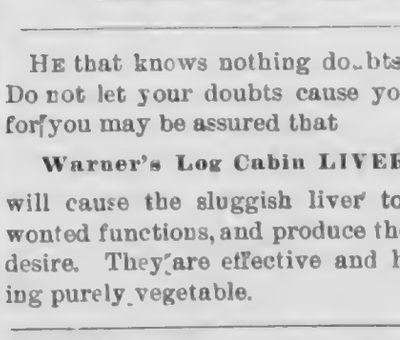

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14 in. wheel,	5¾,	11,	22 or 44	ins. apart,	$13.50 net.
16 " "	6,	12,	25 or 50	" "	14.25 "
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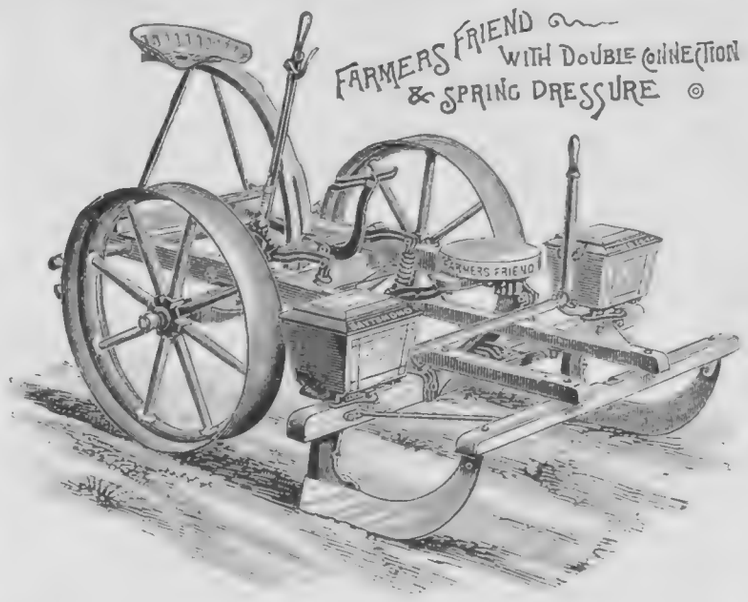

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My brother farmers, why pay **10** or **20** cts. for a seed catalogue, when you can receive one containing **just as many and very probably more varieties** and all new vegetables that are really valuable, for just **NOTHING?** It may have less paint about the covers, but, great Scott! we are not after **paint,** but **seed.** fresh and true to name, such as will make with a master's hand its own picture all over our farms and gardens; seed I am not afraid to **WARRANT** on the cover of my catalogue. Come, my fellow farmers, and join the thousands, who for thirty years have been users of my seed; why, we were a goodly company and having pleasant times together before the great majority of the present race of seedsmen (bless the boys!) had left their nurse's arms! Send for a catalogue.
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WE MAKE 6 DIFFERENT HARROWS
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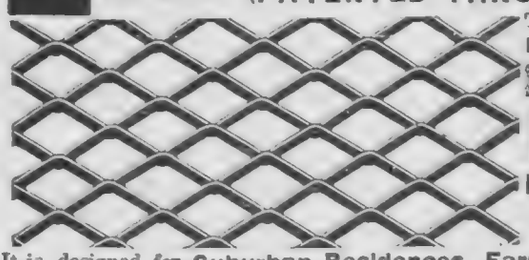

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SEND FOR CIRCULARS GIVING FULL PARTICULARS.
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Literary.

THE DRUM LAKE EASTER SERVICE.

A story of the Michigan Pine Woods.

BY HERBERT W. COLLINGWOOD.

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"TAKE hold of this woman with me Bill," said Jack. "An' you, Parson, take this revolver and foller. Ef a man touches one of us—shoot him."

The two men raised "Sarcy Sal" from the snow, and carried her carefully, almost tenderly, to her own house. The minister followed with the revolver in his hand. He would have used it if necessary. The crowd fell back, and in a short time dispersed.

Silently they carried the woman into the pretty little room, and laid her on the bed, while the Parson stood looking wistfully at her.

"Come, Bill," whispered Jack, as her eyes opened at last, "this ain't no place fer us, leave Parson in here alone." Jack and Bill stole away, and left the Parson and "Sarcy Sal" together.

I cannot tell what happened during their interview, I only know that when Jack Gray came back at last, he found the woman lying dead; the minister with his face buried in the pillow and his hand clasped in hers.

And so, holding fast to the hand of the one she had wronged, as a little child might hold its father's hand, the soul of the wretched woman, freighted with all its sin and shame, had drifted away.

"Come, Parson," said Jack kindly, as he touched the little man's shoulder. "Ye'd better go now an' let the wimmin folks do all the rest."

"I think I will," said the minister as he walked slowly to the door. "I think I will." He gave one last look at the dead woman, and then went softly out.

Something on the floor where the minister had been kneeling caught Jack's eye. He bent down and picked up a long golden curl. He laid it by the head of the dead woman; they were exactly alike.

"The Parson must hev knowed her afore," muttered Jack, as he walked to the window. "It beats all. *I'll* keep it now," and he thrust the curl into his own pocket.

The minister walked unsteadily into Mrs. McKelvey's kitchen and sat down in his old place by the fire. Mamie had cried herself to sleep. She lay on Mrs. McKelvey's bed, with her arm thrown over the baby's neck.

The Parson did not care for dinner. He wanted rest, he said. At last, he rose wearily to go to his own room to try and sleep a little.

He stopped at the door to ask, "You will take care of the little girl; won't you, Mrs. McKelvey?"

"In course, I will, bless' er dear little 'art." She wanted to say more, but the tears stopped her.

Late in the afternoon, Mr. McKelvey knocked at the minister's door. There was no response, and the visitor pushed the door open. The Parson sat in his chair as if asleep. He was asleep, but it was "the sleep that knows no waking." All Drum Lake wondered what killed him. They never could tell, but Jack Gray and Mrs. McKelvey might have told.

They were buried together. Jack and Mrs. McKelvey took charge of the funeral, which was held in the old "audience room" where the Parson's mottoes still clung to the wall.

The minister from Frenchtown came over to preach the sermon. He spoke eloquently of the Parson, and of the great hope before him, but he left the woman with a shudder, to her fate. He did not believe that the minister's hand had held hers all of the way. But after the funeral, in Mrs. McKelvey's sitting-room, when little Mamie came to him and said, "I know I shall see my mamma again," he muttered: "Out of the mouths of children cometh the truth."

Drum Lake came in a body to the funeral. One by one, the people passed by the rude coffins, and looked at the dead. How death had changed them! It had purified the woman. The coarse, brutal look was gone, and only the sweet, tender face remained. It had made the man strong. All the old feebleness and melancholy had passed away, and he was smiling as if the "wondrous good" had come to him at last.

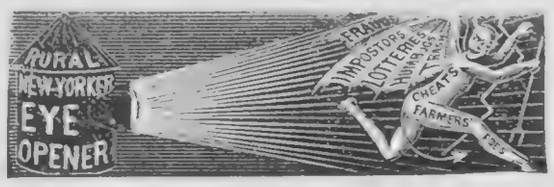
Jack Gray and Jim Foster walked away together.

"I say, Jim, what a terrible pretty woman she must have been in her day."

"Yer right, Jack, but what a fool *he* was."

And so Drum Lake decided his place. Perhaps Jim was right. Perhaps he was a fool, and yet poor, little fool, he "knows the secret that men die to win." He knows it, but he cannot teach us. His lips are sealed. We can only learn it as he has learned it—in the "old, old way." May we be as well prepared.

(THE END.)



REPORTS from several rather widely separated parts of the West indicate that several parties are simultaneously practicing the same swindle upon farmers. Probably they are members of the same "gang," or it may be that, having heard of the fraud, they are all practicing it each on his own hook, independently of any one else. The nature of the scheme is well illustrated by the doings in Webster county, Iowa. A short time ago a respectable-looking, elderly man appeared in different townships for the purpose, as he alleged, of purchasing horses for an Omaha firm. While horses and cattle are the objects which the rascals usually pretend they wish to buy, they occasionally say that they want pigs, or sheep or even wheat, corn or oats—whatever, indeed, the farmer may have most of for sale. Well, that Webster county sharper usually bought one or more horses from every farmer he visited, giving fine prices even for old, broken down animals, always tendering in payment a check signed by the Omaha firm and payable at an Omaha bank. To prevent the possibility of any loss to the farmers, he told them to get their checks cashed before he removed the horses, and to enable them to do this and also to give him time to collect all his purchases in the neighborhood, he would allow those he had bought from each farmer to remain where they were for a few days. Just before leaving, he invariably turned to the farmer and, in an-off-hand, matter-of-course way, said that as the farmer had the horses and the price for them, it would be well for him to pay something—just enough to "bind the bargain." This was invariably done, the stranger getting from each from 50 cents to a couple of dollars. Of course, the checks were never paid, inquiry at Omaha disclosed the fact that no such firm existed there, and the "respectable-looking" old sharper never claimed his purchases. Investigation showed that he had bought horses from 10 to 12 different persons a day, so that though the amount he got from each was small, his rascality netted him a pretty snug income in the aggregate. This "game" can be easily "played" in any part of the country, and with any agricultural product as well as with horses, substituting for Omaha the name of some other town a moderate distance away.

IN the RURAL of February 18, 1888, the Eye-Opener denounced the dishonest practices of "Dr." H. A. Eberle, of Kansas, who was in the habit of obtaining from patients notes for which he promised not to ask payment until a cure should be effected. Then he used to sell the notes, and neglect the patients. He is supposed to have realized over $50,000 in this way. We see from several Kansas papers that the fellow has just been arrested for fraudulently obtaining money under false pretences. Several Kansas friends have written to us commending our exposure, which preserved some of them from imposition.

IT has just been decided by the Supreme Court of Michigan that a note given in payment of Red Line Wheat where the conditions were not fulfilled, cannot be collected, as the whole transaction was tainted with fraud. This Red Line Wheat business is conducted in precisely the same way as the Bohemian Oat swindle. The law relating to one must be applicable to the other therefore, and to all frauds of the same stripe.

A FAMOUS BATTLE-GROUND.

ON the banks of the Tippecanoe, a small stream which enters the Wabash River in Indiana, was fought the terrific battle of Tippecanoe.

In this great struggle of frontier times, the allied western Indians under the chieftainship of Elskwatawa, the "Prophet," were defeated in November, 1811, by the Americans under the command of Gen. Wm. H. Harrison.

It was a desperate, hard-fought battle, and much depended upon the result.

Had the Indians been successful, all barriers of defence for the early settlers would have been overthrown and the deadly tomahawk would have been active in the rapid extermination of the remaining pioneers. On the other hand, the fortunate termination of the contest put an end to further attempts at open warfare by the Indians. The rich territory, so long overrun by hostile savages, was thrown open for settlement, which rapidly occurred as soon as the news of the great victory became widespread.

Naturally, great praise was rendered to the success and intrepid bravery of Gen. Harrison and he was honored in many ways. He afterwards served as commander of the Army of the Northwest, and when Indiana was admitted to statehood, he was selected to represent the State in the United States Senate. In 1840 he was elected President and his unfortunate demise occured shortly after being inaugurated.

The forty-second anniversary of the Battle of Tippecanoe found the gallant grandson of "Old Tip" leading his forces to a great political victory which resulted in the selection of Gen Ben. Harrison as President of the United States.

TheHarrisons have been a hardy race of men, sprung from old log cabin stock, which is sufficient guarantee of its genuineness wherever found. Realizing the truth of this, great effort has been made to re-discover some of the secrets contained in the old log cabin stock of useful articles, and as the result, the famous Old Log Cabin Sarsaparilla, universally regarded as the best Spring tonic and blood cleanser has been found. Not satisfied with the world-wide esteem which is held for Warner's Safe Cure, the only cure for kidney diseases, the proprietor is willing to do all that is possible to establish Warner's Log Cabin Sarsaparilla as foremost among household articles on account of its purity and effectiveness.

After all, each individual has at all times, the great battle of life or death to fight, and for security attention must necessarily be given to the best weapons which science can offer humanity in the great contest.

Miscellaneous Advertising.

ACHING Sides AND Back

Aching Sides and Back, Hip, Kidney and Uterine Pains, Rheumatic, Sciatic, Sharp and Weakening Pains, **relieved in one minute,** by the first **Cuticura Anti-Pain Plaster.** The and only instantaneous pain-killing, strengthening plaster. 25c.; 5 for $1. At druggists, or of POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

GROWERS AND DEALERS IN SWEET CORN, ATTENTION! Genuine Connecticut grown Stowell's Evergreen Sweet Corn by express, $2.25 per bushel, $1.25 per half bushel, 75c. peck. **C. E. CHAPMAN, Westbrook, Conn.**

150,000 FARMERS HAVE USED AND APPROVED THE "ACME"

Agents Wanted.

The Best Selling Tool on Earth.

PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.

Steel Crusher and Leveler. Double Gangs of Adjustable Reversible Coulters. Lumps Crushed, Soil Cut, Lifted and Turned in one operation. No Spike or Spring Teeth to pull up Rubbish. No Wearing Journals. Practically Indestructible. Sizes 3 to 12 ft. wide. With and Without Sulky.

I Deliver Free at Convenient Distributing Depots West and South.

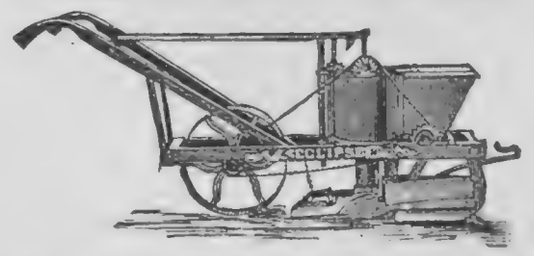
FAIR PLAY. Don't Buy a Base Imitation or Inferior Tool. Order a Genuine Double Gang Acme on TRIAL, to be Returned at my Expense if not Satisfactory. No Pay Asked in Advance.

Illustrated Pamphlet FREE.

DUANE H. NASH, Sole Manufacturer, **Millington, New Jersey.**

MENTION THIS PAPER.

ECLIPSE CORN PLANTER.



Will plant Field and Ensilage Corn, Beans Peas and Beet Seed in **hills, drills** and **checks**—in hills up to 45 inches; in checks from 36 inches up to any distance desired. Will disiribute all Fertilizers **wet** or **dry.** Farmers, send for circulars.

ECLIPSE CORN PLANTER CO.,
Enfield, Grafton Co., New Hampshire.

THE LANE & BODLEY CO.
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MANUFACTURERS OF

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NOW IS THE TIME TO BUY. SEND FOR CIRCULARS. AN EXPERIENCE OF THIRTY YEARS PERMITS US TO OFFER THE BEST

Farmers,
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Mechanics,
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Of all Trades, Professions and Ages Read

THE DETROIT FREE PRESS.

SOME read it for Profit,
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Ever mindful of subjects of domestic economy—ever mindful of the serious questions in science, letters, business and art—ever mindful of life's sober phases—it always comes to you with its inimitable wit and humor to illustrate the cloud's "golden lining." The

RURAL NEW-YORKER

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WEEKLY DETROIT FREE PRESS,

BOTH FOR ONE YEAR FOR

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Address the

RURAL NEW-YORKER,

34 Park Row, New York.

A WONDERFUL PROCESSION

Of what? Why the constant stream of **Hogs, Cattle and Sheep** continually passing into the

Union Stock Yards, Chicago,

—THE—

BONE AND BLOOD

Of which are constantly being manufactured into

RAW BONE

FERTILIZERS

During the past 25 years, by the

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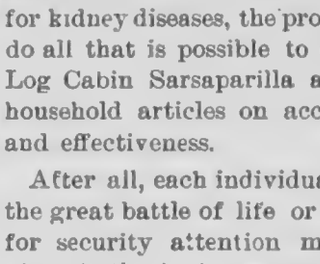
For pamphlets giving full information, address
W. J. RUSSELL, Gen. Ag't for W. Pa., N. Jersey & Conn,
PHILLIPSBURG, NEW JERSEY.



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GRIFFING'S
METROPOLITAN
FERTILIZER
Sold at $25 00 per ton, F. O. B., N. Y.
Send for Circulars.
H. B. Griffings Sons & Co.
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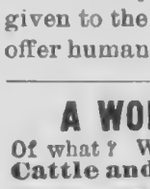
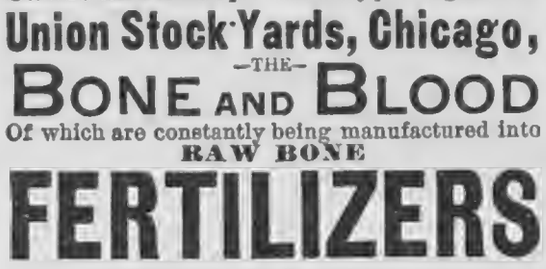
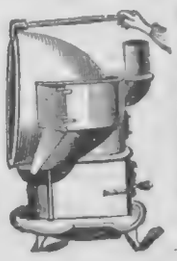


SAVE MONEY. BEFORE YOU BUY
BICYCLE or GUN
Send to A. W. GUMP & CO. Dayton, O., for prices. Over 400 second-hand and shop worn Cycles. Bicycles, Guns and Typewriters taken in exchange. Nickeling and repairing





PROFIT FARM BOILER!
With Dumping Caldron, empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also make **Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Caldrons, Etc.** Send for circulars.
D. R. SPERRY & CO.,
BATAVIA, ILL.

CATALOGUES, ETC., RECEIVED.

HOLSTEIN-FRIESIAN CATTLE.—Catalogue from Smiths, Powell & Lamb, Syracuse, N. Y.—It is always a pleasure to examine this catalogue. It is of neat and handy size, well printed and arranged and full of interesting facts for breeders and dairymen. The "Lakeside" cattle have won numberless prizes for superiority as milk and butter animals, and their performances in the prize ring have done much to build up the marvelous popularity the breed now enjoys. Last week we gave an account of the feeding experiments recently conducted at the Michigan Agricultural College. These experiments showed the great value of the Holstein steer for beef. We can assure our readers that they can buy the best Holsteins to be had at the Lakeside farm.

AGRICULTURAL IMPLEMENTS.—Catalogue from the Belcher & Taylor Agricultural Tool Company, Chicopee Falls, Mass. Here we have a well-prepared list of excellent tools. There is a good selection of hay, straw and ensilage cutters, with the celebrated "Lion" cutter at the head. Vegetable cutters and corn-shellers of various styles are offered and also a variety of plows, harrows and cultivators. A swivel plow, a subsoil plow and a shovel plow, just right for trenching for potatoes, are features of this catalogue. A good hand potato-planter is pictured. This is an excellent house to deal with.

ERTEL VICTOR BALING PRESS.—Catalogue from George Ertel & Co., Quincy, Ill. When a farmer proposes to spend his money for a high-priced implement, it behooves him to know what he is buying. There are different hay presses on the market, and one of them must be better suited than others to perform the particular work required on each farm. It is therefore well to investigate the merits of the various presses. If one can see them in operation at the fairs, well and good; but it is well to know before you go to the fair what good points are claimed by the makers. A circular or catalogue of this kind is understood to be a special plea, in which are packed all the virtues the maker can think of. Read this catalogue with this understanding and when you see the press, notice how true the claims are.

INITIAL TOE PAD.—Price-list and catalogue from the Initial Toe Pad Company, Three Rivers, Mich. This company has made a specialty of the manufacture of carriage panel protectors. Their success has been remarkable, and now many leading carriage manufacturers who formerly made their own toe pads have stopped making them, finding it cheaper to buy of this house. It is safe to say that for beauty and utility these pads are unequaled.

EXPANDED METAL.—This is a "new thing" decidedly, and it seems like a novelty of very decided merit. A circular is sent by the Central Expanded Metal Co., 116 Water Street, Pittsburgh, Pa., which is certainly unique and interesting. "Expanded metal" is sond metal pushed out or expanded into diamond-shaped meshes by mechanical process. A narrow hoop of brass or other metal is first cut and then pushed and pulled apart something in the manner of the paper designs we used to see in the old-fashioned kitchens. It is a most ingenious contrivance, and makes a strong, light and cheap material for fences, gates, window guards, doors, trellises railings or plastering lath. This is something that will repay an investigation. Send for this circular.

B. A. ELLIOTT & CO, PITTSBURGH, PA.—A magnificent work of 120 pages entitled "A Few Flowers Worthy of General Culture," being an effort to win for hardy plants a recognition of their great wealth of beauty. This is the sixth edition. A more elegant treatise is nowhere published. The paper is heavy and super-calendered; the illustrations are among the best. We commend the work unqualifiedly to the attention of our readers.

GEO. A. BONNELL, WATERLOO, SENECA COUNTY, N. Y.—A first-rate list of potatoes; also a selected list of vegetables.

KENDALL & WHITNEY, PORTLAND, MAINE.—Catalogue (100 pages) of garden and flower seeds.

W. H. CORNISH & COMPANY, NEWBURGH, N. Y.—"History of the Potato," "Cultivation," "How to Plant an Acre with One Potato," "How to Store and Keep Potatoes" are among the topics with which the catalogue opens. It offers a new field corn and the claim is made that it has the largest grain and smallest cob of any yellow flint ever offered. The ears are eight-rowed and often 15 inches long.

F. S. EAGER & COMPANY, NEWBURGH, ORANGE COUNTY, N. Y.—A descriptive catalogue of vegetable, flower, grass and clover seeds.

LEWIS ROESCH, FREDONIA, N. Y.—Descriptive list of grape vines and small fruits. A colored plate of the Moyer grape.

JOHN S. COLLINS, MOORESTOWN, BURLINGTON COUNTY, N. J.—A catalogue of small fruits, grape vines, large fruits, mulberries, persimmons, nut trees, etc.

FREDERICK LUDLAM, 182 FRONT STREET, N. Y.—A little book which sets forth in an original way the fertilizers which Mr. Ludlam offers for sale.

M. B. FAXON, No. 21 SOUTH MARKET STREET, BOSTON, MASS.—This is a very neat catalogue the aim of which seems to be to reduce the long list of flowers and vegetables to those of the best well-known, tried sorts. Mr Faxon's specialties are printed in red ink, occupying eight pages.

EDWIN ALLEN, NEW BRUNSWICK, N. J.—A select list of fruit and ornamental trees.

J. W. HALL, MARION STATION, SOMERSET COUNTY, MD.—A list of "high-bred seed potatoes."

ELLWANGER & BARRY, ROCHESTER, N. Y.—A catalogue (No. 2) of ornamental trees, shrubs, hardy perennial plants, etc., The R. N.-Y. offers its assurances to its readers that there is no other nursery firm in this or any other country more enterprising or trustworthy. This catalogue is conservative, terse and explicit. There is no foolishness or humbug about it.

No. 4, also issued by E. & B. is a wholesale catalogue of fruit trees, small fruits, etc.

No. 1 is a descriptive catalogue of fruits, with a colored plate of the Mills grape.

G. D. HOWE, NORTH HADLEY, HAMPSHIRE COUNTY, MASS.—A potato manual of 75 pages. Mr. Howe offers about every variety of potato known at present. On page 16 a resumé of the R. N.-Y. Trench System is given.

QUINNIPIAC COMPANY, NEW LONDON, CONN.—A pamphlet setting forth the value of the fertilizers made by this favorably known firm. Most of their fertilizers are put up in not only 200-pound bags, but in bags of 100-pounds, and in 50-pound bags. They also offer the chemicals separately.

SILO AND SILAGE.—This is the title of a little pamphlet published and sold by Prof. A. J. Cook, Agricultural College P. O., Michigan. It is intended to serve as a silo primer—not so much for those who have proved the value of the silo, but for those who ought to use it, but have not yet been able to see the economy and value of ensilage. We do not hesitate to say that this little book is the most likely to arouse a spirit of investigation among those who *ought* to use the silo that we have ever read. The story is told in a plain, straightforward manner, and there is plenty of evidence that the author is not a theorist, but one who has actually handled and fed silage and computed its comparative cost. The book sells for 25 cents and is well worth that sum to one who desires to study this important subject.

HARROW PAMPHLET.—This volume is sent by the Herendeen Manufacturing Company, Geneva, N. Y. It contains excellent illustrations and descriptions of the tools made by this company. A short essay on the treatment of heavy clay lands is very readable The Thomas harrow is the "Star" of this combination. Better send for this pamphlet and prepare yourself for the fine symposium in the cultivation of young corn and potato plants, that we are to give next week.

GARRETT FENCE MACHINE.—Circular from S. H. Garrett, Mansfield, Ohio. This circular is packed full of facts bearing upon the value of the fence made by the Garrett machine. It is claimed that this fence is superior to those made from barbed wire, hedge plants, rails or planks. The pamphlet presents a list of 18 advantages claimed for this fence and the directions are very complete indeed. It is a very good circular, well calculated to advertise the machine.

H. J. BAKER & BRO., 215 PEARL STREET, N. Y.—A manual, in the form of a pocket-book, of the fertilizers made by this firm. It is an excellent firm and our friends may safely intrust it with their orders.

VAUGHAN'S CELERY MANUAL, BY J. C. VAUGHAN, CHICAGO, ILL.—This gives a full and practical account of celery culture, from starting the seed to shipping the plants. It is also well illustrated. It is a little book of 39 pages. We would call attention to the picture of a "winged" shovel plow on page 18. This is the plow the R. N.-Y. uses to dig its potato trenches for field culture.

GEO. W. CAMPBELL, DELAWARE, O.—A descriptive list of grapes and small fruits. Mr. Campbell is everywhere known as a high authority. He regards the Woodruff Red as the most promising new grape.

AMES PLOW COMPANY, BOSTON, MASS.—Notice is given by this company that they have extended the time on their "special offer" of corn planters until April 12. This was done to accommodate readers of our Corn Special.

MASSACHUSETTS HORTICULTURAL SOCIETY.—The Transactions of this society are sent by Robert Manning, Boston, Mass. We consider this the most interesting volume ever presented by this society. A number of timely topics are intelligently discussed and the discussions bring out a vast amount of valuable information.

NOVELTY STEEL HARNESS.—Catalogue from the Sherwood Harness Company, Syracuse, N. Y. This harness has been before the public for several years and has steadily grown in public favor. There are hundreds of good farmers who regard it as one of the most remarkable labor-saving devices that have been perfected of late years. We are using this harness at the RURAL's New Jersey farm. Mr. Sherwood, the inventor of the harness came to the farm and gave a practical test. We have used the harness, before the plow and also before the wagon. We can only say that we shall never use any other harness for plowing, harrowing or similar work. We believe the horses can do more work with the Sherwood harness than they can with the old arrangement and the time saved in turning and keeping the horses inside of the traces is considerable. In our opinion, the farmer who secures a set of this harness will be thankful.

Miscellaneous Advertising.

BEAUTY of Skin & Scalp RESTORED by the CUTICURA Remedies.

NOTHING IS KNOWN TO SCIENCE AT ALL COMparable to the CUTICURA REMEDIES in their marvelous properties of cleansing, purifying and beautifying the skin, and in curing torturing, disfiguring, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c; RESOLVENT, $1.; SOAP, 25c Prepared by the POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

Dull Aches, Pains and Weaknesses instantly relieved by the CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster. 25c.

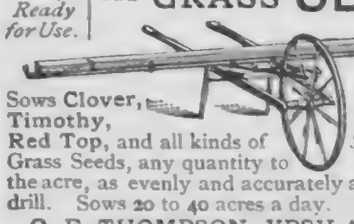
WHO climbs too high goes to fall. The great danger of letting that hacking cough run into the dread malady, consumption, should be at once met by using

Warner's Log Cabin COUGH AND CONSUMPTION REMEDY.

It is a reliable and harmless remedy.

THOMPSON'S CLOVER and GRASS SEEDER

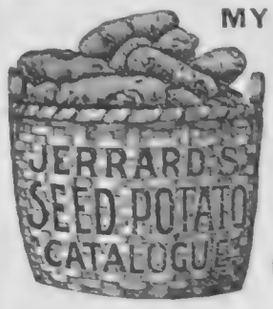
Always Ready for Use.



Sows Clover, Timothy, Red Top, and all kinds of Grass Seeds, any quantity to the acre, as evenly and accurately as the Best grain drill. Sows 20 to 40 acres a day. Manufactured by

Indispensable for sowing in windy weather. *Send for circular*

O. E. THOMPSON, YPSILANTI, MICH.



MY Seed Potato CATALOGUE

Describes the choicest SEED POTATOES and the earliest Seeds, grown in the Cold North-East. It tells of the wonderfully early MINISTER and names special *Low Freights* East and West. It tells how to raise potatoes. *Sent free.*

GEORGE W. P. JERRARD, CARIBOU, MAINE.

BEAT THE "FARMERS." It can't be done Our Fertilizers always ahead—Bones, Meat, Potash. Agents Wanted. Write. Farmers' Fertilizer Co., Syracuse, N. Y.

CANADA HARD-WOOD UNLEACHED ASHES

By rail in car-load lots furnished on short notice. Ashes guaranteed to be of best quality and are especially adapted for all grass and fruits. Pamphlets and prices sent on application.

MUNROE, JUDSON & STROUP, OSWEGO, N. Y

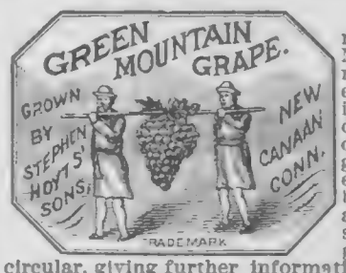
Trees, Seeds and Plants.

Established 1864

SEED POTATO HEADQUARTERS

Original importer of the famous **Prince Edward Island Early Rose**, best in the world for early and large yield. All the standard varieties, but no fancy kinds. **White Star, Northern Rose, State of Maine, Mammoth Pearl**, etc. We have *the Finest* **Seed Rose** and **Early Hebrons** in the U. S., direct from P. E. Island. *The Coming Earlies —try them:* **Early Thoroughbred** and **White Early Ohio.** Catalogue FREE.

T. C. DAVENPORT 124 DOCK STREET, PHILADELPHIA, PA.



This grape originated in the Green Mountains of Vermont. It is very early; color, greenish white; pulp, tender, sweet and delicious. The only grape yet introduced that ranks **first**, both in earliness and quality. It should be in every garden. Send for circular, giving further information. We also offer a full assortment of other nursery stock. Address

STEPHEN HOYT'S SONS, New Canaan, Conn.

ROCHESTER COMMERCIAL NURSERIES. Address W. S. LITTLE Rochester, N. Y.

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NEW and RARE OLD and RELIABLE

Both Fruit and Ornamental. ROSES, Vines, Clematis, Rhododendrons, etc. Two illus. Catalogues 6 cts. Free to customers. Wholesale List, FREE.

VEGETABLE PLANTS—Standard Sorts, at reliable rates. Send for Price List. M. GARRAHAN, Kingston, Pa

SEED POTATOES. New varieties. Low prices List free. S. FROGNER, HERMAN, MINN.

SALESMEN WANTED TO SELL OUR SEEDS NO EXPERIENCE NECESSARY. LADIES DO WELL. SEND 10C. FOR SAMPLE PACKETS OF VEGETABLE AND FLOWER SEEDS AND TERMS. Our Catalogue Free. MOREHOUSE & ANNIS, Rochester, N. Y.

TREES ROOT GRAFTS—*Everything!* No larger stock in U. S No better, no cheaper. Pike Co. Nurseries, Louisiana, Mo.

SEED POTATOES, Ten Standard Varieties. $2 per bbl. or less. Also Strawberry Plants and Japanese Buckwheat Send for price list. GEORGE SISSON, La Plume, Penn.

FOR SALE CHEAP! 3 and 4-Year-Old Apple Trees. List of Varieties and prices on application. GRAY BROTHERS, New Canaan, Conn.

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MR. E. S. CARMAN'S PORTRAIT. *See advt. on page 217.*

Humorous.

The RURAL NEW-YORKER *is prepared to offer very liberal terms to good, responsible,* PERMANENT *agents. Correspondence solicited.*

AH SIN'S ADAPTATION.

'E MELICAN man no wantee John,
No likee fan-tan gamee;
'E Chineeman 'e washee on,
An' gletz 'ere allee samee.

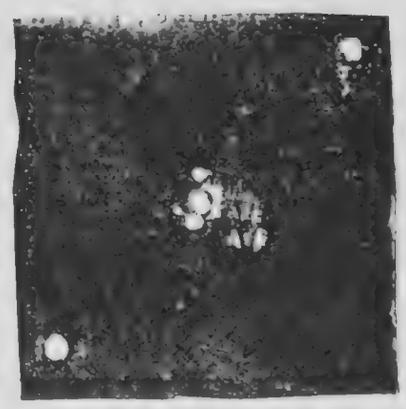
Boston Budget.

"JONES (to Robinson, weary and foot-sore) —"Been fishing, Robinson?" Robinson—"Ya-as." Jones—"Catch anything?" Robinson—"Naw, didn't even catch the last train home."—*New York Sun.*

A LETTER with the following addr ss has been sent to the Dead Letter Office at Washington:

Sylvester Brown, a web-faced scrub,
To whom this letter wants to go,
Is chopping cordwood for his grub
In Silver City, Idaho.

—The Traveler.



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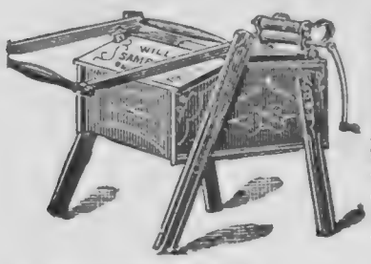

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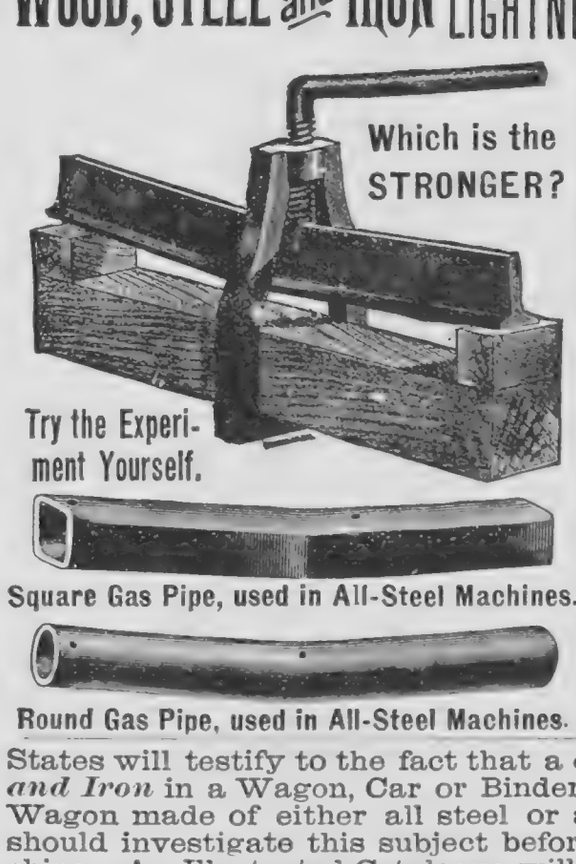
EXPERIENCE HAS DEMONSTRATED THAT WOOD, STEEL and IRON ARE THE THREE ESSENTIAL ELEMENTS OF **LIGHTNESS, DURABILITY and STRENGTH.**



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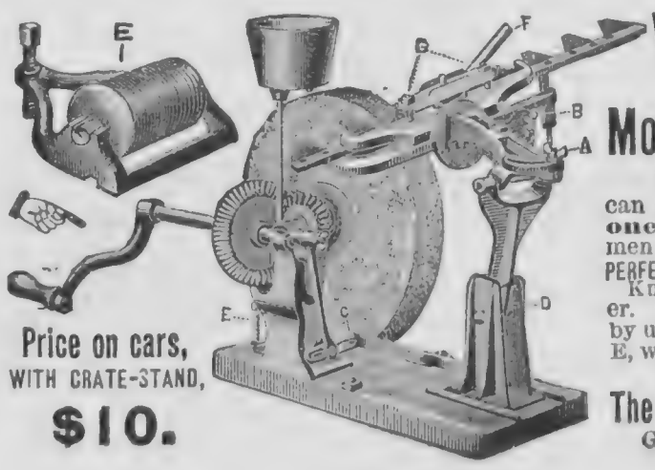

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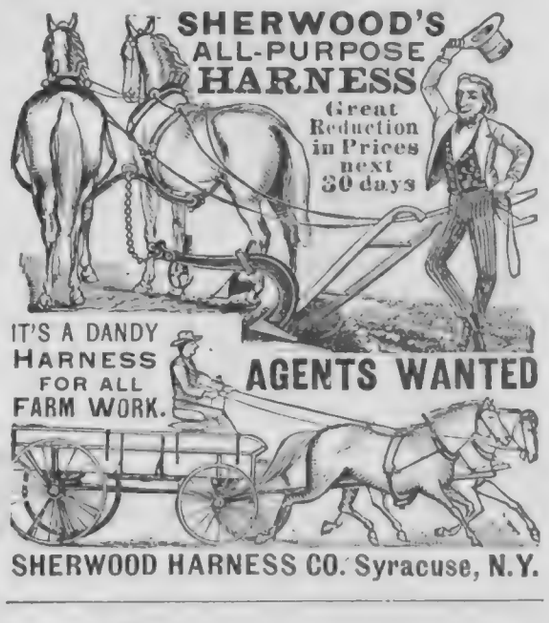

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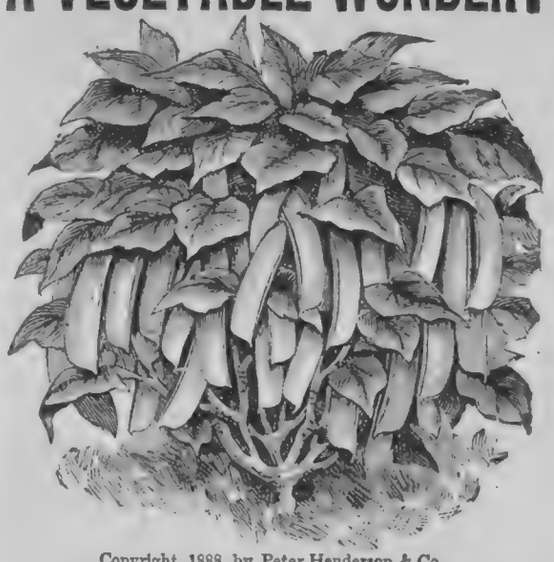

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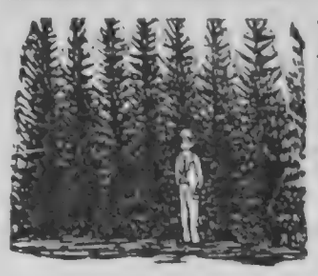

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They are made of **PATENT STEELED METAL,** Which is **FAR SUPERIOR** to chilled iron. A large number now in use, and giving **Entire Satisfaction.**

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The average of the analyses of this manure for six years past by the stations of Conn., N. J., Penn. and Mass., have been fully as high as the above. No other manure made equals t in strength.

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90 bushels (shelled) with 500 pounds per acre. 150 bushels (shelled) with 600 pounds per acre. Value of the grain alone over five times as much as the cost of the fertilizer—AMERICAN AGRICULTURIST.

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JAMES MEANS' Quarter Eagle Boot

(Trade Mark.)

A RELIABLE KIP BOOT FOR FARMERS.

10 Mills make one Cent:
10 Cents make one Dime;
10 Dimes make one Dollar;
10 Dollars make one Eagle,

And with a Quarter Eagle any Farmer in the Country can now buy a boot that will satisfy him. Farmers have been looking for such a boot for a long time and now it has come.

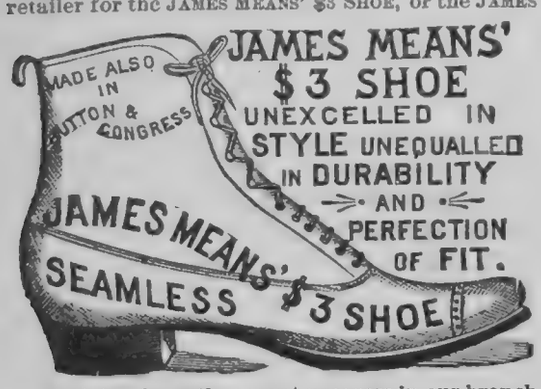
TO COUNTRY STOREKEEPERS: If you invest $20 or $30 of your capital in our **James Means' Quarter Eagle Boots** for farmers, that amount of money will enable you to carry a complete assortment of sizes of our boots in your stock so that you can fit any farmer. You of course desire to attract new customers to your stores. Your customers want you to sell these boots, and you cannot afford to disappoint farmers when they come into your store and say: "I want a pair of the **James Means' Quarter Eagle Boots.**" Send to us for wholesale prices. "A word to the wise is sufficient." **Are you wise?**

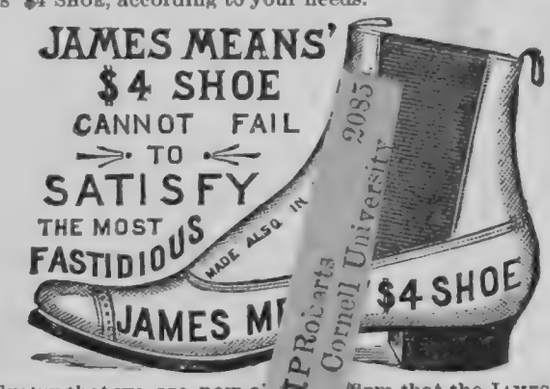
JAMES MEANS' BOOTS and SHOES are Unexcelled in Merit.

Positively none genuine unless having our name and price stamped plainly on the soles. Your retailer will supply you with boots and shoes so stamped if you insist upon his doing so; if you do not insist, some retailers will coax you into buying inferior shoes upon which they make a larger profit.

JAMES MEANS' $3.00 AND $4.00 SHOES

"Competition is the Life of Trade." and if you have not seen our latest improved goods you cannot imagine how lively trade is, or how hard our competitors have to work to keep within sight of us. Ask your retailer for the JAMES MEANS' $3 SHOE, or the JAMES MEANS' $4 SHOE, according to your needs.





Such has been the recent progress in our branch of industry that we are now a[ble to] affirm that the JAMES Means' $4 SHOE is in every respect equal to the shoes which only a few years ago w[ere] retailed at eight or ten dollars. If you will try on a pair you will be convinced that we do not exaggerate. Ours are the original $3 and $4 Shoes, and those who imitate our system of business are unable to compete with us in quality of factory products. In our lines we are the largest manufacturers in the United States.

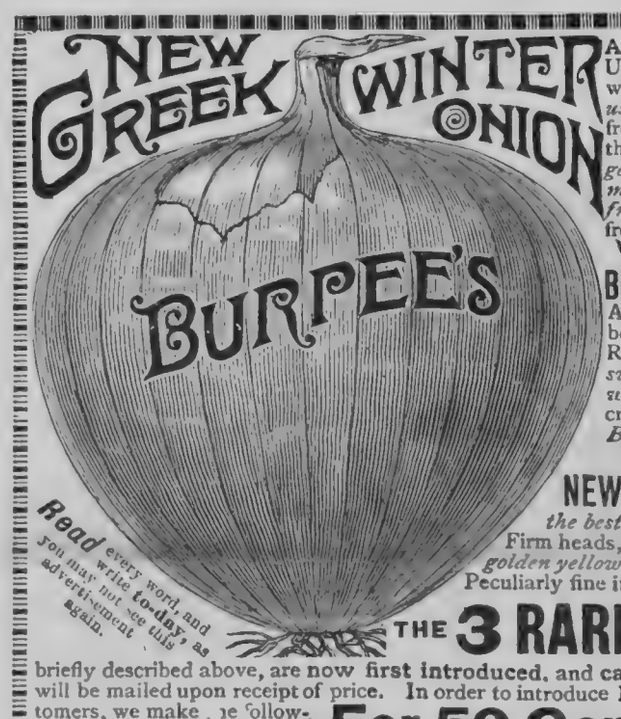
Boots and Shoes from our celebrated factory are sold by wide-awake retailers in all parts of the country. We will place them easily within your reach in any State or Territory if you will invest one cent in a postal card and write to us Please mention the RURAL NEW YORKER.

JAMES MEANS & CO., 41 Lincoln St., Boston, Mass.

Here follows a list of a few of the dealers who carry our goods in stock:

NEW YORK CITY: Ferris & Son, 81 Nassau Street; **BROOKLYN:** Meade & Co. 139 Myrtle Avenue, **Buffalo:** J. Crate, 456 Main Street. **NEW JERSEY: Jersey City,** Rittmaster, 34 Newark Avenue; **Newark,** Wilson, 859 Broad Street; **Paterson,** Meyer Bros, 181 to 187 Main Street. **WASHINGTON, D. C.:** Moran, 1022 Seventh St. **PENNSYLVANIA: Philadelphia,** Cadmus, 17 South Ninth St.; **Pittsburg,** D. Carter, Fifth Avenue. **OHIO: Cincinnati,** G. Giesting, 52 West Fifth St.; **Cleveland,** Berman, 565 Pearl St. **INDIANA: Indianapolis,** Karle & Co., 93 East Washington St.; **Terre Haute,** Kivits, 328 Main St. **ILLINOIS: Chicago,** N. B. Holden, 226 State St. **MISSOURI: St. Louis,** Reid & Co., 411 North Broadway; **Kansas City,** Holmes & Co., 1502 East Eighteenth St.; **St. Joseph,** F. Wenz. **GEORGIA: Savannah,** Nichols, 128 Broughton St **TENNESSEE: Memphis,** John W. Voegeli & Co.; **Nashville,** W. A. Grady. **VIRGINIA: Richmond,** Samuels, 1437 East Main St. **ALABAMA: Mobile,** F. & A. McGill. **NEBRASKA: Omaha,** G. S. Miller, 612 North Sixteenth St. **COLORADO: Denver,** S. A. Bent, 1913 Larimer St. **MONTANA: Butte City,** Ducharme & Co.; **Helena,** F. E. Gage & Co. **WASHINGTON TERRITORY: Seattle,** J. H. Rengstorff; **Tacoma** F. G. Runge; **Spokane Falls,** Skerritt & Donnelly. **OREGON: Portland,** The "Red Front," 29 North First St. **CALIFORNIA: San Francisco,** Nolan & Descalso, 11 Third St. **San Jose,** Koenig & Son; **Los Angeles,** N. Benjamin; **San Diego,** A. J. Jacob.

AND HUNDREDS OF OTHERS IN ALL PARTS OF THE UNITED STATES.



Read every word and you may not see this advertisement again.

A GRAND NEW ONION from GREECE. Unlike all others in form, *extremely handsome*, with thin, brown-yellow skin. *Very early*, of *unusually mild, pleasant flavor*, most remarkable from the fact that it is the first and *only one* of the large, mild Adriatic Onions that is *really a good keeper*. Solid and fine grained, *it remains as mild* and *sweet flavored in mid-winter as when freshly gathered*. A great acquisition, furnishing fresh, mild Onions *all the year round*.
Per packet 15 cents; or 2 packets for 25 cents.

BURPEE'S WHITE GEM WATERMELON A unique new variety from China; *really a gem*, both in *distinct beauty* and *delicious quality*. Ripens *early, wonderfully prolific*, and is *the sweetest of all watermelons*. The skin is a *cream-white color*, while the flesh is rich, bright pink, crisp and juicy. See beautiful *colored plate* in *Burpee's Farm Annual for 1889*.
Per packet, 15 cents; or 2 packets for 25 cents.

NEW MID-SUMMER LETTUCE. Of early, quick growth, this is *the best of all Lettuces* for use throughout the Summer. Firm heads, most attractively colored outside, with large, rich *golden yellow heart* within, *as tender and brittle as can be*. Peculiarly fine in flavor. Per packet, 15 cents; per oz., 40 cents.

THE 3 RARE NOVELTIES FOR 1889 briefly described above, are now first introduced, and can only be had direct from us. Seed of any will be mailed upon receipt of price. In order to introduce BURPEE'S SEEDS to thousands of new customers, we make the following LIBERAL OFFER. **For 50 Cents** we will mail one packet each of the above Novelties, AND ALSO one packet each of The New Volunteer Tomato,—very bright colored, smooth and early,—New Peerless Cabbage,—early, large and solid,—New Model Carrot,—the best in quality and appearance,—Globe Danvers Onion,—finest strain,—Burpee's Golden Upright Pepper,—largest, sweetest, and most handsome, New Density Okra,—New Perfection Musk Melon,—Peerless Cucumber,—Burpee's Improved Blood Beet,—New Earliest Carmine Radish,—Sugar Pumpkin and Burpee's Surehead Cabbage, —the famous *"all head and always sure to head Cabbage."*

The above FIFTEEN PACKETS of THE CHOICEST and NEW VEGETABLES at standard retail prices are worth $1.35, but we will send the entire collection, *neatly boxed*, by mail, *postpaid*, to any address, for only **50 Cents** in *postage stamps*, or FIVE BOXES for **$2.00.** We have the Largest Mail Seed Trade in America, built upon the high quality of BURPEE'S WARRANTED SEEDS, and this Remarkable Offer is made to induce thousands more to TEST OUR SEEDS. Entire Satisfaction Guaranteed to all purchasers, the great majority of whom we hope to retain as regular customers. ORDER NOW, and if you have not already received a copy, ask for **BURPEE'S FARM ANNUAL** for 1889, *enlarged and improved*, a most complete book of 168 pages, with beautiful colored plates, and hundreds of *illustrations from nature*. It tells all about the BEST SEEDS, Bulbs, Plants, and Thoroughbred Stock. It is full of useful information to every progressive farmer and gardener. Entirely free from exaggerated descriptions, it offers THE BEST SEEDS at fair prices. *Write to-day.*

W. ATLEE BURPEE & CO., Seedsmen

Nos. 475-477 N. 5th St. and 476-478 York Ave., PHILADELPHIA, PA.

WHITMAN'S NEW PATENT REBOUND PLUNGER PERPETUAL

Guaranteed superior to any **Lever Press** now made for Hay, Straw and Wool. Always victorious. Received First Premium at all prominent fairs for past five years, over Dederick and others. Illustrated Catalogue Free.
WHITMAN AGR'L CO., St. Louis, Mo

We also make the best **Steam Power Press** in America.

POULTRY FOOD!

Trade Mark.

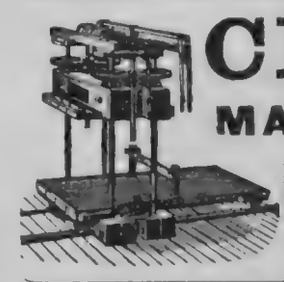
Hollis's Canned Meat For Poultry.
Will Make Hens Lay!
Will Make Chickens Grow!
—AND GOOD FOR—
Moulting Fowls.

This food is strictly fresh meat, carefully cooked, ground fine, seasoned and hermetically sealed in tin cans. Being ground fine, it can be readily mixed with soft food, and fed so as to give each fowl an equal share. Price, 80 cents per can; $8 per dozen. Address
HOLLIS DRESSED MEAT AND WOOL CO.,
20 North St., Boston, Mass. *Mention this paper.*

99 Sample Styles of Hidden Name and Silk Fringe Cards, Sleight of Hand Tricks, Recitations, Dialogues, Puzzles, Conundrums, Games, and how you can make $10 a day at home. All FOR A 2 CENT STAMP. HOME AND YOUTH, CADIZ, OHIO

TICKS

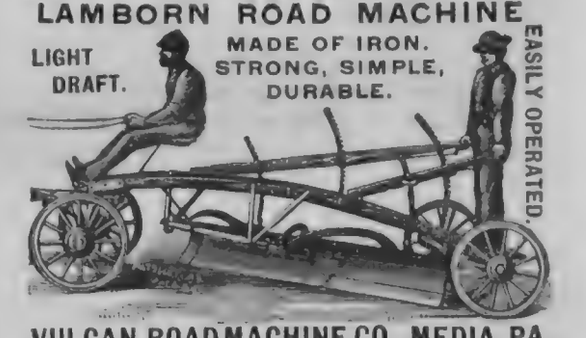
Hon. JOHN E. RUSSELL, of Massachusetts, says of THYMO-CRESOL (the Cold-water Dip):—"*It will stimulate the skin, increase the growth of the wool, and destroy all parasites. I would not be without it if it cost $10 a gallon. It is the best thing for sores of any kind.*" Non-poisonous. Safe in coldest weather. Imported only by T. W. LAWFORD & CO., Baltimore, Md. Sample by mail, **50 cts.** Mention this paper.



CIDER MACHINERY.

Knuckle Joint and Screw Presses. Graters. Elevators, Pumps, etc. Send for catalogue.
Boomer & Boschert Press Co.,
118 *W. Water St., Syracuse, New York.*

LAMBORN ROAD MACHINE



VULCAN ROAD MACHINE CO., MEDIA, PA.

Coarse, uneven, hard-grained Salt dissolves slowly and requires too much working. Nothing can excel the pure and uniform crystals of Higgins' Eureka Salt. Try it. Ask your Grocer for it. Remember the Brand and Trade-Mark.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

PHOTO ENG. CO. N.Y.

VOL. XLVIII. NO. 2045 NEW YORK, APRIL 6, 1889. PRICE FIVE CENTS, $2.00 PER YEAR.

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Horseman.

SEBASTOPOL 5272 (7043).

A PICTURE of this fine Percheron stallion is shown at Fig. 79 The gigantic size of this animal is made apparent by the comparative size of the young lady who sits on his back. Sebastopol is a very fine specimen of his breed. Quite a heated discussion has been going on of late in some of the stock papers as to the relative merits of the French and English breeds of draft horses. It is to be hoped that some satisfactory basis for a test can be arranged so that the public may know which horses are best. Sebastopol is owned by Messrs. Savage & Farnum, of Detroit, Mich.

TICKS ON WESTERN PONIES.

PROFESSOR A. J. COOK.

IT is quite a common practice of late years for speculators to bring Texas or Kansas ponies—"mustangs" from the south-western part of our country, and sell them at auction in Michigan and other Northern States. If done in the autumn this is, I dare say, a safe and harmless proceeding; as I have known several such sales late in the season and no evil results followed. But if these sales take place in spring or early summer, the ponies having just come from the mild, open winters of Missouri, Kansas and Texas, the matter assumes an entirely different aspect. In this case the purchaser secures far more than he bargains or pays for Indeed an evil is introduced that becomes very annoying and may be very expensive. I refer to the ticks—Ixodes—which, though they seem not to affect so seriously the ponies, are most terrible pests when they spread to our Northern horses and cattle. I know of several cases where horses have been so injured that they were fairly skinned alive; as one man said the horses were "externally one solid sore." In a few cases they have actually died. Not only have the ticks attacked horses turned in the same pasture at the same time, but the eggs are so scattered that horses or cattle turned in later—after the ponies were removed—became infested, and some valuable pedigreed colts were nearly killed before the evil was discovered. In one case ponies were pastured in a field where there was a straw stack, and weeks afterwards, horses were turned in and became the camping and foraging ground of these pests.

So terrible is this evil, when it comes, that I think, if necessary, it would be wise and very desirable to legislate against the importation of such ponies early in the season. I think our winters are too severe for the ticks. If this is so, then the fall importations are not objectionable. The Hon. J J Woodman, ex-Master of our State, and also the National Grange, in conversation with me, said he believed that a quarantine against these ponies was more than justifiable.

What are these ticks? The word tick refers in our common parlance, to two very different kinds of animals. Thus we have our sheep-ticks and allied animals. These are true insects belonging to the house-fly order, and are very different from the ticks under consideration. The true ticks are really gigantic mites. They belong to the spider sub-class—Arachnida—and to the order of mites—Acarina. Thus they have eight legs, simple eyes, antennæ Like the mites, they have a short, broad head—rather simple mouth parts, a prominent thoracic shield—see Figures 81 and 82—and the abdomen is neither segmented, as is that of the scorpions and harvest-men, nor plainly separated from the thorax, as it is in the true spiders. Again, the mites and ticks have only six legs at first; but eight when mature. All the others of the spider sub-class have eight from first to last.

PERCHERON STALLION SEBASTOPOL. Fig. 79.

THE TICKS—IXODES.

The ticks are external parasites on warm-blooded animals. They are well fitted to suck blood on which they subsist. The wood tick of my boyhood days was a very unwelcome and by no means uncommon visitor. As I would go to the woods for pleasure, or the cows, one of these blood-suckers would pre-empt a little spot on my neck or back, and before I could get help would sink its barbed rostrum deep into my skin and tissues, so that any attempt to pull it out would surely tear off its head, which would be thus left to irritate and disturb for hours afterward. The Texas pony ticks, (Fig. 81, exact size) which vary in color from a light greenish yellow to red or brown are, I suppose, the Ixodes bovis. At least they answer the description well, and work here on both cattle and horses. They vary as much in size as in color. Thus we have in our collection specimens ranging from nine to 15 m. m. (from .36 to .60 of an inch) in length. Yet all laid eggs, so they were doubtless mature. Very likely this variation can be explained by the length of time since they had a full meal, and the fact that they decrease in size as they lay their many eggs. Their skins seem to be extensile, to accommodate this varying size. Beneath (Fig. 81) we note the eight short legs, and two openings, one midway between the second pair of legs or a little in front of this, and the other posterior to a joint midway between the posterior legs. The first I take to be the oviduct; the last the anus. The position of the oviduct, so far

forward, explains a remark one of my students made to me: "Those ticks seem to lay eggs from their mouths."

The thoracic shield (Fig. 82) is broad, convex, cream-colored with brown lines, dots, and center, in front. This brown center in front is marked off by deep furrows. This shield is really shield-shaped. The head (Fig. 82) is short and broad with two pits one on each side. This terminates anteriorly in the rostrum, which consists of five parts (Figs. 82 and 83), the outside jointed palpi, the mandibles, which are toothed at the end, and the labium, which is extensively barbed beneath, (Fig. 83). From above we see only the palpi and mandibles. From below (Fig. 83) we see the barbed labium, the mandibles with their terminal hooks, and the labium with its rows of barbs. We now see how these ticks work. They anchor by driving the barbed labium into the skin of the animal attacked. The barbs hold them so securely that they break into two parts or lose their heads before they will let go their hold. They also hook on with their mandibles which are tubular, and so serve well to suck or to catch on. There the palpi which are semi-cylindrical by closing up, form a third suction tube. And thus we have a triple-acting pump, that draws fast on the blood and vitality of their unlucky victims. Horses in Van Buren and Lenawee counties of this State, were so gouged and bored by these ticks that they were literally raw, and blood not only oozed from their skin but actually fell in drops from their bodies.

REMEDIES.

An ointment made of lard and kerosene is quick death to these blood-thirsty ticks. The proportion should be one of kerosene to five of lard, so as not to be too harsh. Indeed the more dilute the better, so long as it kills the enemy. Mr. L. H. Bailey, South Haven, Mich, washed his cattle and horses with London-purple and water—one pound of the poison to 50 gallons of water—and was entirely successful in ridding his suffering animals of the ticks. Even though these pests suck, they have such large mouth organs that the solid poison is drawn in and they are poisoned. Cattle lice have been killed in the same way. Of course the ticks cannot be easily scraped off, as they are so well anchored. By far the best way is to practice prevention, by keeping the ponies away, except when they are brought to us in the late autumn. We must not only not purchase them, but we must not even give them pasture. The ticks are very prolific and give rise to several generations in a season. Thus if they once gain a foot-hold, they soon, unless promptly attended to, cover our animals with severe lesions and may do exceeding damage. These beautiful drawings were made by F. H. Hillman.

Biographical.

HON. NORMAN J. COLMAN.

AS THE first Secretary of Agriculture of the United States of America, we present a portrait of Norman J. Colman at Fig. 80. The subject of this sketch was born near Richfield Springs, N. Y., in 1827. As a boy on his father's farm he learned the various details of farm work and received a good academic education. In 1847 he went to Kentucky, where he studied law, taking the degree of Bachelor of Law at the Louisville Law University. He commenced the practice of his profession at New Albany, Ind., and soon became district attorney. In 1853 he resigned his office and removed to St Louis, bought the "Valley Farmer," which, under the changed name of "Colman's Rural World," he has since owned, and edited until he assumed the duties of Commissioner of Agriculture. He took a leading part in organizing the Missouri State Board of Agriculture, the Missouri State Horticultural Society, the Missisippi Valley Dairy Association and the National Sugar Growers' Association, and has been repeatedly elected president of these bodies. In 1865–66 he was a member of the State legislature. In 1874 he was elected Lieutenant-Governor of the State. When he entered upon the discharge of his duties as Commissioner of Agriculture four years ago, he established the Divisions of Ornithology, Mammalogy and Pomology, and a section of Vegetable Pathology. Under his immediate direction the process of manufacturing sugar from sorghum by diffusion was perfected and placed upon a paying basis, thus preparing the way for the saving of at least $100,000,000 now expended annually for imported sugar.

He has earnestly advocated such changes in the seed distribution as would enable him to carry on the work of testing and distributing seeds to the direct agency of the Experiment Stations recently established in the various States and Territories. He has manifes a warm interest in the success of the Experiment Station work, by establishing in the Department of Agriculture an "Office of Experiment Stations" which is intended to serve as a medium of communication and scientific progress.

Indust'l Societies.

THE TWENTY-SECOND SESSION OF THE AMERICAN POMOLOGICAL SOCIETY.

(R. N.-Y. SHORT-HAND REPORT.)

Improvement of native grapes; *Vitis rupestris*; *remedies against mildew and rot*; *Florida for grapes*; *Ives seedling*; *grafting the cultivated on the wild grapes*; *honesty in packing fruits*; *frauds in selling*; *suggestions for packing.*

Geo. W. Campbell, of Ohio, read an instructive and carefully prepared paper on the "Improvement of our Native Grapes." He said: "The improvement of our native grapes has engaged our attention for the last 30 years. We can remember when all the native kinds could be counted on the fingers of one hand. The pioneers in this good work were the Catawba and Isabella. Concord was first exhibited in 1853 The Delaware still maintains the highest position of the American varieties. By judicious hybridization or crossing I am sure we can equal the best varieties that are grown in foreign lands. But we cannot expect a variety that will suit all localities; that is impossible. Look at the Pocklington grape and the very conflicting reports about it. One extols it highly, another condemns it utterly, depending upon the locality. I have rooted out and destroyed hundreds of grapes that in other places would have been of great value. Some experiments in crossing with the Rupestris vine which is very hardy and resists mildew attacks, have been made. In crossing, my experience has shown that the staminate parent generally governed the quality of the fruit. Some of these hybrids recrossed upon the Southern Rupestris are very promising indeed. The Rupestris planted at the North has proven absolutely iron-clad against our severe winters, having stood 30 degrees below zero wholly unharmed, and it resists mildew in the most unfavorable situations. Recent crosses of some of the best natives and hybrid grapes, so far as they have fruited, have produced new types of a most interesting character. The vines have more vigor and the fruit is excellent in character and there is considerable variety. My experiments indicate that this is the rule with rare exceptions. It is my firm belief that through intelligent and continued crossing and hybridizing we must look for the most rapid, successful and important improvements in the character and value of our American grapes. For by these means the best of all varieties from every quarter of the globe can be brought together and their best elements united to form new types of every character and degree of excellence and adaptable to all situations where the vine can be successfully grown.

Another element of great importance for the future of grape culture is the recent discovery of successful remedies against mildew and rot. During the last two years it has been demonstrated that at a mere nominal expense vineyards may be protected, vines remain healthy, and the fruit abundant and perfect, where without the remedy wholesale loss would have occurred. The use of sulphate of copper, and lime remedies has proven effectual. They have been fully tested. These facts are significant even beyond the protection of the present vineyards. For by the use of these remedies at a cost of no consequence compared with their benefit, the finer varieties of our improved hybrids can be successfully and profitably grown in thousands of localities where they could not be without them. Grape culture in this fair Florida and in the South generally, I believe to be in its infancy as yet. With its charming climate and wonderful variety of soil and situation I see no reason why, with proper selection of varieties and the aids at command from horticultural societies and scientists, the sunny South should not be both the garden and the vineyard of the North American Continent." This concluding sentiment of the veteran grape man was of course highly enjoyed by the Southern delegates, and everybody applauded the paper.

Mr. Brackett, of Iowa, then started a lively discussion by alluding to the Ives Seedling and its success in the West. He said it was excellent in and about Burlington, and was the most valuable grape grown there. "The trouble with the Ives is, people do not leave it long enough upon the vines to ripen. It should be left three or four weeks after it is fully colored." South and North joined in defense of what was termed a much abused grape. Among the energetic speakers was Mr. E. Williams, of New Jersey. Said he, "The Ives is not an early grape, though it is sent to the New York and Boston markets early, and long before ripe. Of course, it is not good then, almost unfit to eat in fact. But when fully ripe it compares very favorably with other good grapes, being better than Corcord."

An important point developed during this discussion was that the cultivated grapes could be grafted successfully upon the Muscadine type of wild grape. President Berckmans said this had long been considered impossible by all pomologists, and he inquired very carefully as to the precise facts. Several Florida members testified to having accomplished it frequently, getting large growths and even some fruit.

Mr. E. Williams then followed with a practical paper on, "Honesty in Packing Fruits." "A man who desires to build up his reputation and a demand for his products will be careful to grade his fruit and see that every package shall be just what it purports to be. His merchant can then count on his fruit every time. Those most ready to charge fraud need not go beyond their own doors for the cause and the remedy. Purchasers know a good thing when they see it and can detect an attempt to deceive quite as readily as see the merits of an article. Placing grapes on the market in an unripe condition is another method of fraud. The fruit itself favors it. With other fruits the eye is the expert detective; not so with the grape. Sampling is the only true test, and this is difficult to carry out, as it would soon render the packages unsalable. The eagerness to be first in market and get the almighty dollar brings this fruit on sale weeks in advance of its maturity. Confidence is thus destoyed and prices depressed beyond recovery. I have heard people inquire for some 'real sweet grapes once more.' This fraud has been practiced so long now that people begin to doubt whether the grape grows here now equal in sweetness to those of former days. Near me are two growers. One gets his grapes in market as soon as they are colored, whether ripe or not. He says he is after the money and the people may have his grapes green for all he cares. The other refuses to gather until ripe, packs and sorts carefully, puts in nothing but perfect clusters of number one fruit, warrants each package to be uniform all through, puts his name and brand on each. His number two fruit goes unbranded and sells on its merits alone. The latter sells for more than the branded fruit of the first grower. His merchant says he can sell his fruit under any condition of the market. Early in the winter the New York market was flooded with Florida oranges and the merchants told me they didn't know what to do with them. These things carry their own moral. Remember, first, the cost of the box, labor, packing and transportation is the same in one case as in the other: second, that every box of number two fruit reduces the general average of the whole, that appearance, quality and uniform size are all important passports to profit, and that in this business "honesty is the best policy."

NORMAN J. COLMAN,

First Secretary of Agriculture. Fig. 80.

Everywhere.

RURAL SPECIAL REPORTS.

Iowa.

WIRT, Ringgold County, March 21.—Farmers have commenced sowing oats; there has not been any rain here this spring. There was very little snow during the winter. All kinds of stock are very low and as the farmers in this county depend upon stock-raising to make a living, money is very short with them. Corn, 20 cents per bushel; oats, 18 cents; hay, no sale; cows, $18 to $25 per head; horses very low and of slow sale. If people were out of debt they could do very well with low prices, but when there are payments to meet it goes pretty hard with them. J. D.

Missouri.

CLARENCE, Shelby County, March 16.—Crops last season were very satisfactory to the farmers as far as quantity is concerned. Corn yielded bountifully and is worth at present 25 cents per bushel; but with No. 2, worth only 29 cents in St. Louis, farmers would hardly realize more than 20 cents were it not for the large number of cattle being fed in this vicinity. Oats were a good crop, but were damaged to a large extent by lodging before harvest. They are worth now at the railroad station 18 cents per bushel. Wheat averaged from 15 to 30 bushels per acre and is worth now 80 cents per bushel. Potatoes and apples are drugs in the market—worth nominally about 20 cents each per bushel. When we consider the cost of labor in producing the above-mentioned products and the prices obtained for them we must conclude that the Parrot is right and that "Farmin Don't Pay."

But "there's room at the top" Fat cattle are worth about $3.00 per 100 pounds. Do Eastern consumers get their steaks at a correspondingly low price? We appreciate the RURAL. M T.

Ohio.

FLUSHING, Belmont County, March 4.—The past month has been somewhat wintry. The mercury has reached zero two or three times. Fall and early winter were quite wet. No scarcity of water; little snow. Bad roads almost all winter. Wheat that got a good start in the fall is looking well. Corn matured slowly and late: since, spoiling in crib. Wheat is selling at $1.00; corn, 50 cents; apples, 25 cents; hay, $15; potatoes, 40 cents. W. L. A.

Oregon.

OAKVILLE, Linn County, March 13.—I am just in receipt of the RURAL for March 9th; how does the paper get across the continent so fast? This number is a regular farmers' institute; so I think is every issue of the R. N.-Y. There is little need for any other farmers' institute to a reading, thoughtful farmer. My wife says she must have her name entered for the potato contest, and my wee lassie, Clara, says she will help her ma to grow the potatoes. We had an immense crop of potatoes last year, and there is no market this spring. Some of the cows, however, are very fond of them. Is it not a pity that they are such a perishable crop? We have had a very mild winter with frost enough on one occasion to kill the tomatoes. Plowing and sowing have gone on nearly all winter. We used to be happily free from insect pests in this country, but we had a full crop of coddling moths last summer. Our horses and cattle were driven nearly frantic by a fly which, they say, was brought here by the Northern Pacific railroad. It resembles a house fly, but is a regular blood-sucker. We want the entomologists to introduce some other insect that will prey upon these and so rid us of them. R. L. S.

Pennsylvania.

SCOTTSVILLE, Wyoming County, March 16.—We had a very open, wet winter with but little snow, not having any very hard freezing weather. Wheat is looking well so far. Produce of all kinds is very low—corn, 43 cents per bushel; oats, 38 cents; rye, 45 cents; wheat, $1; hay, $15. per ton; butter, 20 cents; eggs, 14 cents. Times are very hard and dull for farmers and laboring men. We are so

Fig. 81.

close to the Wyoming and Lackawanna coal regions that dull times there make quite a stringent market here. Miners are at work only on half time. I hope that each RURAL subscriber will try to get at least one yearly subscriber to the RURAL. That will double its subscription list. I certainly think that if the farmers have a true friend it is the RURAL NEW-YORKER, and we ought by all means to help our best friends. J. G. F.

Farm Economy.

RACKS FOR TOOLS.

THE Farm Implement News recently printed several designs for racks suitable for holding various kinds of tools in every-day use. We show them at Figs. 84, 85 and 86 The drawings are such that no explanation is required.

THE FARMERS' CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

INDIGESTION AND IMPACTION IN COWS.

E. M., Circleville, Texas.—What is to me a new disease has killed most of my cattle. They were raised on prairie with sage grass. In August, 1887, the weather was so dry that the grass was all gone, they were moved to a mountainous country 150 miles away in five days. All were doing well until the blizzard in January, 1888. Then many of them had their noses and udders frozen. In the spring, just as grass began to appear, they began to die. Some would slobber and look wild out of the eyes and would run over everything, seeming crazy for water, and if they came to a high bluff they fell off, either drowning or breaking their necks. If they could get to the water they would sometimes drink until their

Fig. 82.

hides would burst; at other times they would drop dead first. Some would run until they fell; almost all were mother cows or young heifers. Others would swell up under the jaws and if the tumors were lanced, they would discharge a black, very offensive pus. The animals seemed to have no use of their fore-parts. All died that were so affected. Others were taken with diarrhœa and their droppings were as black as ink and so offensive as to cause sickness; those affected in this way had no use of their hips. A few were cured by giving lard. Some had the disease twice and a few the third time. Most of them ate until the last; and none ever refused water. They were never able to get up after they had been taken; they had to be lifted. Then they could stand very well. They groaned and seemed to be in great pain while down. Some lived a few hours while others lived for two, three and four weeks. Almost always those that were in the best order were taken. After death, on each carcass, there was a black strip eight inches wide around the body just back of the shoulders and under the neck and breast, and they had the appearance of having been beaten with a hammer, and the gall was as large as a half-bushel. The carcasses of all were so offensive that they could hardly be skinned, and by starting the skin around the neck and fastening a rope to it the entire hide would peel off, owing to the presence of a jelly-like substance between the hide and body. The bones were so rotten that they would break to pieces in turning the cows over. What is the cause and is there any remedy?

ANSWERED BY DR. F. L. KILBORNE.

The disease appears to have been indigestion with more or less impaction of the first and third stomachs, followed in some cases by complications as indicated by the varied symptoms. This disease is commonly called "dry murrain," "impaction of the third stomach," etc., and when it occurs on pasture, "grass staggers." In this case we cannot say just when the trouble began. It may have been due, in part, to the starvation and exposure during the winter, or wholly to the feeding in the spring. At this time the cattle were evidently in poor condition with a ravenous appetite, and in picking the young grass considerable quantities of the old, dead grasses of last season were also eaten. It was eating this coarse, dry, indigestible food that probably caused the indigestion and impaction. Such feeding is not infrequently the cause of fatal outbreaks of disease on the range in fall, winter and early spring, and also in late summer droughts. So suddenly do these outbreaks occur, and so rapidly do the animals die, that they are occasionally mistaken for outbreaks of some contagious disease. The disease is not contagious,

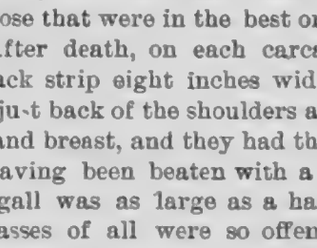

Fig. 83.

however, but due to the common cause—dry, indigestible food. The proper treatment at the outset would have been to have given each cow one to two powders of a mixture of equal parts of Epsom salts and common salt, with one ounce of ginger to each cow. The dose should be given dissolved in two or three quarts of warm water. If this did not move the bowels in 15 or 18 hours the dose should be repeated. In severe cases also give one ounce each of sulphate of soda and ginger, and one-half ounce of carbonate of ammonia in a pint of cold water every four hours until relieved. Owing to the difficulty in giving medicine to a large herd of range cattle, it is better to take some general precautionary measures to prevent the disease. During the fall and spring, or at any other time when the cattle are compelled to eat large quantities of these dried or dead grasses, special precautions should be taken to ward off the ill effects of such feeding. When possible, it is, of course, desirable to supply suitable food. But when this cannot be done, see that the cattle have free, daily access to common salt, have an abundance of good drinking water conveniently at hand, so that they can drink frequently instead of taking in larger quantities at longer intervals. A daily ration of coarse bran or shipstuff containing an ounce of sulphate of soda to each animal, could be given with advantage.

RECLAIMING A WET FARM.

P. H., Fort Wayne, Ind.—In 1888 there was a large body of land lying west of this city comprising about 40,000 acres, drained by a large system of ditches to such an extent that it is believed that the ditches carry off all the water that falls upon the land, and all that may run on there even at times of ordinary floods. They can lower the water level at least eight feet below the surface of the ground. This tract of land will average about a mile and a half wide, and a small stream emptied its waters into the upper end, but the land being so flat it soon had no channel nor did any of the other creeks, of which there were several, have any channel in this low

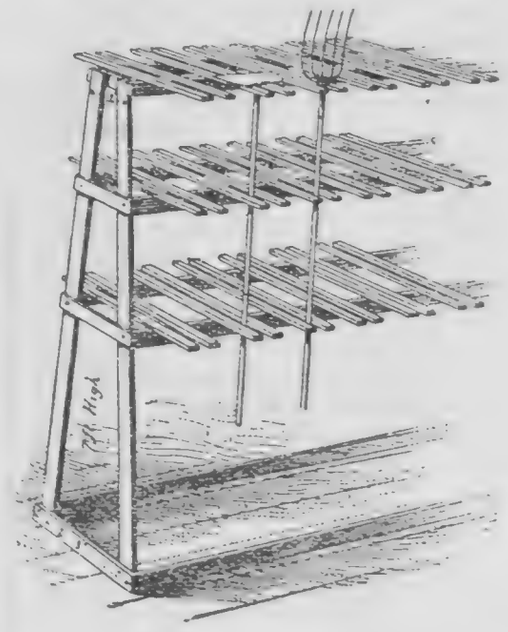

Fig. 84.

land. The streams that poured their waters over this land were very rapid and deposited over the prairie a great portion of the silt or soil that they gathered from the high land. About one-third of this land was covered with soft timbers such as elm, black ash, etc. The other was open and produced all kinds of grasses from Red-top and Blue-joint, to bull-rushes. A part of it—perhaps one-third of the whole extent—is noted by the first surveyors in 1820 to 25 as being prairie. I bought some 400 acres of this land on the north, within about twenty rods of a station on the Wabash railroad. On the north side, and perhaps a third of the west, there is a surface formation that most people would denominate muck, that will run from six inches to six feet deep. It is all underlaid with silt or rather marl formation, and under that clay hard-pan. This muck is very black and has lost its vegetable or pasty look, so that when one spades up a shovelful, it falls off of the shovel or crumbles down from the pile like soil. Through the center of my farm there runs an island, as it is called, that is raised perhaps from eighteen inches to ten feet above the prairie. The soil on this is rather of a sandy nature, although the timber that has grown upon it, was all kinds of burr oak, beach, hickory, etc. To the south of this island my farm is entirely covered with timber, mostly black ash, elm, maple, with considerable white ash, some sycamore, cottonwood, burr oak and white oak. I want to make a very fine farm out of it, and am proposing to thoroughly tile it and if possible to increase its fertility to a very high state. I can get lime (quick-lime) from the kilns a few miles from me delivered at my station for about a dollar to a dollar and a quarter per ton. I am about seven miles from this city, with a good road as well as the railroad. I have been thinking some of having several varieties or the soil analyzed, but have had some doubt as to the practicability of doing so. I wish you would give me your ideas as to what would be the best general course to pursue.

ANS.—Such land as this ought to be rich enough to make "a fine farm" without any help but draining and good tillage, and the regular manuring which follows a judicious system of farming That better timber has not grown on it is due to the wetness of the land and not to the infertility of the soil.

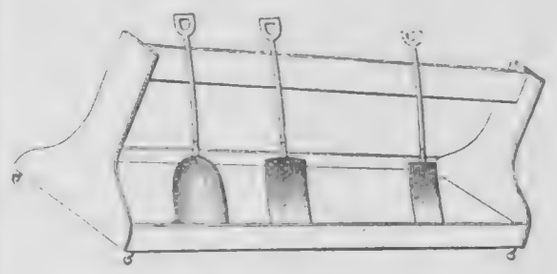

Fig. 85.

Possibly the land having been wet so long contains various acids which would be neutralized by the lime and thus be much improved. Lime is not manure and in this case would be simply useful for the chemical effect mentioned and its mechanical influence in making the land more firm and solid. Hence two tons per acre (50 bushels) spread after draining and plowing might be beneficial. Analysis of the soil would hardly be any help.

ABOUT CREAMERIES

T. J. H., East New Market, Md.—1. What should be the size of a creamery building for a patronage of 200 cows? 2. What kind of machinery should be used and how much will it cost? 3. On what basis can a creamery be run satisfactorily?

ANS.—On the supposition that the creamery is for the purpose of handling gathered milk, to make butter, it will be found that a one-story building will be most convenient, and one 25 by 50 feet with 12 feet studding, will be found to be of handy working shape and be ample in space to put in all the needed tools and machinery, except that it may be well to have a small boiler-room in an L adjoining the side, placed so as to be most convenient for connection with engine and machinery, inside of the main building. Enough from the north end of building may be taken for an ice-house and cold-storage room, to hold accumulations of butter for, say, two or three weeks. This would leave a room 25 by 38 feet for storing vats for milk, separator, cream-tank, churn, butter-worker, engine, pumps, and skim-milk receptacle. Where lumber can be had at an average of $16 per thousand, and foundation stones for but little more than the cost of putting them on the ground, such a building can be made for about $500, building it much as silos are now built, so as to make it both warm and cool; though two by four studding would do, whereas a silo would need two by 12. This is independent of the water supply, as that varies so that an estimate would be useless. 2. There should be a ten-horse boiler, at least a six-horse engine, a separator, storing vats, churn, pumps for water and milk, if needed, butter-worker, scales, the necessary piping for conveying water and steam, stove, and weigh-can and small utensils that need not be specified. The cost of all these with a separator that will

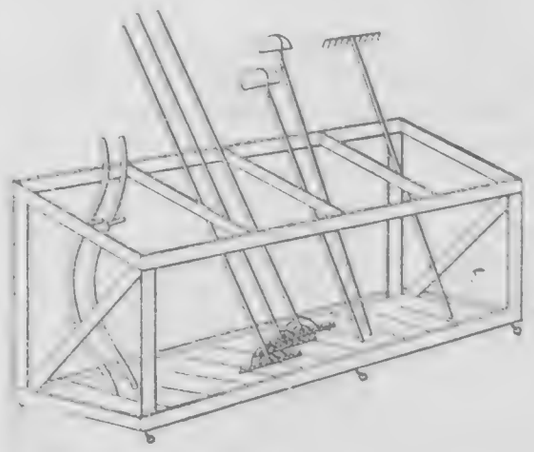

Fig. 86.

cream 1,500 pounds per hour, would be from $1,000 to $1,200, ready to get up steam. The kind of separator, as well as the kind of steam-power, must be determined by the buyer, and need not be stated here, as there are now two main rival kinds, both good. There are reasons why each is preferable for some purposes. The buyer must know his conditions for using either, and not ask us to decide for him. 3. Let the creamery be run as most other

factories are run—by an expert who owns the whole plant, as he would the grist-mill, blacksmith-shop, machine-shop, or store of the locality. Or the building, and sometimes the machinery, may be owned by a capitalist interested, or a joint stock company of farmers, according to circumstances, and the capital of the right man would then be used for manufacturing the butter. He should not buy the milk, or be constrained to do so, in order to get patronage. He should make the product by the pound, and give the farmer all, save the fee for manufacturing. He should be held responsible for making a good product, in the best style and method of manufacture, and for putting it into a safe and attractive package. There should be a cooperative spirit on the part of the patrons, a helping of each other in the way of getting good stock, and learning the best methods of growing foods, caring for cows and their milk, and a generous spirit of forbearance and helpfulness toward the manufacturer, and a cheerful compliance with his instructions, especially in regard to caring for milk. If held responsible for a good product he must have the right to reject defective milk, if it comes.

ABOUT MANURE.

G. W. G., Justus, Pa.—1. What is the percentage of loss in plant food from a pile of manure exposed to the weather from November until April? 2. What is the best practical method of keeping manure, where from 10 to 25 head of stock are kept? 3. What is the value of liquid manure from horses and cows, and the best practical method of saving it?

ANSWERED BY PROF. I. P. ROBERTS.

1. So much depends upon the character of the manure, the depth of the pile and the amount of rainfall that no definite answer can be given. From observation and experiment I should say that manure spread out from four to eight inches in depth as in most barn-yards, would probably lose at least one-half of its real value. Some experiments in England show that five tons of raw manure, lost in rotting, one-half of its nitrogen and over one-half of its bulk. When we consider the amount of water that falls, upon the average, on each and every acre in this State, one cannot understand why any thinking man should deliberately store the most valuable produce of the farm in an open barn-yard for from six to nine months in the year. Three thousand two hundred tons of water fall on each acre annually and on each barn-yard of 100 by 110 feet, 800 tons. Can a farmer afford to put a man at one dollar per day at one end of a dung fork to lift 800 tons of water at the other end; or can he afford to baptise his manures? He is compelled to haul this water to the field if it does not leach out; if it does it carries valuable plant food with it. Some experiments conducted at Cornell University show that 60 cents worth of plant food was lost with each ton of water that leached through eight inches of strawy manure. Eight hundred tons to lift or leach! Farmers, can you afford it?

2. What cannot be hauled out in late fall and early winter, and spread where there is a plant growing, and what is made, say, from December or January to May should be kept in a covered yard or a manure cellar or in a water-tight rotting pit in the open, where all leaching may be pumped back on the pile. We use both the first and the last of these methods and find them very satisfactory. 3. Under average conditions we shall find the following:

	NITROGEN	POTASH	
Horse 3000 lbs.	46.5 lbs.	45 lbs.	Value $9.93
Cow 8000 "	46.4 "	39.2 "	" $9.65

The above is computed on the basis of 17 cents for nitrogen and 4½ cents for potash. In open barn-yards and in piles of hot horse manure most of the nitrogen and not a small share of the potash are lost. Mix the dry horse manure with the wet cow manure. Use as absorbents dry earth or muck, buckwheat hulls, sawdust, gypsum, imported moss, shavings, straw and refuse hay. It none of these can be found in sufficient quantities, then the urine should be run into a water-tight receptacle, pumped into a tank and spread upon grass land, but this as a last resort. What sane man would leave his barn roof off to save a little expense and let 360 pounds of water fall annually on each square foot of hay mow? What informed farmer will continue to let 360 pounds of water fall on each square foot of the barn-yard when it usually contains three to five times as many tons as his hay mow, each ton of which if it is properly made manure, is worth $3.00?

PERMANENT GRASSES FOR HAY.

A. H. H., Rayville, Maryland.—I have about two acres of land in my orchard that were in potatoes and beans last year. The land is in tolerably fair order but not rich. It is a hill-side and adjoins my yard at the dwelling, and as it washes badly when in cultivated crops I want to seed it permanently with those kinds of grasses that would be best for hay, as I never expect to pasture it. What kinds of grass seeds had I better use? Would several kinds be better and produce more hay than one or two? I have read that an acre of rich soil well seeded with a good selection and variety of perennial grasses will produce six tons of well-cured hay in one season without difficulty by cutting early and mowing twice. Does the RURAL think this statement reliable and within bounds? The writer of the book recommends five quarts of Timothy, three of White clover, six of Orchard grass and three of Red-top per acre. I have also seen a recommendation of a mixture of seeds for hay and pasture by Mr. Joseph Harris. It consists of the following: Orchard grass, English and Italian Rye grass, Meadow Fescue, Meadow Foxtail, Fall Meadow Oat grass, True Perennial Sweet-scented vernal grass, Kentucky Blue-grass and Red-top. He recommends three bushels of this mixture and one quart of White clover, one quart of Alsike and four quarts of Medium Red clover per acre for uplands, sown alone without grain. The trees on this part of the orchard do not stand very close together, but of course there is some shade. Is the above mixture as good a selection as I could get for these two acres, and would the shade be against the full development of this mixture of grasses?

ANS.—The mixture of grasses mentioned as recommended by Joseph Harris is a good one, although the quantities of each should be stated. Three bushels of these grasses would be about 40 pounds in weight and as little as should be sown. The quantity might be divided as follows: Six pounds Orchard grass, 15 pounds of Pacey's Perennial Rye grass, five pounds of Italian Rye grass, and five pounds each of Tall Fescue, Fox-tail, and Tall Oat grass; in all, 41 pounds. Kentucky Blue grass will not do well in Maryland, and Red-top is a very poor hay grass. The statement referred to is too rose-colored; in fact, it may be said to be impossible with the grasses mentioned, as White clover and Red-top are very poor plants for hay, and Timothy and Orchard grass mature at such a long time apart that either a light crop must be cut or the hay will be inferior. Necessarily the trees and the grass will be injurious to each other, and unless the ground for 25 feet around each tree is kept free from the grass and is cultivated and manured, there will be but a poor growth and poor fruit. Orchard and meadow are decidedly antagonistic. The grass seed may be sown as soon as possible, either alone or with oats sown thinly and cut for hay when in first head. The land should be well plowed and harrowed and fertilizing will be desirable if it is not manured.

HOW TO LOAD A WAGON: FEED FOR A COLT.

P. K. S., Prattsburg, N. Y.—1. Farmers and teamsters generally load their wagons heaviest over the forward (smaller) wheels in order to get the load nearer the team, as they can handle it easier; are they right? 2 I am feeding a three-year-old colt oats in the bundle, and the orts of clover hay after the calves have eaten what they will; what should I add to the rations?

ANS.—1. The question of draft is one that involves several points of scientific calculation and depends upon several varying conditions. On a level road when the wheels are of such a hight as to bring the line of draft on a level with the center of gravity of the load and the load lies equally upon the four wheels, the draft will be the easiest, and the team will move it most readily when closest to the load. When the line of draft is higher than the center of gravity of the load, the draft will be heavier as pressure is exerted on the load, and *vice versa*. As a wheel is a sort of lever, the larger it is, the easier the load is moved, within certain bounds; and all the more on any roads but those with perfectly solid and unyielding tread, as on a railroad. Earth roads which yield under the wheels cause the load to move up a constant incline, in effect; and a rough stony road is worse still. And then the larger the wheel the more easily the load is drawn; the broader the tire also the easier the draft. In loading a common wagon under ordinary circumstances the load should be evenly apportioned on all the wheels; when the road is rough, the larger and hinder wheels may be loaded somewhat heavier than the forward ones for the easiest draft, on the principle above mentioned. 2. Bran for all growing animals should make a considerable part of the food. This is evident considering that young animals are making bone and flesh, and thus require nitrogen and phosphoric acid in the most digestible form, and these are provided by bran as may be thus shown.

COMPOSITION OF BRAN.

Albuminoids		
Flesh-formers.....	12.9	per cent.
Ash.....	5.1	" "
Carbohydrates.....	59.1	" "
Fat..	3.5	" "

OF THE ASH.

Phosphoric acid
Bone material. ... 51.8 per cent.

FEED FOR COWS FOR BUTTER.

W. G. F., Ithaca, N. Y.—I am feeding to milch cows for butter equal parts by weight of ground oats and corn; is this an economical ration and how many pounds should be fed an ordinary 1,000 pound cow? How could the ration be improved? Each cow has 10 pounds of potatoes and all the good clover hay she will eat Will it pay to grain cows in June and July if they have good pasture?

ANSWERED BY HENRY STEWART.

In choosing foods for butter-making the effect upon the character of the butter is to be considered more than the fat contained in it. It has been found by experiment and long practice in medical and physiological investigations, that the fats of the food are emulsified with the pancreatic fluid and are absorbed by the intestines directly into the blood without alteration; and the use of fatty matters as medicine is controlled by this well known fact. As the fat of the milk is derived from the blood the food must necessarily exert an influence upon the character of the butter, and this is clearly proved by practice in the dairy. Linseed-oil-cake meal, which is rich in fat, of which the flavor is bad, makes poor butter, while that of cotton-seed meal, which has a bland, sweet and nutty-flavored oil, equal to the very finest quality of olive oil, and has also a rich yellow color, makes the finest butter. The fat of oats is white and hard and makes inferior butter; that of corn-meal is much better. Hence oats cannot be considered as a good food for butter-making cows. The action on the digestive organs is also to be considered and it is found that bran has a good effect in this way. Hence the most desirable food for butter cows is made up of corn-meal and bran in equal parts and as much cotton-seed meal as can be given healthfully, which is about one-eighth part of the whole grain food, or one pound of the cotton meal to four pounds each of corn-meal and bran. This may be considered as a standard ration for a 1,000-pound cow, to be increased as the cow can profitably dispose of it; some cows will consume this quantity at one feed, and increase in yield on it; others cannot digest it. This is to be found by testing the cows with caution, stopping at the point of safety.

CORN FOR A SUCCESSION.

J R, Lexington, Mo.—I have agreed to furnish 60 dozen ears of sweet corn per day, during the corn season. This will require 600 dozen ears every ten days. I want to plant the Cory for first, Minnesota for second, Moore's Concord for third, Cory for fourth, and Stowell's Evergreen for the rest of the season; how many acres of each shall I plant at one time and what space of time should elapse between the plantings? The party wanting this corn told me to plant Cory, Minnesota, Moore's Concord, and Stowell's Evergreen all at the same time, and then Cory 10 days later for a succession of 50 days running. I am doubtful about what he says.

ANS.—Why any one wants to plant Cory for a late or later succession we cannot understand The ears are small and the quality inferior. It is the best we can do for *first* early. After that its usefulness is gone. The R. N.-Y. advises the following succession as being as good as any. Cory, Minnesota, Perry's Hybrid, Crosby, Moore's Concord, Triumph and Evergreen. All the above may be planted at the same time, though, of course, each will lap over upon the next. To insure the best corn in its season we should plant relatively less of the earlier kinds so that they will have been exhausted when the later and better kinds come in. For succession we should plant only the intermediate or later varieties. For instance, Triumph or Evergreen might well be planted every 10 days after the first planting. Or Crosby might be planted as late as July if there is no objection to rather small ears. The last question we are unable to answer, so much depends on the fertility of the land, etc. The R. N.-Y. invites discussion on the above questions and answers.

TREATMENT OF AN UNPRODUCTIVE ORCHARD.

S. C., Riverside, Mich.—I have a Rhode Island Greening orchard of 150 trees about thirty years old, which have not borne any fruit to speak of for a number of years. The orchard has been plowed every year but the trees have not been properly trimmed. They are covered with what I call tree lice. What can I do to make them bear?

ANS.—The best thing to do to such an orchard is, first, to manure it liberally and work the manure well into the soil with a disk or Cutaway harrow. Then put on sufficient fertilizer for a crop of beans and plant them, keeping the ground well cultivated until the crop is matured. This is under the supposition that the trees are not crowded,—that is, they should have been set out originally not less than 35 feet apart each way. If they are closer, thin them down, (by cutting and digging out the poorest) to not more than 36 trees to the acre. Then the next spring get an experienced hand to prune the remainder, removing only such limbs as evidently must go, and covering the cuts with a coating of warm coal tar. When the trees have started a healthy growth, the lice, (if the leaf louse or aphis is meant), will not be likely to do serious harm. But if the trees are infested with bark lice (the scale insect), they can be combatted at the time when the young insects emerge from the scale, generally in May, (making the bark look as if thinly sprinkled with flour), by spraying the bark all over with weak lye, about one-fourth as strong as is needed for making soap; or ashes may be thrown into the tree when the bark is wet. As a rule, the bark lice do not seriously injure vigorous trees.

TO GET A COW WITH CALF.

L. E. H., Easton, N. Y.—A young cow dropped her calf in March last, and appeared to be all right. In about two weeks afterwards she was taken with what was termed by our veterinarian, inflammation of the womb, and was treated for the same by him until she was to all appearances cured. Since that time she has been in season at regular intervals. She is now giving milk, and seems well in all respects. She has been taken to different bulls, but to no purpose. Can anything be done for her?

ANS.—Give the cow two table spoonfuls of the following powders in the feed night and morning: Sulphate of iron and powdered nux vomica each four ounces; powdered gentian root and ginger each eight ounces; ground pepper two ounces; mix. If the cow is fat reduce the feed, especially the grain ration. Give little or no corn. Allow at least four or five hours' exercise daily out of doors when the weather will permit. The stable should be light, cool and airy. Have the neck of the womb examined by your veterinary surgeon, to make sure that the passage is open, and that there is no catarrh or discharge. When next in heat and just before being served by the bull, have the passage through the neck of the womb very carefully dilated with the oiled hand, by slowly introducing one finger until you can insert two or three fingers. Then let the cow be served immediately by a common or grade bull—not by a thoroughbred. Repeat this treatment at the next period if not successful the first time.

CANNING MEAT AT HOME.

Several Subscribers.—Is it practicable to can beef or other meats at home?

ANS.—Canned meats are pretty cheap now, as they are turned out in immense quantities by the wholesale canners. Many think the large canners are not so neat and particular in the selection of meats for canning as they should be. Farmers who kill beeves are sometimes left with a quantity of meat on their hands that they cannot sell at a profit. Prices for poultry are sometimes so low that useless stock must either be kept at a loss or almost given away. In such cases it may pay to can this meat and thus hold it in an excellent form for future consumption. As to the profit of the operation each must determine for himself. One of our Connecticut subscribers, Mr. H. Harrington, writes as follows about his method of canning:

"I first strip the meat from the bones, and cut it into pieces as large as I can get into the cans. At the canning factories I get cans made of tin called three-pound cans, but they will hold just two pounds of beef or any other kind of meat. One should not put in more than this, for if he does, he will have trouble. Put in one table-spoonful of salt and solder tight, leaving no vents. Place the cans in boiling water and boil them for 45 to 60 minutes; take out and pierce each can with an awl, then solder each hole made with the awl. As soon as you can, put them back in the water, and boil them until the meat is tender. Beef, chicken or any other kind of meat put up in this way, will keep a life-time if desired. I have practiced it for a good many years."

CUTTING SILAGE FOR FEED.

S. A. L., Mooresville, N. C.—Is it best to feed silage from the top or to cut it down from the side? 2. Where can tarred paper be obtained and at what price?

ANSWERED BY PROFESSOR A. J. COOK.

It is better to feed from the top. In the

first place, it saves all trouble of cutting it down; and it is very easy to fork or rake it off from the top. Again, if we take twice a day from the top, the exposed surface is constantly kept fresh, and so there is no spoiling of the silage. This saves the silage and keeps the barn sweet. Where the silage is cut down, the side molds and ferments and fills the building with the sour, disagreeable odor of fermentation. My barn is sweet, so that even on warm days, one may enter the close basement without being reminded of silage or the silo. I know of another silo where the silage is as sweet as that in my silo; but where the barn is so sour with fermentation that I dislike to go into it. I do not like to keep my stock where I find it disagreeable to stay. This barn has a large silo,and the silage is cut down from the side. I believe this explains the sour odor, so I say emphatically, feed from the top, and make the opening on the side reach to within two feet of the top. 2. Tarred paper in the North is used extensively for sheeting frame houses inside the clapboards. Now we get a thin, tough paper that is preferred by many to the tarred. The tarred costs about two cents per yard, the other a little more. The hardware merchants keep this paper on hand in all our villages and cities.

AN AILING FLOCK OF HENS.

A C L., Windfall, Ind.—What is the matter with my Brahma chickens? One has lost the use of his legs which stick out straight behind him; another has a big boil just back of where the wing joins the body and it discharges what to all appearance is clear blood. Two others appear crazy; they will start and run a few steps then turn round and run straight back again, jerking their heads from one side to the other as though looking for something they imagined was after them. The wing of one which died became a mattered sore, and its comb was a dark purplish red, but the combs of the rest are bright and healthy. They have been fed mostly whole corn with potato and apple parings. They have an almost unlimited range and have had Douglas mixture.

ANS.—The difficulty is due to the use of the Douglas mixture, so far as the boils are concerned, while the vertigo is due to pressure of blood on the brain, caused by over-feeding, and an over-fat condition. The fact that the Douglas mixture shows the effect stated indicates scrofulous tendency, probably inherent, (which often occurs) and the birds should be no longer used. The exclusive feeding of carbonaceous food has thrown the whole flock out of condition, making them more liable to disease.

FERTILIZER QUERIES.

E D. G., Ashburnham, Mass.—1. My soil is an upland, neither clayey nor sandy, but just medium; can I use a better top-dressing for grass than ground bone with muriate of potash? Would fish and potash be a good application? 2. What is the best manure for oats to be cut for hay just as they begin to head? 3. What would be the best fertilizer for flat turnips put in on sod lands in August? 4. In a favorable season could I reasonably expect 200 bushels of turnips per acre from an application of a ton, per acre, of high-grade potato fertilizer, or would bone and potash be better? I shall seed to Timothy and Red-top or Blue grass. 5. For one who doesn't want to use more than from 1,000 to 2,000 pounds of commercial fertilizer is it advisable to buy the raw materials? I can get them as easily as the prepared article.

ANS.—1. Not unless you substitute sulphate for muriate. The mixture would be deficient only in nitrogen Fish might be advantageously added. 2. In the absence of any information as to what your soil needs, we would answer, superphosphate (dissolved bone) three parts, potash one and nitrogen (nitrate of soda) one. 3. A complete high-grade fertilizer strong in phosphate. 4. The potato fertilizer is needlessly strong in potash. 5. No, we would buy the prepared fertilizer in such a case.

ABOUT POTATO PLANTING.

J. H. N., Afton, N. Y.—1. I am going to plant about 14 acres of potatoes on a sandy loam upland. The White Star and Burbank are the kinds mostly raised in this section; would the RURAL advise me to plant those or some other varieties, and what kind would it advise? 2. How many bushels shall I allow to the acre, and if cut how many eyes to the hill? 3. Would wood ashes be good as a fertilizer? 4. I am also going to sow about 20 acres of spring wheat on the river flat a part of which is very rich land. I intend to top-dress the rest with about 20 loads of fine manure to the acre; what kind of spring wheat shall I sow and how much to the acre?

ANS —1. It will be safer to plant potatoes that you know do well on other farms near you, than to try experiments. New varieties ought always to be tried on small areas. 2. If you cut medium-sized potatoes, having a medium number of eyes, and plant one by three feet apart, you will need 12 bushels. Not less than two strong eyes. Give all the flesh possible. 3. Yes, a splendid fertilizer but one-sided. On your land, add raw-bone flour —400 pounds to the acre. Sow broadcast. 4. We prefer not to advise in the matter of spring wheat.

FEED FOR EWES AND LAMBS.

J. H. K., Pompey, N. Y.—I can buy buckwheat middlings quite free from hulls for $15.00 per ton; they seem quite rich and oily; also wheat shipstuff, buck-wheat flour "which has been heated just enough to spoil it for family use," mixed half and half for $18 00: also ship-stuff (clear) and corn-meal. Which is the cheapest feed or feeds for ewes and lambs the object being to make the lambs fat as fast as possible, beets to be fed in connection with the grain and clover cut fine, all being mixed and fed together as cut feed?

ANS.—Sheep masticate their food better than the larger animals and for this reason the buckwheat middlings which contain the bran of the grain (not the hulls) will be the best of the foods mentioned. But moderation must be exercised to avoid over-feeding grain food to lambs. Begin with four ounces a day per head and do not exceed eight ounces. Buckwheat hulls with the large proportion of cracked grain usually mixed with them make an excellent food for sheep, but as they are rich in nitrogen they will be apt to cause heating and shedding of the wool if fed too liberally. At the prices mentioned the buckwheat middlings are cheaper than corn.

LAMENESS IN A HORSE: SPRAIN OF BACK.

F. C. F., Mobile, Ala.—My horse got lame in the loin about four months ago while grading with a scraper. I have blistered him but he seems to have got little if any better. Is there anything that I can do for him?

ANS.—How do youknow the lameness is in the loin? Is there any tenderness along any part of the loin when pinched,or any difficulty in backing? Does there seem to be any pain or difficulty in arching the back to urinate? Can the animal turn quickly in a circle, one way as readily as the other? You should have given a careful description of all the symptoms, so that we may be sure your agnos s is correct. suspect you have not discovered the true seat of the sprain. If the sprain is of the loin, the horse should not be allowed to get down and up. Tie the head from above so that he cannot get his head within two feet of the floor. If weary, place a sling under him so that he can stand on his feet or rest in the sling at pleasure. Repeat the blister over the loins. Allow daily walking exercise only for three to six weeks.

AN AILING HEIFER.

D. W., Benton, La.—My two-year old heifer got quite poor last fall. She has been up and fed now for some time, and has improved somewhat, but she is still weak and stiff in her feet which are large and flat. Her appetite is good now. Her bowels were loose for a while and she passed some bloody mucous stuff; but her bowels are all right now. What ails her?

ANS.—Your history and symptons lead us to suspect that the poor condition of the heifer was due to neglect and want of suitable food rather than to any particular disease. One would not expect the heifer to thrive on ticks and acorns. If she continues to improve medicinal treatment will not be necessary. See that the heifer is well cared for. Feed generously, and make sure that the food and drinking water are both of good quality. If the hoofs are overgrown they should be trimmed. An occasional dressing of pine tar would favor a better growth of horn.

ABOUT CHURNS.

C. B., Chemung, N. Y.—Can better butter be made by churning in any of the new kinds of churns than by the old dash churn; or, in short, is there any better churn than the old dash churn?

ANS.—Yes. The fact that, almost without exception, the people who make the butter that brings the highest price, use the modern churns is a pretty good argument in their favor. We have found churning with the newer churns easier than with the old-time affair, and it is beyond all question that the newer churns will permit a far better observation of the cream during the churning. It is true that many good dairy folks still make excellent butter with the old dash churns. We can only say that we believe they would make still better butter with one of the newer churns. We hope to publish soon an article giving the chief points of superiority of the four distinct classes of churns—the agitator, the barrel, the box and the dash.

COTTON-SEED AND COTTON-SEED MEAL AS FEED.

S. A. L., Mooresville, N. C.—Which is the cheaper feed for milch cows—cotton seed at $11 per ton, or cotton-seed meal at $22? There will be plenty of wheat bran, corn-meal and shorts in either case.

ANS —Cotton seed contains about one half its weight of useless if not injurious substance. The husk is hard and indigestible unless it is ground fine and the lint attached to the seed is apt to form masses in the intestines which may cause serious trouble. The excess of oil in the whole seed is also an objection to its use. When well boiled, however, the whole seed has been used without any injurious results, but the labor of boiling is both costly and troublesome. Hence the meal freed from husk is the cheaper and better feed for cows. Wheat bran would be the best food to mix with the cotton-seed meal in the proportions which have been so often mentioned in this department.

PREPARING A FIELD FOR FALL SEEDING.

P. M. H.,New Paltz, N. Y.—I have a field which was sown with oats last year, but was not seeded. What grain crop can be most profitably grown on it with the view of seeding it or preparing it for seeding in the fall? It is high ground. The soil is loam with clayey subsoil, and is rather light. How much fertilizer should be applied and how?

ANS —To get the land into good condition for fall seeding, the best crop to raise next summer would be German millet sown broadca t, early in June, at the rate of one bushel to the acre so as to have it grow fine for hay. This can be cut early in September and then the land can be plowed, harrowed, seeded and rolled at once so as to get the advantage of the autumn rains: 500 pounds of good superphosphate per acre should be sown on and bushed in with the millet. Should the millet be fit to cut for hay earlier than September, so much the better.

RAISING POTATOES FROM SPROUTS.

E. H. L., Athens, Ga.—A late RURAL says the best way to obtain the largest yield of potatoes is to sprout the "seed" in a hot-bed and plant the sprouts out until the "seed" tuber is exhausted. Will the RURAL give full particulars?

ANS.—Cut the potato into single eyes with all the flesh to each possible. Plant each piece three inches deep in the hot-bed. As soon as the sprouts are two or three inches long cut them off just above the seed-piece and *plant* these cuttings. Some shade and sufficient water will be required. The seed-piece will continue to throw up shoots which may be treated the same as the first. When these shoots shall have become established, cuttings may be taken and rooted in the same way. This process of propagation may be continued even after the sets are planted out-of-doors up to about the last of May or June first.

BLOODY MILK.

A. C. F, Capac, Mich.—I have a heifer that gives bloody milk out of one teat at times. She is all right for three or four days and then she gets bad again; the last milk drawn from her bag is bloody. She is otherwise in good condition and well fed. What can be done for her?

ANS.—Drench the heifer with one pound of Epsom salts and one ounce of ginger dissolved in a quart of warm water. If this does not move the bowels in 24 hours, repeat the dose. Then give one table-spoonful of pulverized saltpeter night and morning in the feed. Bathe that quarter once daily with camphorated spirits. If you are feeding much grain it would be well to reduce the feed until the trouble is over. A thin bran mash or other sloppy food at least once daily would be excellent.

A FERTILIZER.

J. E. D., Little Cooley, Pa.—1. A phosphate is being sold here which has the following ingredients: 1,700 pounds of South Carolina rock; 200 pounds of potash; 100 pounds of ammonia. Is this a good fertilizer for common use? 2. Would the same amount of gypsum be as good as South Carolina rock?

ANS —1. The proportions of plant food are good enough. The South Carolina rock, unless dissolved in sulphuric acid, is insoluble. The ammonia may or may not be soluble. The potash may be sulphate or muriate. It is impossible to give any correct estimate of the value of the fertilizer. 2. No, the gypsum will furnish lime alone. The rock furnishes phosphoric acid.

GROUND AND UNGROUND GRAIN AS FEED.

L. H., Dansville, N. Y.—What is the difference in value betweeen whole grain and the same ground as feed for stock?

ANS.—This is a question of digestibility of the food. Generally in feeding whole grain one-half or more is wasted and ejected in the manure. If the grain is finely ground nearly the whole is digested, and less as the meal is coarser. As a rule for feeding cows, cattle and horses, when economy is an object, the grain should be ground as finely as possible and fed with cut hay, in sufficient quantity to insure mastication and proper salivation. The latter is very important as the salivary fluid is a digestive agent and prepares the food for the action of the gastric fluid.

RAWLE'S JANET AND STARK APPLES.

E. A. T., Croton, Ohio.—What is a description of Rawle's Janet and the Stark apple?

ANS.—Rawle's Janet originated in Virginia. It is quite large, oblate-conic; of a yellow color shaded and striped with red. The flesh is a yellowish-white, juicy tender, sub-acid. Its season is late winter. The tree is hardy, vigorous and productive. It thrives well in the Southwest. The Stark is a large, striped, coarse, sub-acid winter apple of fair quality. It is valued as a keeper. It originated in Ohio.

A COW BEST FOR THE BUTCHER.

J. D. B., Modus, Conn—What is the best feed for a heifer coming in in May? She will be two years old in April and is quite fat though she has been fed no grain this winter. I wanted to feed bran, but was advised not to do so as she was so fat.

ANS.—This heifer is not promising for a cow, as milk and a fattening proclivity do not go together. Evidently she is in no want of special feeding; an animal that will fatten on hay would get still fatter on bran.

Miscellaneous.

A. H. H., Brunswick, Me.—When should I trim apple trees?

ANS.—At once.

W. C. R., Bridgewater, Vt.—What is the inclosed bean?

ANS.—This is the old Dun-colored bean known to seedsmen for the past 75 years.

J. B. W., Charlton, Mass.—Where can I get Stachys tuberifera, and at what price?

ANS.—We find it in Thorburn's catalogue, page nine, at 10 cents per ounce (the roots) or one dollar per pound.

E. C., Berlin, Conn.—Where can I get Consular Reports 99 and 100.

ANS.—These books are published by the Department of State, Washington, D. C. They will be sent to any address.

F. O. C., Washington, Kan.—My 2,000 grape-vines as well as my raspberry vines are covered with tree cricket eggs; how can I get rid of them?

ANS.—Cut out the infested canes and burn them now.

J. T. E., Sharptown, Md.—Who are reliable commission men who sell fruit in New York and Philadelphia?

ANS.—S. H & E. H. Frost, 100 Park Place, E. & O. Ward, 279 Washington St., New York; Warren Harper, Bro. & Co., Philadelphia.

E. H, Utica, N. Y.—Where can I get the Cloud's Seedling, Parker Earle and Hilton strawberries?

ANS —Cloud's Seedling, from A. B. Coleman, Princeton, Ky.; Parker Earle, from T. V. Munson, Denison, Texas; Hilton, from W. W. Alley, Hilton, New Jersey.

W T. S, Greene Co., N. Y.—What are the earliest good potatoes?

ANS.—Nott's Victor is an early variety. Early Ohio should be tried; also White Early Ohio, (T. C. Davenport 124 Dock St., Philadelphia, Pa.) Crown Jewel is sold by Johnson & Stokes, Philadelphia, Pa.

H. S., Marlboro, Ohio.—1. How can I get most plants for next year's planting from a given number of blackberry plants purchased this year? 2. How many Ancient Briton blackberry plants must I purchase this year to have 200 next year?

ANS.—1. By root cuttings. 2. We should say about a dozen.

H G.,Hamburg,Conn.—Where can I get the Paragon chestnut, the Parker Earle strawberry, and the Crown Jewel potato? Is the last early and productive?

ANS.—The Paragon can be got from H. M. Engle & Son, Marietta, Pa.; the Parker Earle strawberry originated with T. V. Munson of Denison, Texas. We cannot speak positively as to the Crown Jewel. See second answer above.

L. M. W., Shelbyville, Ill.—1. Will seeds from the Wild Goose plum produce trees which will bear fruit of the same quality? 2.

What slope is most desirable for grapes, peaches and pears?

ANS.—1. Seedlings do often come quite true. But they cannot at all be depended on so to do. 2. A slope sufficient to insure thorough drainage—nothing more.

G. A. S., Hubbardston, Mich.—1. I have a Bartlett pear that sprouts from the roots six feet from the trunk; how can this be prevented? 2. Do pear trees need trimming the same as apple trees?

ANS.—The R. N.-Y. is of the opinion that the sprouting of the roots is due to one of two causes, viz: either the main stem (trunk) is injured in some way so as to molest the sap, or the soil is too poor. 2. Yes, essentially the same.

A. A. C., Christiana, Del.—I wish to effect an early and rapid growth of feed for cows, as I have not much pasturing; could millet or Hungarian be sown this early or are there other grasses that could be utilized more successfully? The ground is in elegant condition and I am very extravagant in the use of barn-yard dressing and fertilizers?

ANS.—Yes, it could, but millets require a deal of heat to make a good crop. We should choose oats or rye.

J. W. C., Halifax, Pa.—1. I have a number of young cherry trees that grew from the seed. Should I transplant and then graft them or graft first? 2. Would they be of any value for fruit if they were not grafted at the proper time?

ANS.—The R. N.-Y. would transplant first and the year after graft. 2. Probably not. The chance of obtaining a cherry superior to existing kinds from the seed is remote. Still all improvements must come in that way. Graft the cherry very early. It is time now.

N. R. T., (No address). I have been drawing out all winter the manure from nine cows and two horses on a piece of June-grass greensward that was plowed last November and which was intended for potatoes. Unless the manure is buried quite deep, it will, I fear, cause the potatoes to be scabby; is there a harrow that will bury it deep enough. Should I apply superphosphate in addition to the manure?

ANS.—We do not know of any harrow that would bury it. The Acme would come the nearest to it. We should use, in addition to the manure, a liberal quantity of high-grade potato fertilizer.

A. A. G., Janvier, N. J.—I have a quantity of plum and apple stocks to graft this spring and I wish to know how to manage the cions. 1. Would it be best to take them off now and bury them in the ground or leave them until grafting time on the trees? Our cellar is too warm for keeping them. 2. Can I move the stocks before grafting? I wish to graft the Wild Goose on the wild plum stock. 3. Is the Fay's Prolific currant all that George S. Josselyn claims for it?

ANS.—Yes; cut the cions when not frozen and bury them. 2. R. N.-Y. would graft them where they are. 3. Yes, it is as represented.

G. W. S., Parishville, N. Y.—1. What is the best grass to sow with Timothy and Alsike on low land where wild grass is inclined to run out Timothy in a few years? 2. How much of each should be sown per acre? 3. In planting the Rural Thoroughbred Flint corn for fodder, how far apart should the hills be, and how many kernels should there be in a hill?

ANS.—1. We know nothing better than Red-top. 2. Half a-bushel if sown alone of Timothy; two bushels of Red-top; eight pounds of Alsike. These may be moderated in quantity when sown together, as desired. 3. For fodder the hills should be about three by two feet. *One* plant to the hill will be enough.

"Truth-Seeker," Mount Pleasant, N. Y.—1. What is the quality of the Carlough apple? 2. How about the Delaware Red Winter apple? Some pronounce it identical with the Lawver. 3. In what does the Monroe Seedling differ from Sibley's Monroe County Prize or the White Seedling introduced by Sibley two years ago? 4. Is the Crandall currant in any way superior to the Missouri Black or Fragrant currant?

ANS.—We do not know. It is valued chiefly as being a long keeper. It is a sweet apple. 2. It is thought to be the Lawver. 3. We were supposing them to be the same. 4. The R. N.-Y. has ordered a plant and will report in due time. Meanwhile we must depend upon others' reports.

S. H., Overton, Md.—Will you please advise me what seed I should use for my lawn without buying the expensive mixtures advertised in catalogues, which are beyond my means. There is a fair stand of White clover on it now; will a vigorous harrowing be sufficient to catch the seed, followed by a heavy rolling? Ought I to work around my shade and nut-bearing trees, and will it benefit them to spade in stable manure at this time? Which is the more productive potato—Burbank or Beauty of Hebron?

ANS.—If you would have a fine lawn, the soil must be suitably prepared by plowing, manuring, harrowing and leveling. If the soil is moderately rich, you may, as you suggest, harrow it thoroughly and the seed will no doubt sprout after the surface is rolled. The costly lawn mixtures contain just two kinds of seeds which are of the first value, viz., Blue grass and Red-top. Either of these (or both) will give you as fine a lawn as the costliest "mixtures." Red-top will cover the soil as soon as Timothy. Blue grass is later in starting. 2. Burbank.

W. F. S., Taylor's, Md.—I am milking several good cows and although they are well fed and properly cared for, their flow of milk is unaccountably diminishing. Immediately after the milk has been brought to the house, it is put on the stove and brought to a "boil." Some of my neighbors say the decrease in the milk production is due to the heating, and that if this is continued, the flow will cease altogether. What does the RURAL say of the matter?

ANS.—How the heating of the milk can affect the flow of it from the cows is a rather mysterious problem. We cannot see any connection between the two. It can be the condition of the cows alone that can account for the failure of the milk and this may be due to several causes. The cows may not have the right kind of food; or they may not be properly milked. A bad milker may totally dry up a cow in a few weeks, and we suspect this may be the most probable cause, and some close investigation should be made into the case. If the feeding and the method of milking were described, there would be some ground to base an opinion upon the matter.

J. B. W., Charlton, Mass.—Last fall I went into the forest and raked off the top leaves and then scraped up the top of the ground filling a barrel with the stuff, and put it in my cellar. I also put in there some fine sand. This spring I shall go to the pasture where cattle are kept and gather some of their droppings, which have been out during the fall and winter and are, of course, somewhat soaked out. I want to mix those three kinds together and use the mixture in small boxes in which I intend to plant flower seeds to get early plants. I shall put the boxes in cold-frames under glass. How much of each kind should I use in mixing and would the same kind of mixture be good for pots for plants?

ANS.—The R. N.-Y. would not advise that the cow droppings be used. They will make the soil spongy, while their decomposition will be very slow. Only decomposed manures should be used for the purpose indicated. The forest soil is excellent. Ten parts of it to one part of sand would be about right. Rich soil from under fences or from the garden might well be added. This mixture would serve for pots as well.

W. J. H., Shelby, O.—How can I kill cutworms, wire-worms and red ants that are so troublesome to young growing corn? Is there any fertilizer or other substance that can be applied to keep them off?

What Others Say.

RESULTS OF EXPERIMENTS AT ROTHAMSTED (ENGLAND) ON THE GROWTH OF POTATOES FOR TWELVE YEARS IN SUCCESSION ON THE SAME LAND.

Dr. J. H. Gilbert, Dr. Lawes's associate, in a lecture before the Royal Agricultural College, speaks at considerable length upon the above subject. It is reported in the Agricultural Students' Gazette, a copy of which has been forwarded to us by Dr. Lawes.

His special object is to show the general requirements of the crop, both actually and as compared with other crops, and the actual and comparative characters and composition of the product obtained. He draws his illustrations mainly from the results of field experiments on the growth of the potato by different manures, for a number of years in succession on the same land, at Rothamsted, and from those of collateral investigations into the composition of the produce, made in the Rothamsted Laboratory.

The first table (we cannot present it) shows that, without manure, with common ammonium salts alone, and with nitrate of soda alone, the average produce of tubers was less over each succeeding period of four years. On the other hand, with the superphospates alone, with the mixed mineral manure alone, with the ammonium salts and mixed mineral manure together, and with the nitrate of soda and the mixed mineral manure together, there was more produce over the second four years than over the first; but there was a marked reduction over the third four years. It is evident, therefore, that the falling off over the second four years in the other cases was not to be accounted for by less favorable seasons only. The conclusion is rather that by the continuous growth of the crop without manure, or by nitrogenous manure alone, the available supplies of the necessary mineral constituents within the soil, became relatively deficient.

The average produce over twelve years without any manure, is not quite two tons per acre; and there was a considerable decline from period to period under this exhausting treatment. Nevertheless, this low yield without manure, for twelve years in succession on the same land, is about as much as the average produce under ordinary cultivation in the United States, and nearly two thirds as much as in some important European countries. By superphosphate of lime alone the produce is raised from an average of scarcely two, to nearly 3¾ tons; and by a mixed mineral manure, containing, besides superphospbate of lime, salts of potash, soda, and magnesia, to just over 3¾ tons, that is, to very little more than by the superphosphate alone. It is evident, therefore, that up to this amount of production, the character of the exhaustion induced by the growth of the crop on this land, which was, agriculturally speaking, in a somewhat exhausted condition, was much more that of available phosphoric acid than of potash, or the other bases. It is remarkable that there is much less increase of produce of potatoes by nitrogenous manures alone than by mineral manures alone.

Thus, by ammonium salts alone there is an average produce of scarcely two tons six cwts., or only about six cwts. more than without manure; and with nitrate of soda alone there is an average of only two tons 12½ cwts. per acre. The better result by nitrate of soda than by ammonium salts is doubtless due to the nitrogenous supply being more immediately available, and more rapidly distributed within the soil, and so inducing a more extended development of feeding root.

These negative results by the nitrogenous manures alone, confirm the conclusion that by the continuous growth of the crop on this land it was the available supply of mineral constituents within the root-range of the plants, more than that of nitrogen, that became deficient.

The last two lines of the table show, that with the mixed mineral manure and ammonium salts together, there was an average of about six tons 14½ cwts., and with the mixed mineral manure and the same amount of nitrogen as nitrate of soda, an average of six tons 13 cwts.; that is, nearly twice as much as with the mineral manure alone, and much more than twice as much as with the nitrogenous manure alone.

* * * The fact is, that it is only the comparatively small proportion of the nitrogen of farm-yard manure which is due to the liquid dejections of the animals, that is in a readily and rapidly available condition; whilst that due to more or less digested matter passing in the fœces, is more slowly available, and that in the litter remains a very long time inactive. Hence, the addition of nitrogen as nitrate of soda to the farm-yard manure had a very marked effect.

* * * The summary shows that the proportion of diseased tubers was the greater, the greater the amount of nitrogen supplied, the greater the luxuriance. * * *

Upon the whole, it is obvious that, in the case of this somewhat agriculturally exhausted arable land, mineral manures alone had more effect than nitrogenous manures alone; but that, mineral constituents being adequately supplied, the further addition of nitrogenous manures was essential to obtain anything like full crops. * * *

It is of interest to observe that the amount of disease was not enhanced by the continuous growth of the crop on the same land, as is frequently assumed to be the case. * * *

But little is definitely known of the special function of individual mineral constituents in vegetation. It is, however, pretty clearly established that the presence of potash is essential for the formation of the chief non-nitrogenous matters—starch and sugar. The published results of experiments at Rothamsted have shown that the proportion of potash in the ash of wheat was the greater, the better matured the grain—that is the larger proportion of starch it contained; and here in the potato we find a greatly increased amount of potash in the heaviest crops, that is to say, in those in which the largest amounts of starch have been formed.

The accumulation of phosphoric acid, on the other hand, is more directly connected with the assimilation of nitrogen, and the formation of the nitrogenous compound. * * *

It will be remembered that the quantity of farm yard manure annually applied per acre was estimated to contain about 200 pounds of nitrogen, besides a very large amount of mineral constituents. Yet, in no case was the increased yield of solid substance in the crop so great as was obtained by an artificial mixture of mineral and nitrogenous manure, supplying only 86 pounds of nitrogen, but in a more readily available condition. Nor was the increased assimilation of any one of the individual constituents, so great under the influence of the farm-yard manure, as when they were applied in the rapidly available condition, as in the artifical mixtures.

In the case of other crops it has been found that only a small portion of the nitrogen of farm-yard manure was taken up in the year of the application. But these results seem to indicate that the potato is able to avail itself of a less proportion of the nitrogen of the manure than any other farm crop. Yet, in ordinary practice, farm-yard manure is not only largely relied upon for potatoes, but is often applied in larger quantity for them than for any other crop. It is probable that, independently of its liberal supply of all necessary constituents, its beneficial effects are in a considerable degree due to its influence on the mechanical condition of the soil, rendering it more porous and easily permeable to the surface roots, upon the development of which the success of the crop so much depends. Then, again, something may be due to an increased temperature of the surface soil engendered by the decomposition of so large an amount of organic matter within it; whilst the carbonic acid evolved in the decomposition will, with the aid of moisture, serve to render the mineral resources of the soil more soluble.

In countries where the potato is largely grown for the manufacture of starch or potato spirit, the specific gravity serves as an important indication of quality. The higher the specific gravity, the greater, as a rule, is the proportion of dry matter, and the greater the proportion of starch. Indeed, tables are constructed for the calculations of the percentage of dry matter, and of starch, from the specific gravity of the tubers. * * *

The general conclusion to which these calculations as to the distribution of the various constituents of potato tubers leads is—that from 80 to 85 per cent., or even more, of the total nitrogen of the tubers may be in the juice, and that about the same proportion of the total mineral mattter also may be in the juice. Further, that about the same proportion—80 to 85 per cent.—of the total potash, and about two-thirds of the total phosphoric acid, are in the juice. And when it is borne in mind that two-thirds, or more, of the nitrogen existing as albuminoids, is in the juice, it is obvious that if the mode of cooking the potato is such as to exclude the constituents of the juice from the final food product, there is considerable waste of nutritive matter; and that, indeed, the proportion of albuminoid matter in the food is exceedingly small. When potatoes are used as a mere adjunct to an otherwise liberal diet, the general practice is to cut off the rind, and to put the peeled potatoes into cold water, by which a large proportion of the soluble albuminoid matters must be washed out, before the temperature of the water becomes sufficiently high to coagulate and fix them. A very large proportion of the potash must also be washed out under such circumstances. When, however, potatoes constitute an important item in the diet, as in the rural districts of Ireland, for example, it is usual to boil them in their skins—or, as is said, in their jackets. Under such circumstances, certainly a much larger proportion of the albuminoid matter will reach the stomachs of the consumers; and doubtless much more of the potash and phosphoric acid also. Still, it is obvious that a potato diet must be very deficient in the proportion of nutritive nitrogenous compounds.

* * * The produce of dry substance of tubers was, without manure, 1,353 pounds per acre; with purely mineral manure 2,384 pounds; and with the mixture of the mineral and nitrogenous manures ("complete") more than 4,000 pounds per acre.

Potatoes are reckoned to contain on an average more than 21 per cent. of starch.

The produce of starch per acre is 1,120 pounds without manure, and 1,988 or nearly 2,000 pounds with purely mineral manure—

that is without nitrogen. The amount with purely nitrogenous manure is not so great as that with purely mineral manure. But with both nitrogenous and mineral manure ("complete") the quantity of starch is raised to an average of about 3,400 pounds, or about 1½ ton per acre. * * *

As, then, the root-crops are essentially sugar yielding crops, so the potato is essentially a starch-yielding crop; and it is seen that, provided the mineral constituents are not deficient, the produce of both sugar and starch is greatly increased by the amount of nitrogen available to the plant within the soil, whether derived from previous accumulations, or from nitrogenous manuring. * * *

The United States, with nearly four times the area under the crop, but only about 1¼ time as much aggregate produce as Great Britain, yields an average of less than two tons per acre, or less than one-third as much as Great Britain.

Here, then, of 13 countries where the potato is largely grown, their aggregate area under the crop being about 21 million acres, and their aggregate produce about 61 million tons, there is not one that reaches the average produce, per acre, of Great Britain. Norway, Belgium, and Holland most nearly approach its yield, and it is of interest to observe that these, and Denmark, are the countries that most nearly approach the United Kingdom in yield per acre of wheat and barley also.

It is, then, only the countries of small total area, and of small area under the crop, that at all nearly equal England in yield per acre; and among them Belgium and Holland, the second and third on the entire list, more nearly approach it than any other, in *density of population*, and in *the amount of live stock kept per acre*, and consequently in the supply of *manure*. Both these countries, too, have good home markets, besides their exports of agricultural produce.

WESTERN FARM LOANS.—There appears to be a growing distrust of the safety of Western farm loans among conservative monied men and institutions in the East. While the savings banks of some of the New England States have lent a great amount of money on Western farm mortgages, the saving institutions in Massachusetts are not allowed to invest in such securities. The trust companies, however, have the privilege; but all except two of the large number have purposely refrained from exercising it. Bradstreet's says the president of one them before a committee of the legislature, said last week that "within five years there will be one of the biggest panics in the Western farm securities, that we have had for a long time." Meanwhile, however, private capital is going West on farm mortgage loans in increasing amounts, as the interest is much higher than Eastern rates. The Massachusetts savings bank commissioners hold that the trust companies as well as the banks should be forbidden to make such investments. A telegram to Bradstreet's from Kansas City announces that some investment loan companies are withdrawing from Kansas as the rate of legal interest has been reduced there, and the laws of the adjoining States are more satisfactory to them.

SUCCESS OF SORGHUM-SUGAR IN KANSAS.—The sorghum-sugar works at Fort Scott, Kansas, are said to have cleared $30,000 net profit in six weeks' work last year. The scale of operations at the concern's works at Fort Scott and Topeka are to be greatly enlarged, and three large new mills are to be constructed in the Southwestern part of the State—one at Meade Center, another at Arkalow, and the third at Liberal on the borders of No Man's Land. The surrounding country at each place is particularly well adapted for sorghum growing. A wet or dry season makes little or no difference on sorghum-sugar making. A number of U. S. Senators interested in the business are urging the retention of Ex-Secretary Colman by the new Department of Agriculture to take charge of the sorghum-sugar industry, for the advancement of which the last Congress appropriated $85,000. The National sorghum experiment station at Fort Scott was discontinued some time ago owing to the dispute between Professor Magnus Swenson, Chemist of Parkinson's sugar works, and the Government about the ownership of the patents taken out by Swenson for a method of making sugar which he discovered and patented while in the employment of the Department of Agriculture. It is claimed that his discoveries should be public property as they were made at public cost; but they are being used by the Parkinson sugar works for their own private profit. There are two National Sorghum Experiment Stations in Kansas, however, one at Conway Springs, and the other at Douglas, and it is proposed to start three more, and divide the entire appropriation of $85,000 among them.

FINALLY.

PROFESSOR GOFF tried the new tomato Ignotum of Prosessor Bailey. Some of the tomatoes were all that could be desired for quality, but others were too small to be of value. The variety is not yet well fixed.....

STACHYS TUBERIFERA, the new vegetable illustrated recently in these columns, bore tubers at the New York Experiment Station scarcely larger than acorns.....

A CHEMICAL dehorner for cattle is being widely advertised of late. We also notice the statement that "a single application of caustic potash will prevent the growth of the horn." Get a five-cent stick at the drug-store and keep it in a corked bottle so it will not "air-slake." On the arrival of a calf which you wish to be hornless, wrap a piece of paper around one end of the stick of caustic, and with it in one hand, take the calf between your knees, wet the hair over the "horn spots," rub the uncovered end of the caustic well on the spots, let the calf go, and according to the Maryland Farmer, it will grow up a polled Jersey, Holstein, or scrub.....

PLANT peas—the earliest kinds. Farmers as far north as Long Island were planting them two weeks ago.....

PLANT asparagus sets.....

TAKE cuttings of grape-vines and place them in the soil at an angle of 45 degrees, firming the soil about them.....

PREPARE for sweet corn—Let the harrowing be thorough. Spread your fertilizer before the last harrowing. Plant earliest, intermediate and late varieties at the same time. Reserve the intermediate kinds for later planting.....

THE open season has given us muddy roads during a greater part of the past winter. The paths and carriage-way of the Rural Grounds have been a puddle of mud so nearly impassable that the grass margins have been selected for passage to and fro, much to their injury. We are now macadamizing a portion of the road and paths as an experiment. They are dug out a foot deep; earth is then spread over the stones an inch or so deep and over this two inches of the macadam finish the job. The macadam consisting of a yellowish stone in part broken into small bits and in part almost a dust, is brought three miles by rail and one by hauling. The cost per 100 feet (10 feet wide) of the entire work is found to be $40 .....

EVIDENCE accumulates that the new Erie is the old Lawton blackberry—a fact, if it be a fact, that the R. N.-Y. could not have discovered, because it had never cultivated the Lawton until it tried the Erie.....

SAMUEL MILLER says, in Popular Gardening, that the pecan does not succeed on the hickory.....

MR T. GREINER says, in Popular Gardening, that the Ironclad is a wonderful grape. At its home in South Jersey it ripens about the last week of September, but colors early like Ives. One tea-spoonful of its juice in a tumbler of clear water colors it a deep purplish pink, two tea-spoonfuls give it a most beautiful royal purple. The vine seems to be disease-proof, as there is no identified case of the Ironclad being affected by rot. The R. N.-Y. would be glad to secure a vine of the Ironclad.....

THE good Mr. P. Barry shows his interest in the Western New York Horticultural Society in a valid way. He presents it with $2,000...

THE Sibley squash is praised on all hands..

THE R. N.-Y. deprecates the necessity of spraying apple trees with liquid poisons. Will the apples thus raised pay for the probable destruction of the birds?.....

THE Green Mountain is mentioned as the best early white grape..... .....

THE R. N.-Y. ventures to predict a very dry season—for the East at least ... .

WORD FOR WORD.

——N. Y. HERALD: "THE SHAD IN SEASON.—The fish was delicious, and the two epicures relished it to the fullest extent, but he of the pessimistic turn remarked:—

'Shad always suggests to me the idea that nature was in a hurry when she got to that part of her work, took a lot of excellent material and just pinned it together.'

'Ah!' said the optimist, 'you can't have seen the poetical version of the matter.' Then he recited:

'When the angels made shad
The devil was mad,
For it seemed such a feast of delight;
So, to ruin the scheme,
He jumped into the stream
And stuck in the bones out of spite.
When the strawberry red
First illumined its bed
The angels looked down, and were glad,
But the devil, 'tis said,
Fairly pounded his head,
For he'd used all his bones on the shad.'"

——CORRESPONDENT IN POPULAR GARDENING: "The common water lilies may be grown in any door-yard to perfection. I have a neighbor, a lady of great taste, Mrs. Owen Root, who has them in profusion. You must first secure a few tubs that will not leak, and will hold half a barrel, plant them in the ground nearly or quite to the top. Place in each tub six inches of soil or any good garden sod, plant in this a large piece of lily root, then fill up with water. Keep the tub full as it evaporates, and you have nothing more to do. In the fall lift the tubs and store in a cellar where they will not freeze. You can pour off the water and leave the roots nearly dry all winter; when a tub is crowded with roots divide, but they blossom best with the tubs well filled."

——LIFE: "'I'm afraid you are going to be bad' as the old hen remarked to the egg that would not hatch."

——N. Y. TRIBUNE: "Intermittent bad temper is an expensive as well as a waspish thing to carry about one's person; but, says 'The Western Rural,' the farmer who is 'chronically mad just throws away money.' His hired help do less work; cows are afraid to give the most milk; horses jump when they hear him coming, and for every jump he must feed more oats."

——PHILADELPHIA PRESS: "I can corroborate Friend Massey's statement that peas will bear a hard frost without injury. I always plant just as soon as the land can be worked, and almost every spring the ground freezes hard after they are up. I have known the mercury go to eight degrees when peas were showing in the row. Only once in 25 years have my peas been damaged by a freeze, and that was in April, 1882. The first week in that month the mercury reached 80 degrees on three successive days and on the 8th it was at 20. Peas were just blooming, and so tender on account of the unseasonably warm weather, that they were badly damaged, but not ruined."

——NATIONAL STOCKMAN: ALSIKE CLOVER.—"It has proven the most hardy of all the clovers. On rich, low, moist soils it yields an enormous quantity of hay or pasture, and may be cut twice each season. It forms a thick bottom, and when sown with oats in the spring very seldom fails to take firm hold. Almost all farmers keep a few stands of bees, and such will find the Alsike to be of very great value. Alsike clover is also of very great value to brood sows. In ordering seed be sure to ask for 'extra cleaned.' Sow at the rate of eight pounds to the acre. As hay for winter all classes of stock are fond of it, and as a green food for silos none that I know of can surpass it."

For Dyspepsia

Use Horsford's Acid Phosphate.

DR. J. J. MCWILLIAMS, Denison, Ia., says: "I have used it largely in nervousness and dyspepsia, and I consider that it stands unrivalled as a remedy in cases of this kind. I have also used it in cases of sleeplessness, with very gratifying results."—*Adv.*

Miscellaneous Advertising.

Dyspepsia

Does not get well of itself; it requires careful, persistent attention and a remedy that will assist nature to throw off the causes and tone up the digestive organs till they perform their duties willingly. Among the agonies experienced by the dyspeptic, are distress before or after eating, loss of appetite, irregularities of the bowels, wind or gas and pain in the stomach, heart-burn, sour stomach, etc., causing mental depression, nervous irritability and sleeplessness. If you are discouraged be of good cheer and try Hood's Sarsaparilla. It has cured hundreds, it will cure you.

Hood's Sarsaparilla

Sold by all druggists. $1; six for $5. Made only by C. I. HOOD & CO., Lowell, Mass.

100 Doses One Dollar

MAKE HENS LAY

SHERIDAN'S CONDITION POWDER is absolutely pure and highly concentrated. It is strictly a medicine to be given with food. Nothing on earth will make hens lay like it. It cures chicken cholera and all diseases of hens. Illustrated book by mail free. Sold everywhere, or sent by mail for 25 cts. in stamps. 2½-lb. tin cans, $1; by mail, $1.20. Six cans by express, prepaid, for $5. I. S. Johnson & Co., P. O. Box 2118, Boston, Mass.

$20 FENCE MACHINE FOR $10

Freight paid. *Guaranteed.* Hundreds in use. Circulars free. S. H. Garrett, Mansfield, O.

THE CAUSES OF DEATH.

OUR readers are doubtless all familiar with the Robinson poisoning cases, which have recently come to light in Somerville, Mass., a suburb of Boston.

It seems that eight deaths have occurred from arsenical poisoning, seven in one family, and within five years. It is doubtful if the murderers would have been brought to justice had not an organization in which the victims were insured began an investigation as to why so many persons had suddenly died in one family.

But the sensation from a medical point of view connected with the case, took place in Boston at a recent meeting of the Massachusetts Medico-Legal Society, when it was stated by Dr. Holt that there was general ignorance of the sypmtoms of arsenical poisoning and because of such ignorance the Robinson poisoning cases had gone on without arousing the suspicion of medical men. The Robinson cases were all treated by regular phsicians, with correct diplomas, men supposed to know what they were doctoring for, and to know the effect of drugs on certain diseases. Yet in the five deaths from arsenical poisoning of which we speak, certificates of death were given for pneumonia, typhoid fever, meningitis, bowel disease, and Bright's Disease.

Such a commentary on the general ignorance of the medical profession, made by one of its own number, we believe to be without a parallel.

Is it any wonder that patients are losing faith in their doctors? Here were five able-bodied people slowly poisoned with arsenic before their very eyes, and yet these very wise medical men were doctoring them for pneumonia, typhoid fever, meningitis, bowel disease, and Bright's disease.

In the very same manner thousands of patients are being treated this day for pneumonia, heart trouble, dropsy, incipient consumption, etc., when these are but symptoms of advanced kidney disease, which is but another name for Bright's disease. The doctors do not strike at the seat of the disease—the kidneys, and if they did nine times out of ten they would fail—as they are on record as saying they can not cure Bright's disease of the kidneys. Rather than use Warner's Safe Cure, a well-known specific for this and all other forms of kidney disease they would let their patients die, and then give a death certificate that death was caused by pericarditis, apoplexy, phthisis or cardiac affection.

Is this not the honest truth? Do you not know in your own personal history very many instances where physicians doctored the wrong disease, and caused untold suffering, and many times death? Which leads us to remark that very much can be learned by one's-self by careful observation, and that the doctors are very far from having a monopoly of the knowledge of medicine or disease.

SILO AND SILAGE.

This little book describes what is surely going to revolutionize farm methods Its every statement has been proved by the author on his own farm. "It is a missionary for good and ought to be in the hands of every farmer," R. G. Buell. "It is capital, like an egg, full of meat," Col. F. D. Curtis. Mailed for twenty-five cents.

A. J. COOK, Agricultural College, Mich.

IVES' THOROUGHBRED BRAHMAS.

Having bred Light Brahmas for the past 40 years I pride myself in having as pure and fine stock as any in this country. Also White and Brown Leghorns—"Superior Stock." Eggs $2 per doz., or three doz., $5.

JOHN S. IVES, Salem, Mass.

Poultry Supplies.

Such as **Ground Beef Scrap, Granulated Bone, O. Shell, Bone Meal, Animal Meal,** etc. For prices and particulars send for my Circular. Rendering Works and Mills, Worcester, Mass.

C. A. BARTLETT.

$1 PER SETTING, from Pure FELCH Eggs—Light Brahmas. Box 106. C. J. SPALDING, Greenville, Conn.

Lifts 20 to 50 Tons. Worked by 2 men. 5 sizes. Price, $35 to $70. Circulars Free. Three Days Trial. H. L. Bennett, Westerville, O.

IMPROVED EXCELSIOR INCUBATOR

Simple, Perfect and Self-Regulating. Hundreds in successful operation. Guaranteed to hatch larger percentage of fertile eggs at less cost than any other hatcher. Send 6c for illus Cata. GEO. H. STAHL, Quincy, Ill.

DON'T BUY YOUR SMALL FRUIT PLANTS, TREES or seeds until you get our Catalogue. It will interest you. Send for one Free.

COE & CONVERSE, Fort Atkinson, Wis.

PEERLESS DYES Are the BEST. SOLD BY DRUGGISTS.

THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, APRIL 6, 1889.

MR. T. C. DAVENPORT, of Philadelphia, Pa., writes us that the State of Maine is the best late potato he knows of.

"*What informed farmer will continue to let 360 pounds of water fall on each square foot of the barn-yard when it usually contains three to five times as many tons as his hay mow, each ton of which, if it is properly made manure, is worth $3.00?*"—PROF. I. P. ROBERTS, page 232.

MR. ALEXANDER says that the Early White Ohio (not the Early Ohio), is beyond doubt the finest table potato he ever tasted. We have heard the same from others.

"*So terrible is this evil, when it comes, that I think, if necessary, it would be wise and very desirable to legislate against the importation of such ponies early in the season. I think our winters are too severe for the ticks.*"—PROF. A. J. COOK, page 229.

ARMSTRONG wheat (Landreth) is not very popular on Long Island. One farmer, after having raised it three years, goes back to Clawson, though he prefers the Armstrong for its superior quality.

"*Remember that appearance, quality and uniform size are all important passports to profit, and that in this business "honesty is the best policy."*—E. WILLIAMS, page 230.

AS OUR readers well know the R. N.-Y. has from time to time urged the directors of our experiment stations to take up poultry in connection with other live stock. Such a course would do more to gain the interest and attention of the farming public than anything else ever can do. We are very glad to see that the Canadian experiment station managers realize the great importance of poultry experiments. In the last report issued by Prof. Saunders, we find a very interesting account of the poultry department. It appears that a practical poultry breeder is employed at the station to develop crosses between the different breeds, and to establish facts regarding the most profitable breeds for egg production and for table use. We are pleased to see that the R. N.-Y.'s suggestion has led to something definite, though it is a trifle humiliating to think that our own stations cannot start in the matter.

"*It is only the countries of small total area, and of small area under potatoes that at all nearly equal England in yield per acre; and among them Belgium and Holland, the second and third on the entire list, more nearly approach it than any other, in density of population, and in the amount of live stock kept per acre, and consequently in the supply of manure.*"—DR. GILBERT, page 235.

SOME of our wise Yankees find much to amuse them in the disputes English farmers and butchers are having regarding the wisdom of weighing cattle rather than guessing at their weight. It is hard for some of us to understand why English farmers of good standing should still insist that the scales are not necessary in the cattle business. Yet, are all our own houses such that it is safe enough for us to throw stones? How about some of the systems employed in determining the value of the milk sent to butter factories? It is one of the most absurd notions of trade to assume that there should be any uniform price for milk. There is hardly any salable product that shows a wider range of value than milk. Take two samples of milk sent to a creamery. One may be worth, for butter, 50 per cent. more than the other, and this superior value should be recognized and paid for. Are the methods for determining these values fair and just? The RURAL proposes to investigate these methods and to present one which promises to prove exact, easily understood and fair,

A STEAMSHIP recently arrived in this port with 700 tons of bones which were collected on the desert of Sahara. The misfortunes of man and beast on the great desert of North Africa have frequently been recited in song and story. They are now being turned to commercial account. For years these bones have been accumulating in the desert. Caravan after caravan has succumbed to the terrible wind storms. The bones of men and beasts are found all along the desert tracks. These bones are easily collected, for as one wind covers them, another blows away their sandy shroud. Some years ago a German trader in Alexandria conceived the idea of collecting these bones for manufacturing and fertilizing purposes. The trade has increased to immense proportions, and the bones are now being sent to a dozen countries. Many are sold to the sugar refiners, but the greater proportion are made into fertilizers. Urgent indeed are the needs of agriculture in some localities when men will find it profitable to brave the dangers of the great desert in their search for phosphoric acid!

"*It is my firm belief that through intelligent and continued crossing and hybridizing we must look for the most rapid, successful and important improvements in the character and value of our American grapes.*"—GEO. W. CAMPBELL, page 230.

THE New York legislature of 1888 enacted a law, entitled "An Act to Encourage Arboriculture." This provides that the Friday following the first day of May, shall be known hereafter as Arbor Day in this State. The act further states:

"It shall be the duty of the authorities of every public school in this State, to assemble the scholars in their charge on that day in the school building, or elsewhere, as they may deem proper, and to provide for and conduct, under the general supervision of the city superintendent or the school commissioner, or other chief officers having the general oversight of the public schools in each city or district, such exercises as shall tend to encourage the planting, protection and preservation of trees and shrubs, and an acquaintance with the best methods to be adopted to accomplish such results.

"The State Superintendent of Public Instruction shall have power to prescribe from time to time, in writing, a course of exercises and instruction in the subjects hereinbefore mentioned, which shall be adopted and observed by the public school authorities on Arbor Day, and upon receipt of copies of such course, sufficient in number to supply all the schools under their supervision, the school commissioner or city superintendent aforesaid shall promptly provide each of the schools under his or their charge with a copy, and cause it to be adopted and observed."

State Superintendent Draper has issued a circular which explains the law and outlines a partial programme. We hope that all school officials will secure a copy and act upon the suggestions contained in it. New York is slow at starting in this matter, but we hope for good results now that the start has been made.

The publication of a story entitled "Our First Farmers' Institute." will soon begin. We know our friends will like it. It is sharp, bright and suggestive, and, we judge, true in all things.

JAPAN CHESTNUTS.

TWENTY chestnuts of the Japan variety known as Paragon, were sent to us by H. M. Engle, of Pennsylvania, last fall. They were placed in a box of sand moderately moist and the box was kept in the cellar. The nuts, which were found to be perfectly preserved, were planted last week. These nuts, so preserved, sprout very readily and make a growth of about 18 inches the first season. The R. N.-Y. for several years past has advised those of its readers who can afford to experiment to raise Japan chestnut seedlings, and that is still our advice. Possibly the Paragon is an outcome of that advice. We have in this a nut nearly as good as the American chestnuts, and twice as large as the largest of them, while the beautiful trees bear even in the nursery rows. Some of our esteemed contemporaries have discovered that the Japan chestnut is of vile quality, and are, hence, advising their readers not to plant the trees. But the R. N.-Y. begs to offer the opinion that those who, acting upon its advice, shall be able to offer Paragon nuts, or other seedling Japans as good for sale, will find a ready and remunerative market for them. We do not know Mr. Engle and our praise of this variety, as has been our condemnation or praise of all other fruits or plants sent to the Rural Grounds for trial, has been given regardless of the interests of those who have sent them.

HOW IS IT?

TEN years ago, the R. N.-Y. announced, as the result of its own trials, that weevil-eaten peas were essentially worthless for seed. Seedsmen, the best of them; entomologists, the best of them, denied it. The contest was hot. To-day reputable seedsmen will not sell weevil-eaten seeds. How much was this bit of information worth to the country? How much has it been worth since? The RURAL's discovery has never, that the writer can recall, been recognized by the agricultural press. If an experiment station had discovered it, the press would have heralded it far and near—from Dan to Beersheba. We are not carping at this. It is mentioned as an instance of the narrow-minded, mercenary spirit displayed by the farm press in matters which it is their *duty* to make public regardless of their pecuniary interest for the time being. It is on a par with the fact that such farm journals as the American Cultivator, New England Farmer, Massachusetts Ploughman, Country Gentleman, etc., refuse the yearly advertisement of the RURAL NEW-YORKER, setting forth, in conservative terms, its claims to the support of American farmers. It's on a par with their non-recognition of the R. N.-Y. as essentially the first agricultural experiment station in America, and of the effective contributions it has made, as such, towards the advancement of agricultural interests.

The R. N.-Y. has meanwhile been glad enough to record every valuable original investigation made by other journals and sorry enough that they have been infinitesimally few; while it has in no instance refused the advertisement of a contemporary. The R. N.-Y. has never in a single instance, known to it, copied or rewritten an article original with another journal, without giving full credit. In hundreds, if not thousands of instances, we have seen the articles, or parts of them, the methods, the results of investigations made by the R. N.-Y., at no little cost of time and labor, printed in other farm papers without a whisper of credit. It is a short-sighted, selfish policy, brother Editors, and, though it may save you a penny to-day it will lose you two pennies to morrow. As a sort of incidental proof of this, it may be said that, though few if any of the farm papers can justly claim an increase in circulation this year over last, the R. N.-Y.'s circulation is to-day larger than it was in either 1887 or 1888—and this has occurred, too, notwithstanding the fact that we have advertised comparatively little (as compared with previous years) in other journals, with a view to increasing its circulation. It has likewise occurred notwithstanding the fact that its price for single yearly subscriptions is the same to-day as it was 10 years ago, while scores of our contemporaries have reduced their price all the way from two dollars to a single dollar, while fifty and even twenty-five cent monthlies are thicker than new-fledged agricultural professors.

A GIGANTIC SALT TRUST.

SOME time ago a great salt Trust was formed in England which, at the outset, disclaimed any idea of putting up prices. Its professed object was to put down the cost of production by the introduction of better methods and appliances and a more economical management, the chief point in which was to be the dismissal of a large number of employes who would be rendered superfluous on the concentration of many small salt making concerns in a single large one. The business prospered amazingly for the stock-holders from the first. Expenses were greatly cut down by throwing hundreds of clerks, superintendents and workmen out of employment. Then, still further to increase the profits it was found really necessary to decrease production and increase prices. The public grumbled, but what could the public do about it?

Having lowered the cost of salt as far as practicable and raised the price of the article as far as at present tolerable in England, the Trust wished to avail itself of the greatly reduced rates of transportation it could command to the vast market afforded by our population of sixty millions. The import duty on salt, however, is 12 cents per 100 pounds in packages and eight cents per 100 pounds in bulk, or an average of about 70 per cent. on the cost of salt produced in this country. Indeed of late years, salt has been made for as little as 12 cents per 100 pounds in Michigan, and, of course, with cheaper labor, the cost of production is still lower across the water. If therefore, the English Trust could induce American producers to put up the price of the salt to the extent of the duty, importations of English salt would be enormously increased, while the American salt-makers would be amply compensated for the smaller amount of the product sold by the much greater price they obtained for it. Moreover, to gain their object the transatlantic capitalists were willing to invest large sums in forming an American salt Trust which should monopolize the business on this side of the water as the English Trust has of late been doing on the other. For some weeks negotiations for the accomplishment of this end have been in progress, and now it is broadly intimated that they have been successfully completed, so that soon a vast salt-producing Trust is pretty certain to take its place alongside of other unscrupulous monopolies of the same oppressive stripe on the already heavily loaded back of the American citizen. This will enable English capitalists to limit production and raise prices in this country, thus throwing hundreds of our people out of employment, while availing themselves of the greater profits to be reaped from the "pauper labor of Europe."

Of course, some of the American salt men deny that the Trust is an English enterprise, and some even allege that there is no Trust, while others try to disguise it as a rather benevolent undertaking. Farmers will be greater sufferers than any other class from the operations of such a monopoly, for they have to use salt not only for their own consumption, like the rest of the community, but also for pickling meat and making butter for sale, as well as feeding stock and even stimulating or protecting their crops. Even strong protectionists intimate that such an attempt to defeat the tariff by combinations of producers who are benefited by it, should be defeated without compromise or mercy. They say that the people have not upheld the principles of protection for the purpose of giving great fortunes to a few favored individuals at the expense of the rest of the community. What do YOU say?

"*Test every cow faithfully; study her as an individual; try if some special modification of feed, or feeding, may not develop merit in her; 'give her a fair show,' and then if there be no good found in her, let her go.*"—BUCEPHALUS BROWN, page 237.

BREVITIES.

AGAIN, Domestic Economy has the floor.

MUSHROOMS retail at 90 cents per pound.

THE Belgian breed is the latest canditate for draft horse honors at the West.

THE markets are flooded with onions. There never was such a supply before.

EGGS are very cheap as compared with last year. A year ago, however, the blizzard had upset all the plans of the hens

BE kind enough to remind your road-master of the fact that wild cherry trees form a breeding place for the tent caterpillar.

THE markets are full of turnips just now. There is but little demand for this vegetable. Boarding-houses and cheap restaurants provide the market for most of those that are sold.

THIS is from a Michigan subscriber:—"I do not like the way you handle the woman question. You make the ladies hard to catch and of no use when caught by training them to be independent of the men."

THE member of the R. N.-Y. family that shows the most appreciative taste for milk is a little Canadian mare. By the way, is there any breed of horses that can perform more work per pound of live weight than these tough little animals?

MARKET-men are fond of saying that there is no fruit or vegetable that cannot be found any day in the year at the New York markets. The desired article can be found if the purchaser has a purse long enough to stand the price. It is generally agreed that of all fruits the pear is the hardest to obtain out of season.

QUITE a business in turkey feathers is done in this city. They are in good demand in the manufacture of feather dusters of which immense numbers are sold each year. There is also quite a trade yet in the old-fashioned quill pen. White feathers are worth considerably more than colored, and breeders of white fowls frequently use this argument in speaking of their favorites.

Rural Topics.

BUCEPHALUS BROWN'S NOTIONS AND IDEAS.

POTATO TOPS.—Generally, in digging potatoes, the "vines" are thrown together in heaps or left scattered over the ground, where they are in the way of cultivation. When potatoes are ripe, the dry tops seem to be a small item, but they contain a full half of the fertilizing salts extracted from the soil. My practice for years has been to bury them in digging. If the digging is not done by hand, then I would have them left on the ground, (not in piles) and work them at once into the soil with a Disk or Cutaway harrow. I suspect that this method of mine, which I have followed for many years, is the reason why I have not been able to see that potatoes are a particularly exhaustive crop. Other crops following them have not indicated any such fact.

"WEARING OUT" SEED.—At a recent farmers' meeting, a prominent agricultural writer is reported as saying that a certain county has "worn out the Hebron," and adds: "We know it to be a fact, but are unable to tell why." Now it seems very strange that a whole county, of 800 square miles, should "wear out" a potato which is as good as ever elsewhere. Do all the farmers in that county pursue a single method of culture, and that one so very injurious? It is utter nonsense to talk about "wearing out" a variety of any cultivated crop—that is, if it is said with the idea that the fault is in the variety. Intelligent and careful cultivation, and the proper selection of seed, will keep up and even improve any variety, except in peculiar locations unsuited to its growth.

IMPROVEMENT BY SELECTION.—A good many farmers claim to have tried the plan advised by some experiment stations, of selecting seed potatoes from the most prolific hills, and have reported "no good." This is just what I expected to hear. The advice was too unqualified; and even with qualification, it is only true under limitation. Bucephalus has bent his back, digging "taters," lo! these many years; and he can indorse the professional statement that some hills, and some individual plants, will turn out handsomer potatoes, and many more of them, than others. What makes them do it? Sometimes it is a mysterious modification in the plant itself. If this be the case, seed selected from that plant may be more productive,—and it may not,—for few things are less certain than that the peculiarities of "sports" will be perpetuated in their posterity. But in most cases these fine productive plants are so just and only because "their lines have fallen to them in pleasant places," that is, in rich spots. When this is so, seed from them is no better than from another hill, in poorer ground, that is not half so productive.

MIND THE CONDITIONS.—Experimenting professors at the stations, where everything is supposed to be done well and systematically, will often get results that will not be justified in the experience of common farmers, because the conditions are in nowise the same. For every crop at the station the land will be thoroughly prepared and suitably fertilized, according to the teachings of enlightened experience. Upon how many farms will the like conditions be met with? And if they are not found there, how shall the results agree?

KILLING OFF THE POOR COWS.—Some of our cautious cultivators, (you see I am falling into alliteration, due probably to the example of the RURAL'S head-line editor,) are wanting to know what they shall do with their feed, if they send all their unyielding cows to the slaughter. "Give it to those you have left," is the only reply I have seen made, and it is a pretty good one. But it cannot be applicable to all herds. I know some farmers that are feeding all they ought to their cows, yet who might weed their herds considerably with profit. I should say to such, that they make no hasty or wholesale slaughter. Test every cow faithfully; study her as an individual; try if some special modification of feed, or feeding, may not develop merit in her; "give her a fair show," and then, if there be no good found in her, let her go. If this plan is followed there will be no sudden, wholesale reductions of the herd; and time will be allowed to replace the rejected ones by others that are known to be better. This is what the most of our improving dairymen are doing. There is not going to be any wholesale slaughter, or any indisposable surplus of feed.

SOLUBLE PHOSPHATES.—According to Sir J. B. Lawes, while it seems evident, at least on his heavy soil, that turnips must have their phosphoric acid served to them in its most soluble form, it is also apparent that this is not true of other crops. Sir John recognizes a difference, too, among that class of phosphates so deceivingly classed by chemists as "insoluble," and expresses the belief that the phosphoric acid in basic slag, although not soluble in water, is not only available for grain and grass crops, but is also available for roots. He adds that, while turnips do not seem capable of extracting the slowly soluble phosphates from the soil, the mangels find no difficulty whatever in doing so. Making the phosphates "soluble" doubles their cost; and it is high time that our instructors, the agricultural press, should take hold of this subject in earnest and discuss it exhaustively until its readers are taught all the facts about it.

A QUACK IDEA.—Under this heading may be justly placed the proposition to regard the soil as practically inert, and unable to supply any nutriment to crops. This is disguised under the plausible formula, "feed the crop, and not the soil," the practical outcome of which must be that the whole demand of all crops for soil nutriment should be supplied to them in manures and fertilizers. This is utterly preposterous. There is plant food enough in every available soil to nourish vegetation indefinitely. It is only when we want to push the soil to produce extra crops that any artificial feeding of the plant is required. The major part of the food of all plant growths must be supplied by the soil. It always has been and it is safe to say it always will be.

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

Starching, Ironing, Etc.

HOW BEST TO DO IT.

ELBOW GREASE, CLEANLINESS, DEFTNESS, DIFFERENT KINDS OF STARCH, SUBSTITUTES, CONCOMITANTS.

Boiled, Celluloid, Elastic, Electric, Satin Gloss, Silver Gloss and Water Starches. Borax, Butter, Gum-arabic, Kerosene, Lard, Milk, Red Cedar, Salt, Spermaceti, Sugar, Tallow, Turpentine and Wax Prevent Stickiness.

FROM MAY MAPLE.

Ironing day is often the greatest dread of the whole week's work, on account of the "starched clothes," and many a young housekeeper spends the day in tears while she stands at the ironing-table trying so hard to make those shirt-bosoms look as they used to when "his mother" had charge of his clothes; for, in spite of all her efforts, there will be a blister here, an ugly wrinkle there, a streak of smut from the flat-iron or, mayhap, a scorch, and in despair she tosses the detestable article to one side, only to return to it with renewed vigor after ironing some other article requiring less patience and care; but the once fastidious John is obliged to wear a very sorry specimen of laundry work. To the experienced hand there is no work about the house that is made more proudly prominent than the ironed finery of the family, as it is hung upon the clothes-horse in immaculate purity, and most conspicuous of all are the fine shirts with bosoms, cuffs and collars as white as freshly-fallen snow, as smooth as French china, and as stiff as a board.

Of course, there is a right way and a wrong way to do laundry work as well as any other, as Leona found to her sorrow, and also to her joy. When she went out from the farm to service in town, her mistress told her she could put the shirts with the soiled clothes after she had spent nearly the whole of a hot July afternoon in "doing up" three fine shirts.

The next week, when she was doing the washing, the mistress came to the kitchen and made the starch. Putting a good spoonful into a bright tin basin, she moistened it with cold water, and then poured about a quart of boiling water upon it, and then put it on the stove to boil for five minutes, stirring it frequently. It was then taken off to cool, and was then ready for use, and was what is usually called thin starch.

"Now, Leona," said Mrs. H., "after you have rinsed the clothes, dip the fine pieces in this starch, taking collars and cuffs, shirt-bosoms and bands first, and when they are dry, make some fresh starch like this and dip the last mentioned articles into it; wring and hang up to dry, and then dip, and wring out of this last starch again and dry; that is, three dips in the thin boiled starch, drying after each dip. When you are sprinkling the clothes in the morning, make a little thin cold starch and dip the shirt-fronts, neck-bands, collars and cuffs in it, wring and shake out, then fold and roll tight and let them be for two or three hours, then iron with a moderately hot flat, and I think you and I will both be better satisfied with the laundry work."

"My next ironing day was one of the happiest of happy days," said Leona, in relating her experience, "for my fine clothes looked just beautiful, and the work was so easily and quickly done. That starching lesson will last me all my life, but, oh! how I cried over that first day's work. I shall never forget how my feet ached and how every nerve throbbed with impatience and disgust at housework, and fine ironing in particular."

I like to do the starching immediately after rinsing. I make a thick boiled starch, adding a tea spoonful of white sugar and a tablespoonful of kerosene oil. Rub the starch into the fabric thoroughly, and hang up to dry with the washing. Starch again in cold starch, roll up tightly and leave the clothes well packed for two or three hours. In ironing, the sleeves are straightened out and ironed, then the wrist-bands are smoothed out on the wrong side till about half dry, and then turned to the right side for the finishing strokes. Then the body of the shirt is ironed, and next the yoke and band, which received their full share of starch—for a well-starched band adds much to the fit of the collar. The bosom board—which, by the way, is only a piece sawed from an eight-inch pine board and wrapped about with a piece of an old pillow slip—is a great convenience though inexpensive, and next comes into use. The ends of the neck-band are buttoned together, the board is slipped under the bosom, which is straightened out from top to bottom, a clean white cloth is wrung out of clean water, and spread over the bosom and ironed with a hot flat. While the cloth is yet steaming, take it off, and with a clean iron work up and down on the fabric as much as possible, remove all specks with a damp cloth, and iron again till a delicate gloss appears. Collars and cuffs are usually smoothed out on the wrong side first, and then ironed on the right side, but never reversed, for to do so takes off the gloss. In this way a fine shirt is no more to be dreaded than a pillow sham or white apron.

FROM EMMA D. W.

I find it rather difficult to put into words my way of doing up linen. Experience has so much to do with it, to get the starch just right, and to know when an iron is at the heat which will do the best work. I use about one table-spoonful of lump starch, and a tea-spoonful of kerosene for each pint of starch needed. Dissolve the starch in cold water, add the kerosene, then slowly stir in boiling (be sure it is boiling) water till it is a clear, rather thin jelly—it is now ready to use. Use it as hot as you can. Dip the shirt bosom in wrong side out, squeeze out, then rub it in well; if too wet squeeze out again. Proceed in the same manner with the wrist bands, collars and cuffs and dry them. Be sure they are perfectly dry before wetting them to iron. I wet them in cold raw starch, using a good tea-spoonful to a pint of water. Mix well, and stir before dipping each piece in. After dipping in squeeze out and roll up tightly. Let them remain so about two hours before ironing. Bring to this work good, clean, smooth irons, at the right heat, strength of arm and patience. Rubbing a bit of beeswax tied in a cloth, over the irons if the irons are then well rubbed on a clean cloth, helps to make them smooth. Iron the bosom of a shirt last, and use a board to iron it on. Stretch and straighten it well, then iron. If it blisters it is because the starch is not well rubbed in. Try wetting it with raw starch, then iron carefully until it is dry, using much strength. Don't call a shirt done when any part of the bosom sticks to the board, and after it is well ironed see that it is well aired near the fire. Pull the collars and cuffs straight, and smooth lightly with a dry cloth, then pass the iron quickly over them, but do not press at all, straighten again; now use all your strength and iron dry on both sides; then polish the right side and, lastly, shape them so they will not break. I do this by pressing the flat lightly on the wrong side and drawing the collar or cuff through with the left hand, raising it as I draw it. I repeat this several times, then put the articles in something which will keep them rounded, and keep them in as hot a place as I can without scorching, till they are *baked* in shape.

FROM MRS. F. L. AVERY.

My clothes are all dried before starching. I use nothing but *Wheat* starch, and when I called for it here two years ago, my grocer had never heard of it, but found no trouble in getting it for me. I use two heaping tablespoonfuls of starch, dissolve with a little cold water, and pour on one pint of boiling water, stirring rapidly. To boil 15 minutes or longer won't hurt the starch, if you are careful that no lumps are formed. When cool enough to handle, rub into the bosoms and collars, from the outside, all the cloth will take, and do this very thoroughly too. Rub out all wrinkles with the hands before hanging up to dry, as this helps in ironing. In the morning, or two hours before wishing to iron, dip the clothes into cold starch made with two-thirds of a pint of water and one heaping tea spoonful of starch. Sprinkle and roll up. Lay collars and cuffs on a towel and also roll them up. Partly iron the bosom with a cloth over it to absorb the water, and the iron will not stick. Carefully remove the cloth (so as not to make blisters) and iron thoroughly dry. Placing the shirts before the open door of the oven will cause them to be "as stiff as a board." Collars may be stiffened by placing them on a board in the oven for a few minutes with the door left open. A marble slab the size of the bosom-board, or one made of fine-grained hard wood polished, is necessary for putting on the "Heathen Chinee" polish. Get an iron with sides and ends rounded and very smooth—a polishing iron. Place the board under the bosom, wring a piece of soft cloth out of water, just as dry as you can, rub this once or twice up and down a narrow strip of the bosom, as only a slight moisture is needed. Polish by rubbing with the round point of the iron, *up and down—never across*—the goods. Moisten only a small place, then polish. One not accustomed to doing this requires practice. It cannot be done perfectly till after several trials. I learned this from a colored "auntie," and, if I remember rightly, it was only after a good many trials that the work suited me.

FROM MRS. E. C. GILLETT.

On washing day, when the linen is ready for the line, take a dish that can be set on the stove—a bright tin basin or an agate dish or kettle—in it put one table-spoonful of starch, one-quarter of a table-spoonful of lard, also a tiny pinch of salt if you wish to be perfectly sure the starch will not stick. Add as little cold water as will thoroughly dissolve the starch, pour on boiling water—hard is better—stirring constantly, and let this boil. One quart of water will generally make it of the right consistency, as it is better to have the hot starch too thin than too thick. Now add a touch of bluing and put the collars and cuffs in one side of the dish. Dip the shirt-bosoms and wrist-bands in the starch and rub them while they are as hot as you can possibly endure them—a dish of cold water to dip the hands in when too hot will help—squeeze out all extra starch when they have been well rubbed. Rubbing vigorously while the articles are hot and not using too thick *boiled* starch will prevent blisters. When the articles are well dried, dip them in cold starch made from one teacupful of cold water, one tea spoonful of starch and one-quarter of a tea-spoonful of powdered borax, this last being very necessary to make linen *stiff*. Slap them between the hands a little, fold the sleeves of shirts over the bosoms, lay the dampened collars and cuffs below, roll tight, and let them remain at least an hour before ironing. I like best to dampen them at night and iron them the first thing in the morning before getting tired with other ironing.

In ironing be sure the flats are clean. Wash them, dry quickly, rub with beeswax and wipe well. Iron collars and cuffs first, taking out one at a time and keeping the others rolled up.

For shirts, iron the neck-bands first, being careful not to stretch them, then the bodies and sleeves. Put a bosom-board under each bosom, pull the linen up and down smoothly, wipe off with a clean cloth, any starch on the surface, and unless the flats are just right, lay a soft fine cloth over the bosoms; let the flats be quite hot, but not hot enough to scorch or cool enough to stick. If they are too hot, one can not iron slowly enough to dry them well. Rub the flat over the cloth once or twice—not more—then press slowly and firmly up and down until partly dry; loosen from the board, dampen by patting—not rubbing unless to remove some speck—with a cloth dipped in the starch and borax

water *unstirred*; then turn the bosom board on the hardest side and polish and dry by rubbing quickly and hard with the flat.

Collars and cuffs should be treated the same way. Iron slowly at first on both sides, lifting the articles often from the board, passing the hot flat over the ironing-sheet so as to dry them slowly on both sides. I have used a polishing iron, but it is hard work and hardly pays for the extra strength. Turn over collars or bend the points before they are entirely dry to avoid blisters. Should any appear during the process, dampen and set a warm iron on them till they are dry again. To shape cuffs, run the flat over them on the wrong side with the right hand, and bend the cuff with the left toward the flat as it passes sideways over. Lay them in the sun, or on clean tin on the warming shelf to dry. I prefer Duryea's Gloss starch for the shine; but I use Niagara as cheaper. Use the boiled starch left for light calicoes, etc., as they will then keep their color better than when flour starch is used.

Crumpled white dresses, dampened while pressing, with borax water, will be fresh and stiff again without washing if not too soiled.

FROM MRS. ALICE P. SHEFFER.

For starching shirts, collars, etc., I use a starch made as follows: (I prefer Kingsford's Silver Gloss starch to any I've used). Wet up the starch with just enough warm water to dissolve it thoroughly; have boiling water ready and when pouring it on the starch, raise the kettle so that the stream falls from a hight of two feet from the pan, pouring steadily and not too rapidly. Have an assistant to stir constantly and evenly. When it is of proper consistency allow it to cook until clear. While starching have the starch as hot as can be borne. People with weak wrists find it very difficult to wring the starched garments properly. To obviate the trouble I often use the clothes-wringer for this purpose. Don't have the wringer too tight. Thoroughly beat the garments between the hands before drying. Everything used about the starching must be scrupulously clean to secure the best results. After drying, wet up a small amount of starch with warm borax water, or rather warm water, adding a portion of borax water to the solution—say a tablespoonful of borax water for a shirt or six collars. Wring out the articles, old and roll up *tightly*. Let stand for two ours, then iron with moderately hot irons. A set of Mrs. Pott's sad-irons do the best work). Iron the shirt-band first, then draw the shirt over a board made expressly for the purpose, that will stretch the bosom evenly and hold it securely in place. After the shirt is ironed dry, draw it over a *bare*, smooth board and finish with the polisher.

In ironing collars, cuffs, etc., pull them gently with the hands until smooth. Iron first on the wrong side until partially dry, then turn and finish upon the right side. Do not turn over again as the tendency is to break up the adhesion of the sections. You can use the polisher the same as for the shirts.

The following is a very good starch polish for which a round price is often asked by dealers:—

Mix together, at a gentle heat, one ounce of white wax and two ounces of spermaceti. Add a piece the size of a pea to starch sufficient for a dozen pieces, or, dissolve two ounces of gum-arabic in a pint of hot water, bottle and cork. Add a table-spoonful to each pint of starch. I add no bluing to any starch, as there is no need if the articles have been properly blued in the rinsing process, and bluing does not readily combine with starch.

FROM MRS. O. J. PUTNAM.

The following is mother's way. As she was taught, so was I. We call it cold starching:

Of course, the shirts, etc., are to be washed clean and dried the same as a sheet or any other article.

Take one and a-half even tea-spoonful of Silver-Gloss starch or any other kind. Dissolve the same with one table-spoonful of milk, then put in one and a-half tea-cupful of cold water—this is sufficient for one shirt, one collar and one pair of cuffs. If more is needed increase in like proportion. Then take the above articles, turn or fold them so as to dip them into the starch on the wrong side, wring or squeeze all the extra starch water rom them, then roll them up together and lay them aside. See that the sad-irons are scrupulously clean, as a smeared shirt front is not a thing desired. Wash the irons with warm soap-suds and place on a clean stove to heat. When hot take the starched shirt and iron all but what is starched, then place the bosom-board in place, smooth out the bosom on the same, place over it a piece of worn white cotton cloth, then iron on this cloth with a hot iron, no matter if it scorches "some" as it will not scorch through till it is dry or nearly so; then remove the article from the board, starch again on the wrong side in the same starch after stirring it, put back on the board, smooth out—also wipe over with a damp cloth to remove particles of starch if any. Then take a common hot iron and iron right on the bosom, lightly at first; always iron one way this time as the gloss will be all the brighter for it and iron till dry or nearly so, then place the bosom by the fire to finish, as dampness removes the stiffness. Proceed in the same way with collars and cuffs and I think you will be pleased with the result.

I have found this method the easiest and best, after using cooked starch, etc. The articles are quite stiff and glossy and please those who wear them. Practice makes perfect, and you will soon be able to do up your linen in a short time. Do not imagine your starched articles are going to look as glossy as those done up at a laundry where power is used to gloss them. We must use elbow grease and hard rubbing when they have been starched the last time.

FROM MEDORA CORBETT.

To make starch that will make articles glossy and stiff with one starching only, dissolve in a clean, tin basin, one-third of the usual amount of starch, in just sufficient cold water; add boiling water till the starch is transparent and smooth, let boil for two or three minutes, and when comfortably cool, dissolve, in an earthen dish, the remaining starch and borax (one-half a tea-spoonful to one table-spoonful of starch) with a little cold water, add to the cooked starch a few drops of bluing, if desired; stir well together and strain into the earthen dish through a thin cloth or a fine wire strainer.

Having ironed the plain parts of a shirt, slip the bosom-board in, wrong side up, dip the collars and cuffs in the starch, lay them on the bosom and rub the starch in and the wrinkles out. See that each piece is wet through and through before laying it aside for 30 minutes or more protected from dust and flies.

To iron: lay a cloth over the bosoms, and put the collars and cuffs between two folds of a cloth; iron with a moderately hot iron, but not too long before removing the cloth; make the articles as smooth as possible, and when dry, pass a wet cloth over the right side of the ironed surface and polish. The amount of gloss obtainable will depend upon painstaking and the kind of flat-irons used. Put collars and cuffs in a deep dish and in a hot oven for a safe length of time.

FROM AUNT RACHEL.

After shirts have been washed and wrung out of the rinsing water, they are starched in boiled starch. This is made by dissolving a couple of table-spoonfuls of starch in a little cold water in a pan or basin. Set this on the stove and pour into it boiling water until the contents thicken, stirring all the time Remove from the stove and when cool, starch the bosoms and collars and hang them on the line. A little pulverized borax, dissolved in the starch, helps to stiffen the articles and if a sperm candle is stirred around in the starch while the latter is hot, it will assist the work of the flat-iron. Very particular persons hang their shirts on the line and pin them at the shoulders. When dry and ready to iron, the bosoms, cuffs and collars are wrung out of cold starch; that is, a tea-spoon of starch dissolved in a half-bowl of water. They are then rolled up and laid away for an hour, then ironed until dry, with a hot iron. If a soft white cloth wrung out of cold water is rubbed over the bosom when any spot or wrinkle appears the ironing will be all the better. Collars are treated in the same way, and embroidery is ironed on the wrong side. Starched clothes should not be hung out in very freezing weather, as the starch is apt to stick when the clothes are ironed. Good judgment will vary the mode of handling finely-starched goods according to the state of the weather. As in many other cases, practice in this "makes perfect."

FROM EMMA L. ROBERTS.

For one bosom and collar I moisten a tea-spoonful of starch with cold water, pouring on boiling water until I have the proper quantity. I use a new tin dish, and if the boiling water does not make the starch clear, I place it on the stove, and cook it until it is clear—but no longer. A little gum-arabic water, a small shaving of white beeswax, and two or three drops of kerosene improve it very much—one may use one or all if she has them. The starch should be made to penetrate the cloth by striking the article between the hands and keeping it rolled up tightly for two or three hours. I first place a cloth over the bosom and iron lightly; then remove the cloth and polish the bosom with a reasonably hot iron. If the result does not suit, I moisten the bosom with a cloth dipped in cold water and try again. It will polish all the better for wetting.

FROM MRS. A. J. GREENE.

Just before the articles are ready for the line I make my starch, allowing a table-spoonful to each shirt and its quota of collars. Having put the starch into a large bright basin, add sufficient cold water to dissolve the starch and also a small piece of white wax or spermaceti, pouring over the whole boiling-hot water to make it of the consistency of thick cream. Place shirt-fronts, collars and wrist-bands in the starch while it is quite warm; wring out and *thoroughly* rub the starch into the articles and hang them upon the line to dry.

An hour or so before ironing I put them, just long enough to wet them, into *warm* water in which has been dissolved about a tea-spoonful of starch to each shirt, wring them out, and roll the collars in a towel and the shirts by themselves.

When ready to iron I stretch the articles on the ironing-board and thoroughly wet each with a damp cloth, then pass quickly over them a good hot iron, polishing them until dry.

FROM MRS. H. T.

Take two table-spoonfuls of good Gloss starch and mix smooth with three table-spoonfuls of cold water. Set the pan on the stove and pour over it slowly, stirring all the time, one quart of boiling water. Let it boil five minutes. The starch must be strained through a thin bag into a pan. No matter how free from lumps the starch looks, the straining should not be omitted. When the shirts and collars are ready for the line, dip them in the not starch and rub it thoroughly into them from the wrong sides of bosoms and collars. When they are pertectly dry mix smooth one tea-spoonful of starch in one pint of cold water, dip the shirt bosoms and collars into it, wring out—not very dry—roll up and let them lie 10 minutes. Iron the plain parts first; rub the bosoms with a clean, damp cloth. Iron pertectly dry.

FROM "MARGARET."

The soiled articles should be first put into cold water, and rubbed slightly with the hands to remove the old starch and to loosen the dirt, then they are washed and dried in the usual way. An hour before ironing, I take about two table-spoonfuls of Gloss starch to a pint of water, dissolve it with cold water, adding enough warm to make it a little more than of blood-heat. Add a very little bluing, dip the collars in this and wring out several times—do not wring very dry the last time—then roll in a sheet. The shirt-bosoms are treated in the same way and laid away until ready to be ironed. Now take a soft cloth and rub the articles to remove any starch which may be on the surface; take a hot flat-iron and iron the collar first on the wrong side, then smooth the right side several times; change for a cooler iron and polish by rubbing vigorously.

FROM MARY E. WARREN.

A certain amount of tact and natural deftness of manipulation is necessary to do the simplest things *well*, and this is true for so simple a thing as starching and ironing. My method is this: After rinsing and bluing, I dip the articles in a boiled starch, (taking it for granted that every housekeeper knows how to prepare this) using the best sort. When the articles are dry, at evening I dip them in a cold starch—I find Electric or Celluloid starch very nice for this—roll them tightly, and in the morning iron them with a *hot* iron, but not so hot as to discolor or scorch the linen. By lightly rubbing the iron over with a piece of white wax, and then with a dry cloth before using it, a better polish will be obtained. Finish with a polishing-iron treated in the same manner.

FROM MRS. LINDA T. VAN BUSKIRK.

When I am ready to iron, I set a shallow kettle (the potato kettle) on the stove with some water to boil. Take a tea-spoonful of starch for each shirt, put it in a small bowl, dissolve or wet the starch with as little water as possible, then, while stirring it, add enough boiling water to make enough starch for the articles. Set the bowl in the kettle of boiling water and keep stirring the starch until it is cooked. While cooking put in a lump of nice suet tallow as large as a pea—it prevents all sticking. (I have tried kerosene but don't like it.) Apply the starch to the back of the bosoms, fold from right side and press tightly so that all will be damp. Then spread the article out, pull it into proper shape and hang it up for a few minutes. Iron the other articles and watch the starched ones. When they look as if they were partly dry, begin ironing them. Iron the plain parts first, then put a bosom-board into the shirt under the bosom, have a clean cloth and water handy to dampen dry places and wipe off any foreign substance. I lay a thin cloth over all starched articles first and pass the iron over this. When smooth take off the cloth, and rub a moderately hot iron quickly over. This puts on a polish that "my John" says is good enough for him or any one else. I use "Satin Gloss starch."

FROM MRS. A. H. S.

I am not presumptuous enough to think that my method will be beneficial, except as a contrast to the more modern methods of the present time, yet I will give it. After they have been washed, the clothes to be starched are allowed to become thoroughly dry before they are starched. Starch is then well rubbed into the different pieces, which are again dried *in the sun*. Common irons are used, and with reasonable care the results are satisfactory in my family. In making starch, I use the ordinary lump starch of the stores. This I dissolve in cold water until of the consistency of cream; then pour on boiling water, stirring constantly. It is then boiled for about 30 minutes, a small piece of butter being added. To make the irons smooth I rub them on a spray of red cedar and then they will put a fine gloss upon collars, cuffs and the like.

FROM MRS MARY E. PRESLEY.

After trying various methods of doing up shirts and collars with varying degrees of success, I have finally adopted the following which gives me complete satisfaction, but perhaps it would not be as well thought of by others. After the linen is thoroughly dried, I apply as much thick-boiled starch as it is possible to charge it with, to which is added one-half tea-spoonful of powdered borax to one quart of the starch. Starch is best applied with a brush. Roll the starched linen up and in course of half-an-hour it is ready for ironing. I use ordinary flat irons, and if one is careful there is never any trouble with the starch sticking to them. The secret of success in getting the brilliant polish so much sought after is "elbow grease." If a very bright gloss or enamel is desired, after ironing in the usual way an iron for this particular purpose must be used, which is a very heavy iron, rounded at the bottom and very bright. But as I have said I never fail to succeed with the ordinary ones.

FROM LIZZIE JOHNSON.

I do not starch the linen until it is dry. I then take about one tea-spoonful of Niagara Gloss starch to one shirt bosom, and proportionately for the collars, and dissolve it in the amount of water needed. I then starch the clothes and let them remain for a few minutes before ironing. I have used one tea-spoonful of a solution of gum-arabic and water in the starch with success.

FROM MRS. A. J. BRACE.

In my opinion it is not so much the method of starching upon which success depends as upon the starch itself. I always experienced more or less trouble until I began the use of Elastic starch and since then I am satisfied with my work even when done with the ordinary flat-iron, though I doubt not the so-called diamond-faced laundry irons would give a much finer polish

FROM MRS. GEORGE RANDALL.

When the clothes are ready for the line, I rub the bosoms of shirts as well as the collars with warm starch of the consistency of sweet cream. Three hours before ironing, dip them in cold starch and roll in a dry cloth. When ready to iron, I then rub them well with a damp cloth to remove any superfluous starch. I use a hard bosom-board covered with fine cloth. After smoothing nicely, rub hard and quickly. I do not polish.

FROM E. B.

I take the following ingredients in this pro-

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria.

portion: one table-spoonful of starch, one-half tea-spoonful of turpentine, and the same of salt. Moisten with a little cold water and then pour on about a half pint of water as hot as one can bear the hands in. After starching the articles, roll them up and leave them about ten minutes, then iron. I meet with very good success.

FROM N. J. PEFFER.

I wash, then starch the articles in cooked starch quite hot—then dry and starch again in thin, cold starch (unboiled) and iron with a common iron.

ARE YOU GOING WEST?

If you are going west of Montana, you should by all means go by the St. Paul, Minneapolis & Manitoba Railway, the only line offering a choice of three routes to the Pacific coast. You will pass by day-light for 300 miles through the Great Reservation of free government land in the Milk River Valley, and through Butte, the largest mining camp on earth, en route to the coast. Do not fail to see this government land as you go west. For further information, apply to F. I. Whitney, G. P. & T. A., St. P., M & M Ry., St Paul, Minn.—*Adv.*

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

A CORRESPONDENT in Iowa asks us how to propagate Tea roses. There are four methods of propagation among florists—by cuttings or slips, budding, grafting, and layering. The first method our inquirer will find most practicable. Most florists do their rose propagation during January, February and March. The slips are made to one eye, the wood being sloped diagonally at the bottom; they are then stuck in pots or beds of sand. In a greenhouse there are heating pipes running under the benches, and this bottom heat causes the cuttings to root rapidly. If our correspondent does not possess these facilities, she will do well to put the cuttings in a window, where they will have no direct sun. The sand must be kept quite moist. The cuttings should take root four or five weeks after insertion, and should then be potted in pots not more than two and a-half inches in diameter. Rose cuttings may be made all through the autumn and winter; but the largest percentage seem to root during the three first months of the year. Tea roses propagate, as a rule, more readily than any other variety.

The same inquirer asks how to manage the tender cannas in the spring. We presume the tubers have been stored away all winter and kept from the frost like potatoes. Nothing need be done with them until the latter part of May, or the beginning of June, when they are to be planted out in well enriched soil.

* * *

AMONG the old fashions revived is that of cross-stitch embroidery. Many of the mothers and grandmothers will recollect the days when, instead of the ready indelible ink, every garment was neatly marked in cross-stitch. Four threads each way was the usual rule, and many a beginner has shed angry tears over those troublesome stitches. Now some of the prettiest table scarves, doileys and lunch cloths are worked in this stitch, imitating the fashionable Russian embroidery. Geometrical patterns are chosen, usually worked in blue, red, or yellow cotton. A charming lunch cloth is of fine white linen, with a geometrical border in red and blue cross-stitch; the edge is finished with handsome antique lace. One can find ideas in most old-fashioned samplers.

* * *

SOME of the prettiest little photograph frames now seen are imitations of old miniature cases or frames. They are the sizes to accommodate *carte de visites* or smaller medallions, and consist of Rhinestone brilliants set in silver, in antique designs. Others less delicate-looking are of gilt set with turquoise and garnets. Other pretty screen frames to accommodate several pictures are covered with Pompadour chintz.

* * *

PRETTY little trinkets recently noted were Shakespeare bracelets. They were narrow, flat, silver bangles, bearing, in raised letters, some little compliment or bit of wisdom from the great dramatist. These slender silver bangles are still very fashionable; they have entirely supplanted the thick, heavy bracelets of former years. Very pretty silver hair-pins are seen, but for general wear they are not in such good taste as plain shell pins, while the heavy metal is often considered injurious to the hair.

* * *

A GOOD deal of latitude is now allowed in dressing the hair, so every woman may select the style most becoming to her; the simpler it is, the better. The exaggerated "Psyche knot" is past its high-water mark of popularity and is now much modified. A braided or twisted knot, (braided preferable) is worn quite high up at the back of the head; this is becoming to most young women, and is convenient with the leading styles in hats. The bang is a little rounded, shorter at the sides than in the middle, and slightly curled; a tremendously fluffy or frizzy bang is considered rather vulgar. Another really fashionable style, which obtained some years ago, is the catagon plait, a single braid twisted into one loop at the back, coming down over the nape of the neck. The hair must be very thick to arrange well in this mode.

* * *

GREEN still seems a favorite color in everything; it is the prevailing tint in new millinery. A large hat recently seen was covered with grass-green tulle sbirred on the brim, and puffed over the crown The brim turned up at one side, towards the back; a large bow of shaded green ribbon was at the back. At one side of the crown, and trailing around the brim, was a large and straggling bunch of field flowers—buttercups, daisies, and clover, mingled with grass. Another arrangement in green was a small toque of puffed green tulle, with a loose bunch of dark purple lilac straying all over the crown. A large black lace hat had the brim bordered with moss-green plush, while it was trimmed with quantities of mignonette and grasses.

"THE KING'S DAUGHTERS."

MRS. ELLA M. FALCONER of Riverside, Berrien Co., Mich., writes to "Palmetto:"—"I have been reading some old RURALS lent me by a neighbor. 'The King's Daughters,' interested me very much. I would like to correspond with, and send reading to some of those spoken of. I do not know but that I am too late for names, it has been so long since what I read was written; but I hope not. I am a minister's wife, 22 years of age, and have two children. We live on the shore of grand, old lake Michigan."

I regret to say to this kind lady who has proven herself a "King's Daughter" indeed, that the only address I have by me is that of Mrs. J. C. Stribling, Pendleton, S. C., who, I am sure would enjoy a letter from one like my correspondent, and I feel certain also that she will see that all reading sent to her, is placed where it will do the most good. Being in that transition state known as "moving," I cannot at present lay my hands on my file of the RURAL, but in some paper between July 1st and October 1st, 1888, Mrs. Falconer will find other addresses where reading might be sent with profit.

My heart is warmed and touched by this dear lady's personal expressions of good-will and affection, and I return them most heartily. I would that in a very busy life I could find time to reply to all the dear friends who have greeted me through that common bond, "The RURAL NEW-YORKER." PALMETTO.

LETTER FROM AN INVALID.

AN article read years ago on "The Law of Limitation," has remained indelibly in my memory. My whole life had been a defiance of that law. I was determined to learn all that I did not know, to do all that needed doing, besides being everybody's willing substitute and servant, and my present condition is the legitimate outcome of such folly. I see it now. But as I grow older I am dismayed to find that many others have set that iron law of limitation at naught, and, like myself, are terribly punished.

All that remains for us to do is to submit; to ascertain, as promptly and as correctly as possible, the exact size of the niche we are individually capable of filling, and then, alone with Him who knows by experience the extent of human limitation, to say good bye to all the impossible things we had planned and desired to do.

There is no "bitterness of death" left untasted for one who has done this conscientiously I think; and the "afterwards" is a foretaste of Resurrection blessedness too. No more anxiety, no more dissappointment in ourselves; no more reproachful reflections to the effect that if we had but done differently, we might have accomplished more. We drop from the ranks to-day, are forgotten to-morrow, and the world's work goes bravely on without the individual help to which we attached so much importance while it was ours to give; therefore let us take time for rest, leisure for thought, strength to be glad and grateful: to be sweet, patient, hopeful, cheerful. Let us do this *to-day*, at any rate. To day is ours.

E. S. L.

Miscellaneous Advertising.

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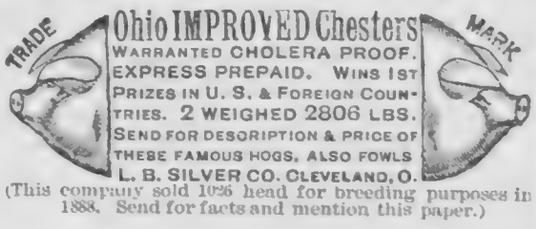

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Entered at the Post-office at New York City, N. Y., as second class mail matter.

News of the Week.

AGRICULTURAL NEWS.

SATURDAY, March 30, 1889.

THE President has just issued an order throwing open a part of the proposed Oklahoma Territory to homestead settlement—to go into effect on April 22. The extent of the area affected by the proclamation is rather doubtful, the estimates varying from 1,800 000 to 8,000,000 acres. The first was telegraphed from Washington yesterday morning as coming from the Department of the Interior. The general opinion is, however, that it amounts to about 4,000,000 acres which have been ceded by the Creek and Seminole tribes. There are also about 6,000,000 acres in the Cherokee Strip or Outlet, and 11,000,000 acres more held by various tribes whose title would have been extinguished by the bill creating the new Territory of Oklahoma, which failed to pass the last Congress. It is estimated that about 50,000 persons are ready to occupy the "opened" land. Thousands have gathered along the Kansas, Arkansas and Texas borders as well as in different parts of the Indian Territory ready to rush in as soon as the country should be opened. Hundreds of these have already swept in from all sides, and large numbers were already there before the issue of the expected proclamation. Telegrams from different points in the territory and adjacent country tell us that all the most eligible locations have already been taken up. Some have had their "claims" staked out for years, and a good deal of fighting and several deaths are already reported arising from disputes about possession. The President warns all that anybody taking up land before April 22, will never be allowed to make an entry in the territory, and General Schofield has ordered the troops to make a list of those who offend in this way, but still claims are being marked out on all sides. The troops at Fort Reno in the country are getting ready to enforce order after the land has been legally opened.... .....New Mexico and Colorado having passed laws providing that all meat sold within their borders must first have been inspected alive, thus prohibiting the importation of beef dressed in other places, the Solicitor-General of New Mexico has just ruled that dressed meat from outside sections cannot be stopped and turned back on the border of the Territory. A bill providing for a similar object is now causing some pretty violent discussion before the New York legislature. The dressed-meat interests are very active and pretty persuasive before all the legislatures in which similar laws have been introduced.....The largest creamery in the State has recently been established at Claremont, N. H., and the neighboring farmers have pledged the produce from 1,000 cows to support it...A law to prevent the adulteration of wheat flour has just been signed by the Governor of Maine.. .....The New England Milk-producers' Union has decided upon the price of 32 cents per 8½-quart can for milk delivered in Boston from April first to October first. If contractors refuse to agree to these terms, no milk will be delivered after March 31st. The net average price to the farmer after deducting freight to Boston, etc., would be only 2½ cents per quart.....Various local Milk-producers' Associations in New York State are joining 'The Union of Milk-producers for the Supply of the New York Market." The Milk Exchange of this city composed of local milk dealers, are strongly opposed to the Milk-producers' Union, and claim that internal disorder will soon disrupt it; but there are few signs of such a mishap. .....The earnest efforts of the "oleo" men have failed to secure the repeal of the anti-oleo legislation in Pennsylvania.... It is estimated that at least 100,000,000 pounds of binder-twine will be needed for the harvest of 1889, and that the recent increase in price by the binder-twine Trust or syndicate would give the manufacturers from $7,000,000 to $12,000,000 more than their usual profits—all of which must, of course, come out of the pockets of our farmers. It's certain that much grain in the West will be harvested unbound or bound by hand, and self-binders will be extensively converted into headers. The culture of jute and hemp in this country is likely to be stimulated by the extortion of the Trust, as both make binding twine as good, according to several who have used it, as that made from sisal and manila which cannot be grown here..... .....Last year's bagging Trust, is to be revived once more by the same parties, with headquarters at St. Souis. This is likely to be the last opportunity for doing so, as it is probable factories will soon be established for making a satisfactory substitute at a lower price from pine needles and other domestic products ..... A considerable number of representatives of manufacturers of and dealers in agricultural implements in different sections of the country met in convention at St. Louis, last Thursday. The objects of the meeting are to determine a schedule of rates and prevent disastrous cutting, and also to devise plans to extend trade into the Southern and Southwestern States, where farm machinery is now but little used....The March statistical report of the Department of Agriculture, issued Thursday, gives the result of the investigation, through its correspondents and agents and the merchant millers and the records of commercial inspection, of the average weight of wheat by States. The general average is 56.5 pounds, the lowest average of six years. In the spring-wheat region the range is from 53.5 in Dakota to 55 pounds in Nebraska. It makes the crop equivalent to 391,000,000 bushels of 60 pounds each—less by nearly 25,600,000 bushels than the quantity in measured bushels. ...The Chicago "Big Four" who buy half the cattle that arrive in Kansas City, and two-thirds of those that reach Chicago—the two greatest cattle markets in the country—say that they will boycott cattle from all the States or Territories that may pass laws hostile to their dressed-meat trade. New Mexico and Colorado, which have already passed such laws, are now under ban; the monopoly won't buy a head from either place. ... The members of the State Legislatures, that met the other day in St. Louis to devise some means of counteracting the evil effects of the "Big Four's" monopoly, accomplished little, and the meeting was very discordant. A bill, however, was adopted by a good majority, looking to the suppression of Trusts, and a bill providing for the inspection of meat in each State at the place of slaughter and prohibiting the importation of dressed meat from other States, was adopted by a slender majority. These bills are to be recommended to the legislatures of the States represented at the meeting. An "inspection bill," called the "Cantor bill," is now before the New York legislature, but it will hardly pass unless the farmers of the State speak out emphatically in its favor..... Henry W. Raymond, editor and proprietor of the Germantown Telegraph, and son of Henry J. Raymond, founder of the New York Times, has been appointed Private Secretary to his long-time friend, Secretary of the Navy Tracy.....The strong recommendation of Governor Beaver to the Pennsylvania legislature urging the adoption of much needed changes in the road laws of the State, is pretty certain to be unheeded, and several of the papers are justly indignant .....The present duty on hops is eight cents per pound; but 16,000,000 pounds were imported last year. Little wonder that there is a movement on foot for an increase of duty for the adequate protection of American hop-growers. ..... That great American Meat Company will soon offer for investment $4,000,000 of stock the par value of which is put at $100 per share, though the shares will be offered at $75 apiece; $7,000,000 of its $15,000,000 capital have already been subscribed and paid for mainly in lands, cattle and other property, and it is proposed to keep the remaining $4,000,000 in the treasury for some time so as not to depress the market..... Owing to fear of failure of the wheat crop from frosted seed and consequent loss of traffic after harvest, the Northern Pacific railroad has arranged with the owners of the numerous elevators along the line to furnish good seed to the farmers who cannot afford to pay cash for it, throughout the "frosted section"—nearly the whole territory north of the Northern Pacific, in Minnesota and Dakota. In return, the farmers agree, when the crop is harvested, to pay the price of the wheat and 10 per cent. interest thereon.

Pronounced Correct.

THE Warren Republican, of Williamsport, Warren County, Ind., printed the following in August, 1885:

"Rev. Colbrath Hall, of Pike, was in town yesterday. He reports the wonderful recovery of his wife within the past 18 months, after being *a confirmed invalid for over thirty years* from spinal trouble. About 18 months ago she began the use of Drs. Starkey & Palen's Compound Oxygen Treatment, and she attributes her recovery to the use of that medicine. She is now able to walk, to get in and out of a buggy, to take rides, etc. All acquainted with the Rev. Mr. Hall and his family will rejoice with them in this remarkable recovery."

In a letter, dated September 2, 1885, Mrs. Sara N. Hall, writes from West Lebanon, in the same county, regarding her own case·

"I have read the paragraph referred to in the Warren Republican, and pronounce it correct."

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 331 Montgomery St., San Francisco, Cal.—*Adv.*

LATEST MARKETS.

NEW YORK, Saturday, March 30, 1889.

COTTON is 1-16c higher on all grades, than last week.

POULTRY is in moderate receipt, and prices rule firm for good stock.

HOPS quiet and unchanged.

HAY is in moderate demand, with no change in prices.

BEANS.—The market is active, with slight change in prices

NUTS.—Peanuts are held firmly at former quotations. Hickory nuts and peanuts are unchanged.

VEGETABLE.—The potato market is weak and prices are somewhat lower. Some very nice Bermudas were held at $9. The market is literally swamped with onions and turnips. Very fine red onions are offered for 75c per barrel while they are retailed in Washington Market for 85c per bushel. No sale for turnips. Fresh vegetables from Bermuda and Florida are in good supply, but both quality and prices show a wide range.

FRUITS.—Fresh. Apples are in full supply, and qualities under fancy are slow of sale at low prices. Oranges are plenty and cheap. Cranberries are plenty and lower. Strawberries are dropping in price, ranging from 30 to 50 cents. Evaporated fruits are slow of sale, with slight change in prices.

BUTTER is in full supply, and the demand is limited except for best grades of fresh butter, for which full prices are asked

CHEESE is slow and unchanged.

EGGS are in heavy supply, and prices are lower, fresh gathered nearby being quoted at 11½ cents.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, March 30, 1889.

BEEVES.—Dressed beef slow, with the bulk of the sales at 5¼@6½c per lb. although strictly prime and choice quality goes as high as 6¾@7c.

MILCH COWS.—Receipts this week to date 127 head. Feeling dull, Inferior to Good Cows may be quoted at $25 to $45 per head.

CALVES.—Market steady, with rather a firm feeling for good stock. Prices ranged from 5c to 8c per lb. Dressed Calves unchanged at 5@10c for Country-Dressed Veals, with little Calves bringing 2½@4c. State and Pennsylvania Calves rarely exceeded 9c. City Dressed sold at 6@11c. Choice at 11½@12c.

SHEEP AND LAMBS.—Sheep sold at $5@$5 60 per 100 lb Yearling Lambs at $6 50@$7, and Spring Lambs were in good demand at $3@$6 50 per head. Dressed Mutton slow but firm at 6½@7½c for Chicago Dressed and 6@8c for City Dressed (Choice bringing 8½c). Dressed Yearling Lambs sold at 9@10½c and Dressed Spring Lambs at $2 50@$6 50 per carcass. Sales of State Sheep, 74 lb average, at $5 per 100 lb; State Lambs, 66 lb, at $6 50; Western Sheep, 99¾ lb at $5 60; Minneapolis Fed Sheep, 129 lb, at $5 37½; Ohio do, 98 lb, at $5 56¼; Michigan Lambs, 66½ lb, at $7; Jersey Spring Lambs, at $4@$6 50 per head.

HOGS.—Market just about steady at $5@$5 50 per 100 lb Country Dressed Hogs easier for Heavy and Medium, but steady for Light Lean Pigs. Quotations are 5@5½c for Heavy, 6@6¾c for Medium; 6¾@7½c for Light States and Lower Jerseys; and 7½@8½c for Light Upper Jerseys.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING MARCH 30, 1889.

S. C. I.—J. H. L.—O. B S.—J. C.—R. K.—A. S.—E. F. W.—E. A. A.—T H H.—W. G.—W. I. C.—S. M.—H. M. R. H. S.—E H. P.—A. L. E.—J. H.—A. E. F.—R L S—I. D. C.—F. H. S.—G. P.—M. M.—J. C. K.—G. C.—W. R.—G. H. T.—H. A. W.—O. S. H.—P. C.—W. J. G.

The Kodak.

PRICE $25.00.

ANYBODY can use the KODAK. The operation of making a picture consists simply of pressing a button. One hundred instantaneous pictures are made without reloading. No dark room or chemicals are necessary. A division of labor is offered, whereby all the work of finishing the pictures is done at the factory, where the camera can be sent to be re-loaded. The operator need not learn anything about photography. He can "*press the button*"—*we do the rest.*

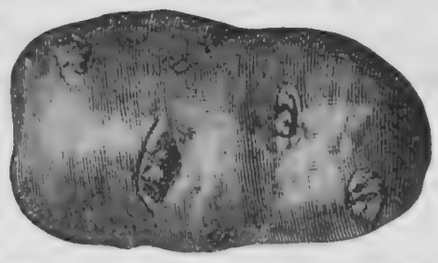
Send for copy of KODAK Primer, with sample photograph. Mention Rural New-Yorker.

The Eastman Dry Plate and Film Co.

ROCHESTER, N. Y.

EARLY DAKOTA VICTOR

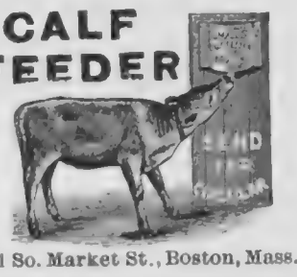
(From a Photograph.)



First Introduction.

Matured from Seed in North Dakota. Earliest Potato in Market. Grown with Early Rose, Vanguard, Downing, and Vick's Gem, getting same cultivation, matured earlier and more than doubled yield of any of them, producing **735** bushels per acre. Skin flesh color; eyes shallow, but strong; flesh pure white and floury. Table quality unsurpassed, baked or boiled. Large and uniform in size and shape; roots extending deep in soil, resisting drought. Big money in 1890 to growers of this potato. By mail, 1 lb., 75c; 3 lbs. $1.50; by express, ½ peck, $2.00. Cash with order, **GEO ELLIOTT & CO.**, Jamestown. Dakota. References: James River Nat. Bank; Lloyds, Bankers.

SMALL'S CALF FEEDER



Supplies a want never before successfully met by invention. The calf sucks its food slowly, in a natural way, thriving as well as when fed on its mother. Now used throughout U. S. Worth many times its cost. S'tisf'ct'n guaranteed or money refunded **J. B. Small & Co.**, 31 So. Market St., Boston, Mass.

WHITMAN'S NEW IMPROVED RAILWAY POWER.

The **BEST IN AMERICA** Has 25 per cent. more power. Far more durable. No breakage. New Governor. Thousands in use. Send for circular. Manufacturers of **Hay Presses, Cider Mills, Feed Mills, Corn Shellers, Feed Cutters, etc.** Address **WHITMAN AGRICULT'L CO. St. Louis, Mo.**

EGGS —P. Rocks, L. Brahmas and W. Leghorns, $1 per 13, 30 for $2. In new baskets, safety guaranteed. Fine stock. Address SAYBROOK VALLEY POULTRY YARDS, Oak Hill, N. Y. **EGGS.**

Strawberry Plants For Sale.

Haverland and Burts, $1.25—100; $8—1,000; Warfield, 75c.—100; $5—1,000; Jessie and Bubach, 75c.—100; $4—1,000; Gandy, $1.50—100; $10—1,000; Hampden. $1 50—100; Summit and Monmouth, $1—100: by freight or ex. **James Lippincott, Jr., Mount Holly, N. J.**

LOOK HERE!—160 acres, Dakota Ter., for sale cheap; 100 under plow; 80 fenced; river cuts round corner; good house, stable, granary, etc.; good assortment of fruit; small grove; good water; 3¼ miles from city of De Smet the county seat. For terms, address **D. C. NOYES, Box 77, De Smet, Dakota Territory.**

"THE Disease proceeds silently amid apparent health." That is what Wm. Roberts, M.D., Physician to the Manchester Infirmary and Lunatic Hospital, Professor of Medicine in Owen's College, says in regard to Bright's Disease. Is it necessary to give any further warning? If not, use Warner's Safe Cure before your kidney malady becomes too far advanced.

Ease, Comfort and Thrift!

THE BEST CATTLE FASTENING.

Smith's Self-Adjusting Swing Stranchion!

The only practical *SWING STRANCHION* invented Thousands in use. Illustrated Circular free. F. G. PARSONS & CO., Addison, Steuben Co., N. Y

IF YOU WANT

Best Farm Boiler EVER MADE

For Cooking Feed for Stock, Heating Milk or Water in Dairies, Small Cheese Factories; for Bath-Rooms, Laundries, Scalding Hogs, Etc., address J. K. PURINTON & CO., Des Moines, Iowa.

IDEAL

IMPROVED Made of best material by skilled workmen, built on correct principles and fully warranted; 17 YEARS' EXPERIENCE. Sent on trial. Write for Circular and Price. **Stover Mf'g Co. Freeport, Ill.**

WARNER'S Log Cabin Remedies—old-fashioned simple compounds, used in the days of our hardy forefathers, are "old timers" but "old reliable." They comprise a

Warner's Log Cabin Sarsaparilla,

"Hops and Buchu Remedy," "Cough and Consumption Remedy," "Hair Tonic," "Extract," for External and Internal Use, "Plasters," "Rose Cream," for Catarrh, and "Liver Pills." They are put up by H. H. Warner & Co., proprietors of Warner's Safe Remedies, and promise to equal the standard value of those great preparations. All druggists keep them.

RELIABLE AGENTS Started in BUSINESS **WITHOUT CAPITAL!**

Write for particulars and secure territory at once.

INDISPENSABLE FOR SPRAYING FRUIT TREES.

It makes **3** complete **polished brass** machines (see cut). *To introduce, I will send a* **sample pump, express paid, for $5.50**, and will also give a valuable illust'd book (just published) containing the latest and best receipts for destroying insects of all kinds, to each purchaser of a pump. The receipts alone are well worth $5.00. Pump will throw water 50 to 60 feet. My agents are making **$10 to $20 per day.** They sell rapidly. Send for illustrated catalogue, price list and terms. GOODS GUARANTEED AS REPRESENTED or MONEY REFUNDED. Address **P. C. LEWIS.** Lock Box B. **CATSKILL N. Y.**

CHARMING NOVELTY.—Lamp shade in the form of Toy Buildings. Landscapes with illuminated cottages. Price, 12c. each; 10 shades, $1.25, $2; carriage free; payable in advance in stamps or money orders of any country. 100 shades, $4.50, including packing, taken at factory. In 8 days more than 10,000 were sold. H. KUMSS, Warmbrunn, Silesia, Germany.

FARMERS!

And others who wish to provide future homes for your children by the purchase of selected tracts of choice farming lands that will make you **100 Per Cent. Profit** as investments alone, or to loan money at liberal rates, will please write me for information **free. ISAAC MULHOLLAND,** Investment Broker, Lock Box 212, **Hoxie, Kan.**

SUCCESS! SUCCESS!

Four First-class Early Richmond Cherry; One Moore's Early and One Concord Grape, **All for ONE DOLLAR.** Send for Prices of Fruit, Flowers and Stock. **EMMET A. RHOADS,** Saint Paris, Ohio.

The Worcester Buckeye Mower

Has Patented Self-Oiling Pitman. Patented Hardened Steel Chain Plates, maintaining the Shear Cut throughout the life of machine. A new device for carrying the weight of Cutter Bar lightly over the ground, preventing its dragging, and lightening draft.

A NEW SCYTHE

Which will not break at heel. Many other new and valuable improvements. Don't fail to see it. Send for 1889 Circulars. Agents wanted in unoccupied territory. Manufactured by

The Richardson Manufacturing Co.
WORCESTER, MASS.

OHIO IMPROVED CHESTER WHITE SWINE—Pure Blood, Choicest Strains. Sock of all ages for sale. Send for circulars and tstimonials of this breed before you buy. We deliver to any point by express prepaid. Ask for 1889 Catalogue of
HERBERT A. JONES, Himrods, N. Y.

DUTTON GRINDER

Perfect Mowing Machine Knife Grinder.

25,000 Machines in actual use testifying to its merits.

Can be carried into the field and attached to Mowing Machine Wheel. Send for new Descriptive Catalogue.
HIGGANUM MANUF'G CORPORATION.
MAIN OFFICE: HIGGANUM, CONN.
Successors to R. H. ALLEN & Co., 189 WATER ST., N. Y.

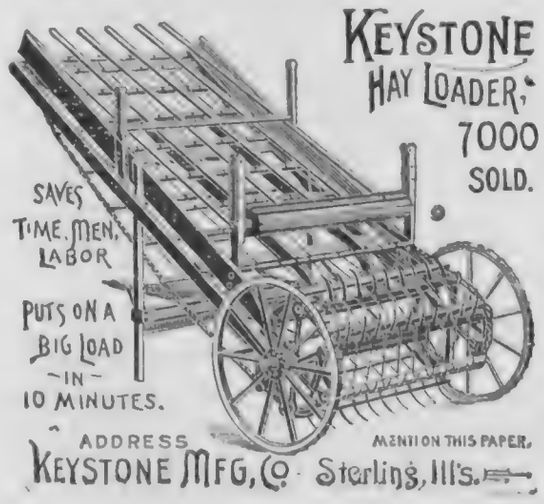
DEDERICK'S HAY PRESSES.

Made of steel, lighter, stronger, cheaper, more power, everlasting and competition distanced. For proof order on trial, to keep the best and get any other alongside if you can. Reversible Full Circle & Belt Presses, all sizes.

Address for circulars and location of Western and Southern Storehouses and Agents.
P. K. DEDERICK & CO., ALBANY, N. Y.

Send for large Illustrated Catalogue.

DR. AUSTIN FLINT, late professor in Bellevue Hospital Medical College, Fellow of New York Academy of Medicine, member of the State medical societies of New York, Virginia, Rhode Island, Massachusetts, etc., says, in speaking of Bright's Disease or advanced kidney disease: "The minor effects are headache, loss of vision, impaired hearing, involuntary muscular twitching, cramps, drowsiness, vomiting and diarrhœa." These are but some of the common symptons of this malady, which accounts for Warner's Safe Cure curing so many diseases (so-called), which are not diseases but are symptoms of advanced kidney disorders.



Newtown Double Geared, Level Tread Horse Powers.
AND THRESHERS AND CLEANERS ARE THE BEST.

We also manufacture Self-Dump Rakes, Corn Shellers, Farm Rollers, etc. Send for Circulars and Price Lists. A. BLAKER & CO., Newtown, Bucks Co., Pa

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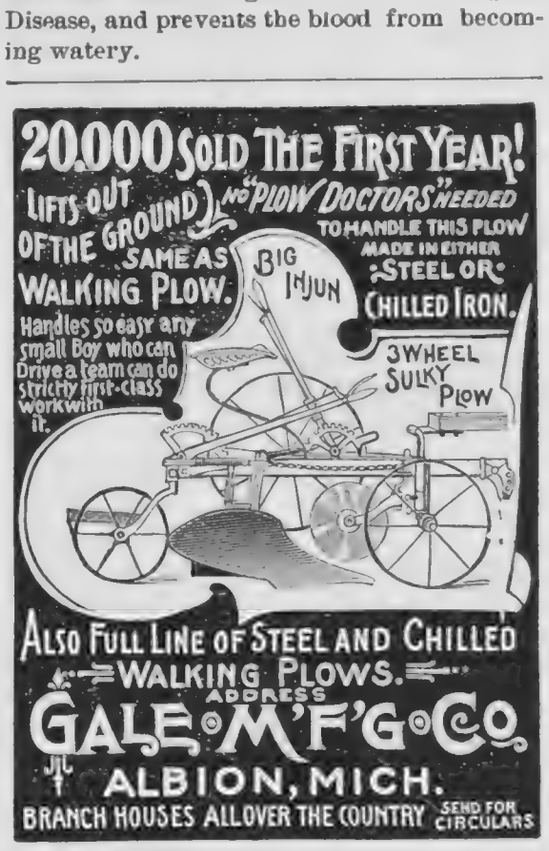
FITS, convulsions, dizziness and headache are prevented and cured by using Warner's Safe Cure. Why? Dr. Owen Rees says: "The tenuity (watery condition), of the blood in Bright's Disease, produces cerebral symptoms, the serous (watery portion), is filtered through the blood vessels of the brain causing anæmia and subsequent head symptoms." That is why these symptoms yield to Warner's Safe Cure. It gets rid of the Bright's Disease, and prevents the blood from becoming watery.



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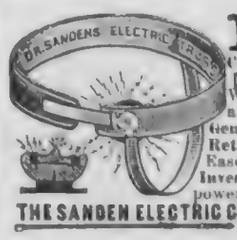
of two Acres at a sitting. A man, a boy and a horse can operate it. No heavy Chains or rods to handle. The crop on a few acres the first year will pay for the Machine. It will only cost you a postal card to send for an Illustrated Catalogue, giving price, terms and testimonials. Address the Manufacturers,
JAMES MILNE & SON, SCOTCH GROVE, IOWA.

NEW JAPANESE BUCKWHEAT—Guaranteed Pure Seed, for $1.50 per bushel.
E. G. STONE,
Box 345. Cuba, N. Y.



RUPTURE

Can be CURED by DR. SANDEN'S Electric TRUSS
Warranted Best Truss made, to CURE all Curable cases or Refund Money. Only Genuine Electric Truss in World. Perfect Retainer, Gives instant relief, speedy cure Ease and Comfort day and night. This New Invention combines science, durability and power. Price $3 & $5. Illus. pamphlet free.
THE SANDEN ELECTRIC CO. Broadway & 12th St., NEW YORK

SEEDS, SEEDS, SEEDS

THORBURN'S PRIVATE STOCK LETTUCE
Best for Out-doors.

See Catalogue of VEGETABLE, FLOWER AND TREE SEEDS FOR 1889.

Also Catalogue of Gladiolus and Other Spring Bulbs Mailed Free.

J. M. THORBURN & Co., 15 JOHN ST. NEW YORK.

RUSTLESS IRON WATER PIPE.

Send for catalogue.
Braman, Dow & Co., Boston, Ag'ts for New England.
THE WELLS RUSTLESS IRON CO., 21 Cliff Street, New York.

OUR SPECIALTIES.

Persons wanting the best BUGGIES, HARNESS or OFFICE SAFES, should see that the Name **MURRAY** is plainly visible on each. All "MURRAY" Goods are fully warranted.

$5.95 HARNESS $5.95 for a good set of Single Buggy Harness. $15.20 for a good set of Double Buggy Harness.

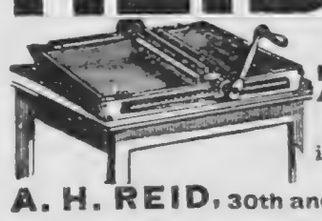
$22 FIRE-PROOF OFFICE SAFES Our $22 Fire-Proof Office Safes are as good as those sold by other manufacturers for $50.

$55.95 SIDE-BAR BUGGIES Beat the World, others ask $80 for similar buggies.

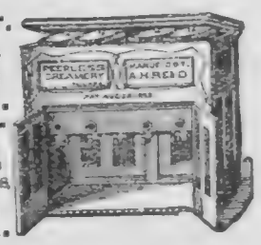
"One price." Buy of the Manufacturer. We deal direct with the Consumer.
Address WILBER H. MURRAY MFG. CO., CINCINNATI, O.

REID'S PEERLESS CREAMERY

Absolute Perfection for Best Quality Butter.



BUTTER WORKER
MOST EFFECTIVE and CONVENIENT.
Also CHURNS, POWER BUTTER WORKERS, PRINTERS, SHIPPING BOXES.
Send for my Illus. Catalogue, containing valuable information for Creamery men and Butter Factories.
CREAMERY SUPPLIES.



A. H. REID, 30th and Market Streets, PHILADELPHIA, PA.

PERFECTION IN BUTTER MAKING.

THE O. K. OUTFIT EXCELS THEM ALL.

O. K. CREAMERY
Has the largest cooling surface, takes less cooling material, less labor, and gives best results. All cream raised between milkings. Skimming glass whole depth of can, showing condition of milk without touching creamery.

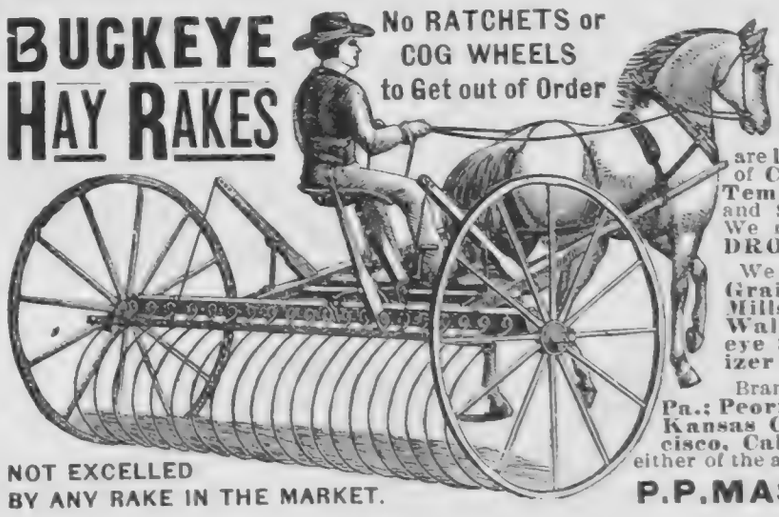
O. K. CHURN Has improvements over the best. Easy to clean, easy to operate. Made of White Oak. Cover Castings will not break.

O. K. BUTTER WORKER Made on scientific principles. Adjustable bed. Preserves the grain of the butter. Solid wood rolls. THE MOST PERFECT Butter Worker ever put on the market.

JOHN S. CARTER, Sole Manufacturer, SYRACUSE, N. Y.

BUCKEYE HAY RAKES

No RATCHETS or COG WHEELS to Get out of Order



NOT EXCELLED BY ANY RAKE IN THE MARKET.

PRACTICALLY A Self-Dump Rake

HIGH WHEELS with Tires bolted on. TEETH are long and adjustable. Made of Crucible Steel with Oil Temper. Has a Lock Lever and Swinging Cleaner-Bar. We make both the COIL and DROP TOOTH.

We also manufacture Buckeye Grain Drills, Buckeye Cider Mills, Buckeye Riding and Walking Cultivators, Buckeye Seeders, Lubin Pulverizer and Clod Crushers.

Branch Houses: Philadelphia, Pa.; Peoria, Ills.; St. Paul, Minn.; Kansas City Mo.; and San Francisco, Cal. Send for Circular to either of the above firms or to

P. P. MAST & CO., *Springfield, O.*

SEDGWICK WOVEN STEEL WIRE FENCE AND GATES.

Best Fences and Gates for all purposes. Free Catalogue, giving full particulars and prices. Ask Hardware Dealers, or address, mentioning this paper,
SEDGWICK BROS., RICHMOND, IND.

EXPANDED METAL

(PATENTED THROUGHOUT THE WORLD.)

This product is made of the BEST QUALITY OF MATERIAL by a new and novel process forming a

SOLID STEEL FENCING MATERIAL

DURABLE, RIGID, ORNAMENTAL and MODERATE IN COST.

It is designed for Suburban Residences, Farm Buildings, Verandas, Gardens, Lawns, Poultry Yards, Chicken Houses and Coops, Church Premises and Cemetery Lots. Also for Window and Skylight Guards, Grape Arbors, Trellises, Tree Boxes, Signs, Office Rail, Door and Car Mats, and everything usual to METALLIC-LATTICE or WIRE WORK.

SEND FOR ILLUSTRATED CATALOGUE.

Central Expanded Metal Co. PITTSBURGH. | N. W. Expanded Metal Co. CHICAGO. | St. Louis Expanded Metal Co. ST. LOUIS.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

THE OWNERSHIP OF MANURE ON RENTED LAND.

E. J. H., Leavenworth, Kan.—Has a tenant a right to remove manure made on the premises?

ANS.—That depends on circumstances. Manure made on a farm from the consumption of its products, is generally considered as belonging to the realty or land, and will pass with the farm if sold. This rule rests on the ground that for the benefit of husbandry the manure produced on the farm should be there used. In New Jersey, however, manure is held to be personal property and does not pass with the real estate as a part of it. As between landlord and tenant, whatever manure is made by the consumption of the produce of leased land becomes the property of the landlord, though lying in heaps and made by the tenant's cattle from crops which belonged to him till consumed—even though he be a tenant at will only—and in the absence of any express stipulation on the subject, an out-going tenant has no right to remove or sell it to be removed. If he removes it, he commits an offence for which the landlord can obtain redress, and if he sells it, the sale vests no property in the buyer. Of course, the tenant has a qualified right in the manure for the purpose of applying it to the farm This rule does not apply to manure made in livery stables or out of the ordinary course of husbandry, or from products obtained elswehere; for manure so made is personal property and may be removed by the tenant at the close of his term.

D. E Z., North Leverett, Mass.—I have a clay bank beside the highway. Have the town officials a right to set off an acre or more, for repairing the road? Can they set their own value on it?

ANS.—Is it a turnpike, county or township road? The rules with regard to the three kinds vary somewhat, so that a more definite answer can be given if the kind of road is mentioned. As a rule, any person who may think himself aggrieved by the action of the highway officers, either in laying out, altering, repairing or discontinuing a road, or in taking materials for making or mending it, may, at any time within 60 days after the officers' determination has been filed, appeal to the judge of the county, who shall appoint three disinterested freeholders, residents of the county, but not of the town, to hear and determine the appeal.

S. W., Waterbury, Conn—A makes an offer to B for B's farm and B accepts the offer. An agreement is drawn up and signed by them and witnesses, stating the terms. When the deed is to be delivered and possession given, A pays down a small amount for which B gives a receipt. At the time he was sober and apparently sane. A is ready to take the farm; but B refuses to give a deed for it, giving as a reason, that he was not mentally competent to make a contract, and it is now sought to have a conservator appointed over him. Can A compel B to give a deed for the farm and possession of it, if a conservator is appointed over him.

ANS.—Probably not; such an appointment would indicate that he was not mentally capable of making a valid contract when he signed the agreement.

R. E D., (address mislaid).—In 1887 I had a lawsuit and the lawyer asked me to sign a note on the understanding that if I gained the suit, I would not have to pay the note. I did gain it and the lawyer got $250 for his work. I lost $100. Then the lawyer served papers on me for the amount of the note. I told him I could't pay it, and that he must give it up. He withdrew the suit then but said he would get judgment against me. Can he do so?

ANS.—For what consideration was the note given? The case isn't quite clear; but judging from the rather confused statement, it is very likely the lawyer can do as he threatens.

Various.

THE A, B, C, OF GOOD GARDENING.

ARRANGE your entire garden in long rows for cultivation by horse-power.

Build a hot-bed to start early lettuce, radishes, and plants for transplanting.

Cart all brush, vines, and other rubbish together, and burn them before you are ready to plow. You are always in a hurry then, you know.

Draw a plan of your garden on paper, marking the spaces assigned to the different vegetables.

Endeavor to grow a succession of peas, sweet corn, radishes, lettuce, etc.

Firm the soil over all seeds sown, when it is not wet enough to pack.

Gather all early peas, cabbage, etc. as soon as matured, and use the ground for late turnips, beets, celery, etc. This is more profitable than leaving it to grow up to weeds.

Hoe! hoe!! hoe!!! around the young plants, the oftener you hoe, the faster they will grow. This is one great secret (?) of early vegetables.

Irrigation by some means is a necessity for growing good cauliflowers on dry soils, in a dry season.

Jot down any bits of information about gardening, for future use; they may be lost if you trust to your memory.

Keep the ground clean and thoroughly stirred while the plants are small. A few radish or turnip seeds sown with onions, celery or other slow-germinating seeds, will enable you to work between the rows much sooner than you otherwise could.

Lima beans require a warm, light, rich soil, and should be planted eyes down, around the poles, four to a hill. They require extra care, but will wel repay it in the delicious product.

Manure melons in the hill with well-rotted yard-manure, mixing it well with the soil before planting the seed. Plant shallow, after the ground is warm.

Never, never, make a garden on cold, wet, springy, undrained land, nor on land filled with quack roots. Better buy your garden truck

Onions grow larger on muck, but those of the best quality are grown on upland. Quality at the expense of size.

Peas and potatoes for early use if planted before the ground is warm, should not be covered deeply, or they will be a long time in coming up.

Quality should be the desideratum in vegetables grown for home consumption. Unfortunately for the buyers, they usually pay more attention to size and fine appearance than to quality, and the market-gardener must govern himself accordingly.

Radishes, to be crisp and tender must be grown very quickly. A heavy dressing of coal and wood ashes worked into the soil, and frequent applications of liquid manure will secure both rapid growth and exemption from worms.

Stir the soil around the cabbages, corn, potatoes, etc., as frequently as possible, especially after a rain. Nothing is more favorable to rapid growth. "Hoe cabbage every morning before sunrise" is an old maxim.

Tomatoes are less liable to rot if trained on a trellis, than if allowed to trail over the ground.

Unceasing warfare on insects is the price of a good garden. Paris green in plaster or water for the Colorado beetle, and a much weaker solution for melon and other vines; and dry ashes sifted over plants when the dew is on, for the flea-beetles, are cheap, handy, and very efficient.

Vigorous-growing plants are less liable to serious injury from insect attacks, than are those which are weak and spindling; hence the wisdom of inducing a rapid growth.

Weed all small truck while the weeds are small. If left longer, they take the strength of the soil from the vegetables, and increase the danger of uprooting them in removing the weeds.

Xcellent beets, turnips and similar roots are grown for family use by sowing the seed late in June or early in July, thus inducing rapid growth and tender flesh.

Yard-manure should be well rotted before being applied to a garden, else many troublesome weeds will be introduced.

Zero weather is not very favorable for actual work in the garden, but is just the time to study new methods, plan the season's work, study the catalogues, select and order seeds, implements, etc., that no time may be lost when spring opens. F. H. V.

Miscellaneous Advertising.

RHEUMATIC Sciatic Pains

Rheumatic, Sciatic, Shooting, Sharp, and Muscular Pains and Weaknesses, Back Ache, Uterine and Chest Pains, relieved in one minute by the first Cuticura Anti-Pain Plaster. and only instantaneous pain killing, strengthening plaster. 25 cts.; 5 for $1. At druggists, or of POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

SOME OLD FASHIONS REVIVED.

THERE is at present a revival of old fashions steadily going on. Popular favor has returned to many of the customs of early times and our homes are rapidly assuming an air of the past.

The old spinning wheel has returned from exile and forms a conspicuous and interesting ornament in our homes.

Quaint old tapestries, rugs and articles of furniture have been restored to deserved popularity.

There is a reason for this revival.

Our ancestors were of the substantial kind and their tastes were accordingly marked.

They looked to their personal comfort and when it was attained they stopped.

Fashion's foibles had no charm for them and in mind and person they were the equal of any people the world has yet seen.

Quick in perception and accurate in judgment, they soon detected the cause of any Physical discomfort and as quickly applied the proper means for the removal of it.

Conspicuous among some of the old fashions recently revived has been the reproduction of some of our grandmother's early time home cures, which are now holding a deserved position in popular favor, under the name of Warner's Log Cabin remedies and include a Sarsaparilla for the blood, Hops and Buchu for the stomach and system, Cough Remedy for colds, Extract for internal or external pain, Hair Tonic, Rose Cream for catarrh, Plasters and Pills.

For purity, simplicity and for their genuine beneficial properties they are unequaled and are worthy of our good old grandmothers, who first produced them.

May there be a revival, by their use, of the good health and long lives of early times!

A WONDERFUL PROCESSION

Of what? Why the constant stream of **Hogs, Cattle and Sheep** continually passing into the

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BONE AND BLOOD

Of which are constantly being manufactured into

RAW BONE

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During the past 25 years, by the

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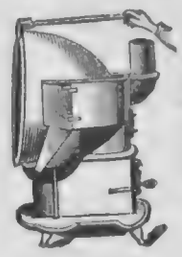

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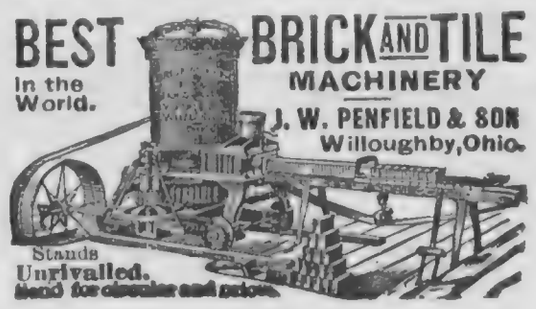

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Steel Crusher and Leveler. Double Gangs of Adjustable Reversible Coulters. Lumps Crushed, Soil Cut, Lifted and Turned in one operation. No Spike or Spring Teeth to pull up Rubbish. No Wearing Journals. Practically Indestructible. Sizes 3 to 12 ft. wide. With and Without Sulky.

I Deliver Free at Convenient Distributing Depots West and South.

FAIR PLAY. Don't Buy a Base Imitation or Inferior Tool. Order a Genuine Double Gang Acme on TRIAL, to be Returned at my Expense if not Satisfactory. No Pay Asked in Advance.

Illustrated Pamphlet FREE.

DUANE H. NASH, Sole Manufacturer, Millington, New Jersey.

MENTION THIS PAPER.

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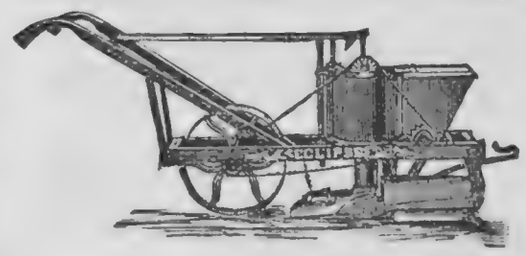
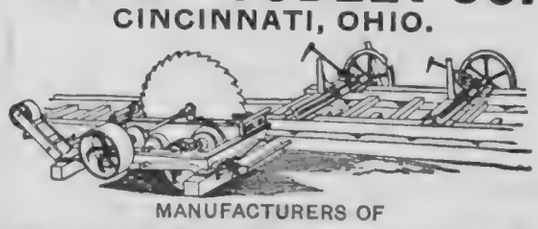


Will plant Field and Ensilage Corn, Beans Peas and Beet Seed in hills, drills and checks—in hills up to 45 inches; in checks from 36 inches up to any distance desired. Will disribute all Fertilizers wet or dry. Farmers, send for circulars.

ECLIPSE CORN PLANTER CO., Enfield, Grafton Co., New Hampshire.

THE LANE & BODLEY CO. CINCINNATI, OHIO.



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34 Park Row, New York.

CATALOGUES, ETC., RECEIVED.

PEACH YELLOWS.—A Preliminary Report by Erwin F. Smith. Such is the title of Bulletin No. 9 from the Botanical Division of the United States Department of Agriculture. It is a volume of 212 pages and 37 plates, containing all the trustworthy information that Mr. Smith has been able to gather during 16 months of continuous observation and inquiry. In spite of the mass of information given in this volume, we do not see that the public is made much wiser as to the cause of the disease. Mr. Smith gives the following list of "conditions known or supposed to favor the disease"

(1) Climatic conditions.
  (*a*) Non-adaptation of the peach to our climate.
  (*b*) Supposed general change in climatic conditions.
  (*c*) Early autumn frosts.
  (*d*) Cold winters.
  (*e*) Excessive rain-fall.
(2) Earth conditions.
  (*a*) Exhaustion or infertility of soil.
  (*b*) Wet and rich soils.
(3) Artificial or culture conditions
  (*a*) Neglect of cultivation.
  (*b*) Neglect of pruning.
  (*c*) Excessive use of nitrogenous manures.
  (*d*) Degeneracy due to continued propagation by budding.
  (*e*) Propagation by means of imperfect or diseased pits.
  (*f*) Diseased buds.
  (*g*) Spread of the disease by infected pruning knives or saws.
  (*h*) Nurseries not responsible for all of the outbreaks.
(4) Mechanical or vital injuries.
  (*a*) Injuries by men or quadrupeds.
  (*b*) Injury by borers.
  (*c*) Root aphides.
  (*d*) Fungi.

AGITATOR THRASHER.—Catalogue from the J. I. Case Thrashing Machine Company, Racine, Wisconsin. This is the 46th annual catalogue issued by this house. It fully describes and illustrates the excellent thrashers which have made a reputation for Racine. There is also a very good list of boiler and saw-mill outfits noted in the catalogue. A novel and exceedingly valuable feature is introduced in the form of "Case's Catechism" This is a series of questions and answers bearing upon the proper mode of running a steam engine. We have frequently had inquiries from those who desired to know how to run a steam engine. This catechism is about the best answer that we have seen.

ALABAMA AGRICULTURAL EXPERIMENT STATION, Auburn, Ala.—Bulletin No. 4 of this institution treats of the culture of strawberries, grapes and raspberries. These are subjects that ought to interest Southern farmers.

NEVADA EXPERIMENT STATION.—Bulletin No. 2 is sent by Leroy D. Brown, Reno, Nev. The bulletin deals with "The interdependence of plant life and climate conditions of Nevada." We do not see that this subject is of any great value to the general public.

EXPERIMENTS IN ARKANSAS.—The First Annual Report of the Arkansas Experiment Station, Fayetteville, Ark., is a very creditable volume. It is sent by Director Albert E. Menke. It will be impossible for us to speak of all the experiments noted in this volume. The station is very young yet and consequently this report must be largely devoted to introductory work, the formation of a base upon which to rear solid results. It seems to us that the Arkansas Station has made a most excellent start in the right direction. The indications are that it will prove a source of profit to the State. The Station officials seem to think that Arkansas should become a sugar-making State. Elaborate experiments with sorghum have been started, and it is proposed to find out all that it is possible to know regarding the chances of sorghum sugar in Arkansas. Experiment with potatoes, small fruits, fertilizers, dehorning, and vineyard work are also recorded

FOOD ADULTERATION IN NEW JERSEY.—Report of the New Jersey Dairy Commissioner, from William K. Newton, Paterson, N. J. It is the duty of the New Jersey Dairy Commissioner, to collect and analyze samples of the various foods offered for sale in the State and to see that the laws regarding the use of food adulterants are enforced. During 1888, 623 articles of food were analyzed. Of these, 320 were pure and 303 adulterated or below the standard. It appears that a considerable quantity of oleomargarine is still sold in New Jersey, notwithstanding the fact that only 28 licenses for its sale were granted during 1888. Of milk, 121 samples were examined and 43 of these found to be below the standard. A number of milkmen were detected in an effort to sell skimmed milk for whole milk and the milk from diseased cows was detected in several cases. The Commissioner states that a large proportion of the lard offered in New Jersey was adulterated. He estimates that not over 1,000 pounds of absolutely pure "leaf lard" is made in the State in a year. American canned goods were generally pure and wholesome. Traces of tin are frequently found in such goods, but it is not believed that tin is a poison. Out of 16 cans of imported canned vegetables, copper was found in 11, and only eight pure samples out of 24 specimens of coffee were discovered. Coffee adulterants are generally harmless however. Ground spice is seldom pure, extracted honey and maple sirup are often adulterated and "soda water" that is stored in bottles with metal stoppers is found to contain lead in damaging quantities. The whisky of New Jersey sustained its general reputation for vileness. Only three samples out of 15 examined could be considered "standard." Brandy and gin were even worse. The Commissioner is surprised to learn how rapidly the opium habit is increasing, and how much of this deadly drug is sold at country grocery stores The report contains considerable information that will be interesting to Jerseymen.

NATIONAL EDUCATIONAL ASSOCIATION.—The proceedings of the meeting of this association, which was held at Washington in February, 1888, are sent out by the Bureau of Education. This volume should be full of interest to teachers. Some of the most noted educators in the country contribute articles on topics that seem to lead up to the true principles of education. Here is the first paragraph we find in the detailed report. It is the opening of an essay on the importance of manual training in the public schools.

"The effort to avoid labor is the chief curse of the human race Idleness is a social crime. Work is the law of life, and hence the duty of all." We most earnestly commend this pamphlet to the thousands of men and women who make a business of training our children.

LUBURG CHAIRS.—Catalogue from the Luburg Manufacturing Co., Philadelphia, Pa. A special feature of the business done by this house is the abandonment of wholesaling. It is now proposed to sell direct to all consumers at the lowest known factory prices. This manner of doing business is becoming very popular and always meets with the approval of customers. Those of our readers who want to procure a baby coach, a reclining chair, an invalid chair, or in fact any sort of a comfortable seat will do well to procure this catalogue and read it over.

Miscellaneous Advertising.

INFANTILE Skin & Scalp DISEASES cured by CUTICURA Remedies.

FOR CLEANSING, PURIFYING, AND BEAUTIFYing the skin of children and infants and curing torturing, disfiguring, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair, from infancy to old age, the CUTICURA REMEDIES are infallible.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease, from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c. RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., Boston, Mass.

Send for "How to Cure Skin Diseases."

Baby's Skin and Scalp preserved and beautified by CUTICURA SOAP.

KIDNEY PAINS, Backache and weakness cured by CUTICURA ANTI-PAIN PLASTER, an instantaneous pain-subduing plaster. 25c.

As the hair has a shadow, so the slightest disease of the scalp threatens the hair. Put the scalp in healthy condition by the use of

Warner's Log Cabin HAIR TONIC.

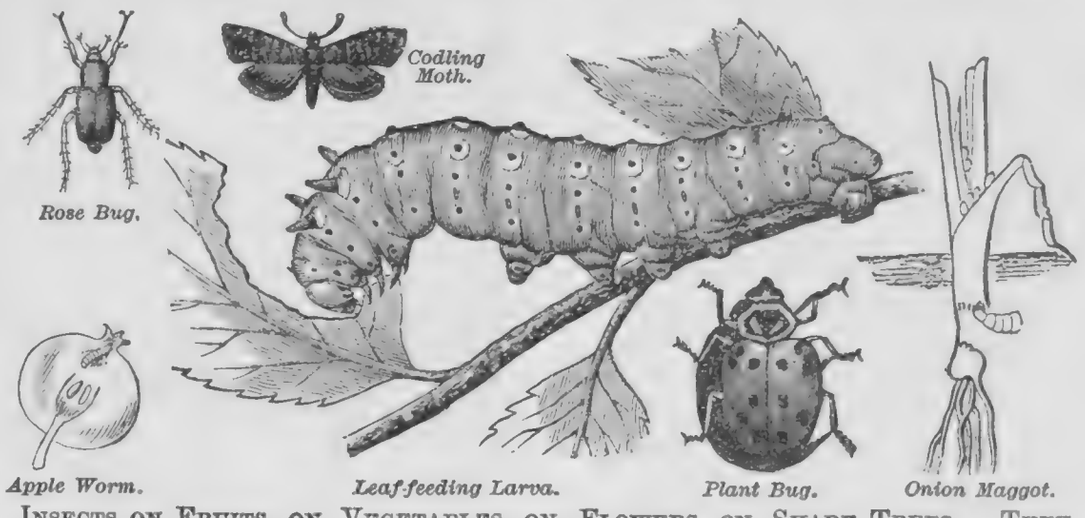
It restores the hair, and has no equal.

GROWERS AND DEALERS IN SWEET CORN, ATTENTION! Genuine Connecticut grown Stowell's Evergreen Sweet Corn by express, $2.25 per bushel, $1.25 per half-bushel, 75c. peck. C. E. CHAPMAN, Westbrook, Conn.

SPRAYING FRUIT TREES to destroy injurious insects is recommended by all experienced Horticulturists and by this system only can perfect fruit be secured. For full directions and outfit for hand or horse power, address FIELD FORCE PUMP CO. Lockport, N. Y.

PEERLESS DYES Are the BEST. SOLD BY DRUGGISTS.

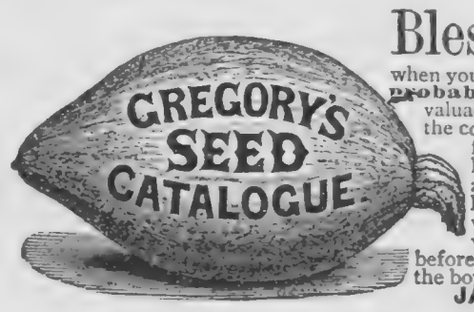
Trees, Seeds and Plants.



INSECTS ON FRUITS, ON VEGETABLES, ON FLOWERS, ON SHADE TREES. THEY ARE COMING. BE PREPARED IN TIME.

An Insect Supplement

to the illustrated monthly journal, POPULAR GARDENING AND FRUIT GROWING has just been issued, which sums up the most approved means of dealings with all common insects. There are 315 headings (alphabetical arrangment.) Clear descriptions, life-like engravings. We will mail a copy of this valuable insect guide to every cultivator who will send us their address and four cents in stamps. Order at once, for the edition will soon go. Address, **POPULAR GARDENING PUB. CO., Buffalo, N. Y.**



Bless Your Souls! My brother farmers, why pay **10** or **20** cts. for a seed catalogue, when you can receive one containing **just as many and very probably more varieties** and all new vegetables that are really valuable, for just **NOTHING!** It may have less paint about the covers, but, great Scott! we are not after **paint**, but **seed**. fresh and true to name, such as will make with a master's hand its own picture all over our farms and gardens; seed I am not afraid to **WARRANT** on the cover of my catalogue. Come, my fellow farmers, and join the thousands, who for thirty years have been users of my seed; why, we were a goodly company and having pleasant times together before the great majority of the present race of seedsmen (bless the boys!) had left their nurse's arms! Send for a catalogue.
JAMES J. H. GREGORY, Marblehead, Mass.

SPRING-TOOTH HARROWS SPECIAL PRICES TO INTRODUCE. SEND FOR ILLUSTRATED PAMPHLET. WE MAKE 6 DIFFERENT HARROWS. HERENDEEN M'F'G CO. GENEVA, N.Y.

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For Weeding and Cultivating all hoed crops. For putting in Grain and Grass and Hungarian or Millet it has no equal. Every farmer should inquire into its merits. Ex-Gov. ROBIE, Master Me. State Grange, writes: "It should be owned by every farmer in the country." Send postal card for circulars and testimonials. All parties in Middle States should address BROWN MFG. CO., 40 DEY ST., NEW YORK. All others UNIVERSAL WEEDER CO., North Weare, Hillsboro Co. N. H.

Stayman's No. 1 Strawberry.

Large and Fine, produced at the rate of **30,000 quarts per acre Price $2 per dozen; $10 per 100.**
JEWEL, the earliest and best black grape known. Equal to the Delaware in quality. **Price, $1.50 each. Send for testimonials.**
STAYMAN & BLACK,
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TREES! + SHRUBS!

Choicest new and old kinds; a large and superior stock; my own growth; reliable and sure to give best results. Prices low for best quality. Send for Catalogue.
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WILLIAM C. STRONG.

THE NEW WHITE GRAPE DIAMOND $2 1/2 EACH FREE BY MAIL. THE FINEST GRAPE EVER INTRODUCED.. LARGE, EARLY, HARDY, PRODUCTIVE. ADDRESS DIAMOND GRAPE CO. BRIGHTON, N.Y. AGENTS WANTED

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My specialty for 32 years. Over **100 best** new and old kinds: Empire State, Diamond, Jewel, Eaton, Moyer, Niagara, Witt, Woodruff Red, Moore's Early, Nectar, Brighton, Pocklington, Delaware, Catawba, Elvira, Ives, etc. Nice, medium 1 year Concords, **$10 per 1000.** Also, Strawberries, Raspberries, Blackberries, Gooseberries and Currants. *Best Plants. Low Prices.* Catalogues **free. GEO. W. CAMPBELL,** Delaware, O.

PEACH TREES,
ALL THE LEADING VARIETIES.
Apple Trees.
Varieties for all sections North and South. Special collection of winter keepers for sections where Northern varieties do not succeed. **Pears, Cherry and Quince Trees, Grape Vines, Shade and Ornamental Trees.** For sale **Cheap.** 80 page Catalogue free. The RANDOLPH PETERS NURSERY CO., Mention Rural New-Yorker. Wilmington, Del.

GRAPE VINES
Nectar, Woodruff, Eaton, and all the best varieties. Dandy and other Strawberries. Blackberries, Raspberries, Wonderful Peach, and other nursery stock. Descriptive catalogue giving *Instructions for planting* free
JOEL HORNER & SON, Delair, Camden Co., N. J.

ROCHESTER COMMERCIAL NURSERIES. Address W. S. LITTLE Rochester, N. Y. **TREES** NEW and RARE OLD and RELIABLE Both Fruit and Ornamental. ROSES, Vines, Clematis, Rhododendrons, etc. Two illus. Catalogues 6 cts. Free to customers. Wholesale List, FREE.

VEGETABLE PLANTS—Standard Sorts, at reliable rates. Send for Price List.
M. GARRAHAN, Kingston, Pa.

SEED POTATOES, Ten Standard Varieties. $2 per bbl. or less. Also **Strawberry Plants** and **Japanese Buckwheat** Send for price list.
GEORGE SISSON, La Plume, Penn.

FOR SALE CHEAP!
3 and 4-Year-Old Apple Trees. List of Varieties and prices on application.
GRAY BROTHERS, New Canaan, Conn.

GRAPES Plants of **Best Quality.** Warranted True to Name. **LOWEST Prices,** and **Largest** Assortment of **old and new** varieties. At dozen rates, **Free by Mail. Special attention** called to **Promising Novelties.** *Send for Price List.* Address,
BUSH & SON & MEISSNER,
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Cold Frame Cabbage Plants.
500,000
Ready for planting. Send for prices. Address
JOHN. S. BARNHART, Denton, Md.

THE ORANGE CO. FIELD CORN
SURPASSES ALL OTHER FLINT VARIETIES. Has yielded over one hundred and fifty bushels to an acre Send for our Illustrated Catalogue of Seeds, containing all the new and standard varieties of Vegetables, Farm and Flower Seed, Potatoes, etc.
W. H. CORNISH,
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SEEDS.
Clover, Timothy and Alsike.
Write to S. S. READ, Toledo, Ohio, for prices.

Humorous.

The RURAL NEW-YORKER *is prepared to offer very liberal terms to good, responsible,* PERMANENT *agents. Correspondence solicited.*

DEEPER than it seems—mud.—*New Haven News.*

THE Chinese are an industrious people, and yet they have a great deal of idol time.—*Life.*

TAKEN as a whole, the Indians, although illiterate, are the best red race in the world. —*Harper's Bazar.*

A BOSTON woman, when writing to invite a friend to dine with her, does not dare to affix "N B." to her letter, lest it be interpreted "No beans."—*Field and Farm.*

BROWN: "I see by your watch, Robinson, it is about an hour ahead of sun time." Robinson: "Yes, I don't see what's got into the sun lately."—*Harper's Bazar.*

GUEST (in restaurant): "Waiter, where's that cheese I ordered!" Waiter: "It's coming, sir, coming." Guest: "Well, I wish you'd ask it to hurry."—*Texas Siftings.*

"CALUMNY," says a philosopher, "is like a coal; if it does not burn it will soil." Yes; and calumny warms a man about as well as coal, too. Still, we prefer coal.—*Life.*

"THE only reason why I got my ears boxed," said Johnny, "was because when mother said a neighbor had borrowed a hen of her, I said the lent-hen season had arrived." —*Baltimore County Democrat.*

THE church was decorated with sweet spring flowers and the air was heavy with their fragrance. As the service was about to begin, Kitty whispered: "Oh, mamma, don't it smell solemn?"—*Liberty Tribune.*

A POET is born, not made. This is lucky for the poet. If the populace caught him in the act of making himself, there would be an injunction served on him so quick that it would make his head swim.—*Puck.*

AT THE REGISTRY OFFICE.—Clerk: "Your age, please." Woman Voter (facetiously): "A woman, you know, is only as old as she looks." Clerk (gallantly): "Oh, but surely, madam, you cannot be so old as that."—*Boston Transcript.*

A CITY boarder in the country awoke at 5 A. M. and heard the hired man running a lawn mower. Thinking he was still at home, he nudged his wife and said, "There's that girl next door practicing her singing lessons again."—*Norristown Herald.*

WIFE revisiting the scene of her betrothal: "I remember, Algernon, so well when you proposed to me, how painfully embarrassed you were." Algernon: "Yes, dear; and I remember so well how kind and encouraging you were, and how very easy you made it for me, after all."—*Life.*

MRS. SUBURB (reading): "The really efficient laborer, says Thoreau, will be found not to unduly crowd his day with work, but will saunter to his task surrounded by a wide halo of ease and leisure." Mr. Suburb: "Humph! Thoreau never lived where he had to catch trains."—*Philadelphia Record.*

BRITISHER: "And have you any—aw—pawk in Cincinnaughty like Hyde Pawk, ye know?" Miss Bacon: "Any pork? Well, in good round fat numbers, I should say about 50,000 to the square mile." Britisher: "Fifty thousand square miles of pawk! By Jove, now you weally surprise me, Miss Bacon."—*Harper's Bazar.*

ALL the same a hundred years hence: "Kin I git a marriage certificate, mister, with a gal's name left blank?" inquired a young man. "I guess so," was the reply. "What's the trouble?" "None yit: but gals is like everythin' but death an' taxes, mighty onsartain. There's going to be a weddin' though, mister, an don't you forgit it."—*Echo.*

WORSE by half than the hen and a half problem is this: A certain family consists of one grandfather, two grandmothers, one father in law, two mothers-in-law, three mothers, two fathers, two daughters, one son, one daughter-in-law, one son-in-law, one grand-daughter, and there are only six persons in the family.—*Farm Journal.*

PHOTOGRAPH OF EXHIBIT AT BAY STATE FAIR, SPRINGFIELD, MASS, 1888, BY MR. F. J. KINNEY OF WORCESTER. THE VEGETABLES WERE RAISED EXCLUSIVELY ON STOCKBRIDGE SPECIAL MANURES, AND TOOK FIRST PRIZE; ALSO SWEEPSTAKES AND FIRST PREMIUM AT NEW ENGLAND FAIR AT WORCESTER.

The Bowker Fertilizer Company were the first to take the plant as the guide to the manufacture of fertilizers, studying it and its wants, and making fertilizers to meet those wants. They proceed upon the principle of feeding the plant rather than the soil; *for the soil has no life in itself, hence no wants.* It is the plant which lives and grows upon the food which is fed to it; and, if the food is sufficient and suitable, it thrives, if not, it fails. This is the Stockbridge system of plant feeding originated by Prof. Stockbridge, and which has been extensively copied by other manufacturers, but the copies have not been equal to the original in *crop-producing power.* PAMPHLETS MAILED FREE.

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IN ONE SEASON, AWARDED BUTTER MADE BY THE

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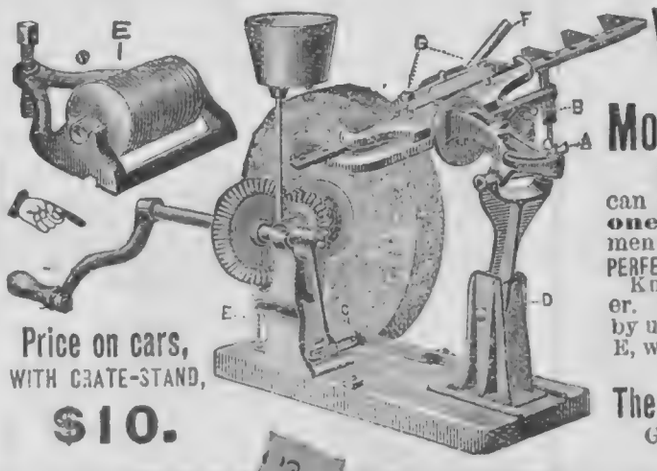
ENGINES, BOILERS, CHURNS, BUTTER WORKERS, AND EVERYTHING USED IN CREAMERIES OR DAIRIES.
SEND FOR CIRCULARS GIVING FULL PARTICULARS.
VT. FARM MACHINE CO., Bellows Falls, Vt.



Price on cars, WITH CRATE-STAND, **$10.**

WILLIAMS' GRINDER
FOR
Mower and Reaper Knives.
WITH THIS MACHINE ONE MAN
can grind the knives of a Cutter Bar, in **one-half the time** required by **two** men on a common grindstone—Do it with PERFECT ACCURACY and on any desired bevel. Knives so ground cut easier and last longer. The grindstone is kept perfectly true, by using occasionally, the steel cutting roll, E, which is sent with every machine.
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We make from the best material **Superior Articles Dairy Goods,** that are models of strength and simplicity. Unquestioned proof given of their durability. Sole manufacturers of **Curtis' Improved Factory Churn, Mason's Power Butter Worker, Lever Worker, Curtis' Square Box Churn, Rectangular Churn, Cream Vats, Dog Power, etc. "One Family Churn at wholesale where we have no agent."** All goods warranted exactly as represented. **TWO GOLD AND FOURTEEN SILVER MEDALS** awarded for superiority.
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WARRANTED not to blow down off the tower, and that our **Geared Wind Mills** have double the power of all other mills. Mfrs. of Tanks, Wind Mill supplies, and the Celebrated

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Good AGENTS WANTED.
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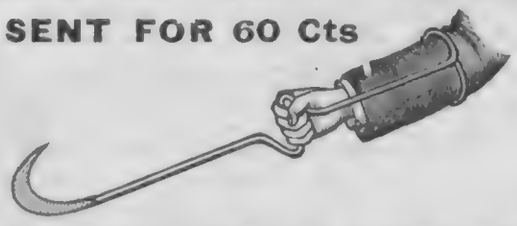

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OUT of many, one of the many plasters that are on the market, the best one is

Warner's Log Cabin PLASTERS.

DR. SETH ARNOLD'S COUGH KILLER CURES COUGHS AND COLDS. PREVENTS CONSUMPTION

I have used **Dr. Seth Arnold's COUGH KILLER** with great benefit. I most cheerfully recommend it.
E. O. Cushing, Thomaston, Knox County, Me.
Druggists, 25c., 50c., and $1.00

A POOR SUBSTITUTE.

DOCTOR DUCK (very near-sighted): "You want something? Haven't been able to eat a square meal in three weeks? Well, my good sir, you just take this bottle of my Ostrich Tonic, and it will give you a splendid appetite."

PHÉNOL SODIQUE
relieves pain instantly, healing the wounded parts. **Farmers and Stock-raisers** find it a prompt remedy for all kinds of Hurts, Galls, diseases of animals like Ulcers, Eruptions, Crack, Thrush, Itch, Mange, Cattle-Typhus, Foot-Rot, and Foot and Mouth Diseases, Scratches. For sale by Druggists and Merchandise Dealers. Price 50 cts. For circulars etc., send to Proprietors, HANCE BROS. & WHITE, Philad'a.

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Savage & Farnum, Importers and Breeders of Percheron and French Coach Horses, Island Home Stock Farm, Grosse Isle, Wayne County, Mich. We offer a very large stud of horses to select from, we guarantee our stock, make prices reasonable, and sell on easy terms. Visitors always welcome. Large catalogue free. Address **Savage & Farnum,** DETROIT, MICH.
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Warner's Log Cabin COUGH AND CONSUMPTION REMEDY
will prevent and cure the many disorders called Consumption.

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Greatest inducements to get orders for our celebrated Teas, Coffees and Baking Powders.
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Mention Rural New-Yorker.

HOLSTEIN-FRIESIAN CATTLE
Special inducement for the next sixtv days!
On account of being obliged to vacate 500 acres, April 1, we must reduce our stock of Horses and Cattle.
The Grandest Lot of
BUTTER BRED BULLS
Ever Offered?
Cows and Heifers equally choice. Superb CLYDESDALE Stallions, Mares and Fillies. PERCHERON Stallions of superior breeding. TROTTING-BRED Stallions of choicest families. FRENCH COACH Stallions and Fillies of unequaled style and action.

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

PHOTO ENG. CO., N.Y.

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Miscellaneous.

NEW LEGISLATION NEEDED CONCERNING MONOPOLIES.

No. 3.

PRES. W. I. CHAMBERLAIN.

PRIVATE property, if wisely invested and managed in railways has its natural rights as property, to fair interest on the investments, insurance on the risk, and compensation for the skill displayed and labor expended in its management. But such property has by its very nature sharp limitations.

First. Railways are by their very nature virtual monopolies for their "suction ranges," (as O. W. Holmes terms it for colleges and cities.) That is, railways are virtual monopolies for the belt of territory for which they furnish outlet. This is clearly true for non-competing points, and under "pooled rates" and division of receipts there are no competing points as between railways. Natural waterways and State canals owned by the people can and do compete for slow freights, but not for perishable or fast freights or for passengers; and except for short distances horses on common roads cannot compete with steam on steel rails either for freight or passengers. I assume, then, that by their very nature and environment, railways, when once built, naturally become virtual monopolies. This point is susceptible of full proof. As monopolies, their operations should be regulated by law for the welfare of society. For it is a fundamental principle of our government, one for which our fathers fought in the revolution, that there should be here no privileged class authorized to levy unrestricted tax on the many. But an unrestricted monopoly on a necessity means exactly that—an unrestricted power to tax, a most dangerous thing with human nature what it is. Indeed we may as well fix it in our own mind clearly and once for all that it is one chief function of every just government to protect the ignorant against the overreaching of the learned, the weak against the violence of the strong, the simple against the cunning of the crafty, and the poor against the possible injustice of the rich. Even in reference to this single function, the "*laissez faire*" theory of government breaks down entirely. There must be something of the "paternal" element in government, or it cannot be a power for righteousness," justice, civilization, growth.

Second. Railways are *public servants*, *common carriers*, clothed by the public with most valuable public franchises. That is, the Government, the agent of the people, or rather the *soul* of which society at large is the organic body, so to speak, the Government gives to the railway companies its own right of "eminent domain" to lay their tracks, buying their road-bed and right of way *at a fair valuation* through private property, often unwilling, sometimes even hostile. For, while all of us want railways in territory yet unoccupied, none of us want them to come, where for the good of society they sometimes must—exactly through our farm, between our house and barn. The true theory of "eminent domain," by the way, rests, not upon the assumption that Government does or did own the land, but upon the fact that society must have arteries and veins for commerce, and that therefore Government, the agent, executive, brain, or personality of socie-

"RAT CATCHERS."

DRAWN FROM LIFE. See page 247. Fig 91.

ty, must see that these arteries and veins are opened as needed, and kept open. The same ultimate authority that opens wagon roads in the country, and streets in the city, opens railways through unwilling private land. The railways are as truly public thoroughfares as the roads and streets, though made and managed by private capital, somewhat like turnpikes and plank roads of old. And even as the turnpikes were gradually bought or taken by the county or State, the toll-gates taken down, and the roads owned, repaired and kept wholly at public cost and for the general good, and as the Post-Office system has all the time been owned and managed by the Government solely for the good of society, so if the good of society should ever seem to require it, might the Government take the railways into its own hands by purchase on appraisal, exactly as it at first authorized the railway companies to take their road-beds from the farmers on appraisal and purchase.

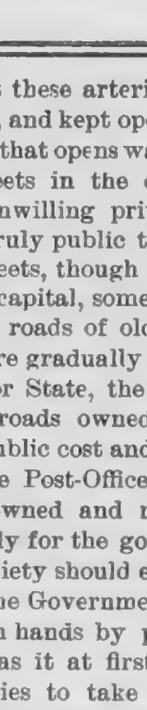


Fig. 87.

To deny this is to deny the right of Government itself to render a needed public service, which yet it has a right to authorize others to render.

Clearly the Government has no right to authorize railway companies to take, even by purchase on appraisal, the lands of unwilling private owners, except on the ground that railways are needed as public thoroughfares, and in order, and provided that the railways may serve the public reasonably, impartially and well, with no sudden changes in rates to shock and disturb business, with no secret rebates or discriminations for or against persons or localities. Clearly the government has the same right to regulate freight rates that it has to regulate passenger rates. The latter right is seldom questioned by the railways; the former right is often sharply questioned and bitterly resisted.

The fact that the wise adjustment of freight rates is a matter of great complexity and difficulty, does not prove that such an adjustment is not needed by the public, but exactly the reverse. The very fact of the intricacy of the problem makes it the easier for the railways to overcharge or discriminate if they are left wholly free by law to fix their charges as they will. It is a matter, however, that calls not for passionate recrimination and warfare, but for calm study and most earnest and candid deliberation. Never shall we secure laws both wise and just until we are as anxious to protect the real rights of the private property invested as to guard the public interests involved, and vice versa. If society and government make unjust demands against the railways, it will react injuriously upon society. We shall be more likely to succeed, however, if we make an earnest effort, than if we give up in despair. Free competition will not regulate the matter, for in reality, as seen, we have not free competition, but virtual monopoly backed by public franchise.

Third. Another sharp limitation arises from the fact not often noticed, though hinted at above, that the railway companies *are not inventors* except in minor degree, hence should not, as they sometimes seem to do, claim the rights and profits of inventors. The great predominant inventions that give them their vast carrying power,—steam-engine, locomotive, graded road-bed, solid, parallel steel rails and the like—these overshadowing things, I say, *are not the inventions* of the present railway companies or managers. These with the vastly increased carrying power they confer, long since became the property of the general public, with the lapse of the patents that once covered them. It is not enough to say that the railways carry cheaper than teams and wagons can. Of course they do. That is just what these great inventions of the past enable them to do. It is, however, a curious fact illustrating this hidden fallacy of argument, that one of the first railways built in Iowa based its local rates upon the actual cost of wagon transportation on dirt roads, *mud* roads, usually in the then new country. This was an absurdity, an utter ignoring of the existence of steam engine and iron track as ideas then and agents then belonging to society, to the world at large.

Rural Topics.

THE RURAL NEW-YORKER WOMEN'S National Potato Contest.

Instructions to be Observed in Competing for the Souvenirs.

THE plot must not be *less* than 1089 square feet, or one-fortieth of an acre. The rows must be equally (*i. e.* approximately so) distant from each other whatever that distance may be. The seed-pieces must be planted at an equal distance apart in the rows, trenches or drills. Any kind of manure or fertilizer, or both, and in any quantity, may be used. Any variety of potatoes may be planted.

2. The plot, whatever the size, must be settled upon on or before April 30, though it may be planted earlier or later in the presence of two witnesses. If *larger* than one-fortieth of an acre, this fact will have weight with the judges to this extent: *All things equal, or nearly so, the larger plot will draw the higher premium.*

It is *imperative* that each contestant should *devise* the entire plan of the contest and *superintend every* part of the work; see the land prepared, manured and fertilized; the seed cut, planted and covered; the insect-exterminator prepared and applied; the crop harvested, weighed, etc., according to the instructions which follow. It is *not deemed imperative that a contestant should be constrained to do the work with her own hands.* The R. N.-Y. has considered this carefully in deference to many who have expressed the opinion that each contestant should perform the entire work. But it should be borne in mind that many are physically unable to do so and

Fig. 88.

it would be manifestly unfair to rule them out as ineligible for that reason. In this "Contest" there is no justice in exacting of women what in similar competitions has never been demanded of men.

3. The full reports must be received before November 1st next.

THE REPORTS.

The following particulars must be given in the reports:

1. Size of the plot.

2. Whether the land is rolling or flat, sandy or clayey, moist or dry, naturally or artificially drained.

3. What was raised on this land for the three past years and about how much crop of each was harvested? How much fertilizer or manure was used?

4. When plowed or spaded, how deep?

5. What and how much manure or fertilizer was applied? The approximate cost of each?

6. When planted, the variety, *size* of seed and average number of eyes; total *weight* of seed; how planted, *i. e.*, in hills, drills or trenches; the depth?

7. Give an account of the weather from planting until harvest, whether wet or dry, hot or cool, etc.

8. State when and how often cultivated; how deep, with what implements.

9. Give the approximate hight of vines, size of stems, date of bloom.

10. At what date they began to die; when dead?

11. What was used to kill potato beetles; how often applied; how applied?

12. The date of harvesting.

13. State how many bushels altogether (60 pounds to the bushel). How many bushels of marketable; how many of unmarketable?

N. B. *All potatoes weighing less than three ounces to be considered unmarketable.* Absolute exactitude in this will not be insisted upon.

14. State whether the potatoes averaged shapely or unshapely; eyes deep or shallow; smooth or otherwise. If scabby, state what was deemed the *cause* of the scab.

15. *If engaged in another "Contest" state wherein you would proceed differently.*

FINALLY.

The following certificates must accompany each report:

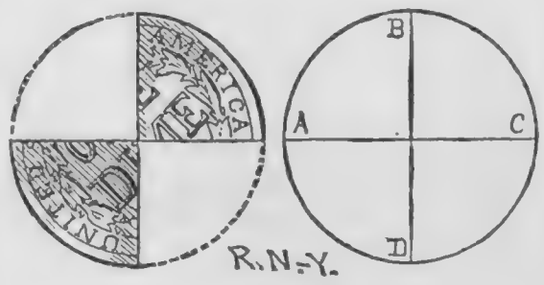


Fig. 89.

FIRST.

I do hereby affirm that the report herewith sent you is true in every particular.

JOHN JONES.

Jonesville, Jones Co., Ohio.

SECOND.

We do hereby affirm that we measured the plot of John Jones and found it of the exact area he states. We further affirm that we saw the potatoes dug and weighed as they were dug and that his statement is correct.

SIGNED, JAMES BROWN, CALEB SMITH,

Jonesville, Jones Co., Ohio.

Field Crops.

"CONTEST" CRITICISM.

WHAT WOMEN WRITE CONCERNING THEIR CONTEST.

FROM ILLINOIS.

My husband, though not a farmer or gardenere xcept so far as potatoes are concerned is enthusiastically in favor of the Women's Potato Contest. His increasing enthusiasm in the matter has awakened an answering echo in my own mind. Therefore, please, enter my name as one of the contestants. My husband has for years taken pains to fix up our kitchen garden plot in the highest state of fertility, and says I may take my choice in this rich garden plot; I shall also help myself to his fine compost heaps of leaf-mold, and to the best commercial fertilizer the markets afford. And as to varieties to plant, we already have almost every novelty in the potato-line grown in the country. Then we have almost every kind of garden plow ever invented; and let me tell my sisters to use Cole's garden plow. With this easy-running implement it is only fun to cultivate the garden. We take so many agricultural papers that I am making myself believe I am as well posted in potato culture, as "Joseph." In your efforts in favor of progressive agriculture, and in bringing about some useful employment and out-door exercise and healthful recreations for us poor, cooped-up women you have my best wishes and heartfelt thanks. MRS. J. W. BAKER.

Bureau County.

FROM ALABAMA.

My husband, though an M. D., has been a constant reader of your good paper for some years, and I, (little dreaming that through weary months of sickness he would be driven into abandoning work in his chosen profession) have often laughed at him for perusing your paper and catalogues, which he always claimed rested him. Last November while I was very sick we decided that change of climate and change of occupation, were what we most needed to restore us to health. So while I was so ill that it seemed almost like a farce, my husband sent in my name to you as one of those who would enter the lists of contestants in the Women's Potato Contest. We came South in December, planted potatoes the 15th of February; aside from my little contest plot, we put in six acres of Beauty of Hebrons. From the day we began the work our health steadily improved. I think you deserve great credit and many thanks from delicate ladies, for thinking of the plan of the Contest, etc., to induce women to work *out of doors more.* My little plot of potatoes will not be ready to dig till the first or second week in June. As to the division of souvenirs, etc., you know the average number of bushels per acre is less in Alabama than in Wisconsin and other States either East or West, as given by the Agricultural Reports of the United States. I presume there will be very *few* competing for the prizes in the South, but I hope that those who do will not labor under any undue disadvantage arising through dividing the country into East and West, as you spoke of doing in a late number. When my name was sent to you we were at our home in Eau Claire, Wisconsin. I hope I may be one in the South who will win, as I have done all the work with my own hands.

Wheeler Station. M. B. H.

FROM MASSACHUSETTS

Why not conduct the Women's Potato Contest in the same manner as the one in which you took part last year? Let there be no minimum size or weight to constitute a "merchantable" potato, but rather let the entire yields be estimated by weight only, as that is the only accurate and honest method to ascertain the true amount raised by each contestant in the United States

I would also like to cross out one other idea. Why say anything as regards cost of producing the crop. It seems to me that this Women's Contest should be conducted in a purely business-like manner just the same as though the participants were men instead of women. Among the prizes offered by the Mapes Co., and others, I see nothing regarding cost of production: it simply means the man who gets the largest yield from one acre. One party might be able to select a plot where it would need no fertilizer to raise a good crop of potatoes, while others, like the writer, could truthfully say, one year ago the plot was too poor for bugs to live on. Yet, health being spared, I have great hopes of that little piece of ground.

Fig. 90.

Am I alone in saying that the first prize should go to the woman who gets the largest yield and does the most work with her own hands? Supposing I tell my husband just how to do the work, and at harvest time, my plot gives the greatest yield. My neighbor over the way has done all the work on *her* plot (excepting plowing, harrowing, and applying the manure) and she gets within a small amount of my yield. By the labor of both head and hands she has *earned* that first prize and ought to have it. MRS. F. L. AVERY

I am much pleased with your success in creating an interest in the Women's Potato Contest, but I do think your condition about the "crop grown at *least cost*" is manifestly unfair. What chance has a woman on some of New England's barren fields in competition with her sisters in situations where the soil has all its virgin fertility! In New England, in many places the natural soil will not produce 20 bushels of potatoes to the acre.

All the fertility must be purchased, adding very much to the cost of the crop. Also the soil is in many places very stony, thus adding to the cost of cultivation, digging, etc. To be just, let the factor of cost not be considered. If it is, many in New England will not use as much fertilizer as they would like to for fear that if they get the biggest yield they will not win on account of the cost. My little girl wants to try and will do all the work except team work and putting on manure. She, last year, covered an acre of potatoes planted in drills one hoeful of soil to each piece and with her sister, put slug-shot on 1½ acre in one day. E. D. G.

Ashburnham,

FROM KANSAS.

I should never presume to dictate to the RURAL. It would seem to me as cruelly presumptuous as to question the wisdom of one's parents. I have been a reader of its wisely conducted pages since a little girl, and it has long since become the oracle in our family in all matters pertaining to the farm. Now in regard to the potato contest. It seems to me such a grand idea of the editor to allow the ladies a chance to show what they can do, but it does seem to me that to be a fair competition one ought to do all the work, except, of course, perhaps breaking up the ground. Thirty-three feet is a very small space, no more than two good-sized rooms, only one-fourth the size of the garden that I have tended for the last 10 years. Now if brother or husband does the work, turning it over to wife, or daughter, or sister, when the work is done, he merely competes for the prize through wife or sister; such a one would seem to me only a fraud, not a fair and honest competitor. Now I expect to do *all* the work on my little plot, even to the breaking up of ground with the riding plow, and I would so hate to be beaten by some other farmer's wife who only sat comfortably in a rocker glancing now and then out at the work being done by the "hired boy." MRS. L. F.

Johnson County.

In presenting my name for "membership" in the "Potato Club" it is needless to say that I do not expect one of the coveted prizes, but it looks to me as if there is fun ahead for all parties engaged in the contest, and I want a share of it. As has been suggested, it seems to me that the "National" plot should be divided into districts, with a grand sweepstake prize. Then, too, would it not be well to give the weight of the *entire* yield, as well as that of merchantable potatoes?

The funniest thing to me is the general desire on the part of the ladies to win the prize *justly* by "*doing all of the work myself.*" I took the Editor's offer to mean a prize for the most successful *method*, his aim being to ascertain *the best way* to grow a large crop of potatoes, that being what he sought in *his* famous "contest plot," and these ladies who seek to earn their prize *honestly* have never inquired whether the Editor of the R. N.-Y. performed *any* or *all* of the manual labor, or simply directed the *manner* in which it should be done. In short, wasn't that contest, and isn't the coming one, more a trial of *methods* than display of *muscle*?

Junction City. MRS. H. H. C.

FROM DAKOTA.

Many women, like myself, if they engage in the project at all, must do so at *very little* or no cost, and we would have a much poorer chance in comparison with those who can use any quantity of fertilizer, than the New England woman 'in her barren fields,' as compared with virgin soil. The New England woman will probably have the best place in the garden, too. The pioneer has to wrestle with unsubdued soil and drought.

Huron. MRS. W. A. B.

FROM MICHIGAN.

I think the potato contest a grand thing. I do not think it will be right for women to contest against men. I think we ought to do all the work except plowing and drawing the manure. Such work will suit me, I can watch the bees and tend my patch of potatoes as well as my garden. MRS. J. E. K.

Marlette.

FROM PENNSYLVANIA.

I think there should be two classes. We intend to do all the work but plowing ourselves. We expect to use newly-cleared land and shall try the RURAL'S method of planting. We live on a hill where frost comes late in spring and early in September. The only corn we can ripen is the Cory, Northern Pedigree and Pond corn sent by the RURAL two years ago.

MRS. R. A. CORD.

Cameron County.

FROM NEW YORK.

I wish to send you my name for the Potato Contest. I believe it will be a help to hundreds of farmers' wives who now have but little, if any interest in out-door farming. You have my hearty co-operation in anything which will lead to breaking up the monotony of cooking and washing dishes.

Tioga Co. MRS. W. M. S.

RURALISMS

Experiment Grounds of the Rural New-Yorker.

EFFECTS OF DIFFERENT QUANTITIES OF FERTILIZERS ON POTATOES GROWN IN A VARIABLE SOIL.

Plot 30—220 pounds, yielded at the rate per acre of		258.50	bushels.
Plot 36—220 pounds		205.33	"
" 40—220	"	172.33	"
" 31—440	"	298.83	"
" 37—440	"	253...	"
" 41—440	"	253...	"
" 32—880	"	282.33	"
" 38—880	"	227...	"
" 42—880	"	231. .	"
" 33—1320	"	228.16	"
" 44—1320	"	242...	"
" 34—1760	"	280...	"
" 39—1760	"	242...	"
" 43—000	"	161.33	"
" 35—000	"	132...	"

SUMMARY.

The average crop of the plots that did not receive any fertilizer was at the rate per acre of		146.66	bushels.
220 pounds gave		212.05	"
440 "	"	268.28	"
880 "	"	246.78	"
1320 "	"	285.08	"
1760 "	"	261...	"

As has already been stated the soil of these plots, naturally variable, was made exceedingly so by grading, the soil from the higher parts having been carted to the lower places. It is in some parts a sandy loam, in others a clay loam, and in still other parts a stiff brick clay—all impoverished by years of cropping without any manure of any kind. It will be remembered by older readers that the R. N.-Y.'s potato experiments previous to last year were made on plots of notably uniform soil, so impoverished that anything short of a "complete" fertilizer failed to materially increase the crops, while it was found that as high as 1760 pounds to the acre could be profitably used. In the present trial it will be seen that 440 pounds gave more crop than 880 pounds, and that 1,320 pounds gave more than 1,760. To what extent this contradictory result may have been due to the flea-beetle can not be estimated.

The variety planted was the Rural Blush. Some of the vines were greatly, some slightly, and a few not at all, injured by the flea-beetle.

The fertilizer used was the Stockbridge Potato.

Entomological.

A NEW INSECT PEST.

JUST as diseases due to microscopic organisms suddenly appear and become epidemic among men and animals, so every few years a new insect appears and increases so rapidly as to cause great havoc in the vegetable world. Between 1850 and 1860 the moth called Liparis monacha appeared in the vast forests of East Prussia. In a few years the larvæ of this insect, in spite of the collection of 300 pounds of eggs, or 150,000,000 single eggs, and the destruction of 1,500,000 female moths, transformed over 30,000 acres of forest into a desert covered with lifeless trunks. At another time a species of grasshopper, Zabrus gibbus, utterly destroyed vast areas of wheat and rye in Bohemia and the vicinity in the space of a few nights.

In the "seventies" the little pine tree borer (Bostrichus typographus) ruthlessly destroyed the finest old trees in the Bohemian forests. The devastation wrought by the Phylloxera in the vineyards of France, Hungary and parts of Germany is fresh in the minds of all.

The latest pest hails from Sweden where it has recently created great havoc, especially in the barley and rye fields. The State Entomologist of Sweden, Holmgren, reports that on the island of Gothland, barley to the value of nearly half a million dollars was destroyed by the larvæ of a species of fly, the scientific name of which is Chlorops tæniopus. The same insect destroyed fully a third of the rye crop of the province of Upland. The length of the perfect insect is from one and a-half to two lines. The general color is a brilliant yellow. The eyes are green, which circumstance suggested the name of Chlorops or "green-eyed." The feelers are short and black and end in round knobs. On the top of the head is a black triangular patch with the apex in front and there are three longitudinal black stripes on the back of the thorax. There are various black dots and marks about the base of the wings and on the sides of the thorax, and four transverse dark brown stripes on the top of the short abdomen. The legs are yellow except the extremities of the first pair which are black and in the male are crossed by a yellow ring.

The fly lays its eggs between the leaves before the ears appear. The eggs hatch in about ten days and the larvæ eat irregular furrows up the tender stalk, beginning at the uppermost joint. The edges of the furrows soon turn brown and knots and so-called "gouty swellings" appear. The development of the ear is arrested; it either remains hidden between the leaves or struggles to the light and puts forth a few imperfect grains. The larva when full-grown is about two lines long. The chrysalis stage is passed on the stalk or concealed in the ear. The pupæ have been found in July on barley plants which appeared perfectly sound, but when the leaves were separated, the inner ones were found to be dead, yellow and partly eaten and the stalk injured. The brown chrysalis was hidden among the leaves about an inch from the top joint. The chrysalis state lasts from 17 to 21 days.

There are many other species of Chlorops, similar in appearance and mode of life to C. tæniopus. Some of these have occasionally appeared in vast numbers and done much damage. In the autumn of 1857 a dense cloud was seen rising from the roof of a house in Zittau. The cloud had so much the appearance of smoke that energetic attempts were made to put out the supposed fire, but it was soon found that the smoke consisted of millions of small fire flies issuing from under a broken tile. The insects were of the species Chlorops nasuta. They were also found in immense numbers in other houses of the city.

The engravings, Fig. 87 and 88, are taken from a German publication. Fig. 88 shows the natural size of the insect, *a*, with an enlarged picture at *b*, and the stem of the plant at *c*. Fig. 87 shows the appearance of the stem after an attack. L. B. F.

Ulster Co., N. Y.

The Naturalist.

TERRIERS.

(*See page* 245.)

ON page 181 of the RURAL a good friend in Canada had the following:

"I very much admired the picture of the collie dogs in a late RURAL, but I would like to speak a good word for the Scotch terrier. If a couple of them are around, one will not need to protect the young apple trees with tar, felt or wire netting to keep off the field mice and moles. The Scotch terriers will save all that work. The owner can always see them hunting around in the grass wherever rats, mice or moles are to be found. As watch dogs, too, they are better than a burglar alarm. They will not let themselves be tampered with or bribed."

The R. N.-Y. can add little to this statement except to say that the picture on the first page (Fig. 91) are drawn from life. The little Scotch terrier at the bottom of this picture has entirely cleared his precinct of rats and mice. As a watch-dog he has more than once given an alarm at the approach of suspicious characters.

Farm Economy.

MONEY BY MAIL.

WHILE looking over some back numbers of the RURAL NEW-YORKER I saw an article describing how silver coins could be conveyed by mail. I enclose herewith sketch and sample of a device that I have been using for 15 years. I have found it very convenient and by means of it have sent money to all parts of the country without loss or damage to the envelop though silver will sometimes cause this when placed loosely in an envelop. Take a piece of stiff wrapping or card-board paper—the latter the better—cut a piece the size of the envelop, and set the pieces of silver to be mailed down on the card-board, one at a time. Put your fore finger on the center of the silver and with the right hand run a pencil around the silver marking a circle, then draw a line from C to A and from B to D; then take a pocket knife and cut through these lines; lift up sections B and D; put the coin under these letters and your money will go anywhere safely. To make this little arrangement will only take two or three minutes. Do not cut the circle.

W. S. B.

A CHEAP MILKING STOOL.

SAW off a leg of some light dry wood as long as the stool is to be high and six or eight inches in diameter. Flatten one side and nail a strip on and let it stick up behind for a handle, hang it up when not in use. Nail on it a piece of sheep-skin for a seat. See Fig. 90. E. B. S.

Hydetown, Pa.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

PARTIAL PARALYSIS DUE TO PREGNANCY IN A MARE.

E. C. R., Alden, Iowa.—I have a brood mare due to foal April 1. About a week ago I noticed that she appeared stiff in one front leg and that she seemed weak and that the muscles of her shoulders trembled. A few days ago she got up with difficulty, and soon lay down again and has not been on her feet since. That day she had twinges of pain frequently. The local doctor called it "colt-founder" and advised giving niter, two ounces, and laudanum one ounce. I gave her half that amount which relieved the pain. I have also bathed her spine with hot vinegar and salt, and am feeding her good hay and bran mash. She does not eat much and shows no desire to get up. What ails her and what should be the treatment?

ANS.—The weakness or partial paralysis is very likely due to the pregnancy, as such cases occasionally occur. Beyond advising that the mare ought to have been placed in slings and made as comfortable as possible, we can give no satisfactory course of treatment, because each case should be treated according to the symptoms as they develop from day to day. Good nursing is of prime importance. Keep the bowels open by feeding a nutritious, laxative diet. Scalded oats and bran are excellent. Give very little coarse fodder. Medicines are to be given only when necessary. Sweet spirits of niter in ounce doses for its kidneys; powdered gentian one-half ounce doses, quinine 10-grain doses, or citrate of iron and quinine, dram doses, two or three times daily as tonics, may usually be given with advantage.

AILING SHEEP.

C. H., Baldwinsville, N. Y.—I started in winter with 40 young, thrifty ewes. After three or four weeks I noticed that one of the flock did not eat as well as usual and after a few days she lost control of her hind limbs and appeared paralyzed. On close examination I found her lungs to be covered with purple spots, one of them being almost entirely purple although she showed no signs of lung trouble in breathing. From a peculiar look of the eyes and a movement of the head I thought at first the trouble was due to some form of staggers; but it was amenable to no treatment. What is the matter? I have been feeding cut corn-stalks until within a few days, when I began feeding good Timothy.

ANS.—The trouble was probably due either to the feed or too close confinement or both. The cut stalks, especially if smutty, musty or well ripened, would not be a suitable ration to feed alone. Such a diet would be very likely to produce indigestion, impaction and paralysis. Confinement in close quarters with little or no out-of-door exercise would predispose the animals to disease. You did well to change the feed, but it would have been much better if you had alternated the stalks and hay all winter. Or a small ration of grain should have been given with the stalks. When fed upon such coarse dry fodder, free access to common salt and water will do much to keep the bowels in a healthy condition.

STARTING A SMALL CREAMERY.

E. P., Beverly, N. J.—On my farm of 150 acres I milk 16 Jersey cows and retail butter the year round at 40 cents per pound. I would like to build two silos and keep 40 cows, starting a small creamery with a centrifugal separator, using the milk from my own cows as well as that of about 100 belonging to my neighbors; would this be practicable?

ANS.—Of course, the whole scheme is eminently practicable; the only weak point about it, that is discernible, is the limitation put on the number of cows—40—when the number, in a short time, should be 150—a cow to each acre. The two silos will be all right, provided they are made large enough, and constructed in a substantial and air-tight way. The use of a separator, especially when it is contemplated to make butter from the milk gathered from other farms, is not only right, but it is about the only really practical, and best method of getting all the cream from such milk, still leaving the skim-milk in the best feeding condition. For farmers with small dairies, not living contiguous to butter-factories that manufacture from milk, or those who wish to patronize a gathered-cream factory, iced creameries are excellent; but gathered milk, if butter is to be made from it, had better go through the separator.

VITALITY OF THE EGGS OF PARASITES ON SHEEP.

D. C. W. C., Cumberland, Ohio.—How is it that the eggs of parasites on sheep can be taken into the stomach without being destroyed? Will freezing destroy their vitality? I notice small white specks on the droppings of my sheep; what are they?

ANS.—In the case of those parasites in which the egg is taken into the stomach with the food (in ruminants this means the fourth or true stomach) the egg-case or envelop is digested off, setting the embryo parasite free. If the embryo is then alive it is able to resist the action of the gastric juices, which have no power to digest living, healthy tissues. After the young parasite has been set free it passes to that part of the intestine or system selected by that particular parasite as its habitat. The same principles apply to the other domestic animals as well as to sheep. So little is known of the life history of these parasites in their egg and embryo stages that we do not know under what conditions the eggs are destroyed, or what degree of cold they will resist. The white particles you notice on the sheep droppings are undoubtedly the ripe segments of tape-worms.

FUNGUS ON CARP.

J. H., West Granby, Conn.—I have about 100 German carp in a pond 10x12 feet, in which the water is two feet deep and furnished by a spring. The carp are troubled by a fungus and several have died within a few days. What is the matter?

ANS.—Marshall McDonald, the U. S. Commissioner of Fish and Fisheries, to whom this question was referred, sends the following answer:—"The fish are probably affected with fungus, a vegetable parasite present in nearly all waters. Bruises or sores on fish are its points of attack, and by its drain upon their vitality it causes death. The best remedy is to make a strong solution of salt and water, and dip the fish in it, allowing them to remain for two or three minutes, and then transfer them to fresh water. This should be done two or three times a week."

STERILITY IN A MARE.

G. P., Lost Creek, Va.—My 16-year-old mare had a colt when she was six years old; then she had no chance to get with foal for five years; but since then she has been to a stallion regularly; but has not got with foal. What can be done to get her with foal?

ANS.—Mares frequently fail to breed after they are 10 or 12 years of age, especially where they have not been bred regularly. There is probably no remedy. In such cases about the only treatment that can be given is to keep the animal in that condition most favorable for breeding, *i. e.* in good working flesh—not too fat, on a moderately rich diet, but restricted in quantity. Regular exercise is very essential; even hard work is often most favorable. Idleness and overfeeding predispose to sterility.

INFLAMMATION OF THE EYE OF A HORSE.

S. D. C., Ainsworth, Md.—My horse keeps one of his eyes shut nearly all the time. I put some sugar on it and it appeared to do good at the time; but did not cure it. Eye-water doesn't help it. The eye-ball seems to be dull and not so glossy as the other; but there is no film over it. What should be the treatment?

ANS.—Cover the eye with a cloth and keep it constantly wet with a solution of 30 grains of sugar of lead and 10 grains of morphia dissolved in a pint of distilled water or clear rain water. Give the horse six drams of Barbadoes aloes to open the bowels. Then keep the bowels slightly loosened by feeding roots or a bran mash once daily. Keep the horse in moderately good condition but do not overfeed.

KILLING WIRE-WORMS AND WOOD-LICE.

J. D. B., Modus, Conn.—How can I get rid of wire-worms and wood-lice in a rose-bed in a greenhouse?

ANS.—You cannot rid the soil of wire-worms, but you can trap a good many of them by burying pieces of carrots in the soil, examining these daily and killing all the wire-worms found on them. For wood-lice take two pieces of old half rotten boards, perfectly dry, and lay them one above the other in a dry shady part of the rose-bed. The wood-lice will crawl in between the boards. Examine these traps frequently and kill the insects with scalding water.

THRUSH.

J. W. C., Halifax, Pa.—All the frogs of my seven-year-old mare waste away and have a very offensive odor. She appears to be in great pain. What is the matter; and what should be the treatment?

ANS.—The disease is thrush. Cut away the dead horn and scrape the surface clean. Then press dry calomel on the diseased surface and well into the cleft of the frog. If thorough, one or two applications should be sufficient. Keep the feet clean and out of the wet as much as possible until well healed.

Miscellaneous.

E. A. H., Potsdam, N. Y.—A turkey of mine has a swelling just above her bill. It began last fall and has been gradually growing ever since. It is soft and when I press on it something like foam runs out of the eye. Another swelling is beginning on the other side. What should be done for her?

ANS.—Wash the head with warm vinegar and water every day for a week or more.

D. S. C., Catonsville, Md.—My 16-year-old mare had her first colt last May. I bred her again in August, and she aborted in March. Will it be safe to breed her again, and, if so how soon?

ANS.—Yes, after three or four months if the mare appears to be all right. Special precautions should be taken in her care to avoid all causes that would be likely to cause a repetition of the act.

H. T., Richmond Center, Wis.—At what temperature does an egg get so cold that it becomes useless for hatching?

ANS.—The safe rule is not to allow the temperature to fall below 85 degrees, though it does not follow that a point below this is sure to spoil the eggs. Too much depends upon the eggs themselves and the length of time they have been in the incubator. The eggs should be kept as near 103 degrees as possible all through the incubation.

P. M., Brucetown, Va.—My six-year-old mare passes soft droppings like those of a cow. She has never had a foal; is she likely to have one? She is healthy and works well?

ANS.—The general condition of the mare may be improved by giving her two tablespoonfuls of the following powders on her feed night and morning for a week. Then omit for a week, after which give the medicine for another week alternating for several weeks. Sulphate of iron four ounces, powdered gentian, ginger and niter each eight ounces. The only way to tell whether the mare will breed is to try her.

A. Q. McD., South Hartford, N. Y.—My father has a very fine herd of Short-horn cows with which a Jersey cow is allowed to run; will the offspring of the Short-horns be liable in any way to be marked like the Jersey?

ANS.—Many cases are on record where animals peculiarly marked have had an effect on the fetus or unborn young of animals of other breeds or varieties. When there is no sudden fright or worrying, there is probably no danger of variation from having animals of one breed running with those of another; certainly not after the animals are born.

A "Rural Reader," Tioga Co., Pa.—When my young grade Jersey cow came in in the fall she was nearly dry. We milked her until four weeks before she came in. One teat became inflamed and the milk thick and stringy. I gave her two doses of saltpeter and she was all right. Last week she calved and the trouble began again, and again the saltpeter was given. The milk comes all right now, although it is deficient in quantity. There seems to be only about a pint in that teat; but a nice lot comes from the others. What ought to be done for her?

ANS.—Since the trouble has already disappeared treatment is not necessary. The flow of milk in that quarter will probably gradually return. If it does not do so this season it will probably be all right after the next calving. The trouble was evidently due either to an injury to that quarter or to over-stocking while drying off.

W. H. L., Walton, N. Y.—I have a hot-bed for lettuce, two feet deep; how deep should the horse manure and soil be to give the best results? 2. How far apart should the plants be in the bed when thinned out? 3. Could I transplant some of them without hardening them by exposure and would such a course be advisable to secure a large crop for the market? 4. Could I sprout early potatoes by placing them in the hot-bed, then putting them in drills, the potatoes being placed between the seed drills?

ANS.—If two feet deep from the sashes is meant, 13 inches in depth of manure, four inches of soil, and seven inches of head room. But this is a shallow hot-bed. 2. It depends upon the variety; 10 inches is fair distance at this time of year. 3. Not safely. Why not make a small hot-bed for the seed, then in three week's time make another to transplant the seedlings into? In this way the plants not required for the hot-bed could be hardened off and planted outside. 4. Yes, but we don't think you would gain very much.

DISCUSSION.

"RHEUMATISM" AMONG HOGS.

J. W. J., SUGAR RUN, PA.—There is a disease common among young hogs, which is very well described by W. S. P., of Forestville, N. Y., and commented on by Col. F. D. Curtis on page 180 of the RURAL. I have frequently had cases of it among my hogs when kept in close confinement, and have two severe cases on hand now. They are both sows about six months old and expected to farrow in May. The one attacked first showed a little lameness in one hind leg, which soon extended to the other, then to all the legs and apparently to every joint in her body. There is a stiffness in the neck which can scarcely be bent sidewise, and all the muscles seem to be sore so that any movement or attempt to use them gives the animal pain. A few days after the first one was attacked, the other became afflicted in the same manner, but not quite so badly.

They lie still constantly, (generally flat on the side), except when driven up; they squeal with pain produced by their efforts to use their limbs and muscles. They have but little appetite and not much thirst; but will eat a small quantity when driven to the trough or when an ear of corn is thrown beside their noses. Since I commenced raising hogs 40 years ago, I have had a good many cases of the disease but never any so far as I remember that was fatal. They have always got over it after a while without any doctoring. Once I had a sow so bad that she had to be helped up, and as she would not eat; I let her lie and gave her up to die, only going to the pen twice a day to look in. She lay three or four days without eating or drinking, and then got up and came to the trough of her own accord, ate moderately, got well and had a litter of good pigs.

Mr. A. D. Hoag, a neighbor, told me that he had a sow which he kept for raising pigs until she was about four years old, and that every time she had pigs, at a certain stage of her pregnancy, a great lameness came upon her, but she would get over it before farrowing, have a litter of good pigs and do well.

His opinion is that pregnant sows are more subject to the disease than other hogs; but, according to my experience, boars are subject to it the same as sows. I had a boar once that was so stiff in his hind legs that, instead of stepping over the board between the sleeping apartment and the feeding room, he would jump his hind legs over together rather than bend them. Now if the disease was caused "by feeble bones and delicate joints," as Col. Curtis suggests, my boar would not have been likely to do this, as the jumping would have jarred the bones and joints and hurt him worse than stepping over.

I agree with Col. Curtis that close confinement and want of sufficient exercise have a good deal to do with bringing it on, but I cannot agree with him that the disease originates from improper diet. It certainly did not in the case of my hogs unless Col. Curtis himself recommends an improper diet, for with the exception of linseed meal, and the addition of milk, they have had the very food which he says is proper. Wheat bran, middlings and milk are what I always feed to my young hogs until I want to fatten them, and then I substitute corn-meal for the bran. In my opinion it would be hard to improve much on the food which W. S. P. had been feeding his hogs when they became "lame in their hind legs, and sore and stiff all over" unless he had milk to give them. The "boiled potatoes, wheat bran and meal" would keep their bowels loose enough and make them grow finely without linseed-meal. The advice to "turn them out daily and drive them about for a half hour," I cannot indorse, and would not have it done to my sick hogs if Col. Curtis would furnish the boy to do it for nothing. It is too much like the old way of trotting a sick horse up and down the road to cure the colic. If the weather were favorable I would turn them out of the pen and let them exercise if they saw fit, but to drive hogs as lame as mine, for half an hour, or for five minutes would be an act of cruelty that the Society for the Prevention of Cruelty to Animals might look after. I call the disease rheumatism, as it has usually come on my hogs during rheumatic weather, when it was damp, rainy, and the wind in the east. Up to the time my hogs were attacked by the lameness, they were so strong and active that they always jumped up when I went to feed them and stood on their hind legs with their fore feet against the side of the pen as easily as a dog would have done it. If their bones had been tender and joints weak they would not have been likely to do it, and the habit of doing it was favorable for strengthening their legs by the exercise it gave them. Col. Curtis is high authority on all farm topics, and especially in regard to the management of hogs, and it seems like presumption to disagree with him on a subject he has made a specialty, but as Mr. Terry would say: in Mr. Curtis's locality, on his farm and in his pens he may be right; but in my locality, on my farm, and in my pens, the case is altogether different.

RUNNING IN DEBT SOMETIMES A GOOD THING.

S. N., HARLAN, IND.—It has often been said that there are two sides to every question; but judging from what has been published in the RURAL from time to time, there is only one side to the question, "Shall a man run in debt?" A few things, however, can be said on the other side. I would say from personal experience that it has been good for me to go in debt, and I am satisfied I have made much more than it would have been possible for me to make if I had not done so. A man cannot make much money just by day's work if he has nothing else. He needs capital, and if he has it not, he must run in debt and use the capital of somebody else, and the more capital a man has the more profit he ought to have at the end of the year. I know that the man in a late RURAL cartoon was wonderfully bowed down with his debts, mortgages and taxes. It was a true representation of some, while others are not burdened by their debts but pay every obligation at maturity. I think M. H. W., on page 161, gives us the reasons why they are so burdened. He would name those riders, Intemperance, Lost Time, Waste, Dishonor, Ill-health, Crime, and I think in most cases he is right; but if these things are the cause of failure, why lay it to running in debt. If those who fail from these causes had been temperate, industrious, saving and punctual, they might have paid their debts and been relieved so they could straighten up. Now I know a good many men who commenced with nothing, worked till they could get enough to make a payment on a piece of land and run in debt for the rest, and paid it, and have a good home, whereas if they had waited till they had enough to pay for a farm, they might never have got one. Then I know a few men who as soon as they get a farm paid for, will run in debt for another, and so buy a farm every few years. I don't know how it is in other places; but I do know that any man who is economical and has the push that would enable him to succeed in any other business, can, in this country, buy a farm on time and pay for it.

An editor of the RURAL told us a year or two ago that he had bought a piece of land and intended to make the crops from the land pay for it. If he can do that, why should not others? It's not running in debt that plays the mischief, but it is running in debt for the wrong things. For instance, if a man goes in debt for nice clothes, when they are worn out they are gone—there is nothing left. Just so with something to eat, and with nice buggies and fast horses, and fine houses and thousands of other things that produce nothing. After a short time they are gone or depreciated in value so that there is a great loss; but when a man buys a farm, it ought to bring him in more than the interest and be worth as much at any time as when he bought it or more, so where is the loss? And if a man needs a horse or implement to do his work with, it is better to buy on time than to neglect his work.

The most of those that complain about their debts belong to the "farming-don't-pay" class

and don't take any agricultural paper; they are always too hard up and can't afford it. I commenced taking the Genesee Farmer when a boy about 18 years old and have been taking one or more agricultural papers ever since, and several times I have got ideas or facts from the paper one of which would pay me to take the paper as long as I live. I like the RURAL first-rate and expect to take it as long as I live.

EXPERIENCE WITH OATS.

A. T. T., FRANKLIN PARK, N. J.—That there is nothing certain excepting death and quarter day is an old saw whose antiquity does not lessen its veracity. From it may be deduced, also that all the world's an experiment. From the vantage point of the last half of an average life the experimental character of the world will be plainly discerned, which substantiates the triteness of the saying that our hind-sight is much better than our fore-sight, as during the first half of life we are quite apt to mistake mere surmises for actual truths. Of the experimental character of much of the results of his 365 days' yearly labor the farmer is tolerably well aware. To be sure he has it recorded that seed time and harvest shall not fail, but the variations of the unfailing seed time and harvest are so exceedingly multiplied that results, which are what he counts on, are too uncertain to be classified other than experimental. (No reflections intended on the RURAL'S sanguine attempts to produce a specified harvest of potatoes regardless of conditions.) A couple of years ago a writer in another farm paper advised that oats be sown in February on snow, stating that the crop would be as certain as if sown in the time of year formerly deemed suitable or even more certain, and, besides, it would be a month in advance of the old way. The writer of this article has not hesitated to enthuse at any plausible theory in this line and his personal investigations, it must be conscientiously admitted, have sometimes had a depressing effect financially. Repeated disappointments will after a time convince the greatest zealot that the best laid plans may come to naught; therefore it was with a laudable degree of prudence that this particular experiment was determined upon. A small piece of ground only was therefore devoted to the trial. During the latter part of February a small depth of snow presented the proper conditions, and a couple of square rods of ground plowed the Fall before were sown with oats. They were washed in properly according to rule, every kernel being nicely mixed in its muddy little bed. The wintry season was extended somewhat beyond the usual period owing to the inclement weather which *may* have militated against the anticipated crop. However, I did not look for sprouting oats before the snow banks had subsided, but I did look for them later and looked in vain. No oats were so green as to appear above ground by the middle of April. On cultivating the field the last week in April preparatory to sowing oats, the two square rods assigned to the early crop were found sprinkled over with a blackened and rotted mass of seed from which it was evident not even the faintest effort at vitality had manifested itself after being sown. If the soil is a light sandy one possibly oats might wash in deep enough to thrive, but if, on the contrary, it is a heavy clayey one the grain is much better off in the owner's granary until nature's own time has arrived. The writer once sowed a quarter of an acre of Southern winter oats and harvested in June the following year 17 bushels of fine oats. That fall two acres were sown on equally good or better land and not a quart was harvested. It is said there is no effect without a cause; probably the cause of this difference in results was the difference in seasons. The first being a mild winter and the latter a cold one. If there was any moral at all to this experiment it may be to sow no winter oats in this latitude.

LIME AS A MANURE.

B. R., BROAD FORD, PA.—There have lately been several inquiries and a number of articles published in the RURAL in regard to lime as a fertilizer, and the conclusions of all are altogether different from the results of my experience as well as of every farmer in Fayette and Westmoreland counties who has used lime on his land. There have been millions of bushels of lime used in these two counties the last 60 years and there is more used each succeeding year. I have myself burned 50,000 bushels in less than 20 years, and, instead of lime enriching the father and impoverishing the son, all my experience and every other farmer's here is just the contrary. As to putting sufficient on land to do the best it is expensive even where limestone is handy and fuel cheap, and it fails to do the best until 10 years after it is put on. Though its effect on small grain and grass is immediate it shows most and does the best for wheat and clover. I have by the use of lime alone raised 20 bushels of wheat per acre on land that before applying it produced only from three to five bushels, and land that at its best produced 20 bushels, after liming produced 30 bushels per acre. People here who use lime put on from 300 to 1,000 bushels to the acre, which at five cents per bushel, is quite expensive at first, but it will last for thirty years when enough is put on.

The way we burn lime here is to select as level a site as we can, and put a double layer of dry wood (old rails are the best) all laid the same way, then a layer of coal, then a thin layer of limestone, then a heavy layer of coal, and a heavy layer of limestone, and after this lighter layers of coal alternately to the top. The larger the kiln the less the cost per bushel, as two kilns of 5,000 bushels each, will take one-third more coal than one of 10,000 bushels. It is generally hauled out as soon as it is cool enough, which is a most disagreeable job, particularly on a hot or windy day. It is put in piles until it rains (never covered) when it is evenly spread. A better way is to burn the lime a year before using, and scatter direct from the wagon; it is just as effective and a great deal pleasanter way. I can raise more wheat by the use of lime alone than by the use of the best manure. Our best land is limestone clay, while the lime is in the ground naturally. I can't see why it is not just as good put there artificially. We have land here (limestone clay) that has been farmed for 100 years without any manure, that produces as well as it did 50 years ago. Put a heavy coat of manure on land and in five years the land will lose all the effect of the manure and be as poor as before. If you still keep on farming the land without any manure it will be poorer; does that prove that the manure impoverished the soil? If lime is useless on land, what fools the farmers must be! But they don't care whether it has any plant food or not so long as it makes things grow. I think there are more things in nature than are dreamed of by theoretical, not scientific farmers.

CARE OF MANURE.

H. N., LINCOLN, ILL.—F. M., South Bend, Indiana, asks in the R. N.-Y. of February 23, how to keep horse manure from burning. The answer is that thoroughly saturating it with water and compressing it will keep it from burning. How this is best accomplished is what I want to point out. The ground where it is intended to pile the manure, should be nearly level, (for although it takes a good deal of water to keep horse manure from burning, it should not be placed in a hole or depression where water can collect) make the piles about nine feet or more wide and as long as the manure will go or the room permit. Build the pile as nearly straight upon the sides as you can, and every layer of one foot or less must receive a thorough sprinkling with water and be tramped as in building a hotbed. After the pile is as high as desired and heat rises, the tramping must be repeated for a few days until the pile appears solid. There it is to be left undisturbed till wanted. If a good rain strikes it, so much the better, as the manure will absorb all that falls on top of it if the pile is flat. It should be arranged conveniently for getting the water there. Putting barrels on the wagon and throwing the water over the pile with a pail, did not prove satisfactory to me, as the work will often be neglected until one or more days' haulings have accumulated; then the water will not soak through and the lower part will fire-fang and spoil. The better way is, if a well is not by the manure already, to have one dug for the purpose with a good force pump in it. A tank or a lot of oil barrels should be prepared for the water and stand a little higher than the pile is going to be, and there should be a rubber hose of sufficient length with spraying nozzle attached to it. Do not think this will entail too much expense or labor, for if the manure is worth hauling, it is certainly worth preserving, and the more carefully and thoroughly this is done, the better satisfaction will be given. There is a difference between heating and fire-fanging. I want manure to heat to a considerable extent in order to destroy grass seeds contained in it and to hasten decomposition. Horse manure treated as above, is the best covering and mulch for strawberries that I can find. As to swine, I think they are entirely out of place on a large pile of heating horse manure; they like to lie on it, but they generally take cold from it and it is the worst place for them to lie down. Rooting it over and exposing it to the air is of no benefit to the manure. Where small quantities of manure are thrown out daily or weekly, cattle tramping and lying down on it will preserve it in the best manner. I compost nearly all the manure I use and do not spread or pile any on land that I want to plow early in spring, until the ground is dry enough to plow; then having the manure at hand and in good condition, a man can spread half an acre and plow it the same day. If the manure is spread in winter, it may be better for the land, but it keeps the latter wet or heavy too long in spring and renders it unfit for early gardening. At least this is the case with my soil unless the manure has been perfectly rotten.

MORE ABOUT "GRAIN HAY".

R. A. S., JOSEPH, OREGON.—A writer in a recent RURAL wants to know more about our practice of feeding grain hay. I will try and tell him how we do out here. Wheat and oats mixed make the best. Some sow wheat, oats and barley. I don't like barley mixed with wheat and oats, as it ripens much earlier. We sow a bushel of wheat and a bushel of oats. The proper time to cut grain hay is when it is in bloom. If I cut with a mower I let it lie in the swath until it wilts a very little, then cock it up in big cocks and let it cure One will have to use his own judgment about curing it. Out here we always have dry weather in harvest and can put hay up green and it will cure in the cock. The best way to cut grain hay is with a self-rake reaper or binder; then it is free from dust. Some bind their hay the same as grain; it is much more easily handled and doesn't occupy so much room in the barn. "Is it enough better than Timothy to be worth the price of straw and grain in the Eastern market?" For milch cows I think it is better feed, but the greatest advantage it has over Timothy is that it will grow on land on which Timothy won't, and I think it will make a third more hay than Timothy on the same land. Then again, where grain lodges, a man can make it into hay and derive a profit, whereas if he let it lie it would not amount to much. For horse feed I would let the grain stand until the head got in the milk for all kinds of farm work. A man can work a team without any other feed by giving them time to eat what they want at noon. A person must feed grain very sparingly when he feeds grain hay that has stood until it got in the milk. Any kind of grain will make good hay. The only difference between hay for cattle and horses is that it should be cut earlier for cattle. Stock of any kind don't like rye hay as well as the other kinds of grain hay, but if they are fed no other kind they eat it well and do well on it. A lady was telling me last spring that her cows never gave so much milk when fed on any hay as they did when they were fed on rye hay. Last fall I had grain hay for my team. The days were short and I plowed a little over three acres of land a day. I fed with the hay two quarts of chop barley and bran mixed half and half. I never had a team do so much hard work and keep up as they did. I am now feeding Timothy and clover mixed, I don't like it as well as the grain hay.

ABOUT THE NATIONAL POTATO CONTEST.

E. A. F., HANCOCK, VT.—In the RURAL of March 2, on reading the editorial allusion to the Women's Potato Contest, I notice this question. Is it fair to award premiums to those who raise the largest yield of potatoes at the least cost? I am somewhat confused. I don't just understand the object of this potato contest. I supposed to raise the largest yield at the least expense was just what we were to work for. Is the object of this contest merely to induce us to spend all we can on a few hills of potatoes solely with the idea of getting a prize, or, perhaps, the name of raising the most potatoes, regardless of the expense? If so, I, for one, have been laboring under a false idea of its purpose. I supposed it to be for the life-long good of potato culture. Again, how many women, do you suppose, have sent in their names who will not have any fertilizer or any money to buy it with, and who will have to depend entirely on barn manures? I live on a hill farm and don't expect a pound of fertilizer—only what I can manufacture myself; but I intend to try to raise potatoes just the same. As to the committee, I should prefer those most competent without regard to sex.

R. N.-Y.—The above reasoning is perfectly sound from our friend's standpoint. The R. N.-Y. respectfully submits the following: Here is a contestant who plants her potatoes in virgin soil, or in a soil rendered *excessively rich* by previous treatment. The cost, in *such a case*, will be nothing at all for manure or fertilizer and she will have a decided and unfair advantage over the many who will plant in comparatively poor soils. If the "least-cost" clause is to remain in, the latter class of contestants are virtually ruled out.

AS TO COW-PEA HAY.

F. C. F., MOBILE, ALA.—I have raised hay from cow-peas for the last 15 years and think there is nothing better for stock of all kinds. My method of preparing the land and sowing is as follows: After the spring crop has been taken off (about April or May) I replow, although I have broken up sod land and sowed right on top and got a full stand. I sow from 1¼ to 1½ bushel to the acre broadcast and harrow in. I cut the peas as soon as they begin to bloom or are making runners, that being the best time as far as my experience goes. Then one gets all the leaves, which I consider the most valuable part, but if one leaves them to run and mat together the leaves will all be lost in curing. The stems remain and are too hard and woody, and unless they are cut up with a cutter and fed with ground feed, they would not be relished by stock. I cut the peas with a mower or by hand in the morning as soon as the dew is off, rake them in windrows in the evening, and finish curing them in cocks. Some people throw the vines on racks in the field to finish curing, but where these are not handy my plan is very good. They will then retain their bright and green color and be eagerly eaten by all stock. If peas are allowed to run and mat over the ground, as suggested by H. L. Wysor, in the first place they could not be cut with a mower and it would require more than three times the amount of labor to cut them by hand, to say nothing of the loss already stated. The peas that we generally get are somewhat mixed—Black Clay and Whippoorwill—but any of them is good unless two crops on one plot in a season are wanted; then I would prefer the last though this holds good only in this latitude I believe.

BINDING-TWINE TRUST.

H. BROS., WHEATLAND, DAK.—I noticed an article in the R. N.-Y. of March 23, on this matter. We farmers of the North west are greatly interested in the subject of twine. On March 20, a farmers' meeting was called to discuss the question in Casselton, Dak. I never before saw such a large assembly of farmers to discuss their interests. It was shown that flax could be grown successfully here, but as there were none present who could give any information as to the manufacturing of twine from flax, a committee was appointed to investigate the matter, and report at the call of the chairman of the meeting. The subject of headers was debated and it was proved that we could buy headers to cut our grain for less than the twine would cost us at present prices. The advisability of starting a factory for the purpose of manufacturing twine from flax at some point in the Red River Valley was discussed, and also an oil mill. With starch and sugar factories, of course, we cannot do anything, but we are going to grow the flax this season and many farmers said they would plant from 10 to 100 acres. The latest Trust is among the jobbers: they have all combined and their traveling men will take orders from merchants but give no prices; these are to be fixed to suit themselves, when the orders get to headquarters. We think it is about time some legislation should protect farmers.

WOOL WASTE AS BEDDING FOR STOCK.

M. M., MEDWAY, MASS.—In a late RURAL an inquirer asks whether wool waste is good for bedding cattle, and the reply is "Yes, excellent." I beg to differ. I used large quantities of it at one time, taking the waste of a factory for three years. I looked at it, thought it would make good bedding and tried it, but it would not keep cattle clean. It was very far from clean itself, and it would adhere to the cattle, and it does not absorb much liquid on account of its oily character. It will heat, however, and the odor exhaled is enough to condemn it for use about the stable. In fact it is unbearable. In my reading I found advice to rot it down before using it for manure, and I tried that, but was not pleased with the results. The product, with the addition of ground bone and muriate of potash, made good manure, but very much of its value appeared to have been lost, though I kept the rotting pile well covered with loam. I could only surmise that free nitrogen had escaped during the heating process. A great waste there certainly was in some way. I have found the best results in my own practice, by spreading the waste broadcast on the ground and plowing it in. The bone and potash can be applied and harrowed in the surface. Used in this way, the results were excellent for grass. I have seen much of it used by other parties and if it is used in this way it gives by far the best results.

LIME FOR THE CABBAGE ROOT WORM.

T. H. HOSKINS, NEWPORT, VT.—Lawyers, as a rule, avoid proving too much. They make their points good with evidence (when they can) and rest there. In horticulture, it is pretty safe to say that evidence may prove so much as to be quite worthless; and it looks to me as if that were the case with Mr. Beckwith's experiment, as reported by E. S. Goff, of the Geneva Experiment Station in the RURAL, p. 181. If the test made "seemed" to show that the presence of lime in the soil about cab-

bage plants doubled the number of attacking root maggots, it might also seem to have been wiser to try the experiment over again—before sliding into print with it, in antagonism to the life long experience of such veteran gardeners as Peter Henderson, for instance, who says—in "Gardening For Profit," p. 137.—"The large amount of lime in the soil is not only congenial to the growth of the cabbage tribe, but is certainly destructive to the larvæ of the insect." The experience of others, on lands not naturally rich in shell lime, (such as Mr. Henderson recommends for cabbages) is that while its application does not at first destroy all the worms, and perhaps may produce but little effect, yet in the long run it does greatly diminish the number, so that good crops are grown where before they utterly failed.

A MISTAKE CORRECTED.

L. S. F., OAKLAND, IND.—In the RURAL of March 2, page 146, it is said that the bonded railroad debt of Muhlenberg county, Indiana, has been allowed to grow until it has reached $1,000,000, and that efforts are being made to repudiate it. This statement must be a mistake. There is in the State no county so heavily afflicted with debt, and none that would try to evade its legitimate debts; nor is there in the State any county called Muhlenberg.

R. N.-Y.—A telegram making the statement appeared in several New York dailies on February 21 and 22, just before the RURAL of March 2 went to press. No doubt Indiana was substituted by mistake for Kentucky, in which State there is a Muhlenberg county. We commented on the matter, believing the statements as to the fact and the place correct, without finding out whether among the 92 counties in Indiana, one was not called Muhlenberg. We are glad to learn that none of the counties in the fine old Hoosier State is so grievously debt-laden, and also that her sons have such a just pride in the honesty and solvency of all parts of their State as to be ready to correct promptly even an unintentional error reflecting upon her.

KEEPING HORSE MANURE FROM BURNING

R. B, ST. HENRY OF MONTREAL, CANADA.—In a late number of the RURAL, I saw an inquiry of how to prevent horse manure from getting fire-fanged. We draw the manure from 80 horses from the city. In beginning the manure pile, we give plenty of room, and as the loads arrive from the town we keep driving over the heap, spreading each load not more than six inches thick. We also had a basin-shaped hole in rear of the barn lined with puddled clay which received the urine from the stables and leakage from the barnyard. We put the horse manure from the city into this basin, and it absorbed all the liquid, making manure of the best quality.

We used the former plan when the basin got full and could not contain any more manure. The continual driving over the heap packed it so tight that it kept the manure from getting fire-fanged.

We get all the manure we want for nothing, and have to draw it three miles; our unleached hard wood ashes cost us $5.50 per ton delivered.

A LANGSHAN-COCHIN CROSS.

H. G., HAMBURGH, CONN.—After seeing the picture and reading the account of the RURAL'S Wyandotte-Dorking pullets in a late issue, I venture to give the result of a similar experiment I tried last spring in crossing a flock of Langshan hens with a Buff Cochin cockerel. The pullets, like the RURAL'S, vary very much in color; two have a complete mixture of black and brown feathers, while some are nearly all brown with spangled necks of black, while others have black feathers over their bodies with brown necks. All have fine plump bodies of as good form, I think, as that of the specimen shown in the RURAL, and they have fewer feathers upon the legs than the parents on either side. They were hatched about the middle of May; but did not commence laying until the last of December; but they have laid very well since then. Their eggs are very large for pullets and all are of the shape and color of those of the Cochin.

BURPEE'S GREEK WINTER ONION.

G. H. S., NORTHFIELD COUNTY, VA.—Last year I planted a packet of Burpee's Greek Winter onion, and was well pleased with the size of the bulbs, but a large percentage were scallions. This may have been owing to the soil—a rather heavy loam. At this date not one of them shows the least sign of sprouting, while Wethersfield and Danvers, with hardly an exception, have made sprouts from half an inch to four inches long. All received the same treatment. If the scallions can be eradicated I am inclined to think that Burpee's will prove a good onion for this section.

E. L., PHILADELPHIA, PA.—The criticism on calling the new American seedling rose by a French name—"Souvenir de Wootton"—in a late RURAL, is, on general principles, correct; but in justice to the originator—Mr. John Cook, of Baltimore—it should be stated that it was named and offered for sale under the name of Souvenir of Wootton. True, souvenir is a French word, but it is a word in everyday use, so much so that it has become part of our own language. The name, as it now stands, is much better than if it were known as "In remembrance of a pleasant afternoon spent at Wootton." The originator of an improved variety of fruit, vegetable or flower is entitled to some latitude when giving it a name. There is a little history connected with the naming of the rose under consideration, which may be interesting. "Wootton" is the country home of Mr. George W. Childs, proprietor of the Philadelphia Public Ledger. It is located at Bryn Mawr, Montgomery county, Pa., six or eight miles from Broad street Station, Philadelphia, on the main line of the Pennsylvania railroad. In August, 1886, the Society of American Florists was in convention in this city. Mr. Childs invited that body to his beautiful place to accept of his hospitality which was dispensed with a lavish hand and generous spirit. Mr. Cook, in his desire to return thanks to Mr. Childs, named the rose as above. When the rose becomes more widely cultivated and better known, the Souvenir de or of, will be dropped and it will be known by its more distinctive name "Wootton." The rose belongs to that class known as the Hybrid Tea. It is the result of a cross between the Tea rose Bon Silene and the H R. Louis Van Houtte. From present indications it will be more valuable to the grower of cut roses for commercial purposes in winter, than for the amateur to grow out of doors in summer. It may, however, prove as hardy as La France or any of the same type. It is more the color of Papa Gontier than the Jacqueminot, as it does not possess the velvety sheen which is one of the charms of the old and well-known "Jacque." It is large and double, and it is certainly one of the most promising varieties for cut flowers that has been tried in recent years.

S. S. C., FREDONIA, N. Y.—The RURAL of January 19th, referring to "Farmer's Institutes," and an article by Mr. Hodgeman on page 35, says, "Is he right in his guess that the managers of the New York State meeting are trying to heat the mass from the top?" Let us do justice to the present series of meetings. I attended the institute at Sherman, Chautauqua county, in December. Recently one was held at Fredonia. I think they were of great utility. They were both of them every whit as good as the institute described by Mr. Hodgeman. There is nothing in this world beyond improvement; but the meetings were a pronounced success—instructive, interesting, stimulative, helpful. This is the universal verdict of the farmers. Never before did I see professional men and others, not farmers, show so much interest. Believe me, if the two institutes in Chautauqua county, are samples, the money appropriated by the legislature will bring fourfold returns.

H.T., BRANDYWINE SUMMIT, DELAWARE CO., PA.—1. The corn that I have been growing for several years is a mixture of Gourd-seed and shallow-grain varieties, my aim being to get a large long cob and deep grain. By planting a mixed corn I think the blossoming period is lengthened, giving the pollen a better chance to fertilize the ears and making them fill better. 2. My yield, on an average, is about 75 bushels per acre without manure. I have grown 106 bushels on a measured acre with stable manure. 3. Four feet each way. 4. Stable manure and good bone superphosphate.

E. A. B., HOPKINS, MINN.—Of the vines grown from Niagara grape seed received from the RURAL one has survived. Last year it bore one imperfect bunch—white with a slight tinge of yellow—ripened with or a little before the Concord and was about the size and shape of the Lady.

What Others Say.

THE Albany Cultivator and Country Gentleman offers in a pithy way suggestions as to the construction of silos that shall really cover the entire subject.

SILOS should be made deep or high when practicable, so that the silage itself may exert a greater pressure on all below. * * Good walls may be made of boards or plank, nailed on the two sides of a stiff timber frame forming an air-space lined with tarred building paper, to make it air-tight and prevent freezing much. * * If the planks are well soaked with petroleum, they will last many years. The portion next to the earth may be treated with gas tar. * * A plank door, capable of being strongly barred, should open next to the passage towards the stable. * * The bottom or floor should have perfect drainage. * * After filling the silo, during successive days, the contents will settle in the course of a week or two, to about two-thirds of their former bulk. * * A ton of good silage contains no more nutriment than an equal amount of well dried and cut cornstalks, but it is liked better by cattle and is better assimilated, digested, and goes further than the dry fodder. * * It has nearly the same advantages as green food given in summer. * * The best silage is obtained by allowing the stalks to ripen enough to let the grain glaze, and the leaves to dry on their edges. Failure results when cutting too green. * * Thoroughly tramp around the edges of the silo in filling; the central portion will become solid without much tramping. * * Weighting the silo packs the top layer more nearly air-tight; leaving it exposed causes several inches to rot on the top. A layer of several inches of dry straw holds a portion of the steam from the hot silage and tends to lessen the rotting. * * A weight of a hundred pounds to the square foot is ample It may be stones laid on plank cover; or it may be sand, saw-dust, earth or bags of grain, according to convenience. Weights are better than screws, because continuous. * * In feeding out, expose as little of the silage to the air as convenient, either by cutting down perpendicularly in successive sections; or in small silos with large herds, by taking off successive layers over the whole surface. * *

MANAGEMENT OF CREAM.—The all-important question that was asked John Gould at the institutes was, "How can I keep cream to get enough to churn and not have it get old or musty?" Milk and cream, Mr. Gould says, in the Weekly Press, will take up everything afloat but fine flavor. The best remedy is a creamer. Keep the cream sweet and cold by allowing the pail to remain in the cold water. When ready to churn bring out the cream, warm it up to 64 or 65 degrees and keep it there until properly ripe or pleasantly acid, or bring it up at once to 75 degrees and let it cool down slowly to 64 degrees or thereabouts and churn as it gets acid. The chief trouble, and the one that gives the most bother, is in allowing cream to remain in a room of changing temperature, from freezing up to "blood heat," as many a room is where cream is set to await churning. Keep it cool at a uniform and low temperature. Don't try to keep it too long even then. Better add 30 per cent. of water at 64 degrees and churn the oftener. Never add "fresh" cream to old just as you start to churn. The acid of the old cream will not "cut" the new quickly enough to liberate all the globules, and a large per cent. will remain unchurned and will go out in the butter-milk, which also decreases the profits of dairying.

WORTH NOTING.

IT is useless for any one to attempt to make a small farm pay, unless he has a love for his work, remarked a speaker at a late farmers' meeting, as reported in the Massachusetts Ploughman. If he has a genuine love for it, everything he puts his hand to seems to know it. If his specialty is plant growth, whether fruit, vegetable or cereals, it is astonishing to his neighbor how they grow. If it is animals, they feel his love and how they grow and thrive. But if, on the other hand, he has no special love or liking for his work, plants and animals seem to know it, and they don't like him and fail to respond to his heartless labors.

A FARMER must be a student and abreast with the progress of the times. In brief, the qualities necessary to the make-up of a successful farmer are as follows: he must be active, diligent, methodical, economical, temperate, progressive, a good salesman, and possess a good share of common sense. If he is not blessed with these qualities, the sooner he sells out and gets into something else the better; for it will avail him nothing to remain and make himself uncomfortable and everybody else by whining and moaning that farming is a poor business and cannot be made to pay.....

THE corn plant cannot endure a crusted soil about it.....

IF, by some unforeseen accident every other grain crop, every root crop, and all our grass and other fodder crops were lost to us, we could still survive and prosper if only corn were spared.....

THE florists of the country are trying to settle upon a national flower. The R. N.-Y. would select Zea mays. This would no doubt amaze the ladies and corner the florists.....

IF it be granted that the application of 1,000 pounds of a $50 fertilizer will increase the yield from 25 to 50 bushels, then that amount can be profitably applied.....

NOTHING will keep the young corn plants thrifty and keep them growing better than stirring the soil.....

PROF. HENRY says, in the Breeder's Gazette, that a principal reason why farmers have held to the silo is because their stock show such an intense fondness for silage after having been fed upon it a few weeks. Every good feeder learns to appreciate the discriminating appetite of his cattle and is happy in catering to it, believing that any preference expressed by the beast should be carefully considered by the master. There is no denying that horses, cows, steers, and sheep prefer some of this succulent food to anything that can be given them excepting grain and roots, and will leave the best hay that can be made, for plain fodder-corn silage. So long as the facts stand thus those who have had actual experience will not permit themselves to be argued out of the case by persons who have had no experience in the matter. They propose to stand by the beasts that have the food to eat, rather than by neighbors who theorize about it. It is an undeniable fact that the friends of the silo today are the *owners* of silos, and that the objections to it come almost wholly from persons who have never fed a pound of silage in their lives. It will be ample time for us to grow doubtful in the mattrr when we see siloists giving up the practice.....

THE new tuber-bearing plant called Stachys tuberifera is prized in France. The tubers with us at this season are rotting when kept in damp sand, while if brought into a warm room they shrink up immediately into a mere skin. The plant is said to be hardy .....

MR. W. W. RAWSON says that the best cultivators do well if they succeed with cauliflowers three seasons out of four. Failures are generally caused by drought.....

MR. PHILBRICK of the Massachusetts Horticultural Society, plants squash seeds among his early potatoes. The squash vines do not ordinarily interfere with the potato vines until the latter have made their growth.....

MR. PHILBRICK commends the White Egg as the best turnip for family use. This variety may follow a crop of peas if the land is rich..

JUST before frost Mr. M. B. Faxon takes up his tomato plants with all the soil that can be made to adhere to the roots, and places them in the cellar. He has had perfect, well ripened tomatoes on his table as late as Thanksgiving from such vines.....

MR. FAXON speaks well of the Sieva dwarf bean. This variety is really a small Lima....

PLANT some beet seeds for greens. Is your parsnip seed sown?.....

THE following is taken from our old and much respected friend the Farm Journal:

"DEAR FARM JOURNAL: Would you not, as friend and guardian of the farmer, do us the favor to call on the RURAL NEW-YORKER, and try to induce it to call a halt, and think what it is doing to us poor farmers who happen to be potato growers? For the last seven years or so it has been teaching the world to raise such enormous crops of potatoes that the price has whittled down, so that to-day they only bring the Pennsylvania farmer about 20 cents per bushel. And now, to cap the climax of our misery, it is trying to induce all the fair ladies of the land to go into potato culture next spring, for health and for profit. Should this prove a success, what will potatoes be worth a twelvemonth hence? Probably not more than five cents per bushel. And the R. N.-Y. in its next cartoon will be obliged to add to the load of the over-burdened farmer, a bouncing, healthy, robust woman or two, on his shoulders, carrying large sacks of potatoes to market. The last straw broke the camel's back.
Hydetown, Pa. DESPAIRING FARMER."

PROF. HENRY says, in the Farmers' Review, that the best way to treat sorghum is to plant eight or ten seeds in hills two feet apart, with the rows three or three and one-half feet wide. Plant about the same time as corn, but not until the ground has become warm, upon well prepared, freshly stirred soil. He has been able to grow cane with very little hand cultivation, by having the ground carefully prepared and using a fine slant-tooth drag to stir the soil before the seeds have sprouted, and while the plants are small. If the hills are slightly below the general surface the drag will not tear much of the cane. Usually cane must be hoed once or twice, since the young plants are quite small when they first spring up, and easily smothered by weeds. The after cultivation can be carried on with the cultivator.....

PROF. FERNALD shows us that alum water—even a saturated solution—has little or no effect upon the currant worm.....

WALDO F. BROWN offers a sensible suggestion in the Farmers' Review. It is that the end posts, which must bear the strain of stretching the wires, be set with concrete. It will take but a few cents' worth of cement to a post, and will make it perfectly firm at the bottom, and also more durable than if set in the clay. It is almost impossible to set posts firm enough so that they will not yield to the strain when the land is wet and soft, but by digging a hole fifteen inches square and pounding it full of coarse cement grout around the post it will give base enough to the post to keep it in place.....

BEFORE the meeting of the Market Gardeners' Association, as reported in the Massachusetts Ploughman, Mr. Crosby remarked that system is needed upon our farms; some farmers now work their men only 10 hours per day, others still demand 15 hours; when we can offer our men the same wages for the same hours that are offered by other trades, and a steady job by the year, we will be able to get as good men as ever, and as many as we want, and we shall also be likely to keep more of our young men upon the farm. If the farmer demands 13 hours of labor for the same pay that is given for the 10 hours in other trades, then farming must be a poor business; so say the young men and the laborers, and this is why we cannot keep them.....

HE further said that Messrs. Budlong & Son, of Providence, R. I., the largest market gardeners in New England, work their men only 10 hours per day. If it is necessary to get the men out at 5 A. M., give them two hours at noon or quit at 5 P. M. or give them better pay.....

A GOOD man who works with a will and has his employer's interest at heart can earn as much in 10 hours as an indifferent or careless man in 13 hours and in order to get the best service we must use our men well and secure their good-will.....

A MEMBER was asked what were his objections to a wooden silo. He replied that rats were liable to destroy it. One member estimated that it would require 12 tons of silage a year for each cow—about a ton a month.....

THE silage has kept better in the silos made from lumber than in those of concrete. Mr. Bullard says that they feed twice a day regularly, morning and evening. In addition to this the cows get, morning and evening, mixed with the silage, three or four quarts of grain. The grain that satisfies best is made up of half bran, one-fourth chop, and one-fourth oil-meal. For cream and milk it gives the best results.....

LAST March (1888) 100 prominent men of Wisconsin were written to who had built and tested silos. All expressed themselves in favor of the silo and satisfied with their success in raising the fodder and feeding the silage. No less than 2000 silos, as the R. N.-Y. has noted, were built in Wisconsin last year.....

MR. J. J. H. GREGORY, before the same meeting, said that he had used three manure spreaders and found them very useful tools. They have been much improved of late. The Meeker harrow was also a very useful tool; he used it in preparing land for small seeds, and estimated it saved him the labor of 18 men with rakes in preparing land for onions. It will not work well on land that has many stones as large as the fist, but on good loamy land is invaluable. For spreading fertilizers in the drill and mixing with the soil he used the Spangler Spreader, and a machine made at Taunton for broadcast spreading of fertilizers. This machine drops the fertilizer so near the ground that it does not get blown away by the wind.....

Mr. GREGORY stated that the manure spreader would put on about four cords per acre at one application. If more than this was needed he applied fertilizers. Mr. Sullivan said the Meeker harrow did not work well on the stiff soil of Revere. Mr. Rawson said he had discontinued using a manure spreader because he could not apply enough at one application and in going over a second time the wheels would clog. He preferred to use two carts. He used the Meeker harrow and liked it for sowing fall spinach on ridges. He also used it somewhat in spring. It is a good tool. He preferred the Cutaway harrow to the Acme; it clogs less and will work on sod. Mr. Gregory said the Kemp manure spreader will work any manure except long straw fresh from the stable. Brick-bats do not generally clog it, but sometimes are thrown at the driver by the machine. He had spread 65 loads in a day with two spreaders and a man to help load.

Mr. James Russell said this machine works well and will spread anywhere except down a steep hill. The improved machine will apply 12 cords per acre by lapping half way.....

PROF. HENRY, of the Wisconsin Agricultural Experiment Station, says experiment silos open in a very satisfactory manner this year, and some of the silage shows only a trace of acid. The first crop of clover silage was very satisfactory and he thinks more interest will be taken in it in the future. The feeding experiments are not yet far enough along to warrant much being said regarding them, but thus far they have got rather more milk and more butter by several per cent. from ensilage than from fodder, although the fodder is unusally fine. He sees nothing wrong with the milk, or its keeping qualities, whether from silage or fodder.....

DIRECT.

——PETER HENDERSON: "Above all, be careful not to to attempt the cultivation of more land than your capital and experience can properly manage. More men are stranded, both on the farm and garden, in attempting to cultivate too much, perhaps, than from any other cause."

——"THE dried peat moss, now being used in the cities for bedding, is likely to be of great value to the market gardener, if it can only be had in sufficient quantities. We have had it in use in our own stables for about a year and find it not only more economical than straw for bedding, but its absorbing qualities make it of great value for fertilizing purposes."

——MASSACHUSETTS PLOUGHMAN: "One of the surest roads to success on a small farm is promptness. I know of nothing that causes more failures than the want of it."

——"MANY think the sons must remain on the farm. I have only one son, and he is not adapted to farming. I don't want him to stay on the farm, for I don't think he is adapted to the farm. Some boys do not like farming and they will not succeed."

——"I HAVE been an overseer of the poor at Peabody for 35 years and not a single farmer has ever crossed the threshold of the Poorhouse."

"GIVE fools their gold, and knaves their power;
Let fortune's bubbles rise and fall;
Who sows a field, or trains a flower,
Or plants a tree, is more than all"

——HUSBANDMAN: "If the new Secretary of Agriculture wants to get very close to the people his Department is intended to represent he cannot do better than to call to his aid men who have made farming their chief business and tried to elevate the industry by securing for it the recognition it deserves as a most honorable calling."

——"A MAN who has a business capable of yielding 20 per cent. annual profit and has 20 per cent. of mistakes to correct in its management may look for great egress through the little end of the horn, so to speak."

——COL. F. D. CURTIS: "Give the hog some show. Pigs always kept in a pig-pen are not healthy food, and the man who eats them eats his own pig-pen."

——N. W. AGRICULTURIST: "If farming does not pay it is easier to put enough energy and brain work into it to make it pay than to enter upon the fierce struggle for life that is going on in all cities. There are nine chances to win on a farm to one in a city."

Horsford's Acid Phosphate,
Beware of Imitations.—*Adv.*

Miscellaneous Advertising.

Scrofula

Probably no form of disease is so generally distributed among our whole population as scrofula. Almost every individual has this latent poison coursing his veins. The terrible sufferings endured by those afflicted with scrofulous sores cannot be understood by others, and their gratitude on finding a remedy that cures them, astonishes a well person. The wonderful power of

Hood's Sarsaparilla

in eradicating every form of Scrofula has been so clearly and fully demonstrated that it leaves no doubt that it is the greatest medical discovery of this generation. It is made by C. I. HOOD & CO., Lowell, Mass., and is sold by all druggists.

100 Doses One Dollar

MAKE HENS LAY

SHERIDAN'S CONDITION POWDER is absolutely pure and highly concentrated. It is strictly a medicine to be given with food. Nothing on earth will make hens lay like it. It cures chicken cholera and all diseases of hens. Illustrated book by mail free. Sold everywhere, or sent by mail for 25 cts. in stamps. 2½-lb. tin cans, $1; by mail, $1.20. Six cans by express, prepaid, for $5. I. S. Johnson & Co., P. O. Box 2118, Boston, Mass.

$20 FENCE MACHINE FOR $10
Freight paid. *Guaranteed.* Hundreds in use. Circulars free. S. H. Garrett, Mansfield, O.

THAT OFFER OF $5,000.

OUR readers will doubtless call to mind the offer so widely advertised for the past ten years by H. H. Warner & Co., the proprietors of Warner's Safe Cure and Warner's Log Cabin Remedies, that they would pay $5,000 to any person who would prove to an impartial referee that they had ever published a testimonial that was not genuine, so far as they knew.

This offer had the ring of honesty about it, and as the matter has an especial interest just now, we give a copy of the offer as it appears in the Messrs. H. H. Warner & Co.'s pamphlet:

AN OFFER OF $5,000.00.

Every Testimonial published by us is Bona-Fide, and, so far as we know, is absolutely true. To any one who will prove the contrary to an impartial referee we will give $5,000. *H. H. WARNER & CO.*

Rochester, N. Y., January 2, 1888.

We ask the reader's careful attention to the following testimonials, as bearing on the offer, and their unbiased opinion of the same with reference to the $5,000.

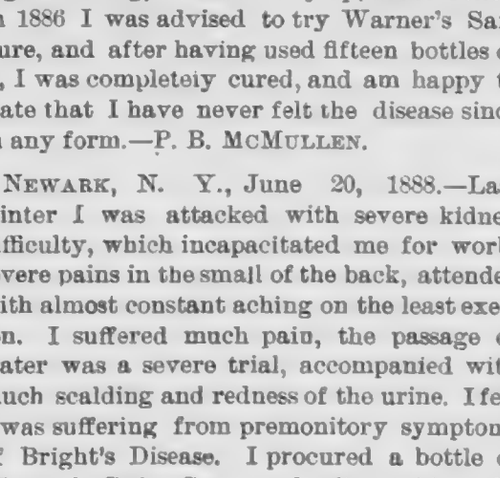
IOWA CITY, IA., June 30, 1888.—Some weeks since my daughter had a severe attack of Rheumatism. She was persuaded to take one bottle of Warner's Safe Cure, and one of Warner's Safe Rheumatic Cure, and has entirely recovered. We think it wonderful, as twice before she had been confined to her bed for months with it.—MRS. SYLVANUS JOHNSON.

CAMP VERDE, ARIZONA, Oct. 27, 1888.—For nearly a year I suffered from Gravel, and was under the treatment of a doctor. I took a great deal of medicine, but it all seemed to fail. I then began with Warner's Safe Cure, and after using one bottle of it began to get better; got another bottle, and took half of it. The gravel stone left me, and I began to mend. I am now feeling as well as I ever did in my life.—MRS. DOLLY MASON.

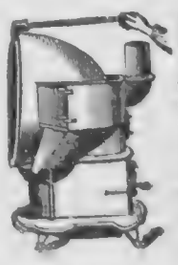
231 Myrtle Ave., BUFFALO, N. Y., November, 1888.—In 1866 I was attacked with kidney disease, and suffered for 20 years, applying often for advice to medical men of high standing, without any apparent relief. In 1886 I was advised to try Warner's Safe Cure, and after having used fifteen bottles of it, I was completely cured, and am happy to state that I have never felt the disease since in any form.—P. B. MCMULLEN.

NEWARK, N. Y., June 20, 1888.—Last winter I was attacked with severe kidney difficulty, which incapacitated me for work, severe pains in the small of the back, attended with almost constant aching on the least exertion. I suffered much pain, the passage of water was a severe trial, accompanied with much scalding and redness of the urine. I felt I was suffering from premonitory symptoms of Bright's Disease. I procured a bottle of Warner's Safe Cure, and after taking the first bottle I felt so much improved that I continued to take it to the extent of four bottles. I am now a new man, able to do a good hard days work, with no recurrence of any trouble with the kidneys.—MANDEVILLE W. PLASS.

There is no getting away from such testimony as the above. The offer is genuine. In fact, Messrs. H. H. Warner & Co. have always requested that doubters should write direct to persons giving testimonials, (enclosing stamp,) and who are of necessity, in the great majority of cases, totally unacquainted with the firm.



CHARMING NOVELTY.—Lamp shade in the form of Toy Buildings. Landscapes with illuminated cottages. Price, 12c. each; 10 shades, $1.25, $2; carriage free; payable in advance in stamps or money orders of any country. 100 shades, $4.50, including packing, taken at factory. In 8 days more than 10,000 were sold. H. KUMSS, Warmbrunn, Silesia, Germany.



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With Dumping Caldron, empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also make Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Caldrons, Etc. Send for circulars.
D. R. SPERRY & CO.,
BATAVIA, ILL.

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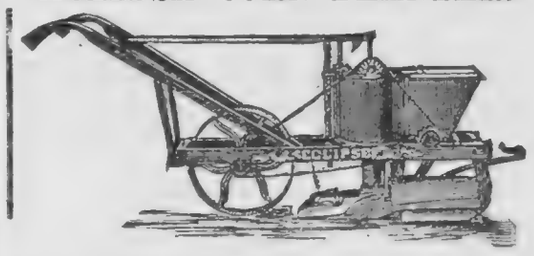

Will plant Field and Ensilage Corn, Beans, Peas and Beet Seed in **hills, drills** and **checks**—in hills up to 45 inches; in checks from 36 inches up to any distance desired. Will disiribute all Fertilizers **wet** or **dry.** Farmers, send for circulars.
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Washington Nurseries.
OUR CATALOGUE OF
NEW, RARE AND BEAUTIFUL PLANTS
for 1889 will be ready in February. It contains list of all the most beautiful and Rare Greenhouse and Hothouse plants in cultivation as well as all novelties of merit well grown and at very low prices. Every plant lover should have a copy.
ORCHIDS.—A very large stock of choice East Indian, American, etc. Also Catalogue of Roses. Orchids, Trees, etc. All free to applicants.
JOHN SAUL, Washington, D. C.

379 VARIETIES OF FRUIT TREES, VINES, PLANTS ETC.
Apple, Pear, Peach, Cherry, Plum, Quince, Strawberry, Raspberry, Blackberry, Currants, Grapes, Gooseberries, &c. Send for Catalogue.
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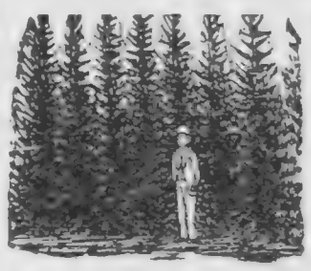

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Catalpa Speciosa, White Ash, European Larch, Pines, Spruces, Arbor Vitæ, etc., etc.
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Forest and Evergreen Seeds.
R. DOUGLAS & SON,
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GROWERS AND DEALERS IN SWEET CORN, ATTENTION! Genuine Connecticut grown Stowell's Evergreen Sweet Corn by express, $2.25 per bushel, $1.25 per half bushel, 75c. peck.
C. E. CHAPMAN, Westbrook, Conn.

GRAPE VINES
Nectar, Woodruff, Eaton, and all the best varieties. Gandy and other Strawberries. Blackberries, Raspberries, Wonderful Peach, and other nursery stock.
Descriptive catalogue giving *Instructions for planting* free
JOEL HORNER & SON, Delair, Camden Co., N. J.

VEGETABLE PLANTS—Standard Sorts, at reliable rates. Send for Price List.
M. GARRAHAN, Kingston, Pa.

FOR SALE CHEAP!
3 and 4-Year-Old Apple Trees. List of Varieties and prices on application.
GRAY BROTHERS, New Canaan, Conn.

IT WILL PAY YOU
—BEFORE BUYING YOUR—
SEEDS
—TO SEND TO—
PRICE & REED,
ALBANY, N. Y.,
For their NEW CATALOGUE.
GOOD SEEDS, LOW PRICES

Strawberry Plants For Sale.
Haverland and Burts, $1.25—100; $8—1,000; Warfield, 75c.—100; $5—1,000; Jessie and Bubach, 75c.—100; $4—1,000; Gandy, $1.50—100; $10—1,000; Hampden, $1.50—100; Summit and Monmouth, $1—100; by freight or ex.
James Lippincott, Jr., Mount Holly, N. J.

GRAPES Plants of Best Quality. Warranted True to Name. LOWEST Prices, and Largest Assortment of old and new varieties. At dozen rates, Free by Mail. Special attention called to Promising Novelties. *Send for Price List.* Address,
BUSH & SON & MEISSNER,
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Cold Frame Cabbage Plants.
500,000
Ready for planting. Send for prices. Address
JOHN. S. BARNHART, Denton, Md.

SEEDS.
Clover, Timothy and Alsike.
Write to S. S. READ, Toledo, Ohio, for prices.

WM. ROBERTS, M. D., Physician to the Manchester, Eng., Infirmary and Lunatic Hospital, Professor of Medicine in Owen's College, says: "Gradual failure of strength, increased pallor or sallowness, and disinclination for exercise is one of the prominent symptoms of kidney disease." Warner's Safe Cure is the only remedy that is guaranteed to cure kidney disease.

THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, APRIL 13, 1889.

THE R. N.-Y. hybrid and crossbred wheats never looked so well as now at this season. The reasons are, first, that the little field is so graded that water does not stand in any part, and, second, the plants were carefully mulched with horse manure last fall after the soil was frozen.

"*Am I alone in saying that the first prize should go to the woman who gets the largest yield and does the most work with her own hands?*"—MRS. F. L. AVERY, page 248.

ATTENTION, friends of the Women's Potato Contest! Read the "Instructions" given on page 246 and save it for future reference. If the R. N.-Y. has not covered the entire subject in an acceptable way, suggestions are now in order. Next week a complete list of the names of the contestants will be printed.

"*By planting a mixed corn I think the blossoming period is lengthened, giving the pollen a better chance to fertilize the ears and making them fill better.*"—H. T., page 250.

A SMALL bag of peas was opened one day last week and found to be alive with the pea weevil. They were placed in a paper box six inches square, one tablespoonful of buhach was added, the lid put on and the box shaken. They were kept in this box for 48 hours and shaken three or four times during that time. All the weevils were killed. If all who sow peas or beans would treat them in the same way, the pea and bean weevil would soon disappear.

"*Allow me to congratulate you on the very handsome way you illustrated the feeding experiment of this college and to thank you for the elaborate notice you gave of it.*" EDWIN WILLITS, Director, Michigan (Experiment Station).

THIS is given as a Wisconsin agricultural rule, but there is no reason to suppose it will not work wherever land is tilled:

"When I think my field is running down and see the old parrot on top of the fence, I plow from eight to 10 inches deep in the fall, and in the spring I mix 14 pounds per acre of clover seed with wheat or barley and sow with a broadcast seeder. When the clover comes up the old parrot leaves. J. B.
Ripon, Wis."

"*From the day we began the work our health steadily improved. I think you deserve great credit and many thanks from delicate ladies, for thinking of the plan of the Contest, etc., to induce women to work out of doors more.*"—M. B. H., page 248.

HERE is a point raised by an Ohio subscriber, that our readers are requested to think over:

"Does the Inter-State Commerce Law benefit the average farmer? I shipped potatoes to a point situated on a Cincinnati and New Orleans road, not two-thirds of the distance to New Orleans from Cincinnati, and was charged the same rate as to New Orleans on the same road. The overcharge is about $100. My lawyer friend says we cannot afford to sue a railroad for that amount, and lawing is not in my line anyway. Is not this the common experience of farmers who use the railroads?"

"*The latest trust is among the jobbers, they have all combined and their traveling men will take orders from merchants but give no prices; these are to be fixed to suit themselves, when the orders get to headquarters. We think it is about time some legislation should protect farmers.*"—H. Bros., page 249.

OUR venerable friend Alfred Rose, of Penn Yan, upon receiving a letter from a New York law firm *in re* his claim that the R. N.-Y. potato No. 2 is one of his seedlings, displays some feeling in his reply. The firm among other questions asked: "Do you declare that the R. N.-Y. No. 2 is the same as your seedling?" Mr. Rose replied: "I do not. In the name of God what more do you want?"

In the face of this and previous declarations to the same effect, his potato pamphlet is being sent about the country. What is said of the No. 2 and his own seedling is cunningly worded so as to lead the reader to suppose them to be the same. But *he* does not say so.

"*As to swine, I think they are entirely out of place on a large pile of heating horse manure; they like to lie on it, but they generally take cold from it and it is the worst place for them to lie down. Rooting it over and exposing it to the air is of no benefit to the manure.*"—H. N., page 249.

THE NEXT SPECIAL of the R. N.-Y. will treat of *Hay and Haying Tools.*

The R. N.-Y. will be glad to have its readers send short answers to the following questions:

1. *What grasses are grown for hay in your part of the country? Do you favor early or late cutting? Why?*

2. *Give a list of improved haying tools in general use in your vicinity.*

3. *How often do you seed down? With what crops? What season?*

4. *What is the average yield per acre and what manure is used?*

5. *Any new grasses or substitutes tried recently? What success?*

6. *What in your opinion is the best way to increase the productiveness of our meadows?*

"*From the vantage point of the last half of an average life the experimental character of the world will be plainly discerned, which substantiates the triteness of the saying that our hind-sight is much better than our fore-sight, as during the first half of life we are quite apt to mistake mere surmises for actual truth.*"—A. T. T., Franklin Park, N. J., page 249.

UNDER "Discussion" a correspondent makes some statements showing how Western farmers regard the "Binding Twine Trust." It is evident that these farmers are in earnest. The injustice of those who seek to impose upon them has passed the limit of endurance. The R. N.-Y hopes something will come of the effort to manufacture twine from flax or some other western-raised material, and it believes that the plan can be carried out. The writer passed many a day in boyhood turning the wheel in an old New England rope-walk. Consequently he knows something about the economy of the manufacture of rope and twine on a small scale. Dakota farmers *can* make their own twine and defy the "Twine Trust." The R. N.-Y. ventures to say that there are plenty of men all through the West who were reared within sight of a "rope walk" and who can hatchel and spin if called upon to do so.

MILK dairymen near some of the larger towns and cities never raise their own cows. They buy cows in the full flush of milk, milk them until nearly dry and then sell them for about what they will bring as beef. Some farmers who have a good supply of hay and stalks buy these rejected cows and keep them until they calve and then sell them, perhaps to the very dairymen who owned them before. Several farmers living near the R. N.-Y. New Jersey farm have practiced this business for some years. It is a rather speculative business. The cow may or may not be in calf, she may prove a good milker or a poor one. The best that can be said of the practice is that it enables a farmer to speculate on a lot of fodder that would be worth but little in the market any way. The cost of raising a heifer calf increases as one comes nearer a large city. This fact, if nothing else, ought to show Eastern farmers the folly of trying to raise calves from poor cows.

THE seeds of Pyrethrum cinerariæfolium are now offered by nearly all seedsmen. As the R. N.-Y. informed its readers four years ago, these plants stand the winter without protection, give a profusion of bloom, while the colors vary from red, through rose to white, resembling large Oxe-eye daisies or White-weeds in form. They are really among our prettiest hardy herbaceous perennials. It may also be remembered that we tried a year or so later powder made from the flowers of the Oxe-eye daisy (Chrysanthemum—Leucanthemum—vulgare) thinking possibly that it would have the same effect on insects. It had no effect at all upon them.

It is an interesting fact that while the ground flowers of pyrethrum have such a remarkable effect in paralyzing many kinds of insects, the flowers while intact upon the plants are visited by insects the same as other flowers, without, in so far as the writer could discover, causing them any injury.

THE director of one of the Western Experiment Stations sends a rather pompous announcement in which he informs the R. N.-Y. that he proposes to send all his bulletins free of charge. Then he goes on to say:

"It would afford me still greater gratification were you to reciprocate by admitting the Station to your list of exchanges and assure us of the regular receipt of your publication. I may further say that the policy of this Station from now on, will be to subscribe only to journals of a special technical character and to none of those of a more general nature and circulation. We propose to issue monthly publications and believe they are equivalent in value to the majority of the weekly or monthly agricultural or family papers of the country."

The R. N.-Y. believes that these Stations are fully able to pay for their papers. They have a fund large enough to cover all such expenditures. There is no reason why any farm paper in the country should make any of them a present of a year's subscription.

LAST year an anti-oleo bill before the Massachusetts legislature providing that oleomargarine should not be colored in imitation of butter, was lost in the Senate, and earnest efforts were made at the last election to defeat enough of the opposing legislators to insure the passage of the measure this year. Just after the election it was supposed that this object had been attained, as several of the antagonists of the bill failed to secure a re-election. This reasonable expectation of the Bay State farmers has, however, been disappointed, as a similar bill introduced into the present State legislature was defeated by a tie-vote in the Senate the other day. The mishap was due mainly to the failure of the farmers of the State to impress their wishes in the matter forcibly on their representatives, though one or more of the latter proved shamelessly treacherous in violating the promises they had made before election. The "oleo" men found little difficulty in securing genuine or bogus signatures to numerous petitions against the bill in the towns and manufacturing villages; whereas the farmers were lax in obtaining signatures to counterbalancing petitions in favor of the measure. If farmers will not take pains to help themselves in legislative as in other matters, they can hardly hope for success, however just their demands.

SEVERAL of the agricultural papers express considerable dissatisfaction at the selection of S. S. Rockwood. Editor of the State Gazette, Portage City, Wisconsin, as "chief assistant" of the new Secretary of Agriculture, on the ground that he knows little or nothing of agricultural matters. These animadversions are, however, misplaced. Mr. Rockwood has been selected only as Chief Clerk of the Department. True, the Chief Clerk was the principal assistant of the Commissioner of Agriculture; but the law creating the office of Secretary of Agriculture at a salary of $8,000 a year, also provided for an Assistant Secretary at a salary of $4,500, who is to have the chief charge, under the Secretary, not of the clerical work, but of the agricultural business of the Department. After some delay, this office has been offered to Edwin Willits, President of the Michigan State Agricultural College, and the selection is generally regarded as eminently proper and gives widespread satisfaction. The present salary of President Willits is $2,000 a year together with a fine residence and other advantages. His position too is permanent and congenial, so that there was some doubt whether he would leave his pleasant Michigan home, to make a new one in Washington. He has, however, just accepted the position. The office of Assistant Secretary of Agriculture, should be permanent to a competent incumbent.

A METHOD TO PROTECT TREES FROM BORERS. TRY IT.

LAST year we briefly alluded to the simple method employed by our neighbor Augustus J. Hewlett, to protect his apple and peach trees against the borer. It has led to so many inquiries that it may be well perhaps to speak of the method more in detail. Fruit-growers all know that tarred-paper about the trunk is harmful to it. Laths, etc, tied about the trunks are not altogether satisfactory. Mr. Hewlett's mode reduces the labor and expense to a minimum and seems thoroughly efficacious, as he has practiced it for over 20 years. White lead and raw linseed are mixed as for ordinary outside painting, though a somewhat smaller proportion of the lead suffices. With this mix enough cheap mineral paint and lamp black to imitate closely the color of the bark. The young trees should be painted in the spring just as soon as transplanted and every year thereafter in early May. The paint is applied from a little below the soil to a foot above. In four or five years the bark will peel off after the paint has been applied. When this excoriation occurs, if before July, it is best to remove what bark still clings and at once give another coating of the paint. The new bark underneath will be found bright and healthy, showing that the paint does no harm. Mr. Hewlett painted some apple trees every spring for 15 years or more. The painting was discontinued for several years as he thought there might be no occasion for further painting. These trees however were at once attacked by borers and several were found six inches above the entrance. Peach trees are painted in the same way. He has never had a tree injured by borers if they were regularly painted.

Try Mr. Hewlett's method, friends. He is a careful, conservative farmer and his statements may be accepted as fully trustworthy.

"*It is not enough to say that the railways carry cheaper than teams and wagons can. Of course they do. That is just what these great inventions of the past enable them to do. It is, however, a curious fact illustrating this hidden fallacy of argument, that one of the first railways built in Iowa based its local rates upon the actual cost of wagon transportation on dirt roads, mud roads, usually in the then new country. This was an absurdity, an utter ignoring of the existence of steam engine and iron track as ideas then and agents belonging to society, to the world at large.*"—PRES'T W. I. CHAMBERLAIN, page 245.

BREVITIES.

READERS who have had experience with the "grain hay" noted in another column, are requested to write it out for the R. N.-Y.

THE Kentucky station confirms the R. N.-Y.'s conclusions as to the value of sulphate of iron as a fertilizer. Why not stop hinting at the mysterious fertilizing powers possessed by this substance.

A PICTURE of an Ohio farm-house will be printed next week. Readers of the R. N.-Y. will be greatly pleased with it. Such a house is a certain indication that farming pays and is made comfortable—indoors at least.

IF you want to make a good hired man feel discontented get him to do all the work of caring for the farm team and then drive the team yourself. The man who takes care of the team ought to drive it—that is, if you want the best work the team can do.

THE R. N.-Y. has just been shown an ornament for a woman's hat in which bright-colored bugs take the place of birds' heads. The wings of the bugs are colored and polished in a beautiful manner. This is a good idea. Some of our most injurious insects are the handsomest.

POULTRY people who complain that purchased eggs do not produce chicks true to the standard or that some breeders hold their eggs for higher prices than others do, are respectfully requested to try a breeding pen of their own and see how the chicks will vary in size, color and shape.

LAST fall the R. N.-Y. gave some facts regarding the profit of mulching winter wheat with straw. Quite a number of readers wrote at that time that they proposed to experiment with various sorts of mulching. The R. N.-Y. will be very glad to hear from all who have tested the matter.

MR. DAVENPORT writes us that instead of being surprised that varieties of potatoes are occasionally mixed by dealers, the wonder to him is that so many varieties are kept pure and true when it is considered that there are scores of kinds that so closely resemble each other. He thinks that if the varieties in this country were weeded down to the selection of the fittest a dozen would cover the best of them. Truly many are called (by various names) but few chosen after trial.

Veterinary.

A FIGHT WITH THE MICROBES OF LUNG PLAGUE.

DR. JAMES LAW.

(*Continued from Page* 219.)

In carrying out the work of extinction of lung plague in Cook County, the district was mapped out into eight divisions with clearly defined boundaries, so that nothing should be overlooked, and a veterinarian was placed in charge of each division; each became responsible for his own division, made a succession of house-to-house examinations of the entire district, and with the assistance of two helpers, sworn in as deputy sheriffs, marked every bovine animal with an ear tag bearing a given number by which such animal was registered, with its personal description, stall and owner on our records at the office. If on a subsequent visit more or fewer cattle than at first were found in any herd, the animals must still correspond to our office records, the new arrivals must correspond in description and number of ear tag with those entered on our records as sent to this particular herd by permit, and the deficiency must likewise correspond in tag numbers to those shown by our books to have been sent on permit to an abattoir and slaughtered. All movement of cattle from herd to herd within the quarantined area was stopped. Cattle might be introduced by permit from a healthy source outside and by a prescribed route direct to their destination, but they must stay there until sent to slaughter or until the quarantine should be raised. Apart from this, all fresh cattle going to stables within the quarantined area must come direct from the Union Stock-yards. The Stock-Yards company provided that no cattle should be admitted from Cook County, but that only such as came by rail, from outside the county, and from healthy districts should obtain access. This they carried out faithfully; indeed, any admission of Cook County cattle would have been the death sentence of the yards for all store cattle, as no one would have ventured to purchase and make additions to his home herd from an infected market. But we did not need to rely on the stock-yard employés alone for the exclusion of infected and exposed cattle. The city Board of Health had an inspector constantly at the gate to look after the question of diseased meat, and to put the question beyond doubt a Government employé was placed at each gate to prevent all ingress of cattle, and to apply ear-tags and give permits with all cattle passing out and destined to the quarantined stables. This employé at the stock-yard was furnished with a list of stables that had been emptied by slaughter and disinfected and those that had been otherwise attested as free from infection, and to these only was he authorized to grant permits.

Every morning he furnished the office with a duplicate of all permits granted by him the previous day, and these together with those granted at the main office, were arranged in groups according to location, and deputies were furnished with lists of herds to which they had been sent, that they might return to the office a full description of the cattle in such herds with their tag numbers, for comparison with the permits granted the preceding day. If a discrepancy appeared the person who obtained the permit was held responsible and could be prosecuted or punished by the withholding of all future permits, or both.

For some time, until we got all cattle tagged and registered, the law was evaded in isolated cases, but as soon as the record was complete the system worked admirably. Unscrupulous and evil-disposed dealers soon learned that the Nemesis of fate followed closely on the heels of every such contravention, and as the judges loyally sustained the law in its letter and spirit, offenders were compelled to make a virtue of necessity and to respect and obey the statute. From this on we had no trouble from the surreptitious introduction of cattle into quarantined herds.

Another point of no less importance was the system of permits by which alone quarantined cattle could be sent to slaughter, and the obligation of the butcher to kill such only in the presence of a Government veterinary inspector. By a strict appliance of this rule and a holding of the owner or custodian to account for the disappearance of any animal except in accordance therewith, we insured that no diseased animals could be smuggled away, and that even chronic cases of the disease coming from an apparently sound herd would be discovered and recorded. Then there was a standing rule that whenever any case of lung plague, acute or chronic, was furnished by a herd, that herd should be at once purchased and slaughtered and the premises disinfected. But as it was almost invariably the case that, prior to the application of our systematic method, any such infected herd had been in contact with other adjacent herds, on the open commons, such adjacent herds were, as a rule, dealt with in the same way. In the majority of cases the slaughter of such adjoining herds furnished evidence of disease, which justified the precautionary measure, and thus not only the infected herd but the locality was at once purged of the infection. Then as to pasturage: whenever a stock-owner had a fenced pasture to which his cattle could go without becoming exposed on any unfenced ground, there was no restriction, but if they had to pass over open ground, even if it were no more than crossing the street, such movement could only be made under a permit and under the precautions requisite to avoid infection of themselves or others. No permit was given to pasture on land that was not well and securely fenced.

Under such a system as this it could only be a question of time when the last vestige of infection would be destroyed and the country and State freed from the suspicion and restriction. The success came sooner than we had reason to hope, for on the 28th of July the last acute case of the disease was met with, and after this we had only to keep a sharp look-out for chronic cases in the slaughter-house, until all cattle that had been in the infected area prior to the inauguration of our work and had ever been probably exposed to infection had been disposed of. That accomplished there was nothing left, even of a chronic nature, from which a new outbreak could originate, and the lung plague can only start anew when introduced from without.

A year ago I hoped that it might be possible practically to extirpate the disease from New York before I had to leave the work last September; but the drawbacks were so many and potent, (above all the adverse decisions given in the courts, the need for new legislation, and the failure of the appropriation) that it was impossible to realize this hope. In spite of all these draw-backs, I had the satisfaction of seeing Staten Island freed from the plague, Westchester and New York almost purged of its presence and Long Island alone remaining subject to inspection and an example of the unwise opposition of its misguided people—the first place on the Continent to receive the infection and the last probably in both State and Nation to be freed from its grasp. In 30 years this lung plague has never been circumscribed to such narrow limits, and never has the duty been more easy or more urgent to complete its suppression.

Indust'l Societies.

THE TWENTY-SECOND SESSION OF THE AMERICAN POMOLOGICAL SOCIETY.

(R. N.-Y. SHORT-HAND REPORT.)

More about orange culture; great, recent and prospective increase of the industry; lemon culture in Florida.

DURING the last evening session George R. Fairbanks read a highly interesting essay on "The Orange Industry of the United States from a Commercial Standpoint." The enthusiastic orange growers evidently realized that it is very seldom the Northern members of the great pomological family ever come to the citrus region, and that they had better make the most of their visit. Hence the various and exhaustive papers on the orange, lemon, etc. Mr. Fairbanks spoke of the early history of the orange in Florida; how the seeds were brought by the French and Spanish explorers over 300 years ago at the settlement of St. Augustine and later. Soon after the territory was ceded to the United States a few groves along the coast and the St. John's river were planted. Zephaniah Kingsley, an Englishman, became the leading grower at that time, and a small quantity of the fruit found its way North by small coasting vessels. With the advent of steam vessels and railways came the first commercial impetus to this industry.

Where there are now over 10,000 orange groves, there were only a few hundred 20 years ago. A well-established mature grove can be relied upon to produce $300 per acre, even at one dollar a box. Orange growing is the most compact and productive of all agricultural industries. A grove producing 10,000 boxes will freight a train of 33 cars. The present annual orange product of Florida is estimated at 3,000,000 boxes—10,000 carloads—which pay to the railways about $2,000,000 for freight. The box-stuff costs about $390,000; nails $30,000; paper for wrapping $120,000; labor of gathering and packing $600,000; total cost of preparing fruit for market about $1,140,000. To this the cost of cultivation, fertilizers, packing-houses, teams, tram-roads, tools, implements, etc., must, of course, be added. Then when we realize that not more than one-fiftieth of the orange trees in Florida are bearing, the possible and probable future development of this industry seems amazing. We now import about 3,000,000 boxes annually. California produces about 700,000 boxes, and Louisiana two or three hundred thousand more. This brings the total consumption of oranges in the United States to 7,000,000 boxes a year. If all the trees now planted in this country come into bearing, the supply will exceed the present demand.

Dr. J. D. Neal then followed with some remarks on the disease known as "root-knot," which is quite troublesome at the South. He showed a small peach tree and other plants affected, the roots of each being a mass of hard, knotty excrescences. He said the sandy soil of the South was much subject to the disease. In each of the knots are found millions of microscopic worms, he said.

An interesting paper on "Lemon Culture in Florida," by H. S. Kidney, of Winter Park, was presented to the Secretary. The Villa Franca and Belair Premium are the best among the choicer kinds and most profitable to grow. Two-thirds of the groves are of these varieties. "I advise budding upon the sweet or sour orange, the latter the better. Lemons require more moisture than oranges; they should be planted closer—only 15x20 feet apart. Plenty of shade is needed; and with it rust is more apt to be avoided. Five-year-old trees should be 10 to 15 feet high and equally broad. They should then begin to bear, yielding an average of a quarter to a half-box, doubling the yield annually until they produce about eight boxes of fruit when 12 years old. There are usually two crops each year, one ripe in July and August, another in October and November. The tree is less liable to disease than the orange. Florida lemons always bring a high price, averaging $2.50 to $4. per box, and I am very hopeful for the profits of lemon culture here."

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

DRESS.

THIS is the season when the thought of the new spring bonnet and gown is uppermost in the minds of fashion's worshippers.

"I *must* have something new for Easter" each exclaims. "But what?" When Easter comes, the fortunate ones hie them to church to exhibit their new finery, and to "take in" what the others have on, while those who could not revel in a new gown and bonnet, remain at home still doing penance.

Every one likes to be well dressed, as a matter of course, but there are many who are *never* well-dressed, no matter how much money they spend upon their personal adornment, for they lack that most essential of all things—*taste*. No one can be considered well-dressed, no matter how costly the apparel, who is dressed in such a way as to attract universal attention. A true lady, one of innate refinement, will eschew for street wear, bright, glaring colors and striking or gaudy millinery. A person may be considered well-dressed who gives the impression of perfect harmony; who makes one feel that her toilet is complete, even though we cannot specify *what* she has on.

I was making a call a short time ago when the gentleman of the house said, "Oh! I saw Alice to-day and she looked beautiful."

"What did she have on?" asked his wife, woman-like.

"Oh! I don't know," he replied "something soft and gray and sheeny—anyhow she looked lovely."

"That's just like you men," said his wife, "Now I'd have known exactly *what* she wore."

That woman was evidently a well-dressed woman. She left the impression on all that she looked "lovely" and that is all that is necessary. She may have had on a garment made of some simple material, inexpensive, yet made in good taste.

If you cannot afford to have many dresses, get something dark, and plain for what you have. If you get a blue, red, or green dress and are compelled to wear it almost constantly, people will soon come to know you by your frock; while if you get a black or dark brown or gray, you can wear it steadily for many months without attracting attention thereby. It is well to have *always* a good black dress for a "stand-by." This can be worn at any season of the year and will not be out of place. A fresh ruching, a bright bow at the throat, or neat white collar and cuffs will brighten and freshen it up wonderfully. I heard a lady say to another one day: "How is it you always look so nice? I

Miscellaneous Advertising.

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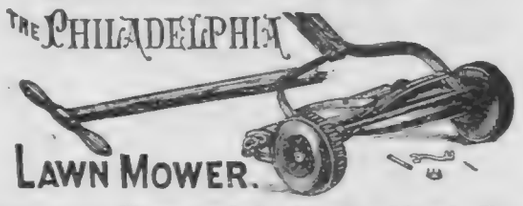

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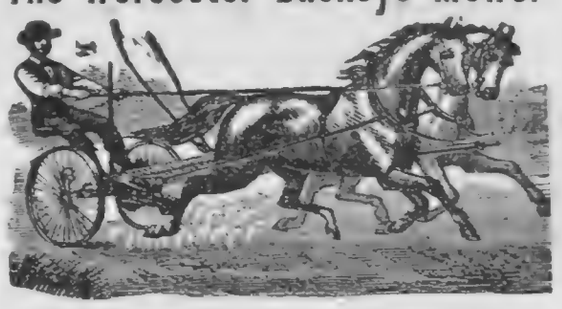

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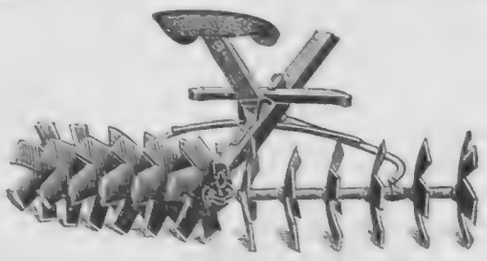

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don't see how you do it on the salary you make and do the other things you do, too."

Her friend laughed and said,

"How many dresses do you think I have?"

"Oh! I don't know" replied the other, "I never thought; only you always look as if you came out of a band-box."

"Well," she answered, "I own just two black dresses. One good one, which I wear on bright days, and one not quite so good which does for the cloudy, dark, or damp days."

Her friend opened her eyes wide with astonishment. But after thinking a moment remembered that she always wore black. The secret lay in the way she cared for her clothes. Every night before going to bed she looked over her dress carefully, put a stitch wherever one was needed. Her facing and braids were kept in order—and that is a job of no small undertaking as my fellow-sisters well know. Her dresses fitted well and brightened up with something at neck and throat, she, as her friend said, "always looked well."

Some people buy whatever is fashionable without knowing whether it is becoming to them or not. This is a great mistake. Now I think of all the known colors red is the loveliest. When I was a youngster I used to implore my mother to buy me a red dress, but she would not do so, because she told me I'd look like a "fright" in it. I didn't believe it—because I didn't know. My sisters wore red; why couldn't I? At any rate I determined that as soon as I grew up and could buy my own clothes I'd have a complete red suit, from the crown of my head to the toe of my foot. Did I? Well, I guess not! Imagine any one with light hair, shading on red, wearing scarlet! I still yearn for a red gown though, and I believe if I ever get rich that I'll have one just to walk up and down my own room in!

Neat gloves and good shoes are the most essential points of one's dress. The French have a favorite saying, which, when translated into our tongue runs—"If one be well gloved and shod, the rest is nothing."

Keep your clothes brushed. The dust, if allowed to remain, fills in the interstices and the garment soon looks rusty.

DORA HARVEY VROOMAN.

KITCHEN TALK.

ANNIE L. JACK.

I THINK there is nothing more trying to a housekeeper than the endeavor to get up a variety for breakfast in winter in the country where the grocer is afar off and the butcher calls only once a week. It is true the larder of the proverbial farm-house is always supposed to be full, and the pork barrel is a never-failing institution. But if one is the least bit inclined to rebel against this as a regular stand-by, and does not happen to be fond of eggs, the question remains, "What shall we have for breakfast?" Tiring of oatmeal lately we have found wheat middlings a pleasant change, light and easy of digestion and very quickly and easily prepared. Home-made marmalade now that oranges are so cheap, is a great treat to some children for breakfast. Rice cakes, from left-over boiled rice of the day before, can be made up with a batter of eggs and milk and baked on a griddle, and corn-meal mush fried in gravy, is very much relished by children who do not care for meat. In spring a breakfast of fresh-water fish, with asparagus and potatoes and a few crisp radishes, is a refreshing change, and the fine flour from corn made into batter cakes with genuine maple sirup, is a real luxury. There is no time of the year when one's appetite is so languid and variable as in the first soft days of early spring.

The proper food for children going to school should be a subject of study; for it only invites to illness to go out on an empty stomach, and yet we all want our little ones to eat what we think is suitable for them. The habit of taking a little of everything, tasting, and leaving part of it, is often copied from their elders, and is a pernicious custom. Given good, plain food, they should be encouraged to finish what they accept. "If grandpa was here he'd make you clean up your plates," said a small child once to a company who were leaving a lot of tasted food to be carried away.

As I write, the kitchen fire burns low, the kettle stops singing, there is a lull in the domestic machinery. Breakfast is over, the clearing up is finished, it is bright and sunny in the window where the canary chirps. Some one said that my kitchen was the cheeriest room in the house, and that is what I want it to be; for with families of moderate means in the country much time must be spent there, especially as in our case where the daughters are mother's help.

OF HIS OPINION STILL.

"A MOTHER," writing to the RURAL of February 16th, fails to see the point of my criticism of Charity Sweetheart's Reveries, and calls it "a tirade against refinement." The dear soul is entitled to her opinion, be it right or wrong, but it recalls an anecdote that I read somewhere of a debate between two children, one of whom delivered this conclusive argument: "It's so! for mother says so, and if mother says so it's so if it ain't so!"

The "refinement" at which I "sneer" is not refinement in any sense of the word, neither according to Webster's Unabridged, nor in accordance with the code of the several States in which I have been. The pseudo-refinement against which the "tirade" was made is the pharisaical egotism of narrow-minded beings, who with the danger of a little learning fondly imagine themselves of a superior mold, and who, in soulful yearning after the utterly utter, would fain flee to Heliconian hights, and serenely exclaim to an admiring world: "We thank God that we are not as are our fathers and brothers, who have no more brains than so many calves." If it is refinement to blazon the faults and misfortunes of brothers, and others to the gaze of the public; to hold up the follies and foibles of loved ones to the shafts of ridicule; to be continually engaged in lauding self at the expense of others; to be continually saying "I"—"I"—"I" it must be confessed that I do despise it.

From masculine women and effeminate men I pray to be delivered. Whenever I see a specimen of the genus Pithecus, commonly called dude, I feel a strong desire to turn him over a barrel and spank him. "Shy and delicate" boys seldom make men of any kind. A very few years finish their brief course, and they are but a memory. There is a vast difference between boyish mischief and natural depravity. A healthy boy is naturally mischievous, and when two or more are together there will the spirit of mischief be also. The ordinary treatment of many boys has a tendency towards driving them away from home to the village store, to the saloon, and into bad company generally, and I make the assertion that more boys are driven to ruin by the treatment accorded them at home than by any natural depravity. Anything is good enough for the boys, any place in the house is good enough for their room. They don't need anything except plenty to eat, and plenty of work to subdue their superabundant energies. No good clothes are needed, no pocket-money, no books, papers, etc., no amusements, no holidays.

Tired mothers exclaim "Boys are *so* much trouble," failing to understand the little animals. Sisters vote them nuisances, and are *so* glad when they have taken themselves off, no matter where, just so they are gone. Under such circumstances no wonder many boys become boorish men, and what else should be expected when the training of home is made to give place to the influences of the saloon, and the village streets? No mother has a right to expect boys to become polished men, when she fails to train them aright at home.

Absurd as it may seem to many, I make the assertion that a woman may be refined, and yet be unable to write her own name, and on the other hand she may have received a common education and be an ignoramus and a slattern all her life. It is an impossibility to make a silk purse out of a sow's ear. I will instance two cases:

In my early manhood among my acquaintances was a young lady whom I considered to be finely educated and accomplished. She made her home with relatives who were both educated and refined. The young lady was a good conversationalist, as most Southern women are, an artist in dress, and a connoiseur in the niceties of good breeding, but she could not write her name. In early life she had been unfortunately situated; had never been to school and was densely ignorant when her aunt took possession of her, and gave her a few years' training. And those few years worked wonders.

Another lady who received the course of the district schools, is greatly afflicted by the home-adornment mania. The walls of her sitting-room are covered with specimens of her handiwork. Crotched what-'al'ye-call-'ems, splint thingumbobs, common chromos with frames of straw fastened with red strings; chromos with frames of split corn-stalks tied with strips of red flannel, with paste-board frames, with paper frames; chromos tacked on the walls, with bits of red flannel over the tacks; strips of red and blue tissue paper woven into a mat and tacked to the wall; splint card-racks filled with highly colored cards; all kinds of figures cut from tissue paper and stuck on the walls; wash-stand in one corner filled with a heterogeneous lot of glass-ware; piles of rubbish and dirt all over the kitchen, floors dirty, windows grimy; madame's dress untidy, with glimpses of underclothes, at neck and wrists, positively black; baby filthy, with head frescoed with a thick coat of grease and dirt that had not been washed off since it was born, more than 12 months before. There was home adornment with a vengeance! Not any of that kind for me, thank you. True? Every word of it, and that's not all.

"Concerning the fish story," There was wife in sitting-room, wife's daughter in parlor, negro cook asleep in kitchen, and head of the house out in the rain doing the work a negro woman was employed to do, all on account of madame's nagging temper.

A MAN.

NOT DEGRADING WORK.

DISH-WASHING—that bugbear of so many young girls in families of moderate means—can be robbed of half its terrors by getting ready for it. First, a big bib apron to cover the whole front of the dress, and loose sleeves with rubber bands at top and bottom to slip over dainty cuffs, and plenty of hot water and towels are necessities. Then gather up, and sort the dishes for washing like this: go around the table taking up knives and spoons in one hand, and forks in the other, to prevent needless scratching: next cups and saucers and fruit dishes; then vegetable dishes, bone plates; etc., and lastly plates and platters, having a convenient dish in which to put refuse food for cat, and dog, or chickens. Don't burn any food unless absolutely necessary. A limber knife and bit of bread, to scrape and rub off crumbs and grease, will make dish-washing a less repulsive task. Now, if both hot water and soap are used freely enough to give the desired cleanliness and polish to the dishes, the fingers will suffer, unless a dish mop, or patent dish-washer is used, (if it only was a *real* dish-washer) which is only a pair of small wire tongs to hold the dish-cloth; a spring wire clothes-pin does very good service if better cannot be procured. Every woman ought to take good care of her hands—keep them as soft and pliable as possible without doing injustice to her work. Nobody really likes to see, or to have, roughened, blackened hands, in spite of the poems written on "Little Brown Hands," and with a little care and forethought much rough work can be done without serious damage to the hands. Stiffened fingers can neither mend stockings as deftly, nor play the piano as well as supple ones, and the busy housewife, who does much of her own sewing, will find it economy to take good care of her hands, as well as the young girl who takes painting or music lessons. Wear old gloves when sweeping or doing rough work, if grandfather *does* look contemptuous; keep a bottle of diluted tartaric acid handy to remove fruit stains, and use glycerine and rose-water—equal parts—to rub on the hands at night. Thos. K. Beecher wrote once that he "should think a woman would be glad, when she broke a dish, to think that she needn't wash that same old dish 365 times next year—aye, 3 *times* 365 times," but so long as we keep this "habit of eating," must dishes be washed, unless that millennium dawns, that Mrs. Fisher wished for so long ago, "when dishes will be made of such cheap material that after a meal one can afford to gather up the four corners of the table-cloth and dump the whole thing into the back-yard, I'd not like to live near that back-yard long, however. Dish-washing *is* monotonous and discouraging work, in that it never stays done, any more than does cooking, or washing and ironing, etc., but if "cleanliness is next to godliness" it cannot be "degrading work," as I recently heard a bright-faced young girl call it. And dish-washing can be idealized, if one wills, as well as digging potatoes I should think, and that has been proven by the RURAL to be an ideal occupation.

AUNT BETTY.

LOOKING GLAD.

AS I gazed on the little dead face of one of my own loved household, much bitterness was added to my sorrow by the thought that he might have been saved if we had only summoned the doctor sooner; if we had only realized how very sick he was, before it was too late to save the precious life. Still another source of sorrow is the thought that I did not always do all that could have been done to make that little life happy. It takes so little to make a child happy! There is one thing I wish I could impress on every young mother's heart. There is something that will cause a child more peaceful pleasure, more perfect content than all other things. I will give a little incident as an illustration. A mother, after a hard day's work, was washing the supper dishes. Six year-old daughter was wiping them. There was quite a long silence, which the little girl broke by asking, "Mamma, what are you looking so glad about?"

Oh, mothers, acquire the habit of "looking glad." The little ones in the house with you study your faces earnestly. They know nothing of your tired feelings. They do not understand your troubles. What do they realize of the debts you must help pay, the losses you have, the lack of convenient articles to do the hard work you must do, and all the crosses you must bear! They know only their own little wants, and think "mamma" can supply them all. If her face is gloomy and dark, they are uncomfortable, and try to carry alone a burden which a few words might set right.

Oh, mothers, if your little ones must wear patches, must eat bread and milk from the kitchen table, and do without pretty toys, by all means treat them to a pleasant face. Bury your own trouble. Keep it out of your face. Practice, and practice, till you can show a face without the least cross look, while the little folks can see you. When your tears get the better of your resolutions, *hide* till the storm is over, clear away its traces, and smile into the eyes of the first prattler you meet. In the old days, you never met your lover with cross looks and tears. Now, never meet your children, as you would have hesitated to let him see you.

MRS. LEVI H. NILES.

TWO NEW ENGLAND RECIPES.

BAKED BEANS.

PUT the beans in cold water to soak, the night before. Next morning, put in a colander, and rinse two or three times. Then put them in a kettle with the pork you intend to bake, cover with water, and boil one and one-half hour. It needs one pound of pork for one quart of beans. When the beans are soft, put into the bean pot with just water enough to cover, add a pinch of pepper. Bake three or four hours in a moderately hot oven.

BOSTON BROWN BREAD.

THREE and three-quarters cups of Indian corn-meal, two and one-half cups of rye meal (not flour), two-thirds of a cup of molasses, one quart of milk, (either sweet or sour,) two even tea spoonfuls of soda dissolved in the milk; steam in a tin pudding boiler five hours. Take off the cover and leave in until morning.

MRS. J. STEIGLEDER.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

KILLING TIME.

OLIVE E. DANA.

I SUPPOSE most of us are busy people and therefore as healthy, earnest folk ought, have a hearty contempt for that old phrase "killing time," and especially for the thing itself. It seems to me to belong only to certain aimless pleasures of the so-called fashionable world, or to the extravagances of certain harmless individuals whose intellects seem in inverse ratio to their pocket-books. It probably does not occur to us that we are guilty of the same folly; yet is it not often true? Do we not do it practically in many ways? Was it not something like it when we bestowed much labor, beside dimes and dollars, on a certain piece of fancy-work which, when done, had little beauty, it may be, or, very likely, was too good for the rest of the furnishings? How many hours every week do we spend in unprofitable reading? How many in equally unprofitable dreaming or "moping" or worrying? If we are "alive unto God," our time must partake of that consecrated vitality. We are making it in a great measure null when we plan out more than we can do in a given time and perhaps have to leave that which was most necessary. We are despoiling it as surely when we overload and distend it as when we make it bear and hold too little. We do most fatally misuse it by over-work and over-worry. There is no way so painful to ourselves, who must bear the pains of all dying hours, as to thus

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria.

destroy it as it were before-hand. We learn by experience how not to do it.

WHETHER IT PAYS.

DID you notice what Miss Dana says about doing one thing at a time? She is right; it doesn't pay to do more than our strength can bear, especially when it is unnecessary. A great deal of harm is done by ambitious girls who are bent on utilizing every moment in some way. The idea of trying to study, for example, when the body is completely tired out! Certainly it does not pay. Change of occupations certainly rests one, but, all the same, one cannot really study profitably when one is tired out.

Fancy-work is one of our greatest relaxations; certainly the needle is one of the greatest blessings we women possess. But, all the same,a good deal of it does not really pay. Take, for example, much of the crocheted edging one sees. It is terribly trying to the eyes especially by lamp-light—yet many girls spend their evenings entirely in this work. It does not really cost much, if any, less than bought trimming;—taking into account the wear and tear on one's eyes it costs more. Of course, there is the pleasure of making, but, after all, does it pay?

Perpetual practice on the piano when a girl has no actual taste for music—does that pay? I don't think it does. There ought to be music in every household, if possible, but, all the same, there is a great deal of valuable time wasted in music by girls whose taste lies in other directions, merely because it is the custom. As far as social qualities go, a girl who can talk pleasantly and sympathetically will always attract far more than one whose cultivation is musical, and nothing else.

PATTY GARTON.

SMOKING IN PRIVATE.

SMOKING in public is bad enough, but it is a question whether or not it results in as much personal injury and inconvenience to those who dislike smoking as the habit of smoking at home. In public we can get away from those who are obnoxious to us, but in private it is sometimes almost impossible. I sometimes think chronic smokers take a fiendish sort of delight in tormenting those who do not smoke. How often when visiting at the house of our friends is our whole evening's enjoyment spoiled by the after-dinner cigar! If we adjourn to the piazza or take a stroll about the grounds the master of the house insists upon the omnipresent cigar. If we go riding the host drives, sits upon the front seat and the tobacco smoke is wafted back into our faces. If a private rowing or sailing party is proposed, the so-called gentlemen must load up with cigars or cigarettes. On every side—everywhere--we come in close contact with the poisonous vapor.

Who can tell how many headaches have been caused, how many delicate lives sacrificed by this deadly nicotine? How horrible the fate of a delicate and sensitive woman who is tied for life to a habitual smoker. Few men are drunk on liquors or beer all the time, while many men are dull and stupid, narcotized all the time. Respect for a man's family ought to induce him to abandon the disgusting habit even if he cared nothing for the comfort or welfare of the public.

In the matter of smoking there is a lingering relic of the homage which men formerly paid to women. Almost any man, who makes any professions of being a gentleman, will ask ladies if smoking is objectionable to them before lighting a pipe or cigar in their presence. Who ever heard of one man asking another if he objected to smoking? It is, however, a fact that some men suffer greatly from inhaling tobacco smoke; as a rule, they suffer in silence for fear of hurting the feelings of the smoker or of being called a crank.

To sum the matter up, I would make a new and imperative rule of etiquette, that *no man should smoke in the presence of other men who are not smoking, or in the presence of ladies or children.* J. H. G.

GOLDEN GRAINS.

THE REV. F. D. KELSEY concludes a pleasing sketch of a Chinaman who was helped by a lady and who returned her kindness by making her a handsome and costly present by saying that we must carry to the needy Christ's gospel of the loaves and fishes—the gospel of bread and cordwood and coats—until men realize that religion is more than a formulary, creed or ritual.....

FLAVAL says that when God intends to fill a soul, he first makes it empty; when he intends to enrich a soul, he first makes it poor; when he intends to exalt a soul,he first makes it humble; when he intends to save a soul, he first makes it sensible of its own miseries, wants and nothingness.....

TALMAGE says that if you want to have a stalwart Christian character, plant it right out-of-doors in the great field of Christian usefulness, and though the hot sun of trial may try to consume it, it will thrive until it becomes a great tree, in which the fowls of heaven may have their habitation.....

SIR HENRY TAYLOR says a secret may be sometimes best kept by keeping the secret of its being a secret. It is not many years since a State secret of the greatest importance was printed without being divulged, merely by sending it to the press like any other matter, and trusting to the mechanical habits of the persons employed for their printing the document without knowing what subject it related to.....

GOOD nature disarms enmity, allays irritation, stops even the garrulity of fault-finding. It more than half overcomes envy. A really good-natured man is the most troublesome morsel that the malign passions ever attempted to feed upon. He is the natural superior of irritable persons .....

ROBERTSON says that what the world calls virtue is a name and a dream without Christ. The foundation of all human excellence must be laid deep in the blood of the Redeemer's cross, and in the power of his resurrection....

UNCLE ESEK says in the Century "I have heard of men who knew more than they could tell, but I never have met one. If a man has a genuine idea, he can make himself understood."....

"FAITH won't enable a man to lift a ton all at once, but it will, ten pounds at a time."...

"YOU may travel a good ways on whisky, and travel fast while you are going, but you can't get back when you want to."....

LONGFELLOW says "Ah, how wonderful is the advent of the spring! the great annual miracle of the blossoming of Aaron's rod, repeated on myriads and myriads of branches! the gentle progression and growth of herbs, flowers, trees, gentle, and yet irrepressible, which no force can stay, no violence restrain, like love that wins its way and cannot be withstood by any human power because itself is divine power."....

Miscellaneous Advertising.

Our Grandsires Would have appreciated a purgative at once so mild and so effective as

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White Mountain Freezer Co., 134 Hollis St., Nashua, N. H.

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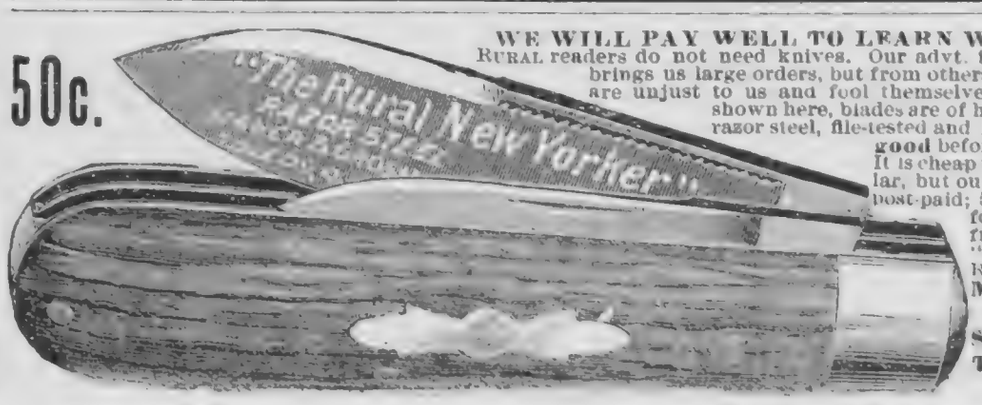

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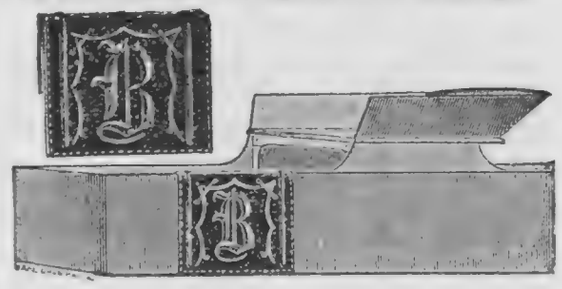

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INSECTS ON FRUIT TREES can be destroyed by spraying the trees with London purple dissolved in water. For full directions and improved outfits for Hand or Horse Power at BOTTOM CASH PRICES, address FIELD FORCE PUMP CO. Lockport, N.Y

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LATEST MARKETS.

AGAIN the advertisers have monopolized so much of our space that a report on markets is out of the question. There is, however, but little change from our last report.

The Encouragement of Numbers.

Which do you prefer to lose, your health or your fortune?

After all, there is no alternative, if you lose your health you lose your fortune.

On the other hand, if you gain health, you gain fortune, for have not our wise old philosophers agreed that Health is Wealth?

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But we leave that as an inference from what our patients say of us.

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We rarely notice anything of a medical nature in the columns of the Journalist, but we must make an exception in favor of Starkey & Palen's Compound Oxygen, which we know to be all that they claim for it, and so give it our hearty and unqualified indorsement.

UTICA, MISS., July 18, 1888.

I most cordially recommend your home treatment to all persons suffering from nervous prostration or general debility, neuralgia and sick headache. Indeed, I would say, all chronic diseases. MRS. THOS. H. LEWIS.

ALBANY, OREGON, LIME CO., JULY 19, 1888.

At the time I ordered your treatment for my son, he was compelled to leave school, he was so ill. Thanks to your Compound Oxygen, he is now able to be about all the time; is not troubled with catarrh, and has not had an attack of asthma since he began using it.
MRS. C. M. WILLARD.

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COMMUNICATIONS RECEIVED FOR THE WEEK ENDING APRIL 6, 1889.

A. A. C.—N. R. S.—William Goodrich, thank you.—W. J. H.—E. A. McC.—W. F.—J. H. C.—D. C.—L. G.—S. A. P.—M. S.—A. C. H.—H. R. H.—E. N. H.—S. F.—W. L. K.—W. J. P.—M. G. L.—E. D. G.—J. L.—G. A. S. L. G. More, potatoes received.

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Butter Holsteins.

Registered BULL CALVES for sale. Sire, the famous bull, Duke Clothilde, 2270, whose dam, g. dam and g. g. dam average 23 lbs. 6 oz. of butter a week. Dams, Cows of noted pedigrees, with records from 13,445 to 19,631 lbs. of milk a year. The offspring of any one of these bulls will double the product of your herd.

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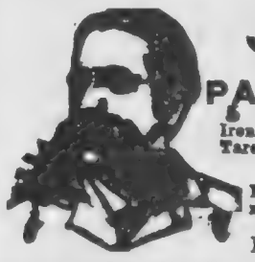

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PAYS the FREIGHT
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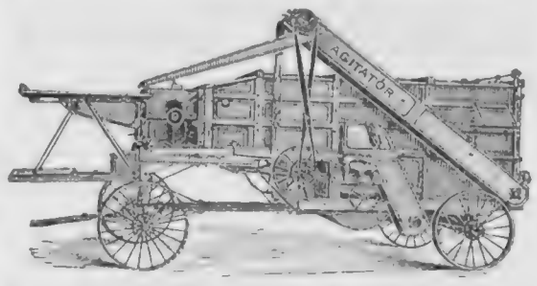

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—ALSO—
TREAD AND HORSE POWERS,
SWINGING STACKERS,
SAW MILLS,
TRACTION AND PORTABLE ENGINES.
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"Hops and Buchu Remedy," "Cough and Consumption Remedy," "Hair Tonic," "Extract," for External and Internal Use, "Plasters," "Rose Cream," for Catarrh, and "Liver Pills." They are put up by H. H. Warner & Co., proprietors of Warner's Safe Remedies, and promise to equal the standard value of those great preparations. All druggists keep them.

FARMERS! FARMERS!!
LOOK! LOOK!! LOOK!!!
NOW is the time to buy a Fertilizer Machine Cheap for distributing fertilizers, ashes, etc., etc. These Machines were made three years ago; were then sold for $40; I will now sell them for $18 to make room for the new Improved Acme Distributor. The wheels are worth more than one-half of price asked for Machine. All in good working order and will do good work. Write for particulars to **A. MEKENNEY,**
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Nickeled Self-Inking Stamp, pen & pencil Any name in Rubber, **20** cents. **Club of 7,** for $1 bill. Marks anything. Name, Town & State on, **25c. Club of 7, $1.35** **Pint** writing or stamp **Ink Free** with club orders
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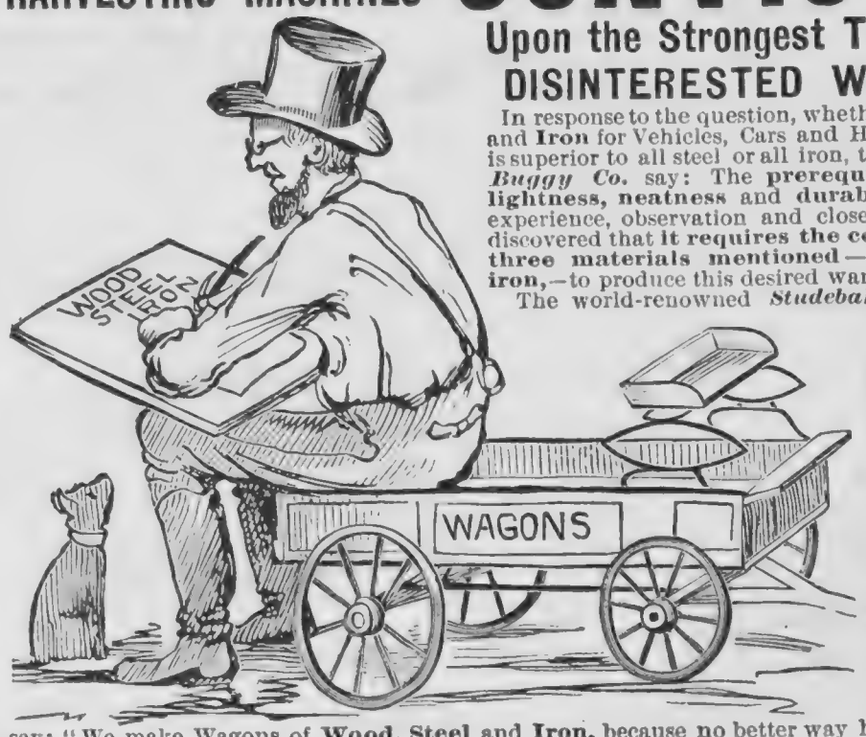
"ALL-STEEL" HARVESTING MACHINES CONVICTED
Upon the Strongest Testimony of DISINTERESTED WITNESSES.



In response to the question, whether **Wood** and **Steel** and **Iron** for Vehicles, Cars and Harvesting Machines is superior to all steel or all iron, the great *Columbus Buggy Co.* say: The **prerequisite is strength, lightness, neatness** and **durability,** and through experience, observation and close study it has been discovered that **it requires the combination of the three materials mentioned—wood, steel and iron,**—to produce this desired want.

The world-renowned *Studebaker Bros.* in substance say:

"We use a combination of **Wood, Steel** and **Iron** for the reason that these materials seem to be **best adapted** to meet the ends designed. Iron Gear, when subjected to severe strains, **wrenches the Frame. Once out of shape, the yre main so, and grow worse and worse the longer they are used.**

The popular *Milburn Wagon Co.* say: "We make Wagons of **Wood, Steel and Iron,** because no better way has been discovered. **The tendency upon Iron Gears is to work at the bolts.** Some years ago we constructed a Wagon of all iron, except the reach, tongue, double and single trees, but our experiments were not such as to lead us to go further."

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The Celebrated BUCKEYE BINDER is **NOT an ALL-STEEL MACHINE, but is a combination of Wood, and Steel, and Iron,** and consequently the best Harvesting Machine in the world. An illustrated Catalogue sent free to every farmer contemplating the purchase of a Machine. Address
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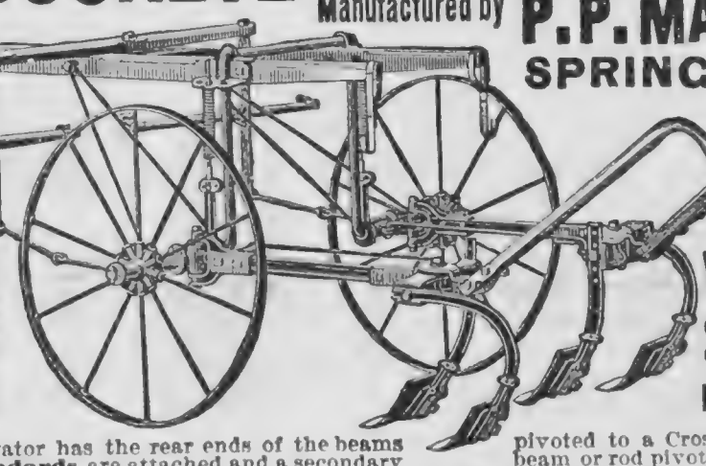
Manufactured by **P.P. MAST & CO.**
SPRINGFIELD, O.



With METAL WHEELS and SPRINGS at Ends of Beams.

This Cultivator has the rear ends of the beams pivoted to a Cross-head to which the **Shovel Standards** are attached and a secondary beam or rod pivoted to the coupling in front and to the Cross-head in the rear, by which the Shovels are carried parallel with the axle, whatever may be the position of them in being moved sidewise. The spring at the front end of the beams supports them when in use, and enables the operator to move them easily from side to side and assists in raising when he wishes to hook them up while turning at the end of the row. We attach these Beams also to our **Riding** and **Tongueless Cultivators.** This Cultivator has no equal in the market, and can not fail to be appreciated by any farmer who sees it. We also manufacture the BUCKEYE DRILL, BUCKEYE SEEDER, BUCKEYE CIDER MILLS AND HAY RAKES.

Branch Houses:—**Philadelphia, Pa.; Peoria, Ills.; St. Paul, Minn.; Kansas City, Mo.;** and **San Francisco, Cal.** Write for Circular to either of the above firms or to
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IN ONE SEASON, AWARDED BUTTER MADE BY THE
COOLEY CREAMER PROCESS
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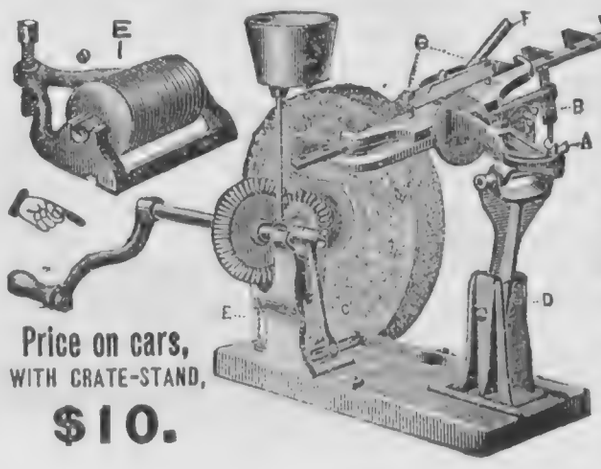

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FOR
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WITH THIS MACHINE ONE MAN can grind the knives of a Cutter Bar, in **one-half the time** required by **two** men on a common grindstone—Do it with PERFECT ACCURACY and on any desired bevel. Knives so ground cut easier and last longer. The grindstone is kept perfectly true, by using occasionally, the steel cutting roll, E, which is sent with every machine.
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FOR FEEDING ALL DOMESTIC ANIMALS.

'Tis true the winter has been an easy one for stock; but be watchful lest the closing and open ing spring weather does not pull down your **CATTLE, COWS, PIGS AND HORSES.**
Use, with your other feed, at least

ONE-THIRD LINSEED OIL MEAL.

Please remember that this meal has an intrinsic value equivalent to three times over that of corn or oats. Write us for prices and other particulars, and mention the RURAL NEW-YORKER.

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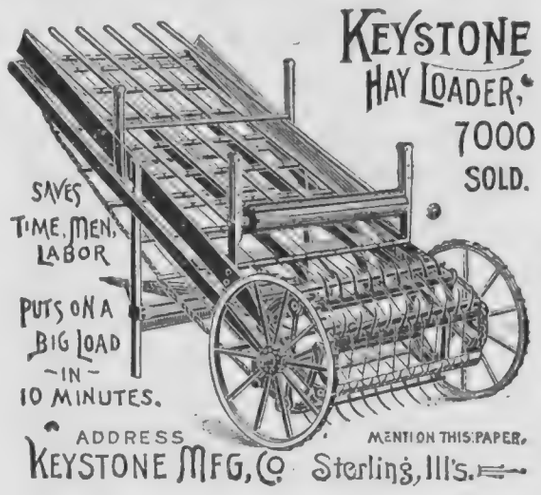

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DR. T. HEMAN BREHMER, an eminent German authority, says: "Consumption is always due to deficient nutrition of the lungs, caused by bad blood." At the Brompton Hospital for consumptives, London, England, a statement has been published that 52 per cent. of the patients of that institution have unsuspected kidney disorder. This explains why the proprietors of Warner's Safe Cure claim that they have received many testimonials which they have not published, because of the incredulity with which they would be received were it claimed that Warner's Safe Cure cures consumption. But the fact is that if your kidneys be cured and put in a healthy condition they expel the uric acid and poisonous waste matter, and prevent the irritation of the delicate substances of the lungs, thereby removing the cause. When the effect is removed the symptom of kidney disease, which is called consumption, disappears, and with it the irritation, which caused it.

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Of what? Why the constant stream of **Hogs, Cattle and Sheep** continually passing into the
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BONE AND BLOOD
Of which are constantly being manufactured into
RAW BONE
FERTILIZERS
During the past 25 years, by the
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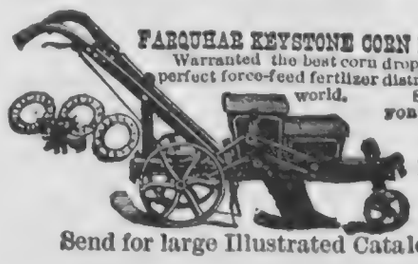

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The THORBURN POTATO
EARLIEST AND BEST.
THORBURN'S MARKET GARDENERS' PRIVATE STOCK CABBAGE SEED.
See CATALOGUE of VEGETABLE SEEDS For 1889.
Also Catalogue of Gladiolus and other Spring Bulbs Mailed Free.
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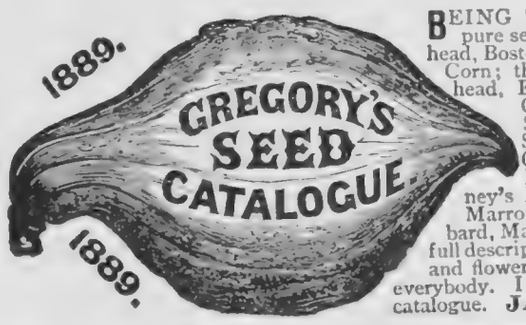
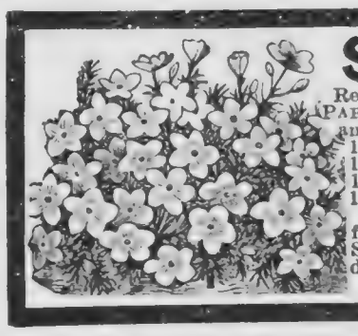


BEING THEIR ORIGINAL INTRODUCER, I offer pure seed of these choice vegetables: Cory, Early Marblehead, Boston Market, Marblehead Mammoth and Longfellow Corn; the Eclipse and Crosby Beets; Snowflake, Marblehead, Early Horticultural, Carmine and Warren bush, Champion and Kentucky Wonder pole Beans; All-Seasons, Early Deep-Head, Danish Drumhead, Stone Mason, Warren, Marblehead Mammoth and Gregory's Hard-heading Cabbage; Marblehead Mammoth and Boston curled Lettuces; Phinney's Early and Miller cream Melons; Brown's Dwarf Marrowfat Pea; Burbank and Early Ohio Potatoes; Hubbard, Marblehead, Butman and Cocoanut Squashes. For a full description of these and an immense collection of vegetable and flower seed, please see my seed catalogue, sent FREE to everybody. I warrant all the seed I sell, as see the cover of my catalogue. **JAS. J. H. GREGORY, Marblehead, Mass.**



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All the above, worth 50 cents, mailed with **Park's Floral Guide,** for only **ten cents.** Can you afford to let this rare opportunity pass? Send **10 cents** at once, and tell your friends to send. You will all be delighted. ☞ This notice will not appear again. Address
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We offer *postpaid* at your own door, the LARGEST STOCK of ROSES in America, *all varieties, sizes and prices,* to suit all wants. **ALL THE FINEST NEW ROSES,** New Hardy FLOWERING PLANTS, New CLIMBING VINES, New Summer FLOWERING BULBS, and JAPAN LILIES, New CHRYSANTHEMUMS, GLADIOLUS and TUBEROSES, The Wonderful NEW MOON FLOWERS, New GRAPES, New and Rare **FLOWER and VEGETABLE SEEDS.** Goods sent everywhere by mail or express. *Satisfaction Guaranteed.* Our NEW GUIDE, 110 pages, handsomely illustrated, FREE TO ALL *who write for it.* It will pay you to see it before buying.
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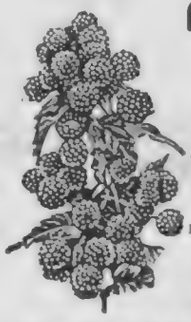

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"The whole story," as told the past winter by J. H. HALE, in Lectures before vast audiences at the Farm Institutes of Wisconsin and New York, and Maine, is published for first time in our **FREE CATALOGUE,** which also describes **ALL** the **Best NEW** and **OLD varieties** of **SMALL FRUIT PLANTS** grown from **pedigree stock.**
EARHART RASPBERRY the wonderful ever-bearing black cap, has now been **tested** over the whole country. "*Would fruit the whole year through if it had a chance.*" "*Six quarts to a plant.*" "*Just ropes of berries,*" etc., are some of the reports that come to us; and it is not surprising, as it is and is a prize for any family garden; and for three years past we have been unable to supply the demands for plants. Send postal at once for **FREE CATALOGUE** to
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$500 offered by American Agriculturist. $1000 offered by the Quinnipiac Co.
In event of the *American Agriculturist* Prize of **$500** not being taken by a crop grown exclusively with
QUINNIPIAC FERTILIZERS, WE OFFER **$750 in Gold**
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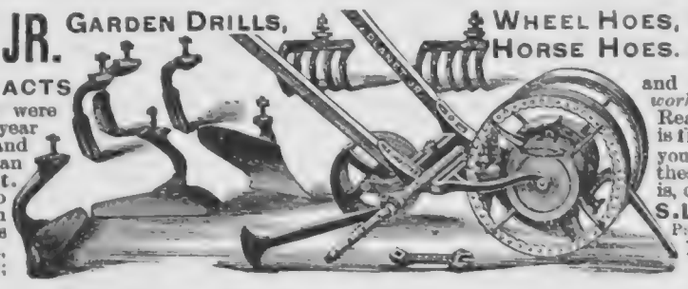

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That these Tools were more popular last year than ever before, and and are this year than last. Another **Fact.** Not on. in ten, who ought to own them knows it. Such as do not own them, ask those who do; and examine them *at work,* they bear it well. Read our catalogue; it is **free** and *reliable.* If you have no use for these Tools, our advice is, do not buy then.
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SEND FOR ILLUSTRATED PAMPHLET
WE MAKE 6 DIFFERENT HARROWS
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BREED'S UNIVERSAL WEEDER and CULTIVATOR

For Weeding and Cultivating all hoed crops. For putting in Grain and Grass and Hungarian or Millet it has no equal. Every farmer should inquire into its merits. Ex-Gov. ROBIE, Master Me. State Grange, writes: "It should be owned by every farmer in the country." Send postal card for circulars and testimonials. All parties in Middle States should address
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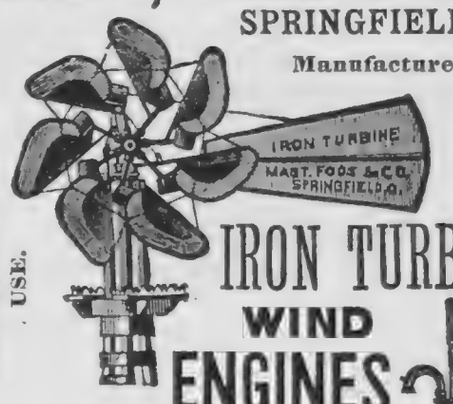

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IRON TURBINE WIND ENGINES
Strong and Durable, will not Swell, Shrink, Warp, or Rattle in the Wind.

BUCKEYE FORCE PUMP
Works easy and throws a constant stream. Has Porcelain lined and Brass Cylinders. Is easily set. Is the Cheapest and Best Force Pump in the World for Deep or Shallow Wells. Over 90,000 in use. Never freezes in Winter. Send for Circulars and Prices, giving depth of well. Also manufacturers of the **Buckeye Lawn Mower, Buckeye Iron Fence, Buckeye Hose Reel, Lawn Sprinkler, etc., etc.**

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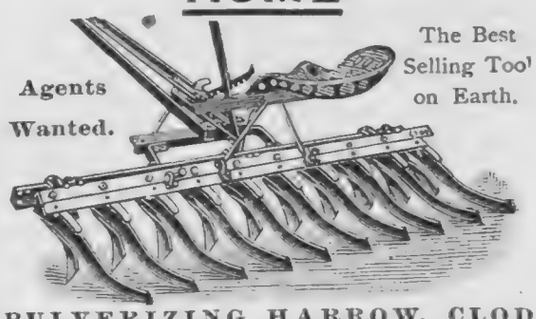

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Steel Crusher and Leveler. Double Gangs of Adjustable Reversible Coulters. Lumps Crushed, Soil Cut, Lifted and Turned in one operation. No Spike or Spring Teeth to pull up Rubbish. No Wearing Journals. Practically Indestructible.
Sizes 3 to 12 ft. wide. With and Without Sulky.
I Deliver Free at Convenient Distributing Depots West and South.
FAIR PLAY. Don't Buy a Base Imitation or Inferior Tool. Order a Genuine Double Gang Acme ON TRIAL, to be Returned at my Expense if not Satisfactory. No Pay Asked in Advance.
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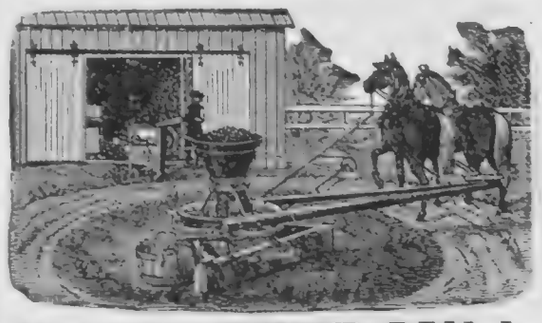

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Grinds all kinds of Shelled Grain and Ear Corn, drives Feed Cutters, Wood Saws. Etc. Lightest draft, strongest and best, fully warranted. Send for catalogue showing full line of Feed Mills. Two and Four-Horse Powers, Wood Saws, etc.
STOVER MFG. CO., Freeport, Ill.

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GRIFFING'S
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Sold at $25.00 per ton, F. O. B., N. Y.
Send for Circulars.
H. B. Griffings Sons & Co.
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"TO EITHER hold the plow or drive," requires strength. To secure and keep strength a good stomach is required, and it must be kept in strong and healthy action.

Warner's Log Cabin HOPS AND BUCHU REMEDY

will put your weak stomach in good working order.

CATALOGUES, ETC., RECEIVED.

JAS. M. THORBURN & CO., 15 JOHN STREET, N. Y.—A catalogue of unusual merit on account of its careful and judicious selections. It opens with a list of gladioli. Among these are Lemoine's Hybrids. Then come hardy lilies; then amaryllis, tuberous begonias, new cannas, dahlias, iris, pæonias, tube-roses, chrysanthemums, miscellaneous bulbs and roots, seeds of new flowers of merit. Then we have new and selected strains of vegetables, fertilizers, lawn-mowers, etc. Among the latter is the "New Model"—the 12 inch cut, $7.50—20-inch cut, $12.00.

A HANDY TOOL FOR EVERY FARMER.—This is what the Boston Knife Tool Company of Boston, Mass., call the little implement they are now introducing. It is an exceedingly handy little tool for cutting and trimming bushes and vines.

THE CONSTITUTION OF MILK.—Bulletin No. 18 from the Experiment Station at Madison, Wisconsin. We regard this as one of the most important contributions to dairy literature that has been published of late years. It is fully in line with the famous dairy studies that have preceded it from this Station. We have only the space for a mere mention of the pamphlet this week. Next week we hope to review it at length.

CORN EXPERIMENTS.—This is the title of Bulletin No. 17 issued by the Kentucky Experiment Station. It is one of the most interesting of the purely scientific papers that the Stations have yet given us. Every farmer who undertakes to use chemical fertilizers finds himself confronted by the problem: "What element of fertility does my soil need?" It is quite possible to conceive of cases where farmers have applied fertilizing elements that were not needed. The land may have been lacking in but one element—perhaps potash or perhaps phosphoric acid. Instead of knowing what was needed and supplying that one thing, such farmers may have applied small quantities of the needed element and larger quantities of substances already contained in the soil in abundance. How shall the farmer know his soil's disease? This very question was propounded by the director of the Kentucky Experiment Station and answered by the crops in a most emphatic way. Corn was the crop taken for the experiment, and the grain was planted on equal-sized plots; on one plot no fertilizer was used, on another a mixture of phosphoric acid, potash and ammonia, on another phosphoric acid and potash, on another phosphoric acid and ammonia, and on another potash and ammonia. The plots were carefully watched and the entire product of stalks and grain weighed. The results plainly showed that potash was the element needed in that particular soil. It might be well for farmers to read this bulletin and see how the tests were made. If they are to use chemical fertilizers at all, it will certainly pay to use them with all the skill and system possible. We may add to what has been said above, that the use of the potash was attended with a greater degree of financial profit than that of any of the other fertilizers.

CANADIAN AGRICULTURAL EXPERIMENTS.—This volume is sent by Wm. Saunders, Ottawa, Canada. It contains a report of the year's work at the main experiment farm at Ottawa, and also short reports from branch farms located in Nova Scotia, Manitoba and N. W. Territory. One of the most interesting sections in the book is that containing the report of the experiments with poultry. So far as we know, this is the first station to attempt poultry experiments. Nothing beyond a mere beginning has been made here, but it is hoped that this beginning may lead to the development of important and interesting facts. An egg record has been started, but as only a few months have elapsed since the opening of the experiment, no conclusions have been reached. It seems evident that hatching eggs can be successfully shipped from England, and it seems equally certain that the substance in which such eggs are packed may have something to do with their vitality. The eggs that gave best results were wrapped singly in paper and then packed in bran. It stated that Canadian poultrymen strongly condemn the common practice of packing eggs in fine sawdust. Red Caps and Indian Games have not been found suitable for a Canadian climate. They seem to lack hardiness. The standard varieties have given excellent results, the Plymouth Rock notably so. In a test for weight, a P. R. showed a marked superiority over specimens of the Wyandotte, Buff Cochin and Houdan breeds. The only crosses yet attempted are the following: Brahma cock on Plymouth Rock hens and Brahma cock on Black Minorca hens. The latter cross seems to promise the better results. Quite an interesting test was made to ascertain the age at which pullets of different breeds would begin to lay. The following results were obtained, the figures representing the number of days that elapsed between the date of incubation and the date on which the first egg was laid.

Houdan	214	days.
S. P. Hamburg	215	"
Black Minorca	204	"
White "	207	"
Black Hamburg	222	"
Andalusian	231	"
Plymouth Rock	217	"
Buff Cochin	243	"

As some of our readers may be interested in the methods employed in feeding the birds, we make the following extract from the report: It must be remembered that this feeding was done in winter.

"The morning feed was varied, but always warm and known as "soft." It was composed of two parts shorts, one part corn-meal and one part boiled wheat. The hot water the wheat was boiled in was used for mixing the feed. To the mixture was added, almost every morning, a small quantity of Cayenne pepper and bone-meal. Twice or three times a week meat scraps were substituted for the bone-meal and boiled wheat. At other times small potatoes and scraps of cabbage formed the greater part of the morning meal. On this variety the layers were fed barely enough to satisfy and never enough to gorge. Soon after, when the water was given for drink, a few handfuls of small wheat or ground meat were thrown into the chaff, always on the floor for the fowls to scratch in, every effort to keep them in activity being of paramount importance. The noon meal was light and scattered in the chaff. The last feed of grain, also thrown on the floor, was liberally given and the layers sent to roost with a full crop to carry them over the long night fast. A cabbage suspended from the center of the pen was also used as an incentive to exercise. Oyster shells (ground) and gravel were also supplied. The temperature varied from 30 to 45 and 50. On reaching the two latter figures the morning feed was greatly reduced and more dry grain given. At the lower figure the chill was taken off the water given to the layers."

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

VALIDITY OF A MARRIED WOMAN'S SEPARATE DEED OF REAL ESTATE.

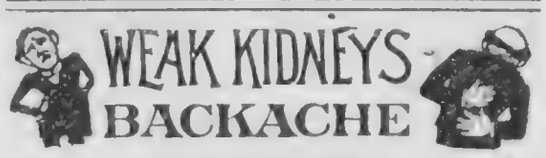
M. T. T., Elmira, N. Y.—If a married woman has a farm conveyed to her in her own right, can she legally convey the same to another party without the signature of her husband accompanying her signature in the deed? The husband having been away for a dozen years, his whereabouts being unknown, and his signature unobtainable, can she contract for the sale of the farm and give a clear title to the purchaser.

ANS.—A married woman in this State who is possessed of real estate as her separate property, may bargain, sell and convey such property and enter into any contract in reference to the same with the like effects in all respects as if she were unmarried, and she may, in like manner, enter into such covenant or covenants for title as are usual in conveyances of real estate, which covenants shall bind her separate property in case the same or any of them are broken. Before 1862 the husband's consent in writing was necessary to complete the conveyance, except in cases where it could not be obtained by reason of his absence, insanity or other disability, but now his consent is not necessary in any case.

E. H. P., Salem, Mass.—A has a mortgage on B's farm; C says he bought a wood lot in said farm of B, and he has cut the wood off. Can A collect the value of the wood from C.

ANS.—We suppose the lot was not sold—only the timber thereon. If the land and timber were both sold, or if the trees only were sold, and A's mortgage was properly recorded, C is liable for damages, as he should have investigated the records before purchasing. Had he done so, he would have discovered that B could not give a valid title.

Miscellaneous Advertising.



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Progressive, Liberal and Scientific Treatment of Disease in a Fairy-like Palace of Unequaled Splendor.

WONDERFUL WORKS ACCOMPLISHED IN REPRESENTATIVE HOMES OF NEW ENGLAND.

TENS of thousands of people go every year to Europe seeking health. The crossing of the ocean, with its storms and tempests, the inconveniences of travel, and the enormous attending expense, are no barriers whatever to those in search of health.

The weary Ponce De Leon ceased not his wanderings in search of something to restore his waning life; the fair Floridas suggested a cure, but, alas! they failed him; the Elysian fields of the "Amazon" promised all he wanted, but they gave him disappointment; the Isle of Cuba charmed him, he tarried, but again doomed to despair he journeyed on.

Hundreds of thousands visit the springs, mountains, and various health resorts every year in search of health, while fully as many more come from the interior States to the sea to board every season, seeking nature's boon. It has been estimated that sea-bathing in the summer has done more to recuperate and cure men and women suffering with chronic diseases than all the doctors in the country, for there is no estimation of the value of sea-baths in chronic diseases. Yet the per cent. of cures is small; not that there is less virtue in sea water than in the days of Mahallian, when he bade the raging ocean

CURE THE TROUBLED LAND,

but the inconveniences of taking baths upon the beach, the cold chills often taken during and following these baths, counteract to a great extent the good of the baths

The thousands who go abroad to Baden-Baden, and the famous Carlsbad, and waters of Nice, the pure and medicated rills of Switzerland, the lakes of Warsaw, the baths of Beyroot, and ancient fountains of Bagdad, all seeking health, evidence two things,—first, that our country is a country of invalids, and, second, that but few of these invalids find what they are searching for.

Ribwell, when dying, said he would give a million of money for a moment of time. Almost any one would give all he possesses for his life, and almost all his possessions for his health, if through such expensive channels only these could be obtained.

In reply to the question of "What value do you put upon health?" Lord Erskine said, "It is my opinion that a man or woman is worth more to the world during three years of living if in good health, than in fifty years of half invalidism; for my part, I would rather live one year enjoying good health, than ten years half sick."

"As cold as the grave, and as dark and uncertain the beyond, I would rather take my chances and go," said the celebrated Dr. Jay, "than eke out the miserable existence of the invalid that so many do." Such is evidently the feeling of most sufferers, and but for conscience, and the hope of improvement on the morrow, suicide would be a most common occurrence.

For hundreds and thousands of years men and women have been rendered helpless, or died at the end of years of suffering, with such diseases as Paralysis, Nervous Prostration, Cancer, Consumption, Scrofula, Neuralgia, Rheumatism, Kidney and Liver diseases, with as great certainty as they would had the knife pierced their vitals. During all this time the world has been full of doctors, trying to relieve, to cure; some have been relieved and occasionally one cured, but the great

ARMY OF AGES,

numbering millions and hundreds of millions, have found no relief whatever from the physician. It has ever been as it is to-day. Where one is helped, hundreds get no relief whatever. You will hear every day some one saying: I have tried a number of doctors but none of them has ever done me any good. All this goes to show that there is little virtue in medicine; scarcely can one be found suffering from any chronic disease, that the name of medicine will not disgust. You will hear on every hand the expression, "I have tried all kinds of medicine; they are

NO GOOD! NO GOOD! NO GOOD!"

Is it any wonder that in this progressive age, with the cry of "excelsior" heard on every hand, that the progressive medical brains should break away from these old methods of treatment, that in search of health, and in the hope of giving health to others, they should concentrate the sun's rays, bottle electricity, cultivate mesmerism, develop magnetism, and wrestle with the powers of mind? Is it any wonder that the progressive brains of the Nineteenth century should seek a new and shorter avenue to health and life, since the old drug systems for 4,000 years had proved

SUCH A FAILURE!

Most wonderful progress has been made during the last few years. Hygiene has been born with its multitude of blessings, and water, pure water, cold water, which for hundreds of years was looked upon as the scourge of the sick room, has proven to be the angel of comfort and life to the sick and dying. In the face of the bitterest persecutions electricity and magnetism have been discovered and proven to be among the most effective curative agents of this age. The power of concentrated sunlight and heat to cure the germs of disease and restore the prostrated has been demonstrated in the face of fiercest opposition.

Perhaps the most distinguished progressive physician of this age, who has done more than any one else to break away from the old drugs, poisons, and instruments of torture, and introduce in their stead, more effective, humane, kindlier, and finer methods of cure, is Dr. R. C. Flower of Boston, Mass. Should I ask the question: Who has not heard of Dr. Flower? but few in our land could say, "Not I." Though only a young man he has for years enjoyed the largest practice of any physician in the world. The doctor has recently consummated the great desire of his life, in the building of a great Health Palace in the heart of the city of Boston, on one of the most beautiful avenues. It is said that his Health Palace is the finest in the world, in fact the finest ever built in any world, as far as known.

Here Dr. Flower has combined every phase of treatment containing any merit whatever one could find should he visit every health resort in the world. The following description of Dr. Flower's Health Palace we take from the Washington *Post* of Feb. 16, and while it is strictly true, it poorly does justice to the virtue and beauty of this great enterprise of the 19th century.

On the second floor, in addition to bed chambers, are private dining-rooms and parlors. On the first floor, large parlors, reception-rooms, conservatory of flowers, office, dining-rooms, café, news stands, telegraph offices and reading-rooms and in the rear of the building professional offices. This floor beggars description. It is richly furnished and set in jewels of the purest kind. It is very grand. Everything your eyes rest upon is artistic and superb. The wood carving of the enormous arches, columns and pillars is the finest we have ever seen, and suggests the old Moorish palaces of the Orient.

The building is lighted by electricity from top to bottom, and in all the rooms and halls are electric bells. Over 17 miles of electric wires run through the building. There are two large front stairways, three back stairways, and two elevators. The house is heated by a new process, which changes the air in every room of the building every three minutes, making and keeping each room the temperature desired, and keeping the floor of each room warmer than the ceiling.

In the large, deep half-basement is the bath department, which is evidently the most elaborate bath establishment in all the country. Here are long rows of Russian and Turkish bathrooms, electrical rooms, for all kinds of electrical treatment; hot and cold seabath-rooms, sulphur-bathrooms, medicated-bath-rooms, numerous shampoo rooms, spacious bathroom parlors for sitting, reclining, and

sleeping; and here let me say that this entire bath department is fitted up in the same oriental splendor and beauty as is the building itself. The plunge bath, or swimming pool in the center of these baths, is worthy of special attention. If anything of the kind exists on this earth, I have never seen it or heard of it.

This magnificent swimming pool is filled with sea water, which comes through artesian wells from some subterranean ocean, which pours a constant stream in and a constant stream out. The decorations of the walls and ceilings of this plunge bath resemble the dazzling pictures of fairy land. On one side the spectacular view of the ocean, with its surging waves and ships arriving and departing. On the other side mountains of verdure and homes of beauty. Turn on the electric lights, and the scene

IS A TROPICAL ONE.

Far in the east the moon is seen, and the stars shine from overhead. Seemingly, various tropical creatures and animals appear, coming from their hiding-places, while down yonder grotto, which looks a mile away, pours a Niagara of water, spurting amid the lilies and the flags.

I have recently visited Dr. Flower's offices in the Flower Palace, corner Columbus Ave., and Holyoke Street. I have seen and conversed with scores of people, if not hundreds, who have come from all parts of the world, to be cured by the doctor and his associates. *I do not exaggerate when I say that they are cured, cured at the mouth of the grave, and when given up by others to die, cured in a most marvelous way.*

I found it impossible to get an interview with Dr. Flower for more than a minute for anything outside of his patients.

"Just a word, Doctor," I said; "tell me

ABOUT THIS HEALTH HOME."

"Well, sir," he said, "it has been my desire for years to build a place different from any other place in the world. A place perfect in all things, like a large, palatial home; cheerful, beautiful, and sunshiny, where every kind of treatment of any merit can be given skillfully, kindly, and thoroughly. This is just what this health place is. There is nothing in the world like it, and, as far as I know, has never been. But I seriously trust that we may soon have many such places in our country. If there is any cure on this earth for the sick, they can find it here. Now you must excuse me," he said, "I must attend to these patients."

We made personal inquiries of a number of his patients, and prominent business men in the city. They were all loud in their praise of Dr. Flower, and were unanimous in their declarations that there was no such physician as he in the world. The following, from the Hon. J. Willard Rice, of the large paper manufacturing house of Rice, Kendall & Co., 91 Federal Street, Boston, is a fair sample of what they all said. No one is better known politically or in extended business circles than Mr. Rice, one of the leading business men of New England, a gentleman of about 70 years of age. "Yes," said Mr. Rice, "I know Dr. Flower well. I have known him intimately for years. I regard him as the most wonderful physician in the world. I have never known his equal. In business he is an ideal man, and as a gentleman he has no superior; is cultured and refined in every way."

PROF. R. F. HUMISTON,

of 413 Shawmut Ave., said: "I have known Dr. Flower for many years. I regard him the greatest living physician. I never knew such a man or such a doctor. If miracles are worked Dr. Flower works them. I have known him make the paralytic and lame, who had been helpless all their lives, spring to their feet and walk forth in health, also dissolve and pass away great tumors in a very short time, when other physicians and hospitals had pronounced them incurable. It is my opinion," said this gray-headed professor, "that Dr. Flower is the greatest physician on this earth; he cures when others fail, and the worst cases seem to be his greatest victories."

Mrs. J. H. Grueby, of 228 West Canton St., Boston, said: "For seven years I suffered intensely from cancerous humor of the stomach, during which time I had been treated by several of the leading physicians of the city. They failed to even give me relief. During the last two years of my suffering I could not bear the weight of my clothes against my stomach, or lie down day or night without an increase of the pain. The last regular physician who treated me, said he did not believe there was any help for me, but would advise that I consult some specialist. I decided to do so, and having often heard of Dr. R. C. Flower and his wonderful cures, I made up my mind, as the very last resort to consult him. Imagine my surprise upon entering his office, to have him tell me my disease and troubles in detail better than I could have told him, without asking me a question. I placed myself immediately under his treatment, soon began to improve, and am to-day a healthy, well, and sound woman. I have seen a great many of Dr. Flower's patients at different times, and they all tell of the same wonderful cures."

Selecting the names and addresses of a few of the Doctor's patients in different parts of New England, we started a personal investigation to see if these things were really true.

CANCEROUS TUMOR.

Mrs. J. L. Horne, of Norway, Me., said: "*I had a very large internal tumor—had it removed with a knife, but it soon returned more malignant than ever*, and finally pronounced cancerous tumor, and that there was no help for it. I had the best physicians of this city and Portland attend me until my case was decided incurable. In my despair I went to Dr. Flower, of Boston, and, to be brief, I would say he entirely removed the tumor without the use of the knife, in less than eight months and without pain. This was over four years ago, and I have been in the best of health ever since. I regard Dr. Flower as the most wonderful and greatest physician of the world. I do not believe there ever was such a man: I know dozens of his patients who think of him as I do." Mrs. Horne is a very prominent lady of about fifty years of age, her husband being one of the leading business men of the State.

MISS EMMA SMITH,

of Norway, Me., a prominent society woman of one of the leading families of the State, said: "I was treated for a large fungus growth and dropsy. I was so large that I could scarcely get up or down, or hold my weight up. *My case was pronounced hopeless, and I expected to die any day.* It was with great difficulty I was taken to see Dr. Flower. He took my case, treated me eight months, and cured me entirely; this was about four years ago. I have been in excellent health, ever since. I do not think there was ever such a doctor in the world as he is. Many of his cures are like miracles; he shows his greatest powers when all others fail."

Mrs. Edwin Wallace, Rochester, N. H., said: "I was treated some years ago

FOR DIABETES AND PARALYSIS.

It was wonderful what Dr. Flower did for me; he saved my life. We regard him as a most wonderful doctor and a perfect gentleman. I know of a number of cures, almost miracles, performed by Dr. Flower; a lady friend of mine in Maine, was cured by Dr. Flower of malignant cancerous tumor, after she had been given up as incurable by the leading medical lights of the east." Mrs. Wallace is one of the most prominent women of New Hampshire, and wife of one of the largest manufacturers in the east.

X. E. Mills, of Milford, N. H., a prominent and elderly citizen of the place. He said: "Ever since my army life I suffered intensely with my stomach; doctors had doctored me for everything they could think of, but all gave me up by saying 'We can't tell what the trouble is'; during all this time I grew worse and worse; in fact my misery became so great that every moment of my life was one of mortal agony; the cold perspiration of suffering stood in beads over me nearly all the time. In my distress and despair, suffering almost death but unable to die, I went to see Dr. R.C. Flower, of Boston (this was six years ago). No sooner had I entered Dr. Flower's presence than he told me that I had swallowed an animal, or some kind of a water creature found in Southern swamps. "Did you ever drink water from the filthy swamps in the South?' he asked. 'Yes, for a time in the army; that was all I had to drink.' 'And from that time,' he said, 'you have suffered, getting worse and worse as the animal has grown.' Dr. Flower took my case. In a little while he killed the animal and passed it in pieces from the bowels. My troubles began to immediately disappear. It has been nearly six years since Dr. Flower cured me of this awful trouble, and gave me back to my family, a happy man. I believe Dr. Flower is the one great medical wonder of this age."

Mrs. Hiram C. Bond, wife of the large shoe manufacturer of Haverhill, Mass., said: "Six years ago I was most successfully treated and cured by Dr. R. C. Flower, of Boston, of

VERY SERIOUS CANCEROUS TROUBLES,

after treating with the leading physicians of Haverhill and Boston, also the Boston hospitals, and by all pronounced incurable. Dr. Flower is a most wonderful man. How he cures people the way he does, and restores to health the dying I cannot tell, but he does it."

Silas C. Mott, a prominent business man of Provincetown, said: "Four years ago I was in wretched health, could hardly walk across my room, or bear my weight upon my feet for twenty minutes at a time.

BESIDES MY PARALYSIS, MY HEALTH WAS WRECKED.

I could not eat anything without great distress, and had no strength or endurance whatever. My family physician advised me to go and see Dr. R. C. Flower, of Boston, as he regarded him the greatest physician for chronic diseases in the world. As a last resort I went. Well, to be brief, Dr. Flower in a few months worked in me a marvelous cure; I could eat everything, attend to my business as I never did before; to-day I am a happy man. Furthermore," continued Mr. Mott, "Dr. Flower doctored my daughter for a swelled and enlarged knee. She had been under the treatment of other doctors for months, growing worse all the time. I took her to the Massachusetts Hospital in Boston. They advised an operation, saying they could not find out the difficulty without cutting into the knee; this I refused to allow. They then did her knee up in splints; the pressure of the splints made the knee worse, and in this helpless condition I took her to Dr. Flower. He ordered the slipnts taken off, and in a little while cured the knee permanently;" and as the grateful man wiped the tears from his eyes, he said, "We owe all to Dr. Flower."

Mrs. H. P. Hughes, of Provincetown, wife of Capt. H. P. Hughes, an old and prominent family of the Cape, said: "Dr. R. C. Flower treated and cured my husband of a terrible disease, which had followed him since his army days. Being in poor health myself, from female and other diseases (after seeing what he had done for my husband) though given up as incurable by other physicians, I consulted Dr. Flower myself. His examination of my case satisfied me for the first time that I had found a doctor who understood my troubles. I placed myself under Dr. Flower's care, and in a few months was cured, both to my own surprise and the surprise of all who knew me. We have both enjoyed wonderful health since treating with Dr. Flower. As a physician, we regard him a wonder, as a man, a most elegant gentleman."

Mrs. O. Ware, a well-to-do farmer's wife, living three miles from Hudson, Mass., stated that she was treated by Dr. R. C. Flower, a few years ago, for large tumor in the bowels; that it had, shortly before going to the doctor, developed a cancerous phase; that she had been a great sufferer, and was scarcely able to go up and down stairs; that she had doctored for years without any relief; that the last physician, before she consulted Dr. Flower, said that there was no cure for her, and that she would be foolish to try again.

As a last resort she went to see Dr. Flower. He took the case, and in a few months' time

ENTIRELY REMOVED THE TUMOR;

that she has been perfectly well ever since, and can do as much work as any woman; never felt better in her life.

Theodore Harrington, a large manufacturer of Southbridge, Mass., stated that about a year ago, all broken down in health, as a last resort he had consulted Dr. Flower; that for six years previous he had been a sufferer from

CHRONIC RHEUMATISM

and neuralgia, and for the last two years a great sufferer, unable to dress himself, and scarcely able to move; that he had fallen off in flesh to almost a skeleton: that latterly a serious stomach trouble had developed; that he was believed by all to be at his journey's end; that he had been doctored by all the leading physicians around there and given up as incurable; that upon entering Dr. Flower's office, to his surprise, the doctor told him his trouble in detail, without asking a question, better than he could have told the doctor; then he placed himself immediately under the doctor's care, and to his great surprise began to improve rapidly, and that he was now in a vigorous, healthy condition; that he had gained as much as three pounds in one week; that he regarded Dr. Flower as the most wonderful physician in the world.

In fact, there is no limit in the work Dr. Flower does; to the number of sick he cures, and dying he saves. He is an unpretentious man, of between thirty-five and forty years of age, highly educated, easy in his manner, and an entertaining conversationalist. He is intensely interested in his work, and loves his practice as he does his life. It seems to me that Dr. Flower has been raised up by heaven to cure the sick. The wonderful power he possesses in diagnosing disease many believe to be a Divine gift. In the recent completement of his new Health Palace, which is unquestionably the finest on the earth, every kind of treatment is to be found, given in the most gentle, skillful, and scientific manner.

The doctor's charges vary according to the disease and the requirement. I have abundant evidence that he is very considerate to the poor.

The rates I understand, in his health palace for treatment, board, care, and attention, range per month from one hundred and thirty to eight hundred dollars, and this includes every comfort, every attention, and luxury known. The SPECTATOR Publishing Co., of Boston, offer for a few weeks, free of charge, to any one sending a two cent stamp for postage, a new publication descriptive of Dr. Flower, his work and health home. It is a work which should be in the hands of every one.

In his great work Dr. Flower is ably aided by his efficient brother Dr. A. H. Flower, Dr. W. O. Jones, and others, who devote their exclusive time to the services of the sick. In this the most of all philanthropic works, Dr. Flower will have the prayers and good wishes of all.

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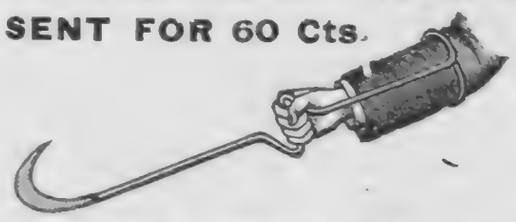

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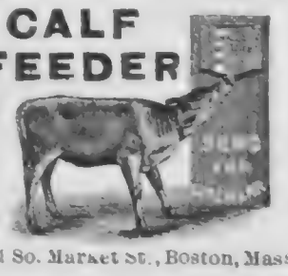

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Many of the largest and most successful Truckers and Growers of these crops in New Jersey, Long Island, Pennsylvania, New England and Western States use the MAPES SPECIAL CROP MANURES TO THE EXCLUSION of PURCHASED STABLE MANURE.

Cabbages—Out of 150,000 *cabbage plants not more than* 1,000 *were not out.*

Messrs. VREELAND & CO., the well-known truckers at Greenville, N. Y., report, October 4th, 1888, on second year's experience:

We have been well pleased with the Mapes Vegetable and Cabbage Manures this past season. Our crops have been and are at present fully up to our expectations.

We set out 150,000 cabbage plants.

Early Wakefield 15 inches apart and Flat Dutch 20 inches apart, both in rows two feet apart.

We applied 1,500 to 2,000 lbs. of the Mapes Manure per acre, one half broadcast and harrowed in and the other half hoed in at first hoeing.

Out of the 150,000 Cabbage plants not more than 1,000 were not cut, and there were not more than 1,500 culls out of the entire number (150,000).

We grow Cabbages on same land, year after year.

We used your Manures alone and with stable manure, and we see no reason why your Manure cannot be used entirely as a substitute for stable manure.

We have sixteen acres of Celery that looks remarkably fine, and this was planted after Spinach and Lettuce raised with your Vegetable Manure, no additional Manure used.

We had good success with Early Cauliflower with your Manure.

Bringing up the land—Potatoes, Cauliflowers, etc.

ROBINSON GORDON, Manorville, L. I., (who has bought the Mapes Manures since 1878), September 11th, 1888, reports:

I used 27 bags of your Potato Manure on 3½ acres, on land that never has been considered good enough to raise potatoes, and they had nothing more than ordinary field culture. The Potatoes were of excellent quality and very smooth. Yield of marketable potatoes 1,060 bushels.

From 2½ acres, with 20 bags of your Cabbage and Cauliflower Manure, I sold 470 barrels Cauliflower which netted me just $500, clear of freight and commissions.

I had 33 acres in Potatoes, Corn, Rye, Wheat, Oats, Buckwheat, Peas for seed, Hay, Cauliflower and Vegetables, and I used your Manures (some 15 tons) on all my crops.

I have found by several years' experience that the easiest and cheapest way to bring worn out fields to the best of fertility, and keep good land growing better, is by using Manure like yours. I have used the Mapes Manures exclusively.

Cabbages.—Not more than 100 *in* 8,000 *failed to make Good Heads.—Green Peas:* 389¼ *Bushels per Acre; Extra Prices Obtained.—Green Corn:* 37,500 *Ears Sold from* 2½ *acres; Took First Premium at Monroe County Agricultural Fair.*

R. W. SCHWARZ, Analomink, Monroe Co., Penn., November 17th, 1888, reports:

CABBAGES: With farm and stable manure alone I have too much loss with cabbage from maggots and club root. The past season was favorable for cabbage, and I had the best crop I ever raised. There were not more than 100 out of 8,000 that failed to make good, salable heads. Used 1,600 lbs. of the Mapes Cabbage Manure and 400 lbs. of Bone, harrowed in with Acme harrow. Stable manure, 15 tons, ploughed under.

SWEET CORN: Applied only the Mapes Corn Manure, 1,600 lbs. per acre, around the hill with a fertilizer dropper at time of planting, and again at last cultivation. Yield, 37,500 salable ears on 2½ acres. I had no nubbins whatever. I had 100 hills of the Squantum variety which had from nine to 12 ears per hill. Besides the 37,500 ears sold there were 6,000 or more ears left on the stalks for want of profitable sale.

"TOOK FIRST PREMIUM AT MONROE COUNTY AGRICULTURAL FAIR on almost all my vegetables raised with THE MAPES MANURES, and this with very brisk competition."

Mr. Schwarz reported last year:

This field has had nothing but the Mapes and Bone for the past fifteen years, and has been planted to corn since 1879, excepting years 1884 and '85, when it was planted to general truck.

DAVID KUEHN, Highland Truck Farm, Allentown, Pa., reports:

With your manure our crops are BETTER, and land in BETTER CONDITION than ever, and our crops only cost about ONE-HALF AS MUCH as with purchased stable mauure.

Out of 40,000 cabbages, with 1,500 lbs. per acre of your Cabbage Manure and a light dressing of barnyard manure, at least 97 in every 100 were salable cabbages. I believe your Manures are the cheapest in America.

Send for pamphlet.

THE MAPES FORMULA & PERUVIAN GUANO CO., 158 Front St., N. Y.

We Ship **direct to consumers** in any quantity—one bag (200 lbs.) and upward—in all sections where we have no Agents. ☞ SPECIAL FREIGHT RATES OBTAINED.

DR. SETH ARNOLD'S COUGH KILLER CURES COUGHS AND COLDS. PREVENTS CONSUMPTION

I have no hesitation in recommending **Dr. Seth Arnold's Cough Killer.** A few doses cured me of a cold and tickling in the throat.

G. L. Walker, Pawtucket, R. I.

Druggists, 25c., 50c., and $1.00.

THE WILLIAMS

Grain Threshers, Horse Powers and Engines

For full particulars address

ST. JOHNSVILLE AGR'L WORKS,

St. Johnsville, Montgomery Co., New York.

WHITMAN'S NEW PATENT REBOUND PLUNGER PERPETUAL

Guaranteed superior to any Lever Press now made for Hay, Straw and Wool. Always victorious. Received First Premium at all prominent fairs for past five years, over Dederick and others. Illustrated Catalogue Free.

WHITMAN AGR'L CO., St. Louis, Mo.

We also make the best Steam Power Press in America.

SOMETHING TO HAMMER ON

FOR FARMERS.

ANVILS.

Save your bills at the Blacksmith's and Machine Shop by having on the farm one of these celebrated ANVILS—*fully warranted*, and of the best material.

Best Hardened Cast Steel Face and Horn.

All sizes, from 20 lbs. to 90 lbs., at from $2.00 to $8.00 each. Larger sizes at 9 cts. per lb. Address, for Circulars, &c., FISHER & NORRIS,

Original and Only Manufacturers, Trenton, N. J.

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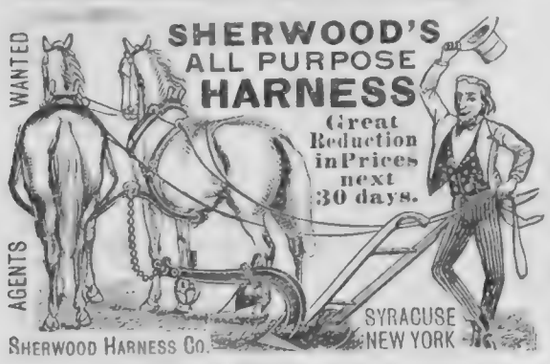

SHERWOOD HARNESS CO.

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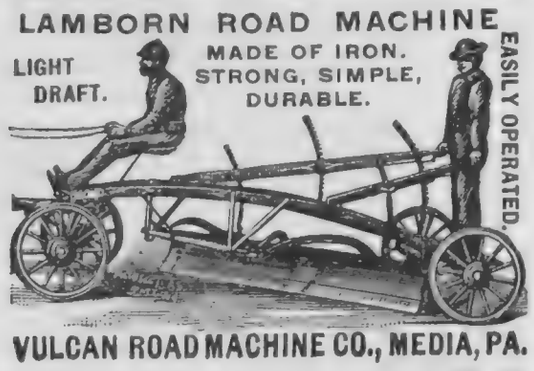

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—MANUFACTURERS OF—

Pure Animal Bone FERTILIZERS,

For All Crops and Soils.

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Wood Beam, Light Draft, Light Weight and Strong.

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Nicely balanced with shifting handles, enabling the operator to walk square behind the plow in the furrow.

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DURABLE, RIGID, ORNAMENTAL and MODERATE IN COST.

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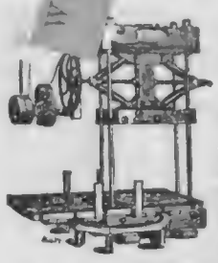

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Knuckle Joint and Screw Presses, Graters, Elevators, Pumps etc. Send for Catalogue.

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Feed Grinder, Tank Heaters.

Indispensible to Farmers ALSO Cylinders, Pumps, &c.

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EGGS—Black Minorcas, $2 per 13; $5 per 39. Wyandotte and Pekin Duck, $1 25 per 13; $3 per 39. G. W. THOMPSON, Red Hook, N. Y.

POULTRY FOOD!

Trade Mark.

Hollis's Canned Meat For Poultry.

Will Make Hens Lay!

Will Make Chickens Grow!

—AND GOOD FOR—

Moulting Fowls.

This food is strictly fresh meat, carefully cooked, ground fine, seasoned and hermetically sealed in 8 lb cans. Being ground fine, it can be readily mixed with soft food, and fed so as to give each fowl an equal share. Price, 30 cents per can; $3 per dozen. Address

HOLLIS DRESSED MEAT AND WOOL CO.,

20 North St., Boston, Mass. *Mention this paper.*

MANGE

MR. JAS. L. ANTHONY, joint owner of the celebrated Graphic Kennels, says of THYMO-CRESOL (The Cold-Water Dip): "*Of all the preparations I have used for many years I have never found anything so valuable for general use. It is at once a deodorizer and purifier. It is not offensive, and for ridding Dogs of vermin has no equal. I have seen a very bad case of Follicular Mange cured by it, and recommend it to every breeding kennel.*" Imported only by T. W. LAWFORD & CO., Baltimore, Md. Sample by mail 50c.

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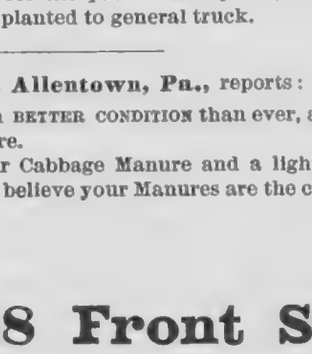

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XLVIII. NO. 2047. NEW YORK, APRIL 20, 1889. PRICE FIVE CENTS, $2.00 PER YEAR.

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Architecture.

AN OHIO FARM-HOUSE.

THE fine house shown at Fig. 92, with floor plans at Figs. 93, 94 and 95, is owned by Mr. Geo. Dormire, of Champaign County, Ohio. Mr. Dormire writes as follows concerning it:

"The foundation plan shows that the cellar is excavated under the entire house, and we utilize the entire space. The furnace (a Barstow wood-burner, see Fig. 93) is admirably located and has given us splendid results in heating our house this winter. The cold air is taken from the north side of the house and conducted through a cold-air shaft directly under the furnace. We also have an opening in the floor directly above the furnace, by which we can admit the cold air from the floor down between the two walls that inclose the furnace at the places marked "cold air;" then it passes under the furnace to be heated, and passes up into the rooms above. This I consider a grand feature in heating by a furnace, and I think the lack of it is the chief cause why some furnaces fail to give good results; for I have sometimes found it extremely difficult—in fact, it was almost impossible—to force hot air into the rooms above when they were filled with cold air, but now we can shut off the cold air in the cold shaft, and open the opening (which should be a register the same as for hot air) above the furnace and admit the cold air from the rooms, thereby creating a circulation of air at once. The cold air passing down is heated and then passes up into the rooms, and our house is soon filled throughout with hot air.

The wood is thrown down the trap-door opening at the east end of the house. It is then loaded on a swinging car and conducted directly to the furnace along the line of track shown on the plan. I intend to take our fruit and vegetables down by a hoist at the same opening; then by means of the car all can be taken where wanted for storage.

The fire-place is intended for soap and apple-butter making and other like uses. The sink at the corner is supplied with cold water and conveniently located for all purposes incidental to a fire-place. The sink under the pantry is supplied with both hot and cold water and is very convenient. The entire cellar is well lighted and ventilated, as shown by the windows, which are hung on hinges and swing upwards.

The three chief points considered in the construction of this house were convenience, durability and comfort; but its hygienic and sanitary conditions were by no means overlooked. The first-floor plan, at Figure 94, shows the location of the rooms and gives their respective sizes. The ceilings are 10 feet high in the clear. The plastering is finished with a brown or rough coat, and will be either painted or papered. The hall, parlor and sitting-room are finished in black walnut; the bed-room is finished with wild cherry, and the dining-room with white walnut or butternut, and all wood-work is artistically carved and finished in a respectable manner. All the wood-work inside (except that in the kitchen, pantry and the bed-room over the kitchen) is filled and finished with two coats of the best varnish. The kitchen, pantry and bed-room over the kitchen and the entire outside of the house have three coats of the best lead and oil paint.

The kitchen and dining-room are provided with a double cupboard accessible from either side; and this is quite a convenience, saving much running from either the kitchen or dining-room. The dumb-waiter or elevator cupboard is also arranged so as to be accessible from either the dining-room or pantry. This is one of the most labor-saving arrangements in the house. Whatever there may be in the cellar can be placed on the waiter and elevated for use in the dining-room, pantry or kitchen, thereby saving many trips down and up the cellar stair-way, which is very wearisome, as many housewives can testify.

The hot-water boiler is placed between the kitchen side of the cupboard and the kitchen flue, close by the cook-stove, which heats the water in the boiler by means of pipes introduced into the fire-box of the stove. The kitchen sink is supplied with both hot and cold rain water as well as well water. The pantry is furnished with all the conveniences that are needed in a well arranged pantry and they are shown at Fig. 94. The work-table has six drawers underneath. The swinging shelf above and rather to one side of it, is provided with small shelves for spices and other such condiments. The shelves over the meal-chest are larger and extend to the ceiling. The cupboard is amply large and convenient. The pot cupboard is convenient for concealing pots, skillets, etc., that housewives do not wish to have exposed when they are not in use.

The kitchen stairway is very convenient, either for going upstairs the back way, or down to the cellar. The wood-house adjoins the kitchen, and there is no need of going out from the hot kitchen into the cold storm or during inclement weather at the risk of health and life, to an outside wood-shed for fuel, for the wood is as close as it can be to the kitchen, and there is no exposure or a long trip to get it. The wash-house is also conveniently located to the wood-house and kitchen, and arrangements have been made to have it supplied with all the necessary equipments when it is to be used for purposes for which it was intended. At present it is used for a living-room. Both the front and rear porches are supplied with sinks. All of the rooms on the first floor are supplied with ventilators both near the floor and near the ceiling, for controlling the temperature, and all of the rooms throughout the house are provided with proper openings in the floors for the admittance of stove-pipes, to be used in case the furnace should be disabled by some accident. Stoves will be used here only in case of such an emergency.

All of the rooms on the second floor—see Fig. 95—except the bath-room are bed-rooms, and all are accessible from the hall above. Each room is finished in a different kind of wood, and all bed-rooms, except one, are supplied with wardrobes built in the walls. The space under the attic stairs is a receptacle for bed-clothes. The bath-room has a bath-tub, wash-stand and water-closet. The bath-tub and wash-stand are supplied with both hot and cold rain water, which we think is more desirable than well water. The water is heated by the boiler in the kitchen. All of the rooms on the second floor are warmed by the furnace. The locations of the registers are shown in the plan. The balcony is accessible from one of the hall windows. Its railing and the upper deck of the roof will have suitable cresting, which will give the house a more complete appearance. The water is supplied from tanks in the water-house located a short distance east of the dwelling-house. The rain water runs directly into a tank from the water-house roof and furnishes all the rain water that we need without any pumping or much further attention. The well water is pumped into a tank on the same level with and by the side of the rain water tank. From there the water is distributed wherever it is needed by means of pipes. The water is pumped by a Haladay wind-engine (13 feet). The same power does churning and washing, saws the wood and grinds the feed. It has given us grand results, and at present is undergoing some changes. When these are completed it will give us still better satisfaction.

This house is not quite completed. It will cost not far from $4,500 when done. The cost may vary, depending upon the price of lumber and labor. The lawn is not laid out, and I want advice from those who have had experience in landscape gardening. It will be useful to have others tell me what trees, shrubs and vines to procure, and how to arrange them so as to produce a good effect. We have, or think we have, a substantial and handsome house, and now we want the grounds to help it out.

AN OHIO FARM HOUSE. Fig. 92. From a Photograph.

THE R. N.-Y. in mentioning lines of work in which the various experiment stations could interest and instruct farmers, has frequently urged the stations to prepare plans of good barns and other farm buildings.

It is very gratifying to see that some of the stations are acting upon these suggestions and presenting excellent plans for barns, silos, piggeries and other useful structures. The stations at Cornell and at Madison, Wisconsin, lead in this work, and we think the plans they have submitted will be found useful by farmers. The West Virginia Station has issued a pamphlet on creameries that gives detailed plans and specifications. This is a most commendable enterprise.

WOMEN'S NATIONAL POTATO CONTEST

Names of Contestants.

EVERY STATE REPRESENTED.

The following list comprises the names of the women who have entered as contestants in the Potato Contest. It will be seen that about every part of the country is represented.

Arkansas.

Mrs. Bethene Simpson, Jefferson County.

Arizona.

Mrs. W. A. Lattin, Pinal County.

California.

Mrs. M. M. Sornborger, Shasta County.
Mrs. Jno. E. Askew, El Dorado County.
Catharine Alter, Lake County.
Elly Alter, Lake County.
Miss Eva Chapman, Lassen County.
Mrs. Nancy Peck, Sonoma County.

Connecticut.

Mrs. Mary E. Warren, Fairfield County.
Ella Barnum Weeks, Fairfield County.
Mrs. Wilber C. Jennings, Fairfield County.
Miss Lucy M. Woodruff, Hartford County.
Mrs. Cornelius Colt, Litchfield County.
Mrs. Julia Andrus, Litchfield County.
Mrs. M. E. Saunders, Litchfield County.
Ada Starr, New London County.
Rush C. Bill, New London County.
Grace D. Bill, New London County.
Mrs. D. A. Starr, New London County.
Mrs. Ada B. Tracy, New London County.
Mabel A. Tracy, New London County.
Mrs. A. B. Anderson, New London County.
Minnie C. Hotchkiss, New Haven County.
Mrs. Geo. W. Drew, New Haven County.
Mrs. J. D. Walter, New Haven County.
Mrs. Wm. P. Andrews, Windham County.
Mrs. Lemuel Wibberley, Windham County.
Miss Maud Cruff, Windham County.
Mrs. J. A. Cruff, Windham County.
Mrs. M. V. Douglas, Hartford County.
Mrs. J. H. Vallett, New London County.
Annie M. Champlin, New London County.

Colorado.

Mrs. William L. Kirk, Fremont County.
Mrs. W. J. Paddock, Lake County.
Mary S. Watson, Bent County.
Mrs. Hepsy Hamilton, Pitkin County.
Ines and Winfred Hammond, Delta County.
Mrs. P. A. Leonard, Conejos County.
Mrs. C. L. Hepburn, Park County.
Mrs. Oliver Howard, Weld County.
Mrs. Harris Stratton, Larimer County.
Eliza C. Horner, Larimer County.
Mrs. D. F. Griffith, La Plata County.
Mrs. J. C. Tunnell, Weld County.
Mrs. Miriam M. Gravestock, Montrose County.
Mrs. Mary McClave, Pueblo County.

Dakota.

Mrs. Helen Wheeler, Jerauld County.
Emma Ladbury, Griggs County.
Mrs. Mary L. Fuller, Beadle County.
Mrs. R. W. Harrold, Cass County.
Mrs. J. E. Haven, Morton County.
Mrs. Wm. C. Port, Grant County.
Mrs. Antoinette C. Warner, Sanborn County.
Miss C. L. Thomson, Cavalier County.
Mrs. Jno. X. Wilson, Foster County.
Mary McKenzie, Lawrence County.
Mrs. W. A. Keep, Aurora County.
Mrs. M. M. Cable, Lincoln County.
Mrs. G. H. Ingersoll, Miner County.
Mrs. W. A. Bishop, Beadle County.

Delaware.

Mrs. J. K. Haldeman, Kent County.

Idaho.

Mrs. John Grimes, Nez Perces County.
Mrs. Eliza Robb, Boise County.

Indian Territory.

Mrs. J. A. Foreman, Cherokee N.

Iowa.

Mrs. J. N. Munsey, Buchanan County.
M. J. Auten, Cedar County.
Mrs. Sarah E. Taylor, Winnebago County.
Mrs. Maria Watts, Henry County.
Miss Bird Moon, Mitchell County.
Mrs. C. E. Dingman, Jasper County.
Mrs. L. G. Steven, Cerro Gordo County.
Mary Wharton, Iowa County.
Mrs. Emily A. Pitt, Allamakee County.
Adelie J. N. Peet, Marshall County.
E. Fay Welsch, Cass County.
Mrs. J. S. McChesney, Louisa County.
Mrs. M. A. Gager, Howard County.
Mrs. D. K. Goodrich, Fayette County.
Mrs. Betsey Watson, Buchanan County.
Mary Rusk, Madison County.
Mrs. Sarah Hawley, Marshall County.
Minnie A. Gunn, Putnam County.
Lelia L. Beighle, Ford County.
Mary J. Grundy, Christian County.
Tina Pharr, Wayne County.
Mrs. Maurice Barnes, Boone County.

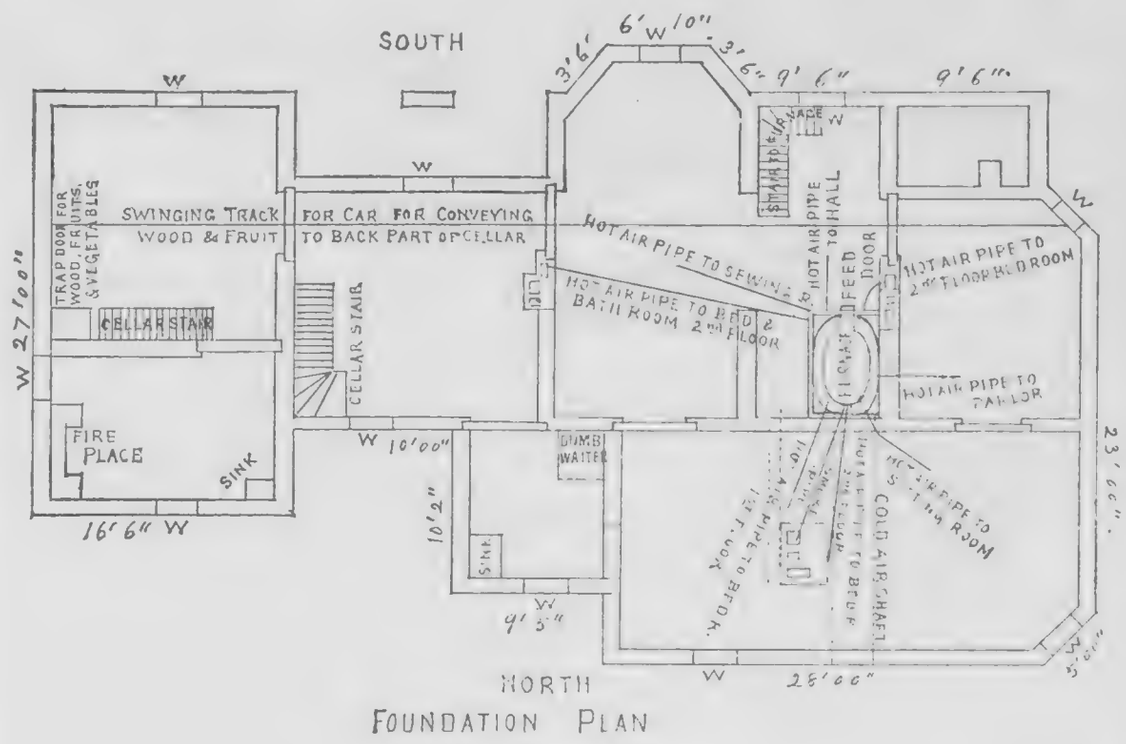

Fig. 93.

Mrs. R. Erwin Greene, Pocahontas County.
Mary Brown, Story County.
Emma Brown, Story County.
Nellie Brown, Story County.

Illinois

Mrs. Mary A. Turney, Shelby County.
Mrs. Emma Barding, Shelby County.
Mrs. Ada A. Haskins, Boone County.
Martha Bunton, Vermilion County.
Marguerith Huber, Rock Island County.
Mrs. Geo. W. Allen, Adams County.
Mrs. Hattie Streblow, Du Page County.
Mrs. Silas M. Jewell, Mercer County.
Mrs. Mary E Tindall, Madison County.

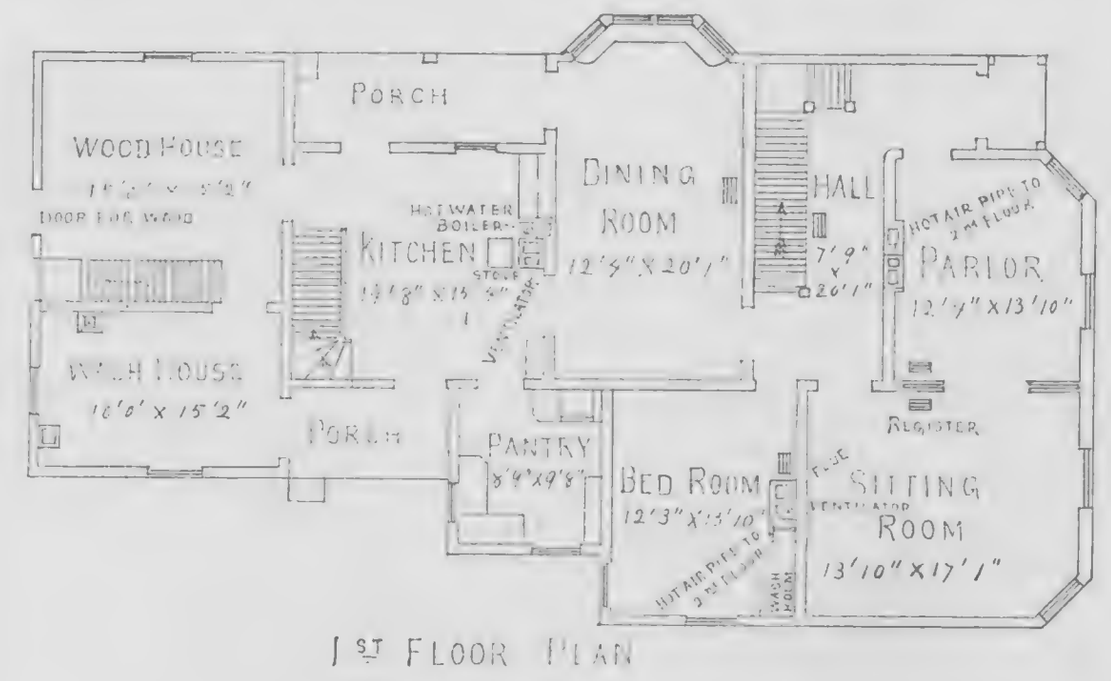

Fig. 94.

Emma Wilson, Shelby County.
Mrs. J. D. Clarke, Tazewell County.
Mrs. Emma Bacon, Lake County.
Mrs. Isaac Fairweather, Lake County.
Cinderella Davis, Williamson County.
Samantha R. Hearn, Williamson County.
Mary E. Stover, Williamson County.
Mrs. Emma A. Heckman, DeKalb County.
Mrs. Sarah Hawley, Marshall County.
Mrs. W. W. Pratt, Whiteside County.
Mrs. Esther A. Allis, Ford County.
Miss Eva Douglas, Wayne County.
Rose J. Bingham, Livingston County.
Mrs. Alice Brown, Livingston County.

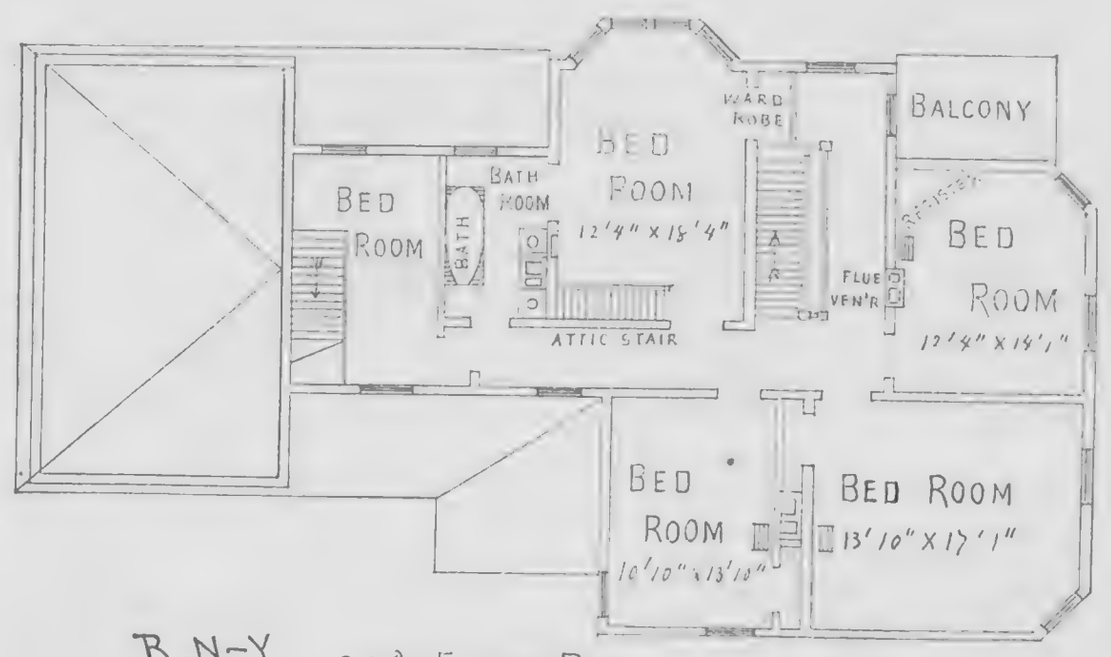

Fig. 95.

Ella M. Davis, Williamson County.
Mary E. Mainwood, Will County.
Mrs. Sarah Metcalf, Kankakee County.
Angele Morisseau, St. Clair County.
Mrs. S. J. Egerly, Fulton County.
Mrs. J. H. Woodburn, Whiteside County.
Mrs. J. W. Baker, Bureau County.
Mrs. Dan. Haskell, Scott County.
Mrs. Geo. Green, Macoupin County.
Mrs. Wm. Rimson, Adams County.
Mrs. M. E. Van Weste, Iroquois County.
Gracie Sanders, Kendall County.

Indiana.

Mrs. T. A. Peffer, St. Joseph County.
Minnie L. Peffer, St. Joseph County.
Mary F. Peffer, St. Joseph County.
Mrs. P. B. Roberts, DeKalb County.
Vinna D. Robinson, Johnson County.
Clara McCullum, Daviess County.
Mrs. John Clem, Allen County.
Mrs. T. C. Clark, Shelby County.
Jessie P. Butler, Posey County.
Miss Myrtle Wright, Kosciusko County.
Mrs Rebecca Wright, Kosciusko County.
Mrs. Noah Cripe, Wabash County.
Mrs. Malinda Neel, Delaware County.
Mrs. E. D. Mendenhall, Wayne County.
Mary A. Cowgill, Benton County.
Mrs. Ann E. Robinson, Johnson County.
Flora S. Kelsey, Elkhart County.
Mrs. J. Thos. W. Lackey, Adams County.
Miss Maggie Grossman, Lagrange County.
Miss Mary Grossman, Lagrange County.
Malinda Parks, Marshall County.
Mrs. Jerusha Light, Marshall County.
Miss Laura J. Richards, Tippecanoe County.
Mrs. A. C. Ludwig, Tipton County.
Kate Y. Myers, Decatur County.
Flora Toff, Clark County.
Mrs. E. H. Collins, Hamilton County.
Miss Jane Reed, Rush County.
Mary A. Hutton, Madison County.

Kansas.

Lilian Shaw, Chase County.
Georgiana Shaw, Chase County.
Miss Fannie Rupert, Douglas County.
Miss Jessie Rupert, Douglas County.
Mrs. Lottie Smead, Douglas County.
Alida E. Moody, Thomas County.
Alice A. Moody, Thomas County.
Mrs. Wm Kinne, Jackson County.
E. M. Champion, Crawford County.
Mrs. Jos. Marshall, Leavenworth County.
Miss Alice Gaston, Reno County.
Viola W. Griblin, Greenwood County.
Mrs. L Fisher, Johnson County.
Mrs. H C. Bowman, Doniphan County.
Mrs. Annie Harrison, Franklin County.
Mrs. Mary Knere, Dickinson County.
Mrs. W. H. Cameron, Jewell County.
Mrs. Hugh C. Clark, Hampshire County.
Mrs. Jane Hewitt, Mitchell County.
Mrs. Alice G. D. Smith, Cloud County.
Lizzie Frazer, Lyon County.
Mrs. Kate A. Myers, Pawnee County.
Mrs. D. T. Bayless, Cowley County.
Eva Longstreth, Kearney County.
Susan E. Harvey, Sumner County.
Laura Mariner, Wilson County.
Mrs. Jennie S. Austin, Shawnee County.
Dora M. Robertson, Nemaha County.
Mrs. Edwin Taylor, Wyandotte County.

Kentucky.

Aleta M. Rouser, Boone County.
Mrs. Warren B. Rogers, Bourbon County.
Linda C. Stilz, Jefferson County.
Mrs. J. W. Johnson, Clark County.
Mrs. G. M Tohl, Muhlenberg County.

Maryland.

Mrs. S H. Wilson, Baltimore County.
Mrs. H. Tyler, Caroline County.
Mrs. Susan Groff, Frederick County.
Miss Mamie Groff, Frederick County.

Maine.

A. H. Herrick, Cumberland County.

Mississippi.

Cath Pabst, Jackson County.

Massachusetts.

Mrs. G. W. Stover, Essex County.
Susie M. Drown, Essex County.
Mrs. Wm. C. Allen, Norfolk County.
Mrs. D. L. Bosworth, Hampden County.
Mrs. A. A. Rice, Franklin County.
Mrs. O. J. Putnam, Worcester County.
Mrs. Florilla Bascome, Worcester County
Mrs. W. J. Walker, Worcester County.
Jennie W. Graham, Worcester County.
Mary C. Graham, Worcester County.
Lucy A. Doobleday, Worcester County.
Mrs. F. A. Clement, Berkshire County.
Mrs. A. W. Brooks, Middlesex County
Mrs. F. L. Avery, Middlesex County.
Isabel B. Osborne, Plymouth County.
Mrs. Eliza Alden, Plymouth County.
Mrs. F. W. Eldridge, Bristol County.
Mrs. Mary C. Thomas, Bristol County.
Mrs. Celia V. Gibson, Worcester County.
Mrs. Augusta Palfreyman, Middlesex County
Mrs. Mary H. Benjamin, Middlesex County.
Mrs. Lewis B. Wheeler, Worcester County.
Mrs. Jennie D. Ide, Worcester County.
Mrs. Wm. Oldroyd, Hampden County.
Mrs. Nellie M. Eddy, Norfolk County.
Eda F. Eddy, Norfolk County.

Montana.

Mrs. H. O. Nash, Jefferson County.
Mrs. Anne Sanford, Deer Lodge County.
Mrs. A. M. Parsons, Choteau County.
Mary Harlan, Missoula County.
Mrs. Mary A. Sperry, Lewis & Clarke County

Michigan.

Mary A. Presley, St. Clair County.
Amelia Kelly, Ottawa County.
Lovina Gillhespy, Ottawa County.
Mrs. Thos. Wilde, Ottawa County.
Mrs. A. R. Wright, Mecosta County.
Mrs. Addie B. Peck, Mecosta County.
Julia L. Ingersoll, Monroe County.
Mrs. R. P. Ingersoll, Monroe County.
Mrs. O. Brown, Berrien County.

Mrs. R. Morrill, Berrien County.
Mrs. L. Kelley, Berrien County.
Mrs. A. N. Wisner, Berrien County.
Minnie Breathwaite, Berrien County.
Miss Agnes Bird, Washtenaw County.
Mrs. W. F. Bird, Washtenaw County.
Miss Jessie Adams, Kalamazoo County.
Mrs. Addison M. Brown, Kalamazoo County.
Mrs. H. A. Horton, Emmet County.
Alice Johnson, Oakland County.
Annie V. Marsac, Emmet County.
Mrs. Eva J. Durkee, Oakland County.
M. F. Gaul, Ionia County.
Alice Crane, Ionia County.
Mrs. N. D. McNeil, Genesee County.
Mrs. Maria Brown, Genesee County.
Mrs. Emily Schafer, Bay County.
Mrs Mark Wilson, Lapeer County.
Mary E Allen, Manistee County.
Mrs. Alice P. Sheffer, Van Buren County.
Mrs. Patience Stiles, Lapeer County.
Mrs. H. Davis, Kent County.
Miss Mary L. Lyman, Shiawassee County.
Mrs. Martha Chapman, Manistee County.
Mrs. F. B. Kennedy, Branch County.
Mary C. Dey, Lenawee County.
Mrs. Sarah I. Willard, Bay County.
Laura E. Rice, Midland County.
Mrs. Lynn M. Northrup, Eaton County.
Mrs. T. W. Lyon, Tuscola County.
Mrs. Kate Delamarps, Osceola County.
Mrs. Melvin C. Hawley, Saginaw County.
Mrs. E. D. Cory, Hillsdale County.
Mrs. Jos. Foster, St. Clair County.
Mary O Toole, Livingston County.
Mrs. E. D. Hammond, Ionia County.
Beulah J. Belles, Oakland County.
Emma Borden, Oakland County.
Mrs. W. P. Butterfield, Lapeer County.
Mrs. E. D. Caulkins, Lapeer County.
Mrs. E. H. Hunt, Ionia County.
Mrs. G. A. Smith, Ionia County.
Mrs. Mary E. Bell, Bay County.
Mrs. Myra L. Parsons, Bay County.
Jennie M. Grant, Oceana County.
Mrs. S. C. Payne, Oceana County.
Mrs. Henry Beython, Saginaw County.
Mrs. C. D. Calker, Shiawassee County.
Mrs. A. D. Topping, Shiawassee County.
Mrs. Mark Wilson, Lapeer County.
Mrs. L. Marsh, Calhoun County.
Frank Tuttle, Tuscola County.
Lucia L. Johnson, Kalamazoo County.
Mrs. E. W. Jenney, Allegan County.
Mrs. W. I. Wright, Mecosta County.
Mrs. A. L. Edmunds, Macomb County.
Mrs. Eliza Speer, Ingham County.

Missouri.

Mrs. C. H. Warren, Jefferson County.
Mrs. Phil Swink, Jefferson County.
Mrs. Thos. Stone, Greene County.
Mrs. Steward Webb, Livingston County.
Samilda J. Allen, Harrison County.
Blanche Allen, Harrison County.
Mrs. Almon Wilson, Harrison County.
Mrs. Rozella Cameron, Texas County.
Mrs. W. M. Brown, Carroll County.
Mary Etta Seaman, Sullivan County.
Mrs. L. E. Wood, Dade County.
Miss S. A. Burckhardt, Shelby County.
Mrs. R. M. Anthony, Madison County.
Mrs. S. M. Fry, Grundy County.
Mrs. Mary Fisher Rheinhard, Lafayette County.
Julia S. Lewis, Nodaway County.
Mary Kirshbaum, Lewis County.

Minnesota.

Edith Clarke, Steele County.
Cora E. Clarke, Steele County.
Emma Hissam, Steele County.
Miss S A. Smith, St. Louis County.
Mrs. J. M. Wyman, Waseca County.
Mrs. J. A. Thompson, Mower County.
Mrs. C. H. Chapin, Wilkins County.
Mrs. Helen Leiken, Faribault County.
Mrs. I. F. Crosby, McLeod County.
Mrs. F. A. Hayes, Polk County.
Julia S. Frogner, Grant County.
Minnie Muller, Otter Tail County.
Emma A. Stacy, Wright County.
Mrs. M. Manders, Faribault County.
Miss May Greethurst, Winona County.
Mrs. C. L. Nickerson, Blue Earth County.
Miss Lucy E. Danforth, Stevens County.
Mrs. E. T. Hammond, Winona County.

New York.

Mrs. Mary J. Stillman, Allegany County.
Mary D. Thomas, Allegany County.
Mrs. B. C. Swarts, Allegany County.
Mrs. C. N. Bell, Allegany County.
Mrs. H. W. Horn, Wayne County.
Mrs. R. E. Davis, Wayne County.
Mrs. W. H. Kelley, Wayne County.
Jessie W. Hurley, Wayne County.
Charlotte A. Jacobs, Fulton County.
Mrs. C. C. Allen, Washington County.
Mrs. I. J. Norton, Washington County.
Emma Jakway, Washington County.
Mrs. Mary F. Willis, Washington County.
Mrs. Eugene G. Horton, Suffolk County.
Mrs. Orrin Raynor, Suffolk County.
Mrs. Chas. C. Dimon, Suffolk County.
Mrs. Daniel R. Young, Suffolk County.
Drusilla J. Youngs, Suffolk County.
Mrs. Lena A. Petty, Suffolk County.
Mrs. Mary C. Payne, Suffolk County.
Mrs. Edw'd Trave, Ontario County.
Mrs. Cholett Collins, Ontario County.
Belle E. Van Eps, Ontario County.
Mrs. Benj. W. Hopkins, Ontario County.
Miss Sara Courneen, Ontario County.
Miss Kate Loomis, Ontario County.
Mrs. E. D. Hoyt, Ontario County.
Elizabeth Geisler, Ontario County.
Mrs. S. B. Douglas, Ontario County.
Mrs. F. E. Van Eps, Ontario County.
Mary J. P. Hewes, Chautauqua County.
Minnie G. Hewes, Chautauqua County.
Mrs. B. W. Morian, Chautauqua County.
Mrs. F. M. Viall, Chautauqua County.
Mrs. G. Schoenfield, Chautauqua County.
Mrs. T. J. Coffeen, Chautauqua County.
Miss Floy J. Decker, Chautauqua County.
Mary J. Flanagan, Chautauqua County.
Mrs. A. Y. Freeman, Chautauqua County.
Mrs. W. P. McManus, Chautauqua County.
Mrs. C. M. Maxwell, Chautauqua County.
Mrs. J. H. Whitman, Cayuga County.
Mrs. Jane Laverick, Cayuga County.
Mrs. Rose Cornelius, Dutchess County.
Mrs. Geo. Lang, Dutchess County.
Fannie Greene, Dutchess County.
Mrs. R. N. Lewis, Dutchess County.
Mrs. R. C. Devine, Dutchess County.
Mrs. S. C. Merritt, Dutchess County.
Daisy Turck, Oswego County.
Mrs. J. N. Stanley, Oswego County.
Mrs. Mary Greenwood, Oswego County.
Mrs. Will Briggs, Erie County.
Mrs. J. H. Jackson, Erie County.
Mrs. Dennis Johnson, Erie County.
Mrs. Aurilla Bartlett, Erie County.
Mrs. J. K. Smith, Erie County.
Mrs. P. G. Brooks, Saratoga County.
Mrs. Herbert A. Shaw, Saratoga County.
Mrs. H. D. Cole, Saratoga County.
Mrs. S. C. Taylor, Saratoga County.
Mrs. R. T. Holloway, Yates County.
Mrs. E. C. Gillette, Yates County.
Mrs. G. S. Bullis, Columbia County.
Mrs. Jacob P. Packman, Columbia County.
Mrs. J. A. Brace, Orleans County.
Janette P. Potter, Orleans County.
Mrs. Lee A. Hitchcock, Orleans County.
Martha A. S. Webster, Orleans County.
Mrs. Rose E. Haight, Orleans County.
Miss Ethel Davis, Orleans County.
Sara E. Chamberlain, Orleans County.
Julia Osborn, Rensselaer County.
Anna W. Newkirk, Fulton County.
Mrs. Wm. Steele, Fulton County.
Hattie E. Ingalls, Broome County.
Mrs. O. Smith, Broome County.
Mrs. Jane Ingraham, Broome County.
Miss Kate Ingraham, Broome County.
Miss Florence Ingraham, Broome County.
Mrs. M S. Drum, Broome County.
Mary E. Mitchell, Broome County.
Emma D. Brozie, Broome County.
Mrs. C. Cobbe, Ulster County.
Mrs. A. Van Valkenburgh, Ulster County.
Eva A. Bowker, Onondaga County.
Mrs. E. G. Wallace, Onondaga County.
Mrs. J. C. Berry, Onondaga County.
Olive Allen, Cortland County.
Mary Allen, Cortland County.
Mrs Geo. Van Buskirk, Cortland County.
Miss Carrie Collier, Greene County.
Mrs. J. H. Lampman, Greene County.
Mrs. Jennie Weller, St. Lawrence County.
Mrs. Clara Clark, St. Lawrence County.
Mrs. Mittie Brooks, Madison County.
Mabel Van Allen, Albany County.
Annie Van Allen, Albany County.
Mrs. Mary A. Van Allen, Albany County.
Mrs. F. R. Johnson, Cattaraugus County.
Mrs. J. R. Holden, Cattaraugus County.
Mrs. D. P. Needham, Wyoming County.
Mrs. Geo. B. Tallman, Wyoming County.
Ellen C. Bonnell, Seneca County.
Dora E. Bonnell, Seneca County.
Mrs. Clark Kilts, Montgomery County.
Mrs. J. H. Saltsman, Montgomery County.
Mrs. R. Saltsman, Montgomery County.
Mrs. E. P. Fisk, Oneida County.
Mrs. S. C. Grannis, Oneida County.
Mrs. W. G. Lyon, Essex County.
Mrs. Emma Burgess, Seneca County.
Miss Emma Roberts, Niagara County.
Mrs. Thos. Hyde, Chenango County.
Mattie F. Browning, Westchester County.
Minnie E. Nellis, Herkimer County.
Mrs. Frances A. Dorn, Schoharie County.
Hattie Cornell, Steuben County.
Mrs. Judson Higby, Lewis County.
Flora M. Sherwood, Tioga County.
Mrs H. M. Roberts, Franklin County.
Mrs Wm. Couse, Schuyler County.
Mrs. A. J. Greene, Jefferson County.
Mrs. Mary W. F. Griffith, Queens County.
Mrs. H. Harrison, Otsego County.
Miss Emma L. Bliss, Tompkins County.
Miss Lizzie Goodell, Madison County.
Mrs. Erastus S. Harris, Monroe County.
Mrs. Geo. Higbie, Monroe County.
Mrs. F. Rossman, Columbia County.
Mrs. S. W. Young, Cayuga County.
Mrs H. Belle Chapman, Schuyler County.
Louise McUmber, Ontario County.
Miss M. J. Watson, Broome County.
Mrs H. B. Tainter, Livingston County.
Mrs. F. H. Warner, Steuben County.
Mrs. A. B. Cogwin, Oneida County.
Miss R. B. Rood, Wyoming County.
Mrs. A. Rood, Wyoming County.
Mrs. Wilber G. Fish, Tompkins County.
Miss M. Louise Dunning, Orange County.
Sarah L. Mapes Orange County.
Mrs. H. T. Coon, Cortland County.
Mrs. R. R. Grant, Cortland County.
Mrs. C. H. Putnam, Cayuga County.
Mrs. E. S. Choat, Cayuga County.
Mrs. M. A. Robinson, Cayuga County.
Mrs. W. H. Wait, Tioga County.
Nellie E. Wait, Tioga County.
Mattie E. Wait, Tioga County.
Mrs. Frank L. Young, Suffolk County.
Miss Minnie Crooker, Suffolk County.
Mrs. Ellen B. Young, Suffolk County.
Miss Lelia M. Young, Suffolk County.
L. Emilia Young, Suffolk County.
Edith Wynn Young, Suffolk County.
Mrs. E. Putney, Suffolk County.
Mrs. B. Barber, Suffolk County.
Mrs. C. Rocks, Onondaga County.
May Gordon, Allegany County.
Mrs. Julia Mills, Allegany County.
Mrs A H. Hopkins, Ontario County.
Mrs. Wm. Middlemiss, Delaware County.
Mrs. Sam'l Orr, Yates County.
Mrs. Ada Semans, Ontario County.
Miss Bertha Semans, Ontario County.
Mrs. H. R. Currie, Oneida County.
Mrs. Charlotte Jacobs, Fulton County.
Miss Betty Taylor, Erie County.
Mrs. Geo. Grentier, Cattaraugus County.
Viola M. Wilson, Madison County.
Mrs. Frank J. Welker, Wayne County.
Mrs. Jennie M. Hilliard, Montgomery County
Anna J. Hay, St. Lawrence County.
Mrs D. B Thayre, Yates County.
Mrs. Ada L. Malder, Queens County.
Mrs. H. E. Wheeler, Chemung County.
Mrs. A. J. Morehouse, Seneca County.
Mrs. J. H. Gifford, Otsego County.
Mrs J. B. Clark, Genesee County.
Mrs. Ira O. Ellinwood, Oneida County.
Mrs. E. A. Calkins, Clinton County.
Mrs. Daniel McCann, Otsego County.
Mrs. John Wallenbeck, Tompkins County.
Mrs. E. Naoma Northrop, Steuben County.
Mrs. E. A. Medbery, Chenango County.
Mrs. E. D. Potter, Wyoming County.
Mrs. A. C. Hegeman, Saratoga County.
Harriet R. Hegeman, Saratoga County.
Edith M. Hegeman, Saratoga County.

New Hampshire.

Mrs. Henry Morse, Sullivan County.
Annie Taylor, Cheshire County.
Mrs. J. E. P. Randlett, Belknap County.
Mrs. H. W. Stevens, Grafton County.
Mrs. Geo. E. Randall, Grafton County.
Miss Grace E. Hunt, Sullivan County.
Mrs. Betsy B. Colby, Merrimack County.
Miss Hattie B. Colby, Merrimack County.
Miss L. H. Palmer, Grafton County.
Mrs. Alfred Cook, Grafton County.

North Carolina.

Miss Annie B. Smeed, Vance County.

Nebraska.

Mrs. A. Neibart, Otoe County.
Miss S. L. Hayward, Otoe County.
Mrs. F. A. Bly, Butler County.
Mrs. Mary Weaver, Rock County.
Mrs. C. Kjeruff, Kearney County.
Mrs. M. L. Damon, Sheridan County.
Mrs. Annie Nelson, Saunders County.
Mrs. H. E. Canham, Knox County.
Miss Mary Poitevin, Keya Paha County.
Mrs. Mary Poitevin, Keya Paha County.
Mrs. Martha Neehart, Otoe County.
H. L Hopkins, Webster County.

New Jersey.

Mrs. D. J. Fox, Bergen County.
Mrs. Ann Chalmers, Cumberland County.
Mrs. J. S. Carlile, Morris County.
Mrs. Hannah Demarest, Passaic County.
Anna M. Stackhouse, Salem County.
Mrs. C. J. Majory, Ocean County.
Emily E. Lynch, Ocean County.
Mrs. Joseph Dilatush, Mercer County.
Mrs. O. C. Herbert, Monmouth County.
Miss Carrie O. Herbert, Monmouth County.
Mrs. And. Lambertson, Monmouth County.
Mrs. Hervey Shimer, Warren County.
Mrs. R. Noel, Union County.
Mrs. Horace H. Alley, Essex County.
Mrs. Geo. N. Earl, Passaic County.
Mrs. C. Valentine, Union County.
Mrs. J. J. Mitchell, Morris County.
Mrs. E. Manget, Bergen County.
Mrs. A. E. M. Carman, Bergen County.
Mrs. H. W. Collingwood, Bergen County.
Miss Lilian E. Morey, Bergen County.
Mrs. Martha Joslin, Atlantic County.
Mrs. L. M. Russell, Somerset County.
Miss Bertha L. Russell, Somerset County.

Ohio.

Miss Della Self, Muskingum County.
Mrs. Marg't Wilkinson, Muskingum County.
Mrs Mary A. Miller, Summit County.
Mrs. E. E. Stine, Summit County.
Miss Lizzie Abel, Belmont County.
Eliza F. Ashton, Belmont County.
Mrs. Dora H. Brock, Belmont County.
Amanda Earhart, Butler County.
Esther C. Earhart, Butler County.
Mrs. Mary R. Potter, Cuyahoga County.
Mrs. W. F. Petch, Cuyahoga County.
Mrs. W. W. Hunt, Cuyahoga County.
Vilora Clotts, Licking County.
L. Aurilla Whitehead, Licking County.
Estella M. Barringer, Montgomery County.
Miss Alice Linson, Clark County.
Mrs. S. A. Densmore, Lake County.
Mrs. Lollie Denlinger, Montgomery County.
Mrs. Almira J. Sanders, Huron County.
Mrs. Grace M. Tillson, Huron County.
Mrs. W. H. Glosser, Warren County.
Mrs. Wm. McDowell, Ashland County.
Mary A. Tomlinson, Columbia County.
Mrs. J. H. Mitchell, Ashtabula County.
Mattie F. Ames, Crawford County.
Mrs. Phebe Kuder, Medina County.
Lizzie G. Lyle, Jefferson County.
Mrs. J. W. Ballinger, Logan County.
Mrs. E. S. Heller, Harrison County.
Mrs. Mary E. Ray, Pike County.
Mrs. Wm. R. Covell, Erie County.
Mrs. H. W. Smith, Clinton County.
Mrs. David Hershiser, Williams County.
Mrs. Phillippina Brumley, Putnam County.
Mrs. Mary E. Haynes, Licking County.
Mrs. F. M. Hance, Lorain County.
Mrs. Hattie Hamft, Hamilton County.
Mrs. Ida L. Thwing, Geauga County.
Mrs. M. S. Wagoner, Tuscarawas County.
Lavina Bender, Summit County.
Mrs. Low A. Bender, Summit County.
Mrs. J. A. Warn, Lucas County.
Mrs. Mary Roper, Lucas County.
Miss Jennie Rhodes, Mercer County.
Mrs. Zena Merrin, Knox County.
Mrs. L. Zimmerman, Lorain County.
Mary B. Sears, Belmont County.

Oregon.

Harriet M. Stitt, Curry County.
Annie S. Burton, Tillamook County.
Mrs. Mary L. Harbison, Wasco County.
Mrs. Willard Beach, Benton County.
Mrs. J. S. Churchill, Lane County.
Phebe Martin, Gilliam County.
Mrs. Jno. Evender, Yam Hill County.
Mrs. J. S. McFadden, Josephine County.
Mrs. B. M. Shannon, Linn County.
Mrs. Lucy A. Todd, Washington County.
Mrs. Irene Smith, Linn County.

Pennsylvania.

Mrs. D. Devere, Indiana County.
Mrs. L. M. Barker, Indiana County.
Bertha Myers, Indiana County.
Sarah Myers, Indiana County.
Mrs. S. E. Cribbs, Indiana County.
Mrs. A. J. Stillwell, Susquehanna County.
Mrs. Jno. C. Gager, Susquehanna County.
Mrs. Flora M. Pickett, Susquehanna County.
Mrs. Nannie J. Linn, Mercer County.
Mrs. S. Morford, Mercer County.
Mrs. A. M. Coleman, Butler County.
Mrs. Coral M. Card, Cameron County.
Mrs. Rosa A. Card, Cameron County.
Mrs. Geo. L Day, Cameron County.
Mrs. Emma J. Bush, Chester County.
Mary C. Ingram, Chester County.
Mrs. C. E. Shipper, Warren County.
Mrs. Jay Hinsdale, Warren County.
Mrs. Grant Putnam, Warren County.
Mrs. Annie E. Smith, Blair County.
Mrs. Rosalie Kribbs, Clarion County.
Susan R. Gregory, Luzerne County.
Mrs. A. Battles, Erie County.
Mora Sherman, Erie County.
Mrs. Chas. A. Lang, Crawford County.
Mrs. L. M. Cady, Tioga County.
Fannie N. Engle, Lancaster County.
Sallie A. Hamilton, Lancaster County.
Mrs. Betty Engle, Beaver County.
Mrs. W. D. Hamilton, Beaver County.
Mrs. J. Amos Miller, Franklin County.
Miss Jessie Lawrence, Dauphin County.
Ida Boyer, Northumberland County.
Mrs. B. W. Heinemann, McKean County.
Martha M. Lishy, Adams County.
Mrs. J. Jarney, Centre County.
Elizabeth Omwake, Franklin County.
Margaret J. McBride, Allegheny County.
Mrs. L. M. Mudge, Warren County.
Mrs. Maria Hopkins, Crawford County.
L. S. Pennell, Delaware County.
Mrs. M. J. Minch, Venango County.

Rhode Island.

Mrs. E. P. Champlin, Newport County.
Mrs. Hannah C. Gardiner, Washington County.
Alice Jackson, Providence County.

South Carolina.

Miss Minnie O. Clark, Clarendon County.
Mrs. E. C. Stirling, Chester County.
Mrs. T. E. Woodson, Edgefield County.

Texas.

Mrs. Nellie Miller, Williamson County.
Mrs. C. M. DeSel, Kaufman County.
Miss Tullula Herron, Burleson County.
Miss Mary Herron, Burleson County.
Miss Ella Herron, Burleson County.

Tennessee.

Miss Jennie Hutsell, Meigs County.
Mrs. W. S. Waite, Bedford County.
Mrs. Ferdinand Shultz, Coffee County.
Mrs. C. H. Stilz, Sumner County.
Mrs. L. A. Holm, Hamilton County.
Mrs. Elizabeth A. Fulkerth, Davidson County
Mrs. H. S. Bennett, Morgan County.

Utah.

Kate Jean Boan, Uintah County.

Vermont.

Mrs. R. L. Town, Washington County.
Mary H. Pitkin, Washington County.
Mrs. Celia Eastman, Washington County.
Mrs. Florence E. Lewis, Washington County.
Miss Eva M. Johnson, Windham County
Mrs. J. H. Capen, Windham County.
Miss J. Burnett, Chittenden County.
Mrs. Wm. Burnett, Chittenden County.
Mrs. Dr. Geo. Davenport, Orange County.
Miss C. T. Meigs, Franklin County.
Mrs. Elizabeth A. Fossett, Addison County.
Loretta A. Kingsbury, Windsor County.
Mrs. Harriet Lynch, Addison County.
Mrs. M. M. Thorne, Orange County.
Mrs. S. B. Alexander, Windsor County.
Martha Harris, Caledonia County.
Mrs. A. E. Bliss, Chittenden County.
Miss Gertrude E. Peet, Addison County.

Virginia.

Miss Mag Naff, Franklin County.
Mrs. T. C. Naff, Franklin County.
Miss Hattie Koiner, Augusta County.
Mrs. J. W. Todd, Augusta County.
Mrs. Maggie E. Carter, Wythe County.
Catherine E. Rodgers, Wythe County.
Ed. A. Andrews, Wythe County.
Charlotte H. Hayes, Fauquier County.
Mrs. Julia E. Kelley, Washington County.
Miss Grace Kelley, Washington County.
Miss Margie Kelley, Washington County.
Miss Lizzie M. Garlick, King and Queen County.
Mrs. S. V. Field, Fauquier County.
Mrs. C. A. Durkee, Cumberland County.
Anna M. Pitkin, Prince William County.
Mrs. Annie H. Smith, Northumberland County.
Faunie S. Kenyon, Fairfax County.
Mrs. Mamie C. Layman, Botetourt County.
Mrs. Allie Dillard, Hanover County.
Mrs. C. G. Harnsberger, Rockingham County.
Mrs. J. W. Melhorn, Rockingham County.
Mollie E. Wassum, Smyth County.
Mary Ann Ager, Wythe County.

West Virginia.

Mary C. Hurley, Wetzel County.
Mrs. T. J. Hugus, Ohio County.

Washington Territory.

Mary W. Hannah, Thurston County.
Lillian J. Hannah, Thurston County.
Mrs. Julius Horton, King County.
Miss Katie Merriman, Skagit County.
Josephine Beasley, Skagit County.
Mrs. Elizabeth Rose, Kittitass County.
Mrs. Mary Hagam, Garfield County.
Susie Deneffe, Spokane County.
Mrs. I. N. Peyton, Spokane County.
Mrs. F. J. Ide, Spokane County.
Mrs. S. S. Keister, Kittitass County.
Mrs. Z. H. Robbins, Whatcom County.
Mrs. Jennie Brewer, Chehalis County.
Mrs. S. F. Bennett, Garfield County.
Mrs. Etta M. Kline, Whatcom County.
Mrs. L. A. Tift, San Juan County.
Mrs. W. A. Davies, Lincoln County.
Mrs. J. H. Chillberg, Skagit County.
Annie Anderson, Kitsap County.
Mrs. I. Thrasher, Walla Walla County.
Mrs. Margaret Smith, Skagit County.

Wisconsin.

Mrs. R. Farrington, Buffalo County.
Mrs. Nellie A. Jackson, Waukesha County.
Mrs. A. I. Gale, Waukesha County.
Ruth Jones, Washington County.
Clara Jones, Washington County.
Mrs. I. Van Wie, Kenosha County.
Mrs. W. H. Abbott, Rock County.
Mrs. H. D. Parson, Fond Du Lac County.
Mrs. B. C. Dunlap, Walworth County.
Mrs. Jas. B. Nye, La Crosse County.
Mrs. C. E. Hogeboom, Eau Claire County.
Elizabeth A. Taylor, Dane County.
Mrs. C. M. Latshaw, Vernon County.
Isabel Van Loon, La Crosse County.
Mrs. Mary Van Loon, La Crosse County
Mrs. A. J. Jones, Sauk County.
Mrs. Meta S. Webb, Sauk County.
Mrs. P. M. Sheldon, Sheboygan County
Mrs. Joseph McFarland, Jefferson County.
Mrs. L. A. Lane, Waushara County.
Mrs. B. M. Smith, Columbia County.
Mrs. Julia Hartnell, Kenosha County.
Mrs. E. S. Lincoln, La Crosse County.
Mrs. L. Ansley, St. Croix County.

Wyoming Territory.

Laura B. Fly, Carbon County.
Mrs. Eliza Day, Johnson County.

Canada.

Mrs. Robt. Oswald, Victoria County.
Mrs. Maggie A. Armour, Victoria County.
Miss S. E. Adams, Lincoln County.
Mrs. C. H. Hulets, Oxford County.
Mrs. Ed. Eckardt, York County.
Miss Maggie Arton, York County.
Miss Mary Arton, York County.
Mrs. B. F. Closson, York County.
Miss M. MacGlashan, Lambton County.
Mrs. Martha Williams, Lambton County.
C. S. A. Taylor, Ontario County.
Mrs. Michael Bowen, Welland County.
Mrs. Dan'l Dunn, Algoma County.
Mrs. D. E. Evans, Vancouver County.
Mary E. Blagden, Wentworth County.
Miss Stanway, Hochelaga County.
Eliza S. Dickinson, Durham County.
Mrs. A. Miller, Hastings County.
Mrs. Joseph Chapman, Leeds County.
Mrs. Russell Smither, New Westminster County.
Miss E. Fowler, Lisgar County.
Susan Pickard, Blanchard County.
Miss Maud McCullough, Windsor County.
Mrs. Jno. Aldons, Stamford County.
Mrs. Thos. Geddes, Dumfries—South.
Mrs. Alex. Patterson, Lincoln County.
Mrs. Edwin Keeler, Augusta County.
Mrs. Jno. Hogg, ————
Jane Kearns, ————
Mrs. Jessie Fox, Delaware County.

No State Given.

Mary M. Laird, Coalville.
Margaret S. Bowley, Kingston.

I BUILT a fire-place in one corner of one room of my new house and find it more out of the way than anywhere else; also the chimney was not in the way of our central end window in the half story above. The chimney draws well, but the house is so tight that if a little air is not given at a transom or window when building a fire, it smokes somewhat. Opening either threw a cold draft across the room. So I took up the hearth, broke a hole in the brick wall which encircled it and held the dirt and sand on which the hearth was laid, pushed a six-inch-stove pipe through under the house, and by joining another joint to it, and laying the second joint in the sand under the hearth brick, I had a draft from under the house coming up freely under the forestick in the fire. I should say that a short elbow turns it upward under the forestick. When all doors are shut, this draft is very strong and one can start a fire on a cold morning very quickly and make a very hot fire in a much shorter time than without it. I can use green wood, or with dry wood I can glaze the brick lining the fire-place if I let all the draft on. I keep an old stove hearth over the opening, and raise the inner edge with a bat

Mattsville, Ind. E. H. C.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

MAKING EGG PLANTS "LAY."

P. B. C., Catonsville, Md.—Won't some one give me an egg-plant special—just a piece of a column? I would like to have the inside facts about how to make them lay. Are commercial fertilizers good? If so, how much and what kind? This year mine made a luxuriant growth of foliage and bore but very little fruit. What was the probable cause? Is it best to save one's own seed? What is the best variety for market? How close ought they to be planted?"

ANSWERED BY WILLIAM FALCONER.

Sometimes I have had an excellent show for an early crop of fruit; but somehow or other the fruit failed to set and swell. The plants would look thrifty and have lots of blossoms in June, but they wouldn't begin to set fruit till July. I have blamed the rain and chilly nights for interfering with the fertilization of the flowers, and, too, I have blamed myself for not keeping a few hives of honey-bees to assist me in [setting [the fruits and seeds of my trees, flowers and vegetables. I attach a good deal of importance to this honey-bee question and am satisfied that bees mean fruit if the climatic conditions are at all favorable. New York Improved is the favorite variety, Black Pekin is also much grown, and I also raise some Early Long Purple for early. The last-named is quite prolific, dwarfer and bushier than the New York and some days earlier, and while good enough in its way for home use, it has neither size nor good appearance enough to commend it as a market variety. The White and Striped are also edible, but not worth growing for this purpose; they are good enough to grow to make up a number of varieties for exhibition purposes; but for no other use that I know of. They are recommended as decorative plants, but I have always considered them very far-fetched garden ornaments. For egg plants to come in about the end of June, I sow them in a hot-house in February, and prick off and pot the seedlings as their growth demands it, till by the first of May they are in eight or nine-inch pots. During all this time they are grown in a temperature of not less than 70 degrees at night; if it runs up to 90 degrees by day it's all right. Now, from the 20th of April till the end of May, is the most critical period in the life of these egg plants; the bright, warm days are apt to induce us to expose our plants too much, with the idea that it is good for the plants, also with the notion of hardening them off; but this is a mistake. Keep them hot at all times, close except during the forenoon warm sunshiny blinks, and especially warm at night, no matter how hot the weather may be. And when they come into bloom—about the first of May—fertilize them artificially, that is, with a camel's-hair brush in the forenoon, and don't plant them out till the first of June, and then only if they are well set with fruit, well inured to the weather for a week or two previous, and in warm sunny ground. If they are planted out when in bloom but not set with fruit, the flowers will be likely to drop off without setting fruit. For my main crop I sow in a hot-house about the end of March and grow on in pots in warm quarters till towards the end of May when I harden them off gradually and plant them out at the end of May or early in June. Had I to raise them in hot-beds I would not sow them before the middle of April, and then in a fresh, brisk bed. We often make sad mistakes with hot-beds. A hot-bed that is fresh and brisk about the first of April is apt to be cold enough before the end of the month, and as egg plants cannot bear cold, it is far better to delay sowing till the middle of the month and then between manure heat and sun heat drive the plants without any check from first to last. Hot-beds in March are hard to manage; the weather is cold, often dull, and the beds need a deal of covering, and as we have to keep them close so long, the seedlings often drop off or come up spindling. Our main-crop plants usually give us fruit about the 10th of July, and about the 20th of the month are in pretty good bearing. We don't wait till the fruit is as big as a pumpkin before we use it. We begin cutting when the Long Purple is about the size of a Bartlett pear or the New York about as big as an Alexander apple. We like rich, loamy, well drained land, and a sheltered but sunny exposure. We plant in rows three feet apart and 2½ feet asunder in the row. We use barn-yard manure only. Last year the cold, wet May left the ground in poor condition for tropical plants till well into June, and the heat and drought of June had hardly established the plants when cold, wet weather set in in July, and although egg plants grew well after midsummer they did not fruit as early or as freely as they generally do. Egg plant seed is quite cheap, and I always have had as good success with bought seed as with what I have saved myself.

ALL ABOUT WILLOW CULTURE.

Several Subscribers.—Will somebody who has had long experience in the business tell us how to grow, cure and sell basket willows?

ANSWERED BY H. W. HORN.

The kind of land best adapted is such that it will retain moisture throughout the summer, but will not be too wet. Land that has surface water, such as springy ground, is not well adapted for a good growth of willows, as it is too cold. If, on the other hand, the soil gets very dry during the growing season such as some of our tamarack swamps here in Western New York, it isn't at all adapted for successful willow culture. Very good crops of willows are raised on what is called creek and river bottom land, but in nearly all such cases, the willows must be cut in the fall as the floods would do much damage. For culture, plow the land in the spring, (or, better still, in early fall,) and give it a thorough harrowing and roll if you can, then take a stout line the length of the land to be planted, and draw it tight, fasten a sharp stick to each end to hold it, and you are ready for planting. Have the cuttings about 10 inches long. They should be from two or three-year-old willows. Be careful to have the right side down; and stick them close to the line at least two-thirds of their length in the ground and about 10 inches apart in the row, the rows being two feet and nine inches apart. If the rows are further apart the willows will be very apt to grow crooked from the buts. Cultivate thoroughly the first and second seasons, to keep the weeds down. Thereafter the willows will do that. As regards the proper time for cutting, unless the willows are to be peeled in the sap, they should be cut in the fall as soon as all the leaves are down. They are then steamed, a process which is simple and easily learned—and peeled with a small hand-peeler and also by a machine. Regarding the latter, to my knowledge none has yet been invented that gives perfect satisfaction, as those now used are very apt to split the willows. Here is another point in favor of fall cutting: if a willow plantation is so located that the snow will be badly drifted in it much damage will be done; but this, of course, is not the case in the Southern States. To peel the willows in the sap, they are tied in bunches of about 40 pounds each. The lower band should be about six to eight inches from the buts. Set them in a shallow pond of water about two inches deep. For that purpose the buts must be quite even. Then as soon as each row of bundles is set in, with a knife cut the upper band off. The following point is a very important one the neglecting of which, years ago, caused myself and others serious losses. When the willows are put in the water, a pole or rail should be fastened between at least every third row of bundles to prevent high winds from blowing them over to one side; for if that once happens and you should not get near them for some time the consequence would be disastrous. The poles should be three to four feet above the water. As to peeling: just as soon as the buds are fairly open and the leaves show, then peeling begins. The willows are then dried by spreading them out in the open air bound in bundles of about 50 pounds. The binding is all done with green willows, and my mode of packing them so that they will stand much handling and arrive at their destination in good order is something that I can show better than I can describe. In regard to selling, there are markets for them in nearly all of the large cities east of the Mississippi river. I ship mine to Buffalo and New York City. At present the prices are so low that I have almost quit that business, and am now in the black raspberry line. Last summer I sold my sap-peeled willows for five cents per pound. My crop of last fall I steam-peeled and sold recently for four cents per pound. Green, they are worth here at present about $14.00 per ton, and it takes about 2½ tons or over of green to make one ton of peeled willows, a fact which is generally ignored by those who write on the subject of willow culture. The yield will be according to the quality of soil, and may be anywhere from three to six tons per acre. The first season's growth is good only for nurserymen's use. Cut back to the old stock and as close as possible every time.

REMEDIES FOR BLIGHT ON FRUIT TREES.

J. W. H., Cleveland, Ohio.—1. I read in some of the agricultural papers last fall, of a wash for pear trees, to be used for the prevention of blight, consisting of two ounces of carbolic acid, 10 pounds of sulphur, and one peck of lime. I went to an experienced druggist to get the sulphur and carbolic acid. He said more of the efficient constituent of sulphur was contained in roll sulphur, and that I ought to take that, and not the flour of sulphur, but I could not make that so fine that it would not clog the sprayer. He also said that I ought to take the refined carbolic acid; but that is much more expensive than the crude. It is strange that men who write or speak of such recipes do not speak more definitely. Should I use the flour of sulphur and the crude carbolic acid? 2. I lost a number of pear trees last year; was the disease blight? When I first discovered it blood-like watery drops were running down the limbs, and on cutting into the bark I discovered that the inner bark had many small reddish streaks through it. On some of the trees the leaves died and the limbs shriveled, but at the same time, several feet down the limbs where there was no external appearance of anything being wrong, I found these reddish streaks in the bark, and the inner layer of the bark next the wood had a reddish tinge and in some cases while the top was beginning to be affected I would find the bark partly down the tree not affected, or but little, while down the trunk of the tree the bark was already dead or nearly so.

ANS.—1. The druggist may be correct in

stating that roll sulphur (brimstone) contains a larger percentage of the needful elements for the purpose intended, but, on account of the difficulty of pulverization of the roll and because the flour is in condition for immediate use, flour of sulphur, (more commonly called "flowers of sulphur,") is universally employed for such purposes. We are not prepared to say that refined carbolic acid would or would not be more effective for the purpose intended; the fact is, however, that the crude acid is always used and recommended by careful experimenters for this purpose. 2. The description of the disease of the pear trees is scarcely full enough to warrant a definite conclusion respecting its cause; although it seems to be, probably, a serious case of blight. The date of its occurrence is important, since blight only attacks the pear during rapid growth, and in warm weather. The injury always extends considerably below the outward indications of the disease, which may account for the discoloration of the inner bark and the wood as described.

SUB-EARTH VENTILATION.

O. S. H., West Deer Park, N. Y.—In the R. N.-Y. March 2, report of the Western New York Horticultural Society mention is made of "a system of sub-earth ventilation by which the temperature in a hill-side cellar or storage room may be kept uniformly at 45 degrees. What is the method of getting the ventilation and cooling the air. Is it by passing the air through a covered ditch or pipe? If so, how large, how long and how deep must it be buried to cool 500 cubic feet of air; or in what other way is it done?

ANS.—The cold-storage system was described by Mr. E. A. Bronson of Ontario county, N. Y. The house is on a brow of a hill, but almost all on the surface. The bottom is cemented; the roof and walls are double with six inches of sawdust in the interspace. Air is admitted only by means of tiles put together with water-lime in the bottom of a ditch 100 feet long covered to the surface. This gives all the ventilation. Prof. Cook (Michigan Agricultural College) uses such a structure for bees; he writes us as follows concerning it. "I have used sub-earth ventilation for bees for several years. My room or cellar is wholly under ground, and well protected against the outside temperature. The floor above is double, with a foot of dead-air space. The chimney runs from the bottom of the cellar to the top of a two story building, which stands on an exposed hill. Of course, a fire in the rooms above heats the chimney and tends to draw the air from the cellar. The wind passing over the chimney I find does the same thing. Thus on windy days I find there is a strong current of air from the cellar into the opening at the bottom of the chimney. The sub-earth pipe from my cellar runs from five to eight feet under ground, for a distance of about eight rods when it opens to the surface. This pipe is of glazed tile four inches in diameter. Then a three-inch tile runs as much further. If I desire, I can stop the opening at the end of the four-inch tile, and thus have the air come from the longer distance. I have known such ventilation to keep the temperature of a bee cellar in our coldest winters from 40 degrees F. to 50 degrees F. from November 1st to April 15th. Yet there were from 20 to 80 colonies of bees in the cellar. I doubt if such ventilation will suffice to keep a room cool enough in warm weather to preserve fruit. It might, however, aid in doing this. I think that it will, if properly arranged, keep a bee cellar from 38 degrees F. to 48 degrees F. from October to April. And this may be made to preserve the proper temperature to keep our bees quiet during the trying times in our severe Northern winters."

CROPS FOR SEEDING TO GRASS IN WIRE-WORM INFESTED CLAY LAND.

E. S., Allegany, N. Y.—A 20-acre lot of clay ground which had been in grass for five years, was broken last fall. I want to put in a crop and seed it again. I cannot sow oats as the wire-worms would destroy them. Would it be well to sow barley—a new crop with me?

ANS.—Our friend's knowledge of the fact that his land was infested with wire-worms, should have deterred him from plowing his land in the fall, with the intention of planting it to any grain crop the following spring. It would have been better in such a case to have deferred plowing as late in the spring as would have given barely time for a seasonable planting of the crop; the conditions then would have been such that the green rootlets of the inverted turf would have afforded food for the troublesome pests, while the young grain plants were entering upon their first stage of growth comparatively unmolested; whereas, owing to their decomposed condition—the result of plowing in the fall—the voracious little pests will "go for" the more expensive diet with increased avidity. To grow barley successfully, it is essential that the ground be rich in the elements of plant food; warm and dry naturally, or made so by artificial drainage, so that the seed may be sown as early in the season as possible, conditions, it is feared, our friend's 20-acre field does not possess, on account of its tenacious clay soil, and impoverished condition after being devoted five successive years to hay production. It is not therefore deemed advisable to sow it to barley. Perhaps no crop is less likely to be injured by the wire-worm than the bean, and it is often grown with a good degree of success where the pests prevail, and if other conditions favor in the locality, would it not be well to plant a portion of the field to this crop? And as the quality of the soil seems better adapted to the production of oats than to the crop in question, it is also probable that if the remainder of the field were sown to this grain, as early in the season as practicable, fertilized with 150 or 200 pounds of standard superphosphate per acre, the results would be attended with some degree of profit.

ALKALI SALTS FOR FERTILIZING.

F. B. T., Wallula, Washington.—Is alkali of the same nature as ashes? Has it any fertilizing value? What is the best way to use it where manure is scarce?

ANSWERED BY PROFESSOR E. W. HILGARD.

The mixture of salts designated as "alkali" in the regions of deficient rainfall is quite variable in its composition, but has most commonly as its chief ingredients, common salt or sodium chloride, Glauber's salt or sodium sulphate, and more or less carbonate of soda. When the latter is largely present the alkali is popularly designated as "black," because of the dark tint of the water standing in mud puddles and the black rings left therein after evaporation; it is highly injurious to vegetation and to the tilling qualities of the soils afflicted with it. None of the three substances mentioned above can properly be accounted a fertilizer, although salt is used to some extent in certain cases. But we frequently find as subordinate ingredients of "alkali," salts of potash, also phosphates and nitrates, which are the very essence of fertility and which we pay for in commercial fertilizers. In such cases the use of the alkali salts would be a benefit in any region of abundant rains, where the sodium salts would be again washed out of the soil. But in the Palouse country and in Eastern Washington generally, alkali salts are usually as abundant in the natural soil as they can be without injury, and in a great many cases, especially in heavy soils, their removal is the first condition of profitable culture. On general principles then, and without knowing the exact character of the alkali to which the Wallula correspondent alludes, I should not advise him to expend any money in putting these salts on his lands, if they are at all heavy in character. If of the light silty kind, prevalent on the plateau lands of the Walla Walla, Palouse and Snake rivers, a small-scale experiment would be well worth trying. The Washington State Experiment station should furnish him with information on the composition of the particular alkali in which he is interested.

NERVOUS DISORDER AND NORMAL PULSE AND TEMPERATURE OF A HORSE.

T. F. B., Wolf's Store, Pa.—Four weeks ago I drove my 11-year-old horse about five miles; but he wasn't warm. While driving I noticed that he jerked his head up a few times, and in the stable he did the same, as if something had bitten him on the nose. Two days later I drove him 15 rods and he began to do it again. After being driven 100 rods, he jerked his head again so much that I had to stop him on the road, unhitch and lead him home. When eating moistened hay waste or drinking or running loose he jerks his head towards the right shoulder; when he is resting I can notice nothing except that his ears droop more than usual. His pulse is 35 and is sometimes irregular. 2. What are the regular pulse and temperature of a horse? 3. What is the best way to remove proud flesh from a wound?

ANS.—1. The symptoms indicate some slight nervous disorder which may or may not be due to heart disease. Try the following treatment:—For twelve hours feed bran mashes only; then give in a ball or as a drench in one pint of water, six drams of the best aloes. Continue the mash diet until the animal has been freely purged. If the bowels are not moved by the aloes in 36 hours repeat the dose. Morning and evening as a powder on the feed give two drams of potassium bromide. A laxative diet should be continued for some time—as roots or mashes until you can give an occasional run on grass. 2. The normal pulse of the horse when at rest is about 40; but it may vary from 35 to 50. When exercised it may be considerably higher. The normal temperature is 99 degrees to 100 degrees. 3. A stick of nitrate of silver is one of the safest and best caustics for this purpose.

CORN FOR SOILING.

Several Subscribers.—Will some of the RURAL'S dairymen readers tell us what crops they sow to supply their cows with green food, during the summer, while the pastures are dry and useless?

ANSWERED BY W. B. PRATT, STEUBEN COUNTY, N. Y.

I sow sweet corn if I have it, otherwise the common yellow field corn, in three feet apart drill marks, at a rate not exceeding a half bushel per acre, on strong, well manured land, in close proximity to a field to which the cows will have access during the dry season. Usually I sow twice—once quite early even before planting field corn, and again two or three weeks later. The cultivator is freely used during the season of growth and some hand weeding and hoeing are done if the land is foul. I sow so much ground that if drought sets in early I feel free to draw on the crop before it reaches its best. If, on the contrary, pasture keeps reasonably fresh and abundant, and there is likely to be an excess of the fodder corn, the second sowing is resorted to as soon as it has reached fair maturity, and the unfed part of the earlier crop is cut and cured for winter forage while the weather is yet warm and dry. A liberal feed is dealt out to the cows each morning after milking, by throwing it over a separating fence immediately adjoining, or from a single horse wagon loaded up the preceding evening if found convenient. Light seeding, rich land and thorough cultivation give greatest bulk and weight, and the best feeding results are gained after the glazing stage is reached. With the occurrence of severe autumnal frosts a full feeding of pumpkins each morning is esteemed of much value.

INSECTICIDES.

W. P. C., Smyrna, Del.—1. How much Bordeaux Mixture would be necessary for spraying an acre of grape-vines? 2. How much Paris-green solution would be needed for spraying, for slugs, an acre of pear trees, and how strong should it be? Would either the mixture or solution be injurious to the fruits to which they are respectively applied?

ANSWERED BY PROF. A. J. COOK.

Two or three pounds of the mixture should be used to one barrel—31 gallons—of water, and this will spray one or two acres of vines. For spraying apples, pears, plums, etc., it is best to use one pound of London-purple to 200 gallons of water; then the work can be made very thorough with no injury to the foliage. A good strong force pump, and thorough work are required to save all the fruit. With a tree covered with leaves it stands to reason that some care is required to reach each and every apple or pear. If we estimate two gallons of the liquid to each tree, one pound of the poison will suffice for 100 trees. With a hand pump like the Whitman or Lewis, I have treated a large tree very thoroughly with two gallons of liquid. It might take a litile more with a large force-pump like the Field. The fruit is not injured by its use at the proper time—just after the blossoms fall.

RANCID BUTTER.

S. C. J., Belle Plaine, Kansas.—Can you give me a recipe for restoring rancid butter? I intend going into the produce business soon and want some process of working our butter, as all butter is so poorly made here that I can find no market for it. I know there must be some process as a party in another section is making a regular business of doing it.

ANSWERED BY T. D. CURTIS.

Within the last 15 years, several persons have announced methods for removing the rancidity from stale butter. The first I think, was Mr. H. O. Freeman, of Sherburne, N. Y., who had a process for purifying stale butter by mixing it with skimmed milk in the place of the original butter fat. Before he died, he acknowledged to me personally that the process was a failure. The flavor was lacking, and the oil did not mix well. Others have since tried the same or a similar process, but have met with but indifferent success, at the best. Emulsifiers have been invented for mixing this kind of grease and others with milk for cheese-making, with not altogether satisfactory results, but I have neither seen nor heard of any successful method of restoring rancid butter so as to make it fit for table use. The chemist can neutralize the rancidity, but the flavor of the butter is gone, and only an unpalatable grease remains. So far as my knowledge extends, those who dabble in this kind of business sooner or later "get left." There is no satisfactory process for restoring rancid butter any more than there is for rejuvenating old men. But there are many humbugs and devices afloat for turning a dishonest penny.

GROWING LUCERNE, ETC.

T. C. K., Huntingdon, Pa.—I have about seven acres of two year's mowing ground on which there is about half enough Red clover and Timothy; would it be advisable to sow Lucerne and harrow lightly—how much seed would be needed?

ANS.—Lucerne cannot be grown in the way suggested. It requires the most careful culture and the cleanest land. Its early growth is slow and it is easily overpowered by weeds. On this account its growth in drills with clean cultivation until it occupies the ground is frequently advocated and is certainly desirable under all circumstances. Moreover, Lucerne does not thrive in Pennsylvania as well as clover does, being more suitable to a hot, dry climate and rich soil. A common method in your locality under the circumstances, is to plow under such a sod on which the clover will disappear next year, being now run out, then take a crop of corn, following it with oats the next year, and reseed with Timothy and clover with the oats. But to do this effectively the land should be manured for the sake of the clover and grass.

Miscellaneous.

J. C. D., Old Church, Va.—You can obtain the bee hive from A. I. Root, Medina, Ohio.

E. H. V., Paris, Ontario, Canada.—The following books will serve your purpose. "Agriculture" by F. H. Storer published by Charles Scribner's Sons, New York; Farmer's Veterinary Adviser, Professor James Law, Ithaca, N. Y.; Shepherd's Manual, by Henry Stewart, and Stock Breeding by Professor Manly Miles, furnished by the Orange Judd Co., New York.

Subscriber, Elva, Va.—A has a cow; B takes her to board and care for; feeds her bran or meal twice a day, returns to A the milk at each milking; what ought B's remuneration to be?

ANS.—We would not do this for less than the regular retail price of the milk so delivered.

R. A. K., Greenfield, Ind.—1. Are the onion maggot and the cabbage maggot the same? 2. If not, what will prevent damage from the onion maggot?

ANS.—1. No. 2. The only practical remedy we know of was given on page 333 of the last volume of the RURAL. Coop a hen and chickens on each acre of the field immediately after the young plants appear.

F. S., Berrien Springs, Mich.—Which are the five most profitable pears for this section of Southwestern Michigan? Soil a sandy loam well drained.

ANS.—Assuming that only autumn varieties are to be planted, select Sterling for the beginning of September, Clapp's Favorite for the middle of the month, and Bartlett for the middle to the end; Howell for October, and Anjou for November. For any and all varieties of pears the soil should contain at least some admixture of clay; although most varieties are fairly successful on lighter soils if kept well manured.

M. J. L., Lowell, Mass.—1. Last summer I collected decayed peaches from the dealers and saved the pits. Now I am told by some that I should have pits from natural or wild fruit; will the latter produce more hardy trees? If so, where can I get them? 2. What is the best length for currant cuttings to give the best results; also how deep should they be set in the ground?

ANS.—We should prefer the natural fruit for seed because the seedlings would be less liable to inherit the weaknesses or diseases of their parents and would therefore serve better as stocks. Inquire of J. H. Hale, South Glastonbury, Conn., as to where the pits can be obtained. 2. We use cuttings about six inches long. Whether this is the most advantageous length or not we cannot say. We set them in the ground as deep as the cutting, allowing only the top eye to peep out.

B., Floral Green, Ohio.—1. Why won't geraniums grow under the shade of a tree planted in the ground, when they *will* grow on a veranda, or a shaded place if planted in pots? 2. Is it better to plant geraniums in the open ground, in the bed, or to set them in the bed in pots? 3. Would a general collection of plants keep in a cellar where they would have plenty of light, but very little sunshine, with a low temperature most of the time? 4. My canary bird is about a year old. He is healthy, sings very well, but he will bite on the wires of his cage, hold his beak on the wires and pull like a wind-sucking horse.

I feed him mixed canary seed, apples and bread. What should be done for him?

ANS.—1. The roots of the trees ramify in every direction and appropriate most of the soil's moisture. 2. It is better to plant the geraniums in the soil of the beds. 3. Many of the hardier plants would keep well under such conditions, such, for instance, as pelargoniums, (geraniums), tender roses, aloes, rubber plant, oleander, etc, etc. 4. We should feed the bird for at least a month canary seed *alone*.

DISCUSSION.

A GENUINE LABOR-SAVING IMPLEMENT.

S. B. H, CRAWFORDSVILLE, IND.—In the Harrow Special one of the questions was, "What harrow would be preferred if the farmer was confined to the use of one harrow?" It was a new and unsupposable question to me. To confine oneself to one harrow on the farm in this day of advanced agriculture seems as unprogressive as it would be to persist in using the wooden toothed harrow of 50 years ago made out of a wooden crotch. Since the Harrow Special was published I have added Clark's Cutaway to my stock of harrows with a seeder attachment, and have sowed my oats with it. From the method of preparing the ground and sowing oats 30 years ago to the present mode the advance is almost as great as from the cradle to the self-binder in harvesting wheat. I have helped to cut the corn-stalks with a hoe, then rake them together with a hand-rake, or a rudely constructed horse-rake, and burn them. To-day we are sowing in corn-stalks, just as the cattle have left the field and are doing the work well. If a sulky plow should be put in the field, that would turn over a furrow about three feet wide with a seeder and harrow attachment, by which the plowing, seeding, and covering would be done at the same time, it would not do more in sowing oats than the Cutaway harrow is doing today with less power than is required now to turn a 16-inch furrow with the average sulky plow with three horses. While the individual farmer is greatly benefitted by such labor saving implements, the nation collectively has a still greater interest in them. During the past dozen years agriculture has been greatly depressed in England, because the British farmer could not compete with the more cheaply grown grain of the American farmer, and the latter is now closely pursued by the ryot of India, and the farmers of South America and Australia. While we have cheap lands and a vast extent of them, Australia and South America and other parts of the world have lands just as cheap, and still greater in extent, and our geographical protection as against those distant countries, in the markets of Europe, is very small. It does not amount to 10 cents on the wool of a sheep, or to two dollars on the wheat of one acre of land. To have to sell our agricultural products at a small advance on the cost of producing them has its inconveniences; but it is not such a calamity to the nation as to be driven from the markets of the world, because other nations can undersell us. We have been able to hold our own against the seven-cents-a-day labor of India on account of labor-saving machinery, and our skill and aptitude in using it. It is with this larger view of promoting the general welfare that we should welcome the advent of any and every labor-saving implement.

DEFENCE OF WYANDOTTES,

G. W. F., DUNLAP, MO.—The RURAL has done some very good work in the poultry interest. It has given some very good hints on breeds and given some hard blows to a few which were advertised as wonderful new varieties. I remember a year or two ago, the remarks about as follows; "The RURAL now reluctantly gives up the Wyandotte, after a thorough test, to try other breeds. Their one fault, if fault it may be, is that their eggs are rather small for the size of the fowl." I was breeding the Wyandotte at that time and like them even better now. I find that they lay eggs as large as those of the Langshan, but not so large as those of a Brahma or Cochin; but what they lack in size is made up in number. On a free range the Leghorns may excel in the number of eggs; but in a close run, I have never seen any bird that could beat the Wyandottes. They have only to be seen to be appreciated. They are medium in size, fine in form and plumage, good table fowls, having yellow legs and skin, and they are easily reared, docile, fine mothers and sitters and are as near to being all-the-year-round layers as can be found. They are becoming great favorites wherever known, making broilers as early as any other variety. They are destined to fill the long felt want on the farm for a general-purpose fowl. They have low, compact rose combs which never freeze. A hen with a frozen comb does not lay till the comb gets well, which takes a long time in winter. Score the Wyandotte two points ahead.

KILLING MILDEW.

J. N. L., HAW PATCH, IND.—Here is my way of killing mildew and aphidæ, and my wife and I think we know something about roses as we have over 200 hardy ones. We keep mildew down and kill it with soap-suds. I use the soapy water after the girl has washed the clothes, and at other times one tablespoonful of soft soap to four gallons of water. Mildew is not bad with me; I never have any on grapes or gooseberries. I have used it two years on roses and so far I have not had a failure except upon two—Her Majesty and Puritan. I think they are the only really worthless roses that I have ever seen. I have had them both since their introduction and therefore know that they are failures. Of the emulsion I use to kill lice, one needs only a small quantity. It is more easily and quickly made than any other, and I imagine it hurts the foliage less. I know that it will kill the pests on roses, cabbages, plums, and cattle: Take eight eggs (whites and yelks) beaten thoroughly, then add a small pint of kerosene. Stir with a stick for a minute (or less) or until the stuff is well mixed; then add four gallons of water. Pump with a force-pump for a moment and it is ready to use. I am more interested in the RURAL'S rose experiments than in all the others and am hoping that it will make a success of the business, and when any of the new roses are put upon the market I shall be glad to buy them.

TOMATOES.

G. H. S.—In about twelve years' experience in growing tomatoes I have noticed several conditions in the growth of the fruit, which may suggest to the RURAL editor the cause of his yellow tomatoes from artificial fertilizer. Not understanding chemistry, I am unable to offer any opinion, so I merely record facts. On poor sandy soil with complete fertilizer, having South Carolina rock as a base, the fruit was similar to that grown by the RURAL. On the same kind of soil, with a small amount of farm pen-manure in the hill, the plants stood upright, produced continuously until frost medium-sized fruit of good color and very little acidity. In loam with, say, a peck of rotted manure per hill the plants fell over, but bore heavily, the fruit gradually diminishing in size till frost. Color good, quality ditto, both gradually deteriorating as the season passed. In heavy loam, heavily manured with poultry droppings, the plants were very luxuriant, the fruit set all at one time, and was gone in a short time. Color good, quality acid. I might say that lack of vegetable matter in the soil causes yellowish-red tomatoes, but I do not know.

LIKES GOOD CATTLE PICTURES.

W. P. W., MONROE, WIS.—The RURAL has a right to call particular attention to the fine animal pictures which grace the issue of March 23d—as well as the information given in the accompanying article. Indeed the RURAL'S pictures of animals have nearly always been very much better than any I have seen in similar publications. Some reproductions from English periodicals, however, were too fine. Such animals as some of them represented probably never existed. I inclose a sample.

R. N.-Y. We should say that the artist who drew the picture inclosed in this letter took for his model a block used in a "Noah's Ark" collection]

S. E. H., GREELEY, COL.—Several acres of bottom land were overflowed by seepage water; as a consequence the kind of flag known as cat-tail occupied the land. After opening ditches to drain it, a portion of it was surrounded by a barbed-wire fence made to hold in swine. This fence was three feet high and had five wires. Into this inclosure the swine were turned during the summer. They uprooted the flags and ate the roots as readily as they would potatoes. They nearly cleaned the cat-tails off that ground. I fed them only about half rations while the roots lasted. They did not fatten but kept in a fair condition, being breeders.

What Others Say.

"THE CONCENTRATED FEED FOR HORSES, CATTLE, SHEEP, SWINE, POULTRY, ETC."—Manufactured at Pearl Mills. For sale by the Concentrated Feed Co., 33 Wendell St., Boston, Mass.

"There has been nothing invented for years," says the manufacturer's circular, "which has proved such a blessing to all classes of domestic animals as the above feed."

The directions which accompany this feed, show that it is offered as a medicinal or condimental food. Thus we read, "For an ordinary working or driving horse feed one single handful of the feed with one-fourth less his usual allowance of grain at each feed, wet or dry. For worms, twice the quantity for five days." For cows, "feed one half-pint or single handful of the feed with the usual amount of grain, wet or dry. For garget, feed twice the quantity until it entirely disappears." Still more startling is the announcement, "this disease," hog cholera, "in its most malignant form yields readily to the free use of the Concentrated Feed." Following the claims of the seller and the directions for use are the usual number of testimonials from those who have used the feed with satisfaction. This material, or a similar one under the same name, has been sold more or less in the State since 1882, and in the report for 1884, page 111, its merits were fully discussed. During the present year a sample was received from W. H. Hammond, Hampton, Conn., who says in regard to it: "The cost price is six cents per pound and it is in 12-pound bags to be sold for $1.00 or eight cents per pound." "The above price" (six cents per pound), "is as given me at ton lots, or three tons for $300." "I have tried it and think it not up to the mark as advertised in their circular." The sample sent by Mr. Hammond was analyzed and reported to him and was also published in the weekly statement No. 41, of September 15. The analysis made by the Connecticut Agricultural Experiment Station, from which we are quoting, is as follows:

	Concentrated Feed.	Wheat bran.
Water	11.39	12.38
Salt	13.20	....
Other mineral matter	4.11	5.59
Albuminoids	14.87	15.36
Fiber	4.48	9.34
Nitrogen-free extract	47.42	53.50
Fat	4.42	3.83
	100.00	100.00

This "invention" which has proved "a blessing to all classes of domestic animals," apparently consists of a mixture of wheat and corn with 13 per cent. of salt and perhaps a little of some more concentrated feed. Disregarding the salt, an equal weight of wheat-bran would supply as much nutriment and would cost perhaps $20.50 per ton. The "invention" costs $100 per ton in three-ton lots, or at the rate of $160 per ton in small quantities.

THE CONCENTRATED EGG-PRODUCER.—made by the Concentrated Feed Co., No. 14 Wendell St., Boston, Mass. A sample of this material furnished by Mr. Hammond, of Elliot, had the following composition:

Water	10.15
Salt	17.20
Other mineral matters	6.40
Albuminoids	14.19
Fiber	3.37
Nitrogen-free extract	44.94
Fat	3.75
	100.00

The mineral matter contains a quite insoluble oxide of iron. The Egg-Producer has a somewhat lower feeding value probably than the Concentrated Food for Cattle. It contains both corn and wheat and some more concentrated feed. Wheat-bran contains, pound for pound, as much nutriment. The cost of the Concentrated Egg-Producer is 50 cents a pound or a dozen pounds for $4.00. This latter price is equivalent to $660 per ton.

As food, neither the Concentrated Feed for Cattle nor the Egg-Producer is worth more than a small fraction (about one-fifth in the case of the Feed for Cattle and one-thirtieth in the case of the Egg-Producer) of what it costs. As condiments they are worthless. It has been abundantly proved that condimental foods have no advantage over others by reason of the condiments in them.

As medicines, they may well be distrusted in view of the absurd claims made by the seller.

Our respected London contemporary, Bell's Messenger, of late date, has the following:

CANADIAN PHOSPHATES.—We may claim some credit for being the first to point out that the ominous cry of the manure manufacturers as to the future supply of phosphates for manure ought to be met by the development, by British capital, of the rich phosphate lands which exist in the valleys which run down to the Ottawa river, in Quebec. Our views have received very emphatic confirmation in three publications which have reached this country during the past week. Our able contemporary, the RURAL NEW-YORKER, in the number which reached this country on Tuesday morning, had a cartoon which is applicable to farming in any part of the world. A rough, unkempt fellow, who is labeled "Bad Farming," is engaged in the brutal pastime of murdering a beautiful female—"Mother Earth." Three stalwart young fellows with clubs are depicted as coming to the rescue of the beautiful damsel, and their clubs are respectively labeled "Phosphoric Acid," "Potash," and "Nitrogen." It is a picture that embodies a great truth, it may be in slight caricature, but still, the truth.

It is evident that the Americans are at last waking up to the fact that their farming is wasteful, exhaustive to the soil, and very much after the style of killing the goose that lays the golden egg. With this awakening will come a demand for those plant foods to which we have drawn attention, which will very seriously affect the supplies to the manure manufacturers of this country. It is well that we should realize this and take steps to see that all available supplies are controlled by British capital for the benefit of the agriculture of our own empire. The Geological Survey of the United States has just issued a report on the nature and origin of deposits of phosphate of lime, which shows clearly that the leading men of that country are alive to the question, and know that the future supplies of that country must be largely drawn from the apatite beds in Canada. These—although at present but little developed—are described as the richest and best phosphatic resources in the world. The South Carolina phosphatic rock is placed second, but the story of the difficulty of mining is told in a manner that is unmistakable. Owing to the exhaustion of the guano deposits in South America, the future supply of phosphates is a matter of doubt. We must have them if British agriculture is to be maintained in its present perfection. To make any show at all in her agriculture, the United States also must soon be a big user of these manures. Our nearest colony is our present hope, and we trust that her lands will be developed for the benefit of British agriculture and not for that of the United States—a country which is so keen a competitor with our own agriculturists.

But it is well to know that the highest scientific authorities in the United States place the Canadian phosphate desposits in the place of honor as the richest and best in the world.

BOILED DOWN AND SEASONED.

MR. ANDREW BURNETT, of Wellesley, Mass., as recorded by the New England Farmer, is a believer in hornless cattle. The head of his herd is a bull, half Holstein and half Jamestown (polled) all of whose calves are hornless. The bull has horns which were loose and movable up to six months ago, when they hardened and became fixed.....

ONE of Mr. Burnett's curiosities is a cow which is one-quarter deer and three-quarters Jersey. Her mother was a cross between a Jersey cow and a buck deer. She is a very large milker, with remarkably gentle disposition, but very timid and easily disturbed at the presence of strangers.....

MR. BURNETT thinks that he can keep silage even 10 years in his silos, and that by having enough to keep over he may help out a dry season or be able to average an extremely productive season with one that is less so.....

MR. C. S. COOPER thinks well of the Patagonians. He is an experienced poultry raiser. His eggs were received from the same source as were the RURAL'S eggs. These, as our readers know, gave us a grand mixture.....

THE R. N.-Y.'s Red-caps lay a fair-sized egg the shell of which is of a chalky whiteness. We don't become reconciled to their top-heaviness .....

PROF. BEAL says that a large spoon heaping full of pure Paris-green to 40 gallons of water is enough for use on apple trees. He reminds Farm Journal readers that unless applied at the right time, no good can follow.

APPLE POMACE, says Dr. Johnson, of the Conn. A. E. S., is prized by those who have it as a food for cattle and horses. A sample analyzed which was free from straw and consisted wholly of the apple "cheese" from the cider press, contained about as much albuminoids, 10 per cent. more carbohydrates and four times as much fat (ether extract) as green fodder maize. It had a faint vinous smell and contained about a quarter of one per cent. of free acetic acid. Ensilaged like maize fodder, it would be a valuable winter feed .....

THE Connecticut Report above alluded to says that repeated trials have shown that old corn of the best quality weighs from 58 to 59 pounds per struck bushel, while a bushel of the best new corn weighs only 50 to 52 pounds. The valuation of the new corn is about $1.45 per ton less than that of old corn, which represents a difference of four cents per bushel; and this seems to be about the difference made in dealers' quotations.....

PETER HENDERSON, in alluding to the fine effect that the past mild, bright winter has had in strengthening hot-house plants, in preventing mildew and damping off, says, in the American Florist, that the nearer we can get the roof of a green house to an unbroken sheet of glass the better; that the glass should be kept clear from snow, dust, or anything that will obstruct light, and that the roof should be placed—if the crop of fruit, flowers or vegetables is to be forced in winter—so that it will get the greatest amount of the sun's rays .....

THE question as to the best time to prune fruit trees was discussed at length at the meeting of the Iowa State Horticultural Society two years ago, and a resolution was passed by unanimous vote favoring the idea that the best time to prune fruits is when the leaves are about two-thirds grown in spring. So says Prof. J. L. Budd, in our esteemed contemporary the Farmers' Review. Members seemed to unite in the opinion that the wounds made at this time would heal rapidly and perfectly, and that the vitality of the tree is lowered less than at any other time. But the pruning in orchard and nursery cannot all be done in one day, so in a general way we can say, prune lightly at any one time from the time when the leaves have attained nearly full size to the completion of the first extension of growth in early June.....

HUNGARIAN BROOME-GRASS—Bromus inermis. This is one of the most promising new grasses in the garden of the Connecticut Agricultural Experiment Station. It produces an abundance of tender foliage, spreads quite rapidly by stolons, comes up quickly after cutting and, last winter, was perfectly hardy. It is said to grow on very dry soil. Hard frosts do not kill the foliage.....

A MARSH grass, Phalaris arundinacea, or Reed Canary Grass, has grown very vigorously. The Striped Grass of gardens is only a variety of this. On low, swampy land this may be a very valuable grass. It is rather coarse, but is relished by cattle, comes quickly after cutting and is not killed down by frost. It is easily propagated from the stout under-ground stems. On cultivated land it might become a pest.....

THE tendency of the times is toward the cheapening of everything consumed by mankind, says Dr. Hoskins, in the Vermont Watchman. The farmers cannot escape this tendency. They demand cheapness in what they buy, and those who buy of them naturally make the same demand. It is inevitable. It behooves every man to understand this truth. Only by understanding it can we prosper. Our safety is in learning how to produce everything from the farm as cheaply as possible. We must not expect, either, that all we save by these methods we can always keep. Those who "catch on" early will make money; but in the long run the public will get the benefit of all improvements. Yet we have to go on improving, or be crushed.....

GREAT Gracious, Mr. Harris! one ton of fertilizer to the acre for asparagus and, then, the next season, 700 pounds of nitrate of soda? He might just as well have recommended 700 pounds of the nitrate *every* spring, for the reason that little of it would be left from year to year.....

MR HARRIS, wisely as we think, advises, in the American Agriculturist, that the plants be not set closer than three feet by 10 inches.....

DR. THURBER having tried many of Rogers's hybrids, concludes after his years of experience that Goethe is the only one that with him still holds out of value. It is strange how two experimenters, having no other motive than that of serving the public, may arrive at opposite conclusions. The Goethe at the Rural Grounds (seven miles from Dr. Thurber's) is, in three seasons out of four, of no value at all. The bunches are loose, the berry tart and late in ripening.

ECKFORD'S new sweet peas are probably the finest strains of this interesting flower. The flowers are nearly twice as large as those of any of the old kinds, while the combination of colors and the beautiful markings render them of the first value as cut flowers.....

"BRILLIANT" is advertised as the first really fine red pansy.....

President W. H. Bowker says, in the New England Homestead, that "corn is a great surface feeder and *for that reason* the fertilizer should not be plowed in deep but *applied near the surface.* Professor C. V. Mapes, in the American Agriculturist, says that "if the fertilizer is kept *too near the surface*, notably with corn, the roots will be developed near the surface, and their presence there will prevent surface cultivation, so necessary during a dry season, without damage by cutting the roots. High-grade, complete fertilizers, as a rule, should be well broadcasted and harrowed in, after plowing, and worked in *to the depth of five or six inches*, so that the root development of the crop will extend from each plant as far as possible in every direction".....

THE R. N.-Y. would say, if it might venture to speak in such distinguished company, that if the fertilizer is harrowed in two or three inches, the early and usually abundant rains of spring would hardly fail to carry the soluble constituents down where they would best feed the plants, and that by the time the roots take possession of the land, the fertilizer would have very little effect to induce a growth dangerously near the surface.

YOU can buy one dozen mixed gladioli corms for 40 cents .....

TRY the new double white Phlox Drummondii.....

ABSTRACTS.

——AMERICAN FLORIST: "Some little Bantam fowls had the run of the rose houses. 'Capital things they are too. They don't do any harm, but they do a great deal of good in picking up grubs and other vermin.' So says Mr. Thorpe."

——"SIEBRECHT says 'of all orchids, either for private or commercial purposes give me first, cattleyas; second, phalænopsis; third, odontoglossums.'"

——NEW YORK HERALD: "'Curious,' said she, musingly, 'that agricultural editors are generally such young men. The Ag. Ed. ought to be Ag-ed, you know.'"

——IF you would get the cream of the R. N.-Y., don't skim it.

——VERMONT STATE JOURNAL: "What we need most is not larger farms, but larger farmers. Has any man a right to more land than he knows how to farm to profit? Has he a right to misuse and depreciate that by which the nation must live?"

——WESTERN RURAL AND STOCKMAN: "Congressmen want more money. They say that their salaries are not sufficient to enable them to live in Washington. Gentlemen, the most of you get a good deal more than you are worth already. Some of you get just five thousand dollars more than you are worth."

——NEW ENGLAND FARMER: "If you would dry your soil, stir deep and often; but if you would retain its moisture, stir only the surface."

For Nervous Debility

Use Horsford's Acid Phosphate.

Dr. H. T. TURNER, Kasson, Minn., says: "I have found it very beneficial in nervous debility, from any cause, and for indigestion." —*Adv.*

Miscellaneous Advertising.

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We do not claim that Hood's Sarsaparilla is the only medicine deserving public confidence, but we believe that to purify the blood, to restore and renovate the whole system, it is absolutely unequalled. The influence of the blood upon the health cannot be over-estimated. If it becomes contaminated, the train of consequences by which the health is undermined is immeasurable. Loss of Appetite, Low Spirits, Headache, Dyspepsia, Debility, Nervousness and other "little (?) ailments" are the premonitions of more serious and often fatal results. Try

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Sold by all druggists. $1; six for $5. Made only by C. I. HOOD & CO., Lowell, Mass.

100 Doses One Dollar

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SHERIDAN'S CONDITION POWDER is absolutely pure and highly concentrated. It is strictly a medicine to be given with food. Nothing on earth will make hens lay like it. It cures chicken cholera and all diseases of hens. Illustrated book by mail free. Sold everywhere, or sent by mail for 25 cts. in stamps. 2½-lb. tin cans, $1; by mail, $1.20. Six cans by express, prepaid, for $5. I. S. Johnson & Co., P. O. Box 2118, Boston, Mass.

$20 FENCE MACHINE FOR $10

Freight paid. *Guaranteed.* Hundreds in use. Circulars free. S. H. Garrett, Mansfield, O.

PARALLEL LINES.

EVERY student knows that in close reasoning parallel lines of thought are laid down and deductions educed.

It is not our purpose at this time to enter into a learned discussion, and we have drawn the above visible lines simply to bring them prominently before your eye and to ask what they represent to you.

A railroad man to whom we showed them said: "To me those four lines represent a double-track railway."

A doctor replied to the same interrogatory: "The lines are to me the large arteries and veins lying alongside each other in the human body."

As will be observed the same lines to either gentleman suggested different lines of thought, as both looked at them through eyes accustomed to see only that which for the most part occupied their attention. To the writer both answers put an old truth in a fresh and original light.

As every intelligent man or woman knows, the blood of every living person flows with almost railroad speed through the arteries, forced by that wonderful engine, the heart. From the arteries it is side-tracked through the capiliaries and veins, and every drop of blood goes through the kidneys for purification no less than 2,500 times every twenty-four hours. If the kidneys be diseased the impurities of the blood containing the worn-out tissues, and deleterious acids are not drawn out or excreted as nature intended, but continually pass and repass through every fiber of the system, carrying death and decay with every pulsation. Unless remedied the heart becomes weakened, the lungs trying to do double work break down, the liver becomes congested, the stomach refuses to digest food and the result is a general break down.

Why?

Because the kidneys, the sewers of the system, are foul and stopped up, and the entire blood becomes nothing more nor less than sewage.

Now is it not criminal, nay, suicidal, to allow such a state of things to continue when a simple remedy is within your reach, known for a certainty to do as represented, which will open the closed pipes of the kidneys, allow the effete matters to escape, relieve the overworked heart, lungs and liver, cause a healthy appetite, put the bloom of health in your cheek, the dove of hope in your breast and the light of life in your eye?

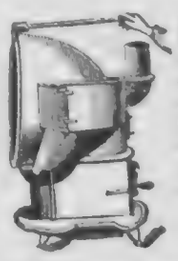
You already have divined the remedy we have reference to; its praise is universal, its influence world-wide. Do not allow prejudice to blind you to your best interests, but to-day procure Warner's safe cure and be put on the straight road to rude health and correct living.

Our parallel and closing lines to you are, take our advice and your experience will justify you in thanking us for bringing under your notice a remedy without a parallel.

IMPROVED EXCELSIOR INCUBATOR

Simple, Perfect and Self-Regulating. Hundreds in successful operation. Guaranteed to hatch larger percentage of fertile eggs at less cost than any other hatcher. Send 6c for Illus Cata. GEO. H. STAHL, Quincy, Ill.

CHARMING NOVELTY.—Lamp shade in the form of Toy Buildings. Landscapes with illuminated cottages. Price, 12c. each; 10 shades, $1.25, $2; carriage free; payable in advance in stamps or money orders of any country. 100 shades, $4.50, including packing, taken at factory. In 8 days more than 10,000 were sold. H. KUMSS, Warmbrunn, Silesia, Germany.



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D. R. SPERRY & CO., BATAVIA, ILL.

PEERLESS DYES Are the BEST.

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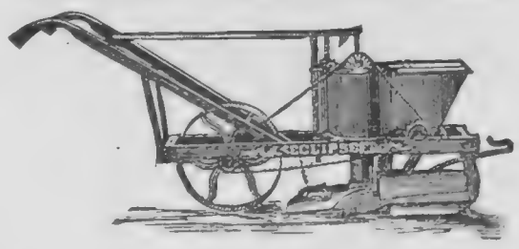

Will plant Field and Ensilage Corn, Beans, Peas and Beet Seed in **hills, drills** and **checks**—in hills up to 45 inches; in checks from 36 inches up to any distance desired. Will distribute all Fertilizers **wet** or **dry.** Farmers, send for circulars.

ECLIPSE CORN PLANTER CO., Enfield, Grafton Co., New Hampshire.

GROWERS AND DEALERS IN SWEET CORN, ATTENTION! Genuine Connecticut grown Stowell's Evergreen Sweet Corn by express, $2.25 per bushel, $1.25 per half bushel, 75c. peck. C. E. CHAPMAN, Westbrook, Conn.

GRAPE VINES

Nectar, Woodruff, Eaton, and all the best varieties. Gandy and other Strawberries. Blackberries, Raspberries, Wonderful Peach, and other nursery stock. Descriptive catalogue giving *Instructions for planting* free. JOEL HORNER & SON, Delair, Camden Co., N. J.

VEGETABLE PLANTS—Standard Sorts, at reliable rates. Send for Price List. M. GARRAHAN, Kingston, Pa.

FOR SALE CHEAP!

3 and 4-Year-Old Apple Trees. List of Varieties and prices on application. GRAY BROTHERS, New Canaan, Conn.

Strawberry Plants For Sale.

Haverland and Burts, $1.25—100; $8—1,000; Warfield, 75c.—100; $5—1,000; Jessie and Bubach, 75c.—100; $4—1,000; Gandy, $1.50—100; $10—1,000; Hampden $1.50—100; Summit and Monmouth, $1—100; by freight or ex. James Lippincott, Jr., Mount Holly, N. J.

Cold Frame Cabbage Plants.

500,000

Ready for planting. Send for prices. Address

JOHN. S. BARNHART, Denton, Md.

SEEDS.

Clover, Timothy and Alsike.

Write to S. S. READ, Toledo, Ohio, for prices.

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My specialty for 33 years. Over 100 best new and old kinds: Empire State, Diamond, Jewel, Eaton, Moyer, Niagara, Witt, Woodruff Red, Moore's Early, Nectar, Brighton, Pocklington, Delaware, Catawba, Elvira, Ives, etc. Nice, medium 1 year Concords, $10 per 1000. Also, Strawberries, Raspberries, Blackberries, Gooseberries and Currants. *Best Plants. Low Prices.* Catalogues free. GEO. W. CAMPBELL, Delaware, O.

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AGENTS LOOK HERE

and farmers with no experience make $2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made $18 one day, $76.50 one week. So can you. Proofs and catalogue free. J. E. SHEPARD & Co., Cincinnati, O.

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A National Journal for Country and Suburban Homes.

Conducted by
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Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, APRIL 20, 1889.

804

NAMES of women, as shown by the list in this issue, have entered for the Women's Potato Contest.

Taking the cash profits of the cows, exclusive of the manure, it is found that one cow paid over $35, *two over* $20, *five over* $15, *two over* $10, *one under* $5, *while one lost* $34. *Nine out of* 12 *therefore made a profit of below* $20. *The one bad cow that lost* $34 *reduced the average of the entire herd. Is there any such cow in your herd?* —page 272.

$25!

TWENTY-FIVE dollars are offered by the R. N.-Y. as follows: Fifteen for the largest and best shaped R. N.-Y. No. 2; $10 for the second best. Reports should be sent in before November next. Those entitled to the prize will be asked to forward the prize potatoes to the R. N.-Y.

"*On a free range the Leghorns may excel in the number of eggs; but in a close run, I have never seen any bird that could beat the Wyandottes.*"—T. W. F. page 266.

THE two new varieties, Mrs. Foraker and Gov. Foraker, as judged by several potatoes sent to us by M. Crawford, of Cuyahoga Falls, Ohio, are splendid keepers. They are shapely and as nearly white in color as any variety we know of.

"*Perhaps no crop is less likely to be injured by the wire-worm than the bean, and it is often grown with a good degree of success where the pests prevail, and if other conditions favor in the locality, would it not be well to plant a portion of the field to this crop.*"—page 265.

VERY, *very* busy times at the Rural Grounds. The season is extremely favorable for early work, and that is just what we are doing with a hearty vengeance. After the work is thoroughly done and in good season, it is restful to think about it.

"*We have been able to hold our own against the seven-cents-a-day labor of India on account of labor-saving machinery, and our skill and aptitude in using it. It is with this larger view of promoting the general welfare that we should welcome the advent of any and every labor-saving implement.*" —S. B. H. page 266.

NO DOUBT there are many names which have been sent to us that do not appear in the formidable list of women contestants presented in this issue.

If those whose names have been omitted will kindly advise us of the fact, the names will be printed in a supplementary list.

"*I sow so much ground that if drought sets in early I feel free to draw on the crop before it reaches its best. If, on the contrary, pasture keeps reasonably fresh and abundant, and there is likely to be an excess of the fodder corn, the second sowing is resorted to as soon as it has reached fair maturity, and the unfed part of the earlier crop is cut and cured for winter forage while the weather is yet warm and dry.*"—W. B. PRATT, page 265.

IN the biographical sketch of the Hon. Norman J. Colman, in the RURAL of April 6, it is said that "under his immediate direction the progress of manufacturing sugar from sorghum by diffusion was perfected and placed upon a paying basis." This statement has been strongly controverted. It is the RURAL'S earnest desire to be just—to give full credit where it is due, but only where it is due.

SPEAKING of the experiments in making sorghum-sugar by the National Government during the past year, at Rio Grande, N. J., Kinner, La., and Conway Springs, Douglass and Sterling, Kansas, Professor H. W. Wiley, Chemist of the Department of Agriculture, says all the conditions combined to render the manufacture of sugar on a small scale commercially unprofitable. At Douglass, Kansas, sorghum cane can be grown, which, with proper treatment, will yield from 80 to 90 pounds of sugar to a ton of pure cane. He thinks Southern and Western Kansas possess the best known climate for sorghum, though it is not unlikely that that of Texas, Louisiana, Arkansas, Tennessee and North Carolina may be equally favorable, but this remains to be proved by experiments. The Indian Territory will, in his opinion, be the center of the industry. The expectation of growing sorghum successfully in the great corn States, he insists, must now be indefinitely abandoned. A reasonably certain season of 60 days for making sugar from sorghum is an essential condition to profitable success. The water supply must be abundant, and the factories must be located close to the fields. A cheap supply of fuel is also indispensable. For this purpose the refuse chips of the cane can probably be used. A factory capable of working up 200 tons of cane per day would cost from $60,000 to $100,000. A smaller one would hardly pay commercially. A thoroughly skillful manager is indispensable in each factory. An average of 194 pounds of sugar can be made from a ton of cane by the diffusion process. It is evident from all the latest experiments, that the old idea that sugar can be profitably made from sorghum on every farm or in every neighborhood by means of a few inexpensive implements and simple processes, must, once for all, be abandoned.

THE REGULAR CONTEST PLOT.

THE trenches of the R. N.-Y. Potato Contest Plot (the *regular* one, not the Women's), were dug last week, the weather being very favorable, the soil dry. It is this year just one-fortieth of an acre. Not to be partial, several kinds besides the R. N.-Y. seedlings, were used for seed, April 8th. The first trench is R. N.-Y. No. 2. The second trench is R N.-Y. No. 3. This is the variety nearly destroyed last year by the flea beetle. The third, fourth, fifth and sixth trenches are the R. N.-Y. No. 4. The seventh trench is Brownell's Winner. The eighth trench is Monroe Co. Prize. The ninth is in part a variety sent to us by J. H. Woodburn, of Sterling, Ill., and New Queen. The 10th. trench is in part a seedling of Early Rose sent to us by Thomas Lazell, of Big Rapids, Mich., and Tonhosks, (we are not sure as to the spelling of the name,) from Theron E. Platt, of Newtown, Conn. The 11th, and last trench is Brownell's Winner. The R. N.-Y. has great faith in this new potato, and would have given more than the two trenches to it, had the seed been sufficient. Thus we have 11 trenches, 33 feet long, three feet apart—the pieces in the trenches being one foot apart—making an area of 1,089 square feet, or one-fortieth of an acre.

A FAIR ARMY.

THE names of the women who are enlisted for the potato contest will be found on other pages of this issue. The R. N.-Y. counts 804 of them, and the names are still coming. This contest is unique. Nothing like it has ever been started before. Think of nearly 1,000 wives and daughters of farmers striving for supremacy in a line that has heretofore been supposed to belong exclusively to men. The world moves. Thirty years ago such a thing as this potato contest would have been laughed out of sight. Now it proves the most interesting and popular movement of American agriculture. There is nothing unwomanly or undignified about it. Those who have entered for this contest are bright, energetic, independent business women, and the R. N.-Y. honors them for their energy and independence. All classes and all ages are represented. In short, we can only repeat that we believe that this contest is the most unique, the most interesting and the most helpful agricultural contest ever devised. The R. N.-Y. hopes that each contestant will be able to win a prize. At any rate, it is convinced that all who carry out the work will reap an increased measure of good health, good appetite and happiness. Success to the fair army of potato growers!

A WOMAN AT WORK.

THE other day we noticed a young married woman busily engaged in cutting and planting seed potatoes. She was one of the contestants in the Women's Potato Contest and would never have thought of doing such work had she not entered the lists for one of the prizes. The March wind disarranged her back hair and brought the tan to her cheeks, but it also gave her buoyant spirits and a voracious appetite for the supper she soon afterward prepared. "Why" she said, "isn't this fun? It's ever so much better than lawn tennis or croquet; for I feel as if I were doing some good; earning some money. Besides, I know now how much land the fortieth of an acre is; how far 33 feet is, and how to plant potatoes."

A beneficent result of the contest will be a bit of practical knowledge of farming, which the contestants are pretty sure to learn. Notwithstanding the "fun" at the outset, they will learn that it is tedious and arduous work to raise a crop of potatoes, and they will be the better enabled to appreciate the work of their fathers and brothers. On the other hand, the men will learn that women can do some things as well as others; that they can actually plan and superintend, or do farm work successfully, and they will respect them all the more for it. Their admiration and respect will be all the greater if the ladies raise more proportionally on their plot than the men do on the farm.

DAKOTA AND WHEAT.

IT will be remembered that during the early agitation for Statehood among the citizens of Dakota, various names were proposed for the northern section of the Territory. It was proposed to call the southern section Dakota instead of South Dakota, while in the place of "North" Dakota, Pembina, Lincoln, Garfield, and other names were proposed. The citizens of the Territory seem to have been in favor of Dakota; why, has not been satisfactorily explained. A subscriber suggests a theory that we have seen advanced several times before. He says that business reasons prompt the Dakota people to cling to their name. Dakota wheat has won for itself a wonderful reputation in the markets of the world. It is the staple crop of the country, and neither section of Dakota is willing to drop the name that represents so much in the milling world. And while on this subject, it may not be amiss to call attention to some facts developed in the investigations of the Canadian Experiment Station. Almost the only unoccupied public lands that can be considered of superior quality, now lie in the Northwest. The fertility of some of these lands is absolutely astounding—almost beyond comprehension. The northern countries—those generally with the poorest transportation facilities and the most unfavorable agricultural conditions—are the only countries producing wheat of the very highest quality—wheat that proves itself a necessity in the production of first-class flour. With an early-ripening wheat the northern countries are sure to be provided with a staple and profitable crop.

COLLAPSE OF THE NEW GREAT MEAT SYNDICATE.

ARMOUR & CO., of Chicago and Kansas City, have strangled the competition threatened to their dressed meat monopoly by the recently organized great American Meat Company. All arrangements having been satisfactorily completed, including the purchase of about 2,000,000 acres of grazing land and 250,000 cattle, together with a large slaughter-house at Kansas City and 12 established meat markets in Baltimore, and after $7,000,000 of the capitalization of $15,000,000 had been subscribed, early this week books were opened by a banking house in this city for subscriptions for $4,000,000 more of stock offered for public investment in order to extend the business. The subscriptions poured in in a volume much greater than the promoters expected, one party alone subscribing $500,000, and the prospects of a keen competition with the Armours became very lively. President Flager and Treasurer Moss of the Cotton-seed Trust, were respectively President and Vice-President of the American Meat Company. Armour is by far the largest customer of the Trust, as he needs nearly half of its product to adulterate his lard. So strong was the pressure he brought to bear on the Cotton-seed Trust that, last Thursday, Flager and Moss resigned and the subscription books were closed. All further subscriptions were declined, and those already paid are to be returned in full. Doubtless it will cost a great deal of money to settle with the original speculating investors; but what of that? The public must pay it, inasmuch as Armour will be in a position to wring it from the people by extortion.

BREVITIES.

PRICKLY Comfrey is now (April 11) three inches high.

STRAWBERRIES are becoming cheap and plentiful in this market.

THE R. N.-Y.'s Women's Contest plot was prepared and ready for the seed on April 9th.

PYRUS Malus Parkmannii has passed through the winter without the slightest injury.

THE experiments with milch cows, noted on page 272, ought to open the eyes of some dairymen.

REMEMBER that maple trees are, in one sense, like cows. The sap from one may make more sugar than that from another.

IT is a somewhat unfortunate thing that the season for "working the roads" comes just at the time when farmers should be doing their spring work.

THE R. N.-Y. believes that the day is coming when the dairyman who does not make use of the silo will be forced to take second place in the race.

THE new potato to be called King of Oneida, is evidently a long keeper. It is of good shape and all that appears against it is the color, which is purple.

"A STRAWBERRY of soil," is the latest name for a plant that requires a certain soil for its best development, while without such a soil it gives very poor results. Do you know of any such?

A STUPENDOUS and altogether creditable success is the Women's National Potato Contest. It is a success entirely beyond the best hopes of the R. N.-Y. Ladies, permit us to congratulate you.

STREET fakirs are selling "choice garden and flower seeds" for one cent per packet, or six packets for five cents. These packets have the imprint of a seed firm that went out of business last year.

WHICH is the quicker grown, the wheat plant or the corn plant? Which therefore requires the more soluble plant food and, at which stage of its life should the food be applied? This is worth thinking over.

ENGLISH farmers experimented with sorghum last year, in the hope of proving that it would make a valuable addition to their list of forage plants. The reports are almost all against it. England is not a corn country.

CATALOGUES should state more specifically than they do how high pea vines grow—that is, in a moderately rich soil. They should also state more accurately than they do the time required for the varieties of potatoes offered to mature.

THE planting of ailanthus trees for street adornment has been strongly advocated and as strongly reprobated. The Health Officer of Washington insists that for sanitary reasons the 500 ailanthus trees that beautify the capital's streets must go.

TAKE two workmen, give them plows of the same make and teams of equal strength. Can one prepare the land in better shape for the crop than the other can? Yes, sir. And it is possible for one team of horses to excel another at plowing by 50 per cent.

WE all feel frisky in the spring. It is the season for friskiness. We won't feel half so frisky in July and August. We won't, but the weeds *will*. The moral of all this is that we can easily lay out in April about three times as much as we can do in August. Another point is that what we neglect in August entails a double loss

ENGLISH farmers are just now discussing the Rye-grass question with great energy. A number of scientists and also some of the best practical farmers are advocating the use of this grass in the strongest terms. We also learn that various parties are again attempting to work up a "boom" for Prickly comfrey. Ireland is the only country where this plant has met with anything like a favorable reception.

AN anti-oleo bill now before the Ohio Legislature is likely to be defeated in the Senate. As was recently the case in Massachusetts, the adverse action of the Upper House will be due chiefly to remissness on the part of farmers in urging their views on their representatives, and treachery on the part of some of the latter in misrepresenting their constituents. Armour's lobby appears to be much more powerful before the Upper Houses of several States than before the Lower. Is it because the former being smaller in membership, the amount of the bribes can be made more persuasive?

Indust'l Societies.

THE TWENTY-SECOND SESSION OF THE AMERICAN POMOLOGICAL SOCIETY.

(R. N.-Y. SHORT-HAND REPORT.)

New fruits; the Idaho pear; the Lucretia dewberry; the Pine-apple strawberry; the Industry gooseberry; the Jewell, Berckmans and Progressive grapes.

As usual, the last session was full of business. First in order was the report of the Committee on Fruit Exhibits and the award of the Wilder medals, read by Dr. Hexamer, the Chairman. Several new fruits were noted by the committee. "The most noteworthy is the Idaho pear." After giving its origin and history, Dr. Hexamer said: "Its eating quality is far superior to that of others of its class. Season September to October. It has not been fruited outside of its native locality where the tree has withstood 30 degrees below zero." Specimens of an improved dwarf Juneberry from Nebraska were received. The flavor was described as approaching that of the huckleberry, and it was pronounced delicious by some. J. H. Hale stated that his firm has lately tested about 20 new strawberries. Among these the Pineapple strawberry was the most remarkable plant he ever saw; berries large, dark crimson and of excellent flavor. The Miami he thought would yield more large berries to the acre than any other variety. A note from Dr. Hoskins asked that the apples Yellow Transparent and Scott's Winter be added to the Society's list, also McIntosh Red, for which Vermont wanted two stars, also the same for Quebec.

An animated and hurried discussion of the later new fruits was then begun. Mr. Steele: "I have grown the Lucretia dewberry here in Florida with success, and it exceeds anything I have ever seen in size and quality, without exception. It is a success on moist land." Mr. Strong: "I think the Lucretia should be introduced in the Society's catalogue." Mr. Van Deman: "I second the motion and advise giving it one star in all States where it succeeds." Mr. Campbell: "It has been successfully trained up from the ground on stakes. The late A. J. Caywood has grown it thus with fine success." Mr. Marble: "I have seen it trained up thus on Mr. Caywood's place, and it was beautiful indeed, bearing very heavily." The Erie being asked about, Mr. Williams replied: "It is very nearly identical with Lawton." The gooseberry came next. Mr. Williams: "I have failed with the new Industry in New Jersey. Can't make it bear at all; tried a dozen plants. I like the Triumph, and consider it the best gooseberry we have in the State." Mr. Strobridge, "I have grown the Industry on clay soil; it doesn't mildew and I am pleased with it. It grows very large and fine. It is all I can ask." Grapes were next in alphabetical order. The "Lutie" was unqualifiedly condemned.

The Jewell grape was called. Mr. Campbell, "I have fruited it three years. It is a small, black grape of good quality; has been recommended by some as equal to Delaware; it is not so to my taste. It is more pulpy, but it is without its high character; its thicker foliage stands better against disease. Small size is almost its only fault; berries rather larger than Delaware, clusters no larger, slow, medium growth; habit like that of the of Early Victor; flavor as good as that of the Eumelan though different in character." Mr. Newman asked about the Berckmans. He said, "I fruited it last year for the first. It is generally pronounced equal to Delaware in flavor; its growth is more vigorous." Dr. Hape: "I have fruited it a number of years; it is more vigorous than the Delaware, and its quality is quite as good, which is saying much in favor of it. Berry larger than Delaware; bunch not so compact, quality most excellent, vine healthy." Dr. Hexamer: "I have seen the Berckmans on Mr. Carman's grounds, in New Jersey. I think the flavor is equal to that of the Delaware; it has more loose, open bunches; the vine seemed vigorous and I was surprised to see it doing so well in New Jersey." Mr. Strong: "I find it very healthy in Massachusetts." The Progress grape was asked about. Mr. Berckmans: "I have seen it and it looked very promising indeed; specimens very fine, very large, and very good. What it is, however, I cannot say." It was then moved and carried, to add the Berckmans grape to the Society list. The Green Mountain came up next. Mr. Manning: "I have seen it bearing in Connecticut; it's a very sweet grape, ripe August 25, last season, strong grower, very good grape, resembles foreign sorts in foliage." This ended the grape discussion.

Everywhere.

RURAL SPECIAL REPORTS.

Illinois.

SHELBYVILLE, Shelby County, April 1.—We have had a very mild, open winter, with but little snow or rain. Creeks and rivers have been running open all winter. Feed of all kinds is plenty. Hay is worth from six dollars to eight dollars per ton; corn, 25 cents per bushel; oats 20 cents; potatoes very plentiful—no sale, nominally, 40 cents per bushel. Farmers have generally finished sowing oats, of which a large acreage was sown. Early potatoes are mostly planted. The ground is now very dry for the season—too dry for grass to grow much. We have a fine prospect for wheat throughout this part of the State. Beef cattle are plentiful and lower in price than for many years; good butcher's stock is selling as low as 2½ cents per pound; good shipping hogs bring from four to 4¼ cents per pound. Apples are plentiful and selling for 40 cents per bushel in market. Grass and clover have come through the winter looking fine and there will be a good stand from last year's sowing. We sow grass seed mostly in the fall, say, in the last of August or first of September, and generally get a good stand if we have rain enough in the fall. We sow clover early in March on wheat ground, or later if sown on oats. Eggs are very abundant and are selling to grocers or shippers for seven cents per dozen. A large number of cattle were dehorned in this section last fall, and all parties, as far as I can see or hear, are well pleased with the plan. Most of the work was done in November and the first week in December, and I have not heard of a single death or of any bad effects resulting from the operation, and I know from personal experience that cattle are more docile and quiet in the herd after they have been dehorned. I think the best time at which to do it is late in the fall after the animals are one year old. E. J. M.

INDIANOLA, Vermilion County.—This western country is populated mostly by Southern people; hence, Southern modes and manners prevail more than those from the East. We have several 3,000-acre farmers who can't read or write. Before their children grew up to use the pen, the shrewd but ignorant native hired a lawyer by the year to do all business for him. Many farmers of *wealth* here regard a farm journal as a luxury which they can't afford. As I have made the circuit several times in all the Western States, I know the people. One will find in Michigan colonies of N. Y. State people; Racine, Wisconsin, is made up of people from the same State. In other sections of all the Western States one finds colonies from N. J., Pennsylvania and other Eastern States. But the war drove a great many bankrupt Southerners to this place. O. K. L.

New Jersey.

FREDON, Sussex County.—The farmers in the neighborhood are out on a strike with the proprietor of the creamery. Last year prices at the creamery were half a cent off from N. Y. prices for eight months and full prices for four months. These terms the farmers are willing to take this year; but the creamery man refuses to comply and the prices he furnishes are as follows: half a cent off for eight months and a quarter of a cent off for the remaining four months. These the farmers refused to accept and they drew up a bond which was signed by all the milk-producers except one, to the effect that anybody must forfeit $50 who brought milk to the creamery.

W. R. N.

New York.

UNION SPRINGS, Cayuga County, March 25.—Crops were very good in this county last year. This is a grain-growing section. Wheat averaged about 20 bushels; barley, 40 bushels; corn, 100 bushels, and hay two tons per acre. Wheat sold at from $1.20 down to $1.00; barley 65 to 80 cents; corn 45 cents; and hay $12. per ton. March has been very mild, some farmers are plowing. Oats will be sown this week.

O. L. C.

Ohio.

BELLEFONTAINE, Logan County, April 1.—March has been an unusually warm and dry month. There was a fall of snow of about an inch, on the 29th. This morning the mercury is about 30, and the weather misty and disagreeable. Wheat is in fair condition, though it is heaved out in some places, with much clover in the same condition. I think the fruit is uninjured so far. ***

Vermont.

BENSON, Rutland County.—We are having a fine sugar season—the best for a long time. Maple sirup is selling at about 80 cents per gallon. I noted, however, that one of our sirup makers is getting more orders than he can fill at $1.00 per gallon, and the reason for this is that he will put up no sirup which weighs less than 11 pounds to the gallon; while the 80-cent sirup weighs only nine to 9½ pounds and is liable to work and sour. Parties who have once used this 11-pound sirup refuse the lightweight kind at any price. Our neighbor had orders for all he could make long before the season opened. Will it not pay every farmer to try to excel in the quality of some one product, thereby getting a reputation which will give him a ready market and good prices at all times? My Shropshire ewes, some imported and the rest from imported stock, are dropping some very fine lambs this spring. A two-year-old ewe, dam bred by Sir Henry Allsopp sire bred by John Evans, England, dropped a ewe lamb (her first) which weighed, as soon as dry, 13¾ pounds. I have placed at the head of my flock the ram "Hercules," sire and dam imported, bred by one of Canada's best flock-masters, a prize-winner in Canada, the closest-wooled coarse-wool sheep I ever saw; but he clipped last year 18½ pounds. Weighs in show shape 250 pounds, and is a model. H. F. S.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

IN addition to preparations for housecleaning, the early spring gives the opportunity of planning the summer sewing. Before anything new is bought, the old things must be looked over. Such as are in good order should be put aside, while those that need making over are to be ripped apart, washed or sponged and pressed. By these means one can tell fully what is needed. If the family purse will not permit of anything new (and that is the case with many of us) we must simply make up the old things to the best advantage. If a woman of small means will remember always to buy things that go well together, she need never look "made over." Black is usually the best foundation for such a wardrobe, because people don't remember it; outside garments and best gowns should be of this tint. Hats and little trimmings might show any becoming tint. Green is now a very fashionable color to combine with black. An occasional garment of dark blue might be chosen, because that color goes well with black; the same is true of gray.

A woman having two old gowns which she wishes to make into one new one, could make a stylish redingote costume, if the colors would go together. The skirt should be of the lighter material or it might be striped or figured. Back and front breadths should be shirred over a foundation; in the back there should be one moderate reed and a pad at the top. The redingote should have on either side a large tab or panel, covering the side breadths to the bottom; in the back it is short, like an ordinary basque. In front it is cut off square to the waist line; it has a full vest, with a little sash across the bottom, and a loose outer jacket—short also, turned back to make flaring revers. The outside of the sleeve is very full, this is basted on a foundation. It forms a puff at the shoulder; below this the fullness is laid in straight plaits, catstitched down with floss of the same color, to about two inches above the elbow, where it forms another puff. Below the elbow is a deep, straight cuff. This is an extremely pretty sleeve suitable for any soft stuff. A pretty seersucker or gingham dress, in which the sleeves are worn or too tight from washing, may be wonderfully freshened by putting in white muslin sleeves made after this model, and a shirred or plaited white vest or guimpe. The style is worn either by children or young ladies.

NEW ENGLAND OUTINGS.

IV.

MARY WAGER-FISHER.

IT is a very pleasant ride by horse car from Cambridge to "sweet Mount Auburn," and if one wishes a guide for the cemetery he can find one at a trifling cost in a small book filled with explicit directions. But I did not care for one, and with the laddie, whose sole bent was to see the boulder brought from the glacier of the Aar for Agassiz's monument and Longfellow's tomb—because Longfellow wrote his beloved "Hiawatha"—I sauntered through the grounds, content with what we found, enough for one short half-day in that extremely beautiful place.

The boulder that marks the grave of Agassiz was nearly covered with ampelopsis growing over it and half concealing the name it bore, no record of the scientist's work being cut in its hard surface. Some pines growing near it had been sent from his birth-place in Switzerland. Over Longfellow's grave, grass was thickly growing and two elms shaded it with their branches. It was marked by a granite

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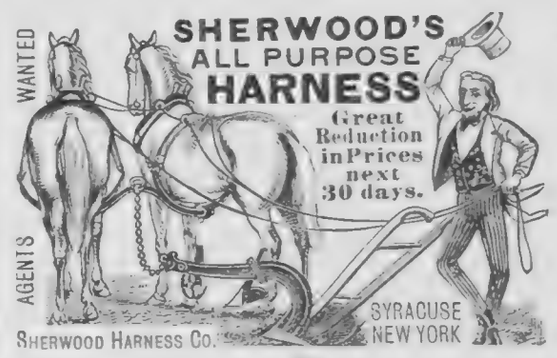

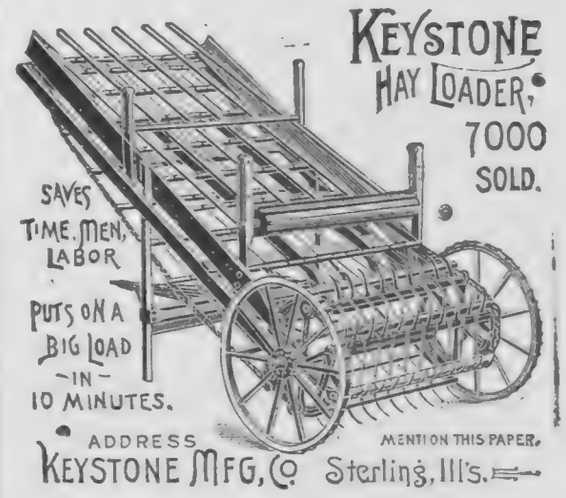

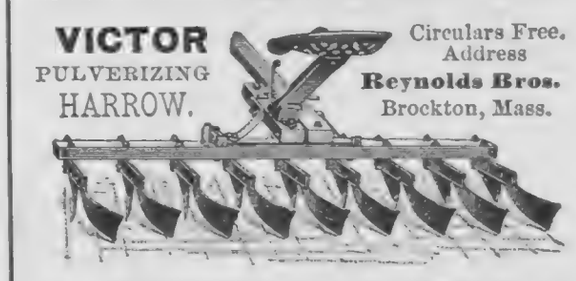

A WONDERFUL PROCESSION

Of what? Why the constant stream of **Hogs, Cattle and Sheep** continually passing into the

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ALL competent authorities say Bright's Disease has no symptoms of its own, but presents the symptoms of other affections. Warner's Safe Cure is universally recognized as a specific for Bright's Disease. That is why it cures so many other diseases, which are caused by the kidney affections. It restores the kidneys to healthy action.

tomb. Flowers grew outside of the coping. Above Charles Sumner's grave grew an oak. His parents lie buried near him, his mother's name being Relief Jacobs Sumner. The monument to Margaret Fuller has a long epitaph. Only the body of her child lies here, as neither hers nor her husband's body was recovered from the sea in which they were drowned near Fire Island, off New York. The child's grave was covered thick with Lilies of the Valley. Charlotte Cushman, in accordance with her wish, was buried in a spot overlooking Boston. A tall marble obelisk marks her grave covered with a mat of periwinkle. Nathaniel P. Willis, who wrote prettily in his day, lies in a plot filled with members of his family of whom "Fanny Fern" was his sister. The monument to Edward Everett is the only one among these graves of noted men that I remember as even so much as hinting at their services. On his are recorded a list of the important offices he filled. An interesting monument is that to the memory of Harndon, the founder of the express business in America. A text on the stone is an illustration that something applicable to everything may be found in the Bible. "The king's business required haste," which with the aid of a concordance can be readily found.

Before leaving the grave of Longfellow I am tempted to refer to the death of the mother of his children, as latterly an article has been going the rounds of the newspapers concerning it, which differs very materially from the account given me by a connection of the Longfellow family, who was with them all the morning of that fatal day. It was at the outbreak of the Secession War, and Mr. Motley, the historian, who was just home from Europe, spent the morning there and discussed the state of the nation—the all-absorbing topic. "It was an exceedingly warm day," said my informant, "and Mrs. Longfellow was very lightly clad in a white gown. I remember the dress perfectly, and how pretty she looked in it. It was flounced to the waist and had flowing or loose sleeves. She was tall and slender and had a very stately and dignified manner. It was little Edith's birthday, and her mother cut off a quantity of her golden hair, which, after dinner, she put in envelopes to send around to the child's playmates. Mr. Longfellow sat half dozing in his chair in his study adjoining the room where she was arranging the letters. She used wax to seal them, and while melting it in the flame of a candle, the sleeve of her gown caught fire, and from the lightness and dryness of the fabric she was instantly in flames. At her cry Mr. Longfellow sprang to her side, wrapping his coat and a rug around her, but in her agony she broke away, and so terribly was she burned that she died on the following day. The poet was never the same man afterwards, and never after shaved his beard."

That a prophet hath not honor in his own country was exemplified in Cambridge, by Anaximander asking where Mr. Higginson lived. The laddie greatly liked his History of the United States, and in many ways we knew him as a charming writer, but no one whom we asked knew him. One said, "Is he a storekeeper?" Another, "Does he keep a saloon?" A year or two later we met the object of our inquiry, and telling him of our non-success in finding where he lived in Cambridge, he said laughingly "If you had asked for Colonel Higginson, every one would have known," so much do titles become a part of one's name.

When Sunday came we went to hear Phillips Brooks preach in his magnificent church, which forms one of a group of superb buildings, including the Museum of the Fine Arts with its striking facade, which form in a way, the initial letter, of the most aristocratic quarter of Boston, called the "Back Bay." The entire superstructure of earth in this neighborhood of monied nabobs, has been artificially produced by "filling in" the Back Bay. Money can accomplish a very great deal, but the old part of Boston, with its narrow, winding streets, is to my soul the ideal of municipal attractiveness, and of course it is not necessary to remark that the really great and famous ones of Boston do not live in the Back Bay.

The Church of the Trinity, in which Mr. Brooks preaches, is as ornate inside as it could possibly be. If there was a square foot in it left undecorated I failed to see it. Mr. Brooks preaches under a big sounding-board, but his speech rushes out of his mouth in a torrent, so that it is no easy task to understand and follow him. He is a very large man and in his black gown makes a striking figure in his pulpit. He is a Low Church Episcopalian and has strong and decided opinions about things to which he gives a vigorous expression, and for these reasons he exercises a very considerable influence even outside of his church. The Spiritual Temple is not far from Trinity and is a striking and beautiful exterior, and we were sorry that it was closed, as we had heard much of its interior finish. It is by far the finest temple or church owned by spiritualists in the United States, not because spiritualists abound more particularly in Boston, but because one of them who was wealthy chose to build this temple in honor of his belief, which ought to be a very comforting one in this materialistic and doubting age.

As we were not likely to indulge in much loafing with the attractions of Boston all around, we decided to go to Plymouth for a month and enjoy sight-seeing at our leisure. We went by rail *via* the South Shore R. R. Passing through Quincy, a gentleman pointed out to us the low, slanting-roofed, red brick house in which John Adams lived and in which John Quincy Adams was born. And then on we went through the beautiful village of Hingham, which, like all the towns, looked very attractive. The houses were mostly of wood, often covered all over with shingles, the foundations generally of brick. The stone walls were lichen-grown, apple and pear trees were laden with fruit, and the great elms were girdled with tar. There is a certain candor in the blue-eyed, fair-haired New England girls, that is very winsome, and every one, rude or cultivated, speaks with the broad "a" which, of course, is the correct pronunciation, and as much as I have heard all classes of people talk in New England, I have never yet heard one give "a" the sound the many do who pronounce psalm, "sam."

GOSSIP AND GOSSIP.

GOSSIP is worthy of all reprobation; certainly every man has his fling at it, and we of the talking sex are oft chidden for our indulgence in this pursuit. But all the same, whatever should we do without it? Of course, we ought not to say anything either untrue or ill-natured, but there is no doubt that the brightest conversation we hear is gossip, pure and simple. That is to say, it is about people—a healthy-minded man or woman always finds humanity more entertaining than any abstract subject. But such gossip need not be about our neighbors. There is no doubt that a nimble tongue, both truthful and good-tempered, will win more friends than genius or beauty. The most popular woman we know, often holds that position merely because she knows how to use her tongue, and also how to govern it. So there is the chance that we may all be equally charming.

The first qualification if one would have one's conversation appreciated, is to suit the listeners. One would not talk ribbons to a man, or guns and boats to a woman. Another thing neglected by many bright talkers, is to give the listeners a chance. Always remember that others have something to say, probably something worth saying, too. And while one may say a little about friends and their ways, it is a good deal better to let personal gossip chiefly consist of chat about prominent people, who seem to be more public property. For this reason, a woman who reads the newspapers always makes the brightest talker. Wit comes by nature, but a witty turn of speech may be cultivated, always remembering that wit which wounds or ridicules others shows lack of that true good breeding and courtesy which is simply the golden rule in every-day use. A great many women are deficient in natural sense of humor, but it is certainly to be cultivated.

How can any ordinary girl become an agreeable talker? By the cultivation of sympathy and kindliness towards all, coupled with thorough truthfulness; add to this constant miscellaneous reading, books, newspapers, and magazines, and a little practice—an attempt to be pleased with others, and to please, and your charming talker is made.

COTTAGE MAID.

GOLDEN GRAINS.

BOSSUET asserts that the spirit of the world includes four kinds of spirits diametrically opposed to charity—the spirit of resentment, the spirit of aversion, the spirit of jealousy, and the spirit of indifference.....

GOOD nature is the very air of a good mind, the sign of a large and generous soul, and the peculiar soil in which virtue prospers.....

MAN'S character is an element of his wealth, and you cannot make him rich in what he has except as you teach him to be rich in what he is.....

WHEN obstacles and trials seem
Like prison walls to be,
I do the little I can do,
And leave the rest to Thee.
—*Faber.*

DRYDEN SAID: "Let grace and goodness be the principal lodestone of thy affections. For love which hath ends will have an end, where as that which is founded on true virtue will always continue."

"I NEVER complained of my condition," said the Persian poet Sadi, "but once, when my feet were bare, and I had no money to buy shoes; but I met a man without any feet, and became contented with my lot."

A LIFE of duty is the only cheerful life, for all joys spring from affection, and it is the great law of nature that without good deeds all good affection dies, and the heart becomes utterly desolate. The external world then loses all its beauty; poetry fades away from the earth; for what is poetry but the reflection of all that is pure and sweet, all high and holy thoughts?.....

THE SHOE AND LEATHER REPORTER says that bad luck is simply a man with his hands in his pockets and a pipe in his mouth, looking on to see how it is coming out. Good luck is a man of pluck, with his sleeves rolled up, and working to make it come out all right.....

BY the words of our mouth we may affect to adore religion, but it is by the work of our lives that we adorn religion.....

THE BOSTON RECORD tells of a four-year-old boy who had been in the habit of repeating a formulated prayer every evening and surprised his parents the other night by saying: "Oh, God, I wish you would make the trees walk." When remonstrated with for his singular request, he replied: "You say that God can do anything, and I want to see the trees walk, and I shan't pray for anything else until they do.".....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

NOW is the time to simplify the housework; to go without the toothsome dainties that consume so many hours in their preparation, and to do less sewing by wearing plainer-made clothing. The time you have so gained spend out-of-doors, on your potato plot if you like, but out-of-doors in the blessed sun and air and away from the kitchen. If you do not care to work in the soil, study, read, mend or rest in some shady spot, but do you spend a portion of each day out-of-doors! Your nerves will be stronger, your health will be better and you will be happier for it and so ought the members of your family.

A TALK ABOUT SEWING.

"IN ye olden times" a girl was looked upon as being very ignorant if she did not know how to hem, fell, darn, cat-stitch, knit or crochet. The sewing machine has done away with "hand work" to a great extent, but still there are some things which must be done with hand.

The foreigners keep to the practice of teaching the children these things far more than do our own people. I remember seeing little German girls going to and from school with their knitting—working as they went. Some of them were tiny tots not more than six or seven years of age. They looked like some quaint old pictures come to life—with their little red or buff dresses, made very short and plain in the waist; with the skirts full and long, nearly touching their shoe tops; the hair combed backed smoothly from the face, plaited in two tight pig-tails behind, either hanging down or coiled around and pinned.

In days of yore each girl began, as soon as she learned how to sew, to make things "'gainst the weddin' time." If she could not bring a well-filled "chest" or "box" as her dowery, it was considered a disgrace.

It is well for our girls to learn to sew, but when I think of the hours those poor little girls of the past spent stooping over their sewing or "sampler" and missing thereby the delight and joy of God's air and sunshine, I heave a sigh for the poor little things. But there is *mezzo termine*, or in other words, a middle course or a happy medium. Every girl should learn to handle the needle to such an extent as to be able to keep her own clothes in order. It may be necessary for foreigners to drill their little girls into the art, but not so with the average American girl. If she is bright at all, she has Yankee ingenuity enough to do almost anything if necessary.

I remember when we were young what pains my mother took to instruct her children as she had been taught herself. How my eldest sister could sew! When she was twelve years old she stitched the bosom of every shirt my father wore. She braided and embroidered the babies' clothes, she crocheted lace for their underclothes; in fact, she did almost everything that a girl could do in that line. Next to her came a boy, then your humble servant who was always "a thorn in the flesh." I had one accomplishment in the way of needle-work, and one only. *I could darn*, and that's all. I rather liked to see a piece of cloth, as it were, grow 'neath my fingers. Then again, I could use a coarse needle, and didn't have to wear a thimble. Besides, my brother had to have some one to play with, so I gradually relinquished my place to the younger girls, who also learned to ply the needle with deftness They always were such "pinks of propriety," never were up to the mischief that I got into, never came home with their ruffles tied in "lover's knots" around their heels, never had the gathers out from the waist. But poor little *me!* I was always in some such plight. At last mamma decided that each of us must mend her own clothes or wear them as they were. I couldn't sew! But I could darn. So I used to darn the girls' stockings if they would mend my frocks. But this arrangement did not last long, for they soon found that they had the worst of the bargain. Then what was I to do? I finally bribed them.

"Say, if you'll mend my blue dress I'll give you my new hair ribbon—Will you?" or "If you'll mend the lace on my petticoat I'll give you my 'Uncle Tom's Cabin'" and in this way I was kept from tumbling apart. But after awhile I had bargained away everything I had worth giving except my "Life of George Washington." One day I said, "Gertie will you mend my dress?" "What'll you give me?" she answered. But all I'd offer wouldn't tempt her—she would answer:

"Give me 'George Washington?'" No, I couldn't do that, so I'd go to another sister. Same result.

Then I tried to do my own sewing. I managed fairly well (only my back ached and I ran the needle under my nails till my fingers were sore), for a little while, but I finally determined that "George" wasn't so precious after all and struck up a bargain with one of my sisters. She was to have the book which had belonged to my father and was a very handsome one, if she would mend my clothes for a month. She agreed, and kept her agreement and so did I.

But as I merged into womanhood I found that I must learn to sew, so set about it. As I have said, American girls have Yankee ingenuity enough to do almost anything they undertake, if they are earnest and determined. So I learned to do my own sewing and have made all my own clothes, dresses included, for years. Not only that, but my sisters always want my advice and opinion in regard to their new gowns, and "If I do say it myself as hadn't orter" I can sew just as well as any of them.

But I didn't want to talk so much about myself, only I wanted to show that it is all nonsense making little girls sit still and sew for hours, while they ought to be out in the fresh air; ought to be enjoying a good romp and frolic. No wonder boys, as a rule, are stronger than girls. They play ball, cricket, leap-frog and kick-the-wicket to their heart's content. They use their muscles, they expand their lungs, they become strong and robust, while their sisters sit on their little stools, perhaps in a close room without any ventilation, and stitch, stitch, stitch. Their backs may ache, their eyes may be weary, but they must do their "stint." Then when that is over they may take a walk, "like a lady." No wonder the poor little things are pale and delicate! No wonder they make sickly frail women! Are they fit to be the mothers of our coming generations? No wonder there are so many miserable creatures dragging wretched, ailing bodies about! If you want healthy, hearty, men and women in the future, give your girls proper care. Teach them to frolic and play out-door games as well as the boys. This practice, I am glad to say, has, within a comparatively few years, become more fashionable than it used to be. When a girl has "gotten her growth," as the old-fashioned people say, it is time enough for her to learn to do fancy-work. Of course, I think, as I said, that they ought to be taught plain sewing enough to enable them to keep themselves neat and tidy—but what's the use in teaching them to fell and hem, embroider, crochet, etc., and neglect their health thereby? A good plan would be to let the girls have one afternoon a week in which to sew; they could be taught all that is necessary in that time, and then when indulged in only

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

as a pleasure, they would be more anxious than ever to learn.

I have heard people tell of how, when they were young, they would be given a piece of work to do, and when it was finished would be told that it was all wrong, that the stitches were "dreadful," and then, after receiving a good slapping for their "slatternly ways" were told to rip it all out and do it all over again. Instead of being encouraged and helped, they were set at the task like a galley slave. Now these same old-fashioned people shake their heads when they see some of the girls of to-day playing lawn tennis and other such games. But although the liberal tendency of many mothers in this direction is increasing, we want still more of it.

There never was a race known where the men and women attained a higher physical and mental culture than they did in Greece. The women, many of them, were as learned as the men. Take Hypatia for instance. They attained such mental hights because of their almost perfect physical bodies. They raced and had their games, the men and women together. They represent the age of the greatest beauty, refinement and poetry, and yet the women stepped into the *arena* and raced with the men. One reason of the high culture they attained, was, as I said, on account of their physical condition. Who can learn, and enjoy what he is learning, who can do his *best*, while suffering physical pain? We have instances where great poets or writers were sick and miserable, but think what they would have been had they had health and strength?

Mothers, think over what I have said, even if I've done it in a bungling fashion. See that your little girls get a chance to develop their bodies as well as their minds. Let them have plenty of exercise, and all of God's fresh air and sunshine that you can give them.

DORA HARVEY VROOMAN.

THE prettiest hats for young girls, that we have seen are broad-brimmed and low-crowned. For every-day wear these are trimmed with light weight surah silk, quite broad, and held in place around the crown with small fancy pins. Those for best wear are trimmed with wreaths of flowers to the exclusion of silk or ribbon.

SOUND.

READING the various directions and suggestions as to preparing meals and housekeeping generally in these days of much writing and much cooking, is almost discouraging. It may be all very well when there is plenty of household help or in small families, even with less help, to make a point of having dinners with courses—even the three which so long ago the Autocrat assured us were as good as ten! But how can any house-mother, with even one baby to care for, find time for one course carefully prepared and daintily served with the spotless napery and shining glass and silver so strenuously insisted upon as making the plainest fare appetizing! By the time the breakfast things are done and the baby settled for his morning nap—if indeed he is a well regulated one who has naps—there may be two hours left before the noon meal. Meanwhile the dining-room must be brushed a little and dusted; the front entry and steps swept, the beds made and things picked up and put in order in the sleeping-rooms, besides half a dozen or more other things for which one may as well allow, as they are sure to come as interruptions of any regular program. And this is supposed to be an off day when neither washing, ironing nor baking is to be done.

Probably at least half the housekeepers who read the RURAL do all their work, except as older girls, and *boys*, too, if well trained, are helpers. And how *can* all these extra nice touches so often described, be given? Indeed who can wonder that a feather duster is whisked over the furniture instead of the cloth so carefully used and shaken out of window or door? Yet even with all the effort possible to save work, the time left to get the dinner is quite too short for more than the plainest meal with one course. And, after all, who is the worse off for the plainer fare? Good bread and meat with one vegetable are certainly enough so far as health is concerned, and it is always admitted that keener relish goes with the smaller variety.

To be sure, it isn't very much to put together a simple pudding or even the much abused pie, but it is well to remember that neither is essential. And if it should occur that there was only time to prepare beefsteak and potatoes, with neither soup, nor pastry at either end of the meal, a plate of crackers and cheese with a dish of apples will answer very well and save the tired mother's strength for better work than making dainties. Then the saving in dish-washing from the smaller variety is an item larger than would be supposed. Counting the dishes after an ordinary three-course dinner, for four people there were 75 articles to handle. Here is where our grandmothers, so often held up to us as models of good housekeeping, had the advantage of us. Would they not want to go back to the old days of spinning and weaving after a trial in the homes of some of their descendants? Yet let us not go back one step! Only drop unnecessary work rather than spend lives in a vain endeavor to make one pair of hands do the work of two or more. Plain living and high thinking is still a good motto. Simple meals, slowly eaten, accompanied with the sauce of cheerful conversation, are not likely to produce evil results.

A. R. D.

HARPER'S BAZAR says that the salutation which meets one in the morning is the key-note of the day. If a woman is met with "Good-morning, my dear! what a pretty gown you have on! you look as fresh as a peach blossom," she will go about her duties gayly. If she is met with a husky "What is all this noise?" "Whose bill is this?—How much too large it is?" "How wretchedly sallow you look!" she is appalled, cowed, discouraged; the day is ruined.

BRIMSTONE FUMIGATION FOR MOLD AND DRY-ROT IN CELLARS.

HAVE I opened a new field of investigation? The past summer was extremely wet and cold, my cellar very moldy and my strength not up to the mark of such whitewashing as would free it from all mildew spots. Sulphur fumigation seemed the one thing to try, so I emptied the cellar and sent to the nearest druggist for two pounds of brimstone. But, to my dismay, John dug the potatoes, poured them on the damp cellar floor in great heaps, five feet high, heap joining heap, before the brimstone got here, even forgetting that an early freeze had chilled a few of them in the hill. By the middle of November our potatoes were "going" pretty fast with wet and dry rot; it was the first time in 20 odd years that we had potatoes rotting in the cellar, except when they had been frozen. I had not doctored diphtheria all these years without learning that unless the cellar was at once made right the rooms above it would not be fit to live in.

True, it was so far better than the average cellar that it had a four-inch tin pipe running from a little above the floor into the kitchen stove-pipe above. Since it was put in, the place has been reasonably dry. Well, John promptly picked over those potatoes, spending several weeks at the job, and he is the quickest man at such work that I ever saw. Meantime, I pasted several thicknesses of paper on the floors above the cellar, nailed heavy building paste-board tightly over that, and then replaced the carpet. To fumigate, set an iron kettle "bottomed" with ashes on the floor, poured into it a shovelful of live coals and put nearly a quarter of a pound of brimstone on them Then I made haste to get out and close it up air-tight. Squashes, pumpkins and garden vegetables generally had to be left in the cellars during the fumigation, and I supposed the brimstone smoke would flavor them. They were spoiling fast any way, so it did not matter. We kept up the smoking for about two weeks, off and on, but did not keep the ventilating pipe closed all the time.

Then I remembered that both green and dried fruits were bleached by means of such fumes, and I cooked some potatoes. They were all right. The few squashes left sound at the time of smoking kept quite sound until eaten. The pumpkins and potatoes have not rotted any since. The family are unusually well. Of course, we *burned* all decayed and decaying tubers for fear of infecting the ground if we buried them,—I mean the few that escaped the picker. The bulk of bad ones were carted off to a sandy ravine and put out of reach of cattle. I will put some to sprout to-day, to see if fumigation has destroyed the germinating power. I hope it has.

E. S. LINCOLN.

STARCHING AND IRONING.

TOO LATE FOR THE SPECIAL.

MY husband has had three years' experience with the Chinese laundries and considers my work superior to theirs. My brother, who is very fastidious, also considers my laundring superior to that of the Chinese. I use Elastic Starch. Bogue's Chinese Laundry Starch is also very good. The following rules must be observed to insure success: Be sure your linen is clean; careless washing spoils good starching. Clean your flat-irons, sides and bottoms, with fine emery paper, wash well with soap-suds and put immediately over a good fire to dry. Have the articles dry. To every pint of luke-warm water add one and a-half table-spoonful of starch; mix thoroughly and add a little good bluing. Starch them the usual way, bosoms on both wrong and right sides, dipping and wringing five or six times to make them stiff; fold and iron after ten minutes. After the linen is ironed, moisten with a damp cloth, not too wet, then by rubbing the heel of a smooth flat-iron cross-wise of the article, it will produce a fine polish. Or you may use the point of the flat-iron by ironing one way with a heavy pressure. After the article is ironed, take the sharp edge of the iron and press it all along upon the stitching of the shirt and the same upon the collars and cuffs. After the cuffs are ironed, press a hot flat-iron over the wrong side a few times, quickly bend the ends together and pin or tie to hold them; and insert the others in the one so secured. Or put in a round box to retain the shape.

MRS. J. D. CLARK.

OUR young men do not like to be outshone by their city brothers and therefore send their linen to the city laundry—an unnecessary expense if mother or sister would learn the right way to "do up collars and shirts." To be successful in doing them up one must be sure the washing has been well done, then, before drying, starch in boiled starch. Pour boiling water on the starch that has been moistened with cold water, stirring it rapidly—it is quite unnecessary to place it on the range. Add a little bluing after the articles have become perfectly dry, (this last condition is very important) dip in thin cold starch, wring and roll in a dry cloth. They will be ready for the ironing process in a half hour. Be sure the irons as well as the ironing cloth are very clean. Iron the collars slightly on the wrong side; then turn and finish on the right side; do not use a very hot iron, but, instead, use all the strength you can exert, and they will shine. Do not call the collars finished until they are quite dry or at least seemingly so, and place them on a plate in the sun, or over the range for a short time. Iron the shirt-bands first, then sleeves and body, the front last, using a sheet folded the size of the shirt front. This is so much better than a board—try it. A young house wife can well be proud when she can accomplish this branch of home making well.

MRS. S. B. DOUGLASS.

IN doing up shirts and collars I starch in thoroughly cooked starch as soon as rinsed, I find that thin starch is as good as thick and put nothing in it to keep from sticking, as there will be no need if well cooked. Thoroughly dry, then dip in cold starch made of one tea-spoonful of powdered borax, one of starch dissolved in a little cold water, then pour in enough cold water to make a pint. Spread out collars and cuffs on clean cloth and roll up tight, iron in an hour. Have the irons very hot and bear heavily on the irons and I think the polish will satisfy the average man.

MRS. W. A. K.

CRANBERRY PIE.

TAKE cranberries (frosted ones will do), one and one-half cup and smash each one, add a large cup of sugar, half a cup of hot water and just the least sprinkle of nutmeg. Bake between two crusts.

FROM A CRANBERRY RAISER.

Miscellaneous Advertising.

The Aged

Who need help in their many infirmities, especially those afflicted with rheumatism, find great relief in

AYER'S Sarsaparilla.

"One year ago I was taken ill with inflammatory rheumatism, being confined to my house six months. I came out of the sickness very much debilitated, with no appetite, and my system disordered in every way. I commenced using Ayer's Sarsaparilla and began to improve at once, gaining in strength and soon recovering my usual health. I cannot say too much in praise of this well-known medicine."
—Mrs. L. A. Stark, Nashua, N. H.

Ask your druggist for

Ayer's Sarsaparilla,

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

Price $1; six, $5. Worth $5 a bottle.

W. R. & CO'S IMPROVED BUTTER COLOR

IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the buttermilk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere.

More of it Used than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & Co., Burlington, Vt.

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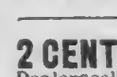

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4 PACKS OF CARDS FREE. One Pack May I C U Home Cards, One Pack Hold to the Light Cards, One Pack Escort Cards, One Pack Flirtation Cards, all free if you send 2 cents for Sample Book of Visiting Cards. Eagle Card Works, Cadiz, O.

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2 CENTS for Catalogue of hundreds of useful Articles less than Wholesale Prices. Agts. and Dealers sell large quantities. CHICAGO SCALE CO., Chicago.

WARNER'S Log Cabin Remedies—old-fashioned simple compounds, used in the days of our hardy forefathers, are "old timers" but "old reliable." They comprise a

Warner's Log Cabin Sarsaparilla,

"Hops and Buchu Remedy," "Cough and Consumption Remedy," "Hair Tonic," "Extract," for External and Internal Use, "Plasters," "Rose Cream," for Catarrh, and "Liver Pills." They are put up by H. H. Warner & Co, proprietors of Warner's Safe Remedies, and promise to equal the standard value of those great preparations. All druggists keep them.

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THE RURAL NEW-YORKER.

34 PARK ROW, NEW YORK.

The following rates are invariable. All are therefore respectfully informed that any correspondence with a view to obtaining different terms will prove futile.

ORDINARY Advertisements, per agate line (this sized type, 14 lines to the inch).....30 cents
One thousand lines or more, within one year from date of first insertion, per agate line, 25 "
Yearly orders occupying 14 or more lines agate space.....25 "
Preferred positions.....25 per cent. extra.
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The subscription price of the RURAL NEW-YORKER is
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" " Six months..... 1.10
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Agents will be supplied with canvassing outfit on application.

Entered at the Post-office at New York City, N. Y., as second class mail matter.

PEERLESS DYES Are the BEST. Sold by Druggists.

News of the Week.

AGRICULTURAL NEWS.

SATURDAY, April 13, 1889.

THE Department of Agriculture's report for April, a synopsis of which was telegraphed to this City last Wednesday, relates to the condition of winter grain and of farm animals as they go out of winter-quarters as follows. The seeding of wheat was somewhat delayed in the Middle States by early autumn rains, and east of the Ohio by dry weather in September and October. Later conditions were favorable in both sections, with mild and drier weather in the East and a fair supply of moisture in the West. In the South the condition of the soil for seeding was generally favorable, and germination was prompt and the growth good. In California the autumn rains were followed by a dry season in winter, but refreshing showers in March caused the germination of the grain lately sown, and a vigorous growth of the early seeded area. There was but little winter protection, except for a short time in mid-winter, in the latitude of heavy winter snows. Consequently the more northern breadths are somewhat brown in color, and patches in wet soils are winter-killed. Yet the temperature has been so mild, with so few sudden extremes, that the present condition is very good. The plants are generally well rooted and have been growing over a large part of the area through the winter. The general average condition is 94, nearly the same as the April condition of the crop of 1886, which fell at the harvest to 87.8. That of 1888 was 82 and that of the previous year 88.1. The April condition of the large crop of 1884 was 95.4, going up to 98 at the harvest. The present condition by principal states is: New York 94, Pennsylvania 93, Texas 97, Kentucky 97, Ohio 88, Michigan 87, Indiana 94, Illinois 97, Missouri 95, Kansas 96, California 98. The condition in the Southern States ranges from 90 to 97. The rye crop is also in good condition, better than that of wheat in Ohio and Michigan and worse in Missouri, with slight differences in other States. The general average is 93.9. The mild winter has been favorable to farm animals, which are generally in high condition. The general average for horses is 98.4, for cattle 96.9, sheep 97.4, swine 95.6. The estimated losses from disease and all other causes during the past year have also been much less than usual. That of horses is 1.5, cattle 2.4, sheep 3.8, and swine 6.2 per cent. in each case less than last year.....

.....April 26 will be Arbor Day in New York, and May 3, in Pennsylvania. April 10 was pretty widely celebrated by the school children of Maryland.....There's likely to be no end of trouble in Oklahoma after the opening of the country to settlement on April 22. There are only 10,000 quarter-sections altogether, and it seems likely that 100,000 people are ready to scramble or fight for them. The most reasonable estimate puts about five claimants on every quarter-section of every kind, and there are likely to be a dozen or a score on every eligible well timbered and watered quarter-section. All the bordering country is thronged with intending settlers. Some have fast horses to get ahead of others and one party has a balloon! The woods in the territory are full of concealed squatters ready to take up claims after midnight on the 22nd. Special trains are to be run in time from many points as far off even as Chicago. There are threats that the railroad bridges to the country will be burned to prevent travelers by rail from getting ahead of the others. Land officers have been established at King Fisher Station and Custine, but the Government doesn't know whether there is now a single building at the latter place, which is to be the capital of Western Oklahoma. There's likely to be a good deal of bloodshed among the reckless rough-and-ready element. ..The story about that Florida Orange Syndicate appears to have been bogus or else the project has collapsed.....The Salt Syndicate is negotiating with the salt operators at Hutchinson, Kansas, for the sale of their works. They want a six-months' option at prices to be agreed upon afterwards..... The committee appointed by the government of New South Wales to investigate M. Pasteur's discovery for the extermination of rabbits, reports that it finds that the rabbits that had been inoculated with the virus of chicken cholera, or which ate the food which had been infected with the virus, died, but the disease was not communicated from one rabbit to another, so that the offer of $125,000 for the discovery of an effective exterminator of the bunny pest in the Australian colonies is still open to the ingenious or the lucky..... There are now forty-six, or, including the branch stations, nearly sixty agricultural experiment stations in operation under the Hatch Bill, conducting scientific and practical experiments in regard to soil, tillage, manures, crops, stock-feeding, dairying and horticulture. They employ more than 370 scientists and agriculturists and will receive during the current year, $595,000, from the National Government and about $126,000 from the various States and other sources.....

Good News.

Here are two instances of the beneficent action of Compound Oxygen. The one in a severe case of consumption, the other in the weariness of general debility. Concerning the first we receive the following:

PORTAGE, Wis., Jan. 30, 1888.

"My wife has been taking your Compound Oxygen for over two years for consumption and has derived much benefit from its use; in fact, I think she would have died long ago but for it." H. D. JAMES.

In the matter of general debility we give the following extract:

BENTON HARBOR, Mich., Nov. 28, 1888.

"I am indebted to you beyond all other Compound Oxygen purchasers."

BENJAMIN J. EAMAN.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, April 13, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	7¾	8	.....
Strict Ordinary	8 3-16	8 7-16	.....
Good Ordinary	9⅛	9⅜	.....
Strict Good Ordinary	9 9-16	9 13-16	.....
Low Middling	10 1-16	10 5-16	.....
Strict Low Middling	10 5-16	10 9-16	.....
Middling	10⅛	10¾	.....
Good Middling	11	11¼	....
Strict Good Middling	11¼	11⅜	.....
Middling Fair	11 11-16	11 15-16	.....
Fair	12 5-16	12 9-16	.....

STAINED.

Good Ordinary	7⅝	Low Middling	9 3-16
Strict Good Ord	8¼	Middling	10

POULTRY—LIVE Fowls, near-by, per lb, 14½@15c; fowls Western, per lb 14½@15c roosters, per lb, 8@12½c; turkeys, per lb 14@16c; ducks, western, per pair, 75c@1.00; geese, western, per pair, $1 40@$1 90.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per lb, 15@16c; do do, common to fair, 10@14c; do, iced, dry picked, choice, 11@12c. Fowls, western, do, choice, 11@13½c; do, nearby, do do 13@13½c; Chicks and Fowls, mixed, 11@14c; do do do, scalded, 8@9c. Squabs, white, per doz, $3 50@$3 75 do, dark, do, $2 50@$2 75. Chickens. Philadelphia, dry picked, 15@17c, do Jersey, do, choice, 14@15c; do nearby, do, good, 13@14c; do Western, do do, 11@12c; do do, iced, good to choice —@—c. Ducks, nearby, choice, per lb, 14@15c; do do, good, 14@16; do Western, good, 14@16c. Geese, Western, good, 8@10c.

GAME.—Wild Ducks, Canvas back, per pair, $——@@$——; do, Red Head, do, $ 50@$1 00; Grouse, do, 75@90c; Wild Ducks, Mallard, do, 40@50c; Teal, do, 22@40.

HOPS.—State, new, best, 21@22c; do, prime, 19@20c; do, low grades, 13@16c; do do, 1887, 10@11 do do do, California, common to prime, 13@19c; choice, 20c.

HAY AND STRAW.—Choice Timothy, 90@95c; do good do, 85@90c; do medium, 70@80c; shipping, 60@65c; do, Clover, mixed, 55@70c. Straw.—No. 1, rye, 75@—c; short do 55@65; oat, 40@50c.

BEANS.—Marrows, new, $1 95@$2 00, new mediums' choice, $1 75@—; pea, $1 75@—; red kidney, $2 10@2 20; white kidneys, choice, 2 10@——; foreign, mediums, 1 85@1 55; California Lima, $2 75@$3 00; green peas, $1 35@1 40.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@——c, and farmers' grades at 6½@7c. HICKORY NUTS quoted at $0 50@$1 00 per bushel. Pecans, 6@8c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Bermuda, per bbl, $4 00@$10 00; Maine do. $1 50@$2 00; State do, $0 80@$1 50; Sweets do. $2 50@4 50; Cab., new, $1 50@$2 50; Peas, per crate, $0 50@$4 25; Kale, per bbl., $0 50@$0 75; Beets, per crate, $1 25@$1 75; Asparagus, per doz., $2 25@$6 25; Spinach, per bbl., $1 00@$1 75; Tomatoes, per crate, $2.-25@$5 50. ONIONS—Orange Co, red, per bbl., 30@50c; Conn. red, do, 60@75c; do, white, do $1 00@$1 50; do, yellow, do, 60@75c; State, do do, 25@75c; Bermuda, do, per crate, $1 25@$——; Beans, string, do, $1 25@$3 00.

FRUITS.—FRESH.—Apples, Baldwin, per bbl, $1 15@$1 50; Common, $0 75@$1 00; Russet, $1 50@$1 75 Strawberries, per qt, 10@30;. Cranberries—Jersey, fine, box, $1 00; do common, 50@75c. Oranges—Florida, best, box, $3 00@$4 50; do, good lots, $2 50@$2 75.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5¼@6c; do new, common to prime, 4@5c; sliced, new, 3@4½c; quarters, 3@3½c; chopped, 1¼@1½c; cores and skins, 1@—c. Cherries, new, 13½@15c. Raspberries, new, 16@17½c. Blackberries, 4@4¼c. Huckleberries, 10@—c. Peaches—Delaware, evaporated, peeled, 12@15c; do do, unpeeled. 5@6c; North Carolina, sun-dried, peeled, 7@9c. plums, 6@6½c.

PROVISION MARKETS.

NEW YORK.—PROVISIONS.—PORK.—New mess, 13 50@13 75, short clear, $14 00@16 00. Extra Prime mess, $12 50@$— prime do, $14@—— and family mess, $13 25@14 00 BEEF—India Mess. in tierces, $13 50@14 Extra Mess, in barrels. $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $8 25@8 50; Family at $12 50@$16. HAMS—$12 00@$13 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 7¼@7¾c; Pickled Hams, 9¼@10c; pickled Shoulders, 6@6½c; Smoked shoulders 6½@—c; do Hams, 10@11c. Dressed Hogs.—City, heavy to light, 6⅝@6⅞c. Pigs, 7c. LARD.—City steam, $7 05; February, $——; March, $7 23; April, $7 24 May, $7 25; June, $7 27; July, $7 29; August, $7 32; September, $7 33; South America, 8c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes quiet; Early Rose, 30@40c per bush.; Burbanks and White Stars, 23@30c Provisions were steady, in moderate demand. BEEF.—City family, per bbl, $9 50@$10; do, packets, $9 00@—; smoked beef, 10@10½c; beef hams, $14 PORK.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@12c: do, S. P., cured in tierces, 9½@10½c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 8½@9c; do, do, smoked, 9c; Shoulders, pickle cured, 8@8½c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 9@9½c; butchers' loose, 7.@8⅛.

CHICAGO.—MESS PORK.—$11 80@—— LARD.—$6 85@—— per 100 lbs; Short Rib sides (loose), $6 30; dry salted shoulders, boxed, $6 25; short clear sides, boxed, $6 75.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New, Creamery, State, pails, best, 27@28c, do do. tubs, new, 20@26; Pennsylvania, best, 25@26; Elgin, best, 27; Western, best 25@—; do prime, 23@25c; do good, 19@21c; do poor, 16@17c. State, Dairy, half-firkins, tubs, best, 25@26c; do do prime, 20@23c; do do fine, 19@21c; Welsh tubs, fine, 21@22c; do do good, 19@30; firkins, best, 19@21c; do prime, 21@22c; do fine, —@—c. Western—Imitation Creamery, best, 19@20; do fine, 17@19; Western dairy, fine, 18@19; do fair, 15@17c; do poor, 12@13c; do factory, fresh, best, 19@20c, do prime, 16@17c; do good, 14@15; do poor, 11½@13½c; do June, 13@14. Old butter from 2 to 4c. lower.

CHEESE.—State factory, fancy, 12@12¼c; do do, fine, 11@11¼c; do do, prime, 10¾@11¼; do do, fair to good 10@10½c; Ohio, flat, prime, 11@11¼c; do good, 10@11c; do, good, 9@9¾; Skims, light, 8¾@9¼c; do medium, 6½@8½; do full, 2@2¾c.

EGGS.—Near-by, fresh, 11¾@12c; Canadian, 10@11c Western, best, 10@11¾c. Duck, 25@26½c.

PHILADELPHIA.—BUTTER dull. Pennsylvania creamery extra, at 28@—c; Western creamery, extra at 16½@17c. B. C. and N.Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were dull. Pennsylvania firsts, 12½@—c; Western firsts, 12@——c: Cheese dull—steady; demand fair; New York full cream, at 9@9¼c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

BOSTON.—Butter firm; Western extra Creamery, 28@29c; Eastern extra Creamery, 27@28c. Cheese dull. Eggs firm; Eastern extras, 13@—c; Michigan extras 12c; Western firsts at —@—c.

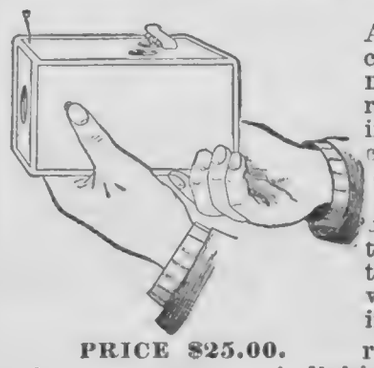
CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was quiet and steady; Elgin creamery, 25@26c; choice Western, 20@21c. choice dairy, 20@21c; common to fair, 11@12c. Eggs weak at 11½@12c.

CHEESE—State factory, September made, 12c; do do do, October, fancy, 11@11¼c; do, fine, 11½@11¾c; do fair and good, 10@10½c; Ohio, flat, prime, 11@11¼c; do, good, 9¾@10½c skims, light, 8¾@9¼c; do, medium, 6½@8½c; do, full, 2@2¾c.

GRAIN MARKETS.

NEW YORK.—WHEAT.—No. 2 Red, afloat, for milling at 86@86¼c; do, in store and elevator, quoted 83⅞@85⅛; do, free on board, 83¾@86¼c; No. 2, January 83⅞c; do February, 83⅝@84½c; do March, 84 34@85⅝c; do May, 87⅝@88⅝; do June, 78¾@83¾c; do, July, 84¾@¼85c; do August, 81¾@82½c; do December, 84¼@85⅜c. RYE.—Quiet and nominal. BARLEY.—Has a light demand. BARLEY MALT.—Neglected. CORN.—Rejected, 37@37½c; Ungraded, 35@45c; No. 3, 39¼@40c, elevator; 40½@41c. delivered; Steamer Mixed, 41@41⅜c, elevator; 42@42¾c, delivered; No. 2, 43¼@43¾c, elevator; 44½@44¾c, afloat; Steamer White, 42@42¼c; Steamer Yellow, 41½c; Low Mixed, 41½c; No. 2 January, 43⅛; do February, 43⅜@43⅞c; do March, 44¼@44½c; do April, 45½c; do May, 45⅛@45⅝c. OATS.—No. 3, 29¾@30c; do White, 29¾@30¼c No. 2. 31¼c; do White, 34@34¼c: No 1 White, 39c; Mixed Western, 28@33c; White do, 33@39½c; No. 2 January, 31¼c; do February, 31¾@31¾c; do March, 31½@31¾c; do May, 34⅜@32¼c; do White January, 33⅞c; do February, 34½c; do March, 34¼@34⅜c; No. 8 do February, 30¼c. FEED.—Very dull. Quoted: 40 lb, 70@75; 60 lb, 70@72½c; 80 lb, 75@80c 100 lb, 85@90c; Sharps, 90@95c; Rye Feed, 75@80c.

The Kodak.



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PERFECTION MOLE TRAP.—I. A. Baker, of Magnolia, Ark., writes that he has caught 19 Moles since last August. Please send me 20 more traps for my neighbors. It does its work complete. Send for circulars. Address JOHN F. TURNER, 4514 Main Street, Germantown, Philadelphia, Pa.

$525 Agents' profits per month. Will prove it or pay forfeit. New portraits just out. A $3.50 Sample sent free to all.
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VIRGINIA FARMS 700 acres (about half in timber)—Price $5,000 360 acres with dwelling that cost $2,200—Price $3,000. 255 acres with good dwelling and out-buildings—Price $4,500. 200 acres, near river and railroad—Price $1,000. 50 acres, midway between Richm'd and Petersb'g—Price $500. *Also* other farms of all sizes and prices Write for free catalogue.
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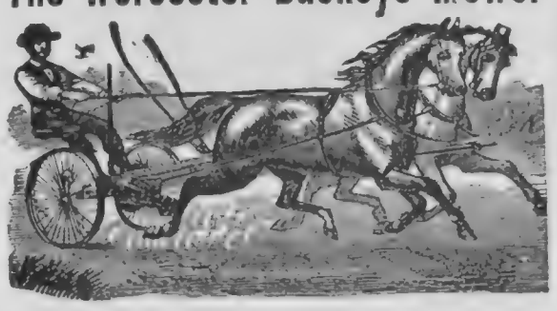

Has Patented Self-Oiling Pitman, Insuring Safety and Perfect Working.

Has a Scythe which Cannot be Broken; Has an Inside Shoe which Cannot be Clogged; Has Patented Chafe Plates.

Always **Maintaining the Shear Cut.**

No other Machine has these improvements. Don't fail to see it. Send for 1889 Circulars. We refer to **Thirty-five Thousand** farmers in New England who use the **Worcester Buckeye.**

Agents Wanted in Unoccupied Territory.

THE RICHARDSON MANUF'G CO., Worcester, Mass.

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Perfect Mowing Machine Knife Grinder.

25,000

Machines in actual use testifying to its merits.

Can be carried into the field and attached to Mowing Machine Wheel. Send for new Descriptive Catalogue.

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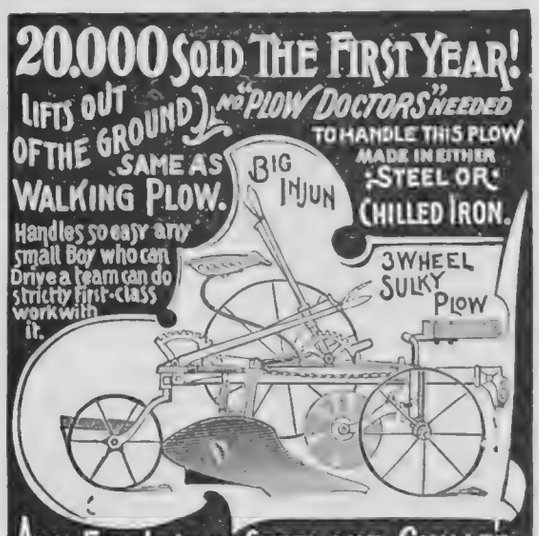
MAIN OFFICE: HIGGANUM, CONN.
Successors to R. H. ALLEN & Co., 189 WATER ST., N. Y.

ONE must forge the iron while it is hot. If you are suffering with a pain in your back, do not wait, 'twill be useless suffering until the pain wears off, before you apply

Warner's Log Cabin PLASTERS.

25 cents. Try it. Best in the world.

20,000 SOLD THE FIRST YEAR!



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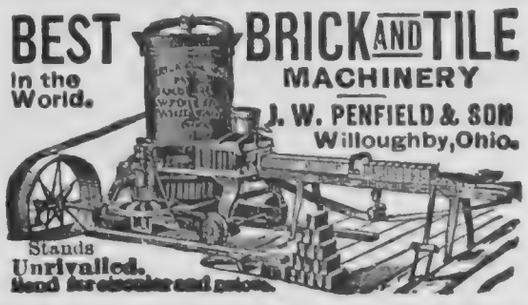
BRANCH HOUSES ALL OVER THE COUNTRY SEND FOR CIRCULARS

BEST BRICK AND TILE MACHINERY In the World.



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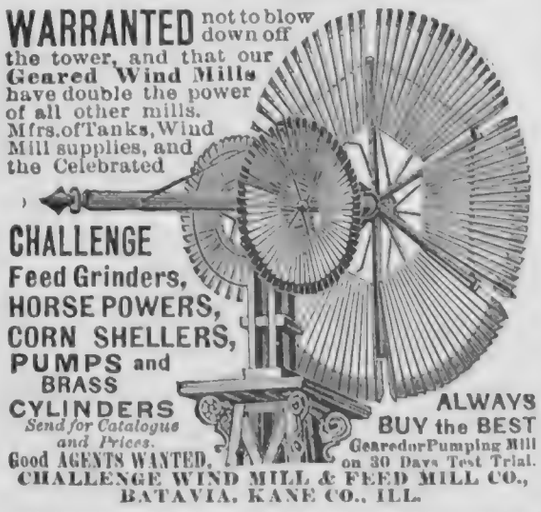
Stands **Unrivalled.** Send for circular and prices.

WARRANTED not to blow down off the tower, and that our Geared Wind Mills have double the power of all other mills.

Mfrs. of Tanks, Wind Mill supplies, and the Celebrated



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Feed Grinders,
HORSE POWERS,
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Send for Catalogue and Prices.

ALWAYS BUY the BEST

Good AGENTS WANTED. Gearedor Pumping Mill on 30 Days Test Trial.

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The opening of the new **"SOO"** railway across Wisconsin and Michigan, gives access to desirable agricultural lands and large bodies of **Pine, Hemlock and Hardwood Timber.**

Superior Advantages Given to Parties Who Will Erect Saw Mills or Factories.

Choice farming lands cheap and mostly on time. **Railway Company pays cash for cordwood.** For further information address

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SEEDS, SEEDS, SEEDS

The THORBURN POTATO

EARLIEST AND BEST.

THORBURN'S SUPERIOR ONION SEED.

SEE CATALOGUE OF VEGETABLE AND FLOWER SEEDS FOR 1889,

Also Catalogue of Gladiolus and other Spring Bulbs Mailed Free.

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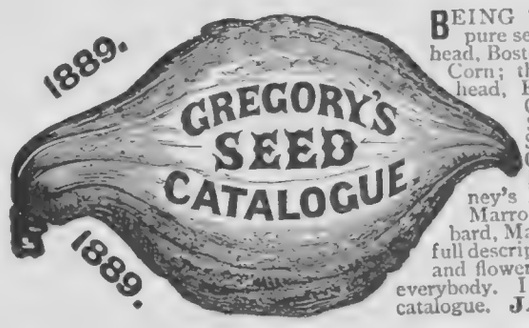
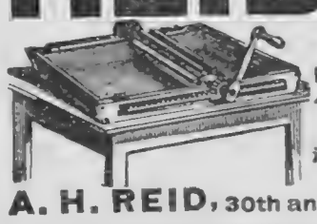


BEING THEIR ORIGINAL INTRODUCER, I offer pure seed of these choice vegetables: Cory, Early Marblehead, Boston Market, Marblehead Mammoth and Longfellow Corn; the Eclipse and Crosby Beets; Snowflake, Marblehead, Early Horticultural, Carmine and Warren bush, Champion and Kentucky Wonder pole Beans; All-Seasons, Early Deep-Head, Danish Drumhead, Stone Mason, Warren, Marblehead Mammoth and Gregory's Hard-heading Cabbage; Marblehead Mammoth and Boston curled Lettuces; Phinney's Early and Miller cream Melons; Brown's Dwarf Marrowfat Pea; Burbank and Early Ohio Potatoes; Hubbard, Marblehead, Butman and Cocoanut Squashes. For a full description of these and an immense collection of vegetable and flower seed, please see my seed catalogue, sent FREE to everybody. I warrant all the seed I sell, as see the cover of my catalogue. **JAS. J. H. GREGORY, Marblehead, Mass.**

REID'S PEERLESS CREAMERY

Absolute Perfection for Best Quality Butter.



BUTTER WORKER

MOST EFFECTIVE and CONVENIENT.

Also CHURNS, POWER BUTTER WORKERS, PRINTERS, SHIPPING BOXES,

Send for my Illus. Catalogue, containing valuable information for Creamery men and Butter Factories.

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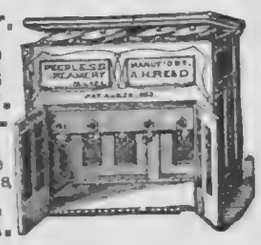

A. H. REID, 30th and Market Streets, PHILADELPHIA, PA.

RUSTLESS IRON WATER PIPE.

Send for catalogue.
Braman, Dow & Co., Boston, Ag'ts for New England.

THE WELLS RUSTLESS IRON CO.,
21 Cliff Street, New York.

NINE GOLD MEDALS

IN ONE SEASON, AWARDED BUTTER MADE BY THE

COOLEY CREAMER PROCESS

as follows in 1888, viz:

KANSAS STATE FAIR,	F. O. MILLER.
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BAY STATE FAIR,	H. E. CUMMINGS.
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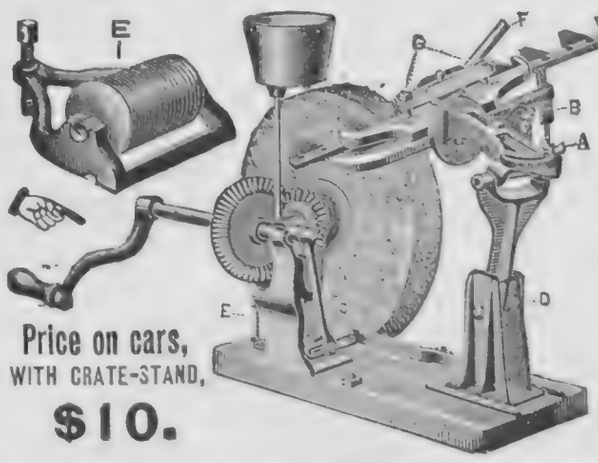
ENGINES, BOILERS, CHURNS, BUTTER WORKERS, AND EVERYTHING USED IN CREAMERIES OR DAIRIES.
SEND FOR CIRCULARS GIVING FULL PARTICULARS.

VT. FARM MACHINE CO., Bellows Falls, Vt.



Price on cars, WITH CRATE-STAND, **$10.**

WILLIAMS' GRINDER FOR Mower and Reaper Knives.

WITH THIS MACHINE ONE MAN can grind the knives of a Cutter Bar, in **one-half the time** required by **two** men on a common grindstone—Do it with PERFECT ACCURACY and on any desired bevel.

Knives so ground cut easier and last longer. The grindstone is kept perfectly true, by using occasionally, the steel cutting roll, E, which is sent with every machine.

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The Williams Bros'. M'f'g Co., Makers,
Glastonbury, (Naubuc P. O.) Conn.

EXPANDED METAL

(PATENTED THROUGHOUT THE WORLD.)

This product is made of the BEST QUALITY OF MATERIAL by a new and novel process forming a

SOLID STEEL FENCING MATERIAL

DURABLE, RIGID, ORNAMENTAL and MODERATE IN COST.

It is designed for Suburban Residences, Farm Buildings, Verandas, Gardens, Lawns, Poultry Yards, Chicken Houses and Coops, Church Premises and Cemetery Lots. Also for Window and Skylight Guards, Grape Arbors, Trellises, Tree Boxes, Signs, Office Rail, Door and Car Mats, and everything usual to METALLIC-LATTICE or WIRE WORK.

SEND FOR ILLUSTRATED CATALOGUE.

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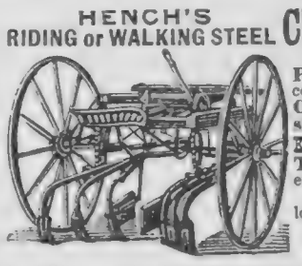
DEDERICK'S HAY & COTTON PRESSES,

are sent anywhere on trial to operate against all other Presses, the customer keeping the one that suits best. No one has ever dared show up any other Press, as Dederick's Press is known to be beyond competition, and will bale with twice the rapidity of any other. The only way inferior machines can be sold is to deceive the inexperienced by ridiculously false statements, and thus sell without sight or seeing, and swindle the purchaser. Working any other Press alongside of Dederick's always sells the purchaser a Dederick Press, and all know it too well to show up. Address for circular and location of Western and Southern storehouses and Agents.

P. K. DEDERICK & CO., Albany, N.Y.

HENCH'S RIDING or WALKING STEEL CULTIVATORS



With Double Row **Corn Planter and Fertilizer** complete in one machine. **Crowned with Medals since 1879.**

KING of the CORN FIELD Thousands in use giving entire satisfaction.

Agents wanted. Catalogues free. Name this paper
HENCH & DROMGOLD,
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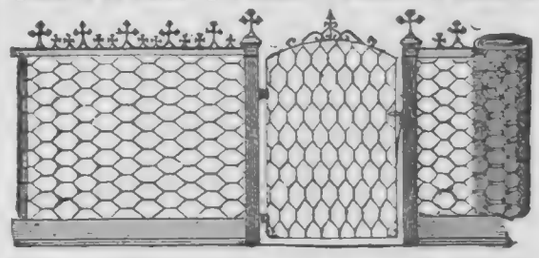
SEDGWICK STEEL WIRE FENCE



Best Fences and Gates for all purposes. Free Catalogue giving full particulars and prices.

Ask Hardware Dealers, or address, mentioning this paper,

SEDGWICK BROS. Richmond, Ind.

BROWN SWISS CATTLE

FOR SALE—My small but select Herd of BROWN SWISS, consisting of 12 Cows from 3 to 10 years old, and the magnificent 2-year-old Bull *Cicero Tell*, also one Bull and two Heifer Calves. All registered in Brown Swiss Herd Book. Would like to sell entire herd to one party. Address H. W. WINDRAM, 24 Lincoln Street, Boston, Mass

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HORSES! OXEN! COWS!

If you own Live Stock why not protect it in **American Stock Growers' Association** (incorporated), which pays benefit upon the death from sickness or accident, of animals protected. Send for blank applications. Agents wanted. Address **Live Stock Association,** Spencer, N. Y.

"Acme Bail" & "Boss Churns"

Make more butter, better butter, churn easier and clean easier than any other churns.

The "BEST WASHER" is warranted to wash collars and wristbands clean Special terms to introduce. Descriptive circulars free.

H. H. PALMER & CO.
120 Mulberry St.,
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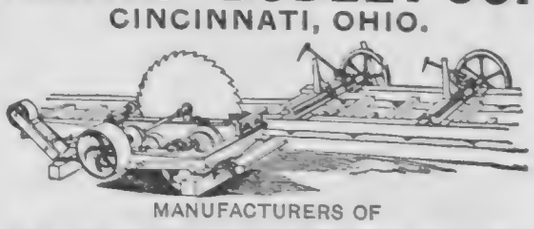
THE LANE & BODLEY CO.

CINCINNATI, OHIO.



MANUFACTURERS OF

SAW MILLS AND ENGINES

NOW IS THE TIME TO BUY. SEND FOR CIRCULARS. AN EXPERIENCE OF THIRTY YEARS PERMITS US TO OFFER THE BEST.

PILES.

Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository. Sufferers will learn of a simple remedy FREE by addressing
TUTTLE & Co., 78 Nassau Street, New York City

APOPLEXY, pneumonia, rheumatism are prevented and removed by Warner's Safe Cure. Why? Dr. Geo. Johnson of King's College, London, England, says: "There is wide-spread enlargement of the muscular walls of the small arteries in chronic Bright's Disease, not only in the arteries of the kidneys, but also in those of the pia-mater (investing membrane of the brain), the skin, the intestines and the muscles, as a result of a morbidly changed condition of the blood due to kidney disease." If the kidney disease is not cured, apoplexy, pneumonia or rheumatism will result. Warner's Safe Cure does cure kidney disease, thus enabling them to take out of the blood the morbid or unhealthy matters.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

NEW HAMPSHIRE LAW OF DESCENT OF A DECEASED INTESTATE'S ESTATE.

L. T. S, Rumney, N. H.—What is the law in this State regarding the distribution of real and personal property where the owner dies intestate, leaving a wife but no children? The property consists of two good, well-stocked farms with buildings, in different parts of the State, and considerable money in various investments.

ANS.—The New Hampshire law for the distribution of the estate of a deceased intestate provides that the judge of the Probate Court may make to the widow a reasonable allowance out of the personal estate for her present support. She is also to be endowed of so much of her husband's real estate as will produce a yearly income equal to one-third of the yearly income of the whole. She is entitled to so much of the homestead occupied by the family as shall not exceed $500. Where the deceased husband has left no children or issue of any, the widow is entitled to receive, in addition to this dower and homestead, one-half of the personal property left after the payment of debts. By releasing her rights of dower and homestead, she becomes entitled to receive, instead of these, one-half of the real estate in fee, of which her husband died seized. The real estate, subject to these rights of the widow, goes, in the absence of issue, to the father of the deceased, if he is living. If the father is dead, it goes in equal shares to the mother, brothers and sisters of the deceased and their representatives. In the absence of any such relatives, it goes, in equal shares, to the next of kin. The residue of the personalty, after the widow's rights are satisfied, goes in equal shares to the same persons who take the residue of the real estate.

PENALTY FOR SELLING INTOXICANTS AT AGRICULTURAL FAIRS IN OHIO.

L. M., Newark, Ohio.—To settle a dispute, what is the law with regard to the sale of intoxicants at or near a farmers' fair in this State?

ANS.—In Ohio a judge of any court, sheriff, coroner, justice of the proper county, or a constable of the proper township especially appointed, shall, upon view or information, without warrant, apprehend any person selling intoxicating liquors in violation of law at or within two miles of the place where an agricultural fair is being held, and seize the booth, tent or wagon, carriage, stand, vessel or boat at or from which such liquors are being sold, and convey the same to a place of safe-keeping and take the person so offending before some officer having jurisdiction, together with an inventory of the things so seized, and the officer before whom such an offender is brought shall proceed forthwith to inquire into the truth of the accusation. The articles so seized shall be bound for the payment of all fines and costs assessed against the accused in the proceeding, including the necessary expenses of seizing and detaining the same, and shall remain in possession of the officer who has made the seizure until the determination of the prosecution, and may be sold on process issued against the accused.

RESPONSIBILITY FOR DEFECTS IN A HIGHWAY.

L. T. M., Kingston, N. Y.—A short time ago, while driving along a public road at night my horse stumbled and fell into an excavation made in the road. There was no lighted lamp or other visible warning for travelers. My light wagon was damaged and I was thrown out and injured rather seriously. Who is responsible for damages?

ANS.—Every city, town or township is liable for damages for injuries caused by its neglect to keep the streets, roads and bridges in proper repair, or for making repairs in such a careless manner as to subject others to injury. Thus, as in the present case, if there is a dangerous hole in the highway, and a person or his horse, using ordinary care, steps into it and is injured, the town is liable for such injuries. In the present case there is no doubt on this point. The person suffering the injury should not contribute towards it by his own act. Thus, if he knew the road to be dangerous, he should advance with great caution, or if there is another road that will serve his purpose, convenient, he must use it to avoid danger.

WATER PRIVILEGES ON ANOTHER'S LAND.

"Subscriber," Michigan.—A owns a farm in this State on which a pond is situated. Its outlet or raceway for about 200 feet runs across A's land and then down to the mill through B's land. B, the owner of the mill, holds a deed couched in the following language: "and a dam and mill pond to be used as a water privilege for a mill." Has A the right to enter upon the pond and cut and carry off the ice or allow others to do so? In fact who owns the ice?

ANS.—Here are a dam and mill pond on A's land from which a race-course runs into land owned by B, which has been purchased with the privilege of using the dam and water as a water privilege for a mill. A is entitled to make any use of the pond not inconsistent with B's water privileges. Unless cutting the ice would injure the water power, by diminishing the flow through the race-way, A may cut for himself or lease the right to others. B has no such right, and it can be derived only from A who owns the fee.

DESCENT OF A WIFE'S PROPERTY.

S. M. L., Watertown, N Y.—1. Can a married woman will her entire personal property as she chooses, giving no part of it to her husband? If not how is her will limited? 2. If she should die without having made a will, and after having had living children, what disposition does the law make of her real and personal property? 3. Can a married man will his entire personal property away from his wife?

ANS.—1. 3. In this State a married woman may dispose of her personal property, in whole or part, by will as she chooses, giving her husband no share therein. A married man has the same privilege with regard to his wife. 2. If a married woman die intestate leaving a husband and children by him, the husband has a life interest in the real estate, the fee going to the children in equal parts; that is, the property goes to them equally after their father's death. One-third of the personal property goes to the husband, and two-thirds to the children in equal parts.

A WIDOW'S RIGHTS OF INHERITANCE FROM AN INTESTATE HUSBAND.

R. H. T., North River, N. Y.—If a man dies without having made a will, can the wife hold one-third of the property that she helped to get; or can the other heirs take all leaving her penniless?

ANS.—If a man dies intestate in this State his widow is entitled to a life interest in one-third of his real estate whether any children were ever born to them or not. Of the personal property one half goes to the widow and one half to next of kin; but if there is no parent, brother or sister, nephew or niece, the widow takes the whole of the personal property. If there be a brother or sister nephew or niece, and no parent, the widow is entitled to one-half the personality and to the whole of the residue if it does not exceed $2,000; if the residue does exceed $2,000, she is entitled, in addition to her half, to $2,000, and the remainder is to go to the brother or sister, nephew or niece.

S. M., Genera, N. Y.—I left three farm wagons in a shop for repairs together with some harness. The shop and my goods were burnt. There was a policy of insurance on the former; but in it no reference was made to goods held in trust or for repairs. Can I collect the value of my property?

ANS.—Unless there was insurance directly or by implication on property other than that owned by the shop-keeper, there can be no claim for the loss described and it falls on our inquirer.

Miscellaneous Advertising.

MANLY PURITY AND BEAUTY

CUTICURA REMEDIES CURE SKIN AND BLOOD DISEASES FROM PIMPLES TO SCROFULA.

NO PEN CAN DO JUSTICE TO THE ESTEEM IN which the CUTICURA REMEDIES are held by the thousands upon thousands whose lives have been made happy by the cure of agonizing, humiliating, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, are a positive cure for every form of skin and blood disease, from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c. RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., Boston, Mass.

Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

Rheumatism, Kidney Pains and Weakness speedily cured by CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster.

PEERLESS DYES Are the BEST. SOLD BY DRUGGISTS.

"EDITOR'S BACK STAIRS."

THE INTERESTING VIEWS OF THE LATE DR. J. G. HOLLAND.

THE columns of the newspapers appear to be flooded with proprietary medicine advertisements. As we cast our eye over them, it brings to mind an article that was published by the late Dr. Holland in Scribner's Monthly. He says: "Nevertheless, it is a fact that many of the best proprietary medicines of the day were more successful than many physicians, and most of them, it should be remembered, were at first discovered or used in actual medical practice. When, however, any shrewd person, knowing their virtue, and foreseeing their popularity, secures and advertises them; then, in the opinion of the bigoted, all virtue went out of them."

Is not this absurd?

This great man appreciated the real merits of popular remedies, and the absurdity of those that derided them because public attention was called to the article and the evidence of their cures. If the most noted physician should announce that he had made a study of any certain organ or disease of the body, or made his sign larger than the code size, though he may have practiced medicine and been a leader in all medical counsels, notwithstanding all this, if he should presume to advertise and decline to give his discovery to the public, he would be pronounced a quack and a humbug, although he may have spent his entire life and all his available funds in perfecting his investigations.

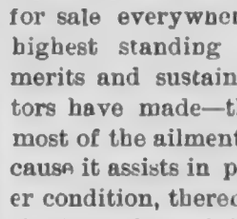
Again we say, "absurd."

If an ulcer is found upon one's arm, and is cured by some dear old grandmother, outside of the code, it will be pronounced by the medical profession an ulcer of little importance. But if treated under the code, causing sleepless nights for a month, with the scientific treatment, viz., plasters, washes, dosing with morphine, arsenic and other vile substances, given to prevent blood poisoning or deaden pain, and yet the ulcer becomes malignant, and amputation is made necessary at last, to save life, yet all done according to the "isms" of the medical code, this is much more gratifying to the medical profession, and adds more dignity to that distinguished order than to be cured by the dear old grandmother's remedy.

This appears like a severe arraignment, yet we believe that it expresses the true standing of the medical profession in regard to remedies discovered outside of their special "isms." One of the most perplexing things of the day is the popularity of certain remedies, especially Warner's Safe Cure, which we find for sale everywhere. The physician of the highest standing is ready to concede its merits and sustain the theories the proprietors have made—that is, that it benefits in most of the ailments of the human system because it assists in putting the kidneys in proper condition, thereby aiding in throwing off the impurities of the blood, while others with less honesty and experience deride, and are willing to see their patient die scientifically, and according to the code, rather than have him cured by this great remedy.

Yet we notice that the popularity of the medicine continues to grow year by year. The discoverer comes boldly before the people with its merits, and proclaims them from door to door in our opinion much more honorably than the physician who, perchance, may secure a patient from some catastrophe, and is permitted to set a bone of an arm or a finger, which he does with great dignity, yet very soon after takes the liberty to climb the editor's back stairs at 2 o'clock in the morning to have it announced in the morning paper that "Dr. So-and-so was in attendance," thus securing for his benefit a beautiful and free advertisement.

We shall leave it to our readers to say which is the wiser and more honorable.



RUPTURE

Can be CURED by DR. SANDEN'S ElectricTRUSS

Warranted BEST Truss made, to CURE all Curable cases or Refund Money. Only Genuine Electric Truss in World. Perfect Retainer, Gives instant relief, speedy cure Ease and Comfort day and night. This New Invention combines science, durability and power. Price $3 & $5. Illus. pamphlet free.

THE SANDEN ELECTRIC CO. 842 Broadway & 12th St. NEW YORK

Nickeled Self-Inking Stamp, pen & pencil Any name in Rubber, 20 cents. Club of 7, for $1 bill. Marks anything. Name, Town & State on, 25c. Club of 7, $1.35 Pint writing or stamp Ink Free with club orders

The Rubber Stamp Co. New Haven, Conn

Estab. 1876. Best references. Store & factory, 11 & 13 Center St.

MUSIC SELF TAUGHT. PROF. RICE'S SELF-TEACHING SYSTEM. All can learn music without the aid of a teacher. Rapid, correct. Established 12 years. Notes, chords, accompaniments, thorough bass laws, etc. Stamp for Music Journal. Circulars free. G. S. RICE MUSIC CO., 248 State St., Chicago.

GENUINE PHILADELPHIA. 1889. PRICES REDUCED!

Fourteen Sizes and Styles for Hand Use. Weighing from 21 to 51 lbs. THREE SIZES FOR HORSE POWER. Lawn Sweepers, Grass Edgers, &c.

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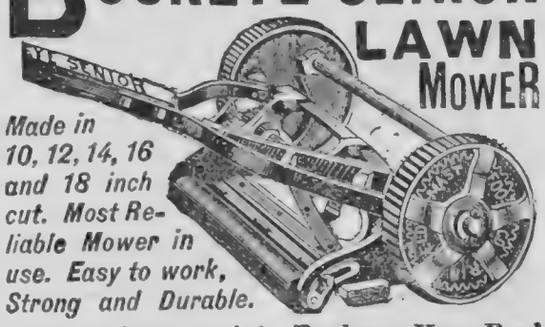

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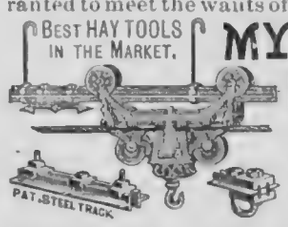

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FREDERICK T. ROBERTS, M. D., Professor in the University College, London, Eng., Examiner in the Royal College of Surgeons, calls attention to the fact that head-ache, dizziness, bronchitis, inflammation of the lungs, derangements of the digestive organs, are common symptoms of kidney disease. Warner's Safe Cure cures these symptoms by removing the cause and putting the kidneys in a healthy condition.

CATALOGUES, ETC., RECEIVED.

THE ROSE GARDEN, by William Paul & Son, Waltham Cross, London, England. The first edition of this magnificent work was written 40 years ago. Much of the present (ninth) edition is rewritten. To express it in familiar words, this book is 12 x 10 inches in size, 365 pages, large, clear print upon heavy paper of the finest quality. There are 20 strikingly beautiful colored plates of our finest garden roses, 16 full-page wood engravings and 80 smaller engravings. The work is in two divisions. The first embraces the "History and Poetry of the Rose, the Formation of the Rosarium and a Detailed Account of the Various Practices Adopted in the Successful Cultivation of this Popular Flower."

The second division contains an "Arrangement, in Natural Groups, of the most esteemed varieties of roses recognized and cultivated in the various rose gardens, English and foreign, with full Descriptions and Remarks on their Origin and Mode of Culture."

Finally, in an appendix are two valuable articles on, first, "The Botany of the Rose," illustrated, and, second, "The Entomology of the Rose," also illustrated. The book closes with a list of "Works on the Rose with Date of Publication and Author's Name," and a plain, comprehensive index. It is bound in cloth and the price is $5.10—21s. The same work (Imperial 8vo., illustrated with wood-cuts only) is $2 55—10s 6d. This is probably the finest work of the kind ever published.

LADOGA WHEAT.—This is the general subject of bulletin No. 4 of the Canadian Experiment Station, sent by Wm. Saunders, Ottawa, Canada. There is no problem that more vitally concerns the future of Canada than that of evolving early-ripening varieties of hard wheat and other grains. The soil of the great plains of the Northwest is so liberally supplied with fertility that its productive capacity can hardly be estimated. But with this vast store of fertility is coupled a season so short that the ordinary varieties of wheat are, in the majority of instances, killed by the frost. Nature has distributed her favors with a just hand. She has given to the cold North, with its short season of warmth the power to produce wheat of the highest quality, absolutely necessary in the production of the finest flour. If, then, a wheat can be found that combines with the finest flouring quality an ability to ripen before the danger from early frosts, the agriculture of the Northwest will be safe and permanent, because it can monopolize a product that is an absolute necessity. This is about the reasoning of the directors of the Canadian Experiment Station. They decided that the Ladoga wheat—a native of Northern Russia—gives the best promise of all varieties they could find. Samples of this wheat were sent to various parts of Canada and this bulletin deals with the facts brought out by this distribution, chemical analysis of the wheat and other tests. The conclusion seems to be that the wheat is well worth trying and that it will doubtless adapt itself to the demands of Canadian agriculture.

WILLIAMS'S MOWER AND REAPER KNIFE-GRINDER.—Circular from the Williams Brothers' Manufacturing Company, Naubuc, Conn. This machine is so simple that a boy can grind machine knives with perfect accuracy. With this machine the bevel of knives can be adjusted readily and every knife ground on the same bevel, or otherwise, as desired. This appears to be a very useful little machine, and we hope our readers will send for the circular and see what they think of it.

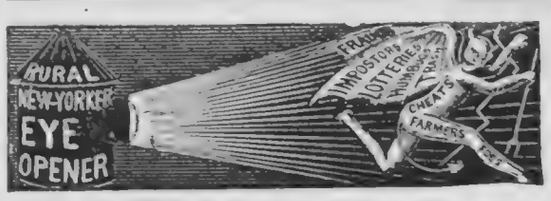
RECORDS OF DAIRY COWS.—Bulletin Number 32 of the Massachusetts Experiment Station. This is quite an important dairy publication. In many respects, the experiment it records is unique and so directly in the line of practical dairy usage that it points out a startling truth. It was proposed to copy, as far as possible, the conditions found on the average milk dairy farm. Twelve cows, grades of the different breeds, were bought as soon after calving as possible. They were milked until their daily yield of milk fell below five or six quarts when they were sold to the butcher. Thus two cows cost from $57 to $72, while they sold for $25 to $35 each. A careful record was kept of the food consumed, the milk yielded, and weights of the cows at different periods. The result is that we have a series of very important figures showing the relative profit of each cow, and the cost of milk from such a herd.

We desire in this review simply to call attention to a few points of particular importance. The bulletin is of such value that every milkman who buys and sells cows ought to have it. Before giving any comparative figures, we may say that the milk was sold at three cents per quart. The profit of the cow is reckoned as follows: The original cost of the cow is added to the cost of her feed. This sum is subtracted from the sum of money obtained from the milk produced by the cow and the price obtained for her from the butcher. The value of the manure was estimated at the usual rating given by the chemists for the food, less 20 per cent. taken by the milk. For example; one cow ate $59 worth of food. It was estimated that her manure was worth $22.27. As the value of manure is so greatly dependent upon the care that is taken of it, it is hardly fair to give this value without explanation.

Of the 12 cows two were grades of the Jersey, two of Short-horn, one of Devon, five of Ayrshire, one of "Dutch," and one native. The cow giving the best returns, exclusive of any valuation for the manure, was an Ayrshire. This cow was milked 584 days. She cost $60 originally, gave milk valued at $203.37, consumed food worth $135.05 and sold finally for $28. A Jersey cow, eight years old, was milked 599 days, but her milk yield was less than that of the Ayrshire. Perhaps she would have made more butter, however. This cow cost the same as the Ayrshire, but sold for $3 less. The poorest cow in the lot was a Short-horn grade. She gave only $75.83 worth of milk, and ate $80.08 worth of food. Taking the cash profits of the cows, exclusive of the manure, it is found that one cow paid over $35, two over $20, five over $15, two over $10, one under $5, while one lost $34. Nine out of 12 therefore made a profit of below $20. The one bad cow that lost $34 reduced the average of the entire herd. Is there any such cow in your herd? Two cows were bought on the same day, sold on the same day, and fed the same quantity of grain. They were of the same age also. The cows were milked 374 days. Here is the record.

	COST	SOLD FOR	QUARTS MILK	LBS. GRAIN	HAY	PROFIT	VALUE OF MANURE.
Jersey.....	$63.	$25.00	3,724	1,947	4,228	$12.73	$22.27
Ayrshire....	$65.	$26 50	4,063	1,947	5,122	$17.75	$24.69

GIDDINGS & READ, RUTLAND, VERMONT.—A variety of field corn called the Giddings is said to have been carefully selected from and improved during the past 100 years. It is represented as "the most perfect type of corn grown in this section" and certain to mature in the most unfavorable seasons. This catalogue offers a first rate list of potatoes among which are Albino, Summit, Gov. Foraker, Mrs. Foraker, Crown Jewel, Nott's Victor, Delaware, Ben. Harrison, Rogers's Seedling, etc., etc. The catalogue itself, which will be sent to our readers on application, must be examined for descriptions.



THE SAME OLD STORY, with hardly a variation. Victim, farmer Daniel Keller, aged 70, the owner of several fine farms in the neighborhood of Bear Gap, Northumberland County, Pa. Time, last Monday. Loss, $4,700. A week before the close of the play a well-dressed, middle-aged stranger of engaging manners called on Keller and said he wanted to buy a farm. Keller showed him about one of his; but the deal hung fire and the agreeable stranger remained at the farmhouse as a guest. Last Monday a well-dressed young man appeared on the scene in the character of a son of John B. Packer, President of the Bank of Sunbury. He wanted to buy a Short-horn bull. Keller invited the two strangers into the parlor, and in course of a pleasant conversation, the last comer produced a pack of cards, and proposed to show the others a fine trick. He selected the ace of spades and two spot cards and began tossing them about, face down. The trick was to select the ace.

The original stranger tried his hand with varying success, and then the self-styled Packer said he would bet $5,000 that neither of his companions could pick out the right card. At this Stranger No. 1—who, of course, was a perfect stranger to Stranger No. 2—picked up the winning card, gave the wink to his friend Keller, bending the end of the card so as to leave a slight crease. "I'll go you $5,000 on that," said the farmer, who had by this time become greatly excited at the sight of a certain way of scooping in a large sum in a moment. The cards were again thrown and Keller picked up the creased one and turning it over, exclaimed: "There you are: now pass over the money." The young man frankly acknowledged that he owed the farmer $5,000 and produced a big roll of what appeared large bills, to show that he was prepared to pay it.

"You can't have it, however," said he, "till you show you made the bet in good faith. Show up your dust so that I can see you could have paid me had I won in place of yourself." Keller said he had the money all right, and after rummaging different hoarding-places in the house, laid $4,700 on the table. Quick as a flash, his old friend, Stranger No. 1, whipped out a revolver and sticking the muzzle against the old man's pallid brow, swore he would blow his brains out if he uttered a cry or moved hand or foot. The other man grabbed the money and fled. Then his pal, still covering the victim with his revolver, backed to the door, passed out, closed it, and sped away after his confederate. When old Keller had recovered enough to make his way to Sunbury, no trace could be discovered of the rascals. Does 70-year-old farmer Keller take the RURAL? Certainly not. If he did, he would now be vastly richer in general knowledge and $4,700 richer in cold cash.

A DEVICE for swindling farmers, that has of late been pretty extensively practiced in some parts of the country is the following: An offer is made of nursery stock, which need not be paid for till it bears fruit, when pay will be taken in fruit. Nothing could be fairer, eh? No fear then of losses from growing plants untrue to name! Of course, however, a note is incidentally required, merely as "a matter of form;" and to insure that it shall not pass to strangers, the words "Not transferable," are boldly written on the face of it. In spite of all, however, it is sent back for collection by some "innocent holder;" but now the words written boldly on its face are "Note transferable," so that it has become "negotiable paper." As a rule, some bold bluffing by a smart lawyer soon exacts payment; but it is very doubtful whether any jury would render a verdict in favor of such a clear case of swindling.

"CURWIN'S HOG-POWDER," puffed up by a Pennsylvania humbug as "sure cure" for swine plague or cholera, has been analyzed by Dr. G. C. Caldwell, Chemist of the National Agricultural Experiment Station, at Ithaca, N. Y., and he says the mixture consists substantially of 78 per cent. of common salt, the rest being sulphur, charcoal and copperas. The whole would be worth only 25 cents per pound, and, as Director I. P. Roberts remarks, if these substances could do what is claimed for them, "hog cholera" would have been wiped out of existence years ago, "for they have all been fed in large quantities to hogs for this very purpose."

Miscellaneous Advertising.

Chest Pains, Coughs and Colds, Weak Lungs, Backache, Kidney Pains, Rheumatism and all Muscular Pains, **relieved in one minute** by the first **Cuticura Anti-Pain Plaster,** and only instantaneous pain killing, strengthening plaster. 25 cts.; 5 for $1. At druggists, or of POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

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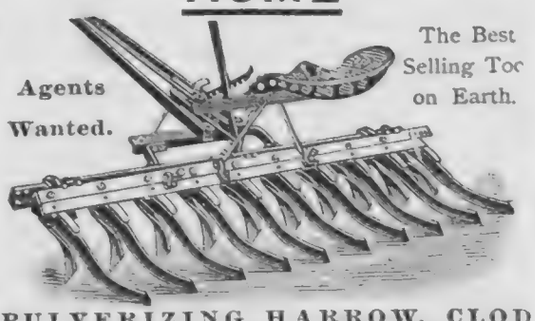

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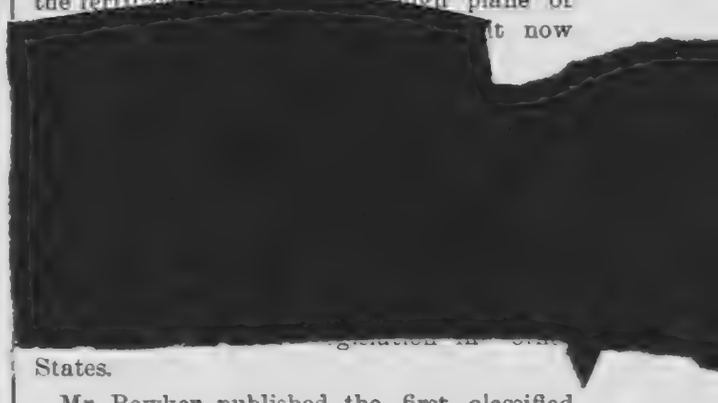
FERTILIZER MANUFACTURE.

A WONDERFUL CHANGE IN FIFTEEN YEARS.

IT is hardly possible to realize the great progress which has been made in the fertilizer business during the past fifteen years. In 1871 Dr. James R. Nichols, speaking before the State board of agriculture, said he had investigated seventeen of the most popular superphosphates and found that the difference between their plant-food value and their selling price gave an average loss to farmers, upon every ton purchased, of $4 90, and he added. "I have reached the conclusion that it is impossible for manufacturers to supply . . . any compounded fertilizer so as to give the farmer a just return for his money."

The following year the president of the agricultural college—Hon. Wm. S. Clark—at the State board meeting grouped in one class horse jockeys, rumsellers and fertilizer manufacturers.

During these years a young man had graduated from the Massachusetts agricultural college and started in the manufacture of fertilizers. He was a farmer's son who had worked his way through college fitting himself especially for this business. This young man—Mr. W. H. Bowker—started out with the idea that the manufacture and sale of commercial fertilizers was as legitimate and honorable business as any, if honestly conducted. The late Capt John Moore of Concord, Mass., voicing the sentiment of the time told him: "If you remain honest one year you will do more than any other man who has gone into the business;" yet he persisted in his course and to-day can claim the honor of having been one of the prime factors in the great change that has taken place both in public sentiment and in the uniformity and the reliability of commercial fertilizers. As the New England *Homestead* very justly says: "Mr. Bowker has been a power in elevating the fertil[illegible] high plane of [illegible] now



States.

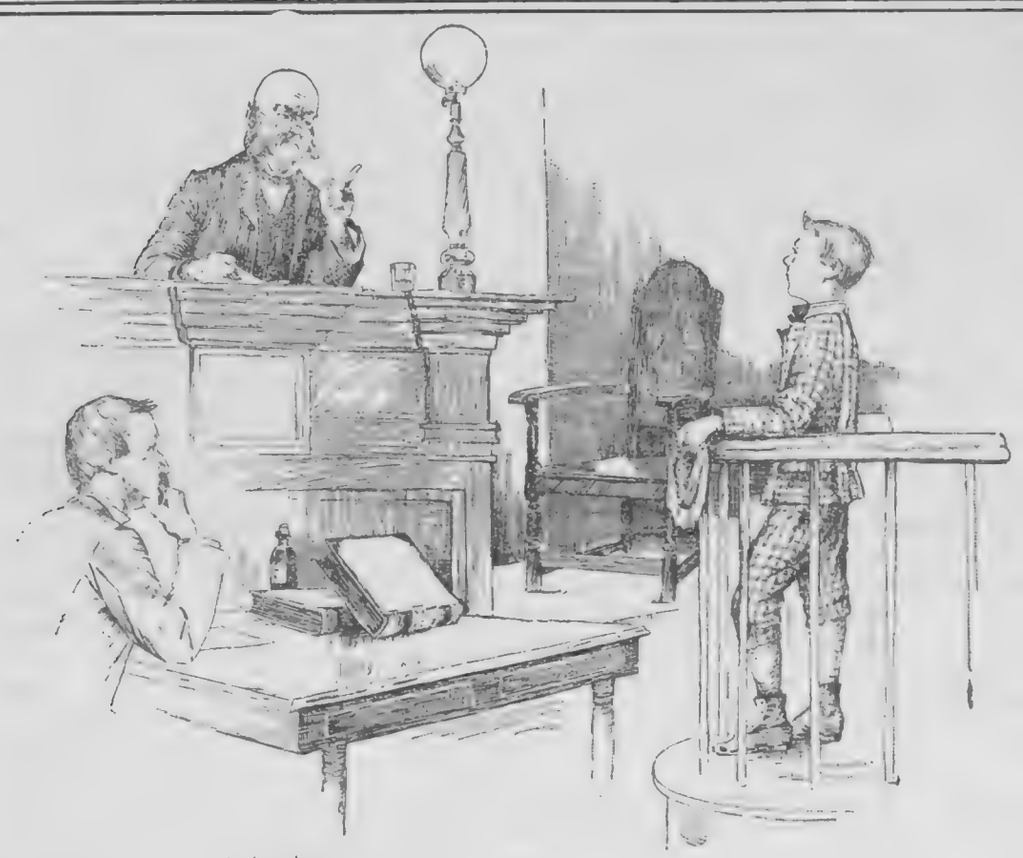
Mr. Bowker published the first classified agricultural chemical price list in the country, and sold the first muriate and sulphate of potash to farmers in New England, and also introduced sulphate of ammonia for agricultural purposes.

Probably no one in the business has been consulted more by experiment stations or has supplied so many chemicals for experimental purposes. Only recently his concern has been favored with a large order from Secretary Rusk of the United States Department of Agriculture at Washington to be used in carrying on important experiments with reference to peach yellows.

It would take quite a chapter to show what the Bowker company and its energetic founder have done to place the business on a good footing, for it is one of the most progressive concerns in the country in the fertilizing business and has been alive to every new improvement.

The great work, however, of this company has been the introduction of special manures under the name of Prof. Levi Stockbridge, which at first was much ridiculed, partly because they were the first manufactured fertilizers that contained potash; but the principle is now recognized by practical and scientific men as being the only rational basis of fertilization.

The Bowker company is also undoubtedly as well equipped as any concern in the country to do the business. It has two large factories, it manufactures its own sulphuric acid, has its own steamboat in New York harbor and a large phosphate mine in Canada. Its sales have grown from 125 tons in 1873, (which Mr. Bowker, assisted by Mr. L. A. Sparrow the present chemist of the company, personally manufactured and sold), to over 30,000 tons in 1888, or 100 tons for every working day of the year. We have watched the progress of this concern from the beginning, and it is a pleasure to note its success. Its efforts have been justly appreciated by the farming public, for it was the pioneer company to put the business on a scientific basis, stating what it sells and selling what it states. Mr. Bowker has by his methods on his merits won a prominent position in the agricultural world, both as one of the trustees of the State college and as a writer and speaker on agricultural topics.—*New England Farmer.*



BOTH IGNORANT.

JUDGE: "Do you know where you will go to, little boy, if you swear to what is not true?"

BOY (of radical tendencies): "No; nor you either."

Humorous.

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"I OFTEN cut my oldest acquaintance," said the buzz saw, as it took off a mill-hand's finger.—*Nebraska Farmer.*

MAMMA: "Well, did you tell God how naughty you have been?" Lily: "No, I was ashamed. I thought it had better not get out of the family."—*Life.*

CHICAGO YOUTH: "My home, which is in the skirts of the city—" Boston spinster: "Sir! Your language is unfit for the presence of ladies."—*Indiana Farmer.*

GERMAN PROFESSOR (to young American): "You don't musht make yourself drouble to speak Cherman by me; ven you shpeak English, I know your *meanness* ferry vell."—*Harper's Monthly.*

LITTLE TOMMY: "Ma, wouldn't it be nice if you had the toothache, 'stead of Bridget?" Mrs. Blueblood: "Why, my son?" Little Tommy: "'Cause you take your teeth out; she can't."—*Ohio State Journal.*

WALES: "I suppose women are all alike. My wife is always coming to me for money." Albert: "What does she do with it?" Wales: "She doesn't do anything with it; I never give her any."—*Boston Beacon.*

"BESSIE, I hear your sister is sick. What ails her?" "I don't know, ma'am. Maybe it's the diploma." "The what, child?" "The diploma. I heard mother say that she took it at school."—*The New York News.*

ELEMENTARY MATHEMATICS.—Teacher: "Tommy, what is half of eight?" Pupil: "Sideways or top?" Teacher: "What do you mean?" Pupil: "Why, half from the top of 8 is 0 and half sideways is 3."—*Time.*

FATHER: "There, Willie, is the old historic birch rod, nailed over the teacher's desk, which tanned my hide twenty years ago." Willie (uneasily): "Are you sure it is nailed perfectly tight, papa?"—*Burlington Free Press.*

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Biographical.

THE ASSISTANT SECRETARY OF AGRICULTURE.

EDWIN WILLITS, whose appointment as Chief Assistant to Secretary of Agriculture Rusk was recorded in the RURAL two weeks ago, was born at Otto, Cattaraugus county, N. Y., in 1830. When he was six years old his parents moved to Michigan and in that State he has since resided. He graduated from the Michigan University in 1855, and at once applied himself to the study of law. He has always been a marked figure in public life, filling various official positions with credit. He was elected to the 45th Congress and served his district three terms with marked ability.

In 1882, Mr. Willits was elected principal of the State Normal School. On the resignation of President Abbot, of the Michigan Agricultural College, Mr. Willits was at once selected to preside over that institution. As president he has proved himself to be an able organizer and a thorough instructor. Perhaps the best idea of his success may be gained from the following resolution passed by the Michigan State Board of Agriculture:

Resolved, That in accepting the resignation of President Edwin Willits, the Board of Agriculture desires to place on record its appreciation of his faithful, intelligent and earnest labor in behalf of the Michigan Agricultural College. Under his administration there has been a continuous, progressive movement in college affairs, and while we, from the first, have had confidence in his ability to wisely manage the diversified interests entrusted to his care, we have been more than gratified with the success attending his enthusiastic and discreet efforts to broaden the scope of the college, and intensify its methods of popularizing industrial education, awakening the people of our State to an appreciation of the value of scientific attainments as an accompaniment of rural life. We recognize his ability to fill creditably the position of Assistant Secretary of Agriculture to which he has been called, and while we sincerely regret the loss to our college occasioned by his resignation, we can but feel complimented by his selection for so important a government position, and we congratulate the Administration on the wisdom of its choice.

In closing the relationship which has continued so pleasantly and profitably, our hearty good wishes will follow our retiring president in his new field of labor. Although he may follow new and broader avenues of usefulness, and make a larger acquaintance with the necessities of agriculture and means of meeting them, he will always be kindly remembered by the Agricultural College of Michigan as having given an added impetus to the progressive movement. CHAS. W. GARFIELD,
CYRUS G. LUCE,
WM. B. MCCREERY."

We show an excellent likeness of Mr. Willits at Fig. 97. We like his face. It is sound, honest and manly. The R. N.-Y. gives the new Assistant Secretary its very best wishes, and expresses the hope that he may be as successful in his new field of labor as he has proved himself in past duties and responsibilities.

On the editorial page of this issue will be found some extracts taken from a recent letter from Mr. Willits. May the hopes expressed in the letter be fully realized.

Dairy Husbandry.

HOW TO ADJUST PROF. F. G. SHORT'S SAPONIFYING OIL-TEST OF MILK TO THE MILK DIVIDEND.

No. I.

IN the convention of the Vermont State Dairymen's Association, held about the middle of January, Mr. F. D. Douglas, said he thought testing instruments were deceptive, as they only tell the butter content in the sample of milk or cream; but do not tell what proportion of fat the churn can take out. Now, I suppose that is the truth, and the worst of it is, it will always remain true. In view of it, what shall we do—forswear all testing of milk or cream, and let all progress revert to chaos and take the injustice of the old way as an unavoidable evil, or act on the light we have, and get the approximate justice we may? Long before Prof. Short's process had been tested enough and perfected to justify its claims for public use, every clear-headed tester of milk for butter fat, knew that Prof. Short's process would no more define the churn-yield than does the old and complicated chemical analysis. The mixture of the alkali with the milk causes a complete separation of the elements held in mechanical emulsion, as that result is achieved in the economy of the cow, and therefore when the fat is abstracted by the admixture of acetic and sulphuric acids, a greater per cent of fat is obtained than is abstracted by the churn—as a rule—though there are very rare exceptional cows, or cows in exceptional conditions, that give cream that yields up in the churn very nearly all the fat that chemical analysis shows there is in the milk.

We are, therefore, driven to the point of testing all samples in the very best practicable way, and the excess in per cent. of fat shown by the test, over that actually produced by the churn, will have to be prorated among the patrons, according to the weight of milk of each. The bulk of the dividend will be a very close approximation to exact justice, and will draw the line sharply between good and poor butter-cows. The excess in test-yields over actual results from the churn, will be small in any event, varying only as the "churnability" of cream varies, and that variation is as likely to pertain to one breed as to another, to one herd as to another, to good cows as to poor ones, and it also varies from day to day in the same herd, and the same cow even; so in that particular, there is a factor that yields to no system of testing whatever, so far as we know. We are therefore in doubt whether any system can ever meet it in any other way than by prorating the difference; for the variation is made by the cows, and their varying condition caused by food, drink, breed, (perhaps) about that we do not certainly know—and by time from farrowing, and by the time they have been gestating. Methods of testing can take no cognizance of these facts, but proceed to separate the elements actually in the sample of milk tested, the same as it would if that were the only morsel of milk in all the universe. Treating a sample of milk the same as the cream of the big or co-operative churn is treated, so far as to age before churning, ripening and either churning and weighing the sample, or reducing it to oil after churning, *does not* help the matter; for there is no positive evidence about which we know anything, that the cream in the co-operative churn yields the same per cent. of butter that the test churn does. On the other hand, we have evidence conclusive enough, that the cream yields its butter in the big churn when it fails to do so in the sample through churning and melting. Because it would not, and never did, uniformly and reliably do so—notwithstanding all our hopes, and the hopes of others—is the reason why Prof. Short's semi-chemical analysis was and is hailed as a boon, and is coming to be more and more relied upon.

So we come back to the point that the per-cent. defined by the test is not and cannot be expected to be a strictly true definition of the per cent. the churn will yield. This comes from the fact that the big churn varies its yield from the absolute per cent. of fat in the milk, from day to day, and from the variation in the results of churning and melting the test samples. There is a "sliding scale" to both; and a hit to-day may be a miss to-morrow; and the miss is as likely to be a minus as a surplus quantity.

What then do we want when we find the big churn is subject to causes over which we have no control, and we cannot certainly tell whether it will excel or be deficient in normal years—to-day or to-morrow? Evidently we need to eliminate the other "sliding scale; the one in the testing—if we possibly can. This is done, substantially, in Prof. Short's test, because it takes out that proverbial "last wrung drop" of fat every time, for the reason that the alkali destroys the natural emulsion of the milk, and the after application of a mixture of acetic and sulphuric acids separates the essential oil from the saponified fat in the milk.

In the next article I will continue the discussion of this very important subject, about which far too little has been said by the dairy and agricultural press; being overlooked, I suppose, because so few make a study of it, though it lies at the basis of true progress in dairying, which waits on a correct way to equitably divide the actual avails from pooled milk at all our great factories.

WISCONSIN.

[R. N.-Y.—On page 461 of the RURAL for 1888 we gave a full description of Prof. Short's process. It promises to supersede most other methods for determining the butter value of milk, hence our readers will do well to study it.]

EDWIN WILLITS,

Assistant Secretary of Agriculture. From a Photograph. Fig. 97.

Farm Economy.

Cultivating Young Crops.

HARROWS AS HOES.

IN CORN AND POTATO FIELDS

Lessening Hand Labor

WHAT FARMERS THINK ABOUT IT

DURING the past few years, farmers have told remarkable stories about the work done by the harrow on young corn and potatoes. It has been claimed that a good harrowing, just after the plants pushed through the ground, has saved one cultivating and one hoeing, besides the advantage obtained from working the soil about the plants at a time when no other implement could have been used. The R. N.-Y. has asked a number of farmers to tell us what they think of this practice. Here we have their answers, presented without further comment:

FROM FRED GRUNDY.

I think it does not pay to harrow young corn or potatoes. When the smoothing harrow was first introduced many farmers bought it to use on young corn to keep weeds down, level and mellow the land, etc., as shown in the pictures and set forth in the circulars. They soon learned, however, that the advantages of the new and remarkable method of corn culture existed principally in the minds of the manufacturers of the implement. When the land was perfectly clear of all trash the smoothing harrow gouged out very little corn; but the trouble was that not one acre in 50 could be found in that condition. Some advocated thicker seeding and "reducing the surplus" with the harrow, but that proved to be a pretty "thin racket." The harrow would take out an entire hill here and there, pick two plants out of a hill of three and leave hills of six and seven untouched. I prefer to have three or four plants in each hill and the hills a proper distance apart.

Some farmers harrow corn land immediately after plowing, plant, then roll, and harrow over once or twice more. This leaves the land in fine condition for the cultivator; but should a heavy, beating rain follow soon after, the soil will pack almost as solid as a road, and it must be stirred again by some means before it bakes, or there will be tribulation. Other farmers simply harrow once or twice over after planting, and this is generally considered the best practice if the land has been pretty well pulverized before planting. It does not pay to plant on rough, cloddy ground and then harrow. When this is done clods are dragged on hundreds of hills and the plants are either entirely smothered, or pressed over to one side and ruined. Cloddy and rough land should be pulverized *before* planting. I always harrow potatoes just before the vines appear. It destroys all young weeds, levels the trenches off nicely and leaves the land in fine shape for the cultivator.

Christian County, Illinois.

FROM PROF. A. J. COOK.

It is my practice to harrow my corn ground before the corn is up and until it gets five or six inches high. I do not raise potatoes. I use a very broad fine-tooth harrow with the teeth slanting back. This does no damage to the corn even when the latter is well up. Indeed I plant very liberally in drills—about 12 quarts to the acre—so that it will bear thinning. I plant with a common grain drill, using the outside teeth only. The other holes are stopped up with small pieces of wood. In this way I can plant 12 acres in half a day; though this makes lively work. As I space every alternate row with my eye, of course I can plant twice as much space as I could drill of common grain. I do this, first, because it mellows the ground and the corn comes much better; second, because the young weeds are thereby killed so that they do not bother later, and I do not have to hoe at all. After this harrowing I use only the spring-tooth harrow. Nearly all the best farmers here practice this method. The practice is increasing. I consider it a very valuable reform on the old ways.

Ingham County, Michigan.

FROM CHAS. MC DANIEL.

In working growing corn with a harrow or a substitute, I have used Breed's Universal Weeder for the past two years on heavy and light soils, on corn and potatoes planted both in hills and drills, and for putting in grain and grass seed, and I find it better than the harrow because it costs less and is more easily handled. It requires only a light horse and is especially advantageous upon hill-sides for finally working small-grain land, or for the corn crop. In using it, it is immaterial whether a crop is planted in hill or drill.

Sullivan County, N. H.

FROM J. B. BASSETT.

My practice has been to go over my corn land as soon as it is planted, with the harrow, for two reasons:—first, it obliterates old marks indicating where the corn is, thus preventing the gophers or squirrels from finding it until it comes up; and, second, the harrow stirs the ground and to some extent kills the weeds, especially if it is a dry time. The potatoes we served in the same way, but for the latter purpose only. After the plants are large enough to allow me to follow the rows easily, I go through the rows twice each way with a double-shovel plow—the best tool that I can find. The advantage of this tool is that it kills the weeds (our great enemy) better than any other tool I have used. It is difficult to find any tool that will take the place of the hoe for hand work on very wet ground. I have used the Universal Weeder, and find it a very excellent tool to use when the ground is dry and before the rows can be well followed by the shovel-plow. This tool can be used when the ground is dry upon any land. It is useful only in the very early stages of growth, and before any other instrument is suitable for the work. It can take the place of hand work only when the plant is very small or before it comes up. We never resort to hand work in this State in corn, and seldom in potatoes, although I think it would pay in case of the latter. Upon the whole, there is no instrument that equals the shovel-plow for this region. Our great enemies are the weeds, and any invention that would prevent their growth or exterminate those that have appeared would almost to a certainty insure a good crop.

Hennepin County, Minnesota.

FROM E. B. TRUE.

It pays to harrow corn and potatoes if the land is in suitable condition, where the soil is fine and free from stones, sods, roots or lumps of manure. Where these are abundant and a careless man drives the team, the crop will be more or less injured; but if a careful man drives the team and does not let obstructions drag in the rows, a fine job can be done. I use a Thomas smoothing harrow made light for this purpose. If the land is in fine condition, the harrow can be used until the crop is five to six inches high. The advantages are the killing of the weeds and the keeping of the ground fine and mellow. Every one knows that the best time to kill weeds is just before they come through the ground, and in no other way can this be done so thoroughly and easily as with the harrow. Any farmer that undertakes to farm as our fathers did—entirely or nearly so by hand labor—will make a failure and will say "farming doesn't pay!" This method of using the harrow is not much in practice here, but some of the best farmers do use it with satisfaction.

Orleans County, Vermont.

FROM GEORGE W. P. JERRARD.

I have never used a harrow upon my corn or potatoes before they were up, to kill weeds. There is always an abundance of farm laborers to be had in this section, and I have preferred to have this work done by careful hand labor. I have watched the harrowing process on my neighbors' potato fields from time to time; but I have invariably noticed that by far too many sets are dragged out or sprouts detached or mutilated for the practice to go into my fields Somehow the harrow teeth seem unable to discriminate between the weeds and the valuable plants, and when one of the latter happens to be in their way it is very sure to be injured. I find it the best policy to have every kind of work done upon my growing crops in the best possible manner; then when the harvest comes it is a poor season when I fail to get abundant crops.

Aroostook County, Me.

FROM L. W. CURTIS.

I have harrowed my potatoes for 20 years—long before I had a smoothing harrow. Since I have had the latter implement I use it for both corn and potatoes. As I plant my potatoes very early and they are some time coming up I run the harrow over them before the vines appear, then again soon after they are up. I plant in drills, with the rows 2½ feet apart. In about a week or 10 days according to the weather, and the starting of the weeds, I run the cultivator through, and before they start again I run through with a Prout's horse-hoe. I then run through with a double-mold-board plow which will do about all the hilling needed; but if the weeds start again before the vines are too large, I run through with the horse-hoe again, set so as to hill more. If the rows are just far enough apart the plow works splendidly. With corn, I run the harrow before the corn is up, and then follow up with a weeder, unless the ground is very free from stones. If it is so, the harrow can be used until the corn is six inches high. If the ground is stony, the weeder is better, as it can be lifted over any obstructions, and can be used until the corn is one foot high. I then use the Prout's hoe as long as needed. If these machines have been used at a proper time—say, just as the weeds are breaking through the ground—there will be no further trouble with weeds. If I do not want to sow grass seed, I hill a little, and that covers all the weeds in the rows. One advantage of this system is that I use no hand labor, which costs too much. Another advantage is that one can choose a hot, dry sunny forenoon and go over all the ground, while if the work is done by hand, rain may overtake him, and the weeds may get large and grow all the better for the hoeing. I know of no soils on which one cannot use, at least, two of the implements named, and these used at a proper time and in a proper way will always take the place of the hand hoe. One should always remember that they must be used before the weeds get much of a start, otherwise they will often help the weeds along. They can be used in hill culture as well as in drill. They can entirely supplant hand labor. I never use the hoe to plant or cultivate after the crop is up. As I have said, I do not believe any farmer can afford to use hand labor as it is too expensive. A man must use his brains if he wants to succeed with a machine. A harrow or a weeder run over a piece of corn or potatoes on a hot, dry, sunny day at the proper time, will kill all the weeds; but if used on a wet day or after the weeds are up it is worse than useless.

Worcester County, Massachusetts.

FROM IRVING D. COOK.

It is each year becoming more a matter of doubt among Western New York farmers, whether it is advisable to attempt to grow corn at a profit, when we consider the fact that no other crop grown by us comes more in direct competition with those raised on the vast and cheaper lands of the West, and eventually laid down in our nearest markets at the prevailing low prices. And it is only as we adopt the best known methods for cheapening its production, in regard to the preparation of the soil, application of fertilizers, planting, mode of cultivation, etc., that we can expect to grow this crop with any degree of satisfaction or remuneration. At the present time the manner of cultivation is a matter of increasing interest and investigation. The old method of performing the season's work of cultivation with the old-time "crotch" style of cultivator, allowing the rear teeth to run deep among the tender rootlets of the growing plants, the trench thus formed being permitted to remain, allowing free admission of air and the scorching rays of the sun, thus parching the soil and tending more or less to injure or check the immediate growth of the plant, is by many considered unadvisable and injudicious. Consequently new methods are being devised, and one that attracts special attention at the present time, is that of harrowing for the earliest cultivation. The common prejudice existing against this seemingly "heroic treatment," has prevented its general adoption, and it is only in isolated instances that I know of its being practiced.

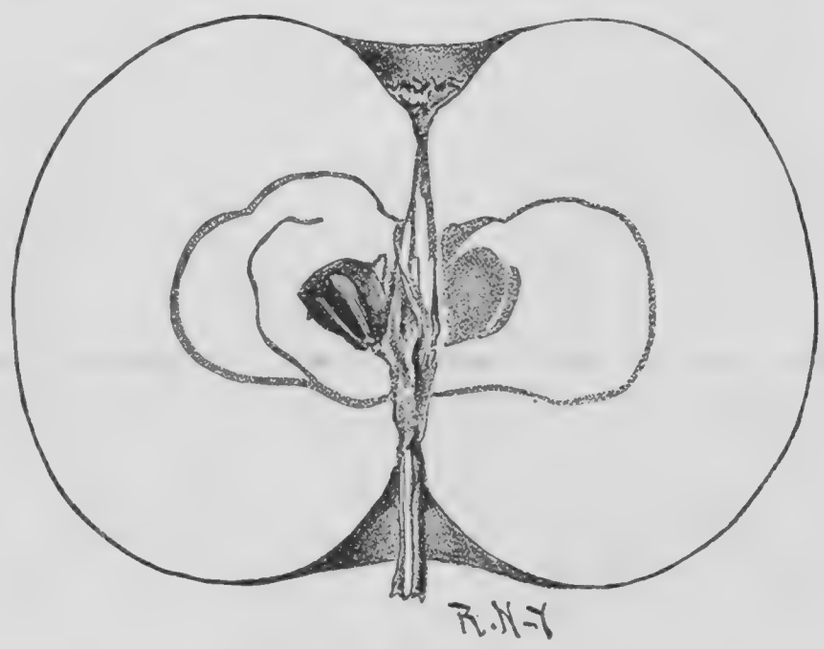
During the past season an adjoining neighbor for the first time harrowed a field of drilled corn intended for a field crop. The results were so satisfactory that he intends to repeat the operation the coming year. The implement used for this work was constructed as follows:—The teeth were those previously used in the ordinary spring tooth horse rakes, and were secured to two pieces of light scantling of sufficient length to harrow a space of the width usually taken in hay raking. This harrow was attached to a two-wheeled arrangement used for potato digging, in such a manner that the depth of the work could be regulated. The corn being in drills, satisfactory work could be accomplished by working across the rows, and a bountiful crop was harvested with clean culture and less labor than ever before. During the discussion of this question at our recent State farmers' institute, the unanimous verdict seemed to be in favor of this method, it being claimed by those with experience that it tended to loosen the dry crust of earth often formed after copious rains, thus allowing the plant to expand and retain a healthy growth, besides destroying myriads of tiny weeds, the rootlets of which permeate the soil in all directions. The Hon. Seth Fenner stated that, after an absence from his farm, he learned, much to his indignation and sorrow, that one of his workmen with a 40-tooth drag had harrowed his entire field of corn, and that he despaired of realizing much from the crop that year, and that, in spite of his remonstrance and gloomy forebodings, he learned a few days later that his man had been over the field with that drag again, and he concluded by saying that it finally resulted in one of the most satisfactory crops he ever harvested. For later cultivation I have for several years used a two-horse wheeled spring tooth cultivator, constructed in two sections. These are each V-shaped and are drawn, with the wide end ahead, on each side of the row as the work progresses. In this way deep cultivation is avoided: the action of the spring tooth creates a thorough agitation of the soil; no deep trench remains near the corn row; the soil at each cultivation is gradually moved toward the corn; the rear tooth leaving a slight trench in the middle of the space between the rows.

Harrowing potatoes is not practiced by any of the large growers of this locality. For first cultivation nearly all have adopted the method of covering the entire surface of the row, the young plants included, soon after making their appearance, the soil for the purpose being moved from between the rows with a two-horse implement constructed especially for the work.

Genesee County, N. Y.

FROM J. C. STRIBLING.

In this region the smoothing harrow is used to a considerable extent in cultivating young corn and cotton; but for cultivating with the harrow either crop should be planted with this object in view, and more seed should be sown to the acre, and the soil should be well pulverized and free from trash. Formerly the Thomas smoothing harrow was the universal implement for this work; but now the New Lever has the advantage of being changeable while the team is going, so that it can be made to run a little deeper on hard places, or more slanting on soft spots to suit the nature of the soil and work and preserve the stand. Here all our fields are more or less variable in character of soil, and on understanding what implement to use and how to use it hinges the success or failure of cultivation with the harrow. For corn or cotton, harrow just before the young plant comes out



THE RONK APPLE. Fig 98

of the ground, and again in five or 10 days, or as often as crusts form on the land or small weeds and grass appear, until the corn is six inches high and the cotton has four leaves, at which time the plow or cultivator should appear. If the value of the smoothing harrow were properly understood and if it were more used by the Southern farmers, it would save millions by clearing and cultivating the young crops at the busiest season of the year. In such times a good team and harrow used at the proper time would do more work in one day than six plows and 10 horses could do in the same time.

Anderson County, South Carolina.

Horseman.

CHAMPION TANDEM TEAM.

At Fig. 99 we show a picture of what is considered the champion English tandem team for 1888. The horses are Elegance and Denmark. The London Live Stock Journal has this to say of them:

"Elegance, foaled in 1880, was got by Beat 'Em from Graceful, by Dr. Barkley; Denmark, foaled 1881, was by Lord Derby 2nd from a mare by Denmark. Elegance has won over $10,000 in prizes, and jointly with her companion Denmark gained most of the prizes at the leading shows in the United Kingdom last season. They have never been defeated in tandem, and Elegance is considered the finest tandem leader in the country, her owner having refused several offers of $5,000 for her."

Many English breeders and farmers find a very profitable business in producing animals for fancy driving. Strong, handsome animals with stylish action and plenty of spirit, are in good demand. There is a good market for such horses in the larger cities of this country, too, and this market is capable of extensive development.

Pomological.

THE RONK APPLE.

Some weeks since several of these apples were sent to the Rural by Messrs. Albertson & Hobbs of Bridgeport, Marion county, Indiana. They were of such excellent quality that we have made a cut of a half-section which we present at Fig. 98. Messrs. Albertson & Hobbs say that this apple originated on the farm of Mr. Ronk, in Boone county, Indiana. In 1862 Mr. Ronk dug some seedlings from his father's orchard, and transplanted them to his own orchard, intending to top-graft such as did not bear desirable fruit. One sprout dug from under a Vandevere tree bore so well and the fruit was so valuable that it was not grafted. Since commencing to bear it has not failed to fruit when there were apples of any other variety.

The tree is growing on rather low, moist, black soil, is now 27 years old, 25 feet high, and one and a-half foot in diameter; spread of branches, 33 feet. It is the largest and healthiest tree in the orchard. It bore 20 bushels of apples last year. It is almost identical with Vandevere, and Mr. Ronk says that for profit it is worth any other two trees in his orchard. It has stood the test when the thermometer has dropped to 30 degrees below zero. The apples do not rot, or drop prematurely, as does the Vandevere, and they keep well into March and April in good condition. Trees of the variety are not yet for sale, and probably will not be for two years; meanwhile we shall watch its behavior with much interest.

Field Crops.

THE SWEET POTATO.

What shall be said here in regard to the cultivation of the sweet potato, is wholly for the Northern States. It is my intention to go into details, giving the results of my own experience for many years, as well as what comes from observation. The sweet potato is almost universally grown in the North from sprouts started in the hot-bed. In the South they are grown directly from the cut tubers planted in the hill, and they have been grown so North, but the former is the only reliable method.

GROWING PLANTS IN HOT-BEDS.

From the 38th parallel northward no tubers should be placed in the hot-bed before the first of April, and the best time is from the 10th to the 20th. For this, preparations for the bed should begin about the first and be completed by the 7th to 15th, a few days before the potatoes are laid down. Stable manure as for any other hot bed should be used, and if prepared by previous turnings as for early hot-beds, so as to take away some of the rank heat previous to its use, so much the better. At this advanced season less manure is needed than if the beds were made in February or March. A sheltered situation should be chosen and if the manure is not too strawy, 15 inches deep after packing will be sufficient, or, say, 17 inches at the north side and 13 at the bottom, and it may be all on top of the soil, or a few inches of the soil may have been previously dug out and put aside for bedding the potatoes. The manure should extend on all sides six to 12 inches beyond the frame. Place on this the frame five feet wide from north to south (five feet are preferable to six because of the difficulty of reaching to the center when pulling plants) and as long the other way as desired. A single sash five feet long by three wide will give room for about 1½ bushel of medium-sized potatoes.

The frame should be about 12 or 14 inches high at the back and 10 at the front. This with the slope of the bed will give enough pitch toward the sun and carry off the rain. Now put in three inches of soil—that partly sandy is to be preferred. Put on the sash and after packing manure around the outside of the frame, let that bed rest for a few days until the heat comes. If it is rank, raise the sash to let the heat escape and wait until it has partially subsided before putting in the potatoes. Glass sash can be used for a covering and some use boards, but I think oiled muslin is better than either. This, tacked on frames three by five feet, makes a light cover, sheds rain and lets in a partial light. When the bed is in the right condition, fairly warm, place the tubers in rows across it about half an inch apart, then cover them with three inches of light soil and place the covers. Watch the bed so that it should not get too hot, and as the plants come through give air by raising the covers behind when the weather will permit, and, later, in warm, sunshiny days they may be left off in the middle of the day. As the plants grow they will need water. Commonly small tubers are used and if not very small they will answer. Those of medium size are preferable to either small or large.

TRANSPLANTING

Many are in too great haste in putting them to sprout, and equally so in transplanting. Nothing is gained by getting them in or out very early, or only in exceptional seasons, so that the 10th of May is as early as any one should begin to put them out, and from the 20th to the last of the month is better, for they are then not only safe from frost, but, the ground being warm, they start off quickly. They can be put out with success up to the middle of June, and crops have been grown that have been planted the first of July. A moist time will be chosen of course for transplanting, but a good stand can readily be got in a dry time by watering as they are planted, and I have had fair success at a very dry spell without it. The secret of all transplanting lies in two things—keeping the roots moist until they are put in the ground, and making them firm by side pressure at the bottom and not at the top.

SOIL AND PREPARATION OF GROUND.

A light sandy soil is generally considered best. A light yellow loam well drained is also excellent. A black, rich soil although sandy, is not to be desired, although it may make a large crop, but this is likely to lack in quality and color. I speak now of the Yellow Nansemond, for nine-tenths at least of all those sent to market are of this sort, and these, to be of good bright color, which is an important point, must be grown in both a light-colored soil and a light one as to weight also.

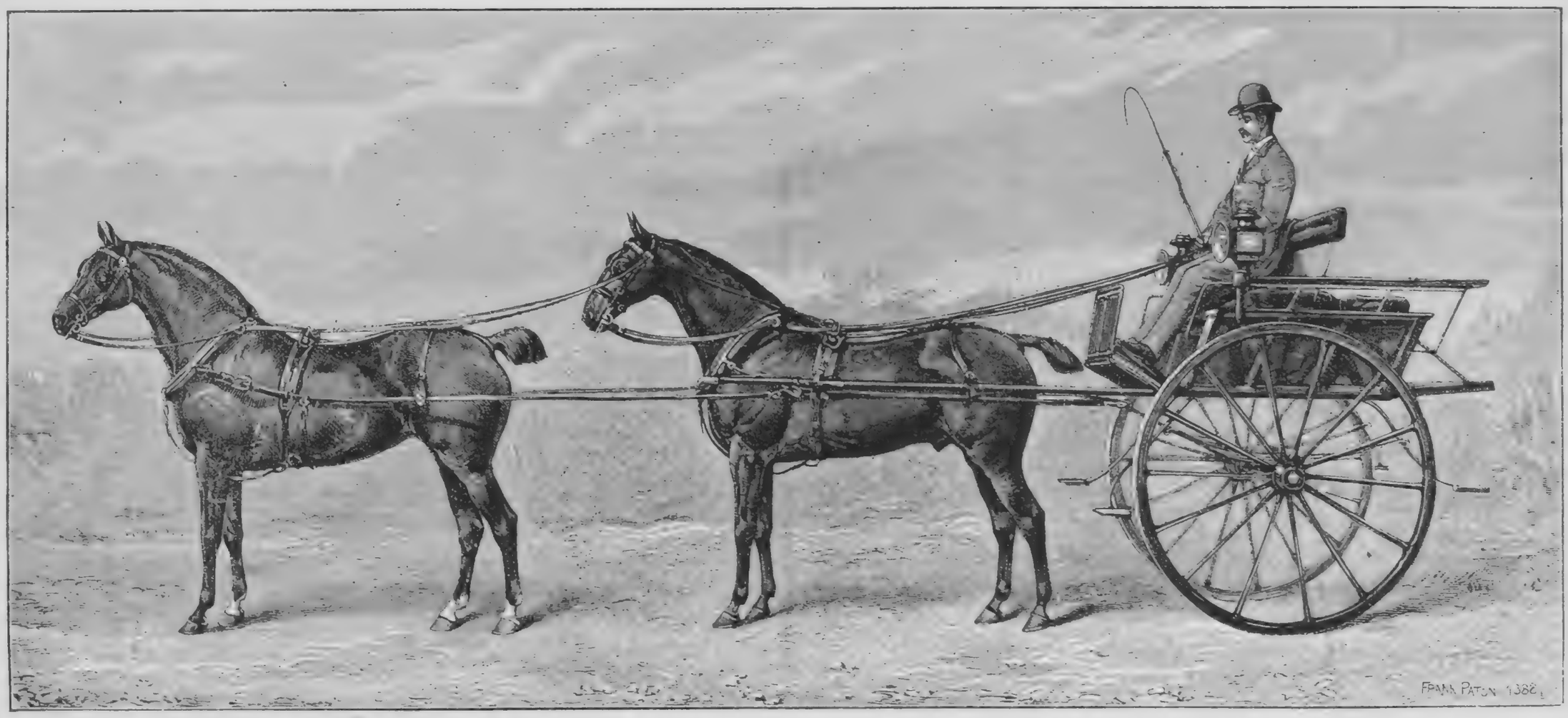
The ground should not be plowed deep nor should large hills or ridges be made. More can be grown to the acre in ridges than in hills, so that ridge culture is the common practice unless land is no object. The rows should be about three and a-half feet apart and the plants 15 inches in the row. The ridges should be small both in hight and breadth. Indeed I am satisfied, although I have not tried it, that a good crop could be grown without plowing the ground at all, (on light soil, I mean) simply by throwing up a moderate ridge; for it is important that the tubers should be short and thick and not long and slim.

The sweet potato needs much warmth and little moisture, and for this reason the suggestion that the Rural trench method would be suitable for their growth is seen to be a bad one. The object of the trench for the Irish potato is that it may have depth and therefore coolness and moisture, while the opposite is what we need in case of the sweet potato. Some years ago I tried level culture in sandy ground without success. They need to be in ridges that the sun may have its full effect on them, and that they may be free from much moisture. Good crops are grown in seasons so dry that the Irish potato would be a failure. Having got the plants established, the plow or cultivator should be run close to them and cut away part of the ridge. The next plowing should throw it back. This should be repeated so that at the fourth cultivation the ridge would be as at the beginning and this is generally enough, except keeping the middles stirred until the vines cover the ground. It is important that the ridge be formed before the tubers are set, and especially that after it has been done no considerable dirt be thrown to them. One experience settled this for me. A man, late in the season, was put to cleaning the rows in my garden. When seen he had drawn a large amount of soil on them. This was forbidden and the remainder were simply scraped free from weeds. The result was that the rows treated in the latter way yielded more than double in good-sized tubers than the other. As to cutting off the vines, I should not do it, and as to pulling them loose from the ground where they have taken root, my own experience has shown little difference whether it was done or not.

VARIETIES.

The Yellow Nansemond is the standard market variety and the best for home use or market and especially for the latter, for the large white and red ones will not sell except to a very limited extent. Out West we have been taught to think that the Yellow Jersey is a distinct variety, but it is evident that it is the Yellow Nansemond. Here in certain soils and with certain treatment it grows long and slim, while in New Jersey on soil adapted to it and with the proper cultivation, it is short and thick and of a bright color, and brings right here 50 per cent. more than home-grown, although they are grown from stock brought direct from New Jersey. The Red Jersey is fully as good as the Yellow and yet it is not salable, for no other reason than that it is one of the notions of the public. The Red Bermuda is one of the largest and earliest, growing to weigh six or seven pounds, sometimes. It is coarse and not dry and is only wanted by a few. The Southern Queen, a white sort and nearly as long in growth as the Bermuda, is better in quality but its color is against it. The Yellow Strasburg or Early Golden is also large and early and better in quality than either of the two preceding sorts, and is worth growing just for early use. This was introduced in the East by Bliss & Sons under the name of Early Golden, while in the West it is called Yellow Strasburg and had that name, as I believe, previous to its introduction East.

A new variety—the Extra Early Carolina—gives promise of being a fine sort. I have not grown it yet myself, but on good authority I am told that it is actually two weeks earlier than the Yellow Jersey and more productive, yielding for my informant 250 bushels to the acre. The sample I have resembles the Yellow Jersey, being of a fine gold color. The shape is exceptionally good; in size it is medium, and I find the quality superior to



CHAMPION ENGLISH TANDEM TEAM. Re-engraved from the London Live Stock Journal. Fig. 99.

that of any I have eaten this season. If on further trial these qualities are confirmed, there is reason to expect that it will supersede other sorts.

YIELD AND PROFIT.

One hundred bushels to the acre I consider a very poor crop. Once I had just 300 bushels on three acres and scarcely any of them were of good merchantable size. A fair crop should be placed at 150 bushels or more. At $1 a bushel as I have known them to average, they make a paying crop, but now with the increase of all vegetables, North and South, they frequently bring only 50 to 60 cents, but even at these prices they pay as well as other farm crops or better.

MANURING.

My belief is that land in good condition is preferable to that manured at the time, although I have not experimented in this direction. Some plow a furrow, fill it with manure and throw the ridge on top of it. Since the foregoing was written I have had a letter from a large and successful grower, in which he says that his land has a stiff clay subsoil. I presume it must be well drained. He remarks that on strong land in a wet season, the potatoes run to vine, while on thin land a good crop is made, but that, on the other hand, the latter would make a poor crop in a dry season.

Horticultural.

A LITTLE OF PEA HISTORY.

JAMES J. H. GREGORY.

Why it may be wise to have the same pea sold under different names; an experiment with peas; comparison between the yields of some standard varieties.

THOSE old English sorts known by our fathers as "Early May," "Early Kent," "Early June," one or all of them gifts of the Mother Country, were doubtless the original parents of all of our numerous varieties of early hard peas which are now catalogued under a score or more names, usually having, as a prefix, the name of some seedsman. I have no ancient catalogue at hand, but will venture a guess that Early Kent may be found to have been the original ancestor of the numerous progeny. Those who have tested all these early sorts side by side, have found a difference of two or three days in earliness in some of the varieties, a slight difference in size of pod, a greater inclination to bear twin pods in some cases and a slight difference in yield, with the habit of yielding all the crop at a single picking rather more fixed in some of the sorts. All these differences count for value among marketmen, yet in some instances the differences between those bearing different names are, if they exist at all, so infinitesimal that a question very naturally asked is "Why have so many names? Is there not far more distinction than difference in the whole matter of naming first early peas?" I have never sent into the market early peas bearing my name as a prefix. I think my good friends will concede that I can have no axe to grind when defending this practice among my fellow-seedsmen. The argument, in brief, is this.—

As it is found in practice that either from a tendency among early varieties to sport, or from carelessness in thrashing or cleaning them, degenerating impurities are apt to creep in, there is and can be no better protection for the public than follows from seedsmen giving their names to their first early kinds, for this compels them, out of regard for their reputation, to have such care exercised in the raising and cleaning of seed that if all impurities are not eliminated they are reduced to as low a percent. as is practically possible. The history of the early pea named Dan O'Rourke offers a good illustration of the individual responsibilty to keep an early pea from degenerating. When first sent out it was an excellent strain, but after a few years it became worthless as an extra early, losing its early habit and maturing unevenly. An effort is being made to recover its lost reputation, but it needs the name of some responsible firm whose reputation will thereby be involved, to insure the public that sufficient care will be exercised in selecting and perpetuating first-class seed stock. In all my experiments with peas, extending over many years and sometimes including 70 varieties annually, I have yet to find an earlier sort than Carter's Early, but it had the defect common to two or three extremely early sorts (and this means an advance of but two or three days) that the pods were small though numerous. A careful test of three seasons has, in each instance, demonstrated that the Alaska is not quite so early as other older sorts.

A word as to the comparative yields of a few well known varieties. Last spring I planted about an acre and a quarter of good pea ground to Hancock, Maud S, Earliest of All, Kentish Invicta, American Wonder, Advancer, Market Garden and Stratagem, with the object of getting facts as to their comparative yields. The land was remarkably even in its composition and lay, sloping gently to the south. It was manured the fall before with unleached, hard-wood ashes, at the rate of 250 bushels to the acre (by mistake of my foreman, twice as much as I intended) and after this had lain awhile and had been very thoroughly harrowed in, eight cords of barn manure were spread broadcast and left over winter at the surface. I went over the piece two or three times to see if there was any ammonia escaping, just after slight rains, but could detect none. In early spring it was plowed deep, furrowed out at a good depth with the furrows three feet apart; 500 pounds per acre of a fertilizer suitable for peas (one not rich in ammonia) were mixed well in the furrows by one of Spangler's distributing machines, and the peas were planted by a planting machine. They were not dropped as thick as I would have liked by one-third. They were run over when a couple of inches high by a New Hampshire implement called Universal Weeder, made of a series of long steel teeth set within a couple of inches of each other. This was run right through the rows, length-ways with good effect, destroying most of the weeds while doing but very little harm to the peas. At picking time by some oversight the crops of the very early varieties were mixed so there were no means of comparing them. The peas were planted in rows of equal length, several rows of each. The following is the average yield per row.

Market Garden....	4 bushels	2 pecks	5 quarts.
Advancer.....	4 "	0 "	4 "
Stratagem.....	2 "	2 "	6 "
Kentish Invicta...	2 "	2 "	4 "
American Wonder.	2 "	1 "	1 "

Three hundred feet of the rows of the Stratagem were brushed—none of either of the other kinds were, to compare the yield with an equal length of unbrushed. The former yielded one-eighth more and ripened a few days earlier—a difference that did not begin to pay for the extra labor required. As the American Wonder would probably have done as well proportionally, had they been planted one-third nearer, I incline to add a half to their yield, which gives a fair measure of what they are capable of. It should also count in their favor that they are much easier to pick than any of the other varieties named—one half more in the same time would be a fair allowance. The Advancer gives a handsomer and better filled pod than the Market Garden, and sells better: coming with us about the Fourth of July it can be sold with very little effort, as the market at that time is eager for all that it can get. The Stratagem is a very large pea with pods corresponding; it is of excellent quality and therefore desirable for the family garden.

Marblehead, Mass.

CANADIAN NOTES ON SMALL FRUITS.

My locality is near Toronto, Ontario. The climate is slightly milder than that of Northern Massachusetts or Milwaukee, Wis, but colder than that of Boston or Chicago. The area kept under small fruits by me is three acres. Time under cultivation, eight years. Soil, stiff clay, mostly low-lying.

GRAPES.—Worden is the best black I have tried. Wilder is finer and more prolific, but once in three or four years it is too late. Moore's Early yields but poorly. Champion is not fit to eat. Brighton is the best red I have tried. Jefferson and Iona have ripened perfectly only once in four years. Lindley is good, but sometimes the berries drop. The other Rogers's reds are sometimes late. Wyoming is the prettiest, but insipid. El Dorado is the best white I have thoroughly tested. It is early and fine-flavored; has very large bunches, nearly equal to those of the Lady Washington though the berries are much smaller. Pocklington is large, beautiful, strong-flavored and fairly prolific though a slow grower; but it drops its berries, and is rather late in ripening thoroughly every year. Niagara and Jessica I have scarcely tested. I find it pays to lay down the vines in fall, though others do not do so here.

STRAWBERRIES.—Seneca Queen is by far the most prolific of the largest berries. Jersey Queen is large but won't bear. Sharpless is watery. Downing is good. Bidwell would be the same if it would ripen to the tips. Manchester rusts. Mount Vernon is second to Seneca. Of the others, some are good; some so worthless as not to be worthy of note.

BLACKBERRIES.—Agawam is the best in quality among hardy sorts. Taylor is next. The others tested—a full dozen varieties—were too tender. Snyder I did not think worth trying to grow.

RASPBERRIES.—Turner is the best hardy red, very good but only fairly prolific. Cuthbert is not hardy, but would be on a drier soil. Hansell is almost worthless, being small, of poor flavor, a light cropper and no earlier than the Turner. Marlboro, Crimson Beauty, and several foreign sorts are worthless here, but Hudson River Antwerp and Herstine are fine. Shaffer is all that is claimed for it. Souhegan is the best black. Gregg is tender and unhealthy.

GOOSEBERRIES—All the English varieties succeed here. Mildew is scarcely known. Downing is the best native.

CURRANTS.—Blacks of all varieties have been failures. Reds thrive and bear but there is little demand for them. White, ditto.

PRICES.—Grapes, three to six cents per pound; strawberries, six to 10 cents per quart box; raspberries, seven to 10 cents; blackberries, 10 to 12 cents; gooseberries, $2 to $3 per bushel for English and $1.50 to $2.00 for native. Currants, five cents per quart for red or white, and 10 to 12 cents for black.

W. J. MCKINNON.

EXPERIENCE WITH SMALL FRUITS.

E. C. BRINSER.

As a small fruit grower of some years experience, I delight in testing new varieties, more especially strawberries. The improvements in new varieties over old have certainly been very great; but when I confine myself to the last decade of years I cannot see such marked improvements as the glowing catalogues would make us believe. While some varieties are great advances in one point, they lack in another, or doing well in one locality they partially or utterly fail elsewhere. Having fruited a number of new and highly recommended sorts in the last few years, I have found a few which succeed so well in my locality and soil that I am inclined to think they will supersede some of our older staple kinds.

STRAWBERRIES.—Among these the Jessie strawberry is very large, of high quality, very firm and productive, vigorous in growth of plant, and free from rust or blight; but I cannot see in it any particular improvement over the Sharpless which seems at home with us, unless it be in two points—first, its even ripening, showing no white tips; and, second, its hardiness of blossom, as it bears a greater degree of cold without injury than the Sharpless and can be grown successfully where the Sharpless fails on the latter account. Bubach I find to be all I see it recommended for, being a good and strong grower, and healthy, and it has produced more exceedingly large berries than any other sort I have ever seen; but it is not so firm or of such high quality as one could wish. Did it contain quality and firmness in as high a degree as Jessie or even Sharpless, I would put it down as a decided improvement on all. Gandy's Prize I am now inclined to think will supersede the Manchester, which we plant here for late. It is later, a luxuriant grower, healthy, and free from rust which so much affects the Manchester some seasons. The fruit is larger, of better quality, and more firm. If it holds its qualities and proves productive enough, it will be a decided improvement on the Cumberland. This is with me the best early (old) berry I have yet had. While some others are a little earlier, they are either deficient in size or quality, so that if a few boxes can be sold at a greater price the balance must be sold for less. Sharpless (old), our midseason berry, is or seems at home here. Of course, it has defects, but these are no more marked than those of any other variety. Manchester (old) is planted here for a late crop and were it not for rust and blight—its main troubles—it would be held to eclipse all others for a late berry. I could mention many more, but I consider these the leading new and old varieties for my locality, all the rest being so deficient in some respect that I shall drop them from my list.

RASPBERRIES.—Souhegan for early; Ohio for medium, and Gregg for late are my leading black-caps. Any improvements that have been made on these remain to be ascertained through tests. Nemaha is as large and good as the Gregg, but is no improvement on it, unless it be in hardiness, which as yet remains to be proven with me, this winter having been too moderate thus far for test. Hansell for early and Cuthbert for late in reds are my leading varieties. Marlboro is a failure, and Rancocas not a favorite.

Dauphin Co., Pa.

Farm Topics.

BUCEPHALUS BROWN'S NOTIONS AND IDEAS.

ON MAPLE SUGAR.—We have just been gathering our buckets, after a very good season. It is rather interesting to note the prevailing ideas among consumers about the sugar and sirup they buy, especially those who have never lived in the country, and know nothing about the matter. It seems to be an ineradicable notion, among at least the older purchasers, that the fine, light-colored sugar and sirup have been "extended" with sirup from refined cane sugar, or glucose. They declare that it does *not* have the "good old maple taste," and they "*know* it is adulterated," and it is "*no use* to tell them differently." This must be terribly provoking to our 2,000 to 4,000 tree men, who have been to so much expense to get the nicest apparatus, and are so very particular to protect their sap from contamination or change, from the tree to the finishing off.

BUT LITTLE ADULTERATION.—Undoubtedly the many car-loads of maple sugar sent westward are used in preparing a composite sirup; but among the farmers themselves I have never known of a single case where adulteration has been practiced; and I do not see how there can be any profit in it. The city people, who often pay as high as 25 cents a pound for maple sugar, may wonder at this statement, but when they understand that the average farmer has rarely seen the time when he could get at the stores more than an even exchange of his maple sugar for granulated, they will see that it must be so. Dealers are offering only six cents for tub sugar in our markets to-day.

THE MAPLE TASTE.—What is it? Is it the taste of sugar? No. The nearer sugar comes to absolute purity, the less taste it has, other than pure sweetness. The brown sugars made from cane have a peculiar taste, not the same, but quite as distinct as that from the maple. The maple taste is produced by something in the sugar which is not sugar. Is it an impurity? In a chemical sense it is; but in the ordinary sense it is not. The sap as it runs from the tree, white and clear as it seems, like purest water, is not pure water and sugar. The sap is the tree's blood, and contains dissolved in it, all the substances which go to build up the tree, just as our blood contains the elements of all the tissues of our bodies. It is the presence of these things that are not sugar which give the *pure* maple taste.

THE TRUE IMPURITIES.—Very few people, however, compared with the whole number of those who consume maple sweets, have ever eaten sugar and sirup having *only* the *pure* maple taste. They are accustomed to a sugar which contains many outside impurities, having or causing other flavors, which modify the pure maple taste. These impurities consist, first, of the many things, moss, dead leaves, bark, etc., etc, that fall or blow into the sap in the buckets, and stay there long enough to have some of their flavor dissolved out of them. Besides these outside flavors, there are flavors arising from imperfectly cleaned or sour buckets, from changes in the sap from the admixture of snow or rain water, or from souring, or from being smoked or burned in boiling. All these things together, added to the true maple taste, have had their part in making up a compound flavor which the great majority of consumers, accustomed to more or less badly made sugar and sirup, have come to recognize, and even to demand, as "the good old maple taste." The good old taste is really rather a "woodsy" taste. It is not bad, generally, unless where there has been positive souring which has "inverted" the sugar, and sometimes even disorganized it, so that it will hardly grain at all.

THE "NITER" IN SUGAR.—There is one thing that for a long time was a great mystery in the manufacture of these wild-wood sweets. No matter how great the care taken to bring the sap to the evaporator, when in boiling it reaches a certain degree of concentration, there will often settle out of it a whitish sort of sand, which has the name of "niter." The necessity of getting rid of this sand, to avoid its presence in the finished product, requires that when that certain degree of concentration is reached, the thin sirup must be allowed to cool, and the "niter" to settle out of it before the boiling can be finished. Chemical analysis reveals the fact that it is an organic salt of lime, usually the malate. On land containing lime a portion of that mineral is always dissolved in the water of the soil, making it "hard." It is taken up by the roots, and in the tree assumes this peculiar form, very annoying to sugar makers.

A SUGAR EXCHANGE.—Some of the best makers of maple sweets in Vermont have organized themselves into a company to sell their products under a guarantee of quality and purity. This organization has been quite successful, and the principle admits of being extended to many other farm products. In this way the producer is brought nearer to the consumer, to the manifest advantage of both.

Miscellaneous.

NEW LEGISLATION NEEDED CONCERNING MONOPOLIES.

No. 4.

PRESIDENT W. I. CHAMBERLAIN.

RAILWAY MONOPOLIES FURTHER CONSIDERED.—In addition to what was said in the last number in regard to railways, I add that since railways are virtual monopolies for their "suction range," and since they are public servants invested with a most valuable public franchise, their rights of way, therefore the Government, acting for society, has a triple right to control them in the interests of society: first the general right of self-preservation; second the right and duty to control all monopolies; and, third, the right to control common carriers that use the Nation's highways. It is the duty of the Government to see that the railways meet the wants of the people and do not over-meet them. No more railways should be chartered than "the traffic will bear," to use their favorite phrase. Many years' experience has shown about how many common *roads and streets* are needed in country and in city for the accommodation of the public. In the level, fertile West, roads are placed on most of the section lines, that is a mile apart in both directions at right angles. All lands are sold subject to such legal highways and the property or land pays for working the roads.

In modern cities on fairly level ground there are 10 or 12 streets to the linear mile in both directions, and the property pays for the pavements according either to value or frontages. Too many roads and streets would cost too much land, and too much expense for working. Too few streets will not accommodate the traffic. Long experience has pointed out the golden mean. But railroads are a somewhat recent invention. Experience has not yet had time to determine just how many are needed in any locality. Existing corporations have been eager to push their lines and branches as feeders to their main trunks, out into new territory sparsely settled, far in advance of the needs of population and commerce and of paying traffic, lest some rival corporation should occupy the territory ahead of them. Thus parallel lines are multiplied beyond the demands of commerce, and pooling or purchase follows and the traffic must pay dividends on twice the needed outlay. At last experience would seem to be sufficient to show our legislators at least the need of caution in granting charters. Each company that asks a charter to build a new road or extend one already existing, should be required to show its right to exist, that is, to show that the new line is needed. Then all existing lines and all new ones chartered, should have their schedules of passenger and freight rates determined by law, and made uniform to all and without possibility of sudden change. We shall soon reach just legislation with our present increasing experience, if we are determined to succeed.

OTHER PUBLIC-FRANCHISE MONOPOLIES.—The same general principles apply also to ferry, turnpike, horse-car, cable, motor, gas, electric light, and telegraph and telephone companies and the like, where private capital combined into companies is given right of way through public streets or otherwise, and partial or complete monopoly of serving the public over a given area with reference to some necessity or urgent convenience. For, such monopoly gives the company the power to levy a personal tax within the given area, and unless such power is regulated by the government of city, State or nation as the case may be, in the interests and for the protection of the people, we at once have taxation without representation, the very thing our Revolutionary War was fought to resist.

Now, this power to tax the public without sufficient control as to cost and quality of service, is eagerly sought in cities by carrying and lighting companies and the like, and has become a fruitful source of the worst corruption in securing from city councils long-time charters to the enrichment of the companies and not to the best interests of the people. All such corporations that have right of way and virtual monopoly given them, usually free, through public streets, or sold them on compulsion and appraisal through private lands, get thereby public franchises of vast money-coining power, which become sources of oppression unless properly restricted by statute-law or in the charters themselves. Such companies should be compelled to use their franchises not to heap up inordinate wealth for themselves by small extortions from large numbers, but to serve the public faithfully, reasonably and well; merely taking to themselves fair and liberal compensation for capital, skill and enterprise involved. To this the public does not and should not object. To extortion, like what we have often suffered in the past and are still suffering, the public has a right to object, and a duty to remedy it.

I call renewed attention to a fact mentioned in the first paper of this series, a fact of great importance and wide application, and yet seldom stated and little understood, viz., that notably within the last fifty years our legislation with tardy step has lagged far behind the amazing growth of population, and the still more amazing increase of inventive genius and of material wealth in this wonderful Nineteenth century. In the points now under consideration our legislation, national, State and municipal, seems to be furthest behind The companies have been keener-sighted than the bulk of the people. Beyond all question, the charters given in the past to our great public carrying, lighting and communicating companies and the like, have, through ignorance, short-sightedness and the like been far too libera and too loose to secure to the people their just rights. These companies furnish the great arteries of commerce. The circulation must be kept unrestricted, or commerce will languish. The idea must be dinned into the inner consciousness of our legislators and city fathers that these great carrying, lighting and communicating corporations are given their public franchises and virtual monopolies *to serve the public* and not to *enrich themselves inordinately*. On no other ground has government a right to bestow these franchises Any other ground would mean the favoring and enrichment of the few to the damage of the many, a thing abhorrent to the very idea of all just government, and especially of our own.

State Agricultural College, Ames, Iowa.

Everywhere.

RURAL SPECIAL REPORTS.

Pennsylvania.

ERIE, Erie County.—In this city we have two half days each week as market days. On the principal street, benches are placed upon one side. These are used as stands or, as some term them, stalls by the farmers, or hucksters, on which to display their produce, etc. Each one occupying a stand pays a tax of 15 cents, and he can occupy it from sunrise until mid-day. On any comfortable day one can find almost any kind of vegetables as well as seed grains, eggs, poultry, beef, mutton, lamb, pork in all its different forms, and also pigs, live fowls of every imaginable strain; fruits of all kinds, nuts, as well as tropical fruits. The latter business is controlled largely by the Italians. There is a large supply of butter and cheese—with a liberal spattering of Limberger, and a cheese by the German hucksters called Swiss cheese, and by others Illinois Limberger. Its peculiarity is that it is very rich and quite strong without the disagreeable odor of genuine Limberger cheese. Speaking candidly of the butter, I must say I have not tasted a prime article since I came to the city in November. It has a taste so different from anything I ever experienced that I am at a loss where to place the fault. There is much offered that one might say is flavored, the taste is so peculiar. Some has been sold that should have been confiscated by the health officers. A cry is soon raised if "bob veal" is found upon the market; but even that is more wholesome than some of the grease called butter. As a rule, the cheese is superior to the butter. The beef generally has been fair for the kind produced by farmers from dry cows, bulls and stags. It is seldom one sees first-quality young beef on the market. The mutton is usually good; some of it indeed is very fine, if really fat mutton can be called fine. The prices for beef have ranged from five to seven cents per pound per quarter. Mutton about six cents per pound by the carcass. Pork has been good—some extra-fine—price six cents. Turkeys have been in excess, and usually brought 10 to 12 cents undrawn. Fowls are, in general, rather poor; but command 10 and 12 cents. Apples have been very poor, many not being fit for cider, being gnarly, wormy and really inferior in every way. The great surprise to me is the marked ignorance of names of varieties. I have seen the Rambo offered as Baldwin; the Swaar, as New England Pippin, etc., etc. Many a common fruit gets the name of some one of our choicest varieties.

Garden vegetables have usually been fine—onions predominating. The sandy soil if properly fertilized, produces these in their perfection. Erie is the center for onion sets. They are of a superior quality this year, and within the reach of all—they are selling for $2 and $2.50 a bushel of 36 pounds. Fine table onions are worth 40 cents a bushel. Celery has all been very inferior. Potatoes command 40 cents; apples 40 to 50 cents; butter 25 and 28 cents; hay is in abundance at $12 to $16. For the last two market days many flowers have been offered, both cut and in pots.

The city can boast a horticultural society with quite a large membership, with the usual attendance of six to eight members. The discussions are able and well timed. In and around Erie one will see some good horses, many serviceable ones, and a few that might be termed by fair judges, stylish drivers; but nothing very marked as fancy steppers for style or speed. There may be some in private stables, that are not seen on the streets. I have watched closely but failed to see more than one or two that I would care to purchase at anything like a fancy price. My attention has been called to the German prunes that are largely grown in this vicinity. Wm. Lasch is advertising them largely, and claims to import them to quite a considerable extent. I am creditably informed that he has not imported one tree in five or more years—if he ever did. It is a known fact that he has repeatedly gone to Fairview, Pa., and bought the sprouts that had come up in an old orchard there, paying six cents each for them, and sold them on a warranty as imported German prunes for 75 cents each. This variety has a marked advantage over the plum, as the skin is so much more tough that they are less liable to be stung by the curculio. Grapes will soon supersede the apple along the ridge, while the apple will be the standard fruit back on the second and third slopes. The markets here require a different management. The hucksters and farmers should be educated to understand that the market demands the best, and is willing to pay for it; therefore they should try to excel in its production. Good goods always find ready purchasers at remunerative prices. H. A. W.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

CULTIVATING STRAWBERRIES.

J. S., Plainfield, Ind.—I would like to hear again from Mr. J. M. Smith, the great strawberry raiser of Wisconsin. He says he lets the runners run out like the spokes of a wheel; how does he cultivate them? I don't see how he can use a horse after the vines begin to run. Does he cut off the second runners?

ANSWERED BY J. M. SMITH.

It is not often that I recommend to others, except in towns and cities, to follow closely my own plan in cultivating vines and training runners. My land is worth many hundreds of dollars per acre. I can always hire all the help I need at a reasonable price. Hence it is better for me to go to a much heavier expense in obtaining a crop, and then rely upon very large crops for my profits. Now for my methods of preparation and cultivation: First, I make my land very rich with manures from my compost heap, or common stable manures, or both, putting on at the rate of about 40 good two-horse loads per acre. I make sure that the land is thoroughly drained, either underdrained or surface drained, or both. It is carefully plowed and put in as good condition in every way as I know how to put it. Thus far, I claim that those who wish to be successful, should all pursue the same course. Hereafter we may differ in our methods of treatment. I grow the Wilson principally. Wilsons are not such strong runners as some of the other varieties, and will bear setting closer together. I set mine two feet apart each way. I set them in the spring, and do not allow them to bear any fruit the first season, preferring to keep the entire growth of the plant and its runners in a course of preparation for the next season's crop. Do you ask, "What! give the land for two years for a single crop of berries?" By no means. As soon as the beds are set, we plant or sow some quick-growing crop between the rows. Sometimes the Tom Thumb, or other varieties of dwarf peas, or early bush beans; perhaps a crop of radishes or lettuce, or, possibly, all of these and some others are planted or sown between the rows. This, of course, reduces the distance to one foot between the rows, only one way at that. Cultivation with horse and cultivator is out of the question; but we do cultivate very thoroughly with a hand cultivator, and in and around the plants with hoes. Weeds and grass are kept out no matter what it costs. During July, the crops between the rows are ready to be harvested. As soon as ready, they are taken off clean. By this time the young plants have commenced to throw out runners, though but very few have as yet taken root. The beds are now thoroughly cleaned of every growing thing, except the strawberry plants and their runners. Sometimes we use a horse and cultivator, going through them both ways, and sometimes hand cultivators. At any rate the ground is well and thoroughly cultivated, and then the runners are trained around the parent plant as I have sometimes said, like the spokes in a wagon wheel, the parent plant being the center. In training the runners we simply spread them around the parent plant, and throw sufficient earth upon each to hold it in its place. We generally go through the beds twice in this manner. Of course, there is no more cultivating with a horse and cultivator after this, and if they grow as rapidly as we wish them to do, but very little with the hand cultivators. The object is to have the plants fill the spaces and cover the entire ground. If they do this, all moving of the soil afterward must be done with the common hand hoe. After the ground freezes we cover the beds with marsh hay, putting it on in quantity sufficient to hide the plants from view, and leaving it there until all danger of freezing nights is over, when we take it off and stack it for the following winter. The weeds are cleaned out if any should be left from the last fall. A coat of wood ashes or of fine manure is spread upon the top of the ground among the vines. All the open spaces are hoed over and the earth is left as loose as possible. It is a wonderful protection in seasons of drought, (and we have had three years of drought in succession). We generally go through the crop twice in the spring, before the picking season begins. We take only one crop from the beds. As soon as it is off, the vines are turned under, and a crop of fall cabbage or celery is grown upon the ground. This may seem to be very expensive, and is somewhat so; but I am not growing strawberries as a matter of sentiment, but for the money I can get out of the business, and when one can get a yield of 200 or 250 bushels per acre, he can afford to make some extra outlay to obtain such results. My beds have averaged over 200 bushels per acre for a number of years, and I hope to do still better in the future. But how about the beds in the country where land is reasonably cheap, and help almost impossible to obtain? In such cases I advise setting the plants in rows, at least three feet apart if Wilsons, and about 15 inches apart in the rows. If the Crescents or any of the very strong-growing varieties are to be used, I would set the rows four feet apart, and the plants from 15 to 18 inches apart in the rows, and then cultivate just as much as possible with horse and cultivator; but in all cases one must do the work thoroughly and give the plants a fair chance to do their best.

CHRONIC DIARRHŒA IN A MARE.

H. S., Portsmouth, Ohio.—My 10-year-old mare was kept running loose in a box-stall in the stable all winter, with an occasional drive on the road. She had oats and sometimes corn with all the hay she would eat. She was in good condition, but not with foal. About three months ago she began scouring badly. I changed her feed to chopped oats and hay, reducing the amout to about one-third of the winter feed. She always eats and drinks heartily, and appears well. She is in poor flesh, however, and appears weak when driven. A veterinary surgeon attended her for two weeks. He said he dared not check the diarrhœa at once, but gave her some powders and drops in her drinking water. He sent her home three weeks ago, and now the ailment is as bad as ever. What should be done for her?

ANSWERED BY DR. F. L. KILBORNE.

Owing to the various causes and conditions, usually more or less complicated, that may produce this chronic diarrhœa, such cases cannot be satisfactorily treated through cor-

respondence. A personal examination and a course of treatment that is varied according to circumstances are usually necessary. Examine the teeth to see that none are decayed or overgrown so as to hinder mastication. If such is the case they should be drawn or filed. Give two table-spoonfuls of the following powder in the feed twice daily:—Powdered gentian, ginger and sodium carbonate each one-half pound; nux vomica one-fourth of a pound. Also give one ounce of sweet spirits of niter three times daily in the drinking water or as a drench in one-half pint of cold water. Allow only one-half bucketful of drinking water three times daily. Continue the chopped hay and oats in moderate quantity only, and scald well with boiling water or steam before feeding. A little well boiled starch gruel can be given in the drinking water with advantage. Allow only walking exercise until relieved. Rub the belly once daily with the following liniment:—One ounce each of Castile soap and camphor gum dissolved in one pint of spirit; then add one pint each of strong aqua ammonia and olive oil well shaken together. Make sure that the feed is free from mold, must or dust, and that the drinking water is wholesome.

WEAK OR WATERY EYES IN A HORSE.

L. L., Gallatin, North Dakota.—My 11-year-old horse has been allowed to run out on the prairie on fine days, the sun being bright and the snow glaring. After a time his eyes began to water and soon afterwards he couldn't look at the light and acted like a snow blind person. Such fits now last about a day and for the next two days he is all right, but looks heavy. The eye-balls are bright, but the eyes are quite hot. Nothing but clear water runs from them; but he appears to suffer considerably. Otherwise he is in good condition. What should be the treatment?

ANSWERED BY DR. F. L. KILBORNE.

The watery eyes may be due to a cold, a dark or damp stable, to irritating gases in the stable such as arise from accumulating dung and urine, or they may be due mainly to the bright, dazzling light from the snow, in which case the eyes are probably naturally a little weak. Without knowing the character of the stable and the conditions under which the horse is kept, we cannot give a definite opinion as to the cause of the weakness. In any case this bright light from the snow irritates the eyes while in their present condition, so that the horse should not be out on the snow in the sunshine. Protect the horse from exposure to cold or wet. The stable should be dry, clean, airy, and moderately light; but the windows, or doors if open, should be at his back so that he receives the light from behind, instead of directly in front. Keep him in-doors during the middle of the day when the sun is bright, especially while there is snow on the ground. Internally it would be well to give seven drams of the best aloes with one ounce of ginger as a drench in one pint of water, to open the bowels. Repeat the dose in 36 hours, if no effect is produced by the first. Then for a few days give one table-spoonful of pulverized nitrate of potash on the feed twice daily. If the horse is fat, reduce the feed for a time. If the eyes continue to run, keep them covered with a cloth wet with a solution of one-half dram lead acetate and 10 grains of morphia in one pint of water.

BLIND STAGGERS AND RUPTURE IN A HORSE.

C. B., Hartford, Ohio.—1. What should be the treatment for blind staggers in a horse? 2. Can anything be done for rupture in a horse?

ANSWERED BY DR. F. L. KILBORNE.

1. Keep the horse on a bran mash diet for 24 hours; then give six to eight drams (according to the size of horse) of the best aloes with one ounce of ginger, as a drench, in one pint of water, to open the bowels. Continue the mash diet until the bowels are freely moved. Repeat the aloes in 36 hours if no effect is produced by the first dose. As a tonic, give two table-spoonfuls of the following powders in the feed night and morning: Sulphate of iron one-fourth of a pound, powdered gentian, nitrate of potash and sulphate of soda each one pound, mix. Continue the powders for a week and then omit a week; alternate thus for several weeks. A laxative diet should be given so as to keep the bowels open. If the fæces become dry or firm another dose of aloes should be given, as advised above. During the summer feed largely on grass or other green food, and in winter on roots and mashes. 2. Rupture and hernia occur at several points and special treatment is usually demanded for each. You should have mentioned the place and extent of the rupture if you desired us to give specific treatment In general, for the treatment of a rupture, the horse is to be placed on his back, or in such position as will bring the rupture uppermost. The protruding organ is then to be carefully returned, and the opening covered with a pad and bandage, applied so as to prevent the return of the organ through the rupture. The bandage must be kept on until the opening or rupture has healed.

STRAWBERRY CULTURE.

J. J. P., Warsaw, Ky.—Could the following mode of making a strawberry bed be improved upon? Turn over an old clover sod in the fall, and sow on it, in early winter, 100 bushels of unleached wood ashes per acre. In spring go over the ground with a cultivator mixing the ashes with three or four inches of the surface soil. Then sow 1,000 pounds of pure ground bone meal per acre, and harrow thoroughly. Lay off rows three feet by two feet, and cultivate both ways until the runners start, and allow them to mat the narrow way not more than four to six inches wide and not very thick in the row. Would it be well to cultivate the sod one season in some such hoed crop as potatoes or tobacco, before setting the strawberries, on account of the presence of white grubs in the soil, or should the fruit be set out the first season? Is the humus in a clover sod just as good as that contained in stable manure? If so, I will take clover, bone and ashes every time for growing small fruits. My objection to stable manure is that it contains foul weed seeds, and an excess of ammonia for fruit.

ANS.—Our friend's first plan is, in our opinion, the better, and as good as any. We should not sow the unleached ashes before mid-winter or a little later. We should (for his climate) turn under the clover sod in the fall, and not put it in any hoed crop for a season. The humus in the clover sod is just as good as that in manure and more available, in so far as we are informed.

STOPPAGE OF MILK.

H. D. P., Fond du Lac, Wis.—What shall I do for my cows? One was all right 10 weeks ago when she was dried off; but when she came in no milk could be got from one quarter though there was no swelling or obstruction in the teat. Another cow was all right when dried off, but when she became fresh no milk could be got except from one-quarter. Here too there was neither swelling nor inflammation. A little lump the size of a small pea in the teats appears to prevent the milk from coming down. All the cows have been properly milked and handled. I tried to pass a knitting-needle through the obstruction in the teat, but could not penetrate it, as it seems to be a bony or gristly substance; neither could I push it up. It is quite long in some cases. I have handled a large dairy for 30 years; but do not know what to do now?

ANS.—If no milk is secreted in the affected quarter of the udder, there is no satisfactory treatment. But if the milk is secreted as usual, and is prevented from being drawn by some obstruction in the teat, a surgical operation will be necessary to remove that obstruction. In that case we would advise employing the best veterinary surgeon at hand to examine the cows, and open the duct if practicable. Are you sure there was no inflammation or caking of the udder in these cases, after you stopped milking, from being "dried off" too quickly?

AN AILING MARE.

W. J. G., Columbus, Ohio.—A mare has been ailing nearly all the winter. The trouble affected her eyes only at first; but lately her right hind leg has been swollen. The trouble with the eyes was pronounced catarrh, and that in the leg is said to be scratches. She has had good care all winter, and is in a fleshy condition. What should be done for her?

ANS.—Give six drams of best aloes with one ounce of ginger, as a drench, in one pint of water to open the bowels. Repeat the dose in 36 hours if the bowels are not freely purged. Then give one table-spoonful of the following powder in the feed night and morning: Nitrate of potash one pound, chlorate of potash four ounces. If the swollen leg is cracked or sore apply a daily dressing of benzoated oxide of zinc. Reduce the feed and give no corn, buckwheat or other heating foods. Give moderate exercise daily. If the eyes are watery or weak, see treatment for the same in back numbers of the RURAL.

KAFFIR CORN, ETC.

H. S. B., Rome, N. Y.—1. Kaffir corn is being widely advertised as a superior food for poultry so far as the grain is concerned; while the stalks are reported to make feed, green or cured. What does the RURAL say? 2. Where can "seed" of the Early White Ohio be obtained? Is it a good potato for general cultivation?

ANS.—1. Kaffir corn is a variety of sorghum that seeds freely. As green or cured food, Indian corn or other kinds of sorghum are more valuable. From having raised it a single season at the Rural Grounds, we cannot recommend it. It may be planted the same as corn except that the land should be clean. The little plants are slow to start; they look like grass and are readily concealed by weeds. 2. Of T. C. Davenport, 124 Dock St., Philadelphia, Pa. All that we know of it is favorable to the variety. Our friend is referred to the R. N.-Y.'s report.

WEAKNESS IN LAMBS.

W. S. H., (no address).—My lambs come all right, get up and suck, but die within 24 to 36 hours—some of them with scours. The 25 ewes are in good condition; they have not had much grain; but all the hay they wanted. Some brine from meat pickled a year ago was put on some hay the sheep ate three weeks before they commenced to drop the lambs; could this cause the death of the lambs?

ANS.—The lambs probably die because constitutionally weak, which may be due to want of exercise, too close confinement, or to the ewes being too fat. Either cause not infrequently produces weak lambs. Give the ewes more exercise, and if fat reduce their feed. If the brine produced no effect on the ewes, it is probably not responsible for the death of the lambs.

ABSCESS IN THE BELLY OF A COW.

J. T., Gallupville, N. Y.—One of my Holstein cows had a very hard lump in the navel. I lanced it, some matter escaped, and the swelling disappeared. Another has come, however, in front of the udder. On lancing that, about a pint of matter came from it. It didn't disappear and now it seems swelling up again. With this exception the animal is in fine condition. What should be done for her?

ANS.—If the present swelling is an abscess similar to the other, it should be freely opened and washed out with a five-per-cent. solution of carbolic acid. Then carefully wash out daily with a two-per-cent. solution until healed. The opening must be prevented from closing, to allow free drainage, while the cavity heals from above downward.

STERILITY IN A HEIFER.

E. H. C., Oberlin, Ohio.—A Jersey heifer of mine only one year old has been in heat about every 25 days since she was three months old. I didn't like to breed her so young; but she gave so much trouble that I finally bred her to a Jersey bull of her own age. He seemed to serve her well, but in 25 days she was in heat again. Since then I have bred her to the same bull three times; but still she comes in heat regularly every 25 days. What can be done?

ANS.—Try breeding the heifer to another bull, preferably a grade. If this fails, use a vigorous "scrub" bull. If this does not succeed, we can only advise you to employ a competent veterinary surgeon to make a personal examination of the heifer.

THE CATALPA.

C. J. J., Sparta, Mich.—Is the catalpa a foliaceous or coniferous tree, and where can the seed be obtained? When should it be sown?

ANS.—There are two catalpas—the Common and Hardy. There is also Kæmpfer's catalpa and a hybrid variety. Probably you will prefer the Hardy or Catalpa speciosa. Seeds of this may be purchased of J. M. Thorburn & Co., N. Y. for 25 cents per ounce. The seeds may be sown now. They germinate readily. It is a deciduous tree bearing seed pods (fruits) nearly a foot long and less than an inch in diameter.

AMAUROSIS IN A MARE DUE TO PREGNANCY.

G., Virgil, Kan.—My nine-year-old mare has had four colts, and she is now with colt. She has become nearly blind. Is she likely to become entirely blind; or is there any remedy?

ANS.—The blindness is evidently the result of a temporary paralysis of the nerves of sight, causing amaurosis of the eye, due to pregnancy. The disease is of rare occurrence, but a few similar instances are recorded. There is no treatment except to cease breeding the mare.

Miscellaneous.

T. B., Pittsford, N. Y.—Dr. Hoskins in a late RURAL speaks of "sugar pumpkins"; where can I get the seed?

ANS.—Sugar pumpkin seed is sold by all seedsmen.

T. W. M., Rock Dell.—The Orange Judd Company will furnish a book on bean culture. For seed beans write to N. B. Keeney & Son, Le Roy, N. Y. This firm makes a specialty of beans of the finest varieties.

W. P. F., Ithaca, N. Y.—What does the RURAL know about the Morris or Maurice Amber wheat sent out by the Government about four years ago?

ANS.—The R. N.-Y. has not raised it.

E. W. S., Barnesville, Ohio.—Would it pay to sow Alfalfa on ground under raspberries, that will be dug up after fruiting?

ANS.—The R. N.-Y.'s impression is that Alfalfa sown at that time will usually fail.

C. C. P., Brooklyn, N. Y.—1. What about the August Giant black grape? 2. Of the following, which is the best white grape—Empire State, Lady, Lady Washington, Pocklington, Niagara and Hayes? Quality is the most important feature next to hardiness and prolificacy.

ANS.—1. The R. N.-Y. has had no experience with the August Giant. 2. It is hard to say. We should choose Hayes. Lady Washington is too late and not hardy.

C. A. W., Hay Springs, Neb.—1. Chemical compounds are advertised which if applied to the horns of young calves, will prevent the growth of the horns. Would something of this kind be safe and reliable? 2. Are Red Polled cattle considered better for dairy purposes than for beef, and how do they rank with other breeds?

ANS.—1. We have never had any experience with such compounds. The practice has been quite extensively advertised and we learn of a number of farmers who are experimenting with it. 2. Yes. The Red Polls thus far sent to this country have been mainly praised for their dairy qualities, though all admit that they make excellent beef. It is for the somewhat uncertain title of best "general-purpose" cow that they are likely to be boomed.

DISCUSSION.

SCABBY POTATOES.

M. H. W., MOORE'S MILLS, N. Y.—Here are the results of some pretty close observations that I have been making for several years in regard to scabby potatoes. Some suppose scab is caused by grubs or wire-worms. I have very often found those worms eating potatoes, but each kind works in a way of its own, leaving a hole in the tuber, but no scab. The grub eats a roundish hole sometimes the size of a chestnut; while the wire-worm bores directly into the potato as if it was a real wire thrust in. I have often taken hold of the end of one and pulled it out and pulled it in two to make sure of its identity. The holes of these pests do no more harm than the wounds of a potato-fork. I have come to the conclusion that a worm of any family is not a "jack at all trades," but pursues its work in special lines; that just as we find them working 30 or 40 times we shall always find them working. Therefore I dismiss the worm and look in another direction for the cause of scab. In digging a few potatoes every day from the time the tubers are half grown until they are ripe, I find them for some days without spot or blemish. Then, if there is some wet, sultry weather, they will soon be found to have very small spots of a whitish mold hardly to be seen at first, but growing in area and distinctness from day to day. This mold or vegetable growth sends its roots through the tender skin of the immature potato and to a limited depth into the flesh, destroying the structure as far as the roots go; so that in a short time the spot turns dark and dry. All observers notice that potatoes are more scabby when raised on coarse manure. Why? Because fresh manure is a fruitful source of mold. Some soils yield a larger per cent. of scabby potatoes than others when no manure is used on either, because the one soil has that in it which predisposes to mold. Phosphates are better fertilizers for potatoes than manure, because their chemical action or caustic qualities tend to destroy the spores or seeds of the mold in the ground. If the chemist can prescribe something that will prevent mold, I think we can raise our potatoes smooth.

CANNING GREEN PEAS, ETC.

M. C. A., HOMER, N. Y.—In the RURAL of February 23, T. B. S., Webb's Mills, N. Y., asks how are green peas put up in glass cans. The answer is "Experience in putting up green peas in glass or tin has generally been a failure." I must say that it can be done, because I have put them up now for four years. Last fall I put up three dozen cans and all have kept perfectly. The peas must be nearly fully grown so that they will not shrink in cooking; then fill the cans quite full. Then put the glass covers on so as to prevent any condensed steam from dropping on them from the boiler cover. Place the cans on a frame in the boiler; fill the latter with cold water as full as you can without causing it to boil over the cans. Boil two hours; then take out on a cloth laid on the table and fill

up the cans with boiling water, stirring with a thin stick till the air is all out. Then put on the rubbers and seal tight. Put back into the hot water and boil an hour and a-half. Then remove to the table and tighten every cover, and continue doing this until they are nearly cold and see that they stay tight, and if the cans and rubbers are perfect, I think success is nearly certain. I can string beans in the same way; also corn; but the latter does not shrink so that there is no need of putting any water in. One must put more hot water in the boiler as it boils out while the peas are cooking. Pumpkins can be canned by stewing and sifting the same as peas; then filling the cans full and putting them in a boiler or kettle and heating them long enough to be sure that each can is hot clear through. I have never lost a can since I began to practice this method. Seal the cans tightly before putting them over the fire.

WESTERN FARM MORTGAGES.

H. P. N., NICHOLS, CONN.—I see by a late RURAL there is to be a great panic in Western farm loans within five years. What is to cause this great panic? Are Western farms about to shrink in value more than 50 per cent.? If this is so the sooner Western farmers turn their farms into cash the better for them, and the great loan companies which have hazarded their capital on the safety of Western farm loans are not very wise. It seems to me that many who decry Western loans may have an object. It is very desirable for those East who wish to borrow money to make Western loans appear at a disadvantage, thereby enabling them to borrow from our savings banks and others at five per cent. or less, and, moreover, all money or at least much of it invested at home increases the amount of taxable property, while much invested in the West avoids taxation or becomes invisible. Will he who prophesies an early "panic" prove it and state what facts he has to justify such an opinion.

R N.-Y.—If our friend had carefully noticed what he read he would have seen that it came under the caption "What Others Say," and that it was given merely as the prediction of a New England financier engaged in making loans in various parts of the country. The RURAL is not responsible for the different opinions given in that department nor does it indorse all of them. It merely gives them as matters worthy of consideration. There is, however, little doubt that mortgaging farms has been greatly overdone in many parts of the West.

FASTENINGS FOR COWS IN STABLES.

H. A. W., ERIE, PA.—I think it a barbarous practice to place cattle in stanchions and confine them for any length of time. I have for years found that cattle having a free use of their heads have thriven better on less feed than those confined in stanchions. A strap having a large snap on and buckled around the horns—a rope three feet long fastened to the manger in such a manner that the cattle could not get their feet over it, and on the end a swivel to receive the snap—makes the best fastening I have ever seen. The trouble of fastening is very slight, and this gives the head freedom. This is essential to health and thrift. The less worry the cattle are subjected to, the greater the profit from the feed consumed. In T. B. Terry's article on clover hay in a late RURAL, he failed to tell us just how he cured it. For many years I have found that clover should be cut as soon as it is in full bloom. As soon as it is nicely wilted, put it in cocks of about 100 pounds, and if the weather is fine, leave it until it is well cured and when it is thoroughly dry, draw it to the barn without exposing it to the sun's rays any more than possible. This will give as fine a quality of hay as can be made.

R.N.-Y.—In the Hay Special, to be published in a few weeks, Mr. Terry will tell us all about his plan of curing clover hay.

ROOT-GRAFTS FOR THE APPLES.

I. J. B., TITUSVILLE, N. J.—A great many apple trees are grown by taking seedlings up from the seed-bed or nursery row, and whip or splice-grafting them and then setting them out in the nursery row. It is a practice to make from one to three grafts from each root. The last or tap-root graft will grow thriftily in a nursery one or more years. My experience is that such grafts never make trees of any value in the orchard unless the graft sends out roots. I think the proper way to grow the apple by this mode of grafting is to make only one graft from a seedling stock. With more than two and sometimes with more than one graft the bottom graft will make comparatively few roots, and these go downwards. We have two rows of Baldwin trees, one budded about six inches up from collar of the tree; the other root-grafted. It may be that the soil is better in one row than in the other; but for years there was apparently no difference in growth or crop. The trees have now been 25 years planted and I think the difference in favor of the budded trees is apparent in size.

REMEDY FOR LICE ON CATTLE.

F. W. V., SPRINGFIELD, CANADA.—As many herds of cattle are troubled with lice at this season of the year, I can from personal experience recommend the following remedy: To a gallon of soft water add one pound of soft soap and one pound of washing soda. Bring the mixture to a boil, and when cool enough to allow one to keep the hand in it, saturate the affected animals. It has the advantage of being cleaner than greasing, and it will not loosen the hair, as may be easily done with petroleum. It is also death to sheep ticks.

J. A., VINCENNES, IND.—A short time ago an article in the RURAL denounced the burning of straw as an act of folly. I wonder if the writer ever worked on a straw pile, or whether he ever saw a crop of wheat the straw from which was so abundant that the owner and his hired men, helped by all the neighbors, could not take care of it. Most farmers in this section do save some of their straw, and to condemn a farmer because he is compelled to burn most of it, shows ignorance of farming on a large scale in a section where population is thin and hired help scarce. There are many sections in which the labor required to take proper care of straw is worth more than the straw would be worth for any purpose. As a rule, the practice commonly followed by intelligent farmers in any section is the best under the conditions prevalent there however unwise it may seem to wiseacres in another section where the conditions are entirely different.

W. L. B, FAULKNER, IND.—Perhaps some one would be benefited by learning how to get rid of the common caterpillar. My way is to destroy all the eggs I can find in the fall and winter. When the eggs of the others are hatched, with a bottle of coal oil and a feather or stick having a rag on the end, I go around and dampen the nests and the pests. The latter will be dead by the time they get to the ground. This mode of treatment cleans the limbs off entirely and does no injury as burning and other ways do. I use pyrethrum or insect powder for currant and gooseberry worms. It will also kill cabbage and parsnip worms. I did not take the R.N.-Y. last year, but concluded I could not do without it this year.

W. R. W., WILMINGTON, OHIO.—On page 237 of the RURAL I see an article on the subject of "wearing out seed." I certainly think that the writer is correct in saying: "Intelligence and careful cultivation and the proper selection of seed will keep up any variety, etc." In proof of the truth of this theory I will say that I am raising the old White Neshannock potato still, a variety that had almost become obsolete. Last year on the same kind of ground, and with the same cultivation, I had Early Rose, Burbank and Early Ohio. The Neshannock was by far the most productive. This year I shall plant for late crop only the White and Blue Neshannock.

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Miscellaneous Advertising.

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FEMALE FARMERS.

WILL the coming young woman be a farmer?

Scattered all over the broad prairies of the Northwest are hundreds of self-reliant, true blue young heroines, living in small, isolated cabins called shacks, proving up claims, entering homesteads and making money.

It is lonesome, dreary business, this living alone on a wild, unsettled prairie, without a face or human form to welcome one or cheer one's solitude, but there seem to be a good many young women who have the grit to hang to this solitary life long enough to prove up a claim at least.

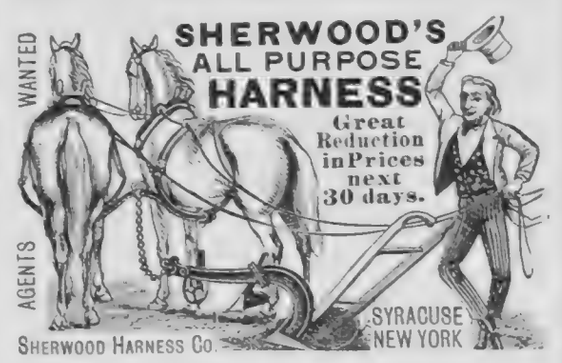
Four young ladies in Dakota last year put their heads together and hit upon an ingenious plan, whereby they could each secure a claim and yet all live comfortably together in one house and each be upon her own land. Instead of building four shacks with one room each, they constructed one shack with four rooms, but so nicely planned that each room of the square building was on a different quarter section. Each had her own bed in her own room and in that way, each claimant at night slept upon her own land.

Society ladies of the city will wonder, not so much how these young lady settlers get along without social privileges, as how they dared live so far away from the doctors. Why, bless you! they never thought of being sick. Doctors are not half so much of a household necessity as city people are in the habit of thinking.

For all the ordinary ills of life, the old-fashioned roots and herbs remedies are more effective, and much safer in results than modern doctors' pills and potions. These latter are so radical in their effects that, while they may better meet the modern desire for quick results, they frequently permanently injure the system, nature rebelling against the unnatural methods employed.

It is always safest to follow natural methods in treating disease. The old-time roots and herbs remedies, which our good old log-cabin grandmothers knew so well how to prepare, were the best medicines the world ever knew, because they were nature's remedies.

The modern world needs them. In Warner's Log Cabin Remedies, and especially such as Warner's Log Cabin Sarsaparilla and Warner's Log Cabin Cough and Consumption Remedy, the people of to-day have an opportunity to secure the healthy medicines which our rugged ancestors used with such splendid results.



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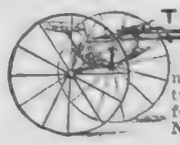
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IMPROVED Made of best material by skilled workmen, built on correct principles and fully warranted; 17 YEARS' EXPERIENCE. Sent on trial. Write for Circular and Price.
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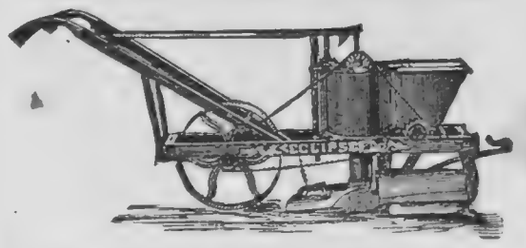
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VEGETABLE PLANTS—Standard Sorts, at reliable rates. Send for Price List.
M. GARRAHAN, Kingston, Pa.

Cold Frame Cabbage Plants.
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Clover, Timothy and Alsike.
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INSECTS ON FRUIT TREES
Can be destroyed by spraying the trees with London purple dissolved in water. For full directions and improved outfits for **Hand** or **Horse Power** at **BOTTOM CASH PRICES**, address FIELD FORCE PUMP CO. Lockport, N.Y

ALL Kinds of GROCERY, GRAPE and BERRY BASKETS, BOXES, GIFT and RETURN CRATES Cheap. Address
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Basket Manufacturer, Willoughby, Ohio.

BROWN SWISS CATTLE
FOR SALE—My small but select Herd of BROWN SWISS, consisting of 12 Cows from 3 to 10 years old, and the magnificent 2-year-old Bull *Cicero Tell*, also one Bull and two Heifer Calves. All registered in Brown Swiss Herd Book. Would like to sell entire herd to one party. Address H. W. WINDRAM. 24 Lincoln Street, Boston, Mass

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FREDERICK T. ROBERTS, M. D., Professor in University College, London, Eng., Examiner in Medicines, Royal College of Surgeons, says in reference to advanced kidney disease: "Complications are met, such as consumption, heart disease, morbid conditions, liver affections. Warner's Safe Cure cures these affections by putting the kidneys in a healthy condition, thereby enabling them to expel the waste or poisonous matter from the system."

THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, APRIL 27, 1889.

FRIENDS and patrons of the R. N.-Y., are respectfully notified that our trial potato ground is full.

"If the chemist can prescribe something that will prevent mold, I think we can raise our potatoes smooth."—M. H. W., page 282.

Two "Women's Contest" plots have been planted at the Rural Grounds, both according to the R. N.-Y.'s Trench system. The first was planted to the No. 2 (100 pieces), No. 3 (50 pieces), No. 4 (100 pieces) and Brownell's Winner 113 pieces, making 363 in all—the area being one fortieth of an acre. The other plot was planted to the No. 2.

"I have for years found that cattle having a free use of their heads have thriven better on less feed than those confined in stanchions."—H. A. W., page 283.

YOU have a given amount of good seed and manure. You are able to perform a given amount of work. This, we may say, is the capital for your farm operations this year. Now, then, the question is:—Will you make more money by spreading that seed, manure and labor over 20 acres than you will by condensing it on 10 acres? Take any multiple of these figures and apply the problem to any farm in the country. The way this question is settled will have very much to do with the profit or loss on many a farm where profit means contentment and peace, and loss means desperation and worry. Think it over.

It is going to pay you to read every word of the story, "Our First Farmers' Institute," which begins this week. It's sound, sensible and truthful. Read it and think it over.

LOTS of so-called "dairy authorities" are urging farmers to go into winter dairying. Make arrangements, they say, to have the cows calve in September or October so that their milk flow will be heaviest when butter and cream are highest in price. A good deal of such talk is given without any limitation whatever. Now, in many places near New York, and also in the vicinity of summer boarding-houses, cream and milk are highest in price in summer, when summer boarders and city visitors are on hand. Thus we see that the man who gives such general advice, without any qualifications, is an unsafe guide. We also see that the way to get the most out of the cream and butter is to know when either will bring most and then make it. The only way to know is to investigate and think.

"The idea must be dinned into the inner consciousness of our legislators and city fathers that these great carrying, lighting and communicating corporations are given their public franchises and virtual monopolies to serve the public and not to enrich themselves inordinately."—W. I. CHAMBERLAIN, page 281.

NEW YORK CITY now receives a great many horses from the Northwest. In former years the lumber camps were able to use the surplus of good horses raised in that section. Of late years horse breeding has been developed to such an extent that the camps cannot utilize all. Thus some fine animals are sent East. The Northwest is not a corn country. Horses there get more oats and wheat bran for grain feed. One would suppose that such feed would develop tougher and more serviceable animals than the corn of the Middle West. Such seems to be the fact. While these Northern horses are not so heavy and fat as those raised further south, they are tough, wiry and solid, and are greatly liked for street work. As a rule, however, they are poorly broken. More care should be taken about breaking them before they are shipped East.

"A man must use his brains if he wants to succeed with a machine. A harrow or a weeder run over a piece of corn or potatoes on a hot, dry, sunny day at the proper time, will kill all the weeds; but if used on a wet day or after the weeds are up it is worse than useless."—L. W. CURTIS, page 278.

NO KIND of legislation more deeply concerns the farmer than that designed to protect him from railroad discrimination. One of the worst offenders in this line is the Pennsylvania Railroad, whose policy has greatly contributed to reduce the value of produce and land in many wide sections of the State. While other industries have been plundered through the favoritism and corruption of railroad managers, beyond all doubt agriculture has been the greatest sufferer. Some time ago the Grangers appointed a Legislative Committee of six, whose duty it was to push legislation in the interests of farmers at Harrisburg. There is a bill now before the legislature against railroad discrimination, and it is charged that at least three of the Granger Committee have for upwards of a month been strenuously obstructing its passage. Would it not be well for the Grange to investigate this matter?

"If the value of the smoothing harrow were properly understood and if it were more used by the Southern farmers, it would save m ons y clearing and cultivating the young crops at the busiest season of the year. In such times a good team and harrow used at the proper time would do more work in one day than six plows and ten horses could do in the same time."—J. C. STRIBLING, page 279.

FOR years the root crop has been a staple product of English farming. For generations English farmers have been taught to believe that it is impossible to raise good stock without roots. Times change. New conditions twist practices all about. Even now good English farmers are seriously considering the profit of continued root culture. It has been clearly shown that the cost of the crop has steadily increased from year to year. The silo has provided the friends of silage with a series of remarkable figures on the cost of cattle food. It is not at all probable that the English root crop will become a memory, but it is clearly certain that it will be lessened. The point we wish to make is that you may have been conducting unprofitable farm operations for years simply because they have always been found in your neighborhood. A little careful experiment and study might show you clearly that they are unprofitable. Now is a good time to think of such things.

"Some farmers harrow corn land immediately after plowing, plant, then roll, and harrow over once or twice more. This leaves the land in fine condition for the cultivator; but should a heavy, beating rain follow soon after, the soil will pack almost as solid as a road, and it must be stirred again by some means before it bakes, or there will be tribulation."—FRED GRUNDY, page 278.

A FRIEND of the R. N.-Y., a good business man, born on a farm and well acquainted with agricultural methods, recently made a visit to the Rural Grounds. On the way from the station, a large, fine-looking farm-house was passed.

"That's a good farm-house; how large a farm does that represent?" said our friend.

"Sixteen acres of cultivated land! That farm supports two families. The girls have a piano, the family take plenty of time for holidays and visiting, and a little money is saved every year."

Our friend shrugged his shoulders. "That beats me; I couldn't do it; I thought I could learn how to handle almost any business, but I wouldn't attempt that." The man who makes "farming pay" will be found working on solid business principles and there are surprisingly few men who excel in other lines of business who could take up agriculture without previous training and make anything like a success of it.

"Harrowing potatoes is not practiced by any of the large growers of this locality. For first cultivation nearly all have adopted the method of covering the entire surface of the row, the young plants included, soon after making their appearance, the soil for the purpose being moved from between the rows."—I. D. COOK, page 278.

THAT is a new path of usefulness started by the Vanderbilt University, in Tennessee. It offers to give full instruction in road making and engineering to one highway official from each county in the State. The course of instruction is to consist of "lectures and practical work on the economical location of highways to conform to the conditions of topography and traffic; principles of the construction of new and the reconstruction of old roads, and of maintenance and repair; methods of drainage; simple highway structures; retaining walls; drains, culverts, simple bridges; a study of the system of highway administration, etc. The roads of Tennessee are as bad as those of any State in the Union, so that this plan is likely to be of great advantage to the farmers of the State, whose welfare is most deeply dependent on the condition of the roads. Isn't the example worth following by institutions of learning in other States also? If they cannot afford to give roadmasters gratuitous instruction, would it be well to make to the State an offer of such services on favorable terms?

AS OUR readers are aware, potash salts contain a very important fertilizer material. Under the law all foreign substances used for fertilizing purposos are admitted free of duty. In 1870, however, the Treasury officials discovered that potash salts of a high degree of purity were imported by certain persons, under this law, while they were really used for the manufacture of chemicals. Accordingly the Secretary of the Treasury decided that any so-called manurial salts or fertilizers containing 30 per cent. of free potash or over, should be subject to duty. This ruling has ever since been a source of no inconsiderable loss to farmers on account of the consequent increase in price of Stassfurt salts which contain a high percentage of potash. Secretary Rusk has been investigating the matter, and has learnt from the Treasury Department that the decision was made solely to prevent fraud, and that the Department was ready to admit such salts duty-free, provided assurance could be obtained that they would be really used for fertilizing purposes. It is suggested that the manufacturers of fertilizers, who are the chief importers of these products, should give bonds to the Treasury that all such salts they may import shall be used exclusively for fertilizing purposes. The suggestion is likely to be adopted, in which event there should be a considerable decrease in the prices of potash fertilizers.

ADDITIONAL NAMES.

THE following names should be added to the list of contestants in the Women's Potato Contest.

Miss Jennie Sullivan, Bergen County, N. J.

Miss Nellie Stillman, Alleghany County, N. Y.

Mrs. M. Crawford, Cuyahoga County, Ohio.

Mrs. T. H. Hurst, Cuyahoga County, Ohio.

Nancy J. Neff, Belmont County, Ohio.

Mrs. E. M. Mehan, Beaver County, Pa.

Mrs. Susan P. Fowler, Cumberland County, N. J.

TIPS IN PLACE.

WHEN we consider that tips for horses are only about half the weight and cost of full-sized shoes, and that in certain circumstances they are much better and safer, it is surprising that they are not getting more rapidly into use. They never contract the hoof, but keep it in a natural healthy shape, and allow the frog of the foot to be planted squarely on the ground, and thus lessen the jar to the leg joints, and their liability to be injured, besides giving a firmer grasp on slippery ground. The surface of the hoof to which the tip is to be nailed should be pared down enough to make it level with the hind part, so that it will set flat alike from toe to heel when the the horse is stepping on the ground, or standing on the stable floor.

THE GOLDEN BELL.

THE Golden Bell may fairly be called the queen of early-blooming shrubs. It is about the earliest to bloom. It is extremely hardy. It is of exceptionally vigorous growth and long-lived. It blooms from top to bottom, and it blooms *every* spring. Confined to a single stem it forms in three or four years a beautiful little tree

Forsythia viridissima is the species seen in every garden. F. Fortunei is of comparatively recent introduction and in several important respects is superior to the first named. The flowers are larger; it is of more vigorous growth and blooms some two or three days earlier. The leaves are larger, the branches stronger and it is quicker to form a shrub of mature and ample proportions.

The Golden Bell should be seen in every garden. It is beautiful when covered with its bright yellow, four-petaled flowers which appear before the leaves; beautiful for its bright, luxuriant foliage after the flowers have fallen. But of the two, choose by all means Forsythia Fortunei. The genus was named after Mr. Fortune who sent it to us from Japan. The latter bears his name both generically and specifically.

THE RIGHT KIND OF TALK.

THE following extracts are taken from a letter recently sent the R. N.-Y. by Edwin Willits, the new Assistant Secretary of Agriculture. We like such talk:

"I wish most emphatically to say to you that I have not accepted the position of Assistant Secretary of Agriculture because it is a political position, but in spite of it. I want no political position, and this place came to me because the scientific workers and the agricultural college people thought (whether true or not time will demonstrate) that I have qualifications for organizing and conducting in its widest scope the scientific work of the Department, and for bringing it into harmonious relations and co-operation with all the experiment stations of the country. I did not seek the place, had no thought of it, did not know of the movement till my name was ready to be sent to the Senate.

But I have been impressed so fully with the importance of the grand impulse of the day to apply science to agriculture, that if the men associated with me think, as they seem to have done, that I am the man to represent their wants in the Department of Agriculture and to bring it into full sympathy with practical agriculture, I will not decline, though my plans here in the local field are only half developed.

I am to have charge of the scientific work; that is the Secretary's wish. President Harrison told me that I owed my selection to scientific and not political influences, and, so far as I can, I shall try to satisfy the RURAL and all other friends of agriculture that there is a place in the Department for such a man."

"As a rule, the practice commonly followed by intelligent farmers in any section is the best under the conditions prevalent there, however unwise it may seem to wise-acres in another section where the conditions are entirely different."—J. A., page 283.

BREVITIES.

STRAWBERRIES retail at 25 cents per quart.

READ what Uncle Bucephalus says of "the true maple taste."

ARE you reading President Chamberlain's forcible monopoly articles?

MR. J. M. SMITH tells, in answer to a question, how he treats his strawberries.

FARMERS in Western New York are evaporating apples—not this year's crop, however.

THE R. N.-Y. would be glad to know where it can procure a plant or so of the Austrian Copper rose.

FOR the first year in the R. N.-Y.'s experience, the white-blackberry canes came through the winter without much injury.

MOTHERS and daughters, read what Miss Taplin has to say in her "Chat by the Way." It is good, sound advice from a good woman.

IN the R. N.-Y.'s field culture of potatoes this season, the trenches are dug by the winged shovel plow run twice to the trench. This gives the desired depth and width.

IT appears that some farmers are making a little money at growing roasting pigs for this market. There is quite a demand for these juicy little fellows. It will pay to work up this market.

THE Cumberland (Triumph) is one of the best strawberries ever tried at the Rural Grounds, as we repeatedly stated years ago when it was introduced. Now it is coming to the front as all the R. N.-Y. ever claimed for it.

WE are giving our asparagus bed a liberal dressing of kainit—probably at the rate of 1,500 pounds to the acre. This furnishes potash and salt, the latter of which is thought to be helpful to asparagus plants, though there is no *evidence* to that effect that we know of. A dressing of sulphate of ammonia at this time would no doubt hasten growth and increase the size of the stalks.

Indust'l Societies.

THE TWENTY-SECOND SESSION OF THE AMERICAN POMOLOGICAL SOCIETY.

(Concluded.)

(R. N.-Y. SHORT-HAND REPORT.)

The White Adriatic fig; the Peen-to and Honey peaches; the Kelsey and Satsuma plums; next biennial meeting to be held in Chicago; gloom in the evenings; visit to some large orange groves; dead-head traveling; nut culture; drawbacks in the meetings.

In continuation of the discussion upon the newer fruits at the last session of the society, figs were next in order. Mr. Peck spoke of the new White Adriatic as doing well. Mr. Pierce said: "It does well on Indian river." The variety was then placed on the list and recommended for trial. Peaches came next. Dr. Hape inquired as to the success of the Peen-to. Mr. Tumblood: "I have grown it successfully, and believe I was among the first to grow it in Florida. The only objection to it with me is that it blooms too early; frost often catches the blossoms. The tree is very vigorous. There are now many seedlings from the Peen-to which are better than the parent in size, shape, and in general. I think a few years more will give us much better varieties, and I have great hopes in that direction. The shape and size of the Peen-to are objectionable. Some of the seedlings already obtained seem to partake of the hardiness of the pear. The Honey does well with me and always escapes the frost. Neither of these varieties is subject to the attack of borers." Mr. Adams: "In South Florida there is very little trouble with the early blooming of the Peen-to." Mr. Callanan: "I now have trees loaded with the Peen-to peach. I have fruited it six or seven years and never lost a crop by early blooming. My trees stand the frost extremely well. I live in the western part of Clay county." Mr. Trowbridge: "I consider it a grand acquisition as a peach in Florida, and I move it be placed on the catalogue and one star be given to it in Florida." This motion prevailed.

Plums were then taken up, the Kelsey being first called. Mr. Callahan: "I have fruited it two years and am well satisfied with it so far. I have great faith in it, having planted an orchard of 6,000 trees, and I expect to plant more. It promises well for Florida. I think it will make a good prune. It stands shipment well. The tree is hardy and grows vigorously."

Satsuma was next called. Mr. Van Deman: "I think well of it. It has the same quality as the Kelsey and is of the same size. It is blood-red inside, and earlier by a month than Kelsey, and I think it is more hardy. It may thus prove more valuable for the North where the Kelsey will not do." The fruit discussion was abruptly closed at this point, the hour for adjournment being so near at hand.

It was then moved by Mr. Trowbridge of Ohio that the next meeting of the society be held at Chicago. This was seconded by Mr. Brackett and many others. Mr. Boon, a member of the Illinois State Society, extended an invitation to that effect and it seemed to be the unanimous desire of all to meet at Chicago next time. Such was the recommendation made but the final decision was left with the Executive Committee. The society then adjourned finally about noon, February 22.

As to the room in which the meetings were held, it should be said the Opera House was well adapted with one exception, and that defect became so annoying in the evenings and the dark cloudy weather as to interfere seriously with the transaction of business. Want of sufficient light was the trouble. There being no gas, a few smoky kerosene lamps had to be relied upon. The spectacle of the chairman holding a heavy lamp that the essayist might see to read a long paper while the reporters were scrawling over their note-books by guess in the dark and the members were sitting in the ghostly gloom peering through the shadows at the speaker on the stage, was in no way cheering to the average northern visitor, but in direct contrast with the real hospitality and enterprise in which the Florida people strove so hard to excel.

In the afternoon the society was taken on an excursion to Citra, where the extensive and beautiful orange groves of the Crescent Orange Co., Bishop Hoyt & Co., and the celebrated Harris grove on Orange lake were visited. The latter contains 200 acres in bearing and is the largest bearing grove in the State; 46,000 boxes of oranges were shipped from it the past year. The trees are all on the native stocks just as they grew, being from 12 to 17 years old. The visitors were given full permission to gather fruit from the trees in all parts of the grove to their hearts' content, there being some 3,000 boxes still on the trees. The other groves visited were 100 and 150 acres in extent respectively, the former yielding 30,000 boxes last season. The packing-houses were also investigated with much interest. On the following day excursion parties started out in various directions to all leading sections and points of interest in the State. Very few of the delegates returned home until a week or 10 days after the close of the meeting, having such an excellent opportunity for traveling all over the State and seeing its wonders and bright winter attractions.

An interesting paper presented but not read before the society was by H. M. Engle, upon "Nut Culture." He thinks thousands of unproductive acres might be made profitable in this way; large supplies of food for man might be obtained with more certainty than by equal amounts of money and labor spent in the production of other crops. If more of the natural products and less of the artificially prepared and adulterated articles were eaten, mankind would be much the better for it. A reliable chemical analysis of the nutritive proportions of edible nuts is needed. Where the chestnut will flourish it may safely be put at the head of the list, since, for quality it is unsurpassed. There is a wide field for hybridization and cross-fertilization in nut culture. Combinations of the best qualities of originals may be brought together in new varieties, and the problem should not be more difficult than for stockmen to breed off horns, increase muscle and reduce bone. The black walnut, butternut, English walnut, pecan, shell-bark and filbert can all be improved in the direction of less shell and more kernel."

In concluding this report of this very successful and pleasant meeting of this society, it seems to the writer, [and to the editors of the R. N.-Y. as well. EDS.] that the essays and papers read were, as usual, too numerous, and many of them were far too long. Too little time was left for discussion. Essays, theories, data and statistics may all be presented in the horticultural press, where fruit-growers may read them at their leisure.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

THIS is the season when people who have overtaxed their digestion during the winter months still further torment that faithful servant by a succession of nostrums. It was the old idea that the system must be thoroughly cleansed every spring, and while there is a certain amount of truth in this idea, it is greatly abused. If the laws of hygiene have been properly observed, care in diet is the only thing needed by adults. Growing children are very often subject to slight blood disorders in the spring, resulting in unsightly eruptions, but in most cases the old-fashioned remedy of sulphur and molasses is both the best and safest to administer, while if it seems a more serious disorder it is best to consult a physician. Of course, as the warmer weather begins people will do well to lessen the amount of heavy food, fried cakes and all sorts of fatty dishes, using fresh fruit or vegetables when procurable. It does not cost very much for a farmer with plenty of good manure to put up a little frame in which to grow early lettuce and radishes, and these vegetables will not only give a zest to the meals, but will also benefit the family health.

* * *

DOES a girl whose first and greatest confidant is her mother ever wreck her life morally? We don't think so—that is to say, unless the mother herself is morally unfit to act as guide. But when a girl begins to keep things from her mother she takes the first downward step. There are so many things in life strange and puzzling to a young girl; so much that she ought to learn and so much of which she ought never to hear. Unfortunately she is apt to hear the things she should leave unlearned, and that from others than her mother. There is no doubt that growing girls gain much knowledge that rubs off the girlish bloom through promiscuous associates, and the careless mother is certainly to blame. The holy innocence of a pure-minded girl is too sacred to be smirched by any coarseness; happy is she who keeps that ignorance of evil to womanhood. She is like the lady in Milton's Comus—no evil thing may harm her.

* * *

As a girl grows toward womanhood there are many things she ought to know concernidg her own nature and organization. Unfortunately, instead of being instructed modestly but sufficiently by a pure-minded and loving mother, she is too often left to pick up such knowledge from outside associates; the result is that the information received is not only often imperfect and erroneous, but it is also coarsened in the telling. She is likely to suffer in consequence both in mind and body.

* * *

WE recently heard a mother say that she thought girls knew a great deal more now than they used to—and more than they ought to, as well. There is no question of this; but it is not entirely the girls' fault. A mother who allows her little girl to roam at large, receiving such impressions as are given by all sorts of associates, cannot wonder if her girl seems pert, bold and forward. We see little and big girls lounging along the streets, laughing and talking loudly, staring and commenting on everything, and then learn that they are the children of respectable and well-to-do parents, who wonder why their girls are not more lady-like in deportment. If we were asked the time-honored question, "What shall we do with our daughters?" our first suggestion would be to keep them at home. It is all very well to make girls self-reliant and able to care for themselves; but self-reliance need not become boldness.

* * *

WE love old-fashioned girls—modest, and innocent, yet self-reliant—real mother's girls, whose innocence does not imply ignorance. Few girls, however, are actually coarse by nature, and the coarse streak may be lessened by training. It is for the mother to attend to that.

* * *

AN innocent and pure-minded girl is usually a little gentlewoman in her manners. And good manners, with good nature, will take one anywhere. This is a free country, as we often assert with much pride, and we may all be gentlewomen in rank, if we choose. Perfect manners must be grounded on good temper, sympathy and unselfishness, and a girl whose daily conduct is an exemplar of these virtues is a thorough gentlewoman, even if she does not understand how to use a finger bowl.

OUTINGS IN NEW ENGLAND.

V.

MARY WAGER-FISHER.

IT must be impossible for any one to step foot in Plymouth without a rush of feelings flooding the heart, raised by the multitude of associations which have consecrated it for all time. More go to Plymouth by steamer from Boston than by rail and in so doing there is something to be gained, as well as money to be saved, in sight-seeing, for the steamer traverses a part of the same course made by the Mayflower, lands the passengers fairly at the foot of Plymouth Rock, and, withal, furnishes a view of the town from the water, which is exceedingly pretty, and of which one of the striking points is Forefathers' Monument. The railroad ends at Plymouth, so that to reach any place by rail, from there, one must retrace his way, for some few miles at least. But the New England coast abounds in what the people call barges, which are long, wide omnibuses, or stages. Until we saw one, however, we labored under the confusion that a barge was a vehicle for water travel only. There were a number in Plymouth, some with regular routes of travel, and others ready to transport parties to almost any point, for a few miles around the country. They are gaily painted, bear some fanciful name, are comfortable to ride in and a decided improvement upon the old-time stage for warm weather travel.

WE had the good fortune to find suitable lodgings in a quiet, well-kept hotel, and the three windows of our airy room overlooked Plymouth Harbor, and far out to seaward. The sunrises were so brilliant that more than once I arose before the edge of the sun was above the horizon and hastily sketched in water-colors the marvelous hues of the sky and water, the long tongue of sand that barred the harbor from the sea, and the black shadows cast by the scattered buildings on it. "Of course, you've exaggerated the coloring, somewhat?" is a frequent interrogative comment on the sketches which were so feebly copied from nature. I heard an artist once say that no one knew how a tree or anything really looked until he had made a drawing of it. One marked difference between this country and other nations is that what in them is looked after by the government, is here the work and care of individuals. So in Plymouth, every spot and relic which is of national interest, has nevertheless been nursed and protected by local care and private munificence, and very little of importance has been allowed to perish through neglect. But this kind of thrift is characteristic of all New England, whose local historians, poets, romancers and artists have made the most possible of their materials, and Longfellow literally wove the entire coast into song.

Forefathers' Day is annually observed in Plymouth by the Pilgrim Society, which dines, presumably, better than did the forefathers. However, as the Pilgrims were so much reduced at one time that five kernels of parched corn were counted out to each one for his meal, so the annual December dinner begins with turned down plates on which are laid five kernels of parched corn. I am sure that I could never get those five grains down my throat without choking with sobs—that first dreadful winter was so terrible! After the corn is despatched a succotash is served made of hulled corn and beans, chicken and corned beef. Our landlady told me that it was a Pilgrim dish, and that the chicken and beef in about equal proportion were boiled together until the meat fell from the bones and could be shredded. Then vegetables cut in dice and the corn are boiled in the water until tender, and the beans, cooked separately and mashed through a colander, thicken the mass. Services are held in the churches. Plymouth Rock, as it now reposes under a granite canopy, has had its history. It is a granite boulder, and in the early history of the country it was in danger of being covered up by the construction of a wharf about it; and an attempt was made in 1775 to raise it, which resulted in splitting off the top part. This detached portion was carried to the town square and deposited at the foot of a liberty pole. In 1834, on a Fourth of July, it was carried with much ceremony—16 pairs of oxen being mustered for the occasion—to Pilgrim Hall, which had been erected in 1824, deposited in front of it, and inclosed by an iron fence. But a few years ago Mr. Stickney of Baltimore, a Massachusetts man by birth, and a member of the Pilgrim Society, with great taste, forethought and liberality, defrayed the expense of improving and embellishing various historical possessions of Plymouth, upon condition that the two pieces of the famous rock should be re-united. So the detached piece was restored, and forms the top which is now exposed above the ground and bears the date 1620. At this time, fragments of the rock were secured by covetous fingers and afterward held for sale at high prices, and even to this day, small bits of rock—claiming to be of this bowlder—are sometimes offered to tourists. But the rock itself is now so secured that immediate access to it is impossible. Anaximander said that when he was at Plymouth several years ago, he had no difficulty in hammering off a piece, and that it must now be lying among some of his collegehood collections, which statement made the laddie's eyes shine with expectation of finding it when going on a grand rummage through the attic in the homestead some rainy day. Near the rock rises Cole's Hill in which the victims of that first terrible winter were buried, and over whose graves corn was planted, to conceal them from the Indians—for half of the little band perished. The bones of some of the dead, have in later years been discovered, and tablets mark the spot. In 1855, while trenches were being dug in a street crossing the hill, parts of five skeletons were found, and these were placed in a metallic box and put in the chamber of the canopy over the rock.

Directly up from Cole's Hill with the harbor at its feet, runs Leyden street, to Burial Hill, back of the town. In going up this oldest street in New England to Burial Hill, one to-day walks under magnificent English elms, planted by the forefathers. One in particular, not far from the Rock, is well worth a journey to Plymouth alone to see. Its branches reach more than across the wide street, and like some of its contemporaries, it has been strengthened in various places with metal bands and clamps, to prevent the great arms from being split off by the wind.

HUSBANDS AND WIVES.

E. S. LINCOLN.

YOU touch a vital point when you call for a Symposium on the subject of the woman's purse. The evil which makes it look proper to men-folks in general that women should be without money and without vote is one that needs thorough probing. It's selfish

—just selfish—thoughtlessness on the one hand, and cowardice on the other. Husband-worship is the modern form of an ancient vice—it is real, sinful idolatry, and does neither the husband nor the wife any good. If the truth—the astounding truth—were known, it would be found there are more *disappointed husbands* in the world than heart-broken wives. And that evil can never be mended until the husband is made to understand what he has or has not the right to expect and ask of his wife.

The wife should be made to know her *chief* duty to her mate is not the silent endurance of thoughtless, custom-justified meanness; but the giving to him of the fullest, most perfectly satisfying sympathy and co-operation in whatever lies nearest his heart—in whatever is most essential to his real wedded happiness. Few women do this, though all would if they knew how, and these few are never beggars to their husbands for justice. They are queens of their homes, and usually feel themselves to be appreciated beyond their deserts. I judge from King Solomon's picture of his ideal wife, mother, and housekeeper, that the needs of men are as unchanging as their natures, and that women who fully satisfy them will always be appreciated. Says one old neighbor of mine, "Well, I was the envy of all my neighbors, for I had $12 a year to spend as I liked." Her husband hired her to do without snuff by the payment of $1 a month pin-money. In view of the fact that his sole capital in life had been her dowry, it did not strike me as great generosity.

GOLDEN GRAINS.

FROM THOREAU: As we grow older, is it not ominous that we have more to write about evening, less about morning. We must associate more with the early hours.....

IF my friend says in his mind, I will *never* see you again, I translate it, of necessity, into *ever*. That is the definition in Love's lexicon. Those we can love we can hate. To others we are indifferent .....

W. W. STORY says: Live not without a friend! The Alpine rock must own its mossy grace, or else be nothing but a stone.....

IT was Thoreau who said: I would rather sit on a pumpkin and have it all to myself than be crowded on a velvet cushion. I would rather ride on earth in an ox cart with a free circulation than go to heaven in the fancy car of an excursion train and breathe a malaria all the way..... .....

Do not do some good thing on purpose that you may be happy. You must do good for the sake of doing good, and not for the sake of the kicking back of happiness.....

"IF you take the right side, the just side, said Seward, ultimately men, however much they oppose you and revile you at first, will come to your support. Earth, with all its power, will work with you and for you, and Heaven is pledged to conduct you to complete success ....

HEAL; do not stab. Of all deadly instruments there is none that carries so bitter a poison as the tongue, and there is no place where it slashes so remorselessly as among Christian people.....

WHEN Isaac Hopper, the distinguished old Quaker, met a boy with a dirty face or with dirty hands, he would stop him and inquire, "Has thee ever studied chemistry?" The boy, with a wondrous stare, would answer, "No." "Well, I will teach thee how to perform a curious chemical experiment," the old gentleman would answer. "Go home, take a piece of soap, put it in water, and rub it briskly on thy hands and face. Thou hast no idea what a beautiful froth it will make, and how much whiter thy skin will be. That's a chemical experiment; I advise thee to try it.".....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

A YOUNG MOTHER'S PHILOSOPHY.

COUSIN CLARA was giving her little four-year-old daughter a lesson in order. The sweet little thing wanted to play with her kitten, which was frolicking about her feet, and running after any flying ribbons or strings that drew her attention; but her mamma, gently yet firmly, made her move a chair up to the wall, and take her hat, and coat, and one or two other articles, and hang them on the hooks. And then she lifted the child to her knee, and said, "Now, see how nice it is to have the hat, and the cloak and all the other things on the rack, not on the floor, where mamma will step on them, and they will get so dirty." Then she kissed her, and sent her to play with her kitten.

"You do it very nicely," said I. "Where did you learn how?"

"My mother managed children pretty well; but, better than any management, was the idea that she somehow instilled into us that a child was the most precious, the most wonderful trust that God could give into our hands. It was pardonable to break, or spoil, or ruin any other object; but to spoil a child, to dim its beauty, was the great, deadly sin."

"You made a pretty stiff demand upon Eliza, and I think she responded well," I remarked. "I wish you would give me some hints as to your method."

"I try to ask nothing of her, that she has not beforehand shown that she could do. I did not require her to draw the chair up to those hooks, and hang up her things until after I had seen her do it for her own pleasure. I make responsibility follow close upon growing power. Of course, my regular reading, my sewing, my society have to be largely given up—I will not say sacrificed, for the sacrifice would be the other way. I am learning more philosophy than my schools ever taught me. The opening minds of my children do for the dull abstractions of the class-room what the electric light does for the dark corners of the city. I am learning what books cannot give. I am getting mental science in the concrete. My family is my university."

"You are a marvelous woman," I thought. No surprise that "the heart of her husband doth safely trust in her."

"I do a good deal of figuring on the children," she continued. "Sometimes I make a mistake in requiring too much, but I watch everything, and help them through as well as I can, and where I make a mistake I am more thoughtful in the future; but one thing, I am painfully conscientious about—I will keep my word with them. They are never deceived by their father or mother. They believe us, every time. And I avoid, so far as I can, all those little meaningless phrases which are the stock in trade of many parents, such as, 'maybe,' 'I'll see,' 'by and by,' which the child understands for 'yes,' and then, at times, is sharply disappointed. A mere baby will soon learn very thoroughly the 'yea, yea, and nay, nay,' which Christ taught; and all this 'next-time' business, children are absolutely ignorant of. I leave myself, as regards training, perfectly free when the difficulty arises, and no very serious trouble ever comes. I make the care of my children my most important business. I will excuse myself to a caller; I will give up any recreation, or even my church service; I will defer the buying or making of a new garment; I will put aside any and every minor interest; but I will attend to my babies, at the moment.

"You, see cousin," said I, "that I'm takin' notes, and faith, I'll print 'em. Will you tell me what you consider the gain in the exercise I have seen this morning? You have some sensible theory, doubtless."

"I will," said she. "And I shall not mention the points, in the order of their importance. If Eliza learns gradually how to pick up after herself, this will, very soon, relieve me of hundreds of steps. This habit will easily lead her to care for the younger children; and each, in its turn, will learn the same way of doing things. You see, I'm drilling her for the whole dozen. I'm making a home atmosphere which will be very helpful.

Then the house will be in better order. I do not object, mind you, to children playing and throwing things around pretty lively; but when the play is over, when they are ready to stop, they must clear away the *débris*. I will not have a nurse to do it—I will not do it myself. I will take *twice the time* to direct them, that it would take me to do it; but they shall be taught to wait on themselves. It will save time and strength in the end.

Mothers are to blame for three-fourths of the worry children cause them—they teach them to be troublesome. To be sure, my mother taught me a good deal of these matters, that most young girls never hear about. But there are books and books to learn from if they wish to read and think. The trouble is that *they don't want to read and think.* My mother taught me to respect marriage and motherhood; and when the common experiences of women, one by one, came to me, I knew what they meant. An earnest, delicate woman can deal with these vital questions without embarrassment—A frivolous, coarse woman cannot.

Children seeing order throughout the house—at the table, in their own rooms, in the attic, in the cellar, everywhere—will be disturbed by disorder, for they will be unaccustomed to it. This, more than any precept, will tend to give them orderly minds. They will carry the same principle of classification into their studies, keeping similar objects, or facts, or truths, together. They cannot be put into a sphere of life where habits of order and systematic ideas will not be of advantage. If disorder is positive distress to a person, better arrangement will be the sure result. Felix Adler says, 'Squareness of things is not without relation to squareness of thought and action.' I believe him. The object I wish to secure for my children is, that they shall lead contented, useful lives, which shall bless their community. As for the common ambitions—wealth, society, glitter and fashion—I do not think of them. They are to me perfectly worthless as aims in life. Then, I hope to be a grandmother some day, and to see all this teaching which I'm now working out put into better form, made more fruitful, and multiplied beyond my power to estimate."

Just here, Johnny gave the usual signal that he was awake. Cousin Clara went to him, saying: "Some other time, we'll continue."

MARY A. RIPLEY.

THE CHAIN AS A PROMOTER OF DOMESTIC HAPPINESS.

IN the "Ladies Departments" of the agricultural papers many nice little recipes for making homes perfectly happy have been, from time to time, published; but I have never noticed one showing how the *chain* may be utilized for this desirable purpose. Doubtless many of the RURAL'S readers have seen combs fastened to the wall in the wash-rooms of taverns, by means of a small brass chain. I have developed this crude idea and adapted it to certain domestic uses, and as the result I claim a reduction of at least 25 per cent., in household friction and worry. The enormous force required to keep the button-hook, the stove-hook, the blackening-brush the stove-poker and other domestic implements in places where they can be found, is set free and can be utilized for other purposes. Some of those peculiarly gifted people who have the mysterious faculty of keeping things in their places without apparent effort, may treat this device with ill-concealed, and others with carefully exhibited, contempt; but to the great majority of struggling households it will recommend itself as promising means of a happy release from toil and care.

Let us exhibit its working in relation to one implement of universal domestic use, viz: the stove-hook. The country-house wife, of sainted memory, who got up and made the fires while her husband enjoyed a morning nap, failed to fasten this man-saving custom upon the rising female generation, and now, the "hired lady" and even the housewife do not recognize responsibility for the performance of this important service. The "manbody" must rise and set the household in motion by starting the fires. When the resolution to do this work has been obtained, the work itself is not so difficult until the cook-stove is reached. Here the trouble commences, for unless the paterfamilias is a disciple of Nimrod—which in most cases he is not—he can't find the stove-hook. Still as evidence of the truth of the familiar adage, "Hope springs eternal in the human breast," he continues the search, though the experience of years should have taught him that it will end only in "swear words." Here at the very commencement of the day, a vast amount of physical and moral energy is expended, which the device of the chain would save. Suppose this physical and moral energy expended each morning were thus saved and directed with judgment against the book agent and the lightning-rod man, or held in reserve against the time for putting up stove-pipe!

And then the button-hook! The button-hook! The whole house may be in order, conducted upon the most approved "happy-home" principles, with just the exact amount of "pleasant smile," (which everybody knows is *so* efficacious in reducing cross husbands to a state of submissive politeness) upon the face of the mistress, but if a button-hook cannot be found at the moment it is wanted, it all amounts to nothing. And who does not know the magical powers of concealment possessed by this little instrument! Sow button-hooks shoe-mouth deep upon the floor in the evening, and it is doubtful if one could be found in the morning. But, the chain, provided it is a very strong one, will permanently locate even the button-hook. And to the father of the family who has often removed the obstructions, a milk crock or two, several baking-pans, a couple of stove-lids and a hot skillet—from the top of the stove reservoir, and got ready to dip without having anything to dip with, and who, after having skirmished around the kitchen and dining-room awhile, has returned to the stove with a soup-ladle, only to find the aforesaid obstructions carefully replaced—to this necessary though unappreciated person, I need only to suggest the advantages of having a dipper secured within reach of the reservoir by means of a chain! Is it necessary to speak particularly of the many other domestic implements of constant use? All but the most unprogressive persons will at once perceive the incalculable value of the chain as a "home-happifier" when used in the manner I have described. STEPHEN R. CRUMBAKER.

FROM A SENSIBLE WOMAN'S PEN.

ALL honor to T. B. Terry for his manly words concerning the *rights* of wives in the earnings of their husbands? And hearty congratulations to him that he is of such a noble nature as to understand the higher law on this subject—that higher law which is the true gospel as to woman's rights of every kind. And happy the wife who has a husband who appreciates the part she has in making the home—the part he cannot perform and for which money cannot pay. Yet many good and otherwise sensible women do not feel free to use the family funds as they do the smaller sums they are able to earn themselves, even when the husbands are ready to acknowledge their equal right in the family purse. It may be partly the fault of the wife. If she allows herself to ask as a favor what is already her own, she places herself in a wrong position. Her husband does her no favor in permitting her to buy their children's clothes or her own. Yet often one would suppose so from the grudging manner in which he will ask if some small sum will not be enough. There are honorable exceptions—many of them—and one good man has often been heard to refer to his immense indebtedness to the wife who has worked for her bread and clothes so many years, when, had her services been paid for as housekeeper, cook, dressmaker, tailor and maid-of-all-work, she would now be in comparative wealth. Mutual love and a common interest make every privation endurable; and there should be no thought of "mine" and "thine" on either side. Then if proper provision is made for the wife in case she be left alone, she will not have to reflect, as many a sorrowing widow has done, on the injustice that deprives her of entire control of the home she has had an equal or harder share in earning and making comfortable. So long as the law does not do justly to women, every man should provide for his own wife. A. R. D.

WHEN I WAS A CHILD.

WE often hear these words repeated; and with what interest we recall incidents of that period of innocence and ignorance of the sins and ways of the world. It is a period to which we who have passed beyond, look back as to one of great joy; a time when we knew nothing of those cares that now press so heavily day by day, the effects of which knit our brows and bend our shoulders. Here it is April once more, and house-cleaning is at hand; and we must either go at this disagreeable task ourselves, or oversee the undertaking from the drawing of the first tack to the nailing of the last one in its place. How many back-aches are in store for us, and how often will our patience be tried over the breaking of some cherished bit of property by careless hands. I hope we may all keep our patience. In our childish days no such disagreeable tasks devolved upon us. House-cleaning was a time of litter and shaking of carpets; of taking the meals when and where we could—in a sort of picnic fashion. We slept anywhere or almost anyhow, when our sleeping-rooms were undergoing the cleansing influence of lime and soapsuds. Rolls of carpet lying all about, curtainless windows, chairs standing on their heads and furniture piled in promiscuous heaps, marked the house-cleaning era, all of which we children very much enjoyed, without experiencing any of the toil or annoyance, or ever realizing that this stir and bustle made hard work for those engaged in the effort to bring order out of chaos.

White-washing done by skillful and exper-

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria

lenced hands, seemed but a bit of play, as we stood with heads thrown back and eyes rolled up watching the operation and calculating how long it would be before we would be old enough to white-wash the walls ourselves.

We found by later experience that contemplation of the undertaking was far more agreeable than the reality, and that whitewashing was not by any means so easy to do as it appeared to be. How well it is for the little ones that they have been wisely withheld from realizing what is before them; for what is more sad than a child old before its time? Let the little children run and play and grow to a ripe manhood and womanhood, that they may be ready to take their places in the ranks of workers at the proper time and age; and do not over burden them with cares, that stunt the body and warp the intellect. B. H. G.

GLITTER AND GOLD.

THERE is an old maxim that "all is not gold that glitters;" but the converse of this proposition is also true that gold does not always glitter. A few years ago I spent several hours in a large waiting-room of a depot in a large city. It was thronged with travelers—going in different directions when their trains were ready to start. Among these strangers I noticed a man in company with his wife and two or three small children. I regarded him with sincere compassion. He was so exceedingly homely that I thought his face must ache, and I wondered how he had been able to have ever won a wife, much less the fair woman with him. I lost sight of him after a time and when next he appeared on the scene, it was with a huge pitcher of steaming coffee, apparently from the nearest eating house. His little party were arranged for a lunch, with evidently the keen appetites of travelers. My homely friend began cutting huge slices of bread from a loaf, and dealing out cups of coffee, himself waiting until the very smallest one had been well served before beginning his own repast. When I saw the affectionate regard for his family which beamed on his coarse features and lit his dim eyes, I realized, as I never did before, how a great warm heart can beautify the most commonplace countenance, and I no longer wondered at the look of sweet content which rested on the features of his wife, who was evidently a woman who could appreciate a genuine good man. Here, thought I, as I overlooked the group, is a case where gold does not glitter. It was also a strong reminder of the folly of judging from appearances.

AUNT RACHEL.

A CHAPTER ON PUDDING.

A PLAIN but delicious tapioca pudding can be made with very little else than tapioca and apples. Most recipes say soak over-night, but one doesn't always know the night before that she will want a pudding the next day. Put your tapioca over in cold water and boil till it is as clear as starch. While it is boiling pare and core a few apples. The number of apples and quantity of tapioca used must be according to the number fed. It is hard to spoil the pudding it is so simple. Put the apples in another dish and cover with water, adding a little sugar and nutmeg or cinnamon and salt Boil nearly soft and then turn the clear tapioca over them and bake a little while. Serve with cream and sugar.

ORANGE PUDDING.

PEEL and cut up six oranges and sprinkle with sugar. Let them stand two hours. Boil one pint of milk, beat the yelks of three eggs, add three table-spoonfuls of sugar and a heaping spoonful of corn-starch, stir into the milk when boiling. Stir three minutes. When nearly cold pour over the oranges. Make a frosting of the whites of the eggs and one-half a cup of sugar. Spread over the pudding, set in the oven in a pan of water, and let it brown lightly.

BAKED INDIAN PUDDING.

BUTTER a skillet, put one quart of rich sweet milk in, when the milk boils stir in three-fourths of a cup of meal, let it boil until well done, then set off the stove. Take one half cup of sugar, one-half cup of sorghum molasses, three well beaten eggs, a pinch of salt, and one spoonful of ginger. Beat well together, then mix thoroughly with the cooked meal, adding milk to make it of the consistency of cream. Bake slowly an hour and a half or two hours. Good either hot or cold. Serve with sweet cream. MRS. V. W. GRIBLIN.

CORN-STARCH PUDDING.

ONE quart of milk. Take one pint, and, when nearly boiling, add two table-spoonfuls of corn-starch dissolved in cold water, and a little sugar. When done, stir in the whites of two eggs beaten stiff. Make a custard of the other pint of milk and the yelks, and pour over the pudding when cold. Whipped cream can be substituted for the custard.

SNOW PUDDING.

ONE-HALF box of gelatine soaked in one pint of warm water. Don't let it cool too much, add two cups of sugar, the juice of two lemons and the whites of three eggs. Stir all together 20 minutes. The secret of this pudding is in the stirring. Put into a mold and when firm turn it over. Eaten with a custard.

TAPIOCA PUDDING.

SOAK three table-spoonfuls of tapioca in a little water four hours. Pour off the water, put in one quart of milk and heat. When it commences to boil, stir in the yelks of three eggs, four table-spoonfuls of sugar and a little salt. Stir till it thickens. Flavor with vanilla. Pour half into a pudding-dish, over this, spread the whites of three eggs, beaten stiff, then add the rest of the tapioca. This cooks the frosting.

EGGLESS COOKIES.

ONE cup of butter, one cup of sour cream, two cups of sugar, one tea-spoonful of soda. If wished, lard may be substituted for the butter and water for the cream. In the latter case use two tea-spoonfuls of cream-of-tartar. Or, omit the soda, and use two tea-spoonfuls of baking powder.

APPLE FLOAT.

THREE large, sour apples baked, white of one egg. When the apples are entirely cold, beat with the egg to a frost. Make a custard, put the float upon it.

QUEEN OF PUDDINGS.

ONE pint of bread crumbs, one quart of milk, one cup of sugar, yelks of four eggs well beaten, rind of one lemon grated, piece of butter the size of an egg, bake. Beat the whites of the eggs to a stiff froth, add a tea-cupful of sugar, into which has been stirred the juice of the lemon. Spread over the pudding a layer of jelly, pour the frosting over, and brown lightly in the oven. Serve with cold cream. R. R.

GINGER COOKIES.

ONE cup of sugar, two cups of molasses, one cup of lard, one cup of butter, one-half cup of buttermilk, two eggs, four tea-spoonfuls of soda, two tea-spoonfuls of cream-of-tartar, two of cinnamon and two of ginger.

MOLASSES LAYER CAKE.

ONE cup of molasses, yelks of two eggs, seven tablespoonfuls of butter one-half cup of butter-milk, one and one-half cup of flour, one-tea-spoonful of soda and one of ginger. Bake in three tins and spread each layer and the top with frosting made of the whites of two eggs, two thirds of a cup of sugar and one tea-spoonful finely ground cinnamon. E. D. B.

Miscellaneous Advertising.

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IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the buttermilk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere.
More of it Used than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & Co., Burlington, Vt.

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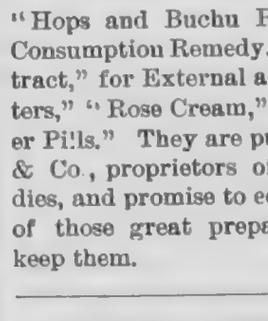
WHITE MOUNTAIN FREEZER.



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"Frozen Dainties," A book of Choice Receipts for Ice Cream, Sherbet, Water Ices, etc., packed with each Freezer this season, or will be mailed upon receipt of ten cents in stamps.
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SEED POTATOES
Early Albino, New Queen, Sunlit Star, and Hampden Beauty, for early; Empire State Morning Star, Thunderbolt, and White Lily, for late. Also, nearly 100 other varieties. Catalogue free to all who mention the R. N.-Y.
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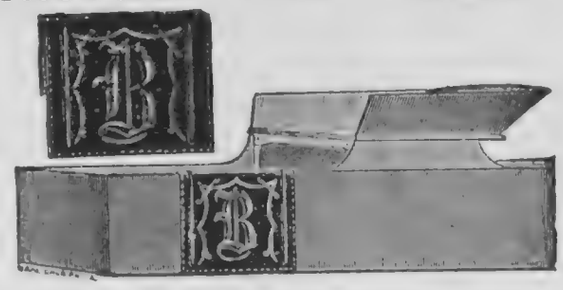

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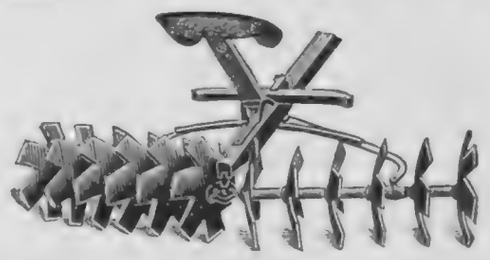

10,000 in use; supersedes the plow; no other tool compares with it; no farmer can afford to be without it; entirely new principles; ground made into a perfect seed-bed; has a seeding attachment for sowing all kinds of grains. Send for new descriptive circular.
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U. S. Standard Scales.
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OSGOOD & THOMPSON, Binghamton, N. Y.

STEAM! STEAM!
Quality Higher, Price Lower.
For Strictly Cash, Complete Fixtures except Stack.
2-Horse Eureka Boiler and Engine, $135
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Other sizes at low prices.
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BROCKNER & EVANS
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AS THE master, so is the servant. As your brains are, so is your body. Use
Warner's Log Cabin ROSE CREAM,
and clear your head of that horrid Catarrh. It is a sure relief from Catarrh. Price, 50c. All druggists.

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THE RURAL NEW-YORKER.
34 PARK ROW, NEW YORK.

The following rates are invariable. All are therefore respectfully informed that any correspondence with a view to obtaining different terms will prove futile.

ORDINARY Advertisements, per agate line (this sized type, 14 lines to the inch).....30 cents
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Yearly orders occupying 14 or more lines agate space.....25 "
Preferred positions.....25 per cent. extra.
Reading Notices, ending with "*Adv.*," per line, minion leaded.....75 cents

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Agents will be supplied with canvassing outfit on application.

Entered at the Post-office at New York City, N. Y., as second-class mail matter.

News of the Week.

AGRICULTURAL NEWS.

SATURDAY, April 20, 1889.

DURING 1888 the "Lakeside Holstein-Friesian herd," of all ages—just 60 cows—have been tested for butter at least one week. These records have been authenticated by the Superintendent of Advanced Registry and accepted by that work. It is not the records of a few phenomenal individuals, but the average of entire herds in large numbers, that shows the capacity of a breed. Of those tested 17 were mature, five years old and over, and averaged 19 pounds 3⅓ ounces per week; 10 were four-year-olds and averaged 16 pounds 15⅓ ounces per week; 11 were three-year-olds and averaged 13 pounds 15¼ ounces per week; 22 were two-year-olds and averaged 12 pounds 1¾ ounce per week. A full list would be burdensome, but here are a few which are included in the above: Among the cows are, Clothilde 2d, 25 pounds 6⅓ ounces; Lady Griswold, 24 pounds 13 ounces; Netherland Baroness 4th, 22 pounds 5 ounces; Executrix, 21 pounds 12⅓ ounces; Benola Fletcher, 21 pounds 3¾ ounces; Kappijne, 19 pounds 12¾ ounces; Aaggie Constance, 19 pounds 14⅓ ounces; Ægis 6th, 19 pounds five ounces, etc, etc. Among the four-year-olds are, Artis Rollora, 21 pounds 12 ounces; Aaggie Rosa 4th, 21 pounds 8⅓ ounces; Princess Margaret, 20 pounds 1⅓ ounce; Lakeside Prize, 18 pounds 6⅓ ounces; Artis Helen, 17 pounds 11⅓ ounces, etc., etc. Among the three-year-olds are, Baise, 21 pounds 3⅓ ounces; Soldene 2d, 19 pounds ¾ ounce, etc., etc. Among the two-year-olds are, Argyrea 3d, 15 pounds 5⅓ ounces; Netherland Myrrhna, 14 pounds 14 ounces; Netherland Princess 5th, 14 pounds 12 ounces; Venus 5th, 14 pounds 9⅓ ounces; Executrix 2d, 14 pounds 4⅓ ounces; Clothilde 3d's Countess, 13 pounds 14⅓ ounces; Aaggie's 3d Daughter, 12 pounds 12 ounces; Ida Rooker, 13 pounds 12⅓ ounces; Netherland Duke's Nierop, 23 months old, 12 pounds 2⅓ ounces; Lady of Verona, 23 months old, 13 pounds 10¾ ounces, etc., etc.....

The immigration to the Dakotas is unprecedentedly large at this season of the year. From five to a dozen emigrant cars are attached to nearly every train on the C. M. & St. P. railroad, a majority of the emigrants being Germans, most of whom intend to start in farming. A great immigrant boom into the new States is expected during the coming summer. .....The Board of Health of the City of Mexico, has pronounced American lard an adulteration unfit for use, and has prohibited its sale. The action has been sustained by the Government and will be adopted throughout the Republic, and suitable instructions have been given to the custom-houses.....

The Ohio Senate has emasculated the anti-oleo bill by adding four amendments which render it of no use to farmers. One provides that imitations of butter must be declared injurious to health after chemical analysis before its manufacture and sale can be prohibited; another provides that neither butter nor cheese must be colored; another ordains that any firm in the State which has been pecuniarily injured by the bill can recover full damages from the State, and the other struck out the penal clause. The Senate has also killed the beef inspection bill by a vote of 16 to 15 .....The Ohio Legislature has passed a bill making the weight of a bushel of beets and carrots 50 pounds. .....

Philo Remington, inventor of the Remington rifle and head of the agricultural works at Ilion, N. Y., died the other day at the age of 73.....Michael Eugene Chevreul, the famous French chemist, who made a number of discoveries of much importance to agriculture, is dead at the age of 103. He retained many of his faculties to the last, but was quite helpless of late years.....

Secretary of the Navy Tracy has been a large breeder of trotters. Thursday 49 of his stock were sold here at auction, bringing a total of $54,083—an average of $1,104. Wednesday the same number were sold, bringing $59,820, an average of nearly $1,221. The total of the two days' sale was 98 horses, a large proportion of which were youngsters, which brought $113,905, an average of $1,162 per head. Abbie, a George Wilkes mare, 12 years old, brought the top figure—$5,900.....

The Maple Sugar Exchange at Brattleboro, Vt., has received 31,340 pounds of cake sugar and 27,541 pounds in pails, besides 4,216 gallons of sirup.....Dairy Commissioner Tatam, of Connecticut, says that not one-third as much "oleo," is sold in that State as there was two years ago, while the sales of butter have increased by $464,000. The United States Government has gained $25,000 from the "oleo" licenses .....George T. Angell, President of the Massachusetts Society for the Prevention of Cruelty to Anamals, 19 Milk Street, Boston, offers a reward of $100 for evidence enough to convict anybody in the State of docking horses' tails. Three convictions have been already secured. .....

Beef exports in March increased 7,123,000 pounds, or 45 per cent. as compared with the same month last year..... .....There is great activity throughout the South in building cotton-seed oil mills in opposition to the Cotton Oil Trust. A society to build a dozen mills to cost $1,000,000 has just been organized in the South, and a Philadelphia company is to put $2,000,000 into the business. Planters are likely to get something like reasonable prices for their cotton-seed..... .....

The Forestry Division of the Department of Agriculture has issued a circular giving instructions to school officials who are interested in the celebration of Arbor Day. Send to B. E. Fernon, Washington, D. C.....

The annual meeting of the American Jersey Cattle Club will be held at the office of the Club, No. 1 Broadway, N. Y., on Wednesday, May 1. Dr. H. M. Howe, President, and F. W. Wicks, Secretary. The Jersey breeders will hold a convention on May 7, at the Fifth Avenue Hotel.....

A simple device is reported to have been perfected at Quincy, Illinois, which will render farmers independent of the Binding Twine Trust. For some weeks a harvester has been at work in the tall sedge grass on the Missouri bottoms, opposite Quincy, binding with wire instead of twine, and the device for doing so is pronounced a complete success. A twister is simply substituted for the knotter used in the twine binder. The farmer can therefore use either wire or twine, and the change can be made in a moment. It is stated that the old objections to wire binders have been obviated in the new attachment..... .....

Canada proposes to make it a penal offense to export cheese from the United States to England, via Montreal, with the words "Canadian Products" marked on the packages. It is said such a practice greatly injures the high reputation of Canadian cheese abroad .....

Farmers through their organizations are urging the legislatures of Michigan and Illinois to provide for the manufacture of binding twine by the convicts in the penitentiary and the farmers of Mississippi want cotton bagging made by the State convicts. Ex-Commissioner of Agriculture Dr. Geo B. Loring has been nominated and confirmed as U. S. Minister to Portugal .... The Pennsylvania legislature has refused to tax oleomargarine and to create the new office of State Dairy Commissioner .....Florida orange growers are beginning to consider that the business of orange planting has been overdone. It is said that the production 10 years hence, when all the trees now planted are in full bearing, will be enough to supply one box annually to every man, woman and child in the United States..... .....

A bill just introduced into the New York legislature offers a bounty of a half cent per pound for sirup from sorghum grown in this State. The sirup must weigh 11 pounds to the gallon. The manufacturer may put up works worth any sum up to $6,000 and the plant is to be for 10 years free from assessment or taxation for State, county, municipal, town and school purposes. The sum of $3,000 is appropriated for the payment of bounty during the first year of the act..... .....Owing chiefly to the comparatively small balance to the credit of the Department of Agriculture, as much of the appropriation for the current fiscal year, ending June 30 next, has been expended, Secretary Rusk has discharged 80 of the employees in the Seed Division of the Department of Agriculture, and is making few additions or changes anywhere .....A beet sugar company has just been incorporated at San Francisco, with a capital of $5,000,000, with Louis Schloss, A. L. Cutts, F. Ehrmann, Claus Spreckels and John Spreckels as directors, the last two holding half the stock. The object is to erect large sugar refineries at various points on the Pacific coast in addition to the one already established at Watson, Cal., with the purpose of refining from 50,000 to 60,000 tons of beet sugar a year. This would make up nearly half our present annual imports.....The Acme Company, of Wilmington, N. C., and "a number of outside capitalists" have agreed on the immediate erection, thoughout the pine regions of the South, of factories for the manufacture of pine-straw bagging for cotton. It is expected that this movement will go a great way towards checking the extortion of the jute bagging monopoly.....

One death and two cases of sickness which must inevitably end with death, have been lately reported from handling glandered horses..... ..The New York Hay and Straw Dealers' Association was organized on the 17th inst. at Syracuse. Nearly every county in the State was represented. Willis Bullock, of Canajoharie, was elected president; C. C. Caywood, of Woodstock, vice-president; W. H. Falke, of Albany, secretary, and T. W. Smith, of Penn Yan, treasurer. The principal object is said to be to get rid of middlemen in the New York, Boston and other Eastern markets. Wouldn't this object be accomplished better by an association of producers than by one of dealers?.....

Called Back.

There is a famous novel by Hugh Conway entitled "Called Back." From a facetious proneness we are indirectly reminded that this is also the name of the supporter of erect stature, the spinal column is *'called back.* Disease may weaken it—weariness wear it, health leave it; briefly prostration may drive its vigor away. but we are pleased to remind you that vigor also may be "called back," by Compound Oxygen treatment.

Here is some encouragement:

PENSACOLA, FLA., July 25, 1888.

"I suffered from a very severe and obstinate case of bronchitis. I had tried a great many doctors' remedies, and while I am not entirely well, I am very greatly improved, and feel fully assured that the same is due to your Compound Oxygen Treatment."

WALLA WALLA, WASH. TER., April 9, '88.

"I have now used your Compound Oxygen Treatment for two months, and feel much better than I did before using it. My lungs hold double the amount of air they did at the time I first tried it. N. K. GABRIEL.

BROOKLYN, N. Y., June 4, 1888. No. 331 Decatur St.

"I will always recommend Compound Oxygen as the greatest vitalizing agent known; for I certainly feel that it has prolonged my life" MRS. S. H. HENDERSON.

If you desire convincing proof of its efficacy—that is if you will consider authenticated testimonials as such, then send for our brochure of 200 pages containing full and explicit information on the subject of Compound Oxygen, together with a record of cures in many cases of consumption, asthma, catarrh, bronchitis, dyspepsia, hay fever, headache, debility, rheumatism, neuralgia, all chronic and nervous disorders. It will be forwarded, free of charge, to any one addressing DRS STARKEY & PALEN, No. 1529 Arch street, Philadelphia, Pa.; or 120 Sutter Street, San Francisco, Cal.—*Adv.*

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, April 20, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans, and Gulf.	Texas
Ordinary	8 1-16	8 5-16	.....
Strict Ordinary	8½	8¾	.....
Good Ordinary	9 7-16	9 11-16	.....
Strict Good Ordinary	9⅞	10⅛	.....
Low Middling	10⅜	10⅝	.....
Strict Low Middling	10⅝	10⅞	.....
Middling	10 13-16	11 1-16	.....
Good Middling	11 5 16	11 9-16	.....
Strict Good Middling	11 9-16	11 13-16	.....
Middling Fair	12	12¼	.....
Fair	12⅝	12⅞	.....

STAINED.

Good Ordinary	7 15-16	Low Middling	9⅛
Strict Good Ord	8 9-16	Middling	10 5-16

POULTRY—Chickens, spring, per pair, 75c.@$1 25; LIVE FOWLS, near-by, per ℔, 12@12½c; fowls, Western, per ℔ 12@12½c roosters, per ℔, 7@11c; turkeys, per ℔ 14@16c; ducks, western, per pair, 75c@1.00, geese, western, per pair, $1 15@$1 50.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per ℔, 15@16c; do do, common to fair, 10@14c; do, iced, dry picked, choice, 11@12c. Fowls, western, do, choice, 11@13½c; do, nearby, do do 13@13½c; Chicks and Fowls, mixed, 10@12c; do do do, scalded, 8@9c. Squabs, white, per doz, $3 50@$3 75 do. dark, do, $2 50@$2 75. Chickens Philadelphia, dry picked, 15@17c, do Jersey, do, choice, 14@15c; do nearby, do, good, 13@14c; do Western, do do, 11@12c; do do, iced, good to choice —@—c. Ducks, nearby, choice, per lb, 14@15c; do do, good, 12@14; do Western, good, 12@14c. Geese, Western, good, 8@10c.

GAME.—Wild Ducks, Canvas back, per pair, $——@@$——; do, Red Head, do, $ 50@$1 00; Grouse, do, 75@90c; Wild Ducks, Mallard, do, 40@50c; Teal, do, 22@40. Plover, per doz., $1 50@$1 75; Snipe, per doz. $1 50@$1 75.

HOPS.—State, new, best, 21@22c; do, prime, 19@20c, do, low grades, 13@16c; do do, 1887, 10@11 do do do, California, common to prime, 13@19c; choice, 20c.

HAY AND STRAW.—Choice Timothy, 90@95c; do good do, 85@90c; do medium, 70@80c; shipping, 60@65c; do, Clover, mixed, 55@70c. Straw.—No. 1, rye, 75@—c; short do 55@65; oat, 40@50c.

BEANS.—Marrows, new, $1 90@$——; new mediums choice, $1 75@—; pea, $1 75@—; red kidney, $2 00@——; white kidneys, choice, 2 10@——; foreign, mediums, 1 85@1 55; California Lima, $2 75@$3 10; green peas, $1 15@——.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@——c, and farmers' grades at 6½@7c. HICKORY NUTS quoted at $0 50@$1 00 per bushel. Pecans, 6@8c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Bermuda, per bbl, $4 00@$8 00; Maine do. $1 50@$2 00; State do, $0 90@$1 50; Sweets do. $2 50@4 50; Cab., new, $1 00@$2 00; Peas, per crate, $1 50@$2 00; Kale, per bbl., $0 50@$0 75; Beets, per crate, $1 25@$1 75; Asparagus, per doz., $3 00@$9 00; Spinach, per bbl., $1 00@$1 75; Tomatoes, per crate, $2.-00@$4 00. ONIONS—Orange Co, red, per bbl., 40@75c; Conn. red, do, 75@$1 00 do. white, do $1 00@$1 50; do, yellow do, 60@75c; State, do do, 25@75c; Bermuda, do, per crate, $1 25@$——; Beans, string, do, $1 25@$3 00.

FRUITS—FRESH.—Apples, Baldwin, per bbl. $1 25@$1 75; Common, $0 75@$1 00; Russet, $1 50@$2 00 Strawberries, per qt. 10@30;. Cranberries—Jersey, fine, box, $1 00; do common, 50@75c. Oranges—Florida, best, box, $3 00@$4 50; do, good lots, $2 50@$3 50.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5¼@6c; do new, common to prime, 4@5c; sliced, new, 3@4½c; quarters, 3@3½c; chopped, 1¼@1½c; cores and skins, 1@—c. Cherries, new, 13½@15c. Raspberries, new, 16@17½c. Blackberries, 4@4½c. Huckleberries, 10@—c. Peaches—Delaware, evaporated, peeled, 12@15c; do do, unpeeled 5@6c; North Carolina, sun-dried, peeled, 7@9c. plums, 6@6½c.

PROVISION MARKETS

NEW YORK.—PROVISIONS—PORK.—New mess, 13 50@13 75, short clear, $14 00@16 00 Extra Prime mess, $12 50@$— prime do, $14@—— and family mess, $13 25@14 00 BEEF—India Mess in tierces, $13 50@14 Extra Mess, in barrels $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $8 25@8 50; Family at $12 50@$16. HAMS—$12 00@$13 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 7¼@7¾c; Pickled Hams, 9¼@10c; pickled Shoulders, 6@6½c; Smoked shoulders 6½@—c; do Hams, 10@11c. Dressed Hogs.—City, heavy to light, 6¾@6¾c. Pigs, 7c. LARD.—City steam, $6 75; February, $——; March, $——; April, $7 20 May, $7 20; June, $7 23; July, $7 26; August, $7 29; September, $7 32; South America, 8c.

BOSTON.—PROVISIONS firm and steady New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, PA.—PROVISIONS.—Potatoes quiet; Early Rose, 23@38c per bush.; Burbanks and White Stars, 23@30c Provisions were steady, in moderate demand. BEEF.—City family, per bbl. $9 50@$10; do, packets, $9 00@—; smoked beef, 10@10½c; beef hams, $14 PORK.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@12c do. S. P., cured in tierces, 9½@10½c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 8½@9c; do, do, smoked, 9c; Shoulders, pickle cured, 8@8½c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 9@9½c; butchers' loose, 7.@8½.

CHICAGO.—MESS PORK.—$11 80@—— LARD.—$6 85@—— per 100 lbs; Short Rib sides (loose), $6 00; dry salted shoulders, boxed, $5 25; short clear sides, boxed, $6 25.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New, Creamery, State, pails, best, 27@28c, do do. tubs, new, 20@26: Pennsylvania, best, 25@26; Elgin, best, 27; Western, best 25@—; do prime, 23@25c; do good, 19@21c; do poor, 16@17c. State, Dairy, half-firkins, tubs, best, 25@26c; do do prime, 20@23c; do do fine, 19@21c; Welsh tubs, fine, 21@22c; do do good, 19@30; firkins, best, 19@21c; do prime, 21@22c; do fine,—@—c. Western Imitation Creamery, best, 21@23; do fine, 17@19; Western dairy, fine, 18@19; do fair, 15@17c; do poor, 12@13c; do factory, fresh, best, 19@20c, do prime, 16@17c; do good, 14@15; do poor, 11½@13½c; do June, 13@14. Old butter from 2 to 4c. lower.

CHEESE.—State factory, fancy, 10½@11¼c; do do, fine, 11@11¼c; do do, prime, 10¾@11¼; do do, fair to good 10@10½c; Ohio, flat, prime, 11@11¼c; do good, 10@11c; do, good, 9@9¾; Skims, light, 8¾@9¼c; do medium, 6½@8½; do full, 2@2¾c.

EGGS.—Near-by, fresh, 12½@12¾c; Canadian, 11@12c; Western, best, 11½@12½c. Duck, 25@26½c.

PHILADELPHIA.—BUTTER active. Pennsylvania creamery extra, at 27@—c; Western creamery, extra at 16½@17c. B. C. and N. Y. creamery extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were firm. Pennsylvania firsts, 12½@—c; Western firsts, 12@——c; Cheese dull—steady; demand fair; New York full cream, at 9@9¼c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

BOSTON.—Butter firm; Western extra Creamery, 28@29c; Eastern extra Creamery, 27@28c. Cheese dull. Eggs firm; Eastern extras, 13@—c; Michigan extras 12c; Western firsts at —@—c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was active and steady; Elgin creamery, 25@26c; choice Western, 21@23c, choice dairy, 20@23c; common to fair, 11@12c. Eggs firm at 10½c.

CHEESE—State factory, September made, 12c; do do do, October, fancy, 11@11½c; do, fine, 11½@11¾c; do fair and good, 10@10½c; Ohio, flat, prime, 11@11¼c; do, good, 9¾@10½c skims, light, 8¾@9¼c; do, medium, 6½@8½c; do, full, 2@2¾c.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, April 20, 1889.

BEEVES.—Dressed beef unchanged and in moderate request at 5½@7c. per lb. with some sales of choice and extra sides at 7¼@7½c.

MILCH COWS.—Receipts thus far for the week 152 head. Dull at $25@$45 per head for poor to good stock.

CALVES.—Demand moderately active at 4@4½c. for Buttermilk calves; 4¾c. for mixed do. and 5@7c. for ordinary to prime veals, with choice fat stock reaching 7½c. Dressed calves in fair demand at 5@9c. for country dressed veals, and 6@10c. for city dressed. Extra carcasses sold as high as 10½@11c.

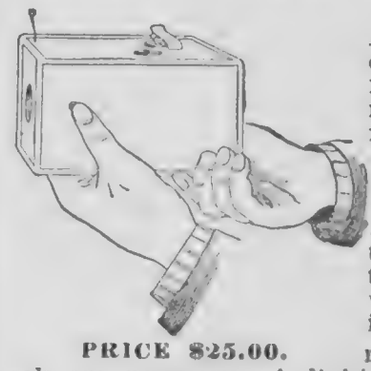
SHEEP AND LAMBS.—Market unchanged and demand moderate. Clipped sheep sold at $4 40@$4 62½; unshorn do at $5@$5 85; clipped yearlings at $4 50@$5 50; woolled do at $6 50@$6 70. Spring Lambs ranged in price from $3 to $7 per head. Dressed Mutton slow at 7½@9c and dressed Yearlings quiet at 8@10c. Sales Unshorn Michigan Sheep, 97 lb. average, at $5 75 per 100 lb; unshorn Michigan Yearlings, 69 lb., at $6 70. Clipped State Sheep, 82 lb, at $4 50; unshorn do, 73 lb, at $5; Spring Lambs at $5 each. Unshorn State Sheep, 99 lb, at $5 85 Clipped Ohio Sheep, 85½ lb. at $4 50; clipped Ohio Yearlings, 53 lb, at $4 62½. Jersey Spring Lambs at $5@$7 per head.

HOGS.—Market steady at $5@$5 40. Country dressed unchanged.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING APRIL 20, 1889.

L. L.—C. F. O.—V. W. G.—H. C.—G. S. M.—G. W. N.—G. W. G.—V. S.—F. D. D.—C. S. R.—D. C. L.—C. C. B.—S. B.—L. B. P.—Mrs. J. W.—L. C. W.—J. W.—J. P. A.—O. F. B.—J. R. B.—S. N. R.—J. H. P.—L M. W.—J. M.—F. D. S.—A. B S.—C. H. F.—A, J. C.—F. D.— H. A. W. L. H. B.—H. T.—J. F.—F. E. S. F C. S.—G. V. S.—W. E. W.—W. M. B.—J. H. L.—P. L. D.—E. A. F.—A. H. S.—R. W. McA.—W. A. O.—F. E. L.—H. L. W.—T. B. P.—W. S. H.—A, B—H D. P.—S. B. H.—A, D.—H. S.—E. A. McC.—E. H. C.—G. W. F.—H. S.—J. A. C.—F. G. W.—W. C. A.—C. A. W.—J. J. H. G.—T. T. L.—J. A. W.—C. F. O.—L. F. A.—O. D.—W. P. W.—D. C. L.—H. A. N.—D. C. C.—J. Y. D.—F. E. V.—J. A. F.—J. F.—J. C. P.—M. M.—S. C.—M. B.—H. M. E.—G. S. J—T. W. D.—O. D.—M. I.—W. A. E.—G. R. B.—J. E. B.—L. P. W.—F. H. B.—J. C.—B. W. B.—F. G. W.—B. W. B.—E. W. S.—John J. Payne. Please report.—B. H. G.—V. W. G.—H. G. O. E.—H. R Jr.—A. B. A.—H. S. B.—T. H. H.—B. B.—D. M. K.—E. J. M.—W. R M.—G P.—A. L. H.—P. O. L.—T. B. P. M. C B.—E. A. R.—A. E. H.—D. R.—J. W.—F. W. A. G. W. M.—E. S. P.—W. J H.

The Kodak.



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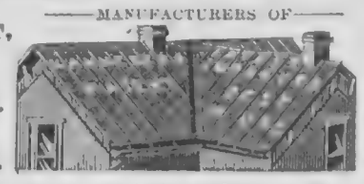

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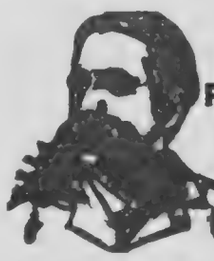

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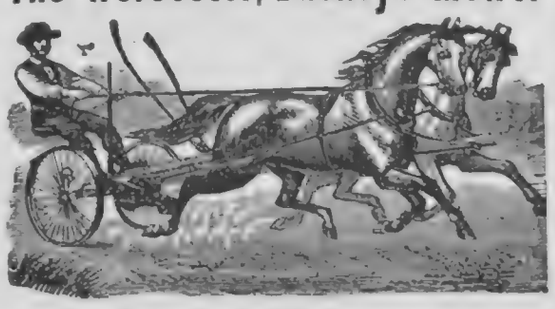

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No other Machine has these improvements. Don't fail to see it. Send for 1889 Circulars. We refer to **Thirty-five Thousand** farmers in New England who use the **Worcester Buckeye.**

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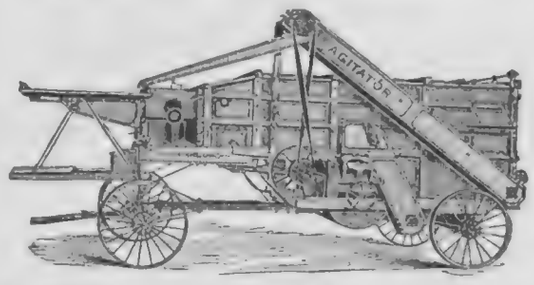

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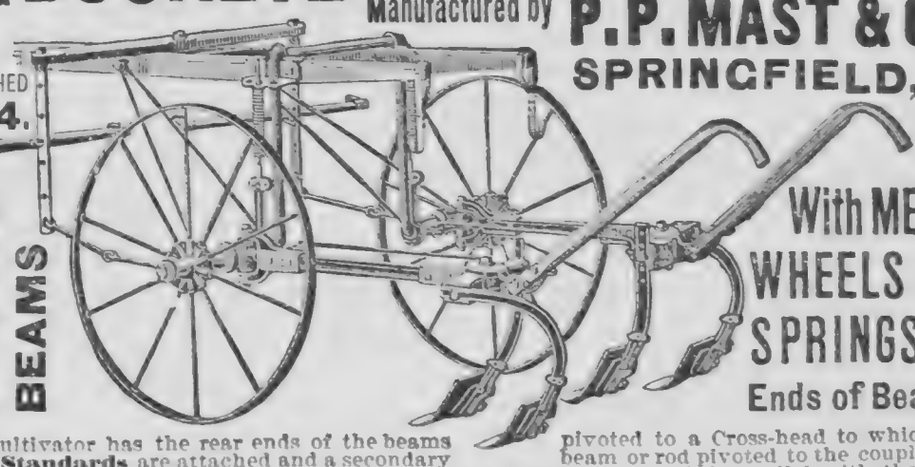
With PIVOTED PARALLEL BEAMS



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This Cultivator has the rear ends of the beams pivoted to a Cross-head to which the **Shovel Standards** are attached and a secondary beam or rod pivoted to the coupling in front and to the Cross-head in the rear, by which the Shovels are carried parallel with the axle, whatever may be the position of them in being moved sidewise. The spring at the front end of the beams supports them when in use, and enables the operator to move them easily from side to side and assists in raising when he wishes to hook them up while turning at the end of the row. We attach these Beams also to our **Riding** and **Tongueless Cultivators.** This Cultivator has no equal in the market, and can not fail to be appreciated by any farmer who sees it. We also manufacture the BUCKEYE DRILL, BUCKEYE SEEDER, BUCKEYE CIDER MILLS AND HAY RAKES.

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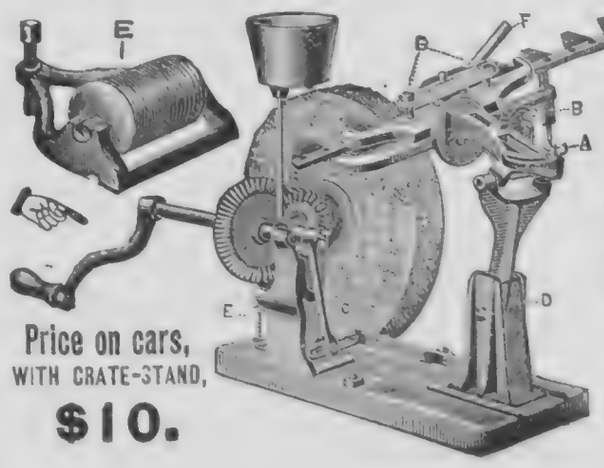

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Literary.

OUR FIRST FARMERS' INSTITUTE.

BY WM. ROSS.

CHAPTER I.

THE FARMERS' INSTITUTE I propose to write about is not an institute held in some far-off locality, of which no one ever heard, or one which had its rise and progress in the imagination of a writer of fiction; but an institute in our own State of Ohio. Woodside, the county-seat of Excellent county, is a village of 1,200 to 1,500 inhabitants, that has grown to its present dimensions within the last 30 years. About that long ago the county-seat was located in Col. Woodside's fields where the beautiful town now nestles among the hills that surround it.

Excellent is a county of hills and valleys, but a great part of it is what the farmers call "strong lands," and limestone in great abundance is distributed over the county. The sources of several branches of three different creeks are within the limits of the county. The bottoms along these are mostly rich, being fed from the surrounding limestone hills. In its primitive condition the land was very heavily timbered with oak, magnolia, maple, beech, hickory, etc. Before the age of railroads, all products had to be transported by wagon a distance of from 10 to 40 miles to navigation. The early settlers were thus forced to produce such crops as would not be injured by waiting till such times as they could be taken to market, and that always brought money at some price, or could be fed to the stock, which could be driven to market on foot. Hence wheat, tobacco and hogs became leading products, and it ranked among the foremost counties in the State in tobacco, in the statistical tables.

The laborious tasks of clearing off the timber, cultivating among the roots, hauling long distances to market, and other toilsome duties incident to the earlier times, made it desirable to the farmers to adopt such conveniences as might be within their reach. They frequently built their stables on the banks of water courses, so as to be convenient to water for stock, as well as to get easy water transportation for the manure that might accumulate, and eventually cause the removal of the stable before they were ready for the event. The hog-lot, of course, had to have water running through it for the same reasons, if it could be had, and it generally could.

It is said the "world moves," but it seems to be moving backward in the matter of conveniences on the farm. The afore-mentioned conveniences are giving place to barns and hog-pens built back from streams, and the stock have to be taken some distance, or water has to be pumped from wells or cisterns. The farmers have, also, to haul the manure out and scatter it over the hill-sides, to get rid of it, which is hard work and very inconvenient. As the early settlers had to have the cream of the land to live on and pay taxes, it was very convenient to let the skim-milk run off and be carried away in the streams. But some of the present occupants are trying to stop these convenient washings, and to get grass to catch, and sod over the hill-sides. In many cases this is found to be a very inconvenient task to accomplish. This being the case, the subjects "How to Retain Fertility of Soil," and "How to Renovate Worn-out Soil," were very popular at our farmers' institute recently held in Woodside.

As this was the first institute we ever had, its history and how it was run are intensely interesting to some of our Excellent county fellows, though, so far as I know, it may not differ materially from other institutes. Some of the farmers had learned somehow, and we don't know how, unless they had been reading agricultural papers, that such things as institutes were being held in different localities in the State, and several times we came near catching the institute fever; for occasionally one farmer would say to another: "We ought to have an institute," and the other would reply: "Yes, we ought." Sometimes, too, the papers would say that we ought to have a farmers' institute; but these mild symptoms, which assumed a periodical character, always subsided without assuming alarming proportions, and so the institute always stopped somewhere before it arrived here. Woodside had a fever epidemic last fall, and the periodical symptoms of this one flashed up, and they kept on developing until we got it bad, or got it good, whichever way it was.

CHAPTER II.

WE now introduce two characters that figure conspicuously in our story. They were familiarly known as Jack Edwards and Bill Bark. Mr. Edwards was a "well-to-do" farmer and kept sheep. He formerly lived in a rough, lonely place in an adjoining county, and had once attended an institute in that county. He had purchased a small farm that was very pleasantly situated in the vicinity of Woodside, but the land was badly run down. His family was small and he rented his old homestead, and now lives a half-retired life on his new purchase. He had had a foretaste of institutes and was hungering and thirsting after more, for he wanted new ideas to comfort him in working up his new purchase so it would hold grass, and he knew that a farmers' institute was the place to get them. Bill Bark had been a resident of Excellent county for nearly 40 years. He had obtained a fair education, was very fond of reading agricultural as well as other literature, and therefore was always pretty well read upon all agricultural matters. During the earlier years of his life he had been engaged in general farming and stock raising, and had reared a large family, which was now scattering off, as most families will. He had recently changed his residence to a little home in the suburbs of Woodside, where he and family could better enjoy the conveniences and advantages that contribute towards making life pleasant. Not keeping much stock now, he had more time at his disposal to read than formerly. He had held responsible offices in the county and had had a taste of the inwardness of politics. Several times during his life he had assisted to start and carry on new societies and companies, and knew what time and labor it required to lead such things to success, and they had as often failed as succeeded. He seemed now to have become disgusted with the whole public spirit business, and made it a rule to refuse whenever solicited to engage in any public enterprise. So he had let all the little flashes of institute interest pass by with almost stolid indifference. He preferred to sharpen his mind with the product of other minds, by his own fireside, as it came to him through the printing press.

One day in October, about a month after the Woodside Fair, these gentlemen met on the sidewalk.

"Some of us was a-talkin', out at the fair, about gitten' up a farmers' institute this winter," said Edwards. "Do you know how to go to work to get it up?"

"Is that so?" responded Bark. "I had not heard anything about it. The way to get it up, is to just go at and get it up, I suppose."

"I was talkin'," said Edwards; "to James High, and David Color, and they agreed to open a discussion on hogs; and young Mr. Hinton will take sheep, and we wanted to see you if you wouldn't speak on Market Gardenin'."

"Oh! yes," said Bark; "I'll help you out on that subject."

Mr. Edwards continued. "As Sheriff Neelan's President of the Fair and Judge Forester's Secretary, we wanted to git them to be President and Secretary of the institute, and they agreed to it, as it would help the fair some, and it would have some influence in favor of the institute."

"I think Sheriff Neelan and Judge Forester have about all they can do without getting up institutes," said Bark. "They are good men for the places, but they are in politics, and after the campaign is ended it may be too late; besides, they have their offices to look after anyway."

"We was tryin to find some one that would open the discussion on horses" said Jack. "Do you know any one that would take that subject?"

"Well, no," said Bark, "There is Joe Swap and Taylor Dicker. They can come as near seeing through a horse as anybody, if he is for sale or trade, but I hardly expect they would speak in public. I think the first thing you should do, is to get Judge Forester to write to Secretary Bonham, at Columbus, and learn whether you can get speakers. The sooner that is done the better, as the Institute Committee will be arranging the work before long."

"Well," said Edwards, 'I'll do that right-away."

This conversation seemingly began to fan up the smouldering coals of interest in public affairs, that had been lying dormant somewhere in Bill Bark's nature. He went to thinking the matter over. Judge Forester was a stoutly built, strong man, but at this time he had about as heavy a load of politics as he could carry. Sheriff Neelan was one of the tallest men in the county, but he was in politics up to his ears, if not farther. Bill had been there and he knew how it was, himself. Both these gentlemen belonged to the same party, too, and political farmers, or farmer politicians, whichever they might be, of the other party would be soured, and how the placing of these gentlemen at the head of the institute would carry influence to it, was something he was unable to understand. But then, it was not his bantling, so he would not interfere, as he was determined not to come to the front in anything of the kind again, for he had had his full share of chagrin, and had even been sneered at for planting briars when he planted out his first raspberry patch. However, nearly all his neighbors have followed his example in this, now.

(To be Continued.)

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Dull Aches, Pains and Weaknesses instantly relieved by the CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster. 25c.

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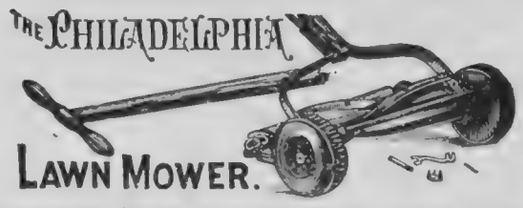

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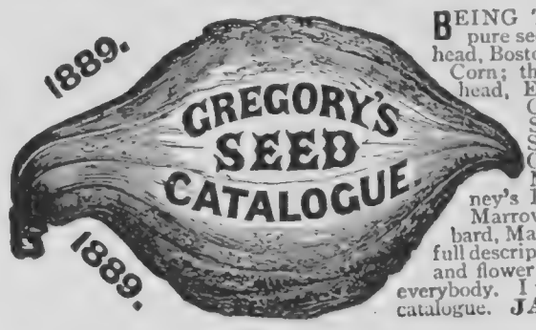

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CATALOGUES, ETC., RECEIVED.

THE CONSTITUTION OF MILK, AND SOME OF THE CONDITIONS, WHICH AFFECT THE SEPARATION OF CREAM.—This is the title of Bulletin No. 18 of the Wisconsin Experiment station. It was prepared by Professor S. M. Babcock, and, as the R. N.-Y. stated two weeks ago, is one of the most important dairy publications that has been recently issued. Starting with the assertion that the manufacture of butter is one of the oldest industries of the country, and is hardly exceeded in money value by any other manufacturing interest, Professor Babcock goes on to say that this vast business is still conducted almost entirely by unskilled labor, while every other business has been developed and systematized to a wonderful degree. Doubtless many of our farmers' wives and daughters will not relish this statement. But do they really perform "skilled labor?" The skilled mechanic knows not only how to put the parts of his machine together, but he knows about the composition of the metals, how the polishing is done, where strength is needed—in fact, he is master of his machine because he can absolutely trace each part from the crude ore or the growing tree. Should the really skilled dairyman know less than this about his business? Should he have anything to guess or should he know what milk is, what cream is, why cream separates from milk, why and how milk sours and under what conditions cream yields up butter? If it is possible to know any of these things, is it not likely that the dairyman who masters them has a clearer right to the title of "skilled worker," than the dairyman who ignores them? It seems to the R. N.-Y. that Professor Babcock must have had something of this idea in mind when he devised the plan of stating in the simplest manner possible, facts connected with the mechanical and chemical constitution of milk and cream. We cannot give the entire bulletin here. We have space for only a few of the more important conclusions. We most earnestly commend the bulletin to those dairy people who wish to study the principles of their business and so inform themselves that they may "know just what they are doing." The R. N.-Y. is of the opinion that our dairy readers will find a good deal to instruct them in the pamphlet. Here are the conclusions. Their real value will be brought out by tracing them through the long line of experiments that lead up to them. This one may do in the pamphlet under review.

PRACTICAL DEDUCTIONS.

1st. The milk should be disturbed as little as possible before it is set, and should be strained directly into the creaming vessel, immediately after milking. It is bad policy to strain milk into a large can and dip the milk into other vessels for creaming, as the agitation and exposure to air occasioned by such practice promotes the clotting of the fibrin and prevents a thorough separation of the cream

2nd. The material of which the creaming vessel is made should have a smooth surface and it should be a good conductor of heat. These conditions are best fulfilled by metal vessels, and practically tin is the best material to use, as it is cheap, easily cleaned and not liable to rust. Neither wood, earthen nor glass vessels are to be recommended, as they are all poor conductors of heat. Wooden vessels are difficult to clean and lass or earthen vessels are easily broken, and the surface of wooden vessels is particularly favorable to the formation of fibrin clots. In comparative tests no vessels have given so good results as those made from tin. Were it not for the danger of corrosion with copper, this should be the best material from which to make creaming vessels, as it is a better conductor of heat than any other common metal.

A tin vessel that is immersed in ice water quickly cools the milk that is in immediate contact with it to a point where coagulation of fibrin does not readily take place, and as the formation of clots begins at the sides of the vessel the coagulation is to a large extent prevented. In general, it is the clots which are in contact with and adhering to the sides of the vessel which are most detrimental, as clots which are not attached are mostly carried to the surface by the fat which is entangled in them. This explains why a large can that cools off slowly will cream as well as, or even better than a small can that is rapidly cooled, as in such the sides may be kept cool enough to prevent changes in the fibrin, while the mass of the milk is still moderately warm and offers the best physical conditions for the separation of the cream.

3d. The creaming vessel should have such a shape that the surface which is in contact with the milk shall be as small as possible in proportion to the amount of milk; this condition would be best fulfilled by a spherical vessel but a vessel of this form, would be inconvenient in practice and will not be considered. The next best form is cylindrical. In such a vessel the ratio of surface to volume will diminish as the size of the cylinder increases and, so far as this one factor is concerned, the larger the cylinder the better; but there are practical considerations which limit the size of the creaming vessel. In the first place, its depth should be such as will permit the creaming to take place in a reasonable time. It is desirable in most dairies that the creaming be completed between milkings or in 10 or 12 hours, so that the same cans may be used at the next milking. It has been found in practice that this may be accomplished, under favorable, conditions with a depth of 20 inches and this depth should not be much exceeded. The diameter of the can may depend upon the number of milkers; it should not be so great as to prevent its being quickly filled, but providing this can be done the larger the can the better. Where there are a number of milkers large cans may be used; but where there are only one or two milkers small cans should be chosen. In any case, it is not well to have a can so large that it cannot be conveniently handled.

CONCLUSION.

1st. That milk when fresh is a perfect emulsion, the fat globules being free and without an envelop.

2nd. That the chief differences in the composition of normal milks are due to variations in the amount of fat, the remainder of the milk, known as the milk serum, being quite uniform in composition in all milks. The variation in the amount of serum solids in milk from the same cow, is rarely more than one half per cent., in milk from different cows of the same breed, it is usually less than one per cent., and in milk from cows of different breeds not more than two and one half per cent. This holds true even when the fat varies as much as seven or eight per cent.

3d. That milk contains a principle analogous to, or identical with blood fibrin, which is capable of spontaneous coagulation, the clots of which entangle the fat globules and to a considerable extent prevent an efficient creaming.

4th. That the most efficient creaming is obtained when conditions are supplied which retard or prevent the coagulation of fibrin. This may, in practice, be best accomplished by setting the milk, directly after milking, in cold water (ice water is best), the creaming vessel to be of bright tin or other metal that can be easily kept clean.

5th. When the milk is transported or when for any reason the setting must be delayed, no method of creaming gives as satisfactory results as the centrifugal.

SUPERIOR DRAIN TILE.—It is always a pleasure to speak a good word for a reliable product that is supplied by a thoroughly reputable house. We like to have our friends obtain such goods, because we know that they are by far the cheapest in the long run. The drain tile made by Jackson Bros. of Albany, N. Y., surely come up to the standard we have indicated. The house is fully reliable, having been in business so long, and having based its reputation so fully on the excellence of its goods that words of commendation are entirely unnecessary. We can only inform our readers that, if they want to purchase first-class tile, they cannot do better than to send to Jackson Brothers.

FERTILIZERS.—The New Hampshire Experiment station director has issued two bulletins designed to serve as a primer and first reader in the science of chemical manuring. They are bright pamphlets, well written.

FENCING AND ORNATE WIRE-WORK.—Catalogue from the Hulbert Fence & Wire Co., St Louis, Mo. A very neat and handy little pamphlet containing the newest designs for ornamental and practical fencings. The Hulbert Company are extensive manufacturers and their products are very popular—justly so, it seems to the R. N.-Y.

SOILS, WEATHER, FIELD TRIALS WITH CORN.—These topics are discussed by Chemist Schweitzer, in bulletin No. 5 of the Missouri Experiment Station. The experiments recorded here seem to have been conducted with a great deal of thoroughness. Those who are in any way interested in the study of soils will be glad to read the first half of this bulletin.

VERMONT DAIRYING.—The Nineteenth Annual Report of the Vermont Dairymen's Association is sent by Secretary E. L. Bass, West Randolph, Vermont. This is an excellent pamphlet, well edited and packed with useful information. It contains, in full, the papers read at the last meeting of the association. The RURAL gave a very full report of this meeting, and also gave the "pedigrees" of most of the samples of prize butter.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

A WATER-COURSE.

H. G. O. E., Sandwich, Mass.—1. A purchases a lot of land of B who, in the deed to A, provides that he (A), his heirs and assigns shall make and maintain forever the whole of the fence where said lot adjoins B's land. Afterwards B sells the land adjoining A's to C, making no reference to said fence. Is A by law obliged to make and maintain all said fence between him and all succeeding purchasers or owners; or will they or any of them be obliged to make one half?

2. A purchases part of a swamp for the cultivation of cranberries. In flowing his meadow in winter and at other times, some adjoining land belonging to B is overflowed by the water from springs the only outlet for which is through A's land. To prevent said overflow and to avoid any claim for damage from B, A builds a dyke which prevents the overflow but dams up the water from said springs in the adjoining land, which raises a permanent pond where there was before only an occasional overflow. Can the owner of said adjoining land, C, after the building of the dyke, collect damage from A, or will he be obliged to find an outlet for said water at his own expense? An outlet can be had by a ditch around A's cranberry meadow, a privilege for digging which would be readily granted.

ANS.—1. An agreement to maintain a boundary or division fence is irrevocable, except by mutual consent or in some way provided by statute. The covenant to erect and keep the fence in repair runs with the land and is binding on the covenantor, his heirs and assigns, even if no reference to it is made in the deed given to C. 2. A has no right, in order to benefit himself by constructing a cranberry bed and by providing against a suit by B, to injure C by making a permanent pond on his land. If he does so, he renders himself liable for damages. He ought to pay for digging the trench around his cranberry meadow and thus give the water an outlet without doing injury to any of his neighbors.

TITLE OF LAND IN COPORATIONS.

L. T., Lincoln County, Neb.—Some years ago the line of a branch railroad was surveyed through a farm of mine in another part of this State. Damages were assessed and paid, and the required strip of land was fenced in. There the matter rested, and now I understand the project of building the road has been abandoned. To whom does the land belong?

ANS.—The fee simple of the land has all along been vested in our inquirer, if he has continued to own the farm. The railroad acquired only an easement in the land, that is, the right to use it for a certain purpose—the construction of the road. If the corporation is dissolved and its franchise ceases to exist, its interests in the land at once revert to the original owner, his heirs or assigns. In a word, during its artificial life, which may be for centuries, the corporation owns the right of way and no more. This principle applies to all corporations that have power to take land for public use, and even to the county, State or national governments.

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PROBABLY thousands of people in this section of country, and this section is no exception to any other in this respect in the United States, have read the report said to have been written by Prof. S. A. Lattimore, Ph. D., LL. D., Analyst of Foods and Medicines, New York State Board of Health, and Professor of Chemistry in the Rochester, N. Y., University, stating that all of the Safe Remedies manufactured by H. H. Warner & Co. were pure and wholesome, nor did any of them contain any mercury or deleterious substance. To shorten the controversy, however, we will give Prof. Lattimore's report entire:

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S. A. LATTIMORE, Ph.D., LL.D.,
Analyst of Foods and Medicines, New York State Board of Health, Professor of Chemistry, University of Rochester, N. Y.

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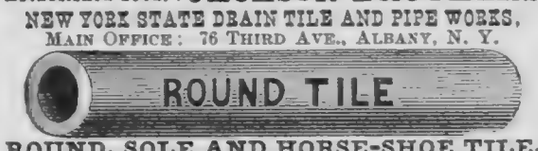

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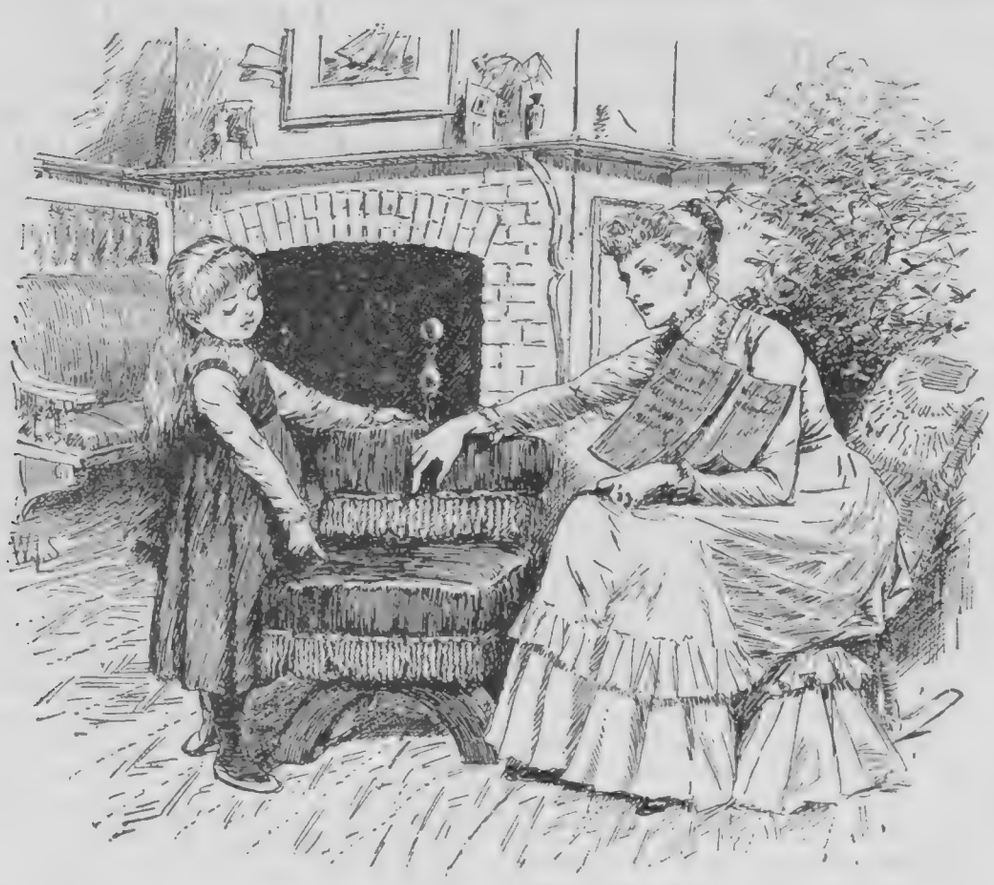

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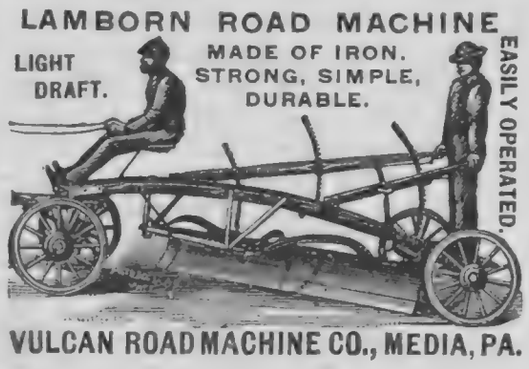

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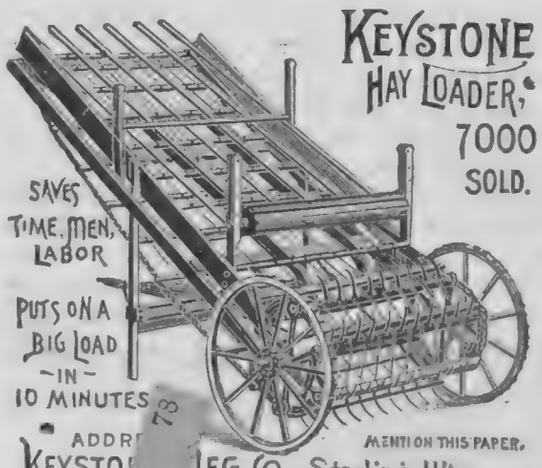

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(*From the Country Gentleman, April,* 1889.)

Cheap at the Price.—The Pennsylvania State Board of Agriculture reports the analyses of a great number of "complete fertilizers," one of which, selling at $20 per ton, is stated to be worth $1.12; another, selling at $18, is worth 17 cents; a third sells for $21, and analyzes for 71 cents. Several brands, however, are estimated to be actually worth something more than their cost. Prominent among these is the "Mapes complete manure for general use," offered by the Mapes Formula and Peruvian Guano Co., of New York, at $40, while the State Board analysis makes it really worth $42.93.

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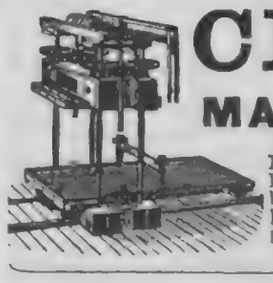

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SCAB

H. C. & J. C. GROOME, of Locust Hill Stud Farm, Wythe county, Va., say of THYMO-CRESOL (The Cold-Water Dip): "*It has been with us notably successful in curing Scab in Sheep, in an advanced stage. We have found the growth of the wool materially promoted by dipping Sheep in it early in autumn. It destroys Lice on Colts, is a most useful dressing for the Hoofs of Horses, and a valuable remedy in cases of Grease and Thrush. We have found it a speedy cure for Mange, and as a Disinfectant and Purifier its merits cannot be too highly commended. In fact, the limits of its usefulness to the stock-breeder are difficult to realize, and here we should be inclined to feel quite helpless without it.*" Imported only by T. W. LAWFORD & CO., Baltimore, Md. Sample by mail for 50c.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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Arboricultural.

THE WEEPING BEECH.

SOME 20 years ago the writer first saw a specimen of this odd tree in the grounds of R. B. Parsons & Co. of Flushing, Long Island, N. Y. About 12 years ago the R. N.-Y. sent an artist to sketch this tree in early spring, before the buds had started. Its portrait, as it appeared in summer, had been published in many horticultural periodicals, but the R. N.-Y. was the first to show the eccentric, freaky growth of its branches, which in summer are almost entirely concealed by their luxuriant foliage. Our present illustrations show a tree which was planted in the Rural Grounds 15 years ago, the one (Fig. 102) a winter, the other (Fig. 101) a summer picture. In the former, two sheets were placed behind the tree so as the better to divide the spray from the background of other near-by shrubs and trees. In the summer picture, the photograph so blends the foliage of the beech with the trees behind it that its proportions must, in great part, be guessed at by our readers.

The main object in presenting the pictures is to show the reader about how long it is needful to wait ere his Weeping Beech may be expected to develop the picturesque beauty for which, above almost any other tree, it is distinguished. The R. N.-Y.'s specimen is now 22 feet high with a diameter of 18 feet near the ground.

The movements of the branches of this tree from year to year have been watched with much interest. What at one time were pendulous branches are now horizontal or even perpendicular, while some of those that were formerly upright have assumed various degrees of pendulosity. It is a tree that doesn't seem to know its own mind, or perhaps, it might better be said, a tree the various parts of which delight in showing their independence of each other.

In 1881 this tree was 12 feet high. The first winter after it was received from the nursery the leading (only upright) branch was killed back so that only pendulous branches remained, and these drooped in a direction almost parallel with the main stem. It was assumed that the *next* leader would come from the growth of some of the topmost buds.

The next year very little growth was made; but the third year it was noticed that *one* of the top branches was changing from its pendulous position towards a perpendicular. It continued to rise until the fall of the leaf when it was found to have moved through an arc of at least 60 degrees. The next year it assumed full leadership and a slight bend in the trunk is now the only evidence that this interesting change ever occurred.

THE WEEPING BEECH. Summer Picture. Fig. 101.

Horticultural.

BIG VEGETABLES.

If a farmer's boy—or for that matter a farmer's boy's father—were to be asked as to whether his primary object in raising a crop would be best served by getting a large crop, or large specimens of an ordinary yield, is there any one who doubts as to what the answer would be? Visit any boy's vegetable garden, or any girl's flower garden and the chances are ten to one that the big pumpkin and tall corn, and the great sunflower and biggest pansy will be pointed to with the proudest finger. It is not far from being just the same in father's field—the Herd's grass up to the shoulder, the mammoth potatoes and the yard-long tobacco leaves ask for first praise, with the matter of tons and bushels of secondary consideration. I say nothing about the farmer's wife, the boy's mother. But I will, for such am I, and——I admire the prodigies of the field and garden as much as "father," Will and Ruth can do. For their benefit and to stimulate their endeavors, I have prepared from my note-book, the RURAL and some other papers, a "record of big things," which I think may interest the readers who "seek the same ends." The largest squash on record was a Mammoth Chili, raised by Charles Hewitt Esq., Lunenburg, N. S., and weighing 292 pounds. This same gentleman, in 1885, raised a Potiron pumpkin weighing 206½ pounds; but Jos. Quinn of Bryantsville, Ky., beat him with one of 226 pounds. There are three varieties of big onions, Silver King, Pompeii and Red Victoria. In 1886 A. Banister, of Meadows, W. T., grew a Silver King weighing 4 11-12 pounds and G. F. Montgomery of Pownal, Vt., one of 4 1 12 pounds. The biggest Pompeii on record was raised in 1886 by G. H. Slaymaker of Atkinson, Neb., five pounds and five ounces. The Victorias this year brought out by Burpee are said to be the largest of all. The largest cucumber reported was a Giant Pera, grown in 1888 by Theo. Southard, Madison Station, Ala. It measured 22 inches in length and 14 inches in circumference and weighed seven pounds and 10 ounces. For watermelons, John G. Miller of Stone Mountain, Ga., has the best record. In 1883 he grew three Cuban Queens of 81, 97 and 111 pounds, and in 1886 a Mammoth Ironclad of 110 pounds seven ounces and one of 128 pounds. The biggest pepper I ever saw was a Procopp's Giant, grown by W. A. Burpee, Doylestown, Pa. and measuring three by nine inches.

In 1888, E. O. Hopson, Canandaigua, N. Y., grew a Turner Hybrid tomato of two pounds nine ounces. A common weight is 25 to 30 ounces. In Bucks county, Pa., it is quite common to find leaves of the Persian Rose Muscatelle tobacco measuring 3½ by 4½ feet. The Golden Wax Flageolet pole bean and the King Lima grow pods eight inches long. The Cuban Asparagus bean has them two feet and upward in length. The Golden Mammoth mangel weighs 20 to 30 pounds. The Marblehead Mammoth cabbage grows to a weight of 50 pounds. The Mammoth Late is the largest sweet corn, weighing two to three pounds each ear. The Snake cucumber grows six feet long. The Mammoth Russian sunflower has heads 12 to 22 inches in diameter. The flower of the Fairy Blush poppy is 10 to 13 inches in circumference The Diamond aster is two to three inches in diameter. The Burpee Defiance pansies are two to four inches across. The Moon-Flower measures four to six inches in diameter. The Tuberous-Rooted begonia and the Giant Mammoth zinnias have flowers four to six inches across. The Perfection Pink balsam has flowers 2½ inches across. Other large vegetables and flowers might be mentioned, but these, measured and weighed by the gardeners on the Fordhook Farm (Mr. Burpee's, at Doylestown, Pa.) fully satisfied the curious visitor.

I might add, in closing, that I was assured last summer that in England, while they did not grow so many such enormous vegetables as we do, they "beat the Americans" with the largest number of medium-sized. The implication is that our vegetables are either notably very large or very small, with but little of "the happy mean." I wonder if it is so!

MRS. L. M. C.

[Large specimens of fruits or vegetables will always be regarded with interest.—EDS.]

Pomological.

Apple Culture Suggestions

AN OLD QUESTION REVIVED

ANSWERS BY POMOLOGISTS

LAST fall the following appeared in the RURAL:

STARTING AN ORCHARD FROM APPLES.

For many years I was under the impression that an apple tree would need some trimming—but otherwise it would take care of itself—that it needed no more looking after than a forest tree. But the reading of the RURAL for eight or 10 years has changed my notions. I have mulched, manured and placed ashes around the trees and have been surprised at the result. Trees that bore small, spotted apples before treating them, have since borne fruit double in size, smooth and well-formed I applied ashes and manure to a Vandevere tree, as I thought, in liberal quantities, but for the first dozen years I did not get a bushel of apples from it. Last spring I hauled two loads of ashes and three loads of manure around it, making a mulch six inches deep, and we will get from this tree three or four barrels of fine apples this year. It may be that I overdid the good work and the tree may die from an over-dose of manure, but at this time it is very thrifty in appearance. This fall I shall plant an apple in the spot where I wish the tree to grow and save the best sprout for grafting, so that the tree shall have no check from breaking of the roots, such as occurs in removing the tree from the nursery to the orchard. To mark the spot where the apple is planted, I shall place a common drain tile. If a tile will exclude the sun and air too much I shall saw the tile into three or four-inch lengths. S. B. H.

Crawfordsville, Ind.

This note was referred to our readers, and the following answers have been received.

FROM T. H. HOSKINS, M. D.

I am asked by the RURAL to comment upon the above communication in the light of my own experience of upwards of 40 years in orchard and nursery work. Unquestionably S. B. H. is correct in reference to the importance of liberal manuring for fruit trees. It is not my experience that the application of manure or of fertilizers of any sort, will prevent the spotting, scabbing and cracking of apples subject to such defects; but without liberal manuring there is no solid success in orcharding: and a well-fed tree, even of a variety subject to the above diseases, will produce much more merchantable fruit than a neglected one of the same variety.

The method proposed by S. B. H. to start an orchard from the seed, (or from the apples) is not novel; and it is rather taking to the novice, when first suggested. There are, however, many practical difficulties connected with it, and these difficulties increase greatly the farther north the experiment is tried. Speaking roughly, all apple seedlings would be hardy (against cold) when grown south of the 42nd parallel. But not nearly all (probably not one-quarter) of the seedlings would make good trees, suitable for stocks to graft upon; and even supposing that we were sure of getting one such from every apple, the choice cannot be determined upon until all have grown so large that the rejected ones cannot be got rid of without uprooting the one chosen. The gain expected by not having to transplant the seedling is mostly imaginary. Theoretically, we might suppose it the most natural, and therefore the best way; but the immense number of very aged and yet vigorous apple trees in existence which have certainly been transplanted, and the evidence gathered from experience and observation by hundreds of orchardists on this point, ought to satisfy any one that apple trees suffer no permanent detriment by transplantation.

The better way is to plant sound, plump and well-ripened seeds thinly in drills, like peas, and care for them as carefully as for any garden crop. The best may be selected from among these seedlings at two years old; and it may be said, in a general way, that the best seedlings for orchard planting are those not of too rank or too small a growth, but such as are of a medium growth, are not disposed to make too many limbs, (which makes frequent pruning necessary,) and have a firm, healthy foliage. Do not allow these choice seedlings to grow more than two seasons in the seed-bed, but transplant them into straight nursery rows four feet apart, the trees two feet apart in the row. Here the heads are to be formed, and the great point is to allow of no forking of the trunks or branches. My preference is for three main branches, started at least a foot apart on the trunk. From each of these, the second season in nursery, three secondary branches may be started, taking the same precautions as to distance and symmetry. If the soil and care are what they should be, these young trees will be ready for transplanting to the orchard in two or three years after the first removal. The same care should follow them there; and as soon as they are again well started and growing thriftily they may be budded or grafted to the varieties desired.

The above described method requires modification in the "Cold North," where only the "iron-clad" varieties succeed. Here, the seedlings, (preferably grown from the seeds of iron-clads, though this is not essential) should grow, I think, but one year in the seed-bed, and only such as attain, at least, the size of an ordinary cedar pencil be selected, the rest being discarded. These selected seedlings I would tongue-graft at the crown with selected iron-clad cions about seven inches long, and set out, in well prepared nursery ground, so deeply that not over two inches of the cion will show above ground. The growth from these grafts should be managed and treated exactly like the seedlings, as above directed; and the young trees may be transplanted into the orchard, when they have reached a like size, to be there top-grafted to the desired varieties. There is probably some choice to be exercised in the selection of the iron-clad cions used in the first grafting, but as yet nothing very positive can be said. On general principles, making iron-clad hardiness the primary condition, I should regard a habit of free growth as generally desirable in those cions which are to form the trunk and first forks of the new tree. With this a sound, vigorous bark, that has no tendency to blight and die, either on the trunk and limbs or in the forks, is most important. Oldenburgh and Switzer seem to fill these conditions with me. For grafting tardy bearers, I find Tetofsky as a stock very satisfactory, though this variety is not entirely free from bark disease. Much is yet to be learned on these matters, for iron-clad orcharding is yet in its infancy.

I ought to add that the object in setting the iron-clad root grafts so deeply is to get roots started from the cions. This very generally takes place when Russian cions are used. Of course, the same or deeper planting must follow in the orchard, and this necessitates deep and thorough preparation of the soil, a thing most beneficial in any case, where fruit trees are concerned.

Orleans County, Vt.

FROM PRES. T. T. LYON.

Although the words *trim* and *prune* are said to be synonymous, the former conveys, to some minds at least, the idea of trimming to a single shoot—removing all side branches. We, therefore, prefer the word *prune*, which, in its horticultural sense, means to thin out superfluous shoots, to shorten or remove crossing or interfering ones, or to cut back the more vigorous branches to secure the proper form or balance of the head, each and all of which become more or less needful to the prosperity and profitableness of both fruit and ornamental trees under the artificial conditions to which they may be subjected under cultivation.

With young trees, especially of certain classes and varieties, the copious application of manures might, quite possibly, occasion excessive wood growth, and thus defer fructification, occasioning also late growths and imperfect ripening of the wood, with consequent liability to injury from the cold of winter. With older trees this danger mainly disappears, the effect being to largely increase the size, quality and quantity of the fruit. In such case excess of manure may be wasted, and there may be danger of injury from the excessive application of such as contain potash or other caustic substances.

The experiment of planting apples will not be an expensive one, and will be only likely to occasion delay, since the seeds of the apples planted are quite sure to lose their vitality before the pulp of the fruit will have sufficiently decayed to afford material to sustain the growth of the germ. Nature always provides for the separation of the seeds of fruits from the pulp before planting. This is even necessary in the case of berries and small fruits generally, even though their pulp is less in quantity and more perishable.

We can see no benefit, but injury instead, from the employment of tile to mark the position of the seed when planted. It will be better every way to use one or more short, light stakes for the purpose, since these will in no way interfere with the influences of light and moisture.

Van Buren County, Mich.

FROM PROFESSOR J. L. BUDD.

If properly understood, the plan is to plant the seed where the orchard trees are to stand, and to top-work the seedlings when large enough. In Indiana the defect will be tenderness in a large per cent. of the seedlings, and irregular growth in the small per cent. that stand. If S. B. H. will plant Gros Pomier for stocks he will find that they will start upward like young cottonwoods, and that strong, vigorous roots will go downward as in the wild crab apple. When the time comes to top-work, the stems will be uniform and straight, and the trees can be made uniform in hight and will make uniform development of stem and top. In this connection I will say that the present craze for top-working and the war on root-grafted trees are, in my opinion, not well supported by facts. At the West varieties of the apple that have good foliage and are hardy in the tops, but liable to bark-bursting or sun-scald of the stems, are benefited by top-working on stocks not liable to injury. But, on the other hand, the long list of varieties with foliage not able to endure the heat and aridity of air of our summers, and liable to winter-killing from the top downward, are not materially benefited if at all by working on iron-clad stocks. Again, such varieties as Willow, Grimes's Golden and Roman Stem, that are benefited by putting perfect stems under them, are found to ripen their fruit prematurely, if worked on such prepotent early varieties as Duchess, Whitney's No. 20, or Tetofsky. Last year Grimes's Golden on Duchess was mellow the first of October, while on Winesap it was hard and crude at that date. As to the war on root-grafting the apple, we must not forget that the Duchess is an iron-clad yet, though it has been root-grafted or crown-budded for generations. I suspect that the climatic changes in the heat and relative humidity of the air of our summers, wrought by the destruction of timber in the Eastern States, and the loss of our sea of prairie grass, and tens of thousands of swampy drainage centers at the West, have had more to do with our orchard troubles than the practice of root-grafting.

With varieties hardy enough to endure perfectly the conditions of air and soil of any particular part of our country, I truly believe, that root-grafts—with short root and long cion set down to the top bud of the cion—will make as long-lived and perfect trees as we can produce. But if wedded to the belief that top-working is best, be sure of the hardiness of your stock and that the season of its fruit is as late at least as that of Gros Pomier, Hibernal, or Recumbent.

Agricultural College, Ames, Iowa.

THE WEEPING BEECH. Winter Picture. Fig. 102.

Farm Economy.

A HOME-MADE PLANTER.

MR. C. P. TODD, of Washington County, Oregon, has sent us drawings of a planter that he made himself at a cash cost of $2. As it has saved him many days of hard work, he thinks others may like to know about it. He took the hind wheels of his wagon to which he bolted a tongue, as shown at Fig. 104. The bolt on the under side of the tongue, a larger picture of which is shown at No. 5 Fig. 105, is to fasten the plow as will be explained hereafter. This bolt came from an old plow which one of the neighbors had thrown away. At Fig. 108 is shown the plow arrangement which is fastened under the tongue shown at Fig. 104. The first shovel opens a trench. Directly back of it is a piece of stove-pipe. It will be seen that a piece of potato or a number of kernels of corn dropped into this stove-pipe must

fall in the trench behind the first shovel. Then the second shovel, bent to run at one side, will cover the seed and leave the ground smooth. The little blocks of wood in front of the strap of each shovel are used to lower the shovels or raise them as desired. They are shown on a larger scale at Fig. 105, No. 7.

Now we see how the seed is covered. How

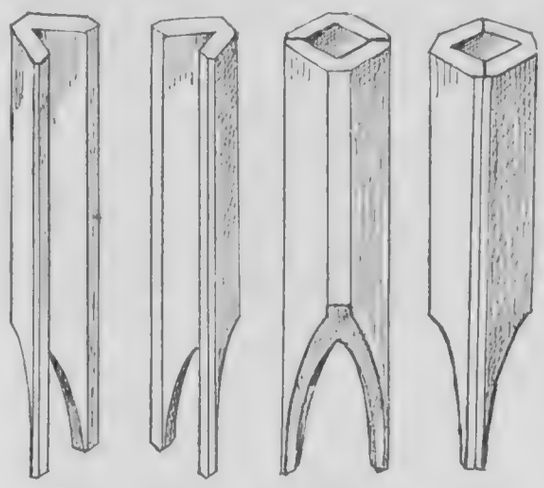

Fig. 103.

is it dropped? A frame made of plank and 2x4-inch scantling, like that shown at Fig. 106, with a better picture at Fig. 107, fits at the top of the hind wheels. The driver sits on the potato box with his feet resting on the board in front. The stove-pipe comes up through the space back of the box, and the dropper sits behind it. The inside of the potato box is shown at Fig. 109, though the stove-pipe rises higher than the cut would indicate. Now the driver starts up, and the dropper lets a quantity of potato sets

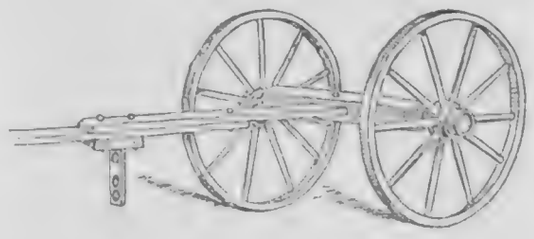

Fig. 104.

roll down the inclined boards about the stove-pipe. He drops them one by one into the stove-pipe; they fall behind the first shovel and are covered by the second. Fig. 105, No. 8, is a pole and chain used to raise or lower the plow beam. No. 6 is a clevis.

A PLANT PROTECTOR.

MR. W. B. WHITNEY, of Leominster, Mass., sends us the little device shown at Fig. 103. The pieces of wood (A, B, C, D,) are to protect from the cut-worm all sorts of plants when transplanted, such as cabbages, tomatoes, etc. The points of each half are readily pushed

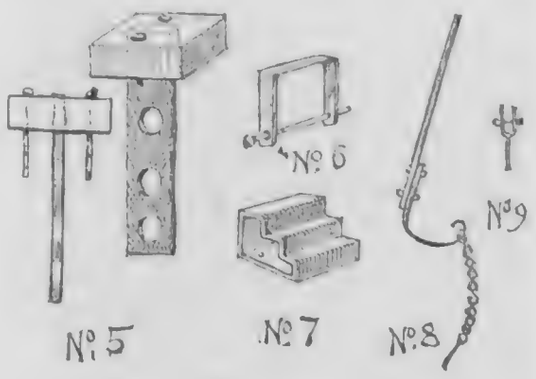

Fig. 105.

into the soil, and a little box is thus placed about the stem. Any wood, having pithy stems (such as elder) could be readily made to serve the same purpose. We have for many years used wrapping paper about the stems of tomatoes, extending it up to the first leaves, the bottom being held in place by the soil. This answers the purpose very well.

Everywhere.

RURAL SPECIAL REPORTS.

Delaware.

DOVER, Kent County, April 15.—We have had a fine spring so far, although a part of March was too wet for farmers. Plowing on high land is about all done; but in sections where the land is low and wet, very little has been done. Oats are all sown and mostly up and quite green. Wheat is growing finely, but the heavy rains of the latter part of February and the earlier part of March damaged it on low lands. Peach trees are in full bloom. Grass is growing finely; a few are beginning to pasture a little. It is the general custom here to horse-rake all grass land intended for mowing and the stuff collected is hauled into

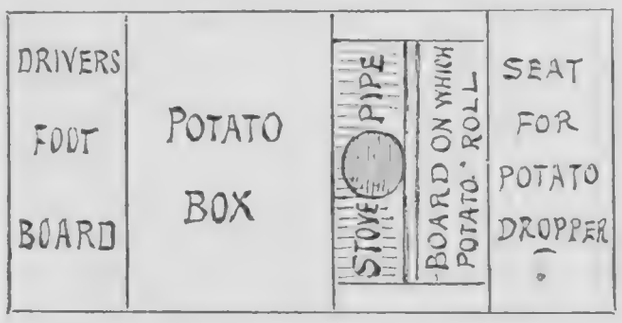

Fig. 106.

the barnyards after the spring hauling of manure. This, with surplus straw, cornstalks and any other things cleaned up from the stack yards, etc., etc., forms the foundation of the next year's manure supply. Feed is scarce and high. Corn remains low. Gardens are all made and early stuff is above the ground and growing, but it is rather too cool to be good growing weather. Corn planting will begin this week if it continues dry; but the greater part of the crop will not be planted before the last week of the month and the first of May. Hired hands get from $9 to $15 per month with board and lodging; boys from $5 to $8. Times have been dull since Christmas; but as spring advances they show improvement. If the weather continues good, the first of May will find spring work well along and the hardest over. A great many peach trees that had that dreaded disease the yellows, have been rooted out this spring. A tree once affected is never any good afterwards. A law has been passed to make it compulsory to remove all trees showing signs of the disease. If no remedy is found, it will not be many years before the peach crop will be a thing of the past with us. Nearly every housewife has her stock of chickens started; but the little fellows seem to be rather unhappy during this cool weather. If any of the readers of the R. N.-Y. who have barren grape vines, will cut off a branch of each after the sap starts and let it bleed freely, it will become fruitful—at least that is my experience with two enormous vines on an arbor. Wheat, $1 05; oats, 35; corn, 35; butter, 25 cents; eggs, 10 cents; potatoes 40 cents; fresh fish, plenty, shad at 15 and 20 cents; herring 10 cents per dozen; other fish cheaper; poultry at nine and 11 cents.

A. G. S.

Iowa.

DES MOINES, Polk County, April 15.—Our winter throughout was one of the mildest ever known in Iowa. We had but few storms, very little snow and no rain, but plenty of dusty, dry weather March weather was as fine as we usually have here in May. In the second week in April our long drought was broken by fine showers which were warm and brought up the small grains and brought out the grass. In consequence of our favorable weather farm work is well advanced and our farmers are only waiting corn planting time; for the small grains have all been sown and nearly all are growing finely. Stock can get a good living on the grass There is plenty of water for stock. Business continues very dull. It is almost impossible to part with any farm product except at ruinous prices. Potatoes are selling at 10 cents per bushel, and thousands of bushels are yet in the farmers' hands. Other farm products are about as dull. A great many potatoes have been planted; for planting them was the only way in which farmers could get rid of them, for there are not nearly cattle enough in the country to eat all on hand. Our farmers have invested largely in small fruits, most of which have been delivered and planted in good shape. Should there be no disaster to this interest, I predict that in a few years raspberries, blackberries and grapes will be as much a drug on our market as potatoes are now Very few of our farmers have much faith in apple-tree planting, though some continue to plant, and more have been planted this spring than for some years past, though planting is regarded as an experiment. The trade in garden seeds has not been so good as last season—for a great many have had all the experience they need with garden truck for some years. The early spring was too dry to risk sowing grass seed, so very little grass or clover was sown. Despite the dull times, our city continues to grow steadily and the street car and telephone lines are lengthening out daily. We have had war here between the horse-car and electric motors and the verdict seems to be that the horse-car must eventually go.

F. S. W.

HUMBOLDT County, April 20.—The RURAL improves with age. We are having a fine spring after a very fine winter. Farm prospects are all very good. Cattle and horses are plentiful, in good condition and of good quality, but prices are low. This is a good place to move to for a permanent home.

O. E. F.

Kansas.

PARSONS, Labette County, April 17.—We are just in the middle of seed-time; oats are growing finely, and wheat is all that can be desired, though a cloud of chinch-bugs was reported going to the northward yesterday. Corn is not yet up, but about half of it is planted. The ground is reported in fine condition. The season is neither early nor late, though a heavy rain this morning may yet make the time of corn-planting late, but this is not considered less desirable than an early season. Early corn-planting here may be set down for April 10, and late for May 1.

The Oklahomites are pouring along in this latitude. It is patent to all now that there is going to be the greatest industrial mob the country has ever witnessed when the gates are opened. We anticipate nothing greater or worse than some confusion and disappointment. Fortunately, the military are highly respected by the people, and are deserving of this estimation It almost seems as if the time is upon us when, as Macaulay said, the strength of the Union would be tested; that is, when the public lands should all become settled. Our people, however, can adapt themselves to new conditions in a degree that, at least once, astonished the world, and that was when the army of the Union retired from the fields of war to those of peace. It was just astonishing for the Old World to see every man falling back into his former calling just as easily and naturally as if he had been on a country jaunt. The Oklahoma country, I am told by one of the men who were surveyors of the territory, does not differ much from Kansas. There are some good lands, but the greater portion is ordinary, and some poor. Our farmers are not in a prosperous condition. Our crops last season were

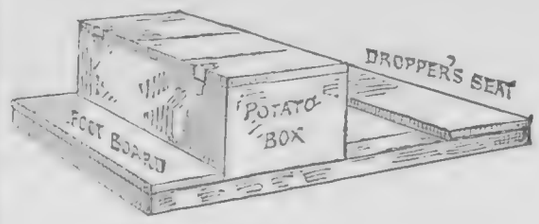

Fig. 107.

good, but low prices prevailed for corn, fruit and cattle. This was doubtless due to the vast quantity of cheap labor that is now producing cereals in South America and India, and flooding the European markets.

J. B.

New York.

JAMESTOWN, Chautauqua County, April 15—The mildness of the past winter and the early spring with its mild, pleasant weather, have brought the wheat through to this time in a very encouraging condition. Throughout Western Pennsylvania and New York I have not seen one piece that the husbandman could not look upon with pride. March was very mild and much plowing with some sowing of spring grain was done. The gardeners in and around Erie, Pa., had some of their earlier seeds in the ground before the 10th of that month. The amount of onion sets of fine quality, that are produced in the vicinity, in Erie, Fairview and Girard, Pa., is astonishing. This year the price ranges low, $2.25 a bushel of 34 pounds. Fine table onions are plentiful at 40 cents a bushel. Potatoes in Erie are abundant at 35 to 40 cents. It is difficult to find a good apple in the Erie market; while in Jamestown, N. Y., fine fruit goes begging for customers at remunerative prices. Potatoes here are of slow sale at 25 cents, and some dealers offer only 15 cents. Farmers will find more profit in feeding them to cattle and horses. Butter has started in at 25 cents; but a decline is looked for. It will be very strange if first quality dairy brings more than 17 or 18 cents and it may drop to 15 cents. The Erie market produces no prime butter; much that is offered can hardly be considered grease of good quality, and the slovenly condition in which it comes on the market is inconsistent with good dairying. The cheese is of a much better quality, but much of it is so highly colored as to be uninviting in appearance. There is a cheese on sale, the address of the maker of which I failed to obtain because the man having it on sale did not know it. It is called Illinois Schweitzer or Swiss cheese. The quality of this cheese makes it very popular with those who are fond of a sharp cheese without any of that unpleasant odor of Schweitzer cheese. This market is far in advance of that of Erie in the quality of the butter and cheese. The average farmer is growing slack in relation to his butter making. He does not work it enough to remove all buttermilk, therefore it is more susceptible of change. The season has been uncommonly favorable to the advance of spring work, most of the plowing being done and much sowing also. The warm rains have given the grass a fair start and if the weather continues as favorable as might be expected cattle will go to grass from one to two weeks sooner than last year. Hay is plentiful at $12 per ton, and feed of all kinds is reasonably low. Farm help is not in excess of the demand at from $15 to $20 a month, with board and washing. Upon the whole, the outlook

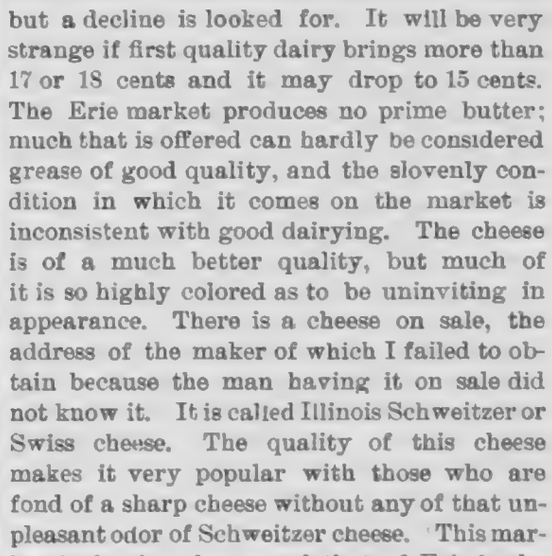

Fig. 108.

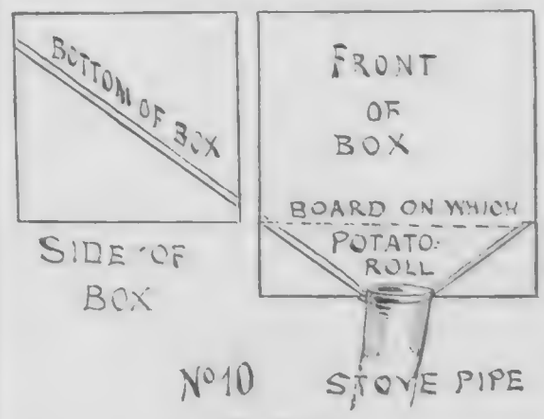

Fig. 109.

is fair for a prosperous and bountiful year. The silo question is calling forth much attention. A few who put in silos as a venture last year will increase the capacity of them, while many will build for the first time this year. A little care and a good deal of good

judgment are needed to assure success and profit. The expense attending the building can be much lessened by proper location and forethought as to material and construction.

H. A. W.

THE FARMERS CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

POUNDS OF MILK TO A POUND OF BUTTER.

Several Subscribers.—How many pounds of milk are required to make a pound of butter?

ANS.—What is the length of a piece of string? There is almost as much difference in the quality of different samples of milk as there is in the length of different strings. The public and private records of famous dairy cows show some remarkable facts bearing on this point. A few weeks ago the RURAL asked its readers to test their milk. They were to weigh a quantity of milk, weigh the cream obtained from it, and also the butter obtained from the cream. Following this we have a few of the reports made in response to this request. These figures are of more importance to the farmer and dairyman than the marvelous results recorded in tests of high-priced cows. It will pay our readers to try their own cows and see if they can duplicate these figures.

FROM A. M. SHELDON.

I have two cows; one is a Devon, 15 years old, was fresh last March; the other a grade Holstein, two years old, came in in April. I weighed the milk from the two for 3½ days in the first part of January. I had 60 pounds nine ounces of milk from which we got seven pounds 10 ounces of cream which made just four pounds of butter. The milk was set in common tin pans. The cows were fed on good Timothy hay and soft corn and apples. Now who can beat that?

FROM MRS. A. A. RICE.

At the end of January, I had two grade Jersey cows which were fed upon swale hay with a ration of one quart of corn-meal and two quarts of bran twice a day and a few apples once a day, the milk being set in shallow pans. I tested 129½ pounds of milk, which gave 25 pounds 10 ounces of cream, which churned 7½ pounds of butter. Thus it took 17 and one-fifth pounds of milk for one pound of butter.

FROM R. J. RAY.

Having seen several statements in regard to yields of small dairies, I give what my six cows have done: One is two years old; two are three years old; one is four years old; two are five years old. During the past year they made 1,647 pounds of butter to sell, besides what milk, butter and cream were used in a family of four. I also fed four calves at least two weeks each on new milk. My cows are half Jersey. They had no extra feed while on grass. During the winter, I fed corn-stalks once a day, hay once a day, and four quarts of oat-meal a day and turned them out to drink once a day. They are left out awhile if the weather is warm; but if it is any way cold, they are put back in the stable as soon as they drink.

I have made one pound of butter from 13 ounds of milk during the winter. During June I made 75 pounds per week. I use a Stoddard creamery during hot weather, and barrel churn.

FROM S. D. READ.

We are milking six farrow cows—grades with some Jersey blood. I find by weighing their milk for one week, that it takes 24 pounds of milk for one pound of butter. Feed: good hay and three quarts each of bran and cob-meal night and morning with some roots. Either the feed or the cows are at fault, for they should do better. If the fault lies with the cows I shall dispose of them and get some that will do better.

MRS. O. J. PUTNAM.

Seeing a wish expressed in the RURAL that the owners of cows would try the test of weight of milk to make one pound of butter, I did so for seven days—weight of milk 59⅜ pounds; of butter from the same 3¾ pounds or one pound of butter from 15 5-6 pounds of milk. The cow is grade Jersey, five years old 23d April, 1889. She dropped her last calf May 20th, 1888. Her grain per day consists of three pints of shorts and one pint of corn-meal in one feed in the morning before she gets her hay, which consists of all the common English hay she will eat morning, noon and night. She gets water slightly warmed once a day and one gill of salt three or four times a week.

CROPS FOR FEED; DEHORNING; CAKED BAG IN A COW.

B. W. B., Saratoga Springs, N. Y.—1. I have 25 acres of sandy land, mostly in poor condition. Two acres are in winter rye and one acre in winter wheat; no grass for hay and no pasture. I want to summer and winter eight or 10 cows, and can sell the milk in the city—not over three miles distant. I have for use the manure made by eight cows and a horse since last October, but no capital to work upon. I want to make a good quality of milk. What should I do for summer and winter feeding fodder and grain? 2. I have a cow which makes too free use of her horns; how close to the head should they be sawed off? 3. I have another cow one-quarter of whose bag cakes occasionally. A few doses of saltpeter correct this; but there remains an unnatural enlargement of that quarter about two inches above the teat, and the flow of milk from that quarter is diminished about one-half; is there any way of restoring it to its natural condition?

ANS.—1. Probably the best thing to be done in this case would be to put all the land in corn—half for ensilage and half for grain. This would afford feeding enough for the eight or ten cows and give some corn for grain feeding. The land should be enriched with at least 600 pounds of a complete fertilizer per acre or our friend cannot hope for a crop that would repay the labor spent upon it. By planting early varieties of sweet corn the first feeding would come in in July, and after that is cut off, the land may be immediately planted again with a second crop as the first is removed. Forty pounds of green fodder or silage, with a peck of brewers' grains and four pounds of corn meal, fed to good cows, should make 12 to 14 quarts per day from each, and cows of less ability than that can not be fed profitably in this way. 2. Horns should be sawn off with a narrow-bladed sharp saw close to the skin and with a cut following the curve of the skull, so as to leave no protuberance. The wound may be dressed by applying common pine tar and making a mat of the hair with it, by which means the raw surface is covered and protected. 3. Saltpeter is a bad thing for cows; it has a temporary effect in reducing fever; but its effect on the kidneys is bad and causes a renewal of the fever by the reaction. Give one ounce of hyposulphite of soda daily; foment the swollen udder with hot water, wipe it dry and apply camphorated soap liniment with gentle rubbing and kneading. Use no iodine in any form, or saltpeter either. The milk may be restored in time by this treatment and by feeding bran mash once a day. Continue this hyposulphite of soda daily for 10 days.

"ONIONS FOR STOCK"—A DENIAL.

H. B. V., Westfield, N. J.—The following article recently appeared in the Husbandman. Will the R. N.-Y. tell us whether it is sensible or not? The item was written by a correspondent in Chautauqua County, N. Y.

"I noticed some time ago a letter from a farmer in Ogdensburg, N. Y., relating to onions as a feed for stock. In this section they have been used as a food for beef cattle, young stock and dry cows for years, when there was no market for them. They are considered a healthy and nutritious food. When the price of onions falls below 20 cents per bushel it will pay to feed them to stock."

ANS.—the R. N.-Y. has never had any experience with onion feeding for stock, except a strong effort to keep milch cows from eating them. This letter was referred to the R. N.-Y.'s friend, Mr. H. A. Whittemore, who has lived for many years in Chautauqua county. Here is his answer.

Mr. Whittemore says:—"I am well aware that sometimes cattle will crop onion tops when they get near them; but in over 45 years' experience and observation, never have I known of onions being fed to any kind of stock either as a relish or a ration. Never since I have had any knowledge of farm crops or the markets for farm produce, have I known onions to command less than 40 cents a bushel; the usual wholesale price has varied with grocerymen and consumers from 75 cents to $1.50 and sometimes $2 a bushel. Chautauqua county soil is tolerably well adapted to the culture of onions, and sometimes produces tolerably heavy crops; but I think it will puzzle this correspondent or even the oldest inhabitant to mention the year when the price of onions fell to or below 20 cents a bushel. I must say that I would not criticise any man's intentions in airing his opinions, but I do question the knowledge of any man in Chautauqua county, N. Y., who says he knows of onions being raised as food for stock—or who says that the price of onions has ever fallen below 20 cents a bushel. In the southern and eastern parts of Chautauqua county the average farmer does not produce over from two to six bushels of onions a year. A few market gardeners may have from half to one acre. In a day's ride anywhere in the towns south of the *ridge*, one will find scarcely an onion bed measuring one-sixteenth of an acre. 'Onions for stock!'—the notion is too absurd to need farther comment."

If any of our readers have other facts to present, we want them.

CHRONIC COUGH IN A COW.

J. H., Fulton, Mich.—1. My horse is apparently perfectly healthy. He is sleek and fat. An hour after putting him in the stable after a drive, I find a place about as long as my hand, just below the whirl-bone quite wet and it remains so for five or six hours. What should be done? 2. A heifer came into the stable in fine condition last November. Towards the end of December I noticed that her eyes were much swollen and watery. I gave her three doses of aconite at intervals of four hours. On my return after a week's absence, I found her eating well but coughing. A veterinary surgeon said the trouble was caused by her liver, and ordered aloes. The dose was followed by mandrake root. No relief; and she gradually ran down. She is now in calf. She eats a little shorts and relishes carrots. There is a rash all over her body and legs. Bathing with Pond's Extract soothes, but doesn't cure. Her lungs seem much better than some time ago and her pulse is lower; but she still coughs and has no appetite. She stands with her head slightly elevated. What can I do for her?

ANS.—1. Rub occasionally with iodine ointment. 2. Give the cow one pound of Epsom salts and one ounce of ginger dissolved in a quart of warm water, as a drench. For the cough mix one table-spoonful of pulverized nitrate of potash and 25 drops of tincture of belladonna with sufficient honey or sirup to make a thick paste. Give this dose two or three times daily by pasting it well back on the tongue and back teeth to be swallowed slowly. Also rub the throat with a good liniment. For the general system, give two table-spoonfuls of the following powders in the feed night and morning: Carbonate of soda and Glauber salts each one pound, sulphate of iron one-fourth pound, mix. If the cow comes fresh and the cough continues, we would advise you not to use the milk at present for family purposes. It may be a case of tuberculosis in which case it would be unsafe to use the milk. If there is no marked improvement in three or four weeks, have the cow examined by a competent veterinary surgeon to ascertain the presence or absence of tuberculosis. If the cough ceases, however, and there is an improvement in the general health, the milk may then be used.

CHRONIC COUGH IN DAIRY COWS; CRIB-BITING.

F. H. W., Auburn, N. Y.—1. I have a dairy of 20 cows, most of them in milk. The past winter some of them commenced to cough and they seem to get worse; it is a dry cough and seems to affect most of the cows that are heavy with calf. I am feeding beets with corn-meal and bran mixed. The cows are in a warm stable. What should I do? 2. Is there any cure for a horse that has just commenced to crib?

ANS.—1. The cough may be the result of colds or exposure during the winter or may be due to disease of the lungs. Apply to the outside of the throat of each coughing cow a liniment of equal parts of raw linseed oil, aqua ammonia and oil of turpentine. Apply this twice a week until the skin is slightly blistered. Also make a paste of one table-spoonful of pulverized saltpeter mixed up in honey or sirup, and add 25 drops of tincture of belladonna. Give this dose two or three times daily to each cow, by placing it well back on the tongue to be slowly swallowed. If there is no improvement after two or three weeks you would do well to have the cows examined by a competent veterinary surgeon for tuberculosis. 2. There is no satisfactory treatment for crib-biting. Various methods are practiced to prevent the habit, some of which are very successful. One of the simplest by which some cases may be checked is to cover the exposed wood-work with a thick, sticky paste containing some very disagreeable substance, as aloes, turpentine or kerosene oil. Spanish flies are sometimes used, but these will blister the lips and tongue and should be used cautiously. Another method is to cover all the wood-work within reach with sheet iron. Some horses will not crib on the iron sheeting. A muzzle to be worn when not eating will effectually prevent cribbing while worn. One of the most practical methods is to tie the animal at a high side wall where there is no exposed wood-work upon which the horse can crib. In this case feed must be given from the floor or a shallow manger below the knees.

PARTIAL LUXATION OF THE PATELLA IN A COLT.

J. S., Center Hall, Pa.—When my 21-months-old colt was about six months old—a few weeks after I had bought him—I noticed that the patella of one leg would slip out when he was running about or when he threw a good deal of his weight on that leg, causing him to limp while it was out. The trouble has continued right along. After standing a little the part slips into joint again of its own accord. There has been no swelling; but there is a soft, pulpy place on the patella. I think the trouble is hereditary, as a considerable number of the progeny of the same stallion are affected in the same way. What should be the treatment?

ANSWERED BY DR. F. L. KILBORNE.

This partial luxation or slipping out and in of the patella is not of uncommon occurrence in colts. It is usually due to a sprain or other injury, which often passes unnoticed, but there results more or less inflammation followed by relaxation of the ligaments which hold the patella in place. With the several colts you mention as being similarly affected, I doubt if any special tendency to this luxation of the patella is inherited, any further than that they are naturally weak, at least in the stifle joint, and the luxation is the result of some trivial cause that in a stronger colt might not have produced any effect. In many cases the colt will outgrow the trouble without treatment; but it is better to stimulate the ligaments to contraction in order to keep the patella in place and strengthen the joint before the trouble becomes too chronic. For this purpose apply a cantharides blister over and around the joint. Powdered cantharides two drams, vaseline one ounce, spirits of camphor 10 to 15 drops. First clip the hair and then apply the blister, following the directions and precautions frequently given in these columns for blistering. A second blister may be desirable when the effect of the first has nearly passed off, if the luxation has not been entirely reduced.

WATER-CRESSES.

G. S. J., Newtown, L. I.—1. On what kind of bottom do water-cresses thrive best? 2. How can one get rid of what is here called. "duckery"—a parasite that feeds on or smothers the cress? 3. How can snails in the cress beds be killed without injuring the cress? 4. Should cress be covered entirely with water throughout the winter? 5. Is there any work on growing water cresses.

ANS.—1. A gravel or hard bottom. Water-cress does not thrive well in a mud bottom; besides, a mud bottom is a hospitable breeding and feeding ground for cress-destroyers, both animal and vegetable. 2. You probably mean duck-weed (Lemna.) It smothers (not "feeds upon") the cress. In order to be able to grow water-cresses with good success you should grow them in a brisk, shallow stream; then you would have very little trouble with duck-weed, as the current would float it nearly all away; but without this brisk current you cannot well get rid of it. 3. Not very well. Here again you will perceive the advantage of a brisk current of water, also of thoroughly cleaning out, regraveling, and replanting the beds once a year, say, in September. Considering the fact that water-cresses grow wild and luxuriantly as permanent plants in some streams, so much trouble to cultivate them artificially may seem unnecessary, but it is an easy job and pays for doing, especially when one has such pronounced evils to contend with as appear in your patches. 4. Water-cress is hardy and will survive the winter even if it be not covered with water, but it is usually covered with a greater depth of water in winter than in summer. As it inhabits running rather than still waters, however, it is seldom frozen in winter. The particular thing to guard against in winter is letting it freeze to the ground, and then have a freshet come and raise the ice and with it the cress plucked out by the roots. 5. We do not know of any.

LAMENESS IN FRONT LEG OF A HORSE.

H. B., New Albany, Ind.—Within two weeks after I began to work a fine young horse I bought last September, what I took to be a wind-gall appeared on his left front leg just above the pastern joint. About January 1, he began to show weakness there, resting that foot frequently by throwing it out in front of him. I bandaged it, applying tincture

of arnica. The puffs or galls disappeared, but after a while they returned. I then discovered fever in the back part of the leg just above the pastern, but there was no heat in the front. I blistered with Gombault's Caustic Balsam four times, the fever returning after each operation; though not for a time after the third blistering. I have just blistered him again, and the wind puffs have disappeared. What should be the treatment?

ANS.—The treatment you have given was good, but evidently not thorough enough. Poultice the foot for three days with ground flax-seed, changing the poultice once daily. Then wash off, rub dry, and cover the whole hoof with a hoof ointment of equal parts of pine tar and vaseline melted together. Use an old paint brush or a shoe-blacking dauber, and apply this ointment to the hoof once daily for several weeks. As soon as the pastern is well dried after removing the poultice, apply a cantharides blister to the front and sides of the whole pastern—powdered cantharides two drams, vaseline one ounce, spirits of camphor 10 or 15 drops. First, clip the hair short and then rub the blister well in for 15 minutes. When the blister is well raised—requiring about 24 hours—wash off with warm Castile soap-suds, after which anoint once daily with vaseline. Do not forget to tie the horse's head well up so that he cannot reach the foot with his mouth and blister lips and tongue.

THE STRAWSONIZER.

R. B. K., Grand Rapids, Mich.—In some English papers I see accounts of a new machine called the "Strawsonizer." What is the machine and how does it work?

ANS.—The "Strawsonizer" is a machine for distributing chemical fertilizers, poisons, sand, deodorizers, etc., etc., or for sowing grain or other seeds. It was invented by an Englishman Mr. Strawson, hence its name. The following description writtten by Prof. Fream, gives one a clear idea of the machine and its manner of working. "Imagine a light cart on a pair of wheels. It is easy to conceive how, as the cart is drawn along, the revolutions of the axle may be communicated, by chain-gearing, or similar means, to any other body capable of turning round its axis, and that the revolutions per minute of the latter may be increased a thousand-fold or more. Suppose a fan is thus made to revolve on its axis, there will be considerable commotion in the adjacent air. If this fan is adjusted to work inside a horizontal tube, the axis of the fan extending diametrically across the tube, a furious blast of air will be driven out at the end of the tube so long as the cart continues to travel. Further, it is perfectly easy to understand that at the end of the tube whence the powerful air-current issues horizontally, another tube may rise vertically, and if this leads up into a hopper in which any material, solid or liquid, is carried, it must follow that when the cart is in motion the material, as it descends from the hopper down the vertical tube, will, when it crosses the sectional area of the horizontal tube, be suddenly subjected to such a blast as will send it flying right and left and backward, but, nevertheless, in style at once regular and uniform."

KEEPING POTATOES IN COLD STORAGE.

L. B. J., Hillsdale, Mich.—On page 288 of last year's RURAL somebody gave a short account of some experiments with seed potatoes kept in cold storage by the Hornellsville farmers' club. I would like to know how the experiment came out. If potatoes can be kept in cold storage and thus prevented from sprouting until ready for planting, it will be a great boon for potato growers.

ANS.—Mr. C. C. Thatcher, the Editor of the Farmers' Club Journal, sends us the following report of this experiment:—The question whether cold storage is a success for the keeping of seed potatoes is not decided beyond a doubt. The seed stored in 1886 kept until the spring of 1888; but none grew. The potatoes looked as hard and perfect as ever, but on being cut open they were black inside and their vitality was gone. We can only judge that so long a storage at almost the freezing point gradually kills the germ of the potato. For seed to be sent to Bermuda, Early Rose potatoes were put in the store-house in March last year and kept until August 1st; then shipped. They were 30 days in reaching their destination, and of course had commenced to sprout. The yield from them was not equal to the native potatoes, yet the same parties are going to try the experiment again. It gives them at least an opportunity to get American seed, which is quite an advantage. Experiments are still being tried, such as putting seed in storage about April 1st to be held for the first of June planting. So far such retarding of sprouting has not proven an advantage; the cold is too near the freezing point for potatoes, except to keep them fresh for eating.

ANGORA GOATS AS PROTECTORS OF SHEEP FROM DOGS.

L. G., Union Village, Ohio.—It is claimed that Angora goats will keep dogs from a flock of sheep: what does the RURAL know on this subject, and if so where would be the nearest point to purchase full-bloods, and what would be the probable price?

ANSWERED BY MILLER & SIBLEY, FRANKLIN, PENNSYLVANIA.

We have a lot of pure-bred Angora goats—probably the largest strictly pure flock in America. The nannies will not always protect themselves against dogs. They have to be looked after when the males are removed, but the males are very combative and will hold their own against any dog. They are inclined to stand their ground and fight it out for the rest of the flock. We have never kept them with sheep, but are informed that the practice is to allow one or two males to run with the flock of sheep and that where such a practice is followed there is no danger from dogs. We have further been informed by those who have kept Angora goats with sheep that there is no danger whatever in permitting goats and ewes to run together as they will not breed together. For a choice-bred Angora our price is $25.

ABOUT POTATO GROWING.

S.S., Yorkville, Ill.—I have an old cow pasture and an old hog pasture both fall-plowed and in splendid condition this spring. Which would be best for potato culture? I have the Early Ohio and Charles Downing for early; the White Elephant for intermediate, and Burbank for late potatoes, the last three being new varieties to me. Which is the most productive? Would leached wood ashes and unleached cob ashes be of use as a fertilizer? I furrow my ground for potatoes with a two-horse cultivator, setting the outside shovels the right distance apart, and go twice in a row, dropping the seed pieces 12 or 14 inches apart, stepping on each piece and covering them with the cultivator.

ANS.—The R. N.-Y. would choose the hog pasture, all else being equal. We would choose the Charles Downing for early, unless the *earliest* potato were desired. Then we would choose the Early Ohio. Burbank might well be chosen for *yield*. The White Elephant is better in quality. Yes, the ashes (both leached and unleached) will, no doubt, help the crop. We should *avoid* stepping upon the seed pieces.

CRIBBING MARE OUT OF CONDITION.

S. A. V., Clyde, N. Y.—I have a young mare that will eat but very little hay or grain and as soon as she is worked or driven she falls off in flesh. Still she appears to feel well, her coat looks good and so does her countenance. She cribs somewhat on coming into the stable after being driven. What is the matter with her and what should I do?

ANS.—The falling off may be due to indigestion from the cribbing. Try the following powders:—Sulphate of iron one-fourth of a pound, powdered gentian and ginger each one pound, mix; dose: two table-spoonfuls night and morning in the feed. Omit this powder the second and fourth weeks and, instead, give one tea-spoonful of powdered nux vomica for the first three days and two tea-spoonfuls the rest of the week. For prevention of cribbing, see answer to F. H. W. elsewhere in this department. If there is no improvement after three or four weeks, treat for intestinal worms, as advised in the Farmers' Club in the RURAL of May 12, 1888.

WALKS IN A COUNTRY LAWN.

E. P., Chatham, Pa.—What is the best and most durable material for walks in country lawns, and how should they be laid?

ANS. It is best for durability either to use gravel (by which we mean small, roundish, granite stones found near the seashore, etc.) or to macadamize the walks. For the latter purpose, various kinds of rock are broken up by machinery and sold at prices varying with the supply and demand. The R. N.-Y. has been macadamizing about 125 feet of carriage-road and paths. The earth was dug out to the depth of a foot. The bottom was paved with stones of various sizes as gathered in the fields, using the larger ones in the bottom and filling in the spaces with the smaller. Then two inches of sandy earth are evenly strewn over this, and finally two inches of the crushed stone spread over all. This makes in time a perfect road or pathway.

LUMP ON JAW OF COW.

W. K., Ontario, Kan.—There's a lump on the neck of a six-year-old cow near the jaw-bone. It isn't soft, but it causes her to wheeze in breathing, especially in wet damp weather. A veterinary surgeon said it was quinsy and gave me some remedies, which have done no good. She has been in this condition since she was 2½ years old. In other respects she is in good health and fine condition. What is the trouble?

ANS.—A personal examination would be necessary to ascertain the nature and cause of the lump, which from your description, may be due to any one of two or three causes. Try painting it three times a week with compound tincture of iodine. Clip the hair as short as possible, rub the iodine well in and continue the applications until the skin is quite well blistered. It is not quinsy.

CATTLE SHEDDING THEIR HORNS.

C. E. H., Detroit, Mich.—Up in Minnesota, from December last until March 1st, I wintered a herd of about 30 head of cattle, consisting of cows, heifers and steers, feeding nothing but oat-straw. The cattle were warmly housed and regularly watered. They seemed to be healthy and in fair condition. Lately three or four cows are losing their horns. The horn decays about the root and drops off. The other animals are in a healthy condition, and so are these with the exception mentioned. The affected animals will all calve soon. Why are the cattle losing their horns?

ANS.—The shedding of the horn is probably due to injury or freezing. As soon as shed, the core should be lightly wrapped in the best pine tar. A new horn will soon grow.

CHRONIC COUGH IN A STEER.

C. P. P., Stafford, N. Y.—My yearling steer has had a cough for several months, probably from taking cold. His appetite is good, but he continues to grow poor. In other respects he seems all right. Is there any remedy?

ANS.—Mix one table-spoonful of saltpeter and 25 drops of tincture of belladonna with sufficient honey or sirup to make a thick paste. Give this dose three or four times daily by placing it well back on the tongue and back teeth to be swallowed at leisure. Apply ammonia liniment to the throat twice a week. If the bowels are not moderately loose give one-half pound each of Epsom salts and common salt as a drench dissolved in one quart warm water.

PLANTING POTATOES LATE.

S. M. R., East Jordan, Mich.—I sowed 10 acres of rye early last fall with the intention of plowing it under the first of June, and planting the ground to potatoes. Would it be advisable to do so, and how should I plant them? Would it be a good idea to drop them in every third furrow?

ANS.—The R. N.-Y. cannot give advice on this subject, and would be glad to hear from others. Our experience with late-planted potatoes has always been against the practice. We should suppose that rye or any other green crop turned under in June would render the ground excessively dry, unless, as is not usually the case, June, July and August should prove to be wet.

CRIBBING.

W. A. F., Homewood, Pa.—I have a valuable young mare that has been sucking wind or cribbing of late; what is the cause and what can be done for her? Would it be advisable to breed from her?

ANS.—It would not be advisable to breed from such a mare. Neither should she be allowed to stand by or run with other young horses. They sometimes acquire the habit by imitation—*i. e.*, acquire the habit by standing near a cribber. For treatment and prevention, see answer to F. H. W. above.

PAINT FOR TREES.

L. M. W., Shelbyville, Ill.—Will young trees be injured by soft-soaping or painting them? What should be the color of the paint used?

ANS.—Soft soap should be diluted. It is well to mix the soap with a light white-wash, coloring it with red mineral paint and lamp-black to imitate the color of the bark. Paint should not be used, although a band about the lower part of the tree serves to repel the borer.

Miscellaneous.

H. M., Saltillo, Mexico.—We should say that the Acme harrow would suit you.

A. H., East Orange, N. J.—The magnolia flower sent for name, closely resembles that of Magnolia stellata.

F. S., Ithaca, N. Y.—What is the relative value of Shropshire, Oxford, and Hampshire Down sheep for farmers in Central New York, who usually keep small flocks well? What would they cost?

ANS.—There is so much similarity between these three breeds, all having their best points through South Down crosses originally, that there is not much choice between them. The Shropshire is the most popular of the three, and is a good enough sheep for any farmer to keep. The common price of all of them is about $10 each for pure-bred ewes, and $15 to $30 each for the best rams.

J. M., Leigh, Neb.—My two-weeks-old colt is beginning to eat a little hay. I noticed yesterday that he passed no dung, but the passage was filled with it as far as my finger could reach. It was cleaned out but is just as full to-day. It doesn't seem harder than ordinary horse manure; but it is very dark and emits a very offensive odor. I gave an injection of soft water and soap, but it had no effect. What should be done?

ANS.—The colt should have received two ounces of castor oil, followed by frequent injections of warm Castile soap-suds, until a free evacuation of the bowels had been obtained.

E. A. R., Rockland, Ind.—1. How much hen manure should be used in a hill of corn? 2. Should it be put in the bottom of the furrows and a layer of soil be placed upon it before planting the corn? 3. Would corn raised about 80 miles north of this place be suitable here?

ANS.—1. Of pure hen manure use one handful to the hill and *mix* it with the soil of the hill. 2. We would *mix* it with the soil of the bottom of the furrow, raising it somewhat above. Then cover and plant. 3. There is no reason why it should not; but one should not trust a large area to an untried variety.

J. C., Monroeville, Ind.—In November, 1887, I bought a pedigreed Holstein-Friesian bull calf, duly registered in the Holstein-Friesian Herd Book. Why do all his calves come red? There isn't a black hair among all his progeny.

ANS.—We suppose these red calves are from native cows and not from cows of the same breed as the bull. A pure-bred bull may not always get calves like himself from native cows, but usually the calves should have some likeness to the bull if he is a good one. The explanation may be that the bull is too young to make a decided impression upon the calves, or that he may have been overworked, and his vigor reduced. Wait another year.

D. R., Bernardsville, N. J.—1. For a hay crop, how many pounds of clover and Timothy seed should be used per acre? 2. How can I learn the number of acres, in fields that are of all shapes from square to triangular? 3. How many bushels of oats should be sown to the acre in this section? 4. How many tons of city manure should be applied per acre on rather poor land, to insure a good corn crop?

ANS.—1. Sow 12 to 15 pounds to the acre of Timothy if sown alone for hay. When no grass seed is sown, from 10 to 20 pounds of clover are sown. Much depends upon the preparation and fertility of the land. The more seed sown, the smaller and weaker will be the individual stems. 2. We should require to know the exact shape. If square, multiply the length of one side by that of the other. So, too, if the angles are right angles, the length by the breadth will give the area. There are 43,560 square feet to the acre. 3. We prefer to sow from 1¼ to 1½ bushel on fertile land. Some varieties of oats tiller more than others and less or more seed is required. 4. We should not use, to *insure* a good corn crop, less than 30 tons to the acre. Had it been applied in the fall 20 tons might have answered as well. Horse manure is very slow to yield up its plant food.

DISCUSSION.

RAISING BEANS WITHOUT POLES: GROWING SEEDS IN THE SOUTH.

A. W. S., AMERICUS, GA.—After reading the article of E. T. Ivey on "Raising Lima Beans without Poles," I must dispute his claim to originality unless he commenced more than four years ago. Four years since I adopted the method except that I used posts six by six inches, 12 feet long, of which four feet were put in the ground. The posts are set 75 feet or more apart with No. 8 galvanized wire for the top and No. 15 for the bottom, about six inches from the ground. I would suggest the latter distance, for when the vines do not have the bottom wire to steady them they frequently break the string, or else they are damaged by the winds whipping them about, both of which mishaps the bottom wire by its steadiness prevents. This year I will use this plan for the growth of different varieties of Moon-flowers, cobæas and other climbers: about 20,000 feet of No. 8 wire for the top. I shall use besides, No. 15 for the bottom, and I shall discard strings, substituting No. 20 wire. I find that here too many strings break if we have wind before the vines reach the top wire and

"Herbrand" Fifth Wheel for Buggies.

damage the vines badly, delaying blooms and diminishing the crop of seed.

I do not know who "Anon" is, but I have read with interest his successive articles on the seed business. What he states as to seed grown South is correct. For earliness we should send North for certain seeds, but I know that in case of the majority of seeds, such as beans, squash, cucumbers, melons, lettuce, okra, etc., our home-grown kinds will produce double the quantity and a much finer quality than Northern-grown seeds, but they will generally be later, except as to melons. The finest cabbage seed I ever saw, I grew myself on St. Lucian's Island off the coast of Georgia, and I never saw finer seed or any as plump from any house North. While the above is true as to the excellence of our Southern-grown seeds, yet I prefer to have less desirable seeds than to grow any on my place that have to pass the fall and winter, as such plants tend to cause an increase in a wonderful degree of the various destructive insects which prey upon young vegetation in the spring. His remarks as to water-melon seed are true in all respects. Many thousand pounds are grown in Georgia for shipment to the North. One seed house, in writing to me, admitted that as the water-melon here reached its highest perfection, so the seeds were correspondingly perfect; but that they were too plump, and that they preferred having them raised nearer home where they weighed less and numbered more to the pound. "Anon" is again correct in saying that the best seeds can be obtained only where the vegetables or fruits grow most perfectly. As the mining interests are bringing millions into this State and Alabama for investment so, 20 years hence, a large proportion of seeds and plants will be grown in the South. But for excessive express charges we could even now grow and ship many plants at one-tenth of what Northern florists must charge to live.

AN ORIGINAL POTATO CONTEST.

J. V., VOAK, YATES COUNTY, N. Y.—Last spring the wife of the pastor of our Methodist church proposed a new plan for increasing the funds of our missionary society. She suggested that each member should select one potato, plant it, measure the yield, and sell the product for the society's benefit. One member of the church increased the interest by offering a prize for the greatest yield from one potato. Thus came about our "contest."

At the time of harvesting, the potatoes were gathered and taken to the church, where a committee appointed for the purpose, received and weighed them, and decided who was entitled to the prize. The potatoes were then sold. At the time of the gathering and the decision of the committee, there was held at the church what was termed a "Potato Supper." Everybody was invited. The "supper" and the social were the fine things about it.

Now as to the yield of potatoes: 21 persons competed for the prize. The yields varied from 14 to 86 pounds from one. The premium lot was raised and presented by Miss Dora B. Slaughter, assisted by her grandfather now 80 years old The weight of this lot was 86 pounds. One large potato was selected, the largest they could find, and planted in the garden, previously well and thoroughly manured with barn-yard manure. The potato cut to two eyes to a piece made 11 hills which, less than four feet apart, occupied 28 feet. The culture was about as usual. They were hoed twice, the hills were broad and flat; the bugs were kept off, and they were occasionally watered during the dry time. The potatoes appeared to be not quite matured, as the skin rubbed off some in handling. I think it probable that they would have weighed more if left in the ground until thoroughly ripened.

Another young lady presented the next highest lot, 68 pounds. Two boys presented each 57 pounds, another 53, and two little girls 37 and 44 pounds respectively.

The yield per acre of the lot that took the prize as figured by some, would be 740 bushels; another made it at the rate of 743 bushels, and another expert at figures put it at 732 bushels 26 pounds. The last was estimated on the supposition that the hills were three feet apart each way.

I will ask the smart folks of the RURAL NEW-YORKER how they agree with our figures on it. I think there is no doubt but that the yield per acre would be quite satisfactory to most, if not all farmers. If by the RURAL'S Trench system that amount can be doubled, and all would adopt it, what would be done with the potatoes? Thus it appears that the RURAL is likely to be beaten by a school girl of Yates county, New York. But let me say to the young men that there is no use in their getting out and dusting their best store clothes, and starting after this young lady. Just wait. Don't let any one bother her while she is at her studies. I might say, however, that she can make bread and cook and keep house as well as raise potatoes.

NORTHERN SEED-CORN IN THE SOUTH.

J. P. A., TALLAHASSEE, FLA.—Is not the belief expressed by Mr. A. C. Glidden, in a late RURAL, to the effect that "corn has no characteristic of value that will bear transportation across one degree of latitude and remain," a little hasty? It may be true in regard to varieties taken from the South towards the North, but it is certainly not true when they are moved from the North southwardly. This section annually imports considerable quantities of corn from Maryland to be planted here for an early crop, to come into use before the native kinds are available, and it always succeeds well. My experience with seed from the North is that it generally does well and is early. There is one drawback, however, and it is a serious one—such corn is much more liable to the attacks of the weevil than that generally raised here. Out of some corn sent from the RURAL NEW-YORKER a few years ago, as the result of crossing 50 different varieties, I selected two kinds from the yield of the first year. These were both white—one having a very small stalk, bearing three to five small ears, and very early; the other having a large, vigorous stalk, bearing one or two large, fine ears, but somewhat later. These were planted together, and the cross resulted in something about half-way between the two, giving good-sized ears, two or three to the stalk, and being nearly as early as the earlier of the parents. This has proved about as early as the Maryland corn and seems a valuable variety. I have had the same difficulty with it with regard to the weevil, however, and this year very narrowly escaped losing the seed from this cause. The Maryland corn is so readily eaten by the weevils that if left too long in the field it will sometimes be found completely riddled before it is gathered. Mine shows no sign of the pest until it has been gathered some weeks.

WHEN FRESH MANURE IS NOT SERVICEABLE.

A. B. A, FLUSHING, L. I.—In the RURAL of March 30, page 316, is the following, "We doubt if fresh farm manure is to any great extent serviceable to the corn plant, when applied in the spring." The term "farm manure," as used above, I suppose means the same as stable manure. If so, then I will say that its value in the spring will depend much on the nature of the soil to which it is applied. On a stiff clay, unless the season after planting proves quite wet, I do not think it will be found of much benefit, and one must wait for good effects from it till the following winter has rotted and pulverized it for the succeeding crop. But for years past I have applied fresh stable manure to my crops of corn, potatoes, etc., planted from early spring to late summer. Along side of these, well rotted stable manure was occasionally used, and I could never see any difference in the crops, unless the season happened to be particularly dry; then the rotted manure proved much the more beneficial, and especially so, if it had been made up into a compost with muck, turf, or vegetable matter. Considerable loss is annually sustained by the improper use of fertilizers, and particularly of those called "commercial." If applied to hoed crops, much of their substance seems to be easily dissolved, and leaches below the roots of the crops, and is thus of little or no benefit to them. Such fertilizers ought to be applied broad-cast early in the spring to grass, wheat, rye, oats, and any other small-grain crops; also in small quantities directly around the plants of hoed crops soon after they have come up, and again perhaps when partially grown. They are of special benefit to corn after silking, when the ear begins to form.

GAS-LIME FOR CHINCH BUGS.

L. C. W., ROGER'S PARK, ILL.—A late RURAL contained a communication from J. R. H., Wellsville, Kansas, on chinch-bugs. I saw in a paper a few years ago, a statement by a man in Ohio to the effect that for an experiment he had sowed gas-lime on a field of wheat, and the bugs did not hurt it; while a piece adjoining it, not so treated was completely ruined, so I thought I would try the plan. It worked splendidly. My brother had a piece adjoining. The pests ravaged his, but did not hurt mine a bit. I got 20 bushels of very nice plump wheat to the acre, while he got only about 12 bushels of poor stuff. If J. R. A. lives near gas-works I would advise him to try gas-lime. It is the refuse left after the lime has been used in purifying the gas. As a general thing, it is given away in order to get rid of it. It is rather nasty to handle; but it does the business. It must be sowed when the grain is three or four inches high or before the bugs begin to work.

R. N.-Y.—A word of caution about the use of fresh gas-lime is not out of place here. When fresh, gas-lime contains sulphuretted hydrogen and other sulphur compounds which are poisonous to vegetation. These compounds are, however, rapidly changed by oxidation into harmless if not useful substances, leaving the lime in the condition of carbonate, or mild lime, with some sulphate. In this condition it is beneficial; but two or three months' exposure to the air is needed to produce this effect, so that if the gas-lime is fresh it would be unsafe to use it before "weathering."

A TREE WITHIN A TREE.

W. B. P., PRATTSBURG, N. Y.—A neighbor cut down an apple tree that was planted 80 years or more ago by his father, and had attained a diameter of 22 inches at the base. In working it into stove wood he found in the center of the trunk of the tree the perfect twig as originally pruned and set. It was three feet high, the short stubs of the side limbs and the two longer ones left of the forked branches of the young tree at the top, were all as distinctly defined and perfect as when the tree was planted. In the adjacent wood were all the angles, bends and indentations that the twig made, and although snugly imbedded, there was no actual connection, a section of the twig falling out when the encasing block was split. There was as much appearance of life in the twig as in the surrounding wood, and but little in either, for the tree was old. Was it an anomaly? How would the matter be explained by those who have made a study of all the mysteries of tree growth?

RIDGES FOR MANGELS.

E. A. McC., Emporia, Kan.—I don't know but Geo. Atkin is right in what he says in a late Rural on ridges for mangels; but I would not take his "say-so" for two acres. I suggest to L. B. S. who inquired about the matter, to try both level and ridge culture. I planted my beets with a wheat drill 40 inches apart and ran a wheel over each row, which left a slight furrow. When the beets were up I worked the soil to instead of from them. I used no manure: the land was medium, the season very dry, but I harvested 1,400 bushels of sugar beets per acre.

MULCHING WHEAT.

J. W., LODI, OHIO.—I mulched 7½ acres of wheat the first week in January with straw and clover haulm, and it looks well now. The stand is good. The wheat on parts of the field where the crop always froze out before stands well now. From present appearance I have every reason to expect a large crop.

W., TYRONE, PA.—The potato has always been a sort of Proteus among our crops. It defies all attempts to lay down rules for its culture. As far back as the days of that first agricultural editor, Arthur Young, who had General Washington for a correspondent, we see the same inquiries and the same differences of opinion on points of treatment, that are found to-day. A Montreal correspondent in a late RURAL, speaks of sawdust as tending to induce scab. Now, my accidental experience last season was that the only quite clean and smooth potatoes that I had—in heavy loam mulched, but without the use of any fresh manure—were where sawdust, used as a mulch for raspberries, had rolled into the furrow so that the young potatoes were found bedded in it under the soil covering. They were so fair and handsome that, although the result seemed quite unaccountable, I resolved to make a special trial of a sawdust bed for the tubers next year.

MRS. E. A. F., HANCOCK, VERMONT.—I measured my potato contest plot on April 13. The snow is not all gone yet so I could not measure very correctly. It is about 70 feet long and 30 feet wide. The bright new leaves of the pie-plant were pricking up through the edge of a snow-bank to get a look at the sunlight. How would my Southern sisters like this prospect for raising a prize crop of potatoes? I intend to do all the work myself except plowing and hauling manure and trenching. I intend to try the Trench system and show the farmers in this section how to raise potatoes. I have been reading the instructions to be observed in the contest and also the criticism and noticed how much the Editor of the RURAL has to contend with. How selfish we poor mortals are! But our RURAL Editor has a mind of his own, and every part and particular point of the potato contest will be conducted in a fair and impartial manner.

A. J. A., CHESHIRE, OHIO.—The amount of foul grass seeds put on the market is not complimentary to the intelligence of the average farmer. Dealers know by experience that many farmers do not know plantain and other noxious seeds, or they would not continue to handle such seeds as one finds exposed for sale everywhere. I suggest that there should be an official inspection of all seeds put on the market, and that all foul or worthless seeds should be condemned. This inspection might include the stuff sent out by the Washington Seed Bureau.

What Others Say.

SPIRIT OF THE PRESS.

THE Darnell's Patent Furrower is a simple and very useful implement. At the end of two short runners are two round disks which make the drills or furrows. The disks are then reversed and the seed is covered. The distance apart may be adjusted as desired. The draft is very light; the implement so simple that there is nothing to get out of order..

THE Cutaway harrow is being used in some new land full of briars (Smilax) with great satisfaction. This harrow is destined to be used by all progressive farmers simply because it is the best implement yet devised to subdue rough, weedy land. On mellow soils indeed, it is of excellent service, since it cuts into the soil, pulverizes and intermingles it as no other harrow will do. As the angle of the axle with the pole is decreased, the draft is increased and the soil more thoroughly worked. This leaves the land in ovals the length of the axle, an objection to this and to all disk harrows that is partly overcome by half-lapping. We cannot speak of the durability of the Cutaway. It does hard effective work and the wear and tear upon the sharp blades and axle and joints must be proportionate .....

YOU can buy an ounce of asparagus seed for 10 cents. Prepare your bed (let us say 24 feet square) by spading it as deep as possible. Rake it level and sow the seed in drills four feet apart. It matters little how thickly it is sown. As soon as the plants reach a hight of three or four inches, cultivate the entire plot, cutting out the plants so that but one remains to every six inches. At the second cultivation, cut out every other plant, leaving them one foot by four apart. In the fall give this bed a covering of well-rotted horse manure two inches deep. This is to be left until spring, when it should be spaded under. The plot is now to receive cultivation as needed and the third spring, a liberal dressing of bone and ashes or bone and kainit will give asparagus as good as (better than, we believe) the one or two-year-old roots purchased of seedsmen will give the third year... .....

VICK'S Magazine praises the Diamond as bearing the most beautiful clusters without exception, of any of the white varieties of our native grapes, whether wholly natives or hybrids. This, as R. N.-Y. readers know, is a cross (Jacob Moore) between Concord and Iona, first fruited in 1880. The grapes are white, the vine vigorous and hardy. It ripens with the Delaware. Our specimen vine has not fruited yet.....

TRY some Savoy cabbages.....

TRY the Emerald Gem muskmelon for home use.....

WASH the trunks of fruit trees and such ornamental trees as are liable to be injured by borers—the Weeping Ash, linden etc. Color the wash, whatever it may be, so as to resemble the color of the bark. Use thin lime, adding soft-soap, carbolic acid, aloes, sulphur or something of the kind. Color with cheap mineral paint and lamp-black.....

PEOPLE who have fairly wintered, should not die in spring, except by accident, unless they over-do in some way, says that original thinker J.B. Olcott, in the Connecticut Courant. Doctors, undertakers, etc., ought to have a season of leisure now, and life insurance a spell of profit. But spring is too exciting, and people who try to whoop it up, unconstitutionally, are apt to come to grief. Before the leaves come to shade the earth, we are liable, quite suddenly, to have days, once in a while, as hot as the tropics. Then is the time for us to choose the lighter and cooler employments for ourselves and our animals. To kill people in trying to keep up with the spurt of a season that will presently be snowing, or raining like shot, is plaguy poor management. The way to behave, during one of the weather-breeding days in our spring-climate, is to look upon it as a show of some kind, as good as a horse-race or a circus. Let it heat itself, if it wants to, while we keep cool. That will be far more profitable than organizing funerals.....

THE Chilian and the Brazilian beets are remarkable for their large leaves and brilliant colors, remarks Peter B. Mead, in Orchard and Garden. Of the Chilian we have the Chilian Mammoth, the Scarlet Ribbed, and the Yellow Ribbed, and the ribs look like tinted

pearl, while the blade of the leaf is a carpet-work of brilliant color. Of the Brazilian we have the Scarlet Veined, the Crimson Veined, and the Golden Veined. Then there are Dell's Black, Ne Plus Ultra, and Victoria, all having ornamental foliage. These beets do not produce edible roots, but the leaves are used as a spinach, and the fleshy ribs, prepared like asparagus, make a very palatable dish; a happy combination of the useful and the beautiful. It is many years since the R. N.-Y. tried every kind of ornamental beet it could procure. The plants were used both as borders and in mass. They made a very interesting and pretty display.....

THE JERSEY BULLETIN says that the best butter, sold at the highest price, is made in private dairies. The great value of the "creamery" is that it is usually managed by a skillful man, who has all of the improved appliances, and makes a uniform article of much higher grade than much of the stuff made in private dairies .....

BUY 200 pounds of nitrate of soda; 600 pounds of bone flour; 200 pounds of muriate of potash. Divide each lot into three parts. Thus we have in each lot in round numbers 67 pounds of nitrate, 200 pounds of bone and 67 pounds of potash. On one plot of one-third of an acre sow 67 pounds of nitrate of soda, and 200 pounds of bone. On a second plot of one-third of an acre, sow 200 pounds of bone and 67 of potash. On the third, sow 67 pounds of nitrate, 67 of potash and 200 of bone—a complete fertilizer. We have now 67 pounds of nitrate and 67 of potash left. Apply this to the fourth plot of one-third of an acre. Should the season be favorable and these plots need a special or complete food, the above trials will be very likely to give you the information desired.....

THERE are many farmers who have the idea that when they buy high-priced fertilizers of old, well-known firms they pay a fancy price; that they pay for reputation, as when jewelry is bought of Tiffany or ladies' garments of Worth. The cases are quite different. All the materials of which fertilizers are made *can be* bought and mixed as well by one intelligent person or firm as by another. The firm that values its good name and reputation most, is the one that will strive to sell the article which will give the best satisfaction and thereby assist in maintaining that reputation.....

TOUCHING upon the above view of the case, the N. E. Homestead says that the average cost of 68 nitrogenous superphosphates as given by the Connecticut experiment station, Prof. S. W. Johnson, Director, is $34.55 per ton and the valuation $28.70, an advance of 20.30 per cent. on cost. In the same manner an advance of 16 10 per cent. over cost of materials is made by manufacturers on special crop manures. Compared with these figures the Mapes special crop manures, as reported by the experiment stations of Connecticut, Massachusetts, New York and Pennsylvania, net the manufacturers but 10.13 per cent. above cost. This profit has to pay all the costs in running the business.....

T. B. TERRY says, in the Ohio Farmer, that, almost without exception, the best corn-growers of Ohio say: "Work corn as deeply as possible at first; after that, not over two inches deep, ending up with even shallower cultivation, so as not to disturb the roots," numerous examples were given, at the institutes, where loss had come from deep tillage, particularly in a dry time, and where great success had come from shallow culture. This is in accordance with common sense, certainly, and if any reader has been in the habit of doing differently, he had better not be too sure he is right until he has experimented faithfully in the above way.....

THE NEW ENGLAND HOMESTEAD says good, vigorous, well-grown one-year-old asparagus plants are better for planting than older ones, just as a small tree is better than a large one for planting out. Capt. J. B Moore, one of the most successful asparagus growers, always preferred one-year-old plants for his own setting.....

LIME, says Mr. H. Stewart, in the Times, is one of the best preservatives for timber in existence. It neutralizes the acids in it and solidifies the albumen, thus preventing decay. It is the best material for preserving shingles and fence posts from decay, and also the sills of buildings and the walls and floors; it prevents wet rot and dry rot, and if painted over the iron work of plows it will keep them from rusting. It should be used as a bedding for the beams and floors of cellars when these are of wood, for it is destructive to all kinds of fungi, and even that pernicious fungus which causes the rot of potatoes, and many others are prevented by its use.....

FRESH lime will absorb one-third of its weight of water and will appear as a dry powder, commonly called air-slaked lime. This water it will absorb from the air as fast as it comes in contact with it, and hence a damp cellar may be dried very easily by putting a peck or more of lime in a box in it. In a few days the air will be dry and the lime will be damp and will have gained more than one-third in weight.....

WORD FOR WORD.

——BINGHAMTON REPUBLICAN "Queer about flowers, isn't it? They shoot before they have pistils."

——THE EPOCH: "Kentucky Constituent—How d'ye do, Senator? Can't you get me a clerkship under the new administration?

Senator—I'm afraid not, Major. The fact is, you look too seedy.

Kentucky Constituent—Then maybe I'd fit somewhere in the Agricultural Department."

——NEW YORK HERALD: "There is no profession which bears so great a responsibility or affords so many opportunities to serve the country as that of the really independent journalist."

——THE CENTURY: "Children are the coupons on the bonds of marriage"

——"White lies are the gentlemen ushers of the black ones."

——"Some people keep a friend as children have a toy bank into which they drop little coins now and again; and some day they draw out the whole of their savings at once"

——"It is only the unlucky who think fortune blind."

——ORANGE COUNTY FARMER: "Nothing daunted by its failure last year, the RURAL NEW-YORKER proposes to try again the task of raising potatoes at the rate of seven hundred bushels to the acre, by its trench system of culture. We hope success will crown its efforts. Even if failure again confront it, it will have the satisfaction of knowing it has done a good work and spread much valuable information among its readers. The Farmer has no petty jealousies in its make-up and can commend the good work of its contemporaries as heartily as its own."

THOMAS MEEHAN, in Garden and Forest: —"When in the boyhood of the writer, some fifty years ago, the pansy came to be some three-quarters of an inch in width, and the florists gave the varieties distinctive names, it was regarded as a wonderful achievement of modern skill. But an old work on horticulture in Britain, called '*Hortus Floridus*,' has recently been brought to light, issued two hundred years ago, in which are pictures of pansies just as large and fine The query is, had the florists of those early times agents in their employ with exaggerated picture-books, or were the pansies of those days as large and fine as those of our own time?"

——LIFE: "It is when the Young Idea first begins to shoot that a little learning is a dangerous thing"

For Sick Headache

Use Horsford's Acid Phosphate.

DR. M. W. GRAY, Cave Spring, Ga., says: "I have used it with perfect success in habitual sick headache."—*Adv.*

Miscellaneous Advertising.

Dyspepsia

Does not get well of itself; it requires careful, persistent attention and a remedy that will assist nature to throw off the causes and tone up the digestive organs till they perform their duties willingly. Among the agonies experienced by the dyspeptic, are distress before or after eating, loss of appetite, irregularities of the bowels, wind or gas and pain in the stomach, heart-burn, sour stomach, etc., causing mental depression, nervous irritability and sleeplessness. If you are discouraged be of good cheer and try Hood's Sarsaparilla. It has cured hundreds; it will cure you.

Hood's Sarsaparilla

Sold by all druggists. $1; six for $5. Made only by C. I. HOOD & CO., Lowell, Mass.

100 Doses One Dollar

JOHNSON'S ANODYNE LINIMENT ESTABLISHED 1810.

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A QUERY.

WHAT "SUBSCRIBER" WOULD LIKE TO KNOW.

WE have recently received a letter from one of our well-known subscribers upon a subject which we prefer to publish for the perusal of our readers, anticipating that in so doing, some one will relieve us of the responsibility of answering "Subscriber's" questions. Here is the letter:

"*My Dear Editor*: For several years past I have been the recipient of several pamphlets issued from time to time by Messrs. H. H. Warner & Co., of Rochester, N. Y., which, in addition to containing an extensive treatise upon kidney disease, its origin, usual symptoms and growth, also includes numerous testimonials from parties whose fac-simile signatures are attached thereto, attesting the statement that they have been individually relieved by the use of Warner's Safe Cure, which is prepared by the above firm, for the use of persons so afflicted. Now, Mr. Editor, I would like to know if the statements made by those parties, who testify to the great good which Warner's Safe Cure has done them, can be relied upon? They seem honest enough from the way they read. "Warner's Safe Cure saved my life after the doctors had given me up," says John Doherty, 133 N. Main street, Concord, N. H. "I was given up to die with Bright's Disease of the kidneys. The doctors said they could do nothing for me. A friend advised me to take Warner's Safe Cure, and my family consider me as given back from the grave," says Mrs. Carrie A. Fry, of Wattena, Kan. Dr. L. B. Rice, of Hanover C. H., Va., says that Warner's Safe Cure cured him of Bright's Disease.

"Each pamphlet which I have received contains a hundred or more testimonials, and the same one does not appear in more than one pamphlet, so it seems that there are a good many who are being helped by that remedy.

It strikes me that there is a good deal of sense in the claim which those parties make that the doctors are treating too many persons for wrong causes, and that oftentimes, people are treated for consumption, brain, heart and nervous disorders, when they are suffering from kidney disease which should be treated, as they say, by the use of Warner's Safe Cure and as a result, when disease is first removed therefrom, that which is supposed to be disease in the lungs or other organs, will disappear. Many of my neighbors tell me that this remedy has done much good for them—more good than their doctors. If kidney disease is the real cause of so many other diseases why, Mr. Editor, don't the people who are afflicted with sickness, insist upon a more careful inquiry being made, in order that the true cause may be ascertained, and the proper treatment given?" "SUBSCRIBER."

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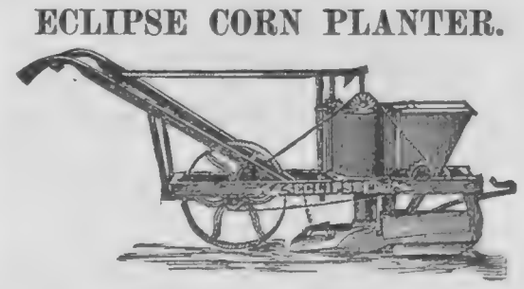

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J. B. Barnard, Garrettsville, Portage Co., Ohio.

BEAUTIFUL WHITE PLYMOUTH ROCKS and WHITE WYANDOTTES. Eggs from choicest stock, $2 per 13; $5 per 40.
T. F. MILLER, Mattituck, N. Y.

THE late Dr. Austin Flint, professor in Bellevue Hospital Medical College, Fellow of the New York Academy of Medicine, member of the State medical societies of New York, Virginia, Rhode Island, Massachusetts, etc., says in speaking of advanced kidney disease (or Bright's): "Fatal termination is many times due to pericarditis (heart disease), apoplexy, difficult breathing, dropsy." The foregoing are but symptoms of diseases. That being the case there is nothing absurd in the claim made by the proprietors of Warner's Safe Cure that they prevent apoplexy and cure heart disease, etc., with Warner's Safe Cure. Why? Because it removes the cause of disease, and when the cause is removed the symptom called a disease is cured.

THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, MAY 4, 1889.

ARE there any special products that you would like noticed at greater length in our market reports? The R. N.-Y. wishes to prepare these reports so that they will be of the greatest value to its readers. We want to secure the latest and most helpful facts regarding the products in which our readers are deeply interested. Let us know what you want, and we will do our best to supply it.

They all seem to like our "Discussion" department. It is getting to be a genuine farmers' institute each week. The R. N.-Y. invites its readers to help out this department by sending short notes criticising or confirming anything that may appear in these columns.

THERE is no reason why newly introduced plants should be called somebody's "seedlings." There is a very good reason why they should not be called so, viz., they are not seedlings. If we plant a seed from the fruit (ball) of the potato, the plant *is* a seedling, simply because it comes from a seed. When we plant the tubers which grow from this seed, the plants are no longer seedlings, because they don't grow from seeds. The same is true of all other plants whatever.

"If our government cannot compel these corporations to serve the people economically, impartially and well, it will have to revoke their charters, refund their actual capital, and itself do the work they refuse to do economically and properly."—W. I. CHAMBERLAIN, page 300.

THE old, very old, question whether there are valid reasons why pale butter should not be colored so as to appear of a golden yellow is now being warmly discussed by many farm papers. The question is one that need not be discussed at all—every one can answer it for himself. Always assuming that the factitious appearance is given by harmless applications, we may ask, is it right to oil the hair, to shave, to color the beard or hair, to black one's boots, to paint one's house, except to preserve the wood? Is it condemnable that we should tidy-up when company comes and assume our prettiest ways? Ought we to clean up the grounds, rectify the margins, weed the flower beds and put on our best bib-and-tuckers on such occasions? Is all this the natural state or color of things? Oh! don't let's bother over splitting hairs. There is real reformatory work for farm papers to do. Let's do it.

"I can see no benefit, but injury instead, from the employment of tile to mark the position of the seed when planted. It will be better every way to use one or more short, light stakes for the purpose, since these will in no way interfere with the influences of light and moisture."—T. T. LYON, page 294.

Two years ago the Michigan Legislature passed a law taxing mortgages on property as well as the property they covered, thus imposing double taxation on mortgaged property. Just about that time there was a craze in several sections for legislation of this kind under the mistaken impression that it was a shrewd device for taxing capital. Experience, however, has shown that the holder of the mortgage merely raises the rate of interest enough to cover the tax, thus adding to the load of the already grievously burdened mortgagor; and the enforcement of the law has proved so costly and unsatisfactory that the House has just voted by a large majority to repeal it. Illinois has refused to pass several bills providing for the taxation of mortgages; Massachusetts declines to re-enact such laws, and wherever they are in force they should be promptly repealed in the interests of the poor mortgagors.

"As the mining interests are bringing millions into this State and Alabama for investment, so, 20 years hence, a large portion of seeds and plants will be grown in the South. But for excessive express charges we could even now grow and ship many plants at one-tenth of what Northern florists must charge to live."—A. Y. S., page 298.

MANY of our States are so large that no general description of climate, soil or other conditions will answer for the whole of them. Take Virginia, for example. People at the North and West speak of the climate and crops of Virginia as though these were similar all through the State. Here is what a subscriber in Virginia says about it:—

"In fact there is not a great deal of difference in point of climate between Southwest Virginia and Southern New York, except that the winters here are milder. Even the people of the extreme sections of the State may be as readily distinguished from one another in customs and dialect as the Yankee from the Westerner. They differ as much as the crops they grow upon their varying soils."

We do not realize what a great nation we have until we seriously think about it. We have every degree of climate and soil, we produce just about everything we need, and our people differ in size, appearance and speech about as much as can well be. Yet we are all alike at one point. We are all Americans, our labor all goes to build up and improve American homes and industries. Great thought, is it not?

"I suspect that the climatic changes in the heat and relative humidity of the air of our summers, wrought by the destruction of timber in the Eastern States, and the loss of our sea of prairie grass, and tens of thousands of swampy drainage centers at the West, have had more to do with our orchard troubles than the practice of root-grafting."—J. L. BUDD, page 294.

PHILIP D. ARMOUR is the most influential director of the Chicago, Milwaukee and St. Paul railroad, and the most important member of the Big Four dressed meat syndicate. It has just been discovered that the railroad, contrary to the Inter-State Commerce Law, has been making secret rebates on the transportation of dressed meat from Chicago. Very justly, there is a murmur of public indignation, which should become an outcry. It is evident that if Armour has not ordered this discrimination in favor of his own business, it has been made through his influence or with his approval. Directors of railroads are simply trustees of the property for the owners, and not for any one of them, and in this capacity each is under a moral obligation to manage the trust for the benefit of the stockholders at large, and not for his own advantage or that of his friends. How few however, put this principle into practice! How many of the great railroad fortunes have been made by wrecking the companies, the managers and directors robbing the stock-holders to add to their own unjustly acquired hoards! Isn't it time that the courts should punish such breaches of trust and of the law? And the more prominent the offender, the more impressive the lesson.

"It is to be hoped that each big boy and girl as well as each little one, will, on the coming Arbor Day, choose from the abundance of material, and lay a corner-stone on which will ultimately rise a living monument, more beautiful and graceful than the sculpture of ancient Greece, more wonderful than the pyramids of Egypt."—RUTH RAYMOND, page 307.

IT seems evident to the R. N.-Y. that there is to be, in the next five years, an immense development of the dairy business in this country. Many farmers have reached a point where "money" crops cost more than they bring in. In order to maintain the fertility of their fields, such farmers must either buy chemical fertilizers or keep more stock. The wonderful development of the dressed beef trade has practically driven the old business of steer feeding from average-sized farms. Farmers are beginning to believe firmly what scientific men have been preaching for years, that a pound of butter takes away from the farm less fertility than is taken in an equal weight of any other product. Creameries run on the cream-gathering system are coming into great favor. Make no mistake about it, the creamery system of butter making is destined to change the agriculture of a majority of the States—change it for the better, too. American dairymen must look up new markets. The most promising field lies to the South of us in Mexico, and the South American Republics. An association of business men has already been formed for the sole purpose of increasing American trade with these Southern countries. American dairymen must be represented in this association.

"Dealers know by experience that many farmers do not know plantain and other noxious seeds, or they would not continue to handle such seeds as one finds exposed for sale everywhere. I suggest that there should be an official inspection of all seeds put on the market, and that all foul or worthless seeds should be condemned."—A. J. A., page 298.

RURAL NEW-YORKER EXPERIMENTS FOR 1889.

AMONG the kinds of potatoes sent to the Rural Grounds for trial and already planted are the following: Seneca Beauty, Mrs. Foraker, Gov. Foraker, Hemstreet's No. 1, Starr's Beauty, Early Standard, Early Market, Badger State, Sunlit Star, Oneida Beauty, Lady of London, Boley's Northern Spy, Wide-Awake, Eyeless, Early Thoroughbred, Early White Ohio, Beauty of Hebron from Prince Edward's Island, Coy's No. 88 (third trial), Beauty of Beauties (second trial), Alaska, Jerrard's No. 2, and about 30 kinds not yet named. These all have been planted under the most favorable conditions; in fact, the conditions were, so far as can be judged, absolutely perfect. The only thing to be feared, the season being remarkably early, is frost in May. For the sixth or seventh year, trials with different quantities of fertilizers are being made from 440 pounds to 2,200 pounds to the acre. For the third year the endeavor to answer the question whether it is better to place the fertilizer under or over the seed is being made. For the third year, also, we have planted the seed-pieces all the way from two to 10 inches deep.

A little experiment that we shall watch with interest is this: Three barrels of the same size were first provided with ample drainage. They were then filled with sandy-loam enriched with potato fertilizer to within 14 inches of the top, and on this, in each barrel, a whole potato was placed, a different variety for each barrel. The potatoes were then covered two inches deep with the same kind of soil. As the sprouts appear above the soil, more will be added until the barrels are filled. After maturity the barrels will be carefully taken apart, and the soil washed away from the stems, roots and tubers, and photographs taken. The experiment may throw some light on the formation of tubers and the under ground development of the potato.

The usual number of new fruits, vegetables, etc., are being tried.

"It is not my experience that the application of manure or of fertilizers of any sort, will prevent the spotting, scabbing and cracking of apples subject to such defects; but without liberal manuring there is no solid success in orcharding; and a well-fed tree, even of a variety subject to the above diseases, will produce more merchantable fruit than a neglected one of the same variety."—T. H. HOSKINS, page 294.

GREAT PROJECTED EXPERIMENTS WITH DAIRY AND BEEF CATTLE.

THE New York State Agricultural Experiment Station, at Geneva, contemplates a series of valuable experiments with beef and dairy cattle, covering the entire range of milk, butter, cheese and beef production in the most efficient and economical way. It proposes to secure, free of all cost to the State for purchase, "the finest herd of blooded cattle in the world." The various associations representing the different breeds are expected to contribute gratuitously the choicest specimens of their favorites, and the desire of each association that its own breed should excel, is sure to make all eager to be very careful in their selections. Already a number of the best-blooded cattle in America have been presented to the State of New York by different breeders. The Holstein-Friesian Association has purchased and presented to the Station the finest heifer from each of the herds of Henry Stevens, D. B Whipple, Gerritt S. Miller and Smiths, Powell and Lamb, and a choice young steer from the herd of S. Burchard. Four fine Holderness calves from the Utica Holderness herd have reached the Station. Two Guernsey steers, two Guernsey heifers and one bull, selected from the finest herds of the breed, await orders from the Station for shipment. The Ayrshire Association has purchased four registered heifers and one bull calf from herds in four different States and will donate them to the Station. The Jersey and several other associations are now making selections with the same object in view, and when arrangements are completed there is no doubt that the finest herd of the best representatives of the various prominent breeds ever collected for experimental purposes, will be at the disposal of the Station. Will the results be proportionately valuable? It must be confessed that, with few if any exceptions, the results of such experiments on this side of the Atlantic have hitherto been of little practical value to the cattle owners of the country at large. With the ample means, improved appliances, lessons from other experiments of the same kind at home and abroad, together with no small amount of talent in the experimenters, it is to be hoped, nay, even expected, that the results of present experiments will prove more instructive and generally satisfactory than those of any of their predecessors.

"I measured my potato contest plot on April 13. The snow is not all gone yet so I could not measure very correctly. It is about 70 feet long and 30 feet wide. The bright new leaves of the pie plant were pricking up through the edge of a snow-bank to get a look at the sunlight. How would my Southern sisters like this prospect for raising a prize crop of potatoes?"—MRS. E. A. F., page 298.

BREVITIES.

How do you purpose to explain the growth of "a tree within a tree" as described on page 298?

How do our Southern readers agree with the remarks of J. P. A. on page 298 regarding seed corn from the North?

AN almond tree six years planted blooms this spring for the first at the R. G. It shows the mildness of the past winter.

READ the account of "An Original Potato Contest" on page 298. Such a thing would make things lively in your neighborhood.

WE are particularly desirous that those who have had any experience with onions as food for stock should tell us what they think of Mr. Whittemore's answer on page 296?

FOR salting cows the R. N.-Y. is using rock salt. The cattle lick the lump with evident satisfaction. This plan seems to us better than that of putting salt in the food. We have often noticed, at the South, the old-time "lick ball." This appeared to be a mixture of clay, salt and ashes, molded into a lump and placed on a convenient stump for cattle to lick.

THE California Experiment Station finds itself called upon with great frequency to make analyses of water. Many farmers want to know what the muddy water from the irrigating ditches contains. Owners of artesian and other wells want to know about the healthfulness of their water. Many owners of springs think they possess bonanzas in the shape of water for medicinal purposes.

THE R. N.-Y. has, ready for publication, one of the most thoughtful articles on agricultural colleges that it has ever read. This review, for it is a review of the work done by the colleges, and a general summing up of the returns they have made for the money expended on them, will be sure to create considerable discussion. The R. N.-Y. hopes that the friends of the colleges will read the article with great care.

AGRICULTURE develops. Here is an extract from a letter written by a farmer in a dairy district of N. Y. State where, five years ago, the silo was laughed at. "I hope by the use of the silo to be able to double our stock and increase the yield of our meadows. We will not have so much land seeded down, but will have more hay. We can afford to feed but little at the present prices, but trust to make the silage do the business, sending the hay baled to the metropolis"

EARLY planting is good. There is nothing that makes one feel better than to work ahead of one's work, so to speak. But when seeds are planted during a warm spell long before the natural season arrives, we must take the risk. Several market-gardeners near the R. G. planted Limas two weeks ago. Last Monday night, a sharp frost killed them and the work must be repeated The same frost injured the earliest-planted peas and potatoes; blighted the early magnolias and caused the hyacinths (in full bloom) to hang their lovely heads.

CLOSELY related to the sassafras, we have now the Spice-wood or Benjamin-bush in bloom, variously called by different botanists benzoin odoriferum, Laurus benzoin, Lindera benzoin, etc. It grows in low, wet places and one might readily mistake its yellow flowers for those of the dogwood—Cornus mass., the Cornelian cherry or several other kinds native of this country. The stems when bruised give out a powerful spicy odor agreeable to most people. It is a very hardy shrub and, where a varied collection is desired, should make one of the collection.

Miscellaneous.

NEW LEGISLATION NEEDED CONCERNING MONOPOLIES.

No. 5.

PRESIDENT W. I. CHAMBERLAIN.

In the last number we noticed that the only just ground on which our great carrying, lighting and communicating companies can justly hold their rights of way, public franchises and virtual monopolies, is that they may, and provided that they do, serve the public impartially, reasonably and well. But the public has been so lax in maintaining its own rights that the corporations have naturally grown arrogant, and restive under legal restraint. The Interstate Commerce Law was fiercely opposed and is still sullenly and only partially obeyed. There has been a fierce fight in Iowa over the legislation of last winter, which, to say the least, was not intended to be unjust to the railways,and which seemed needed to relieve our agriculture and manufacturers, almost impoverished, as the vast majority of the people believe, by freight rates that favor Eastern centers of commerce and manufacture, the mills of Minneapolis, the grain fields of Dakota and the ranches of the great West beyond us, to our own impoverishment in Iowa.

One principle seems to have escaped the notice of the people and to have been kept very quiet by the corporations, viz, that traffic increases directly with the increase of population and wealth along any given line and at its termini. But the cost of carrying, above "fixed charges" of road equipment and operating, varies inversely, or nearly so with the numbers or quantities carried; that is, the greater the population, the industries, the wealth along a line, the less the actual cost for carrying per ton or person. A street car line may lose money in a small city at a five-cent fare, but fairly "coin" money in a large one at the same fare. The money thus "coined," that is, all above a fair compensation for capital, skill, labor and enterprise, belongs not to the corporation but to the people, for they have created the cities, laid out the streets and increased the population and wealth; and the streets and highways used for intercommunication by these companies, belong to the people. The highways of commerce are one of the few classes of property held in common by the people, one of the few instances of communism that has survived under civilization and apparently must survive. The surplus money, therefore, which is "coined" by the use of these thoroughfares, above fair dividends on investment, should be left in the hands of the people by a gradual lowering of fares and rates and a gradual improvement in the quality of the service. Our street car and other public carrying and serving companies, as things are now, often serve the public wretchedly, at high rates, and at rich profit to themselves. All future charters at least should either be for much shorter time, or else should fix a sliding scale of rates and service graduated for and with increase in population. That this can be done is shown by our Post-Office system. Through this system our National Government has, for at least fifty years, served the public efficiently and well, at just about actual cost year by year, working constantly and steadily with increase of population and wealth towards *a maximum of efficiency and a minimum of cost*. Not fifty years ago it took two weeks and cost two shillings to get a letter from Boston or New York to Ohio or Indiana. Now it takes one day and costs two cents. It soon will cost us but one cent, and yet our Postal System will be self-sustaining as it has long been in most of the Northern States. Lightning trains exclusively of postal distributing cars, and steel arms reaching forth to catch mail sacks suspended in mid air, have almost reached the maximum of efficiency and speed; while the control of this vast postal monopoly "by the people and for the people" has also, all the time, in spite of changing administrations and political corruption, worked steadily towards a minimum of cost. Does any one believe that under our past laws any private corporation would have served the public in this matter so cheaply and so well? Compare the high prices charged by telephone companies, and the wretched service coupled with high rates charged by our telegraph companies. For three years our college in Iowa, with five telephone instruments in as many departments, all connecting directly with the telegraph office, has found the telegraph almost worthless, important messages often arriving or going so tardily as to lose their value and even cause much damage and inconvenience. But all public carriers of freight, passengers or communications, and all corporations given by law or charter a right of way with monopoly, or virtual monopoly, should be compelled by law or charter to do the same thing the government does, improve their service and reduce their rates with the growth of population and wealth, instead of rendering, as now sometimes, a minimum of service at a maximum of cost to a grumbling public. Let the public grumble to some purpose or else stop grumbling. Let the watchword be,

"A maximum of efficiency,
A minimum of cost!"

and let it ring through the land till all these corporations that form a part of the great circulatory system of our commerce, have heard and heeded it. If our great corporations choke the breath, and stop or check the coursing life-blood of commerce, the instinct of self-preservation will make our government throw off that grip even if it has to destroy its foe, private monopoly, and manage its own circulatory and respiratory systems. To drop all metaphor: if our government cannot compel these corporations to serve the people economically, impartially and well, it will have to revoke their charters, refund their actual capital, and itself do the work they refuse to do economically and properly. In Indiana the legislature passed laws reducing telephone rates. The companies threatened to withdraw from the State, and the legislature lost back-bone and grew weak-kneed. In an eastern city the council fixed rates; the telephone company refused service; the council ordered the streets and air cleared of all poles and wires; and the telephone company saw that it was check-mated. These companies forget that their franchises from the State are most valuable. In the game between the State and the monopolies it has itself created, there can be no doubt which will be check-mated if the game is played to the end with clear head and steady hand. But the state must not give away all its "pawns" at the start.

State Agricultural College, Ames, Iowa.

Dairy Husbandry.

MORE ABOUT TESTING MILK FOR BUTTER-FAT.

NO. II.

The more light shed on the composition of milk, the more intelligent manipulators of it become convinced that the proportions of fat and caseine to each other are quite uniform in their relations in the milk of common cows that have fair treatment as to food, drink and care. The chief variation—when there is any—is in the percentage of fat, and in its varying proportion with caseine in the course of one, two or three days at a time, and it is a curious and notable fact that when, for sudden cause, these temporary variations come, the average per week is substantially uniform. That is to say, if a cow suddenly withholds butter-fat in her milk so that it falls below the normal yield, she is quite sure within two or three days to swing it above the normal yield for a day or so. It would seem from this that there is no really great loss from sudden and temporary causes, that is not paid up later on. It would seem as if somewhere in the economy of the cow she stored up, in some place of safety, the valuable fat while her fright or other temporary cause lasts, and disgorged it bountifully afterwards, to restore the equilibrium. We are not able to explain the reason of this, it being among the unsolved questions about that wonderful machine—the cow.

But the fact of general uniformity of the proportion of fat to caseine in milk is so well established that, in measuring the commercial value of it, we may well take the most valuable element in it, and the one subject to most variation in percentage in proportion to the other commercial element. That element is the fat. We may with the more propriety do this, because it makes generally about 12½ times as much of the value of 100 pounds of milk as the caseine does, and the further fact that the caseine, being more uniform, and not worth more than two cents per pound, in any event, does not, we might almost safely say cannot, vary the value of itself in each 100 pounds of milk more than two cents ere the cow giving it has so proved her worthlessness as a dairy animal that she should be started on her way to the butcher's block, at short notice. The fat, then, constituting fully 93 per cent. of every dollar of value in milk, may justly be taken as the measure of the value of it for butter-making without a question; and for cheese-making there is no other practical and rapid method of measuring its value for that purpose than ascertaining the fat in it. No matter what those who do not see the point may prattle about the utility of some umpire to measure the per cent. of caseine in milk, yet it has not come to light, or need it come. The more men and nations know about milk, the sooner do they come to the conclusion that the butter-fat is a near enough criterion for measuring its value for any commercial purpose whatever.

No one can rationally doubt that it is the correct way to measure its value for butter-making; for all the other solids go for nothing in making butter; but they do go into the by-product of skimmed-milk that finds its way into the pocket of the producer, either through skim cheese, or in feeding it to animals. For cheese-making the three to four pounds of caseine in 100 pounds of common milk are worth from six to eight cents, and vary but little from two cents' difference from year's end to year's end, not enough to justify the expense of finding out how much the caseine does vary from day to day in cheese-making.

We come to the conclusion, then, that to define what shall be the total amount of solids to constitute it standard milk, is not only a useless endeavor, but in practice a futile one. The sugar of milk and the caseine are both so nearly of uniform proportion to the fat, when cows are in health and in normal condition, or they are lost in manufacturing, or if not lost in the cheese, are of so little commercial value that the practical man can't afford to hunt for them, and they must therefore be inferred in milk for domestic use, and the caseine must be inferred in cheese.

The fat, then, being the chief element, and the practical and just criterion by which to measure value, milk-testers that determine the per cent. of fat, are the only ones we need to concern ourselves about. This is the conclusion of the practical men, the voice of the *savants*, the uncomprehended truth for the old fogies to stumble over, and for the prattlers to allege, who darken counsel with unmeaning words, and suggest that a substance should be measured when there is no way practically to measure it, and if there were, it would be of no more use than a method to measure the bark on cord wood. That the fat measures the essential value of the milk, is the meaning of most chemical determinations; the meaning of the lactocrite, on which tens of thousands have been spent; the meaning of the test churn for either weighing or oil measure; and to come plump to the point, is the meaning and the mission, of the simple and effective method of testing milk for butter-fat, known as Prof. F. G. Short's saponifying and oil test, that has been so broadly indorsed as truth telling, by both the Wisconsin and New York State Experiment Stations. Not to advertise this non-patented article, that anybody may make and use, but to broadly discuss its application to the great dairy industry, will be the leading thought of the next paper. "WISCONSIN."

Market Notes.

TROPICAL FRUITS.

Oranges and lemons are in great profusion everywhere. From the mammoth wholesale houses, down to the Italian nobleman's push-cart, they are piled high in golden mounds. The largest and finest are sold "10 for a quarter," and from this they range to "25 for 25 cents." Bananas, red and yellow, ripe and luscious, are in full supply, and at prices that place them within the reach of all. Pomelos and lemons are plentiful and cheap. The bananas with which the Gothamites tickle their palates, come chiefly from the West Indies and Central America.

The crop has been particularly prolific this spring. The feature of the supply has been the fruit turned out from the plantations at Baracoa, in Cuba. The Cuban planters have developed a regular boom in the cultivation of the fruit, and are now making an ambitious bid for the patronage of the American market.

A cargo was landed in New York from Baracoa on Tuesday last that consisted of between 6,000 and 8,000 bunches, shipped as a sample of what the plantations could turn out. It was a very exceptional shipment,and created a genuine stir in the market. The fruit was reported to be of fine flavor, and was noticeable for its large size. Several times before banana shipments have been received from Baracoa, but they were nothing to compare in quality or quantity with last week's importation.

The shipments from Florida and Havana have both fallen off in the past fortnight, but the trade in Florida oranges is occupying a mighty large share of the attention of capitalists interested in fruit importation all the same. The Sicilian growers are managing to make a pretty lively time.

Strawberries, although not a tropical fruit, are plenty from Florida and Charleston, and are of very fair size and quality.

Vegetables of all seasonable kinds are in full supply. Old potatoes are plenty and ordinary grades are selling for about one dollar per barrel. Bermudas are becoming more plentiful, at lower prices. Onions are in full supply, and are selling at merely nominal prices. Very good cabbage, tomatoes, string beans, asparagus, etc., are offered.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

System and order are the only things in the world to make house-keeping a success or the reverse. No woman who does al her own work can make it run like clock-work all the time, because there are so many unexpected things; but she can at least so arrange it that the occupations fit one into another, and she can save many steps by so doing. When the work is all higgledy-piggledy—first one job and then another, without any idea of labor-saving—it is not strange if the worker is always tired and always at work. Lay out some systematic order of work, and then keep to it as far as possible.

* * *

The Rural has already spoken of systematic sweeping instead of having one great sweeping day, to sweep one room each day, bed rooms and all. It is not so hard to sweep a single bed-room, when doing up the chamber work, but it is hard to sweep three or four, while dusting is such a long and tedious operation that one room at a time is certainly sufficient.

* * *

The same rules may be observed in cleaning silver or other bright things. It is a great deal of work, when one is blessed with much table gear, to polish every thing at the same time. Far easier it is to rub half a dozen spoons or so each day, when washing dishes; it takes but little longer at the time, and expedites the work. We can't afford to neglect such little aids when there is so much to do, and but one pair of hands to do it.

* * *

We think that one of the hardest things to keep neat about the kitchen is the dish-cloth. It will get to look black and dingy, no matter how thoroughly it is rinsed after each dish-washing. Of course, after using, it should always be thoroughly washed with plenty of soap and hot water, and then hung out to dry. Use one cloth for crockery, and another for pots and kettles: they blacken the cloth very much, no matter how well washed they may be. The careful drying of the dish-cloth after each using is very necessary, for damp cloths of any kind, lying about the kitchen, certainly encourage water-bugs and roaches, as well as black-beetles and other insect abominations Keep the kitchen sweet and clean, and you have the first requisite for a wholesome house.

* * *

Cleanliness certainly is next to Godliness, but some women have a way of making their cleanliness so very oppressive that one would almost find dirt preferable. Thus Mrs. Gargery, in "Great Expectations," always cleaned house when she felt especially vixenish, and cleaned her mild and gentle husband completely off the premises. We don't believe in a person who makes her cleanliness a pretext for all sorts of domestic unpleasantness. When exact housekeeping is made a means of destroying the harmony of the home it looks as if the housekeeper thought more of her own way than of others' comfort. It may be housekeeping, but it is not home-keeping.

* * *

Could such a thing as a real *home* exist without a woman at its head? We don't think so—men may build houses and furnish them, but no mere man could, unassisted by a woman, establish a home. Women are the home-making sex, and sad it is when they lose sight of this fact. We always feel suspicious and doubtful of a woman who does not care for home and home life; there is something lacking. And it is noticeable that love for, and pride in a home, will keep a woman to the right when other influences fail. Let us encourage this home feeling, by all means, for it is one of the safeguards of the nation.

A QUAINT ORNAMENT.

OLIVE E. DANA.

ONE of our household has lately completed an ornament of which some of the RURAL readers may like to hear. The foundation is an earthen jug of quart size. It was first painted over, and allowed to dry. It then received a layer of putty, and immediately were pressed firmly into the putty all sorts of trinkets—tiny souvenirs, relics, keepsakes which had been gathered from out-of-the-way places in our house and given by friends for the purpose. Playthings saved from childhood, too tiny for any other use and maybe broken; also odd coins, a wee horse-shoe, fantastic buttons gleaned from the family button-box, a bit of chain, a wampum bracelet, old stencil plates, unused keys, shells, wee bottles, a queer pencil, tiny cones and discarded jewelry—all these and many other similar trifles helped to cover this jug, which bears all its contents on the outside. The literary member of the household gave a handful of worn out pens. One or two long-used thimbles gave added significance to the memorial of old days. The old clock which had long since refused to tick, gave its key, and souvenirs from the West gave a flavor of travel to this Maine medley. When it was well covered (and grains of corn helped fill the interstices) it was given some days in which to dry, undisturbed, and then received a coat of gilding. Its satisfied owner has bestowed the decoration of a bow of peacock blue, and, on a tiny stand in a conspicuous corner of the parlor, it receives a goodly share of attention and admiration.

INDEPENDENCE VS. SELFISHNESS.

J. H. G.

IS a woman who earns her own living independent? In some way it has come to be accepted that all a woman needs to do to become independent, is to acquire the ability to earn her own living. This is a mistake. She is under obligations to her parents and society, which are not satisfied by simply earning enough money to keep body and soul together. Independence means freedom from obligation, a condition which is, in the present condition of society, unattainable. I think one of the most radical defects in our modern system of education, is this striving to make men and women "independent." The whole drift of modern education is toward selfish egoism. It would elevate the individual at some one's else expense, without inculcating any deep sense of personal obligation to parents or society. It is a fact that no one can acquire sufficient education to be of any great practical value to the world without incurring obligations to parents and society, which a lifetime of usefulness would scarcely cancel. What we need is a deeper sense of individual responsibility. We need more of the spirit of Christ, the desire to go about doing good, helping and saving others. There are no conditions in life which require so much of this spirit as that of wife and mother. Max O'Rell talks of the want of gratitude and sense of obligation on the part of American women, but let us hope that he did not see the best side of American life, the country home life, the kind of life which is familiar to most of the RURAL'S readers; the kind of life which is made up of sacrifices and labor on the part of mothers, sisters and daughters. He speaks of the condition of women as he saw them in our cities, when he says:

"If an outsider be competent to form an opinion, I venture to say that the American woman does not render to man a tithe of the devotion she receives from him. The French wife repays a husbands's devotion by protecting his interests; an American one too often repays it by breaking into his capital. But Jonathan complains not. To him it is only seemly that 'beauty should go beautifully.' If one fortune goes, he sets to work to make another, and the sweat of his brow is soon crystallizing once more upon the neck and arms of his beloved womankind in the form of diamonds."

Commenting upon this criticism of American women, the Christian Union says that this question has been discussed before, and it is time for American women to seriously consider it. It says that hardly a defalcation is discovered that is not traceable to social ambitions on the part of the women of the family. Almost every breach of trust is connected with family social ambitions. And the very ones who tempt, actively or passively, drift or sail on till destruction comes, without question.

A wise physician recently said: "I tell you I have to see it. There are men whose only relation to wife and children is that of banker. When they die they are mourned as the bankers, the ones who made the incomes secure; their death means a percentage of danger to income." Women shrink from such arraignment, resent it indignantly, and many justly resent it. Yet too many American women do deserve it. Life is organized on too complicated a plan for the average income. The display at home and abroad shows the margin between income and outgo is too narrow. This is so evident that the social economist finds the family life of America threatened, and gathers statistics to prove that the higher the social grade the more the number of marriages decrease, and attributes this to the fact that the cost of supporting a family grows greater every year, and this increase is in the form of luxuries chiefly for women. Surely it is a serious subject and one worth the thought of all. The woman of limited income has her share in this reform. Every effort to excel in display, whether at a cost of one dollar or one thousand, is one more burden for some one to carry, and usually that some one is the man, who makes a double effort to meet the new demand and leave a margin of capital. Nor does the burden rest there. New standards of luxury are created for the children, who in turn refuse to establish homes on narrow incomes, because display, not happiness of the highest order, has become the object in too many families."

ONE WOMAN'S MEMORY.

OLIVE E. DANA.

THEY have just celebrated the 70th birthday of James Russell Lowell. Good work he has done as author, reformer, critic, and statesman, and very many who care nothing for his essays or his diplomacy or his oratory, enshrine his verse. But noble as are both his prose and poetry it seems to me there is in it all no other passage quite so beautiful as the one which is his portrait of the wife of his youth—"My Love." Others—friends of the poet—have told of her nobility of character and the sweetness of her disposition. The memory still lingers like a perfume around the old college-town where some of her brief years were spent. But this is the fairest and clearest picture this lover-husband painted and it stands for all to see. Was ever true womanliness better delineated?

"She doeth little kindnesses,
Which most leave undone or despise;
For naught that sets one heart at ease,
And giveth happiness or peace
Is low esteemed in her eyes.

"She hath no scorn of common things
And though she seems of other birth,
Round us her heart entwines and clings,
And patiently she folds her wings
To tread the humble paths of earth.

"Blessing she is: God made her so
And deeds of week-day holiness
Fall from her noiseless as the snow
Nor hath she ever chanced to know
That aught were easier than to bless."

CONFESSIONS OF A COUNTRY GIRL.

NO. VIII.

PATTY GARTON.

LIKE all girls, I think sometimes of such things as sweet-hearts and lovers—we all do, don't we? Do you know, I think that we country girls would often be the better for a little of the city etiquette we are apt to sneer at, especially as regards our association with young men. I do believe in frank friendship with young men, but it often degenerates into a hoydenish freedom which certainly rubs off the first bloom. Oh yes!—I know what you are thinking—you don't want people to say you put on airs, and hold yourself above other people. And perhaps—this is *very* confidential—you may think that a girl who holds herself up, and permits no freedom, will not receive those many little attentions we all desire. But I hold a different view—a girl who respects herself will be respected by others, and honestly, a man who is good for anything may laugh and talk and joke with an undignified hoyden; but when he chooses a wife she is pretty sure to be the opposite.

Few men care to marry a woman who allows the same freedom to every man she meets. Now, one thing I don't believe in is very much the fashion in country districts—that is, for girls to receive masculine visitors alone in the evening, often young men completely unknown to their parents. In many cases the parents never think of going into the parlor at all—"Jennie has company," and she must not be disturbed. It is not right—the mother should know just who comes to the house and associates with her daughters, nor should she leave the young people entirely alone. Just the same, girls should not be allowed constantly to go to all sorts of amusements escorted by a young man, without proper guidance. Take care of your daughters, mothers—it is no light thing to lose their girlish freshness of mind, and their innocence in their mothers' charge.

GOLDEN GRAINS.

HOLMES says that he has often observed that vulgar persons, and public audiences of inferior collective intelligence, have this in common: the least thing draws off their minds, when you are speaking to them.....

SORROW is not an accident, occurring now and then, says Robertson. It is the woof which is woven into the warp of life, and he who has not discerned the divine sacredness of sorrow, and the profound meaning which is concealed in pain, has yet to learn what life is. The cross, manifested as the necessity of the highest life, alone interprets it.....

HAMERTON says that a life without suffering would be like a picture without shade. The pets of Nature, who do not know what suffering is, cannot realize it, have always a certain rawness, like foolish landsmen who laugh at the terrors of the ocean because they have neither experience enough to know what those terrors are, nor brain enough to imagine them.....

IT is true that at no time in the history of this country did true Christian manhood weigh more, and a merely nominal church membership less, than now in the estimate of the business world.....

DID you ever see a child who would not return a smile? There may be a few such children, but they are the exception not the rule. The child face is a mirror in which is reflected the face of him who looks into it, as its mind gives back the image of the one who is training it. Those in charge of children should not forget this.....

BEECHER had the happy faculty of saying much in a little, for example, he says in regard to work, that there is no calling that is not made better by brains. No matter what a man's work is, he is a better man for having a thorough mind-drilling.....

IT is not work that kills men, it is worry. Work is healthful, worry is rust upon the blade. Fear secretes acids, but love and trust are sweet juices.....

CHARACTER like porcelain-ware, must be painted before it is glazed. There can be no change of color after it is burned in.....

EMERSON reminds us how cunningly Nature hides every wrinkle of her inconceivable antiquity under roses and violets and morning dew!—.....

THE church is your house, as hosts in God's behalf: and you are glad to have visitors attend its services. Then show them the pleasure you really feel at their presence. As host, introduce yourself; and make the visitors acquainted with others, so that they may feel that they are welcome. Invite them to come again. Do not give them occasion, from your manner, to think that your congregation is made up of a cold or exclusive set. A church is not a club, where all but those who belong to certain circles must expect to be snubbed, if they presume to intrude.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

SOME HINTS ABOUT HOME DRESSMAKING.

GIRLS, I want to talk to you a little about home dressmaking. I mean country girls, but, of course, anybody else is at liberty to read it. Some of you live far away from the town, and perhaps the village where you go to meeting can boast of only one or two dressmakers. (And they may not be much to brag about.) These as a matter of course, are monopolized by the most wealthy families, so the farmers' girls are left to struggle with their own gowns.

Now, you may be first-class needle-women, may know how to do plain sewing beautifully yet be unable to make your dresses so that they will give you any satisfaction at all. (I have experienced this state of affairs myself, so I know.) With a little teaching you might be able to do a great deal better, so I shall try to give you a few points.

The most important thing of all is the waist. No matter how nicely the skirt may hang, your dress will not look nice if the basque does not fit. If this is the first one you are to make for yourself, *buy a pattern*. Where can you get it? Anywhere. All you have to do is to mail 25 cents and inclose a stamp for reply, to New York, Philadelphia, or any large city where the great pattern-makers have offices. They will reply if you live in Arizona just as promptly as if you live in a neighboring town. To be sure, it will take you longer to get the pattern, but it will be mailed to you promptly. In ordering, give *bust measure* and tell just what you want in as few words as possible. (You can address The Butterick Publishing Co., N. Y., or Madame Demorest, 17 East 14th St., N. Y. City. Butterick's patterns allow for seams. Demorest's do not.

The *half* of each pattern is given, so it is necessary to have your dress goods double. Be careful always to have the two *right sides* of the goods face each other; if you are not careful you may cut two pieces alike for one side of the basque, or make both sleeves for the same arm.

The first thing to be done is to lay the pattern on the *lining*, so that the grain runs lengthwise of the pattern. Never cut the pattern cross-wise, as the lining will then pull out of shape. Be careful to cut each notch *exactly* as you find it on the edges of the pattern. If you do this with care, you will know exactly how to join the seams together by fastening one notch to the one on the corresponding seam. After you have your lining cut out, baste it together carefully and fit it on, *seams out*. You will find that you may have to take it in a little at one place, or let it out a little at another; but if you have given the correct bust measure, you won't have very much trouble. Let some one help you by pinning the places where altering is necessary. Then take it off and put it on with *seams in*. If it fits, mark carefully with a colored pencil or chalk the places where you basted it when it fitted you correctly.

Next rip out the basting threads. Lay your dress material on a smooth table; lay the lining on it, seeing that you have the grain *lengthwise*. When you have laid the parts of the lining on so as to cut with as little waste as possible, baste or pin the pieces down, and cut carefully. Baste each piece of the dress material to the corresponding piece of the lining, then baste the basque all together. If care be taken, the result will be quite satisfactory. After you have stitched all the seams up neatly, open them out and press with a warm iron. Then overhand the raw edges. You can buy bones already covered. These are very easily sewed in. Put a bone on each dart, and on the seams under the arms—never put any on the curved back seams. If you like, you may put one down the middle of the back.

In making a skirt, cut your lining first. You can buy cambric for this purpose for five cents per yard. Measure off the desired length for the front. Make the sides the same, but the back must be somewhat longer. If reeds are to be worn, you must allow several inches in length behind; if simply a bustle, you may allow an inch-and-a half, or two inches. Double your front breadth and cut it bias, sloping very *gradually* from the bottom to the waist line. Next lay down the two pieces meant for the side gores. They should be cut bias on one side only, in the same manner as the front breadth. If the skirt is for a slight person, or if the lining material is wide, one breadth doubled over and torn down the center will do for both side gores. The back breadth is perfectly straight. Slope the top a little from the middle of the front breadth over the stomach to the back breadth. You may arrange your dress material over this foundation to suit the fancy. For an ordinary-sized person the bottom of the skirt should be two yards wide. If for a tall person, from 2¼ to 2½ yards wide is best. (I'm speaking of grown people's skirts—not girls'). Sew the *straight* side of the side breadths to the *bias* of the front breadth. (NEVER sew two bias seams together—if you do you will have a point on each side of the skirt.) Of course, the back breadth is straight, so fasten these straight seams to the bias of the side pieces.

Skirt braids now come in side or box plaits. They wear much longer than the plain, straight braid and look very much better.

While dressmaking, always have a hot iron convenient, for it is, you know, "the botch-

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria.

er's best friend." Press all seams, except on silk goods. Some people have gowns made of lovely materials, yet look absolutely dowdy, because they fail to do this very thing.

DORA HARVEY VROOMAN.

WHAT ROCKS STRAND BEGINNERS IN HOUSEKEEPING?

JUDGING from observation and confidential chats, I should say that the first is ignorance, which looms up in an unselfish mother's love for her dear children. It is only by persistent teasing that the little daughter is permitted to wash and wipe the dishes, even for amusement, and when she might do it well, Mamma picks up the scattered ones, together with the iron-ware, and cleans them herself, thereby teaching the child to be careless and unmindful of the lesser matters. Perhaps when she is a dozen years old she is allowed to make a cake; but is not taught to scrape all the dough into the baking tin, and enough is scraped into the pail to make one or two nice patty-pan cakes. But it is work the child likes in making the pastry, and she soon becomes an adept in that line though a very wasteful one. But how is it about the bread? Not one girl in a dozen can make a decent loaf when she is 16 years old, no matter what her circumstances may be, and at that age nearly every Miss considers herself fit to be a bride. In this locality nine out of a dozen are married very close to their 16th birthday. What wonder that the young housekeepers are soon discouraged and give up in despair! The mother has done all the work instead of putting the daughter into the harness by her side.

"Mamie goes to school, and has so many studies that I know she must be worn out when it comes night, so I do not ask her to help me," says a fond mother. And Mamie comes home, throws her books down, catches up a novel and flees to the hammock, or perchance strolls off down the street with her mates. And the already tired mother becomes more and more tired, as she goes on with her self-imposed duties, creating for Mamie the rock of inexperience that will grow to a mountain of sorrow and discord when she goes to housekeeping on her own account.

I often wonder how experienced mothers can be so thoughtlessly *unkind* to their daughters when they know that it is not an uncommon occurrence for very young girls to take the reins of government into their own hands, and not a few women encourage their little daughters into making early marriages, and yet never give them any real experience in the ways of domestic economy.

"Let the girls have a good time now while they are young and care-free; they'll have hard times enough at best," says the over-indulgent mother.

Most assuredly the hard times will come when such a girl marries, no matter whether the husband be rich or poor; for ignorance, carelessness and inexperience would strand a veritable angel if thrown upon the sea of domestic economy without an oar or rudder. All the cooking schools in the world will not save an amateur, from being "oft in sorrow and oft in woe;" for one cannot acquire that perfect judgment and self-reliance in a few weeks or months that years of constant practice will give.

And there are so many times when it becomes a necessity to have a mind of one's own; there are so many ways to make a little go so far that to make a happy and successful home, a young girl needs to be well-learned in kitchen lore, even though "she is goin' to teach school so soon as she can get a 'stificate'" A portion of every day from the age of 10 to 15 years should be spent about the home-work, till Mamie or Jennie can be left to keep the house and do it well, even to doing the marketing and making her own garments and keeping them in good repair. Then, if she elopes with a dude or a farmer's son, poor management, as far as the home-work is concerned, need not be laid to her charge. Instead of being stranded on the rocks, she could sail calmly over the deep waters of domestic bliss.

MAY MAPLE.

NOTES.

THE Empire dress is worn in all its classical simplicity by young ladies, married and unmarried, for afternoon and dinner toilets.

* * *

EMBROIDERY patterns in applique, wreaths and detached bouquets over cloth, cashmere and silk fabrics are the hight of fashion for dress trimmings.

* * *

FLOUNCES are coming in again. Many of the new designs for spring and summer show them in great abundance.

* * *

MANY of the new Spring wraps have wing sleeves as did the winter ones, extending from the shoulder to the bottom of the skirt. But there is nothing so durable and serviceable as the close-fitting walking jackets, some of which show embroidered vests in Persian patterns.

* * *

THE redingote is still in great vogue. One never wearies of black, while the eye becomes tired of so much green, purple and blue. A redingote of rich black material, showing here and there a bit of colored lining, is both pretty and stylish.

* * *

LACE is to be in great favor the coming spring. It is used for trimmings on dresses and wraps, while the lace hat is to be more fashionable than ever.

D. H. V.

A PLEA FOR CHARITY SWEETHEART.

FOR my part I do not like the criticisms and disparagements which are flung at Charity, and I am glad that they have not silenced her and that she is able to speak for herself. Ever since she has made herself known I have had a good deal of sympathy for the motherless girl, who, quite likely, is motherless because the precious wife and homekeeper starved to death for lack of the loving care, the thoughtful help and appreciation, the culture and refinement of surroundings that should have been hers. By culture I do not mean that which is pronounced "cultchah," or that which pertains to wealth, leisure, or high position, but to the cleanliness, care and neatness, the eternal fitness of things which belong to the surroundings of every being, however poor and humble and laborious his or her life may be; and there are more women and children who are hungry and thirsty from lack of love and appreciation and from lack of these simple surroundings than from lack of food and drink for their bodies; more wives, mothers and homekeepers that die of this starvation than of lack of bodily comforts, whose greatest burden is not the daily labor which they perform, the daily sacrifices which they suffer for the husband and children, but the indifference, ingratitude and selfishness of those for whom they toil and endure.

The trouble seems to be that Charity, standing, as she does, in the place of mother and home-keeper, has dared to speak out and tell the truth about things which wives have suffered in silence, and timid women and selfish men are frightened at the revelations which she has made: the women for fear her lot and theirs may be made the worse, and the men for fear other women may be emboldened to speak for themselves and their power as slave-holders and task-masters may be lessened. As to the former, I think every true husband, father and son will rejoice that she has spoken that the scales may fall from their eyes and that they may be prevented from repeating the past in the future; for men are very, very blind in regard to these things. And as to the latter, no reformation, not even the abolition of slavery, was brought about until some one had spoken and revealed the wrongs that were to be righted, the sufferings of those who were held in bondage and oppression.

So let her speak on, and if she does not reform "A Man" or G. H. S., she *may* reform some other man.

GERALDINE GERMANE.

Miscellaneous Advertising.

When You Know

That scores of people have been cured of Boils, Carbuncles, and Scrofulous Sores by the use of

Ayer's Sarsaparilla

why not try it yourself? As a blood-purifier, this medicine has no equal. Listen to good advice: Take Ayer's Sarsaparilla, and no other.

"I had numbers of carbuncles on my neck and back, with swellings in my armpits, and was tormented with pain almost beyond endurance. All means of relief to which I resorted failed until I began to use Ayer's Sarsaparilla. One bottle of this remedy restored me to health."—S. Carter, Nashville, Tennessee.

Ayer's Sarsaparilla,

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

Price $1; six, $5. Worth $5 a bottle.

BOSTON KNIFE HOOK!

SENT FOR $1.00.

For cutting corn, tobacco, sugar cane, briars, trimming bushes and vines, and pruning trees. A handy tool for every farmer. All steel. Agents wanted Boston Knife Hook Co., Boston, Mass.

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Made cheaply and quickly by using a Triple Motion

WHITE MOUNTAIN FREEZER.

Will freeze in half the time of any other Freezer and produce cream of the finest quality Inquire for the "White Mountain" of your local dealer in house-furnishing goods.

"Frozen Dainties."

A book of Choice Receipts for Ice Cream, Sherbet, Water Ices, etc., packed with each Freezer this season, or will be mailed upon receipt of ten cents in stamps.

White Mountain Freezer Co., 134 Hollis St., Nashua, N. H.

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Breakfast Cocoa.

Warranted *absolutely pure Cocoa*, from which the excess of Oil has been removed. It has *more than three times the strength* of Cocoa mixed with Starch, Arrowroot or Sugar, and is therefore far more economical, *costing less than one cent a cup.* It is delicious, nourishing, strengthening, easily digested, and admirably adapted for invalids as well as for persons in health.

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By avoiding Agents you save their enormous expenses and profits which double the costs on every first class Piano they sell.

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ORGANS, $35 to $500.

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Make more butter, better butter, churn easier and clean easier than any other churns.

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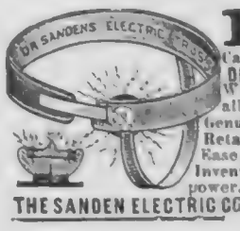

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Warranted Best Truss made, to CURE all Curable cases or Refund Money. Only Genuine Electric Truss in World. Perfect Retainer, Gives instant relief, speedy cure Ease and Comfort day and night. This New Invention combines science, durability and power. Price $3 & $5. Illus. pamphlet free.

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Simple, durable, powerful, easy to operate never affected by frost. **Patent GLASS VALVE**, will never corrode. Ask your dealer for our goods. Write for catalogue.
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SAVE MONEY. BEFORE YOU BUY

BICYCLE or GUN

Send to A. W. GUMP & CO. Dayton, O., for prices. Over 400 second-hand and shop worn Cycles. Bicycles, Guns and Typewriters taken in exchange. Nickeling and repairing

Davis STUMP Puller Lifts 20 to 50 Tons.

Worked by 2 men. 5 sizes. **Price, $35 to $70.** Circulars Free. Sent on **Three Days Trial.**
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A NEW COUNTRY!

The opening of the new **"SOO"** railway across Wisconsin and Michigan, gives access to desirable agricultural lands and large bodies of **Pine, Hemlock and Hardwood Timber.**

Superior Advantages Given to Parties Who Will Erect Saw Mills or Factories.

Choice farming lands cheap and mostly on time. **Railway Company pays cash for cordwood.** For further information address
W. W. RICH, Chief Engineer,
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SCHRAALENBURGH, N. J.

Breeder of P. Rock, White P. Rock, Laced and W. Wyandotte and Patagonian. Eggs $2.00 for 13; $3.00 for 26.

PERFECTION MOLE TRAP.—I. A. Baker, of Magnolia, Ark., writes that he has caught 19 Moles since last August. Please send me 20 more traps for my neighbors. It does its work complete. Send for circulars. Address JOHN F. TURNER,
4514 Main Street, Germantown, Philadelphia, Pa.

CHESHIRE SWINE The Best Hog in existence. Pigs and older stock now ready to ship. Send for circular.
JOHN M. COOPER, Clifton Park, N. Y.

WHOSE heart is full, his mouth runneth over. Whosoever has used

Warner's Log Cabin PLASTERS

has his heart filled with gratitude and he proclaims to the world its superiority to all other plasters. Try it. Cheapest and best.

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34 PARK ROW, NEW YORK.

The following rates are invariable. All are therefore respectfully informed that any correspondence with a view to obtaining different terms will prove futile.

ORDINARY Advertisements, per agate line (this sized type, 14 lines to the inch)..... 30 cents
One thousand lines or more, within one year from date of first insertion, per agate line, 25 "
Yearly orders occupying 14 or more lines agate space..... 25 "
Preferred positions..... 25 per cent. extra.
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The subscription price of the RURAL NEW-YORKER is
Single copy, per year..... $2.00
" " Six months..... 1.10
Great Britain, Ireland, Australia and Germany, per year, post-paid..... $3.04 (12s. 6d.)
France..... 3.04 (16⅔ fr.)
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Agents will be supplied with canvassing outfit on application.

Entered at the Post-office at New York City, N. Y., as second class mail matter

News of the Week.

HOME NEWS.

SATURDAY, April 27, 1889.

OKLAHOMA is a very irregular, somewhat triangular-shaped tract of country containing 1,887,800 acres, or 11,800 quarter-sections, in the heart of the Indian Territory. The apex of the angle is at the south near Purcell, and a little north of this, on the line of the Santa Fé railroad, is Guthrie, and still further north at intervals are Oklahoma, Edmonds and Alfred; while Kingfisher is off the road to the west on the Cimarron river. The base of the "triangle," to the north, double as broad as the main body of the the territory, stretches along the southern line of the Cherokee Strip or Outlet, which is about 70 miles wide, and separates Oklahoma from Kansas. According to the latest accounts, a large part of the land is excellent; some of it ordinary and about one-third unfit for arable purposes..... Just before noon on Monday vast masses of people, variously estimated at from 30,000 to 100,000, were impatiently waiting along the borders of the Territory until, at noon, the signal should be given by the military authorities permitting them to enter. The crowd was greatest at the north, coming from every State and Territory to the "promised land," though there were a great many at the south also, coming chiefly from Texas and the other Gulf States. Many had also found their way into the neighboring Indian Territory to the east and west, so as to be ready to rush in at once and stake out their claims. Hundreds were also in the Territory hiding for the same purpose, while over 500 United States deputy marshals, consisting chiefly of land-grabbers, speculators and agents of syndicates and capitalists, had obtained their positions merely to be at the town sites beforehand so as to grab the best lots before the general scramble began. A large number of railroad hands vied with them in greed..... ..On the arrival of noon where the restraining soldiers were present and doubtless much before where they were not, the inrush began. Fast horses had been got ready, draft horses and others unhitched from the "prairie schooners," and madly dashed riders on in all directions to pick out the best locations, the biggest rush being, of course, made for the town sites, the most eligible parts of which were found to be already gobbled up by the bogus United States officials and railroadmen. After the wild scramble of horsemen, venicles of all sorts drawn by oxen and all kinds of non-speedy horses swept or crept inward. Meanwhile the railroad, which runs north and south through the easterly part of the country, was running section trains 15 minutes apart, and if joined they would have made many miles of continous train crammed inside, crowded on the roofs, jammed on the steps, and packed from the cow-catcher to the end. Never was such a scene in this or any other country. The territory which was supposed to be uninhabited except by officials at noon, had in a few nours a population of tens of thousands. Guthrie, a stretch of uninviting prairie at 12 o'clock, was a town with a population of 15,000, streets, a newspaper office, a bank, lots of stores, etc., etc., at 4, when a meeting was called to elect town officers. Much the same at the other town sites. All over the country all sorts of people were madly at work staking out claims or marking them in other ways, or hunting for them, or preparing to defend them. Rifles and revolvers were as indispensable as shirts or boots. Night brought no rest to a vast number, and the turmoil has continued ever since. There have been a scere or more murders due to disputes about claims, within reach of the telegraph, and God only knows how many in remoter places. Several deaths have occurred from over-exertion, and half a dozen or so have been driven crazy. Thousands couldn't get a chance, and others are bitterly disappointed with the character of their sections. While steady streams are still meandering in, other streams of larger volume are flowing out..... Much of the overflow is settling in the neighboring parts of the Indian Territory, especially in the Cherokee Strip and the other parts of what would have been Oklahoma Territory hadn't Congress killed the Springer bill creating it. It would have included the present Oklahoma, 1,887,800 acres; the Strip or Outlet, 6,022,244 acres and No Man's Land. 3,672,640 acres—a total of 11,582,674 acres. Reports say it would take nearly the whole of the United States Army to drive the desperate squatters out of their new quarters. Much of this land is finer than any in the territory just thrown open, and it is thought the Government must soon throw most, if not all, of this open also. Terrible destitution is already reported among many of the newcomers. Hundreds just managed to get there, with nothing left for support or to make a crop, and water is scarce in wide sections and provisions are unattainable. Think of water at 10 cents a glass even in Guthrie, and 25 cents for two small loaves! Out in the country, away from the railroads, things must be much worse in a region that has never known the plow, and from which all the cattle kings and syndicates have cleared out every head of stock..... Detroit is bound to have a grand International Fair and Exposition costing half a million dollars, $148,000 of which have already been invested in a splendid site near the city. The buildings will be the "largest in the world," costing $250,000 and covering 12 to 14 acres.... A mine of rock salt, pure and clear, has been discovered, 675 feet down, at Kingman, Kansas .. .. Negotiations for the establishment of that gigantic Anglo-American Salt Trust still continue and are likely to be successful very soon. A capital of $10,000,000 is reported to be already secured and much more is said to be within reach, if it is ever needed.....Postmaster Pearson of this City, who held the place under Arthur and Cleveland, has just died at the age of 45, from overwork—highly esteemed by all as the best officer who ever held the position..... .. The Minnesota State Legislature has passed a capital punishment law similar in some respects to the New York law. Under its provisions the prisoner is to be kept in solitary confinement and see no one but his family, his lawyers and his spiritual advisers. He is to be executed before sunrise, and may invite three persons to be present. The sheriff invites six persons besides the surgeon. It is made a misdemeanor for any newspaper to publish anything more about the execution than the mere fact..... Slaughter at grade crossings is just as frequent as ever. Wednesday last, John Wade, 62; his wife, 59, and J. M. Linderman, 14, were killed at Newport, Del., by an engine on the P. W. and B. R. R. No watchman or safety-gate, though hundreds cross the track each day, and 75 trains have chances to kill them.. ....One death from a virulent type of yellow fever at Tampa, Fla., last Tuesday—an unusually early case. Federal and State authorities are taking prompt precautions against any and all outbreaks. Camp Perry, near Jacksonville, can be made ready as an asylum once more for refugees in 24 hours. Danger greatest this year where fever was least prevalent last, as elsewhere most of the people have had it.....Just as the machinery constructors, in convention at Detroit, Mich., had nearly resolved to abandon the Knights of Labor, General Master Workman Powderly arrived there "opportunely" on a lecturing tour, Wednesday, and after some hard work got the convention to agree unanimously to remain in the Order..... ..President Harrison has issued a proclamation making April 30, a legal holiday in celebration of the Centennary of Washington's inauguration as first President of the Republic. As Congress was sitting in this city at the time, the ceremony took place here, and is to be commemorated by the grandest maritime, military and civic parades and festivities ever witnessed on this continent. Over 80,000 civilians will be in line on May 1, taking over 10 hours to pass a given point. On April 29 a grand maritime parade of men-of-war and merchant vessels will attract multitudes to the harbor. On April 30, about 50,000 troops will parade. Hundreds of thousands of of visitors are expected from all parts of the country, but, of course, especially from the adjacent States. All public and private accommodations will be taxed to the utmost to lodge and entertain them. Stands capable of seating a million are already erected along the line of march. The President and his Cabinet will take part in the celebration. There will be balls, banquets, fire-works any amount of bunting and buncombe, and for three or more days there will be the most hilarous, vociferous crowds and the most pompous pageantry and general uproar that ever startled this Western hemisphere. Even wealthy people living along the route of the parade, are letting the windows of their houses, many of which now command $500, and prices are rising..... A very pleasant event occurred recently at the hay-press works of Geo. Ertel & Co., Quincy, Ill., when Mr. Geo. Ertel was presented by his employees with a handsome gold-headed cane, suitably engraved..... Quebec is to have a $10,000,000 cantilever railroad and passenger bridge across the St. Lawrence.....All the Vanderbilt roads east of Chicago will abandon a large part of their Sunday freight trains beginning May 1..... ..The biggest fire in this city for years swept along the bank of the North River a week ago, destroying more than $3,000,000 worth of property, including two large grain elevators, together with vast stores of lard, flour and the like: 15,000 bags of Timothy seed were destroyed and 8,000 bags of clover seed. This was old, long-carried stock, and for some time it has had a depressing effect on the market, so seed merchants are not bemoaning the loss.. .....Both branches of the Minnesota Legislature have passed a bill making drunkenness a crime, and it now awaits the Governor's signature. The penalties are, for first offense, a fine of not less than $10 or more than $40, or imprisonment for not less than 10 or more than 40 days; second offense $40 to $50 fine, or 30 to 60 days' imprisonment; third offense 60 to 90 days' imprisonment..... .... New Mexico, nothern Texas and southern Kansas expect to gain considerable population by means of the Oklahoma boom. It's thought that many of the disappointed and disgruntled boomers will seek settlement in one of the neighboring States. A dozen agents of the Maxwell Land Grant syndicate are now busily canvassing the discontented people, expatiating on the advantages of their employers' place.....The Canadian Parliament has passed the Weedon bill enlarging the scope of the extradition treaty with this country, so as to render the Dominion an unsafe place for "American" boodlers and other rascals. Those north of the line now, however, are safe, as the retroactive provision of the bill has been cut out. .... The Pennsylvania Senate has defeated a bill against railroad grade crossings..... The Delaware House has defeated a bill providing for voting after the Australian fashion by a vote of 14 to 7—the Republicans all voting for it, and all the Democrats against it...An important railroad forfeiture bill has been stolen by Minnesota lobbyists just at the close of the legislative season, which, of course, acts the same as would a defeat of the measure. This is by no means an uncommon trick of such gentry... ..... The Illinois Senate has passed an Australian Election law, and the House put through a stringent Anti-Trust bill by an overwhelming majority..... Massachusetss has just defeated the prohibitory amendment to the constitution by about 50,000 majority. Including cider in its provisions gained the opposition of thousands of farmers the price of whose apple crops would be lowered by it, and farmers were expected to be its chief supporters. The same cause defeated a similar measure in New Hampshire a few weeks ago and is likely to do the same in Pennsylvania in a week or two.....

Valuable Testimony.

Those who are skilled in the nice adjustment of evidence will see why we value the following. They will also discover why we refrain from imposing further introduction or adding more than our usual suggestion as to brochure and address.

Hon. P. H. Jacobs, the well-known chemist, editor of the *Poultry Keeper*, *Farmers' Magazine*, and Agricultural Department of *The Philadelphia Record*, says.

"I have examined carefully the Compound Oxygen manufactured by Drs. Starkey & Palen; also their mode of *treatmeat* by *inhalation*, and have noted the great benefit to those who have used it among my personal friends. I cheerfully say that it offers better promises of curing such diseases as consumption, bronchitis, asthma, catarrh, dyspepsia, nervous prostration, rheumatism, neuralgia and all other complaints of a chronic nature, than any other treatment that has come to my notice. That it will give to the exhausted system renewed and permanent vitality is beyond a doubt."

The brochure to which we refer contains the history of Compound Oxygen and a record of cures in many interesting cases. This, with our quarterly review, *Health and Life*, will be forwarded free of charge to any one addressing Drs. Starkey & Palen, 1529 Arch street, Philadelphia, Pa; or 120 Sutter street, San Francisco, Cal.—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, April 27, 1889.

ACCORDING to the latest reports from different points especially from the West, the crop conditions of the country are favorable. All the Northwest, West and Southwest are rejoicing at the good effects of the copious rains of last week. The cool weather has also given the grain a good chance to root, and the return of warm weather must cause a very rapid growth of spring-sown grain. The condition of winter wheat continues exceedingly good. During the last three weeks it has made very rapid growth, and harvest seems indicated at least 14 days earlier than last season. The amounts of wheat in farmers' hands are reduced to a very low per cent. The flour trade seems dull; stocks everywhere are very large, but no demand. The spring wheat seeding was completed last week. Oats have greatly improved during the last week. The rains came at the time when most needed. Grass has taken a wonderful start all over the West, and what promised to be a short crop 14 days ago gives evidence of being a good one. Pastures and meadows have sufficient feed for stock. Farmers have made good progress plowing for corn, and planting has commenced. The ground, however, is too cold for planting in the northern portions of the corn belt. Too much rain in Kansas and Missouri has delayed planting there, but should the remainder of April prove as favorable for farming operations as the spring has been thus far, we shall see early in May fully 50 per cent. of the corn in the ground..... The wheat deficit in the Australian colonies of New South Wales, Queensland and Tasmania is fully 8,750,000 bushels. Victoria, South Australia and New Zealand have an available surplus of 9,500,000 bushels. Shipments to Europe and the demands of South Africa and the South Sea Islands will, however, eat up this surplus, it is believed, and California, with her large wheat crop, expects to be called on to meet the requirements of the colonies..... ..... The official roster of the Patrons of Husbandry in Massachusetts shows that there are in that State 140 subordinate granges with a membership of 8,000—the highest the State has ever had..... The New York Assembly has passed Representative Erwin's bill establishing four dairy schools in this State, and appropriating $4,000 therefor..... ...The Secretary of the Home and Foreign Produce Exchange of London, England, has notified the Secretary of the Chicago Produce Exchange that American dairy products are in danger of being excluded from English markets under an act of Parliament on account of adulteration. He says that it is of the utmost importance to the future of the trade that American cheese and dairy products continue above suspicion and that the matter calls for prompt action. The Secretary of the Chicago Exchange has forwarded copies of this letter, together with other facts on the prevalence of dairy adulterations, to the legislatures of various States, and efforts will be made to secure the passage of bills in all Western and Northwestern States for the prevention of fraud in the manufacture and sale of adulterated dairy products..... Last Monday St. Louis dropped the antiquated and unfair method of selling poultry by count instead of by weight. Even the Mound City advances.....English hop-growers complain that California and Washington are flooding their home markets with a very inferior grade of hops which give them no profit while breaking down the English markets. ..... New potatoes have been selling at $10 per barrel in St. Louis and Chicago, and new tomatoes at $10 to $12 per bushel .. ..The Anti-Binder Twine Trust agitation is still flourishing at the West, and bids fair to amount to something..... An excellent selection—that of Prof. G. E Morrow, Champaign, Ill., to represent the Agricultural Department at the Jubilee Show of the Royal Agricultural Society of England to be held during the summer. He is also commissioned to visit other European countries and to study the live stock interests of the Old World for the benefit of the New..... .....The charter of the "Royal" was granted March 26, 1840. The Queen has accepted the Presidency of the Society this year. ..... Secretary Rusk has made the following New Jersey veterinary appointments to take effect on May 1. Dr. W. B. Miller, of Camden, and Dr. W. H. Cooper, of Salem to be inspectors of the Bureau of Animal Industry, the former at $1,600 a year, and the latter at $1,400, with traveling expenses, of course..... The New York State fair will henceforth be permanently located just outside Syracuse on commodious grounds, formerly a part of Smiths, Powell and Lamb's Lakeside stock farm, which have been donated by the city at a cost of $30,000..... English farmers and farm journals are justly berating the Privy Council for permitting the free landing of cattle from the Netherlands, which have for years been scourged with frequent and disastrous outbreaks of contagious pleuro-pneumonia. Isn't it time for Americans once more to raise their voices against the unfair embargo imposed on cattle from this country?..... The Illinois House has passed a bill making it a finable offense to sell adulterated or impure lard without a label stating specifically its character and quality.....The American Langshan Club will soon issue a new catalogue. A. A. Halladay, Secretary, Bellows Falls, Vermont.....At the Paris Exhibition Messrs. Vilmorin Andrieux & Co., the noted French seed house, will make a very extensive exhibit of seeds and agricultural products. They also wish to announce that they will be pleased to have such of their many American customers as visit the exhibition to inspect their large trial grounds and seed farms... ..... Florida orange growers complain bitterly of lack of proper transportation for their product, by which they have lost thousands owing to the rotting of the fruit before shipment or during culpably slow transportation. The fruit-growers cannot stand such treatment from the transportaton companies, and are trying to devise some better way of marketing their fruit. Associations are formed all over the orange-growing section, and a convention will be called before long to work out a plan for marketing the fruit different from the present .....James T. Riddle of the Western Reserve Stock Farm of Ravenna, Ohio, has just paid $2,500 to F. D. Stout of Dubuque, Iowa, for the eight-day-old bay colt Cortez, by Nutwood, dam Georgiana by George Wilkes, second and third dams by Mambrino Patchen, fourth dam by Mambrino Chief.....A bill is before the New York legislature providing that cheese made from milk from which any part of the cream has been taken, shall be branded "Skim Cheese."..... .....There's a good deal of talk about the establishment of a Plug Tobacco Trust; but one or two large firms aren't in it; and it can't do much harm without them.....

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, April 27, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans, and Gulf.	Texas
Ordinary	8 3-16	8 7-16	.....
Strict Ordinary	8⅝	8¾	.....
Good Ordinary	9 9-16	9 13-16	.....
Strict Good Ordinary	10	10¼	.....
Low Middling	10⅛	10¾	.....
Strict Low Middling	10¾	11	.....
Middling	10 15-16	11 3-16	.....
Good Middling	11 7 16	11 7-16	.....
Strict Good Middling	11 11-16	11 15-16	.....
Middling Fair	12⅛	12⅜	.....
Fair	12¾	13	.....

STAINED.

Good Ordinary	8 1-16	Low Middling	9⅝
Strict Good Ord	8 11-16	Middling	10 7-16

POULTRY--Chickens, spring, per pair, 75c.@$1 25; LIVE FOWLS, near-by, per ℔, 12@12½c; fowls, Western, per ℔ 12@12½c; roosters, per ℔, 7@8c; turkeys, per ℔ 12½@14c; ducks, western, per pair, 75c@0.90; geese, western, per pair, $1 15@$1 50.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per ℔, 15@16c; do do, common to fair, 10@14c; do, iced, dry picked, choice, 11@12c. Fowls, western, do, choice, 11@13½c; do, nearby, do do 13@13½c; Chicks and Fowls, mixed, 10@12c; do do do, scalded, 8@9c. Squabs, white, per doz, $3 50@$3 75 do, dark, do, $2 50@$2 75. Chickens. Philadelphia, dry picked, 15@17c, do Jersey, do, choice, 14@15c; do nearby, do, good, 13@14c; do Western, do do, 11@12c; do do, iced, good to choice 11@12c. Ducks, nearby, choice, per lb, 14@15c; do do, good, 12@14; do Western, good, 12@14c. Geese, Western, good, 8@10c.

GAME.—Wild Ducks, Canvas back, per pair, $——@@$——; do, Red Head, do, $ 50@$1 00; Grouse, do, —@—c; Wild Ducks, Mallard, do, —@—c; Teal, do, —@—. Plover, per doz., $1 50@$1 75; Snipe, per doz. $1 50@$1 75.

HOPS.—State, new, best, 21@22c; do, prime, 19@21c; do, low grades, 13@16c; do do, 1887, 10@11 do do do California, common to prime, 13@19c; choice, 20@21c.

HAY AND STRAW.—Choice Timothy, 90@95c; do good do, 85@90c; do medium, 70@80c; shipping, 60@65c; do, Clover, mixed, 55@70c. Straw.—No. 1, rye, 75@80c; short do 55@65; oat, 40@50c.

BEANS.—Marrows, new, $1 80@$1 85; new mediums choice, $1 75@——; pea, $1 75@—; red kidney, $2 00@——; white kidneys, choice, 2 10@——; foreign, mediums, 1 35@1 55; California Lima, $2 75@$3 10; green peas, $1 15@——.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@——c, and farmers' grades at 6@6½c. HICKORY NUTS quoted at $0 50@$1 00 per bushel. Pecans, 6@8c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Bermuda, per bbl, $4 00@$8 00; Maine do. $1 50@$2 00; State do, $0 90@$1 50; Sweets do. $2 50@4 50; Cab., new, $1 50@$2 50; Peas, per crate, $1 50@$2 50; Kale, per bbl., $0 50@$0 75; Beets, per crate, $1 25@$1 75; Asparagus, per doz., $3 00@$7 50; Spinach, per bbl., $1 00@$1 75; Tomatoes, per crate, $2.-00@$4 00. ONIONS—Orange Co, red, per bbl., 40@75c; Conn. red, do, 75@$0 90; do, white, do. $1 00@$1 50; do, yellow. do, 60@75c; State, do do, 25@75c; Bermuda, do, per crate, $0 90@$1 00; Beans, string, do, $2 25@$4 00.

FRUITS.—FRESH.—Apples, Baldwin, per bbl. $1 25@$1 75; Common, $0 75@$1 00; Russet, $1 50@$2 00. Spy, $2 00@3 00. Strawberries, per qt, 10@30;. Cranberries—Jersey, fine, box, $1 00; do common, 50@75c. Oranges—Florida, best, box, $3 00@$4 50; do, good lots, $2 50@$3 50. Lemons, $2 25@$3 75.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5@6c; do new, common to prime, 4@5c; sliced, new, 3@4c; quarters, 3@3½c; chopped, 1¼@1½c; cores and skins, 1@—c. Cherries, new, 13½@15c. Raspberries, new, 15@17½c. Blackberries, 4@4¼c. Huckleberries, 10@—c. Peaches—Delaware, evaporated, peeled, 11@15c; do do, unpeeled, 5@6c; North Carolina sun-dried, peeled, 7@9c. plums, 6@6½c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 15 00@13 25, short clear, $14 00@16 00 Extra Prime mess, $12 50@$— prime do, $12@—— and family mess, $13 25@14 00 BEEF—India Mess in tierces, $13@13 50 Extra Mess, in barrels, $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $8 25@8 50; Family at $11—@$14. HAMS—$12 00@$13 00, Winter packing. CUT MEATS.—Quoted 10 lb average, Bellies, 7¼@7¾c; Pickled Hams, 10¼c; pickled Shoulders, 5½@5¾c; Smoked shoulders 6½@—c; do Hams, 10@11c. Dressed Hogs.—City, heavy to light, 6¾@6¾c. Pigs, 7c. LARD.—City steam, $6 70; May, $7 12; June, $7 16; July, $7 19, August, $7 21; September, $7 26; South America, 8c.

BOSTON.—PROVISIONS firm and steady New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes quiet; Early Rose, 28@35c per bush.; Burbanks and White Star, 23@30c; Hebron, choice, 32@35 Provisions were steady. BEEF.—City family, per bbl, $9 50@$10; do, packets, $9 50@10; smoked beef, 10@10½c; beef hams, $14 PORK.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@12c do, S. P., cured in tierces, 9½@10½c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6¼@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 9@9½c; butchers' loose, 7¼@8½.

CHICAGO.—MESS PORK.—$11 50@—— LARD.—$6 85@—— per 100 lbs; Short Rib sides (loose), $6 00; dry salted shoulders, boxed, $5 25; short clear sides, boxed, $6 25.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New, Creamery, State, pails, best, 27@28c, do do. tubs, new, 24@—; Pennsylvania, best, 25@26; Elgin, best, 27; Western, best 25@—; do prime, 23@25c; do good, 19@21c; do poor, 16@17c. State, Dairy, half-firkins, tubs, best, 24@—c; do do prime, 20@23c; do do fine, 19@21c; Welsh tubs, fine, 21@22c; do do good, 21@—; firkins, best, 19@21c; do prime, 21@22c; do fine,—@—c. Western Imitation Creamery, best, 20@22; do fine, 16@19; Western dairy, fine, 20@—; do fair, 15@17c; do poor, 12@13c; do factory, fresh, best, 19@20c, do prime, 16@17c; do good, 13@15; do poor, 8@11½c. Old butter from 2 to 4c. lower.

CHEESE.—State factory, fancy, 10½@11¼c; do do, fine, 10@10¼c; do do, prime, 9½@9¾; do do, fair to good 8¾@9¼c; Ohio, flat, prime, 9¾@10c; do good, 8½@9c; do, good, —@—; Skims, light, 7½@8c; do medium, 5@7; do full, 1@3c.

EGGS.—Near-by, fresh, 12½@12¾c; Canadian, 11@12c; Southern, 11¾@12c; Western, best, 11½@12c. Duck, 20@22c.

PHILADELPHIA.—BUTTER quiet. Pennsylvania creamery extra, at 27@—c; Western creamery, extra at 16½@17c. B. C. and N.Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were dull. Pennsylvania firsts 11½@12c; Western firsts, 12@——c; Cheese dull—steady; demand fair; New York full cream, at 9@9¼c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

BOSTON.—Butter firm; Western extra Creamery, 24@25c; Eastern extra Creamery, 20@23c. Cheese dull. Eggs firm; Eastern extras, 12@12½c; Michigan extras 12c; Western firsts at 12@12½c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally weak; Elgin creamery, 23@24c; choice Western, 21@22c. choice dairy, 20@23c; common to fair, 11@12c. Eggs weak at 10½c.

CHEESE—State factory, September made, 12c; do do do, October, fancy, 11@11¼c; do, fine, 11½@11¾c; do; fair and good, 10@10½c; Ohio, flat, prime, 11@11¼c; do, good, 9¾@10½c skims, light, 8¾@9¾c; do, medium, 6¾@8½c; do, full, 2@2¾c.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, April 27, 1889.

BEEVES.—Prices ranged from $3.50 to $4 70 for light common to choice heavy steers, but no extra cattle were shown. Fat oxen sold at $3 50@$4 20; bulls at $2 65@$3 40, and cows and heifers at $2 15@$3 25, with two or three head retailed at $3 50@$3 75.

MILCH COWS.—Receipts for the week thus far 136 head. A slow trade is reported at $25 to $45 per head.

CALVES.—Market depressed, and while strictly Prime and Choice heavy Veals sold up to about previous figures, all other grades of live Calves were ½c. to ½c. lower, and over 1,000 head were reported unsold.

Buttermilk Calves sold at 2½@3c. per lb; Mixed lots at 3½@3¾c; Veals at 4@5½c, and a few selected at 5¾@5¾c.

SHEEP AND LAMBS.—Demand fair, but at lower prices, both Sheep and Yearlings selling at a decline of 15c. to 25c. per 100 lb. The pens had not been cleared at a late hour. Some choice unshorn stock offered, but a good many rather thin clipped Sheep on sale. Spring Lambs were wanted at about previous quotations.

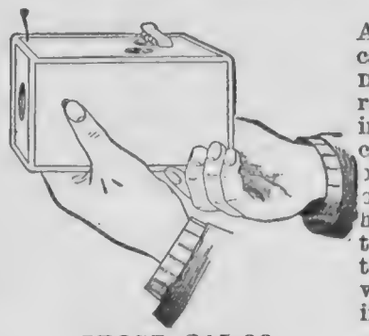
Sales—Clipped Ohio Sheep, 81 lb., at $4 50 per 100 lbs; State do, 91 lbs, at $4 62½; do do, 95 lbs. at $5 62½; Clipped Ohio Yearlings, 71¼ lbs, at $5 62½; Unshorn State do (Culls), 60 lbs, at $6; Clipped State Yearlings, 62 lb, at $5 50, do 56 lb, at $5 50; Unshorn do. 78 lb, at $6 75; Spring Lambs at $6 50 each.

HOGS.—Feeling a trifle easier, and Ordinary to Good Hogs may be quoted at $5@$5 30 per 100 lb. Sales—State Hogs, 212 lb, at $5 20 per 100 lb.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING APRIL 27, 1889.

J. B.—C. B. M.—F. P.—S. P. F., thank you.—F. H. M.—E. P.—R. S. D.—S. E. J.—S. J. H.—W. H. S.—H. A. T. W. H. K.—H. H. G.—T. A. S.—M. B. B.—H. T. F.—F. C. C.—F. L. R.—G. B. H.—W. A. D.—G. N. E, correct.—E. E. P., thank you.—J. L. S.—E. B., thank you.—R. S. D.—A. C.—C. S. H.—F. G.—C. S. C.

The Kodak.



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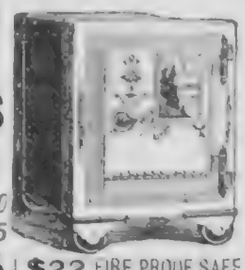

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Literary.

OUR FIRST FARMERS' INSTITUTE.

BY WM. ROSS.

CHAPTER III.

SEVERAL days after the above colloquy took place, Bill walked into Judge Forester's office.

"Brother Bark," said the Judge, "suppose you write up to Columbus about that institute. I haven't time; I have the campaign to look after, and have to be away from home a good deal, and I can't attend to it very well."

"Oh, pshaw!" replied Bill; "they don't know anything about me up there. I have no influence, and Bonham would think I was some visionary crank, or something, and like as not pay no attention to it. You are in an influential position, politically and socially, and your name would carry influence, and you had better write. Besides, I don't want to get mixed up in this thing. It will take time and trouble, and I didn't begin it and somebody else may finish it."

"Oh, well, you just write, and sign my name to it," said the Judge. "Here is paper and envelop, and you do the writing and put my name to it and it will be all right."

"All right," said Bill, "I'll do that much, any time, to accommodate you, brother Forester."

Bill sat down and wrote:

"Woodside, Excellent County, 11, 1, '88.
MR. L. N. BONHAM,

Dear Sir: We have never had a farmers' institute in this county. Can you furnish speakers for one the coming winter?

G. FORESTER."

A few days later the Judge handed Bill a letter, saying; "I see it will require an answer, and you just answer and sign my name, and it will be all right."

Bill opened the letter and read; "We can furnish you one and possibly two speakers. At what point in the county do you wish to hold the institute? Are you sure you can get a good audience? Yours, etc.,

L. N. BONHAM."

Bill replied as follows:

"Mr. L. N. BONHAM,
Dear Sir:

We want to hold the institute at Woodside. It is our county-seat, has good railroad facilities, and I think there are *no doubts* about getting up a good audience.

Yours Truly
G. FORESTER."

When Bill came to the audience part, he stopped to think. He had talked institute to perhaps a half-dozen of his fellow farmers and they said they would come, he intended to be there himself, he was sure his friend Mr. Edwards, would be there, and as Mr. Edwards had been talking institute for six weeks, or more, he might succeed in getting a dozen or so more interested sufficiently to come, and they would all be good auditors, and inasmuch as Mr. Bonham had not introduced the numerical feature, Bill thought any number of good auditors would make a good audience. So he finished the letter and underscored the words *no doubts*.

In a day or two, Mr. Edwards and Mr. Bark met in town.

"I see we've got the promise of a lecturer for the institute," said Edwards.

"Yes," replied Bark, "and maybe two. They want a good audience and you want to be working it up pretty lively. They generally begin holding institutes, I think, in December, and if your institute happens to get on the list for an early date, it may come before you get ready."

"I have been a talking to a good many" said Edwards, "an' they nearly all say they 'll come if they can, and they think it's a good thing. J. B. P. agreed to open the fruit subject, C.D. 'll talk on Cereal Crops, but I hain't found a man that 'll take horses yet. There 'll have to be some money raised, there 'll be some expense, and I don't want to have to take up a collection at the institute. How do you think we 'd better do this now?"

"I think," said Bark "you had bettter call a meeting, and get an organization of some kind, so you will have a central working force. Then each one will know what to do, and know what his responsibilities are."

"How'll we get notice to the people?" asked Edwards. "We hain't got no money to pay for advertising, and the papers 'll want pay for it; won't they?"

"No, not if you don't put your name to it," replied Bark. "The papers will publish it as a local, and it will cost nothing."

"When had we better set to have the meetin'?" asked Jack.

"As soon as possible," Bill replied. "You can get it in the papers this week, and you can have the meeting next Saturday, at 10 o'clock, so the people coming from a distance can get here, and have time to get home again."

"That would be a good idee," said Jack. "But I don't know much about this. Can you write the notices and git them into the papers? You can do this better than I can."

Bill consented and wrote a local, notifying the farmers to meet at the Court House the next Saturday at 10 o'clock to make preliminary arrangements for holding a farmers' institute during the coming winter, and gave a copy to each of the four papers. Bill became somewhat interested, was "warmed up" as they express it at meeting sometimes, as he saw he had been helping to get his friends into the scrape, by what he had done, and he went to the meeting to help them out. The large Common Pleas Court Room, where the institute since met, was warmed, "swept and garnished" for the occasion. The aforesaid local notice had apparently increased the interest in the institute at least 50 per cent. There were Jack and Bill and a new man named Finley Quiets. They could see farmers on the streets, and they had solicited them to come to the meeting, "but they all with one accord began to make excuses." Mr. Quiets was a good acquisition. He was a considerably younger man than either of the others, and had a very happy faculty of accomplishing his work in a very quiet way. In his reputation he stood "A No. 1," and the confidence of the people in him was unbounded. The three warmed themselves with county coal till long after the hour of meeting had passed. They now realized that they had a terrible quandary to discuss. There were, probably, 3,000 farmers that ought to be as much concerned about institutes as they, but 2,997 of them were nonchalant. They discussed for two hours the dilemma in a desultory way.

"I don't believe it's any use," said Jack. "The farmers are not agoin' to take an interest in this matter, and I'm afeared it will be a failure. I b'lieve we'd better give it up."

"I don't know," replied Mr. Quiets, smiling; "it looks a good deal discouraging, that's a fact, but I don't see why we can't have an institute as well as other people."

Bill Bark thought of the power of printers' ink which he knew he could use, and his old-time determination revived in him, and his indifference all vanished.

He replied to Mr. Quiets: "The way to have an institute is to just have it. If we leave and do nothing to-day, we'll probably never have an institute. When will it be any better?"

"But how can we have it if the people won't take no interest?" said Jack. "We'll have some expenses to pay and I'm afeard it won't succeed."

"I have no fears about the people." said Bark. "We have a considerable time yet before the institute will meet, probably, and we can get enough interested to come and make a respectable audience."

"What is your plan, Mr. Bark, to get this thing started?" asked Mr. Quiets.

"Let us form ourselves into a temporary organization," replied Bark; "then appoint some committees and go to work. We'll not let on but we had a good meeting in here, and we'll call another meeting to make a permanent organization, and hear reports of committees, etc."

To this, all assented, and there was a very quiet election held; no boodle used, no wire pulling, no scratching tickets. The candidates all got office. Each one was a committee of one to tell the people the glorious news that Woodside was going to have an institute. Bill Bark was chairman of the Committee on Programme; Jack Edwards and Finley Quiets and three others were appointed a Committee of Arrangements. The meeting then adjourned to meet in one week. Bill wrote as big a local notice as he thought the editors would bear, in accordance with the edict of the convention, and gave a copy to each of the papers, and hoped there would be a good attendance. He also wrote an item stating that the Institute Committee had promised one or two speakers for an institute at Woodside the coming winter. These notices appeared in all the papers the next week as items of local news.

(To be Continued.)

Miscellaneous Advertising.

MISFORTUNE rarely comes alone. If you have caught cold be careful to quickly relieve that pain, be it external or internal.

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is the best, safest, most reliable remedy for internal and external use. Two sizes. Price $1.

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FOR CLEANSING, PURIFYING, AND BEAUTIFYING the skin of children and infants and curing torturing, disfiguring, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair, from infancy to old age, the CUTICURA REMEDIES are infallible.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease, from pimples to scrofula.

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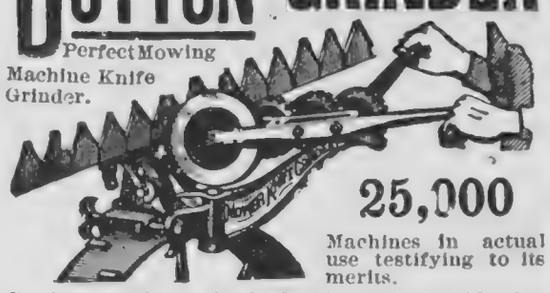

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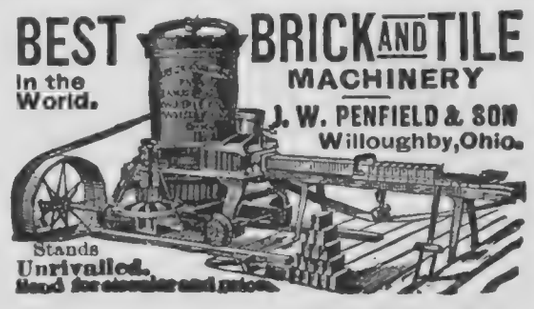

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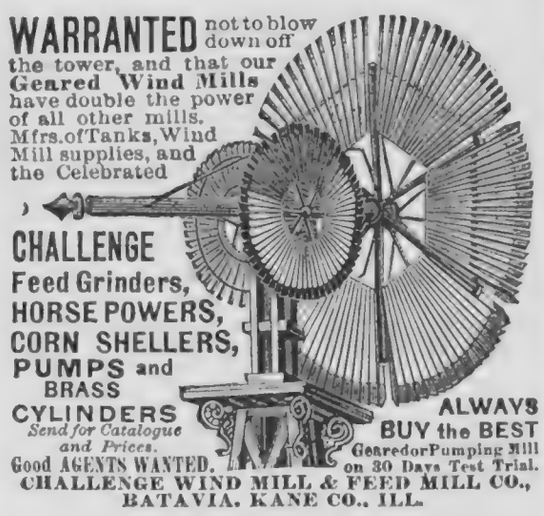

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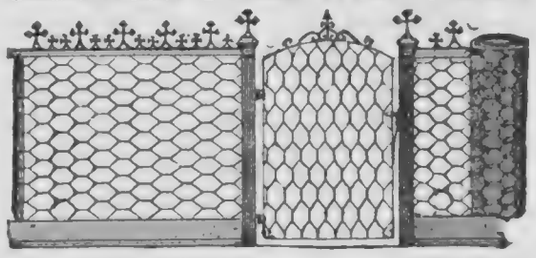

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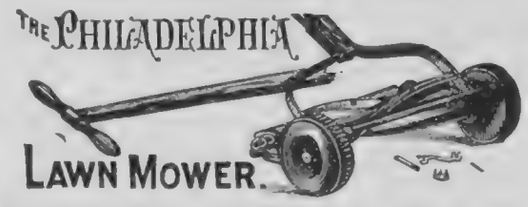

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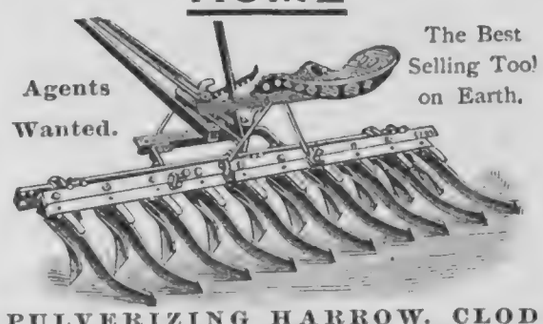

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DUANE H. NASH, Sole Manufacturer, Millington, New Jersey.
MENTION THIS PAPER.

WM. ROBERTS, M. D., Physician to the Manchester, Eng., Infirmary and Lunatic Hospital, Professor of Medicine in Owen's College, says: "The attention of the patient is awakened some months, or it may be years, after advanced kidney disease exists." If you think it unwise to take further chances use Warner's Safe Cure before the malady becomes any further advanced.

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to destroy injurious insects is recommended by all experienced Horticulturists and by this system only can perfect fruit be secured. For full directions and outfit for hand or horse power, address
FIELD FORCE PUMP CO. Lockport, N. Y.

CATALOGUES, ETC., RECEIVED.

WHY NOT PLANT A GROVE?—This is the title of Bulletin No. 45 sent out from the Michigan Experiment Station, Agricultural College Post Office, Michigan. Dr. W. J. Beal states that he has prepared this little pamphlet with a view to awakening interest in forestry and also to give elementary hints on planting and managing young forest trees. Dr. Beal gives his essay in the form of a dialogue, putting himself in the character of a traveler who in passing a substantial farm house, in one of the older-settled counties of Michigan, pauses to converse with the house owner. A short conversation brings out the fact that the farmer has noticed that since the woods were cut down, the snow has drifted excessively, leaving the wheat fields with many bare spots and with some deep drifts. He has also noticed that since he cut down a grove that formerly stood between his house and the prevailing winds, the storms of winter have increased in volume, that his barns are colder and that the stock suffer more and eat more food. These points are just what the traveler wanted to bring out and he proceeds to show how the needed grove can be put back in its place. He urges the farmer to procure small trees, giving the names of two firms that will send such trees by mail. Then he gives some very useful hints about cultivating such trees. He says the roots of such little trees will live in the open sun and dry air just about as long as black bass would live out of water. They must be well planted at once and kept well cultivated. The little dialogue contains some excellent hints that many farmers need.

AYRSHIRE CATTLE BREEDERS.—The report of the 14th annual meeting of the Ayrshire Breeders' Association is sent by Secretary C. M. Winslow. The pamphlet contains the routine work of the meeting as well as the papers that were read. It is evident that the friends of Ayrshire cattle are enthusiastic and hopeful. They claim, as of old, that their cow is the best dairy animal in the world for "ordinary" care and conditions, while she will show the effects of good treatment quicker than any other breed.

FIELD EXPERIMENTS WITH CORN.—Bulletin No.4 from the Illinois Experiment Station, Champaign, Ill., is a somewhat voluminous report of 140 pages. The experiments were quite complete and the results are given at length. We shall refer to this publication again.

SUGAR CANE.—Bulletin No. 20 of the Sugar Experiment Station at Kenner, La., sent by Director Wm. C. Stubbs. This pamphlet is of value to the sugar grower directly, and indirectly to the general public who are all deeply interested in procuring cheaper sugar. The sugar bill of this country is as much a national disgrace as is the butter bill of England. We ought to make our sugar here.

ARBOR DAY PLANTING IN EASTERN STATES.—This is the title of a circular sent out by B. E. Fernow, Chief of the Forestry Division of the United States Department of Agriculture. It is designed to serve as a brief and simple list of instructions for school officials who desire to celebrate Arbor Day in a proper manner. Among the topics considered are the following: Time of planting, treatment before transplanting, method in planting a tree, watering, after care and choice of kinds. It seems to the R. N.-Y. that this is a very valuable little publication. A few carping critics try to make sport of this bulletin, because, they say, it gives only such information as every person able to plant a tree ought to know without being told. Well! well! ! What a world this would be if we all knew as much as some of these wise men! The R. N.-Y. approves of Arbor Day, not only because it believes the trees are needed, but because the beautiful ceremonies connected with the celebration are sure to bring to our boys and girls the best of thoughts and influences. And in connection with these remarks we want to publish the following thoughts which were prepared by one of our New York subscribers:

ARBOR DAY.

When our forefathers planted their homes in the primeval forest, the first work was to clear land on which to erect the rude cabin, and to raise grain and vegetables for sustenance. As there were no mills in the vicinity, or a market for timber, the most expedient way of disposing of the surplus, after logs for building and fuel had been reserved, was by fire. The ruthless destruction of a work which it took centuries to perfect has been inherited by their children, to whom it is not a necessity or an advantage, but a positive detriment. Granted that coal and gas are better fuel; that stone and brick are much more durable, while even paper now holds a place among building materials; yet the general effect that a total destruction of forests has upon the country has been for years considered a serious subject. And well may the Empire State be appalled at the devastation to which she is doomed should the Adirondack forests be razed. He who is surrounded by brick walls will tell you that could he only transport to his city home the magnificent grove of oaks, whose grateful shade he sought when a boy, it would give him more comfort and happiness than wealth can purchase.

Possibly Nebraska, that State of treeless plains, builded better than she knew when she established Arbor Day. Her notes of joy and enthusiasm were borne back to the Alleghenies, and the echoes reverberating aroused sister States to a similar observance: and now every year, thousands of animated children in the East and West, are each doing their little, which is, in the aggregate, a great deal, to redeem the errors of the past. There are so many beautiful native trees that great work can be done with little or no expense, save the trouble, (or pleasure) of transplanting.

Perhaps, all things considered, no tree is more desirable than the maple. It is of comparatively rapid growth, symmetrical, furnishes dense shade and is seldom molested by insects; while its beautiful tints in autumn more than compensate for the death of the flowers.

The Silver maple is easily grown, but is more objectionable on cultivated ground, as breaking the roots causes innumerable sprouts to spring up. Beech, dog-wood, sycamore, and tulip are easily procured in most localities. Some willows are graceful and well adapted to moist ground. The boy who has an eye for business may prefer one of the nut-bearing varieties, Even the little five-year old, "too little" to plant a tree, may drop a nut into the ground, and—what possibilities, from it! The chestnut is lovely when in bloom, its long catkins swaying in the breeze, while the prospect of an abundance of nuts in winter is no small incentive to a little labor. Then there are the evergreens, which, like true friends, remain always bright and pleasant, unchanged by storm and tempest. The American Arbor-vitæ is excellent for hedges, and the Hemlock Spruce is unsurpassed. The latter is also handsome when grown singly, its graceful drapery forming a pleasing contrast to the stiff, precise garb of its Norway cousin.

Equally desirable is the larch or tamarack, while the White pine and many more of our native trees are worthy of cultivation, and are sold by florists at a good, round price.

It is to be hoped that each *big* boy and girl as well as each little one, will, on the coming Arbor Day, choose from the abundance of material, and lay a corner-stone on which will ultimately rise a living monument, more beautiful and graceful than the sculpture of ancient Greece, more wonderful than the pyramids of Egypt.

RUTH RAYMOND.

FODDER CORN AND FODDER CANE.—This is the title of Bulletin No. 2, of the Maryland Experiment Station. Major Alvord, the Director of the Station, states in this bulletin:

"The condition of the worn lands of Maryland and adjacent States has led to a general recognition of the value of keeping more livestock on the farm, particularly to increase the supplies of home-made manures. If the animals can be so managed as to pay all costs and leave the manure they make as the profit, it may be considered good farming."

Then he goes on to say that one great problem before Maryland farmers is how to produce an abundant supply of forage on an economical basis. Assuming that Indian corn or sorghum will give a greater weight of fodder per acre than will any other plant, he gives the details of some experiments conducted with a view to determining the best methods of planting and cultivating these plants, with a view to making the best possible fodder from them. Those who are interested in the details of the experiments must send and get the bulletin. (It is mailed from Agricultural College Post Office, Maryland.) It is enough for us to record that Major Alvord concludes that corn or cane gives the greatest quantity of fodder, green or dry, when planted in drills far enough apart to permit easy and sufficient cultivation. Thick, broadcast seeding of corn gave a smaller yield of poorer quality, the product of an acre of sowed corn having a food value about one-half as great as that from the same acre in drills. To get the most food value on an acre of corn, it should not be cut until the plants begin to show signs of drying and the kernels begin to glaze. These are points that the R. N.-Y. has made clear a dozen times before, but as thousands of farmers do not seem to believe them, it is well to keep them before the public.

THE USES OF ASSOCIATION BY AND AMONG AGRICULTURISTS.—This is an address delivered by Mr. J. M. Hubbard of Middletown, Conn., before the Massachusetts Board of Agriculture. We regard this as an admirable essay. We wish it might be widely read and studied. Farmers need to be organized: without organization they lose power—social, business, intellectual, political power. It appears to be the object of this essay to point out this loss and to show how the loss might be changed to gain. The R. N.-Y. would like to have every one of its readers think over the ideas presented in this pamphlet. The following extracts are to be commended:

"My thought of the future of agriculture never makes the farmer's life one of ease and luxury. It never dispenses with the homely virtues of industry and economy. But it does bring to the farmer just recognition and compensation. I want the land upon which he works to recognize him as its master, and yield to him from its store-house ample returns for his toil. The land will recognize its master when he comes. When farmers fairly conquer the land they may rule it, but never until then. I want this compensation and recognition to come also from the community in which the farmer lives; and I believe this, too, will come when fairly conquered. When, therefore, I assume that the farmer of to-day is without the compensation and recognition he ought to receive, I do so for the purpose of stirring him to action, and not in the way of weak complaint against any other class. Agriculture must fight its own battles, and conquer and hold what is of right its own. And it must use in this strife the agencies which are calculated to win, It must use the power of association. It must not be deterred by the inevitable risk, or by the necessary cost, or by trivial criticism of details of organization. It must go forward, even at the cost of some mistakes, some losses, some defeats. It is a campaign, and perhaps a long one, for which the forces of agriculture have enlisted; but who doubts that it will issue in victory? Not he who is in his place and doing his work."

Law.

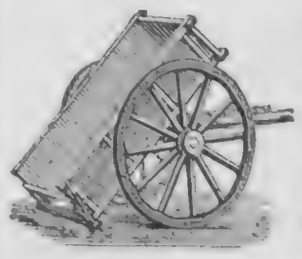
"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

FISH IN A NON-NAVIGABLE STREAM.

J. B. McC., Greene County, Pa.—I live on a non-navigable creek. Parties on the creek own to the middle of it. Is there any law to prevent me from setting nets in the stream for the purpose of catching fish, if the party on the opposite side of it is willing that I should build a fish dam to prevent the fish from passing up the stream. The creek has never been stocked with fish. The fish are generally taken with nets. They come principally from the rivers to which they return in autumn.

ANS.—This statement of the case is not at all clear. With regard to streams not navigable, that run by the side of a man's farm, the owner has a title to the center of the stream, or rather of the current. If the same person be owner of the land on both sides, he owns the whole stream as far as his land extends on both sides of it; but no proprietor of land on a water-course, either above or below another, has a right unreasonably to divert it from flowing in its usual course into the latter's premises, or to obstruct it in passing from them, or to corrupt or destroy it, or to render it less valuable in any way. While therefore our inquirer has a right to set fish nets in his own half of the stream at any time, and in any part of it with the consent of the owner of the land on the opposite side of it, it is doubtful whether he has a right to build a dam or by any other artificial means absolutely to prevent fish from ascending the stream; for if it naturally affords good fishing higher up, by artificially preventing the fish from ascending it, it is obvious that it would be rendered less valuable to those owning land bordering on it higher up its course. It should be borne in mind that the game laws of Pennsylvania allow the killing of the following fish only within the given dates: Salmon and speckled trout from April 1, to August 1; lake trout, from January 1, to October 1; black, green, yellow, willow, rock, Lake Erie, and grass bass, pike, pickerel, and wall-eye pike or Susquehanna salmon, from June 1, to January 1.

Miscellaneous Advertising.



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AMES PLOW CO.,
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Send for Circulars and Catalogue.

PEERLESS DYES Are the BEST. SOLD BY DRUGGISTS.

BRUTE HUMANITY.

ONCE in the city of Vienna, there was a dread of hydrophobia, and orders were given to massacre all the dogs which were found unclaimed or uncollared in the city or suburbs. Men were employed for this purpose, and they generally carried a short stick, which they flung at the poor prescribed animal with such certain aim as either to kill, or maim it mortally, at one blow.

It happened one day that, close to the edge of the river, near the Ferdinand's-Brucke, one of these men flung his stick at a wretched dog, but with such bad aim that it fell into the river. The poor animal, following his instinct, or his teaching, immediately plunged in, redeemed the stick, and laid it at the feet of its owner, who, snatching it up, dashed out the creature's brains.

Which was the brute?

We may surmise what the Athenians would have done to such a man from the fact that they banished the Judge of the Areopagus, because he flung away the bird which sought shelter in his bosom.

There are men in whom is no spark of gratitude or generosity. There are others who appreciate benefits received and are happy in making grateful acknowledgement.

Rev. J. W. Asheman, one of the most eloquent divines of Detroit, Mich., writes March 3d, 1888: "In 1884 I visited Chatham, Ont., to lecture and preach. I was in agonizing pain (the result of kidney disorders), and unable to dine with my host. I explained to Judge Woods what was the matter. He asked me if I was too prejudiced by my medical education to try Warner's Safe Cure, adding: 'Although I have never tried it, I can take you to a gentleman whom it has helped wonderfully.'

"I used 25 bottles of Warner's Safe Cure and was in better health than for twenty-five years. I have everything to lose and nothing to gain by making this statement, save the approval of a good conscience."

There are tens of thousands of people in this country who have gained the approval of a good conscience in a like manner, and are not too bigoted to do good.

Farmers,
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Doctors,
Mechanics,
Literati,
Men,
Women,
and
Children,

Of all Trades, Professions and Ages Read

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Humorous.

The RURAL NEW-YORKER *is prepared to offer very liberal terms to good, responsible,* PERMANENT *agents. Correspondence solicited.*

"I BELIEVE in free raw materials," said the cannibal who had just captured a missionary and was in too much of a hurry to roast him. —*New York Press.*

"Is the baby strong?" "Well, rather. You know what a tremendous voice he has?" "Yes." "Well, he lifts that five or six times an hour-"—*Harper's Bazar.*

A HEN always begins to wipe her feet when she goes into a newly made flower bed. At least she seems by her motions to be wiping her feet.—*Somerville Journal.*

MISS KATE: "O, mamma! don't take those plants, they look so poverty-stricken." Mrs. Suddenly Rich: "Poverty-stricken." Miss Kate: "Yes, they haven't a scent."—*Chicago Tribune.*

THE tenor in a fashionable church choir found to his horror that his voice all at once became unpleasantly thick. He strained it, but without any good effect.—*New York Tribune.*

IT is said that Tennyson sometimes spends hours on a single line. We can rattle off a single line in the twinkling of an eye; it is the second line that exhausts our poetic genius.—*Weekly Ithacan.*

"DID you ever go to the circus, Jim?" asked one small urchin of another. "Not a real circus," said Jim, reflectively, "but I've seen my mother chase chickens into the coop." *Nebraska Farmer.*

SMOKELESS gunpowder is the latest addition to the science of war. Now let somebody invent a smokeless cigarette, and peace will have her victories no less renowned than war.—*Boston Transcript.*

"DO YOU buy your music by the roll?" said a gentleman to the deacon's daughter. "No, sir," she sweetly replied; "I always wait until Sunday, when I can get it by the choir."—*New York Journal.*

SCENE: GRAMMAR CLASS.

TEACHER: "What is the future of 'He drinks?'"

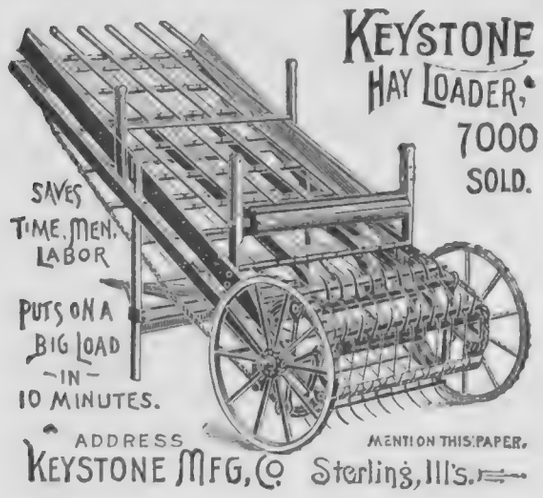
JOHNNY (after considerable thought): "He is drunk."

Miscellaneous Advertising.

ISLAND HOME STOCK FARM.

Savage & Farnum, Importers and Breeders of Percheron and French Coach Horses, Island Home Stock Farm, Grosse Isle, Wayne County, Mich. We offer a very large stud of horses to select from, we guarantee our stock, make prices reasonable, and sell on easy terms. Visitors always welcome. Large catalogue free. Address **Savage & Farnum,** DETROIT, MICH.

Percheron Horses. *French Coach Horses.*



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SAVES TIME, MEN, LABOR

PUTS ON A BIG LOAD —IN— 10 MINUTES.

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HOLSTEIN-FRIESIAN CATTLE

Special inducement for the next sixty days!

On account of being obliged to vacate 500 acres, April 1, we must reduce our stock of Horses and Cattle.

The Grandest Lot of

BUTTER BRED BULLS

Ever Offered?

Cows and Heifers equally choice. Superb CLYDESDALE Stallions, Mares and Fillies. PERCHERON Stallions of superior breeding. TROTTING-BRED Stallions of choicest families. FRENCH COACH Stallions and Fillies of unequaled style and action.

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For Weeding and Cultivating all hoed crops. For putting in Grain and Grass and Hungarian or Millet it has no equal. Every farmer should inquire into its merits. Ex-Gov. ROBIE, Master Me. State Grange, writes: "It should be owned by every farmer in the country." Send postal card for circulars and testimonials. All parties in Middle States should address BROWN MFG. CO., 40 DEY ST., NEW YORK. All others UNIVERSAL WEEDER CO., North Weare, Hillsboro Co. N. H.

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ESTABLISHED 1854.

With PIVOTED PARALLEL BEAMS

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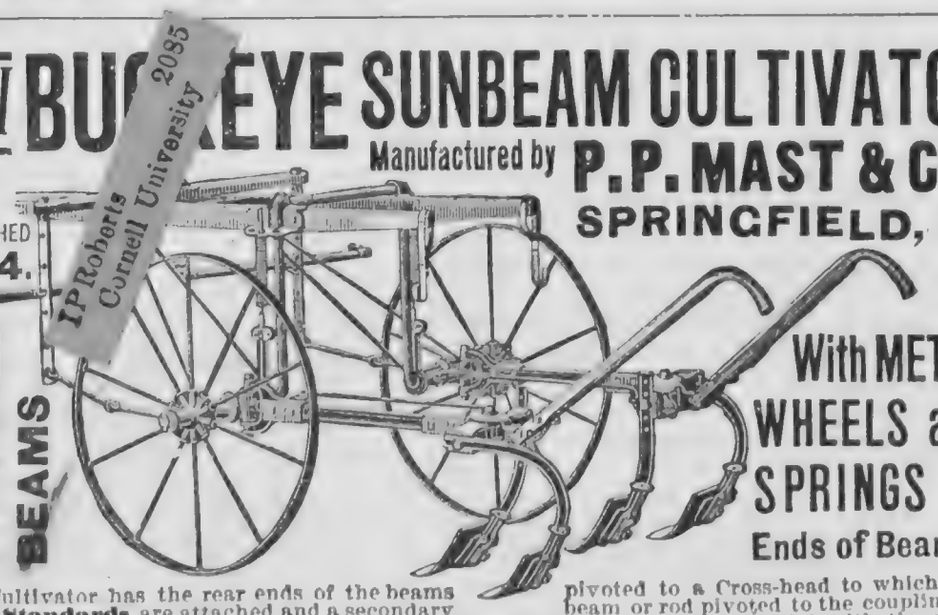

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BURNED! Whenever burned or blistered, apply PHENOL SODIQUE promptly to the spot. It relieves pain, heals and cures so quickly, that not even a scar is left to point out the burned place.

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Has Patented Self-Oiling Pitman, Insuring Safety and Perfect Working.

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No other Machine has these improvements. Don't fail to see it. Send for 1889 Circulars. We refer to **Thirty-five Thousand** farmers in New England who use the **Worcester Buckeye.**

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Warner's Log Cabin LIVER PILLS,

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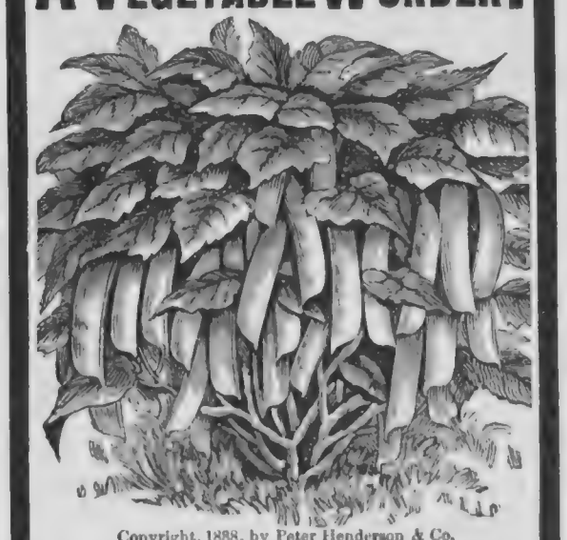

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Can and Should be Grown in every Garden on the Continent.

Of all the *Novelties* in *Garden Products* ever sent out, there is nothing so entirely distinct and valuable as this *New Vegetable.* The old Lima Bean can only be grown on poles, while the *NEW BUSH LIMA* grows and is cultivated exactly like the common bush or snap bean (growing only 18 inches high), and from the time of its bearing in July, produces in abundance delicious Lima Beans throughout the entire season until frost. It has, besides, an additional value, in that it is *two weeks earlier* than any other Lima Bean, being fit for the table in from forty to fifty days from time of planting.

Price (by mail) 25 cents per packet, 5 packets for $1.00, 12 packets for $2.00 (12 packets sufficient for an ordinary-sized family for the season). Directions for growing on each packet. Remittances can be sent either by Post Office Order, Postal Note or Stamps.

$100.00 in Cash Prizes for single plants bearing greatest number of pods. For conditions see Manual offered below.

Every purchaser of *Henderson's Bush Lima Bean* will be sent, *without charge,* our MANUAL OF EVERYTHING FOR THE GARDEN, a book of 140 pages, size, 9 x 11, containing 3 colored plates (the price of which is 25 cents), *on the distinct understanding,* however, that those ordering will say in what paper they saw this advertisement.

PETER HENDERSON & CO

35 & 37 Cortlandt Street, New York.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

PHOTO ENG. CO. N.Y.

VOL. XLVIII. NO. 2050 NEW YORK, MAY 11, 1889. PRICE FIVE CENTS, $2.00 PER YEAR.

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Horseman.

HEAD OF A WELL-BRED HORSE

SOME two years ago the R. N. Y. gave pictures of two widely different types of cattle. One picture represented a Short-horn heifer—probably one of the most beautiful animals in the country. This was designed to show what skill and care, coupled with scientific breeding, might accomplish. The other picture gave the head of a poor, old scrub cow, bruised, battered and neglected.

It was a very powerful object-lesson, showing that kindness and care in the handling of cattle pay, as the fact was never shown before. Now the R. N.-Y. repeats its former lesson, only taking two types of horses this time. The picture shown at Fig. 111 is drawn from life. Our artist tried to find the most intelligent-looking animal possible. He has chosen a coach horse that does daily service on Fifth Avenue in this city. This horse is half Clydesdale and half French Coach and is magnificently formed in every respect. His face is almost human in its intelligence. He may well stand as the representative of intelligent breeding and faithful care. Next week we shall show another picture—that of a poor, broken-down wretch of a horse, driven by inhuman treatment and carelessness to a ghost of his former self. It will make a powerful contrast; it will teach a mighty lesson, and may be the means of ending some of the cruel neglect that shows itself far too frequently on our streets.

It is one of the keenest enjoyments of the appreciative man to own and care for an intelligent and sensitive horse. It is one of the most aggravating and discouraging phases of farm life to be obliged to work with a "lunk-head," a poor, dispirited, wretched beast that has been cowed and maltreated until he has lost all respect for himself. For horses can lose their relf-respect, though good usage and kindness will bring some of it back again. A good horse or a vicious horse will reflect, in its temper and behavior, many of the characteristics of its owner.

HEAD OF A WELL-BRED HORSE. Fig. 111

Rural Topics.

A FARMER'S FARM NOTES.

OLD-TIME VETERINARY DELUSIONS.—It is surprising that so many farmers who ought to know better, stick to the old notion that when the end of a cow's tail is soft it ought to be cut open. Some time ago a farmer came to see my stock, and on going behind the cows took hold of their tails, and said they were soft and ought to be slit open. I told him I guessed they would be all right when they were older. He came to a Guernsey bull which is called a fine animal, and taking hold of his tail, said: "That is a handsome bull; but if his tail had been slit open a year ago, he would have been twice as large." Said I: "How old do you think he is?" He said: "A year and a half." I could hardly keep from laughing, and said: "He is just nine months old." You never saw a cheaper-looking man than he was, and he had nothing more to say about soft tails. A few days after this, I was in a neighbor's barn. He and his son were there and I told them what this man had said. He said the man was right and that their tails ought to be cut, and the son went along to their cows, and taking up the tail of one of them found it soft. He said the blood ought to be let out, and took his knife and slit it open. Since then I was in the same barn and the man told me they had a cow that had garget, and was giving bloody milk. They had cut a hole in her breast and put a piece of garget root under the skin, and the cow's breast was badly swollen.

FASTENINGS FOR COWS IN THE STABLE.—A few years ago I gave up the pole and chain for tying cows, and put them in stanchions, and like them very much. I know the cows do not have a chance to move their heads very much, but if they are bedded and kept as clean as they should be, I think they are as comfortable as when tied by chain and not receiving any better care than most of the farmers give their cows. I have an old-style barn, but have fixed it up so that the manure never freezes, except perhaps when it is very windy and the mercury goes down to 15 or 20 degrees below zero. Then the manure which is hoed back from the cows about 8:30 in the evening will be slightly crusted when I look in to see that all is right in the morning. The cows and bull are carded every day, summer and winter, from head to heels, and kept dry and clean. They are fed three times, and watered twice a day, and on pleasant days they stay in the yard an hour or so.

CHURNING BUTTER.—I see by the RURAL that some persons have trouble in churning, and have hard work to get any butter. My cows are Guernsey and Jersey and are fed good hay and three quarts of meal and two quarts of bran daily, and have salt nearly very day. The milk is set in shallow pans where the temperature is from 55 to 65 degrees. I skim when the milk has turned sour. The cream is kept down cellar in a room made for that purpose until just before churning, and then warmed to 64 degrees. I do not churn longer than five to eight minutes. I use a Blanchard churn and Reid butter-worker. I never use any butter color, and the butter sells for a good price.

HEN MANURE AN OVERRATED FERTILIZER.—There seems to be a great difference in opinion in regard to the value of hen manure as a fertilizer. Some say that a barrel of it is as good as a barrel of any fertilizer, and others say a barrel is enough to top-dress an acre of grass land. I have tried it on different crops, and have received very little benefit from it. Last season I planted three rows of fodder corn, using hen manure mixed with its bulk of loam, and three rows with twice as much manure, and the hog manure gave a good deal better results than the hen manure.

R. N. H.

Horticultural.

Night-Soil for Vegetables

IS IT SAFE TO USE?

WHY SHOULD IT PRODUCE RANK, COARSE VEGETABLES?

AN INTERESTING TOPIC.

MANY market gardeners report that their customers object to fruits and vegetables raised from night-soil or other rank manures. Among the many curious questions sent to us are the following:

1. *Would a plant manured with night-soil show an analysis different from that of another manured with a cleaner manure like a chemical fertilizer?*

2. *Why should night-soil, urine, or similar manures produce a coarser, less palatable vegetable than the fertilizer?*

3. *Are fruits and vegetables produced from manures containing disease germs or disgusting substances as healthy or as fit for food as those raised from chemicals?*

The frequency with which these questions are asked, has lead the R. N.-Y. to investigate the matter. The questions were sent to the parties whose answers will follow.

FROM PROF. S. W. JOHNSON.

1. Other things being equal no!

2. Because they are injudiciously applied. If used in excessive quantity they produce rank, coarse growth. If applied as a top-dressing to spinach or lettuce, they make these nasty externally and perhaps internally until rain-water and time destroy their ill-flavor. The vilest manures have been constantly employed in all countries, time out of mind, to produce the sweetest and cleanest of vegetables; but after the manurings they must have time to grow and develop their own flavor. Even varnish doesn't improve furniture until it gets dry!

3. Disgusting flavors may perhaps enter plants and for a short time be perceptible in them; but they evidently cannot remain long without change and disappearance. Disease germs certainly enter plants; for example, those of the potato rot and onion and rye smut, and these render the plants unfit for food; but whether in any case the germs of animal diseases, some of which (cattle plague) persist for a long time in the soil, can enter plants and through them infect animals, is so far as I am aware, an unsettled question.

FROM PROF. F. H. STORER.

The notion that vegetables manured with night-soil may taste badly has often been debated in all the civilized lands. No doubt there is, on this account, a certain amount of risk in using night-soil, unless care and good judgment are exercised to prevent the mechanical contact of the manure with the vegetables at inappropriate periods of growth. But there is a vast fund of experience to prove that no unpleasantness need attach to plants which have been skillfully grown with the help of human excrements. In so far as mere unpleasant flavor is concerned, that can doubtless be avoided by using the night-soil in not too large a quantity, and at early periods of growth. If need were, the trouble could be obviated by working the manure into the soil pretty thoroughly. But as regards the germs of disease—which is a far more important question than the other—it must be said that the subject has not as yet been adequately studied. Nobody knows precisely how long the several kinds of disease germs might survive in moderately manured garden soils, though it is probable enough that most of them would soon perish there, either from lack of food, or want of comfort, or by being devoured by organisms natural to the soil. In any event, the risk to health from this source would probably be but small; for, even if it be admitted that some kinds of disease germs could continue to live for months in the garden soil, the chances of their becoming attached to the vegetables growing in this soil could hardly be very great, provided the night-soil were applied to the land properly; that is to say, if the times when it was applied were suitable and the methods of distributing it were good. It is to be remembered, withal, that most vegetables are cooked before they are eaten and that the process of cooking would destroy the "germs."

It is not at all probable that analysis could detect any difference between plants manured with night-soil and others manured (as heavily) with chemical fertilizers similar to those which night-soil contains; though, as a matter of course, any plant which has been "forced" by means of large supplies of rich manure will "show its feeding." It is notorious that night-soil and urine, when applied copiously, do cause plants to grow rank and coarse—like the smart-weed, at the edge of a barn yard pool—because they contain certain soluble nitrogenous substances which constitute a highly acceptable food for plants; and it is as true of plants as it is of animals that care must always be taken, in feeding them, not to allow free access to large stores of rich food. Too much of a good thing is an evil to be avoided. In early times, the rankness of fresh barn-yard manure greatly troubled the wheat growers of Europe, and it is one of the merits of the artificial fertilizers that by applying them in moderate doses to certain crops in a rotation the full benefit of farm-yard manure may be gained and the rank growth of grain be avoided. Hence, too, the frequent use of artificials in conjunction with not very heavy dressings of dung. Barring the question of disease germs, which appears to be a purely hypothetical one, experience and scientific observation alike teach that the supposed objections to night-soil may be wholly avoided by using this manure with circumspection and knowledge.

FROM DR. PETER COLLIER.

I am aware that objections are made to vegetables grown on soil which has been fertilized with night-soil and other rank manures, I believe that, so far as this arises from any thing but mere sentiment, it may be explained by the rank growth generally secured under such conditions with perhaps less firm texture and deficient flavor, so that it is due rather to the lack of desirable qualities than to the presence of those undesirable. But there is abundant evidence to prove that, when properly used, nothing is better as a fertilizer. I do not believe that chemical analysis would indicate any difference between vegetables grown by the use of night-soil and those grown by the use of other fertilizers; but there might be a difference which chemical analysis could not detect, although I have no idea that such a difference would be found

A "disease germ" is a very small thing, but so large, nevertheless, that a camel would as easily go through the eye of a needle as could a "disease germ" enter into the rootlets of a plant.

"Disgusting substances" could, I have little doubt, find their way into a plant by means of the roots, but if they should do so, I have still less doubt that they would be oxidized or otherwise destroyed within the plant, which, as we know, has the ability by some process concerning which little or nothing is known, to elaborate within itself in certain plants the most grateful odors, as the rose, and in others the most intolerable stenches, as the Stink-horn.

FROM HENRY STEWART.

No doubt the fertilizers used have a considerable effect upon the character of the plants grown. This effect is well known in the case of sugar beets, upon which potash has an injurious result, making the reduction of the sugar impossible from the so-called intractable potash salts contained in the juice. In the case of tobacco also, a bad flavor is produced by coarse stable manure, and a bad burning quality by the use of fertilizers containing lime, magnesia, or chlorine. Tobacco fertilized with chloride of potassium takes up from the soil 40 times as much chlorine as when sulphate of potassium is used, so that it is an established fact that various manures may have an effect upon the constitution of plants, that would be readily shown by chemical analysis.

Now as to night-soil: I don't know of any exact chemical investigations which have been made for the purpose of testing the results of this manure upon the composition of plants; but I do know something practically of the apparent results upon many crops grown by its use from experience dating back 40 years.

My first knowledge was in regard to the growth of onions in the large market gardens adjacent to London and Paris when I lived in these cities as a student two score years ago. The drainage of these cities was very imperfect at that time, and hundreds of loads of night-soil were removed by the vegetable farmers every night. This night removal gave to this waste product its common name of night-soil. It was a specific manure for the onion crop which was grown year after year upon the same land, and fields of 40 acres or more were common a few miles out of the cities. Certainly the onions were of the most excellent quality—mild, sweet and succulent. The famous Italian onions are mostly grown in the same way, but with irrigation on account of the drier climate. Since then I have had personal experience among the melon growers of New Jersey near to New York City, all of whom make an annual gathering of the night-soil from the usual cesspools as the basis for a compost for his special crop. Every melon grower now knows of the Hackensack musk-melon. And this melon deserves all the praise it has gained for its tenderness, sweetness, succulence and peculiar, delicate aroma. There is no doubt that this manure is the secret of its good quality. I have grown peas, cabbages, carrots, tomatoes and radishes with this manure for my own use and have long ago got over the sentimental repugnance to it as a fertilizer. This manure does not produce a coarse, rank, unpalatable vegetable. On the contrary, its product is tender, succulent and sweet, and radishes and lettuce grown with it are of the very best quality, as I have reason to know from last year's experience.

The last question opens up an interesting chemical consideration. What is meant by disgusting? Disgust is a matter of sentiment. A farmers's manure heap is disgusting to those persons who are not used to its odor. I have been more disgusted with the rank odor of patchouli, used to excess as a perfume by ladies in social gatherings, than I have ever been with the smell of a barn or barn-yard. A very popular perfume is made from cows' dung and the manure of a well fed healthy cow is by no means disgusting as to its odor, until it decomposes. A rotten egg will easily disgust a refined person who will very readily drink, without any objection, a mineral water which has the very same sulphuretted hydrogen gas escaping from it.

"Disease" germs need special conditions for their growth. The poison of a rattlesnake is injurious if taken into a person's stomach. "Gamy" venison, that is, the meat kept until decomposition has begun, which is disgusting to some and pleasing to others, is by no means unwholesome to the stomach; and if a person inserted some of the fluid of it into a wound it would almost certainly kill him. And so there is no danger at all from the use of putrescent manures to the healthfulness of plants used for food that may be grown from them. China, with its enormous population, subsists mostly upon vegetables grown with night-soil. The most thickly populated country in the world, Belgium, is mainly supported by the use of night-soil for the abundant crops grown there, and it is quite common to see the gardeners and farmers collecting from house to house the refuse of the families carefully saved for sale, in suitable vessels, just as in some American villages the housewives save the ashes and bones for sale, and after dusk or at day-break an odoriferous traffic is carried on in this way in most of the Belgian towns and villages. With all these facts, there should certainly be no valid objection to the disposal of human wastes where they will do the most good, just as we dispose of the wastes of other, and less well-fed animals.

SUNBEAM WALKING CULTIVATOR. See page 323. Fig. 112.

Miscellaneous.

NEW LEGISLATION NEEDED CONCERNING MONOPOLIES.

No. 6.

PRES. W. I. CHAMBERLAIN.

CONTRACT AND ASSOCIATION.—Out of the right of life by labor grow as corollaries the rights of contract and association, only however for proper and lawful ends. They give greatly increased power either for good or evil. When used for evil ends their right name is conspiracy. These rights need sharp limitation by law, since they lead quite naturally toward monopoly. Indeed out of each of them have already grown great abuses. For example, out of contracts for grain, provisions and stocks for actual delivery, have grown the frightful evils of stock and grain gambling on "futures," greatly increased in possible volume by the system of "margins," while the manipulating of "corners" is not only like using loaded dice or concealed cards against one's fellow gamblers, but works great damage to the public at large. That "Old Hutch" of Chicago should in a month take over a million dollars out of the pockets or deposits of his fellow-gamblers might not perhaps alarm us so much did not transactions like his great September wheat "corner" disturb commerce and injure the whole country. Similar doings in 1879 sent the price of wheat for months above the European export demand, made England seek and develop wheat elsewhere, and nearly ruined our export wheat demand for years.

Similar gambling in stocks has wrecked many a railway financially. Such transactions injure the many to the vast enrichment of the unscrupulous few.

POOLS AND TRUSTS.—Associations, too, called "pools" and "trusts" have in recent years and months been found to diminish the production and increase the price of all the main essentials of life; the manufactured products that give us food, clothing, homes, furniture, utensils, fuel and light. Their nature and methods are fairly well understood. They form a gigantic corporation "that gobbles up" existing companies, controls the world's supply or the country's supply of some product or of the necessary machinery for manufacture. Take a few illustrations. The Oatmeal Trust pays several mills in Iowa $20,000 each, I am informed, to stop their mills or sell none of their product inside the United States. Some of us—no, *all of us*—pay those sums and enrich the trust besides. How? Well, to-day the farmer gets from 16 to 18 cents per bushel here for oats, one-half to nine-sixteenths of a cent per pound for oats, and pays five *cents per pound* for "rolled oats" or "rolled avena" or "oat meal." By the old laws water-power mills could only take one-tenth of the grist in toll. In the case of oats, under the "trust," the mills *take nine-tenths* and the farmer gets back almost exactly *one-tenth* of his grist! Is not this a burning outrage on its face?

The Copper Trust in France put copper at $400 per ton instead of $150 to $200. The stock of the trust was lately worth 900 cents on the dollar. It now seems likely to collapse. It bled the dear public too savagely.

Take another case; a "trust" to control twine for binding is now (March 16) trying to raise the price of twine from 12 cents to about 18 cents. The farmers' organizations all over the West are agreeing not to buy the twine at an advance above last year's prices.

The recent investigation before the Senate committee gave alarming proof of the effects of "trusts" in stopping mines, mills and manufactories, throwing men out of employment, severely injuring localities and greatly advancing prices of commodities to the damage of society and the enrichment of the unscrupulous few. By this raising of prices above their normal level these "trusts" tax the public "without representation," destroy

fair competition, disturb the normal relation between demand and supply, and seem almost to overthrow the laws of political economy based on a careful study of the facts of the past. Clearly society and Government, its representative, have the highest of all rights, the very right of self-preservation to place sharp limitations on "trusts" and prevent their cornering and controlling the people's supply of food and other essentials, and prime conveniences of life. Nor ought Government to compel the people to resist "trusts" by boycotting; combination by counter-combination; plots by counter-plots. The Government should *itself* deal with these harmful trusts as *conspiracies*, unlawful combinations, seeking by secret means the damage of society. If the Government leaves such matters to private adjustment, it neglects its own proper function of protecting society, and inaugurates intestine war between opposing factions. If this comes "they that take the sword shall perish by the sword."

Discussion, light, and calm investigation should be encouraged. With it our legislation is likely to be just towards the people—producers and consumers—and not unjust towards lawful combinations. Without such discussion and such light, the danger is great and manifest, viz., that the people blindly and numbly feeling the real injustice inflicted on them by railways, combinations, pools and trusts, shall rise in the wrath of communism, grasp the pillars of society, bow themselves in their might like the Hebrew Sampson, and bring down the entire structure of society upon themselves and the Philistines in common ruin.

That heaven may save us from such dire calamity is the prayer of all true patriots. Heaven will save us, if at all, only by the free and calm discussion of the philosophic and ethical principles involved, a determination to know the right and do it. Unless we are thus saved our Republic will perish like the Republics of the past. For the dangers that beset us from combinations of unscrupulous wealth on the one side, and communism on the other are the greatest that now threaten us.

State Agricultural College, Ames, Ia.

Various.

SOME HITCHES.

THE Engineering and Building Record recently published the illustrations shown at Fig. 113. A good deal of time and a good deal of property may often be saved by the ability to fasten a rope quickly and securely. Believing that some of the hitches here described may be new to our readers, we have reproduced the cut. In all the figures, S represents the standing end of the rope and F the free end. Fig. 1 is a simple round turn where the rope encircles the object once. A half hitch Fig. 2, is made by taking a round turn about the standing part, and then passing the free end through the bight. Usually two or three half hitches are used together, as at Fig. 3, and form a very secure fastening. When the strain is intermittent, the free end should be stopped, so as not to slip out of place when not strained. The half-hitch is very easily made, can be fastened on a taut line, and will hold on small objects. A clove hitch Fig. 4, is made with a round turn, and one half-hitch backwards, and will roll if the object can turn. A becket hitch, Fig. 5, is two half hitches made backwards, and is much used for fastening the end of a fall line to the becket of a pulley block. It will not undo, and the free end does not require lashing. This hitch is apt to jam, so that the line must be cut to remove it from the block. A blackwall hitch, Fig. 6, is used for fastening a rope that is to be under strain, to a hook: the standing part jams the free end and holds it securely. A timber hitch, Fig. 7, is easily made, holds well and cannot jam. It is much used for handling timber, but is not safe when used alone unless thoroughly made. A timber hitch and a half hitch, Fig. 8, are used for hauling timber, etc., endways. A roller hitch, Fig. 9, permits the object hauled to roll along freely in the rope. Fig. 10 is a harness hitch. Fig. 11 is a marlin spike hitch. Fig. 12 is a fisherman's bend; it is easily made, and very secure. Fig. 13 is a convenient hitch to use for taking strain from one end of a rope; A A, for shifting luff tackles, etc.

Sheep Husbandry.

A SHEEP BARN.

FOR 50 sheep I built a barn like that shown at Fig. 114, 22x50 feet. The lower story is open to the south and east. The wall is four feet high on the north side, the lower story is 7½ feet high, the second story is high enough to hold all the hay wanted. Two tubes with ladder sides extend from the bottom of the feed troughs to the top of the hay mow, (three by four feet). There are oval holes for each sheep, about six inches wide and eight inches long. The bottom of each hole is four inches from the floor of the feed trough. The latter is from 12 to 16 inches above the floor of the building, according to the size of sheep or lambs. The holes through which the sheep are to feed are about 20 inches from center to center. The space between the two troughs should be about four feet, or enough to allow one to walk through comfortably and feed sheep from inside. The rack or boards are just high enough to keep sheep from jumping over. There is a good passage of five or six feet at each end of the building to allow the sheep to pass freely without jamming together. With this plan the flock can be readily divided by temporary cross wickets or the gates. Any one who has attempted to feed a flock of hungry sheep with grain, or has come in contact with a cross ram will appreciate this plan of feeding. Very little feed will be wasted and the sheep will not crowd each other. The building can be extended so as to make it large enough for any number of sheep. If the ground is not very dry, a floor should be laid.

H. O. S.

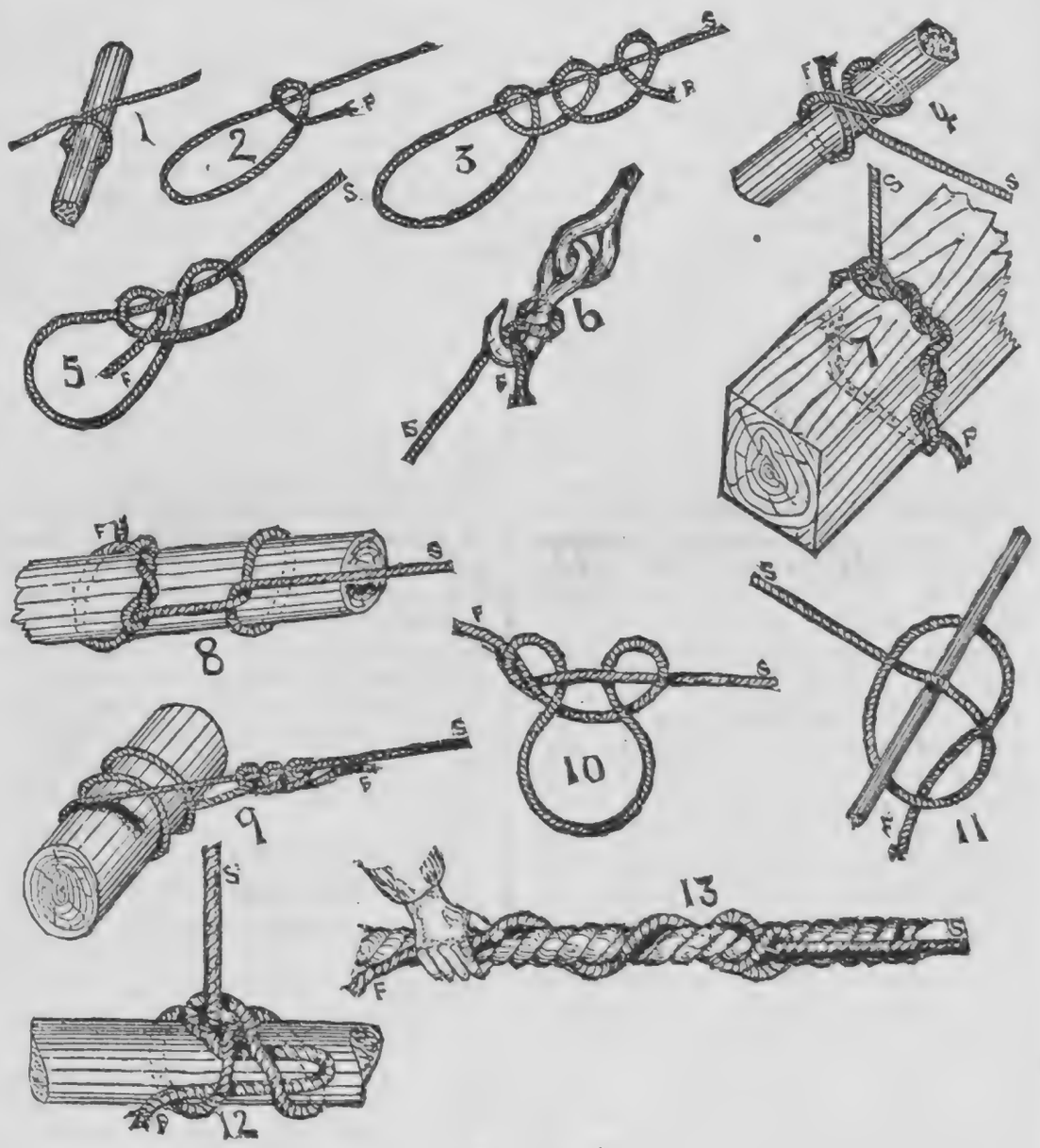

Fig. 113.

Farm Topics.

SOME COGITATIONS.

FRED GRUNDY.

FORETELLING THE WEATHER.—"Is the Signal Service a signal failure?" is asked on page 55. I rather think it is—to the person who looks directly overhead for his weather. In this locality we receive the "indications" for the current 24 hours at 10 A. M. By that time we know what the weather is, and is likely to be until night. But we want to know what it will be to-morrow. If we know how to read the Signal Service "indications," and understand the visible indications, we can, by comparing the two, tell almost to a certainty what it will be. This is how it is done: Nine-tenths of our weather comes from some point between N. W. and S. W. We note from which of these directions the cirrus clouds are moving, and whether fast or slowly; then we know the drift of the upper current of air. If this is from the N. W., we know that to-day's weather in Iowa, Nebraska and Dakota will be ours to-morrow, with possibly some slight changes, and we read what that weather is in the "indications" for those States. If the cirrus clouds are moving from the S. W., we look for the "indications" in Missouri, Kansas and Arkansas. If there is a storm in progress in any of those States, we shall get it, or part of it, within 24 hours. If it is fair in those States with W. or N. W. winds, and there are no local showers in sight, we can safely slash away at the meadow until night. But if it should be rainy out there, or if there are "local rains" with S. or S. E. winds, we had better move cautiously and finish up as we go along. Our rainy weather in summer almost invariably comes from some point between W. and S. and those are the points to watch. Our cold weather in autumn, winter and spring comes from some point between W. and N. and we watch the "indications" for the States out that way. A very few rains come from the S.; none come from the E., except such local showers as are developed in sight. I think the weather is a very fascinating study, and with the aid of the Signal Service and a little practice, any keen-eyed person may become quite expert as a weather prophet.

PREPARING FOR THE CENSUS.—In a late number of the RURAL some one suggests that farmers should prepare for the census to be taken next year. The suggestion is a good one. I took the census of this township in 1880, and of the 158 farmers that I interviewed not more than 10 were prepared to give anything like correct answers to half the questions relating to their vocation. They "guessed" this, and "thought" that, and "supposed" the other. If I hadn't been perfectly familiar with farming operations, my report would have been of little value. By asking an infinite number of questions I could get very near the facts. In the village, business men were prepared to give all required facts and figures right from their books, and I experienced little difficulty in gathering all the information the schedules called for. It really is surprising how little some farmers know about their own business.

OH, FOR BETTER CHEESE!—Governor Hoard, as quoted on page 73, gives the cheesemen a well-deserved pop on their thick skulls. I like good cheese better than meat, but I want to know that it is good before paying three prices for it. When cheesemen learn to supply the home market with cheese that is cheese, and not putty or tallow, the demand will quadruple in a very short time. People buy meat because they know it is real meat. They don't buy cheese because they don't know what it is made of, and they don't care to turn their stomachs into analyzing machines. Let's have some real cheese for the sake of variety.

AWAY WITH THE PRIVY VAULT.—The RURAL has condemned the privy vault. It is wise. The vault is the meanest and most utterly execrable and pestiferous make-shift that was ever devised. It is an abomination that is found on nearly every farm and village lot in the country. Common sense, common decency and the least regard for health demand that it should be abolished. I use a tight drawer arranged to slide under the seat from the back of the building. A plentiful supply of road dust is gathered at the proper season and stored for use. When the drawer is to be emptied a stay chain is hooked into a strong staple projecting from the front, a horse is hitched on and it is drawn out to the field or manure heap. It can be emptied and returned to its place in five minutes, and the labor is nothing.

SALARIES IN THE TOWNS AND WAGES IN THE COUNTRY.—I see in a local paper that my young friend B has "accepted a position" with X Z & Co., a hardware firm doing business in a neighboring town. I also *hear* from a neighbor that D, another young friend, has "hired out" to a farmer in an adjoining township. I learn that B receives $22 per month and boards himself, and D receives $18 per month and board. B has "accepted a position," which fact is chronicled in the local paper, and commented upon by his friends who regard him as a lucky fellow, with a brilliant future open to him. D has merely "hired out," which fact is not chronicled anywhere, or commented upon by more than a dozen people, all told. No brilliant future is open to him; he is not a lucky fellow; he delves among the dirt! If he places $100 in the bank at the end of eight months, and his wages are raised to $20, nobody will make any fuss about it. If at the end of two years he has $300 to his credit, he will be looked upon as a sober, steady hand. If B's salary is raised to $30 at the end of eight months, congratulations will pour upon him. If at the end of two years he still retains his position, and is out of debt, he will be regarded as a very promising young business man and his salary may be increased to $50, out of which he can, if economical, save $10 per month.

Young man, if you want to be *somebody* go to town and "accept a position." If you want to lay up something substantial for the future, go to the country and "hire out."

Christian County, Illinois.

Field Crops.

MELON GROWING IN INDIANA.

J. A. FOOTE.

Melon growing in Indiana formerly and today; favorite varieties; cultivation; planting; Nutmeg melons; starting the seed and after culture; profits in melons.

IN a few sections of Indiana melon growing is a considerable industry. Across the southern part where the soil and shipping facilities are favorable, it is carried on, and particularly in the "pocket" which is the southwestern corner of the State, and from there up the Wabash to Terre Haute and somewhat beyond. The place named was my home for many years and I am conversant with the business there. For many years past several hundred car loads of water-melons and Nutmeg melons have been shipped from there each year. It was famous for water-melons over 30 years ago, for a strip of sandy land, one to three miles wide, runs along the river through the county. At that time the Yellow Mountain Sprout was the principal one grown. I grew them myself, but 20 years ago the red-fleshed sorts superseded them, and now none of them is to be found. It occurs to me

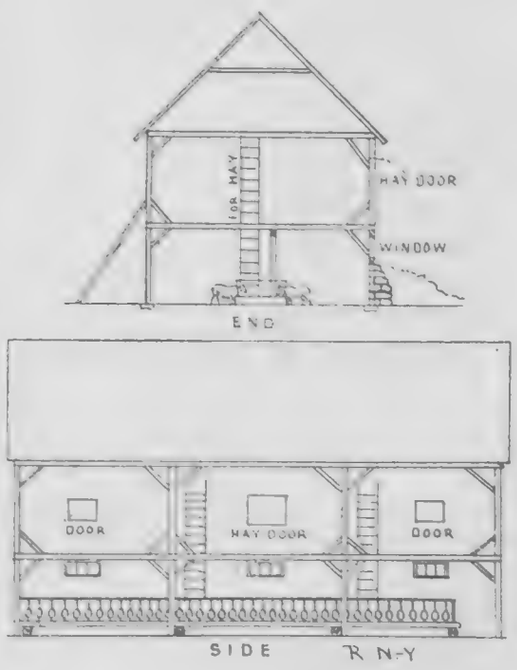

Fig. 114.

here to say that seedsmen do not control the varieties grown as much as they imagine—not as much as the market. For instance, many good varieties of water-melons have been introduced in the past 10 or 15 years; but Kolb's Gem was well in the market before the seed was offered, and has almost displaced everything else as a shipping melon, my impression being that nine-tenths of those grown in

the South and West are of that sort. At Terre Haute one other variety is considerably grown for the home market and shipping short distances, it being too tender to go far. It is the Dark-skin Icing, the best melon in quality grown, in my estimation. Its exceedingly crisp, tender flesh and sweet and delicate flavor make a delicious refreshment on a hot August day, one that seemingly could never be improved on.

Cultivation is done on a large scale, the patches being from five up to 40 acres, and the method involves no more labor than for a corn crop. Soil that will bring a fair crop of corn—say 50 bushels to the acre—will make a fair crop of melons. If this is not available, light manuring is resorted to, and about the first of May planting is begun in hills from eight to nine feet distant each way. Often full or partial replanting is required so that a start is not got until the last of the month. The hills are only slightly elevated on this sandy soil, and I have known some who planted in the furrow, counting that the crumbling of the soil fills up about the plant and aids materially in bothering the striped bug. Good seed frequently fails in cold, wet seasons, and with cut-worms and striped bugs it is no easy task to secure a stand. When this is secured the cultivation is as easy as that of corn—simply a constant stirring of the soil, which is left in a level condition, so that the cost, when the crop is ready for pulling, is only a trifle more than it would have been for the same area of corn.

It is only a few years since that the supply of Nutmeg melons was very limited. It grew with the demand, or perhaps an increasing supply created a demand, until now it is an extensive crop. They are grown also as field crops, and the cultivation differs from that of water-melons only in their being planted closer—say five to six feet apart. Of late, however, there is a difference in starting the plants. What was done on a small scale is now done on a large one—that is, the seed is started in hot-beds. In the first part of April seeds are planted in square quart fruit-boxes and placed in the hot-bed. Two of the most vigorous plants are allowed to grow, and about the time when seeds are usually planted in the open ground, these are transplanted to the field, the cut of a knife taking off the box and leaving the roots undisturbed. That this involves labor when done for the 10 or 20 acres is evident, but that it pays is proven, for the earliest returns are much the greatest.

As to varieties, the Hackensack has been most grown, including the Terre Haute Nutmeg, a sub-variety of that sort, much larger, sweeter and more productive, but not so regular in shape. The Extra Early Hackensack is now taking the place of the regular Hackensack. The past season that new melon, the Osage, has been also largely grown. This is a variety with a deep green skin, not lobed as the Nutmegs, and with an orange or salmon flesh, very thick meat of sweet and delicious flavor. Here is another instance of a melon taking the lead before the seed was offered by seedsmen. It was the leading melon in Chicago in 1887, as well as during last year, bringing 50 to 100 per cent. more than other melons.

Profits a few years ago were large, watermelons bringing from $50 to $100 per acre, and nutmegs up to $150; but these figures have dwindled owing to the over supply and especially to the shipments from the South. By the time the Indiana melons come in, the market has been full of Southern melons for a month, and no longer can fancy prices be got for the earliest ones. If we add to this, as was the case during last season, a cool summer, the price drops below a paying rate and melons are unprofitable. Probably, taking a series of years, this has been and will be as profitable as ordinary farm crops or more so.

Farm Economy.

COST OF ENSILAGE MACHINERY.

SUBSCRIBER, WESTFIELD, MASS.—What do the power and machinery needed to fill a silo cost?

ANS.—Here are estimates given us by some of the farmers who attended the recent Ensilage Congress, at Cleveland, Ohio.

FROM F. C. CURTIS.

I have used a 160-ton silo three seasons, and filled it the last two years with machinery the list prices of which are, for a four-horse power with all extras, $75; plain, $60; a Smalley No. 12 cutter with iron jack, $85; carrier 14 feet or under, $25 A good two-horse tread power—$120—would do the work about as well, costing a little more for belting, and as no jack would be required this rig would cost but little more than the four-horse down power. It will cut a ton of large Southern corn in about 20 minutes. I use two truck (low) wagons with 16 feet hay racks. One man cuts in the field; one man is with the team and one aids in loading. This one aids in cutting when not loading. The cutting machine is placed on a strong table about as high as the wagon rigging, alongside of which the load is drawn. The horses are taken off and attached to the other wagon for another load which is brought in, soon after the other load has been run through the cutter, by two men, who run the unloaded wagon out of the way, and oil up ready for the next load. We average two loads of about a ton each in one hour. The machinery named is from the Smalley Works, Manitowoc, Wisconsin.

FROM E. J. SMALLEY.

The cost will depend very much upon the size and hight of the silo. In a general way, the size of the machine is measured by the capacity of the silo. A man putting up from 50 to 100 tons would not require as large or expensive a machine as the man who puts in from 300 to 600 tons. Then again, the hight determines the length of the carrier so one can readily see that it is impossible to determine the cost till the manufacturer is posted on the hight and capacity of the silo to be built or that has already been built. For instance, I have just sent home orders for three No. 14 cutters for Genesee County, New York. J. C. Walker's carrier is 24 feet long; W. W. Britt's carrier is 16 feet long; N. H. Green's carrier is 46 feet long. Smith Sanburn of Orleans County has just sent in an order for a carrier 24 feet long, while Ora Lee of the same county has given an order for one 30 feet long.

Then again different parties have preferences for different powers. While some, especially the Germans, prefer a sweep or lever power, others will purchase only a tread power because in stormy weather they can cut their dry fodder in their barns. In Northern Wisconsin dry fodder cutting is looked upon as of as much importance as building silos and feeding from them, and in Manitowoc County every man having more than 20 acres of land has a power and cutter at his barn and cuts all his feed for horses and cattle, and all those having silos feed dry fodder once a day. Many who have silos mix one-fifth of dry cut fodder with the silage, claiming the cut dry fodder absorbs all the acidity in the silage.

Niagara County, N. Y.

FROM J. H. BRECK.

I use 18-horse steam power with a boiler of large capacity that was put in my barn when I used to steam feed. I have used several cutters but now I use the Silver & Deming Manufacturing Company's 24 inch cutter made at Salem, Ohio. It is a very strong, powerful machine with which I have cut two tons of fodder in 13 minutes with no extra hurry. One can use tread powers, sweep powers or steam. I cut one year with steamer for a thrashing machine, the owner furnishing a man to run it. A second-hand engine and boiler can be bought for from $150 to $500—say $250 to $300 for a good one. Buy a cutter with a large throat. Such a one is the cheapest in the long run, because when one starts to fill a silo or silos with the produce of 10 to 20 acres of corn that will average 20 tons per acre and more, he will find that a cutter that will cut a large amount in a short time is what he wants. My engine and boiler cost $400, cutter and carrier $160.

Cuyahoga County, Ohio.

FROM M. C. DANFORTH.

I use a No. 11 A Ross cutter made at Springfield, Ohio, and the power is a small grinding power and mill combined called the Victor made at Canton, Ohio. It is easily worked by two horses. I cut last season three large loads estimated at 3,000 to 3,500 pounds each in 40 minutes. I attempt to fill my silos with ordinary farm help. We go in the field and cut and haul three or four loads to the machine, then cut it into the silo. We cut from 10 to 15 loads per day. My cutter was listed at $45; the power at $60. They were bought several years ago. The same goods ought to cost less now.

Summit County, Ohio.

FROM L. R. FOSTER.

I use the Tornado cutter manufactured at Canton, Ohio. I think it is the best machine for cutting corn fodder, especially silage. The power I use for cutting dry fodder in winter is the Buckeye four-horse power, which costs $45. I hired a man and engine last year to fill our pits; for pits not more than 16 to 18 feet deep, the power is sufficient. My pits are 25 feet deep. My elevator is 30 by 25 feet. So I used more power. My machinery cost $160. The cost will be regulated by the amount of carriers used. I have 55 feet, the price is 50 cents per foot.

Summit County, Ohio.

FROM G. E. RICE.

I have a two horse tread power made at Albany, N. Y. which cost $180. I used a No. 14, A Ross cutter with a 20-foot carrier: cost $100 It costs about 50 to 75 cents per ton of 50 cubic feet to take the corn from the field and put it in the silo. One set of machinery will answer for four neighbors as well as for one. Before I bought my tread power I hired a portable engine and man at $3 per day. There are many good cutters in the market, the Ohio, made by Silver & Deming, Salem, Ohio, is first-class.

Trumbull County, Ohio.

FROM O. T. BANTES.

I have a No. 14 Ross cutter made at Springfield, Ohio. This and a 22-foot carrier cost $100 nearly two years ago. My silo is nearly 16 feet high. By placing the cutter on a platform about two feet high, it will deliver the feed into the door of the gable. For power I have a sweep made by the Forest City Machine Works, at a cost of $50. The power is not sufficient to run the cutter to its full capacity. We run through about 15 tons per day with two horses on the sweep. The cutter has a capacity of 25 or 30 tons per day. I would not advise any one to invest in sweep power. I think a two-horse tread would furnish nearly double the power, but it would cost more if purchased new.

Cuyahoga County, Ohio.

FROM HENRY TALCOTT.

I always hire a man with a traction engine used with a thrashing machine at $4.00 per day, and use a No. 12 Tornado feed cutter that cost $40; a 24-foot carrier that cost $32. The cutter cuts and splits the largest stalks into little fine shreds, and stock will eat every particle. I never saw such perfect work with any other machine, and it cuts different lengths. The same firm makes larger and smaller sizes—Nos. 8, 10, 12, 15, and 18. I can cut 40 tons per day.

Ashtabula County, Ohio.

FROM NEWTON RICE.

I have used an engine and horse power both sweep and tread; but I much prefer the two-horse tread power, made at Garrettsville, Ohio: cost about $100. A No. 14 Ross cutter made at Springfield, Ohio, can cut with this rig 30 to 40 tons per day one inch long. There is a considerable difference in different makes of tread powers as to the amount of power one can get from them. It is very important to have the pulleys on the power and cutter of the right size so as to get the most power from them. I cut silage for 12½ cents per ton for my neighbors, they putting the corn on the table. The cutter and belting cost me $65.

Portage County, Ohio.

FROM W. A. WHEELER.

I use the Smalley cutter No. 12, No. 14 would do better. For power I used an eight-horse engine: I paid $2 per day. It cost me 35 cents per ton to draw, cut, and fill the corn into the silo. The Ross cutter is a good machine; so is the Ohio, manufactured at Salem, Ohio. An eight-horse sweep power would do good work, but tread powers are too slow.

Lake County, Ohio.

FROM W. H. STRONG.

I use a three-horse power Shipman coal oil engine. I use crude oil, which has to be warmed to work well. The engine cost $300. It runs a No. 13 Ross cutter with a 20 foot elevator. This cutter cost $78. In filling my silo we averaged 18 tons per day. Cut one-half inch lengths.

Lucas County, Ohio.

FROM S. A. REED.

After using both steam and horse-power, I would not advise any one to use a horse-power if an engine can be hired for a reasonable rate, which is $3 to $4 per day, with one man. When buying a cutter, be sure to get one that is large enough, as the extra power required will not cost any more than if running a small cutter. I shall buy a Silver & Deming cutter of large size for my use.

Oberlin, Ohio.

FROM A. S. EMERY.

I have a 10-horse power engine that cost $150. My 17 A Ross cutter, with 16 feet carrier, cost $132 delivered at station here. I would not buy power again as I can hire power with man for $2.50 per day, when thrashing is over, thus saving care of engine, etc.

Cleveland, Ohio.

Market Notes.

IT would be a first-class object-lesson for any farmer who contemplates shipping his produce to visit the markets of New York, or of any other large city, and learn the requirements of the markets, best methods of packing, manner of selling produce, etc.

Many farmers seem to think that commission merchants are all swindlers. While there are undoubtedly some dishonest persons in this as well as in all other branches of trade, the writer is inclined to the belief, after careful inquiry and observation, that the majority are as honest as the rest of mankind. A few facts, gathered here and there, may serve to illustrate. There are usually two sides to every question; these facts are from the commission merchants' note-books:

Last fall, a farmer in Michigan shipped to a commission merchant here, a car-load of apples. They might have been sold for one dollar per barrel, but the shipper ordered them stored and held for higher prices. This was done, the merchant paying the freight and storage amounting to about $80. After holding the apples until spring, what were left brought just $40. The merchant is out about $40, besides his own labor. Another shipper sent a lot of dried apples which were of such poor quality that it was impossible to secure an offer for them. Another lot of apples were sent when the market was so glutted that the price secured for them was just enough to pay for the frieght, commission and barrels. Another shipper sent on a lot of bones, marked "chickens," which, as a matter of course, sold at very unsatisfactory prices.

It is to the interest of the commission merchant to secure the best prices possible. Shippers should be particular to grade and pack their goods properly, ship only the best, in neat, attractive packages, not ship when the market is overstocked, and there will be better satisfaction, and less grumbling all around.

Everywhere.

RURAL SPECIAL REPORTS.

New York.

NEWARK, Wayne County, April 24th.—Since April 3d we have had no rain, wheat and grass are very much in need of some, wheat is looking well, peppermint wintered fairly well; about the usual amount will be set this year. If there will be any change, more oats and less barley will be put in this spring. Although the price of potatoes to-day is but 13 to 18 cents per bushel, there will be fully as many planted as last year. Onions also will have about the usual acreage. No prediction can be made regarding fruits, as yet. Prices: wheat, $1; corn 45 cents; oats, 32 cents; peppermint oil, $2.15; potatoes, 18 cents; butter, 18 cents; eggs, 11 cents. W. H. K.

Pennsylvania.

LIGHT STREET, Columbia County, April 23.—Wheat in this section is somewhat spotted from being drowned out in low places. Spring has been early and prospects are good for fruit; but we have just had frosts that made ice, so we cannot tell what effect it will have on fruit blooms. Bees are in splendid condition. There has been no winter loss and all are strong and healthy. H. H. B.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.

RUPTURED STOMACH IN A STALLION.

J. P. M., Nelson, Ohio.—My Norman-Percheron stallion appeared well and in good health up to the evening of February 12th. Next morning the first indications of sickness were noticed when he refused to eat more than one-half his feed, which consisted of two quarts of corn and oats chopped and two quarts of oats given regularly twice a day. He appeared dull during the day and still refused to eat or drink. The following morning he appeared worse. He would lie down and then get up, changing from one position to another. A dark semi-fluid mixed with

oat hulls and small pieces of hay and straw of from one-quarter to one-half inch in length kept continually flowing from the nostrils. This flow varied, being sometimes heavy and sometimes light. Its odor was very offensive. He had a staggering gait and seemed ready to drop when attempting to walk. He appeared to be in no perceptible pain. His breathing was good and clear, but a rumbling sound was noticeable throughout the bowels, and there were tremblings and twitchings about the breast. The following day he became more restless and his general appearance was worse. The next morning he was in very great pain, lying down about half the time and groaning so as to be heard quite a distance. A part of the time his breathing was quite good. He made several strange movements as if trying to vomit. The symptoms remained about the same, only growing worse until nine o'clock at night, when he died. What was the disease and what should have been the treatment?

ANSWERED BY DR. F. L. KILBORNE.

In my opinion the horse died of rupture of the stomach. While the symptoms are not those that commonly follow an extensive rupture of that organ, in which case death usually results in a few hours, they are the symptoms of a form of rupture that occasionally occurs, in which the stomach is only partially or slightly ruptured. With ruptures of this kind the horse may live two or three days. A careful autopsy ought to have been made on the animal. There is no treatment for ruptured stomach. The lesion is fatal. When the animal is in great pain, the suffering may be relieved by hypodermic injections of morphine. All medicines by the mouth usually aggravate the symptoms. Since rupture of the stomach is almost invariably fatal the attention must be directed to preventive measures rather than treatment. The lesion occurs most frequently in the heavy draft horses and in all classes usually is the result of faults in diet or management. It is very liable to occur when the stomach has been overloaded with food upon which it is unable to act. Fermentation results, gases are formed which distend and finally rupture the stomach. Other common causes that may be mentioned are, a too sudden change of feed; drinking a considerable quantity of cold water on a full stomach, and severe labor after a full meal. The walls of the stomach may become weakened by chronic indigestion or other imflammation so that they are more easily ruptured. In fact any gastric derangement renders the horse more liable to a ruptured stomach because more susceptible to the various causes that tend to produce the lesion.

TO PREVENT A COW FROM SUCKING HERSELF.

L. R. H., Dighton, Kan.—1. I noticed that the brush on the tails of some of my heifers was twisted. On examination I found a soft place about two inches from the end of the tail, which gave the appearance of being unjointed. Does this indicate disease, and if so what? 2. What will break a cow of sucking herself?

ANS.—1. It is of common occurrence, and does not indicate disease. 2. One of the simplest and most effectual methods employed to prevent a cow from sucking herself, is a block worn on the nose. For this purpose take a block four by six inches and one-half to five-eighths inch thick, of basswood or other light, tough wood. Near one edge bore two 1½-inch auger holes, so that they will overlap about one-half inch, and cut within about three-eighths inch of the edge. Then cut an opening five-eighths to three-fourths inch across, according to the size of the animal's nose, through to the edge of the block. Carefully round all the corners so that they will not make the nose sore. Drive two wire nails to prevent splitting. To attach the block, hook one point in one side of the septum of the nose, and crowd the septum through into the opening, so that the block will hang on the nasal septum. This will prevent the cow from reaching her teats with her mouth, but will not interfere with eating. Should the block be lost or broken apply another.

CUTTING "SEED" POTATOES.

C. S. H., Holabird, Dak.—When is the best time to cut seed potatoes? Should it be done immediately before planting or some days before? How do large and skillful potato growers cut the "seed?"

ANS.—The R. N.-Y. has experimented somewhat; the N. Y. Agricultural E. S. has also made quite thorough experiments in this matter of determining how long before planting the seed should be cut. Our opinion is that nothing is gained by cutting the seed any considerable length of time before planting. As soon as a potato is cut and exposed to the light and air, the cut part begins to shrivel and soon to dry up or decay. This is avoided by means of the soil moisture. If potatoes are cut more than a day or so before they are planted, it is probably well to roll them in plaster which, in some degree, will lessen evaporation. The smaller the pieces in which the seed potatoes are to be cut, the more we should object to cutting them long before they are to be planted. The R. N.-Y. does not hesitate to advise its inquirer that nothing is lost by planting freshly-cut seed.

Miscellaneous.

J. H. M., Huntsville, Texas.—On page 232 in answer to L. E. H., regarding a sterile cow, the RURAL says: "Then let the cow be served immediately by a common or grade bull—not by a thoroughbred." Under the circumstances, why should not the cow be served by a thoroughbred bull?

ANS.—Because owing to the more vigorous powers of procreation usually possessed by a good common or grade bull, as compared with a thoroughbred, there is more certainty of securing a fruitful service, if the cow is not really sterile.

DISCUSSION.

COLLAPSE OF THE GREAT MEAT SYNDICATE, AND BEEF INSPECTION LEGISLATION.

T. H. T., SIOUX CITY, IOWA.—In the RURAL of April 20, an editorial tells of the collapse of the American Meat Company, and Armour is blamed for the checking of this new monopoly. In this I think the RURAL is mistaken; for I believe that the popular feeling against these meat companies, as evinced by the growing interest in the passage of the State Inspection Bills, as adopted by the St. Louis Beef and Pork Convention, has cooled the ardor of the meat ring, for they know that the farmer, the King of this Nation, is against them. Armour, as a monopolist, seeing what was for his best interests, no doubt advised the stopping of any more investments that would tend to centralize the beef trade, and I think that, instead, he will now build small killing houses wherever the State passes the Inspection Bill. This new mode of monopolizing the meat trade will be very hard to control and the result will be the forcing of the meat trade into the hands of the many who will have their agents in various parts of the country contracting their beef, or cattle rather, weeks ahead of delivery, thus making a more safe and reasonable basis on which farmers, feeders and consumers can depend. Then the profit will be more evenly divided between the grower and feeder, the butcher and the consumer, legitimate operators who should, without the action of any monopolists, co-operate for the mutual benefit of all. New York should pass the Inspection Bill such as Minnesota and other States have. For the first time has the farmer discovered a method by which the meat monopolists can be controlled. I say "the farmer," for this is true. No butcher should receive the credit of this wonderful move. It is the farmer and no one else who originated it. The beef ring desires that the local butcher should be considered the originator of this movement, thinking by these means to make it unpopular; but his attempt will not succeed; for it is not the local butcher but the farmer who demands State inspection.

R. N.-Y. Although the popular feeling is very decidedly against monopolies of all sorts, yet it was certainly, as a general thing, in favor of the establishment of the "American Meat Company." The reason for this is on the surface. The "Big Four" now hold a monopoly odious and oppressive alike to the producers and consumers. Within the period of their reign they have depressed the price of beef cattle so much in the East as well as in the West that there is only an infinitesimal margin of profit to reward the producers. Absolutely controlling the two greatest cattle markets in the country—those of Chicago and Kansas City—and partly controlling the other Western live stock markets, Western stockmen are forced to sell to them at their own figures. If they refuse to do so at Kansas City, and carry their stock to St. Louis or Chicago, they are there met by the agents of the same parties, who have been advised of the transactions at Kansas City, and the unfortunate recalcitrants find, at the end of their journey, that, taking into account the freight charges and other expenses between the two places, they must accept for their cattle considerably less than was offered to them on the Kansas line. Recent Congressional investigations have shown that the stockmen of the West have lost millions of dollars through the unscrupulous machinations of this giant monopoly. It is also destroying altogether or greatly injuring home markets by supplying dressed meat from Kansas City or even Chicago as far west as Colorado cheaper than meat can be profitably furnished by local butchers who pay a fair price for their stock, although the syndicate's meat may come from animals raised in Colorado, and have paid freights both ways. The enormous profits of the monopolists enable them to do this for a time, so as to break down the local dealers, and then they can put up prices high enough to make large profits besides making up for what they failed to gain during the period of depression.

They pursue the same policy in the East with regard to the dressed meat trade. The enormous savings they now make at the slaughtering centers, owing to the low prices which they pay for cattle; the great economical improvements made of late years in the methods and appliances for slaughtering, and the utilization of every particle of "offal" much of which formerly went to waste, would enable them to sell meat to consumers at an extremely low figure; but they offer it at prices only a trifle lower than those of local butchers—just enough lower to break down the latter; but even this decrease is sufficient to depress the prices of home-raised stock to such an extent as to render the raising of butchers' cattle in the East hardly profitable save under exceptional conditions. For these and some minor reasons, the Big Four monopoly, which buys over half the cattle offered in Kansas City and two-thirds of those offered in Chicago, has incurred a great deal of odium among the general public, and especially among stock raisers.

The public therefore was disposed to look upon the new enterprise less as an addition to the monopolies from which it is suffering than as a hopeful rival of the odious Big Four. Rivalry is death to monopoly when rivalry is of a brisk, healthy and powerful character. The new enterprise promised close competition in the near future within a wide area, with a strong tendency to constant increase. Moreover, the success of one undertaking of the kind would be a strong incitement to the organization of others, just as the success of the Southern Cotton-Seed Oil Company, started a little over a year ago, is just putting into the field a number of the other rivals of the hateful Cotton-Seed Oil Trust. Armour, as a clear-headed, extremely skillful business man, saw all this, and, very properly from his own stand-point, used all his influence, not, of course, personally—for he was then in Europe—but through his agents to smother the threatening rival, like a baby, at the hour of its birth.

With regard to the "Beef Inspection Bills" which have, within the last few months, been introduced into the legislatures of many States, they are all substantially, if not verbally, of the same character, being all formulated on the basis agreed upon by the joint committees of the conventions of butchers and cattle-growers, held last winter at St. Louis. The main object of all is to protect the butchers and cattle owners of each State from the disastrous competition with the Big Four, though, equally of course, due regard is paid to the health of beef consumers, liable to be endangered by the possibly deleterious nature of the dressed meat supplied by the monopolists. So far as heard from, the bills have been passed by the legislatures of New Mexico, Colorado, Kansas, Missouri and Minnesota, and rejected by those of Ohio and Pennsylvania; while they are still before those of New York and several other States. Judging from past experience, the proposed legislation will probably meet with success in those States in which the raising of beef cattle is a dominant industry and where the population of the country is more numerous or influential than that of the towns; while it is likely to meet with defeat in those States where these conditions do not exist. What the Big Four will do in States where inspection of beef cattle is provided for by law at the places at which they are slaughtered, remains to be seen; but, judging by the latest advices from Minnesota, it is not unlikely that they will establish slaughter-houses at various points within the borders of these States, where such depots would be likely to pay.

CHEMICAL FERTILIZERS IN OHIO.

T. B. TERRY, SUMMIT COUNTY, OHIO.—Some weeks ago the RURAL had a "symposium" on the value of chemical fertilizers for Western farmers. In Ohio we have considerable land that is quite level and very rich. Then again, we have land that is gently rolling, but clayey and not considered very fertile. Also in part of the State, the country is very rolling, or hilly, and the soil when brought under the plow is now exhausted of its fertility to such an extent that it does not bring paying crops. Now at the institutes we hear almost nothing about chemical fertilizers when in counties where the soil is of the first kind. In fact plenty of the farmers do not yet save their home-made manure with any care at all. Tile draining is the all-important subject with them. Fertilizers would seldom show where they were put, and less often pay on such soils. On lands of the second kind fertilizers are more used, and more than half of the farmers who express their opinions at our institutes think they pay. The more clayey the land the better the results, as a rule. I have heard of numerous instances, and seen some, where on such soils fertilizers were the making of the wheat crop. On a strip where none was used the wheat was a failure. This was in a poor year for wheat—when it winter-killed badly. On lighter soils in the same locality, fertilizers usually seemed to do no good whatever.

In the Southeast part of Ohio, where we could walk for days just up and down hill, almost without finding a level acre, commercial fertilizers seem to have usually paid well for a time. But we cannot help doubting the wisdom of plowing such lands and cropping them any more than is necessary for reseeding purposes. To sum up all that I have seen and heard in regard to use of fertilizers, I would advise every farmer to test the matter on his own farm and know what he is doing, in the first place. It is the fashion to use fertilizers in some parts of our State, and very many follow the crowd, and doubtless often to their loss. I know some high authorities have taught that chemicals are just as truly plant food as stable manure. Theoretically this is so. Practically there is a hitch somewhere. I have seen fertilizers make a good crop (there being a total failure where none were put), and within two miles a first-class complete fertilizer, freely applied, showed no result whatever. Good stable manure would have shown where it was put, and if for any reason it did not do so in the first crop it would surely in the following ones. Do not leave a little strip without fertilizers and guess at the difference in yield. Make your experiments by the acre and give the scales and half-bushel a fair chance to tell the story. I have seen two fields of wheat side by side, one looking far better than the other; but the other turned out the most grain.

In the second place, if fertilizers brought enough extra crop to pay on my farm, I would not get into the habit of depending on them too much. I would rather use them to get a good grain crop and a heavy stand of clover, on our poorer soils—to give me a start—and then depend on the clover and the careful saving of all home manures as much as possible. I would recognize the fact that I had to compete with thousands of farmers who had rich farms, and who paid out nothing for fertilizers, and that if I wanted to live as well as they, I couldn't give a large slice from every crop, to outsiders. Probably no ordinary farmer in Ohio, ever put on to an acre of land at one time in the shape of fertilizers as much real fertility as is contained in an acre of heavy clover roots. Should he attempt to cover his farm with chemical fertilizers, at any such rate, he would probably "not only have to mortgage it, but the sheriff would foreclose the mortgage and some one else would have a rich farm." But if he only uses a little fertilizer to give him a wheat crop and a heavy growth of clover, he gets his soil filled with fertility almost without cost, and can have a rich farm himself, particularly if he pay close attention to the saving of home made manure.

From the above can, perhaps, be gathered a hint why commercial fertilizers do not pay on my farm. After several years of careful experimenting I would not pay the freight on a car of fertilizers for all the good it would do. Three tons or more of clover roots per acre (dry weight, turned under once in three years, with what manure we can make, is heavy feeding. To buy what these clover roots contain would cost me hundreds of dollars a year on my little farm.

Now I state only what I know when I say that the farmers in the sections of Ohio where fertilizers are most used, almost universally waste more or less of the home-made manure under or around their barns. This loss in very many cases amounts to one-half or more. What sort of business management is this? So carried away do some get as to say that they can hardly afford to draw out their stable manure. Of course, when feeling in this way they will pay little or no attention to the saving of the liquid or most valuable part. What would they think of a dairyman who should milk his cows, set the milk, throw away the cream, save the skim-milk, and then buy his butter? But that is essentially what they are doing when they let the cream of their manure go to waste and then buy fertilizers.

DO I KNOW WHAT I'M TALKING ABOUT?

L. T. P., INDIANOLA, ILL.—While painting at the home of a wealthy farmer, he said:

"What will you paint about an acre of shingled roof for?"

Said I "it is not a desirable job; I'd as soon paint an acre of sod ground." For paper on which to figure the cost I stripped the wrapper from a copy of an agricultural paper. At the same time I remarked:

"That is a good paper."

Said he "if you think so, just tell the village postmaster to put it in your box. I don't want it to come here any more."

"Why did you subscribe for a paper you don't like?" asked I.

"I was up to the fat-stock show and I just gave a fellow a dollar to get rid of him and his paper. It has too much to say about the tariff." While he was telling me this I looked in the paper and the first lines that met the eye told of two years' satisfaction from painting the shingled roofs of the Michigan Experiment Station, with crude petroleum at a cost of nine cents per gallon. I got that paper into my pocket for fear he would see it, and said:

"I'll paint the roof for $1.50 a square (10 by 10 feet).

Said he, "heave ahead, I'll board you and your horses." To make a long story short, that one copy of a farm journal made me $112 on that job, and I've worked it many times since. But the tariff talk physiced him. If he had read it "for revenue only" and a knowledge of his business, it would have been money in his pocket. Has it ever occurred to you that mechanics regard their trade journals as sacred? How about the farmer and his trade journal? Has it ever occurred to any one that mechanics keep secret any trick or money-making device of the trade? How about the average farmer? We have fields here that have been in corn culture since the war steadily every year—only 24 years. Just hint rotation of crops and you'll be told to "shut up." I'm watching a few farms as a naturalist watches a cocoon,. to see just how long corn will grow profitably year after year on a sucked-out soil.

EFFECTS OF LIMING ON CABBAGE, POTATOES AND GRASS.

A. J., LINCOLN PARK, N. J.—In July last, I plowed up a rich strawberry patch, first applying a good dressing of manure; after plowing, I applied a good coat of lime; put fertilizers in the hills; then set out with cabbage plants, having taken the plants out of a bed where four to six seeds had been sown in hills. The whole patch produced the worst club-rooted cabbage I ever had. There wasn't a good head in the whole plot; while on other patches close by that I did not lime, and the soil of which was not so rich, I had splendid, large cabbages: not a club-root to be seen. I had not grown cabbage on the patch for nine years. Can it be the lime that caused the trouble? Henderson and others recommend lime for cabbage. Four years ago I planted four lands of potatoes. On two I applied lime; on the other two, none. Where I applied the lime I had scabby potatoes; on the other lands they were smooth. One of my neighbors had the same experience. My land is low, flat—a dark, sandy loam, well surface-drained. I can grow good crops; but the land naturally runs to horse sorrell. Early in the fall of 1887 I seeded down two acres with Timothy. At the time of seeding I applied 24 tons of New York horse manure. The ground had previously been well manured for cabbage and potatoes. The grass came up thick and grew finely that fall; in the spring of 1888 it started out well, but after growing to a hight of six to eight inches, the ends of the blades turned yellow, and the crop did not grow much more, although last season was a good one for hay. There was a considerable amount of horse sorrel in it. I had the same experience two or three times before. The cause is a mystery to me, for I can generally grow heavy crops of grass. Can it be that the land needs lime for grass; and could the lime cause the club-root in cabbage.

"FLOUR OF SULPHUR" *vs.* "FLOWERS OF SULPHUR."

L. B. F., MARLBORO, N. Y.—In a recent number of the RURAL NEW-YORKER mention is made of "flour of sulphur, more commonly known as "flowers of sulphur." This may not be intended to mean that the term "flowers" is incorrect, though some readers may so interpret it. There seems to be a wide-spread and not unnatural misapprehension concerning these expressions. The word "flour" describes the finely divided sulphur so perfectly that many people regard the term "flowers of sulphur" as a vulgar error. It is quite certain, however, that "flowers of sulphur" is at least historically correct; and the same expression is found in other languages than English. The Latin name of the substance is "*flos sulphuris*;" the French is "*fleurs de soufre*;" the German, "*Schwefelplumen*;" all of which means literally "flowers of sulphur." "Flour of sulphur" would be "*farina sulpharis*" in Latin "*farina de soufre*" in French and "*Schwefelmehl*" in German, expressions which the writer, at least, has never met. Similarly the term "efflorescents" is applied to crystals such as those of blue vitriol which crumble to a fine powder on exposure to the air. The adoption of the term flour in place of flowers of sulphur is an error similar to that involved in the present spelling of the words "causeway" and "sovereign" which are so spelled because of the existence of the English words "ways" and "reign" with which they have really nothing to do, being derived from the French words "*chausée*" and "*souverain*." Of course, the word "flour" is itself derived from flower, so that it is of little consequence which is applied to this form of sulphur, but it seems desirable to assure those who continue to call it "flowers of sulphur" that they are not thereby committing a vulgar error, but are using the correct name of the substance.

FRUITS AND FRUIT CATALOGUE.

P. H. R., DOWNIEVILLE, CAL.—Very many suggestions were made to my mind by the RURAL's late Fruit Special. What made it more particularly interesting to me is the fact that I have lately become possessed of a beautifully situated, but totally unimproved place in the lower Sierra mountains, and I am desirous of filling it with fruits of the best quality, and everything good or beautiful. Let me suggest that had the writers who contributed so much to the value of that special number, mentioned the peculiarities of climate as well as soil, necessary to the perfect production of fruits of which they wrote, what they said would have been of much more practical value—to me at any rate. Another point which remained unnoted was in regard to irrigation, whether all required the same amount of moisture in the soil. When I saw the caption of the article and the array of contributors, I felt as if that number would be worth $500 to me. Now I feel as though I should be compelled to lay out that amount extra, to make sure of getting the things best suited to my location. To make matters worse, I have lately examined one of the catalogues mentioned in the RURAL as coming from a firm "everywhere respected," and I find by comparing the last one with those one or two years old, that one "cut" serves to illustrate both the Crescent and Atlantic strawberries; another serves for Bubach and Jewell; while another "cut" *cut in two*, serves for the Ancient Briton blackberry and Lucretia dewberry.

PLANTING TREES FROM THE NORTH OR SOUTH.

"W," TYRONE, PA.—An old question in tree culture which still stands unsettled is whether one should prefer for planting, trees grown further North or further South. I received some young trees, (mostly peach) from a nursery in Huntsville, Alabama, where they had apparently just been dug from open ground, while here, at their arrival, the soil is frozen firmly 30 inches deep, and covered by 20 inches of snow, while the air is nearly at a frozen temperature. But they came in good condition from the close box in which they had been carried, and are now in sand in a cool cellar ready for the prime advantage of being set out just as soon as the soil opens and dries to admit of it. Looking at their bright, fully ripened wood, and their peculiarly numerous buds or short-jointedness, the old question came into my mind. It seems that in the South, where the season of growth is long and that of rest short, more buds are formed and better formed than in the far North, where growth, when it does commence, goes on with a rush, and the internodes or spaces between joints are longer, more slender, and less firm, owing to the hurry of the work, also fewer in number, owing to the shorter season.

ROAD WISDOM.

P. K. S., PRATTSBURG, N. Y.—"Brevities" deems it, in the RURAL of April 23, "unfortunate that the time for doing spring's work, and working roads," conflict. Do they? Should not the road work commence as soon as the frost is out of the ground while the land is too soft and wet to be plowed for crops? The tops of the knolls can then be easily plowed and the stones picked out and drawn, with those in the track and by the road-sides, to low places to build sluices and grade up the low places and be covered with the dirt from the knolls. More thought ought to be mixed with the work on the roads. I saw a "path-master" spend half a day with a team digging out a round stone from the beaten track at the foot of a knoll, and then he drew it to the side of the road to scare teams, when a little thought and half the work would have partly graded down the knoll and covered the stone beyond resurrection. Some farmers begin dragging a hill side, at the foot, and drag across and up as if they were plowing it with a side-hill plow. Is that the best way? If not, why not?

D. A. S., UNCASVILLE, CONN.—Starr's Beauty potato is a sport from the Early Rose, and is of nearly the same shape, but the color is more of a blush, and the vine leaves are more crimpy. I think it is a little earlier, and a much better yielder, as there are not half the number of small ones in the hill. I have planted it two years. Last season I planted on the same piece of ground, Early Maine, Early Sunrise, Early Rose, Empire State and the Starr, and the last were by far the best. They are not as mealy in the fall as the Rose, but more like Burbank's seedlings. This is my experience with *nothing* but Stockbridge potato fertilizer, last year, on land which had been in grass over 12 years, and the grass had run out.

What Others Say.

BASIC SLAG AS MANURE.—The London Agricultural Gazette alluded to a paper read by some distinguished specialist on basic slag as a manure. In it he entered into carefully-considered details relating to its manufacture and composition. He pointed out that this manure not only varies very greatly in its composition, the percentage of phosphoric acid ranging from 10 to 20, that of lime from 40 to 60, that of ferrous oxide from eight to 10, and that of manganous oxide from four to five, but the presence of considerable proportions of oxides of iron and manganese he represented as a great draw-back to the benefit which otherwise might be expected from the use of basic slag. He referred to a number of patented processes for freeing the manure from these objectionable oxides and producing a more soluble fertilizer, and until one of these methods has been proved successful, he said he could not advise farmers to give up superphosphate in favor of basic slag. He specially warned them against mixtures of slag and superphosphate. The best sample of this slag he believes to be precipitated phosphate, containing close on 70 per cent. of lime, without anything injurious in it, and in all respects a good article. The process by which this manure is prepared is the invention of Scheibler, a German chemist, and a considerable trade in the preparation is done on the Continent, German buyers taking all the basic slag they find available in this country. After all, then, the desired conversion of basic slag, as far as safety in its use is concerned, appears to have been accomplished.

SKIM-MILK AS A FOOD FOR HOGS.—Prof. Henry says, in the Breeder's Gazette, that 1,000 pounds of average milk contain:

	POUNDS.
Caseine	32
Fat	36
Milk sugar	45
Mineral matter	7

Removing the cream in skimming takes away all of the fat except three or four pounds, but the caseine, milk sugar and mineral matter are practically all left in the skim-milk, together with the residue of fat. Nature designed milk for the young calf, and it contains elements for the growing of the hide, hair, bones, and muscles as well as fat, so that the animal can be developed symmetrically. In removing the fat, we have taken out the principal constituent of the milk, which goes to make the fat of the body, but have removed little or none of the muscle and bone-forming elements. It is evident, then, that although we may have thought skim-milk a very poor article of food, since to our own taste cream seems the best part of it, it is in reality very nutritious, and may be made very valuable on the farm for feeding purposes if properly managed. To get the best results from it we must remember what is left in the skim-milk after the removal of the cream, and endeavor to supply the lacking part so as to bring it back to something like its original composition. In skim-milk are the elements for the bones and muscles of our farm animals, but there is a lack of fat and energy food. Indian corn supplies this for the least money, and so combinations of Indian corn and skim-milk will be found to afford a most economical ration for young pigs, shotes, and breeding stock where good bone and muscle are essential to the highest results.

A NEWLY-DROPPED CALF.—Prof. Robertson, according to the Farmers' Review, says that the calf born between September 1, and December 1, is the best to raise. It gets a good start before winter, winters well, and in the spring grows finely. A cow should lick a calf for at least half an hour when it is first dropped; this will set the heart to working properly, start digestion and put the whole system in proper operation. A calf, either bull or heifer, should show a good escutcheon. In a cow, other points may be seen from which to judge; the teats should be set wide apart and stand out like four legs on a properly made stool. The shape of a calf may be largely changed by feeding. If kept fat it will develop a rounded body, while if fed so as to heep healthy and growing, it may be molded into the desired form for a dairy animal. It should have its mother's milk the first three or four days, as it is designed by nature to set the calf's system in proper condition. After it is a week old it should have sweet, skimmed milk, and be fed dry, ground oats. Eating the ground oats dry produces saliva to aid digestion, insures a healthy system and stimulates growth and good habits. After it is from one to three months old, it may be fed to develop its digestive organs. It should then have plenty of very digestible food of a kind that will aid in forming bone and muscle and add to its general growth—not of a kind that will develop fat. Thus a large deep belly will be developed, a desirable feature for a dairy cow.

WIDE-AWAKE ITEMS.

MR. BOWKER says that any one who will guarantee the concern with which he is connected, a net profit of two dollars per ton of fertilizers on the output of his factory for 10 years, may have any surplus which accrues above the amount.....

Two dollars a ton on a $40 fertilizer would be a five-per-cent. profit. On a $20 fertilizer it would be a 10-per-cent. profit.....

DR. HOSKINS says, in Garden and Forest, that he has for several years been interested in a little native plant found, according to Mr. Pringle, in few localities in Vermont—the Strawberry Blite—Blitum capitatum. Spinach will not winter in his grounds, but the Blite does not mind the cold, however severe; and as it starts into growth the moment the snow departs, it makes as early greens as the dandelion, and to his taste quite as good as spinach. The Blite is a pretty persistent weed, so far as reproduction from seed goes; and the seeds are almost as small and quite as numerous as those of purslane, yet it is easily killed with the hoe. The brilliant crimson color of its pulpy but insipid fruit, with its abundance, makes the Blite a pretty plant in the flower-garden, when well grown, and, we may add, these brilliantly colored fruits last for a long time.....

MRS. KEDZIE, in the Industrialist, Kansas, reports that she buried some butter in a jar last May, eight feet deep in the ground, and has but lately dug it up, and found that while it had "aged" it was still as far from rancidity as when first buried. The color was still the same as when first made. Still it was not quite as palatable, for table butter, but for other uses it is believed, by her, to be quite as good as the fresh-made. Hoard's Dairyman guesses, that it would prefer to submerge it in pure brine, and keep it in a cool cellar..

THE R. N.-Y. is not certain as to the yielding powers of Boley's Northern Spy potato. Its shape will condemn it.....

AND the same may be said of Monroe County Prize.....

PROF. W. J. GREEN, of the Ohio Agricultural Experiment Station, says (in the Ohio Farmer) that the Early Oxford potato is not widely known, but it gives indications of being the most productive variety of the Early Rose class.....

THE OHIO JUNIOR gave lower yields in nearly all cases at the above Station than any other early variety, except the Early Ohio, the two being about equal in productiveness. As compared with Early Oxford, it stands 106 to 200 in three trials, or little more than half in point of productiveness. Empire State and Summit stand at the head of the list and are about equal in prolificacy. Taking the evidence of these trials, Mr. Green ranks some of the standard varieties in the following order as to productiveness: Empire State, Summit, Early Oxford, Pearl of Savoy, Potentate, Puritan, Lee's Favorite, Early Rose, Charles Downing, Early Standard. Early Albino, Early Ohio, Ohio Junior.....

THE following appeared in the R. N-Y. of recent date:

"Mr. C. S. Cooper thinks well of the Patagonians. He is an experienced poultry raiser. His eggs were received from the same source as were the RURAL'S eggs. These, as our readers know, gave us a grand mixture." To this Mr. Cooper replies:

"Your notice of my Patagonians may mislead the reader. From the eggs procured from Samuel Wilson I did not get one pure-

bred chicken. I killed them all for the table. The stock I am breeding from were bought from N. B. White, Norwood, Mass. .....

PURE RICH MILK diluted with 20 per cent. of water will indicate by the lactometer test precisely the same as the standard quality of milk, says the dairy authority, Henry Stewart. Skimmed milk with 10 per cent. of water will indicate by this same test precisely the same as pure rich milk unadulterated, while the richest strippings will indicate a poorer quality than skimmed milk with 20 per cent. of water when tested by the delusive method of the lactometer. It is very clear, then, that this instrument in the hands of an official who does not understand its character, is worse than useless, and may be made the means of the gravest injustice and injury to an honest dairyman, while a dishonest man may actually use it to cover up and conceal a large adulteration. For it is quite easy for such a person to add salt or soda to the milk and an emulsion colored so as to give the viscidity and appearance of pure rich milk, and so pass off skimmed milk upon the public without detection by this illusive test of the lactometer.....

A LACTOMETER is no "lactometer" at all; it can no more measure the quality of milk than a barometer can. Its use is to ascertain the specific gravity of fluids, and as skimmed milk is heavier than pure milk, and the richer the milk is in cream the lighter it is, it is easily seen how unjust and misleading this instrument may be when applied as a test of the quality of milk.....

THE UNIVERSITY OF ILLINOIS EXPERIMENT STATION last year planted corn from one to six inches in depth. The largest yield was from the row planted one inch deep; the next largest from the row planted three inches deep and the least from the row six inches deep. The best depth to plant, so the bulletin says, will depend largely upon the temperature, moisture, and mechanical conditions of the seed-bed at the time of planting—three conditions which are, probably, rarely exactly similar in two different places or seasons. In the above experiment, these conditions were all favorable to the early growth of the corn plant; and in such a case the depth of planting, between one and four inches, would make but little difference.....

THE above station found by one series of experiments that shallow cultivation for corn gave better results than no cultivation and that no cultivation was better than deep cultivation.....

PROF. MORROW says that great as are the difficulties of obtaining satisfactory results with small plats, there are even greater difficulties with large plats. It is much easier to obtain like conditions of soil with 80 one-fortieth-acre plats than with 80 plats of an acre each. The expense of testing the requisite number of varieties in other directions than that of the yield per acre would, of course, be great on large plats and probably not commensurate with the results.....

JUDGING of a single experiment made by the Mississippi A. E. S, it would appear that salt fed to cows increases the flow of milk.....

ANOTHER TRIAL shows that a gain of 244 pounds of milk was made with five cows in two weeks, or 2½ pounds a day, when milked by a thorough milker as compared with the results of the same work done by a careless, indifferent farm hand.....

AN IOWA DECISION invalidates all notes given for Boheman oats.....

PROF. A. J. COOK, as reported in the Farmers' Review, knowing the decided preference of the curculio for the plum, advocates the planting of plum trees in the apple orchard. The curculios will collect upon these trees and can be destroyed much more easily than if scattered over the whole orchard. The best method of destroying the curculio seems to be to spray the tree very thoroughly with a mixture of one pound of London-purple to 200 gallons of water; although if the object be simply to drive the curculio away a mixture of one pint of carbolic acid with 50 pounds of plaster, thrown over the tree, seems to be quite effective. The first spraying should be done just as the blossoms are falling, and should be repeated twice at intervals of about 10 days. The importance of not spraying until the blossoms had fallen, because of poisoning the honey bees, was emphasized in the address.....

BREED AND FEED to a cow, as Prof. Robertson puts it, are like two wings to a bird—one alone is of little use. The simile might well be applied to partial fertilizers when put on land that needs a full ration.....

SEC'Y FITCH, as reported in the N. E Farmer says that the cost of milk on the farm is not less than three cents, the cost of selling is about two cents, leaving three cents of the amount paid by the Boston consumer to be divided as profit. Of this the contractor takes one cent, the peddler two cents, and the farmer gets what is left,—nothing.....

Cows can be kept continually on silage without pasture, says Mr. Gould in the Ohio Farmer. In his recent trip to New York he met Mr. Rodgers, of Binghamton, who has 95 cows that have not seen any pasture for five years. They eat silage and about three pounds of clover-hay per day for 365 days in the year. The cows were certainly fine ones, and when one by chance drops out of the dairy she is soon made fat enough on silage and bran, for the butcher.....

DIRECT.

——FARM, FIELD AND STOCKMAN: "It occurred to me several years ago that soiling cattle from the green crops that grew upon the land could be done with less expense than to pasture the herd. Of course, many will think that this is a poor way of keeping cows, and we often hear the stereotyped objection, 'They ought to have some exercise.' I am satisfied from my own experience, and it has been proved by repeated experiments, that animals that chew their cud do not require exercise other than the exercise of chewing."

——HUSBANDMAN: "When the price of onions falls below 20 cents per bushel it will pay to feed them to stock."

——BREEDER'S GAZETTE: "A good cow gives not less than 5,000 pounds of milk annually, from which there are taken out, say, 250 pounds of butter, all of the remainder being either skim-milk or buttermilk. Valuing this at 25 cents per 100 pounds, we have about $12 to represent the value of this by-product, a sum which should stand to the credit of the cow. The dairy farmer should make pig-raising and hog-feeding an adjunct to his business, and will find no small part of his profits come from this line, if it is managed intelligently."

——COLMAN'S RURAL WORLD: "Why every man praises his fellow to his face and condemns him to his back, is more than we can tell."

——PUCK: "About the N. Y. Board of Aldermen nobody has any delusions. It is mainly composed of irresponsible men of no character—many of them liquor-dealers They buy their places with money and patronage, and they themselves, for the most part, may be bought singly like cabbages or in bunches like radishes."

——DR. JAMES LAW: "I strongly advocate preventing in some way the damage done by horns."

——PROF. GEO. H. COOK: "Some varieties of wheat will yield five, 10 or even 20 bushels an acre more than others."

——W. H. BOWKER: "Fertilizer firms can not manufacture anything equal to stable manure. It should, however, be applied in its crude state, because the farmer cannot afford to compost it.'

——SUPPOSING that a ton of stable manure contains about 25 pounds of actual plant food, we cannot afford to haul the 1,975 pounds very far for the 25 pounds of actual plant food. In this estimate the value of the manure to the soil mechanically is not considered.

Horsford's Acid Phosphate

Makes Delicious Lemonade.

A teaspoonful added to a glass of hot or cold water, and sweetened to the taste, will be found refreshing and invigorating.—*Adv.*

Miscellaneous Advertising.

Scrofula

Probably no form of disease is so generally distributed among our whole population as scrofula. Almost every individual has this latent poison coursing his veins. The terrible sufferings endured by those afflicted with scrofulous sores cannot be understood by others, and their gratitude on finding a remedy that cures them, astonishes a well person. The wonderful power of

Hood's Sarsaparilla

in eradicating every form of Scrofula has been so clearly and fully demonstrated that it leaves no doubt that it is the greatest medical discovery of this generation. It is made by C. I. HOOD & CO., Lowell, Mass., and is sold by all druggists.

100 Doses One Dollar

JOHNSON'S ANODYNE LINIMENT ESTABLISHED 1810.

For Internal and External Use.

Stops Pain, Cramps, Inflammation in body or limb, like magic. Cures Croup, Asthma, Colds, Catarrh, Cholera Morbus, Diarrhœa, Rheumatism, Neuralgia, Lameback, Stiff Joints and Strains. Full particulars free. Price 35 cts. post-paid. I. S. JOHNSON & CO., Boston, Mass.

HOW "TIPPECANOE" HARRISON WAS SAVED.

THE battle of Tippecanoe was fought November 5th, 1811, in Indiana, on the banks of Tippecanoe River, on the site of the present village of Battle Ground, between the Americans under General Harrison, and the Indians under the Prophet, Tecumseh's brother.

After the famous battle until the end of his days General Harrison, grandfather of President Benjamin Harrison, was known by the loving sobriquet of "Tippecanoe."

Following his brilliant achievements in arms, now more than three-quarters of a century ago, General Harrison, together with many of his troops, was stricken with disease contracted through lack of proper food, and exposure to the miasma of that section of Indiana, and for a time his life was despaired of. Several of his command lay for weeks suffering the horrors of disease upon the banks of the Tippecanoe River, which rises in a lake of the same name in the northern part of the State, flows southwest 200 miles and empties into the Wabash, nine miles above Lafayette. General Harrison's troops were threatened with decimation, and the skill of the army surgeons was employed in vain to combat a more terrible and deadly enemy than even the hostile aborigines under Tecumseh's brother.

But relief came at last.

General Harrison very sensibly concluded that residents of the neighborhood—nay, the Indians themselves—knew nature's specific for the disease which had prostrated him and many of his command, and instantly set on foot inquiries with a view to ascertaining and applying the remedies. They were speedily found and put to test, and worked like a charm. Under their use the stricken soldiers were promptly restored to their wonted good health and vigor.

The medicines were preparations of simple roots and herbs, based upon very old-fashioned but effective and natural formulæ. Their intrinsic merits have been known and utilized for generations among people living in remote and malarial sections of the country.

Many of these invaluable formulæ have within the last two years come into possession of Hon. H. H. Warner, president of the Rochester Chamber of Commerce, owner of the largest proprietary medicine manufactory in the world, and whose Safe Remedies have conferred a lasting boon upon mankind, being recognized as standard medicines throughout the civilized globe.

In 1887, Mr. Warner, after careful experimenting and trial put upon the market Warner's Log Cabin Remedies, based upon the formulæ which have cured thousands of debilitated sufferers, not only on the banks of the "Tippecanoe," as above related, but everywhere where introduced.

These Log Cabin preparations are designed for an entirely different order of diseases from those to which the Safe Remedies are applied. They are Warner's Log Cabin Sarsaparilla, Warner's Log Cabin Cough and Consumption Remedy, and Warner's Log Cabin Hops and Buchu Remedy. Suffering flees before them as a pestilence flees before the purifying breath of heaven, and they are sold everywhere.

IF YOU WANT **Best Farm Boiler** EVER MADE

For Cooking Feed for Stock, Heating Milk or Water in Dairies, Small Cheese Factories; for Bath-Rooms, Laundries, Scalding Hogs, Etc., address J. K. PURINTON & CO., Des Moines, Iowa.

I HAVE A WELL IMPROVED FARM of 720 acres in Cowley County, Kansas. Railroad through corner. Cost $25,000 00. Will sell for $17,000.00, easy terms. Poor health is the reason. Address E. L. WHEELER, 406 Alamo Building, Kansas City, Mo.

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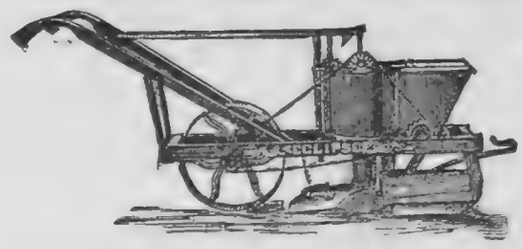

Will plant Field and Ensilage Corn, Beans, Peas and Beet Seed in **hills, drills** and **checks**—in hills up to 45 inches; in checks from 36 inches up to any distance desired. Will disiribute all Fertilizers **wet** or **dry**. Farmers, send for circulars.
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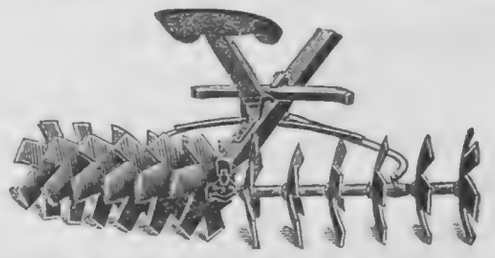

10,000 in use; supersedes the plow; no other tool compares with it; no farmer can afford to be without it; entirely new principles; ground made into a perfect seed-bed; has a seeding attachment for sowing all kinds of grains. Send for new descriptive circular.
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Sole Manufacturers. New York Office, 189 and 191 Water Street; Boston Office, 38 South Market Street.

GROWERS AND DEALERS IN SWEET CORN, ATTENTION! Genuine Connecticut grown Stowell's Evergreen Sweet Corn by express, $2.25 per bushel, $1.25 per half bushel, 75c. peck
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Write to S. S. READ, Toledo, Ohio, for prices.

CHOICE NORTHERN GROWN SEED POTATOES
Early Albino, New Queen, Sunlit Star, and **Hampden Beauty**, for early: **Empire State Morning Star, Thunderbolt,** and **White Lily**, for late. Also, nearly 100 other varieties. Catalogue free to all who mention the R. N.-Y.
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LARGE ENGLISH BERKSHIRES
Catalogues free. Reduced express rates.
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BOYS & GIRLS Adventure stories by Ellis, Otis & Kingston, 4 weeks for 10c. silver GOLDEN DAWN, Detroit, Mich.

MACOMBER'S CORN & BEAN PLANTER
Best and **Cheapest** on earth. Send for Circulars.
S. M. MACOMBER, Adams, Grand Isle Co., Vt.
Gen'l Agents, { A. C. STODDARD, N. Brookfield, Mass. ROLLINS BROS. & Co., Chicago, Ill.

Corn Fertilizers $20 PER TON. Sold to Farmers direct from our Works. No agts. **YORK CHEMICAL WORKS,** York, Pa

WM. ROBERTS, M. D. Physician to the Manchester, Eng., Infirmary and Lunatic Hospital, Professor of Medicine in Owen's College, in speaking of kidney disease, says: "One-third die of uremic (uric acid), poisoning. A considerable number of dropsy. One-fifth from secondary pneumonia, pericarditis (inflammation of the heart sac), or pleurisy, exhaustion, indigestion, or the complications of apoplexy, hardening of the liver, bowel ulcers, etc." The foregoing are only a few of the common symptoms of advanced kidney disease, and this explains why Warner's Safe Cure cures so many different symptoms, called diseases, and why it has such popularity. Ask your friends and neighbors about it.

INSECTS NAMED by Eberhart's Key. Only one published. Arranged like a key to plants. Illustrated, 25c. How to Collect and Mount Insects (illustrated), 8 cents.
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The regular course of Lectures commences in October of each year. Circular and information can be had on application to
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THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
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Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, MAY 11, 1889.

THE price of New York and Brooklyn manure has been steadily going lower for several years. This is accounted for by the fact that the quantity of chemical fertilizers used is increasing every year.

The Osage was the leading musk-melon in Chicago in 1887, *as well as during last year, bringing* 50 *to* 100 *per cent. more than other melons.*—See MR. FOOTE'S article on melon growing, page 312.

President Chamberlain's anti-monopoly articles have seemed to the R. N.-Y. forcibly interesting and they ought to do good· they ought to set people to thinking and to acting. The article this week is the last of the series.

"IF square, hard work shall make my work a success here, my friends will not regret their efforts to get me into the place." So writes the earnest, conscientious Assistant Secretary of Agriculture, Edwin Willits, the late President of the Michigan Agricultural College. Success to you, Mr. Willits, and to Secretary Rusk. We need good, true men in your positions; we need them badly.

MR. T. C. ROBINSON, of Ontario, Canada, writes as follows:—

"I have nothing but good to say of the RURAL. It preaches just the sort of Gospel of Agriculture that I need. I would rather pay $10 a year than be without it. It is worth more to me than all other agricultural and horticultural papers published in your vast empire, combined—so far as I have seen, and I have tasted all the cream."

TEN years or more ago the R. N.-Y. raised many different kinds of so-called cow peas. This crop has been commended for silage purposes. As stated at the time, our cows and horses refused to eat the vines and leaves. Cow-pea hay in the South has a value, as we all know, and the R. N.-Y. stated the fact with hesitation. Now, Professor Shelton, of the Kansas Experiment Station, says, in a late bulletin, "Our cattle refused to eat this forage, either green or cured." Doubtless, as with Prickley Comfrey, farm animals may be educated up to relishing this fodder.

THERE are several varieties of the Purple barberry that hold their purple color during the summer just as well as does the Pissard's plum, and for color of foliage and shapeliness of bush alone, we should prefer the barberry A large proportion of Purple barberry seedlings will have purple leaves. A R. N.-Y. seedling bears leaves as purple in midsummer as in early spring. But Pissard's plum bears plums—small, of a peculiar flavor, it is true—but plums that are relished by some when eaten raw and by all when canned or stewed. Now this plum is the nearest to curculio-proof of any variety ever raised by the R. N.-Y. In fact, it is the only variety we have ever raised that matures its fruit unless the jarring method is resorted to.

Bishop Potter: "The growth of wealth and the prevalence of luxury, the massing of material forces, which, by their very existence, are a standing menace to the freedom and integrity of the individual, the intense swagger of the American speech and manners, mistaking bigness for greatness, and sadly confounding gain and godliness—all this is a contrast to the austere simplicity, the unpurchasable integrity of the first days and first men of our Republic, which makes it impossible to reproduce to-day either the temper or the conduct of our fathers."

THE R. N-Y. has planted two acres of potatoes on the trench system—one acre to Rural New-Yorker No. 2, and the other to Brownell's Winner. On one acre nothing but chemical fertilizer was used, while on the other stable manure was added to the fertilizer. One acre is on an upland, while the other is on lower ground that rarely, if ever, suffers from drought. The planting of the last acre was quite "a family affair." The wife of the family cut potatoes, the hired girl and the young lady visitor dropped the seed-pieces, the hired man scattered the fertilizer, while the "head of the family" filled in the trenches. The horses were just as interested as anybody, the cow looked over the fence in evident appreciation, and the dog seemed willing to give the whole thing his general supervision We all had a good time and went in to supper with surprising appetites.

A JERSEY cow runs in the pasture at the New Jersey farm. Three of the neighbors' cows run in the same field. Thus all the cows eat the same kind of grasses. Grain for these cows is bought at the same place so that we know they get the same kind of grain feed, and they all drink from the same stream. Is the milk or butter made by these cows the same? One might say it ought to be since the food and water are exactly alike for each cow. But, no! The butter made by the Jersey is at least 10 shades darker than that made by the grades and a quart of her milk will make, by actual test, 25 per cent. more cream than a quart from either of the other cows. We can understand why one cow should make richer milk than another—it is impossible to make the Jersey fat, while the other cows are easily made fat enough for beef—but what we cannot understand is that the Jersey should make butter of a deep, rich yellow, while the other cows, from the same food, make light and pale yellow butter.

ANIMALS seldom forget bad habits. Many farmers know this to their sorrow. Halter-breaking horses, fence breaking cows, jumping sheep, and sheep-killing dogs seldom forget how to perform their mischief. One cannot be too careful in the training of a young animal. Firm, yet gentle treatment with a watchful carefulness that makes it impossible for an animal to take advantage of weak halters, broken fences or other helps to mischief should always be employed in the rearing of young animals. Scotch farmers report some curious instances of the disastrous effects of teaching undesirable habits to sheep. In the Highlands of Scotland the sheep are expected to pick their own living during the winter. In ordinary seasons they will do so successfully. Now and then an unusually severe winter occurs, and farmers are compelled to feed hay or even grain. The sheep never forget this extra feeding and expect it ever after. They will not hunt for their food as formerly, but will stand about waiting to be fed even in mild winters. Some farmers are actually compelled to sell such sheep, and buy others that have not been winter-fed.

WHAT are to be the duties of the Assistant Secretary of Agriculture? Secretary Rusk has just defined them. The following Divisions of the Department of Agriculture and Sections thereof are assigned to his charge subject to the reservations mentioned: The Botanical Division and Section of Vegetable Pathology; the Pomological, Microscopical, Chemical, Ornithological, Forestry and Entomological Divisions, together with the Silk Section and the Office of Superintendent of Experiment Stations. The Assistant Secretary will, in general, control and direct the scientific policy and operations of these Divisions and Sections, and all questions and correspondence involving their scientific work will be submitted to him for approval and signature. All such scientific matters, however, in which questions of administrative policy are involved, though primarily subject to the consideration of the Assistant Secretary, are to be submitted to the Secretary for his approval before final action is taken. All matters considered by and all matters originating in any of the above Divisions, in which administrative features or policy are involved will be referred to the Secretary himself. The investigations and experiments in the manufacture of sugar from sorghum are excepted from these rules. The actual work, it is seen, will be under the direction of the Assistant Secretary; while the general management remains in the hands of the Secretary.

THE old battle of the farmers against the union of the State Agricultural College with the State University, or rather the absorption of the former by the latter, raged in the upper branch of the legislature of Minnesota the other day, and once more the farmers were defeated. It was contended on their side that the college ought to be separated from the university, and "carried on according to the original design of the General Government." It was bitterly urged that while the university now gets a large proportion of its support from the Government grants for the college, the former flourishes owing to the paramount consideration it receives; while the latter is dwindling and decaying from sheer neglect. The students at the university, who are, in reality, beneficiaries of the college, affect to sneer and despise the students entered at the latter—the puppies affect to bite the hands that feed them. As the college is kept now, there is nothing to show that it is worth anything; whereas if it had its due, its assets would amount to $1,200,000, and it would be able to run alone without help from the State. Every argument urged against the separation of the two was a plea in behalf of the university—not one cogent reason was adduced in support of any possible benefit to agriculture from the union of the two bodies. It is to be hoped that the advocates of such unions in other States have more honest arguments against separation than those urged by the Senators of Minnesota.

OUR COUNTRY.

NEW YORK City has just finished a most remarkable week. It is doubtful if ever before in the history of the world, any city served as the vent for such a wave of patriotic enthusiasm as came sweeping in from all over the country. It was a week to make Americans doubly proud of their heritage. It was a time calculated to warm the blood of old men; it recalled memories of brave days and noble deeds when history was made at lightning speed. It was a time calculated to fill the minds of the young with patriotic inspirations, and fit them the better for the duties which the future has in store. The city was one vast array of flags. Wherever the eye could turn our beautiful banner flashed into view. And what a magnificent procession was that which passed through the city's streets! It is our policy to cultivate the arts of peace. Foreign nations laugh at our military strength, and yet who that saw the crowds of citizen soldiery passing up Broadway could not realize that every man in the ranks would be followed by 50 others if the country demanded them? And the industrial exhibition was the most surprising of all. Side by side with the rude implements in use 100 years ago, came the marvelous productions of modern times. The growth of industry was shown step by step and the revealing of this wonderful growth was like the revealing of a miracle.

Verily it is a blessed privilege to be known as an American citizen. We live in a goodly country. Witnessing such celebrations, or reading and thinking about them, gives one a broader view of life, and fixes more clearly in mind the great thought that the strength of this great country of ours is founded, not upon the deeds and plans of a few leaders, but upon the right thinking and right acting of millions of common people.

A SHREWD GAME.

THE R. N.-Y. wished to make its Hay Special as complete as possible. There are multitudes of haying tools on the market. Dozens of different mowers, rakes, forks and other implements are offered for sale. "Which one shall I buy?" Farmers often ask this question, and it is one of the hardest questions to answer, because it seems so hard to get an honest opinion from those to whom we are obliged to refer. The R. N.-Y. has not tested all the haying tools that are offered for sale. We are frequently forced to refer questions concerning this or that tool to farmers who ought to be capable of giving a conscientious opinion. We wrote Mr. A. C. Glidden, a well-known writer on agricultural topics, asking him to give a list of the haying tools he had found most useful. Shortly afterwards, the following letter came to hand:

"Gentlemen: We have a letter from A. C. Glidden, in which he says he has received an order from you to write an article on haying tools to be published in your Hay Number. He says he will mention the Eureka as *the* mower, if we will send him $25 at an early day; but if we do not he will mention the McCormick center-draft mower. We do not propose to be blackmailed, and would not under any circumstances submit. EUREKA MOWER CO."

Mr. Glidden was at once asked to explain. His explanation is to the effect that the Eureka Mower Company have not treated him fairly, as he believes, and that he proposed to "get back onto them," and he thought this was a good chance to do so.

The R. N.-Y. has nothing to do with any business difference between Mr. Glidden and the Eureka Mower Company. It is opposed to all schemes for blackmailing or for disguised advertising. If we cannot publish honest, square and conscientious opinions regarding implements, tools or farm methods, we will know the reason why. We do not care for any more communications from Mr. Glidden. We give this case prominence for two reasons: 1. We want our readers to understand that we propose to do our utmost to secure honest and trustworthy reports. 2. Writers who propose to attempt to use the R. N.-Y. as a medium for the payment of private grudges or for stealing free advertising are warned that they will have to stand the consequences. It will be well for readers to bear these facts in mind since many agricultural papers are just now full of just such articles as Mr. Glidden would have sent us.

"We always feel suspicious and doubtful of a woman who does not care for home and home life; there is something lacking. And it is noticeable that love for, and pride in a home, will keep a woman to the right when other influences fail. Let us encourage this home feeling, by all means, for it is one of the safeguards of the nation."—EMILY LOUISE TAPLIN'S Department last week.

BREVITIES.

ALL ABOUT HAY NEXT WEEK.

IN the R. N.-Y.'s estimation nothing is gained by cutting potatoes until planting time.

ON page 312 will be found the views of a number of ensiloists regarding the economy of ensilage machinery.

YOUR cows should be able to give 10 times their weight in milk every year. That is the ideal you should breed for.

THE past winter has given little opportunity to test the hardiness of new plants. All sorts of blackberries at the Rural Grounds are alive to the tips.

"LET the public grumble to some purpose or else stop grumbling. Let the watchword be, a maximum of efficiency, a minimum of cost." Pres. Chamberlain's anti-monopoly articles.

WHAT a fortune awaits the manufacturer who shall first perfect a machine that will cut grain and bind it with a straw band! The "Twine Trust" would soon starve out with such a machine in the field.

DR. T. H. HOSKINS has originated a cross between the Blue Squaw corn of Dakota and his Early Dean Sweet, which is as sweet as the Black Mexican and as early as Cory. The color is nearly that of the Mexican.

WE are going to sow a good quantity of the Thoroughbred Flint corn in drills. This will be cut for the cows during latter July and August. We do not care if the cows stay in the barn all day during the very hot weather.

"IF our government cannot compel these corporations to serve the people economically, impartially and well, it will have to revoke their charters, refund their actual capital and itself do the work they refuse to do economically and properly."

SEVERAL readers of the R. N.-Y. have discussed the wisdom or folly of burning straw. Some pretty strong terms have been used on both sides. The men who advocate this practice will be likely to be a little staggered when they read the "discussion" coming next week.

IF you can raise 20 bushels of potatoes on one-fortieth of an acre, how much more fertilizer or manure and culture can you afford to give the plot than if you raise five bushels? The one is at the rate of 800, the other at the rate of 200 bushels to the acre. Moderate this somewhat and let the question be for acres instead of plots.

WE had always been taught to turn the cows out every day during the winter for exercise. When a boy, the rule, as we now remember it, was that the cows should have exercise, no matter if they froze their horns in getting it. Of late years we have never turned the cattle out on very cold days. During the past winter a German workman insisted that the cows would be better if they were kept in all the time. As he had shown good judgment in other things, he had a chance to prove his statement. We are now compelled to say that the cows are certainly just as well off for not going out of the stable.

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

WASHING AND IRONING

Colored Cotton Goods.

TO PREVENT FADING.

SPEED.

Starch-Water Instead of Soap. Bran and Hay Water. Soft Water.

Soap In the Water, Not on the Goods. Dry in the Shade.

Irons Must Not be Too Hot. Iron on the Wrong Side.

Salt, Beef-Gall, Borax, Alum, Vinegar and Sugar of Lead to Set Colors.

Gum-Arabic, Glue and Coffee for Dark Goods.

FROM MRS. A. BATTLES.

The following mode I have had practiced in my family for the last 30 years. It has proven equally successful in washing colored goods of the most delicate colors and finest material as well as those part wool and part cotton. For washing clothing of this kind, we use a *starch water*. I suppose every one knows how to make starch from flour, but as I like, when reading how to do wo k, to have the directions given plainly and fully, I shall endeavor to do so with mine.

Put a kettle on the stove with six quarts of water in it. While the water is coming to a boiling heat, put three pints of flour in a pan, with cold water enough to make a paste; stir until it is free from lumps; pour into hot water and stir until it boils again. Pour half of this starch into a tub, add soft, warm water sufficient for the quantity to be washed. Where the clothes are much soiled, rub some of the thick starch in place of soap. Allow them to remain in the water only long enough to wash; rinse, and starch as speedily as possible. Wring them dry and turn the wrong side out. In summer dry in the shade, and in winter where they will not freeze. For clothes of fine material and with a white ground or for delicate colors, I use laundry starch slightly blued. For blue prints, ginghams or any goods the colors of which are fast, we use a good quality of hard soap, but we never use *soft soap* on any of our colored cottons. Put salt into the water in which black and white goods are rinsed, as it prevents the colors from running. After sprinkling, allow them to lie only long enough to dampen through. We use Mrs. Potts's sad-irons. Iron the clothes on the wrong side, as that makes them look more like new, being careful that the irons are not too hot, as that injures the colors. Rub and press until the articles are perfectly dry.

FROM MRS. N. D. M.

For delicate colors, I make it a rule to wash quickly, with as little soap as possible, and that dissolved in the water, not rubbed upon the clothes. I never wash prints and ginghams in the suds after white clothes, as that makes them look dingy. For any garment reasonably soiled washing in one suds is sufficient. I rub as lightly as may be on the board, after rubbing between my hands, as in too close an acquaintance with the washboard dainty tints and patterns are likely to suffer. Rinse thoroughly, turn each garment inside out, starch—not very stiff—and dry quickly. When dry, damp, roll tightly, and let them lie until the flat-irons are just hot enough to smooth the cloth; an iron too hot is likely to injure delicate colors. For dark and bright colors one must do differently. I will tell you how I laundried a brown-and-gold print recently, and I think the same treatment will do nicely for all dark colors. In water enough to cover the dress well, I mixed a fresh beef gall and let the dress lie and soak in this half an hour. Then I washed it thoroughly by squeezing it in my hands, rubbing it carefully around the neck and sleeves and bottom of the skirt. I rinsed it well in clear, warm water, and then again in another water in which had been dissolved a piece of glue as large as two fingers. I dried it at once on the clothes horse in the kitchen, and when just dry enough to iron nicely, I rolled it while the irons were heating and pressed it at once on the wrong side, and, lo! my dress had regained all its pristine freshness.

FROM J. L. K.

THE weekly washing must be done, and done with th' assurance drear, that 'twill be repeated 52 times every year, for, like Tennyson's brook,

"Men may come and men may go
But we go on forever,"

or, in other words, we are forever washing, ironing, baking, etc. Nothing is denied to well directed labor, and nothing is ever to be obtained without it. There is complete satisfaction in contemplating the weekly washing after it is hung on the line, especially if it was our labor that produced this immaculate cleanliness. It should therefore be our constant study and aim to bring forth the best of results, with the least labor, so that we may have more time to spend in our favorite pursuits.

To wash colored cotton goods so as to prevent fading, I make suds of "Jaxon" soap, rub them in this, wring and put them in a tub of clean, warm water, turn each garment and rub again through this; then, if I wish them to avoid that stiff, shiny, fresh-from-the-laundry look, I put cooked starch in the bluing water; then hang on the line, wrong side out, and those garments which are the most liable to fade, should be hung in the shade.

For black cotton, or those goods which are bound to fade any way, a little salt thrown in the water will help to keep the color in the fabric. I think one secret of success is this: not to let the garments remain in the suds, and not to rub soap on them. Colored cotton should be always ironed on the wrong side; but our blue morning gowns, red table-cloths, and a few other things will look almost as well, and certainly do their duty as well, if they never feel the hot breath from a sad-iron, and the time that we would spend over the ironing-board, can be profitably spent making the acquaintance of the last new magazines and papers, or practicing our neglected music. Oh! farmers' wives! let us trust in the good time coming, when we shall have co-operative laundries and creameries; then the wife and mother will not lose all of her attractive charms by unremitting drudgery and toil.

FROM MRS. E. D. CORY.

My method of washing colored cotton goods is to wash them through the suds after the white clothes have been rubbed through and put over to boil. They are then laid aside for a little while, until the white clothes are sudsed and rinsed, when they are again rubbed, if necessary, through the suds water, rinsed, starched in good flour starch, turned wrong side out, and immediately hung up to dry. I prefer a shady, but airy place for drying colored cotton goods. I think that to allow the fabrics to remain wet a long time is injurious to most colors, consequently I never hang colored clothes out in freezing weather; but dry them around the fire. I think that if black calico or goods of particularly delicate colors are washed in starch water without any soap, they will retain their colors much longer. The starch water is made simply by making enough flour starch so that, after diluting it with water, there will be sufficient in which to rub the garment, afterward rinsing it in weak starch water. If a small quantity of salt be added to the starch when cooking, it will help to set the color and prevent sticking when ironed. When thoroughly dampened, I iron the goods on the right side with a medium-hot flat, as I do not like the rough, wrinkled looks of clothes ironed on the wrong side.

FROM F. A. BROWN.

I have hired my washing done for a number of years, and have yet to find a laundress who can wash a colored cotton dress without spoiling it, so that long ago I reduced the children's dresses to plain ginghams which I *know* will not fade. I have been successful in washing delicate colors, in this way:—

I have three tubs ready with water just pleasantly warm, and boil a little soap beforehand, which I use in the first two waters just enough to make the water *soft*. I wash the garments quickly and rinse in cold water and hang them out at once. I have never found any benefit from the use of salt water to set the colors. I iron all colored clothes on the *wrong* side; for I know positively that a hot iron used on the *right* side will fade the colors more than poor washing. If the garment must have a gloss, one can use a much cooler iron for the purpose after first ironing on the wrong side. I do not like starched clothes, and unless the colors are very light, the goods, in my opinion, look much better without starch.

The "guid"mon" thinks no one can wash his flannels like "the wife." I put them into water as hot as I can bear my hands in and "sudsy," the last water being clear with a little bluing in it, and hotter, if anything, than the first. I wash out one piece at a time, shake thoroughly and hang out, getting it dry as quickly as possible and pressing on the wrong side with a cool iron. Washed in this way, the flannel is soft and woolly, and never shrinks.

FROM JULIA S. INGERSOLL.

My custom has been this: for dark cambric and percales I take warm soft water, and for two pails dissolve one-half tea-cupful of salt. I make moderately strong suds with good hard soap, and for the most soiled places apply the soap a little at a time, and immediately rub, or the color is apt to come out if the soap is left on many minutes. Wash one piece at a time, and immerse in rinsing water with salt added. Wring out and starch immediately with Kingsford's or any other brand of starch, on the wrong side, and dry quickly in an airy place, in the shade if possible. Iron on the wrong side and the goods will look almost like new. I sprinkle overnight or at least three hours before ironing, that the dampness may be evenly distributed. I have had very dainty medium blue French print that I washed in bran water with good results. I take one quart of bran (wheat), tie it in a salt-bag, quite loosely, or with room in the bag for twice the amount of bran. Soak in a pail of warm water for an hour or two, put bag and bran water into a tub of two pails of warm water, and wash the goods without soap, unless they are badly soiled. Rinse in clean water with some of the reserved bran water added. Dry in the shade, and iron on the wrong side, or spread a thin cloth over the waist and those places which will not iron smoothly on the wrong side, to prevent that shiny look which is caused by the starch and hot irons. Dark prints must be washed and rinsed in water which has not been used for white clothes, as the lint from the white garments is sure to show on dark cotton; for light ones it will do no harm. For ordinary fast ginghams and prints I use hard soap and clean water for washing and rinsing, and starch with flour or fine starch, according to the quality of the garments. Sprinkle and fold over-night or three hours before ironing. Iron on the right side, if the colors are quite light. The bran water doesn't seem to fade the colors, for whenever I have tried it they come out bright and fresh, and one would hardly think they had been washed.

FROM GERALDINE GERMANE.

In washing colored lawns, ginghams and calicoes I do not put them into hot water, or in strong suds, neither do I rub soap on them, nor leave them in the tub to soak. I use water just comfortably warm to the hands, in which enough hard soap has been dissolved to make weak suds. Rub through this quickly, wring and throw into a generous quantity of clear, cold water, turn wrong side out, rinse, dip into starch that has been cooked and has cooled, wring out and immediately hang in the shade to dry. Remove the garments from the line as soon as they are thoroughly dry, sprinkle with cold water and roll tightly two or three hours before ironing. Use moderately heated irons, and iron on the wrong side when possible. Plain brown lawns and calicoes will keep their color better if two or three table-spoonfuls of cold coffee are added to the starch.

Black cotton goods and goods that fade should never be washed with soap, but in lukewarm water in which a table-spoonful of salt and a tea-spoonful of soda have been dissolved to each quart. If there are badly soiled spots they should be cleansed by rubbing in beef's gall or the yelks of eggs. Such goods should be immediately rinsed in clear, cold water, wrung as dry as possible and starched in cool starch that is free from lumps, and if a little black dye be added, the color of black goods will be better and longer preserved.

FROM MRS. A. J. GREENE.

If my white clothes are out of their scalding water, I like to use that for rubbing my colored cotton garments. If not, I take clean *quite* warm water and make good suds, being sure that the soap is dissolved. Then I put the finest, lightest-colored articles into the water and rub them out as quickly as possible, putting each into very warm water for rinsing, adding a small handful of salt. Thoroughly rinse, wring out, turning them wrong side out, starch and hang on the line where they will dry as quickly as possible. I use flour starch, except for muslins, cambrics and like goods. For them I use lump starch cooked, and am governed by the texture of the goods as regards its thickness. Then, taking the next lighter-colored goods I proceed as before until all are rubbed and on the line wrong side out.

For dark blue, or other dark goods making the starch very blue prevents it from showing when the goods are ironed. As soon as they are dry, they are brought into the house, sprinkled at night and rolled, unless I am suspicious that the colors will run; such are left until morning. All articles except plain dark goods I iron on the right side with a pretty hot iron.

FROM MRS. ALICE P. SHEFFER.

Before putting colored clothes into water, it is best to look them carefully over, and if there are any grease spots, they should be washed out first, as they cannot be seen after the articles are wet. Do not wash in very hot water. Warm water does as good work and is not as trying on colors; that is, it will not extract the color so much. Rub immediately, not allowing them to soak long. Soft soap should never be used for any colored clothes except for the various shades of yellow calicoes, for which it is preferred. Rinse such garments always in soft water; while for the other colors hard water is preferable, and rinse them out as soon as they are washed; hang in the shade. A little salt in the rinsing water serves to brighten and set the colors of black, green, and blue calicoes. Alum dissolved in the rinsing water is excellent for green colors, while vinegar added to the rinse will brighten red and pink cottons as if they were new.

For several days before the general wash-day, save up the water in which potatoes have been boiled, and use this for black calicoes, dark lawns, and linen. It can be heated to the right temperature, using no soap. The goods will need no other starching, as the potato water will stiffen them, and also preserve the color. Never starch black cotton with wheat flour. Another method much used by my grandmother for garments inclined to fade, was to wash them in lukewarm water, adding a beef's gall in the proportions of one-half pint to three or four gallons of water, rinsing in hard water. Do not use soap unless absolutely necessary. Most women make flour starch by mixing up the flour with water until the mixture is free from lumps, and then pouring boiling water over it, until it is of the proper consistence. I think a better way is to pour the prepared flour-water free from lumps, slowly into a pot of boiling water, stirring it until it has cooked four or five minutes. Strain it through a bag made of two thicknesses of dairy cloth and then thin it with cold water. If the starch is made in this way the clothes will have a better look. Do not iron calicoes with irons too hot, as the hot irons will change the colors very materially, especially those that are red. Garments that have been starched, should not be put away for several weeks or months where the air cannot circulate freely, as starch has a tendency to make the fiber tender when the goods are not exposed to air.

FROM M. E. S.

For the farmer's wife, I think colored clothes the most troublesome part of the washing. New colored cottons I usually put into a tub of clean, warm water in which I have dissolved a handful of salt. After they have soaked five or 10 minutes, they are washed clean with some good hard soap. I prefer Ivory. They are rinsed well, wrung dry and hung in the shade if possible. If one has not a shady place, she should be sure that the wrong side is the one exposed to the sun. For starching dark cottons, weak gum-arabic or glue-water gives the desired stiffness without the troublesome white specks flour starch sometimes leaves. A tea-spoonful of borax in the starch will prevent it from sticking to the irons.

Sprinkle the goods an hour or so before

ironing them, and iron on the wrong side with a moderately warm iron. I find the results more satisfactory if the garments are not allowed to become very much soiled before washing, for the first time at least. Unless the goods are of some delicate color, I do not use salt after the first washing.

FROM MRS. MARTHA A. S. WEBSTER.

My plan has been to put four or five heaping table-spoonfuls of wheat flour into a milk pan, add about half a pint of cold water and stir until it is perfectly smooth, then fill the pan with boiling water from the tea-kettle, stirring briskly all the time. Remove one of the grates from the oven to the top of the stove, and on this place the pan of starch, to boil from three to five minutes. If it is thoroughly boiled, no tallow or spermaceti will be needed to prevent sticking. Add half of the starch to two or three pailfuls of lukewarm or nearly cold soft water, stirring well. Then rub the goods gently on the board, wetting but one piece at a time. Use no soap unless the goods are very much soiled. When rubbed clean, drop each article—after shaking it—into another tub into which has been stirred the remainder of the starch and two or three pailfuls of hard water. Turn the garments wrong side out and rinse them thoroughly. Wring by hand, and, if possible, hang in a shady place to dry.

If the starch is the least bit lumpy, strain it through an old thin towel or a piece of cheese cloth. This amount of starch will cleanse two dresses for a woman, or several smaller garments. Washed in this way, black-and-white ginghams and prints will remain as bright as new until they are nearly worn out. Iron on the wrong side. Where linings cause wrinkles, lay a piece of thin cloth on the right side of the waist and sleeves of a dress, and iron on that, if a "shiny" appearance is not desired.

FROM M. G. D.

Always use soft water. Have the water as hot as the hands can bear, but not boiling. Put the soap in the water, not on the clothes, unless they are very much soiled, and then not until after they are wet. Wash the clothes in two waters, then rinse them thoroughly in soft water and hang them in the shade and air to dry. If they are to be starched, make the starch by dissolving it in a little cold water and then pouring boiling water on it until it becomes clear, stirring all the time. Dip the clothes in the starch after they have been rinsed, and wring moderately dry. If they are not stiff enough, they can be dipped again in the starch after they are dry, and again hung out to dry. Always turn colored clothes wrong side out to dry. If the clothes are black-and-white, and the colors are inclined to run together, put a little salt in the last rinsing water or starch—about one teaspoonful to a gallon of water. For light goods put a little indigo in the last rinsing water. Sprinkle the clothes the night before they are to be ironed, and iron until dry, taking care not to scorch them. If they are ironed on the wrong side they will not show those shiny streaks along the seams, that they do when ironed on the right side.

FROM E. D. B.

In washing colored clothes, use clean warm water, made a little sudsy by the use of any kind of good hard soap. I use home-made soap. Never put more than one piece in the water at a time. Wash out quickly, rubbing the soiled spots by hand. Use a very little soap if you are sure it will not spot the goods. I prefer a slight stain rather than have the color taken out by the use of soap. Rinse in clear water and starch. Dissolve the starch in a little cold water, then slowly stir in boiling water till it is clear and about the consistency of sweet cream; add a pinch of salt; it will make the goods clear and keep the starch from sticking. Starch the clothes on the wrong side and hang them in the shade, wrong side out. Take them in as soon as dry. Black and dark calico, or anything the color of which will I think run together. I rinse in a pail of water in which a good handful of salt has been dissolved. Wash indigo-blue calico in good suds; if much soiled, it will bear quite hard rubbing. Rinse well, turn wrong side out, and dry in the shade without starching. I think it looks more like new calico without the latter. Sprinkle your clothes at night, make them quite wet and roll up tightly. Be sure they are thoroughly dry before sprinkling and they will iron nicely in the morning. Indigo-blue, black, and all dark colored cotton goods, should be ironed on the wrong side. Very light-colored goods I prefer ironed on the right side, as I like to have them look slightly glossy.

FROM MARY D. THOMAS.

When I have to wash a garment that I am anxious to look well, I wash it as quickly as possible, and do not use water that is too hot. I always use hard soap to make suds but do not rub it upon the goods. I use boiled flour starch in the water; one can use her judgment as to the quantity. After rubbing the goods through this water, they are rinsed directly in cold water, and then starched slightly, for they still retain a portion of the starch that was put in the first water. The more quickly they are washed and dried, the better they look. I seldom hang them out in the sun, but generally dry them near the range. If hung out, they should be turned. After they have been sprinkled and when they have stood long enough to be dampened evenly, they are ironed on the wrong side, where it is possible, and with not too hot an iron. This way of washing colored goods has proven satisfactory with me.

FROM MRS. W. W. H.

For washing colored clothes, I always use clean water not very hot—never boiling—or rinsing suds—and hard soap of my own make, which contains some borax. I do not soak them by putting several articles into the tub at once, but take the lightest-colored first, wash, rinse, immediately starch and dry as soon as possible. I do not put them where they will freeze in winter, or leave them out all day in the wind and sun in summer. If the ground-work of prints is white, I use store starch with a little bluing; if not, flour starch made in this way: Two small table-spoonfuls of flour for a dress and three or four aprons. I do not like them too stiff. Stir in a little cold water. I do not stop to mash all the lumps as I was taught to do when a child, but pour on boiling water and strain through a tin strainer, which takes out all the lumps. I thin it with cold water, adding a little before putting in each article. If the prints have green in them, put a little alum in the rinsing water; if black or brown, use a handful of salt to a pail of water, letting them stand a few minutes. Sprinkle the clothes well, letting them lie an hour or two rolled up in a towel; then iron with a moderately hot iron, until they are quite dry. If the iron is too hot, it fades them worse than the washing. I never use a *hot* iron for colored table-cloths or napkins.

FROM MRS. H. M. R.

My method of washing and ironing colored cottons is very simple yet satisfactory. If washing day is unfavorable for drying clothes quickly, the best prints are laid out of the wash; otherwise they are washed in warm bluing water with hard soap, the lighter colored ones first, each piece being put in the water only when I am ready to wash it. The rinsing waters are cold, the last one blued for all colors except pink. The thin boiled starch (not blued) is prepared in the same way as that for the white clothes, and allowed to cool. Each piece as soon as washed is well rinsed, starched wrong side out, and hung in the shade right side out to dry. On ironing day—a clear one is preferred—the prints receive a fine sprinkle, are rolled tightly, and as soon as evenly dampened they are ironed on the wrong side with a light pressure and again on the right. I have never used anything that would successfully set color on fading goods. My way is not to buy them.

FROM MRS. L. F.

I think the two most essential things in washing colored clothes are plenty of warm water and dispatch. My mode is to place the lightest-colored things, lawns, percales, ginghams, or whatever they may be—in the machine first. These are rubbed through quickly, wrung out and put through warm suds that contain no soap, then rinsed through starched water which is slightly blued, if necessary, for any of the goods. Hang out immediately and follow with the next darker colored lot. A tea-spoonful of beef's gall in the rinse-water will prevent fading. Salt is good and so is soda. I use flour starch, as I think the clothes iron nicer. It is made thus: two or three table-spoonfuls of flour moistened and worked smooth, pour on boiling water, stirring constantly until clear and thick; then thin so it will strain through a piece of cheese cloth. If all parts of colored clothes that can be ironed on the wrong side, are so treated they will look as nice as new.

FROM MRS. M. S.

My way is to make suds, not very strong, and add borax, the amount required depending on the condition of the goods to be washed. I wash them through only one water and do that as quickly as possible; for the longer the goods remain in the suds the more the colors will run together. I rinse them until the water is clear; then hang them in the shade to dry. If they are ironed when taken from the line and before they are thoroughly dry, I find they will look well for a long time. Slightly soiled garments and those that faded badly I have washed in bran water. Take a piece of cheese cloth and tie up a quantity of bran and squeeze it out in the water in which the goods are to be washed. If well rinsed and well pressed they will look like new. I have learned lately that if a red table-cloth is put in strong hot brine for an hour or two before putting it in suds for the first time it is washed, the color will last much longer.

FROM MRS. ESTELLA E. G. WALLIS.

The use of soda is fatal to cotton goods and nothing is more frequent than to see the delicate tints of lawns, etc., blotched and streaked by the ignorance and vandalism of a laundress. It is worth while for ladies to pay attention to this, and insist upon having their summer dresses washed according to the directions which they should be prepared to give their laundresses. In the first place, the water should be tepid, the hard soap should not be allowed to touch the fabric; it should be washed and rinsed quickly and turned upon the wrong side as soon as possible. Linen should be washed in water in which hay or a quart bag of bran has been boiled. The latter will be found to answer for starch as well, and is excellent for pink dresses of all kinds; but a handful of salt is very useful also to set the colors of light cambrics and dotted lawns, and a little ox-gall will not only set but brighten yellow and purple tints, and has a good effect upon green. Alum, also, is good to use in the starch for muslins, ginghams and calicoes. Dissolve a piece of alum the size of a walnut for every pint of starch, and add to it. By so doing the colors will keep bright for a long time, which is very desirable when dresses must be often washed, and the cost is but a trifle.

FROM A FARMER'S WIFE.

I do my washing with as little elbow grease as possible. I use Frank Siddall's soap for my white clothes and wash the colored ones in the same water. I don't think it fades them and if it makes them tender we can have some new ones all the sooner. Rinsing well and starching in flour starch with a little piece of butter melted in it, and ironing, is treatment good enough for the five-cent remnants we farmers' wives have to wear. I shall make soft soap soon, and I think that just as good as hard. What's the use of wearing ourselves out washing, anyway, when all we get is our board and perhaps as much pin-money as the head of the house spends for tobacco? I want to save my strength so as to live long enough to get the use of that third of the property, half of which I have earned.

FROM LAURA E. RICE.

I wash in warm water with as little soap on the clothes as possible, and there is no very hard rubbing on the board. If the clothes are much soiled I use two waters for washing them. After rinsing them in warm water, I have ready some clear cold water with some salt in it—about a table-spoonful to a pail of water. I let the clothes remain in this for a few minutes. For those that I wish starched I make a thin starch—I use *starchine*, which requires no cooking, as the hot water poured upon it is sufficient. After starching, I hang them where they will dry quickly, without the sun shining directly upon them; being careful to hang so as to have as few wrinkles in them as possible. When they are dry, I dampen, fold and roll them up carefully and lay them aside for an hour or perhaps longer. I iron with a hot iron, being sure to dry them with the iron.

FROM AMANDA C. ERHART.

Colored cotton fabrics should be washed quickly in a good suds either quite warm or hot, according as the hands or machine are used. Rinse well at once and starch and dry in haste. Do not expose to a hot sun in summer, or to hard freezing cold in winter. If it is desired to maintain the colors, iron on the right side which gives a gloss which is a preventive against soiling so quickly. Dainty fabrics, such as lawns, can be washed nicely in starch-water leaving out soap altogether. Use two starch waters if the goods are much soiled.

FROM ALICE JOHNSON.

Dip them first in a solution of salt and water, and hang them in a shady place to dry—the salt sets the colors. When dry wash in light soap suds in the usual way. Calico and muslins do not require hot suds. Water moderately warm is best. Wash quickly, turn wrong side out and hang in the shade. For blue goods, blue the rinsing water, also the starch.

Another way is to make a paste of bran, as one would make starch, and boil it one hour, then strain it into warm, soft water. No soap is necessary, as bran has cleansing properties of its own. Always iron on the wrong side with a moderately hot iron. Sugar-of-lead and other drugs may be used to set colors permanently, but this is not desirable, as they are poisonous, and make the goods tender.

FROM JULIA OSBORNE.

To wash colored cotton goods without causing them to fade is almost impossible, but fading may be prevented in a measure by proper care. First, the water should be only moderately hot. I generally use the rinsing water of the white goods. Should it not be hot enough I add more hot water. But this water could not be used for black goods on account of the lint from the white goods remaining in the water. Then wash out the light calico garments first, not putting too many in the water at once, as the longer they soak in the water the more liable is the color to come out. After the light goods are finished, put in the dark ones, and all should be rinsed in two clean waters. They are then ready for the starch which I think is best not too thick, and it should not be used very hot. In ironing after the goods have been sprinkled and laid away for an hour or two (overnight is better), the dark ones will look much brighter if ironed on the wrong side. No washing soda or other washing preparations should be allowed to come in contact with colored cotton goods if keeping them fresh looking is desired.

FROM ETTA D. LYON.

I use hard or soft water and good hard soap, never soft or inferior soap. Make moderately warm suds, put in the goods, the light-colored and least soiled first; soak five minutes; then wash out quickly and thoroughly. Some goods will not bear rubbing on a board and such may be washed with the hands only and rubbed as little as possible. When all are through the first suds, make another, using less soap than for the first, and wash them through this. Then rinse in cold water, and starch in boiled starch of the consistency of thin cream (if made of flour it should be strained) and hang wrong side out, in the shade to dry. Remove from the line as soon as dry and dampen and fold for ironing. I let them lie over-night so that the moisture may penetrate every part. I use moderately hot sad-irons—too much heat will permanently injure the color of some fabrics. Colored cotton and linen table-cloths or napkins I never iron; I fold them smoothly while damp and put them under a weight and they retain their bright colors much longer than if ironed.

FROM JESSIE LAWRENCE.

I always use plenty of water and good hard soap. Have the water lukewarm and soap the things in it, roll them up, and let them soak 30 minutes or longer. Then wash quickly through two waters and rinse in blue water, then turn them inside out, starch, and hang them out. Bring them in as soon as dry, as exposure to the sun and air fades cotton goods more than washing. Sprinkle with warm water; and roll them up tightly. In about two hours they may be ironed, but they will iron better if left longer. We like to dampen them at night and iron them the next morning. Never use a very hot iron, as it takes the color out and makes the clothes tender. Our cotton goods, washed and ironed in this way, keep bright until worn out.

FROM MRS. T. S.

In washing colored cottons I heat sufficient water, with soap cut fine, to make good suds so as to avoid rubbing the soap directly on the goods. I wash them through two waters as quickly as possible and rinse them well. I think much depends on the way clothes are rinsed. In washing prints the first time, I soak them for a few moments in lukewarm water to which a spoonful of salt has been

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria

added. If the goods are green, I use alum; and if red, sugar-of-lead to set the colors. In washing very fine prints and lawns that are known to fade with soap, I make a starch the same as for starching, and put it in the water, using no soap. I wash through two waters and rinse well. I use good starch well boiled. To a quart I use a piece of spermaceti the size of a common marble; or a spoonful of coal-oil will answer very well, and rub the starch well into the goods. I dampen my clothes with warm water about two hours previous to ironing. Iron until perfectly dry.

FROM MRS. A. A. RICE.

I observe five principles in the cleansing of colored cotton goods to prevent fading and preserve a clear and bright appearance, viz.: 1. I use *warm* water—not hot—both for washing and rinsing. 2. I wash with the best soap (generally the Ivory), making good suds and I do not rub soap on the goods. 3. In the last rinse water for the washing of new goods for the first few times I put fine salt in the proportion of a good cupful to two pails of water, and let the goods stand in it half an hour. With *black calicoes*, stockings, etc., I reverse the order and let the goods stand in warm salt water before washing. 4. There is less fading when the goods are dried in the shade; an open shed is excellent for air without sun. 5. The ironing should be done on the wrong side of the goods, with irons not too hot.

FROM MRS. M. S. DRUM.

My method of washing and ironing colored cotton goods is as follows: I take soft water as warm as the hands can bear; shave up some white soap, add a little water and set it on the stove. When the soap is dissolved I add the suds to the water in the tub, making it quite soapy. I prefer the Ivory soap. I know from many years' experience that it will not fade or injure the most delicate color. Rub the clothes through this water; if they are much soiled rub through another water. Then I rinse them thoroughly in plenty of cold water, adding a little bluing, and a small quantity of common salt, which brightens the colors, giving them a fresh look. Wring them dry, using a good clothes-wringer, starch, hang up immediately, and do not allow them to freeze in cold weather. As soon as they are dry, dampen, roll up tightly, let stand a few hours, then iron. If you wish them extra nice, iron on the wrong side.

FROM MARY J. LYON.

Wash the goods as quickly as possible in warm soap-suds made with hard soap; rinse them in cold water, starch, wring quickly, and hang out to dry, not in the sun, but where the wind will dry them quickly. Iron on the wrong side as soon as dry enough. It is best not to sprinkle. If I suspect that the goods will fade, I use a table-spoonful of ox-gall to a sufficient quantity of hot water for washing one dress; let that article remain in this a few minutes, then when cool enough wash as usual. Or dissolve half an ounce of alum in sufficient water to rinse two dresses; when every part is wet, wring out and wash as usual.

FROM EMILY A. PITT.

After having washed the fine white goods, I wash colored cotton goods in the cool suds, especially if there is danger of their fading—and rinse them in clean water. If there are dark blues and browns, I wash them in *clean* suds. I use hard soap for all. Then I wet my starch (I use Silver Gloss usually) with a small quantity of cold, soft water. Add a lump of borax the size of a walnut for two table-spoonfuls of starch, and a tea-spoonful of kerosene oil. Let it boil five minutes. Wring the goods out of the rinse water, and put them in the starch. (I use bluing for only very light goods.) Wring dry and hang out as soon as possible. When dry, take from the line. Dampen at night and iron early in the morning. For very dark prints I use very thin starch, as I do not think a very stiff kind improves a garment.

FROM MATTIE F. BROWNING.

I think it very important to have water and starch not too hot, and to wash, rinse and dry the goods as quickly as possible. One should not rub soap on them, but make some suds to wash them in. Do not use very hot irons. Any colored cotton goods which I know are likely to fade, I soak in a solution of salt and water (say, a handful of salt to a gallon of water) before washing. Though this will not always entirely prevent fading, I have found it to help very much.

FROM MRS. S. C. T.

I find it more difficult to wash some colored cottons, particularly calicoes, than ginghams, without causing them to fade. I never want clean water for washing them in *first*, as clean water, with fresh soap in it is quite apt to fade the dark shades of prints, and will sometimes spot the goods, should the soap not be dissolved. After washing my white clothes, I put my dark cotton goods through the same water without adding any more soap to it.

As I always put my white clothes through two waters before scalding, I serve my colored cottons in the same way. I use some of my scalding water, adding cold water, to put them in for the last time before rinsing. Don't let them remain in this, only rinse them up and down to get the dirty suds out before rinsing them for the last time. Should they need any rubbing, do it in this water, and if you need any soap on extra soiled spots, use some good hard kind. I always want good bluing water for the last. A handful of fine salt added to the water is good, especially for black-and-white goods. Hang in the shade to dry, and if the colors are inclined to run, keep changing the position of the garments on the line, hanging them differently every time. It is best to starch them by turning them wrong side out. As to the ironing, most of the dark prints, blue and red in particular, will look better and more like new goods if ironed on the wrong side. They will iron better and easier if sprinkled and let stand over-night. Do not have the irons too hot, as that will sometimes change the color.

FROM E. W.

I have had excellent results from the following simple method: Before I wash cotton goods that I am not certain will hold their colors, I let them stand for about 30 minutes in a strong solution of salt water, which will set the colors. Wash out quickly in strained suds to remove any lumps of soap; and use no soap on the goods. Rinse well in clear water, and hang out where they will dry quickly yet be in the shade. Before they are thoroughly dry, bring them in, sprinkle them lightly, and roll them ready to be ironed next day. I also find it an advantage to put them after ironing, where it is rather dark and where they can be thoroughly dried.

FROM MRS. R. MORRILL.

My way of washing colored cotton goods to prevent fading, is so simple that it seems hardly worth explaining, but it will do for seersuckers, chambreys, some ginghams and the best prints. Make suds with soft water and hard soap, let the clothes remain in this just long enough to soak thoroughly, then rub lightly, without putting soap directly on the goods. Hard rubbing on the board destroys the color and the goods. I prefer a washing machine that will cleanse without the board. Then rinse well, turn, and if very choice, dry in the shade. Iron on the wrong side with a moderately warm iron, for if it be hot it will fade the goods as much as the washing.

FROM MRS. W. J. WALKER.

Into clean warm water in a tub I put one table-spoonful of pearline and one tea-spoonful of powdered borax to three pails of water. Wash the light-colored cottons first, rinse and starch, then the dark ones in the same water, adding a handful of salt in rinsing if the colors tend to fade. A little vinegar in the water that is used for rinsing pink, red, and green cotton, is good to brighten the colors and keeps them from mixing. As soon as washed, rinsed and starched, I turn them wrong side out, and hang in the shade. Iron on the wrong side, and they will look as good as new.

FROM FANNIE GREENE.

Calicoes, ginghams, etc., place in weak suds and rub out immediately. Rinse them through clear water, starch and hang them in a shady place. Lawns and other delicate fabrics rub gently (or squeeze with the hands) in water in which a little starch made from flour has been placed; rinse in a water prepared like the first and hang them up. I do not think this way is new to any one because it is quite old and the way mother has always washed. We iron calicoes and ginghams on the wrong side with a moderately hot iron.

FROM ADDIE B. PECK.

Put the goods into sufficient salt water to cover them, and let stand before washing. Then take plenty of warm (not hot) rain water and hard soap, make rather weak suds, put in the goods and without rubbing any soap on them, rub gently and quickly till all parts are clean. Then turn wrong side out, rinse, starch and dry as quickly as possible. When dry, sprinkle with warm water, roll up tightly and let remain a couple of hours, iron on the wrong side, till perfectly dry, and the goods will look almost if not quite as well as when new.

FROM ANNIE EVENDEN.

I am afraid my short experience of laundry work will be of little use to you, in comparison with that of older housekeepers, having only had four years experience in any kind of laundry work. I have, however, found that with colored cotton goods, if you wash them in quite cool water, and put one table-spoonful of salt to one gallon of water, the color does not come out *nearly* so much as it does with warmer water and no salt. As far as ironing them is concerned, I damp and iron as I do other clothes.

FROM LIZZIE JOHNSON.

I would first soak them for a few minutes in weak salt-and-water; take them from this to warm suds and rub them on the wrong side. Add a little salt to the first rinsing water, rinsing them in clear water the last time, and hang them to dry wrong side out. If no gloss is desired, iron on the wrong side.

FROM MRS. PATIENCE STILES.

Make some good suds with hard soap and warm soft water, put a few pieces in at a time. Wash the goods out quickly. Avoid rubbing soap on them as much as possible. Rinse in warm, soft water to remove any suds; then place in hard water. This sets the colors, or prevents them from running together. When all are washed, rinsed, and placed in hard water, wring out one piece at a time, starch, (if necessary), wring perfectly dry; then dry quickly. I find

(*Continued on Next Page.*)

Miscellaneous Advertising.

VERY OFTEN

Life has been saved by a bottle of

AYER'S Cherry Pectoral

The best emergency medicine, it should be within reach of every one, young and old.

"Several years ago, on a passage home from California, by water, I contracted so severe a cold that for some days I was confined to my state-room, and a physician on board considered my life in danger. Happening to have a bottle of Ayer's Cherry Pectoral, I used it freely, and my lungs were soon restored to a sound and healthy condition. Since then I have invariably used and recommended this preparation, and always with beneficial results."—J. B. Chandler, Junction, Va.

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass. Price $1. Six bottles, $5. Worth $5 a bottle.

W, R & CO'S IMPROVED BUTTER COLOR

IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the buttermilk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere. More of it Used than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & Co., Burlington, Vt.

ICE CREAM AT HOME!

Made cheaply and quickly by using a Triple Motion WHITE MOUNTAIN FREEZER.

Will freeze in half the time of any other Freezer and produce cream of the finest quality. Inquire for the "White Mountain" of your local dealer in house-furnishing goods.

"Frozen Dainties," A book of Choice Receipts for Ice Cream, Sherbet, Water Ices, etc., packed with each Freezer this season, or will be mailed upon receipt of ten cents in stamps.

White Mountain Freezer Co., 134 Hollis St., Nashua, N. H.

BABY COACHES

Over 100 different designs. Our Patent Automatic Brake FREE

50 CHANGES

We make the largest line of Adjustable, Reclining, Invalid Wheel, Physician's, Rattan and Office CHAIRS. INVALID GOODS a specialty. BICYCLES, VELOCIPEDES etc. *All at factory prices.* Special FREE delivery. Send stamp for Catalogue, and name what goods you wish it for.

LUBURG MFG. CO. 145 N. 8th St., Phila., Pa.

WARNER'S Log Cabin Remedies—old-fashioned simple compounds, used in the days of our hardy forefathers, are "old timers" but "old reliable." They comprise a

Warner's Log Cabin Sarsaparilla,

"Hops and Buchu Remedy," "Cough and Consumption Remedy," "Hair Tonic," "Extract," for External and Internal Use, "Plasters," "Rose Cream," for Catarrh, and "Liver Pills." They are put up by H. H. Warner & Co., proprietors of Warner's Safe Remedies, and promise to equal the standard value of those great preparations. All druggists keep them.

CANADA HARD-WOOD UNLEACHED ASHES

By rail in car-load lots furnished on short notice. Ashes guaranteed to be of best quality and are especially adapted for all grass and fruits. Pamphlets and prices sent on application.

MUNROE, JUDSON & STROUP, OSWEGO, N. Y

FOR Greater Prosperity TEST YOUR COWS BY Shorts Method

for their Butter Value. Send for full particulars to Cornish, Curtis & Greene, Fort Atkinson, Wis.

THE I X L COIL SPRING ROAD CART

Beyond a doubt is the easiest riding cart made. Springs can be adjusted for one or two passengers. Before purchasing write for wholesale prices. A. L. PRATT & CO., No. 71 Willard St., Kalamazoo, Mich.

PAINLESS EFFECTUAL

BEECHAM'S PILLS

THE GREAT ENGLISH MEDICINE WORTH A GUINEA A BOX

For Bilious and Nervous Disorders, such as Wind and Pain in the Stomach, Sick Headache, Giddiness, Fulness, and Swelling after Meals, Dizziness and Drowsiness, Cold Chills, Flushings of Heat, Loss of Appetite, Shortness of Breath, Costiveness, Scurvy, Blotches on the Skin, Disturbed Sleep, Frightful Dreams, and all Nervous and Trembling Sensations, &c. THE FIRST DOSE WILL GIVE RELIEF IN TWENTY MINUTES. This is no fiction. Every sufferer is earnestly invited to try one Box of these Pills, and *they will be acknowledged to be a Wonderful Medicine.*—"Worth a guinea a box."—BEECHAM'S PILLS, taken as directed, will quickly *restore females* to complete health. For a

WEAK STOMACH; IMPAIRED DIGESTION; DISORDERED LIVER;

they ACT LIKE MAGIC:—*a few doses* will work wonders upon the Vital Organs, Strengthening the muscular System; restoring long-lost Complexion; bringing back the keen edge of appetite, and arousing with the ROSEBUD OF HEALTH the *whole physical energy* of the human frame. These are "facts" admitted by thousands, in all classes of society, and one of the best guarantees to the Nervous and Debilitated is that BEECHAM'S PILLS HAVE THE LARGEST SALE OF ANY PATENT MEDICINE IN THE WORLD. Full directions with each Box.

Prepared only by THOS. BEECHAM, St. Helens, Lancashire, England.

Sold by Druggists generally. B. F. ALLEN & CO., 365 and 367 Canal St., New York. Sole Agents for the United States, *who* (*inquire first*), if *your* druggist does not keep them,

WILL MAIL BEECHAM'S PILLS ON RECEIPT OF PRICE, 25 CENTS A BOX.

50c.

WE WILL PAY WELL TO LEARN WHY IT IS

RURAL readers do not need knives. Our advt. in some papers brings us large orders, but from others few. Readers are unjust to us and fool themselves. Take knife shown here, blades are of highest quality razor steel, file-tested and known to be good before sending out. It is cheap for a silver dollar, but our price is 50c. post-paid; 5 for $2. Send for our 64-page free list, also, "How to Use a Razor."

MAHER & GROSH, 80 S Street, TOLEDO. OHIO

DOMESTIC ECONOMY.

(*Continued from Page* 319.)

that colored cotton clothes, when washed in this way seldom fade.

FROM ANNA W. NEWKIRK.

To prevent the colors from running and to give the goods a bright, fresh look, I put in the water a cup of salt, the kind we get for the stock. In washing Jersey blankets, which I consider to be heavy cotton flannel, the red and blue stripes on the ends never run if salt is freely used in the first water.

FROM MRS. GEORGE LANG.

I take clear, soft, hot water and make some suds from hard soap (I use Babbitt's). If the goods are very dirty I use a little soap. After they are washed, I turn them, and put them in cold water to rinse. I then starch and hang them in the shade to dry. I iron them on the right side, but I am very careful not to have the iron too hot, as a very hot iron will fade the goods.

FROM M. CHAPMAN.

I put the goods into clear rain water, not quite as warm as dish water. I use hard soap and rub them out as quickly as possible, plunging them immediately into clean hard water directly from the well. This sets the color if inclined to fade. For drying I prefer a shady place. with a good breeze. I think the more quickly they can be washed and dried, the nicer and brighter they look. I generally use wheat flour for starch. After cooking, I strain and settle it. If there is any part white about the goods I use a little bluing. Iron them on the wrong side, using a moderately hot iron; hang in a draught until thoroughly dry, and hang away in a dark place.

FROM MRS. H. H.

I usually wash colored cotton goods in suds after white clothes. I wash with kerosene, being careful not to have the water very hot, using elbow grease instead of much soap. Wash, rinse and dry in the shade. I think the surest way is to get indigo-blues, Turkey reds and such colors that don't fade, and are new every time when washed.

FROM SARAH E. CHAMBERLIN.

I find the best way to wash colored cotton goods, is to make some suds of hard soap and soft water, wash the goods thoroughly in the suds, rinse in soft water and blue them in hard water. Starch in a very thin boiled starch (not flour) and hang in a shady place to dry. Sprinkle until they are quite damp and iron on the right side.

FROM MRS. ALLIE DILLARD.

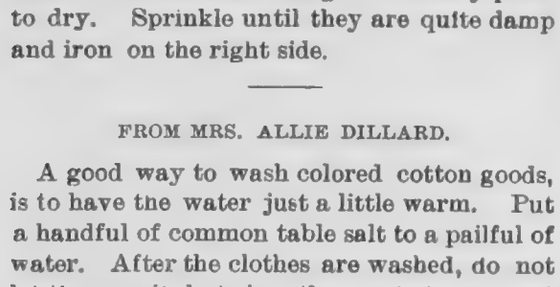
A good way to wash colored cotton goods, is to have the water just a little warm. Put a handful of common table salt to a pailful of water. After the clothes are washed, do not let them wait, but rinse them out at once, and in winter dry them in the house, as freezing will cause them to look dull.

FROM MRS. S. A.

My way of washing colored cotton goods is very simple. I use only clean water and Ivory soap: rinse and hang out immediately, not allowing them to stand in the water. If to be starched, use thin starch.

FROM JENNIE W. GRAHAM.

I have heard of an old lady who has always had very good success in this line, and she says that she washes her calicoes in the dirtiest water she has, and then rinses them *thoroughly* in clean water.



PATIENCE is bitter but its fruit is sweet. It will require but little patience ere you begin to taste the sweet fruit, if you use

Warner's Log Cabin ROSE CREAM,

for catarrh. Its disagreeable features disappear very quickly under this great remedy. Try it. Price 50 cents.

News of the Week.

HOME NEWS.

SATURDAY, May, 4 1889.

THE CENTENNIAL CYCLONE lasted the first three days of the week here. The celebration began on Monday on the arrival of President Harrison in New York after he had been previously received with great enthusiasm at Elizabeth N. J., and at other points along the route from Washington. He was accompanied by the members of his Cabinet, except Secretary of State Blaine whom illness detained at Washington. The naval parade in the bay and partly up the East and North Rivers was a magnificent spectacle, unprecedented in this hemisphire, and hardly ever equaled anywhere else on the globe. The reverberating boom of heavy guns from the war ships and forts, the shrill or deep whistles from multitudinous steamers, the cheers and huzzahs, on all sides, the long lines of gaily beflagged vessels, the innumerable small boats, from trim yachts to clumsy row-boats, the glistening waters and laughing skies made a *tout ensemble* hard to be imagined and never to be forgotten. A crew of jolly old sea-captains rowed the President from the reviewing vessel to the foot of Wall street where Washington had landed one hundred years before. Here he was welcomed by Governor Hill of New York State, Mayor Grant of New York City and other celebrities. He was then escorted to the Equitable Building on lower Broadway where he partook of a banquet and held a reception. Then he proceeded to the City Hall where he was welcomed by rows of white-clad school girls, and held another reception. The evening and night witnessed a grand ball, reception and supper at the Metropolitan Opera House ..... The chief feature of the next day—Tuesday—was the grand military parade, when over 50,000 troops, representing every arm of the service and nearly every State in the Union, marched from the Battery at the lower end of Broadway for eight miles up the City, through the chief streets, lined with people-covered stands, and thronged windows, balconies, door-steps and roofs. At Madison Square, about the middle of the line of march, they were reviewed by the President and other notabilities The gay dresses of the men, their rythmical step, glittering arms, fluttering flags and resplendent banners; the inspiring bursts of music at the head of each body; the wild cheers from the enthusiastic spectators lining both sides of the road from the pavement to the roof pitch—all made a glorious show, marvelously commemorating, even by force of contrast the modester scenes at Washington's inauguration a century before, in a town insignificant in size and population as compared with the city of today. The parade took six hours passing a given point. A grand banquet at night gave opportunities for eloquent speeches by President Harrison, Governor Hill, General Sherman, Governor Lee of Virginia, Ex-President Cleveland, Senator Daniel, Chief Justice Fuller, Ex-President Haves, Senator Evarts, James Russell Lowell, and other distinguished men ..... The principal attraction of the third day—Wednesday—was the industrial parade, which numbered about 80,000, and would have numbered 125,000 were it not that it was cut down, as the larger one couldn't have been seen in a single day. It took nearly 11 hours for the 80,000 line to pass a given point. All the industrial, temperance, political, social, and other civic organizations were represented. The width of the street measured the width of the line abreast. A multitude of gaily bedizzened "floats" drawn by finely caparisoned horses, bore a vast variety of scenes, industrial, allegorical, historical and humorous. Although unlike Tuesday, Wednesday was neither a State nor National holiday, the crowds in the streets were, if possible, larger, as every workingman with all his family took part in the festivity. The procession was reviewed by the President and other prominent personages for six hours at Madison Square. Never before was such an outpouring of the industrial classes witnessed on this side of the water or probably on the other..... ..... During the whole celebration the vast crowds in the streets and the enormous number of flags fluttering everywhere and other decorations hiding most of the house fronts, were the most noticeable features. Close estimates place the arrivals at 468,000 each day, and it is estimated that 1,150,000 non-residents of New York were here at one time. Most of these came from the surrounding country within a radius of, say, 50 miles, and the great majority returned home every night. There was no difficulty in lodging and feeding the visitors, and prices everywhere were about the same as usual. The visiting troops for the most part encamped in the numerous armories and other large buildings where they were supplied with mattresses, blankets and rations, though many of them found less warlike quarters in hotels and private houses. Governors of States and other political and military notabilities were as thick as colonels in Kentucky. Vast quantities of wines and liquors were swallowed; but beer was the principal beverage, and oceans of that disappeared; still there was very little vociferous or turbulent intoxication. Public and private banquets, dances and "parties" of all kinds made every night hilarious. The theatres were not over-crowded, as the vast bulk of visitors thronged the streets at night, while most of the "old-timers" were either out sight-seeing or attending public or private festivities. Every night also there were grand displays of fire-works, some of them at public expense, others given by political and other associations, while many private parties spent not a little on such manifestations of joy, and of course, the "small boy" had to be gratified with noise and gun-powder smoke. All known pick-pockets and crooks of all kinds, residents or visitors, were at once locked up wherever seen, and remained under lock and key till Thursday, when all were discharged, so that there was really comparatively little robbery, thieving or other punishable dishonesty. Horses were in such demand that the hire of one would almost buy him in ordinary times. Altogether it was a glorious celebration of a memorable event, and a grand inauguration of the second century of our American form of Republican Government.. Tuesday, April 30, the actual centennary of the inauguration of Washington as first President of the Republic, was proclaimed a National Holiday throughout the United States by President Harrison, but to make it a legal holiday in any State the Governor had to proclaim it such. In most of the States this was done. In this State the legislature hastily passed and the Governor signed a bill making Monday and Wednesday also legal holidays so far as concerned this city and Brooklyn. This was important to prevent or mitigate business complications much more than for the sake of giving a merry-making season to the people. Tuesday was widely celebrated throughout the country by parades and other gala displays during the day, and by fire-works, dancing, feasting and speech-making at night. Americans abroad also duly "celebrated." .. .. At 9 A. M. Sunday last the St. Louis Express train on the Grand Trunk Railroad near Hamilton, Canada, in running at a high rate of speed round a sharp curve, jumped the track; the engine plunged into a water tank, two cars telescoped and, being heated with stoves, at once caught fire and 21 people were cremated, and a great many more of the 150 passengers were more or less severely injured. At the outset only two of the dead could be identified, but since then the charred fragments of three others have been recognized by pieces of clothing or jewelry, etc., on or near their remains. The train consisted of 10 cars and contained chiefly Western people on their way to see the Centennial Celebration in New York City.....

The Grave and the Gay.

The grave usually predominates in human affairs.

Disease and affliction make the *gay* but a transient visitor. Still the proportion may be reversed; the grave may be expelled; the *gay* invited and retained.

"How?" you ask incredulously. Well, there is a decidedly obvious inference in the following extracts, which answers these questions exactly.

GLASCOW, KY.

"I regard Compound Oxygen as a wonderful remedy, and shall ever be grateful to you for it." JAS. B. MARTIN.

PENSACOLA, FLA, July 25, 1888.

"I suffered from a very severe and obstinate case of bronchitis; I had tried a great many doctors' remedies, and, while not entirely well, I am very greatly improved, and feel fully assured that the same is due to your Compound Oxygen Treatment."

JOHN W. FRATER.

SUMTER, S. C.

"I have used the Compound Oxygen Home Treatment from Drs. Starkey & Palen as a revitalizer and have expereinced marked benefit from it." MRS. N. G. OSTEEN.
Proprietor *Watchman and Southern.*

NAPOLEON, O., Feb. 19, 1888.

"My entire family are using the Compound Oxygen more or less, and I consider it to be a wonderful remedy for all chronic troubles." MRS. L. L. ORWIG.

We publish a brochure of 200 pages, regarding the effects of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, May 4, 1889.

Several important auction sales of horses and cattle will be held at the American Institute building, this city during the month. May 8 and 9, the Palo Alto Stud sale. May 14 and 15, Holstein-Friesian cattle, Combination sale, comprising a large number of animals from several noted herds. May 16, annual sale of ponies and donkeys. May 21, Oakland's herd of Jersey cattle. May 22 a herd of Jersey cattle. May 28 and 29, sale of carriage horses..... Jersey breeders will meet Tuesday, May 7, at Hardman Hall, corner Nineteenth street and Fifth avenue, New York City, beginning at 11 o'clock a. m. This assemblage is called by the American Jersey Cattle Club and immediately precedes the 1889 session of the Club, which will be held at the Fifth Avenue Hotel, at 11 a. m., Wednesday, May 8.....The most costly stable in the world is being built by J. B. Crouse, a resident of Syracuse, N. Y., and when completed is to cost $200,000.....The largest horse farm in the world is said to be 13 miles from Cheyenne, Wyo. It includes 120,000 acres, requires 100 miles of wire fencing to keep the animals in bounds, with 65 men to look after them. The horses, young and old, number 5,000.....Over 1,000 trotting-bred horses have been sold at Lexington, Ky., during the last three months..... ....Dehorning cattle has been declared illegal in England. A Norfolk farmer was summoned before the local justices for cruelty to cattle by dehorning them, but he was acquitted. An appeal was taken to the Court of Queen's Bench, London, and on Tuesday the Lord Chief Justice intimated he would reverse the decision of the justices, and would deliver a written judgment on the case on the first day of next term. ..... California is drying and evaporating her fruits to a much greater extent since the inter-State commerce law raised the rates to distant markets.....Florida is now the most formidable rival of all the other Southern States as an early shipper of fruits, getting into every market East and West before any other State by several weeks.....The first boat of the season through the Erie canal reached Albany, May 2.....The Orange County Stock Farm in the town of Warwick, formerly occupied by C. P. Huntington as a country seat, and later by several different owners, has been sold to Messrs. Drake & Stratton of this city, who, it is understood, will devote it to breeding fine horses and cattle.. The Maryland State Temperance Alliance in its session at Baltimore adopted a resolution asking the legislature to enact such laws as will bring cider within the category of strong drinks.....The pacer Bonesetter dropped dead at Baltimore, May 1. He was valued at $2,500.....Friday, May 3, was observed as Arbor Day in this State..... From Connecticut comes the report of the sale of a 400-acre farm of fair land, with spacious barns, good dwelling house and considerable wood for $1,000 ..... The maple sugar season in New Hampshire is stated to have averaged about as usual as to quantity, but with quality better than usual.....The Williams & Clark Fertilizer Company have removed their offices to the Market and Fulton National Bank Building, Rooms 51 and 52, 81 Fulton Street, New York..... Michigan is to have a permanent location for the State Fair.....

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, May 4, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	8⅜	8⅝	.....
Strict Ordinary	8 13-16	9 1-16	.....
Good Ordinary	9¾	10	.....
Strict Good Ordinary	10 3-16	10 7-16	.....
Low Middling	10 11-16	10 15-16	.....
Strict Low Middling	10 15-16	11 3-16	.....
Middling	11⅛	11⅜	.....
Good Middling	11⅜	11⅞	.....
Strict Good Middling	11⅞	12⅛	.....
Middling Fair	12 5 16	12 9-16	.....
Fair	12 15-16	13 3-16	.....

STAINED.

Good Ordinary	8¼	Low Middling	9 13-16
Strict Good Ord	8⅞	Middling	10⅜

POULTRY--Chickens, spring, per lb, 24@28c.; LIVE FOWLS, near-by, per ℔, 11@11½c; fowls, Western, per ℔ 11@11½c; roosters, per ℔, 7@8c; turkeys, per ℔ 11@13c; ducks, western, per pair, 75c@0.90; geese, western, per pair, $1 15@$1 40.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per ℔, 15@16c; do do, common to fair, 10@14c; do, iced, dry picked, choice, 11@12c. Fowls, western, do, choice, 11@13½c; do, nearby, do do 13@13½c; Chicks and Fowls, mixed, 9@11c; do do do, scalded, 8@9c. Squabs, white, per doz, $3 50@$3 75 do, dark, do, $2 50@$2 75. Chickens Philadelphia, dry picked, 15@17c, do Jersey, do, choice, 14@15c; do nearby, do, good, 13@14c; do Western, do do, 11@12c; do do, iced, good to choice 11@12c. Ducks, nearby, choice, per lb, 11@13c; do do, good, 12@14; do Western, good, 10@12c. Geese, Western, good, 8@10c.

GAME.—Wild Ducks, Canvas back, per pair, $—@@$—; do, Red Head, do, $ 50@$1 00; Grouse, do, —@—c; Wild Ducks, Mallard, do, —@—c; Teal, do, —@—, Plover, per doz., $1 50@$2 00; Snipe, per doz. $1 75@$2 00.

HOPS.—State, new, best, 22@23c; do, prime, 19@21c; do, low grades, 13@16c; do do, 1887, 10@11 do do do California, common to prime, 13@19c; choice, 20@21c.

HAY AND STRAW.—Choice Timothy, 95@$1 00; do good do, 85@90c; do medium, 70@80c; shipping, 65@70c; do, Clover, mixed, 55@70c. Straw.—No. 1, rye, 75@80c; short do 55@65; oat, 40@50c.

BEANS.—Marrows, new, $1 75@$1 80, new mediums choice, $1 75@—; pea, $1 75@—; red kidney, $2 00@—; white kidneys, choice, 2 10@—; foreign, mediums, 1 35@1 55; California Lima, $2 75@$3 10; green peas, $1 15@—.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@—c, and farmers' grades at 6@6½c. HICKORY NUTS quoted at $0 50@$1 00 per bushel. Pecans, 6@8c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Bermuda, per bbl, $4 00@$8 00; Maine do, $1 50@$2 00; State do, $0 90@$1 50; Sweets do $2 50@4 50; Cab., new, $1 50@$2 50; Peas, per crate, $0 50@$1 50; Kale, per bbl., $0 50@$0 75; Beets, per crate, $1 25@$1 75; Asparagus, per doz., $0 50@$2 00;

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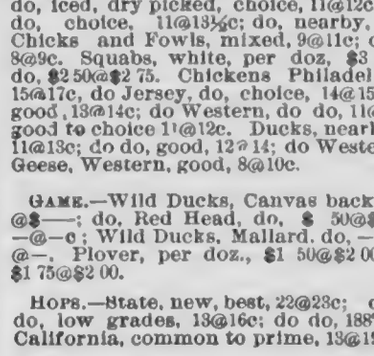

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Spinach, per bbl., $1 00@$1 75; Tomatoes, per crate, $2.-00@$4 00. ONIONS—Orange Co., red, per bbl., 40@75c; Conn. red, do, 75@$0 90: do, white, do. $1 00@$1 50; do, yellow. do. 60@75c; State, do do, 25@75c; Bermuda, do, er crate, 75c; Beans, string, do, 50c@$1 50.

FRUITS.—FRESH.—Apples, Baldwin, per bbl. $1 25@$1 75; Common, $0 75@$1 00; Russet, $1 50@$2 00. Spy, $1 50@2 50. Strawberries, per qt 5@8c;. Cranberries —Jersey. fine, box, $1 00; do common, 50@75c. Oranges —Florida, best, box, $4 00@$5 50; do, good lots, $2 50@$3 50. Lemons, $2 25@$3 75.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5@6c; do new, common to prime, 3¼@4½c; sliced, new, 2¾@3¾c; quarters, 2½@3¼c; chopped, 1¼@1½c; cores and skins, 1@—c. Cherries, new, 13½@15c. Raspberries, new, 15@17½c. Blackberries, 4@4¼c. Huckleberries, 10@—c. Peaches—Delaware, evaporated, peeled, 10@14c; do do, unpeeled, 5@6c; North Carolina sun-dried, peeled, 7@9c. plums, 5@6c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 15 00@13 25, short clear, $14 00@16 00 Extra Prime mess, $12 50@$— prime do, $12@—— and family mess, $13 25@14 00 BEEF—India Mess. in tierces, $13@13 50 Extra Mess, in barrels, $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $8 25@8 50; Family at $11 —@$14. HAMS—$12 00@$13 00, Winter packing. CUT MEATS.—Quoted 10 lb average, Bellies, 7¼@—c; Pickled Hams, 10¼c; pickled Shoulders, 5½@5¾c; Smoked shoulders 6½@—c; do Hams, 10@11c. Dressed Hogs.—City, heavy to light, 6¾@6¾c. Pigs, 7c. LARD. City steam $6 65; May, $7 16; June, $7 17; July, $7 19, August, $7 23; September, $7 26; South America, 8c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, PA.—PROVISIONS.—Potatoes quiet; Early Rose, 28@38c per bush.; Burbanks and White Stars, 23@32c; Hebron, choice, 32@35 Provisions were steady. BEEF.—City family, per bbl, $9 50@$10; do, packets, $9 50@10; smoked beef, 10@10½c; beef hams, $14 PORK.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@12c; do, S. P., cured in tierces, 9½@10½c; do do, in salt, 10c; sides, clear ribbed, smoked, ——@8c; shoulders, in dry salt and fully cured, 6¼@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6¾@7.

CHICAGO.—MESS PORK.—$11 50@—— LARD.—$6 85@—— per 100 lbs; Short Rib sides (loose), $6 00; dry salted shoulders, boxed, $5 25; short clear sides, boxed, $6 25.

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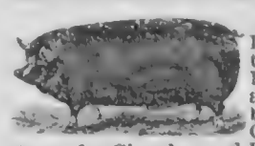
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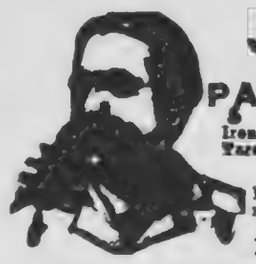
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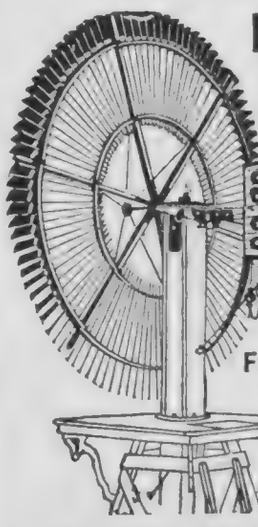
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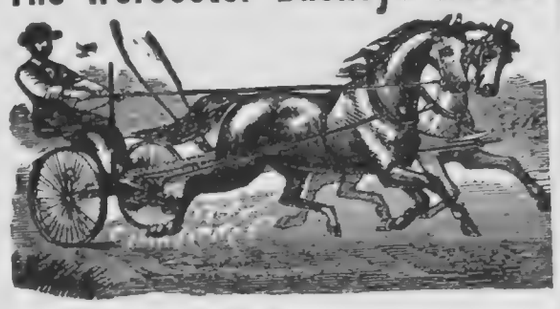
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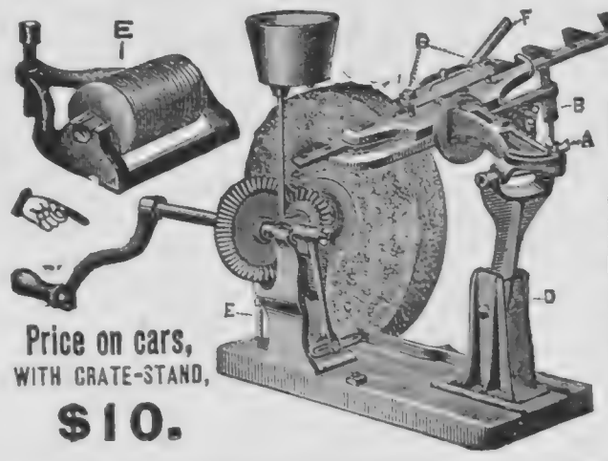

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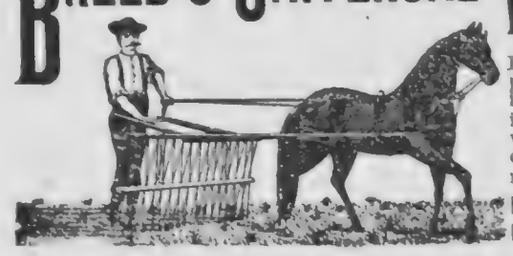
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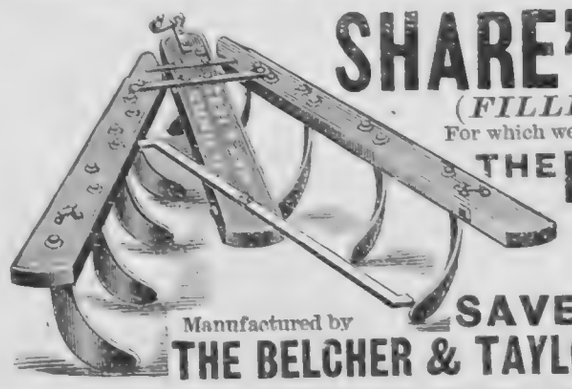
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OUR FIRST FARMERS' INSTITUTE.

BY WM. ROSS.

CHAPTER IV.

THE committees had a week to prepare reports to make at the next meeting. The chairman of the Program Committee had to do all the work himself. The other members had to be caught "on the fly" if caught at all. He made up a program, fixing the hours of meeting, the hours of adjournment, the hours when the State speakers would be heard, an impressive opening ceremony for the first day, and 15 different subjects for discussion, with miscellaneous business and closing. He affixed to each of 15 subjects the names of one to three of the most noted and influential farmers he knew, or could hear of, within a radius of 20 miles of Woodside; though half of them probably, never spoke in public, yet good names on paper carry influence. Bill thought that Mrs. Mean's motto, "When yer gitten, git a plenty," was a good one to adopt in this case, as the local talent of Excellent County was an unknown quantity. The three committees to talk institute worked well. Having learned wisdom from experience, it was thought there would be less vacuity surrounding their meetings by meeting in Judge Forester's office. The room and the crowd would harmonize better in size, and the five chairs, a high stool and a table, would probably afford sufficient seating capacity. The good counsel of the Judge and his clerks could also be secured, and possibly some young farmers might drop in on business with the Court. When this second convention assembled it was gratifying to find there was an increased attendance of more than 200 per cent. The Committee on Arrangements had succeeded in interesting one of its members, appointed in his absence, and it had now a working force of three.

Election of officers was the first business of this convention. Mr. Edwards opened up the matter by saying:

"As Sheriff Nelan is President and Judge Forester is Secretary of the Fair Company, it has been thought advisable to put them in the same positions in the institute society, so as to carry influence in favor of the institute."

"I can't attend to the Secretary's business," said the Judge; "and you needn't put me in."

"I think," said Mr. Bark; "that farmers ought to attend to their own business, and not impose upon men who have no concerns in their calling, and who have enough other business to occupy their time and talents. If this institute business has not merit enough in itself to commend it without hanging on to the skirts of some other institution, we had better stop it now."

"Let us put Bark in for President;" said Frank Toes. "He understands parliamentary law, he is a good presiding officer, and will make the best President we can get."

"That is all very true," said Isaiah Hutton; "but I was thinking of him for Secretary."

"I don't care about Secretary, there is too much work in it, and there are younger men who can do that, though I am willing to do anything I can," replied Mr. Bark.

"I move you," said Mr. Toes; "that Bill Bark be elected President."

The "move you" prevailed and Bark took his seat.

"I move you that Jack Edwards be elected Vice-President."

The "move you" prevailed again.

"Now what will we do for a Secretary?" asked Mr. Hutton.

"There is Mr. Toes who will make a good Secretary," said the President.

Mr. Toes was elected Secretary, and Clarence Grady was elected Assistant. Mr. Grady was chief clerk in the Judge's office. Mr. Quiets was elected Treasurer; and the confidence in him was such that he was not required to give any bond.

Mr. Bark presented his capacious program, remarking that it was not yet complete, as it would be proper to add several more items, when the necessary information should be obtained.

"That's a good program," "First rate," "That'll do," and similar laconic expressions showed the sense of the meeting.

"Mr. Vice-President, I move you the program be accepted." The "move you" prevailed again.

Mr. Edwards of the Committe on Arrangements presented the financial question. "The program," said he, "'ll have to be printed; we'll want at least 500 of 'em, the speakers 'll have to be boarded, etc., and we'll have to raise some money, somehow."

"That is a matter that belongs to the committee," said Bark.

"We don't want to dun the people at the institute," continued Edwards, "it 'll have a bad influence; we don't know how much it 'll take, but there must be some plan to raise it."

"The committee can adopt its own plan and carry it into effect, I think" said the President.

Jack resumed, "If we don't have the money to meet the expenses, somebody 'll have to go down into his pocket after the institute 's over."

"How much will you give?" asked the President.

"I'll give a-half a dollar," replied Jack. "I'll give another and more if needed," said the Judge, "I'll give a-half a dollar," said Mr. Hutton; "I'll give another;" "I'll give a quar"—"Hold on here," cried the Secretary, "till I get this down." The President smiled, and said: "*That's* business."

There now being money to pay postage, the Secretary was ordered to notify every man whose name appeared on the program of his appointment to open discussion on the subject to which his name was attached, and ask him to donate towards expenses.

The committee was also instructed to solicit donations from the business men in town, and see if boarding and lodging and railroad fare could not be secured at reduced rates, for all parties attending the Institute. The time was set for another meeting, and the meeting adjourned.

Bill Bark, now having the Presidential harness fastened upon him, had to either pull or be called balky. So he concluded to pull, and show that "the way to have an institute is to just have it."

CHAPTER V.

THE third meeting was also held in the Judge's office and had a fair attendance. The institute circular for 18'—and 18'—had been received. It gave the information that Waldo F. Brown and W. N. Cowden were the speakers assigned to Woodside and that January——and——was the time. There was also a paragraph in it with an index pointing to it thus:

☞"Do not ask for changes of dates, or speakers, as it will be very difficult to make a change." This was all very satisfactory to all concerned, as it gave assurance that the institute would be well entertained, and also gave sufficient time to get ready. The Secretary reported that some of the local speakers had responded favorably. The committee had good success in collecting money, and all the hotels and boarding-houses except one, had given reduced rates for boarding.

"It might be well," President Bark suggested, "for the committee to make some conditional arrangements at some private houses, too."

"Oh, I think not!" replied Edwards, "five hotels and two big boardin' houses giv us terms, an' that 'll be enough!"

"It would not hurt to have a plenty," said Bark.

"Mr. Edwards, have you bound those parties any way?"

"No, they all just agreed to it, but there's no writin'."

"I think, for your own protection, it would be better to get them on paper, and then if any one refuses to keep his promise, the people cannot blame the institute managers for deceiving them," said President Bark.

"That would be a good idea," said Edwards "If you'll write out a little article, I'll do that."

"I'll do it," said Bark, and this matter was attended to.

It was asked where the institute would be held?

"In the court room," replied Mr. Grady. "It will not be in use then, and it will not cost anything to hold it there."

"It would be well enough," suggested the President, "for the committee to try and make a conditional arrangement for the Opera Hall, so that, if the court room should be found too small, the institute can be moved into it.

"If we git enough here to fill up inside the bar it's more'n I 'spect," said Mr. Edwards.

"The first institute held in M—the people all came inside the bar and it wasn't full."

"It might not be amiss," said the President, "to see where there could be some chairs secured, to increase the seats in the court room, at least."

The committee thought lightly of Bark's premonitions, but he thought the power of printer's ink was unknown.

"Was the committee arranged for printing programs?"

"I asked one editor what he'd charge to print it," replied Mr. Edwards, "and he said he'd do it for nothin', so I looked no further, we couldn't ask it any cheaper'n that."

"How many copies?" "500."

"Mr. Edwards, are you certain that he understood you?" asked the President. "He certainly thought you wanted him to just insert it in his columns."

"I think he understood me."

"He surely did not. All the papers will insert it in their columns, but to print 500 copies, that's job work, and he certainly didn't mean to do that for nothing."

"Well, I don't know!" said Mr. Edwards, "I thought he understood me, but I'll see about that."

This meeting adjourned to meet January—. Everything seemed to be in shape to move along swimmingly, now. The committee had its business well up, except in the matter of music. Mr. Edwards found that either of the papers would print 500 copies of the program for two dollars, and he left it to the President to get it printed when it was completed. The necessary knowledge being obtained he completed it and handed it to the printer.

When the next meeting was held it was ready for distribution, and three of the papers had inserted it in their columns. There was but one matter of importance to decide.

Mr. Edwards reported, "I've been talkin to the leader of the New Agreement choir, and they 'll come and sing for us, if we 'll pay their fare on the railroad, and board 'em."

"We have good choirs in town, but the male singers are engaged in business, and could not well leave their places of business during the day. This would necessarily interfere with the music," said Bark.

"The New Agreement fellows," said Mr. Edwards, "will come, and be right with us all the time, and they 're good singers, and there 'll be no trouble 'bout music."

"I move you," said Mr. Toes, "that the Committee be authorized to secure the New Agreement choir."

The "move you" prevailed again.

Miscellaneous Advertising.

How to Cure Skin & Scalp DISEASES with the CUTICURA REMEDIES.

THE MOST DISTRESSING FORMS OF SKIN AND scalp diseases, with loss of hair, from infancy to old age, are speedily, economically and permanently cured by the CUTICURA REMEDIES, when all other remedies and methods fail.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c; SOAP, 25c.; RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

Send for "How to Cure Skin Diseases."

☞ Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

Relief in one minute, for all pains and weaknesses, in CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster. 25c.

A SOLID STEEL FENCE!

15 Cts. per Foot, material 3 feet wide.
Adapted for Residences, Churches, Cemeteries, Farms, Gardens, &c.
All needing Fences, Gates, Arbors, Window Guards, Trellises, etc., write for our illus. price list, mailed free.
THE NEWEST THING AND THE BEST.
Central Expanded Metal Co. Pittsburgh. | N. W. Expanded Metal Co. Chicago.
St. Louis Expanded Metal Co., St. Louis.

WANTED—A Guernsey Heifer about three months old, to be sent by express. Address A. SNEDAL, Denison, Texas.

IN Guy's (London) Hospital Reports, vol. 1, page 396, is found the statement: "Simple hypertrophy (enlargement) of the heart, especially of the left ventricle, is found without valvular incompetency. In this numerous class the cardiac is secondary (a symptom) to the renal affection." This explains why Warner's Safe Cure is effectual in cases of heart disease. It removes from the blood the kidney acid which causes the heart disease.

FULLY—ANSWERED.

"SUBSCRIBER'S" QUERY CAUSES COMMENT.

AS OUR readers will remember, a letter was published in our columns a few days ago, signed "Subscriber," which dwelt at some length upon a subject of general interest, and which contained several inquiries which will be found answered in the following:

To the Editor:—Several days ago I noticed a communication in your paper from "Subscriber," in which considerable comment was indulged in concerning the pamphlets which are widely distributed by Messrs. H. H. Warner & Co., of Rochester, N. Y. These pamphlets, as is well known, are published in order that the public may become conversant with the symptoms and growth of disease peculiar to the kidneys, and which is, it must be admitted, the productive cause, in a majority of instances, of other organic disorders. The publishers of these pamphlets are also the discoverers and manufacturers of the noted Warner's Safe Cure, which is known to be the only means for the prevention and cure of kidney disease, as can be testified to in every community. In the pamphlets referred to there appear a number of testimonials from parties who speak in the highest terms of how they have in many instances been restored to health by Warner's Safe Cure, after having been given up by doctors to die, and attached to those statements are the fac-simile signatures of the parties themselves.

I am personally aware that all the testimonials published by this firm are genuine and are the voluntary statements of persons who are anxious to manifest their gratitude for the unexpected return of health and vigor which Warner's Safe Cure has brought them. To make assurance doubly sure, it can be added that Messrs. H. H. Warner & Co., have for years, published a standing offer of $5,000 to any one who will prove to an impartial referee that any testimonial published by them is not, so far as they know, bona fide and absolutely true. What more does "Subscriber" desire to convince him, in addition to his own statement, that his neighbors all tell him that Warner's Safe Cure has done more good for them than they have received from the doctors.

In view, Mr. Editor, of the many persons who are sacrificed daily to the bigotry and ignorance of physicians who persist in treating patients for symptoms, called consumption, apoplexy, brain troubles, and nervous disorders, when the real cause is disease of the kidneys—which should be detected and quickly eradicated by the use of Warner's Safe Cure—I maintain that the value of those pamphlets which place in the hands of the public the means of knowing the truth, cannot be overestimated. FAIR-PLAY.

Beecham's Pills act like magic on a weak stomach.

GENUINE PHILADELPHIA. 1889.
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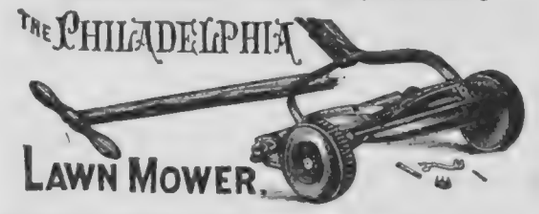

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CATALOGUES ETC., RECEIVED.

THE EFFECTS OF TILLAGE ON SOIL MOISTURE.--This subject is discussed by Prof. W. O. Atwater in Bulletin No. 2 of the Storrs School, Experiment Station. Prof. A. states, what many farmers have observed, that hoeing and cultivating the soil help crops to withstand drought, but the fact that such tillage is often worth more than manure, and the reason why it is so useful, are things that need to be better understood. It was for the purpose of preparing facts that should lead to a better understanding of the true value of such tillage that the experiments recorded in the bulletin were conducted. Eight cans, each 30 inches deep and 10 inches in diameter, were filled with soil—four with a light upland and four with garden soil. Arrangements were made to accurately measure the amount of water falling into the cans. The surface of the soil in two of the cans was stirred frequently—one to a depth of two and the other four inches, while that in the other cans was left undisturbed. Thus it was attempted to supply the conditions found in the soil of the cultivated field. The experimenter knew exactly how much water fell into the cans, and he could also tell at any time he desired, how much was left—hence how much had evaporated. The plan was to see which soil contained the most water—the one with the compact surface or the one that had been stirred to a reasonable depth. The results show most emphatically that both kinds of soil lost more water when left with their surfaces compact than when the surface was stirred. It was also shown that the heavier soil lost more water than the lighter. Having shown that surface tillage tends to conserve soil water, a fact that most farmers have satisfactorily proved to themselves, Prof. A. goes on to show *why* this is so. Here, in brief, is what he says:

The earth acts as a reservoir for water as a lamp acts as a reservoir for oil. Part of the water that sinks into the earth evaporates before it reaches the lower strata of the soil, another part forms "ground water" which is found on digging for wells, etc. In dry weather this ground water is continually rising to a point where the roots of plants can reach it. The force that raises this water is the force of capillarity, the same force that draws oil up the wick of a lamp or causes water to spread through a cloth of which a corner is wet. This force tends to draw water from a wetter to a drier soil and the ease with which it comes depends upon various conditions. One of the most important is the size of the passages through which the water is to pass. These should be fine, but should not be entirely stopped up. They are too coarse in common sand, while in clay they are often clogged. Thus the texture of sandy soils will be benefited by admixture with clay and clay by sand. These pores or passages should not be too large, and there should be a continuous system of them. Stirring or loosening the soil makes the pores larger and breaks their continuity so that water is hindered in its passage. A compact surface helps the water to come to the surface where the sun's heat changes it to vapor and the wind carries it away. If the surface soil be loosened, it will hold more air, which is a poor conductor of heat. Thus it acts as a mulch, keeping the soil below cooler, holding the water below against the dissipating influences of sun and wind. Thus we see that cultivating the surface of the soil assists nature in carrying out the plans of the husbandman. The stores of water are permitted to rise to the roots of plants but are hindered from evaporating and passing away into the air.

THE USE OF NIGHT-SOIL IN JAPAN.—The R. N.-Y. has received bulletin No. 3 of the Imperial College of Agriculture and Dendrology, Komaba, Tokyo, Japan. In this pamphlet Dr. O. Kellner gives the results of his researches in the composition, treatment and application of night-soil, and also some facts regarding the valuation of other Japanese manures. The bulletin is well printed in English and is, in the opinion of the R. N.-Y. the most valuable treatise on the value and use of night-soil that has yet appeared. We have all heard of the wonderful agriculture and horticulture of Japan. In that country, small savings of manure lead to a grand crop result. Soil culture is conducted under the most intensive system possible. In America, stock growing is considered the corner stone of farming. In Japan, domestic animals are largely dispensed with and instead of computing the manurial value of the food given to stock, the scientists estimate the manurial value of the food consumed by human beings. To show the extent to which this computation is carried, we may state that in this pamphlet, citizens are divided into four classes and samples of the night-soil from each class are analyzed for comparison. These classes are farmers, who are supposed to live almost entirely on vegetables; ordinary citizens of the towns who eat somewhat better food; middle class officials who are still better cared for, and soldiers and students who are supplied with a moderate quantity of meat, and whose food closely resembles that eaten by Europeans. Analyses of those different samples of night-soil revealed the following differences—the figures represent the per cent. of the various substances.

	NITROGEN.	POTASH.	PHOS. ACID.
Farmers,	5 51	2.95	1.16
Citizens,	5.85	2.88	1.33
Officials,	5.70	2.40	1.52
Soldiers,	7 96	2.07	2.97

This may look like very small business to the American farmer, but it is by means of just such careful investigation and such thorough attention to fertilizing principles, that Japan is enabled to support her great population, and while speaking of this question of the relation of the quality of food to the value of manure, it may be well to give Wolff's figures regarding the value of the excreta of Europeans.

	NITROGEN.	POTASH.	PHOS. ACID.
Japanese (average),	5.7	2.7	1.3
European,	7.0	2.1	2.6

It will be noticed that the Japanese night-soil is slightly richer in potash than the European, but considerably weaker in phosphoric acid. Again, it is more dilute than the European, as the Japanese are notorious for the great quantity of salt which they consume. They drink more water than any other people. The slight excess of potash is due to the fact that their diet includes so much vegetable food, which is generally rich in potash. So much for the manurial value of night-soil. Now for the manner of obtaining this value in actual culture.

Japanese farmers have frequently noticed two things about the use of night-soil. Fresh manure, applied in a pure state and without undergoing fermentation, never has a good effect. The plants manured with such dung are very liable to wilt. It has also been noticed that night-soil is a one-sided manure. When applied to grain crops it invariably has a powerful effect on the tillering of the young plants, causing a great growth of stem and leaf. Before the formation of the grain, however, this function stops, the plant suddenly seems to become stunted, and the grain formation is seriously checked. Experiments conducted at the Imperial College show that soils have not the power of absorbing urea, which may be said to be the most important principle of fresh urine. Now, when fresh urine is used, the urea remains in a dissolved condition in the soil.

The concentration of the fluids in the soil may become so strong that the absorption of water by the roots is interfered with, so that the green organs are caused to wilt. Either this may happen or the urea may be washed out of the soil, by the rains, and carried to a point where it is of no value as a fertilizer. When the night-soil is decomposed, this urea is changed into a form of fertility that can be utilized and stored up in the soil. It is not strange therefore that Japanese farmers never apply night-soil until it has passed through a thorough putrefaction. For this purpose it is diluted with two-thirds of its bulk of water and stored in large wooden tubs until a greenish color makes its appearance at the top. It is then considered suitable for application. It is quite customary in this country to use disinfectants like carbolic acid and sulphate of iron in privy vaults. Experiments were made in Japan to see what influence these disinfectants had on the agricultural value of the manure. It was found that the disinfected excreta may cause the same loss to the crop that is caused by the unfermented manure, and the disinfectant may also prove poisonous to plants. With regard to the one-sided fertilizing character of night-soil, Dr. Kellner repeats what the R. N.-Y. has repeatedly stated, viz:—that the night-soil is not evenly balanced: it contains too little potash and phosphoric acid for its nitrogen. This is seen by its action on the grain crop. The soluble nitrogen induces a tremendous growth of leaf and stem, but there is not enough of the other elements to finish out this growth and complete the plant as started. Potash and phosphoric acid must be supplied. The Japanese attempt to do this by composting straw, leaves and refuse with the night-soil, or by applying wood ashes in the hill or drill while the night-soil is applied to the surface of the soil in a semi-liquid form. Phosphates would be applied in a similar manner if they could be obtained in Japan. Doubtless the time will come when they will be carried there from other countries. Another point of considerable interest brought out by these researches is the fact that night-soil manures are not so well suited to light, sandy soils as they are to those more compact.

EXPORTATION OF MEAT FROM THE ARGENTINE REPUBLIC.—This is the title of a pamphlet sent out by the Argentine Rural Society. We have heard much about the business energy of the Argentines. This pamphlet would indicate that the people of that southern republic are well worthy their reputation. It appears that Argentine desires to take a hand in the work of supplying the world with meat, both frozen and preserved. Argentine beef has heretofore had but a poor reputation—particularly in England where the most desirable market is located. The President of Argentine sent a letter to the Argentine Rural Society asking the members various questions regarding the present condition and future prospects for Argentine cattle, and also calling for suggestions as to the best way to develop the desired trade. This pamphlet contains these questions and the answers given by the society. It would appear that the cattle of Argentine, are, as a rule, superior to Texas cattle, while they are rapidly improving in quality, as some of the very best Herefords and Shorthorns are being taken to Argentine for breeding purposes. Experiments thus far made in shipping frozen mutton and beef, have not been fully satisfactory—this is admitted by those who write for this pamphlet—but the reasons why satisfaction has not been given are clearly pointed out and there is no apparent reason why the faults cannot be remedied. The government of Argentine proposes to give $1,500,000 to the work of building up the export meat trade. Prizes will be given for the best methods of packing, and rebates of taxes will be made to all who put a certain amount of capital into the business. It seems safe to say that Argentine is determined to secure a share of the world's meat trade. When she does secure her share, the agriculture of more than one country will have to be shaken up and newly adjusted.

FUNGOUS DISEASES OF PLANTS.—The directors of the Connecticut Experiment Station announce in bulletin No. 97 that they propose to extend their field of investigation by the addition of a new department in which provision will be made for the careful study of rusts, smuts, rots, mildews, blights and similar diseases. It is proposed to investigate onion smut first. A list of questions have been proposed, which onion growers are requested to answer. Thus it is hoped to prepare a valuable "symposium" on the subject. Send to the station (New Haven, Conn.) for the questions.

BOOMER & BOSCHERT PRESSES.—Catalogue from the Boomer & Boschert Press Company, Syracuse, N. Y. This is an excellent pamphlet in which the manufacturers state, in a simple and straightforward manner, their reasons for considering their presses superior. Those who desire anything in the cider making line will find what they want at Syracuse. Printed on the back of the pamphlet is a picture entitled "Ye Good Old Way" that reminds one of the famous scenes in "The Old Homestead."

SUNBEAM WALKING CULTIVATOR.—P. P. MAST & Co., of Springfield, Ohio, send us their new catalogue describing and illustrating this excellent implement. There are several distinct features in the construction of the "Sunbeam," that call for particular mention. One of these is the use of the parallel iron-jointed beams, which are undoubtedly one of the greatest improvements ever made on corn cultivators. The rear ends of the beams are pivoted to a cross-head to which the shovel standards are attached. There is also a secondary beam or rod pivoted to the coupling in front and to the cross-head in the rear, which holds the cross-head with the shovels, parallel with the axle, whatever may be the position of the beams sidewise, which enables them to do much better work and to be more easily handled. This feature will commend the cultivator to anyone who may see it. The inside standard can be adjusted up and down on the cross-head, a feature very desirable for plowing listed corn or other crops where there are ridges and furrows. There is a spring at the front end of each beam so arranged as to support the beam when in use, which enables the operator to move them easily on either side, and assists in raising them when he wishes to hook them up while turning at the end of the row. The draft rod is so attached that it relieves all the weight from the horses' necks, and the evener is so arranged that it divides the draft equally and does not turn the wheels out of the line of draft.

We show a picture of the "Sunbeam" at figure 112, in which these parts are shown.

Miscellaneous Advertising.

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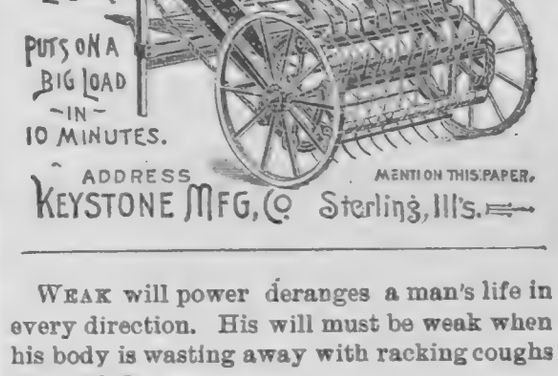
RHEUMATIC Sciatic Pains

Rheumatic, Sciatic, Shooting, Sharp, and Muscular Pains and Weaknesses, Back Ache, Uterine and Chest Pains, **relieved in one minute** by the first **Cuticura Anti-Pain Plaster.** and only instantaneous pain killing, strengthening plaster. 25 cts.; 5 for $1. At druggists, or of POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

150,000 FARMERS HAVE USED AND APPROVED THE "ACME"

Agents Wanted.

The Best Selling Tool on Earth.



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Steel Crusher and Leveler. Double Gangs of Adjustable Reversible Coulters. Lumps Crushed, Soil Cut, Lifted and Turned in one operation. No Spike or Spring Teeth to pull up Rubbish. No Wearing Journals. Practically Indestructible. Sizes 3 to 12 ft. wide. With and Without Sulky.

I Deliver Free at Convenient Distributing Depots West and South.

FAIR PLAY. Don't Buy a Base Imitation or Inferior Tool. Order a Genuine Double Gang Acme on TRIAL, to be Returned at my Expense if not Satisfactory. No Pay Asked in Advance.

Illustrated Pamphlet FREE.

DUANE H. NASH, Sole Manufacturer, Millington, New Jersey.

MENTION THIS PAPER.

WEAK will power deranges a man's life in every direction. His will must be weak when his body is wasting away with racking coughs and nightly sweats.

Warner's Log Cabin COUGH AND CONSUMPTION REMEDY

is a conqueror of the malady we all dread, and restores the victim to health and power.

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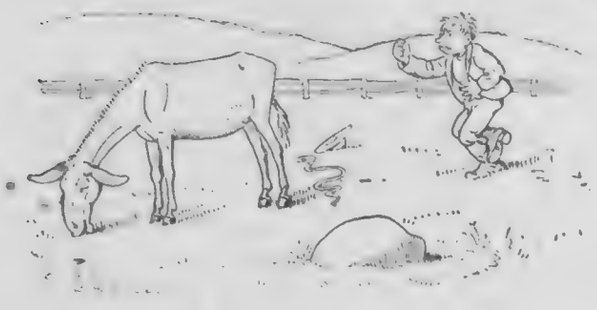

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"AND IT CAME TO PASS."

Humorous.

The RURAL NEW-YORKER *is prepared to offer very liberal terms to good, responsible,* PERMANENT *agents. Correspondence solicited.*

AN exchange speaks of a child having "a gash bitten in its leg by a dog four inches long." A dog four inches long is worthy of a place in Barnum's show. It is the smallest canine on record.—*Norristown Herald.*

A WRITER says an ordinary beetle can draw twenty times its own weight. We have seen the insect move a woman weighing 165 pounds, by simply alighting within half an inch of her nose.—*Norristown Journal.*

A CERTAIN doctor having heard a village poet repeat some verses on a scolding wife, was so delighted with them as to request a copy. "There is no necessity for that," said the poet. "You have the original."—*Otago Witness.*

MADELEINE: "Wasn't it hot at the Johnsons' last night? Fred Johnson and I had to go out on the piazza, the air got so close." Marguerite (pleasantly): "Didn't the heir get pretty close out there, too?"—*Harvard Lampoon.*

HENPECKED HUSBAND (reading the paper and rocking the cradle): "Ahem! the bustle is going out, I see." Vixenish Wife (who has just finished dressing): "You bet it is, and I am going out with it You take care of that baby till I get back"—*Boston Courier.*

FIRST KENTUCKIAN: "Say, Colonel, there's a Mormon elder down the road preachin' to a crowd o' young women an' singin: 'Would I Were a Bird!'" Second Kentuckian: "Well, I kin furnish the feathers. You git some tar to stick 'em on."—*Philadelphia Record.*

"LONGEVITY? I should say longevity did run in the family," said Mrs. Spriggins. "Why, John was six foot two, Bill was six foot four, and George he had more longevity than any man I ever seen. He was six foot seven if he was a foot."—*Michigan Farmer.*

"VAT," said the collector for a little German band to a citizen who sat in his front window, "you no gif noddings for dat moosic?" "Not a cent!" replied the citizen, with hopeless emphasis. "Den ve blay some more, dat's all!" threatened the collector, so the citizen hastily gave up a quarter.—*The Epoch.*

"DOCTOR," said the patient, "I believe there is something wrong with my stomach." "Not a bit of it," replied the doctor, promptly. "God made your stomach, and He knows how to make them. There's something wrong with the stuff you put into it, maybe, and something wrong with the way you stuff it in and tamp it down, but your stomach is all right."—*Farm Journal.*

Miscellaneous Advertising.

AMONG the blind the one-eyed is king. The one-idea of

Warner's Log Cabin PLASTERS.

is to strengthen the foundation of health, and thus insure health. Best and cheapest in the market. All druggists keep them.

The Mapes Manures for { Cabbages, Cauliflowers, Tobacco, Onions, Melons, Pear, Peach and Apple Orchards, Vineyards (for wine and market), Small Fruits, all Truck Crops, Tomatoes for Canning, Sweet Corn, Field Corn, Grass Top-Dressing, etc.

Applications may be made also at any early stage of growth, scattering evenly over the surface and working in when practicable.

The Great Skill in the Mapes Manures.

[*From the Farm Journal, Wilmer Atkinson, Editor—Philadelphia, May,* 1889.]

Mapes' Manures give surprising results to those who use them, and we believe the reason is that the ingredients are mixed with brains. It is said, besides, that the raw materials which compose them costs within ten per cent. of the cost of manure ready to apply to the soil. This latter statement is apt to be true; the former we are certain is true. There is great skill shown in having the Nitrogen, Potash and Phosphoric Acid just in the right proportion, in the proper form, in the right fineness and solubility, so that action is prompt and certain. Often the elements in a fertilizer are present as shown by the analysis, but they are not in condition to act, and the benefit is not apparent; but Mapes seems to have everything just right and his manures are perfectly sure to do the work required of them. This is our experience.

Send for descriptive pamphlet. Address

THE MAPES FORMULA AND PERUVIAN GUANO CO., 158 Front St., New York.

Pure No. 1 Peruvian Guano, direct from depots, in stock.

HOLLIS' POULTRY FOOD

CANNED MEAT.

This meat, which is strictly fresh and ground fine, is the best thing in the world to make

CHICKENS GROW.

It is hermetically sealed in 8-lb tin cans, and will keep until opened. 30 cents per single can; $3 per dozen.

HOLLIS DRESSED MEAT & WOOL CO.,

26 and 22 North [illegible]et, Boston, Mass. Mention this Paper.

H. S. MILLER & CO.,

—MANUFACTURERS OF—

Pure Animal Bone FERTILIZERS,

For All Crops and Soils.

Factory and Principal Office.
ON PASSAIC RIVER, NEWARK, N. J.

Baltimore Office:
202 & 206 Buchanan's Wharf, Foot of Frederick St

Write for "Farmer's Manual," Mailed Free.

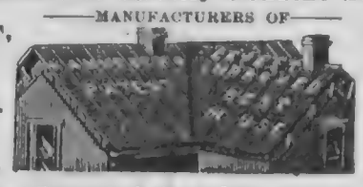
THE KANNEBERG ROOFING COMPANY, CANTON, OHIO.

(The Originators of Strictly Genuine Steel Roofing.)

The KANNEBERG PATENT, Latest Improved Folded Lock Seam.

Strictly Genuine Steel Roofing.

—MANUFACTURERS OF—



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Crimped Edge Iron Roofing and Siding, Beaded Iron Siding and Ceiling, Water Proof Building Paper, Ready Mixed Paints, Etc.

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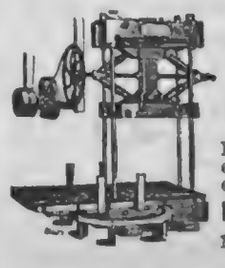
LICE TICKS, SCAB, MANGE, all parasitical troubles, all skin disorders are cured by THYMO-CRESOL (The Cold-Water Dip). Non-poisonous; safe in coldest weather. Colonel F. D. CURTIS, of Kirby Homestead, says: "*I have used it for some years, for parasites upon Hogs, Cattle and Sheep, and I have found it thoroughly effectual and satisfactory.*" Imported only by

T. W. LAWFORD & CO., Baltimore, Md.

Sample by mail for 50c. Mention this paper.



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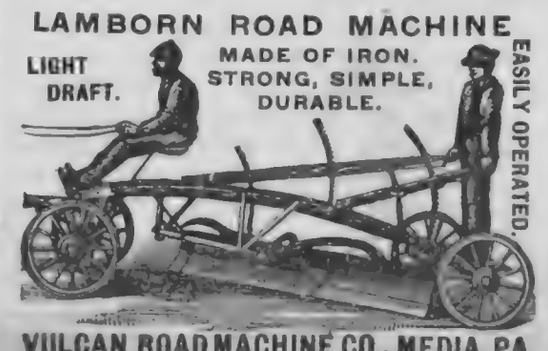

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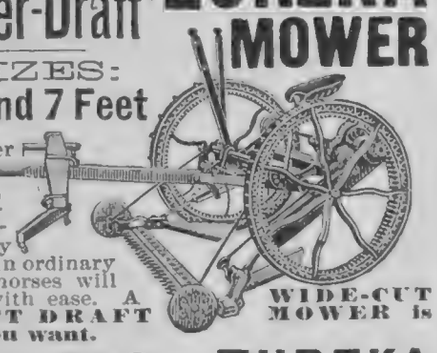

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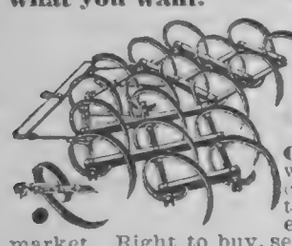

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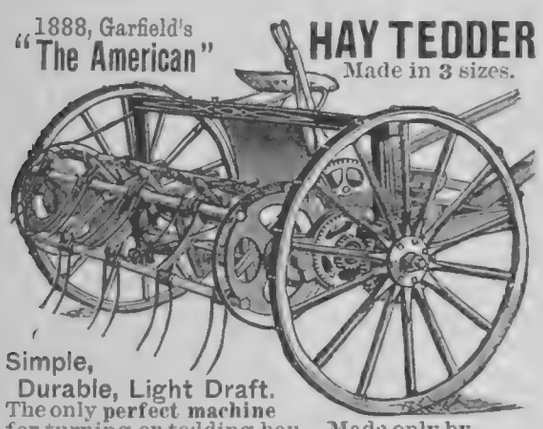

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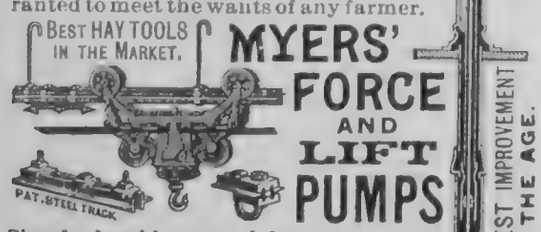

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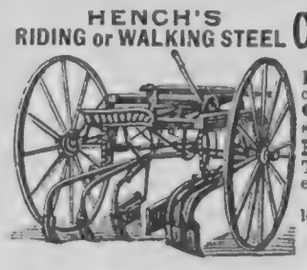

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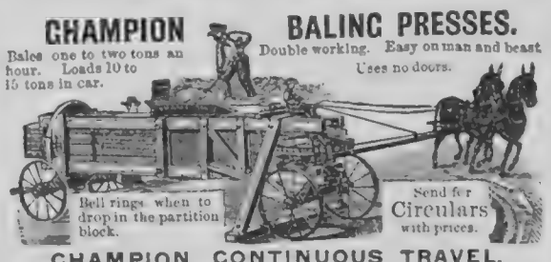

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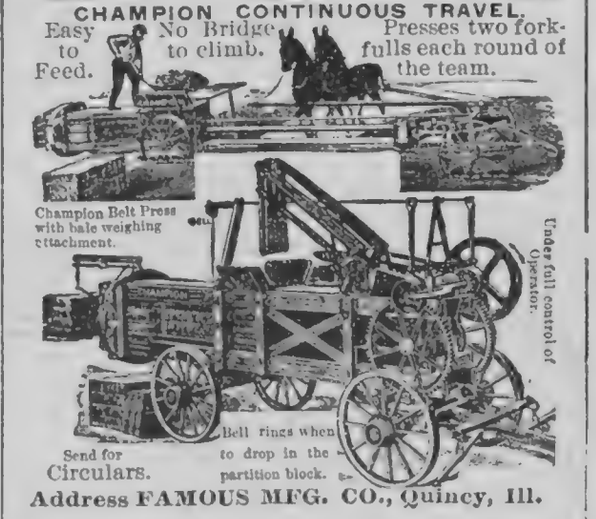

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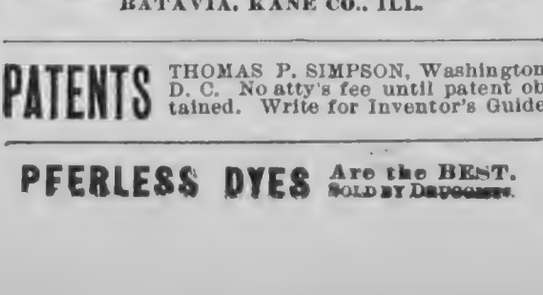

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

PHOTO ENG. CO. N.Y.

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Field Crops.

HAY!

"ALL FLESH IS GRASS."

HOW TO IMPROVE MEADOWS

WHAT GRASSES ARE FAVORITES?

WHAT TOOLS ARE USED?

HINTS ON

Seeding,
Curing,
Handling,
Fertilizing,
Feeding,
Selling.

QUESTIONS.

1. *What grasses are sown for hay in your county? Do you favor early or late cutting? Why?*
2. *Give a list of improved haying tools in general use.*
3. *How often do you seed down? With what crops? What season?*
4. *What is the average yield per acre and what manures are used?*

Any new grasses or substitutes tried recently?

9. *What, in your opinion, is the best way to increase the productiveness of our meadows?*

MEADOWS AND HAY.

C. S. RICE.

In this vicinity meadows are usually seeded with a mixture of Red clover and Timothy. If six or eight quarts of Timothy and the same amount of clover seed are sown to the acre on land in fine condition, a good stand will usually be obtained, and from two to three tons of excellent hay can be cut from an acre at one cutting. If the crop be cut when the clover is in full bloom and rightly cured, the hay will be far more valuable, not only for cows but for all kinds of stock, than it will be if cut later in the season.

Early cutting of such a meadow also insures a large amount of after-growth that can be cut and cured for hay or used as pasture for the dairy through August and September and a part of October. I have used the second crop for pasture for the last 15 years with great profit to the dairy and no damage to the meadows. The cows may be turned on when the feed is eight or 10 inches in hight, and a large amount of excellent feed can be saved through the fall without feeding so closely as to injure the next year's crop.

Good land seeded as above stated, will continue to yield two tons of hay to the acre for three to five years without manure except 100 pounds of plaster to the acre for the first and second years while the clover forms the largest portion of the crop. This result is obtained in spite of the pasturing, which is generally thought to be ruinous to meadows. No doubt the clover roots decaying in the soil greatly increase the crop of Timothy in the third and fourth years.

The value of clover for hay and of its roots for manure is so great, and the large after-growth of a newly seeded meadow is so certain that it is not best to let land remain in Timothy if the yield falls below two tons at one cutting. It is true that the yield may be kept up by top-dressing, but the profit arising from manure used in this way will not be so great as when it is applied while the land is being tilled for the growth of other crops. The benefit of manure is not as lasting when applied on the surface of a meadow as when thoroughly mixed with the soil just before seeding.

The best method by which to improve meadows is improved general farming. Feeding clover and grain, and saving rich manure in a water-tight gutter with plenty of suitable absorbents, will do much to insure success. A soil made fine and free from weeds by thorough and careful tillage is essential to the best results. My experience has proved that with a course of ordinary farm crops and a limited amount of labor, good meadows may be secured and a fair profit realized by management about as follows:

A field of six acres that has been in meadow for four years and has yielded an average of more than two tons to the acre, besides giving a large amount of pasture each year, was manured last fall with 12 large loads of rich manure to the acre. As it is now a good Timothy sod it would, no doubt, yield two tons to the acre this year, but greater profit can be made by plowing and drilling corn for fodder. Next year potatoes will be raised there, bone and ashes being used as a special manure. The third year another application of 12 or 15 loads of stable manure to the acre will be made and the field seeded with barley, peas and oats mixed, for the grain crop, and eight quarts of Timothy, and the same of clover seed to the acre for meadow. I formerly seeded with wheat or barley, but wheat is not a profitable crop now and a good stand can usually be secured with mixed grain. I think that the good effects of bone and ashes used on the potato crop extend to the grass for many years. During the next three years this field will receive thorough cultivation with the best improved tools for the crops mentioned, and, judging by past experiments, I shall confidently expect fair profits and a good meadow for at least four years thereafter. If it were convenient to employ more help on the same land, I would, for profit and rapid improvement of the soil, adopt a four-year course, raising corn-fodder and potatoes on clover and Timothy sod the first year, and re-seeding the second year with the mixed grain, and cut clover and Timothy the third and fourth years and then plow again. Alsike clover makes good hay, but does not yield much aftermath and can never fill the place of Red clover in the improvement of the soil.

I have used millet and Hungarian grass for soiling crops and for hay, but I do not cultivate them now. Clover and corn are more profitable for soiling and also for winter feed. I have tried Orchard grass, but would not use it for meadow if the seed were furnished gratis. On low land not suitable for growing corn and potatoes, I have used the meadow mixture sold by seedsmen for permanent results. An occasional top-dressing in the fall will secure a good yield of hay, and it can be cut later in the season than clover or Timothy and still be of good quality. The hay is relished both by horses and cattle. If cut early, it gives very good after-feed. The sod formed by this mixture will remain uninjured where clover and Timothy would be thrown out by the frost and killed.

Hay should be cured with as little exposure to sun and wind as possible. It should be raked as soon after cutting as it is sufficiently made so that the rake will do good work, and if the weather is fair, it may be cured in the windrow. If there is danger of rain it should be cocked. For 14 years I have used Faust's hayloader with the best satisfaction, and most of the hay has been raked while quite heavy and has been cured in the windrow for convenience in loading, and the labor of cocking is thereby saved. Very little damage has been done by rain or dew. There are no hay tedders in use in this neighborhood and I do not think that I have any use for such a tool. I have used a horse fork for unloading for 30 years. The double-harpoon fork is, I think, the best. An agent put up a hay carrier on trial a few years ago, but soon removed it as it did not give as good satisfaction as the usual method with pulley blocks alone. Our mows are quite large, extending 30 feet back from the floor; but by hitching the fork in different places, much of the labor of mowing a way is saved, and the team has a less distance to travel than with the carrier, and the unloading is done in less time. A drive-way convenient to the main floor is reserved for the use of the team in unloading and all the mows can be filled without changing the cart to which the rope is attached, to different places. This drive-way is afterward used for storing straw.

To improve the meadows on an upland farm in Northern New York I would feed all the hay and grain raised on the farm. I would keep improved stock that will pay a profit on purchased grain feed. I would buy and feed a large amount of bran, corn-meal and cotton-seed meal, and carefully manufacture and apply a large quantity of manure to tilled crops.

I would use a large amount of grass and clover seed. I would work the soil thoroughly with the best improved tools. By a well arranged rotation of crops, I would do away with old meadows entirely. A 100-acre farm so managed will afford more profit than 200 acres largely devoted to old pastures and old meadows.

Lewis Co., N. Y.

THE QUESTIONS ANSWERED.

L. F. ALLEN.

For hay in the city markets Timothy is most in use as horse feed, though it is not, in my opinion, really the best, but it is popularly preferred. For best consumable quality it should be cut when in early bloom, with the blue shade on the head when cut. Later, when full-grown and ripening seed is formed the stalk becomes hard and woody, and of largely decreased value in nutrition. A good way to seed it is to sow it in September with a crop of wheat or rye—six or eight quarts to the acre—and the next spring sow four quarts of common clover with it, or two quarts of Alsike clover, as the latter's seed is but half the size of that of the common Red clover and the quantity mentioned will give as many roots to the acre as double the amount of the other will do. This latter mixture of the seeds is for ordinary stock feeding on the farm; yet in my opinion, from many years' experience, it produces hay equally good for horses.

There are several kinds of mowing machines in general use. Each is preferred according to the tastes of those who use it, and most of them are good. When the crop of grass is heavy, the horse wheel spreader should be used, as it dries the hay in much less time, and makes a great saving of manual labor over spreading with the fork in the old-fashioned way. When sufficiently cured—not absolutely dry—the hay may be gathered into the wagon either from the windrow or cock.

When the crop runs out, either by previous drought or poverty of soil, plow the ground and seed anew with a grain crop and a generous application of barn-yard manure—Timothy in the fall or spring. Clover should always be sown as early in the spring as possible when the frost is out of the ground.

The amount of yield per acre will depend upon the fertility of the soil, ranging from one to three tons. The usual average on our farms is about one and a half ton, depending on the extent of rains we have. A wet May usually gives a fair crop of hay, and if the rains extend into June, all the better. A very dry spring diminishes the crop severely.

I formerly used the common Red clover mixed with Timothy seed, but it usually stays in the ground not more than two years for a crop. For the past four or five years, I have substituted Alsike, as its fibrous roots hold longer in the soil, and, branching from near the root, it makes finer hay, and all kinds of stock like it in preference to the Red as sweeter and finer in quality. If mixed with Timothy it blooms some days later than the Red variety and comes in better season with Timothy and lasts as long in the soil. The common Blue grass, cut in proper season, makes excellent hay for all kinds of stock; but being shorter in growth, the crop is much lighter than that of Timothy or clover. Orchard grass makes a fair quality of hay, coming forward earlier in the season than any of the others, and it should be cut when just coming into bloom; if left later the stalks become coarse and woody, not much better than early cut oat straw. When Red clover is grown with it, the clover blooms later and they are not exactly in unison with each other. For some years I so grew them, but have now abandoned the practice. For pasture, a mixture of Orchard grass with Blue grass and the clovers is exceedingly valuable, as it grows rapidly after feeding off, which the others often fail to do. For dairy cows clover hay is altogether the best, and for the most economical use should always, as with the grass hay, go through the cutter.

Barn-yard manures, either coarse or rotted, are the best fertilizers for meadows, and spreading them early from the Kemp machine is altogether the most economical way of applying them, and if any be unevenly spread, as may sometimes be the case from want of uniformity in composition, a smoothing harrow should be applied, which will spread the manure in perfection. Chemical manures may also be added if necessary, but they are not so lasting in their effects. On light soils, gypsum, applied just as the crop is

starting in growth, is oftentimes of great service. There is hardly a crop on the farm in regard to which so much neglect is displayed in cutting and curing it in its proper season as our hay, to the great detriment of its quality, as well as of its marketable value.

HAYING TOOLS AND IMPROVEMENT OF MEADOWS.

PROF. I. P. ROBERTS.

TOOLS and implements are so numerous and so much improved in all directions that it is impossible to give a "list of them" without taking up several columns. On large farms a mower should have a wide cut; it should leave the grass loose and untramped by wheels or the feet of horses and as nearly in the position in which it grew as possible. The Eureka mower comes nearer to filling the above conditions than any other one with which I am acquainted. There is but slight difference in the self-dumping hay-rakes; all that are well-made are good. Hay tedders are too expensive for most farmers, considering their liability to get out of repair and the little time they are in use. Then, too, unless they are used with the utmost judgment they seriously injure the quality of the hay.

The hay-rake may often be made to serve the purposes of a tedder without injury to the leaves of the grass. The hay should be raked fairly green, left for a few hours till wilted or nearly dry and then turned over with the rake, the operator holding to the lever till the windrow has been inverted. In extreme cases this operation may be repeated. Hay should be cured as much as possible in the bunch: therefore it would appear to be better economy to buy hay-caps than tedders. We are about to make a careful test of the value, cost and durability of hay-caps.

Hay loaders even of the best kinds can hardly be recommended for general use. They all imply drawing hay from the windrow or unraked, and this is not the right method or the best method. Better spend the money for hay-caps than for hay loaders. The best contrivance for unloading, where the barns are sufficiently ample to justify track, ropes, etc., is the sling, which takes off from 700 to 800 pounds at a draft and does not tear the load to pieces or drop large portions of it on the floor. This hay and grain unloader or sling is certainly the best contrivance, except possibly where the location of the barn will permit drawing the wagon and load into the very top of the barn and the method of upsetting the entire load with one short pull.

The greatest improvement and saving in securing the hay crop yet remains to be generally adopted. I refer to the truck wagon. This has low, broad wheels, 30 inches in diameter, and axles six to 12 inches longer than those of the ordinary wagon. Instead of the ordinary rigging, a flat one made chiefly of boards, 14 feet long, and eight feet wide is used. The unusual width of the rigging and the lowness of the load obviate at least one-half of the labor of getting the hay on the wagon, save the loader (in fact a loader is hardly necessary) and obviate all sliding off or upsetting of the hay. No farmer can afford to be without the low, wide-wheeled, long-axled truck. Finally, in fact, there is not a single really poor haying implement made. Some of them lack in the quality of the material used; especially is this the case with the wooden parts.

Two methods are open to us in the improvement of meadows. If they are rough and hopelessly unproductive, the heroic treatment will be found best. Plow, replow, level, clear off all stone and stumps, fertilize and re-seed, using some clover, which will disappear in about two years. By this method plant food will be set free at the surface and with that, added by fertilizers and that brought from the subsoil by the clover roots, there will be enough available fertility in the surface soil to produce many abundant harvests. The second method is to thoroughly scarify the surface with a sharp-toothed harrow in the spring of the year, sow a little grass seed and one or two hundred pounds of commercial fertilizer per acre and roll with a heavy roller. This, of course, should be done in addition to giving the meadows a light coat of fine manure either immediately after haying or later in the fall. If the meadow is overgrown with moss an application of lime, a little grass seed, the harrow and the roller will work wonders. Where it is desirable to have the meadows permanent, little or no pasturing should be done in the fall.

Ithaca, N. Y.

VIRGINIA HAY-MAKING.

H. L. WYSOR.

THE combination of grasses grown for hay in this section is either clover and Orchard grass or clover and Timothy—generally the latter. Timothy is invariably sown in the fall with wheat, as it seldom gives a good catch when sown in the spring. Clover and Orchard grass are usually sown in March or April on wheat or with oats. The best catches are now obtained with oats, unless a sod has been broken for the crop, in which case it is better to rebreak the stubble for wheat before seeding down to grass. It is not necessary or desirable to use other grasses for hay than those mentioned, since this country is the natural habitat of Blue grass, which in a few years drives out all cultivated grasses and takes possession of the land. When this occurs, if hay is wanted, the meadow must be broken, planted to corn and re-seeded.

Orchard grass is not held in as high an estimation, either for pasture or hay, as Timothy; but it succeeds better on dry soils. It must be cut when in bloom, for if allowed to ripen, it is not as good as wheat straw. It and clover ripen together, and are mown here about the middle of June. Timothy is harvested a month later. The best farmers favor early cutting, especially for Timothy. The early cut hay is more palatable to stock, and the aftermath is more abundant. When Timothy is allowed to ripen its seed before being cut, it seems to destroy the vitality of the plant, and the aftergrowth sometimes does not start for weeks, and in case of continued dry weather very often not at all. On account, however, of the pressure of work in the corn-field or in the wheat and oat harvests, haying is very often delayed far beyond the time when it should have been attended to.

No machines, except, of course, the mower and the horse-rake, are used here as a general thing. Hay tedders and appliances for loading or unloading are not common. The hay is usually stacked in the field, and for this purpose is put up in small cocks, which, after being allowed to settle for a day or two, are hauled up to the stack by means of one horse and a chain or grape vine, and they are then pitched by hand.

The average yield per acre of dried hay is probably less than a ton, though the best meadows give double that quantity or more. No manures are used except the commercial fertilizers employed in seeding down, from 150 to 300 pounds per acre. The cattle men feed on the meadows through the winter, but the tramping done by the stock in wet weather more than counterbalances any benefit derived from their droppings and litter. In a few instances meadows are top-dressed by those who keep their stock in barns, but stable manures are more commonly applied to other crops.

From my own experience, the best way to increase the productiveness of meadows is to apply, every three or four years, 200 or 300 pounds per acre of raw bone-meal and harrow it in with a sharp tool. The Acme, I should think, would be excellent for this purpose. This, I am satisfied, will in many cases double the yield. Bone-meal with me has always shown more effect on grasses than any other commercial fertilizer.

I am trying this spring a small quantity of Texas Blue grass received from the Department of Agriculture. The seeds are bound up and connected by means of a kind of lint, which prevents their being separated or scattered. Unless some way can be devised of ridding them of this lint, they cannot be made available or become an article of commerce like Kentucky Blue. They are at present offered by seedsmen at $3 per pound, a price which permits of their use only for experimental purposes.

Japan clover seed is now grown clean and

PORK.—Sections through loins. The upper picture taken from an animal fed for the production of lean meat; the lower two from animals fed in the usual way. Fig. 117. See page 340.

PORK.—Section through fifth rib. Upper "fed for lean;" lower two fed in the ordinary way. Fig. 118. See page 340.

free from dirt in Louisiana. The seeds ripen in Eastern Virginia in September, but the grass does not grow high enough to admit of cutting it for seed, unless sown with oats, and then frost comes too soon for the seed to mature. The season being longer in Louisiana, seeds mature easily there. They are sold at from $5 to $6 per bushel of 26 pounds. This so-called clover has not been tried here, and it is doubtful whether it would be of any particular value even if it succeeded. It seems to be growing in favor in the Piedmont section of the State, where in some counties it is rapidly spreading. Mr. Rowe, of Fredericksburg, speaks highly of it as a nutritious grazing plant, and says it is also valuable for hay on rich soils.

Our great stand-by for pasture in this section is Wire or Flat-stalked Blue grass (Poa compressa), which in general estimation has no equal for fattening cattle. Unlike Kentucky Blue, it is almost indifferent as to soil, growing equally thrifty in sand, clay, or gravel, on rich or poor land, while for the latter, the soil must be in good heart and composed of heavy clay or limestone. The Poa compressa is now offered for sale by seedsmen under the name of Canadian Blue grass; but it can be had, I believe, only in small quantities. It has never received that attention from the agricultural press to which its merits entitle it, thriving under neglect and mistreatment which would mean death to any other tame or cultivated grass.

Pulaski County, Va.

CURING CLOVER.

T. B. TERRY.

FIFTEEN or 20 years ago it cost me much more to cure clover hay nicely than it has of late years. I got a lot of hay-caps, about six feet square, and wilted the clover a little, and then put it up in nice, high cocks and covered them. After standing three or four days, these were opened slightly, and the clover was aired; then it was put in the barn. This made the choicest of hay; but as we seldom get more than $10 a ton for it from feeding it out, the cost was too great. After much experimenting I have settled on about the following plan of curing: I watch the barometer (I have had 25 years' experience at this) and the weather. When, after a storm, the weather seems to be clearing, and the prospect is good for some days to come, I go out about 2 p. m., with my Eureka mower, and cut one of my strips—about six acres (I say "strips" because that is what they are—the best possible shape for fast work). I get through easily by six o'clock. The weather is then so cool, or partly cloudy, that the clover cut after two o'clock will not cure enough to incur any injury in the dew that night. While I am mowing, my man will be at work on another "strip" of potatoes. The six acres will usually make about 20 large loads of hay. This may seem a good deal for a small farmer to cut at once. It would be three or four days later, when there was danger of another storm soon. The point is to cut a lot at just the right time.

The next day, if my weather eye served me rightly, it will be clear and moderately warm. I do not touch the hay until nearly three o'clock; then I rake it as fast as possible into large windrows. By going the right way I can throw the buts of the clover up and leave few heads or leaves exposed. This after the Eureka mower. I take pains to rake a snug windrow. Notice no hand labor is put on the hay. My man still works in the potato field or among the berries. The next day should be bright and quite warm. As soon as the clover in the windrows is dry and warm on top and part way down, we go through the field with forks and roll the windrows right over on to dry, warm ground. As soon as the other side (then the top side) of the clover is warm, thus being clear through, we begin to draw into the barn with all the speed possible. I generally have extra help, so that we get in 12 or 15 loads that day. The rest lies over until next day; but we do not turn any more windrows than we think we can get up. All the hand work, beyond pitching, you will notice, is the simple turning over of the windrows with a fork, which is a short job. In this way it takes scarcely any more work to cure clover than Timothy.

We aim always to have the hay hot when it is drawn in. We do not draw in later than six o'clock, and would prefer not to load any after five, as the hay usually begins to gather dampness by that time. Just the moment it begins to grow cooler, that moment the air begins to deposit the moisture that it cannot longer hold. As long as it is growing warmer the air is taking the moisture from the hay, or any thing else it comes in contact with; but when it is becoming cooler your hay is taking the water back from the air. One cannot make good clover hay and ignore this fact, and still very many try to. The time to draw in is during the hottest part of the day.

Now the above is my general plan. It makes choice hay at slight expense for hand labor. I should say that in the afternoon, when my men are getting in the hay, if the weather is still favorable, I mow some more; but not as much this time. If it is very hot and dry the next day, one can draw his hay in in the afternoon, usually. The idea is that for several days after a storm the ground is drier and the air hotter, and hay will cure quicker. Now, if at any time during the above operations, the weather failed to follow the predictions of the barometer, and rain was likely to come, of course, the hay was cocked up, or secured in the best shape possible under the circumstances. But I think I may safely say that, three years out of four, we are able to avoid almost all hand work.

One point: We do not have more clover than we can take care of in due time, in any ordinary season—not over about 40 loads at the first cutting. In the worst season I ever knew I had six acres in cock during two weeks of rainy weather. Every one said it would be ruined; but between showers we built the cocks over, thus airing them and bringing the green clover at the bottom on to the top. They were built about six feet high and nicely fixed on the top. I did not try to get this hay in between showers, as then it would have been ruined, as there was not time enough to get it entirely dry. When the weather finally became settled and warm and dry, we aired the hay thoroughly, and it was good enough so that our work horses did well on it without any grain.

Many of my neighbors, I notice, are now using a tedder to hasten the drying of their clover. This answers them well. With a side-cut machine and tedder they manage to cure their clover about as quickly as it will cure after my mower without any tedding. Secretary Bonham and other good farmers in Southern Ohio cut heavy clover in full bloom and put it in the barn the same day. In this latitude I cannot do this. In a very dry time, and with the clover a little past full bloom, or with a small crop, I have done it and came out all right. In Wisconsin they put up clover with less curing than will answer with me. Their climate is drier.

My barn is tight and we shut all doors as soon as the hay is in, to keep out cool night air. In this way one can put in clover green and have it keep. In some years there is much more sap in the clover than in others. Take a few stalks and twist them very tightly. If no juice comes out, the clover will require less curing than when you can squeeze out drops of sap. It requires more experience and good judgment to cure clover cheaply and nicely than to cure Timothy; but it is better hay when you get it, for most purposes, and it leaves the land in far better condition for the following crops.

Summit County, Ohio.

HAY IN THE PIEDMONT BELT OF SOUTH CAROLINA; HAY GRASSES AND THEIR SUBSTITUTES.

J. C. STRIBLING.

NONE of the tame or cultivated exotic grasses are sown here to any considerable extent for hay except Bermuda. Our indigenous or native grasses, such as Crab grass, Cherokee and some other lowland grasses, make fine hay when cut early and properly cured, but when cut late they make inferior hay of no more value than good oat straw. Clover is sown to some extent as a kind of pet-patch for both hay and soiling purposes, and I have seen some fine yields of the Mammoth Red variety—from two to nearly four tons per acre and it has made three fair crops in one year. This was, of course, under favorable circumstances.

Of all the substitutes the cow-pea is most used and German millet and Hungarian grass next. The latter is a failure except on the richest land well prepared, while the cow-pea grows well on all kinds of land and with the rudest cultivation imaginable, and invariably improves the land, whether the crop is removed or not. Peas are drilled in or sown broad-cast after small grains have come off, in June. For drilling we mark off rows 30 inches apart with a small plow; drop in the seeds and cover them with two more furrows, and the after cultivation consists in plowing out between the rows and one plowing with the cultivator.

For pea-vine hay sow two bushels of seed to the acre after small grain. Either plow in with a small turn plow or use a Cutaway or Disk harrow. When the earliest pea pods are nearly grown, cut with a mower and rake at once in piles or cocks, or cut with a table-rake reaper throwing as much as possible in a place, and never stir or move the hay until it is thoroughly cured; then load directly into wagons. Handling or raking pea-vine hay after it is partially cured, causes the leaves and small stems (the most valuable part) to fall off which accounts, no doubt, for the poor quality of this hay when made in the same way as grass hay. Pea-vines thus cocked up green will stand rain for several days and cure out green and fair hay that my stock actually prefer to Western hay, and I have sold fat cattle in March that had nothing to eat from the barn all winter except this hay, which may be classed as both grain and hay.

Native grass hay is not a success in general, as this kind of grass does not grow tall enough to mow except in rainy seasons or favorable localities or in rich soil; but it makes finer hay when cut early, and as there is always abundant seed in the soil, it is cheaper than other hay by the cost of seeding.

Bermuda hay is made like hay from other grasses, only I think it can be put up with less curing or risk of molding. One seeding or setting does for all time and to renew the growth one only has to plow and smooth off again. Unless the land is very smooth much of our Bermuda is too short to mow and a good stand of Bermuda averaging only 12 inches tall will yield over one ton of hay per acre. I have, this spring, run a sharp-toothed angle steel-frame harrow over about ten acres of Bermuda meadow and look for good results from this cultivation which no other grass could stand, and I think that if I had sown about 200 pounds of ammoniated dissolved bone to the acre before harrowing, it would have paid.

The latest thing in haying tools with me is a new steel wheel combination one or two-horse rake. My experience is that the wheels are the first part of the rake to give way, hence the advantage of steel wheels and when it comes to bunching hay, it is disagreeably hard work for both man and horse unless two horses—one on either side of windrow—are used. One horse can be worked to this rake or with little trouble a change can be made to two horses.

Anderson County, S. C.

CAN THE FARMER AFFORD TO SELL HIS HAY AND STRAW.

CHAS. CHAPMAN.

PERHAPS the best argument against the selling of hay and straw can be found by looking at the land of the man who practices this method of farming. This is a convincing object lesson. I think all will admit that the selling of hay and straw without the return of an equivalent must in time reduce the soil to barrenness, just the same as the merchant's stock of goods is exhausted by selling all from the shelves and making no return. Every one knows that what is taken from the soil by the plant must be plant food, although the soil is not the only source of this article. Now this plant food has a market value and it is on this value the worth of the ingredients found in hay and straw depends. The manurial value of one ton of Timothy hay, based on the present price of the fertilizing ingredients here, would be about $5; of a ton of clover-hay, nearly $7; of oat-straw about $3.70, and wheat-straw, $3.70.

Now, the question is, can we ever put this amount of plant food back on the farm if it has ever been taken off? It is doubtful if most of us could afford to. It is much easier to keep a field productive as we go along than to bring it back to fertility after the soil has been exhausted. It has been well said that "a man's farm is his bank." In it he can make deposits subject to his draft for future crops. But if he overdraws his account he has to depend on the charity of his land and on Providence to give him paying returns.

Accepting all this as true, what is the remedy? Nature's way is to return to the soil as much as is taken therefrom. Is it impossible for us to do the same? I think not. The breeding and feeding of animals pay to a greater or less extent, the returns varying with the knowledge and experience of the farmer. Dairying, sheep-breeding and hog raising all pay a living profit if conducted in a business-like manner. All the above mentioned branches of farming consume the products of the farm, and return to it nearly all the plant food. This gives an increase of income, because the productive powers of the farm increase from this method, thus making the keeping of more stock practicable. The increase of income is the source of wealth, other things being equal. Although the selling of hay and straw may increase the income the first year, yet each succeeding year will show a decrease. Thus we can see that no farmer can afford to sell the hay and straw produced on his farm, and that the best use he can make of these is to convert them into butter, pork and mutton.

Schuyler County, N. Y.

ALSIKE CLOVER, AND HAY LOADERS

PROFESSOR A. J. COOK.

I HAVE only two points to argue, both of which I believe worthy of attention by our farmers.

First, I believe it pays well to mix Alsike clover with the Red in our spring seeding. The Alsike often catches when the Red does not. It is fertilized by the honey bees and so the first crop yields seed and re-seeds the ground; and so the Alsike becomes perennial, or at least continues longer than does the Red clover. I have practiced this somewhat, and shall do so more. The Alsike clover has the further advantage of being a valuable honey plant.

The other point is of more importance. I refer to the hay-loader. I purchased the Keystone two years ago, and I rank it with the mower. I would hardly know how to dispense with it. It is easily and quickly attached to the wagon as we enter the field, and last year we took all our hay without raking, just as it was left by the tedder. The loader not only took it clean, but carried it on to the load so rapidly that two men were required to keep it out of the way. Farmers have only to know the loader to appreciate it.

Ingham County, Mich.

GROWING MILLET.

COL. F. D. CURTIS.

ONE great advantage in growing millet is that it may be sown as late as the beginning of June in our Northern latitude, and be sure to mature before frost. This remark applies to the common millet. The coarse or broad-leaved millet, called German millet, requires from 10 days to two weeks longer to ripen. The common millet will ripen its seed within 100 days after being sown. In 90 days, or perhaps less, it will be sufficiently matured to be cut for hay. The ground should be well harrowed and made fine so that the seeds will germinate well and not be destroyed if lying under clods and lumps of earth. It is an excellent plan, if the land is not fine, to roll it before the seed is sown and then to cover it with a brush or light harrow, and roll it again. The seed should not be put in, in this way, if the ground is wet, and liable to pack or become crusted. The seed sends up a tiny shoot and it must not be obstructed in its growth, or the crop will be reduced. The seed will grow well if sown on top of the ground and left to be covered by a rain, and when a rain falls on it soon after it has been sown this is an excellent plan. If the seed is covered too deep there will be a great loss. A very little manure will give the crop a fine start, if it is put upon the surface. For these reasons commercial manures can be used to advantage. I sow this form of fertilizer broadcast, mixed with land plaster—equal bulks—at the rate of 100 to 300 pounds per acre, according to the quality of the land. A peck of seed is ample for an acre, if the land is well prepared; if not, more seed must be used. I have always sown the seed broadcast.

I have allowed the millet to ripen its seed and used it for chicken feed and ground it with oats for food for animals. The seed makes rich food; but it is unwise to grow millet in the way best adapted for this purpose as the forage will not then be nearly so valuable. I am sure that when the seed is allowed to ripen, the amount of digestible nutriment in the forage is reduced one-half. It makes very poor hay. When cut while the plant is coming into bloom, millet makes excellent hay which is good food for any kind of stock. Cows do well on it. It is nutritious and cattle are fond of it. Millet is a good crop for the silo.

I have cut it the last of September and cured it for the mow. It should be put into the cock as soon as it is dried a little, and if the weather is threatening, it may be cocked as soon as cut. It is better to have it wilted if possible before cocking. It is possible to gather a crop of clover and then put in millet on the same land and have it mature sufficiently for hay. A profitable change can be made with a run-out meadow, or pasture, by turning it over the first of June, or even up to the middle of that month, and growing a crop of millet. Millet may very properly, like flat turnips, be termed an appendix crop.

Saratoga County, N. Y.

FROM DIFFERENT STATES.

FROM CONNECTICUT.

THIS is not a hay country, and our farmers have not paid to their meadows the attention they should have bestowed. As a community we do not begin to produce enough hay for our own consumption, consequently tons and tons are brought here for sale. It is mostly Western hay, and much of it finds its way on farms that ought to furnish enough and to spare. Timothy and clover have formed the mixture generally used for seeding here, for years, and, as a rule, the farmers prefer to use it rather than try anything else. I prefer early-cut hay, because when the grass is cut before the seeds begin to form, I think the hay from it is most nutritious. At any rate the stock prefer it to that from grass which has been allowed to stand longer and become hard or "woody." I think that, as a general thing, hay is cut from two to four weeks earlier than it was a few years ago.

Haying here has not been on a scale large enough to allow the farmers to use all the improved tools. We have mowing machines and horse-rakes of all desired styles. Only a few tedders are in use. The larger barns are mostly fitted up with horse forks and hay carriers.

I don't think that, on an average, our meadows are seeded down oftener than every eighth or tenth year, and many of them are left unseeded longer than that. Rye is the principal crop with which we seed; but I think it is not so good as wheat. Very little wheat, however, is raised here; but I have always noticed that where we do seed with wheat we are sure of a good "catch" We seed in the fall; we have tried seeding with oats in the spring; but the attempt is not often successful. Some have successfully seeded with buckwheat, and some are sowing grass seed alone, with very satisfactory results. I think the latter plan, where the ground is in proper condition, is to be the plan of the future.

Our average yield is *not* over one ton per acre. Of course, there are meadows that yield two to three or more tons; but we have so many more that don't yield over half to three-quarters of a ton per acre, our average is very low. But little manure is used after a top-dressing at the time of seeding down. Most farmers try to give a fair top-dressing of barn-yard manure at seeding time, and this has generally to last till the sod is plowed for corn. Some of our more thrifty farmers and those who make the farm pay the best, often use leached wood ashes, ground bone, or some superphosphate on their grass land to good effect.

Few new grasses have been tried here, although Red-top is gaining in favor where it has been tried. Orchard grass has been tried with good results; but it is preferred for pasture rather than for hay, although, if cut very early, it is very good for the latter purpose. Hungarian and the millets have been tried only a little, but I think they have proved successful in most cases, both for hay and green feed.

Oats cut while green make very good hay when properly cured. This method of using the oat crop is also gaining in favor.

In my opinion the best way to increase the productiveness of our meadows, is to plow and re-seed them oftener, using manure liberally. Our meadows are allowed to run too long. No meadow should be permitted to exist that won't yield 1½ to two tons of hay per acre. If we are not in a position to plow it, it should receive a top-dressing to help it along. If we would care for our meadows properly and plow as stated, or often enough to keep the soil sufficiently rich, in a few years they would be yielding three or four tons per acre.

Darien. C. F. O.

FROM EASTERN WISCONSIN.

1. RED CLOVER and Timothy are the principal grasses grown in this section, with some Red-top and Alsike clover. We prefer early cutting, experience having shown that better results are obtained from feeding early-cut hay, especially in the dairy line. Such hay is eaten up clean, no dry buts being left. I think I can get 25 per cent. more milk from early than late-cut hay.

2. In this county very large quantities of hay are put up. Our tools are mowers, rakes, tedders and occasionally a hay loader to take the hay from the windrows and load it on the wagons.

3. We generally seed down every two years; that is, we leave a stand of clover and Timothy for two years. We seed down with nearly every crop grown—wheat, oats and barley—in spring. During the last two or three years, owing to poor stands from the effects of dry seasons, our farmers have turned their attention to seeding with winter grain, sowing Timothy in the fall with some grain and clover as soon as the snow is off in the spring, or even before. We always harrow after sowing grass or clover. We use a Cahoon broadcast sower, with which I can sow 30 acres a day.

4. Two tons per acre are considered a fair average yield at the first cutting, though ofttimes three are secured. During the past three years hay in Wisconsin has not averaged more than one ton per acre; but the yield in these dry seasons can not be considered an

(*Continued on Page* 335.)

Everywhere.

RURAL SPECIAL REPORTS.

Illinois.

PLEASANT VALLEY, Jo Daviess County, April 29.—Grain is so cheap here this spring that it is about as cheap to buy it as to raise it on land worth from $40 to $75 per acre. Corn, delivered, is only 25 cents; oats, 20; potatoes 20, and there is almost enough hay in stack to carry us through another winter. But though we have had some fine rains this spring, we have also a great deal of Northwest wind, which dries out the surface soil and the dry subsoil absorbs the moisture like a sponge, leaving the young grass insufficiently supplied, so we may need our old hay yet. Spring opened very early, some oats being sown in March; but it has progressed so slowly that now pastures are hardly any more advanced than they are in average seasons. Cut-worms threaten to be very destructive to early-planted corn. There's no organized resistance here to the twine trust; but I think there should be, and it's time farmers controlled the law-making power to a greater extent. W. S.

STERLING, Macoupin County, April 24.—We are having a nice spring. Peach trees are just coming into bloom. They have not had any bloom for several years. Fruit prospects are good if there are no late frosts.

J. H. W.

Indiana.

BRIGHTWOOD, Marion County, April 28.—Markets are dull: corn, 30 cents; hay, $15 per ton. Wheat is looking well. This is a fine spring for work. Corn ground is mostly broken and some corn has been planted. It's a little too dry for oats. Potatoes are planted, but they are coming up slowly, the ground being too cold. C. H. H.

Michigan.

BIG RAPIDS, Mecosta County, May 1.—There are several thousand bushels of potatoes in this vicinity and they are a drug in the market at 10 cents a bushel. Farmers are feeding all they can to their stock. T. L.

New Jersey.

TITUSVILLE, Mercer County, April 27.—The apple crop is very promising; blooms are full and the weather is fine. Pears will probably not be so good, although the bloom was abundant. The weather has been so cold and damp most of the time that a crop is doubtful. Peaches are in full bloom; if the low temperature does not hurt them when in bloom or just after, we may look for a crop; very uncertain now. I. J. B.

Oregon.

FOREST GROVE, Washington County, April 22.—The past winter was the mildest we have had for many years, if not the mildest ever experienced by the whites. There was no snow and very little cold weather. The prospects for abundant crops were never better. Winter wheat has made a very heavy growth. April for the most part has been rainy. Up to first of the month the season had been unusually dry, some land being too dry to work. A very large immigration is pouring into the country and a good amount of "booming" is being done. Lands that a few years ago were worth from $15 to $35 an acre, are now selling for $100 to $200. Many are coming from Michigan and other States to buy timber lands. We have a grand country which can support a vast population. The Pacific Northwest will be heard from in a few years. Prices rule low:—oats, 30 cents; wheat, 65 cents; potatoes, no market; eggs, 15 cents; hay, $8 to $10 per ton; butter, 20 cents. There is promise of an abundance of fruit. There never was a better prospect for strawberries and other small fruits. S. F. W.

Wisconsin.

DELAVAN, Walworth County, May 1.—I saw it stated that April was to be the wettest month—the rest of the season was to be dry. Is that prediction well-founded? Here March was very early and dry; April forward with seasonable showers. This morning the mercury is 28 degrees—rather frosty on the current, gooseberry, and wild plum, perhaps half of which are in bloom; but the weather is so dry that we hope no harm has been done as yet. Early cherry and apple blooms almost ready to open. We have the first promise of a cherry crop in three seasons. Apple trees promise a fine crop of bloom. This is the earliest spring I think in 10 years or more, and we have had the most lovely winter and spring so far. The sunny South can't beat this long spell of fine weather.

F. K. P.

THE FARMERS' CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.

CHEMICAL FERTILIZERS FOR MEADOWS.

J. A. H., Kent County, Michigan.—We have heard a good deal about the use of chemical fertilizers in maintaining the fertility of our meadows and it may be that Western farmers will be obliged to use these fertilizers in connection with stable manure. Will the RURAL ask some of its Eastern farmer readers to tell us how the chemicals are most economically used?

Here are the answers sent by persons who "make farming pay":

FROM D. C. LEWIS.

Farmers in our vicinity believe that when they have applied chemical fertilizers liberally, on the potato crop more particularly, they secure a better catch, and get larger crops of grass from such liberal applications. The question of top-dressing grass lands is of more recent adoption. I have been doing it for some years, after the second mowing. This spring, top-dressing has been done more than usual, and in my judgment will continue to increase. I have been astonished at the increase in the hay crop by an application of only 200 pounds per acre. I am sure that in many instances it has doubled my yield of hay.

Middlesex County, N. J.

FROM JOS. WOOLWORTH.

Can newly seeded meadows be sustained for a series of years, or old grass lands be restored and made to produce large crops by the use of chemical fertilizers? I answer emphatically, yes. In support of the above I will give my experience in that line. I have about three acres of land seeded to Timothy after tobacco in the fall with no other crop, and the two following years I cut two very heavy crops each year, without any dressing whatever. After the second year I usually look for a falling off in the crop unless in some way sustained, and by the fourth or fifth year at the farthest, the land is ready for the plow again; but I have succeeded in keeping up the reputation of the two previous years by the application of about 300 pounds per acre of the Mapes Spring Top-dressing annually for five years, with a slight increase of fertilizers the last season. The grass the last season was not quite as tall apparently as it was the previous years, but it was thick and heavy and it is evident the time will come when it will be advisable to plow and re-seed, unless it can be done by sowing on grass seed, which I meant to do last fall or early this spring. I have again dressed the same field with about 400 pounds per acre this spring. This will be the eighth year since it was seeded without a spoonful of barnyard manure. I think I am within bounds when I say one dollar in fertilizers is as good as three dollars in barnyard manure, besides the extra cost of hauling and handling the manure.

I add a pailful of water to each sack of 200 pounds, which prevents it flying and makes it as agreeable to sow as oats.

Now a word about renewing old meadows: The same year in which I commenced the application of fertilizers to the above named meadow, I had another piece of meadow which had become badly run out and needed to be plowed or top-dressed. I plowed a part and left about one and one-half acre which was top-dressed with 300 pounds of top-dressing. The first year, the increase of crop was not particularly marked. The second year the crop was much better, and the third year it had about trebled in hight and was very thick and heavy with a strong mixture of Red and White clover. About the same dressing was applied for five years. The fifth year the crop was not quite as good and I inverted the sod last fall.

I am confident the best results can be obtained on newly seeded meadows, the roots being young and much more vigorous. Both the above plots lay on a much traveled road and the successive big crops have attracted much attention, with the frequent remark that we "take the cake" on the big hay crops of Westfield, followed by the question; "How do you do it?" The answer is invariably, "*by the use of* 300 *pounds of spring top-dressing annually.*" The question may be asked: "Why did you take up the 1½-acre plot when it was always doing so well?" I answer it had been down to grass many years and had become "turf-bound," as we call it, and though it was doing well it could be made to do much better by plowing and re-seeding, the same as all grass lands top-dressed with barn-yard manure for a series of years.

Westfield, Mass.

FROM WM. C. SMITH.

I can certify from actual experiment during the last 10 years, that the following method pursued for three or four consecutive years resulted in the production of remunerative crops, and the restoration of the land to grass: I sowed wheat and oats on several worn-out fields, drilling with the grain 400 to 500 pounds per acre of the Mapes Complete Manure "*A*" brand, at about the fourth or fifth crop, seeding with clover and Timothy after wheat. On other fields a top-dressing of 10 two-horse loads of yard or stable manure was plowed in and 350 pounds per acre of fertilizer used in the drill and planted with corn, in some instances for two years or more in succession. Where no top-dressing was applied, the same quantity of fertilizer per acre was sprinkled around the hills three or four inches from the stalks at the time of the last hoeing. On one or two fields 20 bushels of ashes were sown per acre previous to drilling in the grain and seeding. Five or six crops of grass have been mown from the above mentioned fields, and I anticipate that several more crops of hay can be profitably harvested. Wherever an indication of lessening growth appears, a light dressing of fine yard manure composted with fertilizer will restore it at once. The fields thus restored are a moist loam, very retentive of moisture. By the aid of chemical analysis, and the labor-saving implements of husbandry, agriculture can be classed among the exact sciences. The sagacious tiller of the soil is enabled to verify the assertion made long ago, that, "the desert shall rejoice and blossom as the rose." Our own loved poet in the last verse of his "Deserted Homestead" solved the problem when he said,

> "With skill that spares your toiling hands,
> And *chemic aid* that *science* brings,
> Reclaim the waste and out-worn lands,
> And reign thereon as Kings."

South Corinth, N. Y.

HOW TO MAKE A HAY PRESS.

F. M. R., Hamlet, Ga.—How can a hay press be made?

ANS.—A simple hay press can be made as follows: Frame together a stout foundation of 4x4-inch oak timber three feet wide and five feet long, frame in posts six feet long so as to make a space clear in the center three feet long by two wide, and frame caps on to these posts to hold the whole firmly. Make a floor to fill in this space; fill up the ends of the space with plank and the front and back with 2x4-inch timbers framed in the sills and caps upright, and cover with plank except in four places where openings are left from bottom to top for the wires or cords to tie the bales. A floor is made to fit the top loosely and the pressure may be made at the top if desired, either by a lever and cam, or post, and a ratchet and pawl at each end to hold the hay as the lever is shifted; or the top may be drawn down by means of a chain and a lever at each end and the ratchet and pawl; or the bottom may be loose and raised by a screw or lever. To press the hay, it is filled in and trampled firmly until the frame is filled to the top, the ties being laid across the floor and through the spaces left for them, as above mentioned. The upper ties are laid over the hay with the ends passed through the spaces, as with the lower ones. The cover is then fitted and the pressure is applied. When the hay is pressed to one-half of its bulk, making a bale 3x3x2 feet, the ties are fastened and the pressure is renewed. The bale is taken out of the press through a door consisting of one-half of the front part of the frame, which is made separately and hinged to the base. It is held in place by stout bolts at each side while the hay is being pressed. When this door is opened and let down, the bale is rolled out. With a press of this kind costing only $5 for the labor of making it, four bales an

hour have been made, each 250 pounds in weight.

SOILING DAIRY COWS.

H. R., Brookfield, Mass.—On page 87 of the RURAL we are told that Mr. H. P. Hopkins never pastures his cows. I would like to know how he manages to keep his cows in the barn all the time. I keep four cows and would like to keep them always up if it can be done with safety to their health.

ANSWERED BY HIRAM P. HOPKINS.

I feed my cows in the stable the year round, and in pleasant weather in summer I let them out in the barn-yard to exercise for about an hour. In winter I keep them in the stable, and do not let them out to get chilled, as I find I lose too much milk by doing so and it requires too much food to get them warm or in a condition to make milk again. My cows are as healthy and do as well (if not better) in the stable fed as I feed them, as the cows of any of my neighbors who drive their cows out every day in winter and pasture them in summer. I am now feeding silage, hay and grain, and shall continue to do so as long as my silage will last, which will be till about July 1st; then I shall have oats and peas to put in the silo, and I shall continue to feed as I am now feeding. Heretofore my first soiling crop has been rye sown at two sowings in the fall; next, clover; then oats and peas at a third sowing; then second-crop clover and corn. Corn is grown where I cut my first rye, and so on until I fill my silos. While I am feeding soiling crops I feed grain, as I find that it pays well. My herd is entirely made up of pure Jersey cows, which I have fed in this way for six years and they are regular breeders and as sound as any cows of their years. There has never been an abortion in my herd or a sick cow, caused by soiling or keeping them in the stable. I claim that I make more butter during the year from my cows fed in this way than other farmers make by pasturing and feeding as farmers generally feed.

"A NEW BARLEY."

W. H. L., Copenhagen, N. Y.—I inclose head of black barley for name. Two men here have about 200 bushels like this head, and are putting it out after the well-known fashion of the Bohemian oats swindle.

ANS.—The head inclosed is Nepaul barley which was illustrated and described in the RURAL of January 29, 1887. The variety is seldom grown except as a curiosity, it being very inferior in productiveness, and not thrashing cleanly from the head. Nepaul barley was first introduced to the civilized world in 1817 when it was brought from the Himalaya Mountains in the province of Nepaul, in Hindostan, and was known as Nepaul wheat. It has not been cultivated to any extent in Britain. The earliest record of its culture in America under that name was in 1859.

From a head of this variety planted at the New York Agricultural Experiment Station in 1885, four different varieties were grown, two black and two white. Of each of these two colors, one was bearded and one was bald. The seed is quite uneven in size, there being many small ones from the more feeble flowers. The grain is of medium size, rather plump and short, and deep amber or dark brown in color.

A correspondent in Michigan sowed a bushel on an acre of good land, and it made a poor growth and a miserable yield, being worthless, except as a curiosity. A Minnesota correspondent reported a heavy yield.

Grains of this variety were sent to the RURAL about a dozen years ago. As it was hulless, we supposed it to be some kind of wheat, and sowed it in the fall, and that was the last of it. It is safe to conclude that any grain boomed after the manner of the Bohemian oat plan is best let alone.

WHEN TO WATER HORSES.

D. L. B., Maplewood.—Is it right to fill a horse with cold water the first thing in the morning before feeding oats or meal? As watering the animal after feeding tends to wash the grain out of him, when should he be watered?

ANSWERED BY DR. F. L. KILBORNE.

It is not desirable to "fill a horse with cold water" at any time. Horses should get water frequently and then they will rarely drink more than one bucketful. In fact, a horse should rarely be given more than the one bucketful to drink at one time. As to watering just before or just after feeding, there is little choice. The preference, however, is to be given to watering before, as less liable to produce unpleasant results. When given a considerable quantity of water immediately after a feed, especially one of grain, it is liable to wash the grain from the stomach to the intestines before it has been digested, and cause indigestion and colic. If convenient to do so, it is well to water the horse an hour before or after feeding; or if watered immediately before, feed only hay or other coarse fodder at first, and the grain a half hour or more later. An excellent plan is to keep a bucket of water always before the horse in the stable, to be refilled three times daily or oftener if necessary. The animal will drink only a few swallows at frequent intervals and there is then no danger of any injurious effects from drinking too much.

GERMAN MILLET SEED AS STOCK FEED.

W. A., Dorchester, Neb.—There is a vast amount of German millet seed on hand in this section, for which there is no sale. We are told it is good feed for hogs. If so, how should it be fed?

ANS.—The seed of German millet contains more nutriment than barley or buckwheat and approaches very nearly to corn in feeding value, as the following figures will show.

Per cent. of	Compositon of Millet.	Buckwheat.	Barley.	Corn.
Nitrogenous matter....	14.5	9.0	9.5	10.0
Carbo-hydrates, ...	62.1	59.6	66.6	68.0
Fat.....	3.0	2.5	2.5	7.0

Millet excels all in its nitrogenous matter, gluten, albumen, etc., and as this substance is worth as much as fat for feeding, corn only slightly excels it in value. On account of its excess of nitrogenous substances, it may be fed alone to all kinds of stock without any ill effect, as its feeding ratio is a normal one, viz., 1 to 5.25 (1 of nitrogenous to 5¼ of carbonaceous.) For fattening animals it may be very usefully fed with corn which contains an excess of carbonaceous matters. The best use of the millet seed will therefore be to feed it as suggested. It may be fed whole or coarsely ground into meal. The large yield of this nutritious grain—25 bushels per acre—renders millet a very valuable crop, and, as when cut before grain is formed, the nutritive quality remains in the hay, its growth for feeding in either way is a subject of timely consideration just now.

ANASARCOUS SWELLING IN A HORSE; LEUCORRHŒA IN A MARE.

Subscriber.—1. One evening, I noticed that my mare was very stiff in front and next morning she was much worse. There was a swelling between the fore legs and a lump on each side of the body just back of the girth, and one on each side of the breast. The swellings are very hard and sore. I have bathed the parts with very hot water and vinegar and rubbed them with lard and pokeweed, with no effect. In other respects the animal is all right. What should be done? 2. A mare of mine dropped a colt 10 years ago. She got the stallion again four years afterwards, but didn't get with foal. Since then she has had the stallion for five years but in vain. The seed is full of green matter. She discharged from the vagina a very thin pale white fluid of a very offensive odor all through the winter. What should be done?

ANS. 1. Give one of the following powders three times daily until the swellings go down; chlorate of potash four ounces, iodide of potash twelve drams, nitrate of potash three ounces, mix. Make into twelve powders. If the bowels are at all costive, give frequent injections of warm Castile soap-suds until relieved. 2. Wash out once daily with tepid water, and then inject one dram each of sulphate of zinc and carbolic acid dissolved in one pint of water. The mare will probably not breed again.

BLOODY TUMORS ON A COLT.

P. P., Rich Hill, Mo.—My two-year-old filly has one lump on her neck and another on her back. At first I thought they were warts, but they are not. The one on her neck is now as large as a small egg. They are blood-and-watery all the time, and get larger when she rubs herself. What will take them off?

ANS.—To remove the tumors, tie a strong linen twine tightly around the neck of each, making sure that the whole of the diseased mass is included outside of the twine. If necessary get an assistant to draw the tumor out so as to form a neck around which you can make the ligature. Apply a new ligature around the tumor daily; make it tight each time. You will find the neck will grow smaller each day until the twine will have entirely severed the tumor from the body. After the tumors are removed, if there remains a sore which looks unhealthy and does not heal readily, ask a veterinary surgeon or your family physician to cauterize the sore thoroughly with a stick of nitrate of silver or lunar caustic. Then dress it with benzoated oxide of zinc ointment. If the colt rubs or bites the sores you must keep them covered, until healed, with a piece of canvas or blanket fastened to a halter, collar and surcingle so as to keep it in position.

GROWTH OF BONES OF THE LIMBS IN COLTS.

P. H. P., Pope Valley, Cal.—Do the bones of a colt's legs grow in length after it is foaled? 2. If so, at about what age do they cease to grow in length? I am fully aware a colt's legs do not grow any in length from the knee down after birth. But from the knee up I contend they do.

ANSWERED BY DR. F. L. KILBORNE.

1. Yes. 2. If P. H. P. had ever taken the trouble to measure the length of the legs of a colt when foaled and again when he is two years of age, he would never have asked the above questions. If he will even stop to compare the limbs of any colt with those of its mother, he will be surprised to learn how unobserving he has been all his life. The limbs of colts grow in length both above and below the knee for two to four years, until the animals have attained their full hight. At birth, the long bones of the limbs have a center of ossification—region of bone formation—at each end and in the center, between which there is a region of cartilage. Growth in length takes place in this cartilage and continues until the whole has been ossified, or formed into bone, which process is not completed until the animal has attained his full hight. After the cartilage has become bony, growth in length ceases.

FEED AND CARE OF BROOD MARE.

J. M. W., Eugene City, Oregon.—A mare of mine dropped her first foal all right, but the second one died when two days old, having never been able to stand up unsupported. It acted as if there were no strength in its back. The mother raised two strong foals. Last spring she lost another foal in the same way as the first that died. She will foal again soon. Last year I turned her to pasture two months before she foaled and was careful not to work her hard before she was turned out. What should be done to prevent another mishap?

ANS.—The strength of the foal depends largely upon the feed and care received by the mare during gestation. We can only advise you to give special attention to these points. See that the mare has good nutritious food in moderate quantity, but do not over-feed. There is more danger in over-feeding than not feeding enough. All feed and drinking water should be of good quality. Thorough daily grooming is very desirable. Light work or other exercise daily is essential.

GREEN AND YELLOW NEWTOWN PIPPIN APPLES.

W. P., Aukland, New Zealand.—Are the Green and Yellow Newtown apples identical? A friend says that some years ago he sent to Ellwanger & Barry, nurserymen in the United States, for two specimens each of the Green and Yellow Newtown Pippins, and that they sent him the Yellow only, saying that they couldn't find any Greens in the United States. Downing says the two varieties are quite distinct, but our local pomological genius is of the opposite opinion.

ANSWERED BY ELLWANGER & BARRY.

The question as to whether there are two distinct varieties of Newtown Pippin, the Green and the Yellow, has never been satisfactorily settled. It is true that Downing and other pomologists describe them as distinct, but in all our experience we have not been able to find them. It is held by many that the differences supposed to exist between the two sorts are the results of soil and situation.

SORE FEET IN YOUNG PIGS.

Z. C. S., Jersey Shore, Pa.—My two-year-old Poland-China sow dropped eight pigs two weeks ago. About a week ago all the little things became lame, and some lost half a foot, while all the feet were swollen and sore. The sow was very fat, and the pigs got sweet milk, wheat bran and were fat and sleek. What was the trouble?

ANS.—The condition of the feet and limbs of the pigs is evidently due to high feeding. Bathe with borax water or vinegar and honey. Breeding stock should not be kept too fat if you would secure the best results. Far more trouble is caused by over-feeding than by not feeding enough.

PLANTING CORN.

G. B. H., Lansing, Mich. In its Corn Special did the RURAL mean that, to produce the best yield, the rows of corn should be four feet apart and that the hills should be 18 inches apart in the rows and have two or more or one stalk each?

ANS.—Our corn is invariably planted in drills. Our Chester County Mammoth, which we have raised consecutively for many years, is a very tall-growing variety, with large stalks, each bearing its large ear high. Now we aim to plant this in drills four feet apart; that is, one plant every four feet by 14 inches or thereabouts.

Miscellaneous.

G. B., North Ogden, Utah, sends some seedling apples for an opinion of their merits.

ANS.—These apples were so injured from the bruises consequent upon loose packing that we could not judge of their quality fairly. They are evidently long keepers.

J. L. S., Westfield, Mass.—When potatoes are planted in drills in rich soil, how should the "seed" be cut to yield the largest returns per acre?

ANS.—We should cut the potatoes to two strong eyes at least, giving the pieces all the flesh possible.

W. W. D., Flint Hill, Vt.—At what distance apart should corn be planted on land that has been meadow for 10 to 12 years? It is flat, between two hills, and rather moist.

ANS.—Our friend does not mention the variety. On springy or wet land, probably it is best to plant in hills and cultivate both ways. If the Southern dent corn is to be planted, two or three plants to a hill three feet by four would be about right.

V. A. T., Chili, N. Y.—I have a rather poor, sandy soil and but little barn-yard manure. I wish to plant six acres of sod land with potatoes. Should I plant in hills or drills, and what fertilizer should I use?

ANS.—We should buy a high-grade potato fertilizer. If you propose to use but a small quantity, say 500 pounds to the acre, it had better be sown in the hill or drill; if 1,000 pounds or more are to be used we should sow it broadcast and harrow it in. We know of no other publication which has given more information on this subject than the R. N.-Y.

H. T. L., (One of the 19 Brightons in the country)? 1. Would bones burnt and mashed to a powder be a good fertilizer for cauliflower and cabbage? 2. What chemicals do burnt bones contain? 3. Would well rotted manure from corn-fed pigs be as good as burnt bones or better? 4. Could I procure a dent corn that would mature here? Our season is generally from May 24th until September 24th without frost. What about Hickory King?

ANS.—If your soil is supplied with available potash and nitrogen, yes; otherwise, no. 2. Phosphoric acid and lime. 3. Better. 4. Yes, the Prairie Queen (Yellow dent) will mature. It is also known as Pride of the North. The name of correspondents' States should always be given.

T. W., Dennville, N. J.—1. I have a lot of clear hen manure and want to raise 100 bushels of corn per acre by hill culture. Would a liberal quantity of the manure in contact with the sprouting grain injure it? How should it be applied? 2. Would it be advisable to mix the hen manure with well-rotted manure from cattle and horses?

ANS.—1. We do not believe you will raise that quantity of corn from hill-manuring unless the soil is rich. Manure in the hill is first-rate for the young plant, but later, when the grain begins to form, the roots extend from hill to hill and from row to row. The hen manure should be intimately mixed with the soil of the hill. A pint to the hill will then do no harm to the sprouting seed. 2. The hen manure and farm manure may be mixed together or each may be spread separately as preferred.

F. K. P., Delavan, Wis.—Is it tedious and expensive to keep out or clear out of ponds the grass, weeds and frog spittle that usually infest them? What tools are necessary to do so? [We submit this inquiry to our readers for an answer.—EDS.]

DISCUSSION.

PEA-VINE HAY, OR COW-PEA HAY.

G. H. T., DENMARK, MISS.—We have several varieties of cow peas especially adapted for table use. Of these the Lady pea, Sugar Crowder, Small Crowder, and Rice pea are the favorites here. The common Black, Red Ripper, Yellow Creeper—so called because, unlike all the other varieties, it *will not* run up on the corn—(and a great many more varieties that I have not time or space to name) have long vines, especially the Sugar Crowder and Black pea. The Conch pea is not known here, except from advertisements. All the above make equally good hay, but in this section the Speckled or Whip-poor-will pea is raised (for curing into hay) almost

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies.

exclusively. It is deservedly popular. It is strictly a bunch pea, which is quite an advantage at harvest time, as the vines do not intertwine and become tangled, as all the running varieties certainly do. It is likewise the earliest variety, so that it is adapted to a much wider territory than any of the others. It can be raised farther north than any other cow-pea and its earliness adapts it to be planted as a second crop, following oats. Oats are harvested here in June. As soon as they are dry they are hauled to the barn, and as soon thereafter as convenient the stubble is laid off and bedded in rows three feet apart; the beds are opened with a shovel plow; peas are dropped four to six in a place; 18 to 24 inches apart in the drill, and covered with a harrow. Planted in this way, and with one plowing after they are in full leaf, (if planted by July 1, in this latitude) they will mature a full crop of ripe peas before frost. In regard to "when to cut," those who have written on this subject say, "Cut when the first pods that appear are about full-grown, but still green." As far as my own opinion is concerned, I would certainly save my seed first, before cutting them for hay. To do this they would necessarily have to be fully ripe. My reasons for waiting until then are two-fold:—first, for economy's sake, as I would not wish to purchase seed every year; secondly, when they are cut while full of sap and covered with a large number of green and very succulent pods, the weather would have to be extremely favorable to enable one to save them, if they could be saved at all, as it is necessary that they should be cured in the shade; for if they were cured in the sun, the leaves would all crumble and tumble off before the stems and pods were dry. My own practice (and it is likewise that of the farmers of this section generally) is to wait until the peas are ripe, but not dead; gather as many as we want for seed, feed, and sale; then save the vines; when they are gathered at this stage there is not much sap in them and as a natural result they are easily cured.

Are they as nutritious and as easily digested when cut at this stage as they would be were they cut green—by green I mean immature? To this I would answer I have a large amount of well cured pea-vine hay with from 20 to 30 bushels of dry peas thrown in, and as to their digestibility, cattle, sheep and horses will eat every morsel even to the roots (if they have been pulled up, and they often are). Moreover, they will thrive upon the feed, and would winter well upon it exclusively. I believe this kind of cow-pea hay is the best and strongest fodder saved in the South.

As to curing, there are several plans in vogue. The one generally practiced in this section is to pile the vines in rail pens (raised a foot or more from the ground) with the floor as open as the sides to allow a free circulation of air. Fill in to a depth of 18 inches or two feet, then lay some nicely dressed poles across, filling in again with vines; then more poles, and more vines alternately till the pen is filled as high as required; then cover it with a good roof. I said "nicely dressed poles" because when smooth they may be drawn out as the vines cure, letting the latter down, thereby economizing space, and putting more under one roof. Another plan is to hang the vines as fast as cut, on poles, under a good shelter. Still another is to trim up saplings with the limbs projecting, say, three to six feet at the bottom, tapering in a pyramidal form to the top; put an open floor at the base of the saplings (which should be firmly fixed by letting the ends into the ground 18 inches or more)—even brush will answer as a floor; then stack the green vines on the limbs and floor, around the saplings. The limbs will keep them sufficiently apart to allow a free circulation of air, which is absolutely essential to cure them successfully. A plan I have practiced successfully, and one I am partial to, is to place a layer of vines on the floor of an out-building to a depth of two or three feet—fodder or hay lofts answer a good purpose—letting them stay there till cured, always recollecting that the floor must be an open one. Other plans could be followed or suggested, but the *general* principles may be summed up in few words: Never cut or house the vines when they are wet with either rain or dew. Always let them wilt in the field, but never let them stay there until they are dry. Keep in mind that with a good roof over them, and a free circulation of air among them, you can hardly fail to succeed in curing pea-vine hay, always providing the weather be moderately dry.

Those who have no place to put them should cure them as soon as they are a little wilted, by putting them in small, high but narrow shocks. These should be very carefully made, pressed on the sides so as not to spread out, and rounded and dressed off at the top to shed rain. Let the vines remain in these shocks till they are about half cured; then make one larger shock out of several of the smaller ones, building them up in like manner. Let the vines remain in these till well cured; then house. Another plan is to rake up a portion of the vines, and roll them over and over the others until a good-sized, compact cylinder is gathered; these can be readily handled and set on end under shelter to cure. Whatever plan is pursued, always bear in mind the above general principles.

USE OF THE HARROW IN CULTIVATING CROPS.

A. T. T., FRANKLIN PARK, N. J.—In reading the variety of opinions expressed in the RURAL of April 27th under "Cultivating Young Crops," "Harrows as Hoes," let no man allow his heart to die within him or be stimulated to undue hilariousness on account of the assertions made. He may rest assured that if his soil be light and sandy, the harrow will work him sorrow and tribulation; but if, on the contrary, it be heavy and inclined to clay, the harrow will not only help in fitting the soil, but will aid immensely in hurrying on the work and in saving time. For years I have run a smoothing harrow of 72 teeth over corn-fields, and the proportion of stalks torn up was simply infinitesimal. On drilled fodder corn or on field corn that had been drilled in, the harrow in crossing the rows most effectively and satisfactorily yanked out the youthful weeds, leaving the corn unharmed, and, to all intents and purposes, untouched. The whole secret of this apparent partiality in the harrow to the destruction of weeds and the saving of corn lay in the fact that the soil was heavy and compact enough about the corn roots to hold them fast. Of course, the roots of the corn were much larger than those of the weeds, and during the first harrowing they probably still clung to the original kernels that were deposited as seeds, thereby offering much greater resistance to being displaced or drawn out of the ground than the young weed roots could do. Besides, the corn sprouts started from under a considerable depth of soil, while the weeds started from the surface or would have done so if the ground were properly cultivated at the start by the sod being entirely inverted. Convinced of the utility of the harrow at the outset, I became, in an unguarded moment, enthusiastic enough to communicate the good news to a friend who was accustomed to planting largely and also accustomed to mourning grievously over the burdensome expense which the price of labor necessarily entailed upon him in cultivating this large crop. Without inquiring about the quality of his soil, I gave him the details of the "method of procedure," and he at once provided himself with the necessary implements. Fortunately, he had passed beyond a maximum state of indignation and had nearly reached his normal condition of good nature before I saw him next. He was, however, still eloquent in his denunciation of harrows, slanting, straight or of any other form, for corn. He stated that he had ordered his man, in accordance with my instructions, to run as nearly at right angles to the rows as practicable, and the man had done so. After going across the field a number of times, the destruction of corn apparently increasing at every bout, the man came to the conclusion that the rule to "obey orders if you break owners" would be better observed in the breach than in the practice.

A boy was therefore despatched for his employer. On reaching the field and looking over the destruction of the corn that had gone on in his absence, my friend said his opinion regarding the plan of harrowing corn was at once expressed in very emphatic language. He told his man to pitch the harrow over the nearest fence, and at once fell back on his old method, concluding it was better to lose his labor than to lose labor and crop both. His soil was a light sandy loam with an abundance of small cobbles and large pebbles. There was nothing compact or weighty enough around the young corn roots, to hold them down, so they bowed their heads meekly and were scratched out quickly as the harrow passed along.

UTILIZING STRAW.

K. M. T., QUINCY, ILL.—An article appeared in the RURAL, some time ago, in regard to the burning of straw, and in the issue of April 27th, I note that J. A., Vincennes, Ind., rather favors the idea. My mode of taking care of the straw may assist some of my brother wheat raisers in different localities to care for their straw and at the same time reap more benefit than is to be derived from burning it. When our stacking is being done I get a thrasherman who has a "stacker" with his thrashing outfit. With the assistance of this stacker two men at a cost of $3 per day will take care of all the straw a machine can thrash, which is probably on an average 15 tons per day. As soon as our fall work is slack, my men bale the straw. With some presses three men and a boy can bale eight tons of straw a day, thus baling the day's thrashing in—to make even figures—two days, which makes the total cost of stacking, and baling 15 tons of straw $7.50, not including the labor of my team. The expenses may be itemized as follows:—Two men one day stacking straw, $3; three men baling at $20 per month, two days, $4; one boy two days at 25 cents per day, 50 cents—$7.50. I now have my straw baled and can place what I want for barn use in a very small place where I can get it handy, and the remainder I haul to the railroad and ship to the paper mills, from 50 to 150 miles away, and I hardly think there can be any good wheat-growing districts where paper mills are located at a greater distance. They pay me $5.50 to $6.50 per ton for my straw at the mill. Now let's see what I get for these 15 tons of straw. It cost me 50 cents per ton to haul it to the cars and load it; $1 per ton freight, total $22.50, *plus* the cost of baling, a total expense from the thrasher to the paper mill door, of just $30. I receive from the mill never lower than $5 50 per ton—$82.50, less expenses, $30, which gives me $52.50 for my straw, interest on the money invested in my baler (a portable horse-power) and my work which probably does not exceed two days' time.

If one does not want to buy a baler to take care of his straw, let him hire one for a week or 10 days at 35 cents per ton. I feel sure if some who now burn their straw will try the above method, they will not feel like burning straw any more than they would green-backs.

What Others Say.

A MASSACHUSETTS CORRESPONDENT of the Country Gentleman writing of sweet-corn silage, states that after a trial of two years he is so well satisfied with it that he will plant no other kind this year. The past season he put in one acre of it. When cut into the silo, nearly every stalk had one or two well-matured ears. It made a solid section three feet in depth across the silo, with several feet of other corn above and below it. It kept equally well with the other. When he came to feed from this section the flow of milk at once increased on a diminished ration of meal, and it kept up till he struck the poorer corn. He intends to plant Marblehead Mammoth this season, which is a week or 10 days earlier than Stowell's or Egyptian, and, on good land, will grow seven feet high, and produce two large ears to every stalk

SILOS AND SILAGE.—The Michigan Agricultural College has had seven years' experience with ensilage and the result is given by Prof. Johnson in a bulletin lately issued. He has endeavored to be temperate and conservative in his claims for the silo and not to jump at conclusions; for he fully believes that the half-digested statements of many enthusiasts, without practical knowledge, have been as much of a hindrance to the introduction of the silo, as the persistent opposition of some scientists, who have ignored practical results because they did not conform to their preconceived theories.

As a matter of convenience and economy in handling the silage, the silo should be as near the feeding room or stable as possible, and on the same level. It may often be economically located in the bay of the barn, or in some adjacent building. The carting of the silage from the silo to other buildings is not only expensive, but there is more or less waste from the exposure.

To determine the size of the silo, estimate as a daily ration for each animal to be fed about six per cent. of its live weight. This amount of good corn silage, with a few pounds of wheat bran, oats, oil-meal or clover hay will keep animals in fine condition, and also will be found a good milk ration. Take this estimate, to illustrate: ten cows, weighing 1,000 pounds each, will consume 600 pounds of silage daily, or 18,000 pounds per month, or 108,000 pounds in six months.

Professor Johnson has found by actual weighing that a cubic foot of silage, two feet from the surface of the silo, under moderate pressure, weighs 36 pounds; eight feet below, 48 pounds; 10 feet below, 50 pounds. It is safe to estimate about 40 pounds as the average weight of a cubic foot.

We must also make calculations for the settling, in our estimates. If well packed this will be found one-sixth to one-eighth of the depth of the silage; 108,000 pounds would require 2,709 cubic feet of space; add one-sixth for settling, and we have 3,150 cubic feet. A silo 22 feet deep, 10 feet wide and 14 feet long will give this capacity.

How can the same storage capacity be secured so cheaply as in this small silo? And when we add that these 54 tons of silage are sufficient almost to keep, with a grain ration, the 10 cows six months, and may be grown from three acres of good land, it opens up and emphasizes the possibilities of the silo as one of the main reliances of the stock-man in these times of low prices.

It is better to build too large, than too small; have good hight, avoid the deep silos or caverns from which the silage must be raised by machinery.

With a large silo Professor Johnson prefers a partition; it is often more convenient in filling, especially if different crops are to be grown for this purpose. In feeding, so large a surface is not exposed, and consequently there is less liability of injury and waste.

Estimating three tons of silage equal to one of good hay, has been found in actual feeding a fair comparison.

While very large yields per acre of ensilage corn are frequently reported, an experience of some years leads him to infer that these large yields are based on estimates rather than actual weighings. Professor Johnson is of the opinion that 20 tons to the acre are an exceptionally large yield. He has had some very good crops but has never exceeded that weight per acre. From the 10th to the 20th of May is the best time for planting in Michigan.

The practice among those most successful with the silo, is to cut when the grain is beginning to glaze.

Professor Goessman says that the amount of vegetable matter in a given weight of green fodder corn, cut at the beginning of the glazing of the kernels, is known to be not only nearly twice as large, as compared with that contained in an equal weight of green fodder corn when just showing the tassels; but it is also known to be, pound for pound, more nutritious; for it contains more starch, more sugar, more of valuable nitrogenous matter, etc. Professor Johnson has put corn into the silo when the stalks were partially dry and sometimes after they had been frosted, and while he cannot doubt that there was some loss in nutrition, the silage was fairly good and he is confident the corn so injured could in no other way have been as cheaply and economically stored for winter use.

TRUE INWARDNESS.

A WRITER in the Kansas Farmer says: "I am at this time paying the First National Bank of Peabody 18 per cent. on borrowed money, and during a portion of the year have paid 24 per cent. on a part of the same money. The town of Peabody, with 2,000 inhabitants, has four banks; Walton, with less than 300 souls, has one, and Newton, with a population of, say, 8,000 has six with the seventh nearly ready for usurious occupancy."

COMMENTING upon the above the O. C. Farmer says that it seems to be high time that Kansas had a law limiting the rate of interest and not only Kansas, but all Western States where the matter is not now restricted within reasonable limits.

These Shylocks are slowly but surely eating up the substance of the people. They are an ulcer on the body politic. "They toil not, neither do they spin," but they live on the sweat of other men's brows and wax fat.....

OUR interesting contemporary above quoted mentions that not long since some boys were torturing a dog in the street, when a young lady passing along interceded for the dog and persuaded them to desist from their cruelty. She walked away, satisfied that she had done a humane act—and so she had. But on her hat were a beautiful specimen of a stuffed humming bird and a pair of wings from some other bird, both of which had been killed in order that her hat might be adorned to suit her fastidious taste.....

OUR respected friend Dr. W. J. Beal of the Michigan Agricultural College, says that for the past 10 years or more the lumber cut in Michigan has been steadily on the increase, and during this time the great waste has been without a parallel in the history of nations. In the southern counties of the State, people are already beginning to be more careful about wasting the timber. Of the three greatest interests of our country, manufacturing of all kinds ranks first, agriculture second, and forestry third.....

CONGRESS has appropriated large amounts for investigating and encouraging the growing of oysters, crabs, lobsters and fish and the money already appears to be giving large returns. Michigan for some years has done a little by way of experiment to foster the production of fish in our lakes, ponds and streams. We legislate to protect birds and wild game and appropriate money to encourage a large number of worthy objects, but for our forests, from which we are drawing a larger amount in natural wealth than from any other source of supply, or from all other sources together, we have so far done practically nothing to protect or cultivate.....

THE evidence, says Dr. E. J. James, is ample and conclusive that we are making fearful inroads on our forest stores. We are cutting off a much larger crop then can possibly be replaced by natural growth within the period when, at the present rate, we shall have cleared the original forests off the ground. We are wasting our forests by the ax, by fire, by pasturage, by neglect. So far as timber is concerned, we are eating into our capital with little care for the future.....

A RECENT BULLETIN of the New Jersey Agricultural Experiment Station summarizes the results of certain experiments made by the Station, and by certain individuals with the object of finding out what the land needs. The Rev. H. P. Thompson, of Readington, on one-tenth acre plots, used phosphoric acid, potash and nitrogen separately and in combination, with this result:

Fertilizer.	Cost.	Net profit.	Per cent. on money invested.
Nitrogen, phosphoric acid and potash.....	$14.95	$4.19	28.
Phosphoric acid and potash.	9.00	15.50	172.
Phosphoric acid.....	5.25	10 15	193.
Potash.....	3.75	13.65	364.

The returns on the money invested ranged from 28 per cent. to 364 per cent. Mr. Thompson has continued the use of potash upon corn, and has secured uniformly profitable returns up to the present time. His experience also shows that kainit, while it costs more per pound of actual potash than muriate of potash, has been the more economical.

CERTAIN QUESTIONS were asked by Director Cook of a number of New Jersey farmers. Answers were received from 23, representing 10 counties; of these 17, representing nine counties, reported the profitable and continued use of either muriate of potash, kainit or unleached wood ashes as a fertilizer for potatoes, corn, grass and fruit. Twelve farmers, representing eight counties, favored the use of muriate of potash, while five, having used both muriate and kainit, were satisfied that kainit gave the largest returns for the money invested. The weight used per acre ranged, for corn, from 50 to 200 pounds of muriate, and from 300 to 500 pounds of kainit; and for potatoes, from 150 to 400 pounds of muriate, and from 300 to 800 pounds of kainit. The crops reported as being especially benefited were corn, potatoes, fruit, clover and oats. Without exception, the use of potash, either alone or as an adjunct to farm manures, was regarded as highly satisfactory and economical.....

THESE RESULTS, gained from experiment, and confirmed by practice, while only positive for the farms and crops represented, should have a significance for those farmers who have not tested their soils, because they not only demonstrate that soils differing widely, both in formation and previous treatment, respond profitably to applications of potash alone, but also indicate a general lack of potash in the soils of the State, and consequently point out the importance of soil tests by the farmers themselves; for when maximum crops can be secured by the application of potash alone, it is poor economy to apply complete fertilizers, costing $40 per ton, in which $5 represent the value of the potash...

THE R. N.-Y., as its readers know full well, has found that potash alone, no matter what the form, has little if any effect on its poor-soil experiment plots. Neither has nitrogen alone nor phosphate alone. Neither has any two. Only complete fertilizers pay. Thus we see that what is profitable on one field is profitless on another, and the question is one to be answered by every farmer for himself..

PROF. E. M. SHELTON, from careful tests made at the Kansas Agricultural College, says that farm-yard manures must be hauled to the field in the spring; otherwise the loss of manure is sure to be very great, the waste in the course of six months amounting to fully one-half the gross manure and nearly 40 per cent. of the nitrogen which it contained.....

PROF. SHELTON found that corn from which the tassels were removed as soon as they appeared, yielded less than that allowed to mature its tassels. He also found, as has the R. N.-Y., that corn from which the "suckers," were removed, yielded less grain than that allowed to grow naturally. He concludes that all such manipulation is worse than a waste of time.....

FROM all the facts, Prof. Shelton says the listing of corn seems well worth the careful study of his Station. The method itself, like most agricultural operations, is far from being a simple one. As compared with the old methods, it presents the following points of difference: Listed co n is planted at the bottom of a deep furrow, and in otherwise unplowed land; the corn is drilled, perhaps less, or more thickly than in surface planting.

LAST YEAR a number of plots were listed and a corresponding number treated in the usual way. The listed corn yielded over 46 bushels to the acre, the drilled corn about 40 bushels .....

PROF. SHELTON mentions the Tower Surface cultivator which is an implement the R. N.-Y. would like to know more about. This machine is made on the general plan of the familiar two-horse walking cultivator. It differs from the ordinary implement in that each cultivator consists of a gang of sharp knives acting horizontally and set at an angle with the direction of the line of draft. It acts superficially, as its name indicates, slicing the ground very thoroughly to the depth of one or two inches, as may be desired.

THE KANSAS STATION made a number of trials to find out how much cultivation it is profitable to give corn.

The plots "slightly" cultivated yielded at the rate of 38 bushels of sound corn; those receiving "ordinary" cultivation yielded 48; those which received very shallow or surface cultivation, yielded 45 and those which were "excessively" cultivated yielded 42 bushels.

PROF. SHELTON finds that the largest yield, of the best quality of corn, goes with the plants cut latest. Corn continues to improve in weight until the very last—after the blades of the plant have been dried up, and quite likely blown away, and seemingly until the juices of the stalks have been completely sucked up.....

NO EXPERIENCED FARMER will suppose for an instant that this improvement in the quality of the fodder obtained in the early cuttings nearly compensates for the great loss sustained, both in quantity and quality, of the yield of grain. Considering all the facts—the great labor of husking corn from the shock as compared with "picking" it from the standing stalks, the great difficulty in tying, hauling and stacking or otherwise securing the fodder crop, and the great waste of fodder in the field and ultimate loss in feeding—it is perfectly clear to Prof. Shelton that Kansas farmers must raise corn for corn, with no thought of fodder, and corn again which has no higher purpose than the production of fodder. They must, in short, have two corn fields on every farm, receiving radically different treatment, to correspond with the different purposes for which they are cultivated.

THE WEAK POINT in the practice of Kansas farmers is the all but universal neglect of corn as a hay plant. It is far from Prof. Shelton's purpose to write in belittlement of the efforts so many Kansas farmers are putting forth to secure grasses and clovers suited to their climate, but certainly the men who deplore the lack of tame grasses in Kansas forget that, so far as hay is concerned, they have in Indian corn and sorghum hay plants which are superior for most of the purposes for which hay is used to any of the so-called tame grasses in certainty of yield, quality and quantity of crop in handling, if properly handled.....

WITH the object of learning the effect of moderately grazing wheat, both in fall and spring, a portion of a field was selected for the purpose of trial. There was only this noticeable difference—and this was slight—between the grazed and ungrazed areas: the former, particularly that used for fall pasturage, bore a considerably more leafy straw, as indicated in the table, and it seemed a little slower in ripening, although the time of cutting the three areas was the same.....

THE application of manure to certain plots of the Kansas Experiment Station did not pay at all. It is notable that the application of salt did pay.....

THE report respecting Teosinte is essentially that which the R. N.-Y. made 10 years ago.....

PROF. SHELTON says that the Rural Branching sorghum was last year the most satisfactory variety grown. The exceedingly interesting and instructive report which we are now quoting from—a report which reflects much credit upon the Station—makes no mention of having cut the Rural Branching sorghum back to ascertain what its second growth would be.....

THE DIRECTOR has no kind words to speak of Kaffir corn. He says that it has been tried for two years. It grows quite surely and yields more seed per acre than the other varieties of sorghum. The forage has not proved valuable for feeding, and it is doubtful if this variety is equal in value to either Rural Branching sorghum or African millet.....

KAFFIR CORN, it will be seen, behaves in Kansas much as it does at the Rural Grounds.

DR. LEARNED charges 30 cents a pound for his hygienic hams; 25 cents for hygienic sausages and 25 cents for hygienic lard. He is the pioneer in treating hogs in reasonable accordance with the laws of hygiene and finds many who are willing to pay the above high prices for sound, healthy pig products.....

FARM AND HOME says that the seed of peanuts must be taken out of the shell before planting. The R. N.-Y. knows not whether Southern peanut planters do this or not. But we do know that in an experiment tried by the R. N.-Y. the seed taken out of the shell failed to sprout, while the entire peanuts sprouted with scarcely an exception.....

YES, Mr. HENDERSON, "Market gardening *is* a poor business for a lazy man." In fact, the lazy man had better live and work in the city.....

AT the Michigan Agricultural College potatoes raised from one eye for four seasons have averaged 115 bushels per acre; from two eyes 160; from three eyes 170; from half-potato 167; from whole seed 182.....

THE R. N.-Y. has for years contended that if potatoes are planted fairly deep and given level cultivation, there will be fewer to grow out of the soil than if they are hilled up. Prof. Johnson of the Michigan Agricultural College says that some raise objections that the potatoes will sun-burn if not hilled up; but the balance of evidence is just the reverse, and the potatoes will not suffer from drought as badly when the ground is kept level. "Plant deep and keep the ground level".....

FARMERS have been a long time in finding this important fact out. Those of our neighborhood object to planting deep and giving level culture because it is far more trouble to dig them, which is true enough.....

THE BREEDER'S GAZETTE says that butter is colored in winter because the public demand it and that "it is the producer's duty to place his goods before the consumers in the manner best liked by all." Is not this argument too broad? queries our excellent contemporary the New England Farmer? "It is the same argument that the oleo men use to excuse themselves for coloring their goods in order to make them imitate real butter."

Coloring matter in the latter case is used to make a sham appear more like the article imitated and is therefore objectionable. If laws could be made and respected which would *insure* that every pound of oleo should be sold as oleo and known to be oleo by the consumers we would not object to its being colored so as to imitate the color of gilt-edge butter as closely as possible. What we want is good, wholesome butter. This assured, we have no question to ask whether the cow or the butter-maker colored it. We have made butter at the Rural Farm for 25 years and have neither colored the butter nor desired to do so. But had we so desired, we should have colored it with as little compunction as we color soup with soy-sauce or eat grapes that were raised in bags.....

ABSTRACTS.

——GEORGE WASHINGTON: Replying to one who had the strongest claims upon his friendship, and who had applied to him during the progress of the Presidental campaign, as we should say, for the promise of an appointment to office, he wrote: "In touching upon the more delicate part of your letter, the communication of which fills me with real concern, I will deal with you with all that frankness which is due to friendship, and which I wish should be a characteristic feature of my conduct through life. * * * Should it be my fate to administer the government, I will go to the chair under no pre-engagement of any kind or nature whatever. And when in it, I will, to the best of my judgment, discharge the duties of the office with that impartiality and zeal for the public good which ought never to suffer connections of blood or friendship to have the least sway on decisions of a public nature."

——BISHOP POTTER: "The constant importation, wrote the author of The Weal of Nation, as now in this country, of the lowest orders of people from abroad to dilute the quality of our natural manhood, is a sad and beggarly prostitution of the noblest gift ever conferred on a people."

——AGRICULTURAL SCIENCE: "The man of sense will approve of the most scientific work at our Stations, but he will endeavor to so frame his words and draw his conclusions that they may be intelligible to his audience whether scientific or practical."

——CONNECTICUT A. E. S.: "Cotton-hull ashes have been for some years the cheapest source of potash in the Connecticut market. The potash is soluble in water, is entirely free from chlorides and is combined chiefly with phosphoric and carbonic acid. The ashes are now used chiefly on tobacco lands, but are worth the attention of all who buy raw materials rather than mixed goods."

——HOARD'S DAIRYMAN: "Professor E. W. STEWART in the Country Gentleman tells how to quickly put flesh on either a poor, or an old animal. 'Cut clover hay short, say, one-half inch, take cheap molasses, and dissolve one pint in one gallon of water and sprinkle this upon three pounds of the cut clover with two pounds of buckwheat flour and two pounds of wheat bran. Feed this amount to each horse, or animal three times per day,—commencing with a little less per day for two days.' The Professor says he put 100 pounds additional weight upon a horse thin in flesh, in 30 days by feeding him said ration."

——FARM JOURNAL: "Super-serviceable friends made it appear that the Editor of the RURAL NEW-YORKER sought the position of Assistant Secretary of Agriculture. We happen to know that he would not touch this or any other political position with a 10-rod pole, even if it had a Cabinet officer's salary at the end of it." [Thanks. ED. R. N.-Y.]

——FARMERS' REVIEW: "The American people are coming to relish mutton better than they did The knowledge that it is the most wholesome meat food of all of the meats has drawn them to it. In the Chicago market half-a-million more sheep will be required in 1889 than were used in 1888."

——WISCONSIN INSTITUTE: "We do not exhaust land by selling the fat of animals, but we exhaust it when we sell their muscle, their bones, their hair, skin and horns. We exhaust land when we sell milk, cheese or eggs, but not when we sell butter. If we sell $200 worth of wheat, or 250 bushels, we are parting with $67 worth of plant food contained in the soil. If we sell a horse worth $200 that we have raised on the farm, we sell $7 worth of plant food; while if we sell $200 worth of butter, averaging 25 cents per pound, we have sold less than 50 cents worth of plant food."

——KANSAS AGRICULTURAL EXPERIMENT STATION: "The R. N.-Y. Branching sorghum, both green and cured, was eaten by our cattle with greater relish than any other forage crop fed this season."

——"KAFFIR CORN yields from 30 to 60 bushels of grain per acre. The stalks have a harder shell than the other sorghums, and our cattle refused to eat them."

For Nervous Diseases

Use Horsford's Acid Phosphate.

Dr. F. G. KELLY, Alderton, W. T., says: "I have prescribed it in a large number of cases of restlessness at night, and nervous diseases generally, and also in cases of indigestion caused by lack of sufficient gastric juice of the stomach, with marked success, and consider it one of the best remedies known to the professional world."—*Adv.*

Miscellaneous Advertising.

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THE Brompton Hospital for Consumptives, London, Eng., published a statement that fifty-two (52) per cent. of the patients of that institution have unsuspected kidney disorder. Prof. Wm. H. Thompson of the University of the City of New York, says: "More adults are carried off in this country by chronic kidney disease than by any other one malady except consumption." The late Dr. Dio Lewis, in speaking of Warner's Safe Cure, says over his own signature: "If I found myself the victim of a serious kidney trouble, I would use Warner's Safe Cure."

THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, MAY 18, 1889.

DON'T mistake the work of the Flea-beetle for potato blight.

THE women as well as the men readers of the R. N.-Y. are treated to a symposium this week. Miss Taplin discusses the important question of "Domestic Finance."

HELLEBORE is, for the currant worm, a safer and quicker insecticide than arsenic for the potato beetle. Look to the currant and gooseberry bushes now. The worms—not over half an inch long, or less—appear on the under leaves first. Then is the time to use the hellebore. The R. N.-Y. puts a heaping table-spoonful of hellebore in a little hot water (a tomato can is handy for the purpose) and when thoroughly mixed into a paste pours it into a pailful of water. This is sprayed upon the bushes through a cyclone nozzle, holding the nozzle *under* the bushes and sending the spray *up through* the bushes. Two applications will suffice.

IF by some miracle, the power to talk and state their grievances could be given to plants, the scene we have pictured on our first page would be enacted on thousands of farms in this country. Do you doubt it? For years the grasses have been playing the killing game of "giving something for nothing." They have done their part cheerfully, providing food for the animals, and furnishing hay for cash. And they have never received even thanks for their service. The farm manure has been put on the other crops. What the other crops failed to take has been left for them to get as best they can. No wonder they make a strike for a fair share of the manure. There is no crop on the farm that deserves fairer treatment than the grass crop. It is the basis of good agriculture. Clover is the spokesman of the group. We hope his appeal will be heard. Has he just cause to complain about the treatment he receives on your farm?

"One cannot make good clover hay and ignore this fact, and still very many try to. The time to draw in is during the hottest part of the day."—T. B. TERRY, page 329.

ON the morning of May 7, the Flea-beetle was found on the potato vines of our "Contest Plot," in greater numbers than we have ever noticed them before, there or anywhere else. Many of the vines were barely breaking through, while a few had made a growth of six inches. It was hoped that they would prove less troublesome this season than they were last, since, in so far as we can learn, a season of abundance is usually followed by several seasons of comparative scarcity. Perhaps the very mild winter may account for this departure from precedents. The R. N.-Y. has made diligent inquiry as to some effective means of exterminating these little, but terrible pests, without success. We know no better to-day how to fight them than we did last year, when we helplessly saw our vines dying from their depredations. At present we are trying tobacco soap dissolved in water and sprayed upon the vines. We shall also try tobacco stem infusions and whale-oil soap. Nearly everything we could think of was tried last year without the least effect in so far as could be seen.

MIXED GRASSES FOR PASTURE.

THE other day we spent the best part of an hour in watching a horse and cow eat grass in a pasture. This observation was not taken from the top of a fence, but the observer got as close to the animal's mouth as he could. If the reader will take the pains to do as much he will learn a thing or two. Animals know what they want. Watch them graze. They do not eat all sorts of grasses. They pick out what they want, delicately and decidedly. They like young grass best. They do not care so much for the rank, heavy growth that springs up where extra manure is applied to the surface. In the spring they like to eat a few dandelions and other weeds that some human beings take in patent medicines. Our horse likes to graze in one place until the grass is cropped close, and then to leave it for a few days until a new, tender growth is made. He also likes to feed on the high ground one day and on a lower place the next. We find different species of grasses on these different parts of the pasture. The R. N.-Y. concludes from these observations that the farmers who advocate the seeding of pastures with a mixture of a dozen or more kinds of grass seeds are exceedingly wise. The great variety of grasses will surely please the animals, and as the grasses mature at different times, there will be a longer supply of the tender, succulent growth that is so much preferred.

FIGHTERS FOR FERTILITY.

ABOUT a year ago—page 479 of last year's volume—the R. N.-Y. gave a record of some experiments that had been started at the Michigan Agricultural College. This record was entitled "Lessons from an Old Pasture" and it will well repay a second reading, because it points out a fact regarding the fertility of meadows, that is most important. On the poorest soil of an old pasture, 24 species of plants—all worthless for pasture except four—were found. On the best soil but 11 species were found, and one—June grass—had almost excluded all the others. The better the soil, the stronger the good grasses grew, and the more the worthless plants were crowded out. On a poor soil *no* plant makes a perfect development. Any seed that falls has a chance to live and that is about all it can do. Make the ground stronger, apply fertilizers and the whole thing is changed. Before, the plants drag through a stunted, blighted existence. There is nothing in the soil worth fighting for. After, the plants break out of their sluggishness and fight with each other for the fertility. The few stronger capture the greater proportion of the plant food, grow up strong and vigorous, and crowd out many of their competitors And the stronger plants will generally be found the most desirable ones—in the case of the old pasture under experiment the June grass fought away the worthless plants. Nature does not make mistakes. If man would study her ways and understand her unchangeable conditions he might turn her into a willing servant.

PERFUMED HAY.

IN his first printed argument in favor of the ensilage system, M. Goffart said that he had frequently noticed in haying fields evidence of what he considered must be a great waste. He noticed that whenever hay was curing, the air was full of a delicate perfume which had evidently escaped from the grass into the air. This seemed to M. Goffart like a waste of the most valuable part of the grass and one of his strongest arguments was to the effect that by means of the silo the farmer could cure his grass without drying and thus prevent the waste of whatever passes away to yield up this agreeable odor. M. Goffart seemed to think that the green grass was like a pile of manure. He had noticed the escape of ammonia from a manure pile, and reasoned that because this escape was detrimental to the manure "the breath of the new-mown hay" must be equally detrimental to the grass. We do not believe there is much in this objection to drying grass. Certainly no chemist has yet been able to measure the nutritive value of this perfume, and it is generally agreed that the agreeable odor is mainly due to certain volatile oils that may be ranked with honey as regards their nutritive values. In fact, it may be said that hay-making has an advantage over ensiloing, since no silage, however "sweet" can compare in fragrance with the best hay. But these oils have their value. They render hay more fragrant, more palatable and hence more agreeable to farm animals. Who has not noticed how eagerly cattle prefer the sweet, fragrant hay, a mow of which smells like a huge tea-chest, to the dull, odorless stuff that some farmers put up? There is a certain time for cutting grass and a certain way of curing it that preserve the largest amount of its perfume. And those who can retain the most of this perfume can be said to have most nearly mastered the science of hay-making.

"The best method by which to improve meadows is improved general farming. Feeding clover and grain, and saving rich manure in a water-tight gutter with plenty of suitable absorbents, will do much to insure success. A soil made fine and free from weeds by thorough and careful tillage is essential to the best results."—C. S. RICE, page 327.

CHEMISTRY ON THE FARM.

THE gradual introduction of Professor Short's new method of determining the amount of fat in milk goes to show dairymen that there is nothing in chemistry for them to be afraid of. By carrying out the simple rules that govern the method, farmers are enabled to conduct a chemical analysis which, 200 years ago, would have been considered little less than marvelous. The R. N.-Y. believes that the farmer who uses Short's method of testing milk will not be satisfied until he learns how to analyze the food that is given his cows. In other words, he will not be satisfied with simply knowing what the product contains, but will want to know what the food used to make that product contains. And he can do it. We believe that the rules for determining the quality of hay and grain can be made as simple as are those governing the milk test. Are such analyses needed? Are not the published tables, so easily obtained from the Experiment Stations, sufficient? Just examine these tables and see how different samples of hay vary in composition. We are given the *average*. The R. N.-Y. finds that, in the Connecticut Station tables—and these are considered the best American authority—wherever 10 or more samples of hay were analyzed, the difference between the minimum and maximum amounts of dry matter, protein or carbohydrates, was very great. For instance, a good many analyses of clover hay were made with the following result—the figures indicating the per cent. of the various substances.

	Dry Matter.	Protein.	Fat.	Carbo-hydrates.
Poorest.....	78.2	8.9	1.5	35.
Best.....	93.9	20.8	4.3	49.
Average.....	88.62	12.55	2.44	40.55

It is very probable that these wide differences in value are due mainly to different methods of curing and handling. If a farmer proposes to make use of the results of chemical analysis in his feeding, what can he do but take the *average* analysis which may be from 10 to 50 per cent. out of the way.

The R. N.-Y. respectfully submits, 1. that any farmer who pretends to follow these tables in feeding his stock would make money by knowing whether his hay was above or below the average in value. 2. The rules governing the analysis of feeding stuffs can be so simplified that any man who can conduct Short's milk test, can learn to analyze hay and grain. If we are not right, will our agricultural chemists please tell us why not?

CHEMICAL FERTILIZERS AND GRASS.

IT will be noticed that a number of our correspondents speak of using chemicals in the work of restoring meadow fertility. Most of these persons live at the East, yet it will be noticed that a Western man asks, on page 330, for information which none but Eastern farmers can give him. Western farmers, as a rule, do not like to consider the possibility of being obliged to use chemicals. Stable manure and clover should measure the fertility of Western farms, and as clover depends more or less upon manure, it is safe to say that the quantity of manure made and saved on the farm, should determine the fertility of that farm. This used to be the rule at the East, but industrial development has changed that. It simply does not pay farmers to make the amount of manure they made years ago The West supplies us with meat cheaper than we can raise it. The forces of production and transportation have so arranged themselves that we find it cheaper to buy a portion of our manure in the form of fertilizers. In sections of this country where the dressed beef companies must look for their supplies of fat cattle, there will probably never be any need for chemical fertilizers. Wherever the dressed meat handlers supplant local butchers, one of two things must follow: the dairy interests must be largely increased or farmers will be obliged to use more chemical fertilizers.

We give, on another page, the views of some Eastern farmers who use fertilizers with special reference to their effect upon the grass crop. They are all good farmers and speak from experience. We may say, in this connection, that it is our plan to work the R. N.-Y. New Jersey farm into grass as soon as practicable. We are not able to do this all at once; we shall not be able to proceed any faster than the farmer in ordinary circumstances could do. Most of the farm, when we bought it, was in rough pasture fields, grown up to brush and weeds, or in worn-out, grassy corn fields that had been farmed "on shares." It is our plan to plow each year a few acres and apply all the stable manure we can secure, raising corn and giving careful cultivation. The next year potatoes will be grown with at least 1,500 pounds of a high-grade potato manure. In the fall the potato ground will be seeded to rye and Timothy, with clover to follow in the spring. When all the area that we wish in grass is seeded, we shall apply manure to the grass. Until that time we shall use a "complete" grass manure. Whenever the yield falls below the standard, the grass will be plowed and the land given the regular rotation of corn and potatoes.

"Dairying, sheep-breeding and hog-raising all pay a living profit if conducted in a business like manner. All the above-mentioned branches of farming consume the products of the farm, and return to it nearly all the plant food. This gives an increase of income, because the productive powers of the farm increase from the method, thus making the keeping of more stock practicable."—CHARLES CHAPMAN, page 329.

BREVITIES.

OATS and peas seem to be popular as stock food.

HEADS of rye were "out of the boot" on May 2.

PROF. ROBERTS, page 328, speaks a good word for hay crops.

WHY do most of our Eastern readers prefer to seed down to grass after potatoes?

WE have so much about hay that the horse picture, promised last week, has been crowded out.

TIMOTHY and clover! A great deal of our agricultural wealth seems to rest on these two grasses.

HOW many have tried the plan of seeding to grass in the corn field as advocated by Mr. Paine on page 335?

THE plan proposed by K. M. T., on page 332, certainly turns straw into cash, but it takes the life out of the soil nevertheless.

INCREASING the productiveness of our meadows. This topic is discussed by all our contributors. It is a timely topic. Read what is said in this number.

THE use of mowing machines has lessened the number of men who can do good work with a scythe. This means more weeds on the roads and in fence corners.

GREEN grass forms a "perfect ration"—not all grass, but the best grasses. The best hay needs an addition of grain to give the best results. Poor hay will barely sustain life.

OSCAR CLUTE, of California, who has been teacher, editor, and minister, is to succeed Assistant Secretary of Agriculture, Edwin Willitts, as President of the Michigan Agricultural College. He is 48 and an old graduate of the institution.

THE Wisconsin Station urges farmers to use more clover in the silo. Many find it difficult to cure clover hay and get it just right. There is no difficulty about making it into good silage. It does not need to be chopped before going into the silo.

MR. TERRY tells how he cures clover hay. His horses keep in good condition on such hay, without grain. There is a good deal in the curing of such hay. Some farmers would take the same clover and cure it so that horses would nearly starve to death on it. Are we not right in this?

IT has thus far been the most delightful spring of which we have any remembrance. And it is just such delightful springs that, in the quiet valley where the R. N.-Y. does its experiment work, coax out the grape-vine shoots and blossoms to be killed by rarely missed frosts in middle May.

THE great American Meat Company, which, it was generally supposed, had collapsed on the resignation of Flagler as President, and Moss as Secretary, a few weeks ago, has been reorganized. Ex-Senator Warner Miller, of New York, has become President, and ex-Congressman Belden, of Syracuse, his principal associate. Flagler and Moss, of the Cotton-Seed-Oil Trust are still among the directors. The terms of the new organization are substantially the same as those of the old.

IT may be well to remember the remedy for the clover midge that was proposed by Mr. Warren, a R. N.-Y. subscriber, of Medina County, Ohio. Mr. Warren runs the mower through the field about the middle of May, leaving the product on the ground as a mulch and fertilizer. After this there develops a vigorous crop of blossoms. This comes between two broods of the midge and thus escapes attack. Another plan is to cut the hay crop 10 days earlier than usual. This early-cut clover can be used in the silo.

Field Crops.

HAY.

(*Continued from Page* 330.)

average. Stable manure and land plaster are our only fertilizers.

5. We have tried no new grasses or substitutes therefor here of late.

6. The productiveness of our meadows can, I think, be best increased by a judicious rotation of crops and a liberal use of stable manure. My own rotation is: 1, Corn on sod, manured; 2, oats or wheat, with grass and clover seed; hay for one or two years, according to the stand secured and the condition of the meadow. Some neighbors follow about the same rotation, manuring the grass instead of the corn. They leave the meadow two years and put on manure the first fall after seeding. Permanent meadows are not, as a rule, a success here, though I have seen a meadow on low bottom land seeded to Red-top and Alsike clover, which had done well for several years.

Brillion. E. G. F.

FROM VERMONT.

1. TIMOTHY is sown for hay here as a rule; though some sow Red-top with Red and Alsike clover. The early cutting of grass is favored, as the hay makes better feed for cows and young stock and the land does not run out so soon.

2. The Buckeye, Granite State, Bradley, Champion and Wood mowing machines are used, and the Champion and Tiger rakes, and the Mudgett and Thomas tedders.

3. On river farms meadows are reseeded about once in six years, in the spring, with oats or barley; our hill farms do not require seeding so often.

4. Probably 1½ ton per acre. Stable manure is used. Few have tried commercial fertilizers for grass.

5. No new grasses have been tried here in recent years.

6. Many of our best farmers practice top-dressing in the fall.

Warren. F. H. M.

Timothy and clover are the principal grasses grown in this section for hay, though Red-top and Orchard grass are raised to a considerable extent. I favor early cutting, for the reason that much better results are obtained from feeding the hay, because, as I think, the fresh spring grass is nearer to a perfect food than anything we can get, and for this reason farmers should strive to have their hay resemble, as closely as possible, dried green grass. I think that, on an average, I seed down once in five or six years, but this depends largely upon circumstances. In certain soils, with favorable seasons, large crops of hay may be grown for a much longer time with a light top-dressing of manure once in two or three years. I prefer to seed with wheat when seeding with grain: but for several years I have plowed in August, harrowed in manure and seeded without grain, and I have never failed to cut a heavy crop the first season. My average yield for several years has been more than two tons per acre. I use barn-yard manure principally, though I think commercial fertilizers can be used profitably for grass. I have not tried any new grasses or substitutes recently. The best way, in my opinion, to increase the productiveness of the meadows, is to give thorough cultivation of the soil, plenty of manure, and plenty of grass seed. Many farmers sow too little seed when seeding down. I would rather sow one bushel of Timothy and two bushels of Red-top per acre, than a smaller quantity, as the extra yield of hay will many times more than pay for the extra seed. I think more attention is now paid to the grass crop in this section than was formerly. Farmers must be governed, to a certain extent, by the character of their soil in growing the grass crop, just as in the case of other crops. F. E. L.

North Pomfret.

1. Timothy, Red-top and Red and Alsike clovers are generally used here for hay, and on our river bottom lands Timothy, Red-top, Fowl Meadow and Alsike. We cut early for hay for all kinds of stock except horses. Early-cut hay is more easily digested and assimilated, but more liable to be dusty, and therefore injurious to horses. The precise time to cut hay so that it will be most valuable is just when the grass is out of bloom; but it changes rapidly from that state, and practically I am compelled to begin cutting when it is at an earlier stage.

2. The list of haying tools, especially of mowers and horse-rakes, is too long to mention all. I use Walter A. Woods mowers and rakes, a Bullard tedder, a Keystone hay-loader, and a double harpoon horse-fork.

3. I usually re-seed once in five or six years. My usual rotation for heavy clay soils is peas and oats on green-sward; next, barley and grass seed, followed by clover and Timothy. I use large Northern clover and Timothy for renovating heavy clay soils, with Red-top added on moist lands. For loam lands my rotation is, first, corn, followed by barley and grass seed, Medium and Alsike clover, Timothy and Red-top. I use peas freely as a first crop, because they are rich in both plant and stock food, and they leave the soil in excellent condition for succeeding crops. I sow oats with them because they are excellent stock food, and hold up the peas so that they can be harvested by horse-power. They are a somewhat exhausting crop, and for this reason not especially fitted for renovating purposes. The same may be said of barley; but both are excellent for stock food, and the latter is well adapted for use in connection with grass seed. I formerly used wheat with grass seed, but its low market value at the present time prevents its being profitably exchanged for stock food, and no New England farmer can afford to sell grain except in the way of such an exchange. The clover crop is my chief reliance in the way of renovation.

4. The average yield per acre of peas and oats, on large fields of green-sward is from 25 to 40 bushels; of barley from 20 to 40 bushels. In one case I had an average of 43 bushels of Imperial barley on a field of 13 acres of heavy, clay soil. Clover (large Northern) averages from two to three tons per acre. This will be followed after two or three years by Timothy, and when the yield is less than 1½ ton per acre, I plow, and repeat the rotation. I never use large Northern clover on a rich loam soil. In such cases there is liable to be an overgrowth, and consequently poor quality.

5. No new varieties have been introduced that I am aware of, since the introduction of Alsike clover, and Orchard grass. The former I have used successfully for the last 20 years. I have not made a success of the latter. It is quite too "smart" for me, and, besides, it does not produce enough seed, and it costs too much to purchase the latter.

6. By plowing, and the use of some rotation like the one I have pointed out, we can supply ourselves with grain, while raising a larger aggregate amount of hay, and at the same time producing a rapid increase of fertility, provided always that the plant food produced or its equivalent is returned to the soil. The plow may be used with ruinous effect upon the farm and the farmer's hopes of success, but when judiciously used, in connection with an intelligent system, it is the most important agent in the work of crop production, and farm improvement. F. D. D.

Whiting.

1. THE grasses, including clover, in this section, are about as follows: Herd's grass or Timothy is the principal kind raised, and Red-top comes next. Only a few have sown Orchard grass, and at present I do not know of any field of it. It is liable to winter-kill. June grass is plentiful in all our grass fields, but seed is not sown often. A few have sown Meadow Fescue with good results. Red, common, and Mammoth clovers are sown freely, and Alsike is becoming quite common and is much esteemed. I favor cutting the grasses early. Early-cut hay produces, I think, better results in milk flow than late-cut. I consider late-cut Herd's grass a very poor feed for milk. A mixture of Alsike and other clover with Red-top and Herd's grass cut early is, in my opinion, the best for winter dairying.

2. Nearly all the mowing machines in the market are used here; but I think the Buckeye leads. The latest improved kinds of horse-rakes are in use by most hay-makers. Tedders are coming into use a good deal. These with the common drag rake, and improved pitch-forks and hand-scythes complete the list of tools in use.

3. I generally seed down after taking off three grass crops; corn or other crops follow, breaking up the sod. The old way of seeding was to sow the grass seed with an oat or wheat crop in the spring, and generally a good grass crop followed; but of late years I have seeded down to grass in the corn field, with level culture of the corn crop. This is a good way. I sow the seed from about the middle of July to the middle of August, going through every row. At this time the corn is in transition from the silk to the milky state. A cultivator is run through and the ground is raked over, after which the seed is sown. The ground is shaded so that seed rarely fails to germinate. Grass seed is frequently sown on winter grain fields. The average yield per acre on my farm, including rowen, is slightly over two tons per acre; but the crops on many farms in town will not exceed a ton to the acre. In the whole town an estimate of 1 1-2 ton would not be far out of the way for an average yield per acre. All kinds of manure are used; special fertilizers are used to a great extent in connection with barn manure.

The new grasses are not much used here. I have sown Meadow Fescue on several occasions and my experience is that it makes an excellent hay, very good for winter dairying if cut early, and it is very hardy and will hold out longer than most other grasses.

6. I know of no better way to increase productiveness than to plow up, manure heavily and seed down in the corn field. One of my neighbors has increased his grass crop greatly by top-dressing in the fall, and last year his whole mowing fields produced two crops of nearly three tons per acre.

South Randolph. C. G. P.

FROM NEW YORK.

1. TIMOTHY and clover: Timothy for the Troy market where it brings from 80 cents to $1 per 100 pounds according to the supply. Most emphatically I favor early cutting, as soon as Timothy is all headed out, and as soon as clover is in full bloom. Early-cut Timothy will sell for 10 or 15 cents more per 100 pounds than late-cut. Ripe Timothy is not much better for feeding than oat straw.

2. We use the various mowers that are in the market, and wheel-rakes, and some use hay-tedders, but I do not use one myself, as I think such implements break up the hay too much. Various horse-forks and hay carriers are also used.

3. We re-seed about every three years, with rye usually, sowing Timothy seed in the fall and clover in the spring.

4. From two to three tons per acre. Commercial fertilizers are mostly used. They are sown with a drill when the grain is sown.

5. A few are trying or going to try Alfalfa. I have not had time to note with what success.

6. More manure in almost any form will help to produce larger crops. A. H. S.

Melrose.

1. RED CLOVER (both large and medium) and Timothy. As hay is largely the money crop here with many farmers, Timothy leads. We cut clover when it is in full bloom; Timothy as soon as the bloom falls, because the quality is then at its best, and, I think, the weight of hay is greatest.

2. Many styles of mowers and steel-tooth horse-rakes are used, but very few loaders or tedders. The hay is stored in barns as soon as possible with a double harpoon horse-fork, hay carrier and tackle. Fowler's cars and many other good kinds are in use. The hay is pressed by the buyer, by means of the Dederick perpetual steam or two-horse press.

3. We seed with the second or third crops (oats or fall grain) after breaking sod. We sow 10 to 12 quarts—one part clover, two parts Timothy—with oats, Timothy with fall grain; clover in spring, same proportion, and we usually mow three or four seasons.

4. About one ton. We use but little manure, except what is applied when seeding with wheat—mostly barn-yard with some phosphates.

5. We have lately tried Alsike with indifferent success. It does not seem to thrive here as in some localities.

6. The productiveness of meadows can be improved by the use of more barn-yard manure and ashes. No stock should be allowed to pasture on meadows before or after cutting. A gradual increase should be made in the depth of plowing, but not in *all* of our soils. F. D. S.

Ithaca.

1. The principal meadow grasses grown in this section are common Timothy, Red clover and Orchard grass. Occasionally we find a little Red-top and English Blue grass, but not in large quantities. Orchard grass is not grown as much as formerly. Early cut grass I consider the best for hay, as it will be less wiry, more nutritious and more easily masticated and digested.

2. Nearly all of the improved mowing machines are in use here. Hay tedders are also in general use. The Thomas takes the lead. The principal rakes used are the Bradley, Thomas, Tiger and Buckeye. The Keystone hay-loader has been used, but does not give general satisfaction, it being better adapted to the prairie farms of the West. The harpoon hay fork is the best.

3. On gravelly land we re-seed once in four or five years; on low land or muck, once in five or six years. We seed with oats or wheat. Early spring is generally the best time, as the stand is not so apt to winter-kill as that from late or fall-sown seed.

4. The average yield is about 1¼ ton per acre. Cow or any kind of well rotted manure is used in top-dressing newly-seeded land. Commercial fertilizers are used in seeding, but very little as a top-dressing.

5. Some are experimenting with Alfalfa. It has not been long enough in use to warrant a report on the result.

6. To increase the productiveness, do not pasture the meadows; plow as often as needed, and keep up a good crop. The more manure that is placed on the land, the better: but we are sadly limited in this repect. Very few farms produce manure enough to keep the meadows in proper shape. Can commercial fertilizers be profitably used as a top dressing on meadows? C. H. F.

Forestville.

1. CLOVER and Timothy with some Orchard grass and Alsike clover make good hay, if put on rich, moist land. I favor early-cut hay every time, because it has more nutriment and will make cows give more milk and that is what we want in old Chautauqua county.

2. I intend to seed down every third year either with oats or wheat—oats in the spring; wheat in the fall—to Timothy and sow the clover early the next spring.

3. The average yield per acre is about "two tons on our best farms;" 1½ on the poorer ones. The yield depends a good deal on the owner of the farm.

5. No new grasses are being tried in this locality.

6. When the land is under the plow give thorough cultivation, forming a perfect seed-bed. Save all the barn-yard manures and apply it as soon as made and, when enough cannot be secured, make a judicious use of commercial fertilizer. Be sure to find out what your soil lacks first, and then apply that which will fill the need. Keep stock off the meadows at all times of the year. A man who fails of success after practicing these rules had better quit farming, but I don't believe in using much commercial fertilizer, for the crops ought to be all fed on the farm and help to make it more and more productive. P. L. D.

Cherry Creek.

THE acreage devoted to hay on the average hay farm is over three-fourths of its area. The remainder of the farm is devoted to grain crops. As the old meadows "run out" or fail to produce paying crops, the ground is plowed and sowed to some grain crop. With this grain, Timothy and clover seeds are sown in about equal parts at the rate of six to eight quarts to the acre. Some, in their haste to get first-quality hay, are foolish enough to sow Timothy alone; but this practice is not general. The length of time a field will produce hay without re-seeding will vary with the original fertility of the soil and with the quantity of fertilizers or manure applied. One field that I know of has been mown for 15 successive years, and year after year has produced over one ton per acre without manure of any kind. The average yield for this vicinity, taken altogether, has not been over three-fourths of a ton per acre for the last two years.

Among the improved tools used may be mentioned the five and six-foot-cut mowing machine, the self-dump horse-rake, and, last but not least, the horse-fork with a carrier running on either a wooden or iron track. This makes it possible for the farmer to utilize all the space in his high barn with less help; besides, the hay can be unloaded much more quickly than by hand.

A large portion of the hay is sold in the fall and early winter, the purchaser sending a portable press to the farmer's barn with teams and hands. The farmer boards the men and beasts and hauls the hay to the nearest railroad station. Many claim that the extra ease in handling and hauling pays for the board of teams and men. The distance from market probably determines the most profitable way.

To tell how fast the yield of hay is diminishing would be well-nigh impossible. A good indication that there is a decrease may be found in the remarks of the many who say: "Farming don't pay!" "Our land is not what it used to be;" "About half a crop this year and the sod looks as if there wouldn't be any next." These are the men who have sold their soil at one-half cent per pound and are now mourning over the barren fields.

C. C.

FROM INDIAN TERRITORY.

1. The only tame grass grown for hay in our country is German millet. A few of my neighbors, like myself, have experimented somewhat with clover and Timothy, but I think without success I know that I made a failure, owing, I think, to dry seasons and ignorance as to the time to sow, and the manner of seeding down. I sowed one bushel of Alfalfa two years ago. The first season it barely caught in spots; last year the weeds took the land so that what remained could not do much better. I pastured some yearlings in the field all the past winter. This spring I see the Alfalfa is spreading and I will fence off about two acres along with three acres of prairie grass, for a calf and sheep pasture. I believe pasturing will cause

the Alfalfa to spread,and I know it will keep down weeds and give the plot a better show. Native prairie grass is our main dependence. All have it in great abundance. I prefer early cutting; that is, in July when the grass has just got its growth. The Buckeye and Champion are the leading mowers in our neighborhood, although we have mowers of all kinds Sulky rakes are indispensable, stackers and hay presses of different kinds are being introduced. Millet will yield from one to four tons per acre; it is not a success every year. Prairie grass in an ordinary season, will yield from one to two tons per acre according as it is cut on upland or bottom. Our dependence heretofore has been on raising cattle; but depending on cattle alone to bring in money while paying out at all times for almost everything else, will sooner or later bring to grief. I, for one, am going to raise any crop that will pay me fair returns for the time and labor spent on it.

Oowala. J. S. F.

FROM ILLINOIS.

THE first settlers on the prairies used the native wild grasses for hay and pasture. The prairie grass is easily killed when the land is once brought into cultivation, and it never reappears. I do not know of any effort to reseed it. Timothy, clover, Red-top and millet, are mostly used for hay now. Blue grass, of which there are several varieties, makes the best permanent pasture. I have never made a careful test as to the proper time for cutting. I have a notion that early-cut hay would be less woody and more palatable to stock; but I think it more liable to be dusty in the mow. During the Civil War when help was scarce, I seeded my farm largely to Timothy, and cut the seed with a header, taking off from six to 10 inches of the top, leaving most of the straw and blades which I cut with a mower, the grass having to stand until the seed was ripe. The hay was stacked as soon as possible after it was cut. The heads were drawn to the stack-yard when cut and stacked in as narrow piles as possible on each side of a ventilator, and covered with slough grass. I fed hay put up in that way for 10 years, stock eating it with a relish and thriving on it. I sometimes think that the early-cut theory is only a notion. There are a great many different makes of mowers, rakes, forks, derricks for stacking, and carriers for barns, and occasionally a loader is in use. Portable presses are mostly used for baling for shipment.

I have not adopted any system of rotation. I often keep a field in grass eight or 10 years, by top-dressing it with stable manure and harrowing with a sharp-toothed harrow. The crop will be nearly doubled by such treatment and the effect will be noticeable for a number of years.

The best time to seed down is very early in the spring on fall wheat or rye. The best spring crop to seed with is flax. Oats are the only small grain crop generally raised here, and most farmers seed with them; but oats are rank in growth, and take up the moisture so fast that young Timothy will perish if the weather is dry in May or June. Timothy sometimes makes a good stand sowed on oat stubble in the fall. J. R. B.

Chatsworth.

IN this part of Illinois Timothy and Red-top are grown for hay, and are almost invariably mixed with Red clover. The mixture of Timothy and clover is preferred for meadows. Clover itself, though very nutritious, is very hard to cure when grown alone. Where there is a mixture of the grasses with clover a larger crop is grown; it forms a more palatable and nutritious feed; it grows up quickly in dry weather after cutting, and protects, in a measure, the grass from the hot sun, besides forming a mulch and preventing a very rapid evaporation of the moisture of the soil. Moreover, it improves the mechanical texture of the soil as well as increases its fertility. The thick growth helps to prevent the growth of noxious weeds that rob the soil, shade the grass and injure the quality of the hay. It also causes the farmer to cut his grass earlier, thus securing a great gain in its feeding value. If the grass be cut moderately early, though there may be a slight loss in weight, this is much more than counterbalanced by the gain in the digestibility and palatability of the feed, and the waste from shattering, that usually attends late cutting, is avoided. The whole object of the plant growth is to produce the seed, and if this is allowed to ripen, most of the nutrition of the stalk is transferred from the stalk to the seed, while a part of the stalk that would have been digestible if cut early, is converted into indigestible woody fiber. Should the seed not shatter off before it reaches the animal, a great share of it remains undigested, and the loss as feed is just as great. In this vicinity the grass if cut early usually gets the benefit of one or two showers before dry weather.

We seed down after the land has been cultivated three or four years, and usually after cutting a few crops convert it into pasture for a year or two before breaking it up. We usually sow Timothy and clover at the same time—early in the spring—and have no trouble in securing a stand unless the seed is sown with oats. Then if the spring be dry the Timothy suffers. Sowing with a rye or wheat crop is preferred.

To increase the productiveness of our meadows we should feed what hay we make and return the crop to the land as manure; raise a larger percentage of clover; keep down all foreign growth; sow more varieties; avoid close cutting, or pasturing too closely during the dry season, and not use the fields for meadows until the White clover and Blue grass form a stiff, close sod. L. M. W.

Shelby County.

FROM MICHIGAN.

1. TIMOTHY, Mammoth and Medium clovers are sown for hay here. I prefer early cutting for these reasons: The hay is not so dusty when taken out in winter, it cures softer, not being so dry and hard; if clover, a nice lot of green blossoms and leaves are saved, whereas if the crop is allowed to get ripe, one has a lot of black, dry stalks by the time he gets it to the barn.

2. The Champion mower I think the best for stumpy land. Several kinds of riding hay rakes are used.

3. I let the seeding stand three to four years and then plow the grass under and plant the land to corn and potatoes,and then sow to wheat or oats, and seed down again. We often seed with buckwheat, in fact, grains of all kinds—generally in spring; sometimes early in fall, from middle of August to middle of September.

4. The average yield hereabouts is about 1½ ton per acre. I have never used any manure on grass, except land plaster.

5. I have never used any new grasses.

6. In regard to increasing the yield of grass, my plan is to plow under a good crop of clover, or an old pasture, plant the land to potatoes or corn, then to some other grain crop and seed to grass of some kind. Use all the barn-yard manure you have on the grain crop after a potato or corn crop. It this method of farming is followed up, you will likely raise good crops of grass. S. M. R.

East Jordan.

ALFALFA.

As regards the growing of Alfalfa for pasture or hay, I think it is an unsettled question whether it is a profitable crop for the Michigan farmer or not. That it will grow in most parts of the State there is little doubt; but whether it is more hardy than our common clover has not been fully determined.

Some farmers in this vicinity are sowing Alfalfa with very good results so far as making it grow is concerned. It has not been grown long enough to permit any test of its merits for hay. One farmer succeeded in getting a good start by sowing about 15

(*Continued on Page* 341.)

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

Domestic Finance.

PIN-MONEY AND HOUSEHOLD ALLOWANCES.

WHAT THE WOMEN SAY---WITH A FEW QUOTATIONS FROM THE MEN.

"Let a man give his wife equal partnership, and initiate her in the secrets of the business, and she will be ever ready to be a help-mate in preference to a nonentity."

"WHAT'S mine's mine" is the rule in a good many matrimonial partnerships—not the best rule in the world for a harmonious union. One of our friends has, engraved within her wedding ring, this posy, "Each for the other, and either for both—" which certainly applies to money-getting and money-spending, as to everything else in domestic life. There is no hard-and-fast rule for the household purse, which applies to every family—differing circumstances cause different arrangements; but *no* wife should be obliged to ask—perhaps to beg—for money with which to meet legitimate expenses.

* * *

"In the ideal home no system of book-keeping is necessary, except to ascertain the amount of the necessary family expenses. In such a home the mother and daughters are full partners with the husband and sons. It is not a question of individual income or expenditures, but of united income and general expenses."

That is a man's opinion, and a very fair and honest one, we think. What seems to us necessary is complete confidence—let the husband make a clear statement of his income, for one thing; for many wives are unintentionally extravagant simply because they do not sufficiently understand their husbands' circumstances. Another thing which too often promotes extravagance is the credit system. When a woman is allowed to run up an account wherever she deals she is very apt to be far more extravagant than she would be under a system of cash payments. It is so easy to buy unnecessary things when all one has to do is to have them charged to the husband's or father's account, only, unfortunately, a day of reckoning must come. Keep house on a cash basis—that is a brief, but most excellent rule for the domestic finances.

* * *

"As a general rule, it seems only just and fair for the husband to take care of the money."

That seems perfectly right; the husband certainly is the head of the household, yet many women are far more careful and frugal than their husbands. It could hardly be a very agreeable feeling for a man to be dependent on his wife. But it is no less galling for the wife to be so dependent that she has not a penny of her own,and it is quite as hard for the wife to beg for money as it is for the husband. The right way—the only way—for perfect harmony is to carry out the principles of the ideal home, such as one of our correspondents suggests.

WHAT THE SCHOOL-MA'AM THINKS ABOUT THE FAMILY POCKET-BOOK.

BY the family pocket-book we may understand two different things. It may be taken literally to mean the purse in which the household money is kept; or it may mean the part of the income that is to be spent for domestic purposes.

As to the first meaning: In a good many houses it is customary to have a purse kept in a convenient drawer or closet, in which the amount to be used for household purposes is put at stated times; and any member of the family is at liberty to go to this purse whenever he or she wants to buy anything for use in the house. This plan has its advantages in some ways; as, for instance, in saving the time and trouble of going to find mother when you want to go to "the store" in a hurry. But I think there are objections to this plan, which must be obvious to the systematic and careful housewife, and I still cling to the old notion of going to ask the mother for money when needed for the house.

Treating the subject from the other point of view really embraces the whole of domestic finance; and of this vast subject I shall treat only of the principal points. A subject that has received a good deal of attention with some people is: "Who is to keep the money—the husband or the wife?" Of course, no set rule will answer for all people, and every family must be judge of its own case; but, as a general rule, it seems only just and fair for the husband to take care of the money. When a woman marries, it is supposed that she has confidence in her husband in all ways, (if she hasn't she had better not marry), and it does not show much confidence if she is afraid to let him keep the money. Just think of the case of the man who gives over (because he *has* to) all his earnings to his wife, and has to ask her for every cent he spends! I have known such a case. Imagine him going meekly to his wife and saying:

"Mary, my dear, can you spare me two dollars? I would like to take you to a concert to-night." I think Mary would not be taken to concerts very often. The wife should have a certain share of each month's wages—as much as is needed to cover all her expenses nicely (and as much more as her husband's income and generosity will allow), and all the rest should be left in the man's care. It is often a good plan for the two to run a friendly race, to see which is able to save most in proportion, out of their week's or month's account.

If you are not able to save something—if it is only a dollar a week—to put aside, ready for the hard times that are almost sure to come at some time in your life, you are working backwards, no matter how large an income you receive. Bear in mind, my friends, that an article is not always cheap because it costs little. It is more economical to pay two dollars for something that will wear two years than to pay one dollar for an article that will not wear a year. True economy is not always shown by spending the least amount of money. Lastly, no one person can do all the saving for the family. Each one must do his and her share if success is to be attained. PANDANUS.

WHAT A MAN THINKS ABOUT DOMESTIC FINANCES.

J. H. G.

IN a family where the true "Spirit of the Home" has been materialized, where the spirit of Christ predominates, there is no trouble about finances; that is, in so far as the different members of the family are related to each other in money matters is concerned. It is only in families where the Spirit of Evil—the essence of selfishness—prevails, that money matters become a cause of quarrels and consequent unhappiness. In the ideal home no system of book-keeping is necessary, except to ascertain the amount of the necessary family expenses. In such a home the mother and daughters are full partners with the husband and sons. It is not a question of individual income or expenditures, but of united income and general expenses. When the daughter goes to town to do the shopping, her chief trouble is, not what she shall get for herself, but what she shall get for "mother" or sister or her little brother. It is a source of annoyance that "mother's" wants are so few and simple. If she has any needs she will not tell of them until all the other members of the family are provided for. While it is true that Christ appeared in the form of a man, his closest imitators have always been women—mothers.

In the ideal home the question of finaces is one that settles itself; it just drops into a groove and runs without a jar or friction. It is simply a question of who best can work and best serve. Such things as a regular "allowance," individual cash books or any other method of calculating individual expenses is entirely unnecessary. In fact I think the keeping of individual accounts is conducive to parsimony, selfishness and jealousy. It is said that the best way to make children deserving of suspicion is to suspect them; certainly the best way to make children miserly or extravagant is to keep the subject of money constantly before them. Fortunately the happiness of the family does not depend altogether upon money—the higher form of happiness depends upon love, sacrifice and unselfishness: in by far too many cases the love of money crushes out all these higher emotions.

It has been my good fortune to be intimately related only to those in whom I have had unbounded confidence. It is very seldom my children ask me for money, and as a rule they refuse it when offered to them. In the family we are all anxious to increase the family income and limit the expenses. The eggs from the little Bantam hen are a part of the income of the family as well as my own salary; the stick of candy is a part of the family expenses as well as the coal bill or the taxes. Only those things which are deemed necessary are purchased and no record is kept either of income or expenses. Happy is the individual—and thrice happy are the members of the family—who can truly and devoutly say from the bottom of his heart—in money matters as in other things—"The Lord gave;

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

the Lord hath taken away; blessed be the name of the Lord."

BOTH EARNING AND SPENDING.

THERE are so many ways for money to go that it is not only pleasant, but it also helps a great deal for the wives and children to earn a little pin-money by some employment that is their own particular care. Among the justly popular industries for this purpose is the raising of poultry and eggs for market. If one has a large inclosure and a pond for ducks and geese, they pay well and eat no more than chickens according to their size. They can be raised in a pen and swim in a pan, but in that case they are terrors so far as eating is concerned, as foraging, when they can indulge in it, supplies nearly one-half of what they need; but they are unmitigated nuisances if allowed to run at large.

Keeping bees is both profitable and agreeable to many. The expenses are small and a woman can do all or nearly all the work, and without doubt the "guid mon" would lend a helping hand when needed without any expectation of reward except all the honey he wanted to eat at the table.

In some localities it is considered a considerable advantage to board the school-teacher; but with us doing so is rather a doubtful gain as the price ranges from $1 to $1. 50 per week.

In the summer there are generally dry goods, grocery and jewelry peddlers traveling about and it pays very well to keep them over-night or for a meal as it may happen. Generally they have regular days for their trips, and accommodating them causes but little extra work as one knows when to expect them. In the "good old times" many a woman dried $50 worth of apples in a season; but no one can do that now I suppose; still with a small stove evaporator some of the surplus berries, cherries, plums, pears or sweet corn could be dried, and these could be sold at a profit—you see I take it for granted that every farmer should raise all the berries he can use. Our pigs and sheep like apples so well that we are not tempted to use our surplus of that kind of fruit in any way, except as feed. If a man cares for and milks the cows and a woman makes the butter it seems to me it is only fair that the proceeds should be divided. The pet lambs disowned by their mothers and the lame pigs that have been raised by women are so much saved as well as earned. Many a wife feeds a calf through the summer and sells it in the fall; but here it is not profitable as a four-week's-old veal will sell for as much again in the spring as if it were kept till the fall. There are many other equally profitable employments; but those mentioned are possible to any farmer's wife, while most of the others could be profitable or practicable only in exceptional cases.

Generally speaking, I do not believe in allowances. Husband and wife should represent a partnership, and as each is working for the same purpose, each should have an equal right to the money earned; and a prudent wife is as much instrumental in keeping expenses within bounds as is her husband, and many times a great deal more. There are a very, very, few women who want to buy everything they see, and who will run in debt for it if they do not have the money. The only way to check this extravagance seems to be by providing them with an allowance that must not be exceeded. It is sometimes thought necessary to adopt the same method in household expenses; as it has been very truthfully said: "A wife can throw out with a tea-spoon all her husband can bring in with a shovel." But, thank goodness! such women are the exceptions, and very rare ones I believe, as nearly all women are glad to prove helps instead of hindrances. If a person weighs well the need of an article before buying it, there is little danger of extravagance, and in many pleasant, bright homes the practice of economy, not stinginess, is a necessity.

Many people think it desirable that children should be taught the value of money by giving them an allowance, but it is better to let them earn pin-money by doing some little tasks they can perform, and then they will learn the value of money by experience. There is no other true way to teach it to them, and surely no better one. It is a mistake to allow children to grow up without any cares; the hard work of after life will be so much lighter if father and mother give them little duties to attend to, and make the latter as attractive as possible. No other class of people have the opportunities to benefit their children by amusement and instruction that farmers possess.

H. BELLE CHAPMAN.

A LETTER FROM AUNT HETTY.

I WISH to relate my experience concerning money matters during my married life. I am an old woman now, but in my married life there has been one bright pleasure that few have enjoyed, and that has been due to the fact that I have never had to ask for money. In saying this, I feel that I have the envy of all, or nearly all, my lady readers. When my husband took on him the marriage vows, it meant to him that he had married a wife, and not purchased a slave. He looked upon her in the light of his helpmate, and his partner for life, and treated her as such. He told me all of his affairs and plans, thus showing me that he thought I was worthy of trust and confidence and, in return, I confided fully in him. He kept an account of every penny earned and spent, and I also kept a record of the money I spent. At the end of every week, we carefully looked over our accounts, and then he'd replenish my treasury according to our financial circumstances, and as the family increased, and our income too, he gave me more. How much we did enjoy looking over our accounts! He thought it was an excellent plan to keep them, for then we knew where every penny was spent, and what we could afford. It is very galling to a woman to have to ask for every cent, even if it is given pleasantly; but when it comes to complaining, scolding, and putting her off with less than is needed, it makes a woman feel worse than a slave. A woman works as hard in her sphere as the man does in his, and sometimes harder, and yet, as a rule, she has to ask for every penny, and when the husband dies, is entitled to the use of only one-third of his real estate, and now I see some legislators in New York State are trying to take even that away. Truly this is a cruel world.

AUNT HETTY.

ONE WIFE'S EXPERIENCE.

WHEN I hear domestic finances spoken of, I always think of what a lady told me of her experience when first married. When a child she had been used to having a little money that she called her own, and though it was but little, she felt very happy in its possession. Then she married at 16, and her husband having good business talents they soon acquired a good start in the world and every one pointed her out as a lucky woman. She had a pleasant home, a good husband, bright children and apparently everything that a reasonable woman could expect. But, although her helpmate was willing that she should have whatever she wanted, he deemed it a wise plan to do the purchasing himself, for at first she was young and inexperienced, and so he bought all her dresses, purchased all the household necessities and relieved her from the care of money in every way. Consequently, who can wonder that she suffered intense mortification when various little calls upon her purse found not one cent in it, and how gladly she would have sank from sight when little incidents would repeatedly come up to reveal the true state of affairs.

Whenever she went away from home for a fortnight's visit, her husband dutifully went to the depot and bought her a return ticket and sent her out into the world without a cent with which to help meet any contingency liable to make demands on her purse any day.

What chance had that woman in her life? What possible chance for her if her husband should die? He would leave her as unfitted to cope with business as an infant, thereby forcing upon her a double misfortune—years of torture from not being allowed an opportunity to gain experience, and an extreme helplessness should the entire management of the business be suddenly thrust upon her.

Let a man make his wife an equal partner and initiate her into the secrets of the business, and she will be ever ready to be a helpmate in preference to being a nonentity.

S. J. L.

MUTUAL RIGHTS.

SOME God-fearing women as well as men, suppose that a wife has no more right to take money from her husband's purse than she has to take it from any other person's. But Abigail was not denounced for taking of her husband's property—a large store too—even after he had declared that it should not be done, and sending it to David. In her wisdom, she foresaw that even *her husband's interests*, as well as the safety of them all, would be promoted by the outlay of the means he was too sordid to use. She was blessed for it; her act was their salvation. Indeed I have known no continued happiness or prosperity to attend cases where the husband held a tight grip on both ends of the family purse. But I fail to recall a single instance in which both parties conferred together about the outlay of their money, while each felt free to use it, where either had reason to regret it.

MARY L. WORTHEN.

GOLDEN GRAINS.

GOETHE said: If you have any faith, give me, for Heaven's sake, a share of it! Your doubts you may keep to yourself, for I have a plenty of my own.....

VIRTUE dwells at the head of a river, to which we cannot get but by rowing against the stream.....

WE cannot be reminded too often of the fact that brevity is the soul of wit, and tediousness the limbs and outward flourishes.....

HENRY THOREAU, being urged once to prepare some of his feathered birds for the museum, replied: "My field glass brings them nearer to me than a gun can."....

JOHN G. WHITTIER says that it is creditable to human nature and its unperverted instincts that stories and anecdotes of reciprocal kindness and affection between men and animals are always listened to with interest and approval.....

IN the Scarlet Letter we find this sentence: "It contributes greatly towards a man's moral and intellectual health to be brought into habits of companionship with individuals unlike himself, who care little for his pursuits, and whose sphere and abilities he must go out of himself to appreciate."....

NO ACTION, whether foul or fair,
Is ever done but it leaves somewhere
A record, written by fingers ghostly
As a blessing or a curse, and mostly
In the greater weakness or greater strength
Of the acts which follow it.
—*Longfellow.*

THE BISHOP OF MINNESOTA says that we stand where two ways meet. We shall take care of the people or the people will take care of us. The people are the rulers; the power of the future is in their hands. Limit the horizon to this life; let penury, sickness and sorrow change the man to a wolf; let him know no God and Father who hears his cry, no Saviour to help, no brother to bind up his wounds; let there be on the one side health and luxury and wanton waste, and on the other side poverty, misery and despair, there will be, as there has been, a cry for blood.....

MR. SPURGEON has a poor opinion of the Christianity of Great Britain. In a recent sermon he exclaimed, "Ah me, this is a miserable age! Go with a lancet throughout these isles and you could not get enough martyr blood to fill a thimble. Backbones are scarce and grit is a rare article."....

AS DELICATE a charity as I remember says a writer in the Chicago American was the act of a gruff, taciturn old physician in a Colorado mining town. A poor, aged parson was carefully attended by the irritable doctor. When the preacher had sufficiently recovered to dispense with further medical attention he asked for his bill. "Your bill? Here it is," said the doctor, opening his pocketbook and handing the minister's wife a ten-dollar bill.

Miscellaneous Advertising.

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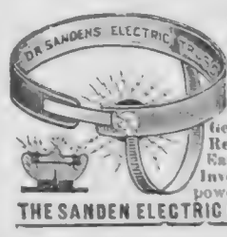

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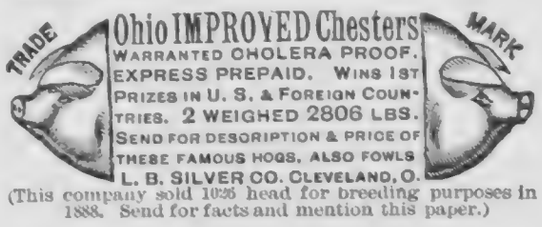

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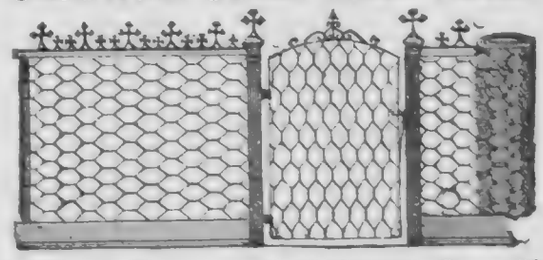


Best Fences and Gates for all purposes. Free Catalogue giving full particulars and prices. Ask Hardware Dealers, or address, mentioning this paper, SEDGWICK BROS. Richmond, Ind.

PEERLESS DYES Are the BEST. SOLD BY DRUGGISTS.

News of the Week.

HOME NEWS.

SATURDAY, May 11, 1889.

Old readers of the RURAL NEW-YORKER will recall the name of James A. Whitney. Twenty-odd years ago, before he became immersed in the profession of the law he was a standard authority on scientific farming in the American Institute Farmers' Club. He was bred a farmer and brought practical knowledge to the interpretation of science as applied to agriculture. In those days he was a frequent contributor to the RURAL. It was in the Farmers' Club, in 1870, on his return from a tour in California, that he first took strong ground against Chinese immigration, his views being subsequently formulated in his noted work on the Chinese and the Chinese Question, of which a second edition has just appeared. During the past few weeks his name has been prominently brought forward in connection with the United States Mission to China. We have known Mr. Whitney for a good many years and we believe that if he is appointed he will do honor to the position..... Out at Duluth the employees of a broom factory struck for higher wages the other day, whereupon the proprietor advanced the wages of the married, hands, and told the single ones that unless they were married within a month they would be discharged, whereas if they married their wages would be raised. Minnesota is bound to increase her population .....A bill legalizing the sale of pools on racing and trotting tracks in that State has been defeated by the Pennsylvannia legislature .....A colony of Belgians with a capital of $600,000 propose to settle in the province of Quebec.....The Massachusetts legislature has passed a bill providing that safe deposit, loan and trust companies doing business in that State, shall not invest in farm mortgages on land outside of New England and New York. The measure is directed principally against investments in Western farm mortgages which are considered too risky for the security of investors and depositors in such companies..... There appears to have been much exaggeration about the influx into Oklahoma, and the murders and lawlessness at the outset. Gen. Merritt, commanding the United States troops there, says the inrush was much smaller than reported, while it is hard to find a well authenticated shooting case. Many of the settlers are leaving in deep disgust at the character of the country in general, and their own ill-luck in getting fair locations. Town lots in Guthrie and other "cities" that sold readily for $100 each the first night, can now be readily got for $10. Provisions are abundant for those who have money; but pretty scarce, of course, for others. Gen. Merritt warns all immigrants not to attempt to settle in the Cherokee Strip and he has ordered a record to be made of all squatters so that they will not be allowed to make entries there when the territory is thrown open to settlement. Nearly all the people in the settlement in towns and country alike, still dwell in tents or covered wagons. Gambling appears to be the most profitable business in the towns; but the newly elected Mayor of Guthrie has notified gamblers to "go." The country is "settling down" fast. Plowing is going on on all sides, and great hopes are entertained of a marvelous harvest. Government inspectors are investigating the titles of land-owners with a view to canceling all fraudulent entries..... High license is to reduce the number of Boston "drinkeries" from over 2,000 to 780. The aggregate loss of those who have been refused licenses is estimated at $5,000,000 in fixtures and income..... The 28th International Convention of the Young Men's Christian Association was held in Philadelphia from May 8th to 12th inclusive.....High license came into force in Michigan May 1. Annual fee henceforth for selling spirits $600; for selling beer $500; brewers, wholesalers and distillers from $250 to $1,000. Druggists are stringently ruled in selling liquors..

Gabriel Dumont, Riel's chief lieutenant in the late half-breed rebellion in the Canadian Northwest, has been causing considerable trouble there since his late return from Dakota. He insists that the Dominion Government should pay for the damages during the rebellion, and another uprising of half-breeds and French-Canadians is not very improbable. .....In Lower Canada the breach between the English and French-Canadians is widening. Lately the province of Quebec voted $400,000 to compensate the Jesuits, in part, for property belonging to the order confiscated by the English when they took the country from the French. This excited the bitterest sort of opposition from Protestants not only in Quebec but in nearly all the other provinces, especially Ontario. An effort was made to induce the Dominion Government to exercise its prerogative of vetoing or "disallowing" the measure, but Sir John Macdonald refused to interfere. The animosity to which the thing gave rise or rather intensified still continues and is likely to become further imbittered by numerous differences in creeds, sympathies, aspirations, characteristics, methods and interests..... Tuesday last a tornado destroyed nearly all the town of Stafford, Kansas, killing three and injuring 30. The people saw it coming and most of them found safety in their cyclone cellars. Crops, farm houses and barns were swept away on a clearly defined northerly swath through Stafford and Rice counties.....Same day a tornado did a great deal of damage about Fargo, Dakota, and a "terrible wind storm" did ditto about St. Cloud, Minnesota.....The Johns Hopkins Hospital, consisting of 17 buildings and 1,200 feet of connecting corridors, and costing $2,050,000, was opened in Baltimore last Tuesday. It has 14½ acres of grounds and is the largest, most richly endowed and completely equipped hospital in the world. Instead of anything having been taken from the original endowment made 15 years ago, for building the Institution, $113,000 have been added to it, all the money having come from judicious investments of the principal. Quaker Johns Hopkins also gave Baltimore the splendid university which bears his name..... Frank W. Palmer, of Chicago, has been appointed Public Printer at Washington. Theodore Roosevelt, of New York, and ex-Assistant Secretary of the Treasury, Hugh S. Thompson, of South Carolina, have been appointed Civil Service Examiners. Both are strong supporters of the law.....Eight ailantus trees planted by Andrew Jackson in the grounds of the White House, and which have for years been a nuisance to the inmates owing to the malodorous character of their flowers, were cut down and cleared out the other day by order of President Harrison..... .....Arthur L. Thomas has been appointed governor of Utah..... The old Libby Prison having been bought by a speculative syndicate, is being transported from Richmond to Chicago on freight trains, the idea being to rebuild it in the Windy City just as it stood as a tobacco ware-house on its old site, and to make a pile by charging a "popular price" for admission to it as a show place. Tuesday a train loaded with parts of it was wrecked seven miles east of Nashville. Tenn., and the fragments were scattered in all directions. As many bricks and other fragments were secured as mementoes, it can never be rebuilt entirely the same as of old. Many object to the proposed perpetuation of this war memento.....Forest fires have done a world of damage to the woods and isolated farms, during the week, about Duluth, Minn; Wausau, Wis; and Ishpeming and East Tawas, Mich. and in a great many other places in the Northwest..... Near Cynthiana, Ky., Tuesday, $50,000 worth of horses were consumed by the burning of Captain Moore's stables.....A large number of Union Generals have been locating the lines of the various commands in the battle of Chickamauga, Tenn., on Sept. 19 and 20, 1863, with a view to securing the field for a national park, comprising about 12 square miles..... Large crowds of settlers in tents and "prairie schooners" are collecting along the Upper Missouri in the neighborhood of the Sioux Reservation in the expectation that 11,000,000 acres of it will soon be thrown open to settlement. Commissioners have for several years been hard at work to secure an agreement to that end between the government and Indians, and have almost completed their labor. The Oklahoma rush is likely to be outdone..... The new Inman Line steamship City of Paris has beaten all records in crossing the Atlantic from Queenstown to New York, having arrived at Sandy Hook at 8.15 A. M. Wednesday, after a voyage occupying exactly five days, 23 hours and seven minutes. On the fourth day out she traveled 511 miles—the longest day's run ever made. The Cunard Line steamship Etruria had made the fastest trip ever previously made across the Atlantic—in six days, one hour and 55 minutes. The City of Paris's time is therefore two hours and 43 minutes faster.....A switch engine on the Michigan Central Railroad last Wednesday evening demolished a street car crossing the track, and killed six women..... The Illinois Steel Company, is the name of a new combine, embracing the three largest steel manufacturing interests in Illinois, with a capital stock of $25,000,000, $18,000,000 of which have been paid in, chiefly in the form of buildings, machinery, etc., etc. The "plant" includes various mills in South Chicago, Joliet and Milwaukee, and mines in Dodge County, Wisconsin.....

A Proxy.

In our more exacting moods, when anything is presented for personal investigation we seem to expect our neighbors to try it first; and are willing to trust to the effect the trial has upon them. Gaining experience by proxy, this is, safe and selfish, but it often answers.

Since you demand a proxy, observe please, the subjoined testimony of a neighbor in regard to Drs. Starkey & Palen's treatment by inhalation.

NEWPORT, R. I., Jan. 23, 1888.

"I hardly dare tell you how wonderfully I have been blessed this fall and winter thus far, and how much I have been enabled to perform through God's blessing, attending the use of Compound Oxygen. I surprise myself almost every day in the amount of labor to perform in comparison to last summer; it seems almost a miracle to me. I have exceeded all my hopes of one year ago. I remain your grateful patient," MRS. LYDIA B. CHACE.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, May 11, 1889.

IN England the Parnell trial still excites most public interest. After the suicide of Pigott who confessed that he had forged the incriminating "Parnell letters" on which the trial was based, and that he had sold them as genuine to the outrageously credulous Times, it was thought that the affair must soon collapse; but the government and the paper had too much at stake to allow the matter to drop until all means should be tried to break the force of the exposure of their vindictiveness and credulity. Parnell has been on the witness stand during a part of this week and last, and with imperturbable coolness denied nearly all the charges made by the witnesses on the other side, and palliated the rest. The impression made by him on the public is quite good. The bye-elections have all along been, almost without exception, in favor of the Gladstonians.....This is an era of strikes in England as well as in most of the continental countries, especially in Germany, where as in France, a number of fatal collisions have occurred between the military and turbulent strikers at various labor centers. There, as here, and with much more reason, workingmen are disposed to insist on obtaining a greater share of the profits of their own labor. .....All the English dock-yards are working as hard as possible in making additions to Great Britain's already enormous naval forces. The country's ambition is to have a fleet as strong as the combined fleets of the rest of Europe; but as France, Germany, Russia and Italy, to say nothing of weaker powers, are also hard at work adding to their fleets, it is more than doubtful whether this can be done.....

AGRICULTURAL NEWS.

SATURDAY, May 11, 1889.

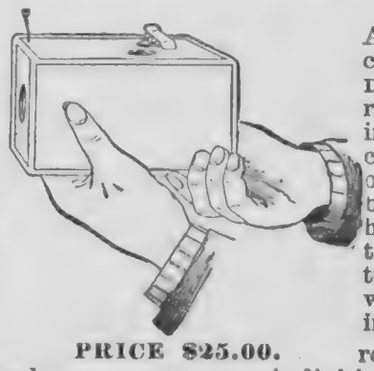
The auction sale of trotters at the American Institute building in this city, last week, was not a great success. The attendance was very small, and the prices obtained, low. The highest price paid was $200 for the bay gelding, Lawrence, and the lowest $165 for Lizzie King.....At the meeting in Chicago of the National Trotting Board of Review, the order was entered that judges have no power to modify or change rulings made during the progress of a race, later than the day upon which the result of the race was announced ... .On the farm of George J. Smith, in Princess Anne county, Virginia, during the gale of April 7, four acres of land began to sink, and are now covered with a lake of water five feet deep... D. La Scala, a fruit commission merchant of this city, has brought suit agaist L. M. Lyon of the Buyers' Union for $50,000 damages, and against eight other members for $5,000 each for alleged libelous statements regarding his manner of doing business..... Hard frosts were reported from eastern Pennsylvania the first days of May, and much damage is feared to fruit, as the trees were all in bloom..... ..Memphis, Tennessee is the largest interior cotton receiving city in the world, and is only exceeded in the amount of cotton handled by New Orleans. Up to May 4, there had been received at Memphis, since September 1, 700,201 bales, being 36,923 bales more than in any preceding year.....A Swiss workman has invented a method of making artificial boards that promises to become a success. The boards are made of a mixture of plaster-of-Paris and reeds pressed into shape by hydraulic process..... ..... A Buda Pesth inventor has devised a machine for felling trees. Electricity is used as a power. The machine does not work a saw, but a drill of peculiar construction which perforates the base of the tree with a series of holes. The axe is used only to finish the work ..... The Missouri Cattle Inspection bill applies only to places of 5,000 inhabitants and over. Those living in smaller towns may eat Chicago dressed meat even if it kills 'em..... ... A bill now before the Missouri legislature makes it illegal to sell grain or other produce for future delivery unless the sellers actually possess the goods at the time of sale. This would put a stop to all sales of "options" or dealings in "futures" and the St. Louis grain dealers and speculators say that if it passes, they will build an Exchange across the river in East St. Louis, in Illinois, and altogether abandon business in the Mound City. There's also a prospect of a Grain Elevator Trust in St. Louis, but it is thought likely that the legislature may interfere with the project..... The Governor of California has vetoed the appropriation of $10,000 made by the legislature for silk culture, on the ground that California cannot compete in that industry with China or Japan..... Two dairy shows will be held in connection with the forthcoming exhibition in Paris One is fixed to take place from the 4, to the 19 of May, and the other from the 13 to the 18 of September. Exhibitors will be obliged to take part in both.....It is proposed by the Government of Victoria, Australia, to establish several model dairy farms, and to fit them up with the most approved appliances. Pupils will be received at the farms and instructed in scientific dairying ..... Dr Salmon has issued from the Department of Agriculture a pamphlet giving a review of his five years' work in investigating the disease known as hog cholera. It is a big pamphlet containing little that is new and almost nothing that is in any way conclusive..... The New York Experiment Station concludes that there is a loss of butter when milk is allowed to cool much below the normal heat of the cow before going into the creamer. It also concludes that quality of butter is not injured by heating milk as high as 135 degrees. .....The Ohio Station has just issued a timely bulletin on injurious insects and how to kill them.....Prof. Sanborn, of the Missouri Agricultural College, who has been having trouble with the Board of Curators of the University, presented his side of the controversy in the hall of the House of Representatives, a synopsis of which has been issued in pamphlet form.....A report comes to us all the way from Scotland, that four ewes belonging to a Mr. Scott of Kincardineshire, had just dropped 13 fine healthy lambs..... The American Jersey Cattle Club has just issued Vol. XXVIII. of its Herd Register. The number of bulls is carried from 20,001, to 21,000, and that of cows from 49,001 to 51,000. ..... A meeting of the Iowa Jersey Cattle Club is called at Davenport, Iowa, Wednesday, May 22..... Peter Henderson has been mentioned by several New Jersey papers for Governor of that State .. .. Chicago florists report a falling off in the Easter demand for Callas.....Tulips, also, are not in as brisk demand as formerly, in all the large cities. The flower for some reason seems to be losing its popularity..... Chicago receipts of live stock for April this year are 224.000 cattle, 361,000 hogs, 130,000 sheep, and 7,800 horses, against 182,015 cattle, 380,792 hogs, 110,455 sheep, and 5,159 horses for April, '88. The prices for the two years are about as follows:

	1888.	1889.
Texas Cattle.....	$4.00 to 4.37½	$3 95
Sheep, best.....	5.75	5.15
Hogs, heavy.....	5.35 to 5.55	4.65 to 4.85
Hogs, light.....	5.30 to 5.45	4.60 to 4.75

The Department of Agriculture reports the average condition of horses throughout the country as 98.4, a very high average..... Ex-President Cleveland's seal-brown horses, together with his carriages, harnesses, and stable paraphernalia, were sold at auction in Washington, May 6. The seal-browns which were said to have cost Mr. Cleveland between $600 and $700, sold for $141 each, and the other property sold at equally low prices..... The Florida Fruit Exchange met at Jacksonville, May 8, for the election of officers, and other business.....As Secretary Rusk was passing some laborers who were engaged mowing the first crop of grass in the grounds of the Department of Agriculture, he seized a scythe and gave them some "points," rapidly cutting a wide swath amid the plaudits of the crowd which had gathered.... .....It is said that 1,034,000,000 eggs were imported into England last year.....During 1887—88 England imported 1,300,000 tons of sugar. Of this amount, 372,000 tons were crude beet sugar, 315,000 refined beet sugar, and 581,000 cane sugar..... The Russian beet crop of last year produced 500,000 tons of crude beet sugar.....The suggestion has been made to make sugar barrels of the refuse bagasse of the Louisiana sugar factories.....An English breeder of Herdwick sheep claims that five out of every six they have killed have an extra rib. .....It is reported that one of the largest flouring mills in Canada has suspended operations owing to the high price of wheat..... For the week ending April 13; the number of foreign beef cattle sold in London was 2,005, of which 1,427 or more than two-thirds were from the United States. The receipts at other ports were also large..... .....The prices of flour for supplying the various Indian agencies are somewhat higher than last year, ranging from $1.73 to $4 23 per 100 pounds ..... The State Straw Wrapping Paper Manufacturers' Association recently in session at Albany, took measures to lessen the manufacture of straw wrapping paper..... Copious rains during the past few days have greatly benefited wheat and other crops all through the West, where they were beginning to be seriously affected by drought..... William M. King, of Ohio, chief of the seed division, Agricultural Department, has resigned, and A. T. Reeve, of Hampton, Iowa, has been appointed to fill the vacancy. The salary is $2,000..... .....W. W. Cooke, of Medicine Lodge, Kansas, has been appointed special agent of the Agricultural Department in charge of sorghum sugar experiments..... William Sims, of Topeka, has been appointed State agent for Kansas of the Agricultural Department.....The Michigan Experiment Station has issued a bulletin discussing potatoes, kale, squashes and tomatoes. The Alabama Station reports experiments with cotton, pigs and cattle.....Several of the stations are making comparative tests of the various appliances used in raising cream. Tests of the various churns will follow. The New Hampshire station started this movement.....15,000,000 bushels of wheat were on hand in Southern Russia, April 1, against 5,000,000 bushels last year..... A Georgia man has planted 45 acres of tomatoes this spring..... The consumption of peanuts is placed at 3,000,000 bushels per year.....A cargo of 27,000 bushels of South American flax seed has been received for a Chicago crusher ....England is now getting most of its ice from Norway to the injury of the American trade..... Three and one-half times as much corn were shipped from New Orleans during the month of April as during the same month last year.....

Miscellaneous Advertising.

The Kodak.



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ANYBODY can use the KODAK. The operation of making a picture consists simply of pressing a button. One hundred instantaneous pictures are made without reloading. No dark room or chemicals are necessary. A division of labor is offered, whereby all the work of finishing the pictures is done at the factory, where the camera can be sent to be reloaded. The operator need not learn anything about photography. He can "*press the button*"—*we do the rest.*

Send for copy of KODAK Primer, with sample photograph. Mention Rural New-Yorker

The Eastman Dry Plate and Film Co.

ROCHESTER, N. Y.

FOR A DISORDERED LIVER try BEECHAM'S PILLS.

Dr. WM. H. THOMPSON of the University of the City of New York says: "The symptoms of diseased kidneys will first appear in the extremely different organs of the body. Treat the kidneys and not the effects of kidney disease, by using Warner's Safe Cure.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, May 11, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	8 5-16	8 9-16	.....
Strict Ordinary	8¾	9	.....
Good Ordinary	9 11-16	9 15-16	.....
Strict Good Ordinary	10⅛	10⅜	.....
Low Middling	10⅝	10⅞	....
Strict Low Middling	10⅞	11⅛	.....
Middling	11 1-16	11 5-16	.....
Good Middling	11 9-16	11 13-16	....
Strict Good Middling	11 13-16	12 1-16	.....
Middling Fair	12¼	12⅜	....
Fair	12⅞	13⅛	....

STAINED.

Good Ordinary	8 8-16	Low Middling	9¾
Strict Good Ord	8 13-16	Middling	10 9-16

POULTRY--Chickens, spring, per lb, 16@22c.; LIVE Fowls, near-by, per lb, 11@11½c; fowls, Western, per lb 10½@—c roosters, per lb, 6½c; turkeys, per lb 10@11c; ducks, western, per pair, 60@0.90c; geese, western, per pair, $1 00@$1 25.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per lb, 15@16c; do do, common to fair, 10@14c; do, iced, dry picked, choice, 11@12c. Fowls, western, do, choice, 10½@11c; do, nearby, do do 13@13½c; Chicks and Fowls, mixed, 9@11c; do do do, scalded, 8@9c. Squabs, white, per doz, $3 00@$3 25 do, dark, do, $2 00@$2 25. Chickens, Philadelphia, dry picked, 22@25c, do Jersey, do, choice, 22@25c; do nearby, do, good 20@23c; do Western, do do, 18@22c; do do, iced, good to choice 16@18c. Ducks, nearby, choice, per lb, 18@20c; do do, good, 16@18; do Western, good, 12@18c. Geese, Western, good, 8@10c.

GAME.—Plover, per doz., $1 50@$2 00; Snipe, per doz. $1 75@$2 50.

HOPS.—State, new, best, 22@23c; do, prime, 19@21c; do, low grades, 13@16c; do do, 1887, 10@11 do do do California, common to prime, 13@19c; choice, 20@21c.

HAY AND STRAW.—Choice Timothy, 95@$1 00; do good do, 85@90c; do medium, 70@80c; shipping, 65@70c; do, Clover, mixed, 55@70c. Straw.—No. 1, rye, 75@80c; short do 55@65; oat, 40@50c.

BEANS.—Marrows, new, $1 75@$1 80; new mediums choice, $1 75@—; pea, $1 75@—; red kidney, $2 00@—; white kidneys, choice, 2 10@—; foreign, mediums, 1 85@1 55; California Lima, $2 75@$3 10; green peas, $1 15@—.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@—c, and farmers' grades at 6@6½c.
HICKORY NUTS quoted at $0 50@$1 00 per bushel.
Pecans, 6@8c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Bermuda, per bbl, $4 00@$7 00; Maine do. $1 50@$2 00; State do, $0 90@$1 50; Sweets do. $3 50@4 50; Cab., new, $1 50@$2 50; Florida, do, $2 50@$2 60; Peas, per crate, $0 50@$1 50; Squash, do, $0 50@$1 00; Beets, do. $1 25@$1 75; Asparagus, per doz., $0 50@$1 50; Tomatoes, per crate, $2 00@$4 00. ONIONS—Orange Co, red, per bbl., 40@60c; Conn. red, do, 50@$0 80. do, white, do $1 00@$1 50; do yellow. do, 60@75c; State, do do, 25@75c; Bermuda, do, per crate, 75c; Beans, string, do. 75c@$1 50; Cucumbers, per crate, $1 50@$3 00; Radishes, per bbl., 50c@$1 00.

FRUITS.—FRESH.—Apples, Baldwin, per bbl, $3 25@$3 00; Common, $0 75@$1 00; Russet, $2 50@$3 00. Spy, $3 50@5 00. Strawberries, per qt 5@35c; Cranberries—Jersey, fine, box, $1 00; do common, 50@75c. Oranges—Florida, best, box, $4 00@$5 50; do, good lots, $2 50@$3 50. Lemons, $2 75@$4 00.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5@6c; do new, common to prime, 3¾@4½c; sliced, new, 2¾@3¾c; quarters, 2½@3¼c; chopped, 1¼@1½c; cores and skins, 1@—c. Cherries, new, 13½@15c. Raspberries, new, 15@17½c. Blackberries, 4@4½c. Huckleberries, 10@—c. Peaches—Delaware, evaporated, peeled, 10@14c; do do, unpeeled, 5@6c; North Carolina sun-dried, peeled, 7@9c. plums, 5@6c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 13 00@13 25, short clear, $14 00@16 00. Extra Prime mess, $12 50@$— prime do, $12@—— and family mess, $13 25@14 00 BEEF—India Mess. in tierces, $13@13 50 Extra Mess, in barrels, $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $7 50@8 00; Family at $11—@$14. HAMS—$12 00@$13 00, Winter packing. CUT MEATS.—Quoted 12 lb average. Bellies, 6¼@—c; Pickled Hams, 11c; pickled Shoulders, 5½@5¾c; Smoked shoulders 6½c; do Hams, 11¼@11½c. Dressed Hogs.—City, heavy to light, 6½@6¾c. Pigs, 7c. LARD.—City steam $6 70; May, $7 28; June, $7 35; July, $7 31; August, $7 34; September, $7 38; South America, 8c.

BOSTON.—PROVISIONS firm and steady New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, PA.—PROVISIONS.—Potatoes quiet; Early Rose, 30@40c per bush.; Burbanks and White Stars, 23@33c; Hebron, choice, 32@35; New Potatoes, Florida, per bbl, $5 50@$6 50. Provisions were steady. BEEF.—City family, per bbl, $9 50@$10; do, packets, $9 50@10; smoked beef, 10@10½c; beef hams, $14 PORK.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@12c; do, S. P., cured in tierces, 9½@10¼c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6¼@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6¾@7.

CHICAGO.—MESS PORK.—$11 95@12 00 LARD.—$6 95@—per 100 lbs; Short Rib sides (loose), $6 10; dry salted shoulders, boxed, $5 25; short clear sides, boxed, $6 25.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 19@—; Elgin, best, 18½@19; Western, best 18@—; do prime, 17@—c; do good, 16@—c; do poor, 14@15c. State, Dairy, half-firkins, tubs, best, 18@18½c; do do prime, 17@—c; do do fine, 16@—c; Welsh tubs, fine, 17@—c; do do good, —@—; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 14@15; do fine, 12@13; Western dairy, fine, 13@14; do fair, 11@12c; do poor, 9@10c; do factory, fresh, best, 13@—c, do prime, 11@12c; do good, 10@—; do poor, 8@——c.

CHEESE.—State factory, fancy, 9¾@10c; do do, fine, —@——c; do do, prime, 9½@9¾; do do, fair to good 8½@9c; Ohio, flat, prime, —@—c; do good, —@—c; do, good, —@—; Skims, light, 2@5c; do medium, 6@8½; do full, 1@1¼c.

EGGS.—Near-by, fresh, 14½@——c; Canadian, 11@12c; Southern, 13½@13¾c; Western, best, 13¾@14c. Duck, 14@16c; Goose, 20@25c.

PHILADELPHIA.—BUTTER quiet. Pennsylvania creamery extra, at 27@—c; Western creamery, extra at 16½@17c, B. C. and N.Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were steady. Pennsylvania firsts 14½@15c; Western firsts, 14—@—c; Cheese dull—steady; demand fair; New York full cream, at 9@9¼c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

BOSTON.—Butter firm; Western extra Creamery, 24@25c; Eastern extra Creamery, 20@23c. Cheese dull. Eggs firm; Eastern extras, 14@15c; Michigan extras 14c; Western firsts at 13½@14c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally weak; Elgin creamery, 20@21c; choice Western, 21@22c. choice dairy, 16@18c; common to fair, 11@12c. Eggs weak at 12c.

CHEESE—State factory, September made, 12c; do do do, October, fancy, 11@11½c; do, fine, 11½@11¾c; do; fair and good, 10@10½c; Ohio, flat, prime, 11@11¼c; do, good, 9¾@10½c skims, light, 8¾@9¼c; do, medium, 6½@8½c; do, full, 2@2¾c.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, May 11, 1889.

BEEVES.—City dressed beef firm and in fair demand at 6¼@7½c. per lb, but very little is common enough to bring less than 6½c. Chicago dressed sold mainly at 6¼@7.

MILCH COWS.—About 75 head have been received thus far this week. Prices steady, with a moderate inquiry. Sales have been effected at $30 to $45 per head. and trash has sold as low as $25.

CALVES.—The market opened rather firm, especially for Prime Veals of 140 to 150 lbs. average; but a weaker feeling prevailed before the finish, and closing sales were at a reduction of ¼c. per lb. Buttermilks and Mixed Calves ranged in price from 3 to 4½c; and Veals sold at 4½@6c for medium to choice quality. Dressed Calves ruled firm for all desirable grades. Country Dressed Veals sold mainly at 5@8c, but inferior stock at lower figures in some cases. City dressed Veals were wanted at 6@9c, and Buttermilk Calves sold at 4@5c.

SHEEP AND LAMBS.—Clipped Sheep sold at $4 25@$4 85 per 100 lbs: Wooled do at $5 25@$5 90; Clipped Yearlings ar $4 55@$6 25. Spring Lambs were in active demand and higher. A carload of Kentucky sold at 10c. per lb; a deckload of Marylands at 9½@10c, and nearly 300 Jersey do at $4 50 @6 50 per head. Dressed Mutton at 7@8½c, with choice bringing 9c; Dressed Yearlings unchanged at 9@11c. Dressed Spring Lambs sold at $5@$8 per head, and by the lb. at 14@20c.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING MAY. 11, 1889.

T. P. R.—J. H. B.—H. T.—A. G. C.—L. C. S.—A W. B. J. B.—W. B. P.—O. T. B.—N. R.—C S. F.—O. E. F.—J. A. F.—J. L.—G. E. R.—M. C. D.—C. C.—H. F. S.—O. K. L.—E. G. F.—L. W. McE.—C. R. W.—P. R S.—J. M. W. A. P T.—S. M. R.—J. J.—G.—H. F. F.—H. P. H.—C. S. P.—W. H. S.—E. L. B.—J. R.—E. W. H.—C. R. & Sons.—A. S. E.—S. A. R.—T. D C.—P. H. J.—M. M.—E. S. G—W. R. S.—A. C. W.—W P. K.—E. T. D.—A. P E.—J. H. W.—R. W. G.—E. B. Z.—A. L. S—J. B. F.—C. A K.—M. B', thank you.—W. H.—A. E. D.—A. K. B. A. C. C. L—C. L. S.—S. H. K. W. McK.—T. A. W.—T—F. K. P.—W. H. E.—M. Bennit, thank you.—L. S. B.—E. S.—A, C. W., thank you.—T S.—S. L. B.—H. T. L., thanks.—J. P. K.—T. H. H.—S. B. H.—P. G.

Miscellaneous Advertising.

ROSES

FOR FORCING.

We have a Splendid Stock of strong Plants of

Bon Silene, Bride, Gontier, Mermet, Niphetos, Perle, Safrano

and other leading varieties which we will sell cheap to make room.

ELLWANGER & BARRY,

Mount Hope Nurseries, Rochester, N. Y.

GROWERS AND DEALERS IN SWEET CORN, ATTENTION! Genuine Connecticut grown Stowell's Evergreen Sweet Corn by express, $2.25 per bushel, $1.25 per half-bushel, 75c. peck
C. E. CHAPMAN, Westbrook, Conn.

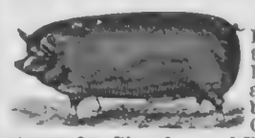
SEEDS.

Clover, Timothy and Alsike.

Write to S. S. READ, Toledo, Ohio, for prices.

NEW JAPANESE BUCKWHEAT (True) immense yielder.
Price, $1.50 Per Bushel.
H. TONG, Box 220, Erie, Pa.

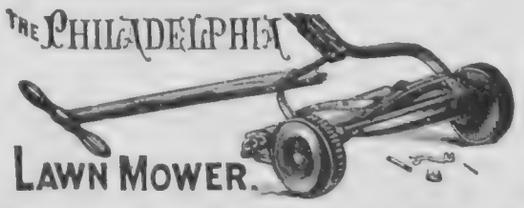
INFORMATION WANTED on how to build for cold storage of fruit, &c. Will party of experience drop card for correspondence.
Box 85, Lakewood, N. J.



Chester White, Berkshire and Poland China Pigs, Fine Setter Dogs, Scotch Collies, Fox Hounds and Beagles, Sheep and Poultry, bred and for sale by W. GIBBONS & CO., West Chester, Chester Co., Pa. Send stamp for Circular and Price List.

WILLIAM ROBERTS, M. D. F. R. C. P., of the University of London, Eng., says: "Passive congestion of the kidneys may be present, in which the urine contains not a trace of albumen, while the symptoms of intense venous congestion, dropsy, orthopœna and pulsating jugulars are present. The urine becomes scanty, high-colored and dense." Warner's Safe Cure, has cured thousands of these symptoms, often called diseases, by putting the kidneys in a healthy condition.

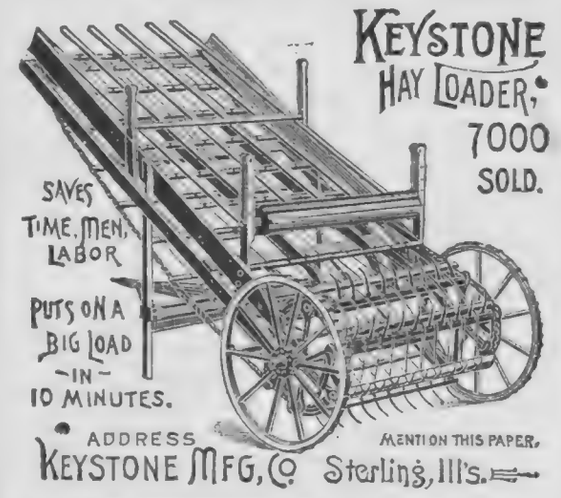
GENUINE PHILADELPHIA.
1889.
PRICES REDUCED!



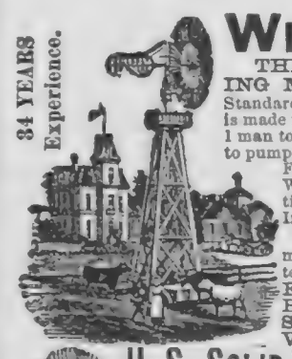
Fourteen Sizes and Styles for Hand Use, Weighing from 21 to 51 lbs. THREE SIZES FOR HORSE POWER. Lawn Sweepers, Grass Edgers, &c.
GRAHAM, EMLEN & PASSMORE,
Patentees and Manufacturers,
631 Market Street, Philadelphia, Penn'a.

The Symmes Patent Hay & Grain Cap,

Made of WOOD PULP; thoroughly WATERPROOFED-Cheap and durable—half the price of canvas. One hundred will cover six to eight tons of hay. Not necessay to fasten down. Will send half a dozen or more as samples, for thirty-seven and a half cents each, here, SYMMES HAY CAP CO., Concord, N. H.



RED CAPS, 13 Eggs, $2.50; 26, $4. B. and W. Minorcas, $1.50; W. and L. Wyandottes, W. and B. P Rocks, Langshans & Houdans. $1. 12 B. Turkey E., $3
A. LEIDA, Delaware, N. J.



WIND MILLS

THE HALLADAY PUMPING MILL is acknowledged the Standard Wind Mill of the World and is made in 18 sizes, 8 to 60 ft. diameter, 1 man to 40 horse power. It is adapted to pumping water for Stock and Dairy Farms, Ornamental and Village Water Supply and Fire Protection, Railway Water Stations, Irrigation, Drainage, etc.

THE HALLADAY is made upon honor and guaranteed THE MOST POWERFUL, DURABLE and BEST REGULATED, STORM DEFYING Wind Mill Made.

U. S. SOLID WHEEL WIND MILL

7 sizes, 10 to 22 feet diameter. Not cheaply made but heavy and strong in construction. These Mills are taking the lead of all Solid Wheels on the market, and are guaranteed the Best of their class.

PUMPS

We make a very complete line of WIND MILL, HAND AND POWER PUMPS. IRON, BRASS AND BRASS LINED CYLINDERS. Our 3 Way Force Pumps have no equal.

TANKS We make the largest assortment of Tanks on the market, consisting of Round, Half-Round and Square Stock Tanks, Milk Cooling Tanks, Storage and House Tanks Special sizes made to order.

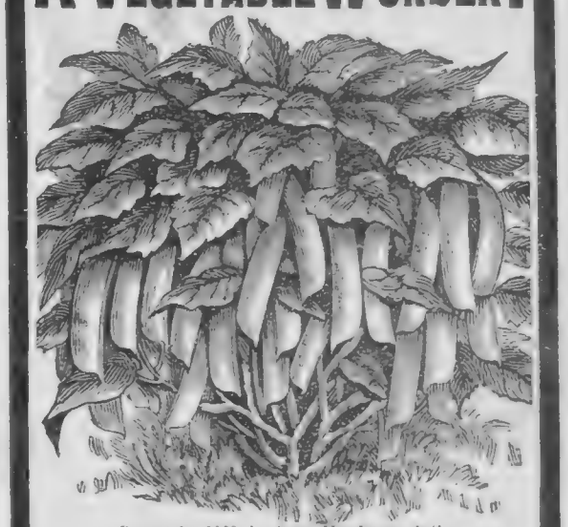
STANDARD HAY TOOLS

For stacking out in fields and mowing away in barns. The use of a good Hay Carrier and Fork a few hours before a storm, may save many times their cost. We make the most complete line of Horse Hay Tools on the market, consisting of Anti-Friction, Swivel, Reversible and Rod Hay Carriers, Harpoon and Grapple Hay Forks, Pulleys, Floor Hooks, etc.

We also make the HALLADAY STANDARD GEARED WIND MILL, in 11 sizes, 1¼ to 40-horse power, Corn Shellers, Horse Powers and Jacks, Stalk Cutters, Feed Grinders, Saw Tables, Tank Heaters, &c. All goods guaranteed. Send for Catalogue and Prices. Reliable Agents Wanted in all unassigned Territory.

U. S. WIND ENGINE & PUMP CO.
BATAVIA, ILLINOIS, U. S. A.
BRANCH HOUSES:—Kansas City, Mo., Omaha, Neb., Fort Worth, Tex., Boston, Mass.

A VEGETABLE WONDER!



Copyright, 1888, by Peter Henderson & Co.

HENDERSON'S NEW

BUSH LIMA BEAN.

Can and Should be Grown in every Garden on the Continent.

Of all the *Novelties* in *Garden Products* ever sent out, there is nothing so entirely distinct and valuable as this *New Vegetable*. The old Lima Bean can only be grown on poles, while the *NEW BUSH LIMA* grows and is cultivated exactly like the common bush or snap bean (growing only 18 inches high), and from the time of its bearing in July, produces in abundance delicious Lima Beans throughout the entire season until frost. It has, besides, an additional value, in that it is *two weeks earlier* than any other Lima Bean, being fit for the table in from forty to fifty days from time of planting.

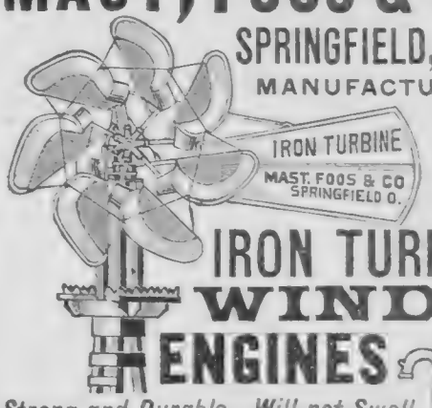
Price (by mail) 25 cents per packet, 5 packets for $1.00, 12 packets for $2.00 (12 packets sufficient for an ordinary-sized family for the season). Directions for growing on each packet. Remittances can be sent either by Post Office Order, Postal Note or Stamps.

$100.00 in Cash Prizes for single plants bearing greatest number of pods. For conditions see Manual offered below.

Every purchaser of *Henderson's Bush Lima Bean* will be sent, *without charge*, our MANUAL OF EVERYTHING FOR THE GARDEN, a book of 140 pages, size, 9 x 11, containing 3 colored plates (the price of which is 25 cents), *on the distinct understanding*, however, that those ordering will say in what paper they saw this advertisement.

PETER HENDERSON & CO
35 & 37 Cortlandt Street, New York.

MAST, FOOS & CO.
SPRINGFIELD, OHIO.
MANUFACTURERS



OF THE
IRON TURBINE
WIND ENGINES

Strong and Durable. Will not Swell, Shrink, Warp or Rattle in the Wind

BUCKEYE FORCE PUMP

A CHILD CAN USE THEM.

Works easy, and throws a constant stream. Has Porcelain Lined and Brass Cylinders. Is easily set. Is the Cheapest and Best Force Pump in the World for Deep or Shallow Wells. Never freezes in winter. Also manufacturers of the BUCKEYE LAWN MOWERS, Buckeye Wrought Iron FENCING, Cresting, etc. Write for Circulars and Prices.

INSECTS NAMED by Eberhart's Key. Only one published. Arranged like a key to plants. Illustrated, 25c. How to Collect and Mount Insects (illustrated), 8 cents.
POPULAR PUB. CO., Chicago, Illinois.

PILES, Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository. Sufferers will learn of a simple remedy FREE by addressing
TUTTLE & Co., 78 Nassau Street, New York City

"I INCREASE." TRADE MARK

Lister's
AGRICULTURAL CHEMICAL WORKS,
—MANUFACTURERS OF—
ANIMALL BONE FERTILIZERS
Factory: Newark, N. J.
Office: 201 & 203 O, Donnell's Wharf, Baltimore, Md.

BREED'S UNIVERSAL WEEDER and CULTIVATOR

For Weeding and Cultivating all hoed crops. For putting in Grain and Grass and Hungarian or Millet it has no equal. Every farmer should inquire into its merits. Ex-Gov. ROBIE, Master Me. State Grange, writes: "It should be owned by every farmer in the country." Send postal card for circulars and testimonials. All parties in Middle States should address BROWN MFG. CO., 40 DEY ST., NEW YORK. All others UNIVERSAL WEEDER CO., North Weare, Hillsboro Co. N. H.

Literary.

OUR FIRST FARMERS' INSTITUTE.

BY WM. ROSS.

CHAPTER VI.

THE institute boom was now well up, and there was nothing to do but to keep it booming. Without saying anything about it, President Bark volunteered to attend to advertising the institute himself. He had had some experience in this line, and he brought this into use now, with any new ideas he might pick up. The National election, with its excitement over, the editors were all very willing to get items, with which to spice up their columns, that did not cost them any labor of their own. Each week there appeared in all the papers more or less laconic items in reference to the farmers' institute, setting forth the time of meeting; the character of an institute; the names of speakers assigned; praising their qualities, and their standing; the importance of institutes; what could be learned; who should attend, inviting the ladies. Every new feature was promptly given; and the nearer the time of meeting approached, the more of them appeared till it almost appeared that the supply was inexhaustible. All these went into the papers as ocal news items, scattered over the home-news page, so that no person could read very much on that page without running upon something about the farmers' institute. The people soon got to thinking that there must be something wonderfully nice about an institute, when all the papers were praising it so, and soon everybody seemed to be talking institute. The total cost of advertising was two dollars. Nothing occurred to mar the harmony till within a week of the institute, Sec. Toes received the following letter from Mr. Brown;

Oxford, O., Jan. —, 18—.

Mr. Toes,

Dear Sir: Mr. Bonham has changed my appointment and will send John Gould to your institute, in my place. Respectfully,

W. F. BROWN.

Frank came to town, and met Bark, who was just leaving the office of the only newspaper that would be out before the institute met, where he had left an unusual supply of institute locals, praising the eminent speakers, etc., as usual. Frank handed him the letter and unburdened his mind of certain expostulatory sentiments, while Bark read it, and reflected a little.

"Let's go into the office and see Clarence," said Bark.

"We don't want Gould," said Frank. "If they had sent him here at the start it would 'a bin all right, but we've worked this institute up for Mr. Brown, and now we want Brown, or nobody. We'll write right up to Bonham and tell him we don't want Gould."

"Oh! that won't do!" said President Bark. "Bonham can do as he pleases, and on the principle that 'beggars should not be choosers,' we'd better not insult the Institute Committee or we'll get nobody sure."

"We're not beggars in this thing; we pay our taxes as well as other people," said Frank; "Gould's subjects are all dairy subjects, and we are not running the dairy business here. We've been telling the people that Brown would be here, and they'll think we've been lying to them, and I don't propose to stand it."

"You can say what you please to these fellows, on paper," said Mr. Grady; "and they'll just turn round and laugh at you, and then do as they please."

"I think those speakers are sent at the expense of the Board of Agriculture, and not much, if any, of the money, perhaps, is raised by taxes, and I think we will do better not to be too fast." replied Bark. "This is awfully aggravating, I know, when we've everything in good shape to have it all knocked wrong—too late to right it too. But I think if we write a genteel protest to Mr. Bonham, it will be better."

"They were very particular about us asking a change," said Frank, "but it's no trouble for them to make a change and ruin us, when they want to."

"I'll write a letter," said Mr. Grady, going to the desk and getting pen and paper; "Now what do you want me to write?" he asked Mr. Bark.

"Well, just write that the change in speakers at this late date, is very unsatisfactory, as we have no chance now to satisfy the people, and they'll think we've been fooling them, and Mr. Gould's subjects are not so popular here as Mr. Brown's, or something to that effect."

Mr. Grady wrote the letter;

"I think that's strong enough," said Bark.

"I think so too," replied Clarence.

"Well, that's all right," said Frank.

They felt the chagrin too keenly to make any corrections in the paper above referred to, as that would do but little good, and possibly might do harm, for no one knew how many there might be, like Toes, that wanted Brown or nobody. It was thought the proper thing to do was to wait developments, and make a public explanation at the institute, if necessary, exonerating the local committee, which could easily be done.

Fearing, however, that the protest might be construed to mean too much, Mr. Bark sent a letter so as to meet the speakers on their way, stating, that if the change had to be, we wanted Mr. Gould, and wanted him badly.

CHAPTER VII.

On the opening morning of the institute some of the managers met the speakers at the station. After the usual self-introductions, Mr. Brown was introduced.

"You received a letter from me, I suppose," said Mr. Brown, "that I was not coming, but I afterwards received a telegram for me to come on and fill my appointments out here."

"We are very glad you did," said Mr. Bark, "for there would have been quite a disappointment if you had not come."

As the people in general heard nothing about the late unpleasantness, none but the managers had to undergo a change of feeling, and soon all were feeling good again.

The New Agreement choir came. The President gave the leader certain signs by which he would know when to prepare to sing.

Promptly at the hour set, the institute was called to order.

Mr. Edwards saw "more than he expected," for the bar soon filled up.

The choir sang "Praise Ye the Lord,"

A minister read, and invoked a blessing on the institute.

The choir again rose and sang.

A short welcome address was delivered *ex tempore*.

Here was an oversight already apparent. There were no means provided to catch speeches "on the fly."

The President replied, in behalf of the Institute, in well chosen words, to disseminate the very best of feeling, among the residents of the town and the farmers, who may attend the institute.

Mr. Brown addressed the assembly on "Farmers' Clubs."

The choir immediately rose and sang "Don't Leave the Farm, Boys."

There being no response to the first topic in the programme, the second was called. "How to Retain Fertility in the Soil." The local talent came out on this with vim. The hour to adjourn came, and the choir was ready to sing again, but the discussion went on. At last the President said "Gentlemen the hour for adjournment has come, the choir may hold their piece for opening."

"Let them sing now and then at opening too," said somebody in the audience.

(To be Continued.)

MAGAZINE NOTICES.

THE CENTURY for May devotes considerable space to Samoa, which is a subject of peculiar interest at the present time. Harvey W. Whitaker who has made a prolonged visit to these islands gives a very entertaining and instructive description of their situation and importance, their government, religion, language, customs, etc. The Samoans are very hospitable, polite and honest, are a fun-loving people, and very fond of singing, dancing, and aquatic sports. Their principal occupations are fishing, collecting copra, planting taro, cultivating fruits, and making cloth from the inner bark of the mulberry tree. The article is profusely illustrated with views of different parts of the islands, the United States consulate at Apia, houses and canoes, and a very good illustration of King Malietoa and a native orator.

Our relations to Samoa are also discussed by George H. Bates, the commissioner sent to Samoa by the United States in 1886. This country possesses treaty rights of the utmost value, including the opportunity to control the most magnificent harbor in the Pacific, the loss of which to the British Empire was long ago bewailed by the most intelligent Englishmen. The Tuscarora's Mission to Samoa is also given by Henry Erben.

Other interesting articles are Roby's Christian Charity; Round About Jerusalem, profusely illustrated; Salome Müller, a story of Louisiana; A Ride Through the Trans-Baikal; Tom's Strategy, a Negro story; Recollections of Jean Francois Millet, with portrait, and specimens of his drawings; The Monasteries of Ireland; The Western Soldier, and others. The papers on Abraham Lincoln are continued, giving a history of occurrences during the most exciting period of the Civil War.

The Pansy for May, is as bright and cheery as the flower from which it is named, and will give a world of pleasure to the young people for whose benefit it is published.

CATALOGUES ETC., RECEIVED.

STEEL CASE REVERSIBLE LEVER PRESSES.—The elaborate catalogue of P. K. Dederick & Co. of Albany, N. Y., contains a full description of the latest thing in hay presses. It seems to the R. N.-Y. that the steel press shown at Fig. 119, is destined to revolutionize the hay-baling business. The use of the steel case enables the manufacturers to make a press that is smaller, lighter, stronger and more durable than the wooden presses of former years. The press that we show is a great favorite with farmers and small balers. It may be driven by steam or water power, tread or lever horse power, or, in fact, by anything that will communicate power by belt. It can be worked in any part of a building and its compact size enables it to fit into many a convenient place that a larger press would not enter. Further particulars regarding this press are given on page 344. For full information our readers are referred to Dederick's catalogue.

"STRICTLY GENUINE STEEL ROOFING"—Catalogue from the Kanneberg Roofing Co., Canton, Ohio. This pamphlet is designed to show, in a comprehensive manner, the various uses to which this roofing can be put. It is a bright and reliable pamphlet which can be easily understood. The goods made by this house will be found first-class in every respect.

EUREKA MOWER COMPANY, UTICA, N. Y.—The Eureka differs from all other mowing machines in that the cutter-bar is directly behind the horses. This enables a team of horses to handle the six-foot-cut with ease. The circulars sent out by this company are very handsome, and illustrated so that any one can see at a glance the points of excellence which characterize the Eureka. Send for them.

WHITMAN AGRICULTURAL COMPANY, ST. LOUIS, MO.—Circular of hay, straw, wool and cotton presses. The Whitman presses are used in all parts of this country and a large number of them have been exported. The Belt Power machine is the most perfect yet invented. The Full Circle Steel press is one of the marvels of the century. The Horse Lever press is used everywhere. It is claimed that the Whitman presses have taken the first prize wherever exhibited. Send for the circular.

GEORGE ERTEL & CO., QUINCY, ILL.—Circular of their Automatic Folder Double-Acting Perpetual hay and straw press. This circular contains a large number of testimonials which go to show that the Ertel Victor gives unbounded satisfaction in that it is one of the best presses made. Send for this handsome 32-page catalogue.

ACME HAY HARVESTER CO., PEORIA, ILL.—Circular of the "Acme" Hay Stacker and Sweep Rakes. It is claimed that these implements will enable one man and two boys to put up 30 tons of hay in one day. Send for this circular and other information concerning the gathering and bunching of hay.

"THE AMERICAN" HAY TEDDER.—Circular from the Ames Plow Company, Boston, Mass. This is a good tedder and will doubtless satisfy those who use it.

ON THE PRODUCTION OF LEAN MEAT IN MATURE ANIMALS.—In bulletin No. 5 of the Experiment Station, at Cornell University, we are given the results of a very interesting experiment. As every one knows, who buys pork, it is exceedingly difficult to obtain lean meat. The pork for sale in the markets and at the stores is all too fat. A few days ago the writer tried to buy a piece of lean pork to be used with baked beans, but it was impossible to find a piece containing more than a mere streak of lean. This fact is so plainly evident that it is not at all strange that some of the wisest of our agricultural scientists have put themselves to the task of proving that lean pork is a profitable possibility.

Professors Henry, Sanborn and Roberts have conclusively shown that the relation between the lean and the fat in the carcass of young animals may be varied by varying the relation between the nitrogenous and carbonaceous matters in the ration fed. That is to say, the feeder has it in his power to increase the proportion of lean meat in pork when he can start with the young pig. But many persons have insisted that the same difference could not be produced in the mature animal whose muscles have been formed. Prof. Roberts determined to test this point and the result of his test appears in this bulletin.

Two grade Yorkshire sows, three and four years old—one the mother of the other—were selected for the experiment. These were much alike in flesh and general condition. One was slaughtered at once and her carcass cut up and rendered so that the total weight of bones, fat, protein, etc., etc., could be determined. The other was fed for 143 days on a ration designed to supply all the nitrogenous or "lean-making" food she would eat. At first this ration consisted of four pounds of wheat bran, two pounds of cotton-seed meal and two pounds of shelled corn per day. After a few days' feeding the sow refused to eat so rich a ration and the cotton-seed meal was lessened. She would take hardly any for a time, but at last she was induced to eat one-half a pound per day. During the entire period she ate 327¼ pounds of bran, 83 pounds of cotton-seed meal and 247 pounds of corn. The following table gives the result of the test. No. 1 is the sow that was killed before feeding, and No. 2 the one that was fed for the production of lean meat.

	No 1.	No 2.
Live weight	207.	296.
Dressed weight including kidneys,	131.	211.
Bones, lbs.	13.	16.63
Total protein matter, lbs.	18.10	59.09
Total fat, lbs.	16.70.	48.29
Per cent. protein in carcass.	13.82	28.
Per cent. fat in carcass.	12.75	22 89
Per cent. dressed to live weight.	63,29	71,28

It is seen from this that the special feeding resulted in a large increase of lean meat—protein. In hog No. 1 there was but about 14 per cent. of lean meat, while hog No. 2 showed 28 per cent. To make the matter still plainer, we give at figures 117 and 118 pictures of the meat from the hog fed for lean meat and that from some hogs sold in the Ithaca market. These hogs were fattened by farmers in the ordinary way, largely on corn alone, and were about the same age as the experiment hog. The meat from the specially fed hog is shown at the top of each picture, the two lower cuts in each engraving are from hogs as offered for sale in the market. We are not giving any figures as to the comparative cost of this lean meat. Speaking from the customers' standpoint, we can only say that we would willingly pay an extra price for meat like that shown in the upper cuts. We know that there are enough more of the same mind to warrant a farmer in making a business of producing such pork.

A. A. MARKS, 701 BROADWAY, N. Y.—Circular of Artificial Limbs with Rubber Hands and Feet. The enormous increase in the number of accidents at railroad crossings has resulted in a large demand for artificial limbs. This increased demand has led to many improvements, chief of which are the rubber hands and feet. A number of the victims of last winter's blizzard were supplied with artificial limbs; one of them, Miss Lois M. Royce, writes:

"The artificial feet fit so far admirably and I walk very well with them. I walked to the carriage this afternoon just by taking hold of my father's arm."

STANDARD HAY TOOLS.—Catalogue from the United States Wind Engine & Pump Co., Batavia, Ill. The hay carrier and fork made by this company will be found well worthy a trial. A most complete outfit of horse hay tools can be furnished, and the company take pride in producing the best that can be made. Besides the hay tools will be found a description of the famous Halliday pumping mill, with tanks and pumps of all sizes. A good house to deal with.

Miscellaneous Advertising.

MANLY PURITY AND BEAUTY

CUTICURA REMEDIES CURE SKIN AND BLOOD DISEASES FROM PIMPLES TO SCROFULA.

NO PEN CAN DO JUSTICE TO THE ESTEEM IN which the CUTICURA REMEDIES are held by the thousands upon thousands whose lives have been made happy by the cure of agonizing, humiliating, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, are a positive cure for every form of skin and blood disease, from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c. RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., Boston, Mass.

Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

Rheumatism, Kidney Pains and Weakness speedily cured by CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster.

Field Crops.

HAY.

(*Continued from Page* 336.)

pounds of seed per acre in oats. This season he intends to seed more ground by sowing the seed in rye, and using the rye for soiling, which will leave the ground to the Alfalfa as soon as it is large enough to need all of the space. The rye will shade the young plants and protect them from the wind which injures the plants when young if the ground is left smooth, and there is nothing to protect them. This injury by the wind is probably due to the fact that there are very few fine roots to hold the plants in place when young. The single, thread-like root that each plant sends straight down, is not sufficient to keep it from being twisted and injured by the wind.

Some have advanced the idea that Alfalfa is especially adapted to sandy soil. This is true, no doubt, but it is also true that this plant will appreciate good, rich, heavy soil as well as any other plant of this nature.

An acre of Alfalfa was sown on the college farm last season on a piece of ground where sand predominates. It came up nicely and made a fair growth during the season, although the dry weather in August killed some of it where the soil was most sandy. It did not come through the dry weather any better than our common clover. I would recommend more than 20 pounds of seed rather than less. When sowed thinly, it grows too coarse and rank and will not make hay of as good quality as if it had been sown more thickly. Bulletin No. 47, Michigan Experiment Station, gives some notes on Alfalfa which is being grown on the farm. H. T. F.

Agricultural College.

FROM NEW JERSEY.

THE grasses grown by us are Timothy and Red clover. We generally sow on wheat or rye. I have always favored early cutting. I believe the hay is better relished by the stock and it is certainly more nutritious. To secure our hay crop all in due season, we must commence cutting early. Every one uses a mower, horse-rake and horse hay-fork whenever it is possible. We also use a hay tedder to assist in curing the crop.

As a general rule, we seed down once in five years; sometimes once in four years, with wheat or rye—Timothy in the fall, at the time of sowing grain; clover in the spring, generally during March.

Ours is a good hay country; but it is difficult to state the average yield. Last year I cut of clover and Timothy, mixed, rising two tons per acre, and of Timothy about 2 1-2 tons.

The productiveness of our section in grass was much increased by the application of sand marl; but of late years fertilizers are taking the place of marl.

We have not used any marls for 18 years—and are producing larger crops of hay than at any former period. By making and using all the yard manure we can, and liberally adding chemical fertilizers, we can grow maximum crops of grass when the conditions of moisture are right. Where we mow more than two years, we always top-dress in the spring, and by so doing we have in some cases, doubled our yield of hay. The manures should be applied as early in March as we can get on our fields. It's wonderful what a change is produced by those spring applications. D. C. L.

Middlesex County.

FROM PENNSYLVANIA.

1. CLOVER and Timothy are used here for hay. The crop is cut early before the seed fills, because the hay seems to give better results when fed on the farm and sells better in market, and we get a better after-growth to protect the meadows in winter.

2. I prefer the Eureka mower which is growing in favor; but I think the majority use the new model Buckeye. There are many other machines in use. The Tiger rake is most used, and single and double harpoon forks.

3. We re-seed once in three or four years without any grain crop, generally early in March.

4. The average yield is about one ton per acre. Farm manure is chiefly used.

5. Farmers are beginning to experiment with new grasses.

6. Productiveness is best increased by plowing and seeding often, top-dressing in autumn with farm manure, and never pasturing meadows. Of late I have been raising one crop of grain or potatoes, then I have plowed and harrowed the ground late in the fall, and sowed it to clover and Timothy in March. In this way I have succeeded in keeping clover two winters on ground so clayey and wet that a fence post will not stand more than three or four years. L. W. Mc E.

Wilawana.

1. WE grow for hay mostly Timothy and clover. We cut clover early if a crop of seed is expected, and Timothy when in full bloom.

2. The Champion and Mc Cormick mowers are the favorites. Hay rakes of different kinds are used, the Tiger being considered one of the best. We use hay carriers of several kinds; the King's Improved is one of the best. Hay tedders and loaders have not come into general use.

3. We generally seed down after a rotation of corn, oats and wheat. The grass seed is sown with the wheat. Timothy is sown in the fall along with the wheat; clover in the spring from about April 1 to 15.

4. The average yield per acre is probably about 1 1-2 to two tons. Barn-yard manure has been the stand-by, but commercial fertilizers are giving good results and are rapidly coming into general use. Lime is also used, but is not considered much of an enricher of the soil, but on land where it has not been used to excess it will give enormous crops of grass and especially of clover.

5. No new grasses have been tried in this vicinity. As substitutes for our ordinary kinds, Hungarian grass, millet and fodder corn are generally used.

6. We think the best way to increase the hay crop is to have the land well drained, plow deep, harrow once, so as to level the ground, and then apply from 100 to 200 bushels of stone lime per acre, as there is mostly plenty of organic matter in the meadows for the lime to act upon. Of course, barn-yard manure is beneficial in almost any quantity, and an application of commercial fertilizer every spring will be found of great benefit.

Fannettsburg. R. W. Mc A.

1. IN this section clover and Timothy are the principal grasses grown for hay. The best time in my experience for cutting clover is when about half of the heads have turned brown. Timothy should be cut just after the blossoms have dropped; if cut earlier, the hay will have have a bitter taste when cured; if left later it will be hard and woody; in either case the stock will not relish it so that there will be a waste in feeding.

2. Of mowers we use almost as many kinds as there are makes. I prefer the Eureka direct draft; it is light-running, considering the width of the cut, (six feet) and easy to operate and it leaves the grass in good shape to dry. Other tools in general use are the Bullard hay tedder, the Tiger horse-rake, the double harpoon hay fork, with a carrier at the top of the barn for unloading by horse power.

3. We follow the four-year rotation: first, corn, next oats, followed in the fall by wheat or rye, the Timothy being sown at the same time and the clover the following spring among the growing wheat, to be cut the following year for hay. The first cutting is principally clover, the next year mixed hay, the third year the clover will have about all disappeared, leaving the pure Timothy.

4. The average yield per acre is about 1½ ton, varying much in accordance with the condition of the soil and the stand of grass. Manure is seldom used for the grass alone, it being dependent on the manure used on the wheat—mostly stable manure, with from 200 to 400 pounds of some kind of commercial fertilizer applied with the drill at the same time the wheat is put in.

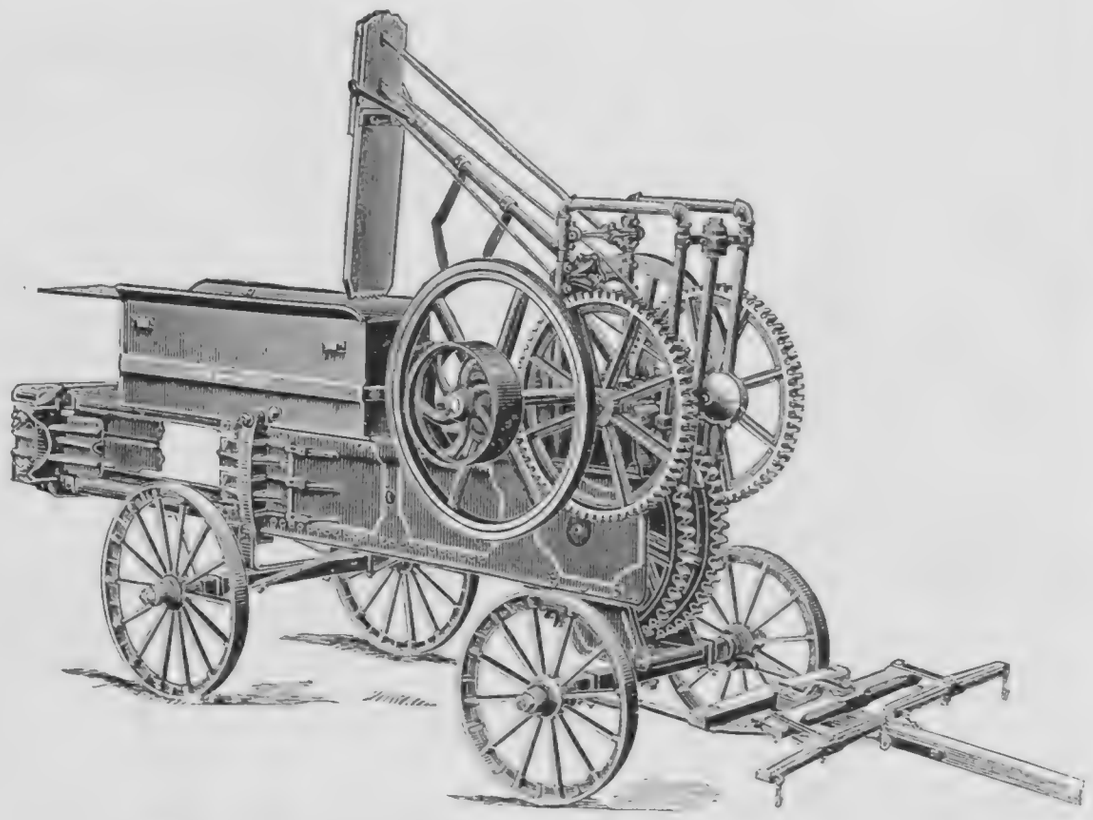
5. No new grasses or substitutes for old kinds are used.

6. A good application of stable manure, or a mixture of rock and bone applied early in the spring is one of the best ways to increase productiveness. H. T.

Delaware County.

FROM MISSOURI.

Timothy and clover are the main grasses used for hay here, with some little prairie grass saved by a few yet, and some Red-top. Timothy is more in use than any other, and most of the farmers mix clover at the rate of three parts of Timothy to one of clover, and if they do not pasture too closely in the fall, in a short time the clover will take the meadow, as I never saw clover freezing and heaving out of the ground as it does on clay lands. Red-top is but little used and when it gets started in a meadow it is hard to kill out. Prairie hay is counted the most wholesome hay for horses, but more grain should be used with it. I favor early cutting for Timothy. I want to commence to cut as soon as most of the blooms have fallen off, and I begin to cut clover when about one-half the blooms have turned brown. Prairie hay may be cut any time between the middle of August and the first of October, as it keeps growing till frost comes. My reason for the early cutting of hay is that the substance is in the stem then, and has not gone to the grain. After it has done this, the stem becomes woody and the seed shatters off and we lose the best of the hay.



STEEL CASE REVERSIBLE LEVER PRESS. Fig. 119.

The best mowers manufactured are in use here, and spring tooth hay rakes, and the largest farmers use two-horse rakes that take the hay from the swath, haul it to the stack-yard and deliver it to the hay stacker which throws it on the stack. With two such rakes and a hay-stacker and six men they can stack from 20 to 25 acres per day. The hay-fork is used considerably also, and some cut and shock their hay and use ropes and a horse to haul the hay from the shocks to the stack or barn. There is no regular date for changing meadows, as they appear to stand for several years, and do as well all through as when first started. I have a Timothy and clover meadow that has been set for at least 12 years, and last year it did as well as any other year, or better. I have had the best results by seeding with oats, sowing the seed immediately after sowing the oats. Most of the farmers here sow the ground to oats or millet and then sow the Timothy seed as early in September as possible, and the clover seed the next spring. Red-top will seed at any time, and we get more of it than we want, and guard against it all we can. The yield per acre is affected by the season more than by any other cause. Last year considerable ground made about two tons per acre, but that was a good hay year. We might count on about one and a half ton per acre as an average. Considerable millet is sown here for hay for cattle. What is known as the common or dwarf and the German millets are used exclusively, and they are sown about from corn planting time till the first of July, and cut for hay about the time the seeds are about half formed or in the milk state, and handled as other hay. The yield is from one to three tons per acre.

King City. A. S. M.

Miscellaneous Advertising.

PENSIONS. W. B. LORD, Att'y, Washington, D. C. Success or no Fee.

THE OUNCE OF PREVENTION.

UNDER the above heading the New York *World* of Feb. 10th, contains an editorial, of which the following are a few extracts:

"Physicians and unprofessional men of sense agree that if people would take a little of the pains to prevent disease that they do to have it cured, the civilized world would be much less like a vast hospital than it is now. * * * * But the idea of a regular and stated physical examination, even of persons who are apparently well, is an excellent one. The approaches of pulmonary complaints, kidney troubles, and many of the other ills that flesh is heir to, are so insidious as not to be apparent to their victim. * * * * In nothing is it truer than in disease that 'an ounce of prevention is worth a pound of cure.'"

There is a great deal of wisdom in what the *World* remarks. Individuals, as a rule, do not give their physical welfare attention, and it is only when alarmed by the presence of disease itself—the consciousness of failing strength—that attention is given to such matters.

Much has been said and written in recent years concerning the extreme and oftentimes fatal danger which results from delay in the treatment af kidney diseases.

Physicians admit that they cannot control advanced disease in those organs, and it is doubtful whether they can control it in any stage without the assistance of Warner's Safe Cure, which is established as the only known means which will reliably prevent and cure this class of disease.

Besides, it has been definitely ascertained that kidney disease is the real cause of ill-health in most cases where consumption, heart, brain or nervous disorders are supposed to exist, and in consequence of such belief many fatal mistakes have been committed by our best physicians in treating such disorders which are but the symptoms of the disease, whilst they have allowed the real disease—disease of the kidneys—to escape their notice until too late.

There is no safer or surer way by which health can be preserved and disease averted than the occasional use of Warner's Safe Cure, which will benefit the "engines of life,"—the kidneys, even if they are in a normally healthy state; while the good that will result in case disease is threatened, or is already present, cannot be over-estimated.

The most careful examination made by a skillful physician sometimes is unreliable, since this class of disease is extremely deceptive, and seldom openly manifests itself until the unsuspecting sufferer is beyond assistance.

Ease, Comfort and Thrift!

THE BEST CATTLE FASTENING.

Smith's Self-Adjusting Swing Stranchion!

The only practical *SWING STRANCHION* Invented Thousands in use. Illustrated Circular free.
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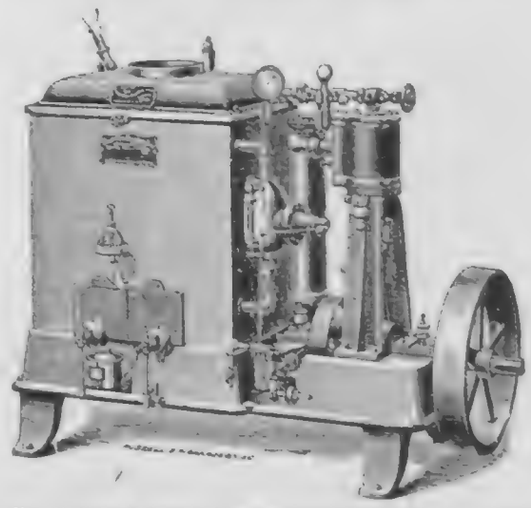

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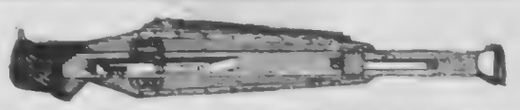

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PEERLESS DYES Are the BEST. SOLD BY DRUGGISTS.

Humorous.

The RURAL NEW-YORKER *is prepared to offer very liberal terms to good, responsible,* PERMANENT *agents. Correspondence solicited.*

THEY used to call him Old Probabilities, but now he is simply Old Prob, and he has lost his abilities.—*Boston Transcript.*

SECRETARY OF AGRICULTURE RUSK has engaged a young man as private secretary, to look after his lettuce.—*Yonkers Statesman.*

"SEE here, waiter, I asked you for a glass of milk," "I know it, sir. That's milk you have in the glass." "O! excuse me. I thought it was chalk-let."—*Harper's Bazar.*

A YOUNG lady recently presented her lover with an elaborately constructed pen-wiper, and was astonished the following Sunday to see him come to church wearing it as a cravat.—*Marion Ledger.*

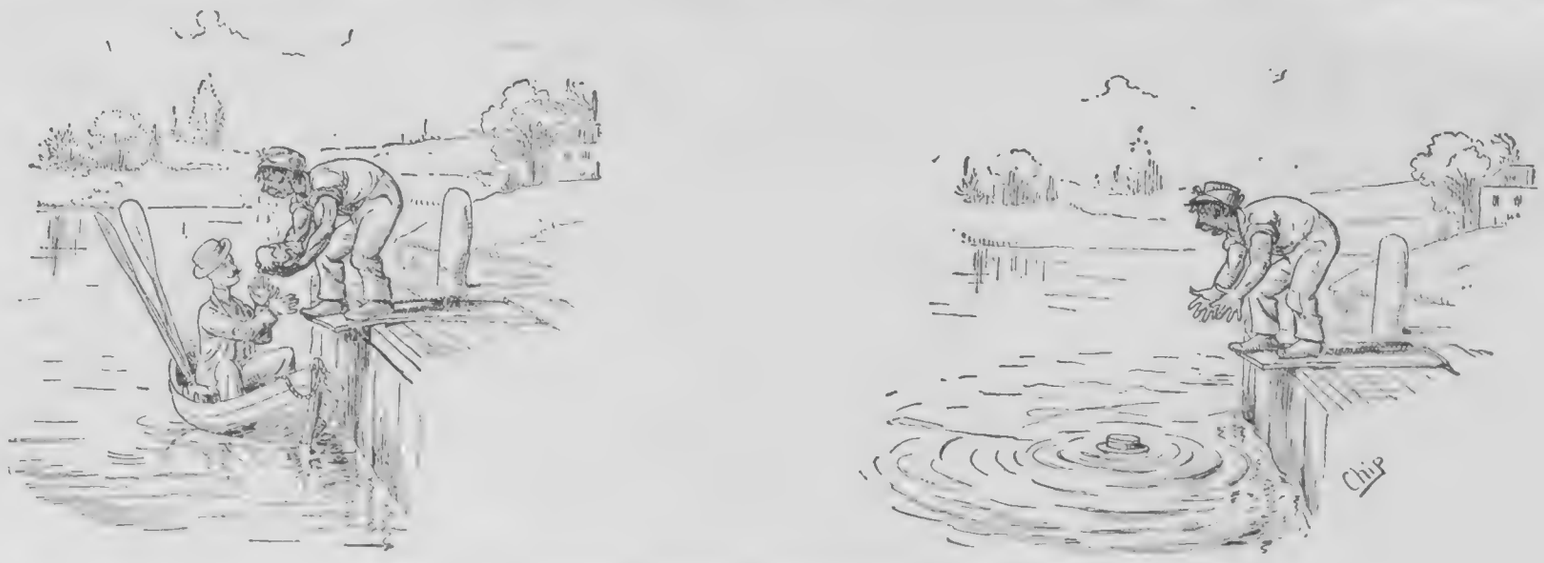
THE biggest trust ever known was the famous corn trust formed by Joseph in the land of Egypt many years ago. The time has been so very long that most of our "oldest inhabitants" have forgotten all about it.—*Acadia Sentinel.*

"MAMMA, aren't grandpapa and grandmamma awfully old?" "No, Millie, not very old. But why do you ask?" "Why, I heard grandpapa tell aunt Mary that he and grandmamma were present at the *Creation.*"—*Colorado Farmer.*

OLD GENTLEMAN (putting a few questions): "Now boys—ah—can you tell me what commandment Adam broke when he took the forbidden fruit?" Small scholar (like a shot): "Please, sir, th' warn't no commandments then, sir?"—*Boston Beacon.*

FIRST PRETTY CREATURE: "Yesterday was my birthday, dear, and my Charley gave me a string of such beautiful pearls—one for every year." Second ditto (who has failed to secure Charlie): "How sweet, dearest. What an expensive present—such a long string, dear!"—*Fun.*

IT is interesting to trace the evolution of words and expressions. Cultivated people say: "How do you do?" Those who are less precise say: "Howdydo?" In the backwoods of Tennessee they say: "Howdy?" The noble red man of the West says: "How?" while the cat on the fence says: "Ow."—*Chicago Times.*



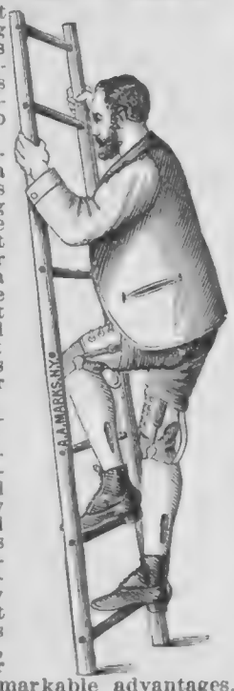
WHAT A YOUNG WIFE'S AFFECTION ACCOMPLISHED.

"Missus sends you some of her own cake for your lunch."

Miscellaneous Advertising.

LEGS AND ARMS

WITH RUBBER FEET AND HANDS.



Although a man may meet with the misfortune of having both his legs severed from his body, he is not necessarily helpless. By having artificial legs applied, with rubber feet attached he can be restored to his usefulness.

The engraving is from an instantaneous photograph of a man ascending a ladder; he has two artificial legs substituting his natural ones, which were crushed by a railroad accident and amputated. With his rubber feet he can ascend or descend a ladder, balance himself on the rungs, and have his hands at liberty. He can walk and mingle with persons without betraying his loss; in fact, he is restored to his former self for all practical purposes.

With the old methods of complicated ankle joints these results could not be so thoroughly attained. Over nine thousand in practical use, scattered in all parts of the world. Many of these have been supplied without presenting themselves to us, simply by sending measurements on a copyright formula which any one can easily fill out. The press, eminent surgeons and competent judges in many parts of the world, have commended the rubber foot and hand for their remarkable advantages. Awarded the highest prizes at every competitive exhibition. Indorsed and purchased by the U. S. Government. A treatise of 400 pages and copyright formula *sent free.*

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Guaranteed Pure Seed. Free on board cars, at **$1.50** per bushel.

E. G. STONE, Box 345, **Cuba, N. Y.**

FOR SALE—SUPERIOR Grazing and Stock Farm in

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40 miles south of Washington City, and one mile from Warrenton Junction, Va. Midland R'y—1008 acres. 900 acres is highly improved, superior quality for grass and grain; is well watered; has a handsome residence, Stone Grist Mill, Cattle House, Tenant Houses, &c. This fine property will be sold at a sacrifice. Address the owner,

A. N. BASTABLE,
27 W. North Avenue, Baltimore, Md.

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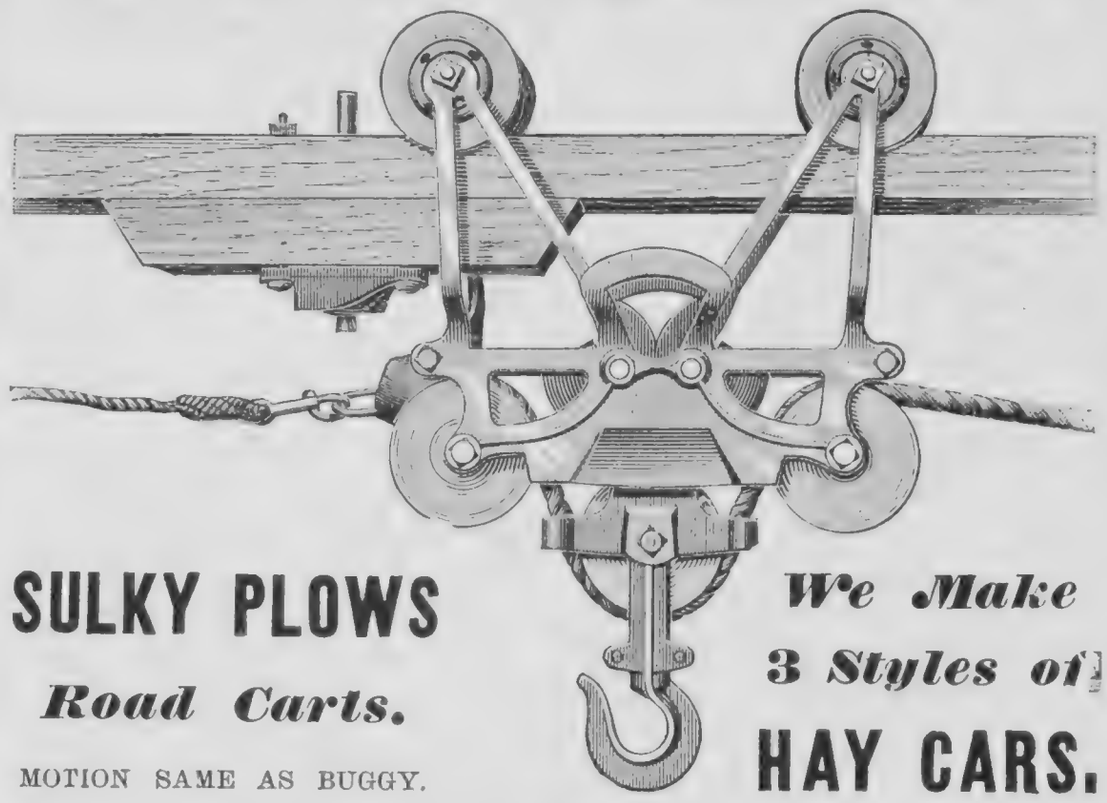
Photograph of a Field of Corn raised on Stockbridge by J. B. Griffiths & Sons, Newmarket, N. H. Yield 400 baskets from 2⅛ acres.

The introduction of the Stockbridge Corn Manure in 1876, by Prof. Stockbridge of the Massachusetts Agricultural College, gave a great impetus to New England agriculture, and was the means of inducing farmers to raise corn rather than buy it, thereby saving thousands of dollars to eastern farmers. Before this fertilizer was introduced, it was thought that corn could be bought cheaper than it could be raised; but farmers soon learned that with the Stockbridge Corn Manure and improved tools they could raise it for from 25 to 50 cents per bushel, and that the stover, if properly cured, was worth almost as much as stock hay—at least $8 per ton—and that the two or three tons stover raised per acre would pay for the fertilizer the corn remaining to pay for the labor and profit. The standard of the Stockbridge Corn Manure having been kept up to that of 1876, more farmers are using it than ever before.

BOWKER FERTILIZER COMPANY, BOSTON AND NEW YORK.

Fowler & Farrington, Taughannock Falls, N. Y.



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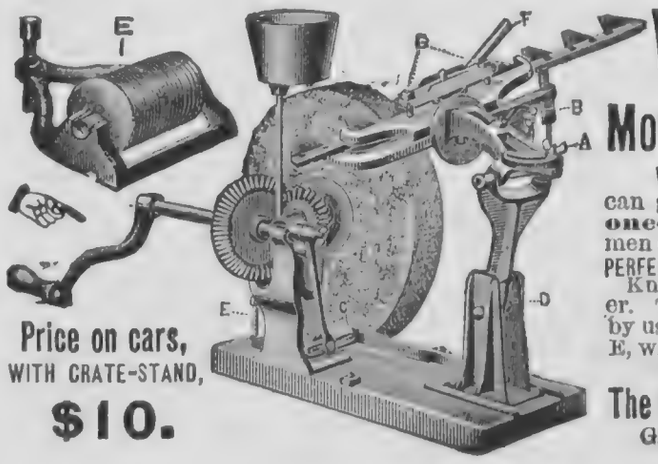

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WITH THIS MACHINE ONE MAN can grind the knives of a Cutter Bar, in **one-half the time** required by **two** men on a common grindstone—Do it with PERFECT ACCURACY and on any desired bevel. Knives so ground cut easier and last longer. The grindstone is kept perfectly true, by using occasionally, the steel cutting roll, E, which is sent with every machine.

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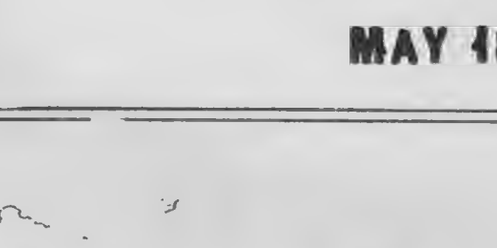

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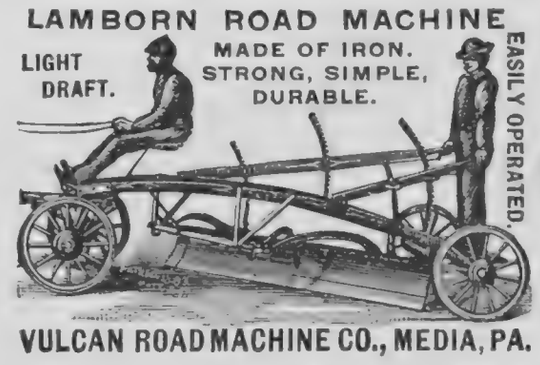

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On account of being obliged to vacate 500 acres, April 1, we must reduce our stock of Horses and Cattle.

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BUTTER BRED BULLS

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First come first served. *Send for Catalogue or better come and see for yourselves. In writing mention this paper.*

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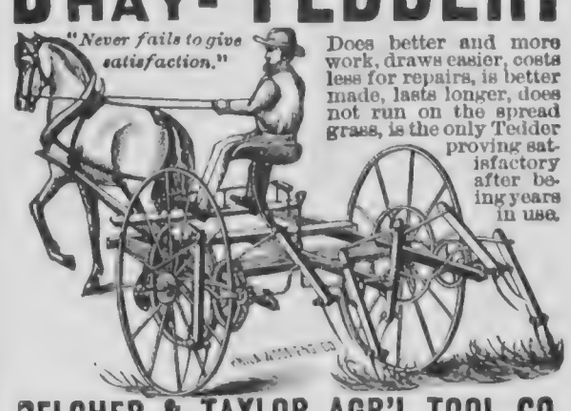

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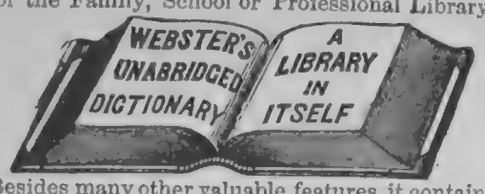

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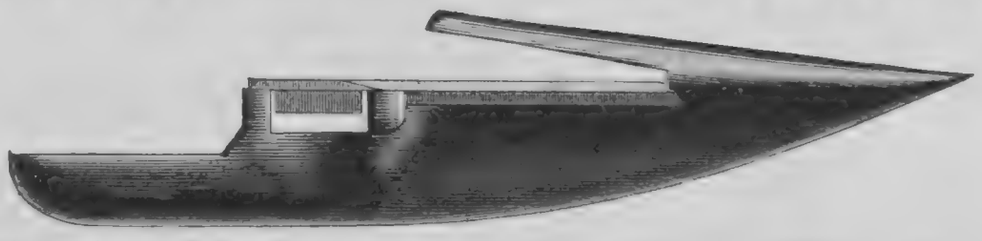
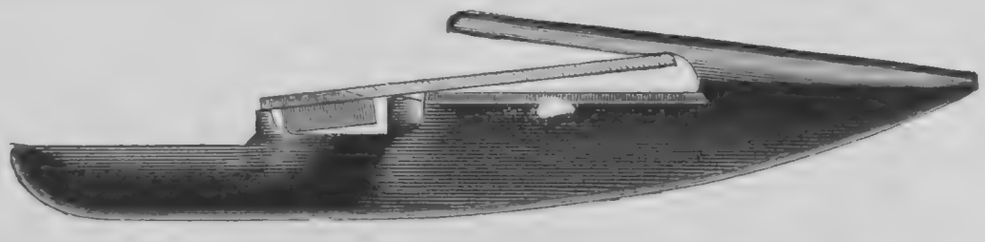


This cut shows a Guard Finger with Knife Section, held up to place by the **Patented Hardened Steel Chafe Plates,** maintaining the **Perfect Shear Cut.**



This cut shows a Guard Finger and without **Chafe Plates,** worn down at heel and the **Shear Cut** lost.

The Patented **Chafe Plates** are found on no other machine.

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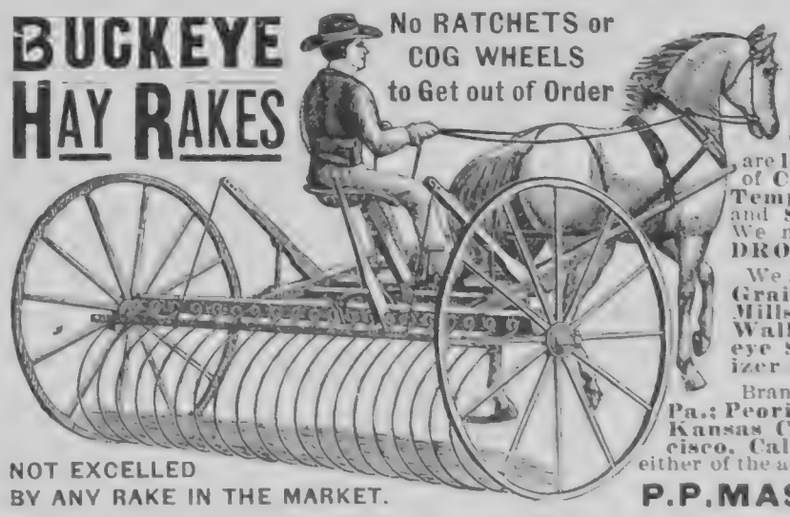

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A WET HEN

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We offer the man who wants service (not style) a garment that will keep him dry in the hardest storm. It is called TOWER'S FISH BRAND "SLICKER," a name familiar to every Cow-boy all over the land. With them the only perfect Wind and Waterproof Coat is "Tower's Fish Brand Slicker."

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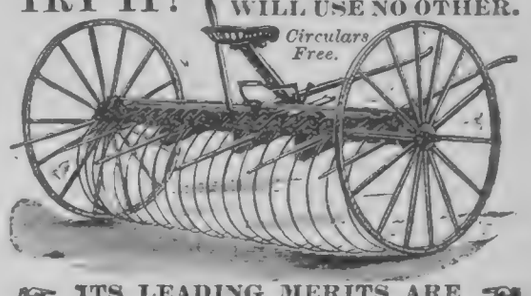

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Economical, Strong, and Safe.
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COMPLETE in itself, or as Attachment to Rake.
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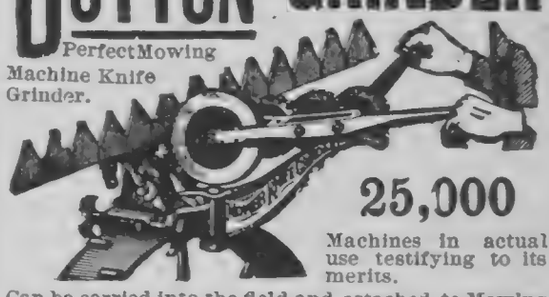

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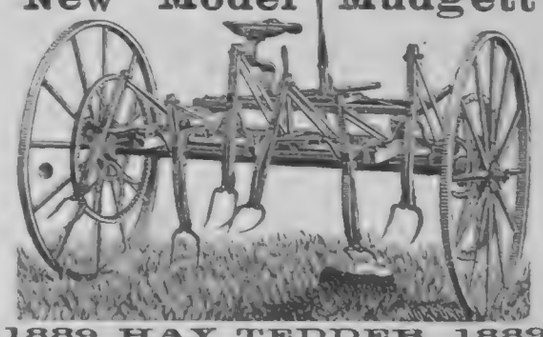

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34 PARK ROW, NEW YORK.

The following rates are invariable. All are therefore respectfully informed that any correspondence with a view to obtaining different terms will prove futile.

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Preferred positions.....25 per cent. extra.
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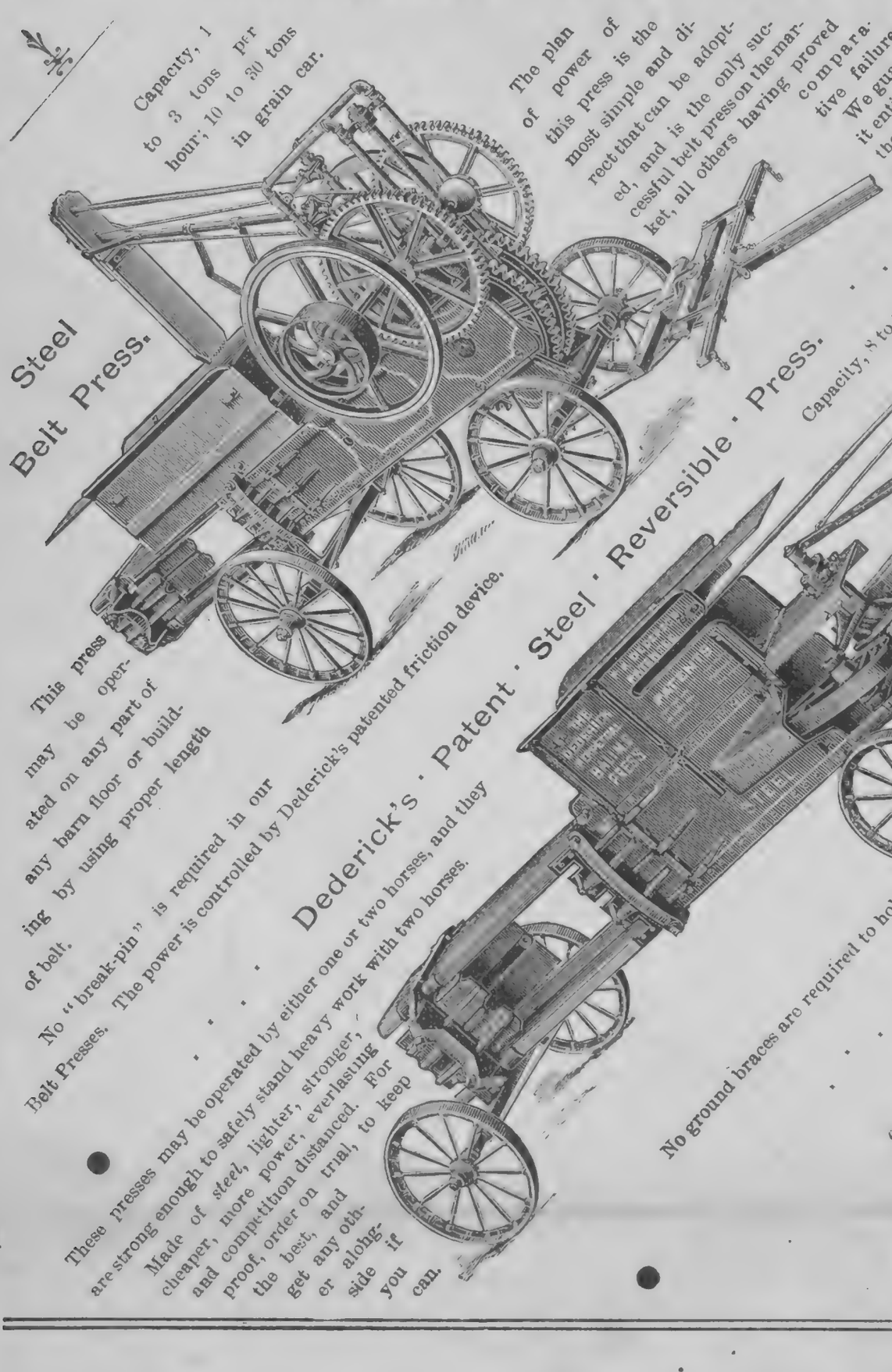

Steel Belt Press.

Capacity, 1 to 3 tons per hour; 10 to 30 tons in grain car.

This press may be operated on any part of any barn floor or building by using proper length of belt.

No "break-pin" is required in our Belt Presses. The power is controlled by Dederick's patented friction device.

These presses may be operated by either one or two horses, and they are strong enough to safely stand heavy work with two horses. Made of *steel*, lighter, stronger, cheaper, more power, everlasting and competition distanced. For proof, order on trial, to keep the best, and get any other along-side if you can.

Dederick's · Patent · Steel · Reversible · Press.

The plan of power of this press is the most simple and direct that can be adopted, and is the only successful belt press on the market, all others having proved comparative failures. We guarantee it entirely beyond the range of competition.

No ground braces are required to hold our steel presses, which is proof of ease of operation.

Capacity, 10 to 15 tons per day.

Dederick's · Patent · Steel · Full · Circle · Press.

Capacity, 8 to 12 tons per day: 10 to 15 tons in box car.

These presses have the open-side bale chamber closed at the discharge end sides, spring retainers, screen press box bottoms, open feed orifice, spring top traverser, folding device, etc., and we guarantee them entirely beyond the range of competition.

Two positive strokes of the traverser to each round of the horses. Patent automatic feeder.

Tubular connection. See catalogue for full particulars.

Others may print as good or better illustrations, claim advantages and superiority, but we stand on the merits of our machine, and only ask an opportunity to substantiate all we assert by test in the field. Send for location and address of Western and Southern storehouses and agents. Address

P. K. DEDERICK & CO.,
Box 56,
ALBANY,
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STRENGTHENING OF THE SOIL AND GOOD GRASS CROPS.

THE MAPES MANURES. TRUE MANURES—NOT STIMULANTS.

LASTING EFFECTS ON GRASS, ETC.

(*Timothy* (1837) *Splendid growth.—Wheat* (1886); *Potatoes* (1885).*—Only the Mapes Potato* (1,500 *lbs. per Acre*) *Used in* 1885.*—Nothing Else Since.—Field* 20 *Acres.*

Dr .W. S. COMBS, Freehold, Monmouth Co , N. J., whose experience with the Mapes Manures has been published in the New Jersey State Board of Agriculture Reports and the Agricultural Press, reports as follows, January, 1888 :

The twenty-acre field in potatoes in 1885, wheat 1886, clover 1887, gave a heavy crop of red clover this year, particularly so for the first year's cutting after wheat. The field was manured *all over* in 1885 with 1,500 lbs. of the Mapes Potato Manure. One half of the field received farm-yard manure (with some marl compost) ordinary dressing, say 15 to 20 loads. Yield, as was reported before, was 385 bushels per acre on the ten acres that received the Mapes alone, and 325 bushels per acre on the remaining ten acres manured with the Mapes and the farm manure. The wheat yield was 33 bushels per acre—no difference apparent in the two parts, Timothy was seeded with the grain. Clover was sown in the Spring of 1886. The yield of clover hay this year, 1887, was 2½ tons per acre. The past season was very trying to grass and only in a very few cases for miles around was the grass crop good. As a rule, the grass was very poor.

During the past week a representative of a fertilizer company visited the field, and was so impressed with the growth of Timothy since cutting, that he remarked, "An onion bed would not have done better." This field had been pastured (18 head on 20 acres) for two months after cutting in June. A most interesting fact is that there is no difference of any improvement whatever in the grass on the half of the twenty-acre field where farm manure was applied in addition to the Mapes Potato Manure in 1885. The ten acres that received the Mapes alone in 1885 produced just as good grass this year (1887) and promise equally well for 1888. I propose to try on the portion that received the farm manure, this year, some 300 bushels per acre of marl (green sand Squankum), to see if the increase in yield will pay a profit *over Mapes alone.*

The above experience related on the twenty-acre field, showing the effects of the Mapes Potato Manure, applied in the Spring of 1885, on the wheat in 1886, and clover hay in 1887, is only one of several I have had since I have been using the Mapes Manures.

Top Dressing Grass Field of Seven Acres.

Increased Yield of Hay 7 Tons, from Less than 300 *lbs. per Acre of Top Dressing.*

VALENTINE FROST, P. O., Locust Valley, L. I. (whose reports on the Mapes Manures on Oyster Bay Asparagus for some 12 years have appeared in our pamphlets), reports, January, 1889 :

I top dressed a field of seven acres of grass that had been in grass four or five years. The field was seeded to wheat in 1883 or '84, with 100 car loads of New York manure, costing $40 per acre. The wheat turned out 25 bushels per acre. The succeeding grass was all Timothy.

Last Spring I applied as a top dressing, during the first week in April, one ton of the Mapes Top Dressing Manure on seven acres, leaving one acre without any dressing. The effect of the fertilizer was very marked a few days after its application. The soil was moist, and the conditions for the action of the fertilizer were favorable. I could see where the application was made as far as I could see the lot. The increased yield of grass was the most satisfactory point. The seven acres yielded fully seven tons more hay, or an increase over the acre not dressed of ONE TON per acre.

I have used your manures some 12 years or more, and have always had very satisfactory results. They are more effective than stable manure, and cost much less money.

14 *Tons of Extra Quality TIMOTHY HAY on Six Acres the Fourth Year after Potatoes* (*Followed with Wheat*).

RICHARD L. HUNT, Queens Co., Long Island, N. Y., December 29, 1887, reports :

I took a six-acre field of heavy loam soil for a test of your manures on grass following wheat crop, and the result has been very good.

In the Spring of 1883 I planted a field with Early potatoes with 1,000 lbs. of the Mapes Potato Manure to the acre. The yield was over 200 bushels to the acre of very smooth, large potatoes. In September the field was sown to wheat with Timothy, with 1,000 lbs. of the Complete Manure, "A" Brand broadcast. Yield of wheat, 25 bushels to the acre. In 1885 it yielded 11 tons of mixed hay, clover and Timothy, of the first quality; in 1886, cut 12 tons, and in 1887, it made 14 tons of clean Timothy. This fourth year cutting was the finest piece of Timothy hay I ever saw. I certainly never put a machine in a better field. Many who saw it remarked that it could not be better.

Dr. HENRY STEWART, on The Mapes Manures: The followiug testimonial, in the *New York Weekly Times*, by Dr. Henry Stewart, Agricultural Editor, is on the permanent effects of the Mapes Manures. Dr. Stewart relates that he used three bags of the Mapes Potato Manure per acre, applied in Spring, on three acres of the poorest worn-out land at Westwood, Bergen Co., N. J. (no manure or fertilizer of any kind having been used since), and produced six SUCCESSIVE CROPS (including potatoes, rye, Hungarian grass and sweet corn), concluding as follows: "There have thus been six crops taken from this field and a seventh is growing, and it is absolutely certain not one would have been grown without the fertilizer (applied on the potatoes)."—*New York Times, July* 15, 1882.

Dr. Stewart also writes:

"When a field is so poor that it will not grow clover, then good artificial fertilizers are the only resource. They soon put the farm in a condition to make large quantities of manure." By this, Dr. Stewart means that by the largely increased quantity of feeding crops, corn, roots, grain crops and grass (timothy, clover and Hungarian) that can be grown with the fertilizers, increased quantities of stock can be fed, and a larger manure pile will be the result.

DR. STEWART WRITES FEBRUARY 22, 1889:

"I am more than ever convinced of the value of the Mapes system of COMPLETE fertilizers"

Send for Descriptive Pamphlet.

THE MAPES FORMULA & PERUVIAN GUANO CO., 158 Front St., N. Y.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII NO. 2052 NEW YORK, MAY 25, 1889. PRICE FIVE CENTS, $2.00 PER YEAR.

[Entered according to Act of Congress, in the Year 1889, by the Rural New-Yorker, in the Office of the Librarian of Congress, at Washington.]

Horseman.

THE SCRUB.

TWO weeks ago we gave a picture of the head of a remarkably intelligent and handsome horse. This was to show what skillful breeding and the best of care can accomplish. We want our readers to place that picture by the side of the one shown at Fig. 122. The latter is also taken from life. It represents the head of a poor, broken-down animal that spends its days in hauling about a huckster's wagon. It is a sad sight to see him toiling along over the hard pavements. He is evidently a horse of good breeding. If he could only speak, he could tell a sad story of man's ingratitude. Years ago he carried his head as proudly as the most fastidious driver could desire. He worked well and faithfully. Who knows but that his speed and courage were relied on some dark and stormy night to bring the doctor so that some dear life might be saved? All these acts of service were forgotten when age or accident spoiled his proud bearing or his ready speed. He was sold and drifted through one hard place after another until he came to his present degrading service. Now he goes stumbling through his duty, with the pride, the courage and hope clubbed out of him. It is a shame! It is a disgrace! What shall be the punishment of the man who would turn a faithful old servant into the hands of those who would reduce him to such a condition?

There are two animals on the R. N.-Y. New Jersey farm that, in their appearance and behavior, illustrate something of the difference we have tried to show in these two pictures. One is a little brown Canadian mare. She is a tough, wiry little animal, full of life and energy and with an almost human intelligence. She has always been treated with kindness, and has never lost her self-respect. As a consequence she actually takes an interest in her work, giving the plainest indications of satisfaction and pleasure when her work is satisfactory. Her special delight is in cultivating or furrowing or in other work where a perfectly direct course is needed. The writer has seen her glance back along the row and nod her head in satisfaction when she saw that it was as straight as an arrow. If, in cultivating, she should step on a hill of corn or potatoes, she is evidently sorry for it. The other animal is a poor little gray mare that had been whipped and abused all her life. When we bought her she had just finished a season's work on a thrashing machine, through which monotonous work she had been clubbed without mercy. She has but little interest in her work. She goes along with hanging head and stumbling feet, little caring what the result of her work is. The Canadian mare knows from experience that she will not be abused and worked too hard, while the other one has found that the harder she worked the more she was expected to do. The gray mare seems to improve a little, however. Perhaps it is due to the association with her more fortunate companion.

THE RESULT OF ABUSE. From Life. Fig. 122.

Rural Topics.

BUCEPHALUS BROWN'S NOTIONS AND IDEAS.

ON OVERGROWTH.—Mrs. L. M. C. does well in calling attention, in the RURAL of May 4, to the fact that the practical and sedate Englishman does not care to compete with the Yankee in the production of over-grown fruits and vegetables; but sensibly prefers well-grown specimens of medium size. This fondness for "big things," without regard to quality, is fostered by the stupid "committees" at our fairs, local and State, which almost invariably accord more "points" to size than to quality in all exhibits, from bullocks to mushrooms.

WE WANT JUDGES.—Men who know good products from poor ones, men who take pride in the quality of what they produce, giving only a just and practical value to size, are driven away from the fairs and expositions of the country by these absurd awards. What is demanded on all hands by worthy competitors is competent judges, men of knowledge and character, who thoroughly understand their work and their duty, and do them faithfully, honestly, intelligently.

WELL UNDERSTOOD.—That the people well understand the ordinary basis of awards, is shown by the frequent remark heard: "We had a bigger squash," (or turnip, or pumpkin, or potato,) "than any that is here; I wish we'd 'a brought it." No self-respecting man wants to enter into a contest of this sort. Size, alone, above that which is recognized as normal and of marketable value, should have no recognition, except as a disqualification. It is true, as the Editor says, that "large specimens are always regarded with interest," just as we look with interest upon every sort of abnormal or monstrous thing; but this interest is far removed from the interest of approval in all intelligent minds.

TRANSPORTING CORN.—Mr. Glidden was not quite careful enough in his statement criticised by J. P. A., of Florida, on page 298. "The North" is a very vague term. An Alabama man would call Maryland and Kentucky "North," but climatically, so far as corn is concerned, there is but little difference between the three States. While Alabama corn might be too late for Maryland, probably any good Maryland variety would succeed in Alabama, but when we get farther north, things are very different. Mr. Glidden would have been quite right if he had said that few sorts of corn grown from New Jersey to the St. Lawrence would succeed well if carried 60 miles north, or 100 miles south, in the valleys; or when removed equivalently as to elevation, say from the Hudson valley up to the Catskills, or the Green mountains. Scarcely any cultivated plant is so influenced in its growth by temperature as corn. A 90-day corn from Maryland, or from Connecticut, or even from Massachusetts, taken 100 miles north in New England, would not mature in 125 days without frost—simply because in all those 125 days the aggregate of heat would not equal the aggregate of heat in 90 days in the more southern locality. This is the way in which inexperienced planters get badly deceived by quite truthful advertisements. But the advertisers who offer 90-day corn should say where it was grown. The St. Lawrence valley not infrequently has 120 days free from frost between corn-planting

time and harvest; yet a corn, like Angel of Midnight, which matures in 90 days in Massachusetts, will not get out of the milk in the best seasons in the Province of Quebec. When far northern corn is taken far southward, it tends to become feeble under the hot sun, and produces only a few chaffy nubbins, although it may give from 50 to 100 bushels of sound corn to the acre in its home.

TREE WITHIN TREE.—The case reported by W. P. B. in a late RURAL is not unique. There is a specimen preserved by Dr. H. A. Cutting, late State Geologist of Vermont, of a sapling some three or four inches in diameter, which dropped out of the interior of an immense and apparently primeval forest tree when it was cut down and split open. What was very curious, and caused the preservation of the specimen, was that although the old tree was, by its rings, upwards of 200 years old, the sapling presented plain marks of having been deeply cut by a steel axe. I write from memory, having, however, seen the specimen myself. Dr. Cutting's address is Lunenburgh, Vt.

HOW EXPLAINED.—The fact being assured, a theory of the cause is admissible. I believe that a serious shock to the vitality of a young tree may cause the growths of one, two or more succeeding years to adhere but slightly together, as we see it sometimes in what is called "shaky" timber. Then, the tree acquiring fresh vigor, grows on and may become very large. But when it is cut down and split open, the portion which grew before the injury may "peel out," or "come loose," as described.

Everywhere.

THE CASH CROPS.

Where the Money Comes From.

WHAT OUR READERS RAISE TO MEET CASH EXPENSES.

AGRICULTURAL CHANGES.

HERE is a copy of a letter that the R. N.-Y. has been sending to some of its subscribers. Short replies from a few of the Eastern States follow. We shall publish more later. Meanwhile we shall be glad to hear from any of our readers who are interested in finding the crop that will bring them the most money:

"WE believe in comparing notes as often as we can. It is a good thing for farmers to talk over crop prospects and means of raising money. The experience of one may teach another some good lessons. With this idea in mind, we take the liberty of asking you to send us brief answers to the following questions relating to

THE CASH CROPS.

1. What crops or agricultural products do the people in your neighborhood depend upon to raise money?

2. Where are such products sold and who buys them?

3. How have prices averaged for the past few years, and what seems to be the prospect for the future?

4. Are there any farmers in your neighborhood who are getting prices that are above the average? How do they do it?

5. Has the farming of your section changed much during the past 10 years? Do farmers depend for their cash upon other crops than those of the past? What has caused the change? Can you suggest still other changes that would be profitable?

You will readily see that short answers to the above questions from different parts of the country would contain much valuable suggestion and information."

FROM NEW HAMPSHIRE.

1—3. Growing fruits and vegetables, and keeping cows for milk are the things on which most of the people in this neighborhood depend to obtain money, though some are successful in the poultry business. Milk is sold to milkmen and they pay the farmers about three cents per quart. Some of it goes to Nashua, and some to the creamery at Lowell, Mass. The other products are sold at the markets in Nashua, N. H., and Lowell. No. 1 fruits and vegetables generally command good prices, while inferior products have to be sold at low prices, and this seems to be the prospect for the future.

4. Yes, there are some farmers who are getting prices that are above the average. They do it by carrying to market only first-class products. Customers soon find them out and most of the buyers are willing to pay an extra price.

5. Farming in this section has not changed much during the past 10 years, and most farmers grow about the same crops they used to. A few of them have changed, however, because they found they could make more money and work no harder for it. I know one man who, 10 years ago, did not have a strawberry plant growing; now strawberries are his principal crop. He grows fine berries and gets a good price for the fruit. It would pay many farmers to plant fewer acres and take better care of their crops. One acre well cultivated will pay better than two acres half cultivated. F. E. S.

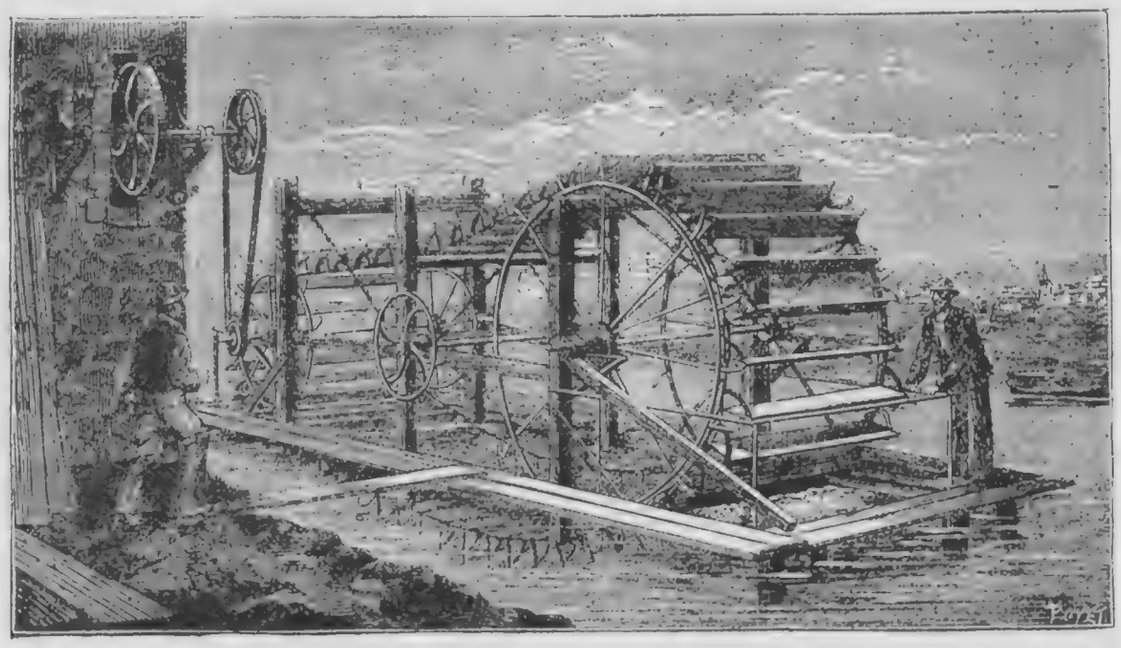
Hudson Center.

FROM VERMONT.

1. Corn, wheat, oats and barley are not raised here as cash crops. Indeed, potatoes are about the only cultivated field crop raised with the view of turning the same into ready money. Many thousands of bushels of onions were formerly raised yearly in this town; but this industry is now mainly confined to the French population, who alone, with the aid of their children, can raise the crop with much profit. Our potatoes are mostly sold, when dug, to middlemen; but some are stored till late fall or winter. Prices are unusually low just now—only 25 cents per bushel. Our fields are too small, and the ground is too uneven and stony for the use of expensive machinery in competition with the West. Still, one year with another, we consider this a paying crop. I think the product increases yearly and we are disposed to stick to it, and depend, if necessary, upon our "smartness" for success. The unwise practice of selling large amounts of hay is on the increase. Over 5,000 tons were shipped from two railroad stations near-by during last fall and winter. Fattening beef is a thing of the past with us. The dairy pays fairly well and affords ready cash. The Spanish merino sheep! This is the banner county of the world for that golden-hoofed animal.

Give us once again our former prosperity, and we will be more contented and happy than the sons of Abraham in Jerusalem!

Cornwall. L. W. P.



RAFT WATER POWER, Fig. 124.

FROM MASSACHUSETTS.

1. Dairying, poultry raising, and fruit culture are the principal money-making farm industries here.

2. Most of our products are sold in Fitchburg and Boston. Those sent to Boston are sold on commission.

3. Prices of most products have averaged very well, although some fruits have sold low on account of over-production and poor quality. The prospects are good I think for those who raise first-class products.

4. If they do, it is because they raise a superior article and put it up honestly and attractively.

5. The farmers in this place are, most of them, wide-awake and they try to keep up with the times, and if farming has changed for the past 10 years it has changed for the better I think. A. W. B.

Ashby.

FROM NEW JERSEY.

1. Milk. 2. It is partly shipped to Philadelphia and partly sold at Trenton. 3. Average wholesale price 3½ cents per quart. There is no prospect of better prices. 4. A few by selling choice Alderney milk get better prices. 5. There are more "truckers" now than formerly, but, as a rule, farmers still depend on old-time crops. Some branches of farming, however, have been dropped almost entirely, partly owing to low prices for grain of late, and partly on account of the disastrous competition with Western dressed beef, which has made the price of fat stock so low that farmers cannot afford to fatten either beeves or sheep. This means more expenses on the farm for fertilizers. I am glad that a bill has been introduced in the legislature of New York for the inspection of live stock before they are slaughtered. I would like to see the farmers of New Jersey wake up to the evils of the dressed meat traffic so that the average farmer could have a home market for his hay, straw and grain and also be able to make abundant manure on the farm. J. Y. D.

Robbinsville.

1. Principally hay, milk, garden vegetables and eggs. 2. They are sold in near-by towns—Elizabeth, Newark, Plainfield, Rahway, etc. Wholesale dealers or middlemen buy the most of them. Hay is sold to customers. Prices are much lower than they were 20 years ago, while expenses are about the same. There is no no visible prospect of improvement. 4. Some living near towns retail the milk and vegetables. 5. Agricultural pursuits have changed very much within the last 25 years. The old settler, industrious, practical, sensible, economical and experienced, has gone. Speculators, foreigners and amateurs are trying to make farming pay, and failing, land is depreciating. A return to some of the good old ways of our fathers, with under-draining, manuring, clean cultivation and better market facilities would be an improvement. D. C.

Roselle.

1. Summer vegetables, fruit, berries, hay and corn.

2. To the residents of Asbury Park and Ocean Grove.

3. The prices were very good until last year. As the boarding season then was so short prices didn't pay.

4. A few have regular customers the year round, but the sales are so small it does not pay to hunt them up.

5. There have been many recent changes: 40 years ago farmers depended mainly on their potatoes, peaches and strawberries for money. Peaches are now a failure through this section. The changes have been caused by the many summer resorts started along the shore, which have given us a home market. It does not pay to send our products to the city, as freight, commission and cartage take nearly all. I think it would be profitable to go into the dairy business more extensively. E. W.

Farmingdale.

Our crop rotation is about as follows:—Corn upon sod ground, and the manure of the farm is put upon it. By many the corn is largely turned into pork; by others into milk for Trenton, Philadelphia, the sea-side resorts and the creameries. The pork-growers follow corn with rye, which is fed to hogs; others sow oats. These crops are followed by wheat; not that there is any profit in it, but it is the best crop for getting the land to grass, and we need the straw for bedding. We use commercial fertilizers on wheat. Then the land lies two years under grass—one to mow and one to pasture. The pork crop is cash. Much is used by local sausage makers, and at Trenton, (population 60,000.) Some fatten 20,000 to 25,000 pounds by buying some feed. The milk sold to Trenton retailers pays best—three cents in summer and four in winter. That sold to Philadelphia comes next; that sold to the creamery brings about two to three cents. Not many calves are raised, as the same feed needed for a calf will raise a colt to three years, and he will bring three times the money; it will keep another cow. Many farmers raise from one to three good stock colts per year, bringing from $150 to $250. Quite a good many peaches and small

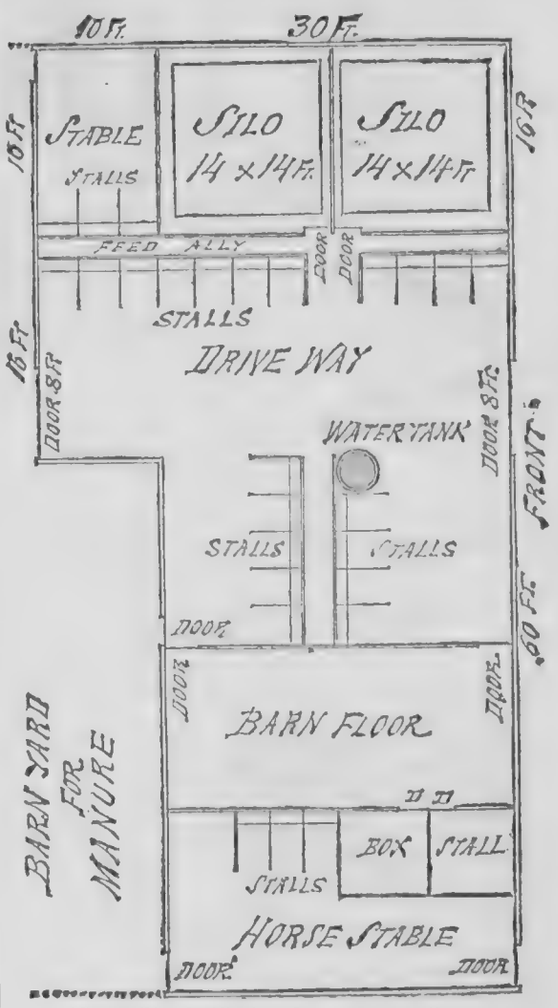


Fig. 123

fruits are raised, and considerable truck is grown, and, so far as we can, we try to grow such things as are not supplied by the great Northwest. S F. W.

Allentown.

FROM PENNSYLVANIA.

1. Cabbage and potatoes.

2. In the coal regions of Lackawanna valley, mostly in the city of Scranton. About half our products are sold to consumers; the other half to merchants and marketmen.

3. Prices for the past few years had been in favor of the producers, until last fall when there was a general decline, with a prospect of continued low prices.

4. Yes, by raising a greater variety of vegetables and fruits, of better quality, and selling direct to the consumer.

5. Yes, a few years ago the farmers of this section depended upon their hay and potato crops for their money. Raising these caused poorer crops each year, until the want of manure led to keeping more stock and feeding what little hay was raised. On account of the low prices of potatoes and the trouble of raising good crops, they are not grown as much as formerly. Cabbages have proved more profitable. Most farmers are selling their milk, and dairying promises to be the leading business for the future. We have a good market for small fruits, but little is grown here, and I predict a growing interest in this business in the next few years, while less attention will be given to raising potatoes and cabbages. G. W. G.

Justus.

1. The barley crop has been the main one for money. The rotation of crops along the lake is confined to clover, corn, barley, winter wheat, and then we seed down again. The corn is principally used upon the farms in fattening a few cattle or sheep. Lately hundreds of acres of grapes have been set out. What the outcome will be no one can tell yet.

2. There are local buyers who buy and ship to Pittsburg, Cleveland, Erie, Buffalo and other points.

3. Prices for the last few years have averaged as follows: barley, from 60 to 80 cents; steers, 3½ to five cents per pound on foot; wheat, about $1 per bushel; corn, about 40 to 50 cents.

4. One farmer who has a herd of Jerseys, and makes fancy butter, has customers in the city and gets 30 to 40 cents per pound, when common dairy is from 16 to 25 cents.

5. There has been very little change, with the exception of the grape business, and raising products for a canning factory that was started here a few years ago.

The outlook for farmers is the poorest we have had since the war. There appears to be an over-production of everything. A good many potatoes were raised here last year, and they have sold on the Erie street market as low as 10 cents per bushel, and one man could not sell his load and offered to give them away. Another raised a lot of onions; he has them now and cannot give them away. The canning factory has shut down and will not run,

claiming that there are enough canned goods to last two years if another can were not put up in the United States. The Prohibition people have got a bill through the Legislature to submit to the people, on June 18th, a consti-

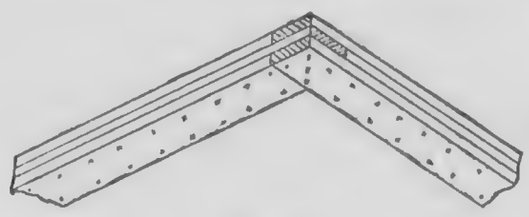


Fig. 125.

tutional amendment prohibiting the manufacture and sale of all liquors in the State. If it passes it will not pay to raise barley any more, and as cider is included, our market for apples will be spoilt. Wheat is worth only 95 cents; corn 37; potatoes $0.00; onions $0.00. One farmer who rents a small farm for $200 cash, raised potatoes intending to pay his rent with the price. He has now 500 bushels on hand and cannot give them away. This outlook, while protected manufacturers, corporations, trusts and monopolies are growing right off the farmer, will eventually ruin this country. J. H. P.

North East.

Here we practice mixed farming. We get most of our money from milk, butter, fruit and stock. A good many of our farmers raise some wheat, rye, corn, and potatoes. Corn and potatoes are the most profitable. All our products are sold near home. We have good markets, especially with the coal regions. Grain is sold to the mills here at little higher prices than those ruling in New York. The prices for butter and dairy products have been better for the past few years and the prospects are good as long as we keep insisting on the passage of prohibitory laws. On most farms raising grain does not pay even for the labor. A few of us are getting extra prices for our butter. I have been getting from 35 to 40 cents per pound for my butter all winter. The reason is that I keep good thoroughbred Holstein-Friesian cows, feed them well, make my butter right and know when and where and how to sell it.

Our creameries are getting extra prices for their butter. They make a good article and sell direct to the merchants in the coal regions. A few of us are also getting extra prices for our fancy fruit, because we pick it carefully at the right season, sort it well, and sell it to the best customers. For the past three or four years our farmers have been organizing and educating themselves, and hence farming has commenced to change. They are depending more on dairy products and fruit-growing and less on grain production. I would suggest that our farmers should go extensively into fruit growing, as our soil and climate are well adapted for the business, and we have the best home markets in the country. We have a few small peach orchards that have paid well, and are looking fine. The fruit sold last year for $1 50 per basket, and I know some Fallawater and Baldwin apple trees that have borne 20 bushels of good fruit for 10 successive years, and we generally get $1 per bushel for our best fruit in the winter. People should plant the kinds which they know will do well in their vicinity. Let them prune the trees properly and cultivate the orchard well as long as the trees are young. Pruning and cultivating are much neglected here. The following is a good list for profit: apples—Baldwin, Fallawater Smith's Cider and Smokehouse; pears—Bartlett, Clapp's Favorite, Anjou and Sheldon; peaches—Mountain Rose, Crawford's Early, Old Mixon free, Crawford's Late and Smock; quince: the Orange. Small fruits, the good and well tested sorts only.

Walnutport. W. M. B.

FROM NEW YORK STATE.

1. Potatoes, butter and eggs.

2. To New York City commission dealers.

3. Fair prices, potatoes averaging 50 cents per bushel.

4. Yes. For eggs, by warranting them fresh White Leghorn.

5. Yes. Yes. Low prices of wheat and pork, and advanced prices of butter, milk and cream. Butter brings from 30 to 40 cents per pound in summer after the city people come out into the country, Southampton being a summer resort. F. D.

Southampton.

1. What we call mixed agriculture is practiced here, embracing the culture of wheat, corn, oats, rye, buckwheat and fruits.

2. Our products are sold to middlemen at our stations here.

3. Prices are low and prospects dull.

4. Some get extra prices, by thorough culture of their crops so as to have fine goods and watching the market closely.

5. Considerable changes have been made owing to low prices. Tobacco and small fruits have been introduced more extensively. I would suggest that farmers should raise some beans and more root crops. Some raise barley and some horses. H. C. Wolcott.

1. Dairying and raising potatoes. Some sell their milk and some sell cream; but most money is made by making butter and selling it at home.

2. Potatoes are shipped, being bought by buyers at this place. Butter is sold at home whenever a buyer is found; if not sold here, it is sent to New York City.

3 Potatoes are a drug, bringing only 25 cents upward per bushel; butter from 20 to 25 cents a pound.

4. They are not.

5. Yes. No change has been made of late. Whitney's Point. J. H. K.

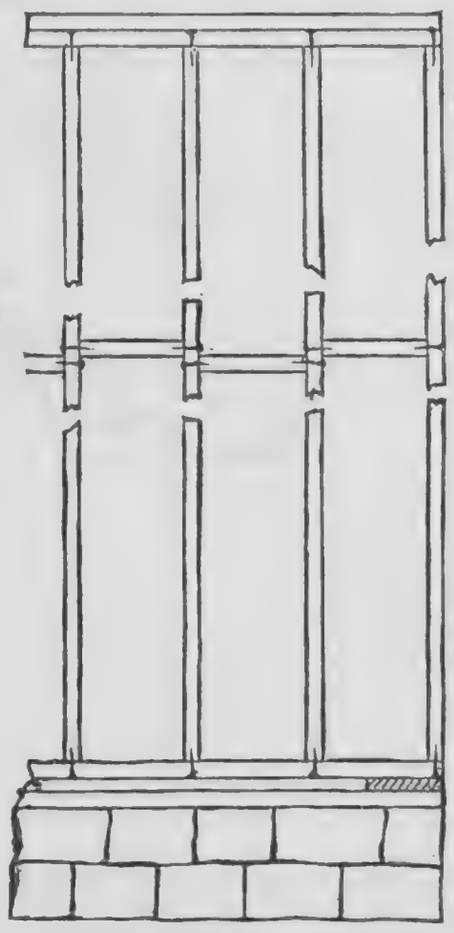


Fig. 126.

1. Wheat, barley, oats, hay, apples and potatoes.

2. We sell to home markets—to millers and shippers.

3 Fair prices have been realized. The prospects for the immediate future are probably no better than the present outlook.

4 I don't know of any who get extra prices. If any do, it is through their shrewdness in marketing rather than through the better qualities of their products.

5. Not much change has been made excepting that more hay is raised and sold.

Tyre. J. P.

1. Our principal cash business is the production of milk for cheese factories. One of the largest and first factories in Western New York was located here. At one time it made 500,000 pounds of cheese in one season. This was several years ago; now the same factory makes only a trifle more than 150,000 pounds, as smaller factories take most of the milk.

2 The cheese is sold at the factory to local buyers, and delivered to the railroad station by the patrons of the factory about once a week. It is mostly sent to Baltimore, Maryland.

3. Prices of cheese here have ranged from one-eighth to one cent per pound less than those quoted for fancy cheese in New York.

4. This being a maple sugar country, a very few are making much better sirup and sugar than the average, and are getting better prices. The use of modern sugar tools usually makes all the difference in results.

5. There has been no material change within 10 years. A very few make a specialty of some one thing, and in that respect there are a few changes. O. F. B.

Rushford.

Before answering these questions I will explain the character of the people in this neighborhood. They are a very conservative class; the greater part of them are old residents occupying the farms they were born and bred upon, and in the language of the "parrot" most of them say "farmin' don't pay," and I don't believe it does except in very few cases if any. Some in fact are dropping behind and several have lost their farms—good clever men too. Now for the questions:

1. The crops mainly depended upon for money, are wheat and barley.

2. They are sold largely right here at Stanley and Hall's Corners, both being good shipping points only three miles apart. The men who buy them are farmers themselves, good reliable men, who buy on commission. Then Geneva, which is about eight miles away, has two large malt houses, one for barley and one for wheat. When they pay more than the shippers, they get the grain.

3. Prices have ranged for the past five years, for wheat from 75 cents to $1; for barley, from 50 cents to 80 cents. There seems at present no reason to expect prices to be any better in future (unless more liquor is drank).

4. I don't think any of my neighbors get more than average prices, but some get less. Those who raise the largest crops per acre generally have the best quality, and of course get the best prices.

5. I do not think farming hereabouts has changed greatly in the past 10 years. Of course more machinery is used upon the farms and more commercial fertilizers are applied, while less summer fallowing is done and in many cases more weeds are permitted to grow. The all-important questions seem to be "What to do? and How to do it in order to make more money?" The raising of beef cattle has become unprofitable owing to the large supply of Western dressed beef. As the most important result of all this, one year ago a company was formed and a creamery was established here at Stanley. A very fair business was done last season, with quite satisfactory results for those who patronized the business. The out-look for this year seems encouraging. The cream is gathered from the farms and taken to the creamery.

6. If I were to offer any suggestions by the adoption of which sure profit would be made, I would advise better farming—more thorough preparation of the soil for the crop, more economy in saving and applying the manure made on the farms, more regard for good clean seed and better cultivation and care after planting. In short, if the farmers in this neighborhood would all take the RURAL and read it and then have sense enough to put in practice what it teaches, I think improvement would be the result. F. E. V.

Stanley.

1. Potatoes have been the principal money crop the past season. The yield was from 100 to 150 bushels per acre; the price from 20 to 40 cents per bushel—average price 25 cents.

2. Large local buyers and shippers of agricultural and dairy products have purchased large quantities of potatoes the past winter for which they found a ready market in Baltimore, Maryland, and Pittsburgh, Pennsylvania, and other cities and places. Farmers, as a rule, draw their produce to Buffalo, their nearest market.

3. Prices are now lower than they have

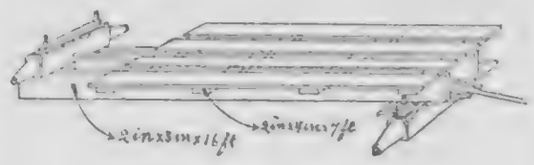


Fig. 128.

been for several years past. Potatoes for the past few years have brought 40 or 50 cents per bushel. It is likely that in future farmers will direct their attention to other agricultural pursuits.

4. The milk from the farm of H. C. Jewett & Co. of this place, who keep a fine herd of grade Holstein cows, is sold in Buffalo for one or two cents per quart higher than the average milk. The increased price is due to the feeding and care given to the cows, and also to the care taken of the milk after being drawn from the cow, by properly cooling, bottling and preparing it for market.

5. There have been some changes as farmers are feeding more silage and using larger quantities of commercial fertilizers, and many more labor-saving machines than they did 10 years ago.

6. They do, namely, fruit, grain, hay, butter, cheese and milk. Dairy products brought a fair price during the past season. The fruit crop was short with the exception of grapes. The hay crop was also short, and farmers have depended largely upon Western hay to feed their stock.

7. Deeper plowing. A more liberal application of fertilizers and clean, thorough culture of the crops in hand. G. W. N.

East Aurora.

Farm Economy.

SILO BUILDING AND FILLING.

IN Bulletin No. 19 of the Wisconsin Experiment Station, L. H. Adams has an excellent paper on the above subject. As readers of the R. N.-Y. know, this Station has led in ensilage investigation. Mr. Adams, having fully studied the subject, speaks with authority. Perhaps the most important portion of the essay is that devoted to

BUILDING THE SILO.

An 18-inch stone wall should be laid deep enough in the ground to be beyond the action of frost, and raised high enough above the surface to admit of sufficient grading to divert all surface water; if the location be a high and well-drained one, there will be no necessity for raising the wall more than six inches above the surface. In digging the trenches, throw enough earth inside to raise the silo floor up to the top of the stone wall. Upon this stone foundation a sill made of three 2x10 planks should be bedded in mortar—see Fig. 125. In laying the sill, the top plank should not be fastened to the others, but left loose, for reasons soon to appear. The studding should be 2x10 plank, preferably 18 feet long. After carefully sawing the studs to a uniform length and squaring both ends, arrange them in a horizontal position, resting on the edges, and placed 16 inches apart; they should be supported on a level with and at right angles to the sill upon which the bent is to be raised. Then spike the loose plank of the sill to the foot of the stud; and when all have been firmly fastened as directed, they should be secured at the top in the same manner. After fastening the studding to sill and plate-planks, the side or end, as the case may be, is ready for raising. After the bent has been raised in a vertical position to its place on top of the other two planks of the sill, the third one that was nailed to the foot of the studding before the bent was raised can be firmly spiked to the lower ones. This first bent can be held in place by temporary stays until the remaining bents are raised; the plates can then be nailed at the corners, and the skeleton frame is complete; two 2x10 inch planks will give all the strength necessary for the plate. It will be observed that by following this plan the studs are securely fastened, top and bottom, and the full strength of sill and studding is saved, there being no mortises cut in the sills and no tenons on the studding. After the frame is up, the next thing to be done is to bridge the studding (see Fig. 126). In case the silo is 18 feet deep, it would be advisable to put in two rows of bridging. By thus spiking planks between the studs, it makes it just as impossible for the studs in the center of the wall to spring out as it is for those nearest the corners. We are now ready to commence lining the silo. Each one can follow his choice as to the outside covering, since it plays an unimportant part in the preservation of the silage. Some will prefer to use drop-siding or ship-lap, others common lumber, and it is possible to put on a covering of low-grade shingles cheaper than any other way. It is not necessary, for the preservation of the silage, that paper be used on the outside of studding, but to keep out frost it is advisable to use it, since it makes the silo much warmer. Since a good deal of moisture rises from the silage, it is well to provide for ventilation at the roof. This can be done by openings in the gable ends of the building, or a dormer-window in the roof. It is much better to carry off the moist air by ventilation than to have it congeal on the rafters during cold weather, and drop back again when mild days come. The lumber for this should have no knot-holes,

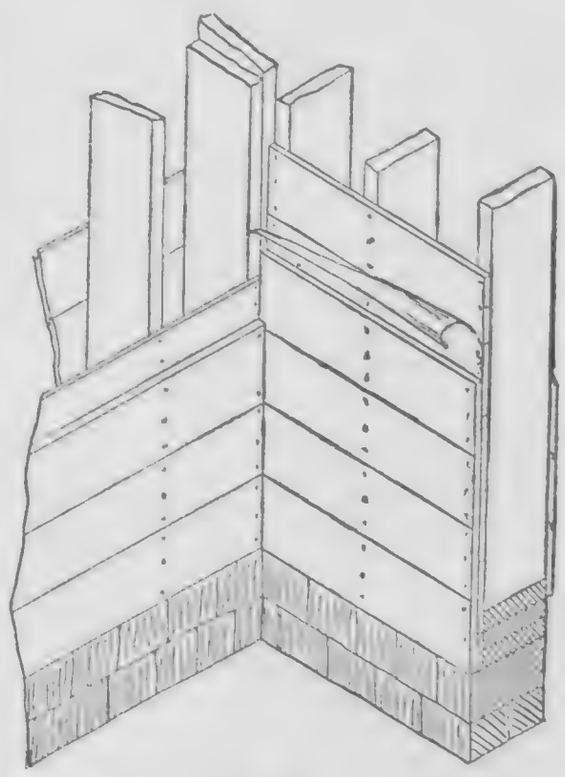


Fig. 127.

and should be dressed on one side, and is better if edged so that the joints will be reasonably tight. The lumber need not be of uniform width, but boards from eight to 10 inches wide are preferable. The inside of the studding is first covered with boards, laid horizontally (see Fig. 127), ten-penny nails being used; building paper is then tacked over the whole surface. Upon the paper, nail a second layer

of boards. Care should be taken to break joints, which can be indicated by chalk marks on the paper. This double lining, with paper between, must reach from the top of the silo to the bottom of the sill.

The floor of the silo need be nothing but the earth; as already mentioned, it is a good plan to fill in the silo until the floor is on a level with the top of the stone wall; a layer of straw spread on the bottom before commencing to fill with corn will prevent the loss of any silage.

The silo should be tied across the top at two or three places with joists, or a cheap cable; this latter may be made by twisting three strands of galvanized wire which costs about three cents per pound; five pounds will make a cable sufficiently long to reach across an ordinary silo. If the silo is more than 30 feet long the sills should be secured at two or three places with a cable of this kind, which, as it rests on the ground, is entirely out of the way. The modern silo will not tolerate partitions of any kind; they are relics of the past. There are several methods employed for cutting off the four corners of the silo. Perhaps the simplest plan is to bevel the two edges of a foot-wide plank and nail it securely in a vertical position in the corner. A dormer-window in the roof of the silo affords satisfactory means of getting the corn into the silo in the fall.

HOW TO PAINT INSIDE WALLS.

An examination of one of the Station's silos that had been treated with a coat of coal-tar shows that one season's exposure to the silage had not affected the wood in any manner. This coal-tar possesses another great advantage over ordinary oil paints, there being so much body to it that it readily fills up all cracks in the lining, and aids greatly to make the silo air-tight. It is one of the waste products in the manufacture of gas, and can ordinarily be obtained in any quantity at gas works at three or four dollars a barrel. As it comes from the gas works, it is a liquid of about the same consistency as molasses, and it is necessary to burn off considerable of the oil that it contains before it is in a condition to apply to a wall. This burning is a simple process: pour a quantity of the liquid into an iron kettle, set fire to a handful of straw and throw it in the kettle. The tar at once flashes up and burns with great heat. In order to tell when it has become sufficiently reduced, thrust a stick into the blazing kettle, then take it out and plunge it into a pail of cold water; when the tar clinging to the stick has become sufficiently cool to handle, take a particle in the hand and pull it out; if it will string out in fine threads a foot or more long, it has burned long enough, and the fire can be put out by placing any tight covering over the kettle. It usually takes from one-half to three-quarters of an hour to reduce the tar to the proper consistency. This preparation must be applied hot, and it will be necessary to swing the kettle up from the ground and keep a fire under it until the work is done. The odor and smoke from the hot tar are very disagreeable, but by taking small quantities of the liquid and applying it very hot with mops or whitewash brushes, the surface can be gone over rapidly.

HANDLING FODDER CORN.

The cost of putting corn into the silo depends largely upon the advantage we take of all the little devices that are calculated to lighten and reduce the labor of harvesting and drawing to the silo. By the use of the old self-rake reaper for cutting in the field, and conveniently equipped wagons for hauling, corn can be cut into the silo for from 50 to 75 cents per ton, and there will be no more hard work connected with it than there would be in harvesting a clover or grass crop. Many farms are supplied with low-wheeled wagons or trucks, but when silo-filling time comes there is usually a greater demand for vehicles of this kind than the ordinary farm can supply. A very simple and practical way of equipping the ordinary high-wheeled farm wagon is shown in Fig. 131. This rack was observed in use on the farm of Hon. Hiram Smith, in the fall of 1888. It is made of 2x8 inch plank, 16 feet long, one end of each being placed on top of the forward bolster, the other ends pass under the rear axle and are chained or bolted up tightly to it; these two pieces make the foundation of the rack. The wagon is coupled out as far as these planks will allow. On top of the plank are placed four cross-pieces, equally distant from each other, as shown in the figure. On these cross-pieces are laid inch boards parallel with the wagon. The load is, of course, placed wholly in front of the rear wheels, but the rack is sufficiently large, and low enough to enable a man to put on a ton of green corn from the ground without having to climb up on the load, or hand it to a second person to deposit.

RAFT WATER POWER.

Some two years ago the R. N.-Y. gave an account of a machine, for raising water that is somewhat used in Europe. This account was called out by a request for information sent by one of our readers in Missouri. This reader owned a farm situated on a bluff below which ran a swift-flowing stream. He desired to utilize the force of the stream for pumping water to the top of the bluff where it was to be used for irrigation. We give, at Fig. 124, the very old picture of a machine used for this purpose in Servia; our picture is re-engraved from La Nature. The working of the machine will be readily understood. It is a large, open raft which is securely anchored in the stream. The paddles are made of strong planks and are arranged so that they run around the wheels like the planks on a horse-tread-power. The force of the current makes the paddles revolve and the force thus generated may be communicated to a pump on the bank, which will lift water from the stream.

PRIZE SILAGE.

At the Ensilage Convention held at Cleveland, Ohio, March 6 and 7, prizes were offered for the best specimens of silage. We have received letters from the three gentlemen who won these prizes. These letters are given below. The R. N.-Y. feels confident that its readers will be interested in knowing how this prize silage was prepared. We may further state that Mr. W. H. Strong, who won the second prize on silage, also won the first prize on butter, while Mr. Finzel, who won the first prize on silage, won the second prize on butter. Both specimens of butter were made from the milk of cows that were fed on silage. The R. N.-Y. has received samples of the silage from Mr. Strong and Mr. Finzel. Both were of excellent quality.

FROM JOHN FINZEL, WINNER OF THE FIRST PRIZE.

I built my silo and part of my barn last year. The silo is built of wood lined inside with two thicknesses of lumber with tarred paper between. My studdings are 2x8, 18 feet long; but the building did not stand the pressure as it spread somewhat, consequently some of the silage became spoiled around the outside; but, after all, it was the cheapest feed I ever fed. I shall strengthen my silo this year with timber on the outside. The corn that I took to the convention was Leaming and was almost matured. It had been planted in drills from two to three stalks to the foot, 3½ feet apart, cut about the middle of September with a Tornado cutter in ⅞-inch lengths. Every load or every alternate load was leveled and tramped down. My silo is in two parts, 14x14 feet each, 18 feet deep. I put in 150 tons, covered it with tarred paper and about 18 inches of straw. I opened the first part on October 15, and fed 45 to 50 bushels a day to 20 head of cows and eight head of yearlings and two-year olds—all they would eat, besides feeding some to horses and colts and the cows ate little else, except chop and bran (night and morning) mixed, and some poor hay at noon. The silage lasted to January 12, and then I fed dry feed one week, but the cows shrank about one-fourth in their milk yield.

I opened the second half of the silo on January 19. More of the silage in this was spoiled around the sides and on top.

I am going to strip, lath and plaster my silo this season with cement. A plan of my barn is shown at Fig. 123.

Lucas County.

FROM W. H. STRONG, WINNER OF THE SECOND PRIZE.

I use Leaming corn for my silage. It was cut when it had commenced to glaze. I use a Ross Cutter—No. 13 A.—driven by a three-horse, crude-coal-oil Shipman engine. I averaged 18 loads per day, which was cut in half-inch lengths. I have three pits: two are 14x16 feet and 20 feet deep; the other is 10x16 feet and 16 feet deep. I fill about four feet, mix well while cutting, and tramp hard around the edges and corners. I let it stand until it warms up to 130 degrees, and follow this mode of filling until all the corn is in. Then cover it about four inches deep with green millet and tar paper, then with sawdust 10 inches deep. I opened the last pit at the end of February without much loss.

My silos are of wood, plastered, with a dead-air space. This is the second time of filling. It took two weeks to fill the pits, and as the corn ripened it kept sweeter. We cut the corn and hauled it directly from the field.

Lucas County.

FROM O. T. BATTLES, WINNER OF THE THIRD PRIZE.

Corn is the best crop for ensilage, producing more to the acre, both in weight and feeding value, than any other forage plant, and maturing when the busy season is over with other farm work. Corn comes nearer to making a complete ration for cattle than any of the other crops used for silage. To make the best silage it should be matured enough for cutting and shocking, which will be when it is well glazed. My silage last year was made mostly from the Southern white corn, planted the middle of May and cut the last of September. It did not ear much, having been planted too thick; eight quarts of seed per acre are quite enough. If much more is used there will not be much grain. I intend to plant the common yellow corn on one-half my ground the present year. If planted the last half of May it will be ready for cutting by the middle of September, and can be got out of the way before the time for commencing to cut the ensilage corn. It will not produce so much in bulk or weight to the acre as the Southern corn; but it will yield much more grain in this latitude. We aim to have our corn ground fitted in the best possible manner, thoroughly pulverizing the soil. I use a hand planter for putting in the seed, harrowing with a Thomas smoothing harrow about the time the blades break through the ground and until they are six inches high. The Southern corn will make a fair crop in a dry season if it be well tended. Two years ago I planted it in the same field and on the same day as the common yellow corn; it grew twice as high as the latter, but did not produce one-fourth of the grain. We cut the big corn with sickles, throwing it on the ground in bundles of a convenient size to handle. Some of it was drawn directly to the cutter and a part lay on the ground several days. A truck wagon with a hay rack makes a good rig for drawing corn to the cutter. The latter should be set on a platform so that the table will be of the same hight as a hay-rack, and one should drive so that the stalks can be unloaded directly upon the machine table. I used a No. 14 A Ross cutter with a 22-foot carrier, and for power a sweep that can be run with two or four horses. The whole rig with some improvements in the power, cost about $175. It could probably be bought for less at the present time.

My silo is built of wood with a concrete bottom; dimensions, 18x34 feet outside, with a partition through the middle, making, when finished, two pits 16 feet square (or nearly so), and 16 feet deep. I use 8x8 stuff for the sills, posts and beams; 6x8 for the plates, with studding 2x8 16 inches apart. It is double-boarded inside with building or tar paper between. For the inside I used cull pine lumber. The first boarding was put on horizontally and the inside perpendicularly, with two coats of gas tar put on hot to preserve the lumber from decay. The outside was covered with drop siding well painted. The whole building cost $350.

The corn was kept as nearly level as possible. After cutting in eight or 10 loads it was well trampled along the edges and in the corners, but not much attention was paid to the middle. Some of the corn was put in wet; but it did not seem to make any difference in the quality of the silage. When feeding I noticed a moldy streak through the pit, caused by the silage being left exposed to the air for four or five days during a rainy spell in the fore part of October. It was not spoiled but was not premium silage. A pit should not be left exposed more than three days when filling without adding fresh feed on the top, as there is a tendency to form a moldy crust on top, just as is sometimes seen in canned fruit. We cut about 100 loads of corn that would average about 2,500 pounds to the load, being about three weeks filling the silo. For covering I used a small two-horse load of straw to each pit, after running it through a cutter, and put some loose boards on top of the straw. I opened the last pit about January 20, and fed the last of the contents on May 5, feeding 40 milch cows once per day from the first of November until the first of April, and after that 20 from feed raised on 10 acres.

Cuyahoga County.

Field Crops.

COST OF HARVESTING TIMOTHY HAY IN 1888.

J. N. MUNCY.

The following data will be sufficiently accurate so that readers may form some definite notion of the expense in putting up hay: The field was accurately measured and contained 14 acres and four square rods. The hay was stacked on the ground in the center of the field. Only small loads were put on the wagons. The hay had been cut with a seven-foot broad-cut mower. All but about three loads was loaded with a hay-loader. An eight-foot hay-rake was used in connection with the loader, in consequence of the light yield per acre. The hay was not raked in light windrows as is so often practiced where hay-loaders are used. My loader will do about as good work whether the hay is in a swath, or light or heavy windrows. The raking was managed in this way: Rake on, say, swath No. 1 until a small amount has accumulated, then cross the adjoining swath at right angles and dump this as near the center as possible; then go back on No. 3 and dump on No. 4 and return. The raker will soon find the most economical way is to turn the rake horse. Hay yielding only 1,000 to 1,500 pounds per acre requires too long a time to take it out of the swath.

Six men and two teams helped in the work of stacking. Chores interfered with a full day's work, and hence I give the number of hours. Two men quit at four and the others at six P. M. The afternoon was very warm and so much was not accomplished as might have been under other conditions. The next forenoon from eight A. M. to 12 M. two men and one team were employed in gathering the scatterings, hauling in about two loads and putting on the "hangers." The teams were quite well-trained, and hence I used no driver on the wagon. The hay was taken from the stack in November, 1888, and weighed 21,400 pounds or 10 and seven-tenths tons. With these data the reader can assess any value for his own time and decide as to the cost of "putting up" a ton. Suppose we figure a team and man at the the usual price of 25 cents per hour.

The cost of stacking is as follows:—

34 hours of man	12½	$4 25
14 hours of team	12½	1.75
	Total	6.00

According to this, the cost of putting one ton of Timothy hay in stack, when it is pitched off "by hand," and loaded on the wagons with a hay-loader is a trifle more than 55 cents. If, now, you allow 40 cents per acre for mowing, the cost of harvesting these 14 acres was at the rate of $1.08 per ton. Assume, however, that the hay had been a good crop and yielded, say, three times as much as the field here given, the cost of harvesting would be greatly diminished. It would be about as follows·

Cost of mowing 14 acres at 40 cents	$5.60
" of stacking.....	15.24
Total	$20.84
Cost per ton	65 cents

In this latter assumption I have deducted the use of a man and rake and horse, assuming that to be 92 cents in the first case. There then remain $5.08, which, multiplied by three give the assumed cost of $15.24. If hay yields 4,500 pounds per acre it is a great loss in time to rake it in windrows, providing one has a good hay loader. If taken out of the swath it can be handled on the wagon much more easily.

A "25-cents-a-day boy" and myself put on five loads, weighing 6,720 pounds or 3.36 tons in 2½ hours. The hay yielded at the rate of 1.62 ton per acre and was taken out of the swath. Allowing $1.25 per day for the use of the hay loader and 25 cents per hour for man and team, the cost of loading is less than 30 cents per ton under these conditions.

Educational.

WHAT ARE THE AGRICULTURAL COLLEGES GOOD FOR?

PROF. D. G. PORTER.

Agriculture absolutely independent of agricultural colleges; apprenticeship and special training, indispensable in other vocations, unnecessary in farming; scientists and specialists confer benefits on agriculture but might make unsuccessful farmers; agricultural papers and reports of agricultural experiment stations tell farmers all they need to know about theoretical and scientific matters appertaining to agriculture; strong tendency of agricultural colleges to divert from farming promising young men who would otherwise be farmers; the chief value of an agricultural college course is to enlarge the mind and increase knowledge and culture; such colleges not designed for general culture; and not necessary for the advancement of practical agriculture; suggested changes of a radical nature; make them "schools of general culture for the winter months, and "farm schools" and practical experiment stations in summer; advantages of such a course; special courses for specialists.

The question of the true value and use of our agricultural colleges is one which is likely to be much discussed in the near future. It is not a question whether or not they are good. It may be conceded at once that they

are good in their way, and do well what they undertake to do. The present inquiry is, What are they good for? What relation do they sustain to the practical agriculture of the country? And what relation do they sustain to the general educational interests of the country?

In the first place, we all understand that agricultural colleges are not necessary to agriculture. Agriculture existed and flourished thousands of years before agricultural colleges were ever thought of. Plants will grow whether we understand the method of their growth or not. They will feed themselves from the earth and air whether we understand the science of plant food or not. It has been known for ages that animal manures increase the fertility of the soil, and the general principles of cultivation have also been long understood. A few simple facts and principles like these constitute the basis of successful agriculture, and experience and common sense will furnish the best rules for applying them. Agriculture, then, is absolutely independent of the agricultural college.

We cannot say the same of surgery and medicine, or of law, or of theology, or of engineering, or of mechanical construction. Everything that can properly be called a profession or trade depends on scientific attainment or acquired skill, and an apprenticeship of some kind must precede capable work in every kind of mechanical occupation. The farmer's boy can scarcely fail to get a sufficient apprenticeship in farming on his father's farm; and, beyond this, energy, industry and good judgment are his best resources, though it must be admitted that successful agriculture makes an unusual demand upon their natural gratification. A good farmer must at least have good common sense.

But given this apprenticeship and these natural qualifications, what can the agricultural college do for the farmer's son? It is an easy inference and an easy mistake to suppose, because a law school is good to make lawyers, and a medical school is good to make doctors, that an agricultural school must be good to make farmers. And it is doubtless true that some of our agricultural colleges were founded upon this folly, implied if not expressly stated in the terms of the Morrill Land Grant Act.

There need be no question that science has done much for agriculture. It was a considerable gain when the elements of plant food were discovered together with the differing proportions required by different products, resulting in the preparation of special and general commercial fertilizers. But this was done by the chemist in his private laboratory, or in connection with a university proper, not in an agricultural college; and when the facts, however discovered, are once known, it does not need an agricultural college to teach them. There has not been so much gain from the analysis of soils, and all the desirable results in this direction can be obtained by the intelligent farmer through simple experiments on his own land.

Agriculture owes much to the entomologist; but if the said professional will tell us the natural history of the potato bug and flea beetle and other noxious insects so as to expose their vulnerable points, and if the chemist will tell us how and when to dose them, that is about all we want to know, and we can get all this from the published reports and the agricultural papers.

We can say about the same for the botanist, but probably not so much for the professor of veterinary medicine. His skill is not so easily communicated. Still if a farmer's son knows enough to take decent care of his animals, he would probably forget all he may have learned of veterinary medicine at college, before having an occasion to use it, and beyond a few simple remedies, would be foolish to trust his own skill if he did not.

If he wants to become a veterinary surgeon, or a professor of agricultural chemistry, or an entomologist, or a botanist, that is another thing and I have nothing to say about that. But to suppose one must become an adept in all these sciences before he can be a successful farmer, is nonsense of no ordinary kind. And to suppose he will be much more successful as a farmer because of such knowledge of these things as he will get in an agricultural college, looks very much like nonsense of the ordinary kind. All that farmers need to know of these matters they will easily get in the reports of experiment stations, and especially in the agricultural papers.

Having thus shown what the agricultural colleges are *not* good for, let us now consider what they *are* good for. If a young man studies botany at an agricultural college he unquestionably derives a certain benefit from the study, though he may never apply it in his business. He will get an educational, if not a practical benefit from it. He acquires a more intelligent understanding of things with which he is in daily contact. He learns to observe, to appreciate, to remember, to classify; and his mental power generally is enlarged by the study. He is a better man if not a better farmer; and he will enjoy his existence more and have a higher value and greater influence among his fellow men. The same may be said if he studies chemistry, or even bovine anatomy. His intelligence and mental capacity are developed by his efforts in all these branches of study. He will not be a much better farmer, but he will be a good deal more of a man.

Is it not a good thing, then, for a farmer to send his sons to an agricultural college? Of course it is a good thing; but generally, it is by no means the best thing; and a thing good in itself may become relatively bad when we compare it with things that are better. The chief value of study in an agricultural college, is, as we have seen, its effect in general culture; and for general culture other courses of study are vastly better, and might and should be equally accessible. Indeed the agricultural colleges were not established for general culture, and would never have been established at all but for their supposed beneficial relation to practical agriculture.

They are, to say the least, not necessary for the latter purpose, and are by no means the best for the farmer, being in this latter respect in no wise comparable to the usual academical course in other colleges. There is indeed one view in which the agricultural colleges are positively detrimental to agriculture. As at present managed, their influence is to take young men away from the farm, who would otherwise have been farmers. Take a boy from his father's house and farm at the period when his habits and tastes are most rapidly forming; dress him up like a gentleman and send him to college to mingle for three or four years with other boys similarly treated; even in vacation when he comes home as a visitor, coddle him with the notion that he has been studying so hard that he needs all the time for rest and recreation—for that is what vacations are for—and what have you done to make a farmer of him even if he has been spending these three or four years in this gentlemanly way at a so-called agricultural college? Not much surely. But you have done a good deal to give him a disposition to keep up his gentlemanly habits, and to keep away from the farm forever.

Now this is not a mere fancy sketch. It is rather a representation which can be backed up by solid facts. Of the nearly 300 graduates reported up to the commencement of the current college year at the Massachusetts Agricultural College, less than one quarter have devoted themselves to agriculture in any of its branches. Now it is a fair presumption that most of the young men intended to become farmers; else why should they go to an agricultural college? And the college instead of helping to make them farmers, actually took them away from the farm, and sent them into other pursuits. Of those who took only a partial course it is probable that a much larger proportion returned to the farm. Probably some of them staid at the college long enough to decide that what they were learning would be of little use to them as farmers, and so wisely went about their business without further delay. But is this the advantage to agriculture which our representatives in Congress expected when they devoted so many millions of the people's money to establishing agricultural colleges? Most assuredly not.

Well, it will, of course, avail little to mourn over or find fault with the past. People have generally to learn in the school of experience, and we shall not deserve such credit for wisdom if we fail to learn something from an experience as expensive as that which the history of our agricultural colleges furnishes. What then ought we to do? I will give my opinion as directly and briefly as possible:—

First. Turn the agricultural colleges into schools of general culture, assimilating their courses of study largely to the academical courses in regular colleges. If you cannot learn agriculture at a college, there are other things you can learn which will be even more important.

Secondly. But do not take the boys away from the farm even to learn these things. Let them understand that they can be just as much gentlemen, in the true sense, on the farm as in other pursuits, and that culture is just as useful and just as ennobling there as elsewhere. To this end let the college course be arranged so as to consist of at least four to six-months' winter terms, leaving the summers entire for other uses. The advantage of this arrangement would be that the boy would not be taken away from the farm long enough to acquire a distaste for it and a disposition to lead an easy, effeminate and, as he thinks, gentlemanly life. In fact, he would not be taken from the farm at all. He would be there every summer, and all summer long, helping his father with the extra zest and the acquired manliness that his winter's opportunity had given him. His tastes, habits, ambitions and opportunities would still be on the farm. Another and a very great advantage would be that the expense of a college course by this method would not be more than a quarter as much as by the usual method, and the college would be accessible to four times as many young men. Allow a boy fair wages for his work during the summer, and his savings would generally pay his expenses at college during the winter.

Thirdly. Turn the institutions now called agricultural colleges into farm schools and experiment stations during the summer. In these let every branch of agriculture be carried on and illustrated in the best possible manner, and let the work be done of preference, and, as far as possible, by young men who desire to become proficient in practical agriculture. Let these young men be paid as much as other men would be for the same amount of work.

There is much to be learned in market gardening, fruit culture and landscape gardening which cannot well be learned from books, and of which the ordinary farm furnishes no illustration. Dairying and the care of stock should also be exemplified according to the most approved methods, as also general farming in all its branches. To carry on all these departments of agriculture extensively, would furnish opportunity for the employment of a great many young men; and all who enjoy the privileges of the school should be expected to labor at least five hours a day and longer if they will. The other part of the day should be devoted to inspecting the various operations of the farm, garden and dairy with note-book in hand. No study should be required and no recitations be heard. The sole literary exercise should be one lecture a day, after dinner or before supper, devoted by the professor to an explanation of the reasons and principles of what is then going forward in the department under his charge. One season from seed time to harvest at a farm school of this kind, would be worth tenfold more to agriculture than a full four years' course at the ordinary agricultural college.

If any of our young men desire to become specialists either in agricultural chemistry, or botany, or entomology, or veterinary medicine and surgery, it would doubtless be well that provision should be made in the agricultural college for students of this class, unless it might better be done in the university proper; but such courses of study should be especial and optional, and should not be included in the regular course.

If our agricultural colleges could be conducted upon this plan, they would be of incalculable benefit both to agriculturists and to agriculture, and we should have no occasion to regret the vast sums which have been expended in their foundation.

New Haven County, Conn.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

BEANS AND BEAN VINES FOR STOCK.

Several Subscribers.—We understand that in the bean-growing sections of Western New York farmers feed quantities of beans to stock and that bean vines are also considered valuable as stock food. Will the RURAL tell us about it?

ANS.—Some idea of the magnitude of the bean-growing industry in Western New York may be gained from the following note from a single firm in Genesee county:

"We pick out from 2,000 to 3,000 bushels of damaged beans in the course of a year, which we sell to farmers for feeding purposes. These beans have to be picked out, one bean at a time, which will give some idea of the amount of labor required to accumulate this quantity of culled beans. We usually handle about 50,000 bushels a year, and employ from 50 to 75 hands hand-picking these beans from September 1st to May 1st. We have several bean-planters with phosphate attachments, which we rent to the farmers in the spring, and also several bean-pullers, which we rent to them in the fall, to assist in harvesting their crops. The culled beans are usually sold at 30 to 40 cents per bushel, which by making allowance for the quantity of waste material, such as stones, lumps of dirt, etc., makes the cost to the farmers about the same as corn would cost them. Many farmers prefer a good fair quality of damaged beans to corn at the same price. They are fed to sheep, in the natural state, or ground and mixed with corn meal, and fed to cows or boiled and fed to hogs, making excellent feed in all cases."

As everybody whose ancestry traces back to New England or New York State knows, the bean is one of the most nutritious forms of vegetable food. American agriculture would be considerably advanced if farmers at the West would substitute beans for a portion of their pork. Using beans as food for stock is a new idea to those who live outside of the bean-growing districts. It is the RURAL'S business to secure information. So we sent the following questions to a number of farmers who ought to be able to answer.

1. What kind of stock will eat beans?
2. Do you grind or cook them?
3. What quantity can you safely feed?
4. How do they compare in value with grain?
5. What do you feed with them?
6. What stock do best on beans?
7. Would it pay to grow beans exclusively for feeding purposes?
8. Are the vines of any value?

Here are the answers:

FROM ADDISON TERRY.

I have never fed beans to anything but hogs and store sheep. They were whole and raw, but one must be careful in feeding, for unless they are fed in small quantities, they will cause the scours. I think there is not much good in them for sheep; but there is no doubt that they are good for cattle. Milch cows increase their milk yield wonderfully if they start with about a quart mixed with corn-meal, and in one week they will eat them without the meal; the feed can be increased to eight or 10 quarts a day without doing any harm. I start hogs like cattle. After one week or 10 days I can give them all they will eat. Beans are worth half as much as corn as feed for hogs. In all cases they must be cooked as well as if intended for the table. Then I think one bushel of them is as good as one bushel of corn as feed for hogs, but boiling them takes time and wood or coals. For boiling them I have a kettle that holds 120 gallons standing on a kind of stove. It is under a shed on each side of which are the hog-pens. The water is conducted into the shed close to the kettle in a two-inch pipe so it is very handy. I fill the kettle half full of beans, then fill up till it is about two-thirds full of water and beans; let them stand overnight, and in the morning the kettle will be about full. I then build a fire and boil them until they are done, which will be in about four hours. If mixed with shorts, middlings or meal, it would be an advantage; but owing to the trouble in preparing them properly, feeding them hardly pays unless one has the right sort of appliances for the work.

Genesee County, N. Y.

FROM S. TAINTOR.

1. Beans are a favorite feed for sheep, both the seeds and the vines. 2. Without cooking or grinding. 3. A pint a day can be fed safely to a sheep. 4. They are equal to, I think, and more "hearty" than corn. 5. When I feed to hogs or horses I grind them, using two bushels of oats to one of beans—feeding three quarts of the mixture at a meal. 6. Sheep. 7. Marketable beans are too valuable to feed. 8. Cows and sheep like the vines and eat them up clean.

Livingston County, N. Y.

FROM GEORGE W. EASTMAN.

1. Sheep, cows and hogs.
2. To sheep we feed whole beans, while we cook them for hogs.
3. We begin by feeding lightly and after a few feeds, we feed them the same as corn.
4. They are richer than any of the grains.
5. We generally mix them with corn.
6. Sheep.
7. It would not.
8. The vines make an excellent feed for sheep or cows in connection with hay or straw. By refuse beans I mean beans the weight of which will not shrink more than six pounds per bushel if the stones, dirt and rotten beans are all removed. The value of refuse beans for feed depends upon the relative prices of beans and corn per bushel.

Wyoming County, N. Y.

FROM GEORGE F. LOWE.

1. Sheep, cattle, hogs.
2. Whole for sheep; ground for cattle; boiled for hogs.
3. One pint to four sheep, whole. For cattle

they ought to be mixed in the proportion of one-fourth of beans to three-fourths of bran or corn. Fattening hogs should get all they will eat cooked; for store hogs they might be profitably mixed with bran or corn, half and half.

4. They are worth more, pound for pound, than any of the grains.

5. Bran or corn.

6. Sheep and hogs.

7. No.

8. The vines or pods are worth as much as good hay, or more, for sheep and nearly as much as hay for store cattle.

The subject is one that might be profitably discussed, as a good deal might be learned by experience in feeding the beans and vines. Beans are never used as feed except they are damaged by wet, or heating, or some similar mishap. But beans should always be screened and hand-picked before they go to market, and the beans that are screened out and those that are picked out make feed. They are a stronger feed than corn or rye, being more nutritious than either; but they require more care in feeding, because if too many are given they invariably cause scours, and then they would be of little or no value; therefore they must be always given in moderate quantities, except when cooked and fed to hogs. Then they may be fed very liberally with the best of effect.

Genesee County, N. Y.

FROM F. A. HOGMIER.

1. Sheep, hogs and chickens.

2. I feed them whole to sheep and cook them whole for hogs and chickens.

3. I start with a very small ration, say, five quarts to 50 fattening sheep, and gradually increase until they get nearly all they will eat.

4. They are as good for feed as ordinary grains if they can be bought at the same price. Split and poor beans can be bought of dealers at a-half cent per pound. These are the only kinds we feed, as good beans are worth too much money to be used as stock feed.

5. They may be fed alone or mixed with anything else.

6. Sheep.

7. No—the beans are worth too much per pound in the market.

8. Yes—they are much better than hay and grain for sheep and cattle; but they must be fed very moderately at the start as they are very laxative. Beans may be ground and mixed with other grains at the choice of the feeder. The pods are very valuable for sheep which will leave the best of hay and eat the pods as though they were grain. My sheep have had nothing but pods all winter—not one pound of grain—and they are in much better condition than they were in the fall. The pods are fine feed for breeding ewes. When fed on them they always have plenty of milk. Beans are the most profitable crop we can raise. Feeders only use poor beans and splits from the pickers' table. There are thousands of acres grown here in Western N. Y. The yield is from 15 to 30 bushels to the acre.

Livingston County, N. Y.

FROM J. H. KENYON.

I saw in the RURAL a short time ago the statement that most sheep would eat beans whole, and then a ration for sheep of 100 to 120 pounds was given. Isn't this ration too great, or am I feeding my sheep too little? I have a flock of all ages that weigh from 120 to 175 pounds each (actual weight, no guesswork). I feed them half a pound of corn daily with what straw they can pick over—mostly barley straw—and this is all they get until they lamb and they are fat and healthy. Some of the single lambs weigh as high as 12½ pounds at birth, and twins 15 pounds, and the only trouble I have with their milk is in keeping their udders from becoming inflamed before the lambs get old enough to take the milk. During the past winter one ewe lost one side of her udder through neglect on my part after the lamb was one week old. In the last two years my lambs gained six pounds in seven days. I have not weighed any this spring, but they are as good as any I have had. About sheep eating beans—I had a few damaged ones which I mixed with the corn, and the only objection the sheep made was there was too much corn and too little beans.

Onondaga County, N. Y.

THE FLAT SCALE INSECT.

J. A. W., Portland, N. Y.—What are the insects on the inclosed orange leaf? By careful washing and hand-picking I can keep them only partially under.

ANS.—The insect is the common Flat Scale (Lecaninum hesperidum). It is a very common greenhouse pest of the North, and further south lives out-of-doors on a variety of trees and plants. At Washington it is one of the commonest greenhouse pests, and at the same time it infests the English ivy in great numbers out-of-doors. Like other scale insects, the female is wingless and degraded and moves about only during the early part of its life. After attaining full growth it remains in one position, inserting its beak into the plant and pumping up sap. The female undergoes but very slight metamorphoses and the newly hatched young is comparatively long-legged and is perfectly active; with each successive molt its limbs become shorter, but it changes little in general appearance. Contrary to the usual rule in bark-lice, the male is also wingless. For many years the latter sex was unknown. The best remedy is the application of a dilute kerosene soap emulsion made according to the Hubbard formula which has been often published in our columns.

IMPROVING A LAWN, ETC.

P. O. M., Galesburg, Ill.—1. The stand of grass on my 6x12-rod lawn is pretty good, though not so good as I want it to be. How can I improve it without digging up the ground, and what is the best time to do it? 2. Ought hard maple trees planted three years ago, and now seven feet high, to be trimmed?

ANS.—1. We should use chemical fertilizers—bone, blood, ashes, kainit or muriate of potash. Suitable combinations of these are put up by all fertilizer firms. Sow at the rate of 300 pounds to the acre now. In June sow again at the same rate during wet weather. In August sow again. It would be very desirable to mix the fertilizer thoroughly, before spreading it, with at least an equal amount of soil. This would insure an even distribution and prevent scorching in places. 2. No, not unless the branches interfere, or a lower, more stocky growth be desired.

Miscellaneous.

I. B., Blockville, N. Y.—The stock of Idaho pears is controlled by J. H. Evans, Lewiston, Idaho.

J. H. C., Jersey Shore, Pa.—The fish commissioners for Illinois are, N. K. Fairbank, Pres't, Chicago; Dr. S. P. Bartlett, Quincy; George Brenning, Centralia.

J. H. C., West Rutland, Vermont.—Is Breed's Universal Weeder valuable for weeding small corn where there are some small stones?

ANS.—We have never used this tool, but those who have used it are quite enthusiastic in its praise.

M. N. McN., Kirkwood, Ohio—When and how should grape-vines be girdled to induce the fruit to ripen early?

ANS.—It is only necessary to tie a strong piece of twine tightly about the cane to be girdled below the grapes. Do it when the grapes are as large as peas.

J. H., Kingston, Ill.—Mr. Terry says: "Keep the cultivator in the potato field until the tops fall down." A prominent seedsman and potato-grower in a friendly letter says: "Stop cultivation when the buds for blossoms appear." What is the RURAL'S opinion on the subject?

ANS.—The R. N.-Y. says also "Keep the cultivator going until the tops fall down"—but cultivate shallow.

W. T. McC., Blue Ridge Springs, Va.—1. What is the best breed of chickens, good health, good layers, good sitters, careful mothers, early maturity, good size and quiet disposition being the factors in the choice. 2. What is the most favorable season to procure eggs for hatching from dealers?

ANS.—1. We should select either Wyandottes or Plymouth Rocks. You will have to try both breeds in a small way before you can tell which is the better for your use. 2. You can start now.

S. N., Romeo, Michigan.—What is the best hand force pump for spraying fruit trees, and what chemicals are best adapted as insect destroyers on the apple and plum trees, small fruits, etc.?

ANS. 1. The Field force pump made by the Field Force Pump Company, Lockport, N. Y. Rumsey & Company, Seneca Falls, N. Y., make good spraying pumps. Paris-green or London-purple is generally used in about the proportion of one pound to 200 gallons of water for spraying apple, plum and other trees. For spraying currant and gooseberry bushes to kill the currant worm, white hellebore is generally used, a table-spoonful to a pail of water.

L. E. C., Bainbridge, Ohio.—1. What is the best implement for the level cultivation of potatoes planted according to the trench system? 2. Is harrowing with an ordinary straight-toothed harrow recommended, or does doing so pack the earth about the potatoes in the trenches? 3. Do suckers from plum trees bear fruit without grafting or budding?

ANS. 1. We use a Syracuse cultivator. It has horizontal blades in front and a shallow hoe behind. A cultivator to work just as we want it for the shallow cultivation of corn and potatoes is yet to be made. 2. We prefer for the preparation of the land the Cutaway harrow. This pulverizes the soil without packing it. 3. "Suckers" are much the same as other branches, except that they usually issue from the interior of the tree and are tardy in bearing.

DISCUSSION.

WATER IN AMATEUR GARDENING.

"AANI," STATEN ISLAND, N. Y.—I have found an ordinary garden or street sprinkling hose exceedingly useful in fruit, flower and vegetable culture. I have sufficient hose to reach over two lots—three lengths. I bought it, second-hand, cheap. It has more than paid for itself as an insect or pest exterminator. I use at times a spraying nozzle, and at other times a single stream nozzle. When the borers bothered my apple trees, I cut the bark, fastened the nozzle of the hose close to the hole, and let the water fly in there for an hour, taking care of itself. The borer never appeared after that wash-out. When the asparagus beetles get on the plants I start the hose up once a week, and give them the full and close benefit of the flying water. The spraying nozzle is held close to the infested parts of the plant. The force of the water I always send in an upward direction from a position close to the ground. The stream or spray strikes all insects unawares. They usually depend on the shelter of the leaves for protection from heavy rain storms. The water from the hose, "knocks them silly," as the boys say. I find that the asparagus beetles are carried 10 to 20 feet from the plant, and there they lie very limp on the ground. Of course, the beetles are not all killed; but the young ones never get back, and so by using the hose once a week I give the plants needed water in dry times, and have healthy-looking bushes. I let the water fly full vent, as close to the plants as they can stand without danger of breaking. The green fly, red spider and rose bug also bother me little after the hose has thumped them heartily. It keeps my rose-bushes clean and bright-looking. The tent caterpillars go the same way. I catch their colonies when very young, put the sputtering water on them, and soon the web is gone all but a tatter or two. The green currant worm, (not borer, but leaf-eater,) goes whizzing off the bushes under the same flying application. Low or dwarf peach trees, pear trees or plum trees are materially cleansed by an occasional "rapid-transit" ducking of their boughs. How the strawberry plants do thrive and grow under a thorough, persistent soaking from the spraying hose! The strawberry crops of none of my neighbors begin to compare with mine. I pick them four to a pint, seven inches around—both Sharpless and Downing. They have a heavy but friable soil, and row culture. The runners are nipped until August 15, and only enough young ones permitted to grow to replace superannuated veterans. The second best thing they get is commercial fertilizers, and the best of all is water, water, water! And then more water after that.

I do not pay much for this water. I apply a patent rubber cap to the faucet, which keeps the water running with good force, and so I don't pay $10 per year for water rent on a screw hose faucet. The attachment costs 50 cents and can be bought in any rubber goods store. Raspberry bushes treated liberally with water do not seem to yield so fatally to the new form of blight that threatens this delightful fruit.

I take good care of my hose and it has lasted three years already. Of course, farmers don't have public water-works to draw on; but thousands of market gardeners do. The same is true of wealthy city merchants' places in the rural or suburban districts. Just let them make nature's great element, water, their ally in fighting plant and shrub insects, and the results will be pleasing and profitable.

I forgot to say that the drenchings given the asparagus, while killing off all young beetles, cause a remarkable growth in stalks. The soaking is wonderfully good in dry, scorching August.

A grape-growing neighbor of mine has a surprise for the horticultural world next year in the form of a magnificent grape. The fruit is red and as big as a Shell-bark hickory-nut. There are few on a bunch, but the bunches are big. To eat it is to get grape jelly in a raw condition—nothing less. Beneath the skin there is a pulp that is thick, soft and saccharine almost, in its delightful flavor. I would not toss up a cent between eating a bunch of these grapes and the most expensive hot-house pets. The vine is a trifle woody, but no more than Pocklington, but the grape—well, I'll let the RURAL speak of it next autumn, after judging of its merits by "sampling" a specimen bunch.

ONIONS FOR STOCK.

T. D. CURTIS, CHICAGO, ILL.—On page 296, appear some comments by correspondents on the subject of feeding onions to stock, and the RURAL calls for other facts about feeding onions. When I was waiting for the train, last winter, after attending the Wisconsin State Dairymen's Convention, I fell into conversation, at the depôt, with a man who said he was engaged in gardening, and in conjunction with this ran a small dairy. He said that a few years since he had a considerable patch of onions that did not bottom well and were too small to market. When the other crops were harvested these were left and he turned his stock in, not thinking much of the onions. To his surprise, these were about the first thing they fell to eating. His milch cows among the rest indulged in a diet of onions. As was expected, the onions tainted the milk and the butter made from it. Marketing it was out of the question. So he suggested that each member of the family should begin the meal by eating onion. They did so and experienced no annoyance from the flavor of the milk or butter. As time rolled on, he thought the onion flavor in the butter diminished, and he ventured to take one tub of butter to market. He said nothing about the onions, but requested that the butter be carefully tested. It was pronounced fine and all right. The next time he went to the village, the buyer inquired if he had any more of that fine-flavored butter to sell. A lady friend, who was very particular, had some of the same make of onion-flavored butter, and soon called for more. A year or so later, he had several hundred bushels of small onions that he could not sell. He gathered them and fed them to his cows heavily. He went on selling his butter to his village neighbors and all spoke of the fine flavor of the article. Since then he uses his unmarketable onions in this way. He seemed to think that an occasional taste of onions by the cows manifests itself in the flavor of the butter in a disagreeable way; but that full and regular feeding only hightens the flavor without making it at all unpleasant. This is the first time I ever heard of feeding onions to cows.

BLACKBERRIES AND SEED POTATOES.

M. M., MEDWAY, MASS.—The Erie and Minnewaski blackberries are not hardy in this climate. I have had the Erie through two winters and the Minnewaski one winter, and nearly every cane of each kind has been killed to the ground. Had I known the truth as to the hardiness of these two blackberries two years ago, it would have saved me $25, which I was induced to invest on the assurance of those who have the plants to sell. I begin to think the word of no nurseryman can be depended upon concerning stock which he has for sale.

I see, in the RURAL of May 4, some remarks about keeping potatoes in cold storage to prevent sprouting. I have a cellar about 12 feet deep under my barn. It remains very cool late in the spring, so that potatoes seldom sprout much in it until late in May. I find that in the spring some of my potatoes are black inside. Such tubers have little or no vitality. Is the bad condition of some of these potatoes caused by a lengthy subjection to too low a temperature? The thought was first suggested to me on observing the difference in condition, one year ago, of the two parts of a lot of Polaris potatoes, some of which were stored in my cellar and the others in a neighbor's cellar. Many of those in my cellar were black inside, while those kept in the neighbor's were all sound, though some had sprouted.

FEEDING ONIONS TO STOCK.

F. H., WAYNE COUNTY, N. Y.—Mr. Whittemore, who in a late RURAL wrote about "Onions for Stock," cannot be very well posted on prices, if he never knew the price of onions to fall below 20 cents per bushel. In this county thousands of bushels of onions were buried or otherwise disposed of during the last winter and spring, there being absolutely no sale for them at any price. In the New York market large quantities were sold for 25 to 50 cents per barrel, less than enough to pay for freight, commission and packages. What Mr. W says may be true of Chautauqua county, but it certainly is not true of this county, or of any onion-growing district. In regard to "onions for stock," I have had no experience in feeding, though I know that stock will eat them. They are considered healthful and nutritious as human food, and why they should not be the same for stock feed I do not know. Onions are very healthful food for poultry, which soon grow very fond of them. They will prevent gapes in chickens, if fed chopped in the soft feed twice a day. They must, however, be discontinued

a few days before the birds are killed, or the flesh may be unpleasantly flavored.

"ANON" ON SEEDSMEN.

"SEEDSMAN"—"Anon" mentioned the instance of a seedsman advertising Northern-grown seed, who last fall purchased his seed corn 200 miles farther south. Well, what of it? Supposing said seedsman to be located in the far North, a difference of three degrees would not make his corn other than Northern-grown. I chance to know of one seedsman who has habitually raised his own field corn for many years, but owing to the failure of the crop by the frosts of early September, he could not get good seed nearer than 200 miles south of him the present season. Should a charge of dishonesty be brought against him? The fact that requires but a modicum of common sense to recognize is, that no seedsman who advertises Northern-grown seeds intends by that to lead the public to believe that he raises varieties that cannot be raised in his locality without costly petting, either as a rule or by reason of an unpropitious season. I agree with "Anon" that where vegetables do best there probably is the best latitude to raise seed from them. This rule would carry sweet corn, flint corn, potatoes, squashes and some other vegetables well into the North.

"THE LENGTH OF A PIECE OF STRING."

G. W. D., BIRMINGHAM, CONN.—Six grade Jerseys, two-year-olds, gave the following results last spring during the second week's milking, on second-quality hay together with one quart of meal and two of bran per day:

No. 1.	No. 2.
6 pounds of milk.	4 pounds of milk.
9 per cent. of cream.	15 per cent. of cream.
9 ounces of cream.	8 ounces of cream.
6 ounces of butter.	6 ounces of butter.
No. 3.	**No. 4.**
6½ pounds of milk.	10¼ pounds of milk.
8 per cent. of cream.	8 per cent. of cream.
10 ounces of cream.	8 ounces of cream.
7 ounces of butter.	7 ounces of butter.
No. 5.	**No. 6.**
6¾ pounds of milk.	7 pounds of milk.
16 per cent. of cream.	6 per cent. of cream.
6 ounces of cream.	6 ounces of cream.
5 ounces of butter.	4 ounces of butter

Compare these amounts, percentages and results, and well may the RURAL say: "What is the length of a piece of string?"

COLORING BUTTER.

W. P. W., NEW YORK CITY.—In the RURAL of May 4, it seems to be editorially assumed that the practice of coloring pale butter, "so as to cause it to appear of a golden yellow," is either a commendable one, like painting one's house, blacking one's boots, etc., or else of no consequence except to the individual colorists. If each manipulator consumed his or her product, then these conclusions would be correct; but when the product is intended for sale for others to eat, the case is entirely different, and the illustrations mentioned no longer illustrate. The practice of coloring butter and cheese is dishonest—just as much a fraud as selling butterine, or oleomargarine, for pure butter. The only object in doing it at all, is to deceive the purchaser and make him pay a higher price than he would pay for the uncolored product. When I purchase butter or cheese, I most emphatically object to having it mixed with dyestuff, harmless or otherwise, and I do not think I am alone in my objections.

SAW-DUST AND POTATO SCAB.

E. S. G., GENEVA, N. Y.—I see that "W." of Tyrone, Pa., states in a late RURAL, that he found that saw-dust after having been used as a mulch for raspberry plants, appeared to protect potatoes from the scab, while a Montreal correspondent, writing previously, had occasion to believe that saw-dust tends to increase the scab. Last season a large number of materials were tested at the New York Agricultural Experiment Station in the hope of finding a remedy for the scab. Potatoes grown with saw-dust in the hills were more injured by this disease than those receiving any other treatment, and were much more affected than those receiving no special treatment. The saw-dust in this case, however, was fresh. It may be that saw-dust that has been exposed to the weather a few months would act very differently. I have known of others who claim to have used saw-dust with success. I hope that readers of the RURAL who can obtain old saw-dust will make the experiment.

PROTECTING PLANTS FROM THE CUT WORM.

H. T. L., BRIGHTON, CAN.—On page 295—Fig. 103—I noticed a device for protecting cabbage and cauliflower plants while young from cut-worms. The only fault I have to find with this device, is that it would require too much time to make a sufficient number. The following is a device I have used very successfully for all kinds of young plants requiring protection from cut-worms. Take a piece of 2x4-inch scantling (basswood is the best, for it decays as soon as it is plowed under) set a good sharp plane to cut a pretty thick shaving, say one-sixteenth of an inch. This will naturally curl. Make as many as required. Have a dish of tar ready; dip one edge of the shavings into the tar and run them on a stick. Place one over each plant, and give it a little twist and it will work far enough into the ground to keep it in place. The cut-worm may climb up the fence but it won't pass the coal tar. A good boy will dip and set 1,000 or more per day.

INDEBTEDNESS OF LAND-GRANT RAILROADS.

S. B. H., CRAWFORDSVILLE, IND.—I am interested in the articles contributed by Mr. Chamberlain. The same idea could be continued in reference to the land-grant railroads, and the Union and Central Pacific. Those roads will owe the people of the United States at least $125,000,000 by the time the bonds become due. They are already at work in Congress to extend the time of payment 50 years at two per cent. The farmers of this country should insist that those roads shall go into the hands of a receiver when the time of payment to the Government shall have arrived, if they are not able to discharge their debt, which they will not be.

THE WILLOW TWIG APPLE.

J. J. B., TITUSVILLE, N. J.—When we have a good thing in the fruit line we ought to let our neighbors know of it. As we have this in the Willow Twig I wish all to know; 1, that the fruit is medium or perhaps below in quality for dessert, but good to cook; 2, that the tree is a good early bearer of fair-sized apples, a good but not a strong grower; 3, with ordinary care the apples are now in good condition for market, and do pretty well for eating without cooking. It is an apple sure to pay if planted in New Jersey or in similar soil and climate whether used at home or grown for the market. Good apples are not very plentiful at this time of the year—May 6.

HERE'S A GOOD JERSEY.

A. C. W., SCHRAALENBURG, N. J.—The RURAL'S articles on "how many pounds of milk are required to make a pound of butter," attracted my attention, so, on Saturday, I weighed the night's milk from my five year-old Jersey cow, and set the 17 pounds in two tin pans in a cool cellar. On Monday afternoon my wife churned the cream, (the milk was still perfectly sweet,) and made 19 ounces of as fine butter as I ever saw. This cow was fed on Saturday morning with two quarts of mixed oats and rye meal and bran, about equal parts, and had good pasture with plenty of well water.

ANTI-CRIB-BITING.

L. W. R., BENTON HARBOR, MICH.—The R. N.-Y. of May 4, contains at least three inquiries about cures for crib-biting in horses. A neighbor of mine, instead of using a halter on his horse, buckles a strap tightly around the neck and the horse is unable to suck wind while he has it on. In this case the strap is deeply imbedded on the top of the horse's neck, but this might be prevented by using a zinc collar-pad, which would protect the top, while the necessary pressure is brought on the windpipe.

What Others Say.

SAMPLES.

THE BREEDER'S GAZETTE remarks that when Short-horn bulls, unceremoniously pulled away from the maternal dugs in Aberdeenshire, hustled 3,000 miles by sea, quarantined for 90 days, railroaded another thousand miles, and sent into the sale ring at the age when they would appear at their very worst, even had their treatment been of the very best—can be sold at an average of about $400 per head there would seem to be some very clearly-defined public sentiment upon the subject of the future of the Short-horn in the West.....

JOHN GOULD, alluding to the proceedings of the late Silo Convention at Cleveland, Ohio says in the Philadelphia Press, that the wooden silo in some of its forms was voted the favorite. The evidence seemed conclusive that the wooden silo was nearest frost-proof, kept its contents in the best state of preservation, and if properly built and painted with some good wood preservative it would last for years The silo, with lathed and plastered interior, was also largely indorsed, while those who had the double-boarded silos painted with gas-tar or asphaltum paints declared them good enough. Not a man voted for stone or concrete silos, although several who had such were present.....

IT was believed by many that the man who built a good-sized silo, and used silage along with the other feed raised on the farm, had been enabled to double his stock. This has proven over and over again that succulent food could be fed in the winter with manifest profit, if warm barns and stables were provided. That silage fed judiciously made "good, rich and healthy milk" was attested to by Dr. Ashman, the city health officer of Cleveland, after 3,000 examinations of milk. That cows had eaten silage year after year and were still healthy and in "possession of their teeth" was shown to be true. That any ill effects from silage feeding could be shown was not attempted.....

A TEST of THREE DIFFERENT CHURNS, was made at the New Hampshire E. S., viz., the Blanchard, Stoddard and Davis. The results show that there is practically no difference in their efficiency, and if there is any preference it must come from convenience in handling, and ease of operation. On this point there is no doubt in the minds of those who actually operated the churns at the Station. For ease of handling and cleaning, and for perfect granulation of butter the Stoddard churn stands at the head. The Blanchard is open to the objection that it has inside floats, which interfere seriously with the granulating of the butter. The Davis is harder to operate than either of the others, and is more difficult to clean when the churning is done. The average time of churning was 24 minutes for the Davis, 47 minutes for the Blanchard and 29 minutes for the Stoddard. The Davis leads in point of time required.....

IN the common practice of buying cream by the "gauge," it is supposed that the product of cream in butter is uniform. In experiments made by the Kansas Agricultural College, cream was the one discordant element. In the case of every cow employed, and with each kind of feed, the milk giving the largest display of cream often gave the least butter product, and the reverse. As far as could be judged, the character of the cream varies quite as much as the milk does in its original condition. Milk showing eight per cent. of cream gave a larger yield of butter than was obtained from milk giving 10, 11, 12 or even 13 per cent. of cream.....

THE truth is, says Prof. Shelton, that the man who buys the milk of a large number of herds, good, bad and indifferent, paying for it by the gauge of cream which it yields, is probably not greatly the loser or gainer thereby. Experience has taught him the amount of butter he has reason to expect from the composite cream; but the loss to patrons, especially those whose herds have been bred up in dairy lines, must often be very great in the averaging process. The farmer whose Jerseys gave 9 1-2 to 10 per cent. of cream, yielding nearly five per cent. of butter, must, if all patrons are paid alike, contribute in the course of a year a very pretty sum towards the support of his neighbor's herd of scrubs, which gave nearly 11 per cent. of cream and only 3¾ per cent. of butter.....

BULLETIN 48 from the Michigan Agricultural Experiment Station gives some very interesting information regarding potatoes, squashes and tomatoes. It speaks of Coy's No 88 (now Burpee's Superior) as follows: "Tubers all marketable and very even in size; very smooth and regular, with ends abruptly rounded. Eyes few and near the surface. Season, medium. In quality one of the very best. Flesh white and mealy when cooked. The most productive and promising potato grown the past year."..... ....

OF the R. N. Y. No. 2 it says: "All of good size. In form nearly as broad as long and flattened. Skin, white; eyes few and inconspicuous. Generally very smooth and regular, although an occasional prong manifests itself. Flesh white and mealy when cooked. This potato is quite productive and is an extremely valuable variety. Had it been grown under better conditions it might have headed the list. Well worth planting."....

NEW QUEEN proved to be "a fine-looking potato of excellent quality, though not productive."..... .....

JUNE EATING is pronounced "a very promising early variety."..... .....

WORD FOR WORD.

——WEEKLY PRESS: "Sweet or ripened silage can only be made from fully grown and mature fodder, the grain of which has begun to glaze. The juices of such fodder are *more* than water, and these juices when the fodder is cut are so charged with starch, etc., that they tend to preserve the fodder, and fermentation can not go as far or attain so high a degree of heat as when less mature fodder is siloed. The filling can be more rapid with mature fodder and as good or better results secured."

——WINNIPEG FARMER: "A STIRRING SUBJECT.—A. L. Crosby says: stir cream, and stir cream, and stir it frequently; John Boyd says: don't stir it at all after mixing the two skimmings of each day with his famous 'starter'; John Gould says: stir the cream while it is ripening; Hiram Smith does not believe in stirring cream. Strange how dairy doctors differ, and stranger, withal, that each and all of these gentlemen can make prime gilt-edged butter."

——DOCTOR TALMAGE: "For the Lord's sake, and for the sake of the harvests and the orchards and the gardens, of which they are the natural defenders, let the birds live."

——NEW YORK HERALD: "THE NATIONAL DEBT shrank during the last fiscal year by about one hundred millions. Sixty millions of people, twice that amount of contentment, vim, dash, chain lightning and happiness—where can you find a grumbler? If he shows his head above the fence, shoot him on the spot."

——O. C. FARMER: "If our national legislators, instead of hatching new schemes for spending the hundreds of millions of dollars now lying idle in the Treasury, would labor harder in the direction of paying the national debt, we would be much pleased with them. Buy the bonds, even if the premium is large. Wipe them out as fast as possible and stop the interest. Then let us get along without a debt. A national debt, like any other debt, is an unqualified curse."

——MAY CENTURY: "FOR many natures it is as much a duty of cleanliness to change opinions as to change clothes."

——"TO owe gratitude oppresses a coarse nature; to receive it, oppresses a fine one."

——"COWARDICE is the greatest giver of alms."

——"TRUTH has never yet proved fatal to any one; there are too many antidotes."

——NEW YORK TIMES: "Recent sales of Jersey cattle show that bottom prices have been reached and the reaction from an unhealthy excitement is at its zero. It is a time for farmers and dairymen to pick up stock."

——AMERICAN GARDEN: "The RURAL NEW-YORKER is doing a good work in inducing farmers' wives to take more healthful outdoor exercise, by competing for prizes offered for the biggest yield of potatoes on small plots of ground. We welcome any effort that has for its object the drawing of country women out of their houses into the fresh air that is so plentiful all about them."

——TROY TIMES: "There are many reasons why stock farmers should be men of good breeding."

Horsford's Acid Phosphate
A Nerve-Food and Tonic.
The Most Effective yet Discovered.—*Adv*

Miscellaneous Advertising.

Hood's Sarsaparilla

This successful medicine is a carefully-prepared extract of the best remedies of the vegetable kingdom known to medical science as Alteratives, Blood Purifiers, Diuretics, and Tonics, such as Sarsaparilla, Yellow Dock, Stillingia, Dandelion, Juniper Berries, Mandrake, Wild Cherry Bark and other selected roots, barks and herbs. A medicine, like anything else, can be fairly judged only by its results. We point with satisfaction to the glorious record Hood's Sarsaparilla has entered for itself upon the hearts of thousands of people who have personally or indirectly been relieved of terrible suffering which all other remedies failed to reach. Sold by all druggists. $1; six for $5. Made only by C. I. HOOD & CO., Apothecaries, Lowell, Mass.

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THE late Dr. Dio Lewis, in speaking of Warner's Safe Cure, said over his own signature: "If I found myself the victim of a serious kidney trouble, I would use Warner's Safe Cure." He also said; "The medical profession stands dazed and helpless in the presence of more than one kidney malady."

THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, MAY 25, 1889.

Read Prof. Porter's views as to what agricultural colleges are good for.

BONE AND UNLEACHED ASHES.—They are first-rate for *all* crops. This combination is a *complete* fertilizer, but a little deficient in nitrogen.

ONE of the most promising new varieties of strawberry growing in the Rural Grounds is one sent to use by T. V. Munson, of Texas. Should this berry toe the mark, after a sufficient trial, it will be called Parker Earle.

LATEST as to the Flea-beetle. On the morning of May 17 the fleas were seen to be thicker than ever and many leaves badly perforated. Half of the Contest Plot was sprayed with the Bordeaux mixture made as follows: Half a pound of copper sulphate dissolved in hot water and two pounds of lime added to two gallons of water. This was first run through a fine sieve so as to insure its not clogging the nozzle. The other half was sprayed with water in which three ounces of bitter aloes were dissolved. The lime of the Bordeaux mixture is evidently injuring the leaves. The Flea-beetle seems to relish both mixtures.

EX-MAYOR HEWITT is in Europe studying the basic process of manufacturing steel. He tells an interviewer that he believes this process will be largely employed in America before 10 years and that it will eventually supersede all others. This means not only cheaper and better steel, but it means a great addition to our supply of phosphoric acid available for fertilizing purposes. In the basic process the phosphorus is removed from the iron. Phosphate meal, Thomas slag, etc., are names given to this residue in England, where it has been found to contain from 20 to 35 per cent. of phosphoric acid.

FOR several years past R. N.-Y. readers may recall that we have spoken in high terms of praise of a white grape which was sent to us four years ago by David Bundy, of Colerain, Ohio, for trial. As it behaves at the Rural Grounds we regard it as the best native white grape in cultivation, all things considered, and one which, it may be presumed, will adapt itself to a wide range of country and climate. We have never seen the variety alluded to in any other journal, and are glad in this instance, as we have had occasion to be in many others, of being the first to bring to public notice what promises to be a novelty of the first merit.

We learn that a company is being formed to introduce the Colerain, as the new grape has been named.

"I am sure that when the seed is allowed to ripen, the amount of digestible nutriment in millet is reduced one-half. It makes very poor hay. When cut while the plant is coming into bloom, millet makes excellent hay which is good food for any kind of stock."—COL. F. D. CURTIS, page 329.

ABOUT the only new hay plant that is just now demanding extra attention from farmers is Alfalfa. It is certain that the plant is very valuable at the South or in the dry, hot regions of the West. Reports from the North and East are still somewhat contradictory. Here is one just received from the Michigan Agricultural College.

"The cold weather which we are having this spring, especially during the past week, has injured the Alfalfa very much. Some mornings it looks as though it would never revive again, although there had been no frost. Our common clover in an adjoining plot does not seem to be affected in the least by the cold. After a week of cold, northwest wind which we are having, the Alfalfa looks quite yellow and some of it is killed to all appearances. I think the great problem is to get it through the first year successfully."

HELP, Entomologists! The R. N.-Y. calls for help for hundreds of farmers and gardeners as well as for itself whose potato vines are thus early being destroyed by the Flea-beetle. Prof. Riley (United States Entomologist) insists that Paris-green water, if sprayed on the under side of the leaves, will destroy them. We have tried this thoroughly and make the positive assertion that it will *not* destroy them. The R. N.-Y. during the past two weeks has tried Paris-green, crude carbolic acid, sulphuric acid, thymo-cresol, hellebore, pyrethrum, tobacco water, tobacco-soap water, whale-oil soap water and several patent compounds which need not be mentioned. We can not see that any of these or various combinations of them either harm or drive them away. Look to your potato leaves. You may not see the little dark beetle in great numbers, but if the leaves are partly or wholly perforated with little holes as big as pin heads, be sure he is there. These perforations soon destroy the leaf tissue, the leaf withers and the plant suffers proportionately.

GREAT BRITAIN is rapidly following the example of the United States in the formation of trusts. The number organized during the whole of last year was only 15, with a total capital of less than $50,000,000; but during the first three months of this year, according to the London Economist, 19 new associations have been formed, with a total capital of about $125,000,000. It is alleged, however, that some of these are little better than confidence games got up for the purpose of beguiling money from the pockets of the public into those of the schemers. They are all floated, however, with a facility which unmistakably betrays a superabundance of idle capital or amazing gullibility in the British Isles. Has anything of this kind been done on this side of the water? Why, certainly. Thousands, yes, probably millions of dollars have been enticed out of the pockets of the public into their own by the promoters of various trusts, which promised enormous profits for the few at the cost of the many, but which can never fulfill those promises. Already in England there are grave fears of the collapse of many of these wind bags, and the Government is strongly urged by long-headed financiers to put an end to these schemes, which, at the best, must be adverse to the public welfare.

ADDITIONAL NAMES.

THESE are more names of those who have entered for the Women's Potato Contest.

Mrs. Alexander Sneddon, Lancaster Co., Nebraska.
Mrs. C. McIntosh, Brant Co., Canada.
Mrs. V. W. Griblin, Greenwood Co., Kan.
Mrs. F. Dick, Washington Co., Minn.
Fannie Dick, Washington Co., Minn.
Theodoria Dick, Washington Co., Minn.
Mrs. G. S. Paine, Kennebec Co., Maine.
Mrs. C. M. Grossman, La Grange Co., Ind.
Mrs. Selinda E. Jones, Chautauqua Co., N. Y.
Mrs. Daphne Martin, Posey Co., Ind.
Mrs. Anna A. Hay, Butler Co., Pa.
Mrs. G. Drew, Macoupin Co., Ill.
Mrs. Lavina Robinson, Marshall Co., Ind.
Mrs. Geo. A. Newcomb, Cattaraugus Co., N. Y.
Mrs. Hannah A. Morton, Wright Co., Iowa.
Mrs. Josie Lawrence, Jefferson Co., Iowa.
A. Boorda, Warren Co., Iowa.
Miss Alice E. Wysor, Pulaski Co., Va.
Mrs. A. F. Mase, Audrain Co., Mo.
Mrs. Angeline Winslow, Yamhill Co., Oregon.
Mrs. Wm. Y. Wilbur, Cumberland Co., Maine.
Mrs. Orson Grover, Hillsdale Co., Mich.
Miss Helen Wheeler, Jerauld Co., Dakota.
Mrs. Wm. Sherwood, Tioga Co., N. Y.
Emily Cockeram, Dunn Co., Wis.
Fannie Cockeram, Dunn Co., Wis.
Mrs. G. Y. Wimmer, Coffee Co., Tenn.
Mary V. Lishy, Adams Co., Pa.
Tillie F. Lishy, Adams Co., Pa.
Mrs. E. McMahon, Beaver Co., Pa.
Mrs. E. C. Dodge, Dane Co., Wis.

SOMETHING NEW.

THE R. N.-Y. has always been very successful in securing the opinions and experience of practical farmers. It has come closer to the farm and to actual farm work than any other agricultural paper. It has made a business of gathering the opinions and experience of those who do actual farm work. Examine any number of the RURAL and see how many articles it contains that bear the indelible stamp of practical agriculture. We now propose to go a wide step in advance of any former feat of agricultural journalism, and call to our aid the wonderful resources of photography and photo-engraving. We are prepared to print life-like pictures of interesting animals and objects just as we now print reports of farm methods and experiences. For example, we are printing reports from some of our readers who are testing their cows in a simple manner. These reports are instructive because they show how many pounds of milk are required to make a pound of butter, and this will go to show farmers whether their cows are above or below the average. Valuable as these comparative records are, it can be readily seen that they would be still more valuable if life-like pictures of the cows could be given. This is exactly what the R. N.-Y. proposes to encourage its readers to do. We have always been glad to have our readers tell us how they proceed to make farming pay; now we invite them to show us the sort of cattle, horses, sheep, etc., they are raising, the sort of homes they live in and the appliances they find helpful.

Photographs are now quite easily obtained in almost any locality. By means of the new processes of engraving, plates can be made directly from the photograph, so that we are able to print an exact likeness of the object photographed. The R. N.-Y. takes pleasure in making this new departure, and hopes its readers will take advantage of it. The R. N.-Y. is *the first paper in the world to propose such a thing.* It will cost a large amount of money, but if the plan will help to make any clearer the RURAL'S right to the title of "the best agricultural paper in the world," we shall be amply compensated. We shall be glad to hear from those who can send us photographs.

THE RURAL NEW-YORKER'S NEXT POTATO CONTEST.

THE LIST OF JUDGES COMPLETED.

IT is proposed that the potatoes of the next "Contest" plot be dug on the last Friday of September next. The plot will be more than twice the size of last year's plot, and the effort will be, as then, to raise at the rate of over 700 bushels to the acre. The following gentlemen have consented to act as judges:

LIEUT. GOV. EDWARD F. JONES, N. Y.

PROF. GEO. H. COOK, Director of the N. J. Agricultural Experiment Station.

L. H. BAILEY, Professor of Horticulture at Cornell University.

Dr. BYRON D. HALSTEAD, Professor of Botany, at Rutger's College, N. J.

E. H. LIBBY, Editor of the American Garden, N. Y.

E. L. COY, N. Y.

HON. JOHN A. WOODWARD, Pa.

J. S. WOODWARD, Secretary of the New York State Board of Agriculture.

PROF. HENRY E. ALVORD, Director of the Maryland Agricultural Experiment Station.

COL. F. D. CURTIS, New York.

HON. EDWIN WILLITS, Assistant Secretary of Agriculture, Washington, D. C.

WILLIAM FALCONER, "Dosoris," Glen Cove, L. I., N. Y.

E. G. FOWLER, Editor of the Farmer, Orange County, N. Y.

HON. J. G. WEBB, Justice of the Peace, N. J.

It is conceded on all hands that the R. N.-Y's "potato work," as it may well be called, has stimulated an interest in the culture of potatoes never before known. No less than 900 women pretty well distributed over the entire country, as shown by our published list, (a perfected list will be printed in the Fall), are now striving to show the possibilities of this farm crop which ranks, in money value, scarcely less than that of grass, wheat or corn in those sections well adapted to its culture. The R. N.-Y. "Contest Plot" has this year received at the rate of but 1,000 pounds of fertilizer to the acre, and the time and trouble of planting and cultivating the plot, will be no more than any farmer can afford to give to his fields, if, by the RURAL'S method of culture, heavy crops can be secured. We hope to raise on this plot over 20 *bushels* of potatoes, or more than one-eighth of the yield ordinarily produced by those who consider themselves good farmers, on an *entire* acre. Let us see, friends. In view of all this, the R. N.-Y. has been careful to select good and prominent men to see the crop dug, to weigh and estimate the yield, to the end that all who see their report may *know* that it is one to *command* their confidence.

"He may rest assured that if his soil be light and sandy, the harrow will work him sorrow and tribulation; but if, on the contrary, it be heavy and inclined to clay, the harrow will not only help in fitting the soil, but will aid immensely in hurrying on the work and in saving time."—A. T. T., page 332.

R. N.-Y. Is this *your* experience?

BREVITIES.

BEAN growers in Western New York use bean vines for stock food. They are considered best for sheep.

CAN we cure weeds with such care that they will make better fodder than the best grasses poorly cured?

WILL any farmer kindly tell a good reason for stepping on the seed potato after it is dropped in the hill or drill?

I REGARD the RURAL NEW-YORKER as the very best of the journals of its class.
PROF. JAMES F. BABCOCK.

THE future home of the baled-hay industry lies in the Northwest. It will follow wheat to the point where the best product can be produced.

ONE heaping tea-spoonful of pure Paris-green to a pailful of water for the potato-beetle, or one pound to one barrel of plaster, if intimately mixed, will kill as well as a larger quantity of the poison, which is liable to injure the leaves more or less.

HAVE the apple blossoms fallen? Then spray the trees with water and Paris-green—about one ounce to five gallons of water. London-purple is more readily held in suspension, costs a good deal less (15 cents a pound) and contains about the same per cent. of arsenic.

IN England, Rye grass, rape and other forage plants are being boomed. Little is said about these plants here—a good many wise men wonder why not. It should be remembered that corn is a wonderful crop in this country; while in England it is merely a plant to be experimented with.

IF you would have fine melons, dig wide holes; then mix a liberal quantity of old farm manure with the soil as it is returned. Compact the soil and plant all the way from a dozen to 20 seeds, if you have plenty and thin out to two or three. Have the hills for watermelons 10x10 feet; muskmelons 6x6.

READERS of the R. N.-Y. in all sections are asked to examine their potato vines to see if they are or are not attacked by the Flea-beetle—the little black, jumping insects to which frequent allusion has been made in these pages during the past year. A history, with illustrations was given last fall, page 546. As was then shown by the R. N.-Y., many cases of supposed "blight" were really caused by these nimble little imps.

LAST year we picked out six of our best hens and put them into a small pen with a good rooster. We set 52 eggs from this pen and 48 of them hatched. This year we have tried selecting eggs from several yards where several roosters run with large flocks of hens. The result is very disappointing, as a large proportion of the eggs prove infertile. Hereafter all our eggs for setting will come from a small pen of our best hens mated with a rooster of good form and breed.

DELEGATES representing the 10 cotton States, met at Birmingham, Alabama, May 15-16. A representative of the jute bagging trust offered to make a contract for bagging at 10½ cents per pound. This proposition was not sustained, and the convention "resolved" to use cotton-bagging to be manufactured in the South, and to demand from purchasers and manufacturers an allowance of at least eight cents per pound on each bale covered with cotton bagging. The cotton bagging costs 12½ cents per yard weighing three fourths of a pound.

Farm Topics.

HOW A DELAWARE FARMER HANDLES MANURE.

Location and soil of the farm; stables and pig-pens retentive of manure; the latter all hauled out in spring; manures for corn and for wheat and oats; mode of application; frequent cultivation; rotation of crops; horse manure, commercial fertilizers; "how to make farming pay."

THE making of manure, and the best mode of using it to get the greatest results with the least amount of labor, are themes that should interest all practical farmers. The question is often asked of me by my neighbors: "What do you do for the land to get such good crops?" While my methods will not suit every one, it may be well to tell others how I do it, so that it I am wrong they can correct me, and by talking the matter over, some good ideas may be developed, that will be of practical advantage to some one.

My farm is situated in the lower end of Delaware, five miles from the town of Seaford. The land is composed of a mellow loam, with a clay bottom, and is as level as a floor. My cattle stables and pig-pens are dug out down to the clay and made basin-shaped so that they will hold water. The rains and liquids from the stock keep the pens wet, and we keep them dry by hauling in leaves, sawdust, corn-stalks and rubbish from the farm. We keep up a constant fight right on this line. Sometimes the weather gets the best of us for a time, and then we conquer by hauling in more leaves and sawdust, until the pens are in good order again. The excess of water from rain will evaporate, leaving the concentrated juices in the manure. All this manure is allowed to accumulate until spring, when we have some hundreds of loads to haul out. Now, it is conceded that fresh "pound" manure is best for corn, while composted manure is better for wheat and oats.

To get the benefit of the fresh manure for the corn, and to save the labor of composting for the other grains, and to get the best results, I first turn over a clover sod for corn, and before harrowing it, haul the manure from the pens and spread it, broadcast, on the plowed ground, then harrow in the manure by going over it once with the Acme. Then I mark out the rows, plant the corn and when it is two inches high, put in the cultivators, and keep working it until the corn is too large. I usually go through it from six to eight times before it is laid by. Then, by cultivating the corn, the manure gets thoroughly mixed in the soil, and by fall it is well rotted. When manure is spread on the land before plowing, it is held in lumps and bunches, and does not get distributed through the soil enough for the plant roots to get the full benefit of it. In the first week in October, a portion of the corn ground is cleared, and put in wheat, and the remainder is sown with oats in the spring, and both wheat and oats are sown with clover in the spring. No other manures are used, and the consequence is that all during the summer the corn and wheat stalks are green from the ground up, instead of being burned, as they would be in a dry season if manured with superphosphates.

I think that by working the manure into the ground while cultivating the corn, it will be in much better condition for the coming wheat and oat crops than it would be by the usual way of plowing under the manure, and it saves the labor of composting for the other grains. The year following the wheat and oat harvest, we mow off a heavy crop of clover, and the following spring turn over this sod for corn, and so keep up this rotation.

"What do I do with the horse stable manure?" I throw it into a heap, and turn it over once a week to prevent it from burning, and at different times during the year, spread it around fruit trees, or manure potatoes with it, and in the winter, when the ground is frozen, I spread a light covering of it on the wheat, and use it in the vegetable garden.

"What is the size of the farm?" One hundred and forty five acres in all: 45 acres are in timber, and all the rest is kept in thorough cultivation, except the clover fields. Four years ago this was a poor, worn-out farm; now it is like a garden spot.

"Do I ever use artificial fertilizers?" Yes, but only in a small way. For root crops, such as turnips, in the fall when there is apt to be plenty of rain, it is just the thing; but if you want to enrich the land use plenty of "pound" manure and clover sod. Instead of sitting around the store stove during the winter months and preaching that "farmin' don't pay," keep your teams busy hauling any kind of absorbents for the cattle and pig pens. Don't drain them off, to keep them dry; fill them up; keep at it all the time. Let the store alone, except when you go to purchase something, and employ every spare hour in manufacturing manure, and you will not only improve the farm, but the money that you will save by doing with less "phosphates," can be better spent by the wife when she wants to make purchases at the store.

SAMUEL BROWN.

Market Notes.

"ARE the low prices of fruit the result of over-production, or under-consumption?" asked the writer of a commission merchant of many years' experience. "Both; while the supply of some certain lines of fruit is greater than the market demands, the lower classes do not consume the fruit they ought to do. I have seen a man pay five or 10 cents for beer or tobacco, and when asked by his children to buy them some apples, say: 'Oh! I can't afford it.' It is pure selfishness. The parents would rather spend their money for that which is positively injurious to themselves, than to spend it for healthful fruit for their families." There isn't a day in the year in this city but some kind of fruit can be bought so cheap that it seems as though the poorest might indulge.

Provisions of all kinds are plentiful, and comparatively cheap. Meats are somewhat higher than during the winter, but fish are in good supply and at reasonable prices. With heavy arrivals of early vegetables from Bermuda, Florida, the Carolinas and Norfolk, supplemented by hot-house products, and some from near-by gardens, to say nothing of last year's leavings, the house-keeper is right in clover. Asparagus is of very good quality, and is now retailing at from 10 to 15 cents per bunch. It comes from Long Island, New Jersey and Norfolk, mainly. Lettuce is in great profusion from near-by farmers. Four to six bunches of radishes can be bought for a nickel. Cucumbers cost five cents each, while a half peck of green peas can be had for a quarter. Good tomatoes are shown, while some had the appearance of being picked green, and were likely to remain so. Cabbages are good, likewise summer squash, beets, string beans, and onions.

Good apples are not in large supply, and are readily sold at good figures. Oranges are growing scarcer and higher in price. Strawberries are not so plentiful, but as they will be due from South Jersey in a few days, the price will soon drop. Other tropical fruits are plenty and cheap. Pineapples bring from 10 to 35 cents each, while hot-house peaches can be had at 50 cents each and upwards. California cherries bring 75 cents per pound There is a heavy stock of butter, and prices are likely to go still lower.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

HOW do you intend to do your house-cleaning—in an orderly, somewhat leisurely manner, or all at once? We have been noticing one of our neighbors and her method. She began with a bed-room one morning, rooted out everything from a big clothes-closet, kalsomined and scrubbed the closet, and hustled the things right back; then took up the bed-room carpet, and started on that room. She scrubbed everything, kalsomined walls and ceiling, had the carpet down before tea-time, and slept in that room the same night. Now, she was, no doubt, a smart and expeditious housewife, but we don't believe that room was either dried or aired properly, and if we hear of sore throats or unexplained colds in that family we shall lay them all to that house-cleaning mania. As soon as this bed-room was done, the housekeeper started on the parlor; that was done with equal expedition, and the day following the dining-room was attacked: in fact, the work was kept straight on, without any intermission whatever. Of course, the family was uncomfortable; there was no sociability or pleasant, restful, home life; but that woman did *all* her house-cleaning before any of her neighbors.

* * *

CLEANING one room at a time with a little needed rest between times, has been preached often enough in the RURAL. It is a time-worn topic, and yet it cannot be too often insisted upon. The sooner women learn that it doesn't pay to kill oneself, the better. Nor is the most perfect housekeeper—or rather home-keeper—she who always has all her work "done up." While no real and perfect domestic life can exist without cleanliness and order, these virtues are not the only things necessary. The real home spirit is far more valuable, and the cultivation of home affection at least as necessary as spring cleaning.

DID you read what "May Maple" said about young housekeepers in the RURAL of May 4? Every one must recognize the justice of her remarks. But it seems that a great many girls never learn anything about housework, simply because all their time is taken up in less useful things. The average school-girl of 14 has a dozen or more studies, one-third of them useless as they are usually taught. In addition to this, she is apt to have music, which takes up the time she should more properly spend in healthful exercise. Such prosaic studies as cooking, sweeping, dish-washing, and the like are entirely overlooked in the haste for accomplishments, and it is not strange that these girls find a good many difficulties in the way when they begin to keep house. The first few months of house-keeping are somewhat difficult, even to one who understands it, and the difficulties must be greater still when it is a novice who battles with them. Certainly house-keeping is one of the accomplishments which should not be omitted, no matter whether a girl can play Chopin mazurkas or not. A little time given to this study, before and after school hours, will smooth the after-life wonderfully.

* * *

AS soon as a girl can hold a needle she should learn to mend, and as soon as she can mend a little she should learn to keep her own clothes in order. Never mind if the stockings are a little bit cobbled—the knowledge that her personal darning and patching depend on herself will make a girl very much more careful. Mending is so very important that it cannot be neglected, and the best way to teach it is to give each girl the care of her own belongings. When mother is always ready to replace buttons and sew up rips, much less care is taken than where each girl is herself responsible for such work.

OUTINGS IN NEW ENGLAND.

VI.

MARY WAGER-FISHER.

THE records of the Plymouth Colony have been so well kept that in going up Leyden street, it is not difficult to locate the rude homes of the Mayflower's passengers; and there are pictures still to be seen of some of their houses. Churches have been built on some of the more noted sites, a Congregational church occupying the spot on which the Pilgrims built their first meeting-house. In following Leyden up to the entrance to Burial Hill, and thence to its brow, one comes to the site of the Old Fort, where Miles Standish had his arsenal for fighting the Indians. From that point, 160 feet above the harbor, he could command a full view of the street and of the immediate surroundings. A tablet now marks the spot. The redoubtable Miles had his own habitation at the base of a hill to the north of Plymouth, where also lived John Alden. The hill still goes by the name of the Captain's Hill, and a tall stone tower has been erected on it in his memory. Of course, we read and re-read Longfellow's noble poem of the Standish courtship, amid the scenes he so beautifully pictured, and in fancy saw Priscilla riding from Plymouth on the white bull to the home of John Alden. One day while sauntering about the town we saw a tin-peddler's wagon which bore the notable name of Standish. Anaximander incidentally asked a resident merchant if this Standish was a descendant of Miles, and what was his business?

Yes, he's a direct descendant," was the proud reply, "and he sells tinware and buys *remnants of cloth*." Naturally, we had a quiet laugh over the "remnants," but admired the spirit of the man, who could not bring himself to say that a Standish D. D. ("direct descendant") bought rags and peddled tinware like an ordinary mortal. That the D. D's. throughout New England and elsewhere hold their descent as a patent of nobility, is as it should be. Of no ancestry could one well be prouder than of the 41 signers to the "compact" drawn up in the cabin of the Mayflower. Burial Hill is packed with graves, and no new interments are permitted in this ground unless one has an unfilled lot in which friends are buried. It is a great resort of the people, who go to sit in it as if it were a park. The view from it is most fascinating, overlooking the harbor with its islands and light-houses, and on very clear days the faint line of Cape Cod may be discerned. Here were buried most of those who survived the first winter, and all the early stones and epitaphs are of very curious interest. The oldest stone is to the memory of Mr. Edward Gray who was a wealthy merchant of the colony. The date on this stone is 1681. All the old stones are of slate, often tapering to the top, with death's heads in various styles, as this was before the era of the weeping willow decoration.

Titles in the epitaphs are scrupulously observed, such as Mr., Mrs., Esq., Honorable, Captain, etc. William Bradford, who was the first Governor of the Colony, from 1621 to 1633, lies here, and his grave is marked with a low granite shaft. On another shaft to the memory of his son, is this inscription: "Here lies the body of ye Honorable Major William Bradford who expired Feb. ye 20th, 1703-4, aged 79 years.

He lived long but still was doing good.
And in his country's service lost much blood.
After a life well spent he's now at rest.
His very name and memory is blest.

Mary Cushman was the last survivor of the Mayflower people, and she lived to be about 90, dying in 1699. Some of the old slate head-stones are protected by coats of zinc, leaving only the inscriptions exposed. Mrs. Tabitha Plaskitt's grave is always visited by youngsters who have read in their school histories of her school teaching, spinning as she taught and when the children were naughty she slipped skeins of yarn under their arms and hung them up on pegs. A row of suspended urchins must have been a novel sight. Tabitha wrote her own epitaph which runs thus:

"Adieu, vain world, I've seen enough of thee;
And I am careless what thou say'st of me;
Thy smiles I wish not,
Nor thy frowns I fear,
I am now at rest, my head lies quiet here."

Many an hour we sat on this hill over-looking the town and the harbor, and traced the course of the Mayflower from the line of Cap Cod, the halt over Sunday at Clarke's Island, always with a feeling of pity that circumstances had landed it on what at that time must have been a very inhospitable shore in the depth of winter. Snow never lies long at Plymouth, but with the cold the place had its compensations in the abundant fish and springs of excellent water, from which people still drink. At one of the springs, by the side of a street, is this legend: "Come, freely drink and quench your thirst. Here drank the Pilgrim fathers first," and it is doubtful if any visitor reads the invitation without accepting it, and the water is exceedingly good. The woods back of Plymouth are charming, and there is no end to the small lakes in the forests. I have heard it said that there are in Plymouth county 365 lakes. The laddie who was learning to swim, found them very pleasant for his purpose. The bathing was fine on the ocean side of the harbor bar, and as a little steamer made frequent trips across the harbor, it was always convenient to reach the sandy beach for a bath. The boating in the harbor at high tide was delightful, but when we went outside we took the precaution to take a skipper. One morning we sailed to Clarke's Island, and visited Pulpit Rock, an immense granite boulder under the sunny side of which the Pilgrims held their first religious service in New England, and the rock bears the inscription: "December 20, 1620. On the Sabbath day we rested." There are a few houses on the island, one of which is the summer residence of Professor Godwin, of Harvard.

There were always a great many boats out on fishing and lobstering expeditions, and the hotel table was well served with fresh fish, while chowders were a daily dish. There were beautiful walks in every direction landward, one of which led to Forefathers' Monument, which is the highest and finest granite monument in the world. The hight of the base is 45 feet; of the statue, 36 feet—a figure of Faith. All the accompanying statues had not then been placed around the center one, but so far as the work had progressed it was of the finest character, and very beautiful. The inscription is this: "National Monument to the Forefathers, erected by a grateful people in remembrance of their labors, sacrifices and sufferings for the cause of civil and religious liberty," and the names of all those who came in the Mayflower are engraved on it. There are to be four scenes in the lives of the Pilgrims represented—the Departure from Delft-Haven; the signing of the social compact; the landing at Plymouth, and the first treaty with the Indians. There are nine acres about the monument and they are to be laid out in the finest style. Different States and private individuals have so far contributed the money for different parts of this superb memorial.

Pilgrim Hall is naturally a place of great interest, as with the relics there one can, in a degree, rehabilitate the colonists. It was built in 1824, since which time the building has been made fire-proof. The walls are hung with paintings, including a number of portraits, while the relics in glass cases are surprising in number. Here is Miles Standish's famous Damascus sword, the Arabic inscriptions on it having been a standing puzzle, until they were deciphered, some eight years ago, by Prof. James Rosedale, of Jerusalem. John Alden's Bible is here, and a piece

of embroidery wrought by Lorea Standish. The oldest State paper in existence in the United States is also here—the first patent granted to the Plymouth colonists by the New England Company; also the original manuscript of Mrs. Heman's well-known ode,

"The breaking waves dashed high
On a stern and rock-bound coast, etc.,"—

and a copy of Eliot's Indian Bible of which but three or four copies are believed to be extant. Some of the furniture was loaned to the Centennial Exhibition in Philadelphia, of which one piece was Peregrine White's cradle—he having been born in the Mayflower, and named Peregrine from the peregrinations of the Pilgrims.

FEMALE FINANCIERING.

MRS. S. H. ROWELL.

"I WISH you would let me have the privilege of managing the family finances this year, Mr. Clark. I hate this annoyance of bills as much as you can; and I really think we could live cheaper, and better too, if we paid cash when we buy things," said Mrs. Clark, as her husband sat with a clouded brow, opening the monthly due bills, that were handed in the previous evening.

"Why, Carrie, what could you do? Women don't understand how to use money; you would make a perfect muddle of it!" he replied, as he took out his pocket-book, and laid it on the table.

"I might not. Mrs. Shelly does not. She has $25 each week to support the table and clothe herself, and they are never bothered with due bills. Her husband buys the fuel, and pays the rent, and she manages the rest."

"Twenty-five dollars! why, it would not half defray our expenses! Why, Carrie, it costs us over $300 a month, aside from rent and coal. What's the use of talking?" and he gathered up the bills and put them in his coat pocket, and took his hat.

"Over $300 a month! Impossible!" she exclaimed.

"Look over the bills yourself! It costs like thunder to keep house!" and he threw the bills on the table beside her plate, and went away.

"Goodness! He must be mistaken! But I will look them over. I know I am not extravagant in dress; and we live no better than I used to at home; but mother always bought things herself, and we never used to buy on credit either. I wish my husband would let me try for awhile. It is horrid to have to pay such heavy bills."

Mrs. Clark was a young house-keeper. For 18 months after her marriage, they had boarded in a fashionable hotel, but she did not enjoy it, and finally coaxed her husband to go to keeping house. He rented a fine house, in a good location, and her father gave her money to furnish it; but Mr. Clark was not content with simply nice furnishings, but must have the most elegant and latest style of everything. Of course, it took money, and then, his wife must not work but have servants to wait upon her and do the work. He was in a lucrative business, and never talked over his affairs with his wife; but she had noticed for some months that he seemed worried and troubled, and thought perhaps they were living beyond their means. He was really cross when she laid the bundle of house bills before him that morning, and as soon as the breakfast things were cleared away, she took a sheet of paper and pencil, and commenced looking over the amount. A frown gathered on her smooth brow and settled into a real scowl as she proceeded with her task.

"We have not had six turkeys within a month! Here are 20 roasts of beef too! and oysters, and fish, and dear knows what besides! And fifty pounds of sugar a week! Goodness! I should think it was time to look over the matter. Now for the milliner's bill. My winter hat $25! And she told me it was only $18! A dozen yards of lace and a box of gloves! $15! and I had neither. I will just see the Madam myself this day! I think I will go down and look over the supplies in the kitchen first! It is impossible that we have used such an amount of groceries in a month. There are only six of us in the family, and here are bills charged enough to feed a regiment."

Mrs. Clark was an energetic little woman, and when she determined to do a thing, she accomplished it, and it did not take her long to decide that her corps of servants were not very trustworthy, or that her cook had taken a large share of the supplies as her perquisites, and had almost supported her sister's family from the Clark larder. When her husband came to dinner, he had a friend with him, so she waited till evening before she laid the matter before him. He was just furious! She had never seen him in such a temper before. "I wish you would let me have the cash to settle the Madam's bill myself; I am not going to pay her charges," she said.

"You shall have it; and if you wish to try your hand in catering a month or two, I am willing you should try it. Your father came into the office to-day, and I had a talk with him, and he says a woman can manage household affairs better than a man. The times are hard, and business is dull, and we really have been living beyond our means. I do not blame you, of course, but I would get rid of that cook as soon as possible."

"You may be sure I will, and I really think that if I have the money to pay for things, I can get them cheaper and better."

"How will Mrs. Clark like going to market herself?" he asked.

"Oh, I shall take Will along to fetch the small things, and the rest will be delivered, of course; never fear, I am all right."

And so she was, and at the end of the next month, she had not only kept her table well provided with every luxury, as heretofore, but had a new spring suit for herself with a hat, and $50 left of the $200 that her husband gave her at the commencement of her experiment. She dismissed two of the servants, and saw to the arrangement of her work herself, and was happier and healthier for the labor. Mr. Clark was delighted with the change, and never again thought that a woman could not manage money matters if she had the opportunity to do it, and the means provided for her.

"Your father was right when he said women were better managers of household matters than men. If you want more cash for pin-money, you have only to ask for it, for I know you will not waste it in extravagance, and I do not believe it will be an easy matter for merchants or trades-people to cheat or impose upon you."

WORRY AND WORK.

AN INVALID.

SPRING and house-cleaning time with all their trials and perplexities have come again. Oh! the worry and confusion, the ceaseless round of woman's work! But, sisters, do not be worried if your house-cleaning is not all finished the first week it is begun, or if some of your thrifty and ambitious neighbors get theirs finished (with the addition of bad colds,) before yours is barely begun. Above all, take care of your health. Ah! how well I remember the last work of any account that I did!—the work that I foolishly thought must be done *just then*, another and another task that I thought must be performed that week, until weary limbs and aching back refused to do their mission longer. Then followed long months of pain and uselessness, and, for aught I know, I may never again be able to take up life's work. How often, on my couch, I have wished that I might again live over those days wherein I sinned against my being and my Creator, before disease claimed me for its prey.

You who have health and strength left you, take care of these blessings while you may. No work is positively necessary when you are tired, for were you sick you could not do it. Over-work and carelessness are the causes of half the sickness in the world. Remember how those common tasks of life would sink into insignificance if death faced you.

How tiresome woman's work is, day after day doing the same things over and over again! How often we long to throw aside our aprons and take up books or the pen. But

"Let us be content to work
To do the thing we can, and not presume
To fret because 'tis little."

Let us do our best in whatever duty calls us to do. Let us stop and look about us on the green fields, spring flowers and blooming fruit-trees, and to the blue sky above us, and thank God for the beautiful place He has given us to work in. Cultivate the habit of looking at the bright side of everything, and in counting our mercies forget about the dark hours. We must endure trials, for no life was ever free from them, but remember that

"From hours of grief and saddened face,
True wealth of heart we borrow;
And heavenly wisdom oftenest comes
Clad in the guise of sorrow."

GOLDEN GRAINS.

SIR WILFRID LAWSON says that there is an old saying of which he is fond. Some great man has said: "I never knew any one to get lost upon a straight road." It is only when you try to make short-cuts—when you try to dodge a principle—that you get into scrapes.....

OLIVER WENDELL HOLMES says that many years ago, in walking among the graves at Mt. Auburn, he came upon a plain, upright white marble slab, which bore an epitaph of only four words, but to his mind they meant more than any of the labored inscriptions on the surrounding monuments: "She was so pleasant." This was all, and it was enough. That one note revealed the music of a life of which he knew and asked nothing more.....

THE CHRISTIAN REGISTER says that the kind of a girl it likes to honor is reported to be spending her vacation in giving her mother a "rest." When asked what she was doing, she said she was enjoying herself very much doing the house-work. "Your mother is away on a vacation, then?" "Oh, no, she is at home; but I'm giving her a chance to rest in the morning, and to dress up and sit out on the piazza when she feels like it. I think it will do her good to have a little change."....

YOU go and gossip with your housemaid or your stable boy, says Ruskin, when you may talk with kings and queens, while this eternal court is open to you, with its society wide as the world, multitudinous as its days, the chosen, the mighty of every place and time? Into that you may enter always; in that you may take fellowship and rank according to your wish; from that, once entered into it, you can never be outcast but by your own fault: by your aristocracy of companionship there, your inherent aristocracy will be assuredly tested, and the motives with which you strive to take high place in the society of the living, measured, as to all the truth and sincerity that are in them, by the place you desire to take in this company of the dead ...

PEABODY says that a genuine conscience is a growing conscience—one that is perpetually becoming more prompt, more keen, more tender. It is in this, mainly, that the growth of character consists. Where there is no increase of moral excellence there is always danger of decrease.....

THE CHRISTIAN UNION reminds its readers to the effect that nothing is more expensive than penuriousness, nothing more anxious than carelessness, and every duty which is bidden to wait returns with seven fresh duties at its back.....

WE attain our highest possibilities when we see clearly the limitations, the obligations, the conditions, that control them. We cannot cast them aside by an effort of will as powerless; they clog and fetter every movement, they are the ghosts that will not be downed. Their warning fingers change to a menace which we cease to see only when we have lost sensitiveness and sensibility. We grow into a likeness of the Creator when we accept humanity and seek not to be gods. We are great, not by what we accomplish, but by what we overcome.....

THE power that determines our career lies within, not without; clearness of spiritual vision decides our plan of life.....

EMERSON advised every man to take the place and attitude that belonged to him, the world must be just. It leaves every man with profound unconcern, to set his own rate. Hero or driveller, it meddles not in the matter. It will certainly accept your own measure of your doing and being.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

THE man or woman who is the happiest is the most economical.

THE successful housekeeper is always a little ahead of time.

"I HAVEN'T the time," is the ne'er-do-well's excuse for culpable negligence.

"It is too much trouble." A short but expressive sentence and one that accounts for many a man and woman's life failure.

LIES.

WHAT is a lie? This question has been running through my mind all the afternoon. Some people may say that wavering one iota from the absolute truth, the uttering of one word not entirely necessary in the statement of a fact is a lie. Well, so it is. But many people lie without doing even so much as that. A gesture, a shrug of the shoulders, the uttering of a few words from which a double meaning may be taken, often do more harm than a deliberate falsehood. I have heard such expressions as "Oh! she's no better than she ought to be," used when a lady's name was mentioned, or "She knows more than her prayers."

Of course, they might be true, for no one is any better than he or she ought to be, and if one didn't know any more than one's prayers, one wouldn't know much. But such speeches as the above, accompanied with a gesture, or the raising of the eyebrows, may do far more harm than if a false statement were used. Such a thing as this, to my mind, is a lie. We have no right to insinuate. If we really *know* anything wrong about a person, I suppose we have a right to tell of it, but even then it would be more Christian-like to refrain from so doing unless we are, or feel ourselves in duty bound to do so. Yet many who call themselves Christians fall into this habit, without perhaps meaning to injure another—but one never knows where a thing is to end. It may be

"Only a trifle as light on the wing,
As the veriest insect devoid of its sting,"

but it may be a mountain before it ends.

Something I heard while at lunch to-day set me thinking about all this. The table at which I sat was arranged for four.

A sweet-faced old lady sat next to me and two girls opposite. While the old lady was reaching for the butter her sleeve caught her cup and upset the coffee all over the table. I pitied the poor thing, for she looked half frightened to death. We sopped up the coffee with our napkins and told her to "never mind," but she seemed so mortified and humiliated that she could scarcely eat. Just then one of the girls opposite said:

"I wouldn't mind if I were you. Such a thing as that happens every day."

"But I never did such a thing in my life before," said the old lady.

"It isn't half so bad as what I did the other day," said the girl with a smile. "I went into a restaurant up town—a regular swell place too—and just as I was about to begin my dinner I upset my tumbler of water and it smashed all to pieces on the floor. I thought I'd die! Then to crown it all, in my excitement I knocked my elbow against my cup of tea and down it went on the other side." We all laughed at this, for she told it with such an expression! Then she said "To make it worse I was with a gentleman too. Wasn't it awful? Now if it had been here I wouln't have cared a straw." The old lady was quite reassured and finished her dinner with ease. When she went out the other girl turned to the one who had been talking and said:

"I suppose that was another one of your fairy tales; wasn't it, Joe?"

"Well, not exactly," replied Joe. "Of course, it didn't happen to me, but I saw just what I described one day last week. And then I pitied the poor old lady. The tears were ready to run down her cheeks, and I know I would have felt dreadfully bad if I had been in her place."

"Well you're the neatest liar I ever saw," responded her friend.

"That wasn't a lie, at all," said Joe. "Did it harm any one? A lie is a thing said with an evil intent; a thing that will injure another. Now what I have just said to that woman wouldn't hurt any one!"

When I left they were still arguing about what was and what was not a lie. I was inclined to believe that "Joe" was right. What she had said had really happened, though not to her. But by putting it on herself she made the unfortunate old lady feel more at ease, for she, no doubt, thought that if that dainty, pretty little thing could be so dreadfully clumsy, a less degree of clumsiness wasn't quite unpardonable in her.

Of course, I am not advising any one to "go and do likewise;" but, then, it doesn't seem to me that that girl lied. If you could have seen the sweet, affectionate manner with which she talked to the old lady, I'm sure you, too, would have felt inclined to be lenient with her. I hold that a lie is, as she said, something said or implied, with an evil intent—something, be it act or implication, meant to deceive. Of all vile habits that is the worst. We can lock our treasures up from a thief, but who is safe from a liar?

What Herbert Spencer says in regard to cursing seems very apropos to lying. He says: "If every curse should stick a visible blister on the tongue, as it does invisible ones on the soul, how many men's tongues would be too big for their mouths, and their mouths as an open sepulchre full of dead men's bones."

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria.

Change the word "curse" and in its place substitute "lie," and,as I said, I think it quite apropos, for the liar and blasphemer go hand in hand. I would as soon trust one as the other. DORA HARVEY VROOMAN.

DISH-WASHING.

TO make the washing of dishes a simple and pleasurable process, make the dishes ready for washing by using a flexible knife and plenty of soft paper. Empty tea and coffee pots, rinse thoroughly with cold water, wash in hot suds, rinse with boiling water, wipe the outsides and turn upside down on a folded cloth on the back part of the stove. Wash silverware next, rinse in hot water and wipe immediately. As each piece of earthenware, tin and iron-ware is washed, immerse it in hot water, turning earthenware on a cloth to drain before polishing, and putting tin and iron-ware on the stove or in the oven to dry. Wash glassware in lukewarm suds, rinse in either very warm or cold water and turn on a dry cloth before polishing with soft, dry towels. A dish-mop saves the hands and is wonderfully effective in washing pitchers, fruit cans, etc. To make a good mop, crochet a chain (twine or carpet-warp) about 12 inches in length, go back over it with any kind of a stitch and then fill the lower edge with a thick fringe, two inches long when finished. For the handle, saw off 12 inches of the top of a broomstick, and to the lower edge of this fasten the mop by tacking one end, and closely and firmly winding upwards, and secure with a second tack.

Having completed one dish-mop, make two more, one for lamp-chimneys and one for a friend. MEDORA CORBETT.

Domestic Economy has been doing its own dish-washing for the past few weeks,and having bought a mop or swab (cost eight cents) can testify as to its practical advantages and superiority over the ordinary article. In the R. N.-Y. of June 13, 1885, page 408, Mary Wager-Fisher describes one she made while staying at Seattle, Oregon. As it differs a little from the one Mrs. Corbett tells us of,we will republish Mrs. Fisher's directions. She says: "I have the frugal habit of saving strings, such as grocers tie about packages, and as our supplies came to hand and were disposed of, there was quite an accumulation of cotton wrapping strings or cords. The whittler of the family prepared a handle for the swab—a round stick the size of a broom handle, a foot long, with a hole in one end through which a string is passed to hang it up; around the other end a groove is cut. I wound the strings around my four fingers held flat, slipped a stout cord through the hole left when the fingers are withdrawn, and tied the loop firmly around in the groove; then cut the bottom of the loop of strings, which results in a heavy fringe falling all around the bottom of the handle. New strings can at any time be added to replenish the swab, which needs to be large and full. I have been thus specific about the swab, as there may be some unfortunate dish-washer left in the world who still clings to a dish-cloth, and if so, she may be hereby induced to make for herself a swab, and wonder evermore that she lived so long without one, for it saves the hands from being burnt with hot water, the dishes are cleaned more thorougly and quickly, and the swab never degenerates into a dish-rag. Wring dry when through with it,shake out and hang up to dry."

Surely, thought we, this noon while using the mop, there is no teacher like experience, for until our recent trial, we confess to having pinned our faith to the ordinary article for cleaning dishes and to looking upon the mop as a delusion and a consumer of much time. Our conversion is complete and, with Mrs. Fisher, we advise all dish-washers to make or buy a dish-mop. Another capital help is a stiff whisk, such as is used for cleaning sinks, for washing pans, kettles, etc. After using cooking utensils, place them on the back of the range with water in them, adding a small lump of washing soda. When the water is hot and the adhering substance loosened, scrub vigorously with the whisk, inside and out, rinse in hot water and dry on the back of the range or in the oven.

With these helps, plenty of hot water and clean towels, dish-washing is robbed of half its terror, and were it not for its repetition thrice daily, we could almost bring ourselves to like it.

SMOKING; ITS EFFECTS.

TWO articles by J. H. G. given recently in the RURAL, on smoking, were so good that I cannot help expressing my appreciation of them. He insists that rules should be made against smoking in the presence of non-smokers, whether in public or private, and says that "the health of many delicate women suffers through having fathers or husbands or brothers, smoke in their presence." He might go farther, since the health of many women and children suffers from daily companionship with smokers, whether the smoking is done in their presence or not. An inveterate smoker's clothes, his breath, and in fact every fiber of his being are so permeated with the poison as to make him a good conductor of it at any time.

And if one studies heredity, he will find the offspring of habitual smokers much more likely to develop nervous disorders of various sorts than those of non-smokers; and, more, he will find that habitual smokers' descendants more readily form an appetite for stimulants, too, though this last is not *wholly* chargeable to tobacco, since the brandy, etc., so largely used in the manufacture of cigars help somewhat.

And now I can't help this bit of defense of the smoker: of course, he must be ignorant of the effects of narcotics on himself and his posterity, and brutally selfish as well, when he smokes in the presence of non-smokers; but who let him grow up ignorant, and encouraged him in selfishness? How much time did his mother spend when he was yet under school age, and his teacher, when larger grown, in teaching him the damage done the human body by using narcotics? True, we have non-scientific temperance instruction given in some of our schools, but that was begun too late to reach the men of to-day. And how many young women of our smoker's acquaintance gave him to understand that smokers and smoking were obnoxious to them? Didn't the majority say, with the sweetest of smiles, when asked if smoking was objectionable to them, "Oh, no, not at all?"

The average man is—as one at my elbow admits—"a bad lot, I s'pose," but I really wonder, sometimes, that he is not worse, when I see to what lengths he is allowed to go in all directions, principally, it seems,because he is such a scarce article—because he's the only son, the only brother, "the only young man in the town." All the more reason why he should, and could be a prime article.

"The hand that rocks the cradle, rules the world," whether the hand be that of a mother a grandmother, a sister, or a maiden aunt.

"Give me," said a famous teacher, "the first dozen years of life, and I'll answer for the rest.

"A word to the wise is sufficient."

"POST SCRIPTUM."

VALUABLE.

ARTICHOKE SOUP.

TO those of the readers of the RURAL who have artichokes, and have never tested them for soup, I recommend them as among the most appetizing vegetables of early spring. At any time after frost is out of the ground, and before the tops are much grown they can be used. Pare the tubers, slice them thin, and boil in a sufficient quantity of water till tender. Season with salt, pepper and butter, adding milk the same as for oysters, and the difference between the animal and vegetable products can hardly be distinguished One household at least, in which this delicious soup is eaten, declares its preference for the latter.

HARD SOAP.

AMONG the various formulas for hard soap, which have appeared from time to time on the pages of the RURAL I do not recollect the mention of the use of Lewis's 98-per-cent. lye. For years I used the lime and sal-soda process, till one of my neighbors gave me information concerning the lye, and I have never since used anything else. The process is so simple and sure, and involves so little labor, and the result is always so satisfactory, that no one who has ever used it, will, I think, resort to any of the old methods. This lye is manufactured by the Pennsylvania Salt Company, and each box contains three quarters of a pound, costing 10 to 15 cents, and is warranted to make 10 pounds of pure soap in 20 minutes without boiling; and it will do it every time if the plain directions which accompany each box, are followed. The soap is also in my opinion, very much superior in quality to that made by the sal-soda and lime process. To the last soap that was made, I added several spoonfuls of powered borax, which I find makes a great improvement in its sudsing qualities, and the soap is voted equal if not superior for all household uses, to any which can be found in market, while the cost and trouble of making are comparatively nothing.

REMEDY FOR CABBAGE WORMS.

A FRIEND from the central part of the State told me, last summer, that the farmers and gardeners in her neighborhood were in the habit of setting pans of sour milk in the cabbage patch, during the summer, and had no trouble with cabbage worms. The moths are attracted by the milk and are drowned in great numbers. I shall certainly try it the coming summer.

Mr. T. B. Terry is deserving of the thanks of every woman in the land for his generous article in a late RURAL, with regard to women's rights as partners with their husbands, which is arousing so much comment and commendation. To him are due the thanks not only of those women, who, when money is needed for necessary expenses, have to undergo the humiliation of begging for a small portion of what by right belongs to them, but also of those who share the common purse equally with their husbands, for his noble championship of their oppressed sisters.

True marriage is an equal partnership in which both parties share not only the labors and the burdens, but also the joys and the rewards. There are as many men as women, especially in country life who are likely to spend the hard earnings of the firm, extravagantly and unwisely. The wife and mother works as hard and usually more hours at her duties, and equitably if not legally a fair proportion of the profits are hers, and that too without having to beg. The Mosaic account of Creation is that "God created man in his own image; *male* and *female* created He them, and gave *them* dominion." Every family needs two heads as much as a person needs two ears, two eyes, two hands, two feet, each working in harmony with the other, and where either head is in subjection to the other, or from any physical, mental or moral inability unable to carry its just share of the burdens and cares of life, or where either is forbidden to enjoy equal rewards, there is inharmonious action and lack of completeness. MRS. W. C. G.

Miscellaneous Advertising.

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For all affections requiring a purgative,

Ayer's Pills

are the general favorite as a family medicine. Sick Headache, Indigestion, a Sluggish Liver, and Constipation are among the complaints for which these pills are peculiarly effective.

"I regard Ayer's Pills as one of the most reliable general remedies of the times. They have been in use in my family for various affections requiring a purgative medicine, and have given unvarying satisfaction. We have found them an excellent remedy for colds and light fevers."—W. R. Woodson, Fort Worth, Texas.

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WHITE MOUNTAIN FREEZER.

Will freeze in half the time of any other Freezer and produce cream of the finest quality. Inquire for the "White Mountain" of your local dealer in house-furnishing goods.

"Frozen Dainties,"

A book of Choice Receipts for Ice Cream, Sherbet, Water Ices,etc., packed with each Freezer this season, or will be mailed upon receipt of ten cents in stamps.
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LUBURG MFG. CO. 145 N. 8th St., Phila., Pa.

IN Guy's (London), Hospital Reports, Vol. 1, page 396, is found the statement: "Simple hypertrophy (enlargement), of the heart, especially of the left ventricle, is found without valvular incompetency. In this numerous class the cardiac is secondary (a symptom), to the renal affection." This explains why Warner's Safe Cure is effectual in cases of heart disease. It removes from the blood the kidney acid which causes the heart disease.

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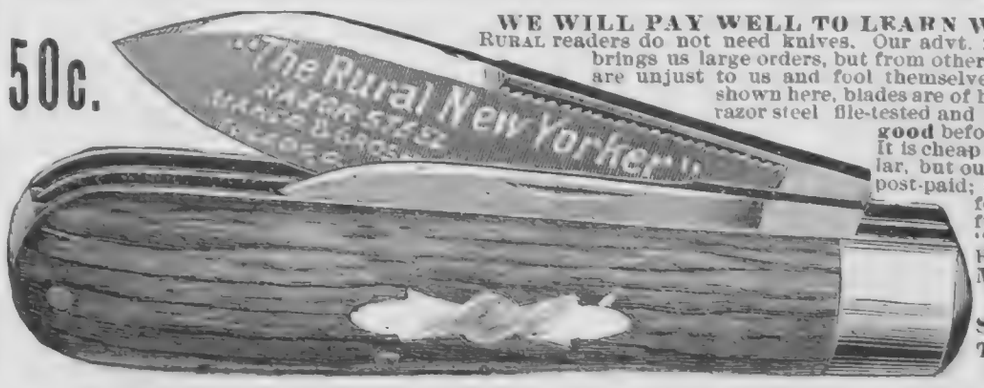
Who (if your druggist does not keep them) will mail Beecham's Pills on receipt of price—*but inquire first.* (Please mention this paper.)

50c.



WE WILL PAY WELL TO LEARN WHY IT IS
RURAL readers do not need knives. Our advt. in some papers brings us large orders, but from others few. Readers are unjust to us and fool themselves. Take knife shown here, blades are of highest quality razor steel file-tested and **known to be good** before sending out. It is cheap for a silver dollar, but our price is **50c.** post-paid; 5 for $2. Send for our 64-page free list, also, "How to Use a Razor."
MAHER & GROSH, 80 S Street, TOLEDO, OHIO

News of the Week.

HOME NEWS.

SATURDAY, May 18, 1889.

JAMES KELLY, produce dealer, Lexington, Ky., has just escaped the clutches of a "green goods swindler" in this city. Wednesday morning he was found dead at a hotel in New Brunswick, N. J, with the g. g.'s circulars in his pocket and a letter making an appointment with the crook. Kelly had blown out the gas and been suffocated. People who blow out the gas instead of turning it off, are ready-made dupes for swindlers .....Deaths by lightning have been unprecedentedly numerous for the season of year—and the electric lighting and telephone wires in towns and cities add considerably to the number of casualties from electricity. .....Bringing suits for "breach of promise" is becoming quite a popular and profitable industry for women from sweet 16 to sour 70—the age of the latest aspirant for damages.....Freight rates on dressed beef from Chicago to New York have just been reduced from 50 to 45 cent per 100 pounds by the trunk lines..... After all, the Missouri Senate has finally defeated the anti-dressed meat bill, though the House has passed it by a large majority and a telegram to New York a fortnight ago, said the Senate had done likewise. A similar bill was shelved by the New York State legislature last Tuesday. The legislature adjourned at noon on Wednesday after a session which appears to have afforded little satisfaction to the public..... The new license laws in Philadelphia have reduced the number of retail dealers in intoxicants from 3,214 to 1,203, and the number of wholesalers from 640 to 500. The lawyers who appeared on behalf of the rum-sellers netted about $750,000 in fees, and "stood to win" much more had they gained more cases. The successful representatives of ordinary dealers averaged $250; while those who represented 40 of the most profitable and notorious places averaged $2,500 each. About 300 of the wholesalers paid $500 apiece, 200 $100 each, and the rest $50 per man. The profits of the business are so enormous, that it pays to give big fees for even a chance to continue it .....Mind-reader Washington Irving Bishop, who created such a sensation in this, his native country, and in Europe by his wonderful mental performances, died here the other day from mental strain incurred in performing a new feat which brought on a cataleptic fit. The doctors in holding a post-mortem examination cut him up a few hours after his death without permission from his relatives, and his mother and wife insist that he was merely in a trance and was killed by the doctors..... It turns out that WILLIAMSON, the Philadelphia philanthropist, who gave millions for founding a great school for the gratuitous instruction of boys, during life paid only $200 a year taxes to the State on $67,500 invested in taxable securities whereas he had $3,750,000 so invested on which he ought to have paid $11,200. His executors will have to pay the full amount in future.....A combination of glass fruit-jar and fruit-jar cap makers at Pittsburg, Pa. where nearly all those goods are made, has just raised the prices and threatens another big lift.....The emigration out of Oklahoma continues. Entries on hardly a fifth of the land have been filed yet; but it is expected that many will return soon and complete their entries..... ... The rush to the Sioux Reservation on the Upper Missiouri is increasing. It is thought that in six weeks it will equal the recent Oklahoma boom. A large proportion of the 11,000,000 acres to be soon thrown open to settlement there, however, is utterly unfit for cultivation, and much of it is not superfine for grazing.... ..... A new smoke-burner for locomotives has just been satisfactorily tried on the Wisconsin Central Railroad, which does entirely away with the smoke nuisance; the locomotives furnished with it need only half the usual amount of coals. It's a boon therefore alike to the railroads and the public! ... .Two New Yorkers have just started on a ride across the continent to San Francisco on a couple of bean-fed nags.....The peach growers of Delaware have to face the prospect not only of a crop so unusually large as to render it difficult to market it so as to realize a profit, but also the threat made by the Peach-Growers' Association of Northern New Jersey, that its members are about to set out 500,000 young trees, besides encouraging others to do likewise. Small wonder that the Delaware peach-growers are rather disconsolate!..... Thursday morning a fire destroyed 700 houses in St. Sauveur, a suburb of Montreal. As the houses are nearly all of wood the flames spread rapidly, making 4,000 to 5,000 people, chiefly belonging to the laboring classes, homeless. Loss $600,000. While trying to blow up some of the buildings to stop the progress of the flames a major and sergeant of the garrison were killed by a premature explosion of powder.....Not a single State legislature has adjourned this year without a hearty "Thank God" from most people. Complaints of jobbery, bribery and all sorts of corruption have been unusually numerous and loud..... Allen Thorndike Rice, aged 36, editor and owner of the North American Review, who had been appointed Minister to Russia a little over a month ago, was suddenly attacked by tonsilitis—a throat disease—just as he was about to start for Europe last Saturday. The doctors thought little of the matter; but he died suddenly on Thursday morning from an aggravation of the disease causing suffocation.

FOREIGN NEWS.

SATURDAY, May 18, 1889.

LAST Monday week the great French International Exposition was formally opened by President Carnot and other celebrities. It was to a great extent incomplete; but everything will be ready by the end of the month. As it was avowedly started to commemorate the great French Revolution which proved so disastrous in its consequences to the monarchies of Europe, it could not expect much aid or sympathy from any of their present representatives. Indeed, contrary to the custom at all other European International Expositions, no monarchical country in Europe is officially represented at this, nor has any assistance been given from the public Treasury of any to intending exhibitors. On the contrary, in several cases, notably in Germany, a good deal of official discouragement has been extended to such enterprises. The chance for advertising their goods, has, however, induced manufacturers and others to make very full exhibits, and the show will probably, after all, be finer than any of its predecessors in France or any other country. The buildings cover a larger area of ground and are more artistically and conveniently constructed, while the number of entries is considerably larger than at any previous display of the kind. This is the only great nation which has made an appropriation to aid exhibitors, and the American display promises to be exceptionally fine. A vast concourse of visitors is already under way from all parts of the world, the United States contributing a mighty contingent. The Effel Tower, a thin iron lattice-work structure 1,000 feet high, is the most unique and probably the most attractive feature of the Exposition.....

A Happy Medium.

IN our efforts to urge conviction our greatest concern, often, is to captivate inclination. When we have done, our adversary admits that he has been agreeably entertained, but he is of much the same opinion as he was before. Then we attempt the direct. We establish an irresistible sequence; an adversary follows; he is convinced but offended.

Our pith pellets of argument have only amused him; but directness and sincerity are trenchant and his veneer of composure is pierced. Now what must we do? We want to convince without offence. Perhaps there is a happy medium. Let us see:

DARLINGTON, S. C., Feb. 7, 1886.
"I intended writing to you three months ago to let you know how wonderfully your Compound Oxygen helped me. I recommend it whenever an opportunity occurs."
SERENA L. DARGAN.

ALMONT, N. Y., May 20. 1887.
"The Compound Oxygen is a marvelous remedy." I am, most sincerely,
MRS. J. C. GOFF.

CRAFTON, WISE CO., TEXAS, May 7. 1888.
"I want to tell you how your Texas Asthmatic is getting along. I am just as well at this date as I was when I gave you my testimonial in ('86)." MRS. MARY HARGROVE.

MIDDLETOWN, N. Y., JANUARY 25, 1888.
"I have used the Compound Oxygen now for about three years, and consider it the most efficient remedy ever offered to the smfferer."
REV. WM. MCGLATHERY.

We publish a brochure of 200 pages, regarding the effects of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, May 18, 1889.

OUR CORRESPONDENT, Hiram P. Hopkins was invited by the United States Dairy Commissioner for his district to make a sample of butter to represent the dairy interests of Erie County, N. Y. at the Paris Exposition..... Assistant Secretary of Agriculture Willits has received a letter from Ireland setting forth the profit of flax culture to America. If factories for the manufacture of flax products could be had in this country the crop would pay well.....Rats have for a long time infested the quarters occupied by live animals at the Smithsonian Institution at Washington. It was impossible to catch them until the discovery was made that they are extravagantly fond of sunflower seeds. Traps baited at night with these seeds held, the next morning, 10 to 15 rats each..... Samuel Budgett & Son, the English cheese merchants state that there has been a gradual decline in prices of cheese. It seems probable that prices will fall still lower. English commission men are carrying smaller stocks than usual and it is probable that late in the season prices in England will jump up because of an under supply. Its expected that New Zealand will ship considerable cheese to England this year..... The tent caterpillar is increasing at an alarming rate in Central New York, and many farmers are making no effort to check its ravages.....From the Crop Report of the Missouri State Board of Agriculture, we learn that crop prospects throughout the State are more favorable than for many years, if indeed, they have ever been so good. The season is 10 days to two weeks earlier than last year. The condition of winter wheat is placed at 98. The prospects for other crops are very favorable. Fruits, with the exception of apples, promise well.....The Lake and rail freight rate on corn from Chicago to New York has been reduced to 7⅛ cents per bushel, and the Lake and Canal rate to 6¼ cents..... The 14th annual meeting of the American Association of Nurserymen will be held at Chicago, June 5 and 6. Papers or addresses are expected from Hon. Norman J. Colman, J. H. Hale, G. E. Meissner, P.J. Berckmans, W. C. Barry, P. Barry, William Storrs, T. S. Hubbard, Peter Henderson, J. T. Lovett, Mr. Hobbs, Geo. W. Campbell, Anthony Lamb, H. S. Anderson and many others. George A. Sweet is president and Charles A. Green secretary.....The Moorestown Agricultural and Industrial Society will hold their 14th annual exhibition on their grounds at Stanwick Station near Moorestown, N. J. June 6, 7, and 8. The premium list includes field trials of all kinds of agricultural implements, plowing matches, shepherd dogs herding stock, etc. An extensive strawberry exhibit will be made.....The Illinois State Grange, Patrons of Husbandry, offered a reward of $10,000 for a patentable contrivance which may be attached to reaping machines, and which will bind wheat and oats with straw instead of with twine..... The Cattle Inspection bill was defeated in the Michigan Senate recently.....Connecticut claims one-third of all the creameries in New England.....Mr. Aspinwal of Three Rivers, Michigan, the inventor of the Aspinwal potato planter, has invented and put into practical operation, wooden combs for bee-hives.....A Michigan firm of Short-horn breeders claim that one of their cows recently gave birth to three bull calves which are all doing well..... The first 13 volumes of the American Short-horn Herd Book are being revised .....The Kentucky Station is making experiments designed to determine what fertilizers are most needed in the culture of hemp. Most farmers think that naturally rich land is needed for hemp. The station desires to know if poor land to which fertilizers are added will answer.... The committee appointed at the last annual meeting of the Ayrshire Breeders' Association recommend the adoption of a set of rules to govern cow tests at all fairs, dairy shows and experiment stations, that the awards may be given to the breed or single animals which show their superiority as profitable dairy cows. These rules in brief are that all cows entered for trial shall be securely locked up, shall be fed, watered, milked, etc., uniformly, under the charge of a superintendent, the cow to be charged with all food consumed. A statement of the cow's previous condition and treatment must be made under oath. The cows must be milked regularly, and samples of each milking must be analyzed. The milk must be handled uniformily, the butter analyzed, and only the dry fat be calculated. The cow or herd giving the greatest quantity of marketable products at least cost to be awarded the prizes..... The experiment stations are all issuing bulletins devoted to fertilizers and fertilizing materials. The Tennessee station is the last to issue such a pamphlet.....A load of rye was received this week to go forward to Germany. Two loads of white corn were bought for Venice, which, with two loads last week form the first shipments to that country in many years.....

Miscellaneous Advertising.

The Kodak.

A WARNING.

UNAUTHORIZED parties are advertising a Camera which they claim is similar to the Kodak, loaded with our film. (We are the only manufacturers of continuous films in the world) We warn the public that the said Camera is entirely unsuitable for using our films and we decline to be responsible for any failures resulting from its use.

There is Only One Camera

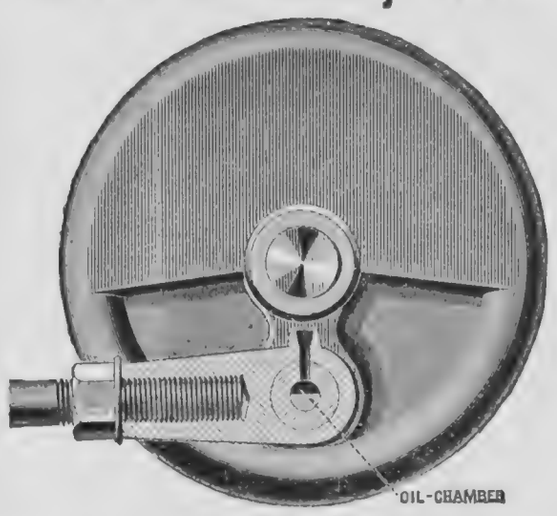
that is sent out loaded with 100 Eastman's films, and that is the Kodak. The patents on the Kodak and film are all owned by us and infringers will be prosecuted.
Send for Kodak Primer, free. Mention RURAL NEW-YORKER.

The Eastman Dry Plate and Film Co.,
ROCHESTER, N. Y.
BRANCH OFFICE,
115 Oxford St., London.

H. S. MILLER & CO.,
—MANUFACTURERS OF—
Pure Animal Bone
FERTILIZERS!
For all Crops and Soils. Factory and Principal Office on Passaic River, Newark, N. J. Baltimore Office, 202 & 206 Buchanan's Wharf, foot of Frederick St. Write for "Farmer's Manual," mailed **Free.**

FREDERICK T. ROBERTS, M.D., Physician to and Professor of Clinical Medicine at University College Hospital, London, Eng., says: "Bright's Disease has no symptoms of its own, and may long exist without the knowledge of the patient or practitioner, as no pain will be felt in the kidneys or that vicinity." This accounts for many people dying with Bright's Disease, or advanced kidney malady. The disease is not suspected until it reaches a fatal period. If Warner's Safe Cure is used at the proper time, the fatality from that disease would be greatly decreased. Dr. Thompson also, says: "More adults are carried off in this country by chronic kidney disease than by any other one malady except consumption."

The Worcester Buckeye Mower

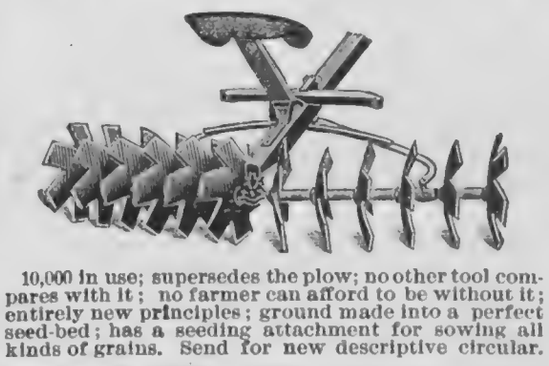


Ask our agents to show you the
SELF-OILING PITMAN
found only on the Worcester Buckeye. Be sure to see the new Big Six-Foot Mower. The lightest running machine ever put into grass. It has but two cog-wheels. Buy no machine until you examine the Worcester Buckeye.
THE RICHARDSON MANUF'G CO.,
Worcester, Mass.

GENUINE PHILADELPHIA.
1889.
PRICES REDUCED!

Fourteen Sizes and Styles for Hand Use. Weighing from 21 to 51 lbs. THREE SIZES FOR HORSE POWER. Lawn Sweepers, Grass Edgers, &c.
GRAHAM, EMLEN & PASSMORE,
Patentees and Manufacturers,
631 Market Street, Philadelphia, Penn'a.

SAVE YOUR MONEY
BY USING
Clark's Cutaway Harrow.

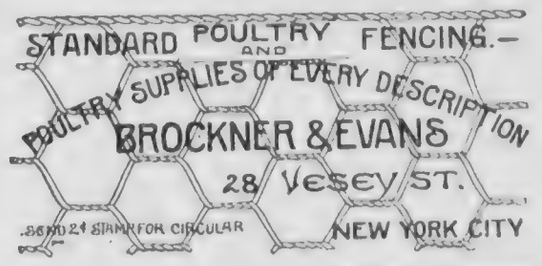


10,000 in use; supersedes the plow; no other tool compares with it; no farmer can afford to be without it; entirely new principles; ground made into a perfect seed-bed; has a seeding attachment for sowing all kinds of grains. Send for new descriptive circular.
HIGGANUM M'F'G. CORP., Higganum Conn.
Sole' Manufacturers. New York Office, 189 and 191 Water Street; Boston Office, 38 South Market Street.

University of the State of New York.
AMERICAN
VETERINARY COLLEGE,
139 and 141 West 54th Street, New York City.
15TH ANNUAL SESSION
The regular course of Lectures commences in October of each year. Circular and information can be had on application to
D. A. LIAUTARD, V. M., Dean of the Faculty

STEAM! STEAM!
Quality Higher, Price Lower.
For Strictly Cash, Complete Fixtures except Stack.
2-Horse Eureka Boiler and Engine, $135
4- " " " " $210
Other sizes at low prices.
Before you buy get our prices
B. W. PAYNE & SONS,
Drawer 57. Elmira, N. Y.

OKLAHOMA SURPASSED! READ ABOUT **TEXAS!** Valuable information **free.** Send your address and get free the great weekly paper of Central Texas—the **Brownwood Appeal.** Contains full and accurate information of this great Grain, Wool and Cattle Country. The healthiest and most desirable spot on earth for Home-Seeker, Land-Hunter and Capitalist. One average crop pays for your home The population exclusively white. Lands rich and cheap. Good markets, schools, churches and railroads. Address
APPEAL, Brownwood, Texas.



RED CAPS, 13 Eggs, $2.50; 26, $4. B. and W. Minorcas, $1.50; W. and L. Wyandottes, W. and B. P Rocks, Langshans & Houdans. $1. 12 B. Turkey E., $3
A. LEIDA, Delaware, N. J.

PILES. Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository. Sufferers will learn of a simple remedy FREE by addressing
TUTTLE & Co., 78 Nassau Street, New York City.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, May 18, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans. and Gulf.	Texas
Ordinary	8 5-16	8 9-16	.....
Strict Ordinary	8¾	9	.....
Good Ordinary	9 11-16	9 15-16	.....
Strict Good Ordinary	10⅛	10¾	.....
Low Middling	10⅝	10⅞	....
Strict Low Middling	10⅞	11⅛	.....
Middling	11 1-16	11 5-16	.....
Good Middling	11 9-16	11 13-16	.....
Strict Good Middling	11 13-16	12 1-16	.....
Middling Fair	12¼	12⅜	.....
Fair	12⅞	13⅛	....

STAINED.

Good Ordinary....8 3-16	Low Middling 9¾
Strict Good Ord....8 13-16	Middling....10 9-16

WOOL.—Spring Texas, 17@25c, and Fall do 15@22c; Fall California, 11@18c, and Spring do 14@24.

POULTRY--Chickens, spring, per lb, 20@25c. LIVE Fowls, near-by, per ℔, 12@—c; fowls Western, per ℔ 12@—c roosters, per ℔, 7c; turkeys, per ℔ 9@11c; ducks, western, per pair, 60@0.90c; geese, western, per pair, $1 00@$1 25.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per ℔, 12@—c; do do, common to fair, 8@11c; do, iced, dry picked, choice, 8@10c. Fowls, western, do, choice, 9½@10c; do, nearby, do do 10@11c; Chicks and Fowls, mixed, 9@11c; do do do, scalded, 8@9c. Squabs, white, per doz, $3 00@$3 25 do, dark, do, $1 75@$2 00. Chickens, Philadelphia, dry picked, 24@32c, do Jersey, do, choice, 22@25c; do nearby, do, good 20@23c; do Western, do do, 18@22c; do do, iced, good to choice 16@18c. Ducks, spring, choice, per lb, 26@28c; do do, good, 16@18; do Western, good, 12@18c. Geese, Western, good, 8@10c.

GAME.—Plover, per doz., $1 50@$2 00; Snipe, per doz. $1 75@$2 50.

HOPS.—State, new, best, 22@23c; do, prime, 20@22c; do, low grades, 13@16c; do do, 1887, 10@11 do do do California, common to prime, 13@19c; choice, 20@22c.

HAY AND STRAW.—Choice Timothy, 95@$——; do good do, 85@90c; do medium, 70@80c; shipping, 65@70c; do, Clover, mixed, 55@70c. Straw.—No. 1, rye, 75@80c; short do 55@65; oat, 40@50c.

BEANS.—Marrows, new, $1 70@$1 75; new mediums choice, $1 70@—; pea, $1 70@—; red kidney, $1 95@——; white kidneys, choice, 2 10@——; foreign, mediums, 1 35@1 55; California Lima, $2 75@$3 10; green peas, $1 10@——.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@——c, and farmers' grades at 6@6¼c. HICKORY NUTS quoted at $0 50@$1 00 per bushel. Pecans, 3½@6c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Bermuda, per bbl, $4 00@$7 00; Maine do. $1 50@$2 00; State do, $0 90@$1 50; Florida, do, $3 00@$7 50; Savannah, do, $6 00@$7 00. Sweets do. $3 50@4 50; Cab., new, $1 00@$2 00. Peas, per crate, $0 50@$1 50; Squash, do, $0 50@$0 75. Beets, do, $1 25@$1 75; Asparagus, per doz., $0 50@$1 50; Tomatoes, per crate, $1 00@$2 00. ONIONS—Bermuda, per crate, 75c; Beans, string, do. $1 00@$3 00; Cucumbers, per crate, $1 50@$3 00; Radishes, per bbl., 50c@$1 00.

FRUITS.—FRESH.—Apples, Baldwin, per bbl, $2 00@$2 50; Common, $0 75@$1 00; Russet, $2 25@$2 75. Spy, $3 00@4 00. Strawberries, per qt 5@35c; Cranberries—Jersey, fine, box, $1 00; do common, 50@75c. Oranges—Florida, best, box, $5 00@$6 50; do, good lots, $3 00@$4 50. Lemons, $2 75@$4 00.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5@6c; do new, common to prime, 3¾@4½c; sliced, new, 2¾@3¾c, quarters, 2½@3¼c; chopped, 1¼@1½c; cores and skins, 1@—c. Cherries, new, 10@15c. Raspberries, new, 16@18c. Blackberries, 4@4¼c. Huckleberries, 10@—c. Peaches—Delaware, evaporated, peeled, 10@14c; do do, unpeeled, 5@6c; North Carolina sun-dried, peeled, 7@9c. plums, 5@6c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 15 00@13 25, short clear, $14 00@16 00. Extra Prime mess, $12 50@$— prime do, $12@—— and family mess, $13 25@14 00 BEEF—India Mess. in tierces, $13@13 50; Extra Mess, in barrels, $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $7 50@8 00; Family at $11—@$14. HAMS—$12 00@$13 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 6¼@—c; Pickled Hams, 11c; pickled Shoulders, 6⅛@6¾c; Smoked shoulders 6¼c; do Hams, 11¾@12c. Dressed Hogs.—City, heavy to light, 6@6¾c. Pigs, 6¾c. LARD.—City steam $6 55; May, $7 11; June, $7 11; July, $7 12; August, $7 18; September, $7 20; South America, 8c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes quiet; Early Rose, 30@40c per bush.; Burbanks and White Stars, 23@35c; Hebron, choice, 32@35; New Potatoes. Florida, per bbl., $5 50@$6 50. Provisions were steady. BEEF.—City family, per bbl, $9 50@$10; do, packets, $9@9 50; smoked beef, 10@10½c; beef hams, $13 PORK.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@12c; do, S. P., cured in tierces, 9½@10½c; do do, in salt, 10c; sides, clear ribbed, smoked, ——@8c; shoulders, in dry salt and fully cured, 6¼@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6¾@7.

CHICAGO.—MESS PORK.—$11 45@11 50 LARD.—$6 80@—per 100 lbs; Short Rib sides (loose), $5 90; dry salted shoulders, boxed, $5 25; short clear sides, boxed, $6 25.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 17@—; Elgin, best, 18@—; Western, best 16@16½; do prime, 15@15½; do good, 14@14½; do poor, 13@13½. State, Dairy half-firkins, tubs, best, 16½@17c; do do prime, 15½@16; do do fine, 14½@15; Welsh tubs, fine, 16@16½; do do, good, 15@15½; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 12@14; do fine, 11@—; Western dairy, fine, 12@13; do fair, 11@—c; do poor, 9@10c; do factory, fresh, best, 10½@11, do prime, 10@—; do good, 9@9½; do poor, 8@——c.

CHEESE.—State factory, fancy, 9½@9¾c; do do, fine, —@——c; do do, prime, 9@9¼; do do, fair to good, 8@8½c; Ohio, flat, prime, —@—c; do good, —@—c; do, good, —@—; Skims, light, 7@8½c; do medium, 2½@5½; do full, 1@1¼c.

EGGS.—Near-by, fresh, 14¼@14½c; Canadian, 14¼c, Southern, 13½@13¾c; Western, best, 13¾@14c. Duck, 14@16c; Goose, 20@25c.

PHILADELPHIA.—BUTTER quiet. Pennsylvania creamery extra, at 17@—c; Western creamery, extra at 16½@17c, B. C. and N. Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were weak. Pennsylvania firsts 14@—c; Western firsts, 13½@—c; Cheese dull—steady; demand fair; New York full cream, at 9@9¼c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally weak; Elgin creamery, 15@16c; choice Western, 12½@14c. choice dairy, 12@14c; common to fair, 8@10c. Eggs weak at 11½@12c.

CHEESE—State factory, September made, 12c; do do do, October, fancy, 11@11¼c; do, fine, 11½@11¾c; do; fair and good, 10@10½c; Ohio, flat, prime, 11@11¼c; do, good, 9¾@10¼c skims, light, 8¾@9¼c; do, medium, 6½@8½c; do, full, 2@2¾c.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, May 18, 1889.

BEEVES.—Decent to choice native bullocks ranged in price from $3 90 to $4 70 per 100 lbs, with the bulk of the sales at $4 05@$4 50. Bulls sold at $3@$3 12½; cows at $1 75@$3 10. Buttermilk Calves ranged from $3 to $3 55 per 100 lbs; Veals from $4 50 to $5 75 for Medium to choice, with Extra Selected selling in a small way at $6. Mixed lots sold at $4@$4 75. Very few remained unsold.

SHEEP AND LAMBS.—Sheep in good demand and firm, with sales of poor to prime clipped at $3 50@$4 85 per 100 lbs. Yearlings steady at $5 62½@$6 25 for good to prime. The eight car-loads of Southern Lambs offered sold at lower figures, mainly at 7¾@8¼c per lb, with sales made early in the day at 9@9½c (few 10c). Sales—Clipped Vermont Sheep, 73 lbs. average at $4 50 per 100 lbs; Clipped Ohio Yearlings, 68 lbs, at $6; Unshorn State do, 87 lbs. at $7; State Spring Lambs, 54½ lbs at $9 50, less $5; Tennessee do, 60 lbs, at $8. Clipped Western Sheep, 84 lbs, at $4 62½; Clipped Western Yearlings, 63 lbs, at $6; State Spring Lambs, 53 lbs. at $9 50; Clipped Ohio Sheep, 95 lbs, at $4 75; Kentucky Spring Lambs, 65 lbs, at $9 50; Virginia Lambs, 57½ lbs, at 7¾c. per lb; Clipped Indiana Sheep, 118 lbs, at $4 75 per 100 lbs; Wooled Virginia do, 104 lbs, at $5 50.

HOGS.—Nominally steady, at $5@$5 30 per 100 lbs.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING MAY. 18, 1889.

M. N. McN.—P. W. J.—E. McM.—C. B. G.—W. J. H.—E. A. F.—O. K. L.—A. P. E.—G. S. C.—J. R. M.—S. G. K.

Miscellaneous Advertising.

LINSEED OIL MEAL
For Feeding all Domestic Animals.
Use, with your other feed, at least
One-Third Linseed Oil Meal.
Write us for prices and other particulars, and mention the RURAL NEW-YORKER.
DETROIT LINSEED OIL COMPANY,
Detroit, Mich.

JONES
HE
PAYS the FREIGHT
& Ton Wagon Scales,
Iron Levers, Steel Bearings, Brass Tare Beam and Beam Box for
$60.
Every size Scale. For free price list mention this paper and address
JONES OF BINGHAMTON,
BINGHAMTON, N. Y.

BEECHAM'S PILLS cure bilious and nervous ills.

Illustrated Catalogue free.
"OSGOOD"
U. S. Standard
SCALES
3 TON $35. Sent on trial. Freight paid. Other sizes proportionately low. Fully Warranted.
OSGOOD & THOMPSON, Binghamton, N.Y.

WINGER'S Royal Wind MILL,
Feed Grinder, Tank Heaters.
Indispensible to Farmers
ALSO
Cylinders, Pumps, &c.

WINGER, Windmill Man, The Freeport, Illinois.

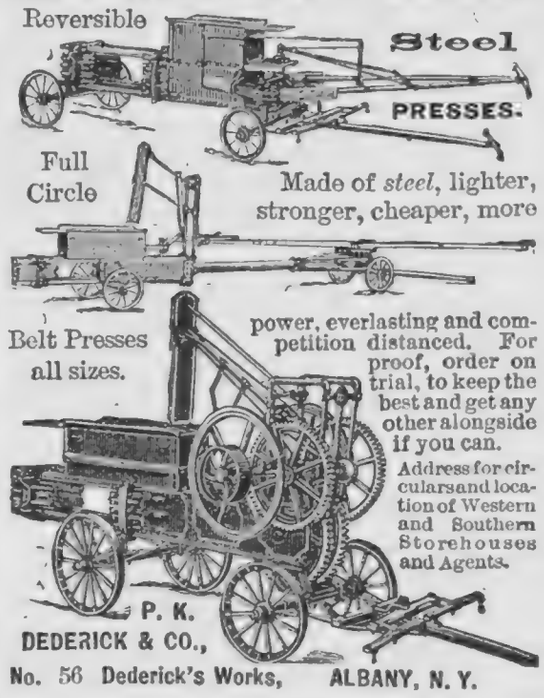
READY ROOFING
Impervious to acids arising from stables. Comes in rolls of 100 square feet.
Just the Roof for Stockmen and Farmers.
Any one can put it on. Send for descriptive circular.
C. P. KNIGHT,
No. 211 E. Lombard St., Baltimore, Md.

INSECTS on FRUIT TREES
Can be destroyed by spraying the trees with London purple dissolved in water. For full directions and improved outfits for Hand or Horse Power at BOTTOM CASH PRICES, address FIELD FORCE PUMP CO. Lockport, N.Y.

DR. T. HEMAN BREHMER, an eminent German authority, says: Consumption is always due to deficient nutrition of the lungs, caused by bad blood." At the Brompton Hospital for consumptives, London, Eng., a statement has been published that 52 per cent. of the patients of that institution have unsuspected kidney disorder. This explains why the proprietors of Warner's Safe Cure claim that they have received many testimonials which they have not published, because of the incredulity with which they would be received were it claimed that Warner's Safe Cure cures consumption. But the fact is that if your kidneys be cured and put in a healthy condition they expel the uric acid and poisonous wsate matter, and prevent the irritation of the delicate substances of the lungs, thereby removing the cause. When the effect is removed the symptoms of kidney disease, which is called consumption disappears, and with it the irritation which caused it.

Established 1852. | **JACKSON BROTHERS**
NEW YORK STATE DRAIN TILE AND PIPE WORKS,
MAIN OFFICE: 76 THIRD AVE., ALBANY, N. Y.

ROUND, SOLE AND HORSE-SHOE TILE,
Over 13 inches long. By cargo or smallest quantity. Our new improved machinery makes superior round and sole tile, excelling anything offered heretofore. First Premium wherever exhibited. Price-list on application. Vitrified Glazed Pipe and Tile Machines.

DEDERICK'S HAY PRESSES.
Reversible Steel PRESSES.

Full Circle
Made of *steel*, lighter, stronger, cheaper, more
Belt Presses all sizes.
power, everlasting and competition distanced. For proof, order on trial, to keep the best and get any other alongside if you can.
Address for circulars and location of Western and Southern Storehouses and Agents.
P. K. DEDERICK & CO.,
No. 56 Dederick's Works, ALBANY, N. Y.

LONDON PURPLE

The farmers of America who have used it have saved their crops, and also SAVED
¾ Million Dollars!
in the cost; while those farmers who have used other poisons have needlessly paid away and LOST
Six Millions Dollars!
If your merchant has not got
LONDON PURPLE
write to us and we will send you the name of the nearest dealer who has it.
HEMINGWAY'S LONDON PURPLE CO. Ltd
90 Water St. NEW YORK. | 60 Mark Lane LONDON.

BEST OF THE CLASS.

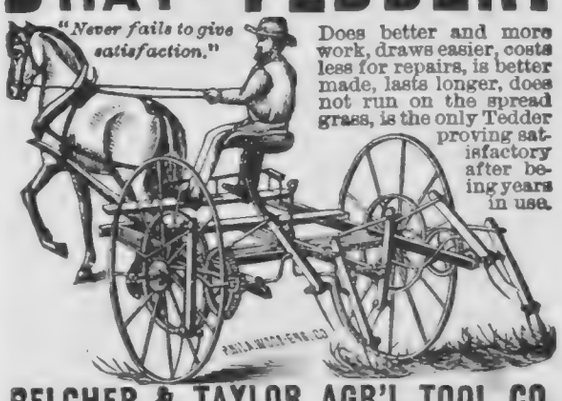
WINDMILLS,
Force Pumps, Handy Carts
Ear Corn Slicers.
Send for book giving full information free.
ENTERPRISE CO.,
Sandwich, Ill.

A SOLID STEEL FENCE!

15 Cts. per Foot, material 3 feet wide.
Adapted for Residences, Churches, Cemeteries, Farms, Gardens, &c.
All needing Fences, Gates, Arbors, Window Guards, Trellises, etc., write for our illus. price list, mailed free.
THE NEWEST THING AND THE BEST.
Central Expanded Metal Co. Pittsburgh. | N. W. Expanded Metal Co. Chicago.
St. Louis Expanded Metal Co., St. Louis.

I DRINK WATER!

FROM
"RUSTLESS IRON PIPES"
MADE BY THE
WELLS RUSTLESS IRON Co.
21 CLIFF ST. NEW YORK CITY.
SEND TO THEM FOR CATALOGUE.

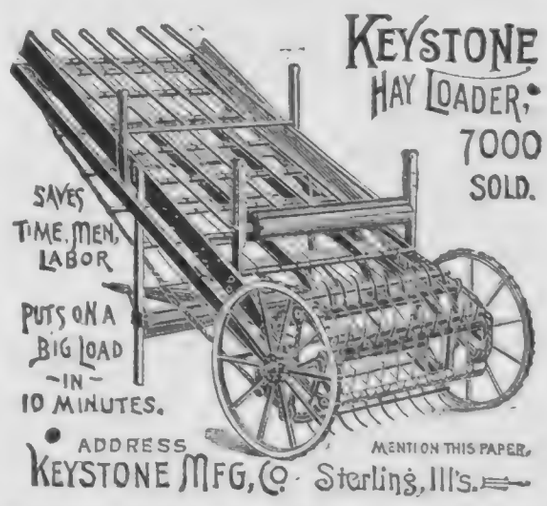
BULLARD'S HAY-TEDDER!


Does better and more work, draws easier, costs less for repairs, is better made, lasts longer, does not run on the spread grass, is the only Tedder proving satisfactory after being years in use.
BELCHER & TAYLOR AGR'L TOOL CO.
BOX 75, CHICOPEE FALLS, MASS.

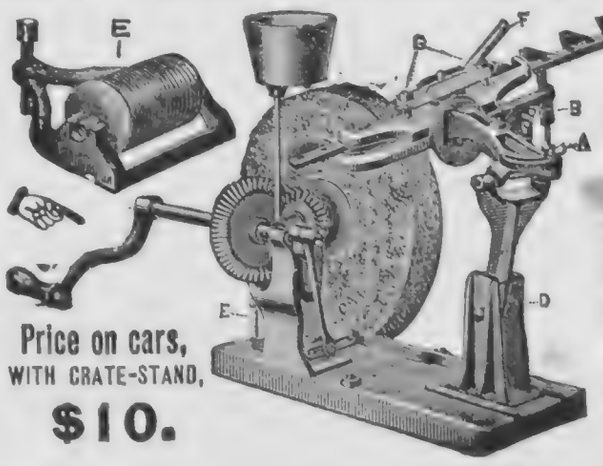
S. R. NYE'S NATIONAL RAKE
TRY IT! and YOU WILL USE NO OTHER.

Circulars Free.
ITS LEADING MERITS ARE
That it will not scratch your ground. Needs no adjustment, but will rake clean on all surfaces. Will not scatter at the ends. Will form a windrow in heavy or green grass. Is easily held down while at work. It has the simplest, most durable, as well as convenient dumping device of any rake in the field.
BELCHER & TAYLOR AGR'L TOOL CO.
BOX 75, CHICOPEE FALLS, MASS.

HAYING TOOLS.
WRITE FOR CIRCULARS AND PRICES.
MARION, OHIO.

KEYSTONE HAY LOADER,
7000 SOLD.


ADDRESS KEYSTONE MFG. CO. Sterling, Ill's.
MENTION THIS PAPER.



Price on cars, WITH CRATE-STAND,
$10.
WILLIAMS' GRINDER
FOR
Mower and Reaper Knives.
WITH THIS MACHINE ONE MAN
can grind the knives of a Cutter Bar, in **one-half the time** required by **two** men on a common grindstone—Do it with PERFECT ACCURACY and on any desired bevel.
Knives so ground cut easier and last longer. The grindstone is kept perfectly true, by using occasionally, the steel cutting roll, E, which is sent with every machine.
WRITE FOR CIRCULARS TO
The Williams Bros'. M'f'g Co., Makers,
Glastonbury, (Naubuc P. O.) Conn.

Literary.

OUR FIRST FARMERS' INSTITUTE.

BY WM. ROSS.

CHAPTER VII.—CONCLUDED.

THE President consented, and they sang, "The Old Tin Horn."

When the song was finished the President said:

"The institute is now adjourned till one o'clock; be prompt in your attendance, and bring more ladies with you." This brought laughter and applause.

As the President was occupying the judge's stand, I suppose he thought he ought to imitate the court as nearly as he could.

Promptly at one, order was called. Pretty soon the usher was seen peeping round after vacant seats and crowding people closer together. During the afternoon the business was transacted in the same vigorous manner as before; as soon as one performance was finished, another was ready, without allowing any time to be wasted. When four o'clock came, the president adjourned the institute till seven o'clock.

"Mr. President, can't we meet at half past six?" asked some one in the audience.

"Yes!" replied he "let it be half past six then: be on time."

Notwithstanding the largest church in town had a booming meeting on hand, sitting room was in demand that night in the court-room, and the premonitions that the President had given the committee, a month before, did not now seem so visionary. After a half-hour of music and short addresses, Mr. Brown gave his inimitable lecture on "Wanted—A Man!" which was listened to with intense attention. As soon as the lecture was finished the choir rose and sang. When it finished, an awful silence pervaded the whole room. Every eye seemed to be looking intently at the President, as if asking, "What next?" He seemed to be at a loss to know how to break that silence. He thought that to proceed further would be malapropos.

Directly he said, "There is no fixed time on the program for the adjournment of the evening session. Whenever the institute so desires we will entertain a motion to adjourn" Immediately a motion to adjourn was passed. Just as the motion was put, Mr. Frisk arose, "I wanted to remark"——

"A motion to adjourn is not a motion to remark on," replied President Bark.

"I was going to suggest," Mr. President, 'that we meet a half-hour earlier to-morrow morning than the program sets."

"If there are no objections, I'll accept your suggestion."

"There being no objection, the institute is now adjourned till nine o'clock to-morrow morning," said the President.

"Why! that lecture was the finest thing I ever heard," said Professor Franks, "and when I came in here, and heard that choir sing; why! I was perfectly elated; why! here I was right in an old-fashioned singing-school! why! I didn't know, hardly, how to hold myself!"

There were a great many terse congratulatory commendations uttered, that were not excelled by the exuberant professor's ejaculations, as the crowd slowly passed out. The music had now become a very attractive feature. It was pure, unadulterated vocal music, with no organ or brass horn nonsense, or string instrument squeaking mixed up with it. That choir came to sing, and they sang. If a momentary lull in the business happened at any time, "Music!" "Give us a song!" "More music!" would be heard from the audience, and when the President would be passing in to commence business, he would receive such reminders, as, "Don't cramp the choir!" "Give us plenty of music!" "Mind the music, Bark," and Bark interspersed it liberally.

The business was conducted the second day with the same energy and with equal interest. The seating capacity of the room was filled to overflowing.

A committee on resolutions and one on permanent organization were appointed. The latter recommended a permanent institute to meet yearly, or as often as it may elect. Mr. Bark was re-elected president and J. Edwards vice-president. A committee on finance and one on arrangements for next meeting, were appointed. Soon after noon the president said: "I have been informed that our speakers have to leave on this evening's train. It may not be prudent to hold an evening session without them, and unless the institute order otherwise it will close at four o'clock. The committee will arrange accordingly." There were three good lectures delivered by the State speakers on this day.

Bill Bark's capacious program was not much too big; if the institute had held another evening session, it would have been just right.

The committee on resolutions resolved thanks to the good people of Woodside; to the eminent speakers, to the ladies and gentlemen of the New Agreement choir, and cordially invited them to come back to the future sessions of the institute; and the heartiest thanks to the various newspapers of Woodside, commending them for their great zeal in making this institute a success.

"Mr. Bonham requested that if I found any good manuscripts," remarked Mr. Brown, "to send them in for publication, and as there are several here, I would like to get them."

"I suggest," replied Mr. Bark, "that, as probably our home papers would like to publish them, and our people would like to read them, they be distributed to the papers, and that they then be sent, *printed*, to Mr. Bonham." It was so arranged. At four o'clock the whole audience rose and sang the long-meter doxology, and the institute was declared closed.

After the close, commendations and congratulations seemed to be the order. The following are specimens. I heard an old farmer ask Mr. Bark: "How often are you going to have these things?"

"About once a year, I suppose," replied Bark.

"Why, they are too good to wait so long for; why couldn't we have them oftener; every three, or six months?"

"We can have them if we just go at and have them," said Bark.

Mr. Brown was asked how our institute compared with others, considering it was our first?

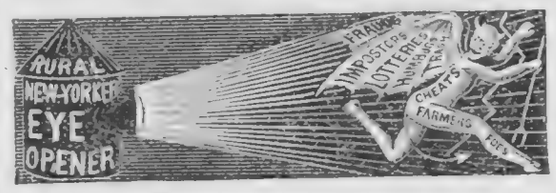
"It is away above the average of those I have attended," he replied, "and your own people have taken part in the various discussions, beyond my expectations.''

"How does it compare in attendance?" "Considering the horrible kind of roads you have, it is fully up to the average."

The next week all the papers devoted a considerable space to the institute. One of them gave it this "send off": "Last Monday a very respectable number of the farmers of Excellent county, whose appearance would compare favorably with most State legislative bodies, met at the court-house." The farmers are puzzled, however, to know just what that means. If the editor had been writing up a State legislative body and said it "compared favorably with that very respectable number of farmers," it could have been easily understood, and the people would have felt that their interests were safe in the hands of such a body.

Any locality that contemplates having a farmers' institute can have it by adopting Bill Bark's method: "The way to have it, is to just have it."

THE END.



Among the "dime novel" literature Indian stories have been yielding fast of late to detective tales, and the detective agency business has greatly increased. One of these facts may be a cause or a consequence of the other, or both may be simply "signs of the times." The number of bogus detective agencies, however, has by far transcended that of the real kind. Every large city has one or more and many smaller towns are not without them. They advertise pretty extensively through certain classes of papers and by circulars through the mails. Most, if not all of them "want agents all over the world." The only requirement is that the embryo detective should send $5 or sometimes $10 to the "agency," and keep his lips tightly closed as to his identity. If he isn't careful on the last point, the local police where he resides may hustle him to jail as a fraud. Of course, therefore, he can never even attempt to make an arrest lest such a folly might lodge him in the calaboose. All the aspiring Hawkshaw will have for his $5 or $10, therefore, is his own consciousness that he is a detective. The "agencies," of course, make big promises of profitable employment in hunting up all sorts of rascals, but, equally of course, they never intend to keep those promises, nor could they do so however hard they might wish. In nearly all the States the laws with regard to private detectives are very stringent. Substantially all provide that any person who shall engage in the business of a detective for hire or reward or who shall advertise his business to be that of a detective, without first having obtained a license so to do from the Court of Quarter Sessions of the county, or some other Court with jurisdiction in such cases, shall be guilty of a misdemeanor, and upon conviction thereof, shall be sentenced to fine and imprisonment of various amounts and duration. The law also generally requires bonds from the agency for security and as a guarantee of the legitimacy of its business. The J. C. Grannan Detective Agency, Cincinnati, Ohio, and the "Central Detective Department," Topeka, Kansas, have of late been particularly busy in this bogus business. All these agencies want is the $5 or $10, and all their dupes will ever get from them is a badge and a set of worthless credentials. Occasionally one, if specially troublesome or inquisitive, is punished by being started on a wild goose chase after some bogus or notorious criminal; but as he has to pay all his own expenses, and could do the same work just as well independently, he soon gets tired of it and settles back into the prosaic life of ordinary business routine.

THE other day, Judge Wickes, holding court at Chestertown, Maryland, gave a decision with regard to the validity of a note given in payment of "hull-less oats" which had been sold on the plan practiced by the Bohemian oats swindlers. The case was docketed Meginnis *vs.* Johnson. The latter gave a note for $100 in payment for 10 bushels of oats. At the same time he received a paper in the form of a contract which bound the "Grain and Cereal Company," of Carroll County, Maryland, to sell for said Johnson 20 bushels of the crop from the purchased seed at $10 per bushel, so that the oats and the contract were the consideration for the note. This note fell into the hands of Mr. Joseph Meginnis, who, of course, assumed the role of an "innocent holder." He managed to obtain from Johnson a second note for $80 in lieu of the original note for $100. The court gave judgment in favor of Johnson, and imposed all the costs upon Meginnis, declaring that the whole transaction was a fraud, and that the holder of the note had knowledge of its fraudulent character. Meginnis's attorney set up a claim that a law passed in 1888 forbidding such fraudulent schemes as the Hull-less oats, Bohemian oats, and Red line wheat swindles, prevented the Carroll county fraud from fulfilling its contract; but the court decided that the act was no bar to any legitimate business in oats or wheat and only interfered with fraudulent transactions. The judge said that, while notes in the hands of really innocent parties could be collected, it was against public policy and good morals to enforce an obligation under the circumstances, and the court would not sanction it. It is one of the laws of nature that, as a rule, a fool should suffer for his folly, but the people of that class who have had dealings with these grain swindlers, may, by boldly resisting the payment of their notes, very often escape the results of their folly, at least, in part.

ONE of the New York daily papers the other day gave up a column and three-quarters of its space to the exposure of a "wicked swindle" with which it charges the "New York Laundry Works," of 23 Dey street, this city. This concern widely advertises that it "will send, as a FREE GIFT, a full suit of clothes for a gentleman or a dress pattern of black silk for a lady" to every one who will send $1 for one of its wonderful automatic family washing machines, show it to his or her friends and help along the sale. The machine is said to retail at $2 and is puffed up to the skies. The concern boasts of having sold 100,000 washers last year. Great inducements are offered to agents, and the advertisement, though very beguiling to the gullible, to people of ordinary shrewdness bears on its face all the marks of a swindle. On investigation, it turns out that the concern says it will give the dress only to those who will buy $75 worth of the machines in one year, although the advertisement plainly says that it will send a machine and a $30 dress to every person who will forward to it $1 and be willing to extend its sales. It is said that the machine will do a family's washing automatically in 30 minutes, but a test proves that the little thing is utterly worthless and couldn't do a family's washing in 30 years. The business quarters of the "Laundry Works" consist of a small, dirty, ill-furnished, carpetless office over a corner rum-mill. The occupants are a young girl busy mailing circulars and a couple of impudent young men, proprietors of the "Works," who are prompt to jeer at a greenhorn who expected to get a $2 machine and a $30 dress for $1. Is this the only concern of the kind in the country? Why, bless you! no. There are hundreds of others just as bad scattered in all the big cities in the Union, with a fair sprinkling in smaller places.

THE "salvage sale" swindle, conducted by Prescott, Reid & Co., of Boston and Chicago, is denounced in many parts of the country. The circulars of the concern announce that it has been granted special license from the Custom House to sell to consumers only damaged cargoes of English, Scotch and French goods secured from various wrecked steamships, the names of which are generally given. The list of the goods is presented, and the amount of the loss through the wreck is stated. Samples of the goods marked at extremely low prices are appended. Agents are going around distributing these circulars, and the following day they generally appear with inferior dry goods, purporting to come from the wreck. Investigation proves that none of the wrecks mentioned ever occurred; that no arrangement had ever been made with the Custom House; that the latter would never consent to any such arrangement as that mentioned, and that the concern consisted of a pack of scoundrels bent on cheating the public by palming off on the ignorant, over-greedy and unwary a cheap, poor class of home-made goods under the guise of fine, expensive foreign fabrics slightly damaged. Several of the "agents" of the concern have been arrested in different parts of the country. The RURAL has often exposed such swindles, and our readers should remember that each of the dishonest schemes mentioned here is merely a specimen of a number of others of substantially the same stripe. It is rather improbable that Prescott, Reid & Co. will ever again—under this title at any rate—appeal to the greed or gullibility of the public: but other concerns of the same kind are sure to do so, and this is a warning against these rather than against the concern mentioned, which is certain to collapse soon, if it has not already done so within the last few days.

Miscellaneous Advertising.

BEAUTY of Skin & Scalp RESTORED by the CUTICURA Remedies.

NOTHING IS KNOWN TO SCIENCE AT ALL COMparable to the CUTICURA REMEDIES in their marvelous properties of cleansing, purifying and beautifying the skin, and in curing torturing, disfiguring, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c.; RESOLVENT, $1.; SOAP, 25c. Prepared by the POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

Dull Aches, Pains and Weaknesses instantly relieved by the CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster. 25c.

FOR SALE—SUPERIOR Grazing and Stock Farm in

FAUQUIER COUNTY, VIRGINIA,

40 miles south of Washington City, and one mile from Warrenton Junction, Va. Midland R'y—1003 acres. 900 acres is highly improved, superior quality for grass and grain; is well watered; has a handsome residence, Stone Grist Mill, Cattle House, Tenant Houses, &c. This fine property will be sold at a sacrifice. Address the owner,

A. N. BASTABLE,
27 W. North Avenue, Baltimore, Md.

General Advertising Rates of

THE RURAL NEW-YORKER.

34 PARK ROW, NEW YORK.

The following rates are invariable. All are therefore respectfully informed that any correspondence with a view to obtaining different terms will prove futile.

ORDINARY Advertisements, per agate line (this sized type, 14 lines to the inch).....30 cents
One thousand lines or more, within one year from date of first insertion, per agate line, 25 "
Yearly orders occupying 14 or more lines agate space.....25 "
Preferred positions.....25 per cent. extra.
Reading Notices, ending with "*Adv.*," per line, minion leaded..... 75 cents

Terms of Subscription.

The subscription price of the RURAL NEW-YORKER is
Single copy, per year..... $2.00
" " Six months..... 1.10
Great Britain, Ireland, Australia and Germany, per year, post-paid..... $3.04 (12s. 6d.)
France..... 3.04 (16½ fr.)
French Colonies..... 4.08 (29½ fr.)

Agents will be supplied with canvassing outfit on application.

Entered at the Post-office at New York City, N. Y., as second-class mail matter.

CATALOGUES, ETC., RECEIVED.

AN ARBOR DAY CELEBRATION.—The May issue of the Journal of the Columbus (Ohio) Horticultural Society contains an account of the Arbor Day celebration carried out by the students of the Ohio State University. The exercises consisted of various speeches and orations delivered by members of the different classes and others. The average college boy is a great hand at a speech; he only needs an audience and an occasion. Arbor Day would seem to be peculiarly fitted to draw out the college poet, but the following is the only specimen of original poetry we find in the report:

POET-TREE.

"Oak, Caroline! for yew I pine;
O willow, will you not be mine?
Thy hazel eyes, thy tulips red,
Thy ways all larch have turned my head,
All linden shadows by thy gate
I cypress on my heart and wait;
Then gum beech cherished, Caroline;
We'll fly for elms of bliss divine.

O, spruce young man! I cedar plan—
Catalpa's money, if you can;
You sumach ash, but not my heart;
You're evergreen, so now depart;
You'd like to poplar—that I see—
Birch you walnut propose to me—
Here's pa! you'll see hemlock the gate;
He maple litely say 'tis late!'

Locust that lover, while he flew
For elms before that parent's shoe;
He little thought a dogwood bite
And make him balsam much that night,
Hawthorny path he traveled o'er,
And he was sick and sycamore."

Well, well, well! Poetry must have been starved out of that college or else they had some very sensible men in charge of the programme.

SUGAR FROM SORGHUM.—Chemist Wiley of the Department of Agriculture, has issued a pamphlet, bulletin 20, giving a record of experiments conducted at Rio Grande, Benner, Conway Springs, Douglass, and Sterling. All who are interested in sorghum sugar will find this pamphlet valuable. There are two points of particular importance. One is the report of the chemists who have analyzed frosted cane. Less than a year ago it was found next to impossible to obtain an analysis that would show the effect of frost on growing corn fodder. It is shown in this pamphlet that a light frost injured the juice in sorghum cane, rendering it lower in solids, lower in sugar, and of less purity. Another topic of practical value is that involving the points to be considered in building a factory for sorghum sugar. A bountiful supply of water is absolutely necessary. A factory must be located where there is no danger of a water famine. Cane now brings a price of $2 per ton at the factory. It will thus be seen that no farmer can afford to haul an ordinary load of it much over a mile. Thus the factory must be in the center of an area of growing sorghum. Suppose the factory could be placed so that all the land within a radius of one mile could be in cane. This would give 2,000 acres, producing say, 20,000 tons of cane. Increase this radius by half a mile and the number of acres tributary to the factory will be greatly increased. We see that the sorghum sugar business is to be conducted somewhat on the principle of the whole-milk creamery, the difference being in the heavier weight of the cane and the greatly increased cost of getting it to the factory. Doubtless the time will come when the factory will find it necessary to extend narrow-gauge railroads into the country about it so as to still further reduce the cost of hauling the cane. Another important point to be considered is the securing of a cheap and abundant supply of fuel. It is therefore necessary that the factory should be in a position so situated that coal can be readily hauled to it. Some economists have advocated the burning of the chips from which sugar has been extracted, but practical experiments have not yet demonstrated the wisdom of this plan It will evidently cost more to prepare the wet chips for fuel than coal would cost. It will be seen from these facts that the production of sorghum sugar will be confined to certain sections of our country where cheap and easily tilled lands can be secured. Chemist Wiley is of the opinion that the Indian Territory offers the best chance for a development of the industry. The cost of a plant suitable for developing the enterprise is so great that the business can only be conducted on a large scale, and like the business of producing cane sugar or cotton will necessitate the employment of cheap labor in order to produce cheap sugar at a profit.

FOWLER AND FARRINGTON, TAUGHANNOCK FALLS, N. Y.—Circular of sulky plows, road carts and hay cars. This firm make three styles of hay cars. Send for their circular.

FISH BRAND WATER-PROOF CLOTHING.—Catalogue from A J. Tower, 18 Simmons Street, Boston, Mass. This article of clothing is designed for the use of farmers, stockmen, herders, doctors and others whose business calls them out into the rain. The material of which this clothing is made is claimed by the manufacturer to be lighter, more durable and cheaper than rubber. Here is an extract from the catalogue, which the R. N.-Y. can heartily endorse:—

"The importance and pleasure of keeping dry in wet and stormy weather can be appreciated only by those who never enjoyed the luxury of a perfectly waterproof garment. Many dollars, and what is more important, many lives are annually lost through want of a proper and sufficient protection against rain and wind; and farmers, and others whose business is out-of-doors, are compelled to lose many valuable days' labor, which they otherwise would not, had they perfect protection from the rain."

Send for the pamphlet and see the new designs for water-proof clothing shown in it.

Does heating milk affect the quantity or quality of butter?

This topic is discussed by Director I. P. Roberts in the latter part of bulletin No. 5 of the Experiment Station at Cornell University. This investigation was started by a reply made by Mr. E. W. Stewart to a reader of the Country Gentleman, who found that milk from high-grade Jersey cows would make but one pound of butter from 28 pounds of milk. Here is what Mr. Stewart said:—

"It is highly probable that not more than two-thirds of the fat is obtained from this milk. If this milk were heated in a water bath to 135 degrees, immediately after milking, and set in shallow pans in a temperature of about 60 degrees, the amount of cream and butter would be largely increased, and the cream would churn in the same time as from fresh milch cows, and probably it could not take more than 17 to 20 pounds of milk to a pound of butter. But if the cream be raised by cold deep setting, then it should be set directly from the cow, and the cream may be heated to 130 degrees when skimmed, and after ripening will churn much better for it and make more butter."

On the other hand, Professor Roberts has the following report from a firm of extensive and very successful dairymen:

"We took some milk from the vat just after milking, and after stirring it thoroughly we took two samples of exactly the same amount. One sample was scalded at 120 degrees, the other without scalding, and both stood for twenty-four hours in ice water at 40 degrees; they were then both closely creamed, the cream ripened and the two samples churned, worked and in every way except the scalding treated exactly the same. The scalded milk produced 6 lbs. 11 ozs. and the other 5 lbs. 15½ ozs. The former was white and pasty and could not be worked into butter; it was impossible to get the buttermilk and curd out of it; the latter made a good product of marketable butter.

"We then took two samples, each of the same amount exactly, heated one to 120 degrees and left the other normal and put both in ice water the same as before for 20 hours. They were then ripened without skimming and treated exactly the same, churned the same and worked the same and in every way treated alike except the heating. The scalded milk produced 4 lbs. 5 ozs. and the other 2 lbs. 1¾ ozs. That from the scalded milk had the appearance of Dutch cheese and could not be worked into butter; it was impossible to get rid of the curd and buttermilk. The other was a very handsome sample of well-colored marketable butter. These tests were both made with the utmost care in every particular. The test of the scalded milk made without skimming showed more curd than when skimmed, and hence the larger proportionate product."

The detailed experiments carried out to settle the question raised by these statements are too lengthy to be given here. Those who care to study them may secure the bulletin. It may be stated briefly that the parcels of milk, each containing 14 pounds, were treated as follows: No. 1, set direct from the cow at a temperature of 93 degrees. No. 2, cooled to 60 degrees, strained into another can and set. No. 3, cooled to 60 degrees and then warmed to 93 degrees. No. 4, cooled to 60 degrees and then warmed to 135 degrees. All were set in a Cooley creamer with water at 40 degrees. Again, 48 pounds of milk were set at 90 degrees, 48 pounds first cooled to 60 and then warmed to 135 degrees, the same amount set at 88 degrees and the same amount cooled to 60 and warmed to 135 degrees.

Two other tests were made just about like those given above. The returns in cream and butter were carefully recorded and careful analyses of the milk were made. Here are the conclusions reached by Professor Roberts:

"We may conclude as the result of these investigations, first, that there is a loss of butter when the milk is allowed to cool much below the normal heat of the cow before being put in the creamer; second, that while there may not be any very great increase of butter when the milk is heated there is no risk of injuring the quality of the butter by incorporating an excess of casein even when the milk is heated as high as 135 degrees."

C. P. KNIGHT, 211 E. LOMBARD ST., BALTIMORE, MD.—Circular of two and three-ply roofing paint and Liquid Enamel paint. This circular contains valuable information concerning new and old roofs, roofing paint, etc. Send for it.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

PROPERTY RIGHTS OF MARRIED WOMEN IN NEW JERSEY.

S. T. M., Williamsport, Pa.—I have been assured that in New Jersey a married woman has no personal rights in her own property, all of which is absolutely owned by her husband, and that she cannot even make a valid will. An instance was given by my informant, of a woman who left her husband on account of his cruel conduct, and went to her father's house, to which the husband followed her, and actually carried off her trunks with their contents, claiming that they were his property. It was also declared that in that State a married woman with some means can be compelled to support a worthless, drunken husband who refuses to work or give her any money. Can this be so in any State of the Union at the close of the Nineteenth Century?

ANS.—No; our inquirer has been sadly misinformed. The old laws with regard to the rights of married women in New Jersey were no doubt unjust, as were all old laws everywhere with regard to the same sex; but since the passage of the amendments of March 27, 1874, the property rights of the women in New Jersey appear to be ample and well protected. The real and personal property of any woman in the State, who has married since July 4, 1852, which she owned at the time of her marriage, continues her sole and personal property as if she were still a single woman. All rents and profits derived from it are hers. Her wages, earnings and all income from her separate business and from all investments made by her belong absolutely to her. She may bind herself and her property by contract, with a few unimportant exceptions, as if she were single. Any will or testament made in due form of law by her, if she is above 21 years of age, concerning real or personal property, is as valid and effectual in law as the will of any other person. She may sue and be sued in her own name without joining her husband, and she is not liable for his debts or support. Thus, it will be seen, New Jersey is fully abreast of the foremost of the other States in reference to the legal rights of married women with regard to their own property.

LAW WITH REGARD TO TRESPASSING FOWLS.

E. L. B, Bergen, N. Y.—One of my neighbors, among a lot of other bothersome fowls, keeps a flock of about 40 Guinea hens. These he keeps all the time on my grounds. Indeed, if they go home, he drives them back across the road again. At seeding and harvesting time they do a world of damage. Last fall they ate nearly all there was of 2½ acres of fine buckwheat. He promised that if I would say nothing about the matter, he would not keep any this year; but he has just told a neighbor that he will keep them because they stay away from home nearly all the time till late fall, and he said that he could pay for all of my buckwheat they might eat. If I shoot some of them, I think the rest will be scared permanently away, or else their owner will keep them out of mischief on my land. Have I a right to do so?

ANS.—This is certainly a hard case, and that is certainly not an agreeable neighbor; still our inquirer has no legal right to shoot or poison the trespassing fowls. Even a notice served upon their owner that our justly exasperated friend intends to kill them, is merely a threat to do an illegal act, and will make no difference in the legal aspect of the case. It has been frequently decided that the poisoning of a neighbor's hens, even after repeated trespasses and warnings of an intention to kill them, was a wrong for which an action would lie. The owner of an animal, however, is liable for its acts, and the present is such an aggravated case that, no doubt, the full amount of the damages done by the hens, not during the past year only, but during former years within the scope of the statute of limitations, could be readily recovered by legal process.

TRESPASSING DOGS: FENCES IN NEW YORK STATE.

L. S. M., Westchester County, N. Y.—I live in New York City, but have a country house with several acres of land in this county. It lies along a public thoroughfare and is unfenced. Dogs belonging to the neighbors enter my grounds, injure my flower-beds, kill my chickens, and cause much other annoyance. Have I a right to put poisoned food in their way? If not what am I to do?

ANS.—It depends somewhat on circumstances. It is quite lawful for any person in this State to kill any dog the tax on which has not been paid, and in a suit for damages arising from such killing the burthen is on the owner to prove that the tax has been paid. In case the dog is licensed and the tax has been paid, no one is at liberty to kill it for the offense complained of by our inquirer. Section 44 of the law relating to fences in this State provides that whenever the electors of any town shall have made any rule or regulation prescribing what shall be deemed a sufficient fence in such town, any person who shall thereafter neglect to keep a fence according to such rule or regulation. shall be precluded from recovering compensation in any manner for damages done by any animal lawfully going at large on the highway, which may enter on the lands not fenced in conformity with such rule and regulation. If our correspondent's premises were properly fenced, or if no regulation with regard to fences has been adopted in his town, the owners of the dogs will be liable for the damages done by them on the premises; but our inquirer has no legal right to kill the dogs by poison or any other means.

RIGHT TO WATER FROM A SPRING ON A NEIGHBOR'S LAND.

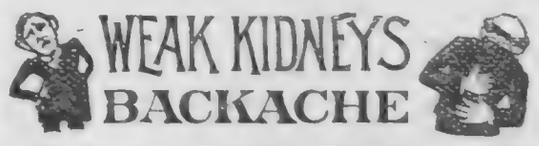
L. K. E., Seneca County, N. Y.—On my farm there is a spring of water that rises about eight rods from the boundary line and then flows on to a neighbor's premises. The neighbor has a lead pipe to the spring, and through it his house is supplied with water. The pipe was laid about 35 years ago, permission having been given by my father, now dead. No written contract or deed was made. I now want the spring for my own use. Have I any right to it; or can my neighbor hold the water by proving peaceable possession of it for 35 years.

ANS.—Even if the water issuing from the spring upon our inquirer's land were conveyed to that of his neighbor by a natural watercourse, without the intervention of a lead pipe, our friend would have no right to divert the water to his own use. It has been often held by the courts that the diversion of the water of a spring from its natural channel by the owner of the land whereon it is situated, whereby a lower owner is deprived of the use of the water, is a legal injury for which the latter is entitled to compensation in damages. The fact that in the present case the neighbor has for so long a time been allowed to convey the water in pipes should strengthen the case. When existing rights have been settled and fixed by mutual agreement, and the agreement has been carried out and acquiesced in, and the privileges have been enjoyed for 20 years without complaint or objection, neither party can gainsay his own acts or complain of any results flowing from them.

T. H. H., Charleston, W. Va.—I own a farm on a stream in another part of this State. The land-owner below me on the stream has had a flour mill for upwards of 30 years, and there has been a dam across the stream for the supply of water. Even in its present condition when the stream is swollen by rains, it causes an injurious back-water on my land. The owner proposes to raise it still higher, so that the injury to me will be greater. Can he legally do so?

ANS.—No; a prescriptive right such as that possessed by your neighbor, cannot be enlarged to the injury of another.

Miscellaneous Advertising.



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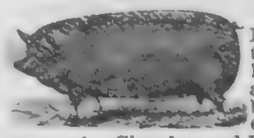

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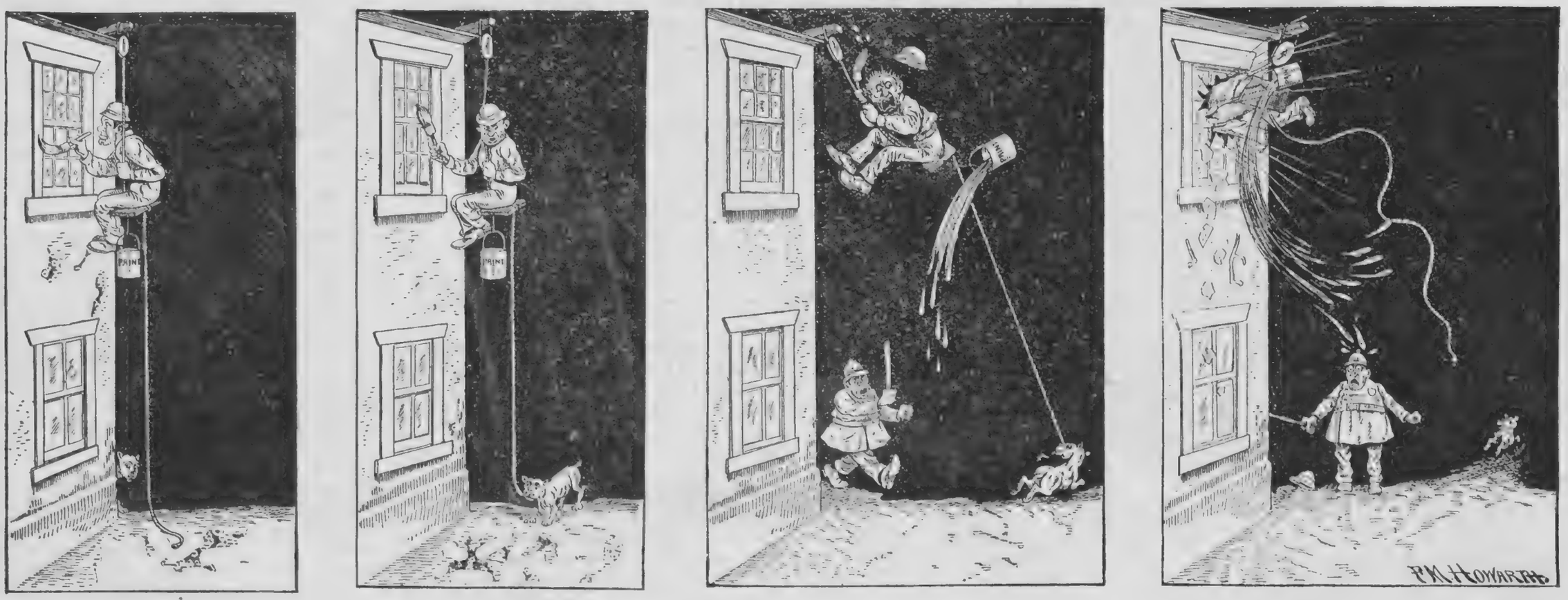

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RAINING cats and dogs is surely no worse than hailing strangers.—*Life.*

"AH, excuse me, Mr. Harrison. I will wait until you are not so busy." "Well, then, goodbye, Mr. Place-seeker; that will be in 1892."—*Albany Journal.*

AT THE HOTEL. Traveler (sitting up in bed, watch in hand): "Six o'clock, and nobody comes to waken me. I shall be sure to miss the train."—*Paris Figaro.*

YOUNG MAN (to editor,: "I would like to leave this article, sir, for you to read, and in case it is not accepted you can return it to me." Editor: "Oh, yes." Young man: "I have signed it Anon." Editor: "Very well, sir; I will return it anon."—*New York Sun.*

MR. BLUFF (to his traveling acquaintance): "Surprised at the evidences of culture you saw in the West, eh? Why they're raisin' corn in the Kaw River bottom-lands that's 16 feet high. If the East can beat that for culture, you'd better show up the goods!"—*Life.*

"ANY important news in railroad circles to day?" asked the Editor, as Faber rushed into the office and hastily began to scribble on a pad. "Yes, there must be a frightful accident down the road; for when I called at the office, I was told there was no information for the press to day."—*Puck.*

WHEN one sees one of those muscular, rather than musical individuals, who saw so exasperatingly on the violin, he cannot help thinking how much better it would be for suffering humanity if the sawyer would give up vocal chords and devote his undivided energies to cords of wood.—*Gorham Mountaineer.*

"IS IT true, Angelina," said a young lady addressing an acquaintance, "that there has been a rupture between you and Clarence De Johnes?" "It is quite true." "Gracious! What was the cause?" "He was addicted to the use of slang." "Oh!" "Yes, I begged him to discontinue the habit, but he persisted in it." "And the result?" "The result is, he is in the soup."—*Boston Courier.*

MRS. ESTHETE (in old furniture depot): "I am looking for a genuine antique bed-room set. The proprietor is out, is he?" New Boy: "Yes, boss won't be back for an hour. We've got what you want, though." "Have you? Oh! Oh! I'm delighted. But perhaps it is a new set made in imitation of an old?" "No'me; it's genuine, I guess. The boss told me to put insect powder on it this morning."—*Time.*

A SMALL boy is rather slow in committing prayer to memory, and requires a good deal of prompting. The other night he began in his regular way: "Now—I—lay—me"—and there he stuck fast. "Down," said his mother prompting. Whereupon Johnny set off again with great alacrity and fluency: "Down came a blackbird and nipped off her nose!" This fable teaches that the preference of the present generation for secular over sacred literature begins at an early age.—*Boston Transcript.*

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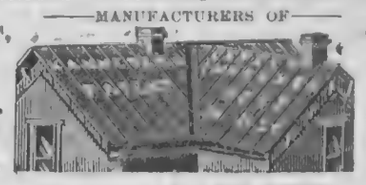

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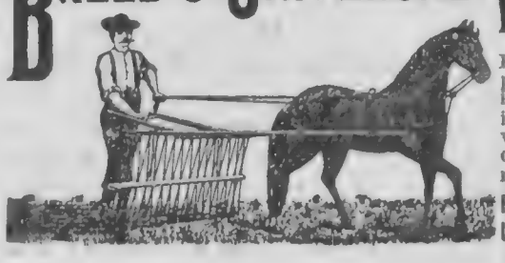

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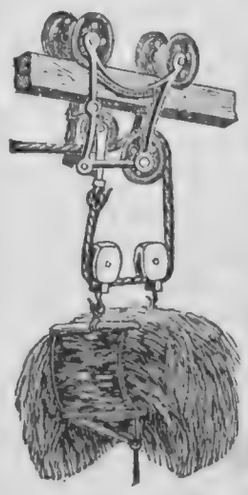

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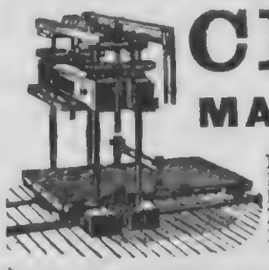

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Dairy Husbandry.

ON A WOMAN'S TWO EXPERIMENTS.

ALTHOUGH since we adopted the creamery system, my daughter and I have no business in the milk-room and buttery, I was seized with an experimenting mania one day last fall, and went into the quarters where once I reigned and slaved, and undertook a matter of proof. By the way, I ought, perhaps, to state that we are always trying some experiment or other on our farm, from hen-feeding and seed-soaking, to fertilizer adaptations and scientific crossing. Indeed, my daughter once had some note-paper printed with the heading "Tentative Farm." Consequently there was nothing new about my undertaking. Terry, the hired man, suggested the idea, simply because he did not fancy the new *regime* that excluded women from the dairy, and placed the men folks there.

"Mar'm," said he to me that morning: "I don't want yer ter think I ain't right up-and-down in favor of them new-fangled thing-umbobs, but I can tell ye one thing!"

I suspected his disinterestedness, but inquired as to the character of the "one thing" which exercised his mind.

"Jest this," he said. "Butter made by that ar process isn't goin' ter keep as well as that made usin' the pails!"

"We'll see," I said, and my experiment was the labor of "seeing."

I wrote out the question carefully, and set out to answer it. "Will the Cooley process make an article of butter that will keep well, all else being equal?" It would take more space than I wish to occupy to narrate my experience in detail. Suffice it that my answer came affirmatively. I, however, qualified it with an "if"—*if* the butter is properly taken care of. I found that if more than one skimming is to be churned, the first ones must necessarily be kept cold until the last skimming is off, and then all must be thoroughly and carefully mixed, and warmed to from 60 to 62 degrees. The stirring has to be frequent until acidulation begins, when the different skimmings are to be churned at the same temperature. I always stirred cream when it was ripening, as I maintain that ripening consists in airing, rather than in souring, so the more stirring the better. Thorough ripening promotes high flavor and long-keeping qualities, and goes on better when the cream is warm and sweet, instead of when it is cold and sour. If 15 years of experience go for anything, it goes to show that when cream begins to sour it begins to spoil, and that the sooner it is churned after beginning to sour, the better the butter will be. Here is my idea exactly:

"Professor W.A. Henry's dairy experiments go to show that the ripening of cream before churning increases the yield of butter from 15 to 20 per cent. over the yield from sweet cream, provided that both are churned in the same way. The ripening of cream appears to have no marked influence upon the time of churning. The mixing of sweet with sour cream just before churning does not result in any advantage to the sweet cream, the same loss being incurred as when each cream is churned separately. The same increase in the yield of butter produced by ripening the cream may be obtained by adding acid to sweet cream just before churning." If that is heresy, make the most of it!

I went clear up into the rye field to tell Terry the result of my experiment, when what should the fellow do but suggest another!

"Look 'e here, mar'm!" he began. "I will shet up on that score; but lemme say my say on another thing. Yew brag of yer butter bein' of better grain; but I'll bet yer that ter make the best grained butter it must be worked by hand instid of by machine."

I saw right through him. He wanted to get out of operating the Eureka butter-worker, and to get me back with my hands in the wooden butter bowl. Of course, if he were right I would go back, but—

Well, I puttered. I should think I tried for a fortnight, and then I set my mind to rest. Butter to be of perfect grain must be worked by the machine. That was what I concluded.

"How do you do it?" the editor of our paper asked me at the fair, and I wrote it out for him.

DIRECTIONS: After the butter is taken from the churn and placed on the worker, I put into every pound of it an ounce of salt. I let it stand for two hours, and then put it on the worker, gathering up the moisture with a cloth. It is worked as little as possible, and packed at once in my one-half pound molds.

That is all.

Some doubted, and differed from me, but I did not care, as I had my mind fixed and my plans were not faulty. I append to my article a bit of matter, which, as it is in the nature of a commentary on my *material* for experiments, I will quote as my own.

"One of the reasons why much poor butter is made in private dairies is that the farmers generally begrudge their wives and daughters the most improved appliances for the household work. They buy reapers, thrashing machines, feed-cutters, grinding mills, seed drills, and sulky plows, but when it comes to a butter-worker or a creamer, there is no money for 'such new-fangled things.'"

ONLY A WOMAN.

DAIRYING.

"THE GENERAL-PURPOSE COW:"—There is not so much talk now of the general-purpose cow as there used to be. When a man says he prefers a big cow with beef points so that he can feel wealthy when he sells her for old-cow beef (after the poor old thing has worked hard in the dairy for 10 years, averaging only 150 pounds of butter per year), it is time to persuade him to get out his arithme-

A PHOTOGRAPHIC VIEW OF THE R. N.-Y. LAKELET, LOOKING WEST. Fig. 133. See page 369.

tic and do a little figuring. His attention should be called to the fact that he feeds his beef for 10 years before he realizes a cent on it: and if he can be induced to make an honest calculation of the cost of his beef, and if he then tries to subtract that amount from what he gets for it, he will become a convert before he gets through the job. Feeding a 1,400-pound cow for 10 years, getting meanwhile 1,500 pounds of butter from her, or feeding a 900-pound cow for the same length of time and getting 3,000 pounds of butter, which is the more profitable? There are some who can't answer that rightly, or, to put the matter in another way, say the big cow makes as much butter as the small one during 10 years of dairy work, is she as profit-

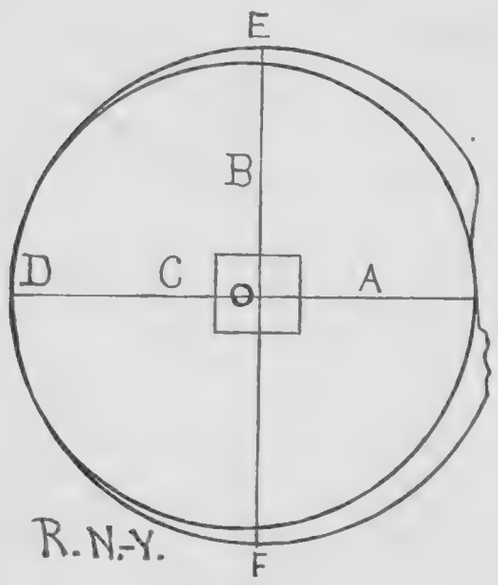


Fig. 134.

able? "Yes, because you have 500 pounds more beef to sell." Well, my friend, I sympathize with you; I thought that way myself once, but I don't now.

STEER DAIRYING: I used to believe that steer dairying brought in the most money. I had it all down on paper as plain as could be, but somehow it would not work out right in practice. In steer dairying, as in all other kinds, the bull plays a very important part. He must have beef points in order to give us good steers, and if he has beef points well developed, his milk points are just the reverse. So we try to coax ourselves to believe that a beefy cow will pay her way with the help of the steers. But will she do it? Not in the East where land and feed are high; or in the West where dairying is made the business of the farm; but where land and feed are cheap and labor scarce and there is plenty of pasture, a man may make a living by steer dairying, but so he may by turning his hogs into the corn-field to save the expense of harvesting. Butter, milk, or beef? If you choose your cow for one of the three you are safe; if for two, you are carrying a useless and expensive burden: but if for all three—

THE SILO:—It looks now as if the dairyman will be compelled to feed silage if he expects to get the best profit. Silage as it comes out of the silo, is the same feed that went into it, only it is partially cooked. It gives a succulent feed, cheaper by far than any root crop, and as much better as it is cheaper. We cannot afford to grow roots in competition with ensilage corn. The silo saves feeding so much hay; more hay can be sold, and those living within reach of a good hay market this winter will appreciate the silo more than ever. If any one is now more prejudiced against the silo than I once was, he is to be pitied. I read about it until I hated to see the word in print. I read the experience of those having silos

Fig. 135.

and fancied I could see how they were trying hard to persuade themselves that ensilage was a good thing, and in the course of time I found myself shoving green corn through a power cutter, and now I believe those men were right. So we must not let our prejudices run away with our good judgment, no matter whether they pertain to the silo or the cow. We can make a profit by feeding dry corn fodder, but if we can make a greater one by feeding it green, why not do so? When a man shows that he has made a profit in dairying while keeping big cows, he ought to be amenable to reason and see if he can not make a bigger profit with smaller cows.

THE CHURN:—Our grandmothers used the upright dash churn, gathered the butter in a lump, worked out the butter-milk and worked in the salt with their hands, and printed it by shaping the pat on the mold with those same hands. And they always got the bottom of the print just convex enough so that it was impossible, when the butter was on the table, to cut off a slice without turning the print upside down. That butter had the true butter-milk flavor, and there are many to-day who insist that brine-washed granular butter has no flavor. So much for what we are used to.

THE THERMOMETER:—Why, a thermometer on a farm in those days was as rare as I hope the general-purpose cow will be by the time the RURAL grows 500 bushels of potatoes on half an acre of ground. (Don't smile, friends; you and I will live to see it; it is only the good that die young.) The cream was tested as to its temperature and acidity by the finger and tongue. But now, through the medium of the farm papers, the use of the creamery, the churn with no dash, the butter-worker, the thermometer, and all the modern implements

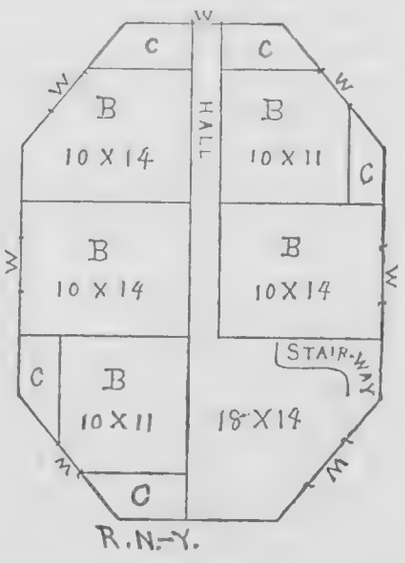


Fig 136.

and methods of dairying, is becoming the rule instead of the exception. A. L. CROSBY.

Horseman.

CLOVER HAY FOR HORSES

Mr. Terry's Plan Considered.

THE SECRET OF HIS SUCCESS.

A Matter of Farm Adaptation.

Best Quality Clover as Good as Oats.

POOR CLOVER HAY WORSE THAN STRAW.

AS OUR readers know, Mr. T. B. Terry, of Ohio, is a man who does not hesitate to think and act for himself. He does not farm in any "rut," but follows the practices that seem best adapted to his own farm conditions. For example, Mr. Terry decided some years ago that it would not pay him to raise grain for his horses. He also decided that good clover hay would keep them in good condition without any grain. Thus for seven years his horses have not eaten grain. A very full account of his way of feeding and the reasons for it were given on page 68 of the RURAL for the current year. In the Hay Special, page 329, the plan followed in curing clover hay was given. This system of feeding no grain has caused quite a little comment. Below we give the views of some of our correspondents.

FROM C. S. RICE.

Mr. Terry's success in keeping his horses on clover hay without grain is not a surprise to me. Many years ago a man just over from England fed and drove my team for the season. He was an expert plowman and manager and trainer of farm horses, having been employed on a large farm in that capacity nearly all his life. My team was fed good Timothy hay and from four to six quarts of oats three times a day for each horse. After feeding and driving the team two or three months, he said to me that he would as soon have such clover hay as he had been accustomed to feed to horses in England without any grain as to have my Timothy and grain combined. As he was a man of experience, truthfulness and sound judgment, I believed his statement to be true, but as perhaps one-third of the horses in this section had the heaves and many farmers thought clover was the cause of the trouble, I continued to feed Timothy hay and grain. A few years afterwards, however, when I began raising clover without mixing it with Timothy, some of it was put in the horse barn, and I then thought and still think that it was by far the best hay ever fed to my teams. It was cut when just red over the field, and nicely cured in the cock. The same season I discovered the great value of such clover for cows giving milk, and have since fed it to them rather than to the horses.

With the crops raised on Mr. Terry's farm and the amount and kind of labor required of his horses, his method of keeping them is, no doubt, the best and cheapest that could be practiced. Where teams are required to do steady full labor for months in succession a more concentrated ration may be needed. Again, where a crop of peas and oats can be grown to more profit than wheat, I think that a team can be kept in the comparative idleness of winter on straw and grain as cheaply as on clover hay. My horses weighing 1,200 pounds each, are fed pea and oat straw, and 12 to 15 quarts of pea and oat meal and bran mixed in equal bulk. They are harnessed nearly every day, but their work is light. They are well wintered in this way and I have never known them to be sick when so fed. In spring, Timothy hay is used instead of straw. Having clover hay, and peas and oats and straw, and cows giving milk, and horses to winter, I would feed grain and clover to the cows and grain and straw to the horses. In Northern New York wheat cannot be raised with profit when prices are as low as they have been for the last few years; but peas and oats yielding double the number

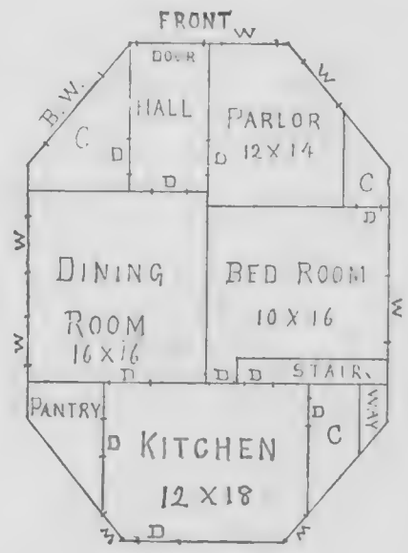


Fig. 137.

of bushels to the acre and weighing 40 to 50 pounds to the bushel, can be raised and profitably used on the farm for feeding cows, horses and pigs. I doubt whether keeping horses on clover hay alone would result in any gain over my present method that has been in use many years.

Lewis County, N. Y.

FROM SAVAGE & FARNUM.

Mr. T. B. Terry's plan of feeding simply hay and no grain is undoubtedly the best plan for him, but there are many things to be taken into consideration in connection therewith. The personal care, and, no doubt, kindly treatment, though Mr. Terry makes no mention of the latter farther than to say that his horses are not worried by the driver, have a great deal to do with the fine condition of the animals.

There is not much doubt that Mr. Terry could with the team he mentions, fed on good clean wheat straw and carrots, do more work and keep them in better condition, than the brawling Jehu with his big whip would do with a team fed on the best hay and oats. The exhibitions of life Mr. Terry speaks of, are no doubt in a measure due to good fellowship between driver and team rather than to the crack of the whip and the terrorizing howl so often indulged in by the ordinary teamster. But to get back to the hay question: Mr. Terry's hay is cut so as to save all of the properties that it originally contained, while most hay is handled so as largely to destroy the life-sustaining principle it contains. Then again, the character of the land upon which hay is grown has largely to do with the quality and consequently the value of the produce. It is possible on good land to produce hay containing all the qualities requisite for the building up of the frame and muscular tissues of a horse and sustaining him in good health and condition while doing a fair amount of work; but many horses are compelled to perform unreasonable tasks. Nice attention to the an'mal's bodily comfort is not thought of, and to adopt the no-grain theory generally would soon leave us a sorry-looking lot of horses and there would be no economy in the end, as oats at $20 per ton are cheaper than the average hay at $10 per ton and grain generally is cheaper than hay when its real feeding value is taken into account.

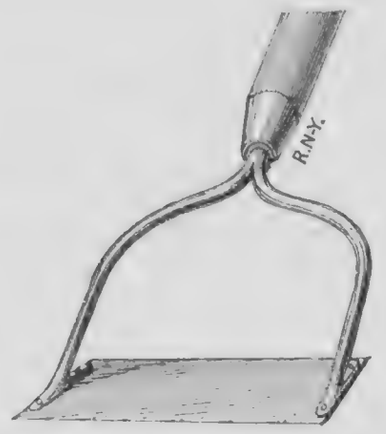


Fig. 138.

FROM JOHN M. TRUE.

My experience in the use of early-cut, well cured clover hay for horses, has led me to a very enthusiastic belief in its superiority over all other kinds of hay or coarse fodder. I consider it admirably adapted to the promotion of the best results as a feed for growing colts and brood mares, and these animals, notwithstanding that a change of feed is conducive to healthfulness, as well as welcome to their tastes, might thrive well on clover hay, without grain, were it necessary to restrict them to any one given feed. But in my opinion the feeding of less hay and a little wheat bran or whole oats, will not only prove more acceptable to the animals, but also tend to better results in building up the bony structure of the growing young, as well as in promoting its general thrift. In my own case, I consider such a mixture of feed, as also an occasional feed of corn fodder, and even straw, not only economical but healthful.

With the work horse upon the farm, I would also use clover hay, but would prefer to feed less hay and a grain feed, as tending to less distension of the stomach, furnishing a more concentrated ration, enabling the horse to perform heavy continuous labor with greater ease and less waste of forces. I do not consider clover a good feed for horses that are subjected to hard driving upon the road, unless very lightly fed, preferring good Timothy hay, and a liberal supply of oats. I do not doubt that Mr. Terry has been able upon his small farm, in his systematic and gentle handling of teams, to produce the exact results he claims; but I do not believe that our larger farmers who subject their teams to hard, continuous labor, will do well, in their appreciative regard for clover hay, to ignore other equally natural and healthful food rations furnished by some of our grains.

Baraboo, Wisconsin.

FROM J. W. BOOKER.

I have read with interest Mr. Terry's article on clover hay for horses, which tells of a practice entirely new to me. I cannot find a horse-

Fig. 139.

owner in this vicinity who favors Mr. Terry's plan of feeding all hay and no grain, especially for working horses. I doubt if our Western farmers with whom the raising of horses is so important a part of their work, would be able to mature a colt as early as they now do, without grain. My experience in raising colts proves, to my entire satisfaction, that plenty of grain is necessary for early maturity as well as for production of bone and muscle.

Champaign, Ill.

FROM DR. F. L. KILBORNE.

I was very much interested in the article in the RURAL of February 2, by Mr. T. B. Terry, on his method of feeding clover hay and no grain to horses. I am not surprised at the general distrust as to the merits of Mr. Terry's method; neither am I surprised at the results obtained by such feeding under the conditions mentioned. As a rule, people are too distrustful of any new method, that is not in accord with their own experience; and they rarely study such methods in detail, in which case it might appear not only possible but practicable.

The success of Mr. Terry's plan is undoubtedly due to at least three favorable conditions, the failure of any one of which would materially change the result.

1. THE QUALITY OF THE CLOVER HAY.—The general impression that clover hay, when fed to horses in considerable quantity, is liable to cause heaves, is more than half correct; but the result is due largely, if not entirely, to the quality of the hay, and not to the fact that it is clover. We have always fed more or less clover hay to our horses with uniformly good results; but only when the clover was first-class. Owing to the difficulty in curing green clover, there is a large proportion of the clover hay that is of poor quality. It is this poor clover that causes heaves.

It is not an uncommon experience for farmers to keep their horses in excellent condition on good pasture without feeding grain. These same horses will perform a moderate amount of labor, even quite hard work if carefully handled. Few farmers would be surprised by the publication of this fact. The method adopted by Mr. Terry is quite similar. Instead of feeding exclusively on grass, he feeds clover hay, improved by a small proportion of Timothy. The difference between these two methods is not so great as might at first appear. If we look at the nutritive digestive ratio of the ration given by Mr. Terry we find that it is fully up to the average. The nutritive ratio of best clover hay is about one to 4.5. The ratio for the best Timothy hay is considerably higher, being about one to five. In pasture grass the average ratio is about one to 4.5. The ratio of an average ration of meadow hay and oats is about one to six or seven. We thus find that the ration as fed by Mr. Terry is even richer than that received by the horse fed on an average hay and grain ration. This is due to the difference in the ratio of the best quality of hay and hay of an average quality, the latter being one to nine or 10. With such a considerable quantity of grain is necessary to bring the ratio down to the required standard.

2. THE CARE AND MANAGEMENT OF THE HORSES.—These are just as important as the quality of the feed. No greater mistake is made in the management of stock, than the plan too often adopted on the principle that all that is necessary is that the animals shall be well or liberally fed. Horses that are well cared for and always carefully used will do well on a very ordinary ration; while horses receiving no care and that are carelessly or severely handled will not thrive on the best of feed.

4. THE WORK REQUIRED OF THE HORSES.—The work required of Mr. Terry's horses is moderate, and can be, probably always is, performed at a moderate pace. If the horses were to be driven at a rapid pace on the road, or were required to do continuous hard draft work of any kind, a grain ration would undoubtedly be desirable if not necessary.

Another very important point is the fact that all horses are not adapted to the same kind of treatment. The individuality of Mr. Terry's horses may have much to do with the success of his method of feeding. Some horses are very easily kept, and will do a moderate amount of work, and at the same time, keep fat, on a ration that would barely keep the skin and bones of another horse together. No general ration can be given that will suit all cases. To secure the best results the needs of each individual horse must be carefully noted and his wants supplied. While the method of feeding on clover hay is practicable, and may even be desirable in special cases, it is not suitable for general purposes. It is, moreover, a method requiring much skill to carry it out successfully. A method that proves a success in the hands of one person, is very often a complete failure in those of another.

FROM E. DAVENPORT.

The RURAL asks what I think of Mr. Terry's plan of keeping horses without grain. Briefly, under his circumstances he has shown admirable tact in adapting means to the end in view. He must raise clover. He does not wish to raise corn or oats. His farm is small. He practices intensive agriculture. His teamwork is moderate. He frankly owns that he was desirous of keeping his horses without grain, to save buying it, and he has proved that in his case it can be satisfactorily done. If so, no one should quarrel with him for not wanting to sell good clover hay, buy grain, and pay transportation both ways. But his experience has not proved that the rest of us should sell our oats and buy clover hay; or that, having both, we should not feed both.

Mr. Terry is not a horse breeder. Horses are a necessity with him. His object is to get from them only a moderate amount of work with the least outlay for feed. He finds he can make his clover hay, which he must raise, do his plowing, cultivating, and marketing of potatoes; which, I take it, is his real business at present. What better could he ask? They beat him in China, for they keep asses and mules and feed them on the potato tops; they cannot afford even hay. Horses, like men, must live on what they can get, not on what their fancy may dictate, or their appetite approve. There is a wonderful elasticity about the requirements of the animal body.

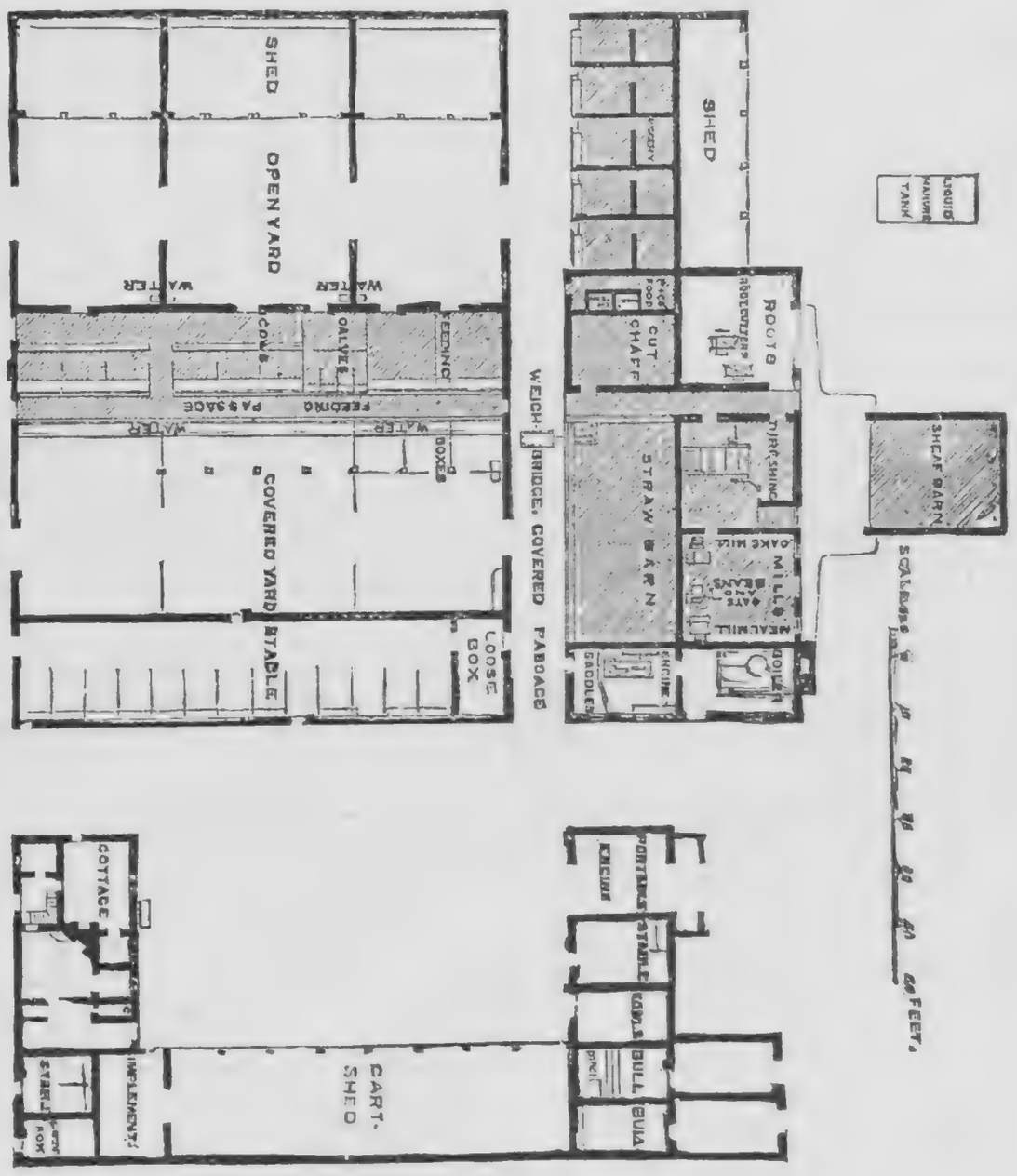
Nor would I be understood to believe that Mr. Terry abuses his horses in feeding no grain. Every farmer must have some kind of animal to consume his coarse products, save transportation, and return the residues to the soil. This is usually done by cattle, sheep and swine. Mr. Terry chooses to make his horses do this, and it does not seem that they suffer thereby. I might remark, in passing, that it is often overlooked that this is the proper office of animals in the economy of the farm, unless the farmer be a breeder, or a dairy farmer, when all else must be subordinated to the well-being of his stock.

We should do Mr. Terry justice. He does not say to every man "Go thou and do likewise;" neither does he say that clover hay alone is the best food, all things considered, nor that it is the best for the horse, nor that more labor can be obtained from a clover-fed horse each day than from one given an allowance of grain. If he should say these things I would say frankly that I do not believe them. They haven't been proved. He is non-committal, and does not assert them. He has proved that he has gained his end successfully. Facts are hard things to theorize away, and no sane man will for a moment question the financial soundness of Mr. Terry's practice under his circumstances.

Milk is a perfect ration for man, and he thrives exceedingly well upon it in his younger days, but for a grown man to perform a full day's labor upon a diet of milk is a physical impossibility. In Belgium, butter-milk is the national diet helped out by potatoes, and supplemented at rare intervals by bits of bacon. There, too, the family cow eats all the weeds of the farm, and horses are not kept at all under "*la petite culture*" of which I am speaking, for there is not enough to be done to pay for their keeping, even on hay. So the cow that eats the weeds, and, perchance the wife that eats the butter-milk—to save it—do the plowing—another shining example of adaptation of means to ends, alongside of which Mr. Terry's is pleasing and luxurious.

On general principles, the horse is not a cow, and is not constructed to live entirely upon the coarsest feed. In his wild state he lives upon grass to be sure, but then native grasses are exceedingly nutritious. As we domesticate him, and keep him for his labor, we tax his energies more severely than nature does. He has not the stomach of the ruminant, and I question if evolution in that direction would be desirable. Hay-fed horses would find labor very arduous on some of our large farms, and in the Michigan lumber woods would undoubtedly prove a failure. It was not that sort of a team that drew 30,068 feet of pine logs at a single load. In general, so far as albuminoids alone are concerned, *good* clover hay is about equal to the same weight of oats; but it contains only half as much of the fats and starches. But one-tenth of oats is crude fiber, while such fiber constitutes one-third of clover hay. Clearly under severe labor and heavy feed, some of the less bulky foods are desirable in order to secure the greatest amount of labor to the 100 pounds of horse. Whether feeding such fodder is cheap or not will depend in every case, as in Mr. Terry's, on circumstances, of which every man must be judge in his own case. Either extreme should be avoided, lest our domesticated horses become grey-hounds upon the one hand or cows upon the other. I shall still feed grain to horses and expect to get more labor from them and with greater comfort to the animals.

Ingham County, Michigan.



AN ENGLISH BARN YARD. Fig. 140.

Architecture.

A QUEEN'S BARN.

ENGLISH sovereigns have always been more or less interested in agriculture. The ruling king or queen has always in modern days made it a point to conduct several farms in different parts of the kingdom, and under different conditions of soil, climate, etc. These farms have been in one sense experiment stations—they have not generally been conducted on a money-making basis, but rather for pleasure and instruction. The following adaptation from Ben Jonson seems to Englishmen very sensible:

"Princes that would their people should do well,
Must at themselves begin, as at the head:
For men, by their example, pattern out
Their imitations, and regard of laws;
A farmer Queen, a world to farming draws."

The present English queen is interested in several farms. One of these, called the Flemish Farm, is the subject of the present sketch. The Flemish Farm received its name from George IV, who established it at Windsor for the purpose of illustrating the Flemish system of farming. It consists of 400 acres of land, of which 160 are in pasture. The soil was originally very poor for general agriculture, being cold and stiff. It has been carefully drained at a cost of $15 per acre, and no expense has been spared to bring it to a high degree of fertility. As a result of this care, it is stated that the farm is made to produce from 36 to 40 bushels of wheat, and from 60 to 80 bushels of oats per acre, and large crops of mangels, clover and beans. Plowing is done entirely by steam. Hereford cattle are kept at the Flemish farm, it being the custom of the royal farmers to keep but one breed of cattle on each farm. The horses are a cross between the Suffolk and Clydesdale.

At Figures 139 and 140 we show the barn plans for this farm. These buildings were erected at a cost of $30,000, and are regarded as the most complete set of farm buildings to be found in England. Fig. 139 shows an end of the main structure; while Fig. 140 shows the plan of the building arrangement. It will be seen that the English believe in having their work well under cover. The drawings are re-engraved from Bell's Weekly Messenger.

A COMPACT HOUSE.

THE house shown at Figures 135, 136, 137, was built by Mr. Richard Cronsberry, one of our Canadian subscribers, from plans designed by himself aided by several ideas he found in the RURAL. The two longest sides are 20 feet; the other six are 13 feet each. The house is built on a stone foundation, walls seven feet in the ground with a wall in the center of the cellar. It is concreted and brick-clad. The cost was $1,500. One great point about it is the number of windows. (w.) As seen in the drawings, there is plenty of chance for sun-light. There are also plenty of closets (c). It is proposed to build a woodshed at the back of the house, so no window was made there.

Farm Economy.

SCUFFLE HOE.

AT FIG. 138 we show a picture of a hoe used by many gardeners. It is intended for shallow work, scraping or slicing. It is very useful for cutting off weeds or grass just below the surface of the ground. The R. N.-Y. is trying a cultivator attachment that works on much the same principle. This is made by G. Hauschild, of Topeka, Kansas. It consists of a narrow cutting-bar about a foot long, so attached to the cultivator teeth that it runs at any depth desired, cutting the weeds off below the surface. We tried it once last year, in stony ground, without the best of success. This year we are to try it in a grassy corn-field that is free from stones.

TRIMMING A GRINDSTONE.

IN the RURAL of March 2 I notice an article from George O. Gilbert showing how to trim up an old grindstone; to this I wish to introduce an amendment.

Inclosed find a rude sketch (see Fig. 134) showing the proper way to proceed with such a job. Instead of making the hole for the crank shaft in the center of the block, find the center of the stone in its present form, mark the point on the block and bore the hole there.

First, draw the line E F across the original center; next a transverse line A D. On this line find the center (from side to side) and make the hole there (at c.) This is the correct center of the stone in its present shape; and from this it can be turned by wasting only one-half as much of it as must be wasted if it were turned in the manner which Mr. Gilbert suggests.

P. H. WAIT.

Field Crops.

NEW WAY OF SHOCKING GRAIN.

IF there is one piece of farm work that the writer feels he knows how to do, it is putting grain into shock rapidly and well, so that it will successfully resist all ordinary accidents of wind and weather to which our crops are exposed. I tried many methods before I found a satisfactory one. This is perfect, and as I never saw any one who had ever heard of it except the man who taught it to me, I want to tell the RURAL readers how it is done. If our wheat had been shocked in this man-

ner all over the State, we should not have heard of the terrible losses of 1882.

Of the 12 bundles that make the shock, select, first, for caps the two longest and best, preferably not very large ones. Next take the two largest and longest and stand them north and south, head to head, with the buts well apart, and settle them firmly together and on the ground. The beginner will not set the buts far enough apart. The bundles should stand at an angle of about 45 degrees with the ground or as flat as may be without falling in; they will never move after they have been left to themselves. Next, with a good bundle in each hand step to the north end of the shock, facing south, and set a pair astride of the buts of the north one of the first pair, rather straight, leaning *slightly* toward the shock, *i. e.* south. Set another pair over the buts of the south bundle of the first pair.

The shock is now long, consisting of three pairs of bundles, the first ranging north and south, and the second and third ranging east and west, one pair astride of the buts of each of the first. This is the essential part of the shock, and with a little practice is so set as to form a lock that stands firmly. A pair against the east and one against the west sides with the caps complete the shock, which will not be round, but will present a well defined ridge running north and south.

To cap this shock, do not break the straws all one way, but part them to the right and left above the band; then with the fingers open the lower side of the but just before placing the cap on, and spread the buts well when in place. The object is to have, not a circular roof, but a long one with two well defined sides, east and west. No man need be afraid to lean against this shock in putting on the caps as it will hold up any ordinary person. Our prevailing winds are from the west and we put the south cap on last. If the shock be properly made there will be a hole entirely through east and west, and every bundle will be visible from the outside.

The advantages of this method are many, and will become appreciated on trial. The shock consists of *pairs* of bundles, and they should be handled in pairs. One or two men can work at it with equal facility. There is no danger while working, of pushing over what is completed. The last four bundles—on the sides—are in no way concerned in the strength of the shock, and may be equal or unequal, good or poor. The first six make the lock, and the two of each pair should be about equal. Even a careless man may help; if the careful man sets up the first pair, and one of the end pairs, the shock will stand in spite of careless work elsewhere. Every one knows in practice that in most methods *every* bundle must be carefully placed, or the shock will be likely to go down.

This plan requires little care when once learned, and I have never had a man who did not readily make good shocks in this way. Since I began to use it, five or six years ago, very few caps have been blown off, and less than half-a-dozen shocks have been blown down. The only fault is that in taking down the shock it must come in the order in which it was built up, as it cannot be readily pushed over with the fork and taken at random. This method is especially good for starting shocks of corn stalks, which are easily blown down. In short, a shock put up in this way, is stronger, presents more drying surface, is more easily made, will resist more bad work and bad weather. Altogether this is the best method I have ever seen. Try it.

E. DAVENPORT.

SWEET CORN FOR CANNING.

THE growing of sweet corn for the canning factory occupies several hundred acres of land in this vicinity, and, in suitable soil with good management it is quite a profitable industry. The factory is owned by a firm which has several other factories in different places. The farmers grow the corn on a contract, made in the spring, specifying how many acres each shall plant; what variety, how it is to be cultivated (that is, the grower agrees to give the crop good cultivation, as corn poorly cultivated, producing many "nubbins," is unprofitable to the canner); how and when it is to be delivered, how weighed, etc., and the price to be paid. This is now 25 cents per bushel, although I think it was formerly 30 cents. The canner furnishes the seed, and takes his pay from the price of the corn at the time of settlement. Growers are not allowed to purchase seed elsewhere, though they may grow their own from seed furnished from the factory if they wish to do so. The corn is generally paid for in January. This is the worst feature of the business, as it compels farmers to wait for their pay until long after the crop is delivered.

Sweet corn succeeds well on almost any soil unless it be a heavy clay, although the best crops, both as to quantity and quality, are grown on the river bottoms and on loamy soils. The land must be well drained. The soil must be fitted about the same as for field corn, and the general culture of the crop is about the same, although the early growth of sweet corn is more slender than that of field corn, and it requires a little more nursing in the earlier stages of its growth. It must not be planted until the ground is warm, or it may rot instead of germinating. It is grown both in hills and drills, the latter method, I think, being preferable, although it necessitates more hand labor. A considerable number of different varieties are grown, though all must have a white cob. For the earliest picking Crosby or Minnesota is planted, followed by Hickox, Old Colony, Asylum, Stowell's Evergreen, Egyptian, Mammoth Sugar, and others. The same varieties succeed differently on different soils. The cultivation is about the same as for field corn, but must be very thorough, as sweet corn will not endure neglect.

The crop is harvested when the corn is in the milk, or in a suitable condition for use on the table. The ears are picked from the stalks, and drawn immediately to the factory. The load is weighed; sufficient corn, taken at random from the load, to make a bushel of husked ears, is husked, and weighed together with the husks removed from it. This is the weight of a bushel, and varies from 50 to 70 pounds. The net weight of the load divided by this, gives the number of bushels, for which the grower receives a receipt. Sometimes the field is picked over twice; sometimes but once. The stalks are cut as soon as the corn is removed, set up in medium sized shocks, and cured as thoroughly as possible before being put into the stack or mow.

This is a very difficult part of the work, as the stalks contain so much sugar that they are very liable to heat and spoil after being stored. It seems to me that the silo will prove a great blessing to growers of sweet corn. The stalks are more valuable for feeding than those of field corn, but the difficulty is to get them properly cured. The yield of sweet corn varies much with the soil, season and culture. I have no figures at hand, but from observation, I should say an average crop is about 100 bushels per acre, or, perhaps, a little less. One field of five acres under my observation the past season produced 800 bushels, or 160 bushels per acre. F. H.

Clyde, N. Y.

Rural Topics.

PROTECTIVE COVERINGS AMONG PLANTS.

PROF. BYRON D. HALSTEAD.

Functions of the skin, rind, fuzz, and prickles of fruit, and of the epidermis of leaves as well as of the bark of trees and other plants; microscopic breathing pores of leaves; the cambium; "hide-bound" trees; rootlets, their function and protection.

PLANTS, like other living things, need to have their tender or so-called vital parts well protected. We seldom think of this, but it is not difficult to be impressed with the fact as soon as attention is called to the matter. Take any fruit you please and the first thing that is met with is a skin of greater or less thickness. This skin may be so thick that it must be removed before the soft parts within can be used upon the table. This is the whole explanation of the peeling of apples, pears, peaches, cucumbers, etc. This skin, or epidermis, in some fruits is very thin and may be eaten, especially in case of the smaller fruits. Thus no one would stop to remove it from a currant or cherry, and, least of all, from a strawberry. Sometimes, in addition to a thick, tough layer, fruits are covered with a coat of short hairs or fuzz, as in the peach and allied fruits. Others have, besides the thick skin, a number of prickles which in some instances, as in the wild gooseberries, are so sharp and stiff as to make the gathering of the fruit a disagreeable process. Other fruits have a bitter or otherwise unpleasant rind that needs to be removed before the inner parts can be utilized. These outer layers of tissue serve a double purpose, namely, that of inclosing and holding in place the soft interior part that would otherwise be destroyed by the elements, or by birds and other animals. This is particularly true of the fruits because the parts within, named the seeds, are of more than ordinary importance.

The seeds are not the only portions of a plant that need protection. Over every part that is exposed there is some sort of a covering developed which wards off enemies and gives form and solidity to the portion that is inclosed. Take the leaf, for example, and the epidermis is not the least important of all the structures. This is a thin, firm, usually colorless layer which extends over every part, whether it be the veins, midrib or the softer portions between the frame-work. Upon the outside of the epidermal layer is a film of gummy substance impervious to water, that serves to keep the parts within from suffering from excess of moisture. Through this envelop of cutin or cuticle and the epidermis below are innumerable small holes called breathing pores, so small as not to be seen except with a microscope. These pores are like delicate valves and are so adjusted that they open or close according to the surrounding conditions. It is through these pores that the water of the plant, in large part, passes out. Tons of water are given off by an acre of growing corn in a single July day.

The stems are protected, and as these parts of a tree, for example, remain for a long time, while leaves, as a rule, last for only a single season, and the stems are more subject to injury from their proximity to the earth, they are usually well protected by a thick layer commonly called bark. This bark is a complex substance which usually is found to consist of layers one over another and all outside of but close to the cambium. By cambium is understood that zone of tender substance easily destroyed and from which the new layers of wood are formed upon its inner side, while the bark is renewed from its outside as fast as more bark is needed to insure the proper protection of the soft and delicate lining cambium within. When the boy makes a whistle out of a willow or other twig he separates the bark from the wood upon the layer we have been speaking of named the cambium.

This bark varies greatly in thickness and texture, depending upon the age of the stem. In short, the older the stem, the thicker this bark, unless it should fall away in great strips from the outside as is true in the shag-bark hickory and many other trees, and better illustrations may be found in the grape vine which is almost always casting its bark. The protective layer of bark sometimes binds the growing parts within so that the horticulturist often finds it to his interest to slit the bark longitudinally upon his "hide-bound" trees.

The young twigs have at first no true bark and are covered, as are the leaves, with an epidermis. As time passes the bark begins to develop and in place of the then green epidermis there is a bark which upon the outside may be brown or gray—in short, of almost any color except green—and covered by a thin, shining layer that is like the cuticle and made up of a gummy substance. Upon a large tree the whole development from a green epidermis upon a young twig to the thick, dead bark upon the body or main stem, may be seen. It may be said, in passing, that when the bark is accidentally removed from a small portion of a tree, there will form a new bark, which process is known as the healing over of the wound. This very fact of the rapid replenishing of the protective layer is one of the best illustrations of the importance of this substance.

Coming now to the root, the case is somewhat different, because the roots and especially the younger ones perform a particular office in the economy of the plant which demands that they shall be free from bark or epidermis so-called. There is a hand-to-hand conflict, so to speak, going on under the earth, and the hands cannot be gloved. It is the peculiar function of the younger roots to do the work of absorbing the nourishment that the plant must obtain from the soil. This work requires that the delicate fibrils, and still more slender root-hairs borne by the rootlets, shall come in direct contact with the soil-particles and the soil-water that is held, sometimes quite firmly, by the small masses of earth. It therefore follows that the young roots, which perform nearly all the work of absorption, are uncovered save by the soil, among the particles of which they insinuate themselves. Their best protection, which of course includes the best conditions for the life of the plant, is when they are not covered with an impervious layer such as that spread over the stems and leaves.

But there is a portion of every young, tender rootlet, no matter how small, that is protected by an outgrowth not unlike that which forms upon the bud. In other words, the tip, which is not employed in absorbing nourishment, is covered with a cap which surrounds the youngest and most tender of all portions of the root, called the growing point. At this point the root elongates and the cap is pushed before this place as the root grows through the earth, and prevents the sharp particles of soil from injuring the most susceptible tissue. Farther back upon the root at a place where it has become woody and can no longer take an active part in absorbing liquids from the soil, there is a rind formed and this may be quite thick upon old roots that only serve as a mechanical support to the plant, and conduct the liquids from its younger branches to the stem and leaves above.

Rutgers College, N. J.

The Poultry Yard.

A PLEA FOR THE CHICKENS.

I HAVE often wondered why it is that housekeepers in the country raise so few chickens. Taking care of them, of course, requires considerable time; but if by devoting two hours each day for three or four months one can furnish a table with delicate, wholesome meat and an abundance of fresh eggs for the remainder of the year, it seems to me that the time is most profitably spent. Very little expenditure, too, is required for their accommodation: in this latitude the roughest of wooden houses will afford them protection from the snow and rain in winter, while in summer they thrive best out-of-doors provided the owls and thieves are not too numerous in their vicinity, and scattered about every farm-yard one can pick up loose boards which an ordinary farm hand can fashion into coop that will serve to shelter the little chickens from spring rains and keep them from running out in the morning dews. Neither is their food an expensive item; the cold victuals left from the table (which are usually thrown out to a crowd of worthless dogs) together with the bran sifted from the meal will serve for their food while small, and after that they can almost get their own living where the range is large and they have access to the orchard and eat the defective fruit as fast as it falls to the ground. This is a great advantage to the fruit trees as well, for the insects which cause the fruit to fall are thus destroyed before propagation takes place.

It is the best plan, however, to give the half-grown fowls a light meal night and morning so as to keep them in good order and ready for the table. If they are obliged to forage for their living entirely, though they are sure to be healthy, they are apt to grow up very slender and long-legged. Then, too, every housekeeper knows what a help it is to have her chickens gentle, so that when company drops in unexpectedly one of the children can slip out and by throwing down a handful of food pick up a pair of nice fat fowls. There is nothing quite so ridiculous as to see a crowd of white children and little negroes chasing an active young cockerel over the yard, and to hear its despairing squawk when at last it is caught, most probably under the front porch where the visitors are sitting. The visitors almost wish they had stayed at home, if they are going to put their hostess to all that trouble, and she is filled with mortification; but what alternative has she? There is no convenient grocery store just around the corner to which one of the children or a servant can be secretly dispatched; and in the country visitors do not call between meals and leave when Bridget rings the dinner bell.

There is nothing that will take the place of poultry; it is always ready; the most wholesome dish a mother can set before her children is stewed chicken, cooked with a few Irish potatoes sliced thin, and seasoned with cream and fresh butter. Who does not remember the deliciousness of the first chicken-pie of the season, and if you want to see a man's eyes shine just set before him a dish of crisp fried chicken. I know one who never tires of it. And the eggs, too, how the children do love them—like is not nearly strong enough to express their affection—love is the word. If you want to make little boys happy in cold weather, just give them some eggs to roast. Likely as not the eggs will pop open in the fire and ashes will get mixed with the yelks, but that doesn't matter, not a particle will be lost.

For an invalid there is nothing so tempting as chicken broth; it is much more palatable than the various extracts of meat, beef juice, and koumiss, that one gets out of a drug store, and which to my thinking are exceedingly trying even to a well stomach. And yet how few families among the poorer people, or even those in moderate circumstances, have a bountiful supply of poultry. How often have I seen little children sit down to a meal of salt bacon and soda biscuit. No wonder their little faces are sallow and peaked, while the father complains of enormous doctor's bills. But if you ask the mother why she didn't raise more chickens this year, 10 to one she

will say it was her husband's fault; either he would keep the brood sows in the lot next the house, or she could not get coops made tight enough to keep out the vermin, or something or other happened to them that a man of average intelligence might have prevented.

Women in the country are not lazy as a general rule; on the contrary, they do more work in proportion to their strength than the men, who among the lower classes are very remiss in providing conveniences for their households. This has been the case for so long that the women have accepted it as fate, or rather, they put it down to what they call luck. Their constant complaint is that they have had "bad luck with the chickens They could seem to raise hardly any at all. The young ones were weakly and slept themselves to death; or they grew off right peart for awhile, then got puny all at once and died. Mighty bad year for chickens."

When I hear them talk that way, I always feel like telling them "luck" has nothing at all to do with it; there is no such thing as luck. What they call bad luck is bad management, and good luck is good management. There is a cause for every effect. If the young chickens are weak and delicate at first the parent stock has degenerated, and when they grow off thriftily for a while and then droop and die it shows there is bad management somewhere. Perhaps they are infested with parasites or do not have access to pure water and are not properly fed. The fowls themselves are not to blame; no little creature comes into the world with a more fixed determination to live, or is more energetic in searching for its daily bread than a young chicken. Chickens are much less finical in regard to their food than young turkeys, and their instinct for self-preservation is much greater.

Young chickens in the spring would be very much healthier if the parent stock were brought through the winter in better condition. When they are allowed to roost in the trees during the severely cold weather, roup is likely to show itself in the spring, and this disease proves fatal not only to the grown fowls but to the young ones also for months afterwards, either through inheritance or because of their surroundings becoming contaminated. During the memorable sleet last winter, the fowls hereabouts stayed out in the trees for a whole week, in a half starved and half-frozen condition. And after every bitter spell of weather my neighbors tell how their fowls froze to death, as if it were something very much to be wondered at. Even the hens that survive are very poor, beginning to lay late in the season, and of course are still later in sitting.

A FARMER'S DAUGHTER.

Logan County, Ky.

Everywhere.

COMMENCING IN THE TIMBER.

The real-estate man of the beautiful prairie regions of the West delights in presenting to his readers on his cards, in folders, pamphlets, 16-page editions of the booming newspaper of his booming town, side by side pictures of the start in the woods and on the prairies, and a view of the enormous improvements five years afterwards. This is not the view to which I wish to call attention. To one who has always lived on the prairie where almost the first thing thought of is to start shade trees about the buildings or the proposed site for them, there are some things hardly explainable in the conduct of a large majority of those who make their start in the timber. The primeval trees growing near the proposed site are almost invariably cut down before the buildings are erected, and in the rare cases when they are allowed to stand for a time they are in course of a few years cut down for wood and the yard is left bare of shade. Protection from wind and storm is not needed at first, but as field after field is cleared out, the timber belt recedes and the storms and winds are felt almost as keenly as in the prairie sections.

Allow me to offer these suggestions: If shade and protection are wanted at all, allow a sufficient number of the most shapely trees to remain standing to afford plenty of shade, cutting and training such limbs or unsightly portions as may be necessary, in order to enhance their natural beauty.

If other varieties are eventually wanted, they can be planted among the old sorts, and as the trees become crowded some of the original ones can be removed as it may be found necessary to do so. For protection, leave a thick belt of timber on the windward side of the buildings and you have at once what a prairie farmer will spend time, care and money for a dozen or more years to secure. But how often in timber regions do we see buildings without a single wind-break nearer than the timber outside the fields. When you are making the first clearings, draw, at least in imagination, plans of the future farm with its pasture field and feed lots, and in these places allow a few trees to remain standing and years hence you will be rewarded by the greater comfort of your stock, and the greater beauty of your surroundings. You will be surprised at the beauty and utility of those trees some day; for growing somewhat isolated, they will become more symmetrical. Of course, the garden and orchard should be close to the house and there the clearing should be complete; but these can be on the side where shade and protection are not needed, and a fringe of timber even here will do no harm; while in some exposures it will be an advantage.

So far as my observation goes, when the clearing commences it should be a complete work, still though in a hurry to get as much land under cultivation as possible, it may possibly be advisable to allow the large trees to remain standing simply "deadening" them for the time; but the damage to crops from shade and fallings limbs makes this doubtful. Where, in a country like this, the timber has but little market value except as needed on the farm for lumber, rails, or wood, let everything be taken "clean as you go," and let the land be put into cultivation the same year. I notice many going through their timber cutting here and there for wood, etc., and if this cutting were done in one place it would add quite considerably to their cleared fields, while as it is, wherever a tree or brush is cut unless the land is put into cultivation at once, innumerable other saplings and brush growth spring up, making the future work much harder.

Occasionally one sees a farm house around which Nature has been allowed to retain much of her natural forms, and with a little artificial work, how soon can a home-like appearance be given to the group of buildings which forms the center of the picture.

Christian County, Mo. J. M. K.

EXTRACT FROM AN ENGLISH LETTER TO A COUNTRY GIRL IN VIRGINIA.

I AM much pleased with the copies of "the RURAL NEW-YORKER" you have been sending me, and interested in the talks upon the "Dark Side of Farm Life" and also with those on the "Bright Side." Such a paper can not fail to do good. You American farmers have more of sunshine than shadow. What lives you live and might live! English farming differs so much from American that my envious eyes are turned toward your shores rather than towards the green valleys and fertile meadows of my own native island. Our soil is very productive; the average yield of wheat per acre is very considerably more than that of the United States, and it grows thicker than it does in America and the grains are very plump and heavy. We can also grow good oats and splendid grasses—very fine, tender and rich. Corn we cannot grow; the climate is not warm enough; but many vegetables, such as turnips, potatoes, etc., do very well as a rule. Still I should much prefer the American farmer's lot. The difference is chiefly caused by the difference in the value of land, and the conditions under which it is held. The land here is largely in the possession of comparatively few, in whose families it has been handed down from time immemorial. It is almost an article of their creed not to sell any, and, in fact, in many cases they have not the power to sell it, it having been left by some remote owner under an abominable old law, called the law of entail, by which the estate is vested in the eldest male of the family, and passes down from father to son, and to son again and so on for generations, each owner in turn being only a life tenant. These large estates are subdivided into farms which are let to the farmers, always for cash rent. There is no such thing as paying rent with produce in this country, and land is so highly valued here that the annual rent is considerably more than good land can be bought for in America.

Our seasons are uncertain, and often unfavorable; but, of course, the rent falls due whether the crop is good or bad, whether it is safely gathered in or rotting in the soddened field. In America, you have such a vast area of land as compared with the population, that it is comparatively low in price, and can be bought and sold with the utmost facility. You have, as a rule, favorable seasons; if one thing does not flourish, another does, and there is (as a rule) no rent to pay, and though the American farmer does not have as heavy crops as ours, he has more of them and consequently has the advantage all around. These advantages of the American farmer again, have this result; with his vast plains, the absence of rent-paying, and the more favorable seasons he can produce vast quantities of wheat at a low price. This wheat which is imported here by millions of bushels, can be and is sold at so low a price that the English farmer, who of course, cannot get more for his wheat or only a little more than foreign wheat brings, has scarcely any profit whatever, often indeed incurring an actual loss. From this cause thousands of acres which were formerly devoted to wheat growing have been turned into grass land.

So great and severe is the depression in agriculture here, that many, very many farms in some parts of the country have gone entirely out of cultivation, there being no tenants for them. This is a very sad state of things, and it is difficult to say what is to be the remedy. Some would have a tax put on foreign cereals, as there used to be in days gone by. The immediate consequence would doubtless be to increase the price of English and foreign wheat together here. So far the English farmer would be benefited, but what about the millions of working people of this country, who would as another consequence, have to pay more for their bread? The problem is a very grave one and I do not presume to offer a solution of it off hand, and I greatly fear that no solution is possible, which shall restore prosperity to English agriculture.

We cannot alter our climate; we cannot abolish competition with American, Indian, and Russian wheats—it would be a woeful day for us if we could and did. Much advantage might result from a thorough reform of our land laws, but we are a cautious people; we move very carefully in matters of real reform. I sometimes think the more urgently the reform is needed the more cautious we are. But it is not so easy as it may seem to out-siders to change laws and customs which have become interwoven into the whole texture of a nation's life by long, gray centuries of use and habit.

Americans will find many more things difficult to deal with, say, a thousand years hence than they find now. But as things are, and will be throughout my time and yours, how enviable is the lot of the intelligent, industrious American farmer! What a life of healthful exercise, of wholesome activity, of peaceful rest, of plenty (not necessarily rude) of opportunities for self-culture as well as of agriculture.

Ah, that I had stayed and hewed me a home out of those woods somewhere! How it all comes back to me! Listen how I can picture it! I see the substantial brick house, or the trim neatly painted frame one, or what do I care if it be the hewn log house? There is plenty of room in it, plenty of everything in it. I hear the sound of happy voices through the open window, against which nods a fruit-laden bough or the fragrant tress of a climbing rose.

A little distance away is the well-filled corn crib and the spacious barn, the smoke-house and its savory store and the stables over yonder where the good horses are housed. In front of the house stretch acres on acres of meadow, down to the stream, where the cows are standing knee deep in the cool water. Over there to the right is a billowy expanse of yellow wheat smiling at the sun, and here, to the left, a green ocean of corn blades, glossy and bright as they wave their silken banners in the breeze. Further away still rise the shadowy woods; the silvery beech, or gnarled sycamore, the straight-stemmed hickory, the ribbed ash, the spreading oak, the towering pine.

Hark, there goes a squirrel rattling up that huge sycamore with nimble feet to his aerial perch, and somewhere overhead I can hear the tapping of the woodpecker, and over all the drowsy hum and chirp of myriad winged creatures, basking their little lives out in the cheerful sunshine. By and by those woods will blaze in the gold and crimson of their autumn glory; the corn blades will hang dry and sere, and the golden ears will peep out from the bursting shucks. A drove of hogs will be fattening over there in the paddock, while turkeys stalk solemnly about the house, in blissful ignorance of all such fatal epochs as Thanksgiving Day or Christmas. The hickory nuts will be ripe and the thorny-hulled chestnut, and the young people will be emulating the squirrels, laying up their store for the winter.

And the long winter evenings by the glowing ash or hickory fire, with the basket of nuts and apples at hand; or the corn-popper hard at work, while the merry story and cheerful laugh go round the happy circle. Oh, for the fragrant soil, as the springtime plowing upturns it! Oh for the young and tender blades of the springing corn; for the yellowing wheat waving in the hot July sun! Oh, for the golden fields of autumn, for the homely joys of winter, all the dear life of the farmer in that dear, dear land!

Ah, how my heart turns to it again and yet again; swifter than the electric message that flashes in a moment from the Old World to the New, my love and longing fly to that far-off shore, hallowed to me by a thousand sacred memories.

Those who have lived the easy country life will find it difficult to understand very clearly the position of the working classes in this country, and of many in the United States. It is true that every condition of life has struggles to pass through, and the farmer has his, too, and often knows what it is to wish that things were a little different. Especially is this so since you have put away the old-time manner of living. Our boys and girls must be sent to college, and a great many other wants are creeping in, and there is often a call for more ready money than the farm can bring. But compare the lot of even the most humble farmer with that of innumerable thousands in this country and of many in your own land.

You have the old home and the farm; you own it outright; you do not have to pay rent to any one for the roof over your head or the fields you till. And those fields under God's bright sun and sweet warm rains, produce your food, and perhaps even your clothing, too, or that which brings it. The trees yield their fruits for you, the garden gives its part, you have cows in the pasture, chickens, turkeys, and what not in the yard, plenty all around you. If the owners, the tillers of those fields wish now and then for a little leisure, to pay a little visit or to have some little excursion, they can take it; the corn and wheat grow on; the sun and rain play their beneficent part, and when the harvest time comes, then all is yours, the fruit of the field, and flock and herd. And though money, in actual coin or bills, be sometimes not abundant; what then? You can still live, the home is still your own, the living is sure. I have pictured in the merest outline the lives of thousands of American families who ought to thank God every day of their lives that "their lines have fallen in such pleasant places and they have so goodly a heritage."

Now, try to imagine the position of millions in this country, and many in your own United States lead much the same life. Imagine the difference; they have just so many shillings, or we will say dollars per week, a fixed, unvarying sum. If kept at home for a day or two once in a while by illness there is no loss of salary, nor when working late hours, as at some times in the year often happens, is there any extra pay. This weekly amount is all there is for everything. The houses they live in are not their own, they pay a high rent to the owner. They have no fields, no flocks of sheep, no cattle, no poultry, no fruit trees, large or small. Every particle of food, flour, butter, sugar—every drop of milk, every egg, clothing, coals, gas-light everything must come out of this one weekly sum. Everything had to be labored for, so much work for so many shillings, and so many comforts or necessaries for these shillings. But if that work should cease for even a week, the income ceases; there is no background of fertile fields and sunshine and showers to work for them, nothing but their daily industry.

I say it with the fullest conviction, after years of struggle in that land and in this, that the American farmer who is industrious, intelligent, persevering, is one of the most favored of men; his lot is, or should be, one of peace and comfort, and if there be such a thing as envy in my heart, there is no man I envy so much. C. BOOTH.

THE FARMERS' CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

VALUE OF FERTILIZERS.

P. G., Oswego Falls, N. Y.—What is the fertilizing value of hen manure per bushel, of hardwood Canada ashes per ton, and of stable manure per two-horse load delivered? The fertilizer is to be used for strawberries on a light sandy soil.

ANSWERED BY PROF. H. H. WING.

Nitrogen, phosphoric acid and potash, in the form of commercial fertilizers, are worth in the market about 17, seven and four cents per pound respectively. For practical purposes we may assume that they are

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies.

worth the same prices in hard-wood ashes, hen manure and stable manure. These articles are, of course, very variable in composition and it is out of the question to give a definite answer without knowing the analysis of the sample in question. A ton of hen manure of good quality should contain about 33 pounds of nitrogen, 31 pounds of phosphoric acid and 17 pounds of potash; these together would be worth $8.38 at the prices given above. Knowing the weight per bushel of the hen manure our inquirer can very easily tell what he should pay for it. In the same way a ton of fresh farm yard manure, likewise of good quality, would contain about nine pounds of nitrogen, four pounds of phosphoric acid and 10½ pounds of potash, worth, all together, $2.24. Good Canada hard-wood ashes should contain per ton 200 pounds of potash and 130 pounds of phosphoric acid, worth together $17.19. Of course, if the ashes have been leached or the manure has been "fire-fanged" or exposed to the weather, the value will be materially decreased, but how much it would take a chemical analysis to determine.

WEIGHTS OF CLUSTERS OF GRAPES.

J. P. K., Wakefield, Kan.—What was the weight of the largest bunch of grapes ever raised in America, England or any other country?

ANSWERED BY GEORGE W. CAMPBELL.

I am not able to answer these questions very satisfactorily, and can only give reports from sources which are probably reliable. If J. P. K. wishes to know the weight of native grapes grown in America, including hybrid varieties of American production, I would say that with ordinary good culture, they are not often grown over a pound to the cluster; from one half to three fourths of a pound being a good average of the larger varieties, while the smaller ones would average less. Concords, Niagaras, Pocklington, Duchess, Downing, and Triumph, have been grown as heavy as one and one-fourth, to one and a-half pound; and the Highland grape, one of Mr. Ricketts's hybrids is reported as having been grown to weigh two pounds and two ounces. In England a bunch of the Black Hamburgh is reported to have been grown by special culture, for exhibition, and shown at the London Horticultural Society's exhibit, weighing eight pounds and six ounces. The Syrian or Palestine grape, which is believed to be the variety mentioned in the Book of Numbers as having been found by the Israelites near the brook Eshcol, and which was borne upon a staff by two men, is reported to have borne clusters in England weighing 19½ pounds; and in its native country as high as 25 pounds. So far as known to the writer, this is the largest grape-story on record.

ABOUT PARROTS.

Subscriber, (No Address.)—Where can I obtain a talking parrot and what is the usual price for one?

ANS.—Parrots are imported from Mexico and the West Indies. The Mexican parrots are considered the best. They are imported chiefly during May, while the Cuban parrots are not brought here until later in the season. The young Mexican parrots are worth from $12 to $15 each, while Cuban parrots may be obtained as low as $5 each. Talking parrots have no fixed value. The price depends upon the extent and character of their education. A really good talker, free from bad habits such as stealing, swearing and the like, would be cheaper at $50 than the average parrot at $15. Judging from our own experience, we should hesitate about bringing the average parrot into the family unless it spoke in its native Spanish or some other foreign language. It is apt to get up unpleasant surprises both by its tricks and its language. The best way is to buy a young Mexican parrot and educate it yourself. Louis Riche, 24 North William St., N. Y., or the Associated Fanciers, Philadelphia, Pa., will send you birds which will be all they are represented to be.

FALL-PLANTED POTATOES.

W. O. F., Greensburg, Ind.—In the spring of 1888 I bought a barrel of "high-bred" seed potatoes which I planted with very satisfactory results. Intending to follow the plan of raising a second crop, on leaving home on the latter part of July, I left directions for planting some of the first crop. My man prepared the ground well and trenched according to the RURAL'S plan and planted the potatoes immediately after digging them. Very few sprouted last fall, but this spring they are coming up splendidly, hardly one being missing. If they had been matured by exposure to the air for a few days, would they have grown right off?

ANS.—Yes, no doubt they would. The R. N.-Y. has planted potatoes in the fall and covered them with a sufficient mulch to protect them against frost. The crop was earlier than if they had been planted in the spring. The past winter has been so mild that we might have planted our potatoes in trenches last fall without a mulch.

"WHITE HOUSE" PAINT.

J. J. A., Montgomery County, Ky.—The following is the recipe for a paint or white-wash similar to that on one end of the White House at Washington: Take one-half bushel of good unslaked lime; slake it with boiling water (cover during the process to keep in the steam) strain the liquid through a sieve and add to it a peck of salt dissolved in warm water, three pounds of ground rice boiled to a thin paste. Stir in, boiling hot, one-half pound of Spanish whiting, one pound of white glue, and five gallons of hot water. Let the mixture stand a few days covered from dust, and apply hot with a white-wash brush. If a different color be desired, Spanish brown, yellow ocher or other colors may be added. Do not add green. This makes a cheap, durable paint for all kinds of out-door woodwork, brick or stone.

Miscellaneous.

P. G., Oswego Falls, N. Y.—How can I get rid of wood-chucks?

ANS.—Wood-chucks may be readily shot with a long-range rifle, or trapped with strong-springed steel traps. Dogs may also be trained to hunt them. We know of no wholesale method of extermination.

E. F. D., Lima, N. Y.—How much potash available as plant food is there in one ton of hard-wood ashes?

ANS.—Unleached hard-wood ashes should contain five to six per cent. of potash, which would give about 100 pounds in one ton of ashes. Many will not contain one-half this amount, however.

N. G. P., Malone, N. Y.—It is not necessary to fill your silo to the very top in order to preserve the silage. Half-filled silos have been known to succeed when the covering was perfect. The proportion of failures where whole stalks are used seems to be greater than when the stalks are cut. It is not necessary that the barn should be specially warm in order to save the silage. A tight, well-made, wooden silo will preserve the silage in any ordinary barn.

J. H. McC., Wrightsville, Pa.—What are the fertilizing value and composition of flue ashes taken from the boilers of a blast furnace?

ANS.—We do not know of any analysis of flue ashes, but we do not see how they can have any considerable fertilizing value. They would be likely to consist chiefly of fine coal ashes and soot. The latter might contain a trace of nitrates, but probably the chief benefit derived from its use comes from some favorable action upon the physical conditions of the soil, making it possibly more retentive of moisture.

DISCUSSION.

CITY AND COUNTRY.

FRANKLIN DYE, TRENTON, N. J.—Life, as it relates to those who obtain employment on farms in contrast with that of those who secure positions in town, to which attention is called by Fred Grundy on page 311, is worthy of still further illustration.

Single men who on the farm receive $12 to $15 per month and board, would not command more than $10 per week in town. This would give them $40 per month. Deduct the cost of board and washing and only $13 per month are left. But we must include in this calculation the numerous temptations to expend money that exist in the city and which do not exist in the country; and unless a city man sets his face like a flint against these, he will not be able to resist the inroads they make upon his earnings, and the temptations to moral ruin are correspondingly greater in the city. Moreover, the class of farm hands who have families are able to command $25 to $30 per month, with a house, a garden and other things that a deserving hand frequently receives from a liberal employer; now, how many of this class would command over $25 per week in town or $100 per month? From this each man must deduct $10 per month for house rent, board for himself, wife, and, say, three children, at $3 a week, making $15 a week, which, with the rent equals $75 per month. Subtract this from $100 and $25 per month are left, and the same temptations to spend money unnecessarily exist with him and family as in the case of the single man.

[Not one man of the kind in 100 could get $100 or $75 a month in the city. Eds.]

Then again, we must take into account two other factors which are apt to do away at any time with all the savings the city worker may have made for years from his larger wages—namely strikes among working-men, and compulsory idleness consequent on the failure of his employer.

This state of things never occurs on the farm. Farming always goes on whether for little or much in the way of profits. A living at least is always assured.

The tendency among farmers, country-working men, and farmers' sons and daughters, has been for some time town-ward. In justice to those who, though still in the country, are looking hopefully forward to the time when they, too, can secure positions in town, a word of caution should be spoken. An old adage says "All is not gold that glitters." To those who must work labor is as honorable in the country as in the city. Externals do not make the man; nor do they ennoble labor. A man's character and worth should not be estimated by the clothes he wears, nor by the business he follows, if it is a legitimate one, whether in country or town. The farmer's son is just as honorable and is as honorably employed when taking a load of hay to town and carting a load of manure home to enrich the farm, as he would be if standing behind the merchant's counter measuring dry-goods, and the prospect of setting up in business for himself is as 100 to one in favor of the worker on the farm, at the present low-price of farms, compared with the chances before the clerk. A man advertised a few days ago for a place as clerk in a dry-goods store, in a town of 60,000 inhabitants. His "ad" was answered, and the largest firm in that city offered him $3.50 per week, and he had a wife to keep also. The prospect is not encouraging at this time for green-hands in any city work. There are unmistakable signs of a change. Those farmers, with their sons and daughters, who stick to the farm now, and keep on improving their soil and their methods, will reap the first and largest harvests when better prices for farm produce come. A word also concerning the girls: Why is it considered more respectable on the part of our country girls—and city girls, too, for that matter—to work as clerks on a pittance of a salary, rather than to do general house-work in respectable families, in town or in country? Positions are not numerous enough for the applicants in the former; while in the latter there is a large and growing demand, and the supply is not at all adequate to meet it.

VALUE OF DROPPINGS.

P. H. JACOBS, HAMMONTON, N. J.—Poultry droppings applied to the soil may prove to be no better than so much dry dirt. They are used every season by gardeners who expect great results, and who are disappointed. Now, poultry droppings, like night-soil, are not nearly so valuable as they are estimated, and it is a mistake to suppose them equal to guano, or even nearly as good. It is well known that night-soil is produced from all kinds of food, meat included, the urine being also added, yet it fails to reach a high value when analyzed, a matter which has surprised many. Poultry droppings may be placed alongside of night-soil. They are rich in fertilizing elements, but what becomes of the elements when the droppings are applied to the soil? I have spread droppings three inches thick on a plot of ground, only to find that the crop on an adjoining plot, on which only one quart of guano had been applied so largely exceeded that on the hen-manured plot as to make a marked contrast. I had not kept the droppings properly. The adoption of the frequent recommendation that droppings be kept dry (I am guilty myself of having given this advice) has resulted in loss. I know of no absorbent material that will prevent loss of the ammonia, (plaster not excepted) if the droppings are kept dry. When you rake up a lot of fresh, moist droppings, and mix them with earth, in a short time the whole mass is dry, with lumps as hard as stones, and not a trace of ammonia can be detected. When the moisture left it carried away the ammonia, leaving only that portion which may have assisted in forming a salt, but which is very little. When plaster is used there is a series of changes, and not a direct formation of sulphate of ammonia, as many suppose; carbonate of ammonia and carbonate of lime are some of the results, the formation of which I will not explain here, but the ammonia finally takes flight.

Some time ago I explained to the readers of the R. N.-Y. how the droppings should be kept, but as some of them may not have preserved that issue I will repeat it here and also for the benefit of new readers. Instead of keeping the droppings dry, keep them *wet*, and in so doing you can render them more available as plant food. Have a place for them, such as a covered box, or small out-building. On the floor of this throw a foot or more of earth. Clean out the poultry house two or three times a week, so as to prevent the loss of moisture already in the droppings, and place the latter on the dirt. Over them throw two inches of earth, then more droppings, and continue alternately until the receptacle is full. You may, if you can do so, add night-soil, urine, or anything else. Now simply keep the mass damp, (not too wet) with soap-suds saved on wash days. Never let the mass become dry. The soap-suds will cause a chemical change, the fat acids fixing the ammonia, (or assisting to do so) and when the time comes to use the manure the ammoniacal odor will convince you that the elements are there. The moisture prevents loss of volatile matter, and there will be no lumps to grind and the whole will be in a soluble condition ready for plant food.

Perhaps some one may suppose that I am trying to upset another theory, but the above is the result of a fair comparison of the *wet* and the *dry*. The former recommendation "keep the droppings dry," was simply founded on a theory, after all, and it requires not even an experiment to disprove its correctness, as it is well known that a dry process does not prevent loss of ammonia, and that moisture favors the formation of chemical salts. Allow the stable manure to dry as hard as the lumps in the droppings of poultry, try it on crops, and the loss of valuable plant feeding material can be almost measured by the comparison.

HOW TO PREVENT "BUTTER NOT COMING."

J. H. A., RANDOLPH, CATTARAUGUS COUNTY, N. Y.—I noticed in a late RURAL some inquiry as to "butter not coming." I have seen much in regard to this trouble, but experience has taught me that a high temperature will obviate it. I have raised the temperature of the cream as high as 80 degrees and even 85 degrees; but there must be no guess-work; let the thermometer be the guide. When the butter shows signs of coming, cool the cream back to 60 or 62 degrees. I have never lost a churning owing to the butter coming soft or to any injury to the grain. It has always been as solid and firm in texture as though the high temperature had not been resorted to. I have a Moseley creamer and churn, and use hot and cold water direct to make the changes.

I churn every second day, ripen my cream in a large can, do not stir it any except by turning in with the rest the mess from each milking, keep it closely covered in a temperature sufficiently warm to make it slightly acid—about 62 degrees. My butter is sold to private families at good living prices.

FEEDING ONIONS TO STOCK.

H. B. S., ROCKPORT, OHIO.—Several years ago I raised a crop of onions and the price was so low in the fall that it was thought best to store them until spring. But instead of the price advancing toward spring, it went down until it was far below the cost of raising the crop. There was a flock of 25 yearling lambs on the farm, and the experiment of teaching them to eat onions was tried. While the ground was yet frozen, and snow covered it the feeding commenced. At first the lambs did not seem to care for the onions and would walk away from them, but soon they got so fond of them that the 25 would eat a bushel a day. It was thought at the time of the experiment that the feeding value of onions was about the same as that of carrots or parsnips. Thousands of bushels of onions have been thrown away this spring, the price being so low that they were not carried to market where they would have brought only 10, 15 or 20 cents per bushel.

THE EFFECT OF LATITUDE ON THE EARLINESS OF CORN.

J. J. H. G., MARBLEHEAD, MASS.—There should be no question about this at this late day. It is fully recognized and acted upon by those who have large business interests at stake, the great canning factories of the country. One of the largest of these informs me that it has for years had the same variety of corn raised by three growers whose farms are about 200 miles apart, in a north and south direction, with the object of having this seed corn mature in the same order when raised for canning in the neighborhood of their factory; and the result has been attained, that raised farthest north maturing first and the other two lots following in the order of their latitude.

E. A. F., HANCOCK, VERMONT.—About five years ago, about the latter part of May Flea-beetles beset my garden, and cabbages, turnips and beets all fared alike, they were all being destroyed. I dusted them with ashes and lime, but to no purpose. I mixed a strong dose of ashes and Paris-green and with it dusted the ground around the vegetables that had been eaten. The beetles soon left. They didn't like the dust.

What Others Say.

LUDICROUS LEGISLATION AS TO DOGS AND SHEEP.—THE legislature of North Carolina passed a law compelling the owner of a dog which was known to have killed or injured sheep, to pay two dollars in cash for each one killed, and one dollar for each one injured. The Progressive Farmer in commenting upon this, says that this act, if it means anything, means to elevate the dog and give him more privileges than heretofore. To say that a dog may kill a sheep for *two dollars* and may injure a sheep for *one dollar*, what does it mean? A grade South Down wether sells for four to six dollars, and a grade Cotswold sells at five to eight dollars for mutton. A pure-blood Merino, South Down, or Cotswold *lamb* sells for 10 to 50 dollars, according to breeding. The city of Baltimore, to encourage sheep husbandry, sells the South Down lambs from the Druid Park flock at the low price of $25 each. Does this bill mean that if any farmer has any improved breed of sheep, worth from $10 to $50 each, a dog is authorized to go and kill them for $2 each? If this be so, farewell to all attempts to improve the breed of sheep. Farewell to all stock raising, and let *all cotton and all tobacco* be the cry—buy everything else. Would it not be better to pass a bill making it a crime to have a sheep?

WHICH MAY REMIND YOU.

MOST people who consider cabbage an essentially coarse food are unacquainted with the Savoy class, says W. F. Massey in that excellent journal, Garden and Forest. Even the Savoys which have been crossed and increased in size and coarseness, like the Drumhead Savoy, are still far superior to the ordinary Flat Dutch and Drumheads. And now we have a variety known as the Netted Savoy, which combines fair size with the highest quality. The difficulty in growing all late summer cabbages is due to the ravenous green caterpillars which eat them so greedily. Pyrethrum powder will destroy the worms if constantly and thoroughly used, continues Mr. Massey, but the marauders come so rapidly that if the application is not made almost daily it is useless, and with good pyrethrum at 75 cents per pound, it will not take long to spend the value of the cabbages.....

This is true enough if the pure dry powder is used. But it should be borne in mind that it can be greatly extended with plaster and still be effective. Moreover, if pyrethrum water is used, the expense is inconsiderable, since a table-spoonful of powder suffices for a pailful of water. With a hand pump, long hose (say 10 feet) and spraying nozzle (Vermorel is about the best for cabbages) the plants may be sprayed rapidly, with comparatively little exertion and at cost for the powder scarcely worth considering.....

MR. CLARENCE M. WEED, of the Ohio Experiment Station, says that his Station's experiments last year indicate that spraying plum trees with Paris-green water is effective in killing the curculio. Four ounces of the poison to 40 gallons of water.....

IT is easy to understand, says the Philadelphia Weekly Press, how some cows may get into a habit of living with a minimum of exercise. We have known some men to get into the same way and never discovered that it made them more efficient. To keep a nervous, high-bred cow confined to one spot for months together with, perhaps, her head fastened in a stiff, unyielding stanchion, looks very much like cruelty to animals. Dehorning is nowhere compared with it. If the injurious effects of confinement do not show to any marked degree in the present generation of cows, they are certain to crop out in an enfeebled offspring.....

CAREFUL EXPERIMENTS to show the relative shrinkage of silage and hay, made in Lancashire, England, and reported in the Live Stock Journal, show that two tons of meadow grass made into hay, leave 12½ cwt. Two tons of meadow grass put into silo come out 34 cwt. of silage.. .....

PROF. HENRY of the Wisconsin Experiment Station, after two years' experience with Prickly Comfrey, thinks it may be valuable with dairymen for soiling purposes, but that it is not likely to hold a prominent place in our agriculture .....

ALFALFA is another plant, says Prof. Henry in the Breeder's Gazette, that has received some attention in the East of late years. From Colorado westward it occupies a very important place among farm crops and on irrigated lands of the West gives enormous yields. The plant is a legume, like clover, but is a perennial, so that when once it occupies a field, with favorable conditions it continues indefinitely. It yields from two to eight tons of excellent hay per acre per year at the West, and it is no wonder that the farmers in the Eastern United States, when they learn these facts, are so anxious to try it. In most cases attempts to grow Alfalfa at the East have not succeeded. The New York and New Jersey Experiment Stations report very fair success. Alfalfa on the Wisconsin Station grounds stood about 10 inches high in early May, but on the whole it has not been a success. Unless the conditions are very favorable he thinks the farmers east of the Rocky Mountain section should not attempt to grow this plant. With a porous subsoil and the water 10 or 15 feet below the surface, also perhaps on sandy land with a sandy subsoil, Alfalfa may be tried with some chance of success. In general, however, Red clover is much better suited to Wisconsin needs than Alfalfa. Clover gives a good crop the second year after it is sown, and can then be turned under for enriching the soil. Alfalfa requires two or three years to get well established, so that the farmer can hardly afford to use it in the rotation of crops even if it succeeds.....

COW PEAS, lupines, vetches and seradella have also been tried at the Wisconsin Station, but appear to be of little value as compared with clover..... ....

T. B. TERRY, in the Ohio Farmer, says he harrows his potatoes three times with a Thomas harrow—the first time soon after planting; the last time, usually, just as the sprouts are coming out of the ground. Some seasons two harrowings are enough. All he wants is to keep the surface mellow and not let the weeds see daylight. He wants to be sure the weeds are cleaned out just as the potatoes come up. Before they start again he takes care of them with cultivators and avoids all hand work and horse-hoes. When harrowing the first two times he keeps the horses between the rows (there are ridges over the drills so he can see them) and, last, he harrows cross-wise to level the ground and be sure of killing all weeds.....

THE report of the N. Y. Experiment Station, Peter Collier, Director is all things considered, the best we have seen. It fills 406 pages and should be examined by every farmer. Careful experiments made by the Station, prove that the liquid portion of the stable manure contains approximately the same amount of fertilizing material as the solid portion; but, in addition, the portion present in the liquid portion is in a condition rendering it immediately available to the growing crop. This portion which is so generally allowed to be wasted, through imperfect methods for its preservation, it is proposed by the Station to save completely..... .....

"WHO can doubt," says Dr. Collier who was one of the judges in the R. N-Y. Potato Contest, "that the great yield of potatoes secured at the rate of 645 bushels to the acre of one variety, and 1,076 bushels of another variety, under the conditions of soil and climate obtaining in the locality where the trial was made, was due wholly to the fertilizers applied and the method of cultivation employed?"

IT is doubtless true that the results may be less, equal or greater, in the same or another place and another season might have been modified or omitted entirely without affecting the result recorded above; but Dr. Collier thinks none will doubt that with all the limitations and modifications which science would demand before accepting any conclusion from the trial, *it does possess a decided value practically and scientifically which will be found helpful in the production of large crops in the future*.....

THE R. N.-Y. was the first, so far as we know, to ascertain that the pyrethrum plant is quite hardy in this climate. We have now a dozen plants growing in the open ground, that were planted five years, or more, ago—both roseum and cinarariæfolium. The New York Station raised some plants and a quantity of the unopened blossoms was gathered and dried in a shaded part of the office, after which they were pulverized in a mortar. The strength of the powder as compared with samples of Buhach, an insecticide made from another species of pyrethrum grown in California, was then tested by putting two grammes of each in a large fruit jar, introducing live flies into the jars and noting the time required for the insects to become paralyzed. In seven trials, the flies placed in the jar containing the home-grown powder fell first four times; those in the one containing the Buhach twice, and in the other trial both fell together.

SOME 70 varieties of potatoes were tested by Dr. Collier. Below we give the names and yields (rate per acre) of those which yielded most. The R. N.-Y. No. 2 stands first. The yield was at the rate of 266 bushels to the acre. Then we have as follows:

Gov. Foraker	214 bushels.
Summit	201 "
Stump of the World	179 "
Green Mountain	173 "
Morning Star	167 "
Lombard	165 "
Delaware	161 "
White Beauty	151 "

NEW QUEEN yielded but 102, Early Puritan 95, Crown Jewell 80, Sunlit Star 74, Charles Downing 68, Early Ohio 43, Mrs. Foraker 50, Ohio Junior 48.....

SPROUTED TUBERS used for seed yielded less than sound seed, the difference amounting to 10 bushels to the acre. No advantage was gained by being careful not to injure the sprouts.....

As between seed pieces exposed to the light and warmth and those not so exposed, the difference amounted to little.....

THE R.N.-Y. guesses that the chief advantage in exposing seed to the light is that it enables one to reject all potatoes with weakly or "blind" eyes.....

AT the suggestion of the R. N.-Y., Dr. Collier endeavored to find out whether it is better to place the fertilizer *above* or *below* the seed pieces. The results with him, as with us were negative..... ....

THE following conclusions may be made from the New York Station's well conceived series of potato experiments:

1. Little or nothing was gained by using cut potatoes for seed, over whole tubers of the same weight.

2. Seed tubers badly sprouted yielded about 8½ per cent. less than unsprouted ones.

3. The earliness of the crop was not influenced by exposing the tubers to light and warmth before planting.

4. The yield was materially reduced by removing the seed end of the planted tubers.

5. Fertilizer placed below the seed may be slightly preferable to fertilizer placed above it. The fact was not clearly established.

CORN EXPERIMENTS again show that needless root-cutting in cultivating is injurious. Thus we see that the truth of the R. N.-Y.'s assertions, made 10 years ago, is confirmed.

Experiments were made by Dr. Collier to ascertain in how far stirring the soil conserved moisture.

HERE are the conclusions: 1. That keeping the surface of the soil stirred, if only to the depth of half an inch, increases the water content of the first twelve inches to a very appreciable degree.

2. That the deeper the tillage, at least up to four inches, the greater is the increase in water content.

3. That the rate of increase diminishes as the depth increases.

4. That a slight mulch exerts a far greater influence in retaining water than tillage four inches deep.

An observation made while excavating for a lysimeter in the latter part of August is appropriate here, as showing the depth to which surface tillage affects the water content of the soil. The excavation was made on a dry ridge, in order to escape bottom water, and on one side it reached into the corner of a plat that had been plowed in the spring, but upon which no crop had been planted, and which had not been cultivated during the summer. The soil it was necessary to remove was very dry and hard, except beneath this plowed portion, where it was so much moister and softer that the labor of excavation was very materially reduced. The influence continued to be noticeable to the depth of at least two feet.....

DR COLLIER'S CONCLUSIONS as to the wireworm and its part in causing scab in potatoes differ from the R. N. Y.'s belief founded upon observations made in its own soil:

1. Millipedes do not feed upon the sound tubers of the potato.

2 Their food consists of decaying vegetable matter.

3. The presence of millipedes in the hills with the scabby tubers was due to the scab, they being attracted by the decayed portion which they desired for food, and the scab is not due to their presence.....

DIRECT.

——BISHOP POTTER: "That political corruption is alarmingly prevalent; that it is the most perilous portent of the age, is amply borne out by every careful observer. Political jobbery, public service for revenue, position for perquisites—these are blood poison in the body of the Republic. Just now they are rampant, voracious and ferocious. Partisanship is a kind of brigandage, and the purchase of votes is made in the open streets."

——GARDEN AND FOREST: "Dead grass and leaves should never be burned. It is an expensive and wasteful custom, and a sure indication of extravagant and therefore bad management. It is a poor policy and thriftless management which burns up plant-food in large or in small quantities, and sooner or later it will make the best land sterile."

——PROFESSOR GEORGE H. COOK, Director of the New Jersey Agricultural Experiment Station: "The weakness of human nature is such that nothing but the chemist's tests and publication is sufficient to hold the dealers to the furnishing of fertilizers of standard purity. More than 40,000 tons of commercial fertilizers were used in our State last year, which were sold for considerably more than a million dollars, and the amount used in the whole United States is more than a million tons annually. Of the quality of these the farmer can form no judgment from their color, smell or taste, or their general appearance. The analysis and publication of the composition of these fertilizers have a most salutary effect."

For Tired Brain.

Use Horsford's Acid Phosphate.

Dr. O. C. STOUT, Syracuse, N. Y., says: "I gave it to one patient who was unable to transact the most ordinary business, because his brain was 'tired and confused' upon the least mental exertion. Immediate benefit, and ultimate recovery followed."—*Adv.*

Miscellaneous Advertising.

Dyspepsia

Does not get well of itself; it requires careful, persistent attention and a remedy that will assist nature to throw off the causes and tone up the digestive organs till they perform their duties willingly. Among the agonies experienced by the dyspeptic, are distress before or after eating, loss of appetite, irregularities of the bowels, wind or gas and pain in the stomach, heart-burn, sour stomach, etc., causing mental depression, nervous irritability and sleeplessness. If you are discouraged be of good cheer and try Hood's Sarsaparilla. It has cured hundreds; it will cure you.

Hood's Sarsaparilla

Sold by all druggists. $1; six for $5. Made only by C. I. HOOD & CO., Lowell, Mass.

100 Doses One Dollar

JOHNSON'S ANODYNE LINIMENT ESTABLISHED 1810.

For Internal and External Use.

Stops Pain, Cramps, Inflammation in body or limb, like magic. Cures Croup, Asthma, Colds, Catarrh, Cholera Morbus, Diarrhœa, Rheumatism, Neuralgia, Lameback, Stiff Joints and Strains. Full particulars free. Price 35 cts. post-paid. I. S. JOHNSON & CO., Boston, Mass.

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THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, JUNE 1, 1889.

POSTSCRIPT.

AS we go to press with the last pages of this issue, news comes from the Rural Grounds that the following mixture seems to repel the flea beetle: Two parts of fine, sifted unleached wood ashes to one of plaster, which had previously been poisoned with London-purple in the usual way, and snuff (tobacco) at the rate of one pound to a barrel of the mixture. It is thought that the fleas are repelled by the ashes alone. The London-purple was added to kill the potato beetles and thus to render an additional application unnecessary. We learn that the flea-beetle is very destructive on many Long Island farms.

"No greater mistake is made in the management of stock, than the plan too often adopted on the principle that all that is necessary is that the animals shall be well or liberally fed. Horses that are well cared for and always carefully used will do well on a very ordinary ration; while horses receiving no care and that are carelessly or severely handled will not thrive on the best of feed."—DR. KILBORNE, page 363.

WE have got yet one more name to add to the list of judges for the R. N.-Y. Potato Contest. It is that of Mr. A. W. Cheever, a practical farmer, and agricultural editor of the New England Farmer as well.

THE R. N.-Y. wants all the help it can get in the battle with the flea-beetle. Some of our correspondents write us that they have been troubled with the insect for some years. What we want to know is, what have they done to keep it in check?

"So we try to coax ourselves to believe that a beefy cow will pay her way with the help of the steers. But will she do it? Not in the East where land and feed are high; or in the West where dairying is made the business of the farm."—A. L. CROSBY, page 362.

WE gave, last week, an item of news concerning the proposed effort to foster the flax industry in this country. The R. N.-Y. is assured by those who have carefully looked into the matter that there is much of promise in the idea. It is confidently claimed that a new machine has been perfected that will revolutionize the flax industry almost as completely as Whitney's invention of the gin revolutionized the cotton industry. Figures on another page show how America would be benefited by such a revolution.

"They beat Mr. Terry in China, for they keep asses and mules and feed them on the potato tops; they cannot afford even hay. Horses, like men, must live on what they can get, not on what their fancy may dictate, or their appetite approve. There is a wonderful elasticity about the requirements of the animal body."—MR. DAVENPORT, page 363.

Two horses on the New Jersey farm have not had 100 pounds of hay during the past month. They have had good pasture, when not at work, cut grass, wilted or partly cured, and grain. They have kept in excellent condition though they have done their full share of work. This fact is worth noting in connection with the ideas advanced by those who discuss Mr. Terry's plan of feeding clover hay to horses. Do we feed our horses more grain than they need? The R. N.-Y. believes that many of us do, just as it believes that many of us eat a great deal more meat than we need.

THE R. N.-Y.'s asparagus bed (consisting of many so-called new kinds) is attacked by the asparagus beetle. On several plants the writer saw last week hundreds of eggs, a dozen or more of the beetles and about fifty of the worms (larvæ or grubs). These worms may be seen eating the leaves just as the currant worm eats the leaves of currants and gooseberries. As soon as our readers discover plants so infested it is better to do one of two things, viz., dust them with sharp, sifted coal ashes, slaked lime, or, what is surer to kill, Paris-green or London-purple and plaster. But the use of poisons would necessitate great care in washing the shoots unless cutting ceased after the application.

"In my opinion the feeding of less hay and a little wheat bran or whole oats, will not only prove more acceptable to the animals, but also tend to better results in building up the bony structure of the growing young, as well as in promoting its general thrift. In my own case, I consider such a mixture of feed, as also an occasional feed of corn fodder, and even straw, not only economical but healthful."—JOHN M. TRUE, page 362.

THAT despised plant, the cactus, is destined to become a power in the development of the Southwest. The plant is nutritious, succulent and hardy. It grows where nothing else will and supplies almost enough water to relieve the thirst of cattle. When mixed with the native cotton seed it forms a more perfect ration than any other product indigenous to that region. But along with these good qualities it is cursed with thorns so sharp and terrible that even the animals maddened by thirst or hunger are held at bay. Thus these thorns prick millions of dollars away from Texas. Did nature make a mistake in this arrangement?

"Some horses are very easily kept, and will do a moderate amount of work, and at the same time, keep fat, on a ration that would barely keep the skin and bones of another horse together. No general ration can be given that will suit all cases."—DR KILBORNE, page 363.

THERE are several points about the sorghum sugar industry that deserve attention. One is that only in a country possessing plenty of coal and water, abundance of cheap land and a warm climate can a factory be successfully maintained. Another is that sugar can be made cheap only by the introduction of cheap labor. Sorghum cane brings but $2 per ton. Take from this price the cost of growing, hauling the crop, and what is there left to attract an ambitious farmer? Still another point is the fact that the plant for a factory is so expensive that only a rich corporation can work the business. The R. N.-Y. suggests that convicts in our State prisons might be made useful in the sorghum industry and thus help to settle the prison labor question. There is already a clamor from some parties that Alaska should be used as an American Siberia. It would be better to locate the American Siberia in a warmer climate and employ convicts at sorghum sugar making.

IS CREAM, cream? We are used to calling milk, milk, without any regard to the fact that there are such wide differences between different samples that they might well pass for different substances. The R. N.-Y. has been studying, with considerable care, the milk from the various cows that ran in the pasture, and the result would indicate that what we call "milk" varies so greatly in actual value that it is impossible to adopt for it any standard price that is fair. Now, is it the same with cream? Will a quart of cream from a Jersey cow make any more butter than a quart of cream from a Holstein, supposing both samples to have been raised under exactly the same conditions? Those who advocate the cream-gathering system of dairying argue against the injustice of paying a uniform price for milk when it is clearly evident that one sample of milk may be far more valuable than another. They assume that cream is cream, in other words, that the difference between the butter-making ability of one cow and that of another stops at the creamer, and that one sample of cream is just as valuable as another. Are they right?

"The people have the unquestionable right to demand that the government shall offer a fair price for the railroads, and that if the owners refuse to sell, it shall construct competing lines where such lines would be most effective, and operate them for the benefit of the people as a department of the Civil Service."—C. W. W., page 369.

TRADE SECRETS.

THERE are a-half dozen things in this paper that might properly come under this heading. There are plenty of them in any number of the RURAL. We mean bits of experience and observation that, if worked out by a mechanic as a part of his trade, would never be made public. When a mechanic hits upon some method that enables him to do his work a little cheaper or better than his fellows can do it, he keeps it to himself, guarding it as a part of his stock in trade. Intelligent farmers do not work on this principle. That is plainly evidenced by reading through a file of the R. N.-Y. This year we have already given at least 100 plans for work, that are deserving of being patented and are worth hundreds of dollars to the originators. Some of the men who guard their "trade secrets" most zealously accuse farmers of being stingy and illiberal. This is a great mistake. In the matter of square generosity and conscientious desire to aid their co-workers, the best American farmers stand pre-eminent.

It is a part of the R. N.-Y.'s business to collect and publish these trade secrets. Most of those to whom we apply are very willing to give information. They realize that they lose nothing by helping their fellows. In fact, they believe that they will gain in the end by improving the general character of agricultural produce. Here is one instance that shows two things. A short time ago the R. N.-Y. set out to find how certain dairy prizes were won. Lists of questions were sent to the various prize-winners. With one exception, they replied promptly, giving minute and interesting accounts of the manufacture of the prize articles. The one refused to tell how the work was done unless the R. N.-Y. paid $100 for the information. It seems evident that in printing this symposium the R. N.-Y. gave its readers information worth a good deal of money, while those who contributed to the fund of knowledge were exceedingly liberal-minded men and women.

"I say it with the fullest conviction, after years of struggle in that land and in this, that the American farmer who is industrious, intelligent, persevering, is one of the most favored of men; his lot is, or should be, one of peace and comfort, and if there be such a thing as envy in my heart, there is no man I envy so much."—C. BOOTH, page 365.

RAISING TROTTERS ON THE FARM.

AT a farmers' institute held at Friendship, N. Y., last winter Mr. Seth Fenner made the following statement:

"I can select 100 trotting-bred stallions in my vicinity, and take all the colts they have ever sired and sell them at auction, and they would not bring enough to pay for the service of the stallions that sired them."

This statement seems to have stirred up the breeders of trotting horses to a high degree of excitement. Mr. C. J. Hamlin, president of the Buffalo International Fair, has sent out a letter in which he gives the names of 13 farmers, neighbors of Mr. Fenner, who have sold colts at from $300 to $1,700. These colts, he says, were "raised by farmers who pay but little attention to horse breeding, but owning good mares, they know the value of good crosses." Then he goes on to say that "the American trotting horse should receive the most careful attention of the farmers of this land. Foreign markets are being rapidly opened. Every important nation in the world is looking at the American trotter. The time is not far distant when this land cannot raise enough good horses to supply the export trade. The sure and valuable incomes the small farmers of France have been reaping from the sale of horses to Americans will soon be repeated in this country where we may look for the buyers of the world."

It occurs to the R. N.-Y. that Mr. Fenner may have been nearly correct in his statement without weakening in the least Mr. Hamlin's argument. There are good horses and poor horses. The farmers who select a trotting stallion just because his services are to be secured for a small sum or who take an inferior mare to a high-priced stallion and expect a first-class colt are always disappointed. Mr. Hamlin's figures prove that the farmers he mentioned patronized the best stallions. Mr. Fenner can perhaps make his assertion good and show farmers who have patronized poor stallions at a high rate for service and then handled the colts so that they proved failures. We believe Mr. Fenner went on to speak of the influence of a fast horse on farm morals and industry. We have never had much experience with very fast horses. Old "Doll" and "Bill" can get us over the road at a rate of speed that keeps business going. We know good men who thoroughly enjoy a ride behind a fast horse and who are in no way spoiled by the ownership of a good trotter. We have had neighbors whose sons were most certainly carried into fast habits, fast acquaintances and fast moral decline by a fast horse. This leads us to conclude that lots of men who try to raise trotters are totally unfitted by nature to understand or appreciate that business. A good deal of the loss from fast-horse breeding is due to these misfits.

"The farmer's son is just as honorable and is as honorably employed when taking a load of hay to town and carting a load of manure home to enrich the farm, as he would be if standing behind the merchant's counter measuring dry-goods, and the prospect of setting up in business for himself is as 100 to one in favor of the worker on the farm, at the present low price of farms, compared with the chances before the clerk."—FRANKLIN DYE, page 366.

BREVITIES.

STRAWBERRIES are cheap and will be cheaper.

READ the "Extract from an English Letter" and then be doubly thankful you are an American citizen.

Of course you have planted some fodder corn for the cows to eat in August. The R. N.-Y. has planted some roots too.

STRAWBERRIES and cream, baked potatoes, good bread and butter, lettuce and the promise of green peas in a few days. Do you want anything finer?

ONE of our readers finds the handling of apple wood profitable. We learn that there is a good demand for second growth ash. It is used for base ball bats.

THE R. N.-Y. has a field badly run to brush and weeds which it wants to clear. The plan is to mow the brush in August and turn in some sheep. Is this right?

SOME years ago $26,000 were refused for the famous Jersey cow, Mary Anne of St. Lamberts. She was sold at auction last Tuesday for $2,100. The uninitiated will ask what has become of $23,900 of her value?

LARGE crates about the shape of peach baskets are now made for green peas and string beans. They hold about as much as the old-time square crates, and can be packed one in another, and thus returned in a less bulky form.

FOR three years we used "oniony" milk and butter. This year we have none of it. This happy result has been brought about by keeping the cow away from the onions. She has not been pastured for weeks, but is fed cut grass and grain. Soiling pays us.

IT is a great advantage to plant potatoes that will sprout evenly. Some varieties are curious in this respect. Part of the plants will grow to a hight of several inches before the others appear. On weedy ground it it evident that this causes much trouble.

LAST year Lima beans brought a good price. The cold, damp spring ruined all the plantings and the crop was light. Sweet corn last year was low. This year in the vicinity of the Rural Grounds everybody plants Limas and reduces the area of sweet corn. What will be the result?

SOME people say that oatmeal and other cereal foods do not agree with them. The writer believes that this is sometimes due to the fact that too much milk is taken with the oatmeal, forming a pasty, mushy mass. He has acquired the habit of nibbling a cracker or slice of bread while eating oatmeal and milk, and thinks it is helpful.

AS is noted elsewhere, the sweet corn canning industry will be sure to lead the silo into any community. The silo affords the best means for preserving the stalks from which the ears of corn are removed. It is only a matter of time before this fact will be amply demonstrated. In these times agriculture is forced to settle itself into the most profitable grooves or go out of business.

IT may be well to repeat here what was said last year about the chemical composition of the corn plant. The leaves and the husks are the most nutritious parts of the plant, containing three-fourths of all the albuminoids. It is evident then that the most profitable corn for ensilage is one that suckers freely and presents the greatest amount of leaf surface with the smallest stalks.

WESTERN agriculture is adapting itself to new conditions with amazing rapidity. We have a letter from an Iowa subscriber who says he has contracted to raise sweet corn for next season's use in Iowa canning factories. He has 138 acres in sweet corn to be used as seed exclusively. The sweet corn canning industry has been supposed to belong to the Northeastern part of the United States. It would appear that this notion is unfounded.

Miscellaneous.

THE R. N.-Y. LAKELET.

(*See First Page.*)

FIG. 133 on the first page is a continuation of the photographic views taken last spring at the Rural Grounds.

No part of the premises is more valued than this little body of spring water. In truth, as we have said before, without it the place would be deprived of fully half its charms. There are three of these lakelets connecting, each one lower than the other, separated by grassy banks, the water flowing over dams. They might be stocked with black bass or trout if the different owners were willing to co-operate to that end. As it is, they are alive with sun-fish, suckers, pike, eels, turtles and the like. The 32 carp put into the R. N.-Y. lake several years ago have never since been seen. There are so many springs that bathing is not relished, the water, even in midsummer, being too cold.

THE POST-OFFICE AND THE RAILROADS.

The farmers' numbers and independence give them great influence in legislation; agitation of each novel project must precede legislation on it; the telegraph, telephone, express and railroad business to be conducted like the post-office, by the general government; reasons in favor of such a change; undoubted right of the government to force it, paying a fair price for the property appropriated; advantages of it; how best to aid in bringing the change about.

As a class the farmers by whom the RURAL is mostly read, are so situated that they are not only among the first to feel the evils that oppress the world and reduce its prosperity below the proper level; but they are also better able to locate and define these evils and to set in motion the remedies than most other classes of people. The RURAL has often shown its good-will to aid in so doing. The ballot is considered the instrument of power for reform, yet each step of progress must be initiated by other means, and the object sought must be pushed to an issue before the ballot can be brought to bear upon it.

There is a movement now on foot looking to the reduction of letter postage in the United States to one cent. The rate is already so low that no further reduction could make any perceptible difference in the people's burdens. There is no desire anywhere to make the Post Office a source of revenue, and it is probably best for the people that it should continue to be practically self-supporting. If, however, a movement could be inaugurated to extend the Post-Office system to all telegraph, telephone, express and railroad business, it would result in great benefit. If the postal business of the United States were left to private enterprise, as all other business is, then the cost of sending a letter to any point would depend on the distance it must be carried, and the number of letters usually passing over the line of its journey. Since the object for which the business would be conducted would be the enrichment of its owners, of those who had invested in it and carried it on, the rule, as in rail-roading, would be to "tax the traffic all it can bear." As it is, the people conduct the Post Office through their agent the government, and the tendency is ever, as it should be, to give the most efficient service possible at the lowest possible cost.

If the postal business of the country were now, and always had been, in private hands, there is no argument that can now be advanced against putting the railroads of the country in charge of the General Government to be operated for the people's benefit at cost, which would not apply to the Post-Office with all its might; but, if a majority of the people demanded it, the change would, nevertheless, be quickly made. The people have the unquestionable right to demand that the Government shall offer a fair price for the railroads, and that if the owners refuse to sell, it shall construct competing lines where such lines would be most effective, and operate them for the benefit of the people as a department of the Civil Service.

Several benefits might be gained from this. First, as in case of the Post-Office, it would give the people the service of the railroads at cost, and the tendency would always be to diminish the cost and increase the efficiency of the service as fast as possible. Second, it would put the Civil Service of the country on a strictly business and non-political footing at once, as the Civil Service reform movement demands. Third, it would promote the adjustment of the changed methods and conditions of the world's work, which are now culminating with so much power for good or evil, to the people's welfare, as an ever-beneficent evolution, instead of as a disastrous and explosive revolution to which these conditions might easily give rise if that adjustment were too strongly resisted.

Now, how can the readers of the RURAL help to bring this change about? This article will probably meet the eye of many, each of whom will say "That is all right; I will vote for it the first chance I get." But if nine-tenths of the voters of the United States were of that mind, and that was all, the chance to vote for it would never come. There is no lack of political machinery for making the people's will effective in any direction in which they may choose to act; but it is necessary that they should *act* if anything is to be accomplished.

This is what the writer would suggest:—Let every person who would like to see the Government of the United States assume control of the railroads and operate them for the people's benefit talk the matter up with others in his own school district, not neglecting to carry the agitation into other sections as opportunity may arise. Then let as many as can be interested in the movement in each school district appoint one of their number to write a letter to the representative in Congress in whose district they live, asking for his aid and influence to bring the desired change about, telling him that they have associated themselves to promote that change by every means in their power until it is accomplished, and let all sign the letter. By the time a majority of the members of Congress find their mails full of such letters the movement will be felt with some power. Let the readers of the RURAL brace themselves for a long, strong pull, and pull all together and they will see this thing start, and slide into place with a promptness that will make the capitalists' heads swim. The change is surely coming. C. W. W.

Huron County, Ohio.

CORRESPONDENTS' VIEWS.

NEED OF MORE EYE-OPENING.—At a recent meeting of the Connecticut State Board of Agriculture at Danbury, Dr. Bowen raised the query: "How are the great body of farmers to get the much needed information with regard to the many frauds which the better informed among them understand perfectly are being worked on them?" It won't do for the Board of Agriculture to ventilate these things, and the public press, catering for city interests and city schemes, will not do it; the papers themselves being practically in the ring.

How then shall the farmers get at the truth of these things which so closely affect their interest, and which are far more vital to them than any fancy, scientific methods by which produce is continually made more plentiful and consequently cheaper and at the same time of better quality for city epicures? The doctor proposed as one means to this end that every farmer should withdraw his support from all papers made up mostly of plausibilities, clippings, etc., and give it to the paper which lends its columns most liberally to a truthful, out-spoken exposure of such matters. Some time ago I came to this conclusion for myself and I believe that a farm paper run on this plan more extensively than any has ever yet been run, would be well and heartily sustained by farmers. They are ready for it. A. W.

Litchfield, Connecticut.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

WOMEN with short, plump necks will be glad to learn that the newer styles in neckwear are specially adapted to their appearance. There is a tendency to make the collars lower, or to replace them with falling frills or fichus. What are known as Empire ruches consist of a fine mull or lace plaiting about two inches deep, which turns over, and is brought down to a point in front. This is very pretty and becoming. The favorite fichus, either large or small, are bordered with frills, after the style affected by Marie Antoinette. Some are brought to a point in front and knotted on the breast; others are looped at the waist line. Very pretty, quaint-looking ones are seen in sprigged and dotted muslin; others in China silk and Canton crape. But their grace and effectiveness depend largely on the taste of the wearer.

Very pretty trimmings for the wrist are full little undersleeves of muslin, tulle, or net—they make a very good trimming when the sleeve is a little short. They are in the form of a puff about three inches deep, closely shirred at top and bottom. The bottom shirring is about one inch from the edge, so as to form a frill. They are very pretty when the bottom shirring is drawn in with pretty baby ribbon, tied in a little bow at the back.

Some charming Directoire cravats are like those worn by French lawyers a century ago. They consist of a close-fitting band for the neck, with two square ends in front. These are closely plaited, and fall straight. These cravats are usually made of sheer muslin or silk mull; they are very demure-looking, and yet jaunty.

* * *

JUST at present the redingote is at the hight of its glory. Everybody wears one, and they range all the way from beauty and becomingness to positive hideousness. We saw a stout woman recently wearing a very straight, very tight, cloth redingote, in color a lively pea-green. It had revers and trimming of a flamboyant brocade, pea-green and Indian red, and the misguided woman who wore it had an air of serene satisfaction, which showed that she thought her attire all it should be.

* * *

THOSE Persian embroideries still hold a favorite place as trimmings—as a rule they are charming, and lighten up a gown wonderfully. A plain frock of black alpaca, simply made, was rendered charming by a little Persian trimming of silver and dull blue. Among the handsomest passementeries for trimming black silk are those which show a mixture of colored metal and beads with plain jet, giving an Oriental effect. Appliqué embroideries form another handsome trimming, but they are, as a rule, very expensive.

THE FAMILY ACCOUNT-BOOK.

OLIVE E. DANA.

IT is a small thing I bring to aid in solving the vexed and vexing problem of household finance, yet, rightly used, it may be a helpful one. One who has not tried the plan may not guess how money matters may often be simplified and straightened by the careful keeping of household accounts. Let the mother do it if the children are small and the good man of the house is disinclined to "bother;" by-and-by the little daughter can be taught to do it, and take pride in it.

This family book-keeping should include an accurate record of all moneys received and of all expenditures. It need not be conducted in any strict and scholarly fashion; nor is it necessary to go to the opposite extreme—nails and seeds hob-nobbing with sugar and molasses, followed on the next line by an entry of thread and cotton cloth.

This, indeed, is to my mind, better than no account keeping. But I think it much better for the kitchen expenses to be by themselves, and for the expenditures for out-door needs to be in their own place, while outlays for dress, postage and the like occupy yet another portion of the family account-book. Of course, when there is a fixed income, the trouble is much less than where both sides must be followed, as in the case of the farmer. And if only one side can be kept I would count the outlays; for we are apt, the most of us, to count on if not to count up our gains even in anticipation, while the corresponding expenditures are not always so carefully regarded.

Was it not Garfield who attributed his success largely to the fact that, at some time in his college course, he was led by the example of a fellow-student to make good use of the "margins" of time? And we do not need to remind ourselves that it is usually the "margins" allowed or disallowed or wholly forgotten, that are the secret of the problem. The mistress of the home will soon see if too much or too little relatively is spent on the table And with the entries before her, she may often bethink herself how less of this commodity and more of that, or *vice versa*, would have conserved the health and comfort of the family. And if too much is being spent in any other department, if the dry-goods bill overshadows the outlay for groceries, or, on the other hand, is shrunken to unseemly size beside it, or if both groceries and dry-goods could have been made to yield a "margin" for repairs or furniture, for books or papers, for the payment of a debt or to be given in charity, or to be set down as a desirable deposit in the family bank-book; if such there be, why these facts are apt to be much more evident if the figures tell them.

That English fashion of which we read is a good one—having the girls of a household begin very early to set down their personal expenses. Rather unchildlike it may seem, but why should not the little ones come by such degrees to the knowledge and the sharing of these oft-times heavy burdens?

There is a good deal of satisfaction to be gotten out of the family account book. It is a multiplication of the pleasure the wage-earner finds in the constant and careful squaring of his or her small accounts—a pleasure every woman-worker ought to know. But in this family book-keeping which becomes also something like a diary, with its associations of related facts and dates, the greater satisfaction accompanies the greater utility.

Father may like to know just how much he paid for last year's fencing-wire; and then, if he knows the date, he perhaps can decide some other little mattter when his memory did not quite serve him truly, and is glad to know just what potatoes, or butter, or apples, or berries were bringing last season And mother bethinks herself that this is an off-year for clothes, and finding that the little record-book justifies her in the expenditure, delights herself and the family by a new and needed carpet.

And then what comfort in knowing just what any given crop realized! The receipts from the berries, when the vines have given all their fruit, the gains from the dairy or orchard, or potato-field—it is double assurance of the success of the year's work, to see these profits, small though they be, set down in honest, solid figures. The lessons of the little book give wisdom, courage and hope for the next glad sowing and reaping. So, by all means, have a household account book, and keep it.

OUTINGS IN NEW ENGLAND.

VII.

MARY WAGER-FISHER.

ONE morning Anaximander came in with the announcement that a whaling steamer was in the harbor and was immediately to leave for Provincetown, to return in the afternoon, and if I could get ready in a "jiffy" we would take passage, so I was ready in a "jiffy" and we boarded the steamer with the usual result that attends precipitancy, to find that we might have had a quarter of an hour more time at our disposal. Provincetown is at the extreme end of Cape Cod and the boat was four hours in making the run. It was a new whaler, and during the seven months it had been at sea 13 whales had been captured. The whales were shot—the gun for this purpose being short and heavy and mounted on a projection from the bow of the boat. A long lance shell is shot from this gun and enters the whale and explodes inside him—a horribly cruel procedure, as the animal does not immediately die, but is sickened by it, and coming to the surface is easily harpooned and hauled in. It was a rough tiresome voyage, and we were glad when the "tip end of Down East" was reached, although Provincetown is anything but a charming spot to rest in. One would suppose that a place so decidedly out at sea would be cool and refreshing. But it was hot and sandy and "fishy." It is built on a coast of sand and stretches out to the length of two or three miles. The sand promontory is some two miles wide, and very good water, with no brackish taste, is obtained from wells. We had for our dinner some fresh cod which was very good. Along the wharf, cod were being unloaded, the fish being removed from the hold of the boats with a large pitch-fork as if so much hay, and put into dories partly filled with fresh water, then rinsed off in this; and repacked in casks. The manipulation was cleanly and the sight of it in no wise modified my liking for "pickled cod." One of the fishermen asked me to look at some cod-liver oil which he pronounced very fine. He said that they threw the livers in a cask and the oil exuded without further operation—the oil settling clear to the bottom and the refuse rising to the top. I don't know how true his story was, but when he lifted the cover from the cask, the odor that came from it was sickening, but thoroughly cod-liverish. As I had in years gone by swallowed several quarts of oil, I declined his invitation to take a swallow from that fearful cask.

As Provincetown was the spot where the Pilgrims first landed, and where they fell on their knees and thanked God for having safely crossed the ocean, we felt in duty bound to walk about and see if anything but sand and sea were to be seen. It was also in Provincetown harbor that the Pilgrims in the cabin of the Mayflower signed the compact for government by which they were to be guided in the New World. It was a co-operative company, and for some time everything was in common, and even when

they reached the comfortable possession of a cow, the good beast was owned by a dozen different families. What ingenuity must have been required to make enough of the milk to go around. We climbed a high hill on which the Town Hall once stood—afterwards burned—and whence we could see the sea on both sides of "Province Land," where people can stake off and take up the land (sand) without cost, then sell it (if they can!) and give a quit-claim deed. As the land is constantly shifting, it would seem that land tenure there must be a very uncertain thing. As everywhere in New England, the door-yards were bright with flowers. At three in the afternoon we steamed away for Plymouth, and had a cloudy, squally voyage, and the ill-luck to run on a sand-bar in the harbor, as the tide was low. The sailors beguiled the time we had to await the tide, by singing Salvation Army hymns, and discussing Captain Cora, the leader of the "Army" that for several months had been holding daily meetings in Plymouth with gratifying success. We became in turn much interested in Captain Cora, who was an educated New England girl, and who had become, a year before, a convert to the Salvation movement. She was uncommonly pretty, very fair, a fine pianist, a beautiful singer and devout as a saint. And that her beauty and accomplishments had inspired a religious fervor in the hearts of a great many people, was not to be wondered at.

Before leaving Plymouth, which is now a flourishing manufacturing town, we visited a tack factory, and left it feeling how wonderful is machinery, and the men who invent and operate the machines. The superintendent told us how many paper boxes—the ordinary 10-cent tack box—one of the girls in the establishment would fold in a day. I did not make a note of it at the time, but if my memory serves me right, it was 2,800. The papers are cut by machinery. Women always excel in work in which deftness of manipulation counts; but whatever establishments I have visited, and have made inquiry as to the pay of the women employed, I always hear the same story of higher wages for men and lower for women.

Our month in Plymouth had been in every way so delightful, both on land and water, that we were loath to leave, and eased our regret by dallying along the coast northward, stopping at Duxbury, Marshfield and Brant Rock. As Daniel Webster's home was at Marshfield, the country all about was redolent of his fame. An old farmer at Duxbury told us that he used often to see him fishing and shooting, a very good-hearted-looking man, but in such shabby old clothes that no one would have thought him worth a cent. He related an ancedote of the statesman, who was accosted by a couple of dudes (not knowing him) who hired him to carry them over a stream, which he did pick-a-back. Anaximander and the laddie went on a tramp to the Webster farm and to the graveyard where he lies buried. Adelaide Phillips, the singer, is buried also in the same yard, and while her grave had at that time no headstone, it was covered with flowers, marks of the devotion of her brother, who is a florist. The soil about "Mashfield" (local) and Duxbury is very poor in appearance and D. W. probably never made much money by farming. Some apple trees in Duxbury, however, were so loaded with fruit that we asked an old man who owned them, how he managed to bring about such a result? He said that when he planted the trees they began early to die at the ends of the limbs, and some one told him to dig around the roots and put salt in the trench! This he did, and with satisfactory results. Another man said that the best thing for apple trees was to turn in "critters" (hogs!) and hens, the former to root and the latter to eat up the insects, worms, etc.

From Marshfield we rode in a four-horse barge for three miles in a nearly straight line toward the sea, to Brant Rock. The rock from which this watering place takes its name, is of enormous size, and at high tide is an island. The sea air here is of peculiar quality, and very beneficial to many persons. Shooting coots and gathering Irish moss form the chief visible occupations. What impressed us most at Brant Rock was the honesty of the landlord of the C. hotel An overcharge was made in our bill, which some days later was discovered by the landlord, who forwarded to Anaximander the over-paid money. Honesty, surely, was not dead in the land.

"A MERRY HEART DOETH GOOD LIKE A MEDICINE."

WE hear so much now-a-days about bad habits; why not say something about good ones? And the first to be thought of is the blessed habit of cheerfulness. I call it a habit, it must needs be one; for it is easy to be cheerful when you are happy, but it takes a deep-seated determination to appear so when you are miserable. Many would say cheerfulness is closely allied to hopefulness, but there is a difference, for one can be cheerful when he or she hopes for nothing.

Melancholia is one of the most terrible words in the English language, indicating a condition the most to be dreaded. A direful contagion is mild in comparison with it. It is a scourge to the sufferer and a continual trial to all who come in contact with him. I firmly believe that, in nine cases out of 10, this "disease of the mind" is only an aggravated form of selfishness, for we know that by thinking and planning for the comfort and happiness of others, we can forget ourselves and our own troubles. What this old world needs is a people of perpetual cheerfulness. We have had a "reign of terror" in the shape of melancholy and downheartedness long enough; let us be thankful for the blessings we have; if these seem too small to count, let's try to make other people happy. What if your life is full of sorrow and bitterness and care and grief, it is the life of many others as well, "There are broken hearts in the world to-day, though smiling faces hide them." God bless those smiling faces! for it is a grand thing to triumph over the sorrows of self and shine forth in all the glorious raiment of cheerfulness. You don't know how much good a cheerful face may do; you don't know how far it may reach. One person may not be able to make a dozen people happy, but one person *can* make a dozen miserable; it is a part of this life that the power of evil is stronger than that of good.

"Go bury thy sorrow, the world hath its share." It makes no difference if the world knows nothing of the anguish that tugs at your heart-strings, your sorrows are too sacred to be bandied about from mouth to mouth. Take the staff that has been the stay of many a way-worn traveler; "let not your heart be troubled,' it is only for a little while and if we can make a beam of sunshine in the hearts of a few or many it is accomplishing much; besides, just as you lighten the burdens of others, just so much you lift from your own heavy load.

Mothers, if your children have no other education, you can at least teach them to be cheerful by example, it will be of more benefit to them than the finest education without it. Don't let them find fault and complain; teach them from the beginning the best of all good habits—cheerfulness.

H. BELLE CHAPMAN.

HAPPY HOMES.

THE study of the home-life of my friends and acquaintances for many years past, has convinced me that there are comparatively few happy households. This fact was most unpleasantly forced upon me the other evening where a little gathering composed of the representatives of ten homes had met together at the house of my friend B. and his charming wife. They were all literary people, which made the matter still more serious and lamentable, for if people of intellect do not know how to choose their life partners wisely, what is to become of the vast unthinking multitude, who mate as lightly as the birds.

It was only necessary to watch our host and hostess for half an hour, to know that here at least was one happy home. The perfect confidence, which it was easy to see existed between them; B's knightly courtesy when he addressed his wife, and the love which illumined Mrs. B's somewhat plain face when she turned toward her husband, made a picture worth studying. Then in my spinster-like fashion, I fell to thinking of how few homes were to be found like this ideal home. I had known all of those present for many years. There was C., handsome, brilliant, and refined, who 10 years ago married a dashing society girl—well, they are still sheltered by the same roof, but only Heaven knows what that home must be since they have both been refused the divorce for which both have sued.

Half an hour in the society of D. and his pretty, querulous, contradictory little wife is sufficient to show you the "true inwardness" of their lives. The bearing of E. and his wife toward each other shows that they have reached the stage of calm indifference, an indifference so veiled by a kind of high-bred dignity that only an intimate friend, or a very close observer would guess that, too proud to bear the slightest breath of slander, they are simply waiting until death does them part.

It does not require a very keen critic to tell that scholarly, gentle F. could know no true union with the silly, frivolous, chattering and over-dressed doll at his side, while G. and H. were unaccompanied by their wives, who, as it is very well known, are never seen in company with their husbands. The remaining three couples I knew to be well mated according to the world's standard, but of the 10 homes here represented, I said to myself, there is only one ideally "happy home." Truly, mused I, it seems as if some one else but God has a hand in setting "the solitary in families."

"I rather think you and I have the best of it, do you not?" said a voice at my side, which I knew to be that of the cynical and sarcastic L. the most confirmed bachelor in my circle of acquaintances.

"No," replied I, as my fingers unconsciously grasped the worn circlet of gold on my left hand, while with an odd choking in my throat I thought of that lonely grave somewhere on Confederate soil. "No, our host and hostess have the best of it." And then through the flashes of keen wit, and biting sarcasm with which L. regaled the company for the next half hour, I sat and vaguely wondered at the why and wherefore of it all.

True, I have had no opportunity to practice what I preach or to avoid the pitfalls into which I see others fall, but I find women too narrow, tactless, selfish and uncompanionable, and men too indifferent, thoughtless and uncourteous Sometimes I am inclined to think that no man or woman who is not a good, true Christian, is to be depended on to make a good husband or wife. Lovely impulses are good, but principle, and above all Christian principle is better. Marriage is very much like the Kingdom of God in this respect; seek your own happiness and you are likely to lose it, seek that of another, and you are almost sure to find your own.

All the syndicate writers of the day have told wives how to win and keep husbands, and have made plain to husbands the way in which they should walk; so of my own weak wisdom I will only endeavor to impress upon both husbands and wives this one bit of advice. Be as free to speak words of praise as you are to reprove. Better still, be so "slow to anger" that you never speak words of reproach.

A. SPINSTER.

LITTLE THINGS.

IT is "little things" that consume the time as well as the money of the housekeeper. "I am so tired!" sighed a lady the other day, "and yet I have done nothing to-day except pick up. It is Monday, and it seems as if every article of clothing and furniture were out of its place this morning. Jennie's hat and gloves were on the piano, and her best cloak on the back of the sofa. Fred's room looked as if he had been holding high carnival in it. Every piece of linen had been removed from his drawers, I suppose in a search for some particular article, while coats, trousers, and neckties made his apartment look like the establishment of a second-hand clothes dealer. Really one of my greatest troubles is this continual 'picking up.'"

"Tell it not in Gath," because I would not have my immethodical friend think that I had criticised her unkindly, but if she begun right, she would have saved herself many precious hours. It is quite possible, without being too strict, to teach a child order and neatness, and nothing promotes a love of these virtues so much as having a room that he can call his own.

Whether boys or girls, they should be taught to take care of their own clothes, and more for their sakes than her own, a mother should see to it that her entire Monday is not spent in picking up after careless members of the family. Thoughtlessness is not always selfishness, and the girl who throws work of this kind upon the unresisting shoulders of her mother, is often not so much to blame as the mother herself who has failed to train her in the way she should go.

M. B.

GOLDEN GRAINS.

BEECHERISMS.

ENTHUSIASM is good to raise men upon, but discipline is the only thing to fight on.....

MEN are responsible for sin, but not for infirmity. Infirmities are the mistakes which men make on their way to knowledge.....

HUMILITY in furs is better than pride in a cowl.....

HARDENING of the heart is very apt to end in softening of the brain .....

MANY speak the truth when they say that they despise riches and preferment; but they mean the riches and preferment possessed by other men.....

THERE is need in this world of every help. Simplicity, silence, and a soul open to the invisible light, are chiefest means of grace.

THERE are sweet surprises awaiting many an humble soul fighting against odds in the battle of a seemingly commonplace life.....

NO metaphysician ever felt the deficiency of language so much as the grateful.....

WHERE there is room in the heart there is always room in the house.....

INFINITE toil would not enable you to sweep away a mist; but, by ascending a little, you may look over it altogether. So it is with our moral improvement; we wrestle fiercely with a vicious habit, which could have no hold upon us if we ascended into a higher moral atmosphere ....

I NEVER saw anybody so poor that he did not bid fair to live till he died; and dying is the best part of life to one who knows how to live worthily.....

A NEW life is the best and the most sublime penitence... .....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

TRIFLES.

"ONLY a trifle as light on the wing,
As the veriest insect devoid of sting,
Only a trifle, ah! mortals, beware,
This trifle may build you a mountain of care!"

WE count trifles, as little things, and very often pass them by without a thought, but life is made up of trifles. Sometimes a word, a look, or a gesture, small in itself, may cause us to do or say a thing that will affect all our future lives. When we think of this, and of how the trifling things we do or say may affect others, how careful we should be! This is especially true where children are concerned. The little ones look up to mamma and papa as the embodiments of wisdom. They drink in what they hear and as soon as they begin to talk, lisp the words of their elders. How if these words are not what we would care to hear from baby lips? If we hear something that is not right, said by baby, and know that we ourselves said the very same thing not long before can we punish the little one for it? No, for if we do, we are cruel. We must be careful.

Some years ago the following instance came to my notice. A little girl was coming from school when she met her aunt. The aunt gave a message to the child and told her to be sure to tell her father exactly what she had been told. The child did so, and the father was very angry at the message and expressed himself very forcibly. Some days later as the child was on her way from school again she met the same aunt in company with several very stylish ladies. "Well, dear," said the aunt, "did you deliver my message to your father?"

"Yes, ma'am," said the little thing brightly.

"What did he say?" asked the aunt.

"That you must be a confounded fool," said the little one, never dreaming that she was doing wrong.

The aunt was furious—the ladies laughed, and the child retired in confusion. The next day the aunt called on the child's father and there was a regular row.

After she had gone the father insisted on having the child punished, but the mother declared that she had only told the truth, and if punished for it, (even though the truth had been unpleasant,) it would teach the little thing to lie, or be deceitful. The disagreeable feelings caused by this one trifling instance lasted for years.

The old saying "Little pitcher's have big ears" is very true. Then, let us give the "little pitchers" plenty for their ears. Stories, tales, anecdotes, etc., told in the presence of children will often be remembered by them far better than lessons studied by rote. They may only be trifling little things, but, nine times out of 10, when people are grown they can go back and repeat some of the tales they heard papa or mamma tell when they were tiny tots, trifling though they were.

Some days ago I saw the sweetest little black-eyed baby one could imagine. I smiled

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria
When she became Miss, she clung to Castoria
When she had Children, she gave them Castoria

at him, for I have a great fondness for children. He returned the smile in the friendliest manner possible. Then I said, "Will you shake hands?" He did so. Finally I said, "Oh! but you're a sweet little thing!"—Imagine my surprise when he responded "You lie." The dear little thing hadn't the faintest idea what that meant, and his poor mother was covered with confusion, but he had heard it. Children are like looking glasses. They reflect what passes before them; unpleasant as well as pleasant pictures. Again I say, *be careful*, especially in regard to trifles, or what to us may seem such.

Never, busy mother, be too busy to give your child a smile, or a pleasant word. It may do far more good than you can imagine, and it is such a trifling thing to do! I remember that, when a child, I worshipped a lady and would have done anything for her, because once she patted my head, smiled, and called me "dear." I thought her the most lovely of all women, and I wouldn't for the world have done anything that she would not like. Since I have grown up I look back in wonder at my adoration of this lady, for she is homely and plain in every way—but my love for her and my desire for her approval kept me from doing many a naughty thing.

"Great things from small beginnings rise
Sands make the mountains, and trifles, life."

DORA HARVEY VROOMAN.

AROUND THE HOUSE.

ANNIE L. JACK.

THE birds are so wild with the excitement of the beauty around them that their music is incessant, and city guests complain of the early awaking. Their music seems more excellent than ever this spring, and I say that it is because the sportsman of the family has taken a farm of his own, and with it his gun. He is a Bohemian student of nature, but has not yet learned Emerson's test of forbearance

"Hast thou named all the birds without a gun?
Found the wood rose and left it on the stalk?"

The robins are vagrants of the forest and seem happy everywhere, in a tree or raspberry bush, where they build so as to be convenient to the choicest fruit. We try to protect the birds, but they have many enemies among their own kind, and blackbirds and sparrows rob the nests of other birds and drive them away.

The hyacinths and many other plants have succumbed to the unusual winter, for we had a wet autumn, with alternate freezings and thawings without snow in the early part of the winter, and the effects can now be seen. Poor pear trees! Planted with such hopes, they have dwindled away, and this year suffered worse than for many seasons.

Our favorite, the Golden Queen raspberry, and its friend, the Cuthbert, have been winter-killed, and show dead tops with a carpet of green suckers on the ground. It is the same in the neighborhood of Montreal where fruit-growers have plowed up their strawberry land and planted corn, or some other green crop.

I talked of entering the lists in the Potato Contest, but concluded it was not for me, who have plenty of out-of-door exercise, and almost live in the garden, but for those who do not know or enjoy the delights of planting and watching, caring for and harvesting a crop. It is a noble undertaking, and will lead to many important results, besides bringing roses to pale cheeks. I am glad so many have shown their interest, and bye and bye they may be able to say, quoting again from Emerson.

"All my hurts my garden spade can heal."

In the house we are busy as usual, and the advanced season makes work pressing. Our hard-wood floors make house-cleaning much lighter work than where there are many carpets, but the oiling and shellac polishing that have to be done after the cleaning is over, are an arduous task. But, then, the work is so very beautiful when finished, that it is worth the trouble.

I asked one of the girls what she was doing with a piece of blue-beech wood chopped fine at the end after the fashion of a paint-brush. She said it was a "pot scrubber" made to go into the corners. Ours was of home manufacture, but such things can be bought I believe. All these little labor-saving contrivances are worth knowing.

The unexpected heat has brought out the blossoms of fruit trees at least two weeks too early for this climate, and we are fearing a cold spell may yet come. Asparagus is a week earlier than usual, and we enjoy it plentifully. It is a vegetable that should be on every farmer's table, being equal to eggs in nutritive properties, and containing the same elements. Half an ounce of seed will furnish more plants than a small garden needs, but it is a paying crop to grow and needs no replanting. The Conover's Colossal is really as good as any variety.

TO WASH AND IRON COLORED GOODS.

ADD one pint of salt and two handfuls of meal to three gallons of water. Stir until the salt is dissolved, put in the goods, wet evenly and let stand one-half hour. Then wash, dip into scalding water, rinse in two waters, blue, hang up wrong side out and I think you will find the colors clear and bright. When ready to iron, sprinkle lightly and iron with a very hot iron on the wrong side. Never expose colors to the sunlight during the washing process as it will dim them.

MRS. W. S. WAITE.

THE best preventive of the fading of cotton goods that I have found is *potato water*. Peel and grate Irish potatoes in soft water enough to wash the goods—say a dozen medium-sized potatoes to two buckets of water—warm and strain and if the goods are greasy use soap, if not, none is needed. Starch and iron on the wrong side. EDNA M. HASKELL.

BEFORE the goods are wet dissolve one handful of fine salt in a pail of water, in which soak the goods for one hour or until they are well soaked through. Then wash in the usual manner, rinse in water that has plenty of bluing. If starch is required that also should have bluing in it. All colored goods should be dried in the shade and ironed on the wrong side. MRS. G. S. BULLIS.

I ALWAYS take clean hot suds and wash as quickly as possible; then scald them a few minutes (not boil). When I think they have scalded sufficiently, I take them from the boiler and rub them lightly with the washboard, to get the suds all out; then I rinse well and dry. If any article requires careful treatment to keep it from fading, or if I want to keep the colors from mingling, I rinse in borax, alum or salt water. I think a great deal of the faded appearance of calicoes is due to careless sudsing and rinsing. When the suds are not well washed out they not only rot the goods but give them a dull, faded appearance, and in ironing most colored goods look best if ironed on the wrong side, especially dark ones. MRS. ELLA KINNE.

ODDS AND ENDS.

NOW is the time to put away winter dresses. If the children's flannel or woolen dresses are spotted and greasy, wash them carefully before putting them away. The best way to do this is to add borax to the water in which you wash them. Dissolve a large table-spoonful of borax in a pint of *boiling* water; put about a third of it in the first suds in which the garment is to be washed. (Never rub soap directly on woolen goods). Another third in the next water, and the remainder in the rinsing water. Shake the garments thoroughly before hanging up to dry.

* * *

THE WOMAN'S WORLD gives the following directions for cleaning black silk, and, after trying it, I can heartily recommend it. Thinking that some of the RURAL readers may find it useful I give it to them.

Take ammonia and alcohol—one part of ammonia to three of alcohol—add half as much hot water, and laying the silk over an old sheet folded in four thicknesses, rub well with a black rag or a sponge dipped in the mixture. Have ready some old broom handles, curtain poles, or other smooth, round sticks, and wrap the silk on them as tightly and smoothly as possible. Let it dry in this position. It will need no ironing.

* * *

As this is house-cleaning time anything relative to such work is in season. After you have beaten the dust out of your carpets you can brighten them up wonderfully by sprinkling corn meal mixed with salt over them, then sweeping thoroughly.

Wash your mattings with salt and water, but not brine. Soap turns them yellow, so should not be used. D. H. V.

EVERYTHING IN ITS PLACE.

I THOUGHT the introduction of "The Chain as a Promoter of Domestic Happiness" an excellent idea. I would suggest that brushes and combs be kept in sleeping rooms and in an outer room instead of in the kitchen where cooking is being attended to. A handy way to fix a stove iron is to put a wire around the stove-pipe and fasten a hook on it, so that the stove iron may hang up. If there is a bracket on the stove, a hook can be fastened so that a large cup or dipper can be hung upon it; then when the men come in to wash the first words won't be "Where is the dipper?" Another handy article is the kitchen bangle board. Take a thin piece of board about 16 inches long and seven wide and if you haven't anything better than a piece of black cloth, tack that smoothly over the board. Take a piece of red braid 2½ inches long and tack each end of the braid to the board; this makes a place for the shears. Then below put in a number of brass-headed tacks to hang button-hooks on. Draw a brass chain quite tightly across the board and drive a tack in at each end. This makes a good place for pencils and pen-holders and all such things. Then there is no excuse for not keeping things picked up.

MARY BENNETT.

TO DO UP SHIRTS AND COLLARS.

AFTER shirts and collars are nicely washed and rinsed in two waters—one clear and the last with a little bluing in it—I wring them out in boiled starch made by dissolving the amount of starch required in a little cold water, then pouring over it boiling water and stirring it at the same time, until it is of the thickness required and looks cooked. Hang out to dry and when ready to iron, starch again in cold starch made by adding cold water enough at first to dissolve the starch. I then add a small pinch of salt to keep the irons from sticking, and then pour on cold water enough for the amount required. Wring out collars first and roll up in a dry towel; then the shirts, folding the dry part of the shirt over the starched portion and roll up snug. Iron in one or two hours. Rub the articles with a clean cloth to get off all loose starch, iron quickly, finishing up collars and cuffs by shaping them round and pinning one and putting the rest inside. Put in a warm place to get dry and stiff. I use a bosom board for the shirts. I am careful to starch and straighten the bosom and to rub well with a cloth before commencing to iron. When ironed hang in a warm place to dry.

MRS. J. R. H.

COFFEE OR SPICE CAKE.

I WOULD like the good sisters who read the RURAL, to try this recipe, which I have tried so many times and always found good. One and a half cup of sugar, one cup of good coffee, one-half cup of butter, two eggs, one good tea-spoonful each of cinnamon and cloves, with a little nutmeg, two full tea-spoonfuls of baking powder mixed thoroughly with two and two-thirds cups of flour. Cream butter and sugar then add the other ingredients, except the eggs, which should be well beaten and added last. Bake in a moderate oven. MRS. S. C. TAYLOR.

Miscellaneous Advertising.

The Aged

Who need help in their many infirmities, especially those afflicted with rheumatism, find great relief in

AYER'S Sarsaparilla.

"One year ago I was taken ill with inflammatory rheumatism, being confined to my house six months. I came out of the sickness very much debilitated, with no appetite, and my system disordered in every way. I commenced using Ayer's Sarsaparilla and began to improve at once, gaining in strength and soon recovering my usual health. I cannot say too much in praise of this well-known medicine."—Mrs. L. A. Stark, Nashua, N. H.

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Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

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PEERLESS DYES Are the BEST. SOLD BY DRUGGISTS.

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IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the buttermilk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere.

More of it Used than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & CO., Burlington, Vt.

ICE CREAM AT HOME!

Made cheaply and quickly by using a Triple Motion

WHITE MOUNTAIN FREEZER.

Will freeze in half the time of any other Freezer and produce cream of the finest quality. Inquire for the "White Mountain" of your local dealer in house-furnishing goods.

"Frozen Dainties,"

A book of Choice Receipts for Ice Cream, Sherbet, Water Ices, etc., packed with each Freezer this season, or will be mailed upon receipt of ten cents in stamps.

White Mountain Freezer Co., 134 Hollis St., Nashua, N. H.

GOLD MEDAL, PARIS, 1878.

W. BAKER & CO.'S Breakfast Cocoa

Is absolutely pure and it is soluble.

No Chemicals

are used in its preparation. It has *more than three times the strength* of Cocoa mixed with Starch, Arrowroot or Sugar, and is therefore far more economical, *costing less than one cent a cup.* It is delicious, nourishing, strengthening, EASILY DIGESTED, and admirably adapted for invalids as well as persons in health.

Sold by Grocers everywhere.

W. BAKER & CO., Dorchester, Mass.

THE BEST SEASON IS NOW ON FOR

AGENTS NEW AND OLD

and **Farmers** to make **$20 to $50 per week**, during spare time, selling **New Patent Fire Proof Safes**; size 28x18x18; weight 500 lbs.; retail price **$35**; others in proportion. Highest award, Centennial Exposition, 1888. Rare chance; permanent business. Our prices the lowest. We are not in the Safe Pool. Exclusive territory given. Catalogue and full particulars free. Address

ALPINE SAFE CO. CINCINNATI, O.

PIANOS $150 to $1500 UNIVERSITY ORGANS $35 to $500

Guaranteed 6 years. They Lead the World We sell direct to families, and send for trial in your own home before you buy. **Catalogue Free.** Estab. 1859. Incor. 1877.

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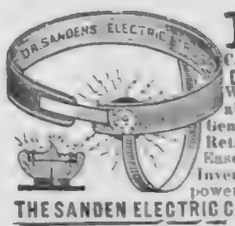

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Can be CURED by **DR. SANDEN'S Electric TRUSS** Warranted BEST Truss made, to CURE all Curable cases or Refund Money. Only Genuine Electric Truss in World. Perfect Retainer, Gives instant relief, speedy cure Ease and Comfort day and night. This New Invention combines science, durability and power. Price $3 & $5. Illus. pamphlet free.

THE SANDEN ELECTRIC CO. Broadway & 12th St. NEW YORK

PLAYS Dialogues, Tableaux, Speakers, for School, Club & Parlor. Best out. Catalogue free. T. S. DENISON, Chicago, Ill.

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Send to **A. W. GUMP & CO. Dayton, O.,** for prices. Over 400 second-hand and shop worn Cycles. Bicycles, Guns and Typewriters taken in exchange. Nickeling and repairing

A SOLID STEEL FENCE!

15 Cts. per Foot, material 3 feet wide.

Adapted for **Residences, Churches, Cemeteries, Farms, Gardens, &c.**

All needing Fences, Gates, Arbors, Window Guards, Trellises, etc., write for our illus. price list, mailed free.

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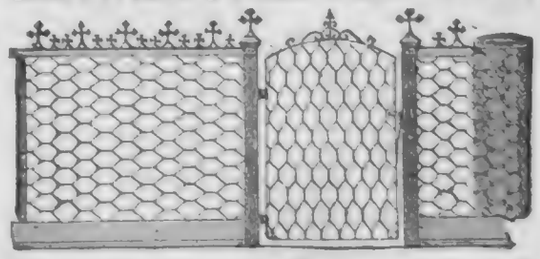

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Ask Hardware Dealers, or address, mentioning this paper, SEDGWICK BROS. Richmond, Ind.

News of the Week.

HOME NEWS.

SATURDAY, May 25, 1889.

Two weeks or more ago Dr. P. H. Cronin, a reputable Irish-American, who was connected with several Irish pseudo-patriotic Irish secret societies, disappeared from Chicago. He had been outspoken in charging that a large proportion of the funds collected in this country for the benefit of the National League and other Irish interests had been misappropriated by the officials through whose hands they passed here. Hence he had incurred the bitter enmity of many of the leaders and he had frequently said that he expected to be assassinated. Shortly afterwards, a trunk stained with blood and clotted hair was found in a remote vacant lot and it was asserted that it had contained Cronin's murdered body. Diligent search, however, failed to find the latter. Rumors were industriously spread that he had fled to escape punishment or prosecution for crime; a number of anonymous assertions were published that he had been seen in several places in Canada and in this country, and even alleged interviews with him were telegraphed to all parts of the country and published in the papers as genuine. Wednesday evening his dead body was found in a sewer in one of the outlying streets of Chicago, where it had evidently been for a fortnight or so. It was identified by upwards of 40 intimate acquaintances, and bore numerous cuts in the head and other plain indications that the man had been murdered. Intense excitment; but no arrests yet.....

Last Thursday Mr. August Belmont's crack two-year-old colt St. Carlo in one minute two and a half seconds won $20,000 by outrunning his 12 competitors over the course of five furlongs in the race for the great American Stake—the greatest monetary prize of the spring meetings—at Gravesend, L. I. near this city.. .....At a church festival at South Glastonbury, Conn., the other day 111 persons who partook of vanilla-flavored ice-cream became sick, and at last accounts some were still in danger of death. Some attribute the mishap to poisoning by verdigris from the corrosion of the copper vessel containing the cream; others think the vanilla seasoning was poisonous.....In Philadelphia, Thursday, Henry Specht obtained a verdict of $20,000 in a damage suit against the Pennsylvania railroad. In October, 1886, a passing train struck his wagon, killing his child and badly injuring himself.....The Navy Department calls for proposals for the construction of three new cruisers of 2,000 tons burthen to cost $750,000 each. With the vessels lately built, those on the stocks and those already contracted and to be contracted for, we shall soon have at least a fine nucleus of a navy..... .....The pension appropriation act for the current fiscal year appropriated $80,400,000 for the payment of pensions, and $8,000,000 were also appropriated for the same purpose to meet a threatened deficiency, making a total appropriation of $88,400,000. This whole amount will be necessary to meet the demands of pensioners and it may be that there will be a deficiency, but it is said at the Pension Office that there is no truth in the statement that $105,000,000 will be expended for pensions during the fiscal year..... ....Twenty-two State legislatures have discussed, and 10 States have adopted, the Australian ballot system. The 10 are Massachusetts, Indiana, Rhode Island, Missouri, Tennessee, Minnesota, Wisconsin, Montana, Connecticut and Illinois.....For want of a market farmers in Oregon are literally throwing potatoes away. For example, Mr. Tyszkiewicz, of Bachelor Island, lately dumped 350 casks of fine Burbanks into the Columbia river.....Postmaster-General Wanamaker and Attorney-General Miller are considering the question of excluding from the mails advertising matter of the Louisiana lottery swindle.... The trial of the electric sugar frauds has just begun in this city..... It has been estimated by the Railroad Commissioners of Connecticut that over 20 millions of dollars would be required to remove the 1,200 grade crossings in that State. Nevertheless, the grade crossings ought to go..... Monday afternoon a fierce hurricane ravaged a swath half a mile broad through one of the richest farming sections of Pennsylvania, north of Scranton, sweeping away or injuring dwelling-houses, farms, orchard and other trees, crops, etc., and hurting several people, but none fatally.....The new steamer of the Hamburg packet line, the Augusta Victoria, made the trip from Hamburg to New York, 3,048 miles, in eight days one hour, thus beating the record.....The sheriff of St. Francis county, the city marshall of Forest City and another citizen were killed in an Arkansas election riot the other day..... Allen Thorndike Rice left over $5,000,000 and no will.....A second autopsy held on the body of mind-reader Bishop failed to determine whether the surgeons in holding a post-mortem were operating on a dead or living body. They broke the law, however, in either case by carving the poor fellow up without the consent of the coroner or relatives, and will be prosecuted..... Mrs. Folsom, the mother of Mrs. Grover Cleveland, was married, Monday, at Jackson, Michigan, to Henry E. Perrine, a merchant of Buffalo, N. Y. .....The steamer Rockton, with 20 officers and 450 men from the shipwrecked crews of the Trenton and Vandalia, has reached San Francisco from Samoa ....Wednesday in the St. Lawrence, near Montreal, the ocean steamer Polynesian ran into and sank the Cynthia, another ocean steamer. Eight on the latter were drowned. .....The Imperial government will begin work on the Canadian Pacific defensive works this summer, those about Esquimault receiving first and most attention..... Sixteen States already provide for the decent burial of indigent and friendless veterans, and Massachusetts proposes to join the honorable band at cost of $7,000 to $10,000 a year. Hitherto the Grand Army posts have done this duty..... Missouri, the home of the Cotton Bagging syndicate, the White Lead trust and other monopolistic organizations, has just passed an anti trust law of much severity. Other States, however, have done the same, still trusts flourish rankly, even within their boundaries.....Mrs. Harrison is preparing to move to the Presidential cottage at Deer Park, to which the President will run out on Saturday and whenever he can spare time on other days.....Ex-Secretary Bayard is soon to marry Miss Clymer, the 39-year-old daughter of the late Dr. George Clymer of the navy.....Secretary Blaine has appointed Louis Dent of Washington to be his private secretary in place of Thomas H. Sherman, the new consul to Liverpool. Mr. Dent is a nephew of Mrs. General Grant, and assisted Mr. Blaine in his preparation of his "20 Years in Congress." Mr. Sherman will sail for Liverpool with his family June 12 ..... The Essex club, of which Dr. Loring is president, dined him at Boston Saturday, on the eve of his departure for Portugal as U. S. Minister... .....Considerable dissatisfaction is expressed at an alleged tendency to nepotism on the part of the President. The present list of the appointments of his own people to office includes a brother, a brother-in-law, a father-in-law of a son, the brother of a son-in-law and a cousin-in law..... ..Montana's convention for framing a constitution for the new State, is Democratic by from three to five majority—38 Democrat, 35 Republican, one Labor and one Independent members..... There will probably be a Republican majority of 12 in the Washington constitutional convention, though farmers and workingmen are generally fusing with the Democrats.....The new Inman line steamer, the City of Paris, arrived at Queenstown at 2 o'clock Wednesday morning, having made the fastest eastward passage on record. Her time between Sandy Hook and Fastnet light was five days, 22 hours, and 10 minutes, and six days, 29 minutes to Roche's Point—the point to be passed in counting time .....California now has an anti-dressed meat law..... The lower House of the Michigan legislature has voted in favor of woman suffrage in school elections by a majority of 58 to 34. The Senate has still to pass on the measure.....Judge Childs, of Buffalo, New York, has just condemned William Zemmler, the crafty murderer of Tillie Ziegler, his mistress, to death by electricity—the first legal victim of that form of execution in any part of the world. .....Jerry Rusk is looming up pretty strongly as a Presidential possibility —soon it may be a probability.. ..... Much excitement among the 2,000 English-speaking fishermen of St. George's Bay, Newfoundland, at the action of the captain of the English man-of-war Lilly, who has issued a proclamation that Frenchmen alone have a right to fish there. The fishermen insist that they have a concurrent right to do so, and make fearful threats if an attempt is made to prevent them.....It is announced that an English war vessel will protect Canadian craft catching seals in Behring Sea which this country claims as its exclusive property, forbidding the catching of seals there by any vessels except those licensed to do so, and then only at a certain season..... .....Hail storms have visited Iowa and Illinois and a snow storm has surprised a large part of Virginia during the week, while many parts of Wisconsin have suffered from severe wind and rain storms.....It is reported that an English syndicate want to secure control of the large flouring industries of the United States just as another is now buying up the breweries. It is now negotiating for the great Pillsbury Mills at Minneapolis. It also proposes to purchase a number of elevators.....A new scheme of transporting packages is coming into favor. The inventor, John G. Williams, is a resident of this city. His machine consists of a magnetic car, hanging from a single rail, where it follows a streak of electricity. With one horse power it is said that one ton can be thus transported 1,440 miles a day at a cost of 30 cents. This, in mail matter, would represent some 2,880,000 letters and by this system packages of mail could be sent off every five minutes if necessary, thus preventing large accumulations. The single track is to be carried on tripods some distance above the ground and the car will pass through coils of insulated wire at intervals. Four miles a minute would be the average speed.....

Listen Now.

It is on the principle we are eventually induced to accept an oft-repeated song that we present to your attention these modest little bulletins of Compound Oxygen.

DECATUR, GA., July 29, 1888.
"My son is now in good health. He has had no attack of Bronchitis since taking Compound Oxygen." MRS. A. A. CONN.

MAPLE VALLEY, Wis, May 14, 1887.
"Compound Oxygen has saved me again with God's blessing and I feel very thankful to Him, and to you, of course."
MRS. G. M. JUDD.

GREENFIELD, OHIO, April 23, 1887.
"My complicated disease is evidently giving way to Compound Oxygen. Am better in every respect" MRS. B. T. GRISWOLD.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; a chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

AGRICULTURAL NEWS.

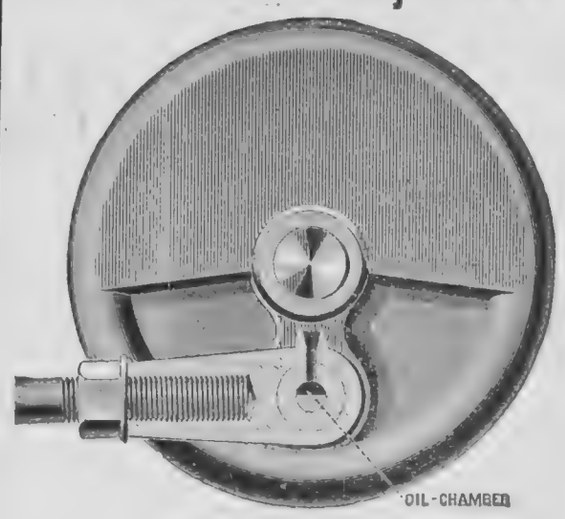
SATURDAY, May 25, 1889.

RECENTLY a car-load of cattle was received at Buffalo from the West, the most of which were suffering from a scrofulous disease known as lump-jaw. They were smuggled through the stock-yards early in the morning, switched upon a private track belonging to a large packing firm, and but for their accidental discovery by a passer-by, would in all probability have been slaughtered and packed as "Extra Family Mess." The animals were in a terrible condition. Their heads were covered with tumors, one of which after being cut off weighed 11 pounds. A city physician declared that there was enough poison in the cattle to poison every person in the State. In commenting upon this circumstance, one journal uses it as an argument against State inspection of cattle, claiming that the system of inspection in vogue at Chicago and other large packing centers prevents the receiving of such cattle, and that they are therefore shipped to smaller Eastern markets where they are disposed of without difficulty. Another journal uses it as an argument in favor of State, or, still better, national inspection, so that all great slaughtering points shall be under strict governmental control. Meanwhile the dear people will take their lives in their hands, and continue to eat Western beef..... There is to be a hay press contest at the Mississippi Agricultural College June 18 and 19. Director Tracy has invited all the hay press manufacturers to enter the contest. The hay business of Mississippi is getting to be an important interest. This contest will show all the presses working side by side.....Sisal was introduced into the Bahama Islands 25 years ago; the inhabitants considered it a nuisance, and used every means in their power to extirpate it. A radical change of opinion has been brought about by the present governor who is very sanguine of the success of its cultivation.....The Secretary of Agriculture recently made a suggestion to the Secretary of the Treasury that imported crude potash salts of the higher grades, as, for instance, the almost pure salts of potash, which is a form particularly valuable for fertilizing purposes, be admitted to free entry under the provision of the free list for "Guano manures and all substances expressly used for manure." Secretary Windom has informed him in reply that his suggestion cannot be carried into effect under the existing statutes in view of the express provision of the tariff act prescribing a duty of 20 per cent. ad valorem for crude potash and sulphate of potash without regard to the uses for which they are intended.. Prof. Wm. Brown, late of the Ontario Agricultural College, has gone to Australia to take charge of the experiment farm at Doven, Victoria.....The dairy works of Cornish, Curtis & Green, of Fort Atkinson, Wis., were recently destroyed by fire..... ....The New York State Weather Bureau is being organized with headquarters at Cornell University.....The lake rate on corn from Chicago to Buffalo dropped from two cents to 1¾ cents..... Latest reports from Chicago say that the receipts of old corn from the interior are very heavy.....Texas reports the cotton prospect better than ever before at this time of the year.....In several Iowa counties a bounty of five cents each is paid for the scalps of gophers, and in one county alone, over 18,000 have been presented this spring..... The melon growing districts of the State of Missouri, are endeavoring to form an association for the purpose of facilitating the shipping and marketing of their watermelon crop, which aggregates annually about three thousand car-loads..... The Michigan State Agricultural Society will hold its fairs permanently at Lansing, hereafter. An effort was made to have it located at Grand Rapids, $50,000, and 80 acres of land being offered upon certain conditions, but the executive committee voted unanimously to locate at Lansing. The grounds of the Central Michigan Society having a half-mile frontage on the Grand Trunk Railroad, are to be conveyed to the State Society free of all encumbrances, the citizens of Lansing binding themselves to pay $11,000 incumbrance now on the grounds..... The stock stables of William Hamilton near Flint, Michigan, containing about 50 blooded horses, were struck by lightning recently, and destroyed. Most of the stock was saved, but two colts valued at $1,200 each, and the trotting stallion Tecumseh were killed..... The American Horse Show Association, of Chicago, is pushing affairs for its first annual exhibition, which will begin October 30. The two big prizes are the American Trotting Stallion Herd premium of $3 000, for stallion with best herd of five colts, and the American Trotting Stallion Prize of $1,000 for best stallion of any age..... The California orange crop for '88 and '89 is estimated to be between 750,000 and 765,000 boxes of 300 pounds each.....The orange crop of Florida is estimated at upwards of 3,000,000 bushels for the last year.....A corrugated steel hoop has been invented, which is said to be elastic and firm, hugging a package tightly. Four steel hoops will take the place of 10 wooden hoops on a flour barrel. They are cheaply produced by the aid of electricity, a hoop being welded in two seconds. .....Articles of incorporation were filed on Saturday with the Secretary of State for the American Meat Company, Chicago, for the packing, canning and preservation of meat; capital, $25,000,000; incorporators, John C. Richberg, C. E. Randall and G. F. Norden.....Press dispatches received by way of the City of Mexico report a boom prevailing in Yucatan, owing to the profitable results of hemp-raising in that peninsula. The high price of hemp is said to have proved immensely profitable to the local raisers. It costs 4½ cents per pound to raise the product, which sells for 12 cents in New York.....

Miscellaneous Advertising.

BEACHAM'S PILLS cure sick headache.

The Worcester Buckeye Mower



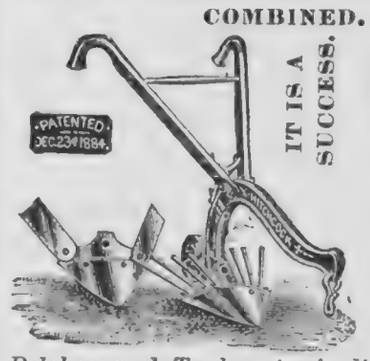
Ask our agents to show you the

SELF-OILING PITMAN

found only on the Worcester Buckeye. Be sure to see the new Big Six-Foot Mower. The lightest running machine ever put into grass. It has but two cog-wheels. Buy no machine until you examine the Worcester Buckeye.

THE RICHARDSON MANUF'G CO.,
Worcester, Mass.

THE HITCHCOCK POTATO DIGGER AND SHOVEL PLOW COMBINED.



EITHER A **SHOVEL PLOW** OR A **POTATO DIGGER,** BY CHANGING ONE BOLT.

Belcher and Taylor Agricultural Tool Co.,
Box 75, Chicopee Falls, Mass.

Ease, Comfort and Thrift!

THE BEST CATTLE FASTENING.

Smith's Self-Adjusting Swing Stanchion!

The only practical *SWING STANCHION* invented. Thousands in use. Illustrated Circular free.
F. G. PARSONS & CO., Addison, Steuben Co., N. Y

"What! Corns and Bunions all gone?"
"Yes, I am happy to say, through the merits of **Hanson's Magic Corn Salve,** I can now walk with ease."

HANSON'S MAGIC CORN SALVE.

If your druggist does not keep it, do not let him convince you that some imitation is just as good. Send by mail to **W. T. HANSON & CO., Schenectady, N. Y.** Every box is warranted to cure or money refunded.

PRICE 15 and 25 CENTS.

SPRAYING FRUIT TREES to destroy insects is recommended by all experienced Horticulturists and by this system only can perfect fruit be secured. For full directions and outfit for hand or horse power, address FIELD FORCE PUMP CO. Lockport, N. Y

FREE HOMES At the rate they have been going the Public Domains will all be gone in 5 years. Now is the time to secure an Rich Land as the Sun shines on at $1.25 per acre. What better could be left for Children? Where these lands are; how to get them, as well as for information about Homes or Employment in all States and Territories. Send 10 Cents and receive the beautiful Engravings, a Picturesque Panorama of America. Address THE WESTERN WORLD Chicago, Ill.

PILES. Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository. Sufferers will learn of a simple remedy FREE by addressing
TUTTLE & Co., 78 Nassau Street, New York City.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, May 25, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	8⅜	8⅝	.....
Strict Ordinary	8 13-16	9 1-16	.....
Good Ordinary	9¾	10	.....
Strict Good Ordinary	10 3-16	10 7-16	.....
Low Middling	10 11-16	10 15-16	.....
Strict Low Middling	10 15-16	11 3-16	.....
Middling	11⅛	11⅜	.....
Good Middling	11⅝	11⅞	.....
Strict Good Middling	11⅞	12⅛	.....
Middling Fair	12 5-16	12 9-16	.....
Fair	12 7-16	13 3-16	.....

STAINED.

Good Ordinary	8¼	Low Middling	9 13-16
Strict Good Ord	8⅞	Middling	10⅝

WOOL.—Spring Texas, 17@25c, and Fall do 15@22c; Fall California, 11@18c, and Spring do 14@24.

POULTRY—Chickens, spring, per lb, 22@27c. LIVE Fowls, near-by, per ℔, 10½@11c; fowls, Western, per ℔ 10@11c; roosters, per ℔, 7c; turkeys, per ℔ 6@9c; ducks, western, per pair, 60@0.90c; geese, western, per pair, $1 00@$1 25.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per ℔, 12@—c; do do, common to fair, 8@11c; do, iced, dry picked, choice, 8@10c. Fowls, western, do, choice, 9½@10c; do, nearby, do do 10@11c; Chicks and Fowls, mixed, 9@11c; do do do, scalded, 8@9c. Squabs, white, per doz, $3 00@$3 25 do, dark, do, $1 75@$2 00. Chickens. Philadelphia, dry picked, 25@36c, do Jersey, do, choice, 25@35c; do nearby, do, good 20@25c; do Western, do do, 18@22c; do do, iced, good to choice 16@18c. Ducks, spring, choice, per lb, 26@30c; do do, good, 16@18; do Western, good, 12@18c. Geese, Western, good, 8@10c.

GAME.—Plover, per doz., $0 75@$1 50; Snipe, per doz. $1 75@$2 00.

HOPS.—State, new, best, 22@23c; do, prime, 20@22c; do, low grades, 13@16c; do do, 1887, 10@11 do do do California, common to prime, 13@19c; choice, 20@22c.

HAY AND STRAW.—Choice Timothy, 95@$—; do good do, 85@90c; do medium, 70@80c; shipping, 65@70c; do, Clover, mixed, 55@70c. Straw.—No. 1, rye, 75@80c; short do 55@65; oat, 40@50c.

BEANS.—Marrows, new, $1 85@$1 90; new mediums choice, $1 80@—; pea, $1 80@—; red kidney, $2 20@2 25; white kidneys, choice, 2 35@2 40; foreign, mediums, 1 35@1 55; California Lima, $3 15@$3 20; green peas, $1 10@—.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@—c, and farmers' grades at 6@6½c. HICKORY NUTS quoted at $0 50@$1 00 per bushel. Pecans, 3½@5c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Bermuda, per bbl, $4 00@$7 00; Maine do. $1 50@$2 00; State do, $0 90@$1 15; Florida, do, $3 00@$6 50; Savannah, do, $5 00@$6 50. Sweets do, $3 50@4 50; Cab., new, $1 00@$2 00. Peas, per bbl, $4 00@$4 50; Squash, do, $0 40@$0 60. Beets, do, $1 25@$1 50; Asparagus, per doz., $0 50@$1 50; Tomatoes, per crate, $1 50@$3 00. ONIONS—Bermuda, per crate, 75c; New Orleans, per bb $2 00; Beans, string, do, $1 00@$3 00; Cucumbers, per crate, $0 50@$2 00; Radishes, per bbl., 50c@$1 00.

FRUITS.—FRESH.—Apples, Baldwin, per bbl, $1 50@$2 25; Common, $0 75@$1 00; Russet, $2 00@$2 50. Spy, $3 00@4 00. Strawberries, per qt 3@15c; Cranberries—Jersey, fine, box, $1 00; do common, 50@75c. Oranges—Florida, best, box, $5 00@$6 50; do, good lots, $3 00@$4 50. Lemons, $2 75@$4 00, Cherries, per lb, 6@15c.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5@6c; do new, common to prime, 3¾@4½c; sliced, new, 2¾@3¾c; quarters, 2½@3¼c; chopped, 1¼@1½c; cores and skins, 1@—c. Cherries, new, 10@15c. Raspberries, new, 19@20c. Blackberries, 4@4½c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 10@14c; do do, unpeeled, 5@6c; North Carolina sun-dried, peeled, 7@9c. plums, 5@6c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 15 00@18 25, short clear, $14 00@16 00. Extra Prime mess, $12 50@$— prime do, $12@—— and family mess, $13 25@14 00 BEEF—India Mess, in tierces, $13@13 50 Extra Mess, in barrels, $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $7 50@8 00; Family at $11—@$14. HAMS—$13 50@$14 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 6½@—c; Pickled Hams, 11¾c; pickled Shoulders, 6½@6¾c; Smoked shoulders 6½c; do Hams, 12¼@12½c. Dressed Hogs.—City, heavy to light, 6@6¾c. Pigs, 6⅝c. LARD.—City steam $6 50; May, $7 02; June, $7 04; July, $7 06; August, $7 10; September, $7 12; South America, 8c.

BOSTON.—PROVISIONS firm and steady: New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, PA.—PROVISIONS.—Potatoes quiet; Early Rose, 25@33c per bush.; Burbanks and White Stars, 23@30c; Hebron, choice, 32@33; New Potatoes. Florida, per bbl., $3 00@$6 00. Provisions were steady. BEEF.—City family, per bbl, $9 50@$10; do, packets, $9@9 50; smoked beef, 10@10½c; beef hams, $13 PORK.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@12c; do, S. P., cured in tierces, 9½@10½c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6½@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6¾@7.

CHICAGO.—MESS PORK.—$11 70@11 75 LARD.—$6 70@—per 100 lbs; Short Rib sides (loose), $5 70; dry salted shoulders, boxed, $5 25; short clear sides, boxed, $6 25.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 17¼@18; Elgin best, 18@—; Western, best 17@17½; do prime, 15½@16½; do good, 14½@15; do poor, 13@13½. State, Dairy half-firkins, tubs, best, 17@18c; do do prime, 16@16½; do do fine, 14½@15; Welsh tubs, fine, 16@16½; do do, good, 15½@16; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western imitation Creamery, best, 14@15; do fine, 12@13; Western dairy, fine, 12@13; do fair, 11@—c; do poor, 9@10c; do factory, fresh, best, 10½@11, do prime, 10@—; do good, 9@9½; do poor, 8@——c.

CHEESE.—State factory, fancy, 8¼@—c; do do, fine, —@——c; do do, prime, 8¼@8½; do do, fair to good, 7¼@7¾c; Ohio, flat, prime, —@—c; do good, —@—c; do, good, —@—; Skims, light, 6@6¾c; do medium, 2½@4½; do full, 1@1¼c.

EGGS.—Near-by, fresh, 14¼@14½c; Canadian, 14¼c Southern, 13½@13¾c; Western, best, 13¾@14c. Duck 14@16c; Goose, 20@25c.

PHILADELPHIA.—BUTTER quiet. Pennsylvania creamery extra, at 17@—c; Western creamery, extra at 16½@17c, B. C. and N. Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were firm. Pennsylvania firsts 14@—c; Western firsts, 14@—c; Cheese dull—steady; demand fair; New York full cream, at 9@9¼c, Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Elgin creamery, 15@16c; choice Western, 12½@14c. choice dairy, 12@14c; common to fair, 8@10c. Eggs firm at 12@12½c.

CHEESE—State factory, September made, 12c; do do do, October, fancy, 11@11¼c; do, fine, 11⅛@11¾c; do; fair and good, 10@10½c; Ohio, flat, prime, 11@11¼c; do, good, 9¾@10⅛c skims, light, 8¾@9¼c; do, medium, 6½@8½c; do. full, 2@2¾c.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, May 25, 1889.

BEEVES.—Common to Prime Steers sold at $3 90@$4 55 per 100 lbs, Tops at $4 65; Bulls at $3@$3 25; Cows at $1 75@$3 25.

MILCH COWS.—Receipts for the week thus far are 90 head. Dealers report a slack market at lower prices, and quote $25 to $40 for inferior to good Cows at wholesale. Choice are retailed as high as $50@$55.

CALVES.—The clear, cool weather helped the sale of Dressed Calves and saved the Live market, and notwithstanding the liberal supply prices were about ¼c. better than at the close of Monday. Buttermilks sold at $2 70@$3 25 per 100 lbs; Mixed Calves at $3 50; Veals at $3 75@$5, with Choice selections at $5 25.

SHEEP AND LAMBS.—Sheep sold at $4@$5 per 100 lbs; a carload of Yearlings at $5 40; Southern Lambs at $6@$7 50, with choice stock at higher figures; and culls at $5 50; and a bunch of States by the head at $3 50 each. Illinois Sheep, 106 lbs, at $4 87½; Kentucky Lambs, 65 lbs, at $7 25; Virginia Lambs, 66½ lbs. at $7 70; Virginia Ewes, 86 lbs, at $4 50; Ohio Sheep, 80 lbs, at $4 50; Western do (Ohio fed), 112 lbs, at $5; Texas Sheep, 70½ lbs, at $4 25; Kentucky do, 111 lbs, at $4 87½; Kentucky Lambs (culls) 54½ lbs, at $5 50; Virginia do, 50 lbs, at $6; Western Sheep, 95 lbs average, at $5 per 100 lbs; Kentucky Lambs (culls), 64 lbs. at $5 50; Kentucky Sheep, 100½ lbs, at $4 25; Western Yearlings, 67 lbs, at $5 87½; State Sheep, 96 lbs. at $4 75; Ohio Yearlings, 61 lbs, at $5 75; Spring Lambs at $3 50 each; State Yearlings, 60 lbs, at $5 40.

HOGS.—Nominally steady, at $4 50@$4 90 per 100 lbs.

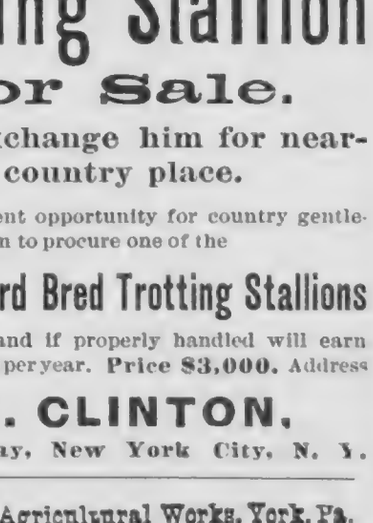
COMMUNICATIONS RECEIVED FOR THE WEEK ENDING MAY. 25, 1889.

E. A. H.—T. M. A.—S. S. M., thank you.—W. H.—T. J G. R. W.—J. M.—O. L. H.—C. W. K.—T. D. C.—J, J. A—H. B. S.—J. H. A.—F. D.—J. L B.—H. H. W.—J. P. S.—W. C. L.—E. D.—A. A. C.—J. H. C.—A. C. K.—S. S. M.—G. S. P.—G. L. W.—J. B.—H. B.—W. F.—J. M. C.—O. T. B.—A. L. C.—J. H. C—C. M. L.—W. H. S.—J. McF.—G. E. M.—J. J. H. G.—J. T.—F. L. K.—G. E. M.

Miscellaneous Advertising.

SEND 10 Cts. in postage stamps to **E. & O. WARD,** Produce Commission Merchant, for circular giving important advice about Shipping Produce. Also contains recipe for preserving eggs. Established 1845. **No. 279 Washington St., New York City.**

Do You Keep Poultry?
SEND $3 FOR
MALLORY'S
IMPROVED
SHELL MILL.
Crushes a Peck of Shells in NINE MINUTES.
BEST AND CHEAPEST
IN THE MARKET.
F. B. MALLORY,
FLEMINGTON, N. J.
SEND FOR CIRCULAR.



Trotting Stallion For Sale.
Or will exchange him for near-by country place.
This is an excellent opportunity for country gentleman to procure one of the
Best Standard Bred Trotting Stallions
in the country, and if properly handled will earn from $750 to $1,000 per year. **Price $3,000.** Address
H. F. CLINTON,
234 Broadway, New York City, N. Y.

Pennsylvania Agricultural Works, York, Pa.
Farquhar's Standard Engines and Saw Mills.
Send for Catalogue. Portable, Stationary, Traction and Automatic Engines a specialty. Warranted equaler superior to any made.

Address A. B. FARQUHAR & SON, York, Pa.

Newtown Double Geared, Level Tread Horse Powers.
AND THRESHERS AND CLEANERS ARE THE BEST.

We also manufacture Self-Dump Rakes, Corn Shellers, Farm Rollers, etc. Send for Circulars and Price Lists. A. BLAKER & CO., Newtown, Bucks Co., Pa

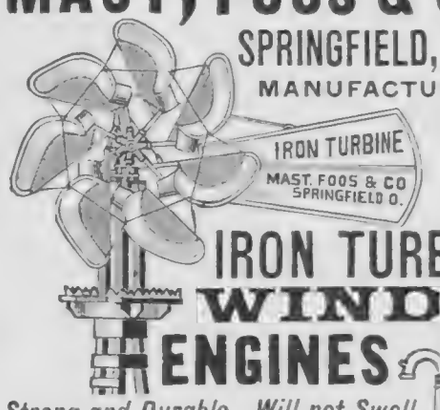
G. HAUSCHILD,
Topeka, Kas.
Box 406.

WEED CUTTERS to attach to Cultivtors for thorough cleaning and surface cultivating the Field, Garden and Nursery. No Cultivator complete without. Set of 4, $5. You want them. Order early. Circular free. Mention RURAL NEW-YORKER.

WARRANTED not to blow down off the tower, and that our **Geared Wind Mills** have double the power of all other mills. Mfrs. of Tanks, Wind Mill supplies, and the Celebrated

CHALLENGE
Feed Grinders,
HORSE POWERS,
CORN SHELLERS,
PUMPS and BRASS CYLINDERS
Send for Catalogue and Prices.
ALWAYS BUY the BEST
Good AGENTS WANTED. Geared or Pumping Mill on 30 Days Test Trial.
CHALLENGE WIND MILL & FEED MILL CO.,
BATAVIA, KANE CO., ILL.

MAST, FOOS & CO.
SPRINGFIELD, OHIO.
MANUFACTURERS



OF THE
IRON TURBINE WIND ENGINES
Strong and Durable. Will not Swell, Shrink, Warp or Rattle in the Wind.
BUCKEYE FORCE PUMP
A CHILD CAN USE THEM.

Works easy, and throws a constant stream. Has Porcelain Lined and Brass Cylinders. Is easily set. Is the Cheapest and Best Force Pump in the World for Deep or Shallow Wells. Never freezes in winter. Also manufacturers of the **BUCKEYE LAWN MOWERS, Buckeye Wrought Iron FENCING, Cresting, etc.** Write for Circulars and Prices.

WIND MILLS
34 YEARS Experience.
THE HALLADAY PUMPING MILL is acknowledged the Standard Wind Mill of the World and is made in 18 sizes, 8 to 60 ft. diameter, 1 man to 40 horse power. It is adapted to pumping water for Stock and Dairy Farms, Ornamental and Village Water Supply and Fire Protection, Railway Water Stations, Irrigation, Drainage, etc.
THE HALLADAY is made upon honor and guaranteed THE MOST POWERFUL, DURABLE and, BEST REGULATED, STORM DEFYING Wind Mill Made.

U. S. SOLID WHEEL WIND MILL
7 sizes, 10 to 22 feet diameter. Not cheaply made but heavy and strong in construction. These Mills are taking the lead of all Solid Wheels on the market, and are guaranteed the Best of their class.

PUMPS
We make a very complete line of WIND MILL, HAND AND POWER PUMPS. IRON, BRASS AND BRASS LINED CYLINDERS. Our 3 Way Force Pumps have no equal.

TANKS We make the largest assortment of Tanks on the market, consisting of Round, Half-Round and Square Stock Tanks, Milk Cooling Tanks, Storage and House Tanks Special sizes made to order.

STANDARD HAY TOOLS
For stacking out in fields and mowing away in barns. The use of a good Hay Carrier and Fork a few hours before a storm, may save many times their cost. We make the most complete line of Horse Hay Tools on the market, consisting of Anti-Friction, Swivel, Reversible and Rod Hay Carriers, Harpoon and Grapple Hay Forks, Pulleys, Floor Hooks, etc.

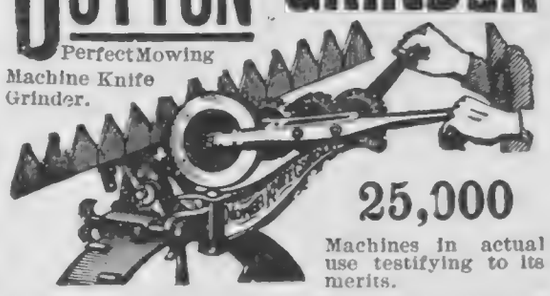
We also make the HALLADAY STANDARD GEARED WIND MILL, in 11 sizes, 1½ to 40-horse power, Corn Shellers, Horse Powers and Jacks, Stalk Cutters, Feed Grinders, Saw Tables, Tank Heaters, &c. All goods guaranteed. Send for Catalogue and Prices. Reliable Agents Wanted in all unassigned Territory.

U. S. WIND ENGINE & PUMP CO.
BATAVIA, ILLINOIS, U. S. A.
BRANCH HOUSES:—Kansas City, Mo., Omaha, Neb., Fort Worth, Tex., Boston, Mass.

GENUINE PHILADELPHIA.
1889.
PRICES REDUCED!
THE PHILADELPHIA LAWN MOWER.

Fourteen Sizes and Styles for Hand Use, Weighing from 21 to 51 lbs. THREE SIZES FOR HORSE POWER. Lawn Sweepers, Grass Edgers, &c.
GRAHAM, EMLEN & PASSMORE,
Patentees and Manufacturers,
631 Market Street, Philadelphia, Penn'a.

DUTTON GRINDER
Perfect Mowing Machine Knife Grinder.



25,000
Machines in actual use testifying to its merits.
Can be carried into the field and attached to Mowing Machine Wheel. Send for new Descriptive Catalogue.
HIGGANUM MANUF'G CORPORATION.
MAIN OFFICE: HIGGANUM, CONN.
Successors to R. H. ALLEN & Co., 189 WATER ST., N. Y.

IDEAL

IMPROVED Made of best material by skilled workmen, built on correct principles and fully warranted; 17 YEARS' EXPERIENCE. Sent on trial. Write for Circular and Price.
Stover Mf'g Co. Freeport, Ill.

EXTRA!

THE

NEW YORK WEEKLY WORLD,

12 Broad pages and 84 Long Columns, Publishing each week a COMPLETE NOVEL by a Popular Author, and the

R. N.-Y.,

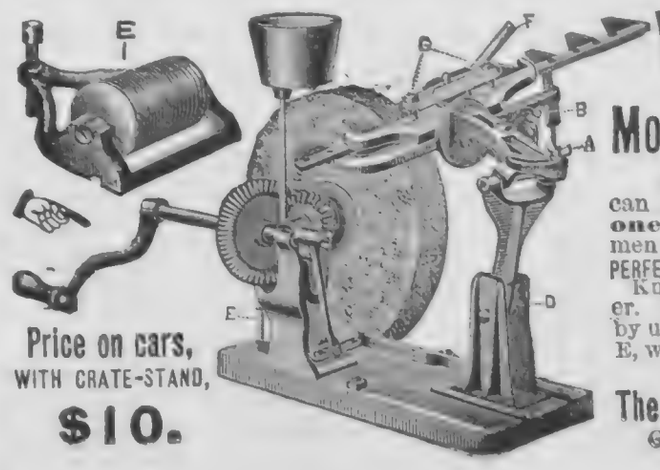
FOR ONE YEAR,

ONLY

$2.25.

RURAL NEW-YORKER,

34 Park Row, N. Y.



Price on cars, WITH CRATE-STAND,
$10.

WILLIAMS' GRINDER
FOR
Mower and Reaper Knives.
WITH THIS MACHINE ONE MAN can grind the knives of a Cutter Bar, in **one-half the time** required by **two** men on a common grindstone—Do it with PERFECT ACCURACY and on any desired bevel. Knives so ground cut easier and last longer. The grindstone is kept perfectly true, by using occasionally, the steel cutting roll, E, which is sent with every machine.
WRITE FOR CIRCULARS TO
The Williams Bros'. M'f'g Co., Makers,
Glastonbury, (Naubuc P. O.) Conn.

Literary.

MABEL WHITNEY'S LESSONS IN FARMING.

BY G. C.

MABEL WHITNEY, a farmer's daughter, concluded that she wanted a higher education than their country school could afford her. Her father, a well-to do farmer, concluded that the said common school education was all that any of his children needed. But Mabel thought if she could only obtain a situation to teach the common branches, she could soon earn money enough to pay her expenses, for one year at least, in some seminary. An opportunity soon presented itself, and her parents' consent was reluctantly given.

Mabel applied for the position and was accepted as teacher in the Meltonville school, the term commencing the first Monday in November, the school during the preceding months having been taught by a young man, who was forced to relinquish his position on account of ill health. The position was secured, but not so easily a boarding place.

"How is it," inquired Mabel of one of the trustees of the school, "that the people here seem so averse to boarding the teacher?"

"Well," answered the trustee, "the people about here are mostly retired sea captains, or something of the sort. Got plenty of money, and their wives and families don't want to be bothered, I suppose; but they are wonderfully sociable and kind; I haven't the least doubt but that you will be invited around considerably."

"But," said Mabel, "where did the young man, who was teaching here, board?"

"At the hotel," was the reply.

"I won't board at the hotel, if I can help it," said Mabel decidedly. "But haven't you any poor people?"

"Some few," replied the farmer; "but they are so pesky poor, they can hardly board themselves."

"Oh!" said Mabel laughingly, "I don't mean that kind, but middle class, I suppose you would call them."

"My dear young lady," said the old gentleman, kindly, "Me and my wife would like nothing better than to have you board with us, for company for her, if nothing else, but I live away over here in the corner of the district, so far from the school, and it would be very unhandy for you, especially in rough weather. But, let me see, there is a family that live right near the school-house. It would be just the place for you, if they would only take you, a kind of poor and proud family, a Mr. Early, a city man, who invested his little all in a farm, and is likely to lose it all, if he don't do better. He has no idea of farming, and it seems as though he can't learn, goes behind-hand every year, and he is likely to lose his wife, for she grows thinner and more sickly-looking every year. It seems to me affairs would be different, if things could be turned around, and she be boss. I have seen her more than once trying to hoe, pizenin' potato bugs, or doing any little thing she could. They have a little 13-year-old daughter that is a host in herself; and there are two more little youngsters—a boy and a gal. If you would like to go to see them, I will take you."

Mabel was a little woman, or girl rather, for she was only 17 years of age, but she was very matter-of-fact. And, like her father, whose farm was a model, neatness with her was like cleanliness, next to Godliness; so when they came to the Early farm, her first expression was, "Shiftlessness! what a shame to let a grand old place like this get into such a wretched state."

"It was all in good repair when he bought it," replied the trustee; "but he didn't keep it so long—no bad habits either, only good-for-nothing." On knocking at the door, it was opened by a bright little girl, whom the trustee addressed as Dora, and whom Mabel took at once to be the little 13-year-old daughter. She politely ushered them into a neatly furnished sitting-room, then, excusing herself; went out, presently returning accompanied by a delicate-looking lady, whom she introduced as her mother. Mabel soon stated her errand. The little girl looked eagerly at her mother, who hesitated, in an embarrassed manner, as though hardly knowing what to say.

"I am afraid," she remarked, "that we could not make you comfortable."

Mabel glanced at the tastily arranged sitting-room, and then at, as she thought, the lovely little girl, and sweet-faced woman. "I have no fear of that," she replied.

"Oh! mamma, I think we can," quickly said the little girl.

It seems the mother thought so too; for before Mabel left she had engaged board with them for the school year.

It was not until Mabel was fairly established as a member of the Early family, that she saw Mr. Early, and then, what was her surprise, when, instead of a tired, discouraged, worried-looking being, a handsome, careless-looking man was introduced to Mabel, by the little girl as her papa. The only time that his face clouded was when he alluded to his ill luck as a farmer.

"I have made a mistake," he said, "by having too little capital to work with; but luck and fate appear to be against me; for instance, this summer, I was heartily ashamed of my wheat crop in comparison with my neighbors', but what was a feller to do?" he continued, lightly, "I couldn't help its freezing and thawing all winter. I believe my wheat froze out." Mabel wondered why the freezing and thawing didn't have the same effect on his neighbors' wheat. Every day Mabel saw more and more to wonder at, thinking how different her papa would do, and what the Earlys might accomplish, if they only would. The father was always trying and always in what appeared to Mabel to be the wrong way. The mother and daughter toiled from morning until night, now out-of-doors, now in. Mabel kept her own counsel but felt so sorry for them. She taught Dora at home, for the child could not take time to go to school, but out of the fullness of her heart, one day Mabel spoke. "Dora," she said, "you poor child, you work hard with your poultry; but they don't seem to pay you, do they?"

"Oh, no," replied Dora, wearily; "they never do."

"What do you feed them with?" asked Mabel.

"Corn, and they do eat so much of it."

"Will you let me tell you something about chickens?" said Mabel. "My mother raises a great many of them."

"Gladly," replied Dora. "I will be pleased to have you tell me anything you will, Miss Whitney."

"Well, in the first place," said Mabel; "chickens must have a variety of food. All corn is too fattening. They must have some green food of some kind, and they should have some bone meal, or cracked bones."

"Do you take us for millionaires?" laughingly replied Dora. "Where are we to get all of those things to begin with? It takes capital, as papa would say. You don't know the low state of our family purse."

"It doesn't take quite so much as you imagine, Dora dear," continued Mabel. "You have clover hay, scald some of that for the chickens, and you will be surprised to see how they will eat it. Throw some of those cabbage stumps, that I see out in the field, into the chicken yard. Give them a breakfast of wheat bran or almost anything but corn. Take that old boiler that your mother uses for lye. When not in use, put in it all the scrapings of the table, that you don't use for Ponto or Kitty; boil them with potato parings, cabbage leaves, or any green thing you can get. When you were showing me the outbuildings, I noticed in the root cellar, where potatoes were stored, that there was quite a lot of potatoes with long sprouts, left sticking in the wall, and on the floor. Gather them together, and get some one to bring them in for you. Cook them, sprouts and all, with the rinsings of your frying-pans, and water in which meat has been cooked. Thicken it with a little meal, and in cold weather a little Cayenne pepper is beneficial mixed with the food. There are bones lying here and there all over the place. There is a large pile near the ashbin."

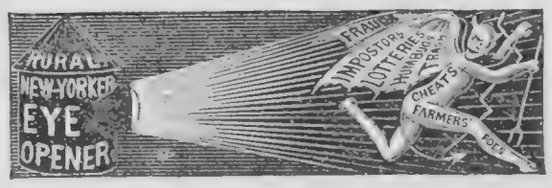
(To be continued.)

BOOK REVIEWS.

THE STORY OF PATSY.—A brief, pathetic story of a crippled child in a mission kindergarten, is told by Kate Douglas Wiggin in a bright yet tender way that captivates the reader, and takes him into the very heart of the gracious work. A helpful book. Illustrated, Houghton, Mifflin & Co., 60 cents.

NORTH AMERICAN BIRDS, by H. Nehrling, is the title of a new work, part first of which lies before us. Mr. Nehrling is an active member of the American Ornithologists' Union, as well as a corresponding and honorary member of several American and European scientific societies; but he says that his work does not claim to be strictly scientific; it is simply intended for the intelligent friend of nature. It is his aim to write a *popular, entertaining and instructive* book, especially for our young folks, so that the extravagant destructiveness so often manifested by boys may give place to the sentiment of affection, and a desire to protect our beautiful native songsters. Part first treats of the thrushes, which are a very numerous family, scattered over a wide range of territory; the American robin, the mocking-birds and the thrashers, and contains 48 quarto pages, printed on heavy paper. It is illustrated by three colored plates.

George Brumber, 286 and 288 West Water street, Milwaukee, Wis. $1.00 per part. To be published in 12 parts.



A BLIND-POOL LAND SWINDLE.—Tyler & Co., of Kansas City, Mo., are sending out a large number of circulars, extolling in very alluring terms their "blind-pool" scheme for speculating in land. It is based on precisely the same principle as the notorious blind-pool swindle advertised extensively by Gray, of this city, about seven years ago, and that advertised by Flemming & Meriam, of Chicago about three years ago, and that puffed up by W. A. Ingham & Co., alias The Speculative Syndicate, of this city one year ago. All of these, however, pretended to deal in agricultural produce or railroad stock, and after a season of profuse, alluring and delusive advertising, all suddenly collapsed after swindling their dupes in all parts of this country and Canada out of hundreds of thousands of dollars. The first flourished rankly for about 18 months and defrauded the public out of about $125,000; the second had a "glorious time" of it for nearly three years, and then the members disappeared with over $1,000,000 of their patrons' money in their wallets; the third raked in the shekels freely for about two years and a half; the concern's victims are still mourning the $250,000 out of which they were swindled by Ingham when he fled to Canada—or Timbuctoo, about a year ago. All were vigorously and repeatedly denounced by the Eye-Opener during the hight of their prosperity, and the final collapse of all was announced with no little satisfaction by him. Like Tyler & Co., they were all modest in their requirements—all they wanted was that their patrons should send in their money freely to be invested by the sharpers according to their own best judgment. The Kansas City fraud says:

"Our system is the combining of a large number of small sums of money into one large sum; with this amount we can, at a favorable opportunity, purchase options on coal, mineral, timber, and other Western lands, and get limited time contracts on same. As soon as we have secured a contract on lands, we immediately place the same on sale at as large an advance as possiole. Sometimes we make 100 per cent. and sometimes as high as 1,000 per cent. on the amount invested, according to the demand for the property."

Here is an alluring extract from the circulars of the same humbug:

"In one of our deals we made $100 for every $5 invested. For example, we bought a three months' contract on 20,000 acres of land at $2.50 per acre, and paid $2,500 down. We sold at $5 per acre and realized a profit of $50,000, 2,000 per cent. on $2,500 or $20 for every $1 invested."

Substitute grain for land and bushels for acres, and you have substantially a repetition of the circulars scattered throughout the country by the other sharpers. Isn't it marvelous that men who make such enormous profits with such unfailing certainty, should be so eager to share them with the general public on such ridiculously easy terms? All this concern asks is that each of its destined victims should mail to it $5, for which a certificate will be forwarded giving the patron a share in the profits. The more $5 sent in the more certificates will be sent out, and the more the crooks will be "in" and the dupes "out." Since his first exposure of Gray eight years ago, the Eye-Opener has denounced and kept track of at least a dozen blind-pool swindlers in farm produce, railroad and mining stocks and other speculative lines, and all of them, without a single exception, have collapsed after a deceitful run of from six months to three years, during which they had persistently swindled their dupes out of all the money they could entice out of their pockets by the most alluring misrepresentations and the most bare-faced falsehoods.

A SOMEWHAT new form of an old swindle is reported from several parts of the West, the latest account coming from Louisa county, Iowa. Two men called on a farmer in that county and expressed a desire to purchase his farm. After considerable parleying, a contract was drawn up, the strangers agreeing to pay $9,000 for the premises. This was really more than the place was worth, otherwise the farmer who had no special desire to sell until the tempting price was offered, would never have consented to the bargain. Just as the discussion was about to close, a third party appeared, and offered $13,000 for the farm, whereupon the two original sharpers agreed to throw up their contract if the farmer would divide the difference with them. This he consented to do, and the party went to town where the farmer drew from the bank $2,000, which he at once handed over to the sharpers. The third man then said that he must go to a neighboring town to draw the money, but promised to return next day to complete the purchase. At last accounts the farmer was still occupying the old place, with a decreased bank account but with $2,000 worth of increased experience. Swindles of this type have been frequently exposed here by the Eye-Opener. There is a strong family likeness between them all. Sometimes a man offers to sell some article, as a violin, a watch or some other thing of considerable value, and not getting his price, obtains permission to leave it for a short time. Meanwhile a confederate comes along and manages to bring the talk round to the object, and after he has examined it, he expresses a desire to buy it for considerably more than the price asked by crook No. 1. Finding that the "innocent holder" has no authority to sell it, he promises to call for it again in a few days. Meanwhile the owner returns and the holder, having already a customer for it at a higher price, buys it, expecting to sell it at once at a higher figure; but, of course, the would-be purchaser never turns up, and the dupe has upon his hands an article he does not want and which as a rule, isn't worth a tenth of the price he has paid for it. From the above two examples one ought to be able readily to detect any of the numerous forms of this swindle which are constantly practiced on the public.

CONCERNS CENSURED.—Under this caption the Eye-Opener will from time to time give the names of concerns he has seen censured in other papers, but which have not been investigated from the RURAL office:—F. Andrews, of Chicago, is declared to be a fraud by local papers. He offers a book, the "Secrets of Bee-Keeping" for 15 cents, and a model hive for $3. The fellow cannot be found at the address he gives, and those who have any dealings with him are certain to be defrauded.... The American Investors' Co-operative Agency, Cincinnati, Ohio, should be left severely alone according to several Western papers....The Monarch Laundry Works, Chicago, Illinois, is denounced by the Farm, Field and Stockman as a catch-penny scheme. The same paper denounces the National Property Exchange, Temple Court Building, Chicago, as a swindling affair, ready to transfer the property of other people from their pockets to its own "with neatness and dispatch."....Investors are cautioned by Western papers against the American Building and Loan Association of Minneapolis, Minn. Its agents are very busy just now in country places trying to get people to take shares in the concern.

Miscellaneous Advertising.

INFANTILE Skin & Scalp DISEASES cured by CUTICURA Remedies.

FOR CLEANSING, PURIFYING, AND BEAUTIFYING the skin of children and infants and curing torturing, disfiguring, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair, from infancy to old age, the CUTICURA REMEDIES are infallible.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease, from pimples to scrofula.

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Davis STUMP Puller Lifts 20 to 50 Tons. Worked by 2 men. 5 sizes. Price, $35 to $70. Circulars Free. Sent on Three Days Trial H. L. Bennett, Westerville, O.

CATALOGUES, ETC., RECEIVED.

TEXAS EXPERIMENT STATION.—The first annual report of this station is sent by Director F. A. Gulley, College Station, Texas. It contains a copy of the laws relating to the Station, the Director's report and outline of the work to be carried out and somewhat detailed reports from the various Station officers. Texas is an immense State. It stretches over such a vast extent of territory that it is impossible to conceive of any single locality in the State that could be taken as representing the typical climate, soil and other natural conditions. It can thus be understood that the task of devising a series of experiments that should be of general interest to the State was by no means an easy one. Director Gulley announces the following as his plan for future work. In making this plan he has been aided by suggestions from many farmers' organizations. It seems to the R. N.-Y. that this is an admirable outline.

1. "A study of the most practicable and economical method of feeding cattle for beef and for the dairy.

2. A study of the disease of the cotton plant known as 'Cotton Blight,' or 'Root Rot.'

3. Testing varieties of fruits to ascertain what kinds are best adapted to the State, and at the same time help to designate the varieties by their proper names.

4. Test grasses and forage plants, adaptability to localities, and value for grazing and feeding.

5. Effect of barnyard manure and commercial fertilizers for certain crops.

6. Value of tile drainage for farm and garden crops.

7. Disinfection and inoculation of cattle to protect from 'Texas fever.'"

We are all deeply interested in the improvement of Western and Texas cattle since it seems evident that more and more of our beef s to come from the great plains of the South and West. Anything that tends to improve the feeding, breeding and handling of Texas cattle is of importance to the general public.

The report of the Station's chemist, Mr. Harrington, is interesting. It appears that experiments are being made with cactus as a stock food. For some years ranchmen in various parts of the State have fed cactus to their cattle with a degree of success depending on their ability to remove the small, sharp thorns. Various methods are employed to do this work. Sometimes the cactus plants, after being cut, are singed over a hot fire; at other times the cactus plants are simply run through a cutting machine, while in other cases the cut pieces or even the entire plants are well steamed and then fed to stock. In all the methods the main object is to remove the sharp thorns. While armed with these thorns the cactus is a terrible plant. The cruel Apache Indians delight in using the cactus as an instrument of torture. Their miserable victims are made to dance on cactus beds and when they fall from exhaustion, are whipped with these cruel blades. But by removing the thorns the cactus is transformed into a blessing for the stockman. It grows where nothing else will grow during a drought. The water it contains forms one of its chief values. Chemical analysis shows that it is almost as valuable as carrots or turnips as a stock food and the cost of gathering it is merely nominal. As the writer knows from personal experience, stock are very fond of it when freed from the thorns. The possibilities of the cactus plant for Western Texas are great. The man who invents some cheap and rapid method of removing the thorns will add greatly to Texan prosperity. With cotton seed and sorghum fodder, cactus forms a perfect fattening ration.

The Mesquite bean is another plant that proves valuable as a feed-stuff in Texas. The R. N.-Y. gave a picture of this bean some years ago. Analysis shows that it is superior in nutritive qualities to either corn or oats. The trees are rarely larger than average peach trees. The branches are so pliant that cattle can bend them down and thus feed without harvesting the beans. There are other excellent things in the report that must be reserved for a future article.

RICKER & OSBORNE, ROCHESTER, N. Y.—Catalogue of the Rochester hay and grain carriers and slings. These slings have the advantage of the central discharge and therefore never fail to work. It is claimed that the largest wagon load of hay may be put in the mow in three minutes. This system is the result of much practical experience, and we would advise our readers to look into it. Send for their catalogue.

KANSAS AGRICULTURE.—The report of the Kansas State Board of Agriculture for the quarter ending March 31, 1889, contains crop reports, statistics, reports of various meetings and other interesting matters.

JOURNAL OF MYCOLOGY.—This publication is sent from the Department of Agriculture. It is devoted to the study of fungi especially in their relation to plant diseases.

VERMONT EXPERIMENT STATION.—Bulletin No. 14 is given up to fertilizer statistics and analyses. Explanations of the values of the various fertilizer ingredients are given which seem to the R. N.-Y. about as clear as any it has yet read. The Station has made a canvass of the State of Vermont to ascertain how many tons of fertilizer were unloaded at railroad stations during 1888. It gives the following results.

"The total figures for the State are 4,194 tons. The average selling price was not far from $35 63 per ton; making a total of $149,432.22 paid by the farmers of the State during the year 1888 for the single item of commercial fertilizers. It is safe to say that at least $30,000 of this large sum could have been saved if the system of small purchases on long time could be replaced by the English system of co-operative buying for cash."

The town of South Randolph heads the list with 240 tons.

CONNECTICUT STATE BOARD OF AGRICULTURE.—The 22nd annual report of this society is received from the secretary, T. S. Gold, of West Cornwall, Conn. It would be impossible to give anything like a detailed review of the volume, because it is different from most agricultural reports. As a rule, one has to hunt through such publications for something new or characteristic, but the trouble with the Connecticut report is that one has to hunt for things that can be left out. It is packed full of sound truths and bits of sensible advice—so full in fact, that after a struggle to pick out the best the reviewer is forced to conclude that they are *all best* and that the only sensible thing to do is to urge farmers to read the whole volume.

Those Connecticut farmers are good ones! They know how to farm and they also know just how to teach the principles of farming. Success to them!

STATISTICAL ABSTRACT OF THE UNITED STATES 1888.—This is the eleventh number of this publication. It consists of 230 pages of closely printed figures, giving the statistics relating to finance, coinage, commerce, immigration, shipping, postal service, population agriculture, railroads, etc., and is prepared under the direction of the Secretary of the Treasury. It is particularly valuable as the records are traced back for 10 years. The R. N. Y. is glad to get this book for it presents a basis for some very interesting figuring.

At the meeting of the National Grange held at Topeka, Kansas, last fall the following resolution was passed:

"*Resolved*, That the Commissioner of Agriculture be requested to inquire, through the consular system of Government or otherwise, what foreign nations are now importing agricultural products, and ascertain what possibilities there would be to establish trade relations for the disposal of our surplus agricultural products; also to inquire what agricultural products are now imported that our country and climate are capable of producing, and lay the same before Congress and publish for the information of farmers."

THE Statistician of the Department of Agriculture has just issued his answer, which is contained in the May report of the Department. Here are a few of his statements:—Europe is practically the only wheat market America can have, and Europe raises 1,200,000,000 bushels herself—more than half the world's crop and twice that of America. Europe imports an average of 144,000,000 bushels, of which America supplies 95,000,000. The demand for oats and barley from other countries is insignificant. We export 68,000,000 bushels of corn, all there is a demand for. We import more potatoes than we export. Only three European countries need to call on us for butter. These are Great Britian, Belgium and Portugal. We send 24,000,000 pounds. Europe calls for 140,000,000 pounds of cheese and we send 118,000,000 of it. We send to Europe 2,636,000,000 pounds of cotton. Europe calls each year for 780,000,000 pounds of raw wool. We produce only 80 per cent. of the wool used at home—importing the rest; 69,000,000 pounds. We send to other countries each year, 242,000,000 pounds of tobacco. The Statistician concludes that more cheese could be exported if its reputation for quality could be kept up. The same is true of butter. There is also a good demand for a good quality of dried or evaporated fruits. He also says we could save money by producing our own sugar, flax, hemp, and fruits

This is a very timely and important subject. It is well worth studying. The R. N.-Y. has made some careful calculations of its own, taking the figures as given in the volume under review. Our desire is to place side by side the values of our exports and imports for the past 10 years. The imports may represent what we have paid other countries for needed articles; while the exports may represent what we have sold.

Articles.	Exports.	Imports.
Eggs	$433,630	$18,841,283
Fertilizers	10,329,079	16,451,767
Bread stuffs	1,897,066,641	84,372,288
Flax, hemp, etc		113,249,874
Manufactures of Flax, hemp	16,122,570	226,093,369
Fruits	27,885,898	146,737,348
Hay	2,312,467	9,705,498
Hops	19,994,096	7,797,231
Meat and Dairy Products	1,138,549,203	17,189,652
Sugar and Molasses	70,468,422	818,644,110
Potatoes	4,011,018	13,581,096

These figures are interesting because they ought to show us the farm products that ought to be produced at home. It will be seen that our sugar bill is an enormous item. Can we make sugar here cheaper than we can buy it abroad? That is the question American farmers must answer. Fruits are a great expense to our people. We might produce most of them at home. Think of paying out millions for eggs! The most striking loss is in the production of flax and other fibers. We are importing nearly $250,000,000 worth of flax and hemp products. Cannot this money be kept in this country? Can we not build up the flax industry on American soil? Another point worth considering is the fact that during the past 27 years Americans have imported $407,747,416 worth of tea and nearly three times as much coffee. Have we not somewhere in our vast extent of territory some place where Americans can earn a portion of this money?

There are some startling figures in this remarkable volume. For example, we find that the American people, have consumed since 1870, 9,866,295,114 *gallons of wines and liquors*. This volume will be found extremely useful by those who like to investigate the growth of our country.

NEW YORK STATE DAIRYMEN'S ASSOCIATION.—SECRETARY JOSIAH SHULL, (Ilion, N. Y.) has issued a bulletin giving a strong argument in favor of dairy conferences. The bulletin states that "people are becoming more refined in their tastes, and more exacting about the quality of their food. This applies more especially to milk and butter, as these products are consumed, more or less, by every man, woman and child in our land. Instead of over-churned, over-worked butter, made from stale cream, that becomes strong, we want creamy flavored butter that is fresh."

The conferences are held so that people may come and see milk, cream and butter handled in the best possible way. The bulletin contains the following "Notes on Dairying." Most of them are as old as the art of dairying, but it is no exaggeration to say that a great many of these rules are still broken, by good people, too.

1. "The milk from healthy cows only, should be used.

2. Avoid excitement of cows, produced by chasing with dogs or in any other manner. Harsh treatment lessens the quantity and injures the quality of milk.

3. Cows should have an abundance of suitable food and pure water, and salt kept where they can have ready access every day.

4. Cows should be kept from all foul odors and not be allowed to eat or drink anything that will give taint to milk.

5. Milking should be done at regular hours, with clean hands, clean udders and clean stables, and the milk kept away from any contaminating odors.

6. Milk should be strained immediately after being drawn, and not be disturbed till creamed.

7. Milk pails and other vessels for keeping milk and cream should be thoroughly cleansed; first well washed and scalded with boiling water, and then aired to keep them perfectly sweet."

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

LAW AS TO SHEEP-KILLING BY DOGS IN OHIO.

T. M., Cuyahoga County, Ohio.—What is the law with regard to sheep-killing dogs in this State?

ANS.—If the owner of the dog is known and able to pay damages, a suit should be brought against him. In Ohio, the owner or owners of any dog that kills, worries or injures any sheep, lamb, goat or kid shall be jointly and severally liable to any person so damaged, to the full amount of the injury done, and the court or justice who has passed upon the case, shall declare the animal found to have occasioned the death or injury, to be a common nuisance and order the defendant to kill or cause to be killed such animal within 24 hours after the rendition of the judgment. If the offending dog has not been seen or if its owner is unknown, or if known, if the amount of the judgment cannot be collected on execution, then the person who has suffered injury or loss may present a detailed account of the injury done, with the damages claimed therefor, verified by affidavit, to the commissioners of the county wherein such damage was done, at some regular session or within one year, and shall make it appear to the commissioners upon the parol testimony of at least two other persons who are freeholders of the neighborhood where the injury was done, that the damage claimed is just and reasonable, that no part of the injury was done by any animal in possession of the complainant, and that he does not know whose animal committed the injury, or if known, that the judgment cannot be collected; then the commissioners, if satisfied that the account is just and correct, may allow the same, or such parts as they deem right, and shall order the payment thereof out of the fund created by the *per capita* tax on dogs. If such fund is insufficient to pay all such allowed claims in full, they shall be paid *pro rata*.

C. W. K., Los Gatoz, Cal.—A puts his young colt in B.'s pasture for a certain amount per month. He visits the pasture occasionally to keep acquainted with the colt, to see that it is there, and pay up to the date of his visit. After 15 months he goes to take his colt away, but it cannot be found. Is B liable for the loss of the colt, or for any damage? There is no charge that the colt was stolen, or had escaped, nor was there any agreement between the parties as to the safekeeping of the animal.

ANS.—If the colt was not stolen and did not escape; that is, did not get out of the pasture of his own accord, what became of him? If it can be proved that his disappearance was due to any action or want of proper care on B's part, a suit for the value of the colt will lie against him. If this cannot be proved, B cannot be held responsible, either in whole or part, for the loss.

T. M. S., Worcester, Mass.—A neighbor who owns land adjoining mine is going to build a large barn with adjoining sheds right up to the boundary line, with the eaves projecting over it so that all the water from the roof must fall on my land; what is the law in such cases?

ANS.—Building a barn or any other structure in such a way is a manifest encroachment on, or an appropriation of our inquirer's property to the extent, at least, of the projection; but a right to make this encroachment may be acquired by 20 years' acquiescence on the part of our inquirer. Any court of competent jurisdiction will issue an injunction forbidding the erection of a building in such a position, and after it is built, the court will order it pulled down or altered so as to prevent the drip from the roof falling on our correspondent's land.

Miscellaneous Advertising.

Chester White, Berkshire and Poland China Pigs, Fine Setter Dogs, Scotch Collies, Fox Hounds and Beagles, Sheep and Poultry, bred and for sale by W. GIBBONS & CO., West Chester, Chester Co., Pa. Send stamp for Circular and Price List.

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PATENTS THOMAS P. SIMPSON, Washington D. C. No atty's fee until patent obtained. Write for Inventor's Guide

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WHEN ladies pack their furs away,
The seals and minks and sables,
And wear the linen and piques
And snowy lawns, with ribbons gay,
The market stalls present each day
A most bewildering array
Of early vegetables,
And they enjoy who have the means
Corned beef with various kinds of greens.
—*Boston Courier.*

MOVES in the highest circles—Saturn.—*The Age.*

DON'T BE A CLAM. You might get in the soup.—*Puck.*

WHEN Time shall hang up his scythe he will be no mower.—*The Age.*

THERE is no use for garden vegetables competing for prizes at an agricultural fair—the cabbage will always be a head.—*Farm Journal.*

PILLOW-SHAMS are going out of style, it is said. This is not true of most other shams, which were never in greater vogue.—*Lowell Courier.*

"WHATEVER you do, my boy, begin at the bottom and work up." "But, father, suppose I was going to dig a well?"—*Town and Country Journal.*

THERE is only the difference of an "s" between woman's weakness and man's weakness. One is gossip and the other is go sip.—*Washington Critic.*

"AT what age were you married?" she asked inquisitively. But the other lady was equal to the emergency, and quietly responded: "At the parsonage."—*Yarmouth Register.*

CITY MAN: "Is this locality healthy?" Country Man: "Healthy? You bet we're healthy? We've got to be. There ain't a doctor within 40 miles."—*Philadelphia Record.*

MOST UNFORTUNATE.

SIMPSON (tremulously): "Emma, darling, say yes, and there will be another——'

NEWSBOY (outside): "Big breach of promise case! Extra!"

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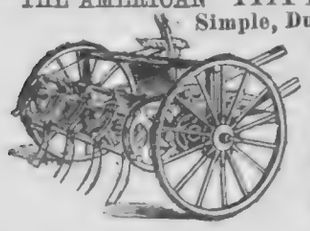
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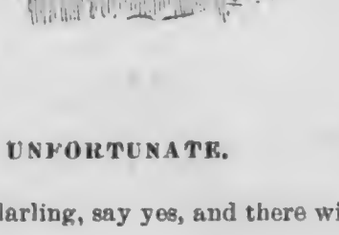

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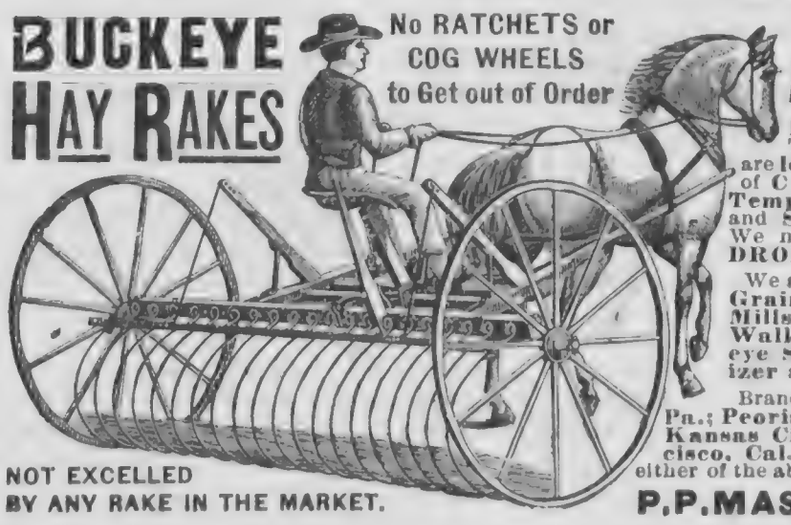
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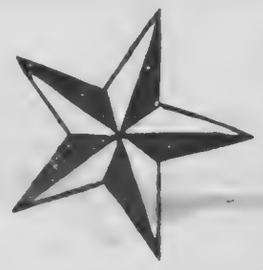
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"PIGS IN THE POCKET-BOOK." PROBLEM: To Place "Farmer's Profit" Where It Belongs! Fig. 142.

Field Crops.

Mixed Wheat Seed

Shall We Sow a Single Variety?

M. DE VILMORIN'S VIEWS.

AMERICAN COMMENT.

An Interesting Discussion

LAST year the Mark Lane Express of England printed an argument by M. Henry L. de Vilmorin, head of the celebrated Paris firm of Vilmorin, Andrieux & Co., in favor of the sowing of mixed wheat seeds. The R. N.-Y. reproduced the following synopsis of M. de Vilmorin's views.

"It has been established by numerous experiments that the sowing together of two distinct kinds of wheat, gives almost invariably a better yield of grain than would have been obtained from the same total quantity of either kind sown separately; and, speaking of France, he says that skillful cultivators often employ mixtures of seed corn. In support of this practice it is remarked that each variety of wheat differs from all others not only in its external characters, but, to some extent, in the manner of its nourishment in its special needs, and in the proportions of the materials it draws from the soil—slight differences, it is true, and yet sufficient to exercise a distinct influence upon the yield. It has been truly observed in criticism of too thick seeding, that the most powerful enemy the wheat plant has to compete with, is the wheat plant itself; this is particularly the case if the plants which find themselves in strife, belong to the same variety, for the roots of each plant are continuously in contact with those of adjacent plants, which at the same time and at the same depth, are seeking in the soil precisely the same food. If, however, two different varieties have been sown together, the competition will be less severe for each. Another advantage of sowing mixed seed is that it yields in general, a grain of better appearance, and this is especially the case when a white or yellow grain is sown with a red one, or a soft-grained variety with one of which the grain is horny or polished. In this way is obtained what is termed upon the markets wheat *panaché* (*i. e.*,) variegated or mixed; ordinarily, these samples sell better than those of pure wheats."

The high reputation of M de Vilmorin will stamp these views as well worthy of consideration, however novel they may appear to American farmers. The R N.-Y. has therefore requested some of its correspondents to give their opinions on the matter. These opinions follow:

FROM PROF. J. W. SANBORN.

The principles involved in mixing different varieties of wheat, if the practice is wise, rest either upon all those sound and, as I believe, vital principles involved in crop rotations, or upon crossings that may occur by natural processes. Botanists seem to agree that wheats do not cross readily; indeed it has been held that they do not cross at all, but are self-fertilizers or, in other words, in-breeders. It has always seemed to me that our new sorts not artificially produced, are to be accounted for upon the principle called variation, or by some "sporting." I believe that cross-bred plants are more vigorous, and should it be that mixed grains result in crosses, these by virtue of their vigor would come to the front. But that such is the fact will not be admitted, nor is there evidence enough to support such a view. Among other good things that he has done the editor of the RURAL NEW-YORKER has shown the possibility of wheat crossing, and it has been shown by others also.

So far as the idea of rotation is involved, we certainly cannot claim much of the distinguishing advantages of rotation for M. Vilmorin's recommendation, for that rests upon principles involving the use of plants of other species and genera. The leading characteristics of different varieties of wheat must be essentially the same; that is, their composition, root area, time of ripening, the acids in their roots for soil solution, etc. It is probable that slight variations in those capacities and directions of development would amount to something. There are variations in the races of men and in the varieties of corn. The question occurs, however, would it not be better to select the variety the sum of whose good qualities is the highest? I see no field of probable gain save in the root action of wheat, the roots of mixed sorts more completely filling the soil and solving it in diverse directions; and then too there is a possibility of crossing. Of course, weak-strawed kinds would be supported by the stronger sorts.

I find that the millers raise no objection to such mixing of seed; indeed they mix the varieties in grinding. There is the objection that mixed wheat will not ripen together and that the tall sorts will shadow the shorter ones. This objection I regard as of some importance as there is a right moment for cutting the crop, which varies with each sort. This could be partly made good by harvesting the earlier sorts a little late. But even then we are confronted by the fact that wheat loses in weight after it has once become ripe, while yet remaining on the stem. Again, the more vigorous sorts of wheat must impair the growth of the less vigorous ones, as Darwin shows, occurs when two plants of diverse vitality occupy one pot. If the distinguished French seedsman rests his belief upon impressions, I should feel at liberty to doubt the value of mixing seed wheat unless crossing occurs, in which event I should be unqualifiedly for it. If M. Vilmorin has made an exact test of the matter, then I am in a position to accept his conclusions, for I have no controversy with facts and detest wise controversial speculations in their presence.

So far as informed, I should now select the most productive wheat that the millers will accept and that which is adapted to the soil I may have in hand. This wheat I would hold up as best I could by the most rigid course of selection. By this process as one of the factors, our entire wheat crop has averaged 39 bushels per acre for the last three years.

Columbia, Mo.

FROM PROF C. S. PLUMB

While I do not know how wheats are graded as to price in France, I do believe that the American farmer who grows mixed seed cannot compete in the home market with the farmer who produces a good, even quality of grain I certainly believe that Vilmorin's idea is more theoretical than practical, and for the following reasons:

1 My observation is that wheat cross-fertilizes very sparingly, hence the results through this medium would be immaterial.

2. Some varieties of wheat are of entirely different character, in maturity, hardiness, size of plant, etc Now, the more the extremes are mixed, the more uneven the sample would be. If a late variety be sown with an early one, the latter will be ready for cutting before the other is fit. If a variety that rusts badly be sown with one quite free from this malady, the former may help break down the latter in lodging. But, assuming that two varieties that are quite closely connected be planted, it seems to me that the more nearly these varieties resemble one another the better for the grower.

3. Patrick Shirreff, of England, was probably the most skillful theoretical and practical wheat culturist in the world. His policy was to breed up one variety, and by that means, pursued for many years, he produced a variety of wheat that brought the very highest market price, and his wheat became world-famous.

4. The miller desires the cleanest, evenest, plumpest grain he can get. The more closely all the grains a farmer delivers resemble one another, and approach or excel a certain mercantile standard, the nearer he approaches the highest market price.

5. In reference to the roots of different varieties of wheat seeking food in the ground, I seriously question if there is a man living who has the data at his command to show that the healthy roots of one variety will seek any different chemical food from that sought by the roots of another equally healthy plant of another variety. This must be simply theory, for it is now positively known that the roots of the wheat plant penetrate much deeper in the soil than was thought up to a very recent date.

Though we have a vast number of names of wheats, it is my opinion, based on considerable field work, that of distinctive varieties we have but comparatively few. I advocate crossing varieties by artificial means, thus attempting improvement. However, if we would have the best wheat, we must grow it on land that is rich in plant food, and adapted to that plant. If our wheat deteriorates, I do not believe it the fault of the variety; in all probability it is owing to deterioration of the soil, caused by starvation treatment.

Univ. of Tennessee.

FROM F. P. ROOT.

The mixing of different varieties of grains in the growing of a crop is claimed by many to be advantageous in the yield, and also, in many cases, in the quality of the product. It is a theory and also a practice not new in this Genesee valley, a noted grain-growing section from the earliest days of its settlement. Fifty years ago and upwards, following the practice of my father, who was a very successful wheat grower, I grew mixed wheats exclusively for several years. The two varieties grown together, were the White Flint and the Red Chaff Bald, and also a white wheat. The gain claimed was that a surer and better yield was usually obtained because the former was a more hardy and stronger-growing variety and the latter a more prolific yielder with stronger and coarser straw, which aided to hold up the flint variety which was liable to fall on a rich soil. This practice of mixing varieties of wheat was quite common in this section for several years; but it gradually disappeared on the introduction of other improved varieties of grain but the practice of mixing varieties of seed in wheat growing is by no means absolute at the present time; for in our market at Rochester, regular quotations are given for mixed, as well as for pure varieties of wheat. It is claimed by some theorists that different varieties of wheat draw from the soil different elements of plant food, and hence two or more varieties may be grown together with less exhaustion of some elements of plant food than when but one is grown. I think, however, that this is rather a slender basis on which to base an argument in support of a theory, for the differences in the elements contained in different varieties of wheat are very trifling; but there may be at times some practical benefits in this theory, like the following: One variety may grow a stronger fibrous root, and hence it will resist heaving by the frosts of spring better than another which is more prolific and less hardy, and when these two are sown together, if the weaker one fails, the stronger may not fail. It may be asked, then, why not sow the stronger variety altogether? The answer is, that the choicest varieties of wheat, such as are the most desirable in market, are, as a rule, less hardy in resisting the casualties of the growing season than the coarser and less desirable sorts. Again, when one variety grows a taller straw than another, the heads are less crowded and a better circulation of air and sunshine is obtained at ripening time and one variety that grows a very stiff straw may hold up another that grows a weaker straw, but which is more prolific. After considering all these trifling benefits to be obtained from a mixture of seeds, I think it tends to negligence and carelessness on the part of the farmer in procuring the best and purest seeds, which is of far more importance than the fancied benefits of mixing varieties. Mixing seeds is quite too common among a large class of farmers, such as mixing rye with wheat, chip, cockle, quack, red-root and many other noxious seeds, much to the damage of the crop and of the farmer. In general, the farmer who takes pride in having clean and pure varieties of wheat, oats, barley, corn, potatoes, etc., is the best farmer and will be more successful in his business than the one who gets things mixed in his crop or in his head.

Monroe County, N. Y.

FROM PROF SAM'L JOHNSON.

I have had no experience in the sowing of mixed wheats; but from the well-known reputation of M. DeVilmorin, I should think his statements worthy of careful consideration. It occurs to me that not much stress should be laid upon the theory that "the different varieties of wheat differ from each other in the manner of their nourishment and in the proportion of the materials they draw from the soil." These differences must be so slight, if they exist at all, that it seems that we must look elsewhere for the reason of an increased yield, if such is the result of sowing several distinct varieties together. Without speculating further upon the reasons given for this practice, I shall be very glad to note this as an interesting question for investigation in our experimental fields.

In this connection I may add that in a conversation on grain-growing with Regents Hiram Smith and H. D. Hitt, of the University of Wisconsin, the latter gentleman informed me that he had sown spring wheat with his oats last spring, and that it was a common practice in his vicinity. It was there claimed that without any diminution in the yield of oats, often 10 or 12 bushels of wheat per acre were obtained from this sowing of mixed oats and wheat. Peas and oats are often sown together, the latter serving to hold up the peas and prevent them from lodging so that they fill better, giving an increased yield, while a fair return of oats is secured. The amount and kind of food elements taken up by these different grains differ more or less in kind and in degree, and this would indicate why the practice might prove profitable under certain conditions. (Mich. Ag. College.)

FROM PROF. E. M. SHELTON.

I think well of the suggestion of sowing mixed varieties of wheat together, provided, of course, the differences between them are not too great. Besides the advantage of having wheats that feed differently growing together, as suggested, the fact that they ripen at different times would be quite likely to prevent their "lodging" in many cases; and it would not be unlikely that the danger of complete destruction of the crops by insects would be averted. The practice of growing mixed grain crops for stock feed is an old one. In England mixed oats and peas are a favorite crop with stockmen. In this section of the Great West, millet or Hungarian is quite commonly sown broadcast with sorghum, the resultant crop being a very heavy yield of curable and highly nutritious fodder.

Kansas Ag. College.

FROM COL. F. D. CURTIS

The plan of M. de Vilmorin has the merit of novelty. I fail to see how one wheat plant will or can assist another in its growth. A coarser or ranker wheat would, of course, send its roots down deeper into the soil; but how this could add to the yield of the more delicate or lighter-growing kind is not apparent. It is, however, plain to me that the underlying plants would rob those feeding nearer the surface of moisture and plant food, just as trees unfit a plot of ground for the production of other vegetation wherever their roots fill the under strata of earth. If these wheats did not flower at the same time there would be no stimulus to production, nor would there be any hybridizing of peculiarities If wheats of different character were sown, and both threw off their pollen at the same time, there might be a mixture, and perhaps a mottled wheat as the result of the combination or union of different colors. The new seed would have a future, being perhaps in part like one parent and perhaps in part like the other: or it might be mostly like one. The idea is interesting for the sake of the amusement it may cause, and testing it in practice will help to multiply kinds; but in the trial crop each kind must depend on the characteristics it has received by heredity. There is no nerve force or magnetic power to be absorbed or borrowed. I have often planted corn in this way, and the result was mixed kernels in the ears, but I have never noticed that the lesser stalks were made greater, or that the larger were magnified; each followed its own bent.

Saratoga Co., N. Y.

Dairy Husbandry.

FARMERS' PROSPECTS IN ENGLAND.

PROFESSOR J. P. SHELDON.

All-round improvement in stock-raising prospects due to abundance of forage and shortage in cattle and sheep; prices greatly increased; of late milch cows have paid best; good prices for milk, butter and cheese; arable farming still depressed; the check to agriculture likely to be permanent; other industries reviving; great advantages of American farmers.

SO FAR as stock-raising, grass-land farmers are concerned, there are several points this spring in marked contrast to the spring of last year, as indeed there were between last fall and the one preceding it. These changes, on the whole, are improvements, and people are in better spirits than, perhaps, they have been during any other year in the current decade. There is a large, all-round increase in the value of the live stock of the farm, and this is owing to two prime causes—the one a favorable and the other an unfavorable cause. The first of these is found in the plentiful surplus of forage which is now left unconsumed on most farms, as compared with the great scarcity of it which prevailed a year ago; the other is the serious decrease which has taken place in the number of live stock—that is of cattle and sheep more particularly. Our national agricultural statistics are collected on the fourth of June, each year, and they form a valuable guide to the comparatively small but increasing number of farmers who take the trouble to study them. On June 4, 1887, we had in Great Britain a total of 6,441,268 cattle, of all ages; and of sheep, 25,958,768. During the succeeding twelve months, these totals had gone down to 6,129,375, and 25,257,-149, respectively, showing a decrease of cattle amounting to 311,893, and of sheep to 701,619.

This diminution in numbers is owing mainly to the dry summer of 1887, in which all kinds of crops were very light, and which caused the slaughtering of a vast number of half-fat cattle, to save the cost of wintering, and to make up the supply of beef required by

the people. This supply was diminished because fattening cattle did not attain the size and weight they ought to have done, by a good deal, and it was not made up from American, Canadian and foreign European sources. The price of beef increased a little in the autumn of that year, instead of diminishing as is usually the case; and this increase in value of beef, coupled with a very short supply of grass and roots, caused a large number of cattle to be sold to the butchers, which

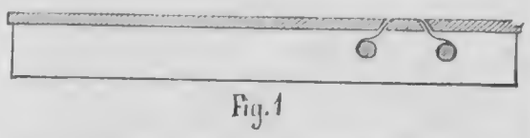


Fig. 1

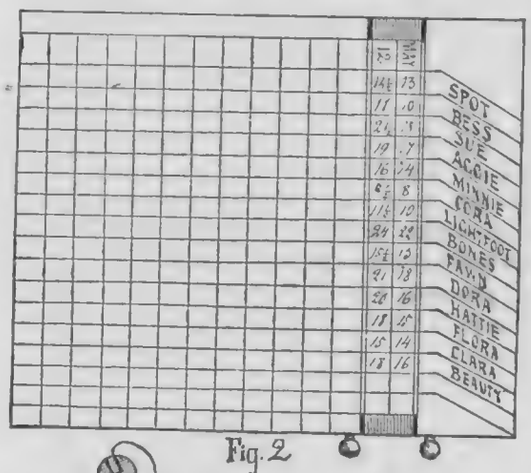


Fig. 2

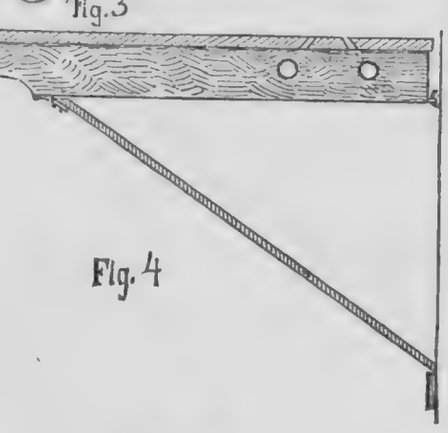


Fig. 3

Fig. 4

Fig 143.

would otherwise have been wintered. As it was, however, many districts had difficulty in wintering their remaining cattle, and hay went up to $30 and $35 per ton, and straw up to $25, in the spring of last year. I have never known cattle so low in price as they were in the fall of 1887, and though they did not improve in value in the following spring as much as might have been expected, still they paid very well for the wintering, to those who had forage enough of their own without buying. The summer of 1888 was a wet one, and crops were abundant, while cattle were much diminished in number, so that in the fall of 1888 bovine stock were worth 60 or 70 per cent. more than they were a year earlier.

During the last winter, cattle have not paid for wintering, save cows in milk. All other sorts of store stock have for the most part been wintered at a loss, although they are now worth $15 to $20 more than they were this time last year; and this illustrates the great increase of value which took place between the spring and fall of last year, and the still greater increase between last fall and the one before it. Calving cows are now worth up to or over $100 each for good specimens; they may, in fact, be said to run from $70 to $100, in round figures. Barren two-year-olds are worth $40 to $60, yearlings from $30 to $40, and heifers and cows $60 to $80. Sheep have advanced correspondingly in value, for yearlings are worth $8 to $11 each, and mutton 16 to 20 cents per pound, while the top price of beef remains at about 16 cents.

Here we are, then, with a greatly diminished stock of cattle and sheep, and higher prices corresponding thereto, or resulting from it, I should say. A great deal of forage is left over from last winter, and we are having an early, grassy spring. The milk trade, owing to scarcity of cows, has improved, and stock-raising promises to pay well for at least two or three years to come. Cheese is worth eight to 12 cents, and butter 20 to 24 cents per pound, with good promise of an increase at all events in cheese. It will therefore be perceived that our dairy farmers' prospects are a good deal more cheerful than they have been for many a long year of weary depression. Sheep farmers, too, have reason to be more hopeful, though wool remains, and is likely to remain, low in value. Our arable farmers, unfortunately, have no such reasons for jubilation, and are not at all likely to have, I fear; and so it is that more land is each year being laid down to permanent grass; and the soil of Old England is going more and more out of cultivation, out of deference to the great grain-raising regions of the New World on your side of the Atlantic.

We are slowly emerging from the period of depression which set in 10 years ago in real earnest, but it cannot be doubted that British agriculture has received a check which will not be wiped out, probably, in this century. The trade of the country is again improving, manufacturers are busy, new mills and workshops are being put up in hundreds, and population is increasing rapidly, and we have no virgin soils, as you have, to feed our people from. So long as our commerce continues to expand the old ship will float on bravely enough; and it may help us somewhat if the foolish nations on the Continent fly at each others' throats again, as they most probably will before long—and we keep out of the rumpus. All the same, however, we may well envy you, far removed as you are from the feuds and hatreds of race and country in Europe. Fortunately for us, we are removed from them by a silver strip of sea, narrow though it be; but you are removed by the wide Atlantic, and may pursue your magnificent development in peace and absolute security. To farm in England is better than to farm on the Continent of Europe, but not so good as to farm in America, so far as prospects are concerned.

Surrey, England.

UTILIZING THE STRIPPINGS.

L. S. HARDIN.

The old Kentucky method of saving the strippings; city milk suppliers make butter of them; strippings the richest part of each milking; the reason for this; comparative richness of the morning's and night's milk; discussion on the matter,

I am asked to tell readers of the RURAL what I know about "strippings," and how they are treated by those who supply city milk routes. My earliest recollections of farm life recall the practice of our Kentucky negro "mammas," who did the milking and always carried a large quart cup to the cow-yard. Their practice was to draw about three-fourths of the milk into the large cedar bucket and then finish the milking into the tin cup which was emptied into a pail reserved for this purpose. These strippings were poured directly into the cream jar, while the other part of the milk was set for the cream to rise in old-fashioned glazed crocks.

This method of saving the last and richest portion of the milk for butter-making is still practiced as a general thing by milkmen who supply town routes. There is, however, an exception to this rule and it comes about in this way. Every milkman makes his contracts for delivering milk nearly up to the maximum supply of his herd, always leaving

Fig. 144.

a margin for meeting an extra demand for milk. When this demand arises he of course puts in the strippings, and, if his conscience is not too tender, a little water to keep the milk from being too rich. When this extra demand falls off he reserves the strippings once more and makes butter of them, at the same time selling the buttermilk. It is of course impossible to keep the supply of milk and the demand of the customers exactly in the same proportion, so that there must always be a margin of extra supply to meet emergencies, and this extra milk must be turned to profitable use, and no better method has been found than to make butter of it. This can best be done by holding back the strippings, even though doing so lowers the quality of the milk supply, which does not usually trouble the milkman very much. The extra demand usually comes in hot weather, when bar-rooms and babies take an extra supply along with berries and ice-cream. At that time there is apt to be dry weather that injures the pastures and produces flies, all of which tend to cut short the milk supply.

There has been a good deal of scientific discussion of late years as to whether the milk drawn in the morning or that drawn at night is the richer and the whys and wherefores of it, but I believe there is no dispute about the fact that the last part of the milk drawn from the udder is much richer than the first part. The old theory was that the cow had already created the milk and held it in completed form in the udder and that the richest part being the lightest, kept at the top of the udder, while the watery part being the heaviest, descended to the teats and was, of course, the first to be drawn by

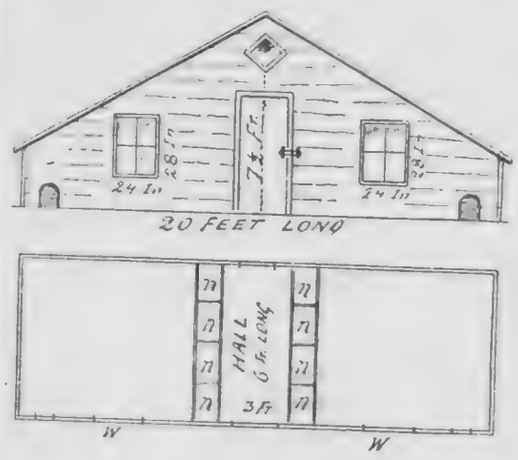


Fig. 145.

the milker. This fact that the richest milk comes last is a severe stumbling-block in the way of the new theory that the bulk of the milk is created by the cow during the act of milking. How this fact can be reconciled with the new theory I do not see.

To go back to nature: we know that the cow's milk is intended for the support of the calf; that while the calf is very young it needs milk comparatively poor in butter fats, and as it grows older it needs more fat. To meet this demand we find that the milk of all cows grows comparatively richer as they progress from the time of parturition. These two conditions seem to meet the exact requirements of nature; but why the last of each individual milking should be richer than the first part is still unaccounted for. It may be that nature reserves the creamy portion for the finishing part of the calf's meal as a sort of dessert to quicken the appetite and induce it to suck the cow dry for her benefit, which is certainly a good thing for her.

If my recollection serves me aright, all well authenticated experiments prove that the morning's milkings are always not only the largest but the richest, a circumstance that goes to prove that the night's rest is conducive not only to the production of a greater quantity but of a richer quality of milk. We know that exercise of the cow tends to lessen the supply of butter fats in the milk. Even the swinging and kicking of the lower part of the udder as the cow walks, may have considerable effect in lessening the amount of butter fats in that part of the udder.

This, of course, is only guess-work, but it is the best one can do until science definitely settles the question. I have known cows that gave almost pure water from the teats at first, while the last milk drawn would form clots of butter on the sides of the pail. It looks very much as though gravitation had more to do with this than anything else. The fact remains, however, whatever the theory may say, and is within the knowledge of every dairyman that the last half of the milk drawn contains at least two-thirds of the butter fats of that special milking, and all dairymen have long since learned that if any portion of the milk is to be retained for butter-making the last third is the part for them to hang on to. This is usually done in town dairies by the milker first taking two-thirds or three-fourths, as the case may demand, of the milk from four or five cows, emptying the bucket into the wagon can and then returning and milking those cows dry, and pouring that milk into the can that stays at home. This custom may not reach a very high plane of morals, but it is strictly business.

KEEPING A MILK RECORD.

I HEREWITH send the RURAL some sketches of a device (see Fig. 143) in use at the University barns for keeping records of the milk of individual cows. The idea was obtained from a similar device illustrated in a bulletin from the Minnesota Experiment Station, and used for recording the data of feeding experiments. It consists of a box a little wider than the paper to be used, in which are two rollers about the size of curtain rollers, shown in section in Fig. 1. The paper used is ruled both ways, and is fastened to the rollers by a long stick which fits into a groove cut in the roller, as shown in Fig. 3. Between the rollers the paper passes up and over a narrow board or stick, where only a very narrow strip of it is exposed. Two lines are used for each day's record: one for the morning and one for the evening milking. Fig. 4 shows a way of hanging the device against the wall where a table is not used; when not in use it is let down against the wall. J. M. D.

Cornell University.

The Poultry Yard.

PLAN FOR POULTRY HOUSE.

THE poultry house shown at Fig. 145, is arranged for two breeds. It is 20 feet long, six feet wide and 7½ feet high. The lower end of the roof is 2½ feet from the ground. The house faces the south, and the interior is lined throughout with tar-paper to make it warm and keep it free from insects. It contains a hall with a room on each side. Each room is lighted by a window 28x24 inches, three feet from the ground. The roosts are even with the windows, and the drop-boards are eight inches below. The nests are below the drop-boards, and can be easily reached from the hall by simply turning a wooden button and letting down a door which extends the whole length of the partition, as seen beneath. The hall is three feet wide and six feet long, and contains two small ventilators, one above the door and the other at the opposite end of the hall. The partitions that inclose the hall extend almost as high as the door, and are so constructed that they can be readily removed. This plan is very simple, and the house is easily constructed, and combines all of the conveniences possible in so small a space. C. R.

Richmond, Indiana.

A DAKOTA POULTRY HOUSE.

MR. C. W. FABER, of Potter County, Dakota, has a house for his hens like that shown at Fig. 144. A shows the shape of the house and the small window in the roof. B shows the interior; a a a are nests; c c c are roosts and b is a water fountain. C is a door also shown at the top of the cut. This house can be made of any desired size; Mr. F.'s house is six by eight by nine feet. This, he thinks, is amply large enough for 15 to 20 Black Spanish hens.

Rural Topics.

MACHINERY IN THE HAY FIELD.

PROFESSOR A. J. COOK.

Defence of the hay tedder; instance of its advantage; in favor of the hay loader; how it is used.

I WAS much surprised to read the article by Prof. I. P. Roberts in a late RURAL NEW-

Fig. 146.

YORKER. His opinion cuts so directly athwart my experience and the opinion of some of our best Michigan farmers, that I cannot well understand it. No one can doubt Prof. Roberts's ability or candor, and the only possible explanation I can offer is that he either had poor machinery, or else the latter was run by incompetent men. The latter suggestion could not apply to Prof. Roberts, as he is a most cautious person and a natural mechanic.

1. "Hay tedders are too expensive for most farmers, considering their liability to get out of repair and the little time they are in use. Then, too, unless they are used with the utmost judgment, they seriously injure the quality of the hay."

In reply, let me say that I value the tedder very highly. I have used mine now for several years and it is still in excellent condition,

practically as good as ever. All farm machinery must be cared for and used carefully. Thus treated, the tedder is durable, as my experience plainly shows. The theory of my boyhood was that the best hay was always cured in the windrow or cock. My experience is that time, expense, safety and excellence are all best secured by the free use of sun and wind, and, I may add, of the tedder.

I never saw better hay than we secured last year. We cut it as soon as the dew was off. As soon as wilting commenced we set the tedder at work; but stopped its use before the hay was dry enough to break. Usually by two o'clock—last season was very dry—we could commence drawing. Now how quickly and easily is all this done. The hay is in the barn the same day that it is cut. There is no risk from rains, no expense of caps, raking or cocking. We like the style; and this method demands the tedder.

The next sentence in the Professor's article is entirely at variance with our experience. "Hay loaders even at the best, can hardly be recommended for general use." I am glad their special use is not interdicted; as we should hardly know how to spare ours. Michigan is much like Western New York, and I know that the loader is a grand success in Michigan. I can't help wondering if Professor Roberts has used the Keystone or seen it used.

My attention was first called to the loader some years since by our excellent Governor, C. G. Luce. He told me that he valued it very highly. Soon after I saw one of our best farmers, Mr. Sower. He said he would almost as soon give up his mower as his loader. But said I, "Is it strong and durable?" "I have used mine," said he, "several years and it is as good to-day as ever." I bought the Keystone loader, and it is a very substantial aid. Haying on my farm is now changed from the hard, tedious, anxious work of the past to the easy, quick, pleasant work of to-day. My men like haying as well as any work of the farm. We commence with the loader at about two o'clock, taking the hay without raking, just as it was left by the tedder. If we have only one man to load, he has to work lively. By the use of slings unloading is also quickly done. Thus by the use of that grand triumvirate, the mower, tedder and loader, we save an immense amount of hay in a day in the best condition. In case we have heavy clover—which we have not had since we have used our loader—perhaps we could not work so rapidly unless we had very close bays or used the silo. Just before night we put on the rake, and go over all the ground This rakes up any left by the loader or that has been dropped from the load; and this is still green, bright, and unbleached. The last load taken is from the small windrows formed by these rakings. Last year we had no use for the rake except to do this clearing up. We have never done our haying with anything like the satisfaction which we received the last two years; and the whole difference came from the use of what we pronounce the admirable Keystone loader. Thus it is that when I see so good a friend receive the black e , I feel like stepping to the defense, even if the person who deals the blow is greatly my superior in both knowledge and experience.

Miscellaneous.

WHAT IS TO BE THE OUTCOME?

T. D. CURTIS.

Dangers of monopolistic combinations; violent and peaceable methods of riddance; national co-operation to supersede monopolistic co-operation; all large undertakings of a public character to be under government control—run by the people for the people, not for a few plutocrats.

I HAVE been much interested in the series of articles contributed to the R. N.-Y. by Prof. W. I. Chamberlain, of the Iowa State Agricultural College, on the subject of monopolies. He is a square, outspoken man, and presents the subject in a forcible light. But it appears to me that no legislation yet proposed promises a radical remedy for the stupendous evil of the day from which we all suffer, while through it a few become millionaires—a class unknown before the war of the rebellion.

"Men may come and men may go," but must this evil, like Tennyson's brook, "run on forever?" Is it a possible thing that evil can be pursued indefinitely? Or will there come a limit to the career, reaction set in, and the opposite extreme be reached, bringing annihilation to the evil and destruction to those who have been its devotees? I believe every evil, in the end, brings its own remedy, and that every wrong must be righted. The pendulum is not truer to the law of gravitation than justice is to the law of equity. Action may have a narrow or a broad sweep, but the reaction will correspond. Though it may continue for a while after the equilibrium is broken, the return is as sure as that of the pendulum when it moves beyond the line of gravitation.

What is the cause of the present co-operative movement on the part of each industry? It is the reaction from the old competitive system, which has brought us down to shoddy, adulterations and cheats and swindles of all kinds, for the purpose of securing a profit from the consumer. It is co-operation on a narrow base for monopolistic purposes. Every combination has the same end in view—to get rid of competition in its own ranks, and to compel the general public to pay whatever is demanded. In some cases, it may even reduce prices to the consumer; but prices, sooner or later, are sure to go up. The different combines will be so many organizations for fleecing the public, and each will want to get the biggest share of the fleece. So each will gradually move to put up prices, and the roar of the giants will begin. Instead of competition in detail, we shall have competition between the organized industries—all scrambling to get the most of what there is, regardless of the consumer and the toiling and producing millions, save so far as they can be made a source of dividends.

But there is a limit to the burden-bearing capacity of the camel's back. The last straw will come at last. Then what? I shudder to contemplate the answer. But let us hope it will be a peaceful solution of the trying problem. I can imagine leaders among the trusts wise enough to listen to the voice of reason and humanity, and to submit to the demands of the public welfare. I can imagine the people made wise enough through experience and suffering to drop all party politics, turn their backs on the demagogues, and to demand through the ballot-box such an administration of the government as shall secure the ends of justice and equity. And I can imagine a much more fearful conclusion. But I hope for the best.

What shall be the remedy? All palliative legislation will fail; and there is no sense in legislation which public intelligence does not indorse, and public sentiment will not see enforced. Premature legislation, however just, would retard instead of helping reform. But it is likely that many ineffectual measures will be tried before the people will clearly see and demand the true one. That I conceive to be *national co-operation.*

At present, the best service which the people get is the postal. This is run by themselves through their government. They must take possession of all railroads of the country, and build as many new ones as may be needed, as a part of the postal system. It must carry passengers and freight, as it does mail matter, at bare cost and the expense of repairs. They must in conjunction with these, take the telegraphs and telephones. The mining and other public interests must be assumed and run in the name of and for the people—and so on, as far and as fast as the public demand and the necessities of the case will permit. These being already organized under trust management, they will be ready to be delivered up to the people. The same officers may continue to run all these industries and the same operatives, with others, may continue to be employed. But the officers will work on salaries and the operatives will be paid equitable wages as government employés. The transfer and transition from competitive co-operation to national co-operation will be natural and easy. The system once begun, its extension will readily follow. Other nations will be compelled to imitate our example, national co-operation will prevail, and then competition will equalize the condition of humanity throughout the world. It will do then to begin to talk about the coming of the millennium.

CORRESPONDENTS' VIEWS.

POTATO YIELDS.—I have followed with interest what has been said about the RURAL'S potato contest, and I think it has done remarkably well, considering the unfavorable season. The weather here was so dry in the fore part of the summer that the growth of our potatoes was checked, and then they made a second growth when the rain came. Then the weather became so wet that we had hard work to secure our crop. The largest yield of potatoes I ever had was 220 bushels of Early Maine, 60 pounds to the bushel—from two barrels of seed. The land had been in early cabbages the previous year, and had been manured with 80 Scotch cart-loads of rotten barn-yard manure to the acre. No manure of any kind was applied to the potatoes. I planted in rows 30 inches apart, 10 inches apart in the row. I tried the trench system with one peck of Puritan potatoes. The land became so dry that it fairly cracked. There was a fine growth of vines, but not many tubers. I applied rotten manure—a complete fertilizer for potatoes—and hard-wood ashes, and only had three bushels of tubers. Perhaps some other variety would have yielded better. I generally grow from 15 to 20 acres of potatoes. I notice that where I do not hill them up with a drill or shovel plow they are apt to grow out of the ground and get sunburnt. Some varieties, like the old Garnet Chili, produce their tubers deep in the ground, while those of the Early Rose type grow near the surface. One implement we use extensively in this vicinity is a potato separator. With it three persons can easily bag 200 bags per day. It puts the large ones in a bag and those of medium and small size in separate boxes, and the earth falls from the potatoes into a box underneath. I also use it for sorting onions. R. B.

Montreal, Canada.

NEVER KEEP HENS FOR EGGS AFTER MOLTING.—There is one thing in regard to the poultry branch of farming—and with the majority of farmers this branch is essential to a well regulated establishment—that I will not be caught doing again: I will never be caught keeping hens over the second year, for I have decided to my entire satisfaction, that it doesn't pay to keep them over the molting period for the purpose of laying eggs the following season, unless they are very valuable for breeding purposes. It is far more profitable to kill them off as near molting time as possible, and depend on early-hatched pullets for the winter supply of eggs, and on later hatched ones for eggs during the rest of the season. Many farmers have a hobby; all should have *one* at least. I believe I have two for a certainty—one is raising potatoes and the other raising chickens. I find both very interesting. A. P. A.

Meadville, Penn.

Farm Economy.

DEVICE FOR RELIEVING A CHOKING COW.

(*See page 379.*)

AT Fig. 146 is shown a device for removing a potato or other obstruction from the throat of a cow. I have used it several times for this purpose, and know that it does the work well. Take about eight feet of common pail bail wire; double it in the center and make a loop of about one foot by two inches. Twist the rest of the wire so as to form a handle. If the obstruction in the animal's throat is loose when this is inserted, it will push it down; if it is not loose, the end of the loop will slip past it, and the obstruction can be readily pulled out in the loop. L. J. P.

Lowell, Mich.

Everywhere.

RURAL SPECIAL REPORTS.

Kansas.

PARSONS, Labette County, May 17.—The weather for this month has had no precedent in Kansas. Commencing Sunday May 5, the wind blew without intermission from the fifth to the ninth, making 120 consecutive hours at a speed varying from 25 to 40 miles per hour. Since the ninth the winds have not ceased and have attained velocities ranging from 15 to 30 miles per hour, with a few gusts of 40 miles which toppled over smoke-stacks, and slight barns. The water-fall has also been peculiarly liberal. During the month we have had heavy rains every five or six days which were so nicely timed that no serious disasters occurred. But the farmers are having a poor time in their attempts to raise a crop of corn. No sooner have they been compelled, as it were to plow, cultivate, and plant, than another down-pour occurs.

Every fifth or sixth day a rain occurs. The rain-fall this month, so far, is not less than eight inches, which is nearly one-third of the average rain-fall for the year. In spite of these obstacles to progress, the usual amount of planting and replanting has been done and farmers are not faint-hearted.

Wheat, oats, etc., are fine and the chinch bugs must be exterminated if water can do it, Grass is good and stock is healthy and doing well. One of our farmers lost 19 fine steers by one stroke of lightning. Fruits of all kinds promise well, especially the small kinds. Canker-worms have done general damage to the apple trees. They disappeared before our big rains occurred. It is supposed by some that the mild winter allowed the pests to survive more generally than usual. Corn stands now from one to eight inches high. Merchants complain of bad trade, and it is not surprising when the cholera takes the hogs one season, and corn brings 22 cents the next one.

J. B.

New York.

MEDINA, Orleans County, May 21.—Our leading and most popular apple, the Baldwin, is entirely a failure in Orleans and Niagara counties. There is a prospect of a fair crop of Greenings and other apples. The peach crop is almost a failure. We shall probably have a few for home use, but none to ship. Every indication points to a large crop of pears, plums, cherries, quinces, etc. The season is very forward—at least two to three weeks ahead of the average. Wheat and spring crops are looking well; corn is being planted, and everything, except prices, looks as if this would be a prosperous year for farmers. C. S. M.

Virginia.

WARE'S WHARF, Essex County, May 23.—Farmers are fully one month behind with plowing and planting. Wheat is promising; oats do.; clover extra good. Peas are now being shipped to Baltimore and canned here, most raisers contracting for not less than $1.50 per barrel at the canning-house; the crop is short owing to so much rain. R. L. W.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

COWS OR SHEEP.

"*Young Farmer,*" *Mercer County, Pa.*—"Which will pay me better, to keep cows and sell the cream, or to keep sheep? Prices here last summer were as follows: Lambs, five cents per pound; mutton four cents; wool 30 cents; stock ewes $3 to $4 each; good cows from $35 to $40; cream per gauge, January, 24 cents; February, 23–24 cents; March and April, 23 cents; May, 20–22 cents; June, 14–16 cents; July, 12–15 cents; August, 15–16 cents; September, 18 cents; October, 18–20 cents; November, 20–22 cents; December, 22–24 cents. I have a few high-grade Jerseys and I could feed skim-milk to hogs which bring six cents dressed. I have about 150 acres of cleared land with good barns"

ANS.—This question has been referred to a number of our correspondents. The replies from those who care to offer an opinion are given below. It is very hard to give advice in such a matter, because it is evident that an answer that would apply admirably to one man or one farm might not fit at all in case of another man or another farm. There are men who take naturally to the care of sheep, who might not succeed with cows; while others, perhaps, like to handle cows but would fail with sheep. Again, some farms are naturally adapted to dairying, while others actually need sheep. All these facts have to be considered in answering such a question.

FROM C. R. BEACH.

Any man who has the ability to manage a flock of sheep or a dairy of cows successfully, can, with the aid of a slate and pencil, answer those questions for himself much more correctly than any one who does not know him or his surroundings, and if he has not such ability the most exhaustive and philosophical answer will be of no help to him. I will only add that with a dairy of well-bred and well selected cows, properly fed and cared for, he has no business to sell cream by the gauge, for he will be cheated every time.

Whitewater, Wis.

FROM W. P. PRATT.

I can give no facts or figures different from those published in the RURAL NEW-YORKER January 19, never having had much experience in selling cream, nor of late years a great deal to do with sheep. Barring the closer confinement which the dairy enforces all the year round, my "theory" would be

that selling either cream or butter would be more to his advantage and that of his farm than raising sheep. A few sheep may be advantageously kept; but to devote his entire area to sheep grazing could hardly be wise. A great deal is published in favor of sheep husbandry as a mode of enriching land, keeping down weeds, etc., but my general objection to fully stocking a farm with sheep is that they "bite too close," killing out not only the weeds but the sweet grasses, compelling frequent cropping to the ultimate impoverishment of the soil. Especially is this true in soils naturally thin and already worn, where thistles, white and yellow daisies, etc., etc., have become as it were indigenous. Sheep will kill out on such lands a fresh seeding every two or three years, thus giving to the noxious growths full swing, for which the plow is the usual and necessarily often-applied remedy.

Steuben County, N. Y.

FROM EDWARD VAN ALSTYNE.

I would say to this inquirer that if he can keep only one kind of stock, let him keep cows. I do not know just what he means by a gauge of cream, as the milk would vary with the different modes of setting. I have therefore figured on 15 cents per quart which is the ruling price in New York State, many getting much more. Eight sheep at $3.50 per head cost $28; but he can scarcely keep eight sheep and their lambs where he could keep one grade Jersey cow. From eight sheep he ought to raise that number of lambs, which if they weigh 80 pounds will bring $4, or $32 for the eight, at five cents per pound. They should shear five pounds of wool each, which, at 30 cents per pound, will bring $1.50 each, or $12 for the lot, making the gross sales $44. Taking a little more than his average price for a cow, viz. $45, he would have to invest more capital in the cows, but the profit would be enough greater to make up the difference. An average grade Jersey ought to give 400 quarts of cream, in 300 days (an extra-good one will give 450 to 500 quarts), leaving 65 days for standing dry, which is too long a period; 400 quarts of cream at 15 cents per quart would bring $60; and the skim-milk, worth from $10 to $15 more, can be fed not only to hogs, but to calves and poultry as well.

The labor would be more with the cows, the amount of manure made would also be greater, but it would not be so valuable as that of the sheep. On his cleared land he should practice soiling, and have a silo, whereby he can keep many more cows on the same ground, than by the old way of pasturing and hay raising. On an average farm I recommend and practice keeping both cows and sheep.

Columbia County, N. Y.

FROM C. H. FLETCHER.

If I should figure out the question on the basis of this or last year's prices, and say that cows would pay better than sheep; suppose dairy products go down and sheep and wool go up, that "young farmer" would soon find that the sheep were paying the best, contrary to my figuring. In fact, the cow might pay me the better of the two, while the case might be the reverse with another. A great deal depends on the adaptability of one's farm. It may be especially adapted to either dairying or sheep husbandry, or both. If it is low, flat, damp land and not well drained sheep will not pay. These animals require dry, hard ground for pasturing; low, wet ground is conducive to most diseases prevalent among them; besides, the grass grown on low, damp ground is not as sweet or as well adapted to promote a healthful and profitable growth in the sheep as that produced on drier ground. If the farm be hilly or composed largely of gravel of a dry nature, I would advise this inquirer by all means to keep sheep. If it be low, flat and of a damp nature I would greatly prefer cows. If the land is part dry and part wet, I would say let him try mixed farming, if it is possible to do so; then he would have a chance to experiment and find out for himself, a far safer way of doing than to rely entirely on some one else's judgment. Mixed farming I believe will pay as well and be a great deal safer.

There are a great many points to be brought into consideration in answering this question, far more than can be discussed here. In fact, it would be an impossibility for a man living in another State and unacquainted with the correspondent's farm and surroundings to answer the question as it should be.

Chautauqua County, N. Y.

FROM IRVING D. COOK.

My answer to the above important problem can hardly fully relieve the anxiety or expectations of the inquirer. In the first place, were it possible to designate certain reasons why either one of the two industries referred to would meet with better financial success in a certain locality, at the same time giving "facts and figures" to substantiate it, the conditions and circumstances existing in another might be such as to cause an entire reversal of what would have seemed a wise course to pursue. While therefore it seems impossible to establish any definite rules, to be followed year by year in relation to this matter, would it not be well for "Young Farmer" by his own experiment to settle the question for himself. As he has about 150 acres of cleared land, good barns, etc., also several head of high-grade Jersey cows, it is to be assumed that he also has the conveniences at hand to manipulate the milk and cream either at home or at a near-by creamery or cheese factory. He can thus faithfully devote the care and attention required for a maximum production in this direction, carefully calculating the expense as nearly as may be. He can also invest in sheep to the extent his accommodations will allow, selecting those best adapted for success. The most desirable at present perhaps are those belonging to the coarser-wooled breeds, as they are better suited for supplying the increasing demand for the choicest quality of mutton, and also for the production of the early or "hot-house lambs" now so popular in our Eastern markets. A favorite and common method practiced by our Western New York farmers is to feed lambs during the winter, when at the age of eleven or twelve months they are in condition for market, usually selling on the farm at about six cents per pound and this is considered the most profitable feature connected with sheep-raising at the present time. Of course our friend will not allow himself to be confined solely to these two branches of husbandry, thus risking all his eggs in two baskets as it were; but he should adopt a system of mixed farming, growing the different fruits, especially the apple and pear, for market purposes, together with the grain crops indigenous to his latitude and locality, reserving each year a liberal area to be planted to the most popular variety of market potatoes: all of which with proper care and cultivation, will, as a rule, bring satisfaction and profit, and it will undoubtedly be made manifest in the meantime, which if either of the above industries will be the more desirable.

Genesee County, N. Y.

SKIN DISEASE AND COLDS IN A HORSE.

J. R., Marshville, N. Y.—1. A skin disease like mange breaks out in blotches on one of my horses the year round, doing so worse in warm weather than at other times. What should be the treatment? 2. What should I do for another horse that is troubled with a bad cold?

ANSWERED BY DR. F. L. KILBORNE.

1. Give six drams of Barbadoes aloes with one ounce of ginger in a ball or drench, to open the bowels. Repeat the dose in 36 hours if no effect is produced by the first. Then twice daily in the feed give two tablespoonfuls of the following powders: Carbonate of potash and sulphate of soda each one pound, powdered gentian root one half pound, and powdered nux vomica one-fourth of a pound, mix. Feed moderately on a laxative diet. Give no corn or other heating agents. 2. Rest in a dry, well ventilated stable, and a restrictive, laxative diet usually constitute all the treatment necessary for a common cold. If the bowels are inclined to be costive five or six drams of aloes may be given to advantage. If the animal be feverish, give 25-drop doses of tincture of aconite two or three times daily, and one ounce of nitrate of potash night and morning; or if the animal shows signs of weakness give one to two-ounce doses of sweet spirits of niter instead of the nitrate of potash. If the cold be accompanied by a cough, mix 25 drops of tincture of belladonna and one tablespoonful of powdered nitrate of potash, with sufficient honey or sirup to form a thick paste. Give this dose two or three times daily by placing it well back on the tongue and teeth, to be slowly swallowed. If there is hard breathing or a discharge from the nose, steam the head by feeding a hot bran mash, made by pouring boiling water on four quarts of coarse bran, and feeding it immediately in a bucket. If hungry, the horse will work at the mash while hot, but if he does not do so, hold his head over the bucket until well steamed.

RUPTURE OF STOMACH IN A MARE.

J. D. L., Moore's Salt Works, Ohio.—What caused the death of my mare? Her time for a colt was up. She had been worked moderately hard during the spring, and when not worked was pastured. On April 25, she was at work in the forenoon, and was turned to grass in the afternoon, when she seemed in good health. At four o'clock she was found sick and sweating. She would lie down, but would not struggle; then she would get up, walk about a little and lie down again. It was supposed she was trying to foal; but in half an hour she was dead. In 2½ hours she was opened; she was then swollen so much that some of her bowels had burst out through the vagina. The colt was found all right in the womb; but the stomach was bursted for about 27 inches. The contents of the stomach and bowels were rather loose. In each ventricle of the heart there was a good handful of matter resembling gelatine formed in cooking beef. Near the top it was colored and had the appearance of clotted blood.

ANS.—If there was no error in your finding the stomach ruptured, the rupture was undoubtedly the immediate cause of death, it probably being due to gaseous distension of the stomach, from indigestion or colic. The condition of the contents of the bowels or heart was probably normal, or such as you would expect to find in an animal dying in that way. The mass in the heart was simply clotted blood.

DEATH OF A CALF FROM INDIGESTION.

J. H. A., Randolph, Vt.—I had a very fine, large, Short-horn bull calf which was bright and fat when dropped. Though to all appearances healthy, he soon began to bloat, and when he sucked the cow he bloated worse, yet he seemed strong and active. I took him from the cow and fed him twice, and each time he bloated. When I went to feed him the third time he refused to eat and appeared in great distress. I gave him two injections and some physic, but he died soon. On opening I found nothing in his stomach but a few lumps of curds and some fluid of a light greenish color and somewhat acid.

ANS.—The symptoms indicate indigestion, which may have been due to the calf being kept from the cow, with too long intervals between feedings; or to the milk being affected through the diet or condition of the cow, so that it did not agree with the calf. If the cause could have been discovered and removed, probably no treatment would have been necessary.

A PARASITE OF THE POTATO BEETLE.

S. L. A., Roslyn, N. Y.—I send the RURAL specimens of the Colorado potato beetle covered so thickly with parasites that in some cases the pest is entirely concealed. Is the parasite known to entomologists?

ANSWERED BY PROF. J. H. COMSTOCK.

Yes; this parasite of the Colorado potato beetle is a well known one. It is a species of mite not infrequently found infesting the potato beetle in New York State. Its scientific name is Uropoda Americana. There is a figure of it in Riley's ninth Missouri report, page 41. When this mite infests a potato beetle it is apt to occur in such great numbers as to completely cover the infested beetle. But I have not observed instances in which any considerable number of beetles were infested by it. I hardly think we can hope this mite will play a very important part in keeping any check on this scourge of the potato.

TO REMOVE WARTS FROM A COW'S TEATS.

W. H. J., Joliet, Ill.—1. How can warts be removed from a young cow's teats? 2. What kind of onions are the best to sow in the fall to produce early green onions in the spring?

ANS.—1. There are several remedies for warts; the following was published in the RURAL last year: Apply nitro-muriatic acid to the warts every other day. Hold the teats so that you can apply the acid drop by drop, and rub it in, using the bruised end of a soft stick the size of a pencil. Be careful not to get the acid on the other portions of the teats or udder, or to apply so much to the warts that it will run off. The calf must be kept from the cow while applying this treatment, and the acid should always be applied after milking. 2. Any good kind, red, yellow or white, as preferred.

INCUBATORS AND POULTRY BREEDS.

M. B. T., Ashville, N. C.—1. Where can I get a cheap, but good, incubator? 2. What are the best three breeds of chickens for laying, sitting and the table?

ANS.—1. Cheap in the sense of low-priced and good are not always synonymous terms. S. W. Guthrie, Homer City, Pa., makes a good incubator. There are cheaper ones, but they are not always reliable. 2. Wyandottes, Plymouth Rocks and Leghorns or Light Brahmas are as good as any, although the choice of a breed must be determined largely by personal preferences, conditions under which they are to be kept, and the object in view. The Leghorns are useless as sitters, and are inferior to the other breeds mentioned as table fowls.

SOUTH CAROLINA PHOSPHATES.

E. O. H., Windham, N. Y.—Who sells South Carolina phosphates in the form of floats?

ANS.—J. Campbell & Co., 59 Wall St., New York, who deal in South Carolina rock write as follows: The present price of South Carolina phosphate rock in the ground form is $15 per ton of 2,000 pounds f. o. b. in New York in car-load lots in bags. The crude rock having recently advanced, ground has gone up proportionately. There is no difference in price between floats or ordinary ground rock. Mona Island W. I. guano is in even a finer state of division than South Carolina floats and contains seven to 10 per cent. of available phosphoric acid, besides 15 to 20 per cent. insoluble. This we sell at $21.

ABOUT TEOSINTE.

J. M., Sarnia, Canada.—What has been the RURAL'S experience with Teosinte?

ANS.—Teosinte was raised at the Rural Grounds 10 or 12 years ago. The plants make little growth until settled warm weather and then grow luxuriantly. The stem is short-jointed as compared with corn and will continue growth if cut back. Our season is all too short either for the plant or for seed to mature. A single seed will produce a great number of stems or suckers. The plants were with us about four feet high when killed by early frost. This is botanically Euchlœna, by some called Reana luxurians.

Miscellaneous.

S. M. K., Williamsport, Pa.—What is the proper time to start a strawberry bed?

ANS.—We should select August, late or early, as the weather may be dry or wet.

G. R. W., Lyndon, Ky.—What is the parentage of the following grapes: August Giant, Amber Queen, Rochester and Woodruff Red?

ANS.—August Giant is said to be a cross between Black Hamburg and Marion. The parentage of Amber Queen is not known to us. Rochester and Woodruff Red are pure Labruscas.

B. R., Broad Ford, Pa.—What is the cause of the appearance of lice on currant bushes and various trees, and what is the best way to destroy them?

ANS.—These plant lice attack many different kinds of plants. If the plants are very vigorous they do little mischief: if the plants are weakly they injure them accordingly. The cause of lice is simply that they exist in great numbers and naturally seek their food. The best remedy is the kerosene emulsion.

H. K. G., Columbus, N. J.—I have a cow that has a swollen tongue, with a swelling under the jaw, and her cud often gets fast in her mouth so that she cannot swallow until relieved. She has been in this condition for over two months. Within this time she has had a calf which will weigh over 150 pounds. She has become very thin, but is otherwise apparently well. What is the trouble?

ANS.—A personal examination would be necessary to ascertain the cause of the trouble, which may be the result of disease or an injury.

E. W. H., Bowling Green, Ky.—I dried off a cow about four months ago when she was giving about a quart of milk a day. In about two months I noticed that one of her teats was larger than the others, and an examination showed that there was blood in it. I have milked it out two or three times. She is due to calve in about 30 days. What should be done to preserve the teat in good condition?

ANS.—The teat or quarter was probably injured in some way. If hard or swollen, bathe frequently with hot water, and if tender, apply belladonna ointment after each bathing. Keep well milked out.

G. S. C., Ashaway, R. I.—Six years ago I set out 50 Orange quince trees, as I supposed. They have borne a few fruits for the past two or three years. Last fall I noticed a difference in the fruits. Those from some trees were small and stunted; those from others large and yellow. The latter were one-third longer than the fruit from the other trees. They were round, with short necks, clean skins and no bloom. The other quinces had larger necks, were of a greenish-yellow color and had a fair bloom. I noticed to-day that the trees that bore large yellow quinces have pink buds, while the buds on the others are yellow. Are there two varieties?

ANS.—Probably the quinces with short necks are the Orange or Rea's; the others the Pear.

A. P., Hoboken, N. J.—1. What will kill blight on plants? Tobacco smoke has no effect. 2. Is there a plant called Brugmansia arborea? 3. How long would a Washington fillifera palm have to grow to show the true character of the species.

ANS.—1. By "blight" you probably mean some sort of insect vermin; while tobacco smoke destroys green flies and thrips, it does

not kill mealy bugs or red spider. Brush off these insects, then with a soft sponge and plenty of soapy water wash the plants thoroughly clean, and repeat this washing in a few days to make sure that young and old, eggs and insects have been destroyed. 2. Yes. Its proper name is Datura arborea. It is a native of Peru, and a large-growing but showy shrub, with white blossoms seven or eight inches long. 3. Much depends upon the health and vigor of the plant and the conditions under which it is grown. Not under three years from seed.

DISCUSSION.

SUGGESTED BY THE HARROW SPECIAL.

E. D., INGHAM COUNTY, MICHIGAN.—It seems to me that the full importance of the harrow as a farm implement is not generally appreciated. No other tool does so great a variety of work under such widely different circumstances, The work required of harrows is of the first order of excellence, and that any one kind can be the best for all the varying conditions of soil, season, and effect, promises to be a physical impossibility. Most farmers own but one, or, if they have a second, it is of the same kind as the first. Is this wise?

WHAT HARROWS HAVE TO DO.

1. To firm the seed-bed, to which end the implement must work deeply and thoroughly. I have recently seen many fields plowed and fitted for sowing, in which the surface looked well, but the foot, every now and then, dropping through into some hole only covered over, betrayed the fact that the beautiful surface rested on an unstable foundation. First of all, fit the bottom of the seed-bed, and then give attention to the top if both cannot be accomplished simultaneously.

2. The soil must be pulverized, and to this end all the ground must be handled to a reasonable depth, and the friction distributed evenly over the surface. Tools with large teeth and only a few fail utterly in both these requisites; they run shallow, and cut only portions of the surface.

3. The surface must be leveled and smoothed, and to this end the tool must run close to the ground and be able to move some earth.

4. Harrows are sometimes required to compact the surface; at other times to loosen and leave it as light as possible, requiring, in the first instance, pressure, and, in the second, none. For the first the implement should hug the ground; for the second it should run free and deliver the earth behind with an upward turn as does the Acme or Cutaway. From the nature of the case these varying and often antagonistic qualities cannot be found in any one style of implement. A man cannot afford to own but one. There are two well defined sorts, the deep worker and the smoothing harrow. One should have both.

WHAT HARROWS SHOULD NOT BE REQUIRED TO DO.

It should not be expected that harrows will do well after a poor job of plowing; or work well on sticky land, or when dull; or draw easily; or find their own shelter or go without; neither should they be expected to work well for any but their rightful owner.

Harrows must not tear up sods or litter; the teeth must be arranged in such mathematical order as not to trail; that is, those that cut next to those of the first row must not be in the second row, but back of the center. They should move the soil to one side rather than straight ahead: and, above all things, they should not be mounted upon wheels. I should like to see this tool more freely discussed.

FIGHTING THE FLEA-BEETLE.

W. B. ALWOOD, BLACKSBURG, VA.—I notice that the RURAL is again in tribulation about the Flea-beetle. Remembering its serious trouble last year and failure in the potato contest owing to this little pest, I venture to give a bit of my experience:

Last March, shortly after having planted early cabbages out in the field, we had some very hot, dry weather for that season of the year, and the Flea-beetles appeared in myriads. I never saw so many. Many of the plants were literally blackened with them, and it seemed as if they would entirely ruin the plants in a few hours. At once I made some kerosene emulsion after the usual formula originally given by Dr. Riley, and sprayed the plants thoroughly with it diluted ten times. The beetles took to flight very readily, but the preparation was driven among the plants with such force and in such a fine spray that many of them were caught and killed. I applied it with such force as literally to fill the air with the finely divided particles, and as a result I had next day the pleasure of finding the dead beetles scattered over the earth and plants in large numbers. This one application by no means ended the fight. I found it necessary to repeat it every few days for nearly two weeks, but as a final result I saved the entire crop, not half a dozen plants were killed. The same application was successfully used on small plants in the cold-frames.

For making this application I recommend the Japy double cylinder knapsack pump, with the Alwood lance and Vermorel nozzle. This pump was imported from France for my work while an assistant in the Division of Entomology at Washington, and since leaving there I have had several pumps made, after this pattern, by Robert Leitch & Sons of Washington. The lance is my own design and works admirably in throwing a direct spray upon plants. For underspraying I use the Raveneau nozzle on a Japy lance. This latter is unquestionably the best implement for the purpose yet made. This pump and the two lances make an outfit suitable for all kinds of work, and one far superior to anything else to be had in this country.

I do not know what strength of kerosene emulsion young potato plants will stand, but I am satisfied that an emulsion containing one part of kerosene to 20 of water can be used, and the plants should be thoroughly sprayed with an emulsion of this strength, or even with a stronger one, if it can be safely done. The application should be made in the heat of the day, when the beetles are most numerous.

A WORD FOR TRUSTS.

A CITY FARMER, PITTSBURG, PA.—I note that the RURAL has considerable to say about "trusts," always speaking against them, never "giving the devil his due." I am not interested in any way in any trust, but as a jobber I saw a great deal of benefit in the rubber trust, for this reason: previous to the combination the chief object of all was to make the lowest-priced garment, not the best. After the establishment of the trust the ambition of all was to make the best for the money, and thus secure the trade of jobbers and retailers, for there was a list price and certain discounts, and the rule no longer was, every fellow for himself. Don't you know some persons who have bought cheap (so-called), but in the end very dear, gossamers or water-proofs, because the price tempted them or they were not willing to buy a good article at a reasonable margin to manufacturer and retailer? And the first time it was wet, did they not condemn it and all through whose hands it came? Here is an instance: A large Broadway house offered an order for 5,000 gossamers to a firm if it could get them at a price which would enable it to make $1 the retail figure. Well! the manufacturer needed something to keep his factory open, and finding a margin of one cent per garment accepted the offer. The articles were made, delivered, examined, found satisfactory, paid for and sold to the retailers faster than hot cakes, because the price was less than those at which goods of that kind could be bought from combination firms. What were they made of and how? Muslin, lampblack naphtha and flour; short, scant and small in every way. The consequence was that if the retailer kept them until the naphtha had evaporated, he could take them out of the bags and shake the water-proofing (?) off. If the wearer were unfortunate enough to go out in the rain without an umbrella, she got wet and had nothing left but a black rag. Now, tell me, reader, was this trust a good thing for the consumer or was it an illegal affair to drain hard-earned money out of her pocket? Is it best to pay an honest price for a good article or to buy such as the above at slop-shop prices? Is it not best to give the retailer a living margin? He can pay the manufacturer a living profit, the manufacturer pays his hands better, the employés can pay more for their victuals and are better citizens, and the farmers can get better prices for their products.

CHEMICAL FERTILIZERS AT THE WEST.

PROFESSOR GEORGE E. MORROW, CHAMPAIGN, ILL.—I have no doubt the use of commercial or chemical fertilizers will become more and more common in the Central Western States. There has been a marked increase in the quantity used in Ohio in recent years. In Illinois and in States farther west their use is, as yet, the exception rather than the rule. There are good reasons for this. On most of our fertile prairie soils even liberal applications of these fertilizers usually give little increase of crop. On those which have had the available supply of plant food considerably lessened by long-continued cropping without fertilization of any kind, like applications often give a large increase of crop But when the farm products sell at low prices, only a large increase in yield will repay the cost of chemical fertilizers. As yet the time has not come for the general use of these fertilizers by the farmers of Illinois. Rotation of crops, with clover holding an important place; the encouragement of increased attention to live stock, with better care of and judicious application of barn-yard manure are the present practical points in this direction for us. Alongside these, however, something can be done to remove the lack of information concerning the nature of chemical fertilizers, and their use in experimental ways is to be encouraged. When live stock can be secured at even a slight profit it is not probably wise to make chemical fertilizers the chief reliance in maintaining the fertility of the soil. Rotation, clover and other green manures plowed under, good tillage and, last but far from least, stable manures will, probably, long be the chief reliance of Western farmers.

NEPAUL BARLEY AGAIN.

W. P. W., MONROE, WIS.—In the RURAL of May 18, a description of Nepaul barley is given, but the estimate of its value may be incorrect. Because it has been seized on by swindlers for the purpose of fleecing farmers is no proof that it is worthless. I received from a seedsman of Chicago, six bushels of a hull-less barley called Nepaul, which (with other varieties) I have sown for him for seed, and I am very sure that this seedsman will make only an honest and proper use of it. I have no interest in it except to grow it for him. It is nearly of the color of rye. The grains are very large and plump, and entirely free of hulls, and so far as I observed, remarkably uniform in size. A gentleman recently from the new State of Washington, where he has lived for some years, tells me that a kind, called the "bald barley," and which he thinks is the same, was several years since introduced there, he thinks from France, and he says it is much more productive than other kinds, and is extensively raised.

That which I sowed is making a fine growth; but, of course, I do not know what it will amount to.

EXPERIENCE WITH MELONS.

D. D. C., DAYTON, OHIO.—Last spring I planted the selected strain of Hackensack Nutmeg seed sent out by the RURAL NEW-YORKER in the previous year's Free Seed Distribution. The melons were very fine and large and none of them were rotten in the blossom end; while in half an acre of Hackensack melons, the seed of which was bought of seedsmen, more than half the largest melons were unsalable on account of being rotten in the blossom ends. I also planted one ounce of selected Osage melon (Vaughan's novelty of last year) costing $1. There were 185 hills and there were five seeds to each hill. From these I did not get one sound, ripe melon They all rotted at the end before they ripened. The dealer gave me a packet of the Osage seed free (with a later order). These were planted on pieces of sod in a hot-bed and some of them under glass bore melons which were very fine in quality; but some of them also rotted in the ends. From my experience of last season, I am led to the conclusion that seed saved from melons having rotten ends, will produce melons with the same fault.

The RURAL'S Hackensack seed was saved with care.

WHY I STEP ON POTATOES WHEN PLANTING.

E. S., YORKVILLE, ILL.—In the West we use either the stirring plow or cultivator for furrowing out potato rows. I object to the stirring plow because it is hard to regulate the depth of the furrow without making it so deep and wide that it is hard to drop the seed potatoes in a straight line, a failure to do which makes bad work when cultivating.

I use the cultivator, going twice in a row, the second time stirring the ground at least six inches deep, but the shovels are not large enough to leave the furrow open more than three inches deep, and by stepping on the pieces of potato I press them, without injury, about an inch into the mellow soil, leaving them about four inches below the level surface. Some may object to this because of the injury done to the sprout. I find it difficult to plant potatoes that are sprouted much without either breaking off or bruising the sprouts—which I consider as bad as breaking. I planted potatoes in the last days of April that were badly sprouted and they are up now (May 24) large enough for the plow.

CHICKENS AGAINST THE FLEA-BEETLE.

B. R., FAYETTE COUNTY., PA.—The Flea-beetles are the worst nuisances I know of, and they are worse here this spring than ever before. Dusting with soot, lime or plaster generally drives them away if this is carefully done every few days, but the only effectual guard against them is that employed by gardeners here to keep them off cabbage plants, etc, A lot of chicken coops are placed where the fleas are, with lots of chickens just hatched; the more the better. If there are a comparatively large number in proportion to the size of the place, they will effectually rid it of the pests in short order. That is the only way in which a neighbor of mine and myself managed to save our cabbage plants last year; but I am afraid it would not answer for potatoes, as the little chicks could not pick the insects from the potato stalks,

SOOT FOR THE FLEA-BEETLE.

F. M., STAMFORD, CONN.—For the flea-beetle try soot well sprinkled on the plants. The pests commenced upon my tomato plants, but soot has so far disgusted them. One of my neighbors tried it last year and had no trouble either with beetles or bugs, and so far this year he has had no trouble.

G. S. P., WINSLOW, ME.—To us in this grass-growing region, along the Kennebec, the RURAL Hay Number is very interesting. Three years ago I ascertained the cause of the "perfumed hay" Mr. Goffart speaks of. My hay is cut early, as a rule, but at that time a strip of poor, ripe, fine grass was cut late, cured and got in the same day. When raking it I noticed it had the powerful perfume which I had always supposed to belong to early cut hay alone. This odor I am sure came out the first afternoon, and by opening and sunning it the next day it would have been dissipated, as is usually the case. As it was, the hay retained the pleasant odor until it was fed, late the next spring, and no hay could have been eaten by the cows with a better appetite. I have noticed the same thing since, and am confident that too much curing spoils the hay. In this region we sell our best hay and feed our best hay; we have the cake and eat it, too. The prime, coarse Timothy goes to the Boston market, where it brings a high price. Few would feed it if they could. We prefer the finer hay—the Red-top, and clover—which makes more and better milk and keeps more of the elements of fertility on the farm.

The Champion mower is the favorite here. I have used it. I have also a Warrior. It is extremely light and strong, very easy for the team, and it has a seat so near the ground, and requires so little oil to keep it running, that it is a luxury to use it. My team are slow walkers, but as long as they move at all it does perfect work.

H. F., WAYNE COUNTY, N. Y.—In the RURAL'S report of the churn test at the New Hampshire Experiment Station, I think the fact is demonstrated that a single trial proves but little. In regard to the "perfect granulation of butter" at that trial, I have nothing to say; but if the report of that part of the trial is on a par with the other two points of superiority mentioned, I have my doubts as to its reliability. I have operated both the Blanchard and the Davis, and I venture the assertion that I can churn a given quantity of cream in a Davis churn with the same expenditure of force that would be required with a Blanchard containing half the quantity. But "the most unkindest cut of all" for the Davis is that it is more difficult to clean. Hundreds of Davis churns are in use in this county, and one of the strong points in their favor among the farmers' wives who use them, is that "they are so easy to clean." They are perfectly smooth inside and need not be lifted, and I do not see how it is possible to construct a churn that would be an improvement in this direction. A few such reports as this will do more to shake the faith of thinking, practical farmers in the reliability of such reports than can be counteracted in a long time.

I. J. B., TITUSVILLE, N. J.—Apple blossoms have been very abundant and probably most of them are fertilized. I find a great variety of blossoms. There is among them considerable difference in size and an endless variety of color. Who can tell whether color has anything to do with productiveness? The time of opening has an influence. The different stages of bloom on the same tree constitute a great insurance of a crop, and a provision against overbearing. The indications here are that apples will set too much fruit this year. I think the reason why some apple trees are not productive is because the blossoms are imperfect. I find the Primate with a short style, the stigma not united, yet almost so, the anthers out beyond the stigma—a poor position for fertilization. I find Smith's Cider with three to five stigmas on long styles so that the stigma is beyond the anthers, in the best possible position for fertilization. Is it possible that the fertilization of one or two of the stigmas, instead of all, is the cause of imperfect or one-sided fruit. If the corn grain fails because each separate grain is not fertilized, why should not the apple.

L. A. W., FARWELL, MICH.—This morning I was reading aloud the RURAL'S appeal for help in fighting the Flea-beetle, when "our girl" inquired if we had ever tried ammonia. Her uncle, she said, used ammonia in water, to keep the little flies and other insects from his cucumber vines and other plants, and

with complete success. She was not quite sure as to the strength of the solution—one or two table-spoonfuls to a quart of water she thought. My first impulse was to wait and test this remedy before writing to the RURAL, but my second and best thought was to submit the matter at once. My potatoes are not yet above ground, b't a neighbor reports that his vines are being destroyed.

A. A. C., AMES, IOWA.—As to the comparative hardiness of Red clover and Alfalfa, discussed on page 336, I think there can be no question. A six-acre field of Alfalfa sown here last spring was so badly killed during the past winter that only scattering plants remained and the field was plowed up. Fifteen acres of clover sown at the same time were uninjured except a little on an exposed gravelly ridge.

J. L., OCEANIC, N. J.—Has the RURAL tried "Hammond's Slug Shot" for the Flea-beetle and, in fact, all kinds of pests? If not, it should try it. I am only an amateur. I have nothing to do but to experiment for the best success with flowers, vegetables and poultry and I find nothing equals "Slug Shot."

R. N.-Y.—Slug Shot is virtually plaster and some form of arsenic intimately mixed.

What Others Say.

HORTICULTURE FOR WOMEN. MRS. B. Parsons, in Harper's Bazar, says that looking over the whole ground with the experience of nearly half a century, he sees no reason why horticulture for profit should not be largely in the hands of women. Each woman esteems herself competent to manage a house, although she may employ a man to care for the furnace, to cut the wood, or to cart the coal. So she could manage any horticultural business, men being employed to do the work requiring muscle. It is eminently proper that women should adopt the business of florists, whether as employers or employed. In the problem of happiness which all humanity is endeavoring to solve, labor is an important factor. Therefore the woman who adopts horticulture for its money-producing capabilities may obtain more lasting enjoyment than the pet of the drawing-room, who looks upon a flower as she would upon a brilliant gem or a beautiful picture.

There is more than a money appreciation in the woman who works herself among her trees and flowers, watching their growth and bloom as a mother watches those of her child. When she plants, her labor and her love can illustrate the lines:

"Wide let its hollow bed be made,
There gently lay the roots, and there
Sift the dark mold with kindly care,
And press it tenderly.
As 'round the sleeping infant's feet
We softly fold the cradle sheet,
So plant each shrub and tree."

It is this sort of mother-love which makes some women succeed with every plant they touch.

Looking upon horticulture as an avenue for many women to a living, there can be seen an opportunity for benevolent men who wish to make the wisest use of their money. A gift or bequest to a college or a library has become a very ordinary thing. Many wealthy men indulge in it. A gift or bequest to found a horticultural school for women would be unique, would be the means of relieving a large class, and would endear the giver to posterity.

PROF. COOK, of the Michigan Agricultural College, in his treatise on silos and silage, to which we have already several times alluded, says that he can grow the most corn with the least labor by planting it in drills. He advises that we plant, cultivate and care for ensilage corn just as we would to secure the best field corn. His silo is 20 feet high, and he would now add five feet more, if building another. With a good silo, he says, farmers can sell most of their hay at a large profit, and yet keep their farms in fine condition.

Silage is succulent food, and so, like green pasture, is appetizing, digestible, assimilable: just the food that suits the needs of the animal. It costs Prof. Cook less than 50 cents per ton for putting corn into his silo. Good silage increases the milk of cows and increases the butter yield. There is no injury to milk, cream or butter. Farmers must keep stock, cattle, sheep, hogs and horses on the land—the more the better. With silage properly secured we can increase our stock one-half. Many say that the stock can be doubled. Double the stock, double the manure, double the fertility, double the production.

The ears of the corn, as well as the stalks, are cut and run into the silos. There is no other way in which the corn can be harvested so easily and cheaply. In the silo the corn is softened so that no grinding is required; for even cattle will digest thoroughly this softened corn in the silage.

Beyond question, corn is the most profitable crop for silage. It is a very sure crop, and with a good yield of from 12 to 20 tons per acre As three tons of silage are worth one ton of the best hay, this is equal to from four to ten tons per acre. Again, this is the cheapest way of harvesting corn, and it can be put in a small barn space.

The silo can be opened and its contents fed out at once if desired; or it may remain closed, as will usually be the case, until cold weather sets in. It answers well as the main food ration for all kinds of stock at any season of the year. It is doubtless improved by adding bran, oat, linseed or cotton seed meal, when feeding the silage.

Silage is a pretty good food ration alone. If desired to add more albuminoids, bran and oil-meal are easily obtainable. It is quite likely that it may pay to make silage of clover and mix this with corn silage when feeding. Prof. Cook's success with corn silage has been so marked and satisfactory that he believes it to be of the first importance and highest value.

If the silo is full to the top, it should be allowed to settle a day or two and then fill to the top again, which should be twice repeated. At the last a foot or two of cut straw should be put on top, and this weighted by a few boards to hold it down. The old way of weighting with tons of stone, earth, etc., is shown, by ample experience other than his, to be utterly useless. It is labor thrown away. Prof. Cook has proved now for two years that the old rule to cut and fill one day and rest the next, that the silage may heat and destroy the germs of fermentation and thus fill on alternate days, is not necessary. He advises filling rapidly, as he knows it is safe and excellent in its results. There is no doubt that filling leisurely, as suggested will give just as good results, as many have proven this to be true; hence, if more convenient, the filling may go forward on alternate days only.

THE RURAL'S LUNCH.

THE SECRETARY OF AGRICULTURE, in reply to an inquiry made by the Farmers' Review, states, what all farmers ought to have known, that all information furnished by the several divisions of the Department is furnished gratuitously.....

T. D. Curtis says in the Dairy World that it may be set down as a rule that the very best butter-makers leave the poorer cream in the milk. There may be some exceptions, where other conditions come in to modify results; but these exceptions will probably be found no more than are necessary to prove the rule. Thorough experimentation will ultimately demonstrate that the butter-maker has the choice between better quality at a small loss of quantity and a small increase of quantity at the cost of a somewhat reduced quality. Extreme quantity and superior quality are not compatible by any known process. .....

Dr. Babcock holds that the sooner milk is set after it is drawn from the cow, the more complete the separation of the cream. The delay of a few minutes in his trials, had a marked effect on the per cent. of cream left in the milk, the amount steadily increasing with the increase of time. He thinks that the fall of temperature has little to do with the matter, as milk which had been delayed in setting, when afterward warmed up, did not part with its cream any better than milk delayed in the same way which was not warmed. This is contrary to what has been taught by good authority, and needs confirmation by additional experiments.....

Dr. BABCOCK recommends not only immediate but cold setting, as sudden cooling prevents the fibrin from coagulating. If he is correct, a vast amount of cream has been lost in the past by shallow setting in the air. But as salt prevents the coagulation of fibrin, why may not the addition of a very small amount of salt immediately after milking have the desired effect of keeping the fibrin in a liquid form?.....

THE new Bush Lima furnishes a starting point for a dwarf variety to take the place of the old Lima. The Bush Lima, though a good thing, is, nevertheless, the smallest of all Limas, and cannot yet entirely supersede the old large Lima. But having secured the habit it will not be long before we have the big bean on the small bush. As grown with Mr. Massey of Crozet, Va., as he states in Garden and Forest, last summer the Bush Lima, or Bush Sieva, was fully two weeks or more earlier than the pole Sieva, and more than that in advance of the large Lima. It will thus be of great advantage in localities too far north for the large Lima..... .....

EXPERIMENTS in heating greenhouses, made by the Massachusetts Experiment Station, designed to show whether steam or hot-water heating is more economical, gave the results that the hot water boiler consumed 720 pounds less coal than the steam boiler in February, and 688 pounds less in January, a saving of nearly 20 per cent.

At the same time the temperature of the room heated by hot water averaged 1.7 degree higher than that heated by steam.

The temperature was more even where heated by hot water, and consequently there was less danger from sudden cold weather. This was strikingly shown on the night of February 22nd.....

EVAPORATED SULPHUR is given as a remedy for rose-mildew, lettuce mildew and red spider..... ....

ARSENICAL POISONS at the Vermont Station had no effect upon the coddling moth

THE VERMONT REPORT also says that if a person has a small piece of ground on which he desires to get the largest possible amount of fodder for green feeding throughout the whole summer, Prickly Comfrey seems well adapted to his wants. The Report speaks well of Japanese buckwheat. .. ..

THIS STATION sent Alfalfa seed enough to sow one-fifth of an acre to 44 farmers of Vermont. This was two years ago. The first fall reports were received from 30 of these men—mostly favorable. Later reports received during the summer of 1888 showed that not one in the original 44 could be found to speak a good word for it. The spring of 1888 had found it missing. The chief reason assigned was that it had not wintered and was a fail ure..... .....

MR. CLAUS SPRECKELS says that as regards making sugar from beets in this country it is a new undertaking, and if his enthusiasm does not lead him too far, it is bound to be a success. The sugar that is made from the beet is more powerful, that is, it possesses a greater sweetening faculty than that which is made or purported to be made from the sugar cane. Besides as to its purity, it can be best manufactured by being kept from adulteration ...

THE California Pioneer Press says that the cultivation of sugar beets on the Pacific coast is said to be a success. What is wanted now is the cultivation of some scheme to beat sugar trusts and other beats as well.. ....

JOHN GOULD says, in the Western Rural that he sold $114 worth of milk from one acre of ensilage and $22 worth of bran and clover hay. The milk brought $1 40 per cwt.....

OUR READERS are again reminded that the new Japan buckwheat is liked by all who have raised it in so far as the R. N. Y. has heard. It is preferred to any other variety.

THE GRUBS of the asparagus beetle are now doing their destructive work. Dust them with lime ... .

IT would have sounded strange, a few years ago, if a man like Prof. A. J. Cook, of the Michigan Agricultural College, says Hoard's Dairyman had said it was a wasteful practice on the part of a farmer to pasture his cattle on good arable land. But he says it now; and though the stupid million are skeptical still, there are growing thousands who know it is true. These will practice on the knowledge, and get rich ere the balance will "catch on."... .....

ABSTRACTS.

——HEMINGWAY LONDON-PURPLE CO.: "THE RURAL NEW-YORKER was the first of the farm press to use 'London-purple.'"

——A. W. CHEEVER: "I have never been able to see any marked difference in the quantity or quality of milk produced on account of feeding or withholding salt. I think animals may acquire a taste for it that may approach a mere habit."

——PUCK: "Secretary Rusk to President Harrison: 'Another chap wants to know if it improves the common breed of sheep to cross them with the hydraulic ram.'"

——LIFE: "The virgin forest has never been axed."

——MEMBERS OF THE HORNELLSVILLE (N. Y.) FARMERS' CLUB.

——"I DO not believe that any real bad person ever cultivates flowers."

——"WHEREVER I have found flowers in the yard I have found sunshine in the home."

——"AS A general thing, you won't see the rough element of the human family taking to flowers."

——"I THINK those who cultivate flowers are far more apt to clean up the rubbish, cut the briars and straighten the fences."

——"WHEN I go by a house where flowers are well-cultivated, I think there must be cultivation inside. When a man can sit down in his own yard and enjoy flowers, he grows better day by day."

——"I BELIEVE in the male members of the family giving assistance to the ladies. Let us give them more time for thus beautifying our homes by making everything about the house as convenient as possible for them."

——"I HAVE traveled over a considerable portion of this country and have noticed that wherever attention was paid to the culture of flowers, there was a higher moral tone to the people; they were more cultured, more refined."

——"I THINK flowers not only help to beautify our homes, but to make them more valuable. They help to elevate the tastes of those who cultivate flowers. The husbands and sons who help to elevate the flower garden will be refined and elevated by their influence."

——'THE BEST EDUCATION I ever had was what my mother gave me as I worked with her among the flowers. You can't start a real home without something to beautify it. We go to the flower garden to get the decoration for the grave and for the bride. Let one of the family pass through the flower garden; he can hardly resist plucking a flower here, pulling a weed there or helping a struggling climber to a firm hold. Suddenly his eye catches some new beauty; he calls some one else to admire it; then another member of the family is attracted to the spot, and before you know it you have a family gathering about one of the most beautiful altars God ever gave to man."

Horsford's Acid Phosphate.
Ill Effects of Tobacco relieved by its use.—*Adv.*

Miscellaneous Advertising.

Scrofula

Probably no form of disease is so generally distributed among our whole population as scrofula. Almost every individual has this latent poison coursing his veins. The terrible sufferings endured by those afflicted with scrofulous sores cannot be understood by others, and their gratitude on finding a remedy that cures them, astonishes a well person. The wonderful power of

Hood's Sarsaparilla

in eradicating every form of Scrofula has been so clearly and fully demonstrated that it leaves no doubt that it is the greatest medical discovery of this generation. It is made by C. I. HOOD & CO., Lowell, Mass., and is sold by all druggists.

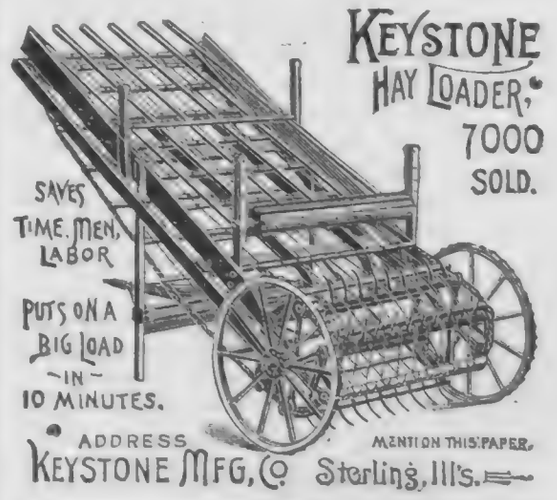
100 Doses One Dollar

JOHNSON'S ANODYNE LINIMENT ESTABLISHED 1810.

For Internal and External Use.

Stops Pain, Cramps, Inflammation in body or limb, like magic. Cures Croup, Asthma, Colds, Catarrh, Cholera Morbus, Diarrhœa, Rheumatism, Neuralgia, Lame-back, Stiff Joints and Strains. Full particulars free. Price 35 cts. post-paid. I. S. JOHNSON & CO., Boston, Mass.

Beecham's Pills act like magic on a weak stomach.



CANADA HARD-WOOD UNLEACHED ASHES

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THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, JUNE 8, 1889.

SYMPOSIUMS.

WE are ready to discuss on the "symposium" plan any farm or horticultural questions that our readers may need light upon; that is, questions which seem to be of general—not merely individual—interest. Let us hear from you R. N.-Y. readers.

"I was everywhere impressed with the idea that the young native-born women of Massachusetts could do better in every way by cultivating small fruits than by toiling in the factories, as so many of them do."—MRS. FISHER, page 385.

ONE of the recognized dairy rules that is most frequently broken is that of permitting the milk to stand in the milking pail for a time before straining it into the pans. The necessity of getting the milk into the pans as soon as it can be placed there is not generally understood. Many good dairy folks from one cause or another allow the milk to become cold in the pail before straining it. This is entirely wrong and if any of our readers will take the pains to investigate the matter the reason will be readily seen.

Mr. C. S. Rice, who contributed one of the most valuable articles in the R. N.-Y. hay special, writes as follows:—

"My method of curing hay is the same as Mr. Terry's, and after reading Prof. Roberts's article referring to hay loaders and curing hay in the windrow, I was glad to have Mr. Terry for company. Prof. Cook expresses the right view of hay-loaders." He also adds:

"I do not think that you have ever published a more valuable number than the hay special. It alone is worth the year's subscription price."

"I will only say that with a dairy of well-bred and well selected cows, properly fed and cared for, no one has any business to sell cream by the gauge, for he will be cheated every time."—C. R. BEACH, page 380.

THERE is quite a discussion going on as to the value of the hay tedder. Much of this argument is useless because it is not based on conditions that are similar. A good deal of the value of the work done by a tedder will depend upon the way the grass is left by the mower. Some mowers leave the grass in such shape that a tedder will be of little value; in fact, hardly needed. Other mowers spread out the grass so that it needs to be shaken up in order to cure properly. Parties arguing this matter ought to state whether they use a side-cut mower, or a direct draft.

OUR farm contemporaries are now beginning to tell their readers that there is no way to protect their rose bushes, grape-vines, etc., against the dreaded rose beetle but by hand-picking. The R. N.-Y. readers may be assured that one heaping table-spoonful of pyrethrum or Buhach powder in two gallons of water sprayed upon the infested plants will rid them of every rose bug in half-an-hour. The remedy must be repeated every day for several days. The R. N.-Y. made this announcement several years ago, and why our esteemed brothers of the farm press do not tell it to their readers is one of the things we cannot explain.

LAST week the R. N.-Y. referred to the fact that there is a fair demand for apple wood. We are now able to state more about the matter. The wood is largely used for making shuttles. Lithographers use it in making presses, and furniture dealers like it for certain kinds of work. Dealers buy the trees while standing and cut them up, though they are prepared to buy logs or boards also. Trees should be at least 15 inches in diameter. There seems to be little choice as to varieties. The price paid by one New Jersey dealer is four cents per foot in the log. Perhaps there may be a chance to develop this business and make more out of the old orchards.

MANY farmers in this country are growing wheat at what practically amounts to a loss. Other sections can produce wheat and send it to such farmers cheaper than they can raise it, and yet they continue to sow about the usual quantity. Such farmers realize fully that wheat does not pay them. Why then do they sow it? Because they believe that wheat is about the only suitable grain with which to sow grass seed. They cannot bring themselves to sow the grass seed alone. Even if they thought it might grow well alone, they cannot bring themselves to view the loss of the grain crop with philosophy. Many of them would find rye a more profitable crop, while others would find, if they tried it, that they can safely sow all their needed grasses with oats.

ON another page of this issue Mr Hardin speaks of the value of "strippings." Prof. Babcock considers this subject in Bulletin No. 19 of the Wisconsin Experiment Station. The following figures show the average of a number of analyses. The difference is between the first pint of milk drawn from the udder and the last pint.

	Water.	Solids.	Fat.
First pint.	88.45	11.55	1.20
Last pint..	80 58	19.42	9.99

The Connecticut Station has also reported results similar to the above. Prof. Babcock in speaking of the various explanations offered for this phenomenon, says:

"I am of the opinion that much of the milk is elaborated during the milking, and that in its passage through the small vessels of the udder the fat is retarded and consequently more of it is obtained at the end of the milking."

"A man cannot afford to own but one harrow. There are two well-defined sorts, the deep worker and the smoothing harrow. One should have both."—Page 382.

SECRETARY RUSK recommends the reorganization of several divisions of the Department of Agriculture, and among several other additions to it, he urges that the Department should be allowed an Assistant Attorney General, such as all the other Departments have already. The act giving the Department its present executive functions made no provision for such an officer. The old law allowed the Commissioner to employ counsel out of the general fund of the Department, but doing this is prohibited to the executive Departments because they are supposed to rely on the Attorney General and his assistants. A great many legal questions come before the Department, especially in connection with the Bureau of Animal Industry whose duties in restricting and suppressing contagious pleuro-pneumonia often bring it in relation with the laws of the different States. Of course, the new Department should be as well equipped as the old with all the means of thorough efficiency in its work.

IN the article entitled "What Are The Agricultural Colleges Good For," printed two weeks ago, Professor Porter was made to say that these institutions were founded upon a "folly." This was a mistake. Professor Porter wrote "fallacy." This article has been criticised quite severely by graduates and officers of agricultural colleges. We shall begin the publication of some of these criticisms next week. Some of the writers find fault with the R. N.-Y. for ever printing the article. That is nonsense. These colleges ought to be fully able, by this time, to take care of themselves. The R. N.-Y. believes that the main points made by Professor Porter will be answered satisfactorily. President Goodell, of the Massachusetts College, calls attention to Professor Porter's statement that less than one-quarter of the graduates of that institution are connected with agriculture. The figures printed in the college report show that nearly one-half of the graduates are working in some line of agriculture. At the Michigan College the proportion is even greater.

"In general, the farmer who takes pride in having clean and pure varieties of wheat, oats, barley, corn, potatoes, etc., is the best farmer and will be more successful in his business than the one who gets things mixed in his crop or in his head."—F. P. ROOT, page 378.

THE R. N.-Y. does not agree with Mr. Proctor's views—see page 385. The flesh of the strawberry is the receptacle or the end of the peduncle or flower-stalk. The real fruits are the seeds, it is true. The drupelets or fruits of the blackberry and raspberry are joined to a long, fleshy receptacle which might be compared to the flesh of the strawberry. A kernel of corn or wheat is really the fruit, the same as the seeds of the strawberry are the fruits. The kernel of corn is borne in a spike the axis of which is the cob or rhachis. This may and does develop even though not a kernel forms. It develops with the flowers of corn and grows as the plant grows and matures. The "cob and the berry," do not "fulfill exactly the same purpose" by any means, as Mr. Proctor states. Actual tests have been made and it has been found that purely pistillate flowers if protected from pollen, do not form berries. It will be found that many of the so-called pistillates do develop a few small stamens and anthers which probably furnish pollen enough for pollenating the stigmas and fertilizing the ovules.

A GREAT deal of interest has been aroused among farmers in the Northwest by the recent dispatches from the Department of Agriculture relating to flax culture for manufacturing purposes. Hitherto wherever flax has been raised in this country it has been chiefly for the seed which yields linseed oil and cake. There is a strong and growing impression that this country is on the verge of a great revolution in the production and manufacture of flax. Its culture would add another "money" crop to the general agriculture of the country, and keep at home tens of millions of dollars now sent abroad every year in payment for foreign flax seed and fabrics. Why shouldn't this country produce all it needs of flax as well as of other fibrous plants such as ramie, hemp and jute? There are sections of the country well adapted to the culture of all, and American inventive ingenuity should soon devise machinery for handling them easily and economically. Already a machine has been invented for separating the flax fiber from the stalk without wetting, and this alone promises to give an enormous impetus to the flax growing industry.

"To farm in England is better than to farm on the Continent of Europe; but not so good as to farm in America, so far as prospects are concerned."—PROF. SHELDON, page 379.

THE American Meat Company which proposes to rival the "Big Four" in the dressed meat trade, has greatly strengthened its chances of successful competition by the agreement it has just made with the American Cattle Trust. The latter association composed of over 150 of the chief cattle kings and syndicates of the plains and prairies, was organized about a year ago for the purpose of marketing the live stock of the members and of others on the best terms and at the lowest rate of commission, and also to secure better transportation rates on railroads; for it was reasonably believed that a combination of many large shippers would have much more influence than any of its individual members. The arrangement into which the two bodies have entered provides that the company shall slaughter and market all the cattle belonging to the various members of the trust and its patrons for a specified rate of commission. This agreement must be of no small pecuniary interest to both organizations, which together stand an excellent chance of a fair measure of success in their rivalry with Armour and his confederates. The far Western stockmen and the consumers generally are likely to be the gainers by the competition in prices of live stock and of dressed meat; but the cattle owners of the rest of the country are pretty certain to suffer from it.

PHOTOGRAPHS.

THE R. N.-Y.'s plan of printing photographs of farm animals and objects is going to take well. We have already received a number of answers to our request. Most papers show the animals that breeders think farmers ought to buy. The R. N.-Y. will attempt to show exactly what farmers use in doing their work. When we see what we have we can compare notes. Among the interesting pictures to come, we are promised one from Mr. T. B. Terry that will cause not a little excitement. It will show his horses—the ones fed on clover hay exclusively—hitched to his big wagon by means of his convenient three-horse rig, with the various tools used on his farm about the wagon. Many of our readers will open their eyes wide when they see the machines that Mr. T's. 50-acre farm provides work for. This will make a fine picture. We would like one like it from your farm. Some of our readers have provided themselves with portable cameras, with which they propose to show whatever is very bad and whatever is very good in the farm "properties" of their neighbors. On the whole, it looks as though this new plan will add considerably to the R. N.-Y's. interest. We hope so.

A PROMISING NEW HYBRID ROSE.

TWO more of the R. N.-Y. Hybrid Rugosa roses are now in bloom. One of these bears little flowers about two inches in diameter with five petals. The petals are at the base a sulphur yellow, rather paler than the color of the male parent, Harrison's Yellow. This runs into a pink, while the margins of the petals are white. It is worthless from the tradesman's point of view, but it is a mighty queer, interesting little rose all the same. The leaflets are very small and generally 11 to the leaf.

The other, of the same parentage, is also most interesting, and a beauty as well. The bush is four feet high, of great vigor and perfect hardiness. The leaflets are twice the size of those of Rugosa and of much the same texture, though not quite so thick. The flower is the color of Gen. Jacq., though, if possible, more intense. It is of medium size, quite double (having about 30 petals) though not compactly so. At this writing there are 165 buds on this remarkably floriferous hybrid which blooms *constantly* from late May until frost kills the foliage. It fills an unoccupied space, being a double, perfectly *hardy* rose and a *perpetual* bloomer. A photographic picture of this promising hybrid will appear in a few weeks.

"At present, the best service which the people get is the postal. This is run by themselves through their government. They must take possession of all railroads of the country, and build as many new ones as may be needed, as part of the postal system. It must carry passengers and freight, as it does mail matter, at bare cost and the expense of repairs. They must in conjunction with these, take the telegraphs and telephones."—T. D. CURTIS, page 380.

Mr. W. B. Pratt, of Steuben County, New York sends the following discouraging note:

"Destruction here of fruit by the freeze of Friday night seems to be complete. After several examinations the writer fails to find, on his premises, encouragement to hope for a single apple, pear, plum, cherry, peach, quince or grape. The destruction of the latter in the grape regions proper is also extensive but not complete."

BREVITIES.

THE dearest things a farmer can buy are *cheap* fertilizers.

QUITE a number of our readers have asked for a picture of the low truck wagon described by Professor Roberts in the hay number. It is coming. The R. N.-Y. has a photograph of it now under way.

THE "Authorities" seem to agree that the chances are that wool will hold its price and probably gain over last year. These statements are mainly opinions, however, though many of them are founded on excellent reasoning.

AS we go to press the distressing intelligence reaches us of the virtual ruin of Johnstown, Pennsylvania, a place of 10,000 inhabitants and the largest town in Cambria County. At five o'clock last evening the dam of a large reservoir above the town gave way under the pressure of the enormous accumulation of water from the recent heavy rains, and the mad torrent rushed down upon the doomed place and the Conemaugh valley. Houses, shops, factories and every obstacle in its course were swept away and it is reported that 500 people were drowned. For miles below the Conemaugh river was covered with dead bodies and people struggling on all sorts of wreckage. As the telegraph wires for miles around the place are all down, information of details is meager, and it is to be hoped that the early reports are exaggerated, but it is to be feared the disaster may have been even greater than has hitherto been announced.

Horticultural.

DOES INFECUNDITY OF THE STRAWBERRY SEED AFFECT THE BERRY?

I THINK we have been fostering an error in teaching that the imperfect-flowering varieties of strawberries need to be fertilized by the pollen of staminate varieties in order to insure a crop of berries. This position has been held so long and has gained so full a credence in the public mind that it seems to have crystallized into a superstition. The idea must have originated in the mind of some crafty nurseryman as a means of selling extra plants with which to fertilize the pistillate kinds; and it is kept alive year after year through nursery catalogues.

Come, let us reason together: The fruit, so called, of the strawberry is not the fruit at all, but simply the stem altered to develop and contain the true fruit—the seeds. As our plants are reproduced from runners, and only originators of new varieties need fertilized seed, there would seem to be no necessity for fertile seed in ordinary culture. The common belief that Nature avoids futile work and will not build up the berry unless incited by fecundated germs in the seeds, is disproved annually in our strawberry beds, if we could but distinguish; but this would probably not be apparent to the unaided eye. Let us take as a familiar example to the point, the single stalk of maize which we occasionlly see standing by itself in some field where it was accidentally dropped. The pollen, although produced sufficiently, generally fails to reach the ear, and consequently we shall find only an occasional kernel of corn. The cob, however, will not fail to attain its usual size. Now, as the cob and the berry fulfill exactly the same purpose, by analogical reasoning we should conclude that the strawberry, like the corncob, would grow equally well with no help from the pollen. And this conclusion is not based upon mere theory. It has often been reached by observers who know that they had no fertile plants in their beds. Of course, it may be possible that such blossoms are fertilized by insects bearing pollen from a neighbor's, or from wild plants. But it seems more probable that fertilization is quite unnecessary. In my own garden, last year, a bed of Jersey Queens gave an abundance of fine berries although about 600 yards away from staminate varieties.

Non-fecundity of blossoms is the popular scapegoat upon which all the failures of the harvest are loaded. The novice sets a bed, as it may happen, of pistillates. If, for one of several possible causes, he gets no fruit the same season, the wiseacre is approached for a solution of the mystery. He opens his eyes wide, and says: "Why, you hain't got no perfect blossoms to father your berries; no mor'll you get any eggs f'm your hens without a father to your flock." So the bisexuals are procured, and another year brings a full crop, and the full assurance that the only obstacle had been overcome. The grower of fuller experience is familiar with several causes why the berry crop may fail—immaturity in the plants, severe winter weather, late spring frosts, blight from other causes, grubs at the roots, etc.

It is commonly urged as a detriment to a variety that it is a pistillate, and a seedling of this or that well known pistillate is heralded as superior to its parent because it has perfect flowers. A little reasoning here will show this conclusion to be diametrically opposed to the probable; for it is a fact that our most productive varieties are pistillate, as a rule. The Crescent, Windsor, Manchester, Bubach, Jewell, Lida, Warfield, Cloud, Haverland, all pistillates, cannot be matched among the staminates for the amount of berries produced. Now, is it not quite reasonable to assume that the unnecessary production of the male element in the bisexuals is a waste of force, which in the pistillate varieties is not wasted, but turned into the useful channel of berry-production? Division of labor always is economical. The female bee won't tolerate a lot of useless male sentiment around, but promptly gets the surest kind of a divorce, and the hive is soon filled. Our pistillates are the true "workers," and the sooner they are recognized as such, the better for berry-growers.

In considering the fact that surprising crops are often grown with two or more varieties intermingled, I would urge as a probable cause that their different habits of growth may enable them more fully to occupy and utilize the soil than one variety by itself could do. In the same way, if cultivation and proper fertility are kept up, we are told that apples, peaches, currants and strawberries may be set upon the same land, with economy of space and no apparent diminution of yield.

I believe this to be a subject of importance to fruit-growers. Let us have some actual experiments, and if the old doctrine of the importance of fecundated seeds is to hold, let it be through experimental knowledge instead of theory. I propose the coming season to make a conclusive test of this matter, by shielding a small number of pistillate plants from insects by the use of netting, at a sufficient distance from bisexuals that the wind may not carry the pollen to them. I would suggest this test to the readers of the RURAL, so that we may have an abundance of testimony.

FRED. W. PROCTOR.

Worcester County, Mass.

The Swineherd.

THE TAMWORTH BREED OF SWINE.

A. B. ALLEN.

Efforts of English swine-breeders to evolve a better ham and bacon breed modeled on the old Berkshire; things still to be done to secure it; things to be avoided; Berkshires for palatable hams and bacon; what farmers should aim at.

THESE are supposed to be the descendants, in England, of the old unimproved Berkshires, but more or less mixed with other kinds for a long time past. Some American breeders have thought lately of importing a few of them, believing that if they did so, they would possess the pure old stock. But so far as I am informed, they will get no nearer to it than the Jersey Red, or Duroc-Jersey, which is quite abundant already in New Jersey, the Northern part of New York, and three or four Western States. These, also, like the English breed, have been mixed considerably with other swine; but latterly selections have been made from them of animals of a pure red color only, or spotted with more or less black, with shapes and points as nearly like those of the Improved Berkshire of the present time, as they can be found; though the selections are generally of large size and coarser in their make-up. The best specimen of these have been recorded in a Herd Book, and the possessors of the models are breeding as true to them now as they can.

Of the Tamworth, the London Live Stock Journal thus speaks:

"Something still remains to be done to bring this variety of swine to a state of the highest perfection. Breeders are increasing rapidly and the type of animal is being improved. To succeed completely, it must have still quicker growth; it must grow to a greater size within the year, it must be more distinct in type, and more uniform in color and in points generally. Tamworth breeders should refrain from showing spotted pigs, or pigs of lighter color, in fact, than those which are of a rich sandy red. They want greater depth of ham and breadth of loin, retaining the depth of the flank and the length of the body. Directly, however, they commence to breed for short noses and small ears, they will put a check on the propensity of the breed to expand, as well in size as in popularity. The Tamworth breed produces good, salable bacon; the other pure breeds, (except the Improved Berkshire), taking them collectively, produce bacon which is much too fat."

American red swine breeders should heed well what is said by this English journal about breeding short noses on their swine, and I will also add, fat jowls. This has been pursued to some extent lately by a few American breeders of the Improved Berkshire. In consequence of this such stock turn out an increased percentage of fat in the hams and bacon, and make these parts of the swine less desirable to consumers. What the latter desire is tender, juicy, lean meat as free from fat as possible. I have had Berkshire hams weighing 30 pounds or more each, and the rim of fat covering them was not over half an inch thick. The rest of the ham was nicely marbled—that is, very fine streaks of fat, little larger than a hair, ran through the lean in all its parts, rendering it juicy, savory and tender. The bacon was streaked in a similar way, and this is what consumers desire.

Choice lean hams and bacon bring an extra price both at home and abroad, and our farmers ought to take particular pains to produce them. In order to do this their swine should be reared without corn, as this is too fattening. Let them have grass pasture and pumpkins and other vegetables, bran, middlings and barley, oat, rye and wheat meals, and for the last two or three weeks of their fatting, Indian meal.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

STRAIGHT and narrow are the ways of fashion at present, straight skirts guiltless of bustle, held in place by the smallest reeds and tiniest pads are the highest mode. Round bodices or jackets are trimmed with fichus or revers. The fichu, which has been out of date for some years, is now revived, and a very coquettish appendage it is, when rightly worn. Fine embroidered mull in all colors forms some of the prettiest of these trimmings. Pale green, pale yellow, pale blue and faint pink are alike charming. A sprigged or flowered muslin gown, with plain, straight skirt, round waist and full sleeves, is charming with a fichu knotted gracefully in front, and a sash looped on one side.

* * *

THE Directoire sashes are very handsome; they are of silk, wider than ordinary sash ribbon, having a knotted fringe and a band of contrasting stripes across each end. One of old rose had stripes of cream, bronze, Nile and olive green; another in cream had the stripes of deepbrown, terra-cotta, and willow-green. They are worn knotted at one side, and form a beautiful finish for a white frock.

* * *

EVERYTHING now is after either the Directory or the first Empire. Chief among the Directoire garments are the long, straight, redingotes; they are the most useful, most becoming, and most popular of garments. They are becoming to most figures. With them are worn the Directoire poke hats—flat-crowned scoops with the trimming chiefly near the back, falling towards the front. But one may wear nearly everything nowadays, and yet be in the fashion—at least, if the garment is becoming.

TRAINING IN HOUSEWIFERY FOR SCHOOL GIRLS.

OLIVE E. DANA.

IT seems to me that the most efficient and natural training of school-girls in housewifery is that which meets a real need. The assistance, be it ever so small at times, which relieves the mother of work and care, is, if cheerfully, systematically, intelligently rendered, the child's best discipline and ever-strengthening bond of sympathy and intimacy. It should begin very early, ere the little daughter has left the mother's side for her earliest school-days. And the donning of school-girlish ways should not imply the doffing of those habits of helpfulness.

To "do as mother does!" What a large proportion of the child's happiest hours is filled with this endeavor. For this are the tiny broom and wash-board and flat-iron, the thimble and scissors and work-basket bought. For this the bits of dough are given from the maternal bread-board, the little table is made ready for mimic ironing or eating; just as her own are, so dolly's clothes must be cut and made, washed and ironed; though the little hands are blistered in the attempt. And "to help mother" is a yet stronger motive. Dolly's affairs lose their charm, the toys their importance, if the little lassie can smooth "real" towels or stockings, help to set the family table, use the short-handled broom so that mother may not have so frequently to use the longer one.

Thus begun, the little maiden's training goes on by a sort of natural progression, lifting many a task from the mother's shoulders, and satisfying the child's ambition with a sense of increasing skill and usefulness. Even the absorbing interests of later-school days, the academy recitations, compositions, clubs, readings, papers, do not displace these duties, and they hold the girl sometimes to home influences at a time when other claims are most exacting and most keenly felt, keeping a wholesome balance when class-room ambitions and passing friendships, or even worthier interests might weigh too heavily in the girlish estimate.

But we are often reminded that the assistance of the daughters of the household is not always most strictly required of them by the mothers who most need it. Mistaken tenderness, foolish pride, or a dislike to exact the tasks which the child may dislike to perform, with other motives intervene. It is very often the daughter whose services could be dispensed with, from a pecuniary point of view, who helps about the cooking and mending, looks after the dusting and the table, interests herself in true sisterly fashion with the younger children, and delights in all housewifely accomplishments, while maybe her schoolmate, born and bred in a household where her services would seem to be indispensable, is relieved of both care and toil in this direction.

Yet such a course is not only unwise; it is unjust both to the child herself and to the rest of the household. She is missing her first, best chance for domestic attainment; the mother rest and leisure and daughterly sympthy; and the family the real, solid, daily comfort the child might learn to secure. But even with the best intentions on either side, better results might often be attained by better methods. There are some points regarding which a few suggestions might be made, even to the most judicious mothers, and such are readiest to learn.

And, first, it is not to be expected that the art of housekeeping can be mastered by even the most diligent use of a school girl's leisure persisted in through girlhood with the long vacations thrown in. At best, experience, nowhere more essential, would be lacking. And, moreover, in the time at her disposal, the girl can perform each week but a very small part of the actual house-work. A certain part she may do; and if there be more than one daughter it may be of appreciable value to a systematic housekeeper.

Right here comes my principal caution: Do not let the daughter have the very same tasks from week to week, from month to month, from year to year. Vary them, so that her duties may include, in time, as large a proportion as possible of the housekeeper's varying tasks. And if there are several girls, is it not better for them to change work occasionally? Better for their own discipline, surely, though each prefers her congenial work. Because Alice will dust a room more deftly, while Emily wields the broom with admirable energy, is no good reason, other things being equal, why Emily should not learn the care and skill that insure a dustless, inviting parlor, or Alice, in her turn, learn to sweep corners, back rooms and all, and gain maybe muscle and vigor in so doing.

Nor do Effie's culinary accomplishments, much as the household enjoys them, justify the mistress of the home in excusing her from all chamber work and from mending and sewing. And it certainly is not fair to put upon one all the wasning of dishes. There might be a rotation as well as a division of labor, especially in vacation times.

And again, because mother can cut and baste so expeditiously, and always get the best results from any given quantity of cloth, ought the daughters, therefore, *always* to insist on her doing such work for them? Would they not better acquire a little of her ability, even at the cost of a yard or two of goods? And do they leave it to her to plan and to perform all the "extras?" The making of bedding of different sorts, the planning of carpets and laying the same, and all bits of work relating to house-furnishing, the annual preservings and lard-tryings, and sausage and mince-meat making, the care of the table linen and many another duty, are included in this long, broad, high art of housewifery. And the maiden who aims at perfection therein will do well not to neglect them.

And it seems to me that though mother's judgment is best and safest, yet the daughter ought to be gaining a little of her own in the way of household shopping. How else is she ever going to know about these things—the right sort of goods for different purposes, the varying qualities, and the reasonable prices to pay therefor?

Ah! it takes time and patience, and a willing heart and hand to learn it, this home-making and home-keeping; but rightly learned, is it not its own reward?

OUTINGS IN NEW ENGLAND.

VIII.

MARY WAGER-FISHER.

FROM Brant Rock we turned our steps inland, going by a zigzag route to Middleboro, the country presenting a better appearance as the scrub oaks and stone fences of the coast farms were left behind. Everywhere there were apple trees loaded with fruit, and although the land must be in fact more productive than it is popularly supposed to be, still the New England farmers cannot compete with those of the West, and so all Yankee-land has practically become a manufacturing district. Nevertheless, I was everywhere impressed with the idea that the young native-born women of Massachusetts could do better in every way by cultivating small fruits than by toiling in the factories, as so many of them do—there is such a vast population and it is so generally distributed as to make markets everywhere accessible.

There is nothing about Middleboro to make it more interesting than the average New England village, and the attraction there for us was a white-haired man whom we loved, who had been an attached friend of Agassiz—a man who was wise in scientific things and had traveled far and wide, and he often said that of all the wonders in Nature that he had seen, he regarded the volcanic regions in the Sandwich Islands as the greatest. During the few days that we were his guests, he entertained us with many interesting reminiscences of his own history and of the surrounding country, which abounded in Indian incidents. We were shown a spot in Assawampsett Lake, where an Indian who had been educated at Harvard, was put under the ice and drowned by hostile Indians who thought that he had revealed their plan to the whites. Near the lake a house had been recently torn down, which was built in 1645. The original cedar shingles were still on it, and the house had never leaked, although the shingles were worn to stubs. All throughout the country, the population had decreased, two-thirds flocking to the towns, or migrating "out West." Still, nowhere do people live longer than in New England,and in Massachusetts, particularly, the educational advantages are so good as to be in fact absurd! In the county in which Middleboro is located, for example, each township is required to have a High School in which tuition and books are free, and in addition, transportation to and from the school is furnished to all pupils who live too remote to walk. That year, the Middleboro people had been taxed $800 to defray railway and carriage transportation expenses for High School pupils. Education is probably valued, like everything else, in proportion as it costs the possessor effort and sacrifice, and an outsider cannot help being curious to see how the Massachusetts munificence will result. The famous little man, known as Tom Thumb, lived near Middleboro, and his yachting box was still standing on the lake. The dwarf Warren girls, Minnie and Lavinia, one of whom he married, belonged to a family named Bump, who lived in the neighborhood. They very sensibly preferred their mother's name of Warren. It is a very common-sense fashion that prevails in Spain,for instance, that when a man and woman marry, the name of the wife, when it is the better of the two, becomes the name of the new family founded by the marriage, and when a man has an outlandish name, he should be glad of an opportunity to drop it for another. When the Warren girls were born, they were regarded by their parents—who were of ordinary stature—as great misfortunes. But as it turned out, they were undisguised blessings, being very kind to their parents, whom they surrounded with every comfort.

Among the reminiscences of our host, was one of his youth, when he was but 14 years old, the second week in May, 1833, on a Potomac river steamer. On the same boat were the Indian chief, Black Hawk, his son and other chiefs who had been taken as hostages by the government to insure the keeping of the treaty made under General Harrison, and they were being taken to Fortress Monroe. "The faces of Black Hawk and his son," said our friend; "were deeply impressed on my memory; Black Hawk was crafty and shrewd; he was rather small and stooped. His son was over six feet tall, straight and stout, and he wore a blanket with the figure of a large hand on the back of it. While on board some of the officers thought they would have fun with the Indians and called Black Hawk down and 'treated' him to wine until he became boozy; then they sent for the son, who came, and they offered to 'treat' him; but straightening himself up and drawing his blanket about him, he shook his head scornfully. They insisted on his drinking, when putting his finger out of the blanket he pointed at his father, and again shaking his head, he stalked scornfully away, wiser than the guzzling officers. I never witnessed a more powerful rebuke."

From Middleboro we went to Wood's Holl, the most southerly point on the Massachusetts coast. Holl is Dutch for hole, bays and coves being called holes. At Wood's Holl the United States Government has a Fish Commission building, where cod and lobster are hatched, and where in glass tanks a great many curious fishes are kept. Of peculiar interest were some squid, perfectly transparent, and the swell fish, so called, because when taken out of the water it fills itself full of air like a ball, from indignation, probably. At that time the ship employed in deep sea dredging was in the harbor, and having gone on board, we were courteously shown the methods employed in this most fascinating work. One of the officers said that sea life was more varied and interesting in the vicinity of Wood's Holl than elsewhere on the Atlantic home coast.

From Woods Holl we sailed for Martha's Vineyard seven miles distant, on the steamer Monohassett, which at the outbreak of the Secession War, had been used as a transport. After a charming sail of an hour or so, the steamer reached the Vineyard and touched at Cottage City, which from a camp-meeting ground has grown into a city of summer cottages. Here we disembarked, but tarried for only one day, owing to the discomfort and poor fare at the hotel in which we were quartered at the rate of $4. "per head" a day. It was at the end of the season, and it was not thought worth while to cater to the wants of a few stray tourists. But in a few hours one can get a very good idea of this unique city of 1,500 cottages, of all sizes and styles, from a tent to a villa, with streets, water, gas, stores, etc., in first-class municipal fashion—a charming place, indeed, for recreation and rest, if one doesn't wish to get away from people.

From the Vineyard we sailed on to the island of Nantucket, 30 miles from the mainland, which has a charm all its own, and is thought by many to be the loveliest summer outing place on the coast. The old town of Nantucket, built on a gentle ascent from the shore, and for years the home of men who roamed the sea for whales and fish of smaller fry, is now invaded by summer saunterers, who not only hire every old house to dwell in, but buy as much colonial furniture and bric-a-brac as they can well carry away, and all New England is fairly ransacked for heirlooms and relics to satisfy the demands of rich tourists, old sofas, chairs, tables and bureaus being sometimes sent as far away as California.

CONCERNING OURSELVES.

OLIVE E. DANA.

WE have all of us our pet economies, and our pet extravagances. We have all our own follies, and, alas! our sins. "It seems very sad to me," said a lady to whom was told some sad failing of another, "but I suppose it's because that's not my way of sinning." Was it George Eliot who said: "We need to hear the excuses men make to themselves for their worthlessness?" We do need to know the circumstances and the influences that have helped to make men and women just what they are, and since that is not always or often possible, we need to have a kinder charity a tender and more constant forbearance, with others, knowing and remembering that we do not know what stern trials have made them pitiless or despondent, what narrow routine has limited both comprehensions and sympathy; what disappointments have embittered and discouraged; what unanswered longings render them unhopeful. And we do not know how they have striven amid or against such conditions, or how much grander may be their seeming defeats than our petty victories.

Their patient endurance may have more real valor and faith in it than all our pleasant words of cheerful trust in happier ways. Sojourning over by the sea-shore, I noticed how oftentimes when the sea looked calm enough from my window,the sail-boats were tossing about its waters, in a way that betokened real force and turbulence underneath them, and sometimes it was wonderfully serene when, looking out upon it, I had not dreamed it was so still. It may be so of human lives; It is not always apparent from a little distance which is troubled and turbulent and which is calm and serene.

On a little island where the river flows into the sea, a mere mass of heaped up stones, as it seemed, with but a little earth in the interstices, I saw fir trees growing among the shelving rocks. It was a stunted growth after all; yet the wonder was that they lived and thrived at all in any vigor or greenness. So of the fruit of human lives. Only the One Husbandman has a right to condemn: only He knows out of what poverty of soil it was put forth. Yet who of us is ready to say of herself that she has done and is doing all that is possible. If nothing more in the way of task and service, no more of the actual work of the world can be required of her, what better fruit of gentleness and patience, of endurance and helpfulness, of earnestness and faith some of us might render!

GOLDEN GRAINS.

How loved, how honor'd once, avail thee not;
To whom related, or by whom begot;
A heap of dust alone remains of thee;
'Tis all thou art, and all the proud shall be!
Pope.—

BLAIR says that such is the infatuation of self-love, that, though in general doctrine of the vanity of the world all men agree, yet almost every one flatters himself that his own case is to be an exception from the common rule.....

THERE is no action of man in this life which is not the beginning of so long a chain of circumstances, that no human providence is high enough to give us a prospect to the end.

MAY all who read this resolve to begin the day with prayer, for it is the golden key that unlocks Heaven to pour down blessings upon us, and end the day with prayer, for it is the same golden key that locks us up under Heaven's protection at night.....

Is it not true,as Plutarch said, that if we hate our enemies we will contract such a vicious habit of mind as by degrees will break out upon those who are our friends, or who are indifferent to us?.....

THE CHRISTIAN UNION says that a world which has a God over it, and a life which has a God in it, have no place for despair. Loss, calamity, grief are not excluded, but these do not bring the message of despair. Despair comes only when there is no longer any hope, and no possible issue out of adversity but permanent and eternal loss. Despair may be the necessity of atheism; Christianity, which makes the cross of shame and death the symbol of triumphant immortality, has no place for it. "For sudden the worst turns the best to the brave."....

THERE is no friendship that is strong enough to get along unless it take faults for granted. Saints may be plenty in heaven, but they are very scarce on earth, and if you are going to form friendships you must form them so that they will be able to swallow up the faults of those you love.... .. ..

BISHOP DOANE concludes that to be a gentleman does not depend upon the tailor or the toilet. Good manners count far more than good clothes.....

SCOTT said that when the hour of trouble comes to the mind or the body, or when the hour of death comes, that comes to high and low, then it is not what we have done for ourselves, but what we have done for others, that we think of most pleasantly.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

AVOID conspicuous and popular styles in dress.

MAKE your traveling dress as simple and plain as possible.

IF you are limited to *one* good dress, select one of black goods.

WE have never been able to understand why a fairly sensible girl will crowd her feet into shoes too small for her. She loses thereby freedom and elasticity of gait; renders herself ill at ease, and does not diminish or improve the shape of her foot one whit—the bulk is there, and if restricted in one direction, it will bulge out in another. Altogether, girls, the torture is worthy of a better cause.

AS we sat cutting seed potatoes for our contest plot not long since, memory carried us back through long years to early days here when, with hearts filled with only one thought, one love—the founding and successful establishment of a home—we worked early and late, not stopping to choose our tasks, but doing with all our might—imperfectly it is true—whatever came to hand, whether it were cutting and planting potatoes in our little garden, directing the workmen, or attending to house duties. The first named occupation (how many others we have never known) struck some of our good neighbors as particularly unfeminine and one that a sane young woman reared in the city and in comfortable circumstances would not voluntarily undertake to do. "Her husband compels her to do it," was the gracious verdict pronounced by this self-constituted jury. And so from time to time we have heard this story and it even traveled to our girlhood home and the writer was commiserated for having made so unfortunate a marriage. Sad, so very sad!

Thus it is that a person, having different aims, different tastes and who leads an altogether different life from those around him, is misjudged. We were new-comers and were voted decidedly queer because we spent so much time in the fields and woods; because of our disregard of fine clothes and conventionalities; our evident disregard of the formalities of society. Our devotion to our home and to each other seemed never to enter into their account.

EXTRACTS FROM SUNDAY EVENING TALKS AT THE RURAL GROUNDS.

"FINALLY, brethren,whatsoever things are *true*,whatsoever things are *honest*, whatsoever things are *just*, whatsoever things are *pure*, whatsoever things are *lovely*, whatsoever things are of good report; if there be any virtue, and if there be any praise, think on these things." Each clause of this verse is a sermon in itself. I shall notice the first three and consider the remaining clauses only as incidental.

This verse,from the fourth and last chapter of Paul's epistle to the Philippians, is the beginning of his final exhortation to them. The letter to the people of Philippi was written or dictated by Paul during his first imprisonment at Rome, in answer to expressions of sympathy and a substantial gift. It is a letter in which are mingled grateful affection, personal sorrow, joy, gloom and anxiety caused perhaps by the exceedingly rigorous and increasing severity of his treatment during imprisonment. Philippi was one of the chief cities of Macedonia. It was the scene of the last struggle of the Roman Republic. It was where Brutus and Cassius, having been defeated by Antony and Augustus, committed suicide. Then it became a Roman "colony" (so called), governed by Roman magistrates and laws—in short a miniature Rome. The Jews were few, and were not allowed a synagogue in the city; but outside the gate in a secluded spot by the bank of the river, they had a small chapel. It was here that Paul and Silas were the means of Lydia's conversion. In Philippi they came in contact with paganism in its worst forms; but fearless, they went about preaching the gospel until scourged and imprisoned. We all know the story of the jailer's conversion. It seems as though the very work which the Roman authorities tried to suppress, was fostered by the means they employed to do so; for the incarceration resulted in the founding of a faithful Christian community. It was to these few worshipers that Paul's epistle was addressed.

Now, nearly 2,000 years after apostolic greatness, has this letter of the greatest apostle lost any of its significance? Is this one verse less applicable to the people of to-day than it was to those of Philippi? Is it not *more* so? If in those days of miracles, words of exhortation to "stand firm," to be steadfast, immovable, were necessary, how much more in need of them are we to-day, never having seen any tangible workings of God!

"Whatsoever things are true, whatsoever things are honest." Think on these things. It seems to me that if those two injunctions were not only thought of but *practiced* in all the dealings of mankind one with another, the disappointed, unhappy faces would be changed to joyous, hopeful ones. Aside from the question of its being morally right to be true and honest, see the practical results that would come into our own lives, if we practiced what the apostle teaches.

Is it the friend who tells us candidly, unreservedly "the truth and nothing but the truth," upon whose word we feel we can depend? Or, is it the one, who, politic, puts forward the side he thinks will be most agreeable, the least liable to offend, stretching it, distending it; covering up, smoothing over, even leaving out entirely the points in any way unpleasant?

Though the truth may "hurt",(as the old expression goes), I fail to see how any one can prefer or desire equivocation.

When I was a child, I heard one lady say of another; "She is one of the few people who tell the unvarnished truth." I can remember thinking about it and wondering if it were really so, and how any one could say things that were not exactly true or put a coat of varnish over the real truth. I fear that a moment's thought will bring to our minds people of whom and of whose words we feel distrustful; but I rejoice in the fact that we can also name a number of those for whom we would vouch.

People of equal candor, honesty and truth of course have different ways of expressing their views. Some are in manner pleasing, gracious, careful, considerate; others short, blunt, unpalatable. It is the latter class that are more misunderstood and I may safely say, more unpopular, than any other class of really good people. Two friends of mine whom I most highly esteem are pretty nearly

Miscellaneous Advertising.

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When she was a Child, she cried for Castoria
When she became Miss, she clung to Castoria
When she had Children, she gave them Castoria

true representatives of these two classes of whom you have heard.

I have never known an instance in which either was the least bit insincere. I can go to either with perfect assurance of obtaining an earnest, honest opinion. Yet I know of no two good people so totally unlike in the expression of those opinions. One is, I might almost say, the personification of gentleness, yet just as firm and decided in her truth and candor as my other friend, who will tell me in the fewest words possible, it seems, exactly what she thinks. I could mention a number of instances in which these two persons have been asked what we call "embarrassing questions," or placed in trying, delicate positions; the answer or the action was invariably genuine truth itself. It seems a very easy thing to be true and honest, but *is* it? Judging from the vast majority of people, who, if not dishonest are insincere, it would appear not. It is a fact to be deplored. It should not be so. In my little experience I have not found it a hard matter to teach children, as a rule, to be truthful. I say as a rule, for heredity is a force—a power that sometimes cannot be overcome.

Take children of all classes and conditions, from the highest to the lowest, from the richest to the poorest, get a hold on them, trust them, let them feel that they are relied upon, and properly directed, it will not be long before positive lies give place to certain truth. It is a notable fact that children of wealthy, "society people" are more apt to equivocate and are more difficult to break of the habit, than the children of poverty, or of the middle class. Is it to be wondered at when there mammas deliberately send a servant to the door to say: "Not at home?" Those same children, perhaps, would think it dreadful to tell a *lie*. The would-be politeness of their parents seems to them entirely proper, and they are often taught just such untruthful things, as being mere necessary conventionalities.

If it be true then, that children are *naturally* honest, it follows that insincerity (equivocation, dishonesty, untruthfulness, call it what you will) is developed in mature years. The prophet Jeremiah says: "The heart is deceitful above, etc., who can know it?" Is not the whole matter summed up in these few words of Shakespeare?

"To thine ownself be true; and it must follow as the night the day, thou canst not then be false to any man."

"Whatsoever things are just." We may be true, we may be honest, but it is much more difficult to be *just*. We all believe, or *want* to believe, that God is a just God. Where do we find another embodiment of justice?

We know many who want to be just, but are they?

We know that we want to be just, but are we?

Who is to decide?

In that, as in many other things, we can only do "according to our light."

ABOUT DINING.

THERE is one place where I visit that I always leave with regret mingled with a keen sense of anticipation—regret that I must go, and anticipation of the next time I'm to spend 'neath that cottage roof. My friends are not wealthy, though in good circumstances, yet one comes away with the feeling that everything in that house is perfect. The sense of "home" pervades the whole place. There, little "dinners" or "teas" are always a success, and I've found out some of the things that make them so, and will tell them to you.

First of all, see that the table linen (it need not be the finest damask) is spotless and fresh; that the china, glass, silver and cutlery are bright and untarnished. Arrange the dishes gracefully: do not place them at equal distances from the ends or sides of the table—nor in exactly right-angular positions, but put them where they will look most inviting. A pretty table scarf embroidered in some vine-like pattern thrown across the table diagonally from one corner to another, adds wonderfully to the brightening of the board. Always have flowers if possible somewhere on the table. Those of you living in the country can always have these during the summer time, at any rate. A great bunch of clovers and grasses makes a lovely decoration; or a vase of dark maiden-hair fern, smelling of the woods, will bring a sense of coolness that is delightful.

Have enough dishes, but a profusion of them is as bad as a scarcity.

Care should be exercised in selecting your guests. They should, if possible, be all sensible, social, and unaffected, else they will not contribute greatly to the pleasantness of the entertainment, and it will be likely to appear formal and stilted. Care should also be exercised in placing the guests at the table. The great point is to pair amiable, pleasant and agreeable people. Arguments should not be tolerated at the table, as they destroy the appetite and spoil the digestion to say nothing about ruffling the temper. Never invite any one to dine simply because he is rich; never invite people who have not the instinct of gentlemen and gentlewomen—they may have such instinct even though occupying humble positions.

Do not hasten through the meal as though you were at a rail-road depot and had just "10 minutes for refreshments." Good talkers are a great acquisition at a dinner, but so also are good listeners. I shall not talk about the different courses, as I know that very many farmers and their wives, who read this, cannot so arrange matters as to permit having their dinners so served, but the other hints I have given can be followed by them as well as by any one else.

A prettily arranged table gives one an appetite. Always have a salad at dinner. There are many kinds that are easily supplied, but lettuce is a stand-by. Lettuce served with water-cresses is a dainty and toothsome finish to a dinner. Garnish your meats with something green—water-cresses or parsley will do nicely.

To do these little things, I know, may seem useless to a poor, tired housewife and mother who has to get up in the morning at five o'clock (perhaps before, so that the men may have breakfast in time to go to the fields, or do the milking, or go to market, but if she cannot follow my suggestions every day in the week, let her try to have her Sunday dinner so bright and cheery that it will be something to look back on during the week, and something to look forward to also. Care about dining does more to refine the boys than all the lecturing one can give. Then, too, if the children are brought up with care in regard to their table manners they are never afraid of making blunders when they go to see their "city cousins," and will not be dreaded by said city cousins as that much laughed-at terror—the "country cousin."

DORA HARVEY VROOMAN.

ON TIME.

LAST summer I spent a part of my vacation at a little city not far from home, and when the time for my departure drew near, I asked the man of the house at what time the train would leave. "At precisely 5:30. It never leaves at 5:29, or 5:31, but *always* at 5:30. If you are there one minute before, you will be in time; if you are there one minute after, you will find the cars gone—if that is not an Hibernianism to find what is not there." Now, it seems to me that people employed in other business should know as much as those connected with the railway; at least, they should be as careful to be on time. But what a woful neglect of punctuality do we meet every day of our lives! People are shockingly off time; but whether it results from carelessness, thoughtlessness or indifference, the sins, both of omission and commission, are there and should be corrected and at once, the sooner the better, for the more a person allows himself to be off time, the harder he will find it to be on time when it is a necessity.

I know, for I have found it to be so myself. As we live at a distance of about five minutes' walk from the academy, very often I would not start for school until five minutes before it opened, and just as often as not I would be a minute or so late—only a minute, but just enough behind time to give me a tardy mark, and the way those tardy marks counted up when the records came in was something frightful. At any rate they frightened me, and I resolved to make one grand effort to have a record that said "on time" the next month. And I did, and for all the months thereafter. Common sense—poor abused term!—should teach people to keep their appointments and to keep them on time.

Some people do not seem to consider that others' time may be valuable if theirs is not, and that much inconvenience and trouble may occur because of their failure to keep an appointment promptly on time. People ask us to meet them at a certain place and at a certain hour and we do so. Perhaps half or three-quarters of an hour after the time agreed upon, they may make their appearance. Do these laggards even stop to think that the time may have passed very slowly to us; that we might be better employed than waiting, waiting, waiting!

Friends promise to visit us, and say they will come on a certain train. We go to the station to meet them; the cars arrive, but they do not, and it is with a feeling of disappointment that we return home. And ordinarily, there is no excuse for their non-appearance but their own carelessness; they missed the train by being a few minutes too late. Well, they should have borne in mind the fact that "time, tide and railway cars wait for no man."

Money is due which is promised to be paid on a certain date; but the date passes and the money comes not. Do these delinquents ever think of the dishonorable nature of this transaction? Do they realize how much may be depending on the receipt of the promised sum? Of course, there are occasions when it becomes impossible to fulfill a money promise, and in such cases, a full and perfectly truthful explanation should be given, and if such explanation be wanting, the delinquent may be safely written down—a scamp.

A person can gain a splendid business reputation by being always on time. Business people require and need punctuality, and when they find that their employés are lacking in promptness, that they do not value their employers' time and their own situations enough to make a proper effort to retain them, they are dismissed and others are found to fill their places, and the popular verdict will be "served them right." I believe success will crown our efforts, if we will only be on time. "Delays are dangerous" in four cases out of five. If we traced the careers of our successful business men, I think we would find the most successful to be those who have been always punctual, always on hand when there was any chance of bettering their position, always on the lookout for their employers' benefit, regarding the hours for which they were paid for their services as their employers', not their own, and consequently, always on time.

Do you ask, "Are you always on time?" Oh, I'm not a *rara avis*; and, besides, don't you know some things are a great deal easier to preach than to practice?

SADIE E. STEIGLEDER.

Miscellaneous Advertising.

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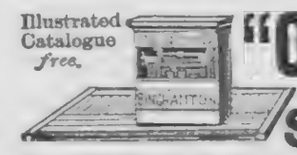


"OSGOOD"
U. S. Standard
SCALES
3 TON $35. Sent on trial. Freight paid. Other sizes proportionately low. Fully Warranted.
OSGOOD & THOMPSON, Binghamton, N.Y.

PAINLESS EFFECTUAL
BEECHAM'S PILLS
THE GREAT ENGLISH MEDICINE
WORTH A GUINEA A BOX

For Bilious and Nervous Disorders, such as Wind and Pain in the Stomach, Sick Headache, Giddiness, Fulness, and Swelling after Meals, Dizziness and Drowsiness, Cold Chills, Flushings of Heat, Loss of Appetite, Shortness of Breath, Costiveness, Scurvy, Blotches on the Skin, Disturbed Sleep, Frightful Dreams, and all Nervous and Trembling Sensations, &c. THE FIRST DOSE WILL GIVE RELIEF IN TWENTY MINUTES. This is no fiction. Every sufferer is earnestly invited to try one Box of these Pills, and *they will be acknowledged to be a Wonderful Medicine.*—"Worth a guinea a box."—BEECHAM'S PILLS, taken as directed, will quickly *restore females* to complete health. For a

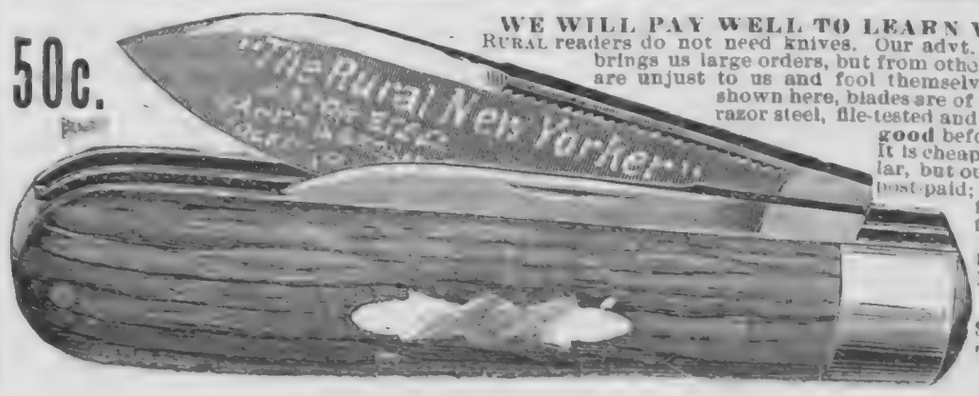
WEAK STOMACH; IMPAIRED DIGESTION; DISORDERED LIVER;

they ACT LIKE MAGIC:—*a few doses* will work wonders upon the Vital Organs, Strengthening the muscular System; restoring long-lost Complexion; bringing back the keen edge of appetite, and arousing with the ROSEBUD OF HEALTH the *whole physical energy* of the human frame. These are "facts" admitted by thousands, in all classes of society, and one of the best guarantees to the Nervous and Debilitated is that BEECHAM'S PILLS HAVE THE LARGEST SALE OF ANY PATENT MEDICINE IN THE WORLD. Full directions with each Box.

Prepared only by THOS. BEECHAM, St. Helens, Lancashire, England.
Sold by Druggists generally. B. F. ALLEN & CO., 365 and 367 Canal St., New York.
Sole Agents for the United States, *who (inquire first)*, if *your* druggist does not keep them.

WILL MAIL BEECHAM'S PILLS ON RECEIPT OF PRICE, 25 CENTS A BOX.

50c.



WE WILL PAY WELL TO LEARN WHY IT IS
RURAL readers do not need knives. Our advt. in some papers brings us large orders, but from others few. Readers are unjust to us and fool themselves. Take knife shown here, blades are of highest quality razor steel, file-tested and known to be good before sending out. It is cheap for a silver dollar, but our price is 50c. post-paid; 5 for $2. Send for our 64 page free list, also, 'How to Use a Razor.'
MAHER & GROSH,
80 S Street,
TOLEDO, OHIO

News of the Week.

HOME NEWS.

SATURDAY, June 1, 1889.

LAST Saturday the steamer Greytown left this port for Nicaragua with the first installment of men and machinery to be employed in the construction of the Nicaragua Canal The estimated cost of the work is$66,000,000—probably not more than one-third or one-fourth of what it will really cost, should it ever be completed, and it probably will. The Panama Canal appears to have completely collapsed. All of the laborers and other employés who could get away at their own cost or that of their respective governments, have done so, after many of them had been nearly starved to death; the excavating, transportation and other sorts of machinery are going to "rack and ruin," gravitation and weather are filling up the "cuts," the rank vegetation of the tropics is covering every thing, even the graves of the 15,000 employés who perished in the work, and the "big ditch" in which over $300,000,000 have been sunk, is going rapidly to ruin. Only about two-thirds of the proposed work on it has been done and De Lesseps can raise no more money to help it along, and the French Government, warned by this country, will do nothing in its favor until the next French election in October, if it will do anything even then. It looks now as if it would remain a tremendous memento of folly or bad management, unless the project is completed by other people after the "privileges" of the original stock-holders have been forfeited or "bought for a song." It's not altogether unlikely that "Americans" may finish the work and "make a good thing" out of the losses of the unfortunate French investors..... Carnegie, the great Pennsylvania iron operator, whose income amounts to over a million a year, and who began with "nothing," has reduced the wages of his men by an average of 20 per cent. They must accept his terms or "go out" and starve.....Hitherto Pennsylvania has been the head-center of the iron and coal business of the country, but the "South"—and especially W. Va. and Ala. —is rapidly becoming a dangerous rival. Owing to the proximity of iron and coal in the same neighborhood, together with lime to be used as a flux, iron in all forms can now be made in some parts of the South considerably cheaper than in the Keystone State..... The Southern railroads, too, anxious to build up a business that must greatly benefit them in the future, give much lower rates of freight on iron of all sorts than those given by the Northern roads. so that among "Northern iron men" there is a good deal of talk, even in Pennsylvania, of transferring the whole,or a part, of their business to the most eligible sections of the South, West Virginia, Northern Georgia and Alabama being the favorite locations. Colored labor is used a great deal there in the "works," and is cheaper than white labor and less liable to disorganization by strikes, and white operatives in "shops" in the South are much less likely to strike than the same class in the Northern factories. A question of the day, therefore, is, "Is Pennsylvania moving down to Alabama?"..... The English and American salt syndicates or trusts have come to the most amiable agreement. Each will do what will tend most to the benefit of the other, and both will in the friendliest way, make the greatest possible profit out of the "dear public."..... At Bellville, Ontario, Canada, the other day, 17 persons were injured in a railroad accident .....The broom-makers of Western New York propose to form a trust, though, of course, they are unwilling to own it..... Down in the French negro Republic of Hayti, after numerous serious reverses and a multitude of needless butcheries and atrocious cruelties, according to reports, the tide of success is setting strongly in favor of Hippolite who has been generally regarded as a "rebel," and against Legitime, who has been looked upon as the legitimate President. It looks as if the former who occupies the Eastern part of the Republic, contiguous to the Spanish negro Republic of San Domingo, will soon drive his rival out of the country or "to the wall." The other day, on the advice of Secretary Blaine, President Harrison appointed Gen. Lew Wallace and the "Col." Beverly Tucker, as Commissioners to visit Hayti and negotiate peace between the warring rivals and also secure three excellent coaling stations for this country; but there is a big hitch in the matter, which some attribute to the recent great successes of Hippolite, while others say the trouble is due to the fact that Tucker was a very bitter "rebel" at the close of the late war..... A company has just been organized to push ahead preparations for the next great International Exposition to be held in Washington in 1892, to celebrate the 400th anniversary of the discovery of this Western Hemisphere by Columbus. The liberality of our government as well as of the American people in dealing with all foreign big shows of this kind, at London, Paris, Brussels, Barcelona and elsewhere, will, it is thought, induce other countries to make liberal contributions of money and products to the great Columbian Exposition of 1892.....The Connecticut House has passed a grade-crossing bill which places all the cost of making the necessary changes upon the railroads ..... It looks as if the Standard Oil Trust were destined, ere long,to get control of all industries involving the production of all materials which can be monopolized by enormous capital directed by great money-making ability aided by unscrupulous conduct and stimulated by insatiable greed. To petroleum, cotton oil and dressed meat monopolies the magnates of the trust are about to add one in white lead. They want to exact a tribute from every man who paints his house..... .....

It is said that all the cabin accomodations of all the trans-Atlantic steamers are already pre-engaged for the next three months. Probably 100,000 Americans will visit Europe this year, each of whom will spend, on an average, $1,000 for expenses, clothing and other things to be brought home—$100,000,000 to be spent abroad !.....Two bank cashiers, one at New Haven, Conn., and the other at Scranton, Pa., have been arrested within a few days charged with embezzlement of $100,000 each. Both were eminently respectable, of course, ornaments of society and pillars of the church. In both cases the directors of the banks would have thought it outrageous to keep a sharp eye on such models of propriety; but they'll have to pay heavily for their over-confidence all the same. .....To the South Dakota Constitutional Convention, to be held at Sioux Falls on July 4, 72 delegates have been elected, of whom 35 are Republicans and 22 Democrats. To the North Dakota Convention to be held at Bismarck, 82 delegates have been chosen—54 Republicans, 24 Democrats, two Republican-Prohibitionists and two Prohibitionists.....Harvey W. Sage, the Ithaca millionaire, has given Cornell University $300,000 for the endowment of a library. His benefactions to the institution now amount to $1,000,000 ....."Henry Georgeism" has a firmer footing in South Dakota than anywhere else in the country..... That English brewery-purchasing syndicate has just added $4,000,000 worth of beer-making plant at St. Paul, and $1,000,000 worth at Detroit to its enormous holdings.....

Actions Speak Louder Than Words.

Anything that serves to recall a maxim, works reciprocally: the maxim is all the more a maxim and the thing itself receives that much endorsement. Now, for more than purposes of illustration we get as close to the above as is possible.

Our purpose is to impress you with the value of Compound Oxygen, and naturally, after what we have just said our manner of procedure must be, that our patients in the past and present, are our endorsements.

Here you have it; and concerning the following we may quote, "For they themselves have said it:"

WILLISTON, S. C., March 20, 1888.
"I am pleased to report a continued improvement both in myself and wife. May you live long to bless suffering humanity with your Compound Oxygen. "Rev. W. W. GRAHAM.

GASONIA, GASTON CO., N. C., May 25,1888.
"I sincerely believe that had it not been for the Compound Oxygen, I would have been in my grave before this time." W. D. HANNA.

REISTERTOWN, MD., Feb. 29, 1888.
"Two doctors of Baltimore examined me and said mine was a hopeless case of asthma. Now, almost two years after using only one treatment, I think I can truthfully say my health is as perfect as it can be on earth."
MRS. MARY R. IRELAND.

PORTAGE, WIS., Jan. 30, 1888.
"My wife has been taking your Compound Oxygen for over two years for consumption and has derived much benefit from its use. In fact, I think she would have died long ago but for it." H. D. JAMES.

We publish a brochure of 200 pages, regarding the effects of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever,headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, June 1, 1889.

THERE is a shortage in the Australian wheat crop, of about 1,000,000 bushels, but this will probably be made up by New Zealand which has a surplus of about 4,000,000 bushels. The average yield in Australia is placed at less than eight bushels per acre, while that of New Zealand is given at 25 bushels. There will be but little wheat exported to Europe. There is also a shortage of feed. Three cargoes of California wheat have been received at Sydney..... The largest crop of wheat ever raised in South Russia was produced in 1888, and the transportation facilities are so inadequate that it is estimated that one-fourth of the crop is yet in the producers' hands. The demand from that country for agricultural implements of all kinds, especially harvesting and thrashing machines, is very great..... The question of the abatement of the rabbit plague in Australia seems no nearer solution than ever. The royal commission report that no evidence is found that any known disease can be employed to exterminate rabbits..... The Arkansas Station proposes a novel warfare against scrub cattle. It will encourage the spaying of cows and heifers and also encourage the cotton-seed-oil mills to buy the spayed cattle for fattening purposes..... The Holstein breeders offer liberal prizes for best specimens of that breed of cattle shown at the fairs. T. B. Wales, Iowa City, Iowa, secretary.....The Western weed that furnished food for the Colorado potato beetle before it began its march to the East, is now following in the wake of the other pest..... The Michigan legislature has appropriated $8,000 for the erection and equipment of an agricultural laboratory at the Michigan College.....A Short-horn cow sold for $2,500 at a recent Chicago sale .....American breeders of Hereford cattle will make an organized effort to secure the South American trade for breeding animals.....The American Jersey Cattle Club has reduced the entry fee on imported cattle to $25 for animals of either sex..... The visible supply of cotton both in this country and in England is said to be smaller than at this time last year.....Assistant Secretary Tichenor has affirmed the decision of the Collector of Customs at New York assessing a duty of 15 per cent. on so-called sausage casings. They consist of long tubes of paper treated with sulphuric acid, and as manufactures of paper, were subject to duty. .....A Holstein cow is reported with a milk record of 30,318 pounds eight ounces in one year. The service fee for a son of this cow is only $500. Why shouldn't farmers grade up their stock?.....During 10 days in the fore part of May, from 80,000 to 100,000 South American hides were sold in New York and Boston. The bulk of them sold for 15½ cents which is said to be the lowest price for more than 30 years. The stocks on hand are very heavy.....Governor Bulkley of Connecticut, vetoed a bill prohibiting the coloring of oleomargarine to resemble genuine butter and cheese, because oleomargarine has been pronounced a healthful article of food; that the present law prevents its sale under false pretences, and prohibiting its manufacture entirely would be detrimental to the interests of the people. The bill was passed over the veto by about thirty majority in the House, but it failed to pass in the Senate..... The Connecticut board of Agriculture sent a series of questions to each town clerk in the State in regard to the number of dogs, tax paid, etc. From partial reports obtained we learn that 2,119 sheep were killed, maimed 531. Damages paid by towns for sheep killed and maimed $10,729; by owners of dogs $636. Number of dogs registered 32,415, dog tax collected $41,100. Number of sheep in the State 50,000.....American apples are said to receive such rough handling before and during shipment, that they are so badly bruised as to preclude the possibility of keeping them any length of time.....The affairs of the Pacific Guano Company are still in an unsettled condition, and there seems to be no prospect of re-organization..... Any exhibition of dairy products at the Paris Exposition must be made by individual exhibitors. Exhibits should be shipped by the vessel leaving New York June 15, and should be on board the preceding day. They should be put in sealed packages, and then packed in a double case with air space between. Shipping directions may be obtained from Dr. D. E. Salmon, Department of Agriculture, Washington, D. C..... It is reported that the east-bound roads from St. Louis will make a grain rate of 23 cents to New York, being a cut of five cents..... There was a heavy frost in Niagara county, N. Y., May 29. The thermometer was but little above the freezing point, and much damage must result.....The semi-annual meeting of the Missouri State Horticultural Society will be held in Brookfield June 4, 5, and 6; a very interesting programme is presented.....At Mason City, Iowa, an old brewery has been converted into a creamery..... According to the English papers, Russia is making an effort to build up an export trade in pork.....The Nebraska State Fair will be held at Lincoln, September 6 to 13. Robert W. Furnas, Secretary, Brownville.....Insurance against hail is becoming very popular with florists who have much glass exposed in their green houses ..... The Queens County Agricultural Society will hold its 23d summer exhibition at Mineola, Long Island, N. Y., June 19 and 20. The display of flowers and strawberries is expected to be very large..... ..... The Massachusetts legislature has passed an act forbidding the docking of horses' tails, with penalty of fine and imprisonment for violation.....A Pennsylvania young man who overdrove a livery horse was well ducked in the horse trough on his return from the ride.....England wants to get along without American corn. Chemists are called upon to formulate a cheap cattle ration that shall leave corn out.....The Linseed Oil Trust has advanced the price of oil one cent per gallon. This trust has compelled some crushers to import seed from South America. .....In some local markets at the West there has been a small potato boom. Prices were so low that farmers began to feed potatoes. The consequence was, that as nobody sent to market, the stocks ran out, and the price ran up .....The Pennsylvania legislature has passed a law providing that no person shall, without the consent of the owner, offer for sale any milk can, butter tub or box used for the transportation of milk, cream, butter or other produce having the name and residence of the owner stamped upon it, nor shall any person wilfully use cans, tubs or boxes for his own use without the consent of the owner.....

Miscellaneous Advertising.

SEND 10 Cts. in P. O. stamps to for circular about **E & O. WARD,** Produce Commission Merchants, **Shipping Produce.** Also recipe for **Preserving Eggs.** Established 1845. **No. 279 Washington St., New York City.**

PILES. Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository. Sufferers will learn of a simple remedy FREE by addressing TUTTLE & Co., 78 Nassau Street, New York City

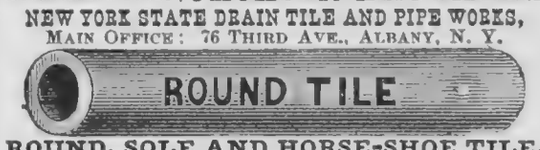
The Worcester Buckeye Mower

Has Patented Self-Oiling Pitman, Insuring Safety and Perfect Working.

as a Scythe which Cannot be Broken; Has an Inside Shoe which Cannot be Clogged; Has Patented Chate Plates.
Always Maintaining **the Shear Cut.**
No other Machine has these improvements. Don't fail to see it. Send for 1889 Circulars. We refer to **Thirty-five Thousand** farmers in New England who use the **Worcester Buckeye.**
Agents Wanted in Unoccupied Territory.

THE RICHARDSON MANUF'G CO., Worcester, Mass.

Established 1852. | **JACKSON BROTHERS**
NEW YORK STATE DRAIN TILE AND PIPE WORKS,
MAIN OFFICE: 76 THIRD AVE., ALBANY, N. Y.



ROUND, SOLE AND HORSE-SHOE TILE, Over 13 inches long. By cargo or smallest quantity. Our new improved machinery makes superior round and sole tile, excelling anything offered heretofore. First Premium wherever exhibited. Price-list on application. Vitrified Glazed Pipe and Tile Machines.

H. S. MILLER & CO.,
—MANUFACTURERS OF—
Pure Animal Bone
FERTILIZERS!
For all Crops and Soils. Factory and Principal Office on Passaic River, Newark, N. J. Baltimore Office, 202 & 206 Buchanan's Wharf, foot of Frederick St. Write for "Farmer's Manual," mailed **Free.**

University of the State of New York.
AMERICAN
VETERINARY COLLEGE,
139 and 141 West 54th Street, New York City.
15TH ANNUAL SESSION
The regular course of Lectures commences in October of each year. Circular and information can be had on application to
D. A. LIAUTARD, V. M., Dean of the Faculty

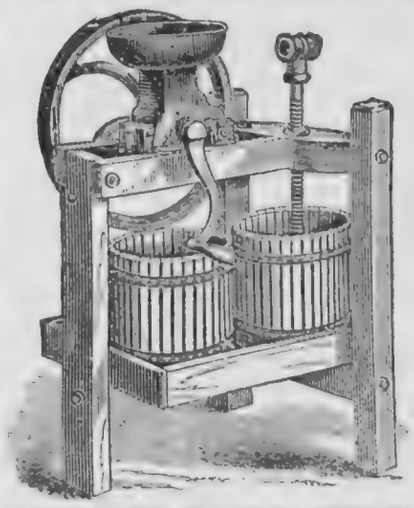
CALF Weaners and Sucking Cow Muzzles. The best in the world. Send for Circular. **H. C. RICE, Farmington, Conn.**

VALUABLE FARM FOR SALE.
At the junction of Goose Creek with Staunton River, in the County of Campbell, Virginia, containing 520 acres; can be sold in three parcels or one entire farm. For further information apply to
G. W. WOODING, Box 345, Danville, Va.

STOCK FARM FOR SALE.
3,000 ACRES, excellent soil, close to depot, well watered; fairly improved. Will be sold with or without 75 head of high grade Percheron Horses. Desirable unincumbered property will be accepted as part payment. For full particulars, address
R. H. PROUDFOOT, East Pierre, So. Dakota.

TO LADIES.—MRS. L. L JACKSON'S popular **Dress Guide** and **Self Instruction Book,** completely revised, with **Sleeve Guide,** for cutting latest style sleeve, now ready. Simple, satisfactory, perfect. Price, $2 00. Send for circulars
Address **FAMILY DRESS GUIDE CO.,**
Box 131, Indianapolis, Indiana.

NEW CIDER MACHINERY.



Send for new Illustrated List of Cider Machinery. Three new patterns and seven sizes, from small family size to large 5-barrel press. Please mention RURAL N.-Y. when writing.

HIGGANUM MANUFACTURING CORP.,
HIGGANUM, CONN.
WAREHOUSE: 38 So. Market Street, Boston, Mass.

THE ECLIPSE
VINE & PLANT SPRINKLER
Has no equal for effectually destroying the **Potato Bugs** and other insects. It is a Combination Sprinkler for WATER or PLASTER, and works equally well for each One man can carry two at a time, and two cans filled will cover 500 hills thoroughly and effectually. AGENTS WANTED in EVERY Town. Sample shipped to any address for $1.50. **F. A TYLER,**
123 W. Dominick St., Rome, N. Y.

ELLIOT'S PARCHMENT PAPER. **THE DAIRYMEN'S FRIEND.**
The Cheapest, the Best, the Highest Quality. Over 10,000 progressive creameries, dairymen, farmers and dealers endorse it in place of muslin or wax paper, for wrapping **Butter, Cheese, Lard, Meat, Sausage, Etc., Etc.** Good butter demands a good wrapper. Send for samples and testimonials.
A. G. ELLIOT & CO., Paper Manufacturers, Philadelphia, Pa.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, June 1, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	8¾	8¾	.....
Strict Ordinary	8 13-16	9 1-16	.....
Good Ordinary	9¾	10	.....
Strict Good Ordinary	10 3-16	10 7-16	.....
Low Middling	10 11-16	10 15-16	.....
Strict Low Middling	10 15-16	11 3-16	.....
Middling	11⅛	11⅜	.....
Good Middling	11⅝	11⅞	.....
Strict Good Middling	11⅞	12⅛	.....
Middling Fair	12 5-16	12 9-16	.....
Fair	12 15-16	13 3-16	.....

STAINED.

Good Ordinary	8¼	Low Middling	9 13-16
Strict Good Ord	8⅞	Middling	10⅝

WOOL.—Spring Texas, 17@25c, and Fall do 15@22c; Fall California, 11@18c, and Spring do 14@24; Scoured Texas, 50@53c; Delaine, 36½c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c.

POULTRY--Chickens, spring, per lb, 22@27c. LIVE Fowls, near-by, per ℔, 12@ ——c; fowls, Western, per ℔ 12@c—; roosters, per ℔, 7c; turkeys, per ℔ 6@9c; ducks, western, per pair, 60@0.80c; geese, western, per pair, $1 00@$1 25.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per ℔, 12@—c; do do, common to fair, 8@11c; do, iced, dry picked, choice, 8@10c. Fowls, western, do, choice, 11@12c; do, nearby, do do 12@—c; Chicks and Fowls, mixed, 9@11c; do do do, scalded, 8@9c. Squabs, white, per doz, $3 00@$3 25 do, dark, do, $1 75@$2 00. Chickens, Philadelphia, dry picked, 25@36c, do Jersey, do, choice, 25@35c; do nearby, do, good 20@25c; do Western, do do, 18@22c; do do, iced, good to choice 16@18c. Ducks, spring, choice, per lb, 26@30c; do do, good, 16@18; do Western, good, 12@18c. Geese, Western, good, 8@10c.

GAME.—Plover, per doz., $0 75@$1 50; Snipe, per doz. $1 75@$2 25.

HOPS.—State, new, best, 22@23c; do, prime, 20@22c; do, low grades, 13@16c; do do, 1887, 10@11 do do do California, common to prime, 13@19c; choice, 20@22c.

HAY AND STRAW.—Choice Timothy, 90@$—; do good do, 75@80c; do medium, 65@70c; shipping, 60@70c; do, Clover, mixed, 55@70c. Straw.—No. 1, rye, 70@75c; short do 55@65; oat, 40@50c.

BEANS.—Marrows, new, $1 85@$1 90; new mediums choice, $1 80@—; pea, $1 80@—; red kidney, $2 20@2 25; white kidneys, choice, 2 35@2 40; foreign, mediums, 1 35@1 55; California Lima, $3 15@$3 20; green peas, $1 10@—.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@—c, and farmers' grades at 6@7½c.
HICKORY NUTS quoted at $0 50@$1 00 per bushel.
Pecans, 5@7½c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Bermuda, per bbl, $4 00@$7 00; Maine do, $1 50@$2 00; State do, $0 90@$1 15; Florida, do, $3 00@$5 50; Savannah, do, $4 00@$5 50. Sweets do, $3 50@4 50; Cab., new, $0 50@$1 00. Peas, per bbl, $3 00@$3 75; Squash, do, $0 40@$1 00. Beets, do, $0 50@$1 50; Asparagus, per doz., $0 50@$1 50; Tomatoes, per crate, $1 50@$3 00. ONIONS—Bermuda, per crate, 75c; New Orleans, per bbl $1 50; Beans, string, do, $1 00@$2 50; Cucumbers, per crate, $0 50@$2 00; Radishes, per bbl., 50c@$1 00. Peas, per basket, $1 00@$2 00.

FRUITS.—FRESH.—Apples, Baldwin, per bbl, $1 75@$3 00; Common, $0 75@$1 00; Russet, $4 00@$3 00. Spy, $3 00@4 00. Strawberries, per qt 3@8c; Cranberries—Jersey, fine, box, $1 00; do common, 50@75c. Oranges—Florida, best, box, $5 00@$6 50; do, good lots, $3 00@$4 50. Lemons, $2 75@$4 00. Cherries, per lb, 6@20c. Huckleberries, per qt, 12@15c.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5@6c; do new, common to prime, 3¾@4½c; sliced, new, 2¾@3¾c; quarters, 2½@3¼c; chopped, 1¼@1½c; cores and skins, 1@—c. Cherries, new, 10@15c. Raspberries, new, 19@20c. Blackberries, 4@4½c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 10@14c; do do, unpeeled, 5@6c; North Carolina sun-dried, peeled, 7@9c. plums, 5@6c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 15 00@13 25, short clear, $14 00@16 00. Extra Prime mess, $12 50@$— prime do, $12@$12 25 and family mess, $13 25@14 00. BEEF—India Mess, in tierces, $13@13 50 Extra Mess, in barrels, $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $7 50@8 00; Family at $11—@$14. HAMS—$13 50@$14 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 6½@—c; Pickled Hams, 11¾c; pickled Shoulders, 6½@6¾c; Smoked shoulders 6½c; do Hams, 12¼@12½c. Dressed Hogs.—City, heavy to light, 6@6¾c. Pigs, 6½c. LARD.—City steam, $6 50; June, $7 05; July, $7 07, August, $7 10; September, $7 15; October, $7 17; South America, 7.9c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, PA.—PROVISIONS.—Potatoes quiet; Early Rose, 25@33c per bush.; Burbanks and White Stars, 23@30c; Hebron, choice, 32@33; New Potatoes. Florida, per bbl., $2 00@$5 00. Provisions were steady. BEEF.—City family, per bbl, $9 50@$10; do, packets, $9@9 50; smoked beef, 10@10½c; beef hams, $13 PORK.—Mess, $14 00@$—; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@13c; do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6½@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6¾@7.

CHICAGO.—MESS PORK.—$11 70@11 75 LARD.—$6 70@—per 100 lbs; Short Rib sides (loose), $5 70; dry salted shoulders, boxed, $5 25; short clear sides, boxed, $6 12.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 17½@18; Elgin best, 18@—; Western, best 17@17½; do prime, 15½@16½; do good, 14½@15; do poor, 13@13½. State, Dairy half-firkins, tubs, best, 17@18c; do do prime, 16@16½; do do fine, 14½@15; Welsh tubs, fine, 16@16½; do do, good, 15½@16; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 14@15; do fine, 12@13; Western dairy, fine, 12@13; do fair, 11@—c; do poor, 9@10c; do factory, fresh, best, 10½@11, do prime, 10@—; do good, 9@9½; do poor, 8@——c.

CHEESE.—State factory, fancy, 8¼@—c; do do, fine, —@——c; do do, prime, 8¼@8½c; do do, fair to good, 7¼@7¾c; Ohio, flat, prime, 7@8c; do good, —@—c; do, good, —@—; Skims, light, 5½@6c; do medium, 2@4; do full, 1@1¼c.

EGGS.—Near-by, fresh, 14¼@14½c; Canadian, 14¼c Southern, 13¼@13½c; Western, best, 13¾@14c. Duck 14@16c; Goose, 20@25c.

PHILADELPHIA.—BUTTER dull. Pennsylvania creamery extra, at 17@—c; Western creamery, extra at 16½@17c, B. C. and N. Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were firm. Pennsylvania firsts 14½@—c; Western firsts, 14½@—c; Cheese dull—steady; demand fair; New York full cream, at 9@9¼c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

CHICAGO, ILL.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Elgin creamery, 15½@16½c; choice Western, 12½@15c. choice dairy, 12@14c; common to fair, 8@10c. Eggs firm at 12@12½c.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, June 1, 1889.

BEEVES.—Dressed Beef in good demand and prices a trifle higher than last week. Medium to Prime sides sold at 6½@7¼c, and choice carcasses reached 7½c; but the bulk of the transactions were at 6½@7c.

CALVES.—The extremely favorable weather and the light supply and high prices of lambs buoy up the Calf market, and it is well sustained. Buttermilk Calves sold at 2½@3½c per lb; Prime to Choice Veals at 5@5½c. The market is liberally supplied with city dressed Calves; but prices are fair, dressed Buttermilks selling at 4@5c, and Veals at 6@8c, and even up to 8½c for extra stock.

SHEEP AND LAMBS.—Trading limited for want of stock. Steady for sheep and 2½c higher for lambs, which continue in light supply. A carload of common Ohio Sheep sold at $4 50 per 100 lbs, and two carloads of Virginia Lambs at 9c per lb. Dressed mutton well sustained in price and selling at 8½@10c; Dressed Lambs higher and quoted at 12@16c.

HOGS.—Feeling a trifle easier, and common to good Hogs may be quoted at $4 70@$5 10.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING JUNE 1, 1889.

H. C—O. C. H.—A. J. B.—C. N. B.—"W."—E. S.—M. M.—C. M. D.—C. H. H.—F. C. S.—C. N. B.—U. P.—G. W. D.—A. R. Q.—H. S.—W. B. P., thanks.—J. P.—B. R.—C. P. G.—V. L.—W. J. B.—J. M.—A. G—B. M.—L. M.—H. R.—S. J.—D. T. S.—U. S. C.—I. D. C.—J. A. T.—S. L. B.—C. S. R.—P. B. S.—U. S.—W. B. P.—I. P. R.—P. C.—C. C. W.—F. K. P.—J. T. H.—G E. H.—J. L., thank you.—D. M. K.—T. H. H.—B. B.—W. B. T—W. F.—J. J.—C. K.—C. N. B.

Miscellaneous Advertising.

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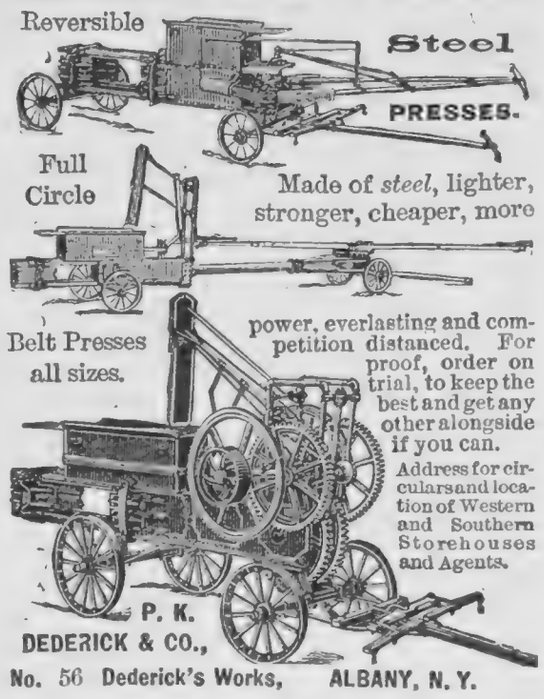

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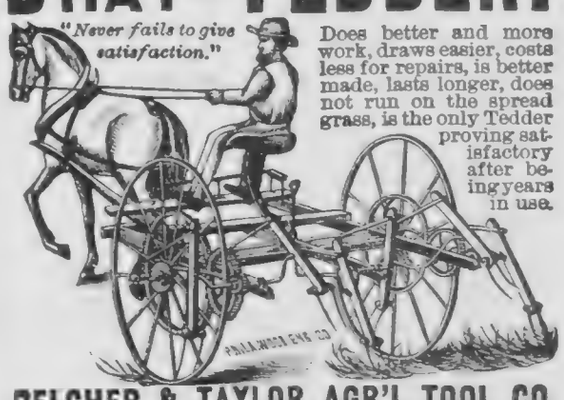

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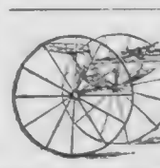

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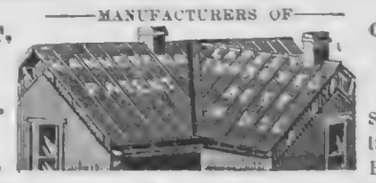

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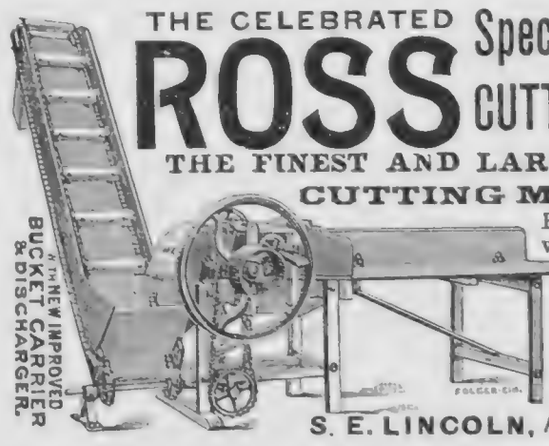

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Literary.

MABEL WHITNEY'S LESSONS IN FARMING.

BY G. C.

"OH I know," said Dora, "when we first came here, papa bought the binful of ashes, and those bones were all through them".

"My papa," said Mabel, "has a little mill that he grinds bones and shells with; but some of these bones will mash with a hammer. If you have an old pan that doesn't leak, fill it with the bones and put them in the oven, and bake them until they will mash easily. Then give them to your hens, and maybe they will soon lay you eggs enough to buy a bone mill. Papa buys beef bones by the barrel, of the butcher."

"Miss Whitney," said Dora, who was somewhat amazed at Mabel's wisdom, "were you ever poor?"

"Not very," laughed Mabel, "and I never will be if I can help it."

"You have such ideas of economy, and you know just what to do," said Dora.

"I am only endeavoring to think for you, Dora," replied Mabel. "My father is a thorough farmer. Nothing goes to waste. Everything is taken care of. No decaying vegetables are allowed to lie around. Everything is kept perfectly clean. He scarcely ever has a sick animal of any kind. His neighbors call him lucky. Mamma says it is care and good management."

"We have sick animals enough," said Dora, "We haven't a pig. They have all died for the last three years. They have good feed, too, and a good house. It is quite old, but it is comfortable for them."

"Perhaps the pig-house is what is the matter," answered Mabel. "If our pigs died that way, papa would tear the pig-house all down, and build a new one somewhere else, and would not use a single board of the old one to build the new one with."

"What would he do if he hadn't any boards to build a new one?"

"I don't know," said Mabel, whose confidence in her father's abilities seemed to be unbounded. "He would manage somehow, likely take old rails or slabs, fence in a corner of a field, build a shed of rails, and cover it with hay or straw."

"The longer I live," said Mrs. Early, who had been a silent listener to the conversation between Mabel and Dora; "the more I am convinced of our ignorance, and what a vast amount we have to learn. We moved here with such bright hopes, expecting that everything that the earth could bring forth would soon be ours, never dreaming of the amount of knowledge and skill required to make even an ordinary farmer. Last spring a man frequently came by here selling early vegetables—radishes, young onions, lettuce and asparagus, looking so green and refreshing, and we with nothing of the kind of our own, and no money to buy those tempting things with. I thought I would gladly give all my knowledge of French, embroidery, or even music, to know how to grow these things so early."

"Oh, how I wish I could exchange with you." said Mabel, all animation. "I know, with the aid of hot-beds, I could grow those vegetables as early as any one; but if I only had a piano and could play—don't you think we can exchange accomplishments, Mrs. Early? You give me lessons on the piano, and I will help you raise those vegetables in the spring."

"You! you raise vegetables!" replied Mrs. Early, with a look of astonishment. "How did you ever learn?"

"I was brought up in that kind of an atmosphere," replied Mabel, laughing, "and besides, we take agricultural papers. Papa has taken the RURAL NEW-YORKER ever since I can remember."

"We must do so, too," said Mrs. Early, "or we can never get along. Mr. Early bought a book on vegetable gardening; but he says it takes so much money to fix things in the manner which that speaks of. But I will willingly give you instructions on the piano, Mabel, for the extra lessons that you give Dora."

"And you shall have your early vegetables, dear Mrs. Early; I will devote my mornings, evenings, and Saturdays, to music and hotbeds," said Mabel, as she followed Dora out to her chicken-yard.

Mabel knew that if reminded in season, and given plenty of time, Mr. Early would make the hot-beds for them; and she expected to get seed from her own home. But the problem of sash was not yet solved in her busy brain. She was afraid it would cost more than the Earlys could well afford, but one day, on one of her return trips from her home, she overheard two gentlemen in the dépot talking of some chicken-houses that one of them intended building; and he was told by the other that there was a lot of sash which he thought he could get cheap, of a gentleman not far from Mr. Early's. Mabel waited to hear no more, but hurried home, the chicken-house men never noticing her presence.

"All things are fair in love and war," said Mabel "and we must have those sash. That man is rich, and the Earlys are poor."

Mrs. Early was much amused when Mabel told her of her plans, and was easily persuaded to get Mr. Early—who entered into the spirit of the joke—to start at once to purchase the sash, with two or three weeks of Mabel's board money, paid in advance, in his pocket.

"I bought them cheap," he said to Mrs. Early, on returning. "I met one of Mabel's dépot friends. He asked me where I got those sash. I told him 'from Mr. Garrison.' 'Well now,' he said, 'I intended to buy those sash. I just heard of them about an hour ago.'"

Fixing and arranging the hot-beds seemed to give Mr. Early a kind of impetus in his farming; and the more he did, the more he wanted to do, Mabel throwing out a hint here and there, as delicately as possible, without appearing obtrusive. When the hot-beds were ready for the seed, Mrs. Early and Mabel said that it was their own affair. They planted the seed in due time. The sashes were partly filled with glass. Where they were not, they tacked muslin. Early in the spring Mrs. Early's table was adorned with bright, crisp radishes, and lettuce, and they were offered quite liberal prices, by their neighbors, for the vegetable plants, which they raised in the hot-bed. When peas and lettuce came, they seemed to Mrs. Early far more luscious, because they were raised on their own farm.

Mabel's father concluded that it was better for her to go to school, than to teach, so at the close of the year, she gave up her school, and bade a reluctant farewell to the Earlys.

The following is a letter received by her from Dora, the next spring.

DEAR, DEAR MABEL:

I suppose you are studying very diligently now. I am going to school. It seems so nice to be able to go.

I wish you could see mamma, now. She is getting strong and seems so happy and contented. She and I commenced bunching vegetables as soon as I came home last evening, and it took until after dark to finish. Papa took them out early this morning, and hadn't nearly enough to supply the demand. We have another row of hot-beds now, and everything that is coming looks well. We have a hired man, and mamma has a girl to help her in the house. I have 100 chickens and 20 hens sitting. Our place looks lovely, this spring. How I do love it! People all wonder at our prosperity.

That old gentleman—the trustee—who introduced you to us, said "it all came from boarding the *schoolmarm*," and, dear Mabel, I believe it.

I can scarcely wait until the time of your promised visit.

Your loving friend,

DORA EARLY.

(THE END.)

For the Young.

WHO SHALL CONQUER?

WHAT I wish to know is, is there such a thing as *making hens lay?* If so, Southern hens differ widely from their Northern sisters. Having seen the statement of "how to make hens lay," in your valuable paper, as well as a dozen other papers, I thought so much proof must be convincing, and that whenever an opportunity offered I would make the test. My hens had always laid well during winter, so that, having several dozen eggs on hand, I thought I might well dispose of them while they were 25 cents per dozen, and still collect enough for my Christmas baking, there being fully three weeks' time. But "Lady Bard" who seems to be queen of the "hen dynasty," and, who is always lurking about the house, overheard our plans and immediately communicated with her subjects, who rebelled against the outrage, and signed a pledge that they *would not* lay again until the 26th day of December, 1888. With one accord, they stopped laying. At last the golden opportunity had arrived in which I would prove to those hens whose will should rule. I subscribed for several "Poultry Journals" to help me in the grand work.

"——'s condition powders" was my first trial. I read over the directions minutely. Yes; how plausible it all seemed! I wondered any sane mind had not reasoned it out long before. I began to sympathize with those hens, thinking how they would feel after I had gotten ahead of them so easily. I prepared the medicine, gave it to them, got a cotton basket ready in which to collect the eggs; meanwhile I would read a chapter or two, to pass time, for soon the cackling would begin; then I would have enough to do. One, two, three chapters; still no hen racket. I thought I'd go and see how matters stood. The hens had finished eating, wiped their bills, and looked up with a "The-time-has not-yet-arrived" expression. Still I was not discouraged. I thought all that was required was time, and morning would surely bring success. But morning dawned, night came, still no eggs. I used the "potted meats for poultry," surely these, with the powders, would produce the desired result; but the hens only "smiled" and passed on. I used a dozen different kinds of powders recommended, but with no success. I cooked, boiled and baked for them, all to no avail. I gave them red pepper, hot victuals, cold victuals; they ate and slept, but not an egg did they lay. Some one said that scraps from the table would make hens lay. I almost starved the family in order to have enough scraps for the chickens; they ate them in payment for past services rendered, and went on rejoicing.

It was no longer the eggs, or gain to be derived therefrom, but will against will. Who should be victor? Oh! the methods of making hens lay! It's like trying the different remedies for curing a cough. I was becoming desperate, when one of my neighbors called in—the one that's always willing to let things go at a bargain, "beens't it's you," letting you have a dozen eggs for 20 cents, while she sells to a stranger for 15 cents per dozen and all such neighborly acts. Of course, I spoke of my hen trouble. She didn't know much about henology, but "knowed as hens needed gravel mighty bad at times." Yes, gravel was what they wanted. With all I had done a little gravel was needed to finish the work. "Pound fine old pieces of broken dishes." Everything in the way of a broken dish was pounded up; I even went so far as to let a few of my dishes fall and break, that I might be sure of enough. The yard looked as if I were laying out gravel walks. The hens scratched and picked but remained unmoved. "Not the right kind of gravel," some one suggested; "burnt bones," were what they needed. Come to think of it, that did seem best; so I had several carcasses brought in, some burnt and broken up. The whole place looked like a bone yard.

Strangers coming in remarked that it seemed out of place having gravel walks in a bone yard. I only smiled and said: "It was an odd fancy of mine." You see, I did not wish to explain further, until I could exclaim, "Ecce homo or Ecce henno," or something to that effect.

The bones met with a like fate of all else I had tried. Then some one suggested sand. Living near a creek where the water ripples over sand, I would have no trouble in getting that, so I had the negro boy haul sand all day. It seemed as if I were raising a sand bank—a very appropriate affair since our late storm, as no one will have need of any other kind of bank for some time to come. The sand only hardened those hens' hearts and they would not lay. Oh! what a desperate state of mind! How I longed to conquer!

What could I do next? Meanwhile the unassuming neighbor called; again I related my troubles. She said she didn't know, she never bothered about her hens; when they got ready to lay, it was all right, and when they didn't lay, she just let them alone. I thought I would not give much for one with so little ambition. The idea of letting those hens rove around at their own sweet will, while eggs were now 35 cents per dozen. But it occurred to me that every one did not know how to make hens lay. It was a knowledge possessed by only a few of the intelligent ones. I heartily sympathized with her, knowing how those hens imposed on one at once so good-natured and ignorant. Again, some one suggested lime. Lime, why that was the very thing. The shell is partly composed of lime; why had I not thought of it before and saved myself all this expense and trouble?

The hour of triumph was now surely nigh at hand. I put lime everywhere. The family on looking out in the morning began to shiver and remarked that they had no idea there had been a snow storm during the night, and "Old Probabilities" noted it down,—"The severest snow storm known in this locality for 20 years," etc. I let them find out the real truth and went to see my hens. They were all there, awaiting further trial, but the eggs were still missing. Some said: "They must roost warm." So I put them all in the hen house; I even thought of buying a stove to put in there with them, but my means would not allow it. Others said: "They will do better sleeping in the open air." So I took them all out and made them roost in the trees. Again, I heard the suggestions, they were roosting too high or too low, so back to the hen house they went. Those that were high, I put down low, and those that were low, I put up high, dragging them about several nights in order to get the right hens in the right places, but all for nothing. I went out at night to look at them; they were all sitting on the floor; the climax had come at last; they would all lay at once. On closer examination I found they had eaten so much gravel and egg-food generally, that they were unable to get on the roosts.

It's the night before Christmas. I give up all hope; all ambition has died within me. I've been conquered. Those hens signed a pledge and they kept it to the last. If all temperance pledges were kept as rigidly, what a grand work Temperance Societies would do! Christmas morning, I went out to look at those hens. They looked up at me, as much as to say: "I told you so!" That was the last feather; I could stand it no longer. I went into the house and wept bitterly over my disappointment.

It was the day after Christmas,
When all through the yard
Every hen was a-cackling,
Even old "Lady Bard."

One would have thought it Easter morning and that every choir in the United States had burst forth in one grand anthem of praise; but it was only those hens who had conquered, and were now ready to resume business.

I merely write this to warn all who are not physically strong enough to bear severe disappointments against, "making hens lay against their will." Should they be so rash, they will surely come to an early grave.

M. C. B.

Miscellaneous Advertising.

THE R. N.-Y.

ENTERPRISE, DILIGENCE, RESEARCH.

ORIGINAL IN ALL ITS DEPARTMENTS.

THE LEADING NATIONAL GARDEN AND FARM WEEKLY OF AMERICA.

SUBSCRIBE FOR THE BEST.

It will please all progressive rural people and all people sensible enough to have rural tastes.

From the N. Y. Times:

"The RURAL NEW-YORKER has done more to promote the true interests of agriculture in the way of experimenting, than all of the experiment stations put together."

From the N. Y. Tribune of Feb. 1, 1888:

"The RURAL NEW-YORKER is a paper which during its nearly 39 years of life has done vastly more for farming than nine-tenths of all the land-grant colleges and experiment stations, whose chief business is underdrainage of taxpayers."

From the N. Y. Sun:

"The RURAL NEW-YORKER is one of the ablest and best papers on rural affairs in all America. It is thoroughly practical in every department, and its constant efforts in the introduction of new seeds, plants, and implements after the most careful tests commend it to the confidence of every tiller of the soil."

From the Farm Journal, Philadelphia, Pa:

"The RURAL NEW-YORKER is the best farm weekly in the world."

From the Inter-Ocean, Chicago, Ill.:

"Readers of the Inter-Ocean do not need to be told that the RURAL NEW-YORKER is one of the best horticultural and farm weeklies published."

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"The RURAL NEW-YORKER is the best agricultural paper in the country."

From Joseph Harris, Moreton Farm, N. Y.:

"The fact is, you are doing more for agricultural and horticultural science than all the experiment stations combined.

Specimen Copies, Posters, Premium Lists free. Price $2.00 a year. In clubs of five or over, $1.50.

Considering the cost of its publication, the R. N. Y. is the cheapest agricultural paper published.

The Rural New-Yorker,

34 Park Row, N. Y.

CATALOGUES, ETC., RECEIVED.

PENNSYLVANIA INDUSTRIES AND RAILROAD POLICY.--This is the title of an address delivered by Andrew Carnegie before the Pennsylvania legislature. It is now published in pamphlet form. It is a powerful and fearless attack upon the policy of the Pennsylvania Railroad Company, which Mr. Carnegie claims, will, if continued, cripple the leading industries of the State or drive them out of her boundaries. Some facts not now generally considered are brought out in this address. At the beginning of this century Virginia headed the list of States in population with Pennsylvania second. In 1810 New York went to the head with Virginia second. In 1820 Pennsylvania passed Virginia and the race for supremacy has since been between New York and Pennsylvania. Since 1860 the latter State has steadily gained on New York, and sanguine Pennsylvanians believe the time is surely coming when their State will lead. This belief is based upon a thorough understanding of the peculiar shape and physical characteristics of their State. It is square as a block in shape, reaching from the lakes to the sea and with the best of water courses. In fact, Pennsylvania is a small country by herself. She sweeps westward in mountain range after mountain range. The mountains supply coal and iron, and close to them comes the third great natural product, petroleum; and to this may now be added natural gas. And the farming lands of Pennsylvania are so interspersed among the coal fields and the iron mines that Pennsylvania farmers are doubly protected in their home market. The way to the markets of other manufacturing States runs over easily traveled courses, and distant farmers may bring their products over the home farms and sell them. This is changed to a great degree with the Pennsylvania farmer. The physical character of this State defends him.

It will thus be seen that the internal commerce of a State like Pennsylvania must be something enormous. And the Pennsylvania Railroad Company, by securing what amounts to a monopoly of this commerce, has welded a power for good or for ill, the magnitude of which is difficult to comprehend. The modern railroad links homes, families, towns together. It is a home enlarger. A liberal policy, that will give the public confidence in the justice and honesty of the managers is sure to become a blessing to the community and the State. A mean, discriminating policy, a disregard of public rights and fair demands, will only become a curse to the State, and will, sooner or later, injure the business of the railroad that employs it. For a number of years farmers and mechanics have been crying out against trusts and monopolies. This cry has been too vague and indefinite. The reform must *begin* somewhere. Of late, public opinion seems to be settling into the idea that we should begin the work of bringing about a fairer division of profits by placing the management of our railroads in the hands of the general government. After reading Mr. Carnegie's address carefully we are inclined to think that governmental control of the Pennsylvania Railroad would prove a blessing in several ways.

CONSULAR REPORTS.—No. 103 of these reports, issued by the State Department at Washington, contains some very interesting information concerning foreign trade and modes of living. One matter of considerable interest to American farmers is the report of our agent at the Bahama Islands. It appears that the inhabitants of these islands have in former years, depended upon the salvage received for their services in case of marine disasters for quite a portion of their income. The British Government recently erected a very complete system of light-houses on the island and as a consequence so few wrecks have occurred that wreckers are cut away from a portion of their income. It has been decided to take up the production of sisal hemp in the place of this lost industry. The hemp can be grown cheaply on the islands and just at present it is the most marketable product to be thought of. An increased production of this hemp will mean cheaper rope and twine for American farmers.

EXPERIMENTS IN HEATING GREENHOUSES — This subject is treated in a bulletin recently issued by Prof. S. T. Maynard of the Massachusetts Experiment Station. One season's experiment went to show that a hot water boiler consumed about 20 per cent. less coal than a steam boiler, while the temperature of the hot water heat was most even.

Here are some conclusions as to the protective value of various building materials. On the inside of the wall, the lined board walls, filled with shavings, gave the best results, that with the hollow space being but little less valuable. Hollow brick and concrete walls are about equally valuable in protecting from cold, but not equal to the framed and board walls. Experiments were also made with evaporated sulphur as an insecticide. A kettle of sulphur, heated to nearly a boiling point was kept in the greenhouse for three or four hours twice or three times a week. This kettle was placed on a hand stove. The sulphur must never become hot enough to take fire, and care must be taken to prevent its becoming upset. Prof. Maynard concludes as follows:

"From our own experiments and the reports of those who have used the evaporated sulphur we can recommend its use for the destruction of rose-leaf blight, rose mildew, grape mildew, chrysanthemum leaf blight, and the red spider. It is certainly an aid also in preventing mildew on the lettuce. Further experiments, however, begun earlier in the season may give more positive results, but our main dependence in the growth of lettuce under glass must be the proper conditions of temperature, moisture and plant food.

I would again advise *caution* in the use of sulphur, that every precaution be taken to avoid its taking fire, for the fumes of burning sulphur will quickly destroy all plant life, and even five minutes of burning might destroy hundreds and even thousands of dollars worth of plants."

DOWNY MILDEW AND BLACK ROT OF THE GRAPE VINE.—Bulletin No. 10 of the Section of Vegetable Pathology, United States Department of Agriculture, gives a report of the experiments made in 1888 in the treatment of these diseases. As our readers know, the Agricultural Department has for some years experimented with the various mixtures of sulphate of copper in the hope of finding a remedy for diseases of the grape. It would appear that success has come from these experiments and that there is reason to believe that sulphate of copper represents a value to the vineyardist about like that represented by Paris green to the orchardist.

TO DEFEAT THE TWINE TRUST.—This is the title of a pleasant little circular issued by Aultman, Miller & Co., of Akron, Ohio, manufacturers of the celebrated Buckeye binders and mowers. The object of the circular is to prove that the Buckeye is the cheapest and best harvester made. The main argument offered is to the effect that the various wire binding devices proposed by certain manufacturers will prove expensive instead of economical. The wire, so this circular claims, will cost as much or more than twine to which must be added the cost of the extra attachment. Again, it is almost beyond the reach of probabilities that the "Twine Trust" will be able to maintain their high prices for any length of time. The jute bagging trust has just received a black-eye from cotton planters. We are informed in this circular that twine is the material best suited for use in grain binding. The argument seems to be that it is better to stick to twine and twine binding attachments and take the ground that high prices for that product are sure to be broken.

ELLIOT'S PARCHMENT PAPER.—Circulars from A. G. Elliot & Co., Philadelphia, Pa. This firm are headquarters for parchment paper, a material which is now considered practically indispensable by good dairymen. Send for circulars, no matter whether you use the paper at present or not.

DOWN THE GREAT RIVER.—An account of the discovery of the true source of the Mississippi river, by Captain Willard Glazier, published by Hubbard Brothers, Philadelphia, Pa. This is an intensely interesting volume, and one of the best aids to the study of the geography of the Mississippi valley that we can think of. It is an account of a trip taken to the source of the Mississippi and from that point to the Gulf of Mexico.

Strange to say, there is a serious question as to whether the older explorers ever found the head-waters of the Mississippi. Indian guides carried Captain Glazier as far to the North as a canoe would float. From this point, the canoe was permitted to float down the stream, past city, town and wilderness past islands, down rapids, ever on till the great river broadened into the Gulf. It is an interesting story of a remarkable trip, told so simply and so well that it is hardly possible, to lay the book down unfinished. The price of the book, is, we believe, $2.00

PRACTICAL HINTS TO BUILDERS.—Price 10 cents. The National Sheet Metal and Roofing Co., 510 to 520 East 20th Street, New York City. This book is filled with practical hints for owners of houses or other buildings. It is of especial value to those about to build. Among other things we notice a number of very good plans for houses and outbuildings, with devices for heating, ventilating, etc., etc. It advocates the use of metal roofing—the new roofing which is destined to supersede, to a great extent, both wood and tin for pitched roofs.

HEMINGWAY'S LONDON-PURPLE CO., 90 WATER STREET, NEW YORK.—A circular giving full directions for the use of this poison, also the opinions of many well-known people in regard to it. The circular gives the R. N.-Y. credit for having been the first of the farm press to use London-purple. When it was first offered for sale we tried it very carefully beside Paris-green, and wrote the manufacturers the result. London-purple contains about as much arsenic as does Paris-green, selling for about 15 cents a pound, while the latter costs about twice as much. We prefer the London-purple because, being much lighter, it is readily held in suspension while being applied. It is also more adhesive, sticking to the foliage longer whether mixed with water or plaster. Our readers may send to the Company for the circular.

MAGAZINE REVIEWS

HARPER'S MAGAZINE for June opens with a paper on "Social Life in Russia" by the Vicomte Eugène Melchoir de Vogüé, giving an insight into the habits of life, occupations, amusements, etc., of the different classes that people this much-discussed land. Part III of "A Little Journey in the World," a novel by Charles Dudley Warner is continued in this number. Dr. William Howard Russell contributes a very interesting "Incident of the Irish Rebellion." A very entertaining part of this issue is that devoted to "Our Artists in Europe," with illustrations and short sketches of each by Henry James.—F. D. Millet, Edwin A. Abbey, Alfred Parsons, George H. Boughton, George Du Maurier and Charles S. Reinhart are the subjects of the paper. An instructive as well as entertaining paper is the one on "Montreal," by C. H. Farnham. It describes the different classes composing the population, and contains views of McGill College, Victoria Square, Montreal, from the mountain, Bonsecours market and church, the Notre Dame de Lourdes, Bank of Montreal and Post Office, and many other places of interest. "Friendly Rivalry" is a very clever fiction of the middle of the 20th century, or about the "year 50 of the Commune." In it James Sully gives us a view of the new order of things when such things as love, sentiment and kindred feelings are done away with, and the two sexes are evolved into scientific beings of perfect equality. This is Mr. Sully's first attempt at fiction.

The serial "Jupiter Lights" is continued.

Nannie Mayo Fitzhugh gives us "T'other Miss Mandy" as her maiden effort in fiction. Lawrence Hutton writes of "The Negro on the Stage," with numerous illustrations of celebrated negro impersonators.

"Quince," by Winthrop Mackworth Praed and several shorter poems by different authors are interspersed. The Editor's Easy Chair, Study and Drawer are replete with good things, while the illustrations are numerous and excellent.

THE CENTURY for June is an exceedingly interesting number. There are several articles of special interest to Americans. "The Relations of the United States and Canada," from a Canadian standpoint, is given by Charles H. Lugrin. It is a very timely paper in view of the present agitation of the subjects of annexation, reciprocity, etc.; and also as showing the attitude of our Northern neighbors on these subjects.

In "General Lee after the War," Margaret J. Preston gives us an insight into the noble character of this great man as exhibited in his beautiful, devoted home-life. In the Lincoln History several chapters on important political events are published: "The Pomeroy Circular," "The Cleveland Convention," "The Resignation of Chase." John Fraser tells us the story of "An American Amateur Astronomer," Mr. S. W. Burnham, formerly of Chicago, now chief assistant of the director of the Lick Observatory in California. He adopted the profession of stenography, and was with the Union army at New Orleans during the Civil war. While there, he purchased a second-hand Astronomy at an auction, in which he became deeply interested, and which study by the aid of a cheap telescope, he followed enthusiastically. After the war, he located in Chicago, devoted all his leisure time to the pursuit of his favorite science, and purchased a small but excellent telescope. This he mounted in an observatory constructed mostly by himself in his back-yard, which his friends laughingly called a "cheese-box." With this small telescope, rudely mounted in a back yard in Chicago, this enthusiastic astronomer discovered more double stars in the short space of two years, than all the astronomers of the world beside had discovered in 20 years. It is a story of a Yankee boy, who unaided except by his native genius and indomitable will, has placed himself in the front rank of scientists. Mr. Kennan continues his papers on Russia by giving the first article on his visit to the Convict Mines of Kara. The article is profusely illustrated the most striking pictures being those of the "Convicts at Work in One of the Kara Gold Placers," and "Convicts Returning at Night from the Mines." An illustrated article on the Bloodhound by an English writer informs us that the bloodhound is not the savage and blood-thirsty brute he is generally pictured, but is an animal of remarkable intelligence. The frontispiece of this number is a fine portrait of the famous French painter, Corot, and an article by Mrs. Van Rensselaer descriptive of his work is also illustrated by a portrait of "Corot at Work." "Certain Forms of Woman's Work for Woman" is illustrated by views of the Young Women's Christian Association Building of New York, showing the many different departments. "Early Heroes of Ireland" are described by Mr. D. E. Kay. Then there are "Memoranda of the Civil War," "Topics of the Time," "Open Letters" and numerous poems. It is a valuable and extremely interesting number.

SCIENCE, Travel, Natural History, Stories, both complete and serial, and pure fun, liberally sandwiched with poetry, make up the entertaining contents of the June St. Nicholas. "How I Saw Old Carolus," the initial article by George Wharton Edwards, tells of the big bells in the Antwerp Cathedral, which may be seen only by climbing a tower 400 feet high. "Old Carolus," so called, because given by Charles V, is "the greatest and best beloved of all the bells of Antwerp, and, indeed, of all Belgium." It is valued at nearly $100,000. The description is as interesting as a story, and as vivid as a picture, while the picture of the little maid Josephine, born in the tower, who was the writer's guide, is very quaint and sweet. Sarah Orne Jewett's serial "A Bit of Color," is concluded, leaving its readers in love with Betty, "who had a won't-you-please-like-me way with her."

"Teddy and the Wolf" tells how Teddy in his brave attempt to protect the family from the supposed material wolf, was the means of keeping from the door the figurative "wolf," that really threatened it. "Little To-bo" gives some of the quaint sayings of a bright—"*really*" child, and some of her drawings are shown. "The Goblin Storm," a Legend of Bigstoria, contains a very big story indeed, while "Bingo was His Name" gives some very funny adventures of a little brother and sister who "didn't mean to be bad." Some 35 articles make up the number, besides the Letter Box and Riddle Box.

Miscellaneous Advertising.

How to Cure Skin & Scalp DISEASES with the CUTICURA REMEDIES.

THE MOST DISTRESSING FORMS OF SKIN AND scalp diseases, with loss of hair, from infancy to old age, are speedily, economically and permanently cured by the CUTICURA REMEDIES, when all other remedies and methods fail.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c ; SOAP, 25c ; RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

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THE RURAL NEW-YORKER.
34 PARK ROW, NEW YORK.

The following rates are invariable. All are therefore respectfully informed that any correspondence with a view to obtaining different terms will prove futile.

ORDINARY Advertisements, per agate line (this sized type, 14 lines to the inch).....30 cents
One thousand lines or more, within one year from date of first insertion, per agate line, 25 "
Yearly orders occupying 14 or more lines agate space.....25 "
Preferred positions.....25 per cent. extra.
Reading Notices, ending with "*Adv.*," per line, minion leaded..... 75 cents

Terms of Subscription.

The subscription price of the RURAL NEW-YORKER is
Single copy, per year..... $2.00
" " Six months..... 1.10
Great Britain, Ireland, Australia and Germany, per year, post-paid..... $3.04 (12s. 6d.)
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Humorous.

The RURAL NEW-YORKER *is prepared to offer very liberal terms to good, responsible,* PERMANENT *agents. Correspondence solicited.*

I KNOW there's a cross about Norah's blue eye,
But that fact me love cannot smother;
For her eyes are so pretty! No wonder they thry
To be gazin' round into each other.
—*WashingtonCritic.*

THE young man who is too fresh generally finds himself in a pickle sooner or later.—*Michigan Farmer.*

STRANGE that breaking both wings of an army is the surest way to make it fly.—*Agricultural Epitomist.*

A MODERN joker asks: "Who was Richard the Third before he was himself again?"—*Massachusetts Ploughman.*

I THINK a man should have a leetle vinegar in his composition—just enuff to keep the flies off, says Josh Billings.—*Detroit Free Press.*

YOUNG LADY (to dealer): "I want to look at hammocks." Dealer: "Yes Miss, you want one for your own use?" Young lady "Ye-es, partly; but it must be strong."—*Farm Journal.*

DENTIST: "Well, how do the new teeth work?" Patient: "Not very well. They seem to cut the others." Dentist: "That is perfectly natural. They belong to an entirely different set, you know."—*San Francisco Examiner.*

BROWN: "The hen always cackles after laying an egg. I wonder if when she is cackling she is counting the number she has laid." Jones: "Certainly not. A hen always lays her egg early in the morning. She doesn't cackle late."—*American Poultry Yard.*

YOUNG MR. BROKAW (who believes in doing everything in a business-like way: "Miss Southmayd, I am matrimonially inclined. You are my choice above all women. Is it a go?" "Miss Southmayd, (treezingly): "Yes, sir. There is the door."—*Burlington Free Press.*

GEN. GREELY (with a self-satisfied air): "I've got 'em this time. There won't be any complaints to-morrow." Assistant (incredulously: "There won't?" "No siree. I've predicted fair weather and change of temperature, with local rains or snow."—*Philadelphia Record.*

A WAGON passed through Kansas City April 13th bearing the following inscription on its canvas cover: "Chintc-bugged in Illinois, Sicloned in Nebraska, White-Capped in Indiana, Bald-Knobbed in Missouri, Prohibited in Kansas—Oklahomy or bust."—*Orange Judd Farmer.*

EDITOR: "We can't accept this sketch; it isn't true to life—it represents a messenger boy running." Artist: "But he isn't carrying a message." Editor: "Isn't he?" Artist: "No he's running to a fire." Editor: "Well, that alters the case. Put in the fire and we'll accept it."—*Yankee Blade.*

AMELIA'S mamma was teaching the Sabbath-school lesson. "What does 'frankincense' mean?" she asked. The little girl thought a minute and answered: "Why, mamma, 'franc' means a piece of money, and I suppose the wise men gave it to Jesus in cents."—*Youth's Companion.*

AN editor, who does not mind a joke at his own expense, says he went into a drug store recently and asked for some morphine. The assistant objected to giving it without a prescription. "Why?" asked the editor, "do I look like a man who would kill himself?" "I don't know," said the assistant; "if I looked like you I should be tempted"—*N. Y. Mercury.*

A REASONABLE TIME.

"You must give me time, George, to think it over. It is all so strange, so unexpected."

"I will give you a year's time if you wish it. My love for you is great enough to bear that strain."

"Oh, I don't want a year; give me five minutes."

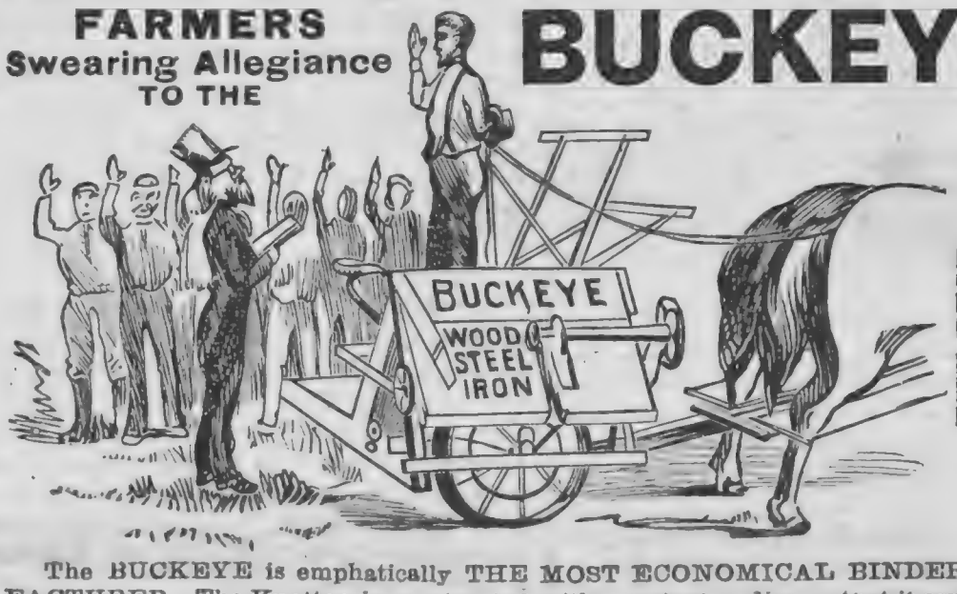
Miscellaneous Advertising.

MAY AND JUNE are the best months to hatch out chickens, and I will sell eggs from the following varieties at $1.25 per setting or three settings for $3: Lt. Brahmas, Buff Cochins, Barred and White P. Rock, Silver and White Wyandottes, Langshan, White, Brown and Black Leghorn, and Pekin Ducks. Send for circulars.
R. G. BUFFINTON, Fall River, Mass.

WHITMAN'S NEW PATENT REBOUND PLUNGER PERPETUAL

Guaranteed superior to any Lever Press now made for Hay, Straw and Wool. Always victorious. Received First Premium at all prominent fairs for past five years, over Dederick and others. Illustrated Catalogue Free.
WHITMAN AGR'L CO., St. Louis, Mo.
We also make the best Steam Power Press in America.

FARMERS Swearing Allegiance TO THE BUCKEYE!



THE BEST Harvesting Machine ON EARTH.

The BUCKEYE is emphatically THE MOST ECONOMICAL BINDER MANUFACTURED. The Knotter is constructed with a swinging disc, so that it can use a low grade of twine, as well as the higher grades. All steel machines with so-called "simplified knotters" lack as broad capacity in this particular. The faulty construction of all steel machines has induced their manufacturers to offer new attachments, which, they claim, are for the purpose of breaking the Twine Trust, but really to aid the said manufacturers themselves in putting a few extra dollars into their pockets at the expense of the farmer. The BUCKEYE presents no old wire binding device, or header or hand binding attachments which cost the farmer more at the end of the season than if he had used the highest priced machine. The Buckeye, with its COMBINATION OF WOOD AND STEEL AND IRON, the three essential elements of LIGHTNESS, STRENGTH AND DURABILITY, is complete and perfect in itself. There is no extra charge for its knotter with swinging disc. The BUCKEYE is endorsed by the leading manufacturers of wagons and cars in the United States, and thousands of honest sons of toil throughout the civilized world are willing to swear to its general excellence. The BUCKEYE BINDER and the BUCKEYE MOWER are a pair of machines which will render their possessor contented and happy. If the farmer desires to break the Twine Trust let him buy the BUCKEYE.

AULTMAN, MILLER & CO., MANUFACTURERS, AKRON, OHIO, U. S. A.

HOLLIS' POULTRY FOOD

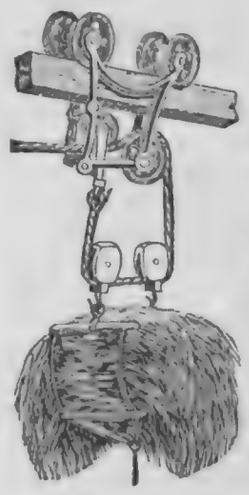
CANNED MEAT.

This meat, which is strictly fresh and ground fine, is the best thing in the world to make

CHICKENS GROW.

It is hermetically sealed in 8-lb tin cans, and will keep until opened. 30 cents per single can; $3 per dozen.

HOLLIS DRESSED MEAT & WOOL CO.,
20 and 22 North Street, Boston, Mass. Mention this Paper.



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The result of twenty years of the best thought and practical experience. Largest wagon loads put in the mow in three minutes. Holds draft and runs into mow at any point. Our slings are center discharge and are a perfect success. Never fail to work. We guarantee our hay tools. Agents wanted. Send for catalogue.
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Savage & Farnum, Importers and Breeders of Percheron and French Coach Horses, Island Home Stock Farm, Grosse Isle, Wayne County, Mich. We offer a very large stud of horses to select from, we guarantee our stock, make prices reasonable, and sell on easy terms. Visitors always welcome. Large catalogue free. Address
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is the Strongest and Best Self Regulating Wind Mill made
Full instructions for erecting sent with the first mill. All Wind Mills warranted. For Circulars and Prices address
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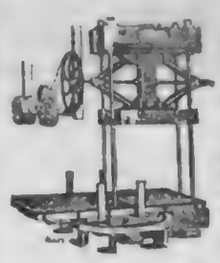

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Sheep Husbandry.

A WISE MUTTON-HEAD.

THOSE who know least about the sheep are emphatic in calling it the most stupid of our domestic animals. Shepherds well know that some sheep possess plenty of sense and cuteness, and that the sheep's memory is generally better than that of any other farm animal. It requires a study of the animals to learn these facts, however; to most people sheep will always be known as small-headed, stupid, cowardly, selfish animals, fit models for that disagreeable type of humanity—the mutton-head.

While looking about the stock-yards not long ago, the R. N.-Y. artist came upon the lamb whose head is pictured at Figure 148. We consider it about the most intelligent "mutton-head" we have ever seen, and the R. N.-Y. hopes that those who see it will admit that sheep are not all the dull, woolly-brained animals that prejudice has pictured. This lamb ought to be an intelligent-looking animal. He was engaged in a work that will, if carried out, bring profit to American farmers. Though he died for the cause the flavor of his flesh may help to stimulate the demand for good American mutton to such a point that farmers will see their way clearer to meeting it. This was a "spring" lamb—a cross of a South-Down and a common ewe. He was one of a choice lot from Virginia that brought first prices and gave such excellent satisfaction that the dealers want "more from the same place."

There is a demand in all our large markets for good mutton, but it is impospossible to supply this demand for the reason that first-class mutton cannot be obtained at anything like a reasonable price. The mutton that is sold in the markets does little besides ruining its own reputation. Parties who have eaten Canadian mutton wonder why such meat cannot be found here. The fact is that too many American farmers have utterly neglected the breeding of mutton sheep. They have bred entirely for wool, and the result is that they have well-nigh ruined a very profitable meat industry. It is high time that steps were taken to stop this retrograde movement.

Rural Topics.

BUCEPHALUS BROWN'S NOTIONS AND IDEAS.

FARM WASTES.—There is a cause for everything; and there must be some sort of a cause for the general wastefulness of manure on our farms. It is not a mere occasional, accidental thing. On the contrary, if I may judge from long observations, a careless indifference, even in our oldest States, causes the practical loss to the crop of not less than one third of all the manurial matter—plant food—which is furnished in the excrements of our farm animals.

SAVING AT THE SPIGOT.—I know pretty intelligent farmers who will lose more time than it is worth in fussing with the manure of a small flock of hens, while the whole liquid evacuations of forty head of cattle run to waste upon their property.

HEN MANURE.—Do I think hen manure has no value? Not at all. It is a very good fertilizer, more or less, according to the food the fowls get; but always better than we get from cattle fed the same, because it always contains the urine of the fowls. That is what gives hen manure its excellence. I save all the hen manure I can, and throw it into the manure shed, along with the rest. I do not fuss with it at all, or mix it up to use for any special purpose, because I get all the good there is in it that way, and save time, which is money.

THE LESSON OF HEN MANURE is the lesson of saving the urine, and I wish some of these fussers with fowl dung would learn it. But it seems as impossible to make an American farmer saving of manure, as it is to make him liberal in building roads and improving school-houses. If one-tenth of the money that might be saved in the manure were to be expended on the roads and the schools, and the rest worked into the crops, the condition of the American farmer would very rapidly improve. He might even pay off that mortgage, about which we hear so much.

'PRENTICE WORK.—The great bulk of our farming is neither more nor less than 'prentice work. I mean by this that most men engaged in farming are not half educated to the business. As a rule, they know less about principles than European farmers, and not one-quarter as much about sound practice. It is too much to ask that the average farmer should be familiar with the science of farming. There is no provision yet for teaching it, even to the young. But I do say that there is no excuse for ignorance of sound routine practice, because we have enough good practical farmers in almost every township or county to teach that.

THE SCHOOL OF THE FARM.—Every well-managed farm is, or ought to be, a school for the young men employed upon it. The ill-worked farms are certainly schools of bad farming; and it is at such schools that the great majority of our young farmers are being taught "how not to do it." If they were wise, they would offer themselves to work with the best practical farmers three years for board and clothes rather than go to farming with the little knowledge they possess. They would be 200 per cent. better off, at least, in 15 years, by doing so. Besides

AN INTELLIGENT MUTTON-HEAD. Fig. 148.

that, being themselves well informed in their art, they would become centers of instruction for others; and knowledge would thus go on multiplying itself.

THE MARK OF A GOOD FARMER is easily recognized. He never wastes any manure. If you want to know what kind of a farmer you are, here is a test, infallible, by which you may try yourself. A man who has sense and business enough in him to save all the fertilizing material made on the farm, is not the man to waste it. He may make mistakes, but these very mistakes will instruct him, and be of profit to him.

A FAIR QUESTION.—"Now will you, please, tell me, Bucephalus Brown, how to save all this fertilizing material, which you say we are wasting?" I wish it were as easy to induce the questioner, who cocks his head and his eye at me, and puts this question *to do what he already knows that he might and ought to do in that direction*.as it is to answer it! The thing is very simple. Are the 17 men whose barns I passed by in a 30-mile ride, last winter, ignorant that they ought not to throw out the manure of their long cow stables under the stables' eaves, as they certainly did? Have not nineteen-twentieths of the farmers of the State in which I live who save little or no urine abundant proof of its power to make grass grow thick and dark and tall? Every spot in their pastures and fields where a cow has humped up her back is a testimony against them.

THERE ARE DIFFICULTIES.—Yes, there are lions in the path. Even some of those who have made some attempt to save and apply the liquid waste of their stables, have been disappointed in its use. Urine, and especially the urine of straw-fed stock, is by no means a complete and satisfactory manure, when used alone. The better we feed our stock, the more wasteful it is to waste their excrements; for in them is the greater part of the plant food taken out of the soil which grew that rich feed. It costs something to prepare a urine tank, as much as it costs to build a silo, and perhaps more than to build a cheap one. It costs something, too, to get the liquid on to the land. But it costs much more to let it waste.

THREE WAYS.—Urine may be carted out in a water-cart, such as is used in watering dusty streets, and sprinkled on grass stubble, either to promote the growth of the grass, or preliminary to plowing. If for grass, remember that urine, rich or not so rich in plant food, is always an ill-balanced manure. It should naturally go with the dung, and even then there is often a large deficiency of phosphoric acid, relatively to the nitrogen and potash. A plain phosphate, like ground bone, Thomas-slag, or similar material, should be used along with all stable excrements to secure the best economy.

OTHER WAYS.—The water-cart method gets it all on the land; but there are other ways, often better, to utilize this liquid. On farms where there is an excess of straw, either of the small grains or of peas, beans and buckwheat; or of poor swale or salt-marsh hay; or where sea-weed or swamp muck is good and handy, urine is a most admirable instrument for making these materials quickly into the richest kind of compost. With a compost yard handy to the urine tank, but on a lower level, properly made piles of any or all of these absorbents, singly or in mixture, may be easily moistened and kept moist from the tank, until they have, with occasional turning, become sufficiently rotted to be drawn out and plowed under. Even the stored manure, in sheds, is bettered by the same practice, which certainly should be resorted to so far as to prevent over-heating which tends to fire-fanging. There are ways enough, when there is a proper amount of will. At present the trouble is too much won't.

Dairy Husbandry.

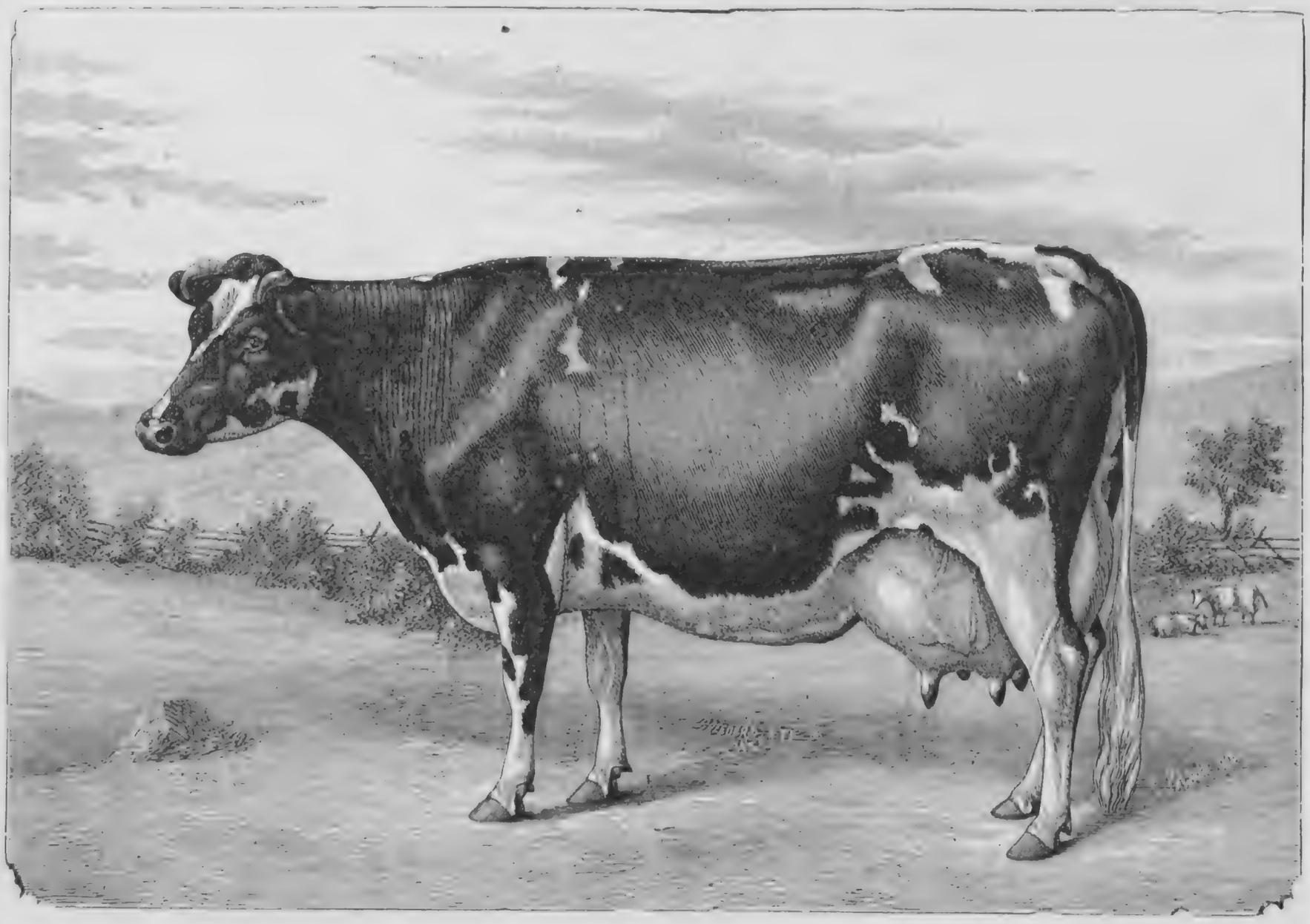
The Coming Holstein-Friesian

DAIRY vs. GENERAL-PURPOSE.

What Breeders are Working For.

OUR readers will remember that at the last meeting of the Holstein-Friesian Breeders' Association somewhat divided advice was given. Prof. Johnson, of the Michigan Agricultural College, strongly urged breeders to pay particular attention to the dairy points of their cattle. In spite of the fact that the test he had shortly before completed gave the strongest evidence of the value of a Holstein steer for beef, he was emphatic in saying that the Holstein cow was specially designed by nature to serve as a dairy machine,and that every energy of the breeder should be devoted to the task of improving the ability to make milk and butter. Prof. Morrow, on the other hand, seemed to think that the Holstein-Friesian might profitably apply for the position of "general-purpose" cow, and he therefore urged breeders not to neglect the beef points while they tried to develop dairy qualities. As this seems to be a matter of considerable interest, we have requested a number of breeders to give their views on the subject.

We are also enabled to present pictures of a typical milk Holstein, and also of a cow bred more with reference to beef points. "Lady Fay," Fig. 149, is owned by Smiths, Powell & Lamb, and is considered about the highest type of the dairy Holstein. The judges at the N. Y. dairy show, guided by the "scale of points," awarded her the highest honors, and she verified the wisdom of this judgment by winning the sweepstakes prize for milk at that show.



"LADY FAY," TYPICAL DAIRY HOLSTEIN. Fig 149.

Rhoda, Fig. 150, is owned by Mr. F. C. Stevens, who regards her as a typical milk-and-beef animal as near to the "general-purpose" standard as we are likely to get. Rhoda has always been a great milker, having a year's record of 21,309 pounds, and a butter record of 23 pounds in seven days. She is now nearly 14 years old and has ceased to breed. The greatest weight she has ever attained was 2,030 pounds.

FROM SMITHS, POWELL & LAMB.

We believe that the dairy qualities, (those concerned in the production of milk and butter) in the Holstein-Friesian breed of cattle are of paramount importance, and that they should never be sacrificed in any degree in order to secure better beef points; but at the same time we do not believe it is necessary to breed entirely away from beef qualities in order to retain or even to improve the essential dairy qualities. We believe in breeding for *butter* and *milk first*, *last* and *all the time*, and with these qualities developed in the highest degree we wish to retain all the beef points possible.

Syracuse, N. Y.

FROM J. O. BEAL.

In practice I have been selecting, feeding and breeding with the object of producing a large cow that will mature early (if these two requirements are not contradictory) with great milk and butter capacity, leaving to other breeders the task of producing the *highest-priced beef*. It seems impossible here to sell grade Holstein-Friesian steers at the same figures as grade Short-horns. I think I can make Holstein-Friesian beef as cheaply as any other kind; but 2½ cents per pound, which we get at present, is not a flattering price, and I feel that if we neglect the dairy qualities we must soon go under.

Lenawee County, Mich.

FROM F. C. STEVENS.

My advice to all breeders of Holstein-Friesian cattle is to breed so as to perpetuate the breed as they now are (taking as a standard the highest and best type); for we have in them a combination of qualities found in no other breed, and this and this only is what makes them better than any other known breed. It is their size that makes them so much more desirable than Ayrshires or Jerseys and their milking qualities that recommend them to all farmers over the Short-horn. The successful breeder of Holstein-Friesians is he who produces a cow weighing from 1,400 to 1,600 pounds, which will give 10 times her weight in milk each year.

Wyoming County, N. Y.

FROM T. G. YEOMANS & SONS.

We agree more nearly with the views of Prof. Johnson than with those of Prof. Morrow. We believe the Holstein-Friesian is the best "general-purpose" cow, and in those localities where beef qualities are more of a desideratum she can very easily be bred in that direction, but our experience convinces us that she is the greatest dairy cow the world has ever known whether for milk, cheese or butter, and we think it wise to continue to develop her in that line in which she has been so long and successfully bred.

Wayne County, N. Y.

FROM CORNFORTH & CORNFORTH.

The majority of people in this country and in this State especially, want the Holstein-Friesian to be an all-purpose cow. We aim to breed and raise good, large, well developed stock, but in so doing we do not neglect the milking qualities as we breed to the finest and best milk and butter animals we can get. We believe that if breeding for beef qualities were entirely given up, and no attention were given to breeding for large, well-formed bodies, the Holstein-Friesians would become in a number of years, small ill-formed animals such as the Jerseys.

Elbert County, Colorado.

FROM CHAS. ROBINSON & SON.

We concur fully with Professor Johnson in aiming for all the points we have already secured and in keeping the Holstein-Friesian a strictly dairy breed, continuing to improve in that line. We have plenty of beef breeds now, and only one strictly dairy breed, viz. the Holstein-Friesian. ("Let us fight it out on that line forever.") Breeders must stick to one thing if they would regard the future.

Worcester County, Mass.

FROM N. C. BARNEY.

I agree emphatically with Professor Johnson in striving to make the Holstein-Friesian a dairy cow "first, last and all the time." Breeding her for that especial purpose for generations has brought her to her present high standard. Breeding for another object, will, in my opinion, deteriorate her milking qualities. No one animal or breed among quadrupeds or bipeds can possess all of the "admirable virtues." The beef attributes of the Holstein-Friesian are now sufficient to make her pre-eminently a good "all-purpose cow." Really what purpose is served by running the risk of depreciating what we know we possess, in striving to gain something we may never acquire?

New York.

FROM JOHN A. FRYE.

This question, like all others, has two sides and while in the West it does, without doubt, pay to raise beef, I doubt very much if it can be profitably done in New England. Therefore I think it wiser for New England men to give their attention to breeding first for milk and butter, and incidentally to producing an animal that will ultimately bring a fair figure at the block.

Middlesex County, Mass.

FROM GERRITT S. MILLER.

I consider the Holstein-Friesian emphatically a dairy breed. It owes its world-wide reputation to the fact that it produces more milk, butter and cheese, per capita, than any other breed. But in addition to this remarkable dairy feature, it is the equal if not the superior of any of the beef breeds in one very important feature—that of rapid growth, (at the Chicago Fat Stock Show, Holstein-Friesians have surpassed their competitors in this respect). This combination of excellent dairy and very fair beef qualities is one possessed by no other breed in so great a degree, and intelligent breeders should not only preserve it, but strive to improve upon it, always keeping the dairy feature uppermost.

Ocean County, N. J.

A PLEA FOR SPECIALTIES.

G. W. THOMPSON.

THAT the general purpose cow has not figured favorably in the history of the past goes without saying, and the same is likely to be the case in the future. To assume that, because the cow is used for both milk and beef, therefore an agreement that "whatever is is right" would paralyze our every effort in improvement. We might as reasonably expect to produce a valuable horse for the turf, the coach and the city dray, by a careful mixing up of Clydesdale and Hambletonian

blood. How to produce such a cross I will leave to those agricultural colleges which, with no really genuine agricultural department, have been trying to represent Hamlet with the Prince left out.

If excellence is to be attained in science or art, it must not be looked for from a jack-of-all-trades; specialism points to higher attainments, leads the way and usually gets there. If our country were less continental and our resources limited, it might be a matter of expediency to have a general-purpose cow; but while we have almost unbounded cattle ranges where beef can be produced at a minimum cost, and other sections are excellently adapted to dairy husbandry, it seems to me the part of wisdom to make special effort by special means to supply the specialty the market demands, in the most perfect manner and by means of the animals best adapted to such purpose.

Our common cow, sometimes termed a scrub, is an example of the all-purpose cow. That she is capable of improvement no one will gainsay; but inasmuch as we have several improved breeds with special adaptabilities, to adopt such of these as is best adapted for our particular purpose would seem the wiser course.

The little Jersey may not be displaced. The attempt to make her a farmer's all-purpose cow has materially affected her popularity, but she is a nice little pet for those who want to keep their own cow. The beef-purpose Short-horn will surely take its place when combines are so controlled that farmers can afford to improve their fields by fattening steers, selling more on the hoof and less by the bushel. The Galloways, the Aberdeen-Angus, even the West Highlanders will perhaps adapt themselves to the rustling life of our Western ranges, and will by careful breeding or judicious crossing prove worthy of the reputation they have already attained; while no attempt should be made to divert the Holstein-Friesian from her life-work at the pail in order that she might die like a hog, for of the Holstein-Friesian cow at least, it may be claimed "she can't be wrong whose life is in the right."

Stelton, N. J.

Educational.

"What are the Agricultural Colleges Good For?"

PROF. PORTER'S ARTICLE ANSWERED.

FRIENDS OF THE COLLEGES STATE THEIR SIDE OF THE CASE.

FROM DIRECTOR CHAS. E. THORNE.

I find much in Professor Porter's article "What are the Agricultural Colleges good for?" (R. N.-Y., page 348), with which I can heartily agree; much with which I cannot agree. That the agriculture of our fathers was independent of agricultural or other colleges is true; for it was but a handicraft, and a rough one at that; but the industrial revolution of our generation, of which the railway and telegraph and the wonderful improvements in machinary of every description are but the material indications—but the natural outgrowth of that intellectual regeneration which is manifested in the progress of scientific knowledge and civil and religious liberty—this revolution does not stop at the gates of agriculture in its intellectual phases any more than in its material manifestations.

What do the colleges do for surgery and medicine, for law, for theology or for engineering? They simply afford convenient opportunities for the bringing together of teacher, student and illustrative material. They *make* neither doctors, lawyers, preachers nor engineers If the student have within him the material out of which one of these may be made, then the college will cultivate and systematize this material; but after the college has done for him all that it can do it has only brought him to the gateway of his profession. It is only when he passes beyond college walls and engages in the actual pursuit of his profession that he becomes a doctor lawyer, preacher or engineer. And how often does he fail, after the college has done its best for him!

The "folly, implied if not expressly stated in the terms of the Morrill Land Grant Act," is precisely the same folly that is implied or stated in the terms of every college charter. [Professor Porter wrote "fallacy" in place of folly. EDS. R. N.-Y.] When the professional colleges turn out none but fully equipped and successful professional men, then, and not till then, shall we have a right to demand that the agricultural colleges graduate only fully equipped and successful farmers.

That the so-called agricultural colleges, as a class, have most lamentably failed to accomplish their legitimate work none will insist more strenuously than I. It *is* true that "as at present managed, their influence is to take young men away from the farm." But this is true only of the class, and not of all the individuals. There are agricultural colleges whose managers have had the breadth of vision to see the opportunity that lay before them, and who have built up institutions wherein the spirit of agriculture prevails, and whence young men and women are going back to the farm with every faculty cultivated in sympathy with the life of the farm and trained to make the most of that life. These colleges do not *make* farmers; but give them the material out of which a farmer may be made, and they will not pervert that material into the making of a second-rate lawyer, doctor or preacher.

The trouble with our agricultural colleges lies here:

1. Their managers are generally men who have no active sympathy with the life of the farm; who were educated in the traditions of the "classical" schools, and who have not the wisdom to see that such education is now obsolete, so far as the training of men for modern life is concerned. These men have already been generally successful in turning "the agricultural colleges into schools of general culture, assimilating their courses of study largely to the courses in regular colleges."

2. The farmers, realizing that the old scholastic education was not adapted to their necessities, and seeing in the new education simply an old acquaintance under a new garb, have largely refused to patronize the colleges; whereas they should, by power of numbers and combination, have compelled a regeneration of these colleges in fact as well as in name.

Get the agricultural colleges out of the ruts of scholasticism, man them with men awake to and in harmony with the demands of the age, and we shall soon cease to hear of their failure.

Columbus, Ohio.

FROM DR. W. J. BEAL.

I have read a long article in a recent number of the RURAL, by Professor D. G. Porter, under the caption, "What are the Agricultural Colleges good for?" which is a question of great interest to many of us. If he had drawn more largely on facts and less on his imagination, the article would have contained fewer objectionable points.

Here are a few thoughts called out by reading his article, with no attempt to notice much that it contains.

He proves (?) that a man will be no more successful as a farmer by having a knowledge of veterinary surgery, agricultural chemistry, entomology and botany. Much depends on who teaches the above subjects, how they are taught and what parts are made prominent.

He says farmers can get needed information from reports of experiment stations and agricultural papers, not understanding that it is possible for stations and papers to be of much real value to the farmer only if we have well-educated men to manage them. The agricultural colleges have done more to raise the standing of agriculture and agricultural papers than most people are aware of, and they have made it possible to establish and maintain the experiment stations.

The agricultural colleges, the experiment stations and the agricultural papers constitute a natural alliance, each aiding the others.

The author admits that the studies referred to tend to make a person "a good deal more of a man." The leading thought of our best agricultural teachers is to make better and broader men while they are also training them for the farm In fact, the man is of more importance than the farm, and we cannot count a man as a successful farmer unless he is a success as a man.

The author plans, in a general way, a course of study, making the sweeping assertion that agricultural colleges take young men away from the farm. In several notable cases this last statement has again and again been shown to be untrue.

He refers to the 300 graduates of Massachusetts Agricultural College, where less than one-quarter have devoted themselves to agriculture in any of its branches. Let him count up a like number (as others have done) who graduate in other colleges or who take anything near a full course in academy or high school, and he will see that even the proportion of one-fourth of the graduates as farmers, in a manufacturing State like Massachusetts, is a fine showing for a young institution. If this be not enough, let him count up 300 graduates, taking all in certain classes, from schools of law and medicine, and see if he can make as good a showing for these professional schools.

"Now it is a fair presumption that most of the young men intend to become farmers; else why should they go to an agricultural college?" An experience of nearly 20 years in an agricultural college situated in an agricultural country, has shown that students are induced to drift into an agricultural college for a large number of reasons, as they drift into other schools or colleges.

In regard to the graduates of the Massachusetts Agricultural College, I take the following from Agricultural Science for April, 1889: The editor is a graduate of that college.

"Of the graduates of the college, 46 are farmers, six fruit growers and market gardeners, eight florists and landscape gardeners, four planters, nine poultry and stock raisers, seven veterinarians, two editors of agricultural papers, four fertilizer manufacturers, nine chemists to fertilizer companies and 28 engaged in agricultural colleges or experiment stations. There are 150 other graduates engaged in various occupations." The above is a fine showing for any agricultural college.

Professor Porter would turn the agricultural college into an academy, where instruction should be imparted only in winter. He greatly underestimates the cost of this method, when he states that for four to six months the cost would be not more than a quarter as much as it would be if the usual method were followed.

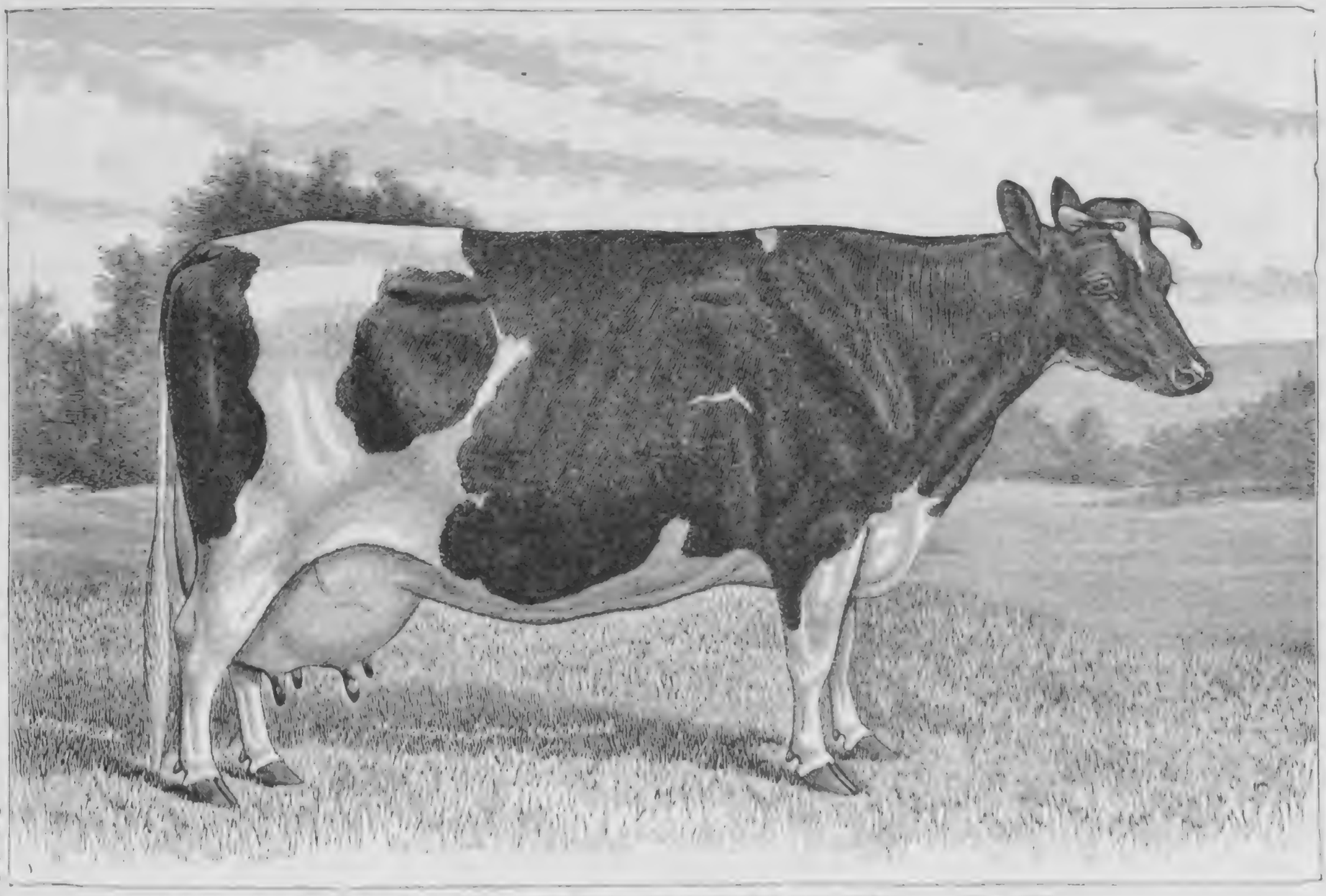
Our experience is like that in many other States, that poor boys can best support themselves while attending an agricultural college, by having the long vacation come in winter when the student can make more money in four months by teaching school than he could in six months by working on the farm. By taking a course of the college during summer, he has practice in many kinds of work requiring skill. Without a course followed by examinations and credits, experience would show that most boys would prefer base ball and other sports to taking notes of farm operations according to the plan of Professor Porter. Actual practice would show that very little could be done by one lecture a day, after dinner or before supper. Fortunately for our great nation with its varied interests, we are still trying many experiments in the way of teaching agriculture. By short courses, by those of four years, by summer courses, by winter courses, by establishing colleges in connection with universities, and by others not so connected, by requiring manual labor and by not requiring it, by introducing into a course a pretty liberal number of studies like rhetoric, pure mathematics, logic and moral philosophy, and by other courses in which these and kindred studies receive very little attention; in due time the problem will be solved.

There is one point the author has not taken into consideration, the fact that most of our graduates have little or no money when their course is finished. To become a farmer requires capital. Such men usually believe they can engage for a time in surveying, teaching or something else and get money more rapidly than by hiring out to work as a day laborer, or by going to a very new country where land is cheap. Many not now numbered among the farmers, still hope some day to be able to purchase and manage a farm.

Michigan Agricultural College.

FROM PROF. J. L. BUDD.

Prof. Porter's paper on page 348 of the



"RHODA," TYPICAL "GENERAL-PURPOSE" HOLSTEIN. Fig. 150.

RURAL is a surprise. His argument appears to be founded on the belief that the farmer, fruit grower, gardener and forester need only expertness of hand and a few empirical rules, handed down from father to son, to insure success. He says "plants will grow whether we understand the method of their growth or not," and, again, when trying to solve the problem as to what shall be done with existing colleges of this character, he says: "No study should be required, and no recitations be heard. The sole literary exercise should be one lecture a day devoted by the Professor to an explanation of the reasons and principles of what is then going forward in the department under his charge." As he says nothing of preliminary preparation in the natural sciences, or the needed academic studies, it seems fair to assume it as his belief that the farmer should go back to the position he was in mentally during the period he speaks of when "agriculture existed and flourished thousands of years before agricultural colleges were thought of."

If this be his meaning, I cannot see, after 13 years of experience with agricultural college classes, how the Professor can explain "the reasons and principles of what is then going on in his department." At the agricultural colleges of Europe of the first grade it is well known that the applicant for entrance must have completed the course of study embraced in the first seven classes of a gymnasium, or the first five classes in a real school, or have completed the entire course in an agricultural school of the second grade. With this preparation his two years' course has continued lectures, studies and recitations in applied science, combined with daily practice. At our best agricultural schools of the West—such as those of Michigan, Iowa and Kansas—the course of study and practice is not materially different except that a part of the preliminary studies is included in the regular course.

That such an education is not needed to grow a crop of corn or potatoes in accordance with a few empirical rules handed down from father to son may be freely admitted; but the real query is: could the common uneducated laborer have originated the new modes and methods, the new tools and appliances, the new and valuable varieties, the new and improved stock, and, in a word, the new order of things which has made our day the most advanced one in the industries the world has known? Would agriculture have kept pace with the advances in other lines without the aid of the agricultural colleges and trial stations of Europe and America? Here we have the true mission of the technical schools. We need the pioneers, the thinkers, the planners, and we will not find them among the students of the training schools the Professor is inclined to recommend.

As to the complaint that too small a per cent. of the students of such schools return to the farm, it should be noted that but few of them have farms to return to, or means to purchase and stock them. At first they drift quite largely to other lines of work that promise to pay better without invested capital. But personal observation of hundreds of such students who have left our college during the past 12 years shows that the bias towards agriculture, horticulture, forestry, veterinary science, mechanics, etc., during the formative period of their lives, leads them sooner or later to do good work as planners, leaders and thinkers, in the great and needed work of lifting up and bettering the industrial pursuits.

Agricultural College, Ames, Ia.

FROM AN AGRICULTURAL COLLEGE GRADUATE.

It does not seem to me possible that Professor Porter can ever have personally examined the workings of an agricultural college, talked with the graduates of such institutions or taken pains to see why boys want to enter them. As I am a graduate of an agricultural college, it may not be out of place for me to state why I took a course in agriculture and what influence such a course had upon me. I went to college of my own free will. I was considerably over age when I entered and I was obliged to depend upon my own efforts for support. I am sure I examined the catalogues of at least 100 different colleges before I decided to go to an agricultural college. I have never been sorry I went there, and if I had a boy to day to be educated I know of no other institution that I would sooner have him attend. My desire was to attend the college that would give me a sensible insight into what the world calls "an education" at the least outlay of cash, and at the same time leave me at the completion of my course in a condition that would enable me to do something in the way of earning my livelihood as soon as I graduated. I knew plenty of graduates of literary schools who for a year or more after graduation were utterly unable to support themselves by any other occupation than that of teaching, and I knew well enough that I never could succeed as a teacher. The agricultural college graduates that I knew were earnest, practical men. A demonstration of their ability and readiness to work hard in the field whenever called upon to do so and their equally evident ability to talk, think and act strongly and sensibly did much to send me to the Michigan Agricultural College.

During my college course I did rather more work on the farm than the average student performed. I milked cows the first year and in fact, went through the regular course of work, from spreading manure and digging potatoes to helping fill the silo or running the college engine. At the same time I had my full share of class and literary honors which were always elective—presented by the students.

I speak of this to show that the college spirit was essentially democratic; there was no such thing as a college aristocracy. Dudes and drones seldom went past the first term. Every boy had a square and equal chance for the college offices that college boys aspire to. I am positive that the vast majority of my college mates came to the agricultural college because they found that they could partly pay their way by working on the farm and because the graduates with whom they were acquainted were earnest and practical men—workers not dreamers.

My college expense account will show that I finished my course for less money than I should have been obliged to pay for two years at any reliable literary, or technical school. In fact, had it not been for the peculiar advantages offered by the agricultural college I never could have started my college education, and it is not at all surprising to me to find that the great majority of the boys at college with me say the same thing.

A word about the course of instruction at an agricultural college. If Professor Porter had ever gone to such a college and fairly investigated the methods of teaching and the matter taught, his article would never have been written. He proposes to have farmers depend entirely upon agricultural papers and experiment station bulletins for scientific information and investigation! Did it ever occur to him that the course at an agricultural college may be such that a farmer who takes it may be far better fitted to appreciate the science he finds in agricultural papers and bulletins? My experience is that a course in agriculture is a great help in understanding and practicing the principles laid down in modern agricultural literature. I should say that Professor Porter guesses at the matter.

And then that old humbug about the small proportion of agricultural students that go back to the farm! How many graduates of a Normal school do nothing but teach? How about graduates of schools of law or medicine? For a number of years after graduation I had less to do with agriculture than pleased me, simply because I had no farm to work. I can say most emphatically that I cannot think of a single member of my class who did not leave college with the firm determination of some day owning and working a piece of land. It will be years before some of them become connected with soil culture, but the love of rural pursuits is in them and their college course fastened it. Some of the best lawyers in the State of Michigan are graduates of the agricultural college. One of them was not long since elected a Judge of the Supreme Court of the State, and the fact that he had attended the agricultural college had a good deal to do with his election. Is a lawyer any better qualified to stand as the champion of the rights of farmers because of his course at an agricultural college? I think he is. Professor Porter may not think so.

The plan proposed by Professor Porter is a beautiful one—on paper. I can only give an opinion regarding it, and that is that he could not get a corporal's guard of the class of boys American agriculture needs to attend such a schoo.

H. W COLLINGWOOD.

Farm Topics.

NATURE'S REMEDY FOR A WORN-OUT SOIL.

Excessive cropping ruinous to fertility; clover a rescuer of plant-food from the depths of the soil and the atmosphere; clover sod as a seed-bed; how to get a "catch;" the best mode of treating manure is to haul it out and apply it as it is made; the next best to save it in ridges and spread it as it is hauled; housing manure; never leave it in piles in the field; manuring in spots.

CLOVER.

In Southern Ohio, plow, plow, plow seems to be the rule rather than the exception, and fully half our farmers fail to see in what direction they are drifting. Cropping, cropping, cropping has already taken the cream out of the virgin soil of Southern Ohio. Some, however, are waking up to the evils of this practice, and clover is being sown in many fields. Many of our farmers are beginning to see that this great foliage plant is coming as a succoring angel to the rescue. But to get down to facts: Clover is, in my opinion, the greatest natural fertilizer and renewer of the soil known to man. It penetrates the subsoil with a long, tapering root to a greater depth than any other plant, bringing plant food up from below the reach of other plants and leaving it in the large crown near the surface of the soil and in the dark foliage upon it. I have traced the root of an ordinary stool of Red clover to the depth of 24 inches. Last spring, while working in corn about knee-high, I traced the corn roots and found, to my surprise, that the roots of two thrifty hills would meet across a four-foot row.

Again, we are told by good authority that the clover plant feeds upon the atmosphere, gathering, accumulating and depositing fertility and gases from that source in considerable quantities.

Two years ago, owing to drought, I was short of pasture, and, as a last resort, turned the lambs on the second or seed crop of a three-years-old clover sod. They ate it close, thus making a finish of it. I plowed the land for potatoes. Except for the breaking of the clover roots this piece turned over very easily, the furrow breaking and crumbling as it turned, the soil being clayey. I prepared a very fine seed-bed, though the labor of doing so was less than in any other case producing like results. Clover seems to lift, heave and loosen the soil, thus giving it new life. Despite the dense green foliage, there is a constant falling of dead leaves, causing a black mold on the surface. Part the foliage while in full bloom and examine the moist soil, and you will be as surprised as I was when I made my first clover-hay by forking and handling until the stems were bare.

I hear some talk of clover-sick soil, but the fact is that more soil is sick from the want of clover than from an over-dose of it. Any worn-out field can be seeded to clover if properly managed. If the field is bare and clean, in early spring spread on a coat of manure (a little is better than none); then as soon as the soil can be worked harrow it with a sharp-toothed harrow, sow anyhow 15 pounds of seed to the acre—20 are better—and harrow again. In this way I have never failed to get a good sod of clover. If the soil has any inclination to run to Blue grass, the latter will make its appearance before this crop is exhausted. Where the winter is severe the second or seed crop each year should be allowed to fall down as a mulch for the roots, or else the freezing and thawing will heave the roots out and ruin the crop for next year. This failing of the seed crop perpetuates the sod, the seed coming up the next spring only to make the sod thicker.

I have an old gravelly bank too poor for any kind of a catch of Timothy. It was sown as above described two years ago. I have mowed from it two heavy crops and to-day it is fully half a Blue grass sod. Do you think the plow will get into that? Not soon.

In addition to the advantages of clover as a great life-giver to the soil, no better feed was ever produced than a good quality of clover hay. I have fed it to sheep with no grain whatever with the very best results.

MANURE.

A proper gathering and feeding on the farm of all feed and grain raised, together with a careful saving and judicious returning to the soil of all manure made is a course that will never impoverish any soil. Of course, the tiller of the soil must exercise good judgment in a correct rotation of crops, and avoid breaking a good sod too frequently

A trip through Southern Ohio will reveal, to an observing traveler, the serious fact that fully nine-tenths of all the manure made is thrown out against the side of the stable, many times under the drip of the eaves, there to leach, over-heat, fire-fang and "waste its sweetness on the desert air," and at the same time the very perpetrators of this crime (for crime it is against themselves and their children), will sweat and toil to get together a few dollars to send to some Eastern city for a ton or so of some commercial fertilizer. Why, brethren, these things ought not so to be.

I have experimented considerably with various methods of caring for the manure heap, and the best results have been obtained from making it in the form of a ridge fully exposed to the weather. Make the ridge on well-drained land, allowing no surface water to reach it. It is not best to make it more than four feet high; keep the loose manure around the edges well thrown up. A ridge of this kind will seldom leach; in fact, several times I have turned the eave spout so as to run the water into the ridge when I had any fear of its over-heating, being careful not to let it get more water than it would absorb. Last spring I hauled out a ridge treated as above, that was in excellent condition, well rotted and very little fire-fanged.

Not long since, in an agricultural journal of national repute, I read an article advocating the housing of manure. This I have also tried, and find that if it is piled over a foot deep it will heat, (manure from cattle, of course, excepted) and if it heats it will literally burn itself to death and be as worthless as straw. It may sometimes be advisable to leave the manure undisturbed under the feet of the stock; then it will heat unless very closely trampled, to say nothing about the injury done to the stock.

But as much skill is needed in applying the manure as in keeping it. The best authorities tell us that where the land is level, or nearly so, we should haul the manure direct from the stable to the field as soon as it is made. This is, undoubtedly, good advice and the most economical mode of application, but in a rough, hilly country like this, it is impracticable. Then the next best way is to rot it in the ridge until the ground is plowed, and then apply it on the surface, spreading it evenly and harrowing it in. Hauling the manure to the field and leaving it in small piles is a bad practice. I tried this once to my satisfaction or rather to my sorrow. When I spread the heaps I was very careful to scrape the ground where they stood very closely, expecting it would be the richest. Despite all this the corn was very spotted and uneven.

Last fall I broke an old field to re-seed it. Not having manure enough to cover all of it I hunted out all the poorest spots, bare knobs, etc., and spread what manure I had on them. That piece to-day is spotted. In fact, I fear there will be no grass at all by spring except where the manure was spread. The difference is so great that the irregular outlines of the manured pieces can very easily be traced.

This taught me this lesson: don't plow for anything an inch more land than you have manure with which to cover it.

Finally, the farmer ought not to be ashamed of his calling, neither should he cause his fields to be ashamed of him. He ought to put on his thinking-cap and make his calling a study. He ought to use sense and judgment, for if there is a calling under the sun that needs a proper use of these two virtues it is the farmer's. The bright, wide-awake, thinking man succeeds wherever he goes, while the sleepy, don't-care fellow will fall in the ditch every time.

Athens County, O. A. B. SAUNDERS.

Everywhere.

RURAL SPECIAL REPORTS.

Indiana.

PENDLETON, Madison County, May 17.—The prediction of the R. N.-Y. of a dry season was well-nigh fulfilled. As the winter was the mildest the spring was the driest on record in this region. There was no rain to stop the plow, and corn is all planted and some of it is being cultivated. Wheat has made a good growth and tillered better than usual, and if indications do not change, may make nearly an average crop. Copious rains on May 10—12 have refreshed the thirsty earth and caused vegetables, flowers and all living things to rejoice. P. H. H.

SOUTH BEND, St. Joseph County, May 29.—Yesterday it snowed nearly all day and the mercury was down to 33 degrees nearly the whole time; but it is several degrees warmer to-day. If those engaged in farming experience many springs like this, they will be seeking other means of making money.

T. A. P.

Iowa.

DES MOINES, Polk County, June 1.—May has passed and we are glad rather than sorry; for it was cold all the month. The first half was wet and cold, and on the 19th we had a fearful hail storm which destroyed thousands of dollars' worth of small fruits and vegetables, besides greatly damaging corn and small grains. Ever since the hail storm we have had a cold wave from the Northeast, so cold that we have worked all day with our coats on. May 31, we had a heavy freeze, ice forming one-fourth of an inch in thickness on water in tubs. Vegetables were nearly all killed, and small fruits will be scarce. Apples were badly damaged by the hail storm, and have fallen badly since. Blackberries and hardy apples are all our show for any fruit this year. During the hail storm, currants, strawberries and gooseberries were

nearly all destroyed. Early potatoes and many fields of corn were badly damaged by the last frost. Vegetables are very scarce. Early cabbages were nearly all destroyed by cutworms and the black cabbage flea. There are more of these pests this season than I ever saw. Our prospects for crops this year are gloomy enough at this time. F. S. W.

New Jersey.

TRENTON, Mercer County, May 30.—The weather continues wet here, and it is warm *now* after a cold snap of several days. It is favorable to a heavy growth of grass and wheat and rye straw; but it has been too wet, and, for a few days, too cold for early-planted corn, though favorable to truck. There are enough peaches on to make an average crop, providing they do not fall off prematurely. Apples, where not injured by insects, will be a medium crop. Cherries, a small crop. Strawberries are rotting and sour; but a day or two of sunshine will make them all right. Blackberries are full. Pastures are luxuriant, especially on good ground. F. D.

New York.

FORESTVILLE, Chautauqua County, May 29.—We have had one of the finest springs on record, and the prospect for a large crop of fruit and most other things was very flattering; but, alas! "Old Jack Frost" came this way last night and turned every thing upside-down, destroying the corn and potatoes, killing most of the fruit and damaging the hay, wheat and other crops. It is said to have been the worst frost that this section has known for 30 years. Farmers are feeling blue. The frosts and the trusts are too much for them. Something *must* be done in regard to these trusts, and that soon too.

C. H. F.

Wisconsin.

GREENBUSH, Sheboygan County, May 31.—We had an early spring and crops were looking well; but we have had three hard frosts within a week, and we had a snow storm last night. Fruits are all killed and all corn and potatoes that were up are frozen down to the ground. Our Contest potato plot is ruined, I fear. The currants look as though they were cooked on the bushes. Clover is looking splendid. We have had several heavy rains lately.

A. M. S.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

GAPES IN CHICKENS.

C. M. L., West Henrietta, N. Y.—I have 20 three-weeks-old chicks that have the gapes. I can save some of them by running a feather or looped horse-hair down the wind-pipe; but I have lost 10 after having drawn out some of the worms that killed them. Now where do these worms come from? Don't say from stagnant water, for there is none. Neither is their presence due to wet weather, for it has been dry. If they come from hen lice, why don't my neighbors' chicks have them? Hen lice are common around here. What is the cause of their prevalence in my flock, and a preventive, and what is a cure for those that are now affected?

ANSWERED BY HENRY HALES.

It is refreshing once in a while to have a communication from some one who evidently has ideas and reflections of his own, and who is not easily satisfied by mere guess-work. Perhaps there is no subject connected with poultry about which so much nonsense has been written as gapes. Many theories with regard to it have been started and discussed, that very ordinary observation would show to be conjectures, with no foundation. These false theories have a tendency to mislead inquiry and observation. The fact is that no one has ever found how the worm is propagated. The highest scientific authorities only guess at it. Dr. Cobbold who is allowed to be the best informed on the gape worm (Sclerostoma synagamus), says: "By whatever mode the young make their exit from the shell, it is manifest that prior to their expulsion, they are sufficiently developed to undertake an active migration; their next habitation may occur within the bodies of certain insect larvæ, or even in small mollusks; but I think it more likely that they either enter into the substance of vegetable matters, or bury themselves in the soil at a short distance from the surface." The last opinion I think much the most likely. After studying the symptoms and insects for 25 years, I am satisfied lice have nothing to do with the matter. Of course, lice will attack fowls ailing from any cause, as it takes the full vital energy of poultry to keep them clear of parasites. Take a number of hens from one house with freshly hatched chicks, put half of them on new ground removed from the old contaminated quarters, put the other half on old infected ground in use the previous year, and most if not all of the chicks will, in the latter case get the gapes. This plainly shows that the contamination does not proceed from the mother hen, or from her personal parasites, neither in my opinion does the insect pass through the intestines or any part of the earth-worm as so many assert, for I have seen pheasants badly troubled with the gapes, that were kept on board floors on a second story of an aviary, so that it would seem that the larva or first formation from the egg, may lodge in old boards, or in the ground near-by the parents' locality the previous year. The gape-worm is not confined to domestic poultry: all the family of Gallus are subject to it, besides some other birds. Change of ground for chickens so that they are not allowed to run at all over the infected places, will prevent the disease, and after a year or two (some say one year) the infected ground will be purified. The only perfect cure for afflicted chicks is the removal of the worms with a small feather or twisted horse-hair. The latter is the better. Have a small loop at the end, watch for the wind-pipe to open as the chick breathes, thrust down the horse-hair the length of the neck, twist it round as it is drawn out, and it will dislodge and bring out the worms. Often all the pests will not come at once, but the chick will sometimes cough out the rest after they have been dislodged by the hair or feather. If the latter is used it must be stripped to the stem, except a small vane point at the end. A piece of camphor about the size of a grain of wheat given as a pill will sometimes destroy the worms: other cures, such as dusting lime on the chicks in a box, or fumigating with fumes of carbolic acid, etc., are recommended, but removing the worms as above is the only way to effect a perfect cure.

RYE AS STOCK FEED; POLLUTION OF CISTERN WATER; A CISTERN FILTER.

D. R., Barnardsville, N. J.—1. Is it safe to feed rye to farm horses, brood sows, and poultry? 2. How can I get rid of a disagreeable odor in the water from a cistern?

ANS.—1. Rye is quite safe to feed to any kind of live stock, if it is free from ergot, but it is not desirable food alone. When ground with corn it is excellent for horses, and pigs. Fowls do not eat this grain readily unless they can steal it, when they seem to be quite satisfied to fill their crops with it. We suppose the grain is referred to. If it is a growing crop the green rye may be cut when in bloom for forage for horses or for cows, although it is not considered a desirable fodder for cows kept for butter. Green rye is a very good food for pigs of all kinds. 2. The cistern should be cleaned out. A very large quantity of filth collects on roofs and is washed into cisterns, and this quickly ferments and gives off very offensive gases which are absorbed by the water. A cistern therefore needs thorough cleaning every spring, and should be provided with a filter made of gravel, sand and charcoal, through which the water passes on its way from the roof. A simple filter of gravel and even of coarse flannel will arrest much of the matter which is washed from the roof, and after a dry time when this collects abundantly in the gutters, the use of a filter is very desirable. A filter may be made of a barrel prepared as follows: bore in the bottom a large number of holes and lay a screen of fine wire gauze over these; on the screen place two or three inches of fine washed gravel; on this four inches of clean river or sea sand washed; then six inches of finely broken charcoal; on this lay four inches of the washed sand; then three inches of the fine gravel and a covering of small stones to receive the water, which is best run through a rose strainer to spread the force of the water and avoid disturbing the filtering layers. The barrel should be placed over the cover of the cistern. Every spring this filter should be taken apart and washed and put together again. Every care should be exercised to keep the cover of the cistern tight and to exclude dust, worms, mice, rats etc., all of which are frequent sources of pollution of cisterns. It is recommended to put a bag of charcoal in the cistern to absorb the foul odors. This is exceedingly bad advice. It is only a temporary device; it only mitigates the evil for a time, and it misleads the people into danger. The foul gases from a corrupt cistern are a most serious danger to health and may very easily provoke attacks of malignant and fatal diseases. The cause of the evil should be removed and avoided.

BLOATING COWS.

G. Mc F., Ladner's Landing, British Columbia.—I have three acres with a heavy clay subsoil. Two have been a long time in Timothy; the other has been two years in Alsike, Red clover and Timothy grass and was pastured last year without any bad effect. This year since the end of March when grass was low, my cows have been occasionally swollen, one so seriously that she had to be stabbed. I have four cows on three acres and there is not a week in which some of them are not swollen and often two at one time—in the morning, at noon or in the evening. The trouble seems to come on suddenly and after a few hours it becomes a little less, but the affected animals are often a whole day without being able to chew the cud. They do not seem to be sick, for when they get a little ease they commence to eat and next day to all appearance they are all right. The grass is very rank and abundant and they have water at will, but it is ditch water. All kinds of weeds are abundant around the fences. My cows had the same run last year and the same water, but there was no trouble.

ANS.—Feed each cow once daily some bran, or give as a drench one-half ounce each of carbonate of soda, sulphate of soda and common salt. Improve the drinking water if possible. When attacked give as a drench one-half to one pound each of Epsom and common salt (according to the size and condition of the animal) with two ounces of ginger. In severe cases also give two ounces of oil of turpentine shaken up in a quart of milk; or one-half-ounce doses of carbonate of ammonia as a drench in one pint of cold water, and repeat this every three hours until relieved. Puncture as before if it becomes necessary.

HOCK LAMENESS IN A MARE.

T. S., Fair Grove, Mo.—My 12-year-old mare was taken lame in her left hind leg, last October. She was suckling a colt at the time, and a swelling appeared on the inside of the leg, a little below the hock joint. She was turned in pasture and the swelling was bathed twice a day, with mullein and vinegar. In a few days it disappeared, but appeared again at intervals through the winter, until about March 20th, when she staid lame until she foaled on April 24th. She was due to foal May 7th. During the last lameness she held up her leg, and when she put it down would just touch her toe. Now the leg is swollen all around the hock joint, but she is not so lame, and holds it up a great deal when standing. The swelling seems to be quite hard on the inside of the leg below the joint, and appears to give her some pain when pressed. What is the trouble, and how should she be treated?

ANS.—This appears to be one of those complicated cases of spavin or disease of the hock, brought about by some injury to the joint. Treatment is not very satisfactory in these advanced cases. The application of the compound solution of iodine—iodine two parts, iodide of potassium one part, water 16 parts—two or three times a week for several weeks; or firing the joint in points, followed by the application of the iodine as soon as the effect of the firing has nearly passed off, might afford some relief. Rest during treatment is essential. We doubt, however, if you will be able to do more than to relieve the mare so that she may be kept for breeding purposes.

SHOULDER OR FOOT LAMENESS IN A MULE.

C. H. H., Bright Wood, Ind.—My four-year-old mule was lame in the left shoulder last year and was treated for sweeny. This year he is a little stiff there and lags behind when at work, stretching his neck out to the right, and flinching a trifle in his left shoulder. There is no perceptible fever there, and the skin is not tight as it was a year ago, but there is a slight depression. His dam was lame in the same place for several years, but a season's rest has cured her. A full brother, a year older, is all right. What's the trouble?

ANSWERED BY DR. F. L. KILBORNE.

If the lameness is in the shoulder it is probably the result of a sprain. A very large proportion of the so-called shoulder lameness is really in the feet and not in the shoulder at all. Judging from the history, we suspect that may be the case in this instance. If you desired us to diagnose the case you should have given the symptoms, *i. e.*, the position of the limb when standing, and the action in walking and trotting both on hard and soft ground. For chronic shoulder lameness due to an old sprain, the proper treatment would be the application of a strong liniment, or a cantharides blister, over the seat of the sprain (made and applied as frequently directed in these columns), or firing in points. Either course would favor a restoration of the weakened muscle or tendon to its natural condition. The firing should be attempted only by a competent operator.

UNDER-DRAINING A GARDEN.

W. F. K., Clinton, La.—I want to underdrain a two-acre garden; what sort of tile would be the best?

ANS.—The size of tile must be chosen in accordance with the quantity of water in the land. Usually one-inch tile is quite sufficient for a two-acre plot when the land is not very wet and springy. Round tiles are the best, using only perfectly straight ones. These are laid in narrow ditches the bottom of which is scooped out to fit the tile. An implement for doing this work is easily made by bending a hoe—having first heated it—to the shape required. The work should be begun at the upper ends of the ditches, and as the tiles are laid they should be covered with earth to avoid disturbing them. They may be laid easily by means of a light rod with a projecting pin on which the tile is placed and lifted into the channel made for it. The tiles should be laid in this manner, the rows being 50 or 60 feet apart unless the land is very wet, when intervals of 30 or 40 feet are not too close. The discharging tiles should be two inches in diameter for the upper half and three inches for the lower half if the number of laterals exceeds eight to 10; a two-inch tile has four times the capacity of a one-inch, and a three-inch nine times the capacity.

ABOUT BEAN CULTURE.

C. M. D., Mansfield, O.—1. Are beans a profitable crop? 2. What is the proper manner of planting, cultivating and harvesting them? 3. Do they do well in heavy clay soil?

ANS.—1. As profitable as ordinary farm crops. The average yield is from 10 to 20 bushels per acre. Bean growers in Western New York say that a crop can be grown, harvested and delivered for about $10 to $12 per acre, exclusive of the use of the land. 2. Those who grow beans on a large scale, use bean-planters either with or without fertilizer attachments. Beans are also planted with a common grain drill by stopping up some of the teeth, putting the drills of beans about 28 inches apart. They may also be planted with hand corn-planters. Cultivate early and often, but do not stir the ground when the vines are wet from rain or dew. They are usually pulled by hand, but machines are used for doing this work where enough are grown to warrant the expense. They are thrashed by hand with flails, trodden out by horses in cold weather, or thrashed by machines constructed especially for this purpose. 3. They do well on almost any soil except muck or a soil that has been manured with rank manure.

HEAVES IN A HORSE.

R. C. Q., Farmingdale, N. Y.—My horse had a cold last winter and it has left him with the heaves. Can they be cured?

ANS.—An exhaustive article on the treatment of horses afflicted with heaves was given on page 767 of the RURAL for 1886. It is doubtful if a genuine case of heaves can be cured, although recent attacks on young and healthy animals may be relieved by proper care and treatment in feeding and handling. Medicines have little effect except to hide the symptoms until the effects have passed off. Attention to feeding and watering is the best treatment both for relieving the disease and for preventing it. Never feed hay, straw, or grain that is the least bit dusty. Cut feed mixed with ground feed well sprinkled with water is good. Do not over-feed; water frequently, but not much at a time. Give half a pail of water before feeding. Do not over-work, but give moderate exercise daily. Keep the bowels easy by green food, or laxatives. Avoid exposing to cold winds or storms, especially when heated.

LUMPS ON COLT'S NECK; BREEDING SMALL MARES TO LARGE STALLIONS.

W. R. S., Maple, Mich.—1. My 12-days-old colt was born with two lumps the size of a hen's egg on the cords in the neck back of the jaw-bones; what should be done? The mare has been in good condition for a year. 2. Is it advisable to breed small mares to large stallions?

ANS.—1. If the lumps or bunches appear to be attached to the skin only, they may be cut out, or a strong twine may be tied tightly

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies.

around the neck of each and tightened daily until the bunches drop off. If they are attached to the deeper structures it would be well to employ a competent veterinary surgeon to remove them. 2 It is not advisable to have too great a difference between the size of the mare and stallion, but within moderate limits there is no serious objection. Mares are frequently bred to stallions larger than themselves, as in the crossing of the imported Percheron on native mares. But for small mares a correspondingly small stallion should be chosen.

STORING CELERY.

W. B. T., Ashville, N. C.—1. Should celery be left in the ground over winter? 2. Why would it not be a good plan to leave it in the ground, bank up the earth well around the plants, put planks to hold it up, then mulch with leaves? My experience is that it will rot when taken up and put in trenches, the earth caving in on it.

ANS.—1. Litt it and store it. 2. In your part of the country (N. C.) this mode would answer very well. The main points to be observed in keeping celery over winter are dryness and low temperature, but, of course, it must not be so low as to freeze. In order to secure these conditions we find it best, in the North, to lift and store our celery close together in out-door ridges which we can cover with boards and leaves or straw, or store it in shed or cellar. Preserving it in the ridges in which it had been grown would entail much labor in banking and covering. We have no difficulty in keeping celery till April.

STRINGY MILK.

G. L. W., Idana, Kan.—My cows give stringy milk; a small tumor forms at times in the teat, and after one or two milkings it breaks and when the teat is pressed what looks like decayed milk comes out in chunks and sometimes in strings. Sometimes it forms in the udder on a larger scale, and unless care is exercised, straining the milk will be impossible. What should be done?

ANS.—Inject such teats after each milking with a solution of five grains each of carbonate of soda and permanganate of potash in an ounce of water, using a small syringe with a small probe-pointed nozzle. Give each cow, in the feed night and morning, two drams of hyposulphite of soda and one ounce of sulphate of soda. If the trouble is in one or two teats only, it is probably due to injury or faults in milking, and this quarter may be bathed with camphorated spirit. But if the trouble is general, it may be due to unwholesome food or water, which should be corrected.

SPLINTS IN A COLT.

H., Whiteland, Dak.—How can splints be removed from a colt's legs? They are on the inside of the front legs near the fetlock joints.

ANS.—You should have been more definite in your description and given the age of the colt, when the splints appeared, presence or absence of heat, tenderness, or lameness, etc. In the absence of these data, we will suppose the "splints" were present when the colt was born, in which case they are congenital and we could not advise treatment without a personal examination. If they do not cause lameness we would advise no interference.

RUPTURE IN A HORSE.

A.. B., (No Address)—What should be the treatment of a ruptured horse? So far as I can make out, the rupture is near the place from which a testicle was removed in a bungling castration.

ANS.—In this case it would be best to employ a competent veterinary surgeon to examine and operate on the horse. Without a personal examination, we could not safely advise you as to the operation in a case of this kind.

BONE AS A FERTILIZER.

C. N. B., Elizabeth, N. J.—Is "rotten bone manure" as good a fertilizer as ground bone? 2. What is the difference, if there be any.

ANS.—Less nitrogen and more moisture are the differences. Whether it is better or less valuable depends upon its fineness and moisture. The finer it is, the more soluble are its food constituents.

Miscellaneous.

J. C. S., Shad's Gap, Pa.—Who make and sell sheep masks?

ANS.—We do not know. Can any of our readers answer.

A. R. A., Mill Brook, Conn.—I supposed a cow's teats were all right when I dried her off last winter; but now she has a calf and I can get no milk from one of the teats. The bag is somewhat hard and swollen. What should be done?

ANS.—The teat should be well milked out at each milking or oftener. The swollen quarter should be frequently bathed with hot water, and belladonna ointment should be applied. The milk will probably come as soon as the swelling and heat disappear.

D. N. H., Manchester, Ia.—1. Why cannot one raise radishes, turnips, beets and other root crops on old land, even if well enriched, as well as on a newly plowed meadow or prairie sod? What elements are lacking? Is there any commercial fertilizer that will supply them? 2. Where can one get a pair of bellows for blowing powder on plants to kill insects, worms, etc.?

ANS.—1. We know of no reason if the land is well enriched, except that insects partial to crops accumulate as they are raised from year to year, to injure either the root or leaf. If any food constituent is lacking in the soil, and one can find out what it is, chemical fertilizers will supply it. 2. The best bellows are the Woodason for sale by most seedsmen.

DISCUSSION.

THE FLESH OF DISEASED ANIMALS NOT UNHEALTHFUL.

J. J. H. G., MARBLEHEAD, MASS.—"The poison of the rattlesnake is injurious when taken into a person's stomach" remarked Mr. Stewart incidentally in the course of his excellent article on the effect of night-soil on the quality of vegetables, in a late RURAL. It is no more so, however, than other medicines, if I have read correctly, for in crude practice it has been administered in this way as a medicine. It is necessary to bring it in direct contact with the blood before its poisonous characteristics are developed. If the liberal use of night-soil made the vegetables raised from them unhealthful, then the population of this vicinity, having used for about 40 years vegetables raised principally on this plant food, should demonstrate in shortened or unhealthy lives the sad fact, but, on the contrary, we claim to be as healthy, robust and long-lived a people as can be found in any section of these United States. Prof. Storer wisely remarked that the process of cooking would destroy all germs capable of injuring health, were there any present. This important fact has not had due weight given it in discussions relating to the unhealthiness of diseased food, either animal or vegetable. Established facts make it safe to say that it matters not of what disease an animal may have died, or in what degree of putridity the flesh may be, when it is thoroughly cooked it becomes perfectly healthful human food, and that therefore the elaborate precaution taken, especially in large cities, to prevent the sale of such food, cannot be defended on the ground that it is injurious to health—the right foundation on which to rest an argument in defence of such municipal regulations is the existence of a sentiment born of our high civilization, which leads us to turn with disgust from the very thought of such a diet. I have said that there are established facts which prove this: let me give an illustration on a large scale. A college mate who has been a resident of northern India for over 30 years, once wrote me the result of the observations of himself and an English physician on the effect on the health of one of the lowest castes into which the natives of that country are divided, of a long-continued diet on flesh of animals which had died of various diseases. He stated that by immemorial custom the flesh of all such animals became the property of this particular caste. At the time he made his observations they were feeding on the bodies of cattle, some 10,000 of which had died of a disease akin to putrid fever, in that hot climate causing much of the meat to be in the first stage of decay before it was cooked. The observations of the English physician were made on the same people under similar circumstances, and they both agreed in their results which were, that this particular caste were not only exempt from all of those diseases which have been assumed to be caused by eating such diseased food, but, on the contrary, they were remarkably and exceptionally healthy. With this demonstration before us, of the perfectly innocuous character of diseased meat *after it has been thoroughly cooked*, while it would not be wise to go and do likewise, nevertheless a knowledge of such facts may save us, who can have but little knowledge of the ante-mortem history of the meats we buy, from such unprofitable fear, and should lead legislators to place all the precautions taken to prevent such food from being put upon the market on the only foundation on which they can honestly rest, viz., a deference to public sentiment rather than defend them as necessary for the protection of the health of the community. The nose and eyes, nature's police, that stand guard over our mouths, to give warning of the approach of the unclean, to protect our health, are really all the police we need. Those who choose to eat meats whose condition may disgust us may take comfort in the fact that the temperature necessary for cooking, by either the roasting or boiling process, must destroy all germs whatever injurious to health, even the dreaded trichinæ. It is a comical fact that the habit of eating what we of the common people call spoilt meat, forms a connecting link between two extremes of the race, the wealthy gourmand who covets his "gamy" flavor, and the low-caste, half-civilized East Indian gnawing with a relish the bones of his half putrid buffalo.

CHEMICAL ANALYSIS FOR FARMERS.

PROFESSOR F. C. SHORT, MADISON, WIS.—A late number of the R. N.-Y. makes the statement that "any farmer would make money by knowing whether his hay was above or below the average in value,'" and also that the "rules governing the analyses of feeding stuffs can be so simplified that any man can learn to analyze hay and grain." The first statement is probably true. There is no doubt that anything which would enable the feeder to estimate accurately the value of his fodders would be a great benefit to him, enabling him to feed them to the best advantage; but it is an open question if a chemical analysis alone would be of any advantage to him. The chemical analysis of a fodder, as an indication of its feeding value, is at the present time much overrated. The value of a fodder depends on the amount of digestible nutrients it contains, and this is determined by the condition of the fodder, soil, climate, time of cutting, etc. For example, oat straw may contain from 0.19 to 3.50 per cent. of digestible albuminoids; clover from 3 to 11 per cent. according to the time of cutting. The digestibility of the albuminoids of meadow hay ranges from 39 to 79 per cent. In fact, all fodders are subject to like variations. Consequently a chemical analysis alone tells us but little of the value of a fodder, and, unless it is taken in connection with other data, is absolutely useless. These other data the farmer has under his eye. He knows the condition of the fodder, the time of cutting, whether his animals eat it eagerly or not. Having all these conditions under his observation, the question is whether the farmer cannot feed just as intelligently by taking the average of a large number of analyses and determinations for the value of his fodders. The complaint made by the R. N.-Y. that, according to analysis, there is a variation of 10 to 50 per cent in the value of samples of the same fodder is certainly a true one, but it is also true that the percent. of digestible nutrients has as great or a greater variability and unless we are able to combine both the percentage composition of a fodder and its digestion coefficient, the average of a large number of fodders taken from the table would prove a better guide than a simple chemical analysis, however accurate. Fortunately considerable liberty may be taken in adjusting the ratio of carbohydrates to albuminoids without any loss in economy of feeding. Although the results of many experiments have shown that a nutritive ratio of 1: 5.4 will give the best results, yet the same experiments also show that a feeding standard like the above can have only a general value, and that feeding must be largely influenced by the individuality of the animal as well as by the quality and value of the fodders used. The farmer who looks carefully after the quality of his fodder and takes the figures given in the tables for its composition and digestibility and makes up his rations accordingly, will find just as good results following his feeding as if he made a chemical analysis and a digestion experiment with each fodder in the barn. To the second statement there is but one answer, and that is that it is absolutely impossible for the farmer to make an analysis of his fodders. Expensive apparatus and long training are necessary for work of this kind. In place of its becoming more simple, fodder analysis is becoming more complicated. It would be much more practical for the farmer to attempt the manufacture of his plows and wagons, a line of work in which he has some practical knowledge, than to attempt the analysis of fodders, a line of work in which he would be utterly at sea.

THAT CHURN CONTEST AGAIN.

P. B. S., CONCORD, N. H.—In the RURAL of May 25 a paragraph tells of the test of three different churns at the New Hampshire Experiment Station; but all the important results are not given. In the three trials made at that time, 128 4 pounds of cream were used in each churn. The results were as follows:

Davis Swing made 39.81 lbs. of salted butter.
Stoddard made.... 40.53 " " " "
Blanchard made... 41.12 " " " "

Why is not that the best churn which will make most butter of at least equally good quality, from the same quantity of cream? And is it not about time to bury that old "chestnut" that the inside floats of the Blanchard churn injure the grain of the butter and interfere with its granulation? This assertion has been demonstrated time and again to be utterly false, and it is well known that some of the finest butter in every respect has been made in the Blanchard churn. All butter comes in granulated form, and the process may be stopped at the desired point in one churn as well as in another. We think the manager of the experiments wandered a little outside of his province when he stated in his report which churn he liked best. We want the hard facts which resulted from his experiments, not his opinion as to the comparative merits of the different implements. There are plenty of good butter-makers of much longer and larger experience than he possesses, who would not agree with his "opinion."

MILK FOR CHILDREN.

P. H. R., DOWNIEVILLE, CAL.—"I cannot refrain from saying a word about the ideas of Dr. Learned concerning the asserted superiority of cow's to mother's milk for children, as quoted in the RURAL of March 23. The ideas are too absurdly ridiculous to deserve notice, and were it not for the fact that some ignorant mother might attempt to follow such advice, and tearfully regret it, I would not care to use the RURAL'S valuable space to discuss it, however briefly. In the discussions at all the late conventions of medical men the subject of dietetics has occupied a prominent place, and the feature pertaining to infant feeding has been the most prominent of all; and the medical men universally agree that in both theory and practice the mother's milk is the best food for infants, and that the food most nearly like mother's milk is next most desirable. Cows' milk is quite dissimilar to woman's milk. And many foods, theoretically like that of the natural mother, fail to give at all similar desirable results. But for that most pernicious idea that mothers cannot, without great personal sacrifice, nourish their offspring at the breast, the present alarming infant mortality would be greatly reduced. And if there is a personal loss attached to the feeding of the infant in the natural way, surely that is one loss from which the natural, pure-souled mother would gain exquisite pleasure.

NUMBER OF HENS TO A ROOSTER.

"WYANDOTTE," CRANFORD, N. J.—The RURAL'S resolution, as expressed in Brevities, hereafter to take all its eggs for setting from a small pen of hens mated with one rooster, needs some qualification. That several roosters running with a large flock of hens, give very unsatisfactory results, is a fact long since recognized by breeders, for one will either be boss of the roost, and keep all the others in mortal fear of him, or else there will be perpetual war in the camp to the utter neglect of business. The only satisfactory way of getting fertile eggs is to keep one rooster with a single pen of hens. But how many hens? That depends. In case of the large, heavy breeds, like the Brahmas, with their deliberate ways and sluggish temperaments, a-half dozen hens to one male will be enough. With the medium weights, like the Wyandottes and Plymouth Rocks, the number may be doubled; while the festive Leghorn, or the foppish Minorca rooster will attend to from 15 to 25 hens with more satisfactory results than a smaller number. These conclusions are not the result of guess-work or fine-spun theories, but of observation and experience. Other considerations are the age and condition of the male. A fully matured, vigorous rooster may be allowed to serve a greater number of hens than a young or undeveloped one, though the latter should never be used.

INSECTICIDES.

I. R. H., MOUNTAINVILLE, N. Y.—For the past 13 years I have used pure pyrethrum powder for the destruction of the cabbage Flea-beetle by throwing it through the foliage with an air-gun. In 10 minutes' time the pests are usually all dead. I think this will prove an effectual remedy for the potato-flea-beetle. [The proper name of the pest is the Cucumber Flea-beetle—Haltica cucumeris—but it appears to be quite as partial to the potato as to any other plant. EDS.] It is equally effectual for the striped squash-bug, killing it in the same time. It answers also for rose-bugs, for which pests I myself used it 10 years ago, but it takes about a half hour to kill them. It also answers for the green cabbage worms, taking about one hour to kill them. There is hardly an insect or worm around here, that I have not killed with it. It will kill wasps in about 15 minutes. The most difficult thing to kill has been the black squash bugs as it takes them two hours or more to die.

R. N.-Y. We have tried Buhach in water without any effect. Thanking Mr. Hawkins, we shall try the dry powder.

KINDNESS TO LIVE STOCK.

C. F. V., DARIEN, CONN.—The two horse pictures lately published by the R. N.-Y. when placed side by side need no further explanation. Their appearance speaks louder than words. The contrast makes one think, not only of the abuses many horses suffer, but also of the unnecessary hardships endured by stock of all kinds. There is evidently some difference in the ages of these two horses; but this brings out more forcibly the fact that the older the animal the more subject it is to abuse and neglect. Care and kindness will produce more flesh and work from the horse than roughness and neglect with twice as much grain and hay. This also applies to oxen, and milk or butter from the cows; also to the growth and appearance of the young stock. Brother farmers, don't let us treat our stock when alone with them as we would not treat them when friends and neighbors are about. Don't let us allow cruelty from the hired help either.

ASHES FOR CURRANT WORMS.

F. D. C., CHARLTON, N. Y.—White hellebore is the common remedy for the worms on currants and gooseberries. There is no doubt of its being effectual when thoroughly applied. I found my gooseberries and currants covered with worms, a few days ago, and in some cases they had about eaten up all of the leaves on the gooseberries. The pests were of all sizes. There was no hellebore at hand, and something must be done at once. Pails of water and wood ashes were brought. With a watering pot the bushes were thoroughly wetted and then the ashes were dusted over them. The next day not a worm was to be seen. This is a cheaper destructive agent than hellebore, and something a farmer always has on hand. My success in saving these berries has pleased me so much that I hasten to tell the RURAL readers of it.

What Others Say.

AT THE VERMONT EXPERIMENT STATION last year a test was made of the different methods of planting that are possible, with the Eclipse corn planter. The field was heavily fertilized with chemicals, 200 pounds per acre being put in the hill or drill with the machine and the rest scattered broadcast. The rows were each 36 inches apart. The first two rows were planted with the planter set to drop five kernels in a hill, 36 inches apart; the next two rows with the machine set to drop three kernels every 24 inches: the next two rows two kernels each 12 inches and the next two rows were intended to be one kernel each six inches. Then the whole set was repeated and then repeated again, making six long rows for each of the four methods of planting. It is not to be understood that these kernels were planted exactly as they were designed, for on rough ground the planter varies slightly in the number put in a hill, and sometimes scatters between hills. The trial was with the planter just as it would be used in ordinary farm practice.

The six rows of each of the four methods were weighed separately after the corn had stood several weeks in the shock and was quite well dried.

METHOD OF PLANTING	W'G'T OF EAR CORN.	W'G'T OF STOVER.	TOTAL W'G'T OF CROP.
Hills 36 in. apart.	890	1003	1393
" 24 " "	343	1015	1358
" 12 " "	303	980	1283
" 6 " "	224	1319	1543

It will be noticed that the two extremes did better than either of the means, the one extreme excelling in ear corn and the other in stover. This would seem to indicate that for ensilage and fodder the greater weight can be obtained by quite close planting, yet as no analyses were made it is not certain that the 36-inch planting did not give more real animal food than the 6-inch, since it grew a much larger amount of grain, and a pound of its more fully grown and perfected stalks was probably worth more for feeding than the less mature and more watery stalks of the closely planted rows.

BY THE SHORT WAY.

"THE R. N.-Y. ventures to predict a very dry season, for the East at least. Come now, Brother R. N.-Y., please quit that. The Farm Journal knows nothing about future weather, neither do you, nor is your guess worth more than ours, which is nix."

We don't profess to *know* anything about "future weather" either. Nevertheless, the prediction is somewhat more than a mere guess. For two seasons in succession we have had considerably more than an average rainfall. During the past winter the rainfall was excessive. This therefore, brother F. J., is why the R. N.-Y. predicts for the East a very dry season. The prediction is reasonable enough; isn't it?.....

IN the same issue the F. J. tells us how we may cure biliousness and dyspepsia:

"A milk diet, with a little lean meat and two vegetables for dinner, and brown bread at each meal, continued for three months, will often cure a bad case of dyspepsia."

Will our much esteemed friend tell us *what* two vegetables? Two potatoes, two heads of lettuce, two green peas, two cabbages? Or shall we be allowed one green pea and one potato; one head of lettuce and one cabbage; one onion and one tomato, etc.?.....

COLONEL CURTIS says that butter may be made in the summer in a small dairy and packed away for winter's use if it is properly made. The cream should be churned at least within three days after it is taken from the milk. The first two days it should be kept in a temperature not above 55 degrees. The butter-milk should be well worked out, and the butter packed in glazed stone jars and then covered with brine and set in a dry, cool place, where there are no bad odors. The cream should be taken from the milk within 24 hours after setting. If left longer it will be damaged. The jars may be small. The sooner the jar is filled and the brine put on the better.....

WE need not look for large grapes and large bunches if the vine be permitted to bear all that set, assuming the vine to be a heavy bearer. Thin out the bunches so that each shoot shall have only its share. A good way to ruin a grape vine for years or forever is to let it bear a full crop. Confine spring-set plants to one or two shoots. In older vines, pinch out all but one shoot proceeding from a single axil. To protect the bunches from rose-bugs, etc., it is well to bag them as soon as the berries set. If bagged while in bloom, many berries will fail to set.....

THE simplest way of making the kerosene emulsion is that advocated by Professor A. J. Cook. Soft soap, one quart, or hard soap one-fourth of a pound; two quarts of hot water and one pint of kerosene. Stir or shake these until all are permanently mixed. Then add 10 pints of water. This will make just about two gallons in all. Is not that right, Professor Cook?.....

THE Minnesota Experiment Station burnt a part of a plot of Orchard grass, while a thick mat on the other portion was left. Decided injury to the burnt half was noticed during the entire season. Not only was the first crop thinner, six inches shorter, and of a somewhat sickly color, but the second crop also plainly showed the bad effects of the burning.....

"WE have just learned that the Cucumber Flea beetles, which cut down the potatoes on the R. N.-Y. famous contest patch of last year, have again been devouring the tops of the early potatoes in the corresponding plats this year. We are informed also that none of the remedies tried have been successful yet, and that so many have been used that it is feared they have injured the foliage of the plants. Here is a case in which one would have supposed the grower would have been forewarned and forearmed. But, really, all the men of science reported that the insects were not likely to be troublesome a second year. And, again, the beetles last year did the damage before it was known what the plague really was, and perhaps the R. N.-Y. thought that if it watched and detected the beetles in the act it could defeat them. But in this it seems to have been mistaken. The moral of all this is, that even when we exercise all due caution some tiny insect will blast all our hopes."....

The above is from our respected contemporary the Philadelphia Press. Yes, we were forewarned and *thought* we were forearmed. We were told by at least four persons that tobacco water would kill or drive them away. It was the first remedy tried. Then we tried tobacco soap. Then both together. It didn't discomfit them in the least. It is true that the application of so many repellants and poisons has injured the vines. Those of one trench, it was thought were so injured that they would probably die. They were pulled up and another variety planted. These last will stand a poor show since, it is feared, the rows on either side will meet before they can get a good start. As was stated two weeks ago, unleached wood ashes seem to repel this pernicious insect. We poison the ashes, instead of plaster as hitherto, with London-purple or Paris-green. Why is not it a good plan? There is no better fertilizer for potatoes than ashes if we add nitrogen in some form.....

CUT the Orchard grass before it blooms.....

WORD FOR WORD.

——WASHINGTON CRITIC: "It is about time now to turn the hoes on the corn-field".

——"BUT the tongue can no man tame; it is an unruly evil, full of deadly poison."

——JOHN MINNET, IN FARM JOURNAL:—"No corn or corn meal should be fed to the sow for several days after the pigs are born? Bran and water are all the food required. If this diet be had for a week before the pigs are due it would be better."

——"THE SOW with a litter of new-born pigs should not be disturbed for 24 hours. In a natural state they will not leave the nest for two or three days. The placenta furnishes the needful food."

——"A LITTLE BED is best for the breeding sow. The new-born pigs get tangled in the straw when there is too much, and they get under it and the sow lies on them. They should always be in sight. A dry, hard bed is best."

——"IT is possible to rear pigs so as to to have 75 per cent. of lean meat in them. This can be accomplished by feeding bran, middlings and skim-milk, or bran and middlings. Hogs need salt as much as any other animal."

——"A TEN-HOUR husband ought not to have a sixteen-hour wife. Reform, brother, at once."

——"FINE wire netting will not 'kill three birds with one stone,' but it will keep three pestiferous enemies from young fruit trees if properly applied: Get a roll of such as is used on fly screens, and cut into strips eight or ten inches wide, and as long as the roll is wide, and wind them the long way around a broom handle to give them the proper 'set.' Spring one of these open and let it coil itself around each young tree. It will 'give' with the growth of the tree, and neither mouse, rabbit, nor *borer* can get through it."

——FARMERS' REVIEW: "In the official report of the State Board of Agriculture of Ohio for December, 1888, the analysis of the Western Reserve Fertilizer, Jonathan Warner, Mineral Ridge, Ohio, is given as follows:

Per cent. of ammonia	
Total per cent. of phosphoric acid	trace
Per cent. of potash	0.73
Commercial value of potash	$0 95
Estimated value of fertilizer per ton	$0.95

SUCH is the commercial value of the constituents of a ton of this fertilizer as found by the Ohio State Board of Agriculture in 1888. A wagon load of earth from a corn field should show better than this, and a ton of leached hard-wood ashes would show much better."

——HENRY STEWART:—"The farmer works less than the average business man in spite of the prevalent belief that he is a toiling slave, laboring 'from sun to sun.' This is a fiction of the imagination of people who know nothing of farm life, for a good farmer, even one who works up to the high pressure, has more leisure than a mercantile clerk or his employer."

——"THE GREAT advantage of soiling cattle is that it is exceedingly comfortable for the cows, insuring full feeding with the best food, the largest supply of the best milk, and the ease and comfort of the owner. There is no driving of the cows, no wasted time of the owner, everything is done with ease and at the right time, and there is a certain regularity about the work which takes away all the laboriousness and worry from it."

——DR. TALMAGE: "The trouble is, my friends, that the people do not understand the ethics of going in debt, and that if you purchase goods with no expectation of paying for them, or go into debts which you cannot meet, you steal just so much money. If I go into a grocer's store, and I buy sugars, coffees and meats, with no capacity to pay for them and no intention of paying for them, I am more dishonest than if I go into the store, and when the grocer's face is turned the other way, I fill my pockets with the articles of merchandise and carry off a ham. In the one case I take the merchant's time and I take the time of his messenger to transfer the goods to my house, while in the other case I take none of the time of the merchant, and I wait upon myself, and I transfer the goods without any trouble to him. In other words, a sneak thief is not so bad as a man who contracts for debts he never expects to pay."

——PHILADELPHIA WEEKLY PRESS: "Everybody knows better than to eat in a hurry and without sufficient mastication. Everybody knows it is a crime to satisfy his appetite and then to overload his stomach because some rich dessert is offered him. Everybody knows that food fried in grease is indigestible; that hot bread is less wholesome than stale bread, and that tobacco is not a nutritious article of food. The farmer who is as careful about his own stomach as he is of his horse's or cow's will soon learn what food is most profitable for him."

——N. Y. SUN: "Dr. George B. Loring, our Minister to Portugal, has been commissioned by the New England Agricultural Society to try the experiment of grafting barbed wire on the cork tree with a view of producing cork-screws at reduced rates."

THE AMERICAN AGRICULTURIST, speaking of rose-bugs, tells its readers that arsenical poisons, kerosene emulsions, pyrethrum powder, and all the usual insecticides have proved powerless against this sturdy pest, which defies everything except actual capture by hand.

Not so, friend. Buhach, either the powder or water solution, will bring them down in 20 minutes or less. If applied every day, during their short period of existence, all sorts of plants which they attack, will be effectually protected. The R. N.-Y. was the first to discover this remedy, and the A. A. ought to tell its readers about it. The Bordeaux mixture is thought by Col. Pierson to be a remedy also.....

"THE office should seek the man, but it should inspect him thoroughly before taking him."

"STILTS are no better in conversation than in a foot-race."

THE Good Samaritan helps the unfortunate way-farer without asking how he intends to vote."

"IT is the foolish aim of the atheist to scan infinitude with a microscope."

"WHEN poverty comes in at the cottage door, true love goes at it with an ax."—*Century.*

For Nervous Exhaustion

Use Horsford's Acid Phosphate.

DR. H. C. MCCOY, Algona, Ia., says: "I have used it in cases of dyspepsia, nervous exhaustion and wakefulness, with pleasant results. Also think it of great service in depressed condition of the system resulting from biliary derangement."—*Adv.*

Miscellaneous Advertising.

Purify the Blood.

We do not claim that Hood's Sarsaparilla is the only medicine deserving public confidence, but we believe that to purify the blood, to restore and renovate the whole system, it is absolutely unequalled. The influence of the blood upon the health cannot be over-estimated. If it becomes contaminated, the train of consequences by which the health is undermined is immeasurable. Loss of Appetite, Low Spirits, Headache, Dyspepsia, Debility, Nervousness and other "little (?) ailments" are the premonitions of more serious and often fatal results. Try

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For Internal and External Use.

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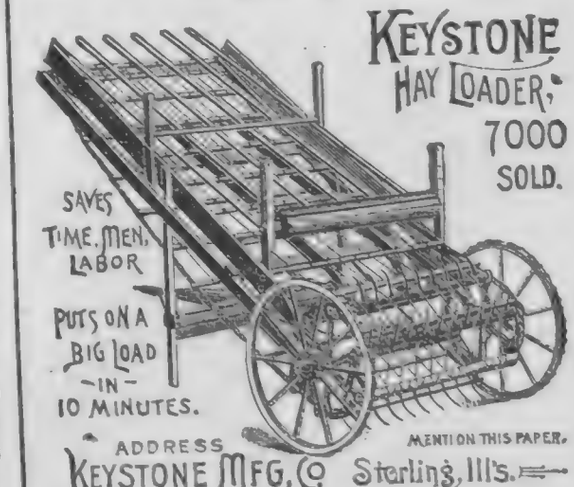

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THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, JUNE 15, 1889.

THE R. N.-Y. tried the Bordeaux mixture, of the strength recommended for grape-vines by Col. Pearson, on rose bushes. The effect was to kill the foliage and blast the buds. We shall try it again, using but one-quarter of a pound each of copper sulphate and unslaked lime to one gallon of water. It is necessary to pass the lime-water through a sieve if the liquid is to be sprayed on the plants.

ACTIVE preparations are now being made for the taking of the next census. A special effort is to be made to render the report on the mortality and vital statistics as complete as possible. Robert P. Porter, the new superintendent of the census, informs us that efforts are being made to communicate with every physician in the country in the hope of obtaining an accurate estimate of the birth and death rates of sections where there may be no satisfactory system of State or municipal registration.

"Would agriculture have kept pace with the advances in other lines without the aid of the agricultural colleges and trial stations of Europe and America?"—PROFESSOR BUDD, page 395.

A FEW weeks ago the R. N.-Y. said it was puzzled at the ability of a Jersey cow to extract a high, rich color for her butter from food that gave, when fed to other cows, but a pale, light tint. Here is another case. We have a Langshan hen running in a yard with some White Leghorns. Of course, these hens get the same kind of food. The Langshan lays an egg with a dark-brown shell, while the egg from the Leghorns are pure white After all, perhaps this is not any more strange than the evident fact that a certain action or statement may suggest to the minds of two different men entirely different ideas that lead to widely different results.

PROFESSOR F. C. SHORT concludes, on page 398, that "it is absolutely impossible for the farmer to make an analysis of his fodders." He says that fodder analysis is becoming more and more complicated. His idea is that the farmer will do better to look carefully after the quality of his fodders, take the figures given in the experiment station tables, and knowing the history of his handling and curing, make his own estimates. What the R. N.-Y. wants farmers to do is to study into the real meaning and value of an analysis of food stuffs. It still believes that the successful farmer of the future will have to be a chemist, in a small way, at least.

"Are the 17 men whose barns I passed by in a 30-mile ride, last winter, ignorant that they ought not to throw out the manure of their long cow stables under the stable eaves, as they certainly did?"—B. BROWN, page 394.

THE variety of strawberry which it is proposed to call the Parker Earle, if it prove worthy, bears at this time more berries than any other kind we have ever raised. It remains to be seen how well they will ripen. Its season is probably from medium to late. It originated with James Nimon, of Denison, Texas, and will be introduced by Prof. T. V. Munson of the same place. Mr. Nimon writes us, under date of May 25.: "In fruitfulness, beauty of berry, high quality and vigor of plant it certainly surpasses any thing we have here, and we have a majority of the wonderfuls in the strawberry line." If this berry prove to be all that it promises now, we shall give careful illustrations later.

THE Connecticut legislature ought to feel proud of having just passed a law forbidding hens to trespass on other people's gardens. The penalty for violating this beneficent law is a penalty of seven dollars with costs, to be inflicted on the owner of the trespassing hens. The effects of the measure are already excellent. Leghorns, Minorcas and Games, sequestered behind picket fences 15 feet high, are as harmless to neighboring flower beds and truck patches as are Brahmas, Cochins and Wyandottes in three-foot-high inclosures. Sweet Peace begins to smile through all the rural districts, the cause of endless bickerings between neighbors having been removed. We hear a good deal at times about "protection" for the American Hen; would that we heard more about protection against her!

"The agricultural colleges have done more to raise the standing of agriculture and agricultural papers than most people are aware of, and they have made it possible to establish and maintain the experiment stations."—DR. BEAL, page 395.

A CAREFUL farmer who "makes farming pay," tells us of two points about poisoning potato beetles that he is satisfied about. He can put on the mixture of Paris-green and plaster at less expense than he can handle the water mixture. Hand-picking the beetles pays him. The first brood can be picked with little trouble. At the first hoeing it is not much extra work to destroy the eggs that are in sight. Any mixture of poisons, he thinks, injures the plants to a certain extent and the application should be delayed as long as possible. The eggs hatch out irregularly. A few vines will be first attacked. The grubs can be knocked from these few vines with little trouble and one application of poison will then answer for the main crop.

THE R. N.-Y. has had considerable to say about the patent silage or "preserved fodder" made by Mr. S. M. Colcord, of Massachusetts. We have been at some little pains to investigate the process by which this "preserved fodder" is made, and do not hesitate to say that the specimens of it we have examined are superior to any sample of ordinary silage we have ever seen. The last sample sent was taken from a part of the silo where 20 bushels of early apples were thrown with the corn. These apples were preserved in excellent condition, fully "good enough to eat." The experiment stations of Wisconsin, New York, Massachusetts, Michigan, and in fact, a dozen other States, ought to test this "preserved forage" side by side with ordinary silage. The R. N.-Y. asks them to do so.

A SUBSCRIBER calls attention to the lack of information regarding what he calls "the underground geography" of farms. He refers to the drainage and he makes an excellent suggestion when he says that there ought to be a careful map of all drains so that a new-comer may know just what facilities his farm enjoys for the disposal of surplus water. Such a map accurately prepared should be given with a deed of the farm. It would add considerably to the farm value. We know of farmers who have been put to a vast deal of trouble and expense by their inability to locate drains that had become clogged or broken. A man should never put his property in a hiding place so secure that he cannot find it. That is what a man does who digs a drain through his farm and then fails to mark the place where it runs.

"The industrial revolution of our generation, of which the railway and telegraph and the wonderful improvements in machinery of every description are but the material indications, does not stop at the gates of agriculture in its intellectual phases any more than in its material manifestations."—DIRECTOR THORNE, page 395.

"ONE of those six flowers in the goblet of water is General Jacqueminot. Which is it?" (Its foliage was concealed by the others.) This question was put to three persons in the R. N.-Y. office. The roses were carefully examined as to color, shape, number and size of petals, and also as to odor. Not one of the three selected the Jacq. The other five roses were from a plant of Rosa rugosa Harrison's Yellow origin. Strange, is it not, that a rose so closely resembling Jacq. should have come from such parentage? The leaflets, as our readers have already been informed, are much larger than those of Rosa rugosa, with the same peculiarities though less pronounced. It is thought that we have in this hybrid just what every one wants, viz., a perfectly *hardy, double, ever-blooming, fragrant* rose. The beautifully distinct foliage, like that of its mother, is, moreover, less subject to attacks of insects than the leaves of other roses. It is proposed to place this rose in the hands of some nurseryman or florist for propagation and introduction, since such work is not in the R. N.-Y.'s line.

PROFESSOR SHELTON'S pig-feeding experiments go to show that farmers in the West, where pork-making is the main business, should as a measure of economy, continue to use corn as their staple fattening food. Doubtless this conclusion is in full accord with local conditions. In Kansas, as Professor S. says, milk, peas and other supplies of nitrogenous food are not to be thought of—they cost too much to produce. Professor S. does not give an opinion as to what would follow in a section where these foods can be secured. As a matter of fact, such an opinion has little to do with the business of the Kansas farmer whose object it is to produce all the pork he can at the cheapest possible cost. It is the R. N.-Y.'s. opinion that the farmer who can establish a reputation for producing "lean" pork will be able to work up a profitable business for that product. We mean pork with a greater proportion of lean than is found in that sold in the general market. The demand is for lean pork, there can be no use in denying the fact, and it seems evident that this lean product is to be produced outside of what is known as "the corn belt."

"Finally, the farmer ought not to be ashamed of his calling, neither should he cause his fields to be ashamed of him. He ought to put on his thinking cap and make his calling a study. He ought to use sense and judgment, for if there is a calling under the sun that needs a proper use of these two virtues, it is the farmer's."—A. B. SAUNDERS, page 396.

WHAT the R. N.-Y. has tried upon the potato vines of its "Contest" plot to repel or kill the villainous Flea-beetle: Tobacco soap, tobacco (stems) water, whale-oil soap, thymo-cresol, Paris-green, London purple, crude carbolic acid on corn cobs, one each between the plants, hellebore, Buhach, sulphuric acid, Bordeaux mixture, aloes, ammonia, snuff, "Peroxide of Silicate" and unleached wood-ashes. The result of all this (excepting the last mentioned) has been to weaken all the vines and to kill 36 plants. The unleached wood ashes have the effect of repelling the flea, but it is necessary that every leaf should be covered, underneath as well as on top, to give perfect protection. The vines are first sprayed with water and the ashes are then sifted over them. Paris-green or London-purple is mixed with the ashes, the same as with plaster to kill the potato beetle.

The Flea-beetle's preferences are no less marked than inexplicable. A neighboring field of Early Sunrise potatoes is not infested, while across the road the Thorburn is alive with them. The R. N.-Y. No. 3 is in one field much infested, while in another, it is not attacked. The same may be said of Brownell's Winner. Tomato plants are dying by hundreds from the effect of perforated leaves caused by this terror.

THE CONEMAUGH HORROR.

WHILE the actual loss of life in the Conemaugh Valley can never be known, enough about it is already known to leave no doubt that it is the most fatal calamity that has ever occurred in this country or in the civilized world in modern days. Unlike all other catastrophes within our remembrance, this grows greater as we get nearer the facts. Its enormity has outdone exaggeration. There is no silver lining to the dark cloud that flooded the unfortunate valley. In a few hours, almost without warning, a scene of busy life and cheerful, profitable industry was changed into a scene of awful turmoil, death, destruction and desolation. The flood that swept the inhabitants of the valley to death has forced open the pockets of the world. From all parts of this country generous contributions of money, food and clothing are pouring towards the scene of the disaster to repair, as far as possible, the material losses of the sufferers and to relieve their distress.

Foreign countries are also liberally contributing to the charitable tide, but however magnificent the display of spontaneous benevolence, even the material relief can only be comparatively small in view of the enormity of the losses. These are total. Men insure against fire, but who on land insures against water? Even the payment of life insurance risks will be jeopardized or hampered by the impossibility, in most cases, of identifying the dead or even of proving actual death. Then again, pestilence threatens to add to the horrors of the tragedy. Let no one say "Enough has been given or will be given without my mite;" but let each give as generously as his means will permit, and give at once. All classes, ranks and ages are represented among the sufferers, and all classes, ranks and ages should contribute toward their relief.

A WORD ABOUT STOCK IMPROVEMENT.

AN Ohio subscriber writes as follows: "The RURAL has struck the key-note of more failures in raising trotters on the farm than are due to all other causes combined—'breeding inferior mares to high-priced stallions.' The chances are all against such methods. All one can get at the best will be an animal just fast enough to be beaten by everything it tackles."

And yet hundreds of farmers will not believe it, and prefer to lay the blame at some other door. It is strange, indeed, that some farmers *will* not understand the principles of profitable breeding. Here is an instance: The R. N.-Y. has an excellent Jersey cow—good enough to be called a "great" one. A farmer in the neighborhood has a scrub bull, a mixture of various breeds, with absolutely nothing in the way of shape or pedigree to indicate dairy superiority. This animal was not castrated, simply because his owner meant that he should pay for his food until three years old by service—after that he is to be castrated and turned into beef. This neighbor felt much hurt because we refused to patronize this animal, and laughed at our plan of hunting the country over for the best Jersey bull in it. Another neighbor hears about the affair and at once proposes to patronize the Jersey bull. His cow has a pedigree about like that of the scrub bull; but he has thoroughly convinced himself that the calf will fully equal the R. N.-Y.'s cow's simply because its father can boast "Jersey" blood. He will be a sadly dissappointed man and will doubtless do all he can in future to ridicule the plan of stock improvement by careful breeding.

"Colleges make neither doctors, lawyers, preachers nor engineers. After the college has done for the student all that it can do, it has only brought him to the gateway of his profession. When the professional colleges turn out none but fully equipped and successful professional men, then, and not till then, shall we have a right to demand that the agricultural colleges graduate only fully equipped and successful farmers."—DIRECTOR THORNE, page 395.

BREVITIES.

FRIENDS of the agricultural colleges are evidently by no means bashful about defending these institutions.

THE R. N.-Y. is very glad to learn that experiments with poultry are contemplated at the New York Experiment Station.

"THE issue of the R. N.-Y. for May 25 fills the bill for an agricultural paper better than any other issue I ever saw, and as I have taken the RURAL for 36 years it seems as though I ought to know something about it."
Wayne County, N. Y. JOHN BRADLEY.

"CONDENSED CREAM" is the latest dish offered to city people. It is put up in one-pound cans, and sold for 10 cents per can. It has a suspicious flavor of corn-starch about it. "The word CREAM as applied to all canned products of the dairy, is copy-righted."

MR. DREW'S "EYE-OPENER" this week is a novelty. It is a true statement of fact. It ought to put visitors to this city on their guard. Scoundrels like our friend "Cummings," are constantly on the watch for victims. Their favorite prey is the "smart" young man—the one who "knows it all".

In some parts of Michigan farmers are reported to be paying nearly two bushels of potatoes, at five cents per bushel, for one pound of sugar, at nine cents per pound! There isn't stock enough to consume the surplus tubers, and they are not considered worth five cents per bushel for fertilizing purposes so long as tons upon tons of manure are allowed to go to waste. It is to be hoped that prices for other farm products are high enough there to "even up" the list to a profitable level.

IT is very well to put into the nests carbolic acid, lime, tobacco and the like as many recommend. But these are merely repellants. They drive the lice out of the nest, but do not kill them. Many years ago the R. N. Y. began its advocacy of *spraying* the houses and nests with kerosene. We find it a perfect remedy and one that is quickly applied at a trifle of cost. Houses treated in this way once in two weeks need never be white-washed. There is no need of it.

The Herdsman.

SELECTING A BULL

DOES SOILING IMPAIR VIGOR?

MUST ANIMALS EXERCISE?

A SUBSCRIBER in New York State sent us the following letter, and as it has to do with a matter that is being now quite generally discussed, we have made it the basis for the following discussion:

"I expect to purchase a bull for my dairy. I find that some of the breeders that I have corresponded with soil their cattle so that the cattle have comparatively little exercise. I have plenty of pasture, and shall not raise any soiling crops. I am told that an animal from a herd that has been kept on the soiling system for a number of generations, will not do so well on my pastures as would one raised more as I should raise him. Is there anything in this?"

FROM L. F. ALLEN.

Can cattle accustomed to soiling do as well in pasture, after they have become used to feeding in the stable? I do not know why a change from one kind to the other should affect their dairy qualities if they were well fed in both cases. Cows while soiled in confinement in stables or sheds should have more or less exercise through the day—an hour or two, more or less, as convenience may govern. Cows that run at pasture when they have to range over large spaces for their food, fall greatly off in their production of milk owing to the harmful exercise required in gathering their food. A ready filling of the stomach, and an immediate rest afterward until the time for feeding again are great stimulators of lacteal production. Therefore unless abundant pasture is furnished, the best and most economical way is to adopt soiling throughout the grazing season. During the winter season while cows are in the stable, a few minutes' or even an hour's exercise in a well wired inclosure outside is beneficial and even necessary for the highest health of the animals.

A bull should never run at large with the cows either in a yard or pasture. He should be always stabled or yarded—stabled always in winter, and closely yarded in summer, or even stabled if necessary, but in such a case he should have some exercise during the day. If he is allowed to run loose with the cows, he is either idle or teasing them with his importunities, whereas a single service or, at the most, a double service is all that is required for procreation. At the time of heat, the cow should be withdrawn from the herd, quietly placed with the bull, and after she has been served by him she should be placed in a stable stall, or small yard by herself until her excitement has fully passed. If she is sent immediately back to the herd, she is again worried to no good purpose, but to her detriment. So treated, a bull which serves only one or two cows per day, if of full age, well fed and vigorous, may successfully serve 100 or more cows throughout the year.

Niagara County, N. Y.

FROM SMITHS, POWELL & LAMB.

We believe that cattle thrive better and are more healthy, and that their progeny are more apt to be vigorous when they have regular exercise every day, and this they can get in no more natural way in summer than by running in the pastures. We would not advise this inquirer to allow his bull to run in the pasture with the cows; but he should have regular exercise every day. We have no knowledge from experience bearing on the point which is raised; only in a general way we would not anticipate as good results from a bull from stock that had been soiled for years, as we would not expect him to be so vigorous and prepotent as a bull from stock that had enjoyed the benefit of more exercise.

Onondaga County, N. Y.

FROM C. M. WINSLOW.

The tendency of all stock is to revert to nature, and as grazing is the natural way of feeding, and as soiling is comparatively a modern method of doing so, I see no reason why stock, if taken young and subjected to the original and natural method of feeding, should not thrive. I do not think there is enough difference in the two methods of feeding to have any effect on the offspring, if another method is adopted before the calf is himself subjected to the soiling plan. It is possible that an animal that has had food given abundantly to it for a long period, would, if a change were made, fall away for a while, until it became accustomed to providing for itself, and a man would be liable to suffer loss in buying such stock; but not if he began with the calves.

Rutland County, Vermont.

FROM MILLER & SIBLEY.

Our experience in relation to the soiling of cattle and its effect on the progeny has not been sufficient to enable us to answer the question with such a degree of positiveness as would make our opinion of much value. The whole question to our minds would form itself thus:

What has been the treatment of the animals under the soiling system? Have they been allowed an abundance of fresh air and ample exercise? If such has been the case and the herd from which the animal came was of a strong-constitutioned class, we would have no more hesitation in purchasing such an animal than we would (other conditions being equal) in purchasing one from a herd where ordinary methods of feeding were followed. We are all disposed to look at any question from one stand-point and not from all sides. A person selecting a bull for which he pays more than an ordinary price should carefully examine the family history and characteristics of the strain from which the animal sprang. He must consider the individuality and external evidence of constitution as well as historical evidences of the same and all the minor questions which go to make it apparent that one animal is more desirable than another.

Venango County, Pa.

FROM M. P. ROWE.

I have never had experience with bulls that have been soiled altogether, and which have not been allowed to run out in pasture, but the general impression is, (and my observation confirms it) that neither bulls nor stallions that have been so treated, and which "have had comparatively little exercise," are as sure for breeding purposes as are those which have been otherwise treated. Should the RURAL'S correspondent, however, procure a bull calf bred from cattle that had been altogether soiled, and never pastured, and should he raise him under different conditions, I do not think that any defects his ancestors had acquired *from their mode of keeping* would be inherited by the calf.

Spottsylvania County, Va.

FROM H. B. RICHARDS.

Calves bred from a male kept in confinement without exercise are generally small with weakened constitutions. If the dam also be confined and have insufficient exercise, the tendency will be the same. Inactivity on the part of the dam will make the offspring sluggish. Nothing will compensate for exercise, and breeding for a few generations from stock fed in this way must result in loss of vigor, activity and constitution, and the animals will not be adapted for the changes of out-door climate or for pasturing and reproduction.

Northampton County, Pa.

Miscellaneous.

CORRESPONDENTS' VIEWS.

POISONOUS POTATOES.—Ordinarily the potato is one of our most healthful articles of diet. With the addition of a small proportion of other food it has more than once been the barrier between the Irish nation and starvation. Several years ago, when on a visit to the famous island of Iona, I was told that the failure of the potato crop had compelled over half its population to emigrate. In our own land among the great variety of vegetables with which we are blessed this is the one most universally used and the last to be spared. Still we must not overlook the fact that healthful as it is, and acceptable as is the potato to our palates, with its floury richness and agreeable flavor, yet it belongs to a family that includes among its members belladona, tobacco, stramonium and henbane, some of the most poisonous plants known to man. Its relationship to these can be recognized in the intense bitterness left in the mouth when we taste the cellar-grown sprouts, or that portion of the tuber which has been made green by exposure to light. Last season was a very peculiar one for all vegetable growths and the result of this is strikingly seen in its effects on the quality of a potato raised in some localities. These appear all right to the eye, but when cooked are found not only to be deficient in the dryness and good flavor we so highly esteem in this vegetable, but they leave a bitter taste in the mouth and cause a burning or smarting sensation in the throat. When such results follow from eating them, we may be sure that a poisonous element has been developed in the tubers and that they are no longer healthful human food.

Marblehead, Mass. J. J. H. GREGORY.

I COMMENCED TESTING GRAPES in 1884. I hoped to be able by this time to report a number of facts relative to the many different varieties which I have, numbering over 230; but I find that facts of one season may not be facts the next, and I have hesitated, and still hesitate, to make public the results of my experience, as my notes are apparently very contradictory. I hope to have something to say later. I left a bunch on a Mary vine until October 22, and although we had had several severe frosts, there were no signs of rot; the berries adhered firmly to the peduncles and were but slightly shriveled. The Mary may be the same as the Lindley, but it does not appear so from my experience this season. It fruited for the first time. UBER.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

IF we talked only when we had something to say, and then said it in the best and simplest words in our vocabulary, we would add a good deal to the value of our conversation. We meet plenty of talkative people, but few good talkers. One of the greatest troubles is that we are apt to talk to interest ourselves, rather than to interest others.

* * *

WE think it a great mistake so to repress children that they are never allowed to join in the family conversation, but it is a mistake of equal magnitude to let them interrupt the conversation of their elders. But it is well when they interest themselves in sensible or instructive talk. The chief disadvantage of repressing children is that it is apt to render them awkwardly bashful when older. There is no doubt that bashfulness is usually the result of excessive self-consciousness which is, after all, but a form of vanity—one who talks to interest others without considering himself, is never bashful.

* * *

WE expect most of our talking to be done by women, and it is really necessary that our girls should practice the art. To begin with, the voice should be agreeable. Harsh tones must be modified, clearness of utterance cultivated, and one should try to attain

"A low, sweet voice,
An excellent thing in woman."

The language should be carefully chosen. Now, we abhor any affectation, and we do not admire the young lady (she would feel hurt if you called her a young woman,) who always says she "resides" at so-and-so, rather than that she lives there, "retires" when she goes to bed, and whose language is best described by "genteel" that poor old word that has been abused until it is really vulgar. Never be ashamed of talking plain English, but never abuse it by using vulgar catch-words or current slang. Thackeray said that there was gentlemanly slang as well as vulgar slang, but the two are so inextricably mixed that it is difficult to tell one from another. So it is best to avoid either. If girls knew the abominably low origin of many slang phrases that they so glibly repeat, we think they would utterly abjure them in disgust. One may use pungent, expressive speech without approach to slang.

* * *

THEN there are words which are not slang, yet are objectionable and incorrect. Take, for example, that most terrible of all Americanisms, "pants," or its accompaniment, "gents." Some purist declares that only a "gent" would wear "pants;" and indeed the two words seem to go together. It is just as easy to speak correctly, and say trousers, as to use the more objectionable word. Even such a woman as Mrs. John Sherwood, considered an authority on good breeding, is guilty of using the word pantaloons when she means trousers, and though this word is not really incorrect, it is certainly inelegant.

SOME ultra-modest people really give an offensive turn to their conversation simply in the effort to be very correct. For example, we know so many who always use the ambiguous word limb when they mean leg, and though it may be meant in all simplicity it does sound a little absurd. But in this one must be governed both by taste and surroundings; it is well to call a spade a spade, but there is no need to make a spade or anything else too obtrusive.

OUTINGS IN NEW ENGLAND.

IX.

MARY WAGER-FISHER.

A little ride from Nantucket—one can go by rail—is Sconset (Siasconset), a miniature village of fishermen's cottages of the quaintest description. Here, after a storm the surf rolls in 50 feet high, and is both magnificent and fearful to contemplate. While the surf on this side of the island is so great, one may bathe on the opposite shore in water as calm as an unruffled mill-pond. In the days of Nantucket's commercial prosperity from two to three hundred large vessels were owned here, but now scarcely a vessel of any rig lies at the wharves. That the island should be eminently "healthy," with a fine temperature, is readily understood, and it is a scrap of the world quite free from pretentious people and from the newly rich. It is quiet, comfortable, aristocratic and very enjoyable for the best class of people. Indeed the entire New England coast from Maine to Connecticut, inclusive, with its bold shores, its wealth of islands and of bays, both large and small, is one long stretch of beauty and every spot has its own charm and attraction.

From Nantucket we sailed to New Bedford across Buzzard's Bay, nearing the old-time whaling town at sunset, and the view of water and shore, of islands, villas, boats and shipping bathed in the twilight colors, was exquisitely beautiful. New Bedford is a wide-awake city, with handsome stores, and public buildings, and beautiful elms. I noticed on the doors leading into the waiting rooms at the Old Colony Railroad Station, a fine new building, the simple words "Men" on one and "Women" on the other—two brief words stripped of all unnecessary verbiage, which gave all the information required. From New Bedford we had a delightful ride by rail on to Providence, Rhode Island. We saw, *en route*, what we had never seen before, a forest that had been felled by fire, the fire working in the peat underground and burning the roots off so that the trees toppled over. There is very considerable both of beauty and interest in Providence, but our visit had for its principal object the museum of Brown University. There are museums and museums, which suggest catalogues of birds and stones, but this one of Brown possesses great originality and is well worth a visit even from museum-satiated travelers. To me among the most interesting relics in it were the "remains" of the body of Roger Williams, that most liberty-loving, sane-minded young parson, who after being driven out of Massachusetts, made his home in Rhode Island, and called the place Providence, "because God had provided for him." Some few years ago, it was deemed proper to look after his mortal remains with increased care, when it was found that his body had already been resurrected and had ascended into an apple tree, which had grown near the head of his grave, the roots having absorbed the body, following the outline of it, the legs, knees, feet, etc., then continued on into another grave. So that these apple tree roots and a few bits of nails that were in the coffin, are all that are left of the contents of Roger's grave, and these preserved in a glass case belong to the museum. The Memorial Hall of Brown University was built by Mr. Sayles, whose son died while in college.

From Providence we had a charming sail down Narragansett Bay to Fall River, where we spent one Sabbath. Here too, the death of a son had resulted in a memorial building, a superb structure costing a million of dollars and devoted to education—the Durfee High School, built of granite, and supplemented with an endowment of a million dollars—the gift of a mother whose only son had died at 23 years of age. Every day she drove to his grave to cover it with flowers—the one poor little comfort left to her.

Presumably, like all other strangers to Fall River, I had thought of it only as a city of enormous cotton mills, and tenement houses of operatives. True, the great mills are there, high, long buildings, full of windows, looking prosaic and utilitarian to the last degree. But the greater part of the city is very attractive, built on a bluff commanding beautiful water and shore views, and rich in charming and costly houses. We attended the Central Congregational church—New England is the home of Congregationalism—an edifice spacious and beautiful, and filled with a congregation elegantly garmented. One cannot but wonder, the country over, where so much money comes from for fine apparel.

In writing of Middleboro, in a former letter, I neglected to mention an interesting statement made to us concerning the acoustic properties of buildings. We were taken into a church of which the acoustics was perfect, and of which the proportions were, width half the length, and hight half the width—a bit of information which may be of value to unscientific builders.

From Fall River we sailed for home and our first New England summer outing was at an end. It was the middle of September, and Anaximander said with a business air, "Courts open." "School begins;" said the laddie. "Peaches and tomatoes to can, and the fall house cleaning," sighed madame.

CITY vs. COUNTRY BOYS.

J. H. G.

NOTHING could be further from the truth than the feeling so prevalent among country boys—that farmers' sons have no chance in the "race of life." The fact is, the men who are leaders in both mercantile and professional life were, as a rule, brought up on a farm. It may be said with truth that their success depended upon the fact that they left the farm and entered college or business life. It will be found, however, that the men who have achieved the greatest success are those who did not leave the farm until they had acquired the habits of industry and frugality which can be learned nowhere else so well as on the farm. A model course of training either for the professions or for business would be 20 years on the farm and 10 years in college or in acquiring business experience. The Office says that country boys have no conception of the advantages they possess over their city cousins. For the most part the idea seems to prevail that the city boy has all the opportunities, while the country boy has only privations and disappointments. And yet, when we come to look the business of the city over, we find that among the successful men those of city birth and training are in the minority, while those who spent their boyhood in the country, and commenced the race apparently handicapped, are in the majority.

New York City is a striking instance of this fact. The merchant princes, so called, and the railway magnates, as they are commonly termed, together with the bankers, brokers, lawyers, doctors, manufacturers, judges, editors, inventors, and accountants, with hosts of others too numerous to name, who have achieved the most distinguished success in their special fields of labor, are not, as a rule, New Yorkers by birth and education. The leading men, with very few exceptions, in all the walks of life in the metropolis were educated outside of the city, and not a small proportion of them were country boys a very few years ago. The reasons for this are not very hard to discover. In the first place, the procession of events before the gaze of a city boy is so rapid that he has no time to seize upon any one thing for himself. If it be only a book or a paper that comes in his way, it is not prized, because of necessity it must make way for its successor of the morrow. Again, business is conducted on so large a scale that as observer or apprentice he can only become acquainted with a subordinate part. He seldom has the opportunity to study a given business in its entirety. Opportunities for amusement are so many, and the habit of indulgence formed in childhood is so hard to break, that much valuable time is lost in that direction; and so we might go on enumerating many other things equally unfortunate for the training of the city boy for the active responsibilities of a successful business.

Last, but not least, the average city boy has not the physical stamina that hard work, the only method of attaining success in the business world, so imperatively demands. On the other hand, the country boy has leisure. He has few amusements, and he prizes, and therefore studies, the books and papers that fall in his way. He finishes one thing before he takes up another. If he learns any business while in the country, it is one so small in extent, and of so few details, that he comprehends every feature of it. If he has decided ability for management, it is not at all strange to find him in the direction of affairs long before his city cousin of the same age has left school. He early learns self-reliance. As a rule he is of robust health, and, having been thrown upon his own resources, he is not abashed when some unexpected difficulty is encountered in his business career. But, beyond all else, he has been trained to work continuously the year through. He has fixed habits of industry. Accordingly, when he comes to the city to live, the odds are largely in his favor, although it is very possible that neither he nor his city cousin appreciates the fact. The very belief, however, that he is at a disadvantage in the race causes him to make greater effort, and ere long he finds himself away ahead of all competitors.

REALIZING TRUTH.

OLIVE E. DANA.

IN Mrs. Whitney's "Sights and Insights," when the travelers whose experience we share are comfortably established on the ocean steamer plowing its way across the rolling waters that separate and unite the continents, she puts into the mouth of Emery Ann the characteristic words:—"It makes any one realize their geography, don't it?"

I suppose there is no experience that should not make us "realize" some b fore unapprehended fact as truth, or principle. There is no gift a teacher might better covet and cultivate than this—of making real to her pupils the lessons of the school-room, that the truths they receive may become realities in their lives. Is there not here an essential difference between teachers, even between successful teachers?

We all know so many things confusedly and superficially. There is so much we have heard and read which seems familiar, yet of which we have no definite, thorough, trustworthy knowledge. "Reading maketh a full man;" said the quaint old writer. But fullness does not imply thought or vigor or acumen. "Speech maketh a ready man;" but readiness is not, we know too well, synonymous with accuracy. "Writing," he concludes, "maketh an exact man." But not even to the exact man are facts always realities. To some they are fossils, quaint and precious; to some, tools; to some, living buds, which, as in the poet's song, flower into beauty.

The vagueness and unreality of our knowledge may be due in part to a lack of early discipline. Here is the teacher's opportunity for the new generation. And these faulty mental habits of inattentiveness and lack of "grip" we have allowed to fossilize. We have indorsed these habits so often that we cannot repudiate them at will; they are a part of ourselves.

All the best influences of modern education are tending to furnish the scholar, and therefore the coming man and woman, with real knowledge, real skill, real motive and inspiration for the life-work that is among rugged realities. The child's education is begun among real things, he is taught to number, to use, to measure, to make real things. And for the older student, the pebbles, the plants, the stars, are some of the pages in his text-books. And perhaps, too, the youth or maiden is lured to the carpenter's bench or the cooking class as a part of the curriculum, before he or she can graduate from the school-room.

It has been said, and not without reason, that "the effects of the school are apt to fade away on the farm and in the factory, and a separation, if not an antagonism, often takes place between study and daily life." We need a bridge to carry the scholar with his habits of study and inquiry safely into the life of profitable labor, without obliging him to drop what he has taken so much pains to gain.

It is wont to be true of men who have won for themselves, in the teeth of obstacles, success, fame, wealth and the education or training preliminary and attendant upon that attainment, that their knowledge was obtained by real struggle, by virtue of real, felt need, was sought, assimilated, used. It is a part of their life, not a shadowy abstraction; not a recreation or accomplishment. And it is urged that women fail too often from lack of definite and accurate information and grasp of facts and principles, more often, perhaps, than from any other cause. They have come short of that ownership of truth, which is their prerogative. But there are other things besides geography and physics that we need to realize. More than a thorough and familiar acquaintance with history and literature, will it avail the pupil, when he or she is a man or woman, to realize the worth of truth and loyalty; of sincerity and nobility; to appreciate the value of kindness; to know that there are grander things to strive for than wealth or comfort or fame.

Ah! what tides of worldliness, what waves of care, what billows of trial, what winds laden with all potent and insidious temptations, must beat upon all souls in the commonest ways, the most prosaic occupations, the most sheltered lives! We need a strong grip on certain actual truths and principles, a firm faith in God, and earnest aspiration, and unfailing love. These things cannot be too real to any of us. And we can never do much toward a thing real to others until it is intensely real to us. The best teaching is a sharing. The reason why some teachers succeed so much more nobly than others in these directions, may be that they but give more freely of their own more abundant life.

GOLDEN GRAINS.

Count the mercies, count the mercies!
Number all the gifts of love;
Keep a daily, faithful record,
Of the comforts from above.
Look at all the lovely green spots
In life's weary desert way;
Think how many cooling fountains
Cheer our fainting hearts each day.
Count the mercies! Count the mercies!
See them strewn along our way!

—*Mrs. M. D James.*

LAVATER says that everything may be mimicked by hypocrisy but humility and love united. The humblest star twinkles most in the darkest night. The more rare humility and love united, the more radiant when they meet.....

No man or woman, says Phillips Brooks, of the humblest sort can really be strong, pure, and good, without the world being better for it, without somebody being helped and comforted by the very existence of that goodness.....

THE true ideals and standards of life; says the Sunday School Times, are, in one sense, always unattained; though, in another sense, they are never unattainable. They are as the shadow of a man's head when the sun is low behind him. He marks where that shadow is, leaps toward it, and alights upon the spot where it lay. But the very effort to reach it has thrown the shadow still farther forward. So of our ideals. We reach the point of a past, and only a past, ideal; but the very act of reaching it throws the present ideal still farther forward. A man who considers that he has reached his present ideal is a man practically without an ideal, and therefore without the power of high accomplishment.....

THE HOME-MAKER says that the best of us make mistakes, and what wonder is it that our boys, with their high spirits and their ignorance of the world, blunder and get into scrapes pretty often? But it is a cause of rejoicing if either father or mother can get hold on a young heart which leads it to them to open its worst recesses to their loving eyes....

ADDISON said that irresolution on the schemes of life which offer themselves to our choice, and inconstancy in pursuing them, are the greatest causes of all our unhappiness ...

THE GOSPEL BANNER tells us the petition of a colored boy who was appointed to lead the prayer-meeting, "O Lord, I pray thee make thy servant conspicuous," expresses the feeling not seldom manifest among those who serve in that office and who are supposed to be better qualified than the untutored colored youth. When self is obtrusive the leadership is not so helpful as is desired in any service.

EASE, says the S. S. Times, signifies waste power, or, at least, strength unused. Generally, he who does any thing easily is doing less than his best. Not until we feel the burden of overcoming a difficulty can we know that we are doing as well as we might do. It were better to have it said that you write well than that you write easily; for though you may write comparatively well with comparative ease, it would be a greater achievement to write better with comparative difficulty.

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

Heed how thou livest. Do no act by day
Which from the night shall drive thy peace away.
In months of sun so live that months of rain
Shall still be happy. Evermore restrain
Evil and cherish good, so shall there be
Another and a happier life for thee.

—John G. Whittier.

EXTRACTS FROM SUNDAY-EVENING TALKS AT THE RURAL GROUNDS.

THERE is nothing lovable in a person who yields to every whim and fancy, and places himself at the head of all creation. It is only those that live for others that are reverenced and looked up to in this world. I came across this stanza in the Proverbs the other day. "Better is a dry morsel, and quietness therewith, than a house full of sacrifices with strife," and it instantly made me think of a mistake I am constantly making. Whenever I make a sacrifice I am sure to upset it by a long face, a complaint or, if not that, I am so cross afterwards that I destroy any good that it might have done me or any one else.

* * *

THE following little incident was told me by one of the college boys at home. When he left his home to attend college, his mother, in packing his trunk, put his Bible (one that she had given him) down at the bottom with a $10 bill in it. She thought in this way to find out whether or not he made a practice of reading it. Well, at the close of school he returned home to spend the summer vacation. His mother went to his trunk, got out his Bible and found the $10 bill still there, and just where she had placed it.

* * *

We are so constituted that labor of some sort is essential to health, and health to happiness. *There is no such a creature in existence as a* HAPPY *indolent man, woman or child.* There is a *kind* of inactivity, often mistaken for indolence, that is the effect of a feeble physical system. Such persons are *entitled* to sympathy though they receive little.

But the genuinely indolent man is entitled neither to help, consideration nor respect. God helps those who help themselves. Else what did Christ mean by the parable of the talents? I look upon those as being the offers of just so many hobbies. Will you ride? The man who returned his one talent which he had carefully stored away did not *ride*, and his master well rewarded his indolence.

We *must work to* be happy. If you can work with a *heart*; that is, if you *love* your work, that work brings you joy. It becomes a pleasure. The affectionate mother who watches over her first-born babe night and day, has a *hobby*. Could you induce her (if she be a *true* mother) to give up that work?

All *worthy* hobbies are of this kind. They *absorb* us; we cherish them; they are the last thought that rests in our mind as we go to sleep—the first that flashes upon us in the morning. We have an *aim in life*. We are ready to hasten dressing; to hurry up the meal so that more time may be given to the hobby.

Why is work a punishment? Simply because it is not in accord with our tastes. To *me* mercantile life is hateful. To the so-called merchant prince it is glorious. To *me* practicing upon the piano for four hours daily would be a *severe* punishment. To Miss —— it may be a pleasure. The practice of surgery to many is a pleasure-giving profession. I couldn't amputate a leg or remove a tumor if I were to die for the failure.

It is plain, therefore, that devotion to our work brings happiness. Let us see to it, therefore, that we endeavor to choose our work wisely; that we endeavor to guide our children so that they can determine what kind of an occupation they may take an interest in or make a hobby of. It is the hobby-rider, my friends, that does the most good in this world, and he experiences the most happiness as well. God never intended that any one man should excel in all things. He did not so constitute us. Our mental powers are too feeble—our lives too short. Newton, Darwin, Pasteur, Edison, and all who have served mankind faithfully and well were *specialists* —merely another name for hobby-riders.

Give me the earnest, persevering, vehement nature, and I will show you a hobby rider. He may ride well or ill. That depends. We may have vehemence without brains or conscience. In the one case he will probably run his horse into a ditch; in the other to the devil. Children, with hobby-riding proclivities, or vehement natures, are just the ones that need the most careful guidance from parents, since they are inclined to persist in evil as well as in good projects. This is a view of the subject that would need a separate consideration. The fact still remains that if we would enjoy the greatest amount of happiness; if we would accomplish the greatest amount of good in this world, it must be through *persistent* work into which the heart as well as the head and hands enters Let us never forget that *pleasure* is simply agreeable labor. There is absolutely no such thing as pleasure or happiness without an *effort*—and an effort *means work*. The more the affections are engaged in the work, the less arduous it becomes. From this point of view parents cannot be too careful while rearing their children not to place before them work for which they are not fitted; work against which they may reasonably

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria
When she became Miss, she clung to Castoria
When she had Children, she gave them Castoria

rebel. Better by far that the same time be spent in guileless play. Let their natures develop vigorously. It is in accord with natural laws that children should, in great part, choose their own pastimes. Guided by wholesome study, later years will develop the earnestness of purpose, which we may hope will seat them on a sound hobby *that they may* safely and with benefit to society ride through life.

HANDY.

WE have recently hung up a slate and pencil in the kitchen for putting down items needed from the store.

Orders are taken and goods delivered on Thursday of each week. A treacherous memory sometimes causes a clog in the domestic working, but now when an article is needed it is at once placed on the slate, and taken off from our mind. It is handy. We have also grown tired of running upstairs or going without, when in need of a pin in the kitchen. A small pin-cushion suspended just above the kitchen table now supplies us.

Just such little contrivances prevent friction, and friction you know, good women, wears and tears and ages.

STARCH, AS MADE AND USED BY A MAN.

WHILE reading the columns of starch lore in the R. N.-Y. of April 6, the writer was forcibly impressed by the fact that enough labor, time and worry are annually lost by each housekeeper in handling starch, to raise $100 worth of fruits and flowers.

This is made less surprising when one considers that the great diversity of methods offered by the writers exhibits a total lack of any certain knowledge of the subject. However, since all the conditions influencing it are uniform, and are under one's control, it is apparent that the work should be governed by uniform rules. The women have done well in the effort to help each other, though the writer believes that each would-be helper benefited herself most in the attempt to help her neighbors.

Since every woman and her mother have for a thousand years starched and ironed various things variously, no two alike, though all striving to the same end; and since not one woman in 1,000, though possessing the requisite strength, can get, or keep after getting, employment in one of our large laundries, it is strongly suggestive of prejudicial influence exerted by former radically wrong methods. In California there are two laundries that employ, each, on an average, 200 hands. The stock of those companies is at or above par. *Do they know how to starch and iron?* Numerous visits to those institutions, with notebook in hand, enable the writer to give the general principles employed by them—besides, he can do the work himself. Some things must be understood, or, at least, accepted as facts; then when you have the principle and know the rules—the details being left to you—you will succeed if you have tact, courage and muscle; if you have not these requisites but have the knowledge, you are still helped.

It is the starch more than the cloth, that is to be treated, the cloth merely holding the starch while you punish it. Starch alone is all that is needed to make a shirt-bosom as smooth as a mirror—you probably know how that looks—and as stiff and "springy" as a carpenter's saw. It is nonsense to try to work a body of starch into a fabric already loaded with water—dry the goods. A small amount of suet is sometimes added to the starch while cooking, to make the work easier for green hands; but as it sometimes causes a blister, when a little too much is added or when it is not properly mixed, it is unsafe; besides, it is not needed for a good ironer. A capable man will iron and finish from 60 to 125 shirts a day; but though he could do 500 he could not polish one with a common iron. The "polisher must be very hot, and run very fast with heavy pressure. Ironing and polishing shirts is as hard work as chopping wood and harder than sawing it; so the wife had better get her husband to investigate the matter: the result would serve to illustrate some of the trifles that women do. A polished surface will wear twice as long as an unpolished one without becoming soiled; but if you want whiter and neater-looking linen just dampen it slightly after it has been polished and dry it with a common iron. Now mix the required amount of starch with a little cold water; then after taking out a-fourth of it, cook the remainder about 15 minutes; remove it from the fire, and when slightly cooled add the rest. The added starch should whiten the mass just perceptibly, and the starch should then be as thick as you could work or wring it into the cloth. While the starch is as hot as can be borne, turn the shirt-bosom, and grasping the body, around the bosom, with the left, use the right hand to work and wring in all the starch you can. Wring off the surplus, and turning the bosom treat it in the same way. Throw it on the table and hold it while with both hands you straighten the bosom and vigorously rub the starch into it with the "heel" of your hand. It is nearly smooth, and comparatively dry, so throw the bottom up on the bosom, and the cuffs on that and roll tightly, after which it may rest awhile, as this serves to dry it in a degree and absorbs the surplus starch. But since you did so good a job in the starching you need only wait to "get your breath," so get a seven-pound, or larger, iron, which must be hot enough to brown the shirt at once if allowed to rest on it. Unroll the shirt and straighten out the wrinkles, having the collar always to the left. Take it by the back of the collar and the center of the lower posterior end, and with a sort of toss outward and a draw toward you, the shirt's back lies doubled lengthwise. Be lively now, while you rub the hot iron over it, else you will scorch it. Pick it up by each end and turn, spreading the whole front up; and now your iron flies over that. Then to the sleeves. Your iron is slightly—only slightly—cooled now, so turn the cuffs wrong side up and run the iron, lightly the first time, then with pressure, clear across and back; repeat it, and change to the other cuff; then you may turn them right side up and finish them with about three long, heavy strokes forward and back for each. Now to the collar-band, and then to the shoulders, after which comes the "tug of war." If you have acted just right your iron is still hot enough to smooth the bosom, but I fear you have been a little slow and awkward, so you had better get a hotter one—heat is essential. Get one as hot as you can use without burning. Take hold by the left shoulder and the center of the front flap and raise it up so that the uncut cloth of the back will lie under the bosom when put down, and lay the center line of the bosom on the edge of the table, the right half hanging over; since the wrinkles are partly smoothed out, there is no difficulty in gliding the iron—*lightly*—from bottom to top. Try it; better be compelled to dampen it again than not learn how to do it right. Again push the iron over it, this time with pressure; now fairly ride it up and down a few times, to make it solid; put it up on the table and treat the other half in the same way. Well, there; you have been but a fraction over eight minutes, and it looks like a "store" shirt: but if the work has been an item of importance you must economize by putting on a little more. As your polisher is just a little too hot to iron with, it is about right, so now push a hard, smooth board into the shirt under the bosom, and with a soft cloth dampen the surface of about one-fourth of the bosom—be careful there not to use too much water—now grasp the polisher firmly with the right, and, laying the left hand over it, put the rounded *heel* upon the cloth, throw on your weight and make the iron fairly dance crosswise over that bosom, finishing by long strokes up and down with the bottom of the iron. Good! At last it is a "thing of beauty;" and when your "guid mon" makes your cheeks red with praises you needn't tell him that you learned how 'twas done from

Downieville, California. P. H. R.

WASHING.

I WOULD like to give a few hints on washing, on points on which others in their abler articles have not touched, and to me they are such great helps that I want other hard-working women to try them. I soak my white clothes in hot suds over-night; in the morning, I rub them out slightly and after making suds of cold water I add two tablespoonfuls of spirits of turpentine to a boiler of clothes. Let boil 20 minutes and rub out of lukewarm water and rinse. The clothes will come out snowy and sweet-smelling without half of the rubbing. This treatment will not make the clothes tender and is better than any washing fluid I have ever used. The views expressed in the Special, about washing colored clothes in starch water, setting the colors of delicate prints with salt water, etc., are mine also, only I use bran in a coarse sack instead of flour, which answers the purpose equally well and is more economical. But in washing very dirty overalls, a job that falls to the lot of every farmer's wife whose husband raises large quantities of potatoes, I want to give my plan. I had just such a pair yesterday, firm, thick and stiff with dirt. Well, verily, the "spirit was willing, but the flesh was weak," and, like Samantha Allen, I "sithed a deep sigh" and went at them, but my weak hands and wrists refused to do the heavy work, so I got my scrubbing brush, (an ordinary one without a handle) and laying the overalls, a part at a time, on the washboard, I soaped them thoroughly and scrubbed them with the brush. The dirt could not stand that treatment and I came off victorious.

I heartily sympathize with "Farmer's Wife" in her detestation of the one-third law, while she earns one-half, but it seems to me that it would be better to economize with her remnants, making them go as far and look as well as she possibly can, in order that her one-third may be large enough to keep her from the Old Ladies' Home.

MRS. H. L. SKEELS.

THE flower bud may be perfect but without sunlight, without warmth and food, it refuses to unfold. So it is without the expanding influence of an education the mind blights—it brings forth neither flowers nor fruit.

A BATCH OF CAKES.

FROM the following recipe I made three cakes this morning, which proved to be very good: Three table-spoonfuls of butter worked into three cups of sugar, three well beaten eggs, three cups of sweet milk, six cups of flour through which I sifted six tea-spoonfuls of baking powder. Beat up well.

I first made a layer cake in three parts, between which I put layers of soft chocolate icing. The second cake I baked in a small round tin, intending to cover it just before it is eaten with sweetened and flavored whipped cream. To the third I added one-half cup of flour, and a cup of raisins. This may be spiced to taste. I think it less work to make the three cakes at one time than to bake at different times and I like the variety.

Another cake which the children think very nice and pretty is made in this way: Separate the whites and yelks of three eggs, saving the white of one for frosting. Add to each, well beaten, two-thirds of a cup of sugar, into which has been worked one tablespoonful of butter. Add to each one-half a cup of milk. Sift for each one-and-three-fourths cup of flour with one-half tea-spoonful of saleratus and one tea-spoonful of cream-of-tartar. Bake in layers, placing first a yellow cake, then a white to which has been added two or three drops of coloring, sufficient to make it a delicate pink. Place the white cake upon the top and frost. It cuts very prettily. The yellow portion should be flavored with lemon, the pink with rose, the white with vanilla. SUSIE E. KENNEDY.

Save the rose leaves. We dry the petals between sheets of unglazed white paper, having never been successful in putting them in jars with salt between the layers. We should be glad of information as to the best way of preserving the leaves for perfume jars and for flavoring extract.

Miscellaneous Advertising.

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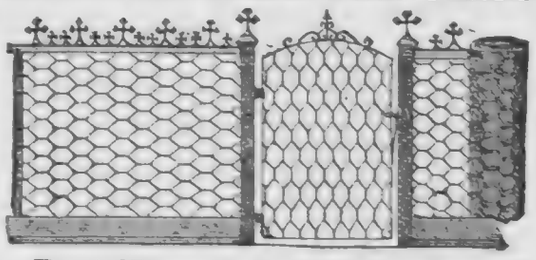

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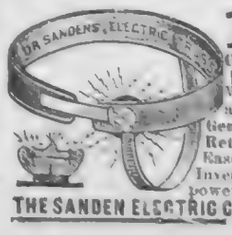

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THE SANDEN ELECTRIC CO. Broadway & 12th St., NEW YORK

News of the Week.

HOME NEWS.

SATURDAY, June 8, 1889.

AS WAS feared, the flood in Conemaugh Valley, Southwestern Pennsylvania, on Friday May 31, was far more disastrous than even the most woeful of the first telegrams announced. A week ago the deaths were estimated at from 200 to 500; now it is known that they cannot be less than 10,000 and may be over 15,000. It was the most terrible disaster that has ever occurred in this country. The population of the desolated valley—about 30 miles long by from a half a mile to over a mile broad, is put at about 50,000, and of these 12,000, mostly women and children, are dead, a greater loss than in any battle of the late war and a vastly greater proportionate loss than in any battle of modern times. Conemaugh Lake, the cause of the disaster, was 3½ miles long by 1¼ broad, and was an artificial formation made, first, by the State to supply the Pennsylvania Canal. After this was bought by the Pennsylvania Railroad, the reservoir was emptied and used as a grass farm for some years, then purchased and refilled by an association of Pittsburg sportsmen who used it for fishing purposes The embankment shutting it in was about 1,000 feet long, 90 feet thick at the base and 30 at the top and 70 feet high, and the water it contained at the time of the flood would have taken 26 hours to pass over Niagara at the ordinary rate, though it passed out of the reservoir in about an hour. It was supplied by the Conemaugh river, and was situated 14 miles above Johnstown, the scene of the greatest disaster. Before the bursting of the dam five inches of rain fell in the surrounding country and swelled all the emptying creeks into torrents, and a high wind along the lake gave impetus to the swollen waters. Twenty-five feet high the rolling, tossing wave swept down the narrow, winding valley carrying everything before it. It first struck and shattered South Forks (2,000 inhabitants); then Mineral Point (800 inhabitants); then Conemaugh (2,500 inhabitants); then Woodvale (2,000 inhabitants); then Johnstown, which with Cambria City and two adjoining towns, contained nearly 30,000 inhabitants. On the waters rushed down the valley laden with wreckage of all kinds and thousands of human beings, dead, or alive awaiting death or rescue. Sheridan (800 inhabitants) shared the fate of the upper towns, while all the farm-houses and farms between the towns contributed horribly to the general ruin. Live stock of all kinds in vast numbers, added to the floatage of the dead and the dying. House tops, trees, all kinds of floating supports were burdened by human beings of all ages, comparatively few of whom were rescued or escaped. The floating houses and other wreckage of the upper valley, on striking the fine, solid stone bridge of the Pennsylvania railroad just below Johnstown, were stopped and piled up 45 feet high over an area of 65 acres. The mass caught fire from over-turned stoves and it is thought that from 1,500 to 2,000 people were cremated. Some were dead, many caught in the ruins and others free but unable to escape except by plunging to death into the flood, which many did. The mass is still smouldering and hundreds of workmen are breaking it up; but it will probably require dynamite or fire to get rid of it and its confined hundreds of festering corpses. The actual number of the dead can never be ascertained. Some have doubtless been carried down along the Alleghany and Ohio rivers even as far as the Mississippi. Hundreds were cremated in the awful jam, buried deep in sand, or washed into inaccessible nooks and crevices, never to be seen by human eye. Pestilence threatens the valley from festering human corpses and animal carcasses. About 3,500 dead bodies have already been buried, and the work goes steadily on. Mud flats represent the sites of the greater portion of all the destroyed towns. Factories and workshops have gone with houses and farm homesteads. The whole section must be rebuilt. The Cambria Iron Works alone lost $7,000,000 in plant and material. Six or seven thousand men are now hard at work hunting for bodies, burying the dead, clearing away wrecks and preparing for rebuilding. While some of the most glorious examples of heroism brightened here and there the gloom of the disaster, numerous cases of selfishness and cruelty added to it. Ghouls, chiefly Hungarians and Italians, at once flocked from the neighboring country to rob the dead. Many of these have been lynched—shot, hanged or driven into the river and drowned. Thieves and idlers have been flocking in from all sides, but they are being arrested or driven out again. None are permitted to stay, except the workers and those who are known to belong to the place. Several regiments of State militia are on the ground, and more are ready to move there at once. Terrible rain-storms and disastrous floods elsewhere would have caused a tremendous sensation throughout the land were it not for the overwhelming nature of the Conemaugh catastrophe. All Virginia east of the Blue Ridge, the Potomac Valley, the mountain region of Eastern Maryland, all middle Pennsylvania, and the lake region of Western New York have grievously suffered from severe rain storms which ravaged villages, mills, railroads, and farms, causing the loss of millions of dollars' worth of property and hundreds of lives. At Williamsport, Pa., 65 people watching the awful floods of the West Branch of the Susquehanna, perished with the bridge on which they stood. There also $5,000,000 worth of timber and lumber was swept away, and enormous damages inflicted on the town and surrounding country. The total of human deaths in that section varies from 100 to 200. The deaths in Maryland and Virginia, singly or in twos and threes, are put at about 100; while those in Western New York are variously estimated at from 25 to 125. The losses in damages or destruction of mills, canals, railroads, bridges, houses, crops, live stock, etc., etc., are undoubtedly high among the millions. May has been the wettest month in the East in the records of the Signal Service ..... A big fire, Thursday, destroyed the lower part of Seattle, Washington Territory, and a good deal of the rest of the town. Estimated loss, $15,000,000.....The National White Lead Trust, an offshoot of the Standard Oil Company, has just purchased the plant of the Collier White Lead Company of St. Louis, for $4,500,000. This enables the oil monopoly to control absolutely the output of white lead in America..... .....The base-ball war goes merrily on. Yesterday morning the records of the two great national organizations were as follows:

LEAGUE.

Clubs.	Won.	Lost.	P. Ct.
Boston	24	7	.774
Philadelphia	21	13	.618
Cleveland	21	14	.611
New York	18	15	.545
Chicago	15	20	.429
Pittsburg	13	19	.405
Indianapolis	10	22	.313
Washington	8	20	.286

AMERICAN ASSOCIATION.

Clubs.	Won.	Lost.	P. Ct.
St. Louis	31	12	.721
Athletic	23	15	.605
Brooklyn	23	17	.575
Baltimore	20	19	.513
Kansas City	21	20	.572
Cincinnati	22	23	.500
Columbus	15	25	.375
Louisville	8	23	.258

After paying the freight over a much longer journey, steel rails from Chattanooga were sold the other day at Cleveland, Ohio, at much lower figures than those at which similar goods made in Ohio or Pennsylvania could be put on the market without a great loss. Northern iron works are ruthlessly cutting down wages on all sides to meet this Southern competition, but in vain it is hoped and feared.....The Michigan Central road was discovered last fall granting to a Chicago firm a rebate of three cents per 100 pounds on eastern shipments of wheat, which gave the firm so much of an advantage over its competitors and of course constituted a case of unjust discrimination under the law. The freight officials of that road will be prosecuted by the Inter-State Commerce Commissioners.....Wyoming Territory is now clamoring for admission as a State. Delegates to a Constitutional Convention to meet on September 2, will be elected on July 8. It has already population, wealth and intelligence enough to entitle it to admission..... The Canadians, the other day, seized the American fishing schooner Mattie Winship for poaching within the three-mile limit, off Cape North. She is to be released, however, on furnishing bonds in the sum of $3,500 to await the decision of the Courts..... There may be trouble in the Behring Sea embroglio. The Canadians say their vessels will hunt seals as usual, and that if they are captured by U. S. naval vessels, British vessels will recapture them. Our Government, however, expresses no alarm..... A convention is to be held at Chipley, Fla. on July 4, to concert measures for the annexation of Northwestern Florida to Alabama..... The memorial monument erected at Chicago by citizens in honor of the policemen who were killed by Anarchist bombs in the Haymarket riot, May 4, 1886, was unveiled the other afternoon..... The Northern Pacific Railway has just purchased the Northwest Central. This is looked upon as leading directly to the opening up of the entire Canadian Northwest. .... Eighteen St. Louis breweries have applied to the State to be organized into one corporation. This is one result of the new anti-trust law, which seems to be forcing rather than breaking up monopolies .....It is estimated at the Treasury Department that there has been a decrease of $8,000,000 in the public debt during the month of May, notwithstanding the disbursement of nearly $12,000,000 during the month on account of pensions. The Treasury surplus is now stated at $54,000,000.. ....A new compulsory education law has been enacted in Illinois, which seems to be generally regarded with favor, save only by the private schools that teach in a foreign language..... The whole country is responding to the cry of distress from the Conemaugh valley with glorious generosity, and several European countries are forwarding liberal contributions and collecting more. Down to Thursday evening the following cash contributions for the Johnstown sufferers were made:

Philadelphia and vicinity	$515,212
New York and vicinity	513,000
Pittsburg	275,000
Through Governor Beaver	210,000
Chicago	90,000
Boston	50,000
Cleveland, O.	42,000
Massachusetts Legislature	30,000
Washington, D. C.	30,000
Columbus, O	23,000
Baltimore, Md	16,000
Bethlehem, Pa.	15,000
Lancaster, Pa.	13,169
Cincinnati, O.	12,000
New Hampshire Legislature	10,000
Scranton, Pa.	9,500
Paris, France	9,000
Wilmington, Del.	6,700
Chester, Pa	6,000
Allentown, Pa.	5,500
Wilkesbarre, Pa.	5,000
Easton, Pa.	4,600
Indianapolis, Ind.	3,500
Chattanooga, Tenn.	2,721
Denver, Col.	2,500
Toledo, O.	2,000
Savannah, Ga.	1,700
Kansas City, Mo.	1,500
Charleston, S. C.	1,500
Chambersburg, Pa.	1,000
Carlisle, Pa.	1,000
Total..	$1,908,112

The Massachusetts grant is said to be unconstitutional and therefore unavailable. Nearly all the above sums are the results of a spontaneous movement. Churches, theaters, etc., etc., are preparing to contribute liberally, and the Pennsylvania legislature, and perhaps those of other States will probably make special appropriations for the sufferers. The money loss throughout the valley is estimated at all the way from $35,000,000 to $60,000,000, and as there was no insurance against water, the loss is a total one..... It is charged that execution by electricity is against the Constitution which forbids "cruel and unusual punishment." The Supreme Court in this State having decided that it is constitutional, an appeal is to be taken in the case of William Kemmler now awaiting execution in Auburn Prison.....A federation of the associations of locomotive engineers, railway brakemen, and firemen has just been effected in Chicago. Conductors and other railroad employées are expected to join ere long.....Negotiations are now being carried on at the Rosebud Agency, South Dakota, between the Sioux chiefs and the U. S. Commissioners with regard to the purchase of those 11,000,000 acres of the Sioux reservation by the General Government for the purpose of speedy settlement. The reports that squatters are occupying the country are officially contradicted. Numbers are, no doubt, secretly going through the territory to find out the best locations so as to be able to seize upon them at once when the country is thrown open to settlement, but no considerable number will "squat" there..... From the first opening of spring there has hardly been a working day which has not witnessed the inauguration of one or more strikes among workmen in various parts of the country. These have been most numerous in the strongly "protected" industries, and in nearly all cases they have been due to attempts to cut down wages and consequent resistance by employées. Machinery in this country now does the work of 500,000,000 men, we are told, and with the large natural increase in our population and the enormous immigration it is hardly surprising that there should be slackness in human employment, especially as the annual increase in machine-power greatly transcends the increase in hand power from all causes..... Both houses of the Connecticut legislature have passed a bill forbidding railroads to issue free passes to members of the legislature, and ordering the Controller of the State to furnish railroad tickets to every member of the legislature who may make him an assignment of his mileage.....The Massachusetts Senate has passed a bill authorizing the Bell Telephone Company to add $10,000,000 to its capital..... Judge Gray, of the U. S. Supreme Court and Miss Jennie Mathews, daughtee of the late Stanley Mathews, were married at Washington Tuesday afternoon..... The Illinois Legislature has passed a bill designed to restrict the circulation in that State of "flash" papers. It makes it unlawful to sell, lend, or give away or otherwise distribute to any minor any book, magazine, pamphlet or newspaper devoted to the publication of criminal news, police reports, or accounts of criminal deeds; or pictures and stories of deeds of bloodshed, lust or crime..... Senator Brown, of Georgia, is seriously ill. In case of death, Governor Gordon is sure to succeed him..... Jacksonville, Fla., is again unfortunate——60 buildings were burned Wednesday morning; loss about $200,000.. Governer Hill, of New York, has vetoed the Vedder Bill taxing sales of intoxicants, and the Crosby High License bill. Great discontent among those who want a legal check on indiscriminate rum-selling.....The Massachusetts House has rejected a bill for the abolition of the poll tax as a prerequisite to voting..... Three arrests have been made in Chicago in connection with the murder of Cronin. It is supposed that the actual assassins were imported from other sections, but the men arrested, and others to be arrested had a guilty knowledge of the crime, or aided in one way or another in causing it. One of the "clans" or branches of the Clan-na-gael, a "physical-force" secret society founded in 1872 as the successor of the Fenian Brotherhood, appears to have passed sentence of death on the man, ostensibly on the ground that he was a British spy, but really because he persisted in charging some of the leaders with the misappropriation of $84,000 or so. The society, of course, indignantly denies any connection with the murder.....

Our Patients Speak.

McCONNELSVILLE, O., September 14, 1886.
"With the largest gratitude I remain truly yours." MRS. F. A. DAVIS.

CHICAGO, Ill., May 29, 1887.
"I am talking Compound Oxygen to everybody." M. G. KIMMEL.

NEW CASTLE, MD. July 3. 1888.
Compound Oxygen certainly was the means of giving me a new start to life and health. MRS. J. A. HEICHERT.

PORTSMOUTH, O., June 8. 1887.
"I hope you feel greatly rejoiced over the worth of the Compound Oxygen. TIMOTHY CALVER.

ASHLAND, O., May, 29, 1897.
"I am still improving in every respect." R. L. HALSTED.

We publish a brochure of 200 pages, regarding the effects of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, June 8, 1889.

IN England, the Parnellite trial still drags uninterestingly along. Nearly all interest ceased with the proof of the forgery of the letters on which the charges of the Times were mainly based, and since Parnell himself left the witness-stand there has been little public interest in the matter. The court, which has evidently been all along against the accused, as its organization originally indicated, appears determined to drag the case out till the public shall have forgotten the Pigott fiasco. Gladstone is "stumping" the country now in favor of Home Rule, and says he is confident of ultimate success. There's a good deal of doubt, however, as to the scope of his Home Rule at this moment. Labor troubles are prevalent in every industrial center. Continental countries are competing closely with English manufactures in the markets of the world, and while the manufacturers are unwilling to cut down their own large profits in the least, they insist that the business situation demands the cutting down of their workmen's starvation wages from 10 to 25 per cent. Hence strikes, lockouts, etc., etc., etc.! .....Last Wednesday the Duke of Portland's three-year-old colt, Donovan, bore off the "blue ribbon of the turf" by winning the Derby race of Epsom, 12 miles from London, in 2.44 2-5. He was the favorite since February. He had already won $165,000 as a two-year-old, so that he has now cleared about $200,000 in winnings alone, and he stands to win a lot more. The Duke is "a very good young man" who has just contracted a marriage engagement with one of England's most beautiful daughters. He is also one of the richest men in the country..... ..... In France the great International Exposition still holds the field. All other movements are subordinated to its success. Political agitation is temporarily silent and even Gallic vaporings for "revenge" are for the moment hushed, lest the number of visitors should be diminished, for every one of them must leave behind a rich profit to French and especially Parisian hotel and shop keepers, etc., etc., and no nation on the globe is more covetous of the Almighty Dollar than the French. Hitherto the show has been a brilliant success. The daily visitors have been fully twice as many as at any previous exhibition of the kind, and the receipts have been correspondingly large. The present session of the Chamber of Deputies will end in a few days, and the general election will not take place until after the close of the show, in October. Then Boulangerism will probably once more become rampant, and the various other factions will enter into fierce and vociferous conflict..... Of late years the Argentine Republic, South America, has been making great efforts to induce immigration by offering free homesteads and free or assisted passages to all new-comers. Last year fully 400,000 immigrants responded to these tempting offers and now the Republic is forced to put a check on the inrush, as all the eligible public land is being rapidly taken up and there is a great amount of compulsory idleness in the country. The immigrants have been chiefly from Italy, but within the last few years Great Britain, France and Ireland have contributed liberally.....The Venezuela government, too, offers to pay the expenses of laborers going from Italy to that country for the purpose of cultivating the ramie plant. For each adult laborer it will pay $23.08, and $11.54 for each minor laborer.....Following the example of the anti-dressed beef movement in this country, the butchers of Paris are asking the French government to stop imports of dressed beef and mutton from Germany and Belgium; and the French Chamber of Deputies has voted to legislate on the matter at once.....

Miscellaneous Advertising.

SEND 10 Cts. in P. O stamps to **E. & O. WARD,** Produce Commission Merchants, for circular about **Shipping Produce** Also recipe for **Preserving Eggs.** Established 1845.
No. 279 Washington St., New York City.

CALF **Weaners** and **Sucking Cow Muzzles.** The best in the world. Send for Circular. **H. C. RICE, Farmington, Conn.**

THE ECLIPSE
VINE & PLANT SPRINKLER
Has no equal for effectually destroying the **Potato Bugs** and other insects. It is a Combination Sprinkler for WATER or PLASTER, and works equally well for each One man can carry two at a time, and two cans filled will cover 500 hills thoroughly and effectually. AGENTS WANTED in EVERY Town. Sample shipped to any address for $1.50. **F. A TYLER.**
123 W. Dominick St., Rome, N. Y.

ITHACA HORSE RAKE
Hand-Dump and Self-Dump Patterns.
OVER 100,000 IN USE.
ITHACA PORTABLE ENGINE
Economical, Strong, and Safe.
ITHACA BROADCAST SOWER
COMPLETE in itself, or as Attachment to Rake.
SUPERIOR GOODS at Low Prices.
AGENTS WANTED in unoccupied territory. Address the Manufacturers. (Mention this paper.)
WILLIAMS BROTHERS,
ITHACA, NEW YORK.

AGRICULTURAL NEWS.

SATURDAY, June 8, 1889.

THE Chemung County, N. Y., Agricultural Society will hold a fair at Elmira on the State fair grounds, June 18 to 21. George B. Smith, Horseheads, secretary..... ..An inter-State fair is to be held near Elmira, N. Y. September 17 to 27, $100,000 have already been pledged; the railroads will give reduced rates. Geo. M. Robinson, secretary, Elmira. .....The spring meeting of the Pennsylvania State Board of Agriculture will be held at Brookville, Jefferson County, June 12 and 13. Excursion rates on Pennsylvania railroad; particulars of T. J. Edge, secretary, Harrisburg .. ....The Columbus, O., Horticultural Society will hold a strawberry meeting on the University grounds, Columbus, June 16, at 2.30. The literary exercises will consist of papers in answer to the question: "What is the strawberry?" from the epicures', entomologists' and nurserymen's stand-points.. One county in Missouri has sold 32 car-loads of corn-cobs during the last year, realizing $5,600. They were sold to a pipe factory in St. Louis.....Professor Sanborn refuses to resign from the office of Dean of the Agricultural Department of the Missouri State University.....Missouri is making great advances in horticulture. It has at least 15 county horticultural societies, holding mostly monthly meetings, besides the State and various other associations meeting with more or less frequency.....At the National Conference of the Farmers' Alliance, a resolution was adopted recommending farmers not to sell their cotton-seed unless a price could be obtained equal to or greater than its value as a fertilizer; this is said to be about 20 cents per bushel..... The price of jute bagging fell from 13½, to 8½ cents as soon as the cotton-growers resolved not to use it..... The first auction sale of California cherries in Chicago took place May 13, when 53 boxes of Black Tartarians sold for 23¼ and 32½ cents per pound... ... .A California farmer started for town with a load of hay, and also took along a loaded pipe to beguile the journey. The hay and wagon went up in smoke ..... Nearly $50,000 are expended annually for dairy schools in Denmark, and the exports of butter have increased over 600 per cent. within the last 20 years.....In spite of repeated protests, the American Fat Stock Show has continued to allow butterine to be exhibited at its shows. The result of this has been that a corporation with a capital of $100,000, and W. D. Hoard, D. W. Curtis, John Boyd, S. J. Harrison, H. B. Gurler and H. D. Sherman as incorporators, has been organized as a National Dairy Fair Association..... The production and consumption of sugar in India have increased greatly in the past few years. From being an exporter, the country has changed into an importer, notwithstanding the largely increased production of the domestic article. The consumption per head of population is close on 26 pounds, against a consumption in France of 27 pounds, 19 pounds in Germany, nine pounds in Austria, 70 pounds in the United Kingdom and 60 pounds in the United States. With improved methods of sugar production, it is claimed, India not only should supply her own entire population, but should become a large exporter. Her soil, climate and other conditions, it is claimed, fit her for being the greatest sugar-producing country of the world..... A vegetable product that can scarcely be distinguished from wool, is said to have been found in Arkansas. It is called "wool-cotton," and the seed came from the Patent Office at Washington. When woven, the texture resembles wool cloth in every particular.....The 60,000-bushel elevator of the Northern Pacific Railroad at Davenport, D. T., was destroyed by fire..... The wheat harvest began in Southern Missouri the last week in May..... Several years ago, a company was formed in England for the purpose of putting up a meat-curing establishment at Sherman, Wy. T., depending upon the pure air for preserving the meat so that it could be shipped to England without refrigerators. Old settlers tried to dissuade the manager, but were scornfully told that "Americans were not up to English science." Many thousands of dollars were expended, and 2,000 sheep were slaughtered and hung up to be cured. After beginning to spoil, they were shipped and disposed of for what they would bring. The last of the machinery has just been taken away, and nothing remains but a row of posts for monuments of their folly..... At the International Fair held at Buffalo last September, two cows from the Lakeside herd at Syracuse won first and second prizes for the greatest amount of butter made in three consecutive days at that show. The judges' award was protested and the board of managers have listened to all the arguments, but have sustained the report, and paid the awards in full..... ..... The American Seed Trade Association meet at Washington, June 11. Reduced rates have been secured from railroads and hotels. This association have secured from the express companies ot the U. S. lower rates on packages of seeds and bulbs weighing less than four pounds. The new rates went into effect June 1 .... Several seedsmen have failed within the past few weeks, and the question is raised by a trade paper as to whether there are too many seedsmen, or whether the public have become tired of being humbugged.....The citizens of Stillwater, Minn., are considering the feasibility of donating 10 acres of land to James Vick & Co., for a flower garden..... A number of Nebraska farmers are experimenting in growing hemp.....The new crop teas were received in New York June 4, being 26 days from Japan.....The State Board of Health of Massachusetts last month examined 522 articles of food, of which 205 were found to be adulterated. All the lard, more than half the milk, and one-third the samples of sirup, both maple and cane, and common molasses were pronounced impure... The Eighth Annual meeting of the American South Down Association was held at Springfield, Ill. The Association is in good condition financially, and admitted several new members, among them Vice-president Levi P. Morton. The third volume of the Record is ready for distribution. The officers for the ensuing year are: J. H. Potts, Jacksonville, Ill., president; S. E. Prather, Springfield, Ill., secretary; D. W. Smith, Bates, Ill., treasurer; C. M. Clay, of Kentucky, John Jackson, of Canada and Levi P. Morton, of New York were elected directors for three years. The Association appointed a committee to consider the advisability of holding an exhibition during the coming autumn. The price of the Record to members is $2.50 per volume, to non-members, $5 00 ...The Grand Jury of Orange county, N. Y., have just indicted Alfred Gilman, the principal heir, and the administrator of the million-dollar estate of his father, W. W. Gilman, of New York, for selling oleomargarine as butter. The prosecution was instituted by the New York State Dairy Commission. The penalty for the misdemeanor is fine or imprisonment, or both, and in addition a fixed penalty of $500, recoverable by civil suit.....

Market Notes.

ONE of our correspondents in writing of the low prices received by farmers for their products, raised the question as to whether city consumers obtained their provisions at correspondingly low figures. A glance at the prices of some of the necessaries of life in this city may prove interesting in comparison with prices in other places. With the exception of rent, a family can be maintained in this city about as cheaply as anywhere in the country. Prices of all supplies vary greatly in different parts of the city. In the more aristocratic portions, rents are much higher, and customers are more exacting in their requirements, consequently shopkeepers must charge higher prices. The popular market of the lower part of the city is Washington Market, and the adjacent streets. Here may be bought any kind of fish, flesh or fowl; fruits and vegetables; butter, cheese and eggs.

A good sirloin steak may be bought here for 12 to 16 cents per pound, which will cost uptown from 20 to 30. A good rib roast will cost about the same. A stewing piece free from bone may be had for about six cents. Nice veal cutlets cost, down-town, 10 to 14 cents; while a leg of mutton may be had for about 10 to 12 cents; chops 14 to 16 cents. A whole ham is sold for about 10 to 12 cents, and boneless ham from 12 to 14 cents per pound. Corned beef costs from six to 12 cents per pound. You can buy dressed fowls for 10 to 12 cents per pound, less than they are quoted alive, at wholesale. Turkeys may be had for 10 to 12 cents. Odds and ends, such as soup-bones, calves' heads and the like, are very cheap. Fish of all kinds are in market, though shad are nearly out of season. Roe shad cost 40 to 50 cents each, while "buck" shad could be had for half that figure. Cod steaks cost a shilling per pound. Porgies are five to six cents; dressed bullheads 10 cents.

VEGETABLES have been noticed before in this column, but the prices vary so much with the season and the supply, that it is almost impossible to keep any track of them. The supply is very large, and prices are very much in the buyers' favor. The quality is generally good. Strawberries attract more attention now than any other fruit. Fine Sharpless and other varieties are selling for 10 cents per quart or "three for a quarter." They are large and nice, but the quality is not of the best. The near-by gardeners say that they are raising too much truck. This may be bad for them, but it is good for the buyers.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, June 8, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	8 7-16	8 11-16	.....
Strict Ordinary	8⅞	9⅛	....
Good Ordinary	9 13-16	10 1-16	....
Strict Good Ordinary	10¼	10⅜	....
Low Middling	10¾	11	....
Strict Low Middling	11	11¼	.....
Middling	11 3-16	11 7-16	.....
Good Middling	11 11-16	11 15-16	.....
Strict Good Middling	11 15-16	12 3-16	.....
Middling Fair	12⅜	12⅝	.....
Fair	13	13¼	.....

STAINED.

Good Ordinary	8 5-16	Low Middling	9 ⅞
Strict Good Ord	8 15-16	Middling	10 11-16

WOOL.—Spring Texas, 17@25c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 53@55c; Delaine, 36½c; Indiana, 30c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c.

POULTRY.—Chickens, spring, per lb, 20@25c. LIVE FOWLS, near-by, per ℔, 12@13c; fowls, Western, per ℔ 12@12½c; roosters, per ℔, 7c; turkeys, per ℔ 10@11c; ducks, western, per pair, 60@0.80c; geese, western, per pair, $1 00@$1 25.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per ℔, 12@—c; do do, common to fair, 8@11c; do, iced, dry picked, choice, 8@10c. Fowls, western, do, choice, 13@13½c; do, nearby, do do 13½@14c; Chicks and Fowls, mixed, 12@14c; do do do, scalded 11@12c. Squabs, white, per doz, $3 00@$3 25 do, dark, do, $1 75@$2 00. Chickens, Philadelphia, dry picked, 20@32c, do Jersey, do, choice, 20@32c; do nearby, do, good 20@25c; do Western, do do, 18@22c; do do, iced, good to choice 16@18c. Ducks, spring, choice, per lb, 20@27c; do do, good, 16@18; do Western, good, 12@18c. Geese, Western, good, 8@10c.

GAME.—Plover, per doz., $0 75@$2 00; Snipe per doz. $2 00@$2 50.

HOPS.—State, new, best, 22@23c; do, prime, 20@22c; do, low grades, 13@16c; do do, 1887, 10@11 do do do California, common to prime, 14@20c; choice, 20@22c.

HAY AND STRAW.—Choice Timothy, 90@$—; do good do, 75@80c; do medium, 65@70c; shipping, 60@70c; do, Clover, mixed, 55@70c. Straw.—No. 1, rye, 70@75c; short do 50@55; oat, 40@45c.

BEANS.—Marrows, new, $2 00@$—; new mediums choice, $1 85@—; pea, $1 85@—; red kidney, $2 30@— white kidneys, choice, 2 35@2 40; foreign, mediums, 1 35@1 55; California Lima, $3 15@$3 30; green peas, $1 10@—.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@—c, and farmers' grades at 6@7½c. Pecans, 5@7½c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Bermuda, per bbl, $3 50@$6 50; Maine do, $1 50@$2 00; State do, $1 25@$1 90; Florida, do, $5 00@$6 00; Savannah, do, $5 00@$6 00. Sweets do, $3 50@4 50; Cab., new, $0 50@$1 00. Peas, per bbl, $1 25@$2 50; Squash, do, $0 50@$0 75. Beets, do, $0 50@$1 50; Asparagus, per doz., $0 50@$1 50; Tomatoes, per crate, $1 00@$2 00. ONIONS—Bermuda, per crate, 60c; New Orleans, per bbl $2 00; Beans, string, do, $0 50@$2 00; Cucumbers, per crate, $0 50@$4 00; Radishes, per bbl., 50c@$1 00. Peas, per basket, $0 75@$1 50.

FRUITS.—FRESH.—Apples, Baldwin, per bbl, $2 00@$4 00; Common, $0 75@$1 00; Russet, $4 00@$4 00. Spy, $3 00@4 00. Strawberries, per qt 3@13c; Cranberries—Jersey, fine, box, $1 00; do common, 50@75c. Oranges—Florida, best, box, $5 00@$6 50; do, good lots, $3 00@$4 50. Lemons, $2 75@$4 00. Cherries, per lb, 5@12c. Huckleberries, per qt, 8@10c; Gooseberries, per qt, 5@7.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5@6c; do new, common to prime, 3¾@4¼c; sliced, new, 2¾@3¾c; quarters, 2½@3¼c; chopped, 1¼@1½c; cores and skins, 1@—c. Cherries, new, 10@15c. Raspberries, new, 19@20c. Blackberries, 4@4½c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 10@14c; do do, unpeeled, 5@6c; North Carolina sun-dried, peeled, 7@9c. plums, 5@6c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 13 25@13 50, short clear, $14 00@16 00; Extra Prime mess, $12 50@$— prime do, $12@$12 25 and family mess, $13 25@14 00. BEEF—India Mess. in tierces, $12@12 50. Extra Mess, in barrels, $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $7 50@8 00; Family at $11—@$14. HAMS—$13 50@$14 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 6½@—c; Pickled Hams, 11¾c; pickled Shoulders, 6¼@6¾c; Smoked shoulders 6½c; do Hams, 12¼@12½c. Dressed Hogs.—City, heavy to light, 6@6¾c. Pigs, 6¾c. LARD.—City steam, $6 50; June, $6 99; July, $7 03, August, $7 07; September, $7 12; October, $7 15; South America, 7.9c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes quiet; Early Rose, 30@40c per bush.; Burbanks and White Stars, 38@43c; Hebron, choice, 35@40; New Potatoes, Florida, per bbl, $2 00@$5 00. Provisions were steady. BEEF.—City family, per bbl, $9 00@$9 50; do, packets, $8@8 50; smoked beef, 10@10½c; beef hams, $13 PORK.—Mess, $14 00@$—; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@13c; do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6¼@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6¾@7.

CHICAGO.—MESS PORK.—$11 70@11 75 LARD.—$6 70@— per 100 lbs; Short Rib sides (loose), $5 85; dry salted shoulders, boxed, $5 25; short clear sides, boxed, $6 12.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 18@18½; Elgin, best, 18@—; Western, best 17@17½; do prime, 15½@16½; do good, 14½@15; do poor, 13@13½ State, Dairy half-firkins, tubs, best, 17@18c; do do prime 16@16½; do do fine, 14½@15; Welsh tubs, fine, 16@16½; do do, good, 14@15; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western imitation Creamery, best, 14@15; do fine, 12@13; Western dairy, fine, 12@13; do fair, 11@—c; do poor, 9@10c; do factory, fresh, best, 10½@12, do prime, 10@—; do good, 9@9½; do poor, 8@—c.

CHEESE.—State factory, fancy, 8¾@—c; do do fine, —@—c; do do, prime, 8¼@8½; do do, fair to good, 7¼@7¾c; Ohio, flat, prime, 7@8c; do good, —@—c; do, good, —@—; Skims, light, 5½@6c; do medium, 2@4; do full, 1@1¼c.

EGGS.—Near-by, fresh, 14½@14¾c; Canadian, 14½c Southern, 14@14½c; Western, best, 14¼@14½c. Duck 14@16c; Goose, 20¼@25c.

PHILADELPHIA.—BUTTER dull. Pennsylvania creamery extra, at 17@18c; Western creamery, extra at 16½@17c. B. C. and N. Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were firm.; Pennsylvania firsts 16@—c; Western firsts. 15½@—c Cheese dull—steady; demand fair; New York full cream, at 9@9¼c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally weak; Elgin creamery, 15½@16½c; choice Western, 12½@15c. choice dairy, 12@14c; common to fair, 8@10c. Eggs firm at 12@12½c.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, June 8, 1889.

BEEVES.—Dressed Beef in fairly good demand at 6¼@7¼c per lb, with choice sides reaching 7½c.

MILCH COWS.—Receipts thus far for the week 142 head. Market unchanged at $30 to $45 for Common to Good Cows, with a few retailed at $50@55 per head.

CALVES.—Demand active and prices fully maintained. Buttermilk Calves sold at 3¼@3½c per lb; mixed lots of Calves at 4@4½c; Veals at 4¾@6c. Dressed Calves firm and in good demand at 4½@5½c for Dressed Buttermilks; 5@7½c for country Dressed Veals; 6½@8½c for City Dressed; Choice and Fancy selling in a small way at 9@9½c.

SHEEP AND LAMBS.—With more liberal receipts prices fell off 10@15c on Sheep, and from 75c to $1 per 100 lbs on Lambs. Common to Choice Sheep sold at $4 37½@$5 25 per 100 lbs; Southern Lambs at 7¾@8½c per lb, including a deckload of Marylands at the outside figure. A little bunch af State Lambs brought 8c. and 9 Jerseys sold at 9c. Dressed Mutton in good demand, but weak and lower, selling at 9@10c; Dressed Lambs 1c lower, and quoted at 11@13c. Sales—Texas Sheep, 71 lbs. scant, at $4 50 per 100 lbs; Western do, 70 lbs. at $4 65; Ohio do, 68½ lbs, at $4 62½; Kentucky do, 107 lbs at $4 65; Kentucky Lambs, 62 lbs, at 7¾c. per lb; State Sheep, 105 lbs, at 5c; Bucks, 83 lbs, at 3c Jersey Ewes, 126 lbs, at 5c; Jersey Lambs, 58 lbs. at 9c Kentucky Lambs, 70 lbs. at 8c; State do, 66 lbs, at 8c; Vermont Sheep and Lambs mixed (Common), 54½ lbs. at 4½c; Kentucky Lambs, 66 lbs scant, at 8½c per lb.

HOGS.—Nominally firm at $4 75@$5 20 per 100 lbs. Country Dressed in light supply and unchanged, with Medium selling at 6¾@7c, and Light at 7½@8c.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING JUNE 8, 1889.

P. H. P.—S. C.—D. N.—R. S. A.—C. K—J. R. H.—R. L. K.—C. C.—T. T. L.—W. B. P.—E. T. I.—D. N. H.—C. H. B.—T. H. H.—S. M. B.—T. B. T.—E. A. F.—W. F. B.—O. H.—T. E. H.—J. H. P.—J. J. M.—A. B. T.—L. C. W.—T. A. P.—A. M. S.—J. M.—H. C. H.—G. L. W.—A. McD.—H. F.—F. S.—E. J. M.—J. R. R.—J. B.—H. H. K. D. C. L.—D. D. M.—R. R.—R. L. K.—J. E. P.—L. T. P.—L. D. S—V. A S.—R. A. S.—J. F. F.—R. H. P.

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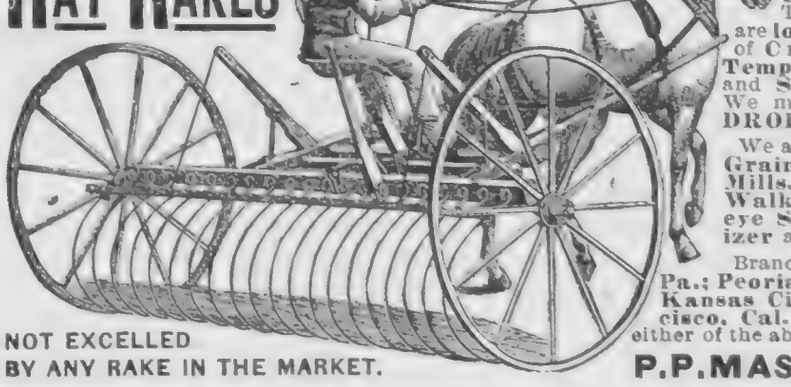

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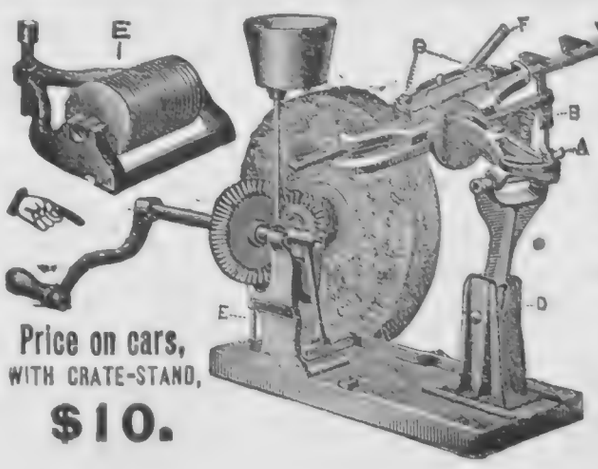

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A WARNING TO INNOCENTS.

JAS. W. DREW.

DURING the spring vacation of the present year, the writer of this, in company with several other students of Cornell University, took a trip to New York City. It was my first visit to the city, and, of course, there were many new and interesting things to be seen. Two of us who were particularly interested in agricultural affairs separated ourselves from the others, and, besides visiting the main points of interest which all must see who visit New York, we spent some time in visiting milking stables, sales stables, veterinary colleges and other similar places. In finding these places we were materially aided by the kindness of the Editors of the RURAL, the Assistant Dairy Commissioner and one of his agents. If there are any RURAL readers who drink milk or eat beef that are produced in the stables above alluded to, they ought to know just what we saw during the forenoon that we spent in hunting up and looking through 16 of these dens of filth on Long Island; but I defer an account of these for some future time. My purpose in writing this is to tell, exactly as it happened, how I was "taken in" by a sharper, and how, if I had not read just how such scoundrels fleece innocents, I might have easily parted with what money I had with me.

My friend spent the second night of our visit with friends up town and agreed to meet me at the hotel at an early hour the following morning. At the appointed time he came, but had not yet eaten breakfast, while I had; so he went to a restaurant, agreeing to meet me again in 20 minutes. In the meantime I sauntered about the street watching the sights and studying the people who were going to their work. While thus occupied, I was asked by an honest-looking stranger if the station about a block down the street was the Bridge station? I replied that it was, and then remembering how, the day previous, my friend and I had made the mistake of climbing up on the wrong side, I walked along with him and put him right. Just after parting with him and turning to go back to the hotel, I was accosted by a man who held out his hand, and said: "Isn't this Mr. Drew from Winona?" My first impulse was either to turn on my heel or call a policeman; then, on second thought, I remembered that I had registered at the hotel as from Ithaca, and not from Winona and this must be some one who had known me in the latter place.

I told him that I did not recognize him Then he said his name was Cummings and that he was born and brought up in Winona, and that his father once ran a foundry there, naming the street. I remembered hearing of the family, and knew that there were several boys, none of whom I had known personally. I asked him how he recognized me, and he answered that he had known me by sight all his life—that he used to see me going to and from school in Winona. He then said that he had not visited Winona for five years, and began asking questions about many of the people of the place. He showed an intimate knowledge of the city and of events which had happened several years ago; but he knew almost nothing of what had occurred lately. He said he was traveling for a firm in Philadelphia and would have to start for that city in less than an hour. In the meantime he wanted me to go with him about a block to a ticket office where he had left his grip, as he wanted to show me a few samples of a new kind of cloth which was being manufactured by the firm he was representing. I told him of my engagement at the hotel, and he said that we would be back in time for me to meet it, so we walked on, talking all the time about Winona people. So busy were we that we must have walked at least five or six blocks when I suddenly remembered my engagement, and said we must have passed the place he had spoken of. He looked up at the building we were passing and said:

"Sure enough we have been so long talking that we have come a long ways out of our way." We then turned about and started back. Just then we met a villainous-looking fellow who spoke to my companion and they had a few words together which I did not hear distinctly. Then we went on. I was in a hurry to get back to the hotel, but my companion evidently was in no haste. He still plied me with questions about the people of Winona and particularly about an old schoolmate of his, whom we will call Charlie Brown.

We had gone but a short distance from the place where we had met the villainous-looking fellow referrrd to, when my companion stopped at a stand on the corner, and, asking if I smoked, bought some cigars. As I answered that I did not, he ordered a glass of lemonade for me, while he lighted a cigar. When we turned from the stand I noticed that we were not going in the same direction as before, but knowing how easily a person becomes confused in regard to the points of the compass, I said nothing but went along with my companion, still thinking and talking about the people we both had known in Winona. We soon came to the "ticket-office," and my companion, after taking a look through the partially open door, pushed it open and walked in. There was a young man there who gave Mr. Cummings his grip when he asked for it, and we sat down at a table together and began looking over the samples of cloth which the grip contained.

While we were thus engaged and while Mr. Cummings was asking me to pick out a sample piece of cloth which would, in my opinion, make a good suit of clothes for the aforesaid Charlie Brown, a man came into the room and asked the young man at the desk for a ticket to Joplin, Mo. He was a fat, good-natured-looking man of about 40, and wore a good suit of clothes, a large Western hat, a pair of blue glasses or goggles and a "hickory" shirt. The young man took him to a map which hung on the wall and showed him what roads he would pass over and told him the price of a ticket to Joplin. The Joplin man then asked him if a ticket for a "nigger" would cost the same. After some conversation about a second-class ticket for a "nigger," the young man said he would step out and find the boss who had gone out a few minutes before. While he was gone the Westerner sat down on the opposite side of the table from us, and fell into conversation with Mr. Cummings.

"Say," said he, "I don't want to act green nor to have you laugh at me; but a funny thing happened to me this mornin'and I don't see through it exactly. I went into a dime museum, and a feller in there come a little trick on me with some cards and before I got away I lost 100 toadskins."

"Toadskins!" said Mr. Cummings. "what do you mean by that term?"

"Don't you know what toadskins is?" said the Westerner, pulling out a roll of bills; "These here are toadskins;" and pulling out a gold piece, "This here is a yaller-jacket. That's what we call 'em in Missoury."

"You are very careless to carry money in that way," said Mr. Cummings. "You should buy a draft, then there would be no danger of any one stealing it from you."

"Well, maybe I had better," said the stranger. "I am a sort of greenhand in this business. I brought a lot of cattle from Missoury, and then I went over into Connecticut to visit a sister that I hadn't seen since the war, when she run off with a Yankee soldier. There was a kind of coolness between her and the old man after she ran away, but when he died a while ago he left her a lot of toadskins, and I have been over to carry 'em to her. But I was goin' to tell you how the feller got my money. He had four cards with pictures of base-ball men on one side of 'em; three was blue and one was red He handled them cards most awful slick and I thought I could see where the red was: but when I bet I lost 'most every time; but I grabbed the cards when I came away and I've got 'em here."

Hereupon he pulled out a bandanna handkerchief and unwrapped the four cards he had been speaking of.

"Now," said he, addressing Mr. Cummings, "I can't handle these cards as slick as that feller did; but I'll bet you can't tell which the red one is," and he laid them down one at a time on the table, purposely allowing us, as he did so, to see which was the red one. Mr. Cummings bet the cigars with him, and of course won. Just at this juncture the fact that I was in a den of thieves flashed across my mind, and I arose from the table and started for the door. I more than half expected to find it locked, and was never before in a place where I really thought I needed a revolver, but I was happily disappointed, and as I stood in the doorway I told Mr. Cummings (?) who was of course trying to get me to come back, that if he wanted anything more of me he could come around to the hotel at noon and I wouldn't be there.

Right at this point I made a great mistake. I should have made a note of the street and number; but I was so glad to get out into free air again, and so afraid that my friend would tire of waiting for me and be gone, that I thought only of reaching the hotel as soon as possible.

As I walked along, I tried to study out how this man who called himself Cummings and who had such an intimate knowledge of Winona and its people, had found out that I came from it. It was not till after I had retired that night that I remembered that during my walk early that morning with the man who wanted to find the Bridge station, I learned that he was from a place near Winona, and had told him that I was from Winona and had always attended school there.

Of course, this Cummings (?) had followed me from the hotel where he had learned my name from the register and had been very fortunate in hearing me tell the stranger that I was from Winona. That he had once lived in Winona I have not the slightest doubt, for he knew all about the early history of the city and its people; but whether his name was Cummings or Smith is a matter of question. He certainly is a confidence man who ought to be handed over to the police, and it is a matter of regret to me that I could not have helped to do it.

R. N.-Y. This is a favorite game of confidence men and one that in a majority of cases succeeds. The first man that you talked with was undoubtedly a friend of "Cummings." It was a simple matter for the two rogues to communicate with each other before "Cummings" introduced himself to you.

THE BUYERS' UNION, a swindling concern, one branch of which was broken up in this city the other day, still has flourishing branches in Philadelphia, Cincinnati and Chicago, and perhaps elsewhere also. There is no doubt that several other concerns of the same character are swindling the public to a very profitable extent in various parts of the country, and a caution against one should serve as a warning against all. The "Union" proposed to give subscribers the privilege, for 10 years, of buying books at wholesale prices. It pretended to have $50,000 paid-up capital besides property in New York, Chicago and Philadelphia, consisting of an opera house and five stores, besides a farm in Michigan. All these claims turn out to have been false. A fellow called Ernest G. Loomis, the "promoter" of the scheme, is said to have obtained $1,000 each from 80 to 100 subscribers who were anxious to represent the Union in their respective States, and the officers in this city invested from $1,000 to $5,000 each in the business, all of which found its way into the pockets of Loomis. In addition to these large gains, the concern secured a number of small ones from ordinary subscribers who were desirous of obtaining the cheap rates on books promised by the Union. As in other concerns of the kind, each subscriber sent in from $5 to $10 as a kind of initiation fee, entitling him to the benefits of the organization.

In all such schemes, at the outset, the books ordered are sent apparently as per agreement; but in reality the concern makes a clear profit on every order. So long as subscriptions come steadily in, an appearance of doing a square business is industriouly kept up; but when "business" becomes dull or that particular section has been worked "for all it is worth," the schemers usually pocket all the money that comes to them, failing to send any goods in return, and after a short time, the concern collapses. Sometimes the manager or general-factotum disappears with the "boodle;" but frequently he remains and poses as an unfortunate philanthropist whose ambition to benefit the "dear" but inappreciative public has led him to ruin his own fortune. In such cases, however, the fellow soon manages to start again in the same or some other business with much larger resources. Where did they come from? Pshaw! Can't you guess?

Miscellaneous Advertising.

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34 Park Row, N. Y.

CATALOGUES, ETC., RECEIVED.

PHOSPHATE MEAL.—Some few weeks ago the R. N.-Y. called attention to some remarks made by Ex-Mayor Hewitt of this city regarding the basic process of making steel. The introduction of this process into this country will have a great influence upon the agriculture of the South and East because it will cause the production, in vast quantities, of a new phosphatic fertilizer. This Thomas basic slag or Thomas scoria, is already being sent here from Germany. The South Carolina Experiment Station conceived the idea of testing it by the side of "floats" or finely ground S C. rock phosphate. In Bulletin No. 5 we find an account of an experiment with these two fertilizers on oats. The importer who furnished the new fertilizer thus speaks of it:

"It is obtained from the so-called Peine-Thomas scoria through the dephosphorization of pig-iron, after the patented method of Sidney Gilchrist Thomas. The dephosphorization of the iron takes place by melting the iron with lime in a current of air, a proceeding by which pig-iron, rich in phosphorus, is converted into steel, free from phosphorus (ingot iron). In this manner the phosphorus of the pig-iron is converted into phosphoric acid, which, uniting with the lime added, forms phosphate of lime. The melted mixture of phosphate of lime, with the excess of lime and combinations of the iron and manganese, obtained by this proceeding, is called Thomas scoria. It is brought into the market for the purposes of agriculture, in a finely ground state."

Analyses of this substance made at the station showed 21.46 and 26.60 per cent. of phosphoric acid. It was tried side by side with "floats" and showed a slight but steady superiority. This substance is destined to greatly influence American agriculture.

JACKSONVILLE AUXILIARY SANITARY ASSOCIATION.—This Association has issued a report of about 300 pages, giving a history of the terrible epidemic of 1888. The report is in the form of a diary giving an accurate description of the growth and gradual decline of the plague. Following this are reports of financial, sanitary and other committees. It is to be supposed that Jacksonville was cleaner than ordinary Southern towns, yet when the fever broke out the town was full of bad smells and dirty places that served admirably as plague breeders. The committee met with a severe obstacle in their work in opposition from those who objected to having dirty places cleaned up. Crowds of idle men congregated in the streets breeding disorder and trouble. It was found necessary to provide work for these men, and a good proportion of the funds sent from other localities were spent in paying these idlers for work at cleaning the city and digging drains and ditches. In every case of local calamity it is found necessary to provide work for the unemployed who are thrown out of work the moment the general business of the place is interfered with. The recent terrible calamity at Johnstown shows this. There, thousands of men who depend for a living on their wages from day to day were thrown suddenly out of work. They stand in need of wages rather than of charity, and the money so generously contributed by others will be paid to them in return for their services in clearing away the wreck. This wise plan was followed at Jacksonville with excellent results. This pamphlet ought to be sent to every town in the Gulf States, and the public officials of such towns should be compelled to read it through. All through that dismal fever siege there ran a streak of humor. The following telegram was sent to a Jacksonville merchant by a brother at the North:

"Dear John:—Keep cool. Don't worry. Trust in Providence. Keep taking pills and you will pull through all right."

REPORT OF THE COMMISSIONERS OF THE STATE RESERVATION AT NIAGARA.—This is the fifth report of this commission. It details the work done during 1888, contains some interesting facts about the Falls of Niagara, and also five beautiful photo-engravings of views taken from both American and Canadian shores.

INSECTS INJURIOUS TO FRUITS.—This is a new edition of the celebrated work by William Saunders, reduced in price and with information carried down to the latest facts. This has long been known as a standard publication and farmers and others who wish a cheap and comprehensive treatise on entomology will be thankful for this new edition. It is published by J. B. Lippincott & Co., Philadelphia, price $2.00

INSECT LIFE.—No. 11 of this publication is sent from the Department of Agriculture. This magazine is mainly devoted to technical information for advanced students of entomology, but there are in each number bits of practical information that any one who knows what an insect is can understand. Here are a few found in No. 11: A correspondent states that a toad placed in a room will clear it of cockroaches. Notwithstanding the frequent reports of serious injury from bites of spiders, it is not thought likely that any American species can cause much injury. Varieties of spiders are found in New Zealand and in Russia that inflict dangerous wounds. Professor Peyritsch, of Berlin, is convinced that double flowers are frequently produced by the agency of mites which work upon the plant organs in their earliest stages. Dr. Tere says he has applied the bee-sting remedy to 173 cases of rheumatism with uniform success. Australian authorities are to offer at all the agricultural fairs cash prizes for the largest number of heads or eggs of the English sparrow. In Tasmania, the farmers who neglect to fight the coddling moth with prescribed methods are prosecuted.

HORSES.—This is the title of the latest pamphlet issued by Smiths, Powell & Lamb, of Syracuse, N. Y. Lakeside stock farm has been for years noted as the home of the largest herd of pure-bred Holstein-Friesian cattle in the world. Of late years preparations have been made to include the breeding of fine horses in the various industries clustered at "Lakeside." As a consequence the visitor may now find splendid specimens of Clydesdale, Percherons, French Coaches, American-bred Coaches and Standard-bred trotters. These will be sold for breeding purposes or for driving purposes—either matched or single. It is hardly necessary for us to inform our readers that the horses they purchase at "Lakeside" will be well-bred, serviceable specimens of their breed. Smiths, Powell & Lamb do the sort of business that will not allow misrepresentation.

CORN-FED PORK FOR KANSAS.—Professor E. M. Shelton, of the Kansas Experiment Station, issues a report of some experiments recently made in pig feeding. As our readers well know, Professors Henry and Sanborn have conducted "fat or lean" experiments which go to show that a farmer can, by feeding certain foods rich in nitrogenous substances, produce pork with a larger percentage of lean meat than that contained in pork as ordinarily sold. In these experiments young animals were fed. More recently Professor Roberts has conducted similar experiments with sheep and mature hogs, the result in each case indicating that "feeding for lean" is a possibility, though the *profit* of such feeding has hardly yet been demonstrated. Now Professor Shelton comes along with a set of figures and facts that tend to mix things up sadly.

Since the publication of the results of the experiments in Wisconsin, Missouri and New York, a renewed outcry against "corn-fed pork" has been raised. By feeding milk, peas, cotton-seed meal and other like foods hogs with an extra proportion of lean meat, were produced. The class of people who do the most talking want lean meat and a good many of them are willing to pay extra for it. In the West, where, by the way, the great proportion of American pork is produced, corn is the great hog food. As Professor Shelton says in this report:

"To the farmer of Kansas there is but one common, easily accessible carbonaceous food, Indian corn, while his choice of nitrogenous foods is necessarily limited to two, bran and shorts. It is futile to talk to Kansas farmers of peas or even milk as general pig feed; the one is not generally grown and will not be, and the other could not be had in quantities sufficient to even moisten the corn fed to our swine."

As matters stood there was an evident movement on the part of consumers here, towards a still further discrimination between Eastern and Western-raised pork, because it seemed to be understood that Eastern farmers were feeding a greater variety of foods with a view to increasing the proportion of lean meat. So Professor Shelton conducted his experiment with a hope of seeing if Kansas farmers can afford to use shorts and bran in the place of some of their corn. We should judge that Professor S. is not at all sorry that the figures of his careful experiment indicate that corn is still the most profitable food for the Kansas pig-feeder.

The full details of the experiment are given in the pamphlet under review. They are too lengthy to be given here and they cannot well be condensed. We advise pig-feeders to secure the pamphlet and study it. We call attention to the following summary with which Professor S. concludes his report:

"The truth is, the great American staple, Indian corn, is an incomparable grain food when used simply for fattening, or when judiciously blended with other foods in the process of growth and development of the animal. But it is when we consider the cheapness and ease with which Indian corn is produced, due to its perfect suitableness to American soil and climate, that its superiority to all other forms of grain food becomes strikingly apparent. Thus a single acre yielding the quite ordinary product of 50 bushels of corn, would according to the facts of this experiment, produce 513 pounds of pork. Moreover, in the case of the chief portion of the agricultural sections of the American continent, there is no other grain that is really available for meat-making. It is futile to talk of using bran, shorts, barley, oats, milk or peas, in pork-making, upon a large scale. The instant that we are reduced to the necessity of using any or all of these foods as a substitute for Indian corn, our supremacy as a pork-producing nation will have passed to others.

The objection often urged against the general fatness of corn-fed pork seems to me to have no sufficient foundation in the wants of consumers. It is true that towns-people generally demand lean fresh meat, but work people, who are the chief consumers of pork the world over, demand fat meat, and of the salted article will take no other: while with all classes pure lard is a staple article, for which they cheerfully pay a price such that the fat portions of the hog before "rendering" are more profitable to the butcher than the lean parts of the carcass.

The results of our feeding fully-matured pigs in equal sets upon shorts, bran and corn meal during a limited forcing or fattening period may be briefly summed up as follows:

1. The shorts-bran-fed pigs required for full ripening nearly or quite 25 per cent. more of time than was needed by the corn-fed series; but even when the feeding of the corn-fed lot was prolonged—to their great disadvantage—to a period equal to that occupied by the shorts bran-fed series it cost to make a hundredweight of gain from shorts-bran 25 cents more than was needed to make a like gain with corn meal alone.

2. The corn diet, as compared with shorts-bran, had no unfavorable influence upon the vital organs, so-called, with the exception of the kidneys. The testimony upon this latter point, however, is not conclusive.

3 The corn-fed pigs had stronger bones than those fed shorts-bran, and the quality of the bone tissue was distinctly tougher and more fibrous.

4 The meat of the pigs fed corn was fatter than that made from shorts and bran, a fact fully explained by their excess of gain, (98 pounds) but the advantage of either series in respect to the amount of lean meat, or in its distribution with the fat (marbling) was not distinguishable by the senses.

5. The quality of the meat, as a whole, of the corn-fed pigs was clearly better than that of the shorts-bran series, for cooking by boiling; the results obtained from roasting lean meat gave occasion for a difference of opinion as to superiority in the quality of the meat of the two sets, while frying failed to show any advantage for either."

MAGAZINE REVIEW.

PROBABLY no private American citizen fills so large a place in the popular heart as George W. Childs of the Philadelphia Public Ledger. A self-made man who has risen to affluence by his own exertions; his munificent benefactions; his princely hospitality at Wootton have made his name a household word throughout the land. It is peculiarly gratifying to know that the publishers of Lippincott's Magazine have succeeded in inducing Mr. Childs to contribute four articles of "Recollections" to that periodical, the first of which is given in the June number, and which deals more particularly with his early life. The secret of his success is contained in this description of himself when but a boy:

"When first at work in Philadelphia I would get up very early in the morning, go down to the store, and wash the pavement and put things in order before breakfast, and in the winter-time would make the fire and sweep out the store. In the same spirit, when books were bought at night at auction, I would early the next morning go for them with a wheelbarrow. And I have never outgrown this wholesome habit of doing things directly and in order. I would to-day as soon carry a bundle up Chestnut street from the Ledger office as I would then. As a matter of fact, I carry bundles very often. But I understand that certain young men of the period would scorn to do as much." What an example for the young! Gen. Lloyd Bryce presents "A Dream of Conquest," a very ironical novel, complete in this number. In it he portrays the weakness of our navy and coast defenses, and represents China attacking us with her powerful navy. Judge Albion W. Tourgee contributes another installment of "With Gauge and Swallow." R. H. Stoddard gives some interesting reminiscences of Fitz-Greene Halleck. An article of special interest to women is "Social Life Under the Directory" by Anne H. Wharton, which describes the customs and costumes of that time. Madeline Vinton Dahlgren and Miss J. K. Wetherill contribute respectively "Who was She" and "A Silent Minority." There are several poems, "Monthly Gossip," "Book Talk," and other departments that go to make up an interesting number.

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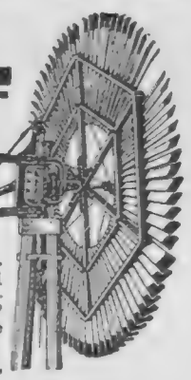

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They did not come to me that way:
The shortest I remember
You came a day with me to stay,
And filled my heart with laughter;
The longest day—you were away—
The very next day after.
—*The Century.*

IN the soup—Well, that's the cook's secret. —*Puck.*

"Do you enjoy good health?" "Why, yes, to be sure, who doesn't?"—*Sanitary News.*

YOUNG ladies who play croquet are known as "maidens all for lawn."—*West Haven Budget.*

GIRLS who use powder don't go off any quicker than those who don't.—*Boston Courier.*

A MESSENGER boy's diary—Monday, hired; Tuesday, tired; Wednesday, fired—*Newark Sunday Call.*

"EAT with judgment," says a learned physician. Most people, however, will continue to use their jaws.—*Boston Post.*

"A HEN out West, has just laid an egg as big as a bowl." First time we ever heard of a bowl-egged hen.—*Cleveland Sun.*

SHE: "How do you suppose the apes crack the hard shells of the nuts they pick?" He: "With a monkey wrench, of course."—*Burlington Free Press.*

"I SAY, Jenkins, can you tell a young chicken from an old one?" "Of course I can." "Well, how?" "By the teeth." "Chickens don't have teeth." "No, but I have,"—*Pick-Me-Up.*

"YOU all remember the words of Webster," shouted an orator. "No, I don't," interrupted a man in the gallery. "Do you expect a man to remember the whole dictionary?"—*Farm Journal.*

HE (who in attempting to get some pond lilies has fallen in): "Don't I look the very essence of woe, Miss Brown?" She: "Oh, no, Mr. Jones; you look more like Pond's Extract."—*Michigan Farmer.*

"THAT'S it!" exclaimed Mrs. Bascom at the concert, as the singers came out again in response to an encore. "Make 'em do it over again until they get the thing right."—*Burlington Free Press.*

MOTHER: "One of you boys has been stealing raisins again: I have found the seeds on the floor. Which one of you was it?" Tommy: —"It wasn't me. I swallowed the seeds in mine."—*Texas Siftings.*

"PAWN me honah, me deah boy." Don't," interrupted his friend, "I beg of you, don't; you couldn't raise enough on it to buy a cord for your eye-glass." And the conversation was not resumed.—*Michigan Farmer.*

ACCOUNTED FOR.—Stranger: "What is the matter with this town? Everybody looks haggard and played out. Had a plague here?" Citizen: "No. The pigs in clover puzzle struck the place last week."—*Michigan Farmer.*

"WHERE did you get that cake, Annie?" "Mother gave it to me." "She's always a-giving you more 'n she does me." "Never mind, Harry; she's going to put mustard plasters on us to-night, and I'll ask her to let you have the biggest."—*Life.*

"OH, PAPA," said a vivacious East Liberty girl, "we want a good name for our young ladies' club. Can you think of one at once significant and appropriate?" "Well, I don't know," replied the old man, "how would 'Giddy 'uns' Band' do?"—*Pittsburg Chronicle.*

A BOSTON woman asked if the late lunar eclipse was partial or impartial? That is something on a par with the young New Orleans lawyer who was taking a testimony and asked a witness if certain articles in question were valuable or invaluable.—*The Hustler.*

A LITTLE CONFUSED.

JACK: "Sis, what is that funny little noise I hear all day?"

SIS: "Why, Jack, that's a cricket! You don't mean to tell me that you don't know the cricket's song?"

JACK: "Really! They never sing when I sit on them."

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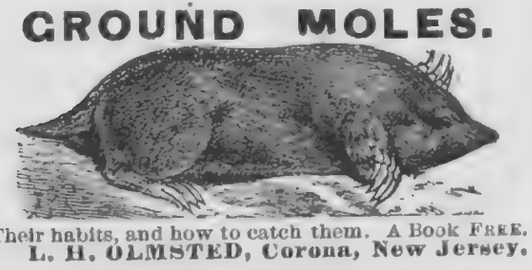
GROUND MOLES.



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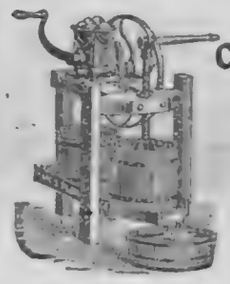

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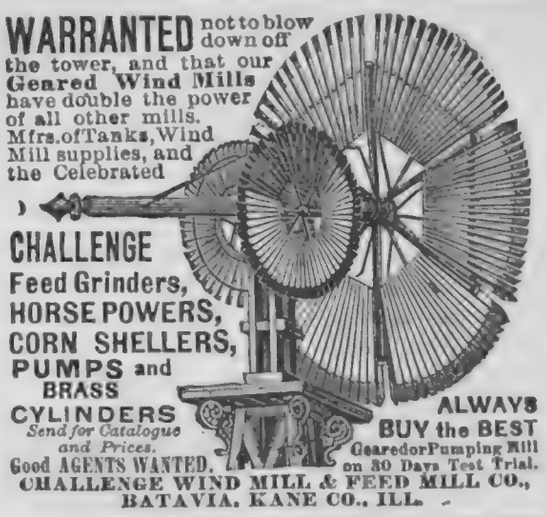

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[Entered according to Act of Congress, in the Year 1889, by the Rural New-Yorker, in the Office of the Librarian of Congress, at Washington.]

Sheep Husbandry.

A GROUP OF SHROPSHIRE EWES.

THE sheep shown at Fig. 156 were awarded first prize at a recent English show. They are regarded as excellent specimens of the breed. Years ago, the South Down was about the only breed of sheep that was mentioned in connection with English mutton. It may be said now that the Shropshires have fairly divided the honors with the South Downs as mutton sheep. In this country, the great value of the Shropshire lies in its peculiar adaptability for the work of improving the mutton quality of our common sheep A cross of the Shropshire on common ewes gives an excellent lamb that is sure to sell at an advanced price. It is probable that among those who are in the business of supplying this market with early lambs, the Shropshire is a decided favorite.

Farm Topics.

USE YOUR BRAINS.

Crops are easily raised, but brains are needed to raise them profitably; they are needed in determining the most profitable crops and in raising them at the lowest cost and in utilizing labor; extra profits from the use of brains in a decade.

THERE can be no possible doubt about the fact that we have brains on the farm, but do we use them? Judging by results on a great many farms, we do not. We seem to think that raising corn, wheat, pork or butter is farming. But it is not. Any laborer can raise a crop of corn; but it takes a farmer to run the farm The question for the farmer to decide is what crops can he most profitably raise, taking into consideration all the factors essential to the profitable raising of such crops, such as the quality and quantity of labor at his command, the nearness of markets, the condition of his soil, etc. Then he must decide how he can get the largest yield with the least cost. The right kinds of crops being determined upon they should not conflict with each other, but should "dovetail" in as regards labor and other considerations. Last year a farmer in this neighborhood who had sold his early potatoes—which were small—for 80 cents per bushel, and could not get 50 cents for his late potatoes—which were large—remarked that he did not think he would raise any more early potatoes: not because they did not pay, but because they interfered with his system of farming by taking labor from other crops when it could not well be spared, and the difference in price between the early and late potatoes did not warrant him to change his plan of farming.

The labor question enters most largely into the matter of profit, and is a question that should be taken into most careful consideration.

Is it good? Is it cheap? Then raise crops that require much labor and thus make a profit on labor as well as on the crops. Is it scarce or high? Then raise crops that require but little labor, and buy every labor-saving implement that you have the money to pay for, and if you, yourself, instead of the hired man, will use and take care of the tools, each one will pay for itself before it is worn out. A gentleman has declared in one of our Western papers, that among other things the self-binder must go. He has a large dairy farm and probably he may dispense with the binder and be better off without it, as he necessarily keeps considerable help and can afford to take the time to harvest his grain unbound. But if he had been around these parts during harvest and seen some of our farmers paying two or three extra hands $1½ a day, while others with no extra help, were doing the same work by means of their self-binders, I think it probable that he would have said that the self-binder must "go" from early in the morning till late at night.

Having decided what crops to raise—and this can be determined only by personal experience on one's own farm, observation of one's neighbor's, and the help of agricultural papers,—there is another urgent call for brains in raising the crops with the most profit.

Let us, for example, see how the use of brains works in the wheat crop. What kind of fertilizer produces the largest yield with the least outlay? You don't know. Have you tried the different sorts side by side, noted the results, and calculated which was the most profitable? Probably not. What quantity of seed per acre produces the best results? You don't know. Have you tried the various quantities side by side and noted the results? Probably not. Do you make every effort to have your ground plowed, cultivated and sown at the right time, or do you work when it is most convenient? I am afraid most of us have given our brains too much of a rest on the above questions. Let us see how proper attention to these matters pans out in dollars and cents.

We will suppose the difference in yield caused by varieties of fertilizers (the outlay for fertilizers to be the same, but the same priced fertilizers not necessarily to be used) quantity of seed, and time of plowing, cultivating and sowing, to be two bushels per acre, calculating the price to be $1 per bushel and the average area of the crop to be 10 acres: then in 10 years the result in favor of brains is $200. This is only one crop. When we think of the other crops and all the little odds and ends on the farm that need brains just as much as this crop, we can hardly help saying that what the farmer needs is to use his brains first, last, and all the time. S. O. L.

GROUP OF SHROPSHIRE EWES. Fig. 156. Re-engraved from the London Live Stock Journal.

The Poultry Yard.

POULTRY NOTES.

GAPES IN CHICKENS.—This is the time of year when, in many poultry yards, young chickens by the dozen may be seen gradually but surely choking to death with the most fatal disease to which young chicks are subject. The cause of this disease is numerous small white worms which fill the windpipe causing strangulation. The origin of these worms is a subject of much dispute. This is immaterial. The remedy is what we want. The chicks will be less liable to attack if kept on fresh ground where poultry have not been kept before, but this is not always practicable. Many "infallible" remedies are published every year, but still the chickens go on turning up their toes prematurely.

The barbarous practice of fishing out the worms—or attempting to—with a horse hair or feather, with most operators will kill more than it will cure. Many of the other remedies recommended are nearly as bad when given ignorantly or carelessly. There is hardly a farmer but has a remedy within his reach if he will faithfully use it. Onion tops and onions chopped fine, mixed with the soft feed and fed twice daily, will prevent the gapes, will cure them if not too far advanced, and will greatly relieve the chick in all cases where it has strength enough left to eat. They must be fed faithfully, twice a day; once will not do. I have used this remedy for several years, and have never lost a chicken from this cause when it was given faithfully. Do not give the chicks sloppy feed; give plenty of pure water and shade, and they will repay the extra trouble. Bone meal and meat should also be fed, especially if the chicks are confined in yards.

Kill, sell, or give away the roosters after you are through setting eggs for the season. You don't want to breed from them again; the hens will lay bet-

ter without them; the eggs will keep better if you want to pack them; and you will save considerable feed. The roosters must go.

Look out for the lice. They breed with incredible rapidity during the summer months, especially if the houses are not thoroughly cleaned. Provide the hens with a good dust-bath if they are confined in yards. Eggs are higher now than at any time since mid-winter.

It is very poor economy to throw soft feed into the dirt. Place boards in front of the coops to feed the chicks on. Place troughs in the hen-house in such position that the hens cannot get their feet in them.

Provide plenty of pure water for the hens. An egg is more than three-fourths water. Some men say a hen doesn't need water. No farm animal will suffer more for want of it. Such men should be set on a desert island for a short time with "never a drop to drink." F. H. V.

Farm Economy.

TRUCK WAGONS ON FARMS.

THE Cornell University and the Mississippi Land and Cattle Company of Calhoun, Miss., use trucks briefly described as follows:—see Fig. 152. Wheels 30 inches, 2 1-2 inch tires,—they would be better if they were three inches—distance between axle-trees when used with dump board box 7 feet 2 inches; when used with hay rack the reach is lengthened. Width of bolster between stakes four feet; tread five feet from center to center of wheels. Top of bolster 24 inches from the ground. Weight of wagon without box 600 pounds. For carrying crates of potatoes, etc., stone, manure and the like, dump boards are used made of clear basswood 2 1-2 by 4 inches, and side-boards and end boards of the same wood 1 1-2 by 8 inches and of the length desired. The hay and grain rack would also best be made of basswood. Sills 2 by 8, 16 feet long; 4 cross-pieces 2 by 5 inches, 7 1-2 feet long notched half an inch on the sills; 4 cross-pieces 1 1-2 by 4 inches 4 feet long; 6 slats 1 1-4 by 4 inches 16 feet long; 2 pieces 2 by 4 16 feet reduced on one edge to 3-4 inch. These are nailed on the top of the outside slats to give them strength and to prevent the load from sliding. See Fig. 154. A board 8 inches wide and 7 1-2 feet long should be placed crosswise over the top of the truck at the extreme rear end: 6 carriage bolts, 1-2 inch, 14 inches long, 24 carriage bolts, 3-8 inch, 6 inches long, 1-2 pound 10-penny nails.

The trucks will turn in a much shorter space, if the sills to the rack are brought together from four to six inches in front, and blocks are nailed to the side of the sills to fill out to the stakes of the front bolster.

If the dump or farm box described above is made 12 feet long, it may be left on and the rack described above, *minus* the sills, can be used; the side boards of the dump box serving in place of sills. This cheaper rack 14 feet long will easily carry one ton. The more elaborate one will carry two tons. The only danger is that the load will exceed the strength of the team. It will be noticed that the top of the rack on the truck is but three feet one inch from the ground, or just the hight of an ordinary man's trousers' pocket; while the flat rack--see Figure 153--on an ordinary wagon is four feet nine inches high. Fully one-half of a ton, possibly three-fourths of a ton of hay may be put on the truck before the load reaches the hight of the rack of the ordinary wagon. If we take the V-rack, the difference is still greater. In this the first part of the load as well as the last has to be pitched four to five feet higher than with the lower wagon. While the truck can hardly be tipped over, the latter contrivance keeps one nervous for fear the center of gravity will not remain over the base.

The trucks we are now using were manufactured by the Groton Manufacturing Co., Groton, N. Y., when they were building mounted horse powers. Knowing the great value of farm trucks by practical experience—especially since we have gone so largely into silage farming—I notified the manufacturers over a year since of the great demand for a cheap perfected truck that would inevitably follow the silage and potato boom. The cost of such a wagon without box, should range between $20 and $30

The hubs are cast, there are no front hounds or ironed stakes, and all the parts are very simple and plain. How a farmer can afford in these days of low prices to pitch hay, manure and grain, lift stones, potatoes and wood, two or three feet into the air unnecessarily only for the fun of throwing them down again cannot be scientifically explained. I. P. ROBERTS.

Cornell University, Ithaca, N. Y.

Everywhere.

THE CASH CROPS.

WHERE THE MONEY COMES FROM.

WESTERN REPORTS.

IN the RURAL of May 25 we gave some interesting answers to a series of questions designed to show what farmers depend upon for their cash. Here are some more answers from Western readers:

1. What do you sell to raise cash?
2. Where are they sold?
3. How about the past and future of prices?
4. Are any farmers obtaining extra prices?
5. What changes have occurred in the past 10 years?

FROM KANSAS.

1. Corn, flax, cattle and hogs.
2. The overplus is mostly sold at Kansas City.
3. Good till this last crop. The next crop will be good.
4. I think not a great many.
5. When I came here, 10 years ago, this section was mostly prairie; now it is all settled up with railroads, and small towns all around us. Since the emigration to the western part of this State and the rush to the South this spring many farms have not changed hands, consequently land is low-priced.

Lone Elm. J. W. H.

1. Flax seed.
2. It is sold at home, being generally bought by the grain dealers. We also sell hogs and cattle.
3. Prices are about the same as usual, except those of cattle which are 40 per cent. lower. There are no prospects of better figures.
4. No.
5. Farmers have not changed much in the last 10 years. Before the dressed beef syndicate went into operation, farmers in this region were doing well. I think that if farmers would go into dairying more they would make more money. D. B.

Centralia.

1. Vegetables, fruits, cows and hogs.
2. Fruits and vegetables are sold at Strong City, and hogs to shippers.
3. Very low with but little show for the better.
4. None that I know of.
5. Not very much. This is not a farming country to any extent. It is a stock country The mode of stock raising has changed a great deal in 10 years. People now-a-days keep less stock but they are of better quality and they feed better. J. H. C.

Strong City.

1. Corn, pork, sheep and wheat; and, to a less extent, oats, millet seed, flax-seed, fruit, poultry, eggs and butter.
2. They are mostly sold here at our stations to local buyers who ship to Kansas City, St. Louis and Chicago.
3. Prices of fat hogs for the last few years have been good, averaging about four cents per pound. Good average fat cattle have brought about five cents per pound, but prices are low now—only 3½ cents per pound. Corn has averaged 25 cents per bushel; but it is only 20 cents now. Future prospects for hogs are very good; for fat steers and cattle very dark. Good corn-fed beef at 3½ cents per pound means dissatisfaction among the feeders. The prospect for the future of course depends on the season, which has been very good here so far.
4. Only those who have the best and smoothest hogs and steers.
5. The only change is an increase in corn and its products—pork, beef, poultry, eggs and butter. Now 100 bushels are raised, where one bushel grew 10 years ago. This was a new country then. R. R.

Sabetha.

1. Hogs, cattle, wheat and corn; with a small amount of butter and eggs. These are the *only* products of this section.
2. Hogs, to local shippers; cattle, to certain farmers who fatten and then ship them to Kansas City; wheat to local millers; and corn to stock-feeders and shippers, and butter, eggs, etc., to local merchants.
3. Up to last year, or until the railroads came here, we obtained splendid prices and there was a good demand for everything; but since then the farmer's greatest source of income being cut off—*i. e.* freighting and hauling lumber and goods—we have had no market for anything save hogs and steers and they bring much lower prices than those that are obtainable in the Mississippi valley, because we are so far from market. The future seems as though it will be hard to make current expenses.
4. Yes, by getting their products in the best possible shape when they sell.
5. The farming has changed only in the method of putting in and tending the crops. Our farmers are experimenting now with castor-beans and broom-corn, and the former seems likely to pay well; but if such should be the case three or four of the adjoining counties can and will flood the market to over-flowing in a short time. I raised about 600 bushels of peanuts last year and 1,200 gallons of cucumber pickles and neither will pay freight to market. Then, my broom-corn neighbor has his stock of nice green dwarf corn and would be glad to realize two cents per pound for it. Almost all of us brought money with us here, and we got along finely till the railroad monopoly came, and said, "We will haul for one dollar the same load for which the farmer charges five." The consequences are that the one dollar goes East and never returns (except in the one way of a loan on land); whereas the farmer's $5 kept on changing from farmer to merchant and *vice versa*. Burst up the trusts so that the laborer will be able to buy his other commodities as cheaply as he buys farm products; then we can pay a hand $10 per month the year around, and both will make money; but as long as the hired man demands $20 per month for six months and lies idle the other six and boards himself, we are both losing money.

From a careful study, it seems that a man who is close to a large city or even to a mining district where men work only half time, is doing fairly well, whereas the man who lives remote from these places is having a hard row to hoe. J. J. M.

Iuka.

1. At the present time corn, hay and cattle.
2. They are sold mostly to local shippers. Shippers sometimes gather up in August and September what we call stockers, and these they will hold for the spring market, often buying corn and hay to fatten them. A drove of stock hogs always follow cattle during the feeding, and when the former are ready, the latter are also fit for the market.
3. Cattle and corn paid well until the last year; since then prices have been too low. The hog alone seems to be the poor man's friend one year with another.
4. There always are a few who are more skillful than their neighbors at large in their management. For instance, some put 250 to 300 pounds of flesh on their hogs when nine months old; while others feed 18 months to make the same weight. The secret of hog feeding consists in giving a variety—milk at first, then oats, then soaked corn. Continue to change from one to the other. Keep up the milk feed if possible until the pigs are six months old. I always feed twice a day and never over-feed. The extra profits are made by saving feed.
5. Wheat 10 years ago was the staple crop. Corn came next, and then oats. Latterly wheat has dropped partially in the shade, oats and German millet filling the vacancy. Last year German millet fell from $1 50 to 20 cents per bushel, hence millet has gone out of sight for a while and the vacancy is filled by oats and corn. Both of the latter are looking well to-day. This is a big country. A man sometimes leads the masses in some staple crop, and when all are ready to take hold of the same thing, if he is wise, he drops out, and takes something else. That is the man who makes the money. The farmer has got to the place where the merchant stood 30 years ago. Competition is forcing many to mortgage, who never pay off that mortgage. The only way I can see for farmers to get along is to raise a variety of products. We can save a little from each, and all the little savings put together, will give the thoughtful farmer something for old age. G. L. W.

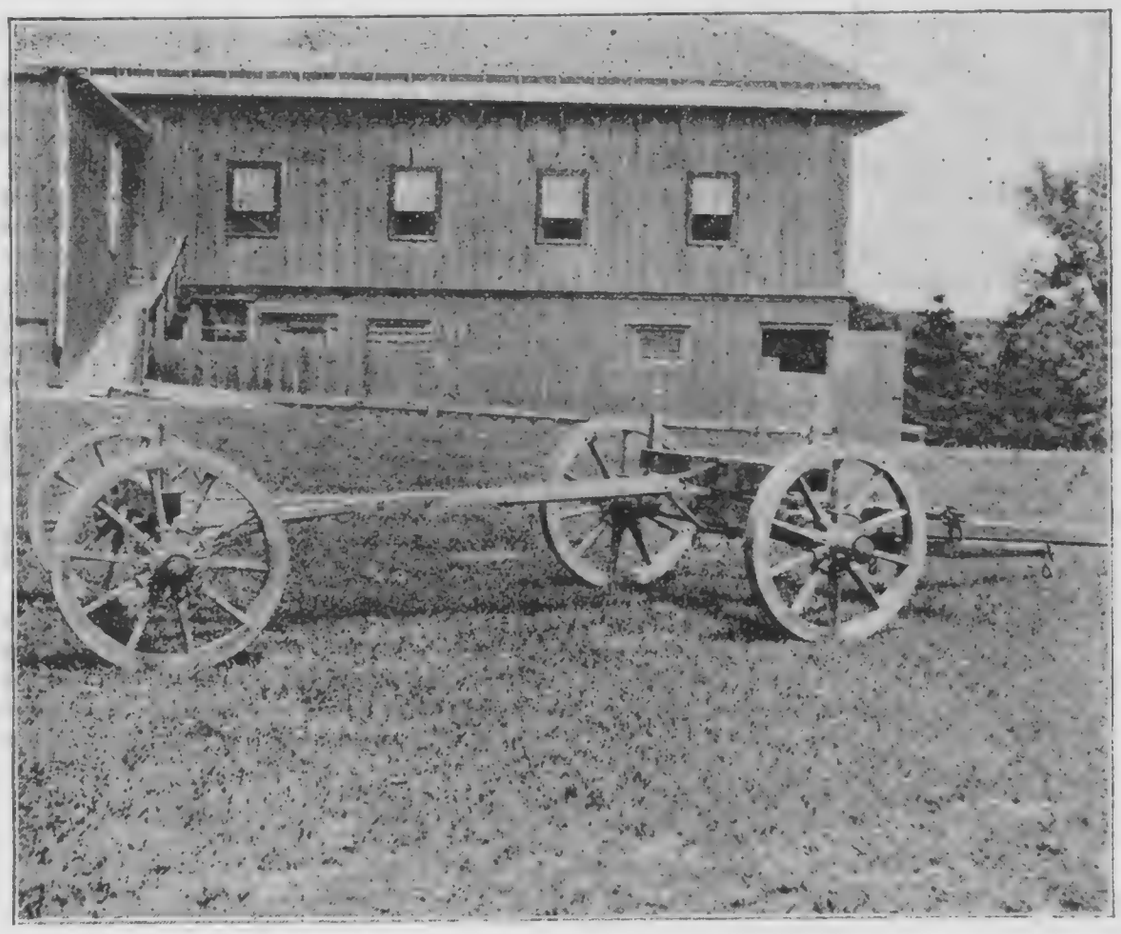
Clay County.

1. Wheat, hogs and cattle.
2 and 3. Wheat is sold to the millers in Leavenworth. Stock is sold to packers and shippers in Kansas City. Wheat has averaged 60 to 85 cents, except during a short time last fall when the price reached $1.00 to $1 05, but we didn't sell then. Some farmers who then refused $1 per bushel have sold during the past week at 78 cents. Prices of cattle ruled extremely low until quite recently. Good cows are selling at $1.75 to $2.00 per 100 pounds on foot. Hogs bring $4 to $5 per 100 pounds live weight. Considerable hay is left over for which there is practically no market. Potatoes are 25 to 30 cents per bushel.
4. Not so far as I know.
5. None to any great extent, although some are engaging in the dairy business, selling milk—present price 8½ cents per gallon net, shipped to Kansas City. Some prefer making butter as that leaves the skim-milk, etc., on the farm to be fed to pigs and calves, but the competition with Kansas City hog and bull butter, is so strong that there is little profit. Prices at present are 16 to 18 cents per pound. Prices for farm products are continually tending downward. This is a splendid country, with numerous natural advantages—good land, pure water and cheap fuel—yet this (Leavenworth) is the most debt-ridden, tax accursed county in the State. My quarter section is assessed at $2,390: tax last year, $89.00. J. M.

Bastian.

FROM WISCONSIN.

1. Mixed farming is practiced here. A majority of our farmers raise garden vegetables, from five to 20 acres of potatoes, and about the same number of acres of sweet corn. From 1,000 to 10,000 tomato plants are also set out by each of the farmer gardeners, and they raise other garden produce in proportion.
2. This place, Caldwell, is 23 miles from Milwaukee, and we draw our produce to the city with our teams, selling to grocery-men, hotels, boarding-houses, and at times we deposit our goods with commission-men.
3. Prices are very low and the prospects don't indicate any great advance.



TRUCK WAGON USED AT CORNELL UNIVERSITY. Fig. 152.

4. No.

5. A great many. In this section two years ago, the farmers' whole attention was given to the growing of wool and the breeding of sheep for the Western market. Within the last two or three years they have gone into dairying, carrying their milk to co-operative factories. This is greatly owing to the great advertising the farmers' institutes have been doing in favor of the dairy interests; the business has been over-done. There is an over-production here or an under-consumption elsewhere.

It would be greatly beneficial to the farming interests if Congress would so legislate as to prevent foreigners or foreign syndicates from occuping any of our public domain for raising stock or any other purposes. Every foreigner should be a resident of the United States five years before he is allowed the full

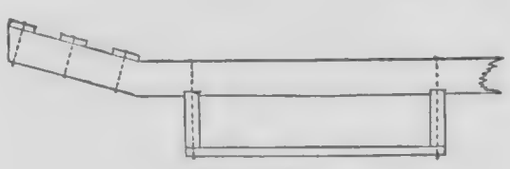


Fig. 153.

privileges of American citizenship. Congress should so legislate that no American or syndicate of Americans should be allowed to occupy our public domain for the purpose of raising stock or farming in any shape or form, working against the actual farmer who is making the improvements and paying the taxes to support the government.

These are questions of great interest. When we examine our records we find that our real estate was never so heavily mortgaged, according to its assessed value, as at the present time, and why is it that land in York State that sold for $75 to $100 per acre 10 and 15 years ago, is now on the market for $50?

Caldwell. L. C. W.

1. Nearly all depend upon cheese and pork.

2. They are sold mostly to local buyers.

3. Prices averaged very well until last year. Low prices seem probable for farm produce this year.

4. No; for people don't take pains to raise anything of extra quality.

5. Grain used to be the principal crop raised 10 years ago; everybody raises now cows and hogs with only grain enough to feed. The change has been caused by poor grain crops; due to chinch bugs and drought, and by the good prices for cheese, when the business was new. I would suggest as a mode of increasing profits that people should take better care of their cows; weed out the poor ones and grade up. It costs no more to keep a cow that gives 35 or 40 pounds of milk per day than one that gives 20 pounds. One man here gets 100 pounds per day from three cows. Others with six to 10 cows get less than 200 pounds. The best dairy cows don't average 30 pounds apiece at any time. We have seven cheese factories in our town. I think the farmers ought to work together and sell to the consumers and get the middlemen's profits themselves. J. B. L.

Greenbush.

1. Stock, dairy products, and potatoes.

2. To local dealers for the Chicago market.

3. Beef cattle have been very low for several years—two to three cents per pound live weight. Prices for dairy products are very good; butter 12 to 20 cents; cheese seven to nine cents. Potatoes are the largest crop in this section; except during the past year, they averaged 45 to 60 cents per bushel. During the past season they have brought only eight to 20 cents per bushel, and thousands of bushels have been fed out to stock. Future prospects are fair.

4. Yes. By producing first-class articles for market.

5. Formerly wheat and other grains were extensively grown; now not enough of these is grown for home consumption. Our hope is in clover and better farming. C. C.

Waupun.

Wheat, corn, hogs, sheep and dairy products. Wheat has been up to a dollar and down to 60 cents. Hogs have ranged from $3 to $6 per cwt. Farmers who have the best products get the best prices. We used to raise considerable stock; but that does not pay. Farmers have gone into dairying--cheese and butter making. E. S.

Richland Center.

1 and 2 Pork, sold to the packers in La Crosse, 25 miles away, and cream sold on the farm to the Farmers' Co-operative Creamery at Holmen, eight miles off. Sometimes a little rye is raised. Corn and wheat are sold to grain dealers at the railroad stations.

3. Low and lower. Prospects threaten the lowest prices of all in the future by reason of glutted markets.

4. Yes, several: One, by being first in the market, ere the "rush" begins, stopping sales as soon as prices drop, and living so economically as to be able to hold his products for his own price, which he gets far oftener than a careless man would think. The others, by meeting the real demands of the market. For instance: yellow corn is purchased at the mills, to be ground for table use, and these men don't offer white dent there. They grow strawberries, grapes, melons, etc., for the stores, and make 10-pound, full-milk cheeses for sale, that go off "like hot cakes." They make gilt-edged butter and contract it for the season at an extra price when the cheese market gets slack, and are attentive to their business generally.

5. Very many. Small grains, potatoes, fat beeves, pork and veal used to pay; now they do not. Chinch bugs get the small grains, and sometimes invade the corn-fields. Beef is less than two cents per pound for the best. Pork and veal at four cents are too cheap. Potatoes and truck are drugs in the market.

The first change I would suggest would be a "Trade Union" of all the farmers in every town. Make the organizations as simple as those of school districts, town, county and State and as inexpensive as possible. A per capita tax of five cents per annum is quite sufficient, if we keep clear of lazy, lying place-men and demagogues. Meet often, say, at the schoolhouse one evening every week to discuss markets, crops, methods; making every meeting a regular "institute" for the elucidation of some one point pertaining to our business. Thus organized, we might diffuse a professional spirit in the farmers, control the output and the markets in some degree, and better our prospects in due time. There should also be in connection with the farmers' unions at their places of meeting, some arrangement for the exchange, purchase or sale of farm products. There should be half a dozen "bulletin boards" written up, say, as follows:

FOR SALE OR EXCHANGE.

4 horses by.....T. Day.
20 bushels seed oats by.....S. Roe.
10 " clover seed by.....J. Brown.

WANTED.

4 spring pigs by.....T. Day.
10 bushels seed oats by.....P. Roe.

Holmen. "DOT."

1. The cash agricultural products of this section are wheat, rye, oats, barley, buckwheat, potatoes and hay, together with dairy products, beef and pork.

2. These are mostly sold in our local towns to dealers and shippers, except where creameries or cheese factories are patronized.

3. Prices here average about the same as in Chicago and Milwaukee, with no very bright outlook for the future, as the prices for everything grown on the farm are going lower and lower.

4. Farmers who are selling their dairy products to consumers, and those who are raising extra-good cattle and horses, are the men who are getting prices that are above the average.

Much less wheat is raised here than formerly, as it is no longer a sure crop, and more dependence is placed upon the dairy and the raising of draft horses—a business which is beginning to claim the attention of many of the farmers in this section. Dairying and the raising of stock seem to be our only financial salvation. As farmers, we must raise better stock, in fact, the very best we can possibly produce, and do away with middlemen, wherever practicable, if we would have even a small margin of profit for our own labor and the capital invested. W. M. H.

Neenah.

FROM CANADA.

1. The products we depend upon for money are wheat, barley, peas, oats and stock.

2. They are sold mostly here and shipped to Eastern markets.

3. Prices ruled low for wheat until last year. The prospects for future prices are not very encouraging.

4. The farmers that get an extra price are those who raise a first-rate article.

5. Several farmers depend more on raising good stock and dairy products. They also give better cultivation, raise better stock, are more industrious and economical. D. T. S.

Bugden.

1. Wheat barley and peas.

2. Farmers sell to local buyers who ship wheat and peas to England and barley to the States.

3. Prices for wheat have ranged from 75 cents to $1.20; for barley from 45 to 75 cents; for peas from 50 to 75 cents. Prospects for this year are that prices will rule low.

4. A few good farmers by raising good samples of grain command the highest price.

5. Farming has not changed much during the past 10 years. H. F.

Wilsonville.

HACKNEY MARE, MOVEMENT. Fig. 155.

Re-engraved From The London Live Stock Journal.

1. Our cash products are, first, barley, then cheese and horses.

2. Our barley and horses are bought by local buyers mostly for New York State markets.

3. Prices have averaged very low for some years, with no prospect of a change for the better.

4. I do not know that any of our farmers get more than average prices.

5. Farming in this section has changed but little during the last 10 years, only we have improved implements to work with. Peas are coming to the front as a cash product. The A. B. Cleveland Co. has a branch establishment in this county and a good many farmers are sowing their peas, under a contract, at from 65 cents to $1.10 per bushel. I think a thorough system of underdraining would make farming more profitable. The prospects for crops are exceedingly good so far this year. S. S. M.

Prince Edward County.

1. Wheat The yield averages 30 bushels per acre, and for 10 years the price has averaged 75 cents per bushel.

2. At Lake Biers, the railway station.

3. The prices for four years have been: best No. 1 Hard wheat, 50 cents to $1.20; average 75 cents per bushel.

4. No one has got more than these prices; but some have got less, because it was not clean.

5. For two years farms have changed hands at advanced prices. As an improvement, I would suggest mixed farming. People ought not to run out their farms while they are still young. W. C. H.

Cypress River, Manitoba.

1. There are different classes of farmers in the vicinity of Montreal: 1. The milkmen who feed all they raise to their cattle and sell the milk in the city. 2. Those engaged in market gardening and orcharding, both of which vocations are practiced by the same persons with few exceptions. 3. Those who sell principally hay and potatoes.

2. These products are mostly sold in Montreal and Quebec. Occasionally we send potatoes and choice Fameuse apples to the United States.

3. Cheap railway accommodations have brought into the city garden produce, milk, etc., from a distance, and this has made the prices lower these past few years than they used to be.

4. Those who try to excel in growing and producing good articles and marketing them in tasteful packages will always get more than the average prices. I would suggest that orchardists should always brand their names on the barrels of fruit they sell, to establish a good reputation; the same as millers do with their flour.

5. The system of farming has not changed much; farmers have gone more extensively into the branches I have mentioned, and are apt to over-produce. If we only had free trade and could send our potatoes, etc., free of duty across the border in return for the vegetables that already come in free from the States, it would be more profitable. R. B.

St. Henry of Montreal.

1. Fall wheat and beans.

2. We sell to Chatham and the surrounding markets. There are three large flouring mills in Chatham and they use a large quantity of wheat for grinding and shipping to the Lower Provinces and the British market, and some wheat is sold to middlemen for the English market. More beans are raised in Kent county than in all the rest of Canada. They are sold to grain buyers. Large quantities of them go to the American market and the Lower Provinces.

3. Prices for all kinds of grain have been low for the last few years; but they were very good last year. The prospect for prices is better for the future.

4. There are a few farmers who get better prices for their produce than others, by being forehanded and not compelled to sell till prices are remunerative. They study this matter and practice good farming.

5. Farming has changed somewhat in the last 10 or 15 years. Formerly farmers used to depend mostly on grain; but now they practice mixed husbandry. We can grow the very best of corn, barley, peas, oats and all kinds of grain and fruits, such as apples, pears, peaches, plums, grapes, of the best quality, and large quantities are sold here yearly. We raise horses, cattle, hogs and sheep for shipping to the British market. The best change would be to consume all the grain on the farm except wheat and beans. By this plan, with good farming and plenty of manure that is made by keeping plenty of stock, farming would pay well, with the RURAL NEW-YORKER to guide us.

Chatham. A. MC D.

FROM IOWA.

1. Horses, cattle, hogs, dairy products, corn and oats

2. A great many heavy draft horses are raised in this section. They are bought and shipped East, mostly to the large cities. Fat cattle are also shipped to Chicago, and so are the hogs, which are mostly bought by local buyers. Those that are dairying sell their milk to the creameries, receiving back the sour milk which they feed to their calves and pigs. There are a few farmers who continue to raise corn and oats for money crops, which they sell mostly to the stock farmers in their neighborhood.

3. Prices have been good, but are rathe on the decline.

4. There are a few who raise full-blood horses and cattle, that get fancy prices for them; but I cannot say whether they realize

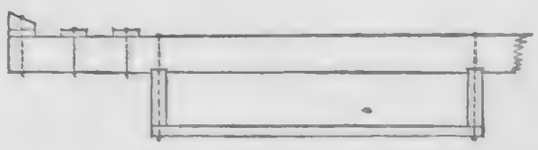


Fig. 154.

any more profit from their farms than their neighbors.

5. Farming has changed but little with the exception that more stock is raised and less grain is shipped. If farmers would go over less ground and do more thorough work, I think they would receive more profit from their work. A. B. T.

Monticello.

1. Hogs, cattle, corn, oats, and milk.

2. Some are shipped, but the hogs mainly go to our packing houses and the cattle are slaughtered. Oats go to our oat-meal mill, milk to the creameries, and a small portion of the corn is shipped.

3. Quite satisfactory; prospects good.

4. The prices realized are pretty uniform.

5. I think an improvement may be justly claimed, but there has not been much change in the kind of farming. Our farmers try to cover too much ground—they take off too much and return too little. Much of the manure that accumulates in our city goes to fill wash-outs, at the expense of cartage.

Cedar Rapids. A. C. K.

FROM INDIANA.

1. Corn, hay, oats, clover seed and wheat are the chief crops raised here, all of which are fed to stock except the last two.

2. Our stock are sold mostly at Cincinnati and Indianapolis. Some good stock are shipped directly East, having been sold to local buyers.

3. Prices of agricultural products have gradually decreased during the last few years except those of hogs. None of us can see a shadow of hope for better prices. Prospects for future production are good.

4. Prices are generally uniform and so are the products.

5. Farming has changed, for the work is more thorough, but there is plenty of room for improvement. T. E. H.

Greensburg.

1. Wheat, corn and considerable oats, hay and potatoes.

2. Local dealers usually buy all.

3. Prospects are not very flattering for farmers who try how much ground they can till; but for good farmers, small fruit and potato growers, prospects are fairly good.

4. Same prices are usually got by all, but those in debt and who hasten to sell usually make a sacrifice.

5. There has been very little change in 10 years, but potatoes and small fruit have been grown more extensively, and find ready sale, and some make them very profitable. Nothing could profit farmers more here than to work in harmony for their own interests.

Bourbon. J. H. P.

1. Wheat is now and always has been the staple money crop; but corn, oats, vegetables and stock of all kinds are very profitably raised.

2. Farm products are usually sold at home to men engaged in the purchasing business; some of them are commission agents, but most of them are men who use their own capital.

3. Prices for all farm products have generally been low and the prospects are not very encouraging.

4. It is very seldom that farmers get more than the market price for anything except for butter, and when they do get more it is on account of the superior quality of the product.

5. Farming has changed considerably in the last 10 years, principally in the raising of more corn, oats and stock. Farmers are learning that it is more profitable to feed stock and use up all their grain and rough feed on the farm than to ship the grain and waste the rough feed. One of the best and most profitable changes for the farmers would be for them to organize themselves into companies and all stand for each other as one man. J. S.

Lima.

1. Mainly wheat, corn, potatoes and small fruits.

2. Dealers in our home market buy the products.

3. Prices are low when crops are good. Prospects for the future are fair for a first-class article.

4. Some find a readier sale for their produce, by offering a first-class article in proper shape but very little if anything is obtained above the average price.

5. More are going into growing potatoes and small fruits. Five acres of potatoes are planted now to one 10 years ago. Some expect to make a success with small fruits regardless of having a liking for the business.

South Bend. T. A. P.

1. We depend principally for money upon corn, using wheat, oats, barley and rye to change the land.

2. We sell the corn to our grain-dealers, also to starch factory and cannery.

3. Average price of corn 30 cents; rye 40. Copious rains have made the future prospects for crops at present very flattering. If the harvest proves fine it is hard to tell what prices will be.

4. Farmers who can hold their grain get from the average to the highest prices.

5. Farmers seed their land to clover and Timothy, feed their farm products to hogs and cattle and depend more on grass crops than in the past. To obtain better results foul land must be restored by seeding to grass and the most profitable stock must be produced. Deeper plowing on old land would be a good change, and if farmers would use more fertilizers and raise more vegetables their profits, comfort and health would be increased. T. R.

Atlantic.

FROM NEW JERSEY.

1. Milk, hay, potatoes, rye straw, green corn, truck, apples, cider, vinegar, small fruits, poultry and eggs.

2. The products are sold in the small towns around, or in New York. Some sell to consumers, to store-keepers, and to buyers who gather up and take to Newark.

3. Prices have averaged fair the past few years. The prospects for future look dull to me.

4. The farmers who get the best prices sell good articles to consumers.

5. I think farming has not changed much in the past 10 years. We are not good farmers here. A number act as agents for machinery, fertilizers etc., or do team work. The general opinion is that "farmin' don't pay" well. I think there is need of more manure, labor and brains. Too many farms are rented and skinned; the land is strong and somewhat hilly. C. R. W.

Westfield.

1. All that may be included under the term "truck," more especially early potatoes, tomatoes, canteloupes and sugar corn; also late tomatoes of which a large percentage are contracted for by local canneries, and small fruits, more especially strawberries. Late cabbages have been increasingly raised and until the last year at a good profit. Probably one-third of the farm profits hereabouts is derived from dairy products, chiefly in the form of milk.

2. The greater part of all these is consumed in Philadelphia and Camden and their environs. Strawberries and late cabbages are largely shipped to distant points by commission dealers.

3. Prices have averaged very near the starvation point for encumbered farmers for the last three or four years. Where one article has brought a fair profit, there are two that scarcely pay the cost of production. Future prospects of better times are based wholly on uncertainties mainly the weather. The past year has proved that a season of universal moisture is a boon solely to the consumer in its first effects. As to the future, some farmers are being driven out and this may help those who are able to remain; but there are many other factors to be considered ere a man can exercise the gift of prophecy to advantage.

4. Of late years, those who have produced goods of a superior quality have often found that the highest prices received were not, as formerly, in proportion to the increased cost of production. Nevertheless, it is only those who aim at the highest quality consonant with a paying quantity, who get along at all.

5. Our farming methods and the character of farm products have materially changed in the last decade. Southern competition in early fruits and vegetables, combined with the enormous increase in city populations, has diminished the interest in early trucking and increased proportionally the dairy interest of our locality. In the highly perishable class of small fruits and vegetables, Southern competition cannot materially affect the home market for home products, and hence the demand for and production of these are ever on the increase. The immense canning industries of our State conduce to the same end. S. M. S.

Haddonfields.

FROM CONNECTICUT.

1. Milk, butter, poultry and general farm crops; small fruits, large fruits, and all kind of fruits possible to raise.

2. Milk, poultry, eggs, butter and a great deal of produce are sold direct to the consumers, large gardeners and stores.

3. Prices have been good to fair. Good, fresh produce generally brings a fair price.

4. Yes; by being first with everything in its season, dealing honestly and selling to the consumer for cash.

5. There have been many changes, with the young men especially. A good creamery would bring profit both to farm and farmer.

Birmingham. G. M. D.

FROM ALABAMA.

1. In spring, vegetables, such as potatoes, cabbages, peas, beans, cucumbers and tomatoes; in fruits, such as strawberries, plums, peaches and pears. I won't state the prices obtained as they might look too big.

2. Our products are sold in Western cities through commission merchants.

3. Prices have averaged good for the past few years and the prospects are good for all that can be raised in the future, because not one acre in 100 is under cultivation.

4. Some of our farmers generally get prices above the average, usually because their products are nicely assorted and packed in good shape.

5. Farming has changed very much in the last 10 years, owing to new facilities for shipping and the remunerative prices obtained for vegetables and fruits.

6. Yes, our lot would be much better by the destruction of those abominable frauds called express companies.

Let the railroads give us rapid transit at reasonable rates, and let Congress initiate the movement by amending the postal laws so as to give us a parcel-post at about four cents per pound. Such a law would not affect vegetables and fruits, but it would everything else. C. C. W.

Grand Bay.

FROM WASHINGTON.

1. This immediate neighborhood has been settled but a few years, and a large part of the people have not cleared enough to make a living on the ranch, so they work out in logging camps to raise money. Those that make money for support at home, make it on hay and cattle; but there are few of them.

2. To lumbermen.

3. Prices are good, and prospect very good.

4. So far, prices are about equal for all.

5. No changes have been made. Farmers still raise oats on the diked tide lands; fruits, vegetables and hay, on the river valley lands. There will be many changes, however, as the country develops, and transportation becomes more convenient. This valley is heavily timbered, and most of the people came here poor; but the climate and soil are hard to beat. No such thing as failure is known, and coal, iron, and gold are found, the two former in abundance, and there is no end to the lumber supply. Money seems to be pretty plentiful. Immigrants are coming in large numbers. R. H. P.

Mt. Vernon.

FROM MICHIGAN.

1. Wheat, wool, beef and pork.

2. Wheat and wool are sold to elevators, and beef and pork are sold on foot to drovers.

3. Prices of wheat, wool and pork were in 1888 better than usual; but those of beef were very low. Calves are selling for $1 to $3 apiece now. The future looks bad. Farms are selling low.

4. None.

5. There has been a change this year to the production of early lambs by using a Shropshire buck on Merino ewes. We are also raising more coach and carriage horses. Farmers stick steadily to mixed farming.

Almont. J. F. F.

1. Wheat, hay and wool.

2. Wheat is sold to the millers and shippers; hay to shippers at the railroad stations; wool to the woolen mills and to Eastern buyers.

3. Wheat has brought from 70 cents to $1 18 for No. 1; hay from $6 to $16 per ton; Wool, unwashed, 12 to 20 cents; washed 20 to 40 cents, according to quality. Prospects for wheat and hay are good.

4. The better the farmer the better the grain and price.

5. Farming has grown better; we have better stock, and building improvements are made every year. Perhaps dairying would pay if properly managed. We have creameries in the county, but they claim to pay only expenses. I. G. D.

Grand Blanc.

FROM NEBRASKA.

1. At this point corn and oats are the main crops, with occasionally some flax. Very little wheat is raised on account of low prices and poor yields.

2. The corn is sold to cattle feeders and some of the farmers feed it to stock themselves.

3. Prices for corn and oats have ranged from 15 to 40 cents. Some corn and oats last year sold for 40 cents; they are selling now at 20 cents per bushel.

4. Those who get more than the market prices are men who are able to hold their crop until corn becomes scarce.

5. I don't think there has been much change, only in raising wheat. The price of the crop has been so low and the yield so poor that very little has been raised for the last two years. The price of wheat has been from 30 to 50 cents; but good wheat is now worth 85 cents. J. M.

Gibbon.

FROM SOUTH DAKOTA.

1. Wheat and flax seed.

2. We sell to warehouses in the towns, owned and run by large grain companies.

3. The average prices have been about 50 to 60 cents for wheat; $1 for flax. Farmers will get better prices by having their own warehouses, as they are beginning to do through their "Farmers' Alliances."

4. Yes, by having clean, sound grain to sell.

5. There have been no changes as the country has been settled only six years. Still farmers are raising more corn, as they are finding it pays well. C. H. S.

Holabird.

1. In the Black Hills farming is conducted as a side issue to stock raising.

2. We have a handy market at our mines of gold, silver and tin, for our surplus cereals and vegetables, and we ship fat stock and wool East.

3. Prices have been good in the past and prospects look brighter as our mines are becoming more developed.

4. No.

5. Not much has been made. As in all new places, we scratch the ground a little, put in the seed and trust to luck. Wool raising is my source of revenue. J. W. B.

Hermosa.

FROM ILLINOIS.

1. Strawberries are the principal products, then oats and the products from a little mixed farming.

2. In Chicago and towns north of it by commission merchants.

3. The prices have been low and prospects are very dull.

4. A few, by having something that is fancy.

5. Farming has changed a little. Years back we raised wheat as the principal crop and some hogs. Then the chinch bug became so troublesome and prices so low that almost every one quit raising wheat. There seems to be an opinion that more meadows would be better for us here. J. K.

Centralia.

1. The products of mixed farming.

2. At the nearest shipping points where they are bought by commission dealers.

3. Prices have been very low with the exception of pork, which has been from four to five cents per pound. Cattle have not paid expenses. Horses have been profitable: quite a large number have been shipped from here to St. Louis, Kansas City, Denver and to the Eastern markets.

5. Improved machinery, a more thorough cultivation, a better knowledge gained from reading agricultural papers, have caused a great change in farming. No paper in my estimation is equal to the RURAL NEW-YORKER. J. T. H.

Mendon.

1. We depend principally on corn and hay in connection with stock raising.

2. A large portion of the corn is fed to hogs, which are sold to local buyers, or middlemen who ship them mostly to Indianapolis. The corn not fed at home is sold to local grain dealers at the nearest shipping points. Hay is sold to dealers at the nearest points, who bale it and ship it mostly to the Southern markets.

3. The average prices for the last four years have been as follows; hogs live weight $4.50 per 100 pounds; corn about 28 cents per bushel; hay from $6.00 to $10.00 per ton, according to quality, averaging probably $8.00 at home.

4. By securing a good, clean, well-cured crop of Timothy hay cut at the proper time, say, as soon as the bloom is off, farmers may get an advance of, say, $2.00 per ton on the above prices, and an advance on hogs by having the best of well-bred stock well fatted.

5. Down to 10 years ago farmers depended mostly on raising wheat and selling it and other grains to grain dealers to get cash. Now they feed more of their grain on the farm than heretofore, thereby increasing the amount of manure and increasing the value of their products. I would suggest that if the farmers of this section would turn their attention more to sheep raising and the dairy, and to the improving of their breeds of cattle, they would make more money, and get better prices. The average prices for almost all farm products are low at this time: corn 25 cents; oats 18 cents; wheat 75 cents; potatoes 0,00; hay $6.00 to $7.00 per ton in the stack or barn; sheep $2.00 to $3.00 per head, clipped; wool 24 to 26 cents per pound. Cattle, butchers' stock $2.50; the shipping grades $3.00 to $3.50 per 100 pounds. E. J. M.

Shelbyville.

1. Southern Illinois, or this part of it, is pretty evenly divided between timber and prairie land. The ways or means of raising money are many; not one alone would do to depend on. On the prairie, Red-top, oats, and cattle; on the timber, wheat, clover-seed, hogs and cattle.

2. At our nearest railroad stations, five of which are about equally distant—nine to 12 miles—to local buyers.

3. Wheat from 65 cents to $1.10 per bushel; Red-top seed 35 to 75 cents per bushel; clover seed $3.25 to $5.50 per bushel; oats 15 to 30 cents per bushel; hogs from $3.25 to $6.00 per 100 pounds; cattle from $2.00 to $5.00 per 100 pounds. One year ago last fall Red-top seed brought only from 20 to 30 cents per bushel, which did not pay expenses. Cattle are very low at present, but we hope for better prices.

4. A few farmers make more money than the others by pooling and selling their products in large lots, saving the buyer much time and trouble.

5. Timothy and clover are taking the place of wheat, tobacco and Red-top. Dairying too,is creating much interest in this neighborhood. Owing to the low price of cattle and Red-top seed, the ravages of the Hessian fly and chinch bugs, we will have to change our mode of farming, or depend wholly on our wives to support the family and pay the taxes with poultry and eggs, which command a very good price. J. N. R.

Mount Erie.

1. Hogs, cattle, dairy products, corn, oats, hay, potatoes, tobacco, melons, in about the order named.

2. Most of the grain, hay, etc., is fed by stock raisers, and only the surplus is hauled to the nearest towns. Stock are generally sold at the handiest railroad station to buyers who make a business of buying and shipping to Chicago. Tobacco is often shipped to St. Louis, or Cincinnati, Ohio.

3. Prices seem to be very unsettled, and this is caused, I think, by stock and grain gamblers and speculators. Prices are generally so low that it is only by the best management, and by a lucky sale when prices are up, that the common farmer can make a profit. If the enormous sums wasted for cursed drink could be turned into the honest channels of trade,prices would soon be better, as drunkards' families are, at present, poor consumers of healthy food and clothing.

4. Some farmers made money two or three years ago forcing calves for market at 10 or 12 months old. They began to feed, as soon as the calves would eat, plenty of oats, corn, bran, oil meal, etc., besides letting them run with the cows till four or six months old, and when the animals were sold they weighed from 700 to 900 pounds per head, and brought from four to six cents per pound. But this seems over-done, and prices now are three to four and a-half cents.

5. There has been no change in farming except in raising tobacco, which is comparatively of recent introduction here; but it doesn't show such profit on paper as it did a few years ago. Raising pop-corn would be profitable if prices would remain as they were last fall in Chicago—1¾ cent per pound in the ear. We can raise easily 1,400 to 2,100 pounds per acre. Potatoes have no sale at present; but I believe they would be worth 20 cents per bushel to cook for hogs, if corn were at its usual price of 40 cents instead of 25 cents. Large profits are made by good breeders who raise and sell thoroughbred cattle and swine. W. S.

Pleasant Valley,

FROM OHIO.

1. Cheese, butter, wool, pork, veals and sheep, and some wheat.

2. At Youngstown, Buffalo and Cleveland.

3. They are yearly going down in value.

4. Some get extra prices for butter, factory-made, and that from the best farmers.

5. More artificial manures are used, and more potatoes are raised. Here on the Western Reserve, cheese is most depended upon unless near Cleveland, where milk is sold. I think we are doing better farming than we did 10 years ago. The RURAL may help some.

Gustavus. H. H. K.

1. Most farmers here depend on wheat, oats and milk for cash.

2. The wheat and oats are sold mostly at the mills here and in Akron (the Akron mills are numerous and large); the milk, at the various cheese factories in the county.

3. The price of milk has varied from five to 15 cents per gallon of 10 pounds, the average being about seven cents for summer and 12 cents for winter.

4. A few farmers get extra prices on milk by shipping or carrying it to milk depots, hotels, etc., in cities.

5. Farming has changed but little in 10 years, and the same crops are grown. Potatoes are grown quite largely now, but last year's glut will probably discourage many.

Cuyahoga Falls. W. S. C.

1. Maple sugar and sirup, with fruits, wheat and potatoes.

2. We have home markets at Garrettsville, and at the Mahoning Valley Iron Works.

3. Prices remain about the same with very little variation. The future does not look very bright, there seeming to be an overproduction in all farm products except the maple products whose area is limited, and whose production cannot be overdone.

4. There are some farmers who have built up a trade in sirup, and can, box and ship sirup directly to regular customers at an advance of 50 cents per gallon. Some by use of cold storage keep apples till they are out of the regular market and get better prices, but they do not claim any great advantage by so doing.

5. Ten years ago this whole section was strictly devoted to dairying and sheep husbandry. Now not one in 10 of the old factories is running. They are rotting away, having been forsaken by owners and patrons. Our best cash crops consist of maple products which are about the only things that bring us any profits. Farmers should form a vast trust and demand "living" prices for their products. They have the power to do so, if they would only combine. L. M.

Garrettsville.

FROM MINNESOTA.

1. Oats, barley, potatoes, hay, good horses, beef, pork and dairy products.

2. Mostly east—at Chicago, New York,etc.

3. Prices for stock, horses, beef, pork and dairy goods have been fair.

4. The most prosperous farmers are those who produce a good article and ship it direct to the consumer.

5. Farmers have changed from wheat-raising to diversified farming, with stock in the lead. J. A. T.

Austin.

1. The principal crops are wheat, oats, barley and corn.

2. Corn is fed to cattle and hogs and these are sold to the butchers and shippers. The other grains are sold at the elevators.

3. Prices for the past few years have been very low except last fall, when wheat was high. The men who have the best of everything get the highest prices. "X. L."

Winona.

1. Wheat.

2. At the railroad station to the elevator company.

3 The price is $1 per bushel. Prospects are fair for a good crop; but prices are likely to be lower.

4. Some do; it depends on the location of their land, and how they work it.

5. Not much. Some have come in to raise stock which doesn't pay very well yet; but it will be better after a while. There is not much blooded stock in this section yet. We will have to raise hogs and stock as wheat is running out. J. F. M.

Ottertail.

RURAL SPECIAL REPORTS.

Georgia.

SUMMERVILLE, Chatooga County, May 30.—We had a very mild winter. Wheat and oats came through uninjured by cold. The grain is plump and fine—as good as I ever saw it. Fall oats will be light; spring oats short, but the grain of both will be good. We have had a very dry spring,but we have had a fine rain to-day all over the country, which will be a great thing for spring oats and for all farm crops. Wheat is ready to cut now; it looks almost as yellow as gold. Fruits of all kinds are in the greatest abundance. Peach trees are so heavily loaded that they are breaking to pieces. My Niagara grapes are as large as No. 1 buckshot. The cotton crop is late on account of cool, dry weather. Corn looks well, but it is small. Some have not finished planting; while others have corn waist-high. This North Georgia is a fine country and there is plenty of room for some Northern farmers and Northern capitalists; they are surely coming, too. J. C. H.

Washington.

DAVENPORT, May 20.—I have lived here for seven years and never saw a better prospect for crops than at present. Many are coming here from the East, and most of them are much disappointed. Good land is about all occupied, and for the man without means this is no place. S. C.

Entomological.

DISAPPEARANCE OF THE COLORADO POTATO-BEETLE.

IT is now about 30 years since the Colorado Potato-beetle first appeared in Iowa and about 25 years since it crossed the Mississippi river in its march eastward. The beetles were first collected in their native home at the base of the Rockies on the upper Missouri in 1819 by Thomas Say, Zoologist of an exploring expedition sent out by the U. S. Government to the Northwest Territory. Only a few of the beetles were seen and these were feeding on a wild plant, Solanum rostratum, belonging to the same genus as our common potato, Solanum tuberosum. The marvelous increase and spread of this insect over the entire country were due,principally,to the increased food supply brought to them by the introduction of the potato by the settlers without a corresponding increase of their natural enemies. Not only has the Colorado Potato-beetle spread to all parts of our own country, but it has crossed the Atlantic and is already doing much damage in Europe. During all of the years that this beetle has been with us, its myriads of egg-clusters and plump, juicy larvæ, or young, have furnished abundance of delicious food for predaceous insects which, in their turn, have also increased in numbers.

I do not remember to have seen it stated that the potato-beetles were very greatly on the decrease over large areas. I came to Iowa from Michigan one year ago, and was surprised to find so few Colorado Potato-beetles, in the vicinity of the Iowa Experiment Station. I do not think that I saw a-half-dozen of the adult beetles during the entire summer although I made special search for them on several occasions. On inquiring of old residents, I was told that the "potato-bugs" had been on the decrease for several years. At the present time the potatoes in my garden are nearly knee-high and the tops are badly punctured by the little black Flea-beetle (Haltica cucumeris) that did so much damage in many places last summer, but I have not seen a single "potato-bug" anywhere. Last winter the Station sent out a large number of question sheets to the farmers of Iowa, making inquiry concerning certain injurious insects. Out of over 300 replies to the question: "Have the Colorado Potato-beetles done any damage in your vicinity the past summer?" more than half were in the negative.

To the question: "Are they as numerous as they used to be?" only 26 replied in the affirmative, and these replies all came from the northern and eastern parts of the State.

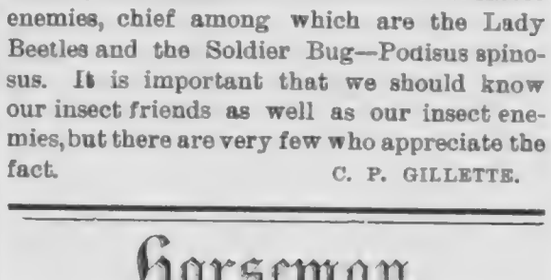
I think there are two principal causes for this great decrease in numbers of the Colorado Potato beetle first, the free use of the arsenites, London-purple and Paris-green; and, second, the increase in numbers of its insect enemies, chief among which are the Lady Beetles and the Soldier Bug—Podisus spinosus. It is important that we should know our insect friends as well as our insect enemies, but there are very few who appreciate the fact. C. P. GILLETTE.

Horseman.

HACKNEY MARE "MOVEMENT."

See page 141.

THE R. N.-Y. has frequently printed pictures of Hackney horses and described them so well that our readers know the main points of interest about the breed. This week's picture is given—see Figure 155—because it shows one of the most remarkable horses of the kind in England. It would seem at first sight that the remarkable color of this mare—known in England as "skewbald"—would fit her for the circus rather than for competitive exhibition for a high place in the ranks of a breed of horses that are remarkable for solid colors, yet this mare has beaten every rival that has appeared against her. When at rest she is described as an "insignificant-looking little horse," but when harnessed and hitched to a cart, she shows a style and energy that are remarkable, considering her age and the service she has seen.



ANSWERS TO CORRESPONDENTS

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

TAPHRINA PRUNI: A FUNGUS ON PLUM TREES.

E. T. I., Marshallton, Pa.—What is the fungous growth on the inclosed twigs of the Miner and Wild Goose plums? The pest first appeared here two weeks ago, and is spreading quite rapidly. The Miners have the thriftier growth, but are suffering most. It looks as if everything would be destroyed. The pest first appears on the stem of last expanded leaf, and then extends to the off wood of the branches.

ANSWERED BY E. A. SOUTHWORTH, ASSISTANT MYCOLOGIST, DEPARTMENT OF AGRICULTURE.

The twigs in question are the victims of a fungus known to botanists as Taphrina pruni. It is closely related to the fungus that causes the disease of peach trees, known as "peach curl." On the plum it generally attacks the fruit, causing what are commonly known as "plum pockets," but occasionally, as in this instance, it also attacks the growing branches. Similar cases have been reported from the South and from Iowa. The fungus is itself a plant that grows within the tissues of the twig and produces its fruit on the surface. The powdery patches seen on the deformities are masses of spores, each of which is capable of reproducing the fungus and causing the deformity of another twig. The part of the fungus growing within the tissues is the mycelium, or vegetative part of the plant, and is composed of fine, branching threads of microscopic size. By their presence, they so irritate the unlignified parts of the twig as to cause excessive growth and so produce the deformities. The presence of this fungus is quite independent of any fertilizer that can be applied to the roots, but is dependent to a large extent on a proper condition of the atmosphere, heat and moisture being necessary to the germination of the spores, and to the infection of new shoots. When infection has once occurred, however, the fungus can develop under any ordinary conditions, and the mycelium will live over winter in the woody parts of the stem, and in the spring will grow out into the young shoots. In order to get rid of the fungus, it is necessary to remove and burn every diseased shoot as soon as it makes its appearance. In doing this, it is best to cut back the branches so as to destroy all parts which are likely to contain the mycelium of the fungus. Instances are known where this process was followed for two or three years with decidedly beneficial results. If, in addition to this, it is desired to disinfect the trees so that spores falling on the leaves or stems will not germinate, the following method of treatment may be used: Spray the trees in the spring before the leaves come out with a solution made by dissolving two pounds of sulphate of iron in five gallons of water. This would destroy any spores lodged in the crevices of the bark. Spray the foliage two or three times during the summer with a solution made as follows: Into a vessel having a capacity of one gallon, pour one quart of ammonia (strength 22 degrees Baumé), add three ounces of carbonate of copper; stir rapidly for a moment, and the carbonate of copper will dissolve in the ammonia, forming a very clear liquid. For use, dilute to 22 gallons. Use a good force pump with a fine nozzle, and make the applications after sun-down. The simple cutting back will, however, if persisted in and followed up on *all* the diseased trees at once, probably be sufficient. An illustrated account of the fungus will be given in the Annual Report of the Department of Agriculture for 1888.

RATION OF SILAGE AND SUPPLEMENTARY FEED.

Several Subscribers.—How much silage should be fed to a cow and what sort of grain is best fed with it?

ANS.—There appears to be no such thing as a standard analysis of silage. The materials of which the silage is made vary so much in composition and the silage itself is made under such varying conditions, that a standard analysis seems out of the question yet. The Wisconsin Experiment Station directors have printed a list of grain rations that may be fed with silage. The R. N.-Y. could do no better than give them here. These are daily rations, and the cow is expected to eat, with the grain, 40 or more pounds of silage from well-matured, well-eared corn.

(1.)		(2.)	
Oat straw,	8 pounds	Hay,	5 pounds
Bran,	7 "	Bran,	5 "
Oil meal,	2 "	Oats,	4 "
(3.)		(4.)	
Bran,	7 pounds	Malt Sprouts,	3 pounds
Hay,	5 "	Oat straw,	6 "
Corn Meal,	2 "	Oats,	4 "
(5.)		(6.)	
Hay,	5 pounds	Br's Gains,	20 pounds
Oats,	5 "	Bran,	6 "
Corn Meal,	4 "		
(7.)		(8.)	
Bran,	10 pounds	Corn Meal,	3 pounds
Corn Meal,	2 "	Clover Hay,	8 "

(9.)

Bran, 8 pounds
Fodder Corn, 5 "

(10.)

Oats, 5 pounds
Fodder Corn, 5 "
Oil Meal, 1 "

(11.)

Clover Hay, 7 pounds.
Oats, 5 "

ABOUT TWIN CALVES

R. L. K., Licking, Washington.—Will twin heifer calves breed? I have been told that they will not; if so, what is the reason?

ANS.—Yes. It is safe enough to conclude that both will breed. Your informant probably meant that where twins are born, one a heifer and the other a bull, the heifer is usually barren. Such heifers are known as "free-martins" and they are generally unable to breed. The rule is not absolute, however. About the time your letter reached us, one of our friends in Livingston county, N. Y., sent us the following account of a fertile free-martin, which he knows to be correct:

"Two years ago next month one of the best cows I ever owned (grade Short horn) gave birth to twins, the get of a Holstein bull. The bull calf was sold to the butcher for veal, and the heifer, which was born first, and the larger by 10 pounds, I raised, together with four others, the get of the same bull. She has grown well and developed into a fine animal. She gave birth the 19th of the present month (April) to a bull calf, which weighed 90 pounds, and is doing finely. She has a large udder, prominent milk veins, and, so far as I can judge, bids fair to excel in all points, her half sisters of the same age."

BREEDING FROM CROSS-BRED BULLS.

W. J., Glendale Farm, Md.—I have a fine bull calf from a thoroughbred Holstein bull and a thoroughbred Alderney cow. Will it be as good a bull for breeding purposes as a thoroughbred, or would such a cross tend to deteriorate rather than improve the general qualities of milking cows?

ANS.—We presume Jersey is meant by the word Alderney. A cross between a Holstein-Friesian bull and a Jersey cow might partake of the character of one parent in preponderance to that of the other; or it might fairly represent both. This uncertainty is the most serious objection against cross-breeding and the use of cross-bred bulls for breeding. Such a bull would certainly not be so good as a thoroughbred, but it would be better than a grade of either breed, that is, a cross between the pure-bred and a native; and while it would not improve the stock so much as a thoroughbred, it would not deteriorate it, as its good blood would have some useful effect. Sometimes excellent strains of cross-bred cattle have been made in this way by wise selection.

GETTING RID OF SPARROWS.

F. K. P., Delevan, Wis.—Can the RURAL help us with regard to the sparrow pest? In a village corporation here, an ordinance against shooting birds, though daily broken, is never enforced. But to lessen their numbers I have to be a law-breaker. I have lamed my arm stoning sparrows to very little purpose. Last year there was no ordinance against shooting them, and by doing so I had very little trouble from them. Is there any help in noiseless powder, air-guns, or what? Or is the benefit from shooting, as some claim, due principally to the loud noise of the reports?

ANS.—Shooting is not a good way to rid ourselves of sparrows. Shooting drives other birds away. If shooting is practiced it should be in winter when most of our useful birds have gone south. The better way is to snare or poison them in winter. This may be done so as to cause no mischief and yet clear out the sparrows with a guileless conscience.

A BLUNDER TO BE AVOIDED.

W. D. G., Clintondale, N. Y.—As there appears to be a diversity of opinions as to the meaning of "sulphate of copper" in the composition of the Bordeaux Mixture, a remedy for rot in grapes, the RURAL would, no doubt, help some of its readers by telling whether real sulphate of copper (blue vitriol) or sulphate of iron (copperas), which is also sometimes called sulphate of copper is meant. As there is a wide difference in the prices as well as in the effects of the two, no doubt should be allowed about the matter.

ANS.—A deal of mischief, no doubt, has been and will be done by such blunders as those here mentioned. The Bordeaux Mixture is copper sulphate or blue vitriol, not sulphate of iron. Sulphate of iron is green vitriol or copperas. The Bordeaux Mixture is lime and copper sulphate.

Miscellaneous.

E. C. A., Aberdeen, Dak.—For ticks on sheep, use Thymo-cresol, manufactured by T. W. Lawford & Co., Baltimore, Md.

R. C. F., New York.—The New York State Experiment Station, Geneva N. Y., will make analyses of chemical fertilizers for farmers in New York State.

C. H. H., Brightwood, Ind.—In a late RURAL an item told us that potatoes were raised at the Michigan Agricultural College at the rate of 182 bushels per acre from whole "seed;" how large were the "seed" potatoes and were the plants thinned out after they came up or not?

ANS.—Professor Johnson of the Michigan College, informs us that the potatoes were of medium size and were not thinned.

G. W. T., Birmingham, Conn.—1. What is the cause of the injury to my Snyder blackberry leaves, samples of which are inclosed? 2. What is the best way to get rid of rose-bugs on grape-vines?

ANS.—1. The trouble is caused by the so-called "orange rust." All that can be done is to cut down and burn the infested plants. It attacks the wild as well as cultivated kinds. 2. The R. N.-Y. uses Buhach or pyrethrum powder—one heaping table-spoonful to two gallons of water. Spray the vines through the Nixon or Cyclone nozzle. Repeat daily.

DISCUSSION.

CURING HAY: THE HAY-LOADER.

C. S. RICE, LEWIS COUNTY, N. Y.—To save labor and expense, Mr. Terry cuts his heavy clover when he is very sure of fair weather, rakes while it is quite green and lets it cure in the windrow; Prof. Roberts with quality in view and plenty of labor at his command, cures his hay in the cock and uses hay-caps when deemed necessary, as set forth in the RURAL'S recent Hay Special.

It would probably trouble an expert to distinguish samples which could be the results of these different methods of curing. When the cost is considered, there is quite a balance in favor of the windrow system, but in my own experience it was not cost alone that led me to abandon my former practice of cocking all or nearly all my hay. The change was made when it was very difficult to get help to secure the crop in its season of greatest value for feeding. We try to secure hay when no rain is likely to fall just after it is cut, but if an unexpected shower should find a windrow exposed, the damage is not so great as that incurred by allowing the crop to stand when the clover or Timothy is allowed to stand a week or two too long. If grass that will yield two tons of hay to the acre is cut after the dew is off and before noon, and raked between three and five o'clock, the windrows may be turned over at 10 the next day, and drawing may commence at one o'clock. On the older meadows where there is but little clover, it is not always necessary to turn the rows, and frequently a load or two will be in condition to draw before dinner.

I use a low wagon with broad tires, with a rack 16 feet long and eight wide, a strong team, a good hay-loader, a double harpoon fork, and have large bays in which to unload. The loads will average a ton and a-half, and in an emergency, with two or three hands on the load, a large amount of hay can be secured in a short time. I do not mow in doubtful or catching weather; but work at repairs or in the potato or corn fields, and by using the loader and drawing from the windrow I am able to secure the hay crop in excellent condition and in fair season. I do not often sell hay, but I have at different times sold Timothy from a mow 30 feet square for an extra price on account of its brightness and freedom from dust.

With three good, strong, willing men hay can be quickly loaded with the hand fork, but such men cannot always be had, and more hay can be handled in the same time and with far inferior help by using the loader. To illustrate the value of this implement, I will state that 13 years ago I had something more than 100 tons of hay to harvest. Soon after beginning, my son was taken sick and was unable to labor for months. I had a very good hand 19 years old, and a boy 16 years old. I could not get other help. I was not able to pitch by hand or ride the mowing machine, but could drive the team with the loader and could handle the harpoon in unloading.

The hay was secured with this weak force in good season and without serious damage by rain, thanks to the hay loader. On one occasion I had about four tons of fine hay in the windrow fit to draw at half-past three on Saturday afternoon, and 30 cows to milk. I thought that I could place the hay in the barn in as short a time as I could cock it as the fineness of the hay was no hindrance to the loader. I made three loads of it and had it safely in the barn and the cows milked by sun down. The team went the length of the rows—about 40 rods—without stopping. With ordinary ability and carefulness in judging of the weather, hay can be nicely cured in the windrow at far less cost than when cocked. By the use of the hay-loader it can be placed in the barn in good time with help wholly inadequate to care for the same amount with the hand fork. I have owned the loader 15 years, and have used it 14 seasons for an average of about 100 tons each year. The cost for repairs has not been more than one dollar for the whole time.

Whatever others may think of the hay-loader, I value it as holding an important place among the improved implements that enable the farmer to accomplish his labor in less time and with less expense than in former years.

VALUABLE WHEAT EXPERIMENTS.

V. A. S., BENTON HARBOR, MICHIGAN.—About October 2 or 3, 1887, after removing a potato crop grown on Timothy sod, in a clay loam soil, I planted, with a roller drill, in a young orchard, one and one-half acre of wheat (Hybrid Mediterranean,) one bushel to the acre, the drill rows being 16 inches apart, in order to facilitate cultivation, which was practiced several times, at the rate of eight or 10 acres a day, and with most gratifying results as to the growth of the crop. The treatment for the experiments was as follows:

First, one space between the trees had been manured from the barn-yard in spring, for the potato crop. This was mulched in November with wheat straw four inches deep. Second, a space was manured as above, but not mulched. The remainder of the field received no manure in the spring, and no mulch in the fall. Third, a space was dressed with ashes from Chicago smoke-houses at the rate of four tons to the acre, at seeding time. Fourth, a space received commercial fertilizer from Chicago at the rate of 800 pounds per acre, at seeding. Fifth, another space got no fertilizer or manure whatever. Sixth, a space was top-dressed with half rotted barn-yard manure at the rate of 12 tons per acre, and it was harrowed in with the spring-tooth before seeding. On four additional spaces completing the field, nothing was applied. The season was cold in winter, freezing and thawing in spring, and very dry in summer. The yield was 25 bushels to the acre.

The results were carefully noted all through the season and were marked as follows, the lowest grade being six:

1st space, spring manured and mulched, No. 1.
2nd space, spring manured, no mulch, No. 3
3d space, ashes at seeding, no mulch, No. 3.
4th space, phosphate at seeding, no mulch, No. 4.
5th and four last spaces, no extra treatment, No. 6.
6th space, top-dressed from barn-yard at seeding, No. 2.

The mulched space showed much the best stand, and made the most wheat. The space top-dressed (from barn-yard) showed the darkest color and strongest growth, but lost a little by freezing; otherwise it stood No. 1. There was a perceptible difference between the space treated with ashes and that receiving phosphate (cost the same,) in favor of the ashes. The stand on about one-third of all that part of the field not mulched and not top-dressed from the barn-yard was frozen out.

Conclusions as to how to grow the best winter wheat crop here in Michigan:—Sow about September 15, one bushel to the acre; drills 16 inches apart; top-dress from the barn-yard; mulch with wheat straw, buckwheat straw, potato-vines, marsh hay, etc. Rake off the mulch with a sulky horse-rake, about April 1; cultivate till the wheat is 10 inches high. With fair soil such treatment will bring from 30 to 40 bushels to the acre, as was proved in the experiment above given.

THE PARKER EARLE STRAWBERRY.

W. B., DAYTON, OHIO.—By to-day's mail I send the RURAL samples of berries which I bought for Parker Earle. Of late I have seen several notices of a berry which it is proposed to call Parker Earle. As there is already on the market a strawberry of that name, introduced several years ago by Mr. John T. Lovett, it seems to me undesirable to put another of the same name out, unless it is much superior to the one already introduced. My berries are early, and these are not fair samples, as they are not half the size they generally attain, owing to a severe frost on May 23, when they were just in bloom. With me they are long in shape like Haverland, only not quite so pointed. When fully ripe they are a dark crimson, slightly acid in taste, and very firm. The vine is more productive than the Sharpless; but not enough so to make it a good market berry. Under glass culture the productiveness, size and flavor are improved and from my tests I am inclined to think this the best berry for forcing that I know of The leaves are more distinct than those of any variety I know; though they look weak, they retain their color until frost. Their variegated look remains under all conditions. Does this description correspond with that of the Parker Earle known to the RURAL?

R. N.-Y.—The berry sent was named Parker Earle. It was tested at the Rural Grounds before it was introduced, and reported upon. It may be good for forcing, but it has no distinctive merits otherwise. It was therefore proposed to discard it. The new Parker Earle is not yet for sale. It originated with James Nimon of Denison, Texas, and will be introduced by Prof. T. V. Munson, of the same place. It is one of the most promising sorts ever tried by the R. N.-Y.

AGAINST ARTIFICIAL COLORING OF BUTTER.

W. F. B., ANN ARBOR, MICHIGAN.—In the RURAL of May 4th the editor seems to favor the coloring of butter and he appears to think the subject hardly merits discussion. His comparison of the matter to the blacking of boots or the painting of houses seems to me to be quite defective. Good looks are always becoming, and perfectly proper when not obtained at too great a cost. There is no other way to make a boot respectable except by blacking, or to make a house so except by painting. But then we have to eat neither the polished boots nor the painted house nor the blacking nor the paint.

There is a much better way of making good-looking butter than by adding questionable ingredients to it and it is a much more profitable way. It is to put the color into the feed, by feeding sugar beets, carrots, parsnips or squash, notably the latter, with a ration of cornmeal and bran in addition to clover hay and corn fodder. By these means one can in winter make butter as sweet and attractive as in June.

People who color butter will can fruit with poisonous acids, and we can never tell what we are eating. Why not eat oleomargarine and be done with it if it tastes and looks like butter. But the most vital objection is a moral one. The act is a fraud, although in a small way; it may easily lead to greater ones. Who knows but some of the scores of bank cashiers who have skipped to Canada took their first lesson in dishonesty at their mothers' butter tubs?

CAN "NORTHERN-GROWN" SEEDS BE PROPERLY GROWN IN THE "MIDDLE STATES?"

"ANON," TERRE HAUTE, IND.—In the R. N.-Y., of May 25, a criticism is made on a statement made by the writer as to seedsmen selling for "Northern-grown seeds" those grown 200 miles farther south. The critic does not catch my idea exactly. A seedsman, we will say, in Minnesota, advertises his seeds, including corn, as the best, because northern-grown, which means with him grown in Minnesota. A farmer in the central part of Illinois or Indiana, thinking that seed corn from that latitude would be of benefit to him, orders some of it. But the corn had been bought in one of these lower States, possibly close by the residence of the one who orders. Is there anything wrong in that? It seems a very plain case—the farmer has been deceived. He may get good seed, but owing to the seedsman's profit and the double freight, it costs him four times what it would have cost at home. Admitting that northern-grown seeds are the best, there is a deception for probably half the seeds sold by seedsmen have been grown in a lower latitude, so that the advantage claimed by these northern seedsmen cannot be more than half true; half at least of their seeds being grown in the same latitude as those sold by all seedsmen in the Middle States and in a middle latitude. This is by far too great an allowance. At any rate if they advertise northern-grown seeds they should not sell as such those grown three or four degrees south of them.

TWO POULTRY PUZZLES.

S. C. M., WESTFIELD, N. J.—I set a hen on 13 eggs on April 3d. She was accidentally killed on the 8th, after having sat five days. I had doubts about the eggs hatching; but on the 11th after they had remained cold three days, I put them under another hen. Nine hatched—but, what do you think? Should they have "come off" 21 days from April 3d? You may think so, but they did not. They hatched out on April 27, instead of April 24. Does not this show that for 72 hours (April 8—11,) the life of those chicks was preserved without any growth? Odd, I think. I have a hen that will leave the nest while sitting only once in 48 hours, and invariably she hatches her eggs in 19 days. The ordinary hen that is off once or twice a day, sits for 20 or 21 days.

R. N.-Y.—This year we set a hen on Wyandotte eggs. She never seemed to act naturally, leaving her eggs frequently. They be-

came "stone-cold" several times. After about 10 days the hen was found dead on her nest—it is not known how long she had been dead when discovered. Another hen was placed on the eggs and four of them hatched, though two of the chicks were killed by the hen. Some good authorities state that a hen should not sit too steadily on her eggs, claiming that it is better for the eggs to "cool off" each day. The R. N.-Y. would like to hear from others on this point.

TO KNOW, BETTER THAN TO GUESS.

J. H. A., RANDOLPH, N. Y.—Every farmer knows that the profits are made up of little items coming from everything he husbands. Now, the one who farms well and knows just what he is doing allows no guess-work, and loses the least as a rule. I have been practicing this plan very closely of late in regard to the care of milk, though I was getting good results before, but I thought I might perhaps better them, and was surprised to find an increase of over one-eighth in the yield. Previous to the adoption of my present plan I set my milk as soon as I could milk two pailfuls and go to the milk-room and strain it, thinking there would be only a slight fall in the temperature; but when I tested it by means of the thermometer I found I was all wrong. Now each can of my milk is brought to a temperature of 100 or even 110°, and there is no guess-work. We can't afford to lose these little leakings. Only think of it—that little instrument, which costs but a trifle, may save a great deal for us. Who can afford to be without one in the milk-room? There are, no doubt, many who are doing the same as I did—going by guess-work—and what I have said may cause them to investigate and, as a consequence, largely increase their profits. I am fully confident that the more we know and the less we guess on our farms the better will be the results.

NEED OF MORE CO-OPERATION AMONG FARMERS.

C. F. O., DARIEN, CONNECTICUT.—As has often been said, "middlemen take all the profits." I see no reason why the day should not come when the farmers will buy and sell their own goods entirely. In some sections, this is largely the case now; but it is only because the farmers are united and work together. This is most noticeable in the co-operative creameries in New England. The farmers now manufacture their butter and fix a price on it, instead of, as before, taking it to the store and "trading it out," at the store-keeper's price. If the farmers can manufacture and sell butter in this way, why can't they grow and sell potatoes, and the other crops in the same way? I hope to see the day when our Western farmers will own their own mills, and make their own flour. Allowing these middlemen to "corner" our crops, and take our profits are things we will have to prevent, either by handling our own crops or by making our voice heard in the legislatures. This can only be done through co-operation. We have rights; why not stand up for them?

UTILIZING WIRE NETTING.

J. H. G., PEARSALLS, N. Y.—After completing my chicken yard, I had about 15 feet of wire netting left. It lay around the barn for a time, until finally I determined to put it to some use. So I put six old posts in the form of an octagon, and stretched the wire around them, putting a gate between two of them. I then moved a chicken coop, containing a hen with a brood of little chickens, into the inclosure. The next day I let the old hen out of the coop, and she has been as happy as a lark ever since. The little chickens occasionally climb through the meshes of the wire, but they never get far away from their pleasant home. I wish I had half a dozen of those little inclosures.

MORE ABOUT FEEDING ONIONS.

W. F. B., ANN ARBOR, MICHIGAN.—Two years ago I had a quantity of frozen onions. Not having disposed of all my stock before the frost came out, those on hand were not very salable, some of them being a little soft. I commenced feeding them to a couple of two-year-old heifers which were only in fair condition—just about holding their own on straw and corn-stalks. One of them ate the onions from the first, the other had to be educated for a few days. Both became fond of them, and though I fed only a small quantity at a time, I am sure the animals improved in condition.

L. C. M., WESTFIELD, N. J.—Just try toads as a remedy for Flea-beetles. They are worth paying 10 cents apiece for to be put in a garden or potato patch. "But they will hop away!" O, no; they like bugs too well, and they will find them in the best regulated gardens.

R. N.-Y. We have vines over 18 inches high that are covered with Flea-beetles. Will the toads jump up and eat them? Much has been said about the fondness toads have for potato bugs. The writer tried one the other day. The toad had fallen into an old drain where he had spent several days. It may be readily believed therefore that he must have been hungry. He was put in a tin can with three potato beetles. Twelve hours later the toad was found at the bottom of the can with two of the potato beetles perched on his back and the other by his side. Toads may eat the beetles—some of them at least may do so—but this particular toad surely proved a sad failure as an insect killer.

C. K., BELLEVILLE, N. J.—Can the RURAL assist me in the selection of a two-horse cultivator? I wish to obtain one which is easily handled, works with little waste of land in turning and can be adjusted for narrow or wide rows, and for deep or shallow (two inch) plowing. Are walking cultivators easier to handle than riding ones; (riding being no object) and are the former mostly tongueless? I have obtained circulars from different makers, but none gives the needed information.

H. A. M., GREENE, N. Y.—With regard to the size of clusters of various kinds of grapes, spoken of in a late RURAL, J. J. Thomas describes a cluster of Black Hamburgs that weighed 17 pounds.

What Others Say.

THE STRAWSONIZER. A distinguished party of agriculturists and representatives of the press recently visited the Queen of England's Farm, at Windsor, in order to witness a trial of Strawson's improved distributor, now styled the "Strawsonizer."

Our excellent contemporary, the Agricultural Gazette, says that the machines were ready for trial, one fitted for distributing liquids, and the other for solids. The same machine will do all kinds of work, and the only reason for using two was to save the time that would otherwise have been occupied in changing the fittings. The machine is a light one for one horse, being constructed in great part of wood, mounted on two iron wheels. The distributing power is obtained by a blast of air produced by a revolving fan, worked by the traveling wheels of the machine. As the material falls from the hopper, it is caught by a blast of air, and spread from the back of the machine. For solids a metal spreader is fixed, while liquids are sent through nozzles placed in different positions for various purposes.

Next, the other machine was set to work to sow barley, broadcast, at the rate of three bushels to the acre. The grain was distributed with wonderful regularity over a track 18 feet wide. A greater width could be covered, but the width named is considered most effective, and, as at this rate 30 to 40 acres can be got over in a day, the width is sufficient.

Another trial was an illustration of the sprinkling of a hop garden, special nozzles having been fixed for directing the liquid properly. In this case a dense and fine spray was sent out from the level of the ground up to a hight of about 20 feet on either side of the machine, and all present agreed that if the operation had been carried on between two rows of the tallest hops, the bine would infallibly have been sprinkled all over from top to bottom.

All the trials were deemed remarkably satisfactory, and it was the general opinion of those present that there is a great future in store for this wonderful invention. As a broad-cast sower for corn, seeds, manures, insecticides, sand (in the streets), or sanitary appliances, the Strawsonizer is certainly superior to any machine hitherto introduced.

Small hand-power machines are made for gardens, fruit plantations, coffee or tea plantations, and other purposes, as well as horse-power machines for farms. Special distributors are made for use in vineyards, for which purpose they are already in great demand. Indeed, the demand for the machine for all purposes, the Gazette says, is at present much greater than the supply. It would seem that this Strawsonizer is just what is needed, and sadly needed too, in this country.

RURAL LIFE NOTES.

LET US not forget the children's gardens at home, says the American Garden; neither must we forget that the children are of a younger growth than we. Their ambition exceeds their knowledge. Their efforts are persistent if not untiring. We cannot perform a giant's task, and should not expect a boy to do a man's work. Let us teach them to love garden work, and half of ours is done. Get tools light and adapted to their strength, and give them a little piece of ground where something will grow, and not insure discouragement by giving them some shaded corner or barren spot that a champion gardener could get no satisfaction from, as many guardians do, unless we wish to disgust them with gardens and plants and drive them to truer friends and better places than they find with us, and to seek pleasure in some other way. We must show them again and again the things they ought to know, and remember that example is the most potent factor in the education of a child. We must give them help to dig the stubborn soil, and tell them why some things are likely to flourish in this particular ground and others not. Advise them about getting their plants and seeds, which perhaps are more valued if of their own selection, and obtained with some effort on their part.....

MR. C. L. ALLEN says, in the above journal, that the gladiolus in our climate will not perfect itself in hot weather, and the only way to secure its full measure of beauty is to plant from the 1st to the 15th of July. Remember that, RURAL readers; Mr. Allen knows what he is talking about when he speaks of the gladiolus. We bought our first corms of him over 20 years ago. The writer well remembers that a set of 12 imported from France cost him $23, a rather large sum for a slender purse. But we enjoyed them more than the cost. Mr. Allen has done more to popularize the gladiolus and lily in this country than, we were about to say, all others put together—but we will say, more than any other person .....

PROFESSOR BUDD says that Acer ginnala is perfectly at home on the bleakest prairies of the Northwest. The objection to this tree in the R. G. is that it fruits too freely.....

PROFESSOR FERNALD states (see Transactions of the Massachusetts Horticultural Society, page 113) that Paris-green proves to be "a most effectual remedy for the rose beetle." We tried it thoroughly, as was thought, both on grape-vines and rose-bushes years ago to find that the rose-beetles did not seem to be hurt by it at all. He also recommends pyrethrum.....

THE MAINE FARMER some time ago put the searching question: "Can a ton of butter, of like quality, be produced at a less cost with a herd of Holsteins, than with the dairy stock we now have?".....

GOVERNOR HOARD wishes some of the 42 State experiment stations would make themselves useful in that direction.....

THE London Agricultural Gazette makes the gloomy remark that men who rely entirely upon farming as a means of maintaining and educating their families, are truly to be pitied.....

IT offers the soothing suggestion that it behooves young men who cherish a violent love for farming, and there are many such, to try if possible to combine their tastes for country life with some other more profitable occupation, and they may then enjoy their rural pleasures without fearing a monetary collapse.

DIRECT.

——W. F. BROWN in New York Tribune: "Don't go security."

——"EIGHT to 10 per cent. of corn-starch or arrow-root mixed with thoroughly dried table salt will, 'The Medical and Surgical Journal' says, prevent the packing of the latter in cruets, even in the most humid atmosphere (as on the sea coast), while a much smaller proportion is enough for inland points."

——AMERICAN GARDEN: "To teach love of plant life by text books, adding more to the already too long list for children, will, if practiced in our rural communities, be about as valuable as is usually the study of grammar. Some of the patient but erring teachers will learn their text books as they have their grammars; they can parse and analyze anything in the English language, but their letters are atrocious."

——NEW ENGLAND FARMER: "The Hale Brothers of South Glastonbury, Conn., expect to harvest this season the largest crop of peaches ever grown in New England upon any single farm. All their trees of bearing age give promise of a full crop."

——VERMONT WATCHMAN: "At the metropolis there is no agricultural journal to rival the long-established R. NEW-YORKER. It has the metropolitan spirit—a wide universality—but it never reflects the engrossing, selfish spirit of the great city. On the contrary, it is the strongest of all newspapers of any class in holding up every right and interest of the farm against every kind of corporate aggression, in the form of rings, trusts and all other aggressive monopolies. In the matter of illustrations it is easily at the head."

——N. Y. TIMES: "Farmers who use plaster on their corn or clover may be gratified, in either case, to know that this popular fertilizer is taxed at the rate of 50 per cent. on the cost of the unground material. We have bought the Nova Scotia plaster, which is a perfectly pure sulphate of lime, for $4 per ton at the port of importation, so that the import duty is 50 per cent. of the market value. No other country in the world is so well supplied with this mineral as the United States, vast beds of it being found in New York, Michigan, Illinois, Louisiana, West Virginia, Kansas, Nebraska, and some other States. Consequently this industry, considering the cost of freight, cannot fear injury from the competition of Nova Scotia and other parts of Canada. This tax is paid by the farmers beyond a doubt or question, and is a proof that, as with all other similar taxes, the farmer pays, out of his hardly earned income, a bonus to the gypsum quarriers for their personal benefit."

——N. Y. TRIBUNE: "The Rev. Wilbur F. Crafts mentions a prudent farmer, who, believing in having two strings to his bow, set up this garden sign: 'Boys, Don't Touch These Melons, for They are Green, and God Sees You.'"

"CHICAGO, May 31, '89.

——GENTLEMEN: Herewith we hand you our check in settlement of bill for advertising as per contract. It gives us pleasure to state that your paper has given us more business than all others we have used this spring combined; one feature that we did not expect was that it brought us orders from points near us.

THOMPSON & EDWARDS FERTILIZER CO."

——N. Y. HERALD: "Many men lead double lives, but reference to only one of them is made on their tombstones."

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For Sunstroke.

It relieves the prostration and nervous derangement.—*Adv.*

Miscellaneous Advertising.

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This successful medicine is a carefully-prepared extract of the best remedies of the vegetable kingdom known to medical science as Alteratives, Blood Purifiers, Diuretics, and Tonics, such as Sarsaparilla, Yellow Dock, Stillingia, Dandelion, Juniper Berries, Mandrake, Wild Cherry Bark and other selected roots, barks and herbs. A medicine, like anything else, can be fairly judged only by its results. We point with satisfaction to the glorious record Hood's Sarsaparilla has entered for itself upon the hearts of thousands of people who have personally or indirectly been relieved of terrible suffering which all other remedies failed to reach. Sold by all druggists. $1; six for $5. Made only by C. I. HOOD & CO., Apothecaries, Lowell, Mass.

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Stops Pain, Cramps, Inflammation in body or limb, like magic. Cures Croup, Asthma, Colds, Catarrh, Cholera Morbus, Diarrhœa, Rheumatism, Neuralgia, Lame-back, Stiff Joints and Strains. Full particulars free. Price 35 cts. post-paid. I. S. JOHNSON & CO., Boston, Mass.

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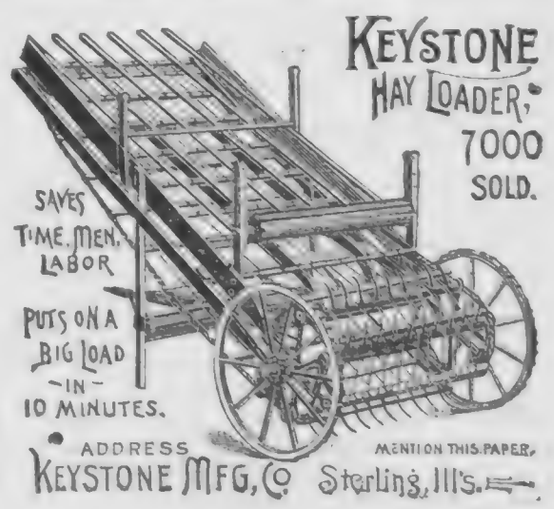


THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, JUNE 22, 1889.

THE gales and heavy rains of last week have blown away or destroyed so many of the Flea beetles that the vines of the "Contest" plot are having a little rest and, in consequence, show a decided improvement in color and vigor. Two weeks ago we were sure of another failure. Now we have a hope (not a very confident one) of success.

THE "three-barrel" potato experiment of the R. N.-Y. is progressing nicely. The stems have grown through from 15 to 16 inches of soil, and the vines are now 18 inches above the tops of the barrels, looking the picture of health. A platform has been made about the barrels level with the tops for the support of the vines when they shall fall over. This is to the R. N.-Y. a very *interesting* experiment, though nothing of any account may come from it.

NEXT week the R. N.-Y. will begin the publication of a reply to Professor Porter's recent attack upon the agricultural colleges. It is written by President W. I. Chamberlain, of the Iowa College. Speaking of Professor Porter's article, President Chamberlain says:

"It virtually charged failure because the agricultural colleges have not done as much in 20 years as the old colleges did in centuries. I claim great success, considering all the facts and circumstances."

"THE rose for the million" is what we hope one, if not two, of the R. N.-Y.'s Rosa rugosa hybrids will prove to be. We were told by several good friends four years ago that nothing would come of the cross. "It will be interesting, no doubt," they said, "but you will not get anything of value to rose growers."

"Why did we choose Rugosa crosses?" There were several reasons, the most forcible of which was that the field was a new one. And it is still new. It is by no means improbable that we shall have in and from these crosses new races of roses as valuable and as distinct as any others. Mr. John Thorpe, well known as being one of our first rose authorities, during a short visit to the Rural Grounds a few days ago, was emphatic in his praise. "It is a great acquisition," said he.

"WILL you tell me," said the writer of this note to Mr. John Thorpe, during a brief visit to the Rural Grounds, "why those half-a-dozen tall, vigorous rose bushes do not bloom? I have asked the question of several others, and I was answered that they were not properly pruned."

"Why," replied Mr. Thorpe, after a brief examination, "they are Manetti roses." We had never suspected it, not being familiar with this rose, which is used chiefly for stocks upon which to bud other roses either of feeble constitution upon their own roots, or those that will not readily root from cuttings. This Manetti is a very shy bloomer. It always has as many as seven leaflets—rarely nine. It may be known by this characteristic. Have you any roses in your collection, readers, that do not bloom? Perhaps in your case, as in ours, the varieties budded upon them have been winter killed and the Manetties, which are great roses to sucker, have grown up in their stead.

VERMONT should enforce more fairly the prohibitory liquor code she has passed. The fact that the number of United States licenses to liquor sellers amounts to 450—more than one for every town and village in the State—demonstrates that a great deal of intoxicants is sold there in spite of the law. Cider used to be one of the staple products of the Green Mountain farms; but the law with regard to its sale is stringent and pretty rigidly enforced. The penalty for the first offence in selling it is $10, but for a second conviction the figure is raised to $20; while persistent violations of the law are punishable by fines varying from $1,000 to $3,000, with varying terms of imprisonment, at the discretion of the court. While the sale of intoxicants in towns can be carried on without much difficulty, the sale of cider by the barrel on the farm is not so easily concealed, especially as a share of the fine goes to sharpen the wits of the informer. Let the sale of cider be prohibited by all means; but the law against other intoxicants should also be sternly enforced.

DURING the past week the R. N.-Y. has examined a good many acres of potatoes in different parts of New Jersey. The crop is generally looking fairly well, though the heavy rains about planting time caused some rotting of seed, particularly on low land. But the beetles! They are without number. It is pleasant to know, (see Mr. Gillette's article on page 413,) that they are disappearing in Iowa, but the serious fact remains that they like New Jersey too well to leave. They are a terrible pest. We noticed that more farmers than ever before are using the water and Paris-green mixture this year. Some of them use the plaster mixture when the vines are small, and the water at the second and later applications. We met one farmer who has already made six applications of poison, and the beetles are "still with him." The frequent showers that we have been favored with this year have greatly increased the labor of applying poisons. The larger growers are all using sprinklers. Without question the tendency of potato growing is towards large areas where the improved machinery for planting and harvesting the crop can be employed. Another evident tendency is to make the potato crop the point in the farm rotation for applying the bulk of the fertilizers.

THE DOUBLE WHITE HORSE-CHESTNUT.

IT is a matter of surprise to the R. N.-Y. that so little is said, so little known, of the beauty of the Double White-flowering horse-chestnut. As an ornamental tree it ought invariably to take the place of the old single white (Æsculus hippocastanum) because it is more pyramidal in form; because the racemes of flowers are larger and, last though really first in importance, as the tree bears no fruit, it is free of the serious objection to the common variety that the lawn, during the late season, is littered with the nuts and their shells. The flowers of the Common White have but five petals; those of the Double White have upwards of 30. Each petal is splashed with crimson at the base and the whole raceme reminds one, at a little distance, of a compact spike of hyacinths. This tree was sent to us some five years ago by Ellwanger & Barry. It is now about 12 feet high and is blooming for the second year. Ellwanger & Barry have a specimen over 40 feet high, which Wm. Scott, in his "Suburban Home Grounds," describes as "in the blossoming season, like a verdant tower, spangled all over with hyacinth bouquets."

A CAUTION.

TO a half-barrel of unleached ashes were added a quarter of a barrel of "Peroxide of Silicate," and a quarter of plaster which had been poisoned with the usual quantity of Paris-green, viz., 1½ pound to the barrel—making a barrel in all. This was sifted on the vines of a small plot of potatoes in order to find out what effect it would have either in killing or repelling the Flea beetle. It was assumed that the poison of the quarter-barrel of the "Peroxide" and plaster would suffice when thoroughly mixed with the half barrel of unleached ashes to kill the potato-beetle. The result of this application upon the vines was to seriously injure all the leaves and to destroy most of them. As it had been previously ascertained that the ashes and poisoned plaster, mixed together, half and half, did not notably injure the leaves, the damage was attributed to the "Peroxide."

A barrel of the Peroxide was sent to the Rural Grounds last year for trial, and we were instructed to use it without dilution. The result was that it killed all the leaves upon which it was sifted, as our readers were at the time advised. This insecticide (Peroxide of Silicate) is now advertised in many papers. If it is now made the same as it was then, our readers are cautioned against its use without first testing it on a few plants.

ANOTHER POTATO PEST.

LAST year we found stems of potatoes, here and there, fallen over and either dead, wilted or wilting. Examination showed that in some cases the stem was rotten about an inch under the surface of the soil, while in others it seemed to have been eaten into as if by a borer of some description. This year so many of these wilted or dead vines were noticed that a more careful investigation was made. The result was that the wireworm or thousand-leg worms (Julus or Iulus), was found to be the apparent cause. In some instances the vine was girdled; in others from one to four of these millipedes were found eating into the stems; in others they had bored into and up the stem. The vines at length rot about the infested part, or become so weakened that they fall over and die. The vines are attacked always just beneath the soil, or from one inch to 1½ inch underneath.

We now learn that potato vines in certain parts of Monmouth County, New Jersey, are similarly attacked. The growers attribute it to blight or something caused by damp weather. In some sections the damage is said to be serious. We advise the use of powdered sulphur blown or sprinkled about the stems.

PROFITS OF TRUSTS.

IT is a very difficult matter to learn the profits made by any of the "trusts." All the public knows is that men connected with them have become enormously rich, and that trusts have gone on multiplying until they have become a power so all-pervading in nearly every enterprise and industry in the country, that its extent can hardly be estimated. The parent of trusts—the Standard Oil Company—took the position that it was a purely private affair, and all the other trusts have followed the example of secrecy it has set them. Particularly is this the case with the sugar trust; but some figures have lately been published here, which show that its profits must be so enormous as to make even Standard Oil men green with envy. Its nomial capital is $50,000,000, and on this amount dividends are paid; but it is claimed that the actual investment is only $15,000,000, the other $35,000,000 being "water." During the past week its certificates have gone up from 99 to 107, with large sales and increasing demand. Refined sugar was put up a quarter of a cent per pound, or $5,000,000 on the yearly consumption, and as the trust refines 75 per cent. of the whole output, its shares of this little increase alone must amount to $3,750,000 a year. In 1888 its profits, as shown by elaborate statistics, could not have been less than $14,000,000, and doubtless they were much greater. For the first five months of this year the same line of calculation shows that its profits must have reached $8,230,000 at the lowest estimate. The price of refined sugar has risen continuously ever since the trust was formed. Statisticians say this is due chiefly to short crops in the cane and beet-sugar producing countries; but there is no doubt that this insatiable combination has had much to do with a steady rise which has put so many millions into its own coffers. The New York Courts have already decided that the association is an illegal body; what are the oppressed people going to do about it?

THE CASH CROP.

WHAT is your money crop? You will doubtless ask yourself this question after reading this issue of the R. N.-Y. This is a business number. There are two points upon which all our correspondents seem agreed

1. The agriculture of most sections is constantly changing. The extension of the railroad system may revolutionize transportation facilities so completely that the producing of a staple article may be changed from profit to loss. This is because the article can be brought to the market from more distant lands that are so situated that the article can be more cheaply produced. The section that is outbid in price, must produce a better article that will command a higher price, or go into some new line of work. A study of the answers found in this issue will reveal dozens of such changes; from dairying to maple sugar, from hay to potatoes, from grain to cheese-making and so on. The point we wish to emphasize is that conditions are changing so rapidly in this country that it is the farmer who has his farm in such a shape that he can readily take advantage of reliable indications of change, who alone can hope to keep ahead of his business

2. There is an evident and growing demand among farmers for a thorough organization that shall direct education in the right lines, encourage the study of sound, political economy, and take hold of the business situation in a vigorous and clear-headed manner. This organization must command respect and demand for farmers a fair and honest share of the country's profits, striking straight at whatever stands in the way, whether it be the prejudices of the farmers themselves or the rapacious greed of speculators or monopolists. The R. N.-Y. believes that thousands of good, thinking farmers all over the country are satisfied as to the need of such an organization as we have indicated. When shall we have it? How shall it be started? These are vital questions.

And while on this subject the R. N.-Y. is led to refer to a farming community it has just visited. This community is in New Jersey, within 50 miles of New York. "The cheap lands of the West will so flood Eastern markets with staple products that New Jersey farmers will have to become gardeners or truckers! Farming cannot be done without the use of stable manure as a basis; chemical fertilizers will 'burn up' the soil!" At certain seasons of the year we hear these statements repeated over and over again. How ridiculous they appear after a visit to the community we speak of. Here we have a class of farmers growing rich at producing hay, potatoes, corn and wheat. Yes, actually growing rich at producing Western products within 50 miles of New York. And it is done practically *without* stable manure; a farm having less than 10 head of cattle sells from $1,000 to $1,200 worth of hay and absolutely grows stronger and more productive each year. Under such a system of agriculture the boys stay at home, farm life is robbed of its worst features and becomes a very ideal life of comfort and happiness. We saw this life realized—saw the crops, the tools, the men. We were so interested in it that we propose to tell R. N.-Y. readers just what we saw. We hope our report will lead to some hard thinking. It will be nothing but a report as honestly written as possible.

BREVITIES.

WE shall be glad to have our readers answer the question asked by C. K. on page 415.

MR RICE'S remarks, on page 414, are well deserving of attention. Mr. Rice, by the way, "makes farming pay."

A NEIGHBOR had a piece of potatoes that were very uneven as a result of too much water. He has just been transplanting some of them to get them all in a bunch. Will it pay?

MARKET gardeners in the vicinity of New York are cutting early cabbage. Strawberries are not so plentiful, and are higher in price than they were two weeks ago. Cherries, peaches, plums and gooseberries are quite plenty at reasonable prices.

ORATORS, poets and philosophers are fond of saying that railroads are vast blessings and wonderful civilizers. On page 410 a Kansas subscriber shows that he would have been far better off if the railroad had kept away. Thus we see that there are many ways of looking at every subject.

Mr. William Falconer writes us as follows: "STYRAX JAPONICA is now in full bloom, and the most beautiful shrub in our place today, the fragrant waxy-white snowdrops hang in thousands all over the little trees and bend the slender branches right straight down. And among herbaceous plants our Canterbury Bells are supreme, surpassing pæonias, poppies, coreopsis and larkspurs—thrifty, branchy, one mass of clean, clear, showy flowers, which are highly serviceable as garden ornaments and for cut flower purposes when they last a long time. Now is the time to sow for next year's crop of flowers. The chief trouble with growing Canterbury Bells is that they are barely hardy in winter, but the protection of a cold-frame is all they need and all I give them."

FARMERS often put on wry faces when, in a few hours after Paris-green has been applied, a rain washes it off. They should bear in mind that the grubs eat constantly and that if the poisoned water or plaster has been thoroughly applied, every grub then upon the vines will be killed. The only objection to a rain is that the new grubs from the eggs not hatched out when the poison was applied will need another dose. The R. N.-Y. thinks that many farmers use too much poisoned plaster on their vines. The thinnest dusting suffices as well as a dense coating which is certain to injure the foliage more or less. In fact, plaster alone or ashes or flour or any other substance, however innocent in itself, which covers the leaves, impairs the leaf function to the injury of the plant.

Field Crops.

WHEAT NOTES.

DO YOU SOW A RED OR A WHITE WHEAT? WHY?

ANSWERS.

FROM IRVING D. COOK.

Nearly every year since the weevil ravaged the wheat fields of Western New York, I have grown almost exclusively some of the red varieties of winter wheat. Although larger yields of the Clawson (the favorite white variety) are sometimes grown, I am convinced that for our average yield, one year with another, the red varieties on my farm are the most profitable, for the following reasons: They are less liable to be winter-killed; they weigh more pounds to the bushel, and they usually command a higher price for flouring purposes. A promising new variety called the Yates County Amber, is just being introduced among the farmers of Genesee county, yielding the last season, in nearly every instance, 30 or more bushels per acre.

Genesee County, N. Y.

FROM PROFESSOR SAMUEL JOHNSON.

We sow both red and white wheats. As a rule, red wheats are hardier, less susceptible to injury from insect enemies, and thus more likely to give a fair return on lands somewhat worn. The price of red wheat is frequently more than that of white. When this is true, it would be a reason for sowing the former. Red wheat can usually be sown earlier than white. On good, fertile wheat land I would ordinarily sow white wheat, in this latitude, from Sept. 10 to 20th. For earlier or later sowing I would prefer red.

Michigan Agricultural College.

FROM HERBERT ROOT.

Here in North Dakota we sow only amber-colored hard Spring wheat, because, 1, it makes the best flour in the world; 2, we can grow it, and but few others can; 3, it brings the highest price; 4, it out-yields all other wheat with us.

Valley City, North Dakota.

FROM O. C. HOWE.

I sow both white and red wheat upon my farm. I sow white wheat upon stubble ground because I think it less liable to be hurt by the fly. In the main, red is best, because the price does not fluctuate, as has been the case with that for white wheat. Formerly when white wheat was generally raised, the buyers did not want it; and now that but little is raised the price is two cents above that for No. 2 red.

Berrien County, Michigan.

FROM S. B. HOEFGEN.

We sow red wheat almost exclusively, because the red varieties are generally considered more hardy and reliable. The buyers formerly paid more for white than for red wheat; but now no difference is made in the price, and that perhaps has had something to do with the great decrease in the area of white wheat.

Crawfordsville, Ind.

FROM PROF. A. J. COOK.

I sow white wheat. As the years go by there is no essential difference in the price. Sometimes the white wheat sells for more than the red sorts; then again the red kinds fetch most. In my neighborhood the Clawson has done better than any other wheat ever brought in the country. Hence I sow Clawson.

Shiawassee County, Michigan.

FROM H. COX.

I sow red wheat, because the first consideration in a wheat is earliness, then come stiffness of straw to make it stand well, and productiveness. Millers seem to prefer it for the new process of flour making. We find the above qualities in our best red wheats.

Kalamazoo County, Michigan.

FROM J. C. STRIBLING.

I sow a small-grained, round, plump winter wheat. It is the earliest and hardiest, consequently it is less liable to rust, while it weighs more and gives more good flour per bushel than the white varieties. Some years whites do better, but my 30 years' experience with different varieties convinces me that wheat of the red sort described is the most profitable and reliable here for a term of years.

Anderson County, S. C.

FROM JONATHAN TALCOTT.

I sow a white wheat without beards, because I like the product better than that of a red wheat. I like a white-wheat bran far better for feed than a red-wheat bran, and the women of the house like the flour better.

Rome, N. Y.

FROM A. L. CROSBY.

I sow a red wheat (Fultz) because it stands up better, is hardier, yields better, sells better, cures better, and is better in every way than any white wheat I know of.

Catonsville, Md.

FROM O. T. BATTLES.

But little wheat is raised in this county. Red wheat is grown here principally. I have sown Fultz wheat for about seven years and think it superior to any of the new kinds, it being hardier and not so liable to winter-kill, and also being a good yielder. The county mills consider it equal to white, at least the roller mills will give as much flour in exchange, and when it is sold in the Cleveland market the difference in price is but one cent per bushel. Wheat in this vicinity will not be over half a crop, but on higher lands farther back the prospects are good for a full crop.

South Euclid.

Arboricultural.

THE OLEASTER AND PEA-TREE FAMILIES.

PROFESSOR J. L. BUDD.

THE OLEASTER FAMILY.

In nearly all parts of our country the silvery-leaved shrubs and trees have their uses for certain positions on the lawn, and among those really hardy at the West, and in the "Cold North," the oleasters, and some of their near relatives, take the lead in beauty of foliage and rare fragrance of flowers. With my office perfumed with a vase of the blossoms the idea occurs that a few notes on the best species may encourage their propagation and dissemination.

ELEAGNUS ANGUSTIFOLIA.—The East European form of this is hardy everywhere in the Northwest. It is an erect grower and attains a hight of 30 feet or more, with a fine spread of top. The few larger specimens we have in Iowa have proven objects of interest in winter and summer, as not only the leaves and fruits are silvery, but the buds and young branches as well. The flowers of the Eastern form are perfect, and more fragrant than those of Eleag nus hortensis, and the fruit has no show of the red spoken of by Loudon and Hemsley.

ELEAGNUS ARGENTEA.—Although native to the banks of the Upper Missouri, this fine shrub is rarely seen in the West. Although it is difficult to excel it on the score of beauty and oddity of foliage, its habit of sprouting is against it as a shrub. Hence it should be propagated by budding or grafting on E. angustifolia. In Europe I saw many specimens of it growing in this way. Worked at a hight of four to five feet, it forms a handsome rounded head that can be seen from afar.

ELEAGNUS MACROPHYLLA.—This is a shrubby oriental species with glistening silver foliage. Its fruit is also said to be more nearly edible than that of the other temperate-zone species. It is a sprouter and will give the best satisfaction when top-worked.

ELEAGNUS LONGIPES is not really hardy here. It is killed back more or less each winter, yet the lower limbs are always full of the peculiar fruit.

HIPPOPHÆ SIBIRICA.—The Sea Buckthorn of West Europe fails to endure our summers or winters; but that of Southwest Siberia is all right up to the 43d parallel in Iowa. It makes a very handsome silvery-leaved shrub very little given to sprouting. It may also unite with the Angustifolia in top-working as it is a near relative.

SHEPHERDIA ARGENTEA.—This is known as "Buffalo Berry" on the Upper Missouri, where the banks are covered with the pretty combination of the silvery leaves with the loads of red berries in late summer and early autumn. As it is strictly dicœcious, and the fruit is a leading essential in the beauty of the large shrubs, for ornamental planting it should be planted in clumps of three or four. In certain positions on the lawn such a clump is very attractive.

THE PEA-TREE FAMILY.

The larger form of the caragana (Caragana Arborescens) has proven useful for screens, and as an ornamental tree of small size north of the 43d parallel at the West; but farther south its beauty of foliage is impaired by the summer heat. Some of the more beautiful dwarf species are, however, from the hotter and drier portions of East Europe and North-central Asia, and they will endure great summer heat and aridity of air, as well as the lowest winter temperatures. As the best of them are given to sprouting, they should be worked by budding or grafting on stocks of C. arborescens. With a view to encouraging their propagation in this way East and West, I will note three or four of the species now loaded with the rich, deep golden clusters of blossoms, to be followed soon by the peculiar little colored pods.

C. GRANDIFLORA.—Some specimens top-worked four years ago on the Arborescens, have attracted more attention than any trees on the grounds. Each forms a beautifully rounded, pendent head, and the large, bright yellow, pea-shaped flowers form a handsome contrast with the lighter green, acacia-like foliage.

C. REDOWSKII.—This forms a contrast to the above, as the foliage is different in shade and the leaves have but two pairs of ovate, smooth leaflets. It is a very profuse bloomer.

C. SPINOSA.—This is another varied form with singular spiny branches. Its clusters of bright yellow flowers, and its after crop of peculiar pods have a singular appearance among the thorns and handsome little leaflets.

C. FRUTICOSA.—This is prized as a shrub in East Europe, and is now warmly praised by some of our Eastern growers. But it will be prized still more when it is headed four feet from the ground on the Arborescens. The four named above are perhaps as desirable as any for top-working, yet those who wish varied shades of foliage, habit of growth, and shape, size, and season of flower, will equally prize C. microphylla, C. arenaria, C. pygmæ, C. frutescens, and C. Chamlagu. While it is true that these dwarf caraganas will prove most valuable where the shrub and ornamental tree test is restricted by trying climate, yet their peculiar foliage and flowers will give some of them a place over a large part of our country.

Ames, Iowa.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

A BIT OF NATURE.

THE most charming of all gardens are those which give the impression of a "naturall wildernesse," to use Lord Bacon's words—where Art is subservient to Nature, and indeed the art itself is Nature. A wild garden, where both native and foreign hardy plants are allowed to grow at their own sweet will, with just enough training to render them effective, compared with formal bedding-out, is as a sonsie country maid compared with Miss Flora MacFlimsey. It is a sign that good taste is on the increase nowadays that such graceful, natural arrangement is superseding the old-time horrors of carpet-bedding.

One of the prettiest natural gardens the writer recollects consisted of a little nook surrounding a tiny pond. It was an irregular bit of water, with

> "Many a fairy foreland, set
> With willow, weed and mallow."

The pond itself was filled with water-lilies and duckweed, the latter being present without leave. Duckweed can only be compared with the obtrusive "pusley" described in "My Summer in a Garden;" it takes up its quarters without any invitation whatever, and makes itself so much at home that the gentle water-lilies positively feel as if they were intruding. It can only be endured, like chilblains; though it may be kept in check to some extent, there is no cure, when it once gains a foothold—except filling up the pond. But this is a digression.

All around the edge of this pond aquatic and semi-aquatic plants were arranged—the blue Pontederia, frail-looking Arrow-head, Golden Club, with its orange spike, and tufts of rushes. Beyond this was a wide border, backed by a natural bank overgrown with pink bindweed and wild clematis. This border was filled with a little of everything. The soil was rich peat and leaf-mold, which formed excellent nutriment for great clumps of native ferns. Mingled with the ferns were native orchids, Lady's Slippers, Snakemouth, Ladies' Traces, and Preacher-in-the-pulpit. The gorgeous foliage of caladiums rivaled the orchid blooms with their glowing colors, and everything looked, not as if it had been planted, but as if it just grew there. This sounds a very simple bit of a garden, and so it was; but it was most charming—a bit of ideal horticulture.

One may arrange a garden of this style entirely with native plants; though in such a case some unappreciative Goth is pretty sure to vex the soul of the gardener by dubbing them "weeds." When it can be arranged, a rock border is charming, only don't build one of those mausoleum-cairns of stones, with here a plant and there a plant, sticking up among the rocks, the whole being described by many misguided people as a "rockery." Such arrangements are often built merely as an irregular pile of stones, with a top-dressing of soil put on with the last layer. And then people wonder why their plants don't grow! If you examine rock-growing plants in their native habitat, you usually find that the fissures in which they grow widen as they descend, and consequently the plants have an unfailing supply of moisture and nourishment at the root. Reverse this, put a plant in a shallow fissure which soon diminishes to nothing, and it is not strange that it "dwindles, peaks, and pines." This is the usual rockery, and very melancholy is its general effect. It is so often inappropriately planted, too—fancy red geraniums growing on a pile of rocks, and yet we often see this favorite plant so misused. First and foremost, a rockery or informal border should give the idea of permanence, and for this reason hardy herbaceous plants should be chosen.

"There's fennel for you, and columbines," and the latter is one of the showiest plants for a rock border. There is the wild columbine, miscalled honeysuckle, with its gay red and yellow flowers, livening the rugged Palisades; there is the more dainty Rocky Mountain columbine, blue and white, and the lovely golden columbine from Arizona—all hardy, and all native Americans. Then for early spring there is

> "The coy anemone, that ne'er uncloses,
> Her lips until they're blown on by the wind."

Most of the anemones are of mountain birth, and they all find a congenial home among the rocks. The scarlet Anemone fulgens is the most gorgeous flower of early spring, while the bright yellow Ranunculus-flowered anemone forms a glorious contrast. Then there is the pale purple or blue Pasque Flower, which brightens the plains of the Northwest; all form desirable tenants for a semi-wild border.

The bonnie Blue Bells are charming enough to find a place in every garden, and most of them are admirable in a rockery. They are real mountain-dwellers for the most part; they cover the slopes of the Carpathians, and lift up their innocent faces by snowy slopes of Mt. Cenis.

Assuredly one may arrange a hardy garden permanently with an overflowing measure of success, as far as beauty goes, and with little trouble and less expense. The arrangement must never be formal or stiff; natural unstudied grace

> "Doth more bewitch me than when art
> Is too precise in every part."

It may be a home of grandmother's flowers—perennial phloxes, Sweet Williams, yellow Day lilies and Love-in-a-mist, Corn-flowers and pinks, and Love-lies-bleeding, tangles of hardy roses and clumps of Flower de Luce. I think Lord Bacon's idea for a wild garden could not be improved upon. He says: "*Trees* I would have none in it, but some *Thickets*, made only of *Sweet Briar* and *Honney-suckle*, and some *Wilde Vine* amongst; and the ground set with *Violets*, *Strawberries*, and *Prime-Roses*. For these are sweet, and prosper in the shade. And these to be in the *Heath*, and here and there—not in any order. I like also little *Heaps* in the *Nature* of Mole-hils, (such as are in *Wilde Heaths*) to be set, some with Wilde Thyme, some with Pincks; some with Germander, that gives a good flower to the eye; some with Periwinckle; some with Violets; some with Strawberries; some with Cowslips; some with Daisies; some with Red Roses; some with Lillium convallium; some with Sweet Williams Red; some with Beare's Foot, and the like Low Flowers, being withal, sweet and comely."

This is the very ideal of a natural garden. Who, after reading it, could call Bacon a dry and musty old philosopher? It is a model one should bear in mind when establishing a hardy border—a veritable joy forever to all flower-loving women.

OUTINGS IN NEW ENGLAND.

NO. X.

MARY WAGER-FISHER.

WE consumed a full half of our second New England outing time in prolonged stops on our way to the Massachusetts

sea coast. We first went due north from Philadelphia to Oswego, on the New York side of Lake Ontario, where we tarried for more than a month, and consumed a full week in journeying from there to Boston.

The lake breezes render Oswego an agreeable city for a summer sojourn, and the little city has quite an extended reputation for its beauty The streets are beautifully shaded, and I do not remember to have been in another town in which horse-chestnut trees so abound, nor where landscapes are painted on the wall back of the pulpit in churches—not a bad idea, however, particularly when the picture is better than the parson.

The native elms of Northern New York are of great beauty and add a large element of picturesqueness to the landscape, and in varied scenery New York is peculiarly rich—mountains, rivers, lakes, forests—a world of beauty in itself. A friend, who has traveled much, and who knows a great many people, always says, when speaking of New York State people: "They are the *best* in the world—the warmest-hearted, the most hospitable." Being a New Yorker myself, of course, I always coincide with these views, while Anaximander looks grim in behalf of his beloved Keystone State. Provincialisms are not so marked in the different States in this country, perhaps, as in the different counties in England. Still they do exist to a certain extent. A young man born and bred on the Pacific coast, who lately came to study medicine in Philadelphia, told me that the way in which Philadelphians emphasize words in a sentence struck him as very funny. Instead of saying "Are you going *out?*" the question would be "*Are* you *going* out?" A woman from Maine says that she never becomes accustomed to the Philadelphians' habit of speaking of having lost a friend, when the friend has died. New Yorkers use "want" for "wish," and a noticeable provincialism is the use of "boughten" to designate an article bought at a shop instead of one home-made.

One of the entertainments of Oswego, of which Anaximander and the laddie availed themselves, was a summer school of languages, which brought together several hundred young people for vacation study. The natural method of teaching was employed, and in the various class-rooms rarely a word was heard, except in the language being taught. Of course, by being obliged to hear and speak only the language studied, an apt pupil would soon acquire considerable facility in its use, and the confusion arising from different tongues to be heard was quite amusing. One of the young men in the school was an Armenian who had been born and reared in the immediate neighborhood of Mount Ararat, and after having studied English for a few months he felt competent to lecture. But his English was a curious conglomerate, and his Armenian dress and his nativity smacking so strongly of Noah's Ark, constituted his only claims to attention. In no one way is the good nature of Americans more manifest than in their treatment of adventurers, who *talk* for a livelihood, and have nothing of value to say.

There are a number of very beautiful homes in Oswego, but the most noted for its almost priceless treasures is that of Mr. Irwin, a handsome, healthy-looking man, who grew up in the country near Oswego, later on engaged in the buying of grain and accumulated a large fortune, and who has spent it most liberally in buying, from time to time, exceedingly rare and beautiful things—pictures, bric-a-brac, and particularly books. He owns one of four books in existence, and one of the first 11 books—Bibles—printed in Latin by Gutenberg, who used movable types and was five years in printing them. A few pages were printed, when the types were reset for succeeding pages. This one Bible is valued at $20,000. When Mr. Irwin secured it in Europe, it was in pig-skin binding. It has been elaborately rebound at a cost of over $400. Many of the valuable books are kept in a fire-proof safe, and are more precious than gold: among them are a number of exquisitely illuminated missals of the 13th and 14th centuries. A small print about as large as a silver dollar, after a picture by Albert Dürer—the "father of German art," and who is said to have invented etching—cost nearly 500 dollars. A copy of the Bible, in some 60 volumes and weighing a ton or more, contains prints of every picture of value or interest extant illustrating Biblical subjects. In the drawing-room is a table once owned by Marie Antoinette, of France. It is inlaid with painted medallions in Sèvres china and is of great beauty and value. The great charm of the Irwin house is the exquisite harmony, to the minutest detail, in the furnishing, and its extreme homelikeness. Although every article of furniture is as beautiful as money could well buy, everything seems to be perfectly at home and used to being enjoyed by home-loving occupants. This is but one instance out of many in this land of self-made men, of little centers of art of surprising excellence being established in the most unexpected places. One cannot but wonder how a country lad grown into a busy manhood could have time to form so fine a taste in the fine arts.

One of the industries of Oswego is the manufacture of starch by Mr. Kingsford. The starch is made of Western corn, which is ground wet, and goes into immense wooden tubs or vats, 10 feet in diameter and greater in hight. The chemicals put in the water in the vats have an odor like lye, and the smell from the starch factory is very unpleasant. After a time the water is drawn from the vats, and the contents left therein are drained in square troughs lined with white muslin. This is now practically starch, and is broken up, moved into another apartment where it is wrapped in blue papers and put in the drying room. When it is dry, a brown crust which has formed on it has to be scraped off, and this refuse is worked over into a lower grade of starch. About six weeks are required for the entire process. Mr. Kingsford is of English birth, but came with his father to this country, where they worked in a starch factory in Jersey City. The starch was made of wheat, which was dear, and its cost led to experiments in the use of corn, all of which failed. But out of one failure grew success. Some discarded buckets of the corn in the process of experiment, having been set out-of-doors over-night, the contents were found next morning to have changed into starch. Thirty-five tons of starch a day are turned out at this factory, and to accomplish this, much ingenious machinery is used and many men and women are employed. The wooden boxes which hold about six pounds of starch and have a sliding top, cost about 20 cents The machine which does the dove tailing of these boxes was invented by F. I. Gleason, and I was told that he was too poor to patent it and other men had utilized his invention. The refuse of the factory is bought by the farmers in the neighborhood of Oswego for hog feed, and they pay for it about 15 cents per barrel. One woman whose business it was to paste a colored picture on the top of boxes was so quick that she pasted on 2,500 a day. The women employed were paid half a dollar a day and the men double that and more. There had never been any "strikes"

SOME DEFINITIONS OF "CULTURE."

OLIVE E. DANA.

WOULD it not be well for the many young "RURAL" readers, who long to make the best of themselves, intellectually and otherwise, to define to themselves clearly the "culture" or education or self-discipline for which they long? And would it not help them to such definition to read first what some wise men and women of our own day have said concerning this subject? One or two such utterances, thoughtfully pondered, might give new direction and impetus, new and more intelligent hopefulness to the seeker after wisdom.

A book called "The Philips-Exeter Lectures, 1885-86," contains as its opening chapter, an address by Edward Everett Hale. Its rather uninviting title, "Physical, Mental and Spiritual Exercises," conveys little idea of the scope and value of the paper to every student. One who wishes first of all to get a true notion of what education is—and this would seem to lie at the very foundation of attainment—should read this discourse of Mr. Hale. It may save him from many a failure, mistake, or discouragement. It is the wrong track that leads to disheartenment; it is better to take care of the beginnings, and start right. The lecture to which I refer is brief, and enters little into the details of study; yet it presents some very practical suggestions. And while our young student has the book in hand it may help him or *her*, (for why shouldn't girls build as wisely and broadly as their brothers, in their own way?) to read some at least of the following chapters. Any young person, ambitious of attainment, can hardly fail to be influenced, impressed and inspired by the closing lecture of the volume, that of that always noble and inspiring preacher, Philips Brooks on "Biography."

Then there is a book called "Hints on Self-Culture," by John Stuart Blakie, a Scotch scholar, professor and author, who died not long ago. It was published a few years ago in Funk & Wagnall's "Standard Series," in which form I secured it for the sum of 10 cents. But its manilla covers have guarded it well, and its counsels are as trenchant and trusty as ever. Its style is admirably clear and interesting, and its substance sound and impartial. Matthew's "Getting on in the World," is well-known and weighty in its accumulation of fact, anecdote and allusion. I know of no book so full of what may be called practical illustrations of success and its conditions, including, of course, culture and self-discipline as both preliminary and crown of "success."

Hamerton's "Intellectual Life" is full of good things. It has become almost a classic. To have read it understandingly and sympathetically is to have taken one sure step toward true intellectual discipline. For girls especially, Miss Livermore's "What Shall We Do with Our Daughters?" may be mentioned. And Miss Willard's "How to Win" is wise, witty and brilliant. It is so largely written out of her own life that it has added value and significance. And its racy chapters abound in practical wisdom and words of encouragement. Of course, it is not expected or desired that the boy or girl who cherishes "ambitions in homespun," and longs to find the way to knowledge, will read all these books. But one or two of them may be within reach, and may foster intelligent aims, open near, judicious and accessible ways of attainment, and give hope and courage to persevere therein.

The book first named is published by Houghton, Mifflin & Company, of Boston. Any public library ought to contain it, or indeed all the books mentioned.

GOLDEN GRAINS.

ON the worn features of the weariest face,
Some youthful memory leaves its hidden trace
As in old gardens, left by exiled kings,
The marble basins tell the hidden springs
—Dr. O. W. Holmes.

LEWIS says that organized structure is the platform of existence; it is the stage whereon the star actors—nutrition and propagation, motion and sensation—play their individual parts. The play is called "Life;" and accordingly as the actors perform their allotted roles—evenly, irregularly, or unnaturally,—so will the piece be successful, mediocre, or a dead failure.....

LONGFELLOW said that he venerated old age and loved not the man who can look without emotion upon the sunset of life, when the dusk of evening begins to gather over the watery eye, and the shadows of twilight grow broader and deeper upon the understanding.

WHEN one has lost the sentiment of pity out of his heart, he is not fit to live in such a world as this. He might do for some other one where there is no sin or suffering, *if there be such a one*, but here our compassions must be in constant exercise if we are to live to any good purpose.....

TALMAGE says that the kindly and songful birds have enough enemies without human antagonism. No creatures of God have a harder time to live than they; first, they have enemies in the animal kingdom, as man has in his. The eagles, the crows, the squirrels, the weasels, are their assailants. Then the hurricanes dash them against the rocks, and beat them against lighthouses, and tangle them in the telegraph wires, and toss them into the sea, and drive them back in their semi-annual migration. And they have their own distempers to contend against, and what a gauntlet of earth and sky they run before they come within range of sportsman or taxidermist. *For the Lord's sake, and for the sake of the harvests and the orchards and the gardens, of which they are the natural defenders, let them live.....*

THE CHRISTIAN UNION put the sentence: "It is not enough to *know* a thing; we must *feel* it," in large type and it deserves to be so emphasized.....

A MAN must always ask leave of his stomach to be happy.....

ALL physicians are not as frank as the doctor who, having been visited by a lazy man who complained of dyspepsia, gave him the following prescription:

RECIPE:

Woodsaw, ...	1
Cords of wood, ...	5

ORDER:

To be sawed into stove length within three weeks.....

GRANT, O Lord! that our varied experiences from day to day may prepare us for that higher life which impends over us. May we not shrink from it. May we labor so that we shall be accepted of God at whatever hour this life may end. May we not count it dear, nor seek to prolong it, nor dread its termination. May we listen for thy call. As men wait and watch for the morning through the weariness of the hours of the night, so may it be given us to long for our rest—to be homesick for heaven.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

HOW TO BIND THE RURAL.

ALMOST all the readers of the RURAL, without doubt keep files of their papers; but how to bind them, so as to make them handy to open, is a difficult matter. It is quite expensive to get "binders" for each volume, and then when the various issues are put in the binder, the RURAL for a year is so heavy and bulky that the binder does not secure it strongly enough for indiscriminate handling, such as my RURALS get from my children. By request of the RURAL I here show how I fix a year's numbers, and the volume has stood a year's mauling by two children, without any ill effects.

Take two slats the length of the RURAL, and about 2¼ inches wide; put them in a vice and saw out five or six notches as represented in the drawing. Then take the volume and jar the

Fig. 156.

edges on a smooth place, such as a board or table, to make them even like those of a book. Take the slats and carefully put one on each side of the back of the RURAL and put the volume in the vice, and then set the screw up tight. Have a few wires prepared, (those for ringing pigs or a little larger will do) bend each at right angles, about a-quarter or half an inch from one end. Then take the brace and bit, (use a small gimlet bit), and bore holes through the back of the RURAL at the notched places, and then put the wires through; let them run through a-quarter or half an inch, and with a hammer turn the end of each down flat, holding another hammer or weight against the bent end so that it will clinch down solid. Insert all the wires in this way, and you have a very solid book.

If a patent binder is used for the cover, fasten it to the volume in the same way. It is not necessary to put it back in the vice to do this, unless to bore the holes in their proper places. But if a binder is not used, (and most likely it will not be), get a piece of extra heavy, tough brown paper large enough for both sides and the back, and with flour paste put it on, and it will make a passable cover. It might, however, with a little care be put on before the rivets are put in.

M. H. C. GARDNER.

Niagara County, N. Y.

THE HOME.

NOTES FROM A LECTURE BY PRESIDENT HOLBROOK, OF THE NATIONAL NORMAL UNIVERSITY.

THE following thoughts on the home are gleaned from a lecture given before a large audience of young men and women,

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria

students in the school of which the lecturer is President:

"The integrity of the home is progress, power and influence. English-speaking people have the truest homes in the world, but *they* can be made better. Duties that are looked upon merely as duties, are not truly done, so in the home there must be a love for duties. When we come to the point that every law of God is a blessing, and the richest, sweetest blessing, we will be nearing the ideal He would have us reach.

The home is worthy of study, the duties of the husband are worthy of the study of every young man here. They are duties that build up the character. The man in the home ought to be the wisdom, the energy, the strength, and the business power. He ought to provide for his family and provide for the unnecessary desires of the family, as well as for the necessities. A 'good provider' is generally a good husband. The man who doles out his money grudgingly, with frowns and ugly remarks about extravagance, ought to be trounced. Abundant, generous, full-hearted provision should be made for the wants of the family. Provide generously, nobly, joyfully. 'Those who stay by the stuff' deserve half the spoils, as much now as in Bible times.

I know men who give the purse to the wife or give her an ample allowance. The wife has a right to a certain definite share of the earnings and the husband does wrong who does not recognize this. I knew of a man of wealth who invested his money here and there, but a panic coming, financial failure stared him in the face. He went to his wife, heavy-hearted, and told her of his embarassment and she loaned him $1,500, saved from her allowance during years of his generous providing, and he was saved from bankruptcy. I once sat day after day at the table of a man who every time we sat down grunted and groaned about something—the steak was tough, the potatoes were not dry, everything was wrong, he was always finding fault. You may be a good provider in cheerfulness or a good provider in niggardliness of spirit.

The husband must be kind, considerate, demonstrative, appreciative. The home is the place for reciprocal service. The best gift God can give us is to permit us to work for God's cause; but, next to this, lies the blessing of working for the home. The young man planning for a home is ready to promise everything.

How is it after marriage? The man has power to make his wife's life utterly wretched by criticism, sarcasm, fault-finding and snarling. Turn this right around, friends; praise the steak, say: 'How good this coffee is; I guess it is because you made it.'

One of the perils connected with the home is utter selfishness, usually on the part of the husband, but sometimes on the part of the wife. But the latter sort of selfishness doesn't occur once in 10,000 times as often as the former. If both are selfish; then what? Neither is willing to give up anything, and they think each other unpardonably selfish. Oh, I've seen it so many times!

Want of home liking, home love want of the feeling that home is the best place on earth, is too common. Too many men look on home as a place where they can get their meals and which they can get away from. Clubs and secret societies take away the beauty of home.

Another peril to the home is worry—business worry. A man who is amassing a fortune is in danger of carrying his business worries to his home and pouring out all the gall of his spirit on his wife, and he expects her to take it and be cheerful and sweet and charming.

Temper is another peril. A vigorous person is a man or woman of passion. If you are that sort, put yourself under control; hold yourself; you are simple and weak and silly in giving way to temper, and you may wreck the structure you have promised to perfect. You can, every one of you, make a heaven of your home. Let each determine that it shall be the best home he, with all his powers, is capable of making. Every true man and woman cherishes the hope and desire of being at some time a part of a true home. Prepare yourselves to make such a home and to cherish it above your own life."

Though this is not the entire lecture it contains in a measure the spirit of the whole. It is often urged by the President that reading is one of the delights and safeguards of a home. He says, "Good reading in the home gives health, mental power, respectability, growth in influence and power. Good books are the life of the mental system." Believing that the readers of the RURAL are people who appreciate and love their homes, and that they will be strengthened in their efforts to make home more beautiful by President Holbrook's vigorous thoughts, I have given the gist of them above. ALICE BROWN.

DOMESTIC RECIPES.

CHICKEN IN JELLY.

BOIL the chicken in as little water as possible until the meat is perfectly tender. Remove bones, skin, etc., and cut into half-inch pieces and season with pepper and salt. Take a small mold and arrange some slices of hard-boiled eggs on the bottom, then put in a layer of chicken, then more slices of eggs and chicken until all are used. Season, and skim the liquor the chicken was boiled in (there should be about two cupfuls) and while hot stir in a spoonful of gelatine which has previously been soaking in a little cold water. Pour this over the chicken and egg and set away in a cool place or on ice over night. Slice thin and serve with a garnish of parsley or celery leaves. M. B.

MINT VINEGAR.

PUT into a wide-mouthed bottle enough fresh spearmint and parsley leaves to fill it loosely. Cover with vinegar, and cork. Let stand for two weeks, turn off the vinegar into another bottle and keep well corked for use.

COOK.

SPICED CURRANTS.

SIX pounds of fruit, four of sugar, one of seeded raisins, one pint of vinegar, two tablespoonfuls of cloves, three of cinnamon and one of allspice. Boil slowly one hour, stirring constantly.

PICKLED WALNUTS.

PICK them when of a good size but tender enough to pierce with a pin Throw into a brine and let stand for three days, making new brine once during that time. Rinse off and put in the sun, turning frequently until black. Pack in jars and cover with hot spiced vinegar. MRS. A. C. E.

CHERRY PRESERVES.

THE Early Richmond will be found best. Stone the fruit, weigh, and allow the same amount of sugar. Take half the sugar and sprinkle over the fruit. Let stand an hour or longer, then put over the fire in a porcelain kettle and boil slowly for 10 minutes. Then skim out the cherries, add the remaining sugar, boil, skim and turn over the fruit. Cover and keep in a cool place until the next day. Drain off the sirup, boil, skim carefully, put in the cherries, boil for 10 minutes and seal up in small jars.

MRS. H. JONES.

RASPBERRY PUDDING.

MAKE a soft dough, using sour cream and soda, and stir in rasp'berries or blackberries Put into a tin pail having a tight-fitting cover and place in a kettle of boiling water. Boil three hours, not once letting the water stop boiling. Eat with sweetened cream. The mixture should, when put in, not quite half fill the pail. MRS. BUXTON.

CURRANT PIE.

ONE full cup of ripe currants, mash and add a cup of white sugar, one table-spoonful of flour made smooth in two spoonfuls of water and the beaten yelks of two eggs. Mix and pour into a tin lined with a good crust. Bake slowly. Beat the whites of the eggs stiff, add two spoonfuls of powdered sugar, spread over the pie, return to the oven and brown lightly.

COOK.

FROZEN STRAWBERRIES.

LINE a mold with vanilla ice cream—sides and bottom—fill the center with fresh strawberries, raspberries or peaches, sprinkled with powdered sugar, cover with ice cream, cover tightly and pack in salt and ice. Serve in about half an hour. The fruit should be thoroughly chilled, not frozen.

BROILED WOODCOCK.

DRESS and wipe carefully, split through the back and broil over a clear fire. Dip in melted butter and serve on a thin slice of toast with a piece of broiled bacon.

MRS. ECONOMY

ICED CHERRIES.

DIP the fruit by the stems into beaten whites of egg, sift powdered sugar over them and put in a warm place until dry.

MRS. A. C.

POTTED FRESH FISH.

DRESS, and let remain in a weak brine three or four hours. Drain and cut into slices. For five pounds of fish allow three ounces of salt, two of black pepper, two of cinnamon, one of all-spice and a half ounce of cloves. Place in an earthen jar a large layer of fish, then one of the spice (mix all together) with a sprinkle of flour and a few bits of butter, repeatedly till done. Cover the fish with equal parts of vinegar and water. Cover the jar with a cloth well floured on top so that the steam cannot escape and bake six hours. Let remain in the jar until perfectly cold. Excellent for supper.

EGGS ON TOAST

BEAT eight eggs until very light, add a cup of sweet cream and a little salt. Turn into a well greased pan and place over a moderate fire. Stir until the mixture is cooked through but not hard, and turn over pieces of nicely browned and buttered toast. MRS. E. C. D.

MOTHER'S HARVEST DRINK.

ONE quart of water, a table-spoonful of ginger, three table spoonfuls of white sugar and half a pint of vinegar.

MUSTARD.

HERE is the way that mother also prepares our mustard. Put a pint of good vinegar over the fire. When it boils stir in one-fourth pound of ground mustard, two tea-spoonfuls of salt, two table-spoonfuls of sugar and a tea-spoonful of white pepper. Boil slowly two or three minutes and turn into small bottles. Seal and keep in a cool place.

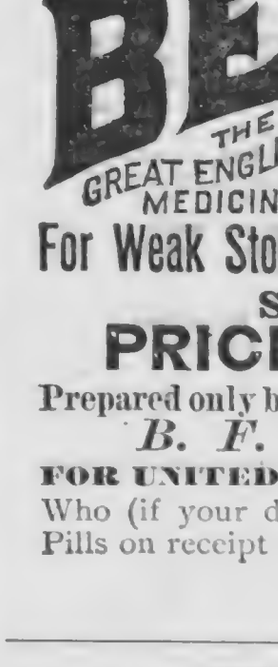
ELIZA BAXTER.

CHERRY CATSUP.

ONE quart of sour cherry juice, one pound of sugar, two tea-spoonfuls of cloves, two of cinnamon and a very little Cayenne pepper. Boil until thick, bottle and seal.

MRS. CRANE.

Miscellaneous Advertising.



Our Grandsires

Would have appreciated a purgative at once so mild and so effective as

Ayer's Pills,

the old cathartics being too harsh and drastic for common ailments.

"Ayer's Pills are the best medicine known to me for regulating the bowels, and for all diseases caused by a disordered liver and stomach."—Philip Lockwood, Topeka, Kans.

"I have been taking Ayer's Pills and using them in my family since 1857, and cheerfully recommend them to all in need of a safe but effectual cathartic."—John M. Boggs, 807 W. Chestnut st., Louisville, Ky.

For Sick Headache and Indigestion take

Ayer's Pills,

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass. Sold by all Druggists and Dealers in Medicine.

W. R & CO'S IMPROVED BUTTER COLOR

IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the buttermilk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere.

More of it Used than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & CO., Burlington, Vt.

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Made cheaply and quickly by using a Triple Motion

WHITE MOUNTAIN FREEZER.

Will freeze in half the time of any other Freezer and produce cream of the finest quality. Inquire for the "White Mountain" of your local dealer in house-furnishing goods.

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A book of Choice Receipts for Ice Cream, Sherbet, Water Ices, etc., packed with each Freezer this season, or will be mailed upon receipt of ten cents in stamps.

White Mountain Freezer Co., 134 Hollis St., Nashua, N. H.

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Over 100 different designs. Our Patent Automatic Brake FREE

50 CHANGES

We make the largest line of Adjustable, Reclining, Invalid Wheel, Physician's, Rattan and Office CHAIRS. INVALID GOODS a specialty. BICYCLES, VELOCIPEDES etc. *All at factory prices.* Special FREE delivery. Send stamp for Catalogue, and name what goods you wish it for.

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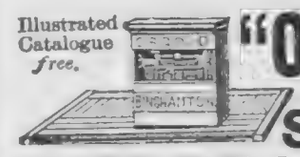
Illustrated Catalogue *free.*



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15 Cts. per Foot, material 3 feet wide. Adapted for Residences, Churches, Cemeteries, Farms, Gardens, &c. All needing Fences, Gates, Arbors, Window Guards, Trellises, etc., write for our illus. price list, mailed free.

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Central Expanded Metal Co. Pittsburgh. | N. W. Expanded Metal Co. Chicago.

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PAINLESS **BEECHAM'S PILLS** EFFECTUAL

THE GREAT ENGLISH MEDICINE

WORTH A GUINEA A BOX

For Weak Stomach—Impaired Digestion—Disordered Liver.

SOLD BY ALL DRUGGISTS.

PRICE 25 CENTS PER BOX.

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FOR UNITED STATES, 365 & 367 CANAL ST., NEW YORK,

Who (if your druggist does not keep them) will mail Beecham's Pills on receipt of price—*but inquire first.* (Please mention this paper.)

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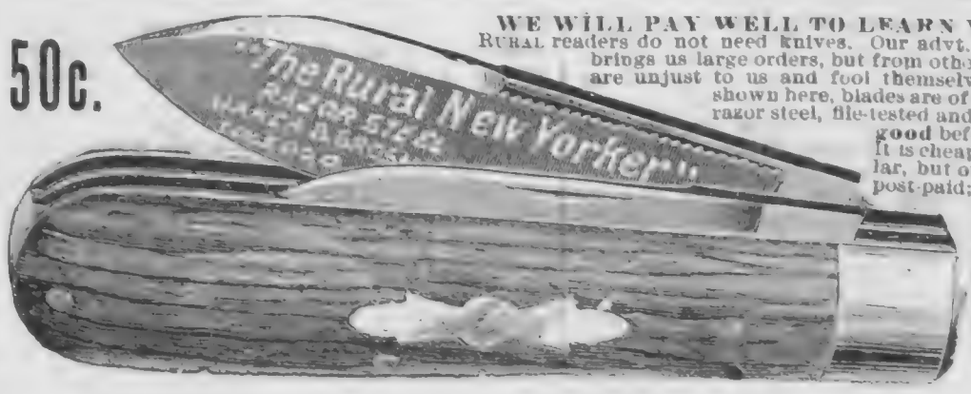

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RURAL readers do not need knives. Our advt. in some papers brings us large orders, but from others few. Readers are unjust to us and fool themselves. Take knife shown here, blades are of highest quality razor steel, file-tested and **known to be good** before sending out. It is cheap for a silver dollar, but our price is **50c.** post-paid; 5 for $2. Send for our 64 page free list, also, "How to Use a Razor"

MAHER & GROSH, 80 S Street, TOLEDO, OHIO

News of the Week.

HOME NEWS.

SATURDAY, June 15, 1889.

THE latest returns from the Conemaugh Valley put the number of deaths in the neighborhood of 4,000. Considerably over $3,000,000 in money has been subscribed for the relief of the sufferers—enough to give about $650 to each surviving family. Enormous quantities of clothing, provisions, etc., have also been given. At first about 7,000 men were set to work at $2 per day and rations, clearing off the wreck and burying the dead. Last Wednesday the State of Pennsylvania took official charge of the work and cut down wages to $1.50 a day and rations. All the workmen left except about 250. New hands are pouring in, however, and by Monday over 3,000 will be at work repairing damages, etc. Governor Beaver proposes to get $1,000,000 from the banks to be expended in whole or part in clearing up the valley which is to be done as a State sanitary precaution. A large number of prominent merchants have signed an indemnity bond to secure the bankers who may advance the money, should the legislature refuse to make an appropriation to pay it. It would cost $250,000 to $300,000 for a special session of that body and the work can probably be done for nearly that amount. The Cambria Iron Works which employed about 6,000 hands, have already started with 1,500, and will employ more as soon as they turn up and repairs and rebuilding give more room. Merchants are already starting afresh, and wholesale dealers elsewhere are liberal in giving them long credits. The 800 police and deputy sheriffs who did little good and added much to the troubles of the people have been dismissed. A handful of 32 policemen now look after things, while the soldiers maintain peace and prevent plundering. Tramps and thieves still try to ply their trade there, but on detection are jailed or banished. The expenses of keeping the people are put at $3,500 per day, but as wages are earned and business progresses, the necessary outlay will rapidly diminish. How best to lay out the generous charity of the public is now the vexing problem. About $330,000 of New York's cash donations are still here awaiting advices from Governor Beaver and the other authorities on the spot. Investigation shows that the reservoir dam was criminally weak in its construction. The owners of the lake have converted the Club House into an orphan asylum for the victims of the flood, and doubtless they will support it liberally. There is some talk of prosecuting them criminally, and more of suing them for damages..... Once more there's a great deal of talk about the establishment of a Plug Tobacco Trust with a capital of $25,000,000, to include all the important manufacturers in the United States. They are to sell out to the trust and then take stock for the amount of the valuation of their plant. There are several denials of course, as usual. The concocters of such schemes want to spring them full-fledged on the public.....Reports from the Standing Rock Indian Agency in North Dakota, say that Sitting Bull has been dangerously ill from pneumonia for some time and is so steadily sinking that he must soon pass into the "happy hunting grounds" where buffalo ghosts still range in millions. Of late he has lost all influence with the Sioux.... ...The salary of a New York alderman is $2,000 a year, of which he sometimes saves over $10,000, besides spending $5,000 in "treating" and "loans" to his constituents.....John Anton Wolff Grip is the new Scandinavian Minister to Washington.....The Inter-State Commerce Commission has been investigating the Kansas City Hog Trust, an offshoot of the Chicago Big Four syndicate..... The internal revenue receipts, beginning with 1863, when such taxes were first imposed, show that the beer business has grown in the last quarter of a century from the production of 2,006,625 barrels to 24,680,219 barrels. The internal revenue taxes have increased in the same time from $1,500,000 to $23,000,000.. ... .A San Francisco firm has just built the largest wine cellar in the world, with a capacity for 3,000,000 gallons, at a cost of $250,000. It looks as if Prohibitionists would have a poor chance in the "Wine State."..... It is proposed to start a Rubber Boot and Shoe Trust for the purpose of maintaining steady prices high enough to be profitable to manufacturers, jobbers and retailers..... Forest fires are doing a world of damage south and west of Superior, Wis..... Canadian Odd Fellows, in session at Montreal, have refused to admit colored men to membership.....Recent yacht races in England having shown that Lord Dunraven's new flyer, the Valkyrie, is not much faster than other crack English yachts, her owner intimates that he will not contest for the America's Cup this year, as the Volunteer could outsail his boat. As no other English boat can be built in time, there will therefore be no race..... Myriads of locusts have appeared in the wooded districts around Barrville, Pa..... The 17-year locusts are due in New Jersey this year.....W. E. Chandler has once more received the Republican caucus nomination for Senator in New Hampshire. The Ex-Secretary of the Navy is certain of re-election.....Governor Gordon, of Georgia, says that more men were killed in our civil war than England has lost in her nearly constant warfare since William the Conquerer; the statement is said to be absolutely true.... .... .The latest trust is one by the makers of castor oil, on which there is an import duty of 80 per cent..... ..... Ex-Senator Sabin, of Minnesota, has been quietly divorced from his wife on the ground that she has become a comfirmed drunkard and opium eater. This her friends indignantly deny. For some time she has been in an inebriate asylum at Flushing, Long Island, at her own request.....Mrs. Harrison, her old father, Dr. Scott, and her grandchildren, including of course, Baby McKee, are at the sea-shore at Cape May, N. J..... ...The Dr. Cronin murder case at Chicago still attracts a great deal of attention not only there but all over the country. Alexander Sullivan, a prominent Chicago lawyer and Irish leader, ex-president of the Clan-na-gael, has been arrested as an accessory to the murder. There's no doubt that it was a cool, premeditated crime perpetrated deliberately by an association one of whose cardinal tenets is the justifiability of political assassination by Irishmen. The members arrogate to themselves the right to try, condemn and execute offenders across the water and in this country also. Of course, as the coroner's jury justly said, such an organization is inconsistent with the spirit, and against the interests of this country and should be at once abolished, under whatever name it may act. Two alleged accessories have been arrested in this city; but for the present Governor Hill refuses to surrender them to the authorities of Illinois..... The loss by fire at Seattle, Washingon, is even greater than was first announced. The town, like all new, tentative places, was built nearly entirely of wood, with crooked, irregular streets. High rents prevented the tearing down of the buildings, and improvements generally. Now that all the old business part of the town has been destroyed, the streets will be laid out more regularly and fine buildings will replace old, ramshackle frame affairs. The fire may, therefore, have been a "blessing in disguise." Charity has liberally helped the needy, and with true far-western grit and energy the place is already being rapidly rebuilt, and business even among the ruins of the "old" and the bricks and mortar of the "new" is once more booming..... Governor Ames, of Massachusetts, has appointed Col. Thomas Wentworth Higginson to be State Librarian and Military and Naval Historian with a salary of $2,000 for five years and $500 a year for expenses. An excellent appointment.....Governor Hill, of New York, has signed a bill for the suppression of "bucket shops." Will it suppress them?.....The Canadian sealers of British Columbia say they will resist seizure if overhauled by American cruisers in Behring Sea.....Several months ago Attorney-General Hogg, of Texas, began suit against the Southern Pacific railway and other lines for the return to the State of 15,000,000 acres of land which had been given to the railways on certain conditions. These conditions the State showed were violated, and the forfeiture of the lands was demanded. Judge Key decided in favor of the State, and held that the railroads had wilfully violated the conditions and had no title to the lands. A great portion of the lands has passed into other hands, having been sold by the railroads, and under the decision the supposed owners have no titles. Mr. Calvin S. Brice, the genial many-time millionaire, who managed the last Democratic national campaign, and contributed towards its expenses, has been unanimously chosen Chairman of the Democratic National Committee to succeed the late Hon. William H. Barnum. Looks as if the Democrats intend to maintain in 1892 the tariff position they held in 1888. .....Over 700 singing birds secured in Germany have been liberated near Portland, Oregon. Are they friends or enemies of the farmer and horticulturists?.....The trial of the "electric" sugar refiners is going on here now, and makes "mighty interesting reading." The swindlers bought the best refined sugar in the form of cubes, broke these cubes with hammers, and, after sifting the pounded sugar, passed it down a shute into a receiver, where it was exhibited as a product of their "electric" refining process. This was certainly one of the simplest swindles ever practiced upon gullible men—and keen-eyed business men at that!.... Party lines are not drawn on ballot-reform legislation. In Illinois, Pennsylvania, Maine and Ohio, Republican legislatures have rejected ballot-reform bills. In Connecticut, Massachusetts and New York Republican legislatures have approved such bills, while a Democratic Governor in New York and a Republican Governor in Connecticut have vetoed them. The people appear to demand such legislation, but "practical politicians" see neither office nor boodle in a scheme that promises to prevent fraud, bribery and intimidation.....The Weldon extradition bill recently passed by the Dominion Parliament has been submitted to the imperial government for ratification. It is the first case on record which provides for the extradition of criminals by an act of the legislature instead of by a treaty. It's likely to be ratified. People say it is retroactive; but as the Parliament voted down an amendment declaring it so, it's hardly likely that the government will extradite the "boodlers" now across the border ....Col. John C. Kelton, 61 years old, a graduate of West Point, and a distinguished soldier in the late war, has been appointed Adjutant General of the Army to succeed General Drum "retired" for age..... .....After the "Glorious Fourth" "Old Glory" is to be emblazoned with four more stars to represent the four new States, the Revised Statutes providing that such addition is to be made "on the fourth day of July next succeeding the admission" of the State or States .....The Grand Jury here have indicted the three doctors who carved mind-reader Bishop so prematurely, for having cut him up without authority from the coroner or relatives.....That English syndicate has just added to their long list of American breweries, one at Newark, N. J., for which they paid $5,100,000—$4,000,000 in cash; the balance in stock..... The American Executing Company is the title of a Chicago concern, with a capital of $25,000, which wants to do all the legal hanging and electro-killing throughout the country on contract.....

An Honest Skeptic.

Does Skepticism pay?

The enthusiastic has his answer ready—No!

However, we differ, although our devotion to Compound Oxygen comes under the head of enthusiasm.

We differ because an honest skeptic is one who insists on proof in support of assertion.

Can you find fault with that? Hardly, since as a rule, it is your own plan of procedure.

However, we will step in advance of usual method and call attention to proof without assertion. That is, we will say nothing and leave our case in the hands of those we have benefited.

Rev. Chas. W. Cushing, Rochester, adds to former testimonial:

Feb, 14, 1888.

"The treatment you sent my daughter for chronic ulceration of the throat a year ago, was very effectual. It was the first thing which seemed to do her much permanent good."

CHESTER, S. C.

"I believe in the remedy and can therefore recommend it." REV. H. T. CHREITYBERG.

ST. PAUL, MINN., March 20, 1888.

"For giving the system permanent vitality and the elimination of disease I believe Compound Oxygen to be far in advance of all medicine or treatment." H. H. COOK.

NASHUA, N. H., Feb. 14, 1888.

"I commenced your Compound Oxygen treatment the last of August, 1887, and was happily surprised at the end of one month to find I was almost entirely relieved."

MRS. C. K. DAGGET.

WEATHERFORD, TEXAS, April 1, 1888.

"You have my heartfelt gratitude for the good your Compound Oxygen has done me."

MRS. FRAKIE EDWARDS.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv*

FOREIGN NEWS.

SATURDAY, June 15, 1889.

AN agrarian congress opened at Paris this week. Mr. Saunders was elected American secretary. Henry George made an address in which he referred to land reform as the starting point of social reform. Mr. George was unanimously elected honorary president. M. Lonquet was chosen chairman and made an address in which he spoke in terms of warm praise of Mr. George. Rather strange, this attempt to introduce Henry Georgism into the land of peasant land proprietorship par excellence!..... The latest news from Stanley comes by way of Zanzibar in a letter dated December 2; but which must have been written in February, "authorities" say. He was at Usuri at the southeast end of Lake Victoria Nyanza, having suffered heavy losses of men on the journey from Arumiwi. Emin Pasha was not with him; but he may have been following. After resting at Usuri a short time, he had returned to Victoria Nyanza to secure stores which had been deposited for him at Insalala a year ago. In sufferings, heavy losses of men and stores and failure of the object of the expedition, this has been by far the most disastrous of all Stanley's journeys in the Dark Continent.....Russia, Germany and Austria have sent an identical note to the Swiss Government demanding that it should deal more severely with Anarchists and Socialists..... ....The Shah of Persia has just made a visit to Russia where he was right imperially entertained with military reviews and other grand public displays. Then he went to Germany, where he is now receiving much the same kind of a reception. Russia and England are strenuous rivals for a preponderance of influence in Persia, and it is said that the Czar intimated that if the Shah made any concessions to England during his projected visit there, 100,000 Russian troops now on the north of Persia would at once enter the country. The report is hardly diplomatic, but is significant.....The French government is still trying to devise some means of helping the Panama Canal without taking on itself too much responsibility or embroiling itself with this country. The 800,000 Frenchmen who have put money in the venture must be soothed if not aided..... The worst railroad accident that ever occurred in Ireland happened near Armagh last Tuesday. An excursion train, in three sections, containing 1,200 passengers, nearly all Methodist Sunday School children, left Armagh for Warren Point, a watering place at the mouth of the river Newry in County Down. In ascending a steep grade on a bank 76 feet high, the first section passed on all right but the engine of the second section couldn't haul up the cars which ran madly down the slope smashing into the engine of the third section which was following. Seventy persons were killed, most of them being about 20 years old, and only a dozen children. The elders were in the rear car, hence the great mortality among them. Several hundred were more or less severely injured..

AGRICULTURAL NEWS.

SATURDAY, June 15, 1889.

UP TO the last week in May, crop prospects were exceptionally good in nearly every part of the country. May 23, some parts of the country were visited by frosts, but no extensive damage was done. May 29,30 and 31, a large part of New England, Northern and Western New York, Northern Ohio, Indiana, and Illinois, Michigan, Wisconsin, Iowa and Minnesota were visited by frosts of greater or less severity, while parts of Michigan and Wisconsin were snowed under to a depth of six inches. These were immediately followed by heavy and long-continued rains, which, added to the heavy rains during the latter part of May, have caused disastrous floods in many parts of the country. Pennsylvania and Maryland have perhaps been the greatest sufferers from the latter cause, although many other localities have been damaged to a greater or less extent. As a general thing, throughout the East, there has been too much rain for the lowlands. The frosts through the localities visited have wrought havoc with all kinds of fruit, have greatly injured corn and potatoes, and, in some instances, grain and grass, and

Miscellaneous Advertising.

SEND 10 Cts. in P.O stamps to **E. & O. WARD,** Produce Commission Merchants, for circular about **Shipping Produce** Also recipe for **Preserving Eggs,** Established 1845. **No. 279 Washington St., New York City.**

AUTOMATIC MILK AERATOR.
Removes the taste of GARLIC, CLOVER and NOXIOUS WEEDS. Send for Circular. **E. W. COFFIN,** Ashland, Camden Co., N. J.

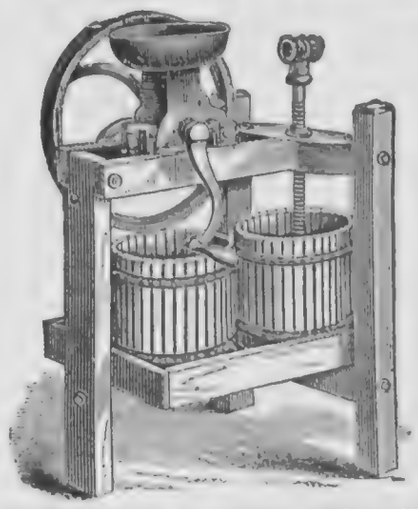
JAPANESE BUCKWHEAT.
Guaranteed Pure. $1.50 per Bushel.
In new bags, free on board. Address
MURRAY BUNDY, Angola, Erie Co., N.Y.

TO LADIES.—MRS. L. L. JACKSON'S popular **Dress Guide** and **Self Instruction Book,** completely revised, with **Sleeve Guide,** for cutting latest style sleeve, now ready. Simple, satisfactory, perfect. Price, $2.00. Send for circulars Address **FAMILY DRESS GUIDE CO.,** Box 131, Indianapolis, Indiana.

STEAM! STEAM!
Quality Higher, Price Lower.
For Strictly Cash, Complete Fixtures except Stack.
2-Horse Eureka Boiler and Engine, $135
4- " " " " $210
Other sizes at low prices.
Before you buy get our prices
B. W. PAYNE & SONS,
Drawer 57. Elmira, N. Y.

ROSSIE IRON ORE PAINT.
Is made from Red Oxide Ore—is the best and most durable Paint for Tin, Iron and Shingle Roofs, Barns, Farm Utensils, etc.; *will not crack or peel*; will protect roofs from sparks. Samples free. Ask prices of
ROSSIE IRON ORE PAINT CO.,
Ogdensburg, N. Y.

NEW CIDER MACHINERY.



Send for new Illustrated List of Cider Machinery. Three new patterns and seven sizes, from small family size to large 8-barrel press. Please mention RURAL N.-Y. when writing.
HIGGANUM MANUFACTURING CORP.,
HIGGANUM, CONN.
WAREH USE: 38 So. Market Street, Boston, Mass.

PILES. Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository. Sufferers will learn of a simple remedy FREE by addressing
TUTTLE & Co., 78 Nassau Street, New York City.

have destroyed much garden truck. The cool, wet weather has been very favorable for keeping in check all kinds of insects, and in this may be found some compensation for losses in other directions. Except where the superabundance of moisture has caused floods, the prospects for abundant crops of grain and grass are good. The greatest loss from the unseasonable weather, is with the fruit crop, which is reported entirely destroyed in some places, but it is to be hoped that the results may not prove so disastrous as is now feared.....

The Indian agent at the Umatilla Agency, Oregon, reports that on May 23, the last band of intruding cattle and sheep were removed from the reservation; 40,000 sheep and 10,000 cattle in all were removed. Vigorous measures are to be adopted hereafter to keep all trespassing cattle from the reservation.....Last year Congress appropriated $100,000 to be used by the Department of Agriculture in experimenting with sorghum cane as a sugar producer. Of this sum less than $15,000 were so expended, and Congress gave the Department the unexpended balance to continue the work. Secretary Rusk has decided to expend the entire amount this year and made the following allotments: Rio Grande, N. J., $7,500; Morrisville, Va., $3,500; Kenner, La., $5,000; Meade Center, Kan., $12,000; Conway Springs, Kan., $8,000; Attica, Kan., $6,000; Medicine Lodge, Kan., $6,000, Ness City, Kan., $4,000; Stirling, Kan., Experiment Station, $2,500; Cedar Falls, Iowa, Experiment Station, $5,000; general chemical control and direction, $15,000. One thousand dollars were reserved for experimenting with beet culture, and this amount will be divided between the stations at Madison, Wis., and Berkeley, Cal.....The trotting-horse breeders of the Pacific coast have organized a Breeders' Association.....October 1st, next all the publications and properties appertaining to Wallace's Monthly will be turned over to the Wallace Trotting Register Company. This company has been incorporated with a capital of $100,000, in shares of $100 each. It is intended to give every reputable breeder in the country an opportunity to become a stock-holder.....The New York State Agricultural Society will offer the State Dairy Association facilities for holding daily dairy conferences at the coming State Fair.... The Board Managers of the New York State Dairy Association arranged to hold the present summer 30 Dairy Conferences in the various dairy sections of the State.... ...Of the 2,637,000 cattle slaughtered for the dressed beef trade last year, 2,050,000 met their death at Chicago .....The Wisconsin Horticultural Society will hold a meeting at Baraboo, June 19 and 20. In addition to the exhibition of fruits and flowers, an interesting programme has been prepared.....

Peter Henderson offered at the last meeting of the Society of American Florists, $100 for the best herbarium of native plants collected between August, 1888, and August, 1889. The award will be made at the meeting in Buffalo in August.....California hopes to become a great seed-growing state. The single county of Santa Clara has 1,200 acres devoted to this industry, and has shipped 60,000 pounds of lettuce seed, and 20,000 pounds of onion seed to the East in a single season..... ...It is said that repairs to Pennsylvania's fences cost about $5,000,000 each year. In some cases the inclosures are worth more than the land they protect.....

The latest invention reported is one to extract the butter directly from the milk.....

It requires 15,000 horses annually to supply New York.....A resident of Terra Haute, Ind., where hogs are permitted to run at large in the streets, removed the fences around his house, and has begun 119 law-suits to recover damages from trespassing hogs.....The introduction of phylloxera into Asia Minor appears to have been the result of a deliberate importation of the vines from a country where the disease was known to exist.....Arrangements have been completed for landing California fruit on the dock at New York in the original cars, instead of transferring it at Jersey City as formerly.....The firm of B. & J. W. Belcher, lately manufacturers of agricultural implements at Chicopee Falls, Mass., is insolvent.....

Mr. Whitman of the Whitman Agricultural Works, St. Louis, left on Wednesday for Paris, where the company have a hay-press on exhibition at the Exposition .....H. M. Roberts, East Hartford, Conn., brought the first bushel of green peas, Hawley's Exta Early, to C. D. Hawley & Company, on May 23, thus winning the $10 prize. J. H. Griffith of Pearsalls, Long Island, reports Early Essex potatoes as large as hens' eggs June 5.....

The American Seed Trade Association elected as officers for the ensuing year: Herbert V. Johnson, Philadelphia, president; J. C. Vaughan, Chicago, and R. Miles Rice, Cambridge, N. Y., vice-presidents; Albert McCullough, Cincinnati, secretary and treasurer. An executive committee was also elected. There was considerable opposition manifested to the free distribution of seeds by the government, but no action was taken. The next annual meeting will be held at Saratoga.....

The experiment of planting American grape vines in France to combat the phylloxera has proved successful, and the demand for such vines was this year greater than the supply.....Kansas City received 15 car-loads of Mexican oranges during the past season. They are said to be very fine and of good quality.....Secretary Rusk has made arrangements to issue veterinary bulletins devoted to the diseases of horses, cattle, sheep, etc. ...Fruit is shipped from California to Eastern cities on special fast trains of 10 cars each, loaded not to exceed 22,000 pounds per car. The charge to Chicago, St. Louis, Minneapolis, and contiguous points is $1,500 per train; to New York $2.00 additional per 100 pounds. For cars attached to passenger trains, $2 50 per 100 pounds to Chicago, $3.12½ to New York, and $3.22½ to Boston, are charged: rates by regular freight are much lower, but are very unsatisfactory, as are those for cars attached to regular passenger trains.....

The Chief of the Bureau of Statistics reports that the total values of the exports of beef, hog and dairy products from the United States during the month of May, 1889, and during the five months ended May 3., 1889, as compared with similar exports during the corresponding periods of the preceding year, were as follows: May, 1889, $8,225,692; May, 1888, $7,166,937; five months ended May 31, 1889, $44,448,495; five months ended May 31, 1888, $33,270,783.....

The New Era Exposition is to be held at St. Joseph, Missouri, from September 3, to October 5. Large premiums are offered, and every preparation will be made to insure a successful exhibition. For particulars address as above.....The State Veterinarian of Missouri has issued a circular with a set of questions the answers to which are designed to aid him in controlling infectious diseases of cattle in the State.....Three months after Prof. Cook issued his book "Silos and Silage," 2,500 had been sold. This shows the interest farmers are taking in this subject .....Cattle thieves are operating in Southern Dakota.....New stock-yards having accommodation for 10,000 head of cattle are being built at Minneapolis. It is expected the company will do a $5,000,000 business the first year.....

SPECIAL BUTTER, CHEESE, AND HOP MARKETS.

UTICA, N. Y., June 15, 1889.—The ruling prices of cheese are lower than for several years at this season, and sales were heavy. Prices ranged from 7⅞ to 8¼ cents. The butter market is firm, and the quality of the offerings has improved. The price ranges from 17 to 20 cents.

Ordinary hops, crop of '88, sell for 20 cents, while '87's sell for eight cents. The yards are reported in fine condition, equal to the usual July appearance, and the indications are that the crop will be fully up to the average or above it.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, June 15, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	8 7-16	8 11-16	.....
Strict Ordinary	8⅞	9⅛	.....
Good Ordinary	9 13-16	10 1-16	.....
Strict Good Ordinary	10¼	10⅜	.....
Low Middling	10⅝	11	.....
Strict Low Middling	11	11¼	.....
Middling	11 3-16	11 7-16	.....
Good Middling	11 11-16	11 15-16	.....
Strict Good Middling	11 15-16	12 3-16	.....
Middling Fair	12⅜	12⅝	.....
Fair	13	13¼	.....

STAINED.

Good Ordinary	8 5-16	Low Middling	9 ¼
Strict Good Ord	8 15-16	Middling	10 11-16

WOOL.—Spring Texas, 17@25c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 30c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 33½c; Scoured Colorado, 53c.

POULTRY.—Chickens, spring, per lb, 15@20c. LIVE Fowls, near-by, per ℔, 12@13c; fowls, Western, per ℔ 12@12½c roosters, per ℔, 7c; turkeys, per ℔ 10@11c; ducks, western, per pair, 70@0.90c; geese, western, per pair, $1 00@$1 25.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per ℔, 12@—c; do do, common to fair, 8@11c; do, iced, dry picked, choice, 8@10c. Fowls, western, do, choice, 10½@11c; do, nearby, do do 11½@12c; Chicks and Fowls, mixed, 12@14c; do do do, scalded 10@11c. Squabs, white, per doz, $3 00@$3 25 do, dark, do, $1 75@$2 00. Chickens, Philadelphia, dry picked 20@25c, do Jersey, do, choice, 20@25c do nearby, do' good 20@25c; do Western, do do, 18@22c; do do, iced' good to choice 16@18c. Ducks, spring, choice, per lb' 20@23c; do do, good, 16@18; do Western, good, 12@18c. Geese, Western, good, 8@10c.

GAME.—Plover, per doz., $0 75@$1 75; Snipe, per doz. $2 00@$2 50.

HOPS.—State, new, best, 22@23c; do, prime, 20@22c; do, low grades, 13@16c; do do, 1887, 10@11 do do do California, common to prime, 14@20c; choice, 20@22c.

HAY AND STRAW.—Choice Timothy, 90@$—; do good do, 75@90c; do medium, 65@70c; shipping, 60@70c; do, Clover, mixed, 55@65c. Straw.—No. 1, rye, 70@75c; short do 50@55; oat, 40@45c.

BEANS.—Marrows, new, $2 00@$—; new mediums choice, $1 85@—; pea, $1 85@—; red kidney, $2 40@2 50 white kidneys, choice, 2 35@2 40; foreign, mediums, 1 35@1 55; California Lima, $3 15@$3 30; green peas, $1 20@—.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@—c, and farmers' grades at 6@7½c. Pecans, 5@7½c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Bermuda, per bbl, $3 50@$6 50; Maine do. $1 50@$2 00; State do, $1 75@$2 00; Florida, do, $5 00@$6 00; Savannah, do. $5 00@$6 00. Sweets do, $3 50@4 50; Cab., new, $0 50@$0 75. Peas, per bbl, $1 25@$2 50; Squash, per crate, $0 75@$1 00. Beets do. $0 50@$1 50; Asparagus, per doz., $0 50@$1 50; Tomatoes, per crate, $1 00@$1 50. ONIONS—Bermuda, per crate, 75c; New Orleans, per bbl, $2 50@$3 00; Beans, string, per crate, $0 50@$2 00; Cucumbers, per crate, $0 50@$2 25; Radishes, per bbl., 50c@$1 00. Peas, per basket, $0 75@$1 50. Turnips, per 100 bunches, $2 00@$3 75.

FRUITS.—FRESH.—Apples, Baldwin, per bbl, $2 00@$4 00; Common, $0 75@$1 00; Russet, $2 00@$4 00. Spy, $3 00@$4 00. Strawberries, per qt 3@13c; Cranberries—Jersey, fine, box, $1 00; do common, 50@75c. Oranges—Florida, best, box, $5 00@$6 50; do, good lots, $3 00@$4 50. Lemons, $3 75@$4 00. Cherries, per lb, 3@12c. Huckleberries, per qt, 3@9c; Gooseberries, per qt, 5@6. Plums, per qt, 5@9c; Peaches, per crate, $1 75@$2 50.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 4½@6c; do new, common to prime, 3¼@4½c; sliced, new, 2¾@3¾c; quarters, 2½@3¼c; chopped, 1¼@1½c; cores and skins, 1@—c. Cherries, new, 10@15c. Raspberries, new, 19@20c. Blackberries, 4@4¼c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 10@14c; do do, unpeeled, 5@6c; North Carolina sun-dried, peeled, 7@8½c. plums, 5@5½c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 13 25@13 50, short clear, $14 00@16 00. Extra Prime mess, $12 50@$— prime do, $12@$12 25 and family mess, $13 25@14 00. BEEF—India Mess. in tierces, $12@12 50 Extra Mess, in barrels, $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $7 50@8 00; Family at $11—@$14. HAMS—$13 50@$14 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 6½@—c; Pickled Hams, 11¾c; pickled Shoulders, 6¼@6⅜c; Smoked shoulders 6½c; do Hams, 12¼@12½c. Dressed Hogs.—City, heavy to light, 6@6⅜c. Pigs, 6¾c. LARD.—City steam, $6 40; June, $6 93; July, $6 99, August, $7 05; September, $7 10; October, $7 15; South America, 7.8c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes quiet; Early Rose, 30@40c per bush.; Burbanks and White Stars, 38@48c; Hebron, choice, 35@40; New Potatoes. Florida, per bbl., $2 00@$5 00. Provisions were steady. BEEF.—City family, per bbl, $9 00@$9 50; do, packets, $8@8 50; smoked beef, 10@10½c; beef hams, $14 PORK.—Mess, $14 00@$—; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@13c; do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6¼@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8¼c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6¾@7.

CHICAGO.—MESS PORK.—$11 70@11 75 LARD.—$6 70@—per 100 lbs; Short Rib sides (loose), $5 85; dry salted shoulders, boxed, $5 25; short clear sides, boxed, $6 12@$6 25.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 18@—; Elgin, best, 18@—; Western, best 17@17¼; do prime, 15½@16¼; do good, 14½@15; do poor, 13@13¼. State, Dairy half-firkins, tubs, best, 17@17½c; do do prime, 16@16½; do do fine, 14½@15; Welsh tubs, fine, 15½@16; do do, good, 14@15; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 14@15; do fine, 12@13; Western dairy, fine, 12@13; do fair, 11@—c; do poor, 9@10c; do factory, fresh, best, 10½@12, do prime, 10@—; do good, 9@9½; do poor, 8@——c.

CHEESE.—State factory, fancy, 8⅞@—c; do do fine, —@——c; do do, prime, 8½@8¾; do do, fair to good, 7¼@7¾c; Ohio, flat, prime, 7@8c; do good, —@—c; do, good, —@—; Skims, light, 5½@6c; do medium, 2@4; do full, 1@1¼c.

EGGS.—Near-by, fresh, 14¼@——c; Canadian, 14c Southern, 13½@—c; Western, best, 13½@14c. Duck 14@16c; Goose, 20¼@25c.

PHILADELPHIA.—BUTTER firm. Pennsylvania creamery extra, at 17@18c; Pennsylvania Prints, extra, 19c; B. C. and N. Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were weak; Pennsylvania firsts 15@—c; Western firsts, 14½@—c Cheese dull—steady; demand fair; New York full cream, at 9@9¼c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Elgin creamery, 15½@16½c; choice Western, 12½@15c. choice dairy, 12@13½c; common to fair, 8@10c. Eggs firm at 12@——c.

GRAIN MARKETS.

WHEAT.—Sales—Ungraded Winter Red at 80¼@84c; No. 2 Red, 81⅝@81⅞c f. o b., 82¼@83¾ afloat; do in store quoted 81@81¼c. RYE—Stronger and in better demand for export. Sales, Western, c. f, and 1, 46¼@46⅝c; Western quoted 46½@48¼c; State, 50@52c. BARLEY MALT.—Steady and quiet. Two rowed State quoted 85@87c; six-rowed do, 88@95c; Canada, 92½@$1. CORN.—Ungraded Mixed, 40@43c; Steamer Mixed, 41@41¼c, elevator, 42c. afloat; No. 2 Mixed, 41¾@42c, elevator, 42¾@43c, afloat, 42½@42¾ to arrive; No. 2 42c, elevator, 43c, afloat OATS.—No. 3, 27c; do White, 33½c; No. 2, 28¼c; do White, 35c; No. 1 White, 38c; Mixed Western, 26@30c; White do, 33@39c.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, June 15, 1889.

BEEVES.—Feeling steady. City Dressed Beef slow at 6@7c, with some prime and choice sides bringing as high as 7¼@7½c; Texas sides sold at 4¾@5½c.

CALVES.—Veals sold at 4@4¾c for fair to choice, and a small lot of Mixed Calves at 3c. Buttermilks are quoted at 2@2¼c. Dressed Calves slow at 4@7c for Country Dressed Veals, and 5@7½c for City Dressed, with a few choice carcasses selling at 8@8¼c. Dressed Buttermilks sold at 3½@4½c.

SHEEP AND LAMBS.—Sales of Sheep were at $4@5 per 100 lbs and poorest to best Lambs ranged from $5 62½ to $6. Dressed Mutton had a light demand at 8@9½c per lb; and Dressed Lambs sold at the wide range of 8@12c, with 10@11c the most common figures for fair to good. Sales—West Virginia Bucks and Ewes, 81 lbs. average, at $4 per 100 lbs; Kentucky Ewes, 147 lbs, at 4½c; Kentucky Lambs, 66 lbs, at 6c; West Virginia do, 60 lbs, at 5½c.

HOGS.—State Hogs, 171 lbs, sold at $5 per 100 lbs. Market nominally easier at $4 65@$5 10. Country Dressed in very light supply and unchanged.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING JUNE 15, 1889.

J. A. F.—G. W. D.—J. N.—E. C. A.—T. H. H.—H. S.—W. W. C.—H. E. M.—R. S.—J. F.—R. L. K.—P. A. S.—E. S. S. L.—E. S. B.—H. S.—E. S.—O. H. A.—J. E. R.—J. P. B.—W. J.—J. M. R.—S. J. R.—P. H. B.—J. C. M., thank you.—"Subscriber."—J. P. D.—C. M. S.

Miscellaneous Advertising.

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Every size Scale. For free price list mention this paper and address
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BINGHAMTON, N. Y.

LOUDEN'S HAY SLING.

CLEANING UP RACK.

"Cleaning up the rack," is the most troublesome part of unloading hay with a horse fork. Frequently forks, which work well in taking off the top of the load, fail completely in cleaning up the bottom. To remedy this difficulty is the object of the device herewith illustrated.

The sling is first spread on the rack, and the hay is built upon it. The top is taken off with the fork as usual, and then the sling is attached. The remaining hay is rolled up, as shown in the cut, and the rack is cleaned at a single draft.

The manufactnrers of the Louden hay tools, for the sake of introducing their new Self-Compressing Center Trip Hay and Grain Slings, offer this outfit at the following special prices, good for this season only (1889): Cleaning up outfit for one wagon, $4.50; two wagons, $7.50; three wagons, $10.00.

The outfit can be used with any kind of carrier or stacker, or any elevator using a fork. It can be sent cheaply by either freight or express, and will be forwarded to any address on receipt or price.

For further information concerning this or their other haying outfits, for either field or barn, address Louden Machinery Co., Fairfield, Iowa.

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In Ithaca, N.Y., bordering on the City Line
A FRUIT FARM
Of Twenty-three Acres, having an Eastern and Southern exposure, in Peaches, Plums, Apples, Pears, Grapes, black and red Raspberries, Blackberries, Strawberries, and Seven Acres of Grass. Nearly all young and thrifty trees and vines, many just coming into bearing. Is about 25 minutes walk from the City Post Office, 15 minutes from the street cars, and within 45 minutes walk of Cornell University. Ithaca has the best schools, and this would be a desirable place for a family wishing to educate children, and at the same time have the means of making a livelihood. Can be bought on easy terms. Call on or address
H. P. JOHNSON, No. 2 West State St, Ithaca, N.Y.

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The *New York Herald* says: "'London Purple' is preferable to White Arsenic or Paris Green, as it is not so liable to burn the leaves, and its color enables one to distinguish readily between poisoned and non-poisoned trees."

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Indust'l Societies.

THE TENTH ANNUAL EXHIBITION OF THE MOORESTOWN AGRICULTURAL AND INDUSTRIAL SOCIETY.

(RURAL SPECIAL REPORT.)

THE annual spring exhibitions of the Moorestown Agricultural and Industrial Society have always attracted a good deal of attention, and the exhibition held at Stanwick Station, on the 6th, 7th, and 8th of June, was no exception to the general rule. Nearly all the leading manufacturers of farm machinery in the United States were represented; and visitors from all parts of the country were present. The president of the society, Mr. Edmund Cook, is a thoroughly practical man, and, as he says, he has tried to model the Moorestown fair after the ideal fair so often described on the editorial pages of the R. N.-Y. It is certainly a fair of the farmers, for the farmers and by the farmers. The manufacturers of implements understand this, and send their best specimens and ablest agents here, and are usually rewarded by large sales. Excitement is furnished by competitive trials of harvesters, mowers, cultivators, plows and other farm implements, instead of by horse-races and side-shows. The fair comes at a time when farmers are anxious to learn about the merits of different machines with a view to purchasing them.

Prominent features of these exhibitions are the displays of strawberries and small fruits. Unfortunately the season was about two weeks earlier than usual, and many of the best berries were through bearing, and in consequence some of the leading growers, like Wm. Parry and Thomas Zane, made no exhibit. Samuel C. DeCou, of Moorestown, and Chas. B. Horner, of Mt. Holly, however, made fine displays, and saved the reputation of the association. Nearly all the leading varieties of strawberries were shown. With the exception of Bubach No. 5. and the new seedlings, very little attention was paid to the newer varieties. For market purposes Sharpless was considered the best; Ontario next; with the Crescent a good third. The seedling originated by Mr. Silas Walton, of Moorestown, and known as the "Walton," attracted a good deal of attention. (It will be remembered that this berry was illustrated by the R. N.-Y. two years ago.) It was exhibited by Mr. C. B. Horner, of Mt. Holly, who also exhibited a new seedling as yet unnamed. Mr. Horner has, however, the name of "The Gem" under advisement. If it has not already been taken it will be the name of the new berry. Mr. De Cou showed some new seedlings of the Felton. A new seedling to be introduced under the name of Chair's Seedling, attracted much attention. It was found by Mr. Chair in the woods in the suburbs of Baltimore, and seems to be a new and distinct variety. One plant contained 60 perfect berries besides many smaller ones. It is large in size, of good form and quality and seems to be very prolific.

Some of the earlier cherries were shown, also a few peas and potatoes. The display of vegetables, however, was not as fine as it should have been in a locality so largely devoted to market gardening.

The domestic department was well filled with pies, cakes and other appetizing products of the culinary art.

The display of implements was very large and complete. An acre or more of land was covered with an infinite variety of farm machines and tools. There were at least a dozen kinds of reaping, harvesting and mowing machines: in fact, nearly all the leading manufacturers were represented by their most eloquent agents. The mowing machines seemed to attract the most attention. One old farmer spent an hour or more listening to the claimed merits of the various machines, and finally concluded that they were very much alike. "'Most any on 'em will cut grass, and that's all I want," he said. The number of new devices for lessening the friction and side draft and increasing the cutting power of mowing machines seems endless. The "screw machine," with a screw gearing and a floating cutter-bar, was eagerly watched and favorably commented on. It is not a new machine; but has been greatly improved since last year. It is now made by the Kennett Wagon Company, at Kennett Square, Pa. Poulson's and the Dutton mower knife-grinders were kept in operation preparing the knives of the machines for the trials. Both did good work. The trial of harvesters attracted such a crowd that it was impossible to judge of the merits of the machines.

In the trial of sulky cultivators there were three entries—the Little Diamond, Bird's and the Hudson Bicycle. All did good work and each had its friends.

Clark's Cultivator, made up of two small cutaway harrows, did some excellent work and promises to be a popular implement. Coffin's milk Aerator occupies a prominent position on the grounds. Exhibits were made by P. P. Mast & Co., Hench & Dromgold, D. H. Nash, the Gale Manufacturing Co., and other manufacturers.

Gardiner's road wagon has the advantage of a low-down wagon on high wheels. This reduces the labor of loading, and, it is claimed, makes the draft lighter. Messrs. A. Blaker & Company made the largest exhibit of the larger kind of farm machinery: their new Fenton thrasher and cleaner was shown in operation, being run by the Newtown double geared horse-power. This firm is making a new sheller and separator known as the Newtown Star sheller and separator. It is one of the most complete machines of the kind I have ever seen.

Several new methods of building fences were shown. One of the devices was a "wire lock" for holding the rails of an ordinary worm fence together. It seemed to work very well. Another fastened the ordinary post-and-rail fence with wire so that it would stand even after the posts had rotted off. The Garrett fence machine was shown in operation. It is a low-priced machine, but does good work.

The attendance was all that could be desired and the weather was perfect. In fact, the 10th annual exhibition of the Moorestown Agricultural and Industrial Society may be ranked among the best of the spring exhibitions.

J. H. G.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

A STALLION'S SERVICES IN MAINE.

H. S. T., Lincoln County, Me.—Some time ago I bred an excellent mare of mine to a stallion whose owner charged a big fee on account of the fine pedigree he claimed for his horse, and the speedy records of some of his alleged offsprings. Now I find that all his claims with regard to the stallion were unfounded, so that I am "out" not only the fee which I paid, but also over 12 months of my mare's time for breeding purposes. Have I any redress?

ANS.—A recent law in Maine provides as follows: "The owner or breeder of a stallion for breeding purposes, before advertising, by written or printed notices, the service thereof, shall file a certificate with the register of deeds in the county where said stallion is owned or kept, stating the name, color, age and size of the same, together with the pedigree of said stallion, as fully as attainable, and the name of the person by whom he was bred. And it shall be the duty of such register to record such certificate in a book kept for the purpose. Copies of such certificate, duly certified by such register, may be used in evidence, the same as the original, in any State. The fee of the register for recording, and for each certificate, shall be 25 cents. Whoever neglects to make and file such certificate shall recover no compensation for said services, and if he knowingly and willfully makes and files a false certificate of the statements aforesaid, he forfeits $100 to be recovered by complaint, indictment or action for debt, for the county where the offence is committed."

ADMINISTRATING ON PROPERTY IN ANOTHER STATE.

T. L., Waterloo, N. Y.—An old resident of Alton, Illinois, died recently without having made a will. He left some real estate and other property in Alton, and a farm in this State. Can his administrator, appointed in Illinois, administer on the property left in this State, and if he undertakes to do so, is he responsible, and can his bondsmen be held responsible if the property is not properly administered?

ANS.—The Illinois courts hold that a grant of administration in that State confers upon an administrator no title to property of an intestate situated outside of the State. He has no authority whatever over it, nor is he responsible for any part of the intestate's estate which is beyond the jurisdiction by which he was appointed. Such administrator in his official capacity can neither sue nor be sued outside of the State from which he derives his authority, and to which alone he is amenable. If he wishes to reach property belonging to the estate, but situated in a foreign jurisdiction, he must obtain letters of administration there and give such security, and become subject to such regulations as the laws may prescribe. His bond covers only his duties as to property situated within the State in which he was appointed.

S. C., Davenport, Washington.—What is the law with regard to placing poison on one's own inclosed premises for the purpose of destroying jack rabbits and other pests.

ANS.—If the premises are inclosed as the law directs, placing poison in them for the above purpose is quite lawful.

T. L. L., Seneca County, N. Y.—A married woman owns a small farm in her own right, while her husband owns a much larger one. In case of a law suit, should the woman sue under her own name—say as Mrs. Mary Brown—or under her husband's—say as Mrs. John Brown?

ANS.—In all legal proceedings and documents, whether as grantor or grantee, plaintiff or defendant, a married woman is described by her own proper name, as Mrs. Mary Brown.

C. E. D., New York City.—A man subscribes for a paper, the price of which is $1 50 per year, or $2.00 if not paid in advance. He pays for one year upon subscribing. At the end of the year the paper is not stopped, but keeps on coming. He takes it, but neglects to pay up. Three years pass, then comes a notification that if the bill is not paid by a certain time interest will be charged on each year. Can such a demand be legally enforced? Is the subscriber liable for more than the face of the bill, $2. for each year's subscription?

ANS.—Yes. It is a mean law, though.

Inquirer, Steuben County, N. Y.—Is there any law in this State to regulate the charge of doctors?

ANS.—No. Fees are not regulated in New York State by statute law. If every man who has had the advantage of a doctor's service paid him a reasonable fee, there would be little complaint of charges, as the fees would be too low for grumbling. There is no class of professional men, and indeed no class of wage-earners at all, who do so much work gratuitously and to whom so large a proportion of their earnings remain for a long time due as doctors; indeed a great amount of their fees is never paid.

J. W. A., Newburyport, Mass.—I hired a house and built a hen-house in the garden. It was not built on any foundation. The frost being in the ground; the building was made to rest on blocks laid on the snow. Have I a perfect right to remove the building, provided no injury is done to the landlord's property?

ANS.—Yes. Under such circumstances the house was a "chattel," which is movable, not a "fixture" which is immovable. In general whatever a hirer of land buys or makes to use on the land and fasten to the land or building, if he fastens it in such a way that he can remove it and leave the land or building in as good order and condition as it was before, he may remove or take it away whether a tenant for life, a term of years, or at will.

Miscellaneous Advertising.

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CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease from pimples to scrofula.

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CATALOGUES, ETC., RECEIVED.

LOUDEN'S HAY AND GRAIN SLING.—Circulars from the Louden Machinery Company, Fairfield, Iowa. This sling is used for handling all kinds of hay, straw, sorghum fodder or grain either bound or loose. It seems like an excellent device. It is most admirably explained and illustrated in this circular.

THE SPAYING OF CATTLE; COTTON SEED HULLS FOR FATTENING.—A few weeks ago the R. N.-Y. gave as an item of news the fact that the Arkansas Station proposed to get rid of scrub cattle by promoting a general interest in spaying cows. It was also stated that such cattle, in the Southern States, might be fattened on cotton-seed hulls. An explanation of this plan will be found in bulletins No. 8 and 9 of the Arkansas Station, Fayetteville, Arkansas. The first bulletin discusses spaying. First, an effort is made to justify the operation. It is claimed that the operation is but little more painful than that of castrating, that it enhances the value of the animal—making better beef and more of it,and that it is a sure means of stopping the breeding of poor cattle The classes of animals that should be selected for spaying, according to this bulletin, are the following:

"First, and chiefly, heifers under one year old, which are not intended for milch cows, and which are not wanted for breeding purposes. Second, older cattle, either heifers, or cows that have had one or more calves, and which it is desired to fatten for beef; and, finally, cows in any dairy in full flow of milk, and whose calves it is not profitable to raise, may be included as suitable for testing the effect on the milk production."

Then follows a description of the operation and an account of its effect upon several animals. As to the merits of spaying, the R. N.-Y. opposes the practice. From the best information it can get the operation is horribly cruel, unless performed by a skilled veterinarian. It is hard to conceive of anything more revolting than the spectacle of poor brutes mangled and tortured by amateur operators. At the same time the R N.-Y. knows that the practice is growing at the West. We do not believe the cattle interests of the country demand this thing. At any rate let no bungler ever attempt it. If it is done at all, let it be done by somebody who can do it skillfully.

Bulletin No. 9 treats of a much more cheerful topic. This is the hoped for discovery of feeding value in what has generally been considered a waste product. In the manufacture of cotton seed oil, so we are told in the bulletin, one ton of seed yields 36 gallons of oil, 700 pounds of meal and 900 pounds of hulls. These hulls have, until recently, been used as a fuel. "It was noticed, however, that certain scrub stock in the neighborhood of one of the mills, managed to make a very good winter on them." This led to the suggestion that money might be made by feeding these hulls on a large scale. Accordingly, sheds, costing $10,000, were erected and 2,000 cattle were bought. The following extract, taken from the bulletin, gives an account of the methods employed as reported by the feeders:

"After coming off the cars the cattle are put in open yards for some time (about 30 days), to become accustomed to feeding and to recover from the fever of shipment, which is always present, especially in those brought from Texas. This condition is accompanied by highly colored urine. *It does not prove serious.*

The diet at the start is four pounds of meal and about 23 pounds of hulls. The regular ration later is eight pounds meal and 25 pounds hulls per diem; this is fed half morning and evening. Hay is given once a week; if manure becomes abnormally soft, the hay is increased. A constant supply of fresh well water raised by steam pumps is on hand. The water troughs are frequently cleaned of algæ which collect on the bottom and sides. Salt is always accessible. The period of feeding is about four months. About one per cent. of the cattle scour, but there is no fatality from this cause. It is attributed to the meal and not the hulls. Scouring cattle are treated by turning out of the sheds into the yard; they are given hay and less meal but the ordinary ration of hulls is continued; perfectly fresh water is supplied. The duration of scouring is one or two days. Some animals may continue quite loose in the bowels and yet gain in weight. There is no recurrence of the diarrhœa.

The cattle are released and turned into the open yards for a week or more before shipment and fed the same rations as before, in troughs. They generally under these circumstances feed at night and lie during the day. Cattle are weighed on arrival and departure. None are fed during the summer months. They sell in Chicago for full price of Texas-fed cattle of the best grade and they can pass for corn-fed steers.

There is no trouble shipping north from Texas fever regulations. They were bought by an agent in lots during the fall and winter. The best Texas cattle being purchased, average weight 850 to 950 pounds, and price, including shipment, $25 a head. These figures were rather nigh. Some cattle are obtained from this state. The weight of the cattle when shipped averaged 1,690 pounds for the largest and 1,141 for the balance. The age preferred for buying is four to six years. They are nearly all shipped to Chicago; about 280 head were sold to local butchers and buyers in Memphis. Monthly gain: those that did well were tested, some gained 20, 25 and 30 pounds a week, but they don't keep that up. Average may be placed at 75 pounds per month among good feeders. There is no refuse of food.

The yards at times get very muddy. The manure is cleaned out at times. No straw or bedding is allowed. If the cotton seed hulls are stored they sweat and spoil,and are not fit for use. They must be fresh or they will cause scouring. They will not keep stored over two months. Meal should be of a bright yellow color and free from large black particles. Hulls should not contain seeds."

The director of the Arkansas Station wisely concluded that there must have been some mistake about the weighings. The reported gains are too large. Accordingly, four animals were fed at the Station on a ration very similar to that used at Little Rock. The result, on the whole, seems to have been rather disappointing, still there is enough in it to fully justify a continuation of the experiment, which we hope will be made. The R. N.-Y. dwells at some length upon this topic because it has to do with the utilization of a waste product. Such utilization we are always very glad to assist in promoting.

TIME OF CUTTING GRASSES AND CLOVER.—Bulletin No. 5 of the University of Illinois Experiment Station discusses this much-discussed topic. Those who wish to consult a well-compiled list of analyses of grasses cut at different stages of growth will need this bulletin.

DEPARTMENT OF AGRICULTURE. REPORT FOR 1888.—This report appears to be of unusual interest. There seems to have been an effort to edit this volume and to cut out unnecessary or unimportant matter. There is plenty left that will never be read by the general public, still, it may be said that there is a distinct gain in this respect over previous reports. The volume is well departmentized, and the matter is classified and arranged so that particular topics may be readily found.

The Entomologist.—Dr. Riley gives an excellent account of the plum curculio, its life history and habits, and the methods employed in fighting it. Jarring or trapping still appear to be the only feasible remedies. The fluted scale, hop plant-louse, and other scale insects are also described. A report of the year's operations in silk culture is included in this department. We do not find much of anything in this to warrant any one in urging silk culture as a profitable enterprise for Americans. One of the most interesting papers in the entomological department of this report is the account of the California treatment for scale insects. A strong tent is placed over the tree that is to be treated and into this tent noxious gases are introduced.

Bureau of Animal Industry.—In this report Dr. Salmon gives an account of the operation of the Bureau in an effort to eradicate pleuro-pneumonia in cattle. It appears that 35,604 herds containing 305 280 cattle were inspected; 43,176 post-mortem examinations were made, revealing 3,426 diseased cattle—1,446 diseased cattle were found by inspection. The work cost, from January 1, to November 30, 1888, $481,586 55. Glanders and hog-Cholera are also discussed though little that is new concerning either disease is brought out.

The Chemist.—Analyses of a number of substances are given in this report. There is an article on Sweet Cassava, a root that promises to become quite an important product of Florida agriculture. It is valuable as a starch product or as a food for man and beast. There is also a long article on lard and its adulterations. We shall refer to this more at length at another time.

The Botanist.—Dr. George Vasey describes a number of grasses and weeds most of them natives of the West or South and some of them believed to be worthy of trial elsewhere. There is also an exhaustive article on The Pastoral Resources of Montana. This is of especial importance just now. The recent victories of the Montana-raised horse, Spokane, have caused horsemen to investigate the advantages Montana affords as a horse country. Just now, Western horses are in great favor, and it may be that Montana will be able to stamp a trademark on her horses just as Dakota has stamped one on her wheat.

The Statistician.—Mr. Dodge explains his system of collecting reliable crop reports, the value of accurate work and the difficulties met with in conducting the service. It appears that speculators frequently attempt to control the reports in their own interests. Many of the crop reporters think they ought to be paid for their services, and the work they perform is surely of great value. If the sum of $100 should be appropriated for each county, the cost would be $233,000. The service would be cheap at the price, but if there were any money in the work, a dozen cheap politicians would be after every $10 place. The result would be that some incompetent would be appointed when the service demands the best and most accurate observer in the county without regard to religion, politics, sex or age. The figures in this department are very suggestive and afford opportunity for some very interesting deductions. Some of the facts developed are quite surprising. For example, the average price for horses is highest in Rhode Island; for mules, Delaware; for milch cows, Wyoming; beef cattle, Ohio; sheep, Connecticut; and hogs, Massachusetts. The values of our imported food stuffs are just now quite freely discussed. We notice in this report that there were imported, in 1888, $20,502,223 worth of fruits and nuts. Some of our American fruit-growers argue that a high tariff should be placed on these fruits and nuts. Just now, while strawberries are barely paying the cost of picking, the streets are fairly clogged with banana stands. A high tariff would cut down the supply of bananas; this would lead to the sale of more American strawberries—thus these political economists argue. There are also in this report some interesting statistics regarding the agriculture of Egypt, Japan, Australia and France.

The Ornithologist and Mammalogist.—Dr. Merriam's report is one of the most interesting in the volume. It appears that in 1881, or thereabouts, efforts were made to introduce pheasants into the Pacific coast country. These efforts were highly successful in Oregon, but in California the success has not been remarkable. Dr. Merriam concludes that the mink does far more harm than good and should be considered as a public enemy. Mink farming used to be a profitable industry but is now little followed. Rather a good word is spoken for the sparrow-hawk, which, it is claimed, catches and kills numberless insects and mice. The crow is a bird that has been both cursed and praised by American farmers. In some localities, organized crusades are made against this black fellow, who is supposed to "pull more corn than he is worth." In other places farmers are glad to have crows about the farm, asserting that the birds destroy their weight in bugs and worms for every kernel of corn they destroy. It is also claimed that they destroy the eggs and young of poultry and wild birds and that they destroy fruits of some kinds. Dr. Merriam has made an elaborate effort to secure sound evidence as to the habits of the crow. Hundreds of reports from all over the country have been sent to him, and in addition to this, about 100 stomachs of the common crow have been examined to see what crows eat. The following verdict has been rendered: "So far as facts at present known enable a judgment to be formed, the harm which crows do appears to far outweigh the good" A bird has been found that seems to like the taste of potato beetles. This is the rose-breasted Grosbeak which eats the disgusting pest with keen relish.

Director of Experiment Stations.—Professor W. O. Atwater makes the first general report of the work done at the central office at Washington. This office was established October 1, 1888. A complete list of the stations has been prepared, a library of station publications has been started,and materials collected for an exhibit at the Paris exposition, as well as data regarding the history of the general movement for the promotion of agricultural science and education in the United States. The publication of "farmers' bulletins" is contemplated. In these bulletins it is proposed to collate the results of station work bearing upon special topics. Another set of bulletins designed more especially for those more interested in science will also be published. In fact, the central office will serve as headquarters for the whole system of experiment stations. Through this office we may expect some of the best results from the system. Accompanying Professor Atwater's report is a paper on the Origin and Development of Agricultural Experiment Stations in the United States.

SORGHUM AND IMPORTANT INJURIOUS INSECTS.—These are the subjects treated in Bulletin No. 5 of the Iowa Experiment Station. What is said about sorghum is, in the main, a review of previous work done in Kansas and New Jersey. For many years Iowa farmers have been making sorghum sirup in a small way. Chemist Patrick of the Iowa Station, evidently thinks this business can be very profitably increased. We hope so. Our sugar bill for the past 10 years amounts to $818, 644, 110.

Mr. Gillette writes about cut-worms, wire-worms and various other injurious insects. As to cut-worms Mr. Gillette tells of an Iowa farmer who catches the moths in a sorghum evaporator. The large evaporating pan, 3½x22 feet, is exposed over-night with sorghum juice in it. In the morning he skims from it one or two pailfuls of moths. This plan, he thinks, has checked the ravages of the cut-worms inside of a radius of one half a mile from his mill. A few pages of the report are devoted to remedies for cattle lice. Kerosene and lard, kerosene emulsion, pyrethrum, tobacco, and sulphur and lard all are named. Potato as an insecticide will be somewhat new to many of our readers. The water in which potatoes or potato parings had been boiled was used on lousy cattle with generally satisfactory results. Mr. Gillette also conducted some experiments with pyrethrum to see how much of its deadly effect was lost by boiling or heating. This was done to test the popular belief that a decoction of the powder is worth less than a cold mixture. Here are Mr. Gillette's conclusions—they are all somewhat at variance with previous reports.

"It seems safe to conclude, at least until more careful and exhaustive experiments prove to the contrary, that, when it is desired to use Pyrethrum in water without waiting 24 hours, it can be prepared in boiling water, (in which case I would advise boiling for five or 10 minutes) and as good results obtained as with the cold water extraction, and,second, although it is always advisable to keep the powder in tight receptacles, it does not seem possible that the powder loses its strength very rapidly when exposed to the air. The fact that when the powder is dusted on plants it soon ceases to destroy the insects that pass over it is not, it seems to me, evidence to the contrary. In such cases the finest particles of the powder,which are its most destructive parts,are soon removed by the winds and what remains becomes moistened with dews and adheres so closely to the foliage that it is not removed to come in contact with the bodies of insects in sufficient quantities to destroy life."

BOOK REVIEWS.

HOUGHTON, MIFFLIN & COMPANY, (Boston and New York), have begun the issue of a series of books under the title of "The Riverside Library for young people. It is intended to include History, Biography, Mechanics, Travel, Natural History, Adventure and kindred subjects. The books will be illustrated when necessary, and will be uniform in size, containing 200 to 250 pages each, well bound in cloth, and sold for 75 cents per volume.

We have received the first two volumes of the series. Number one is "The War for Independence," by John Fiske, a very compact, handy little volume, just the thing to slip in the pocket to be read on the cars or at odd moments. It treats quite at length of the causes of the war, and is well written and instructive. "George Washington," by Horace E Scudder, is the title of the second volume. It gives an account of the boyhood of Washington, and of the manner of life of the early settlers of Virginia. These books are of especial interest at this time.

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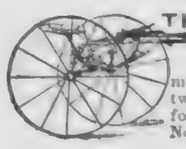

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The hen just for that,
Laid two eggs in his hat,
And thus did the hen reward Beecher.
—*Orange Judd Farmer.*

FISH have some discomforts, but they manage to escape the annoyance of being called 'too fresh."—*Boston Globe.*

SIR ISAAC NEWTON earned fame by seeing an apple fall. Some people make money by keeping an apple stand.—*Boston Courier.*

HUMORIST: "I dreamed last night about some jokes that I wrote." Friend: (who has read some of them): "How I pity you."—*Yankee Blade.*

"HOW is that butter I sent you?" asked a Warwick grocer of a transient customer. "Better, thanks—gains strength every day." —*New England Farmer.*

"CAN you tell me where I can find Rienzi's Address?" asked a young lady of a clerk in a Brooklyn book-store. "Have you looked in the directory?" he asked.—*Harper's Bazar.*

WHEN a newspaper man gets into an arm-chair with his best girl he doesn't talk shop you bet, even to the extent of saying, "We are over-crowded this evening."—*Michigan Farmer.*

"WHAT are you doing, Patrick?" "Wakin' up your husband, ma'am," "But why?" "Because it's tin o'clock, ma'am, when I was to give him the dhrops to make him shlape."—*The Epoch.*

IN days like these: "I believe I will put on my thin underclothes, Sarah." "Don't you do it. Stick to your flannels, John." "That is just the bother of them. I have been sticking to them all day."—*Michigan Farmer.*

WINKS: "I forgot all about my rheumatism last evening. I went to the minstrels, and laughed straight along. Didn't feel a twinge. Funniest endman I ever saw, only he was awfully hoarse." Minks: "Hoarse chestnuts are good for rheumatism."—*N. Y. Weekly.*

MR. WOODENHEAD: "This new teacher ain't fit for business." School Commissioner: "What is the matter with him?" Mr. W: "He can't spell wuth a cent." "Can't spell?" "Naw, can't even spell. He told my darter to-day that 'skeeters' was spelt with a 'm."—*The Jerseyman.*

MISS CLARA: "Mamma, Mr. De Hooper asked me to be his wife last night." Mamma: "Of course, you accepted him?" MISS CLARA: "I told him I would give him an answer later." MAMMA: "Accept him immediately! His father has a window on the line of the procession."—*Life.*

FIRST DEACON: "Have you ever heard the Rev. Mr. Goodman, who exchanges pulpits with our pastor to-day?" Second Deacon: "No." First Deacon: "Well I have. I think, brother Passbasket, we'd better vary our regular custom this morning and take up the collection before the sermon."—*West Haven Budget.*

"SO YOU want a place on the staff?" inquired the editor of a comic paper. "Have you had any experience?" "Not on a regular paper," replied the applicant; "but I have been cracking jokes all my life." "Umph!" returned the editor. "Any references?" "Nobody except Miss Giggle," he answered with a blush; "she once said I was too funny for anything." "In that case, I guess you're too funny for us." —*Puck.*

CARPENTER: "You say you want a bureau made on a new plan?" Citizen: "Yes, sir. I want it made with legs so that I can get my head and shoulders under it." Carpenter: "Of course, I will fill your order, but you might satisfy my curiosity as to why you want a bureau made in that way." Citizen: "Well, I want to be able to find my collar button when I want it without moving the bureau."—*New England Homestead.*

Jimmy went to the fair grounds and saw a baloon inflated with gas. Upon his return home, his experiment upon Samuel (the youngest), was a perfect success.

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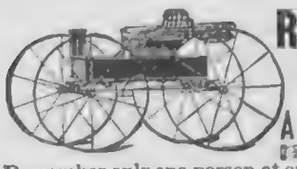

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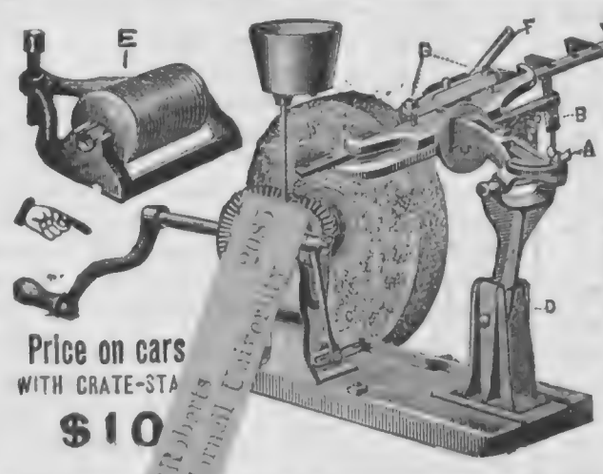

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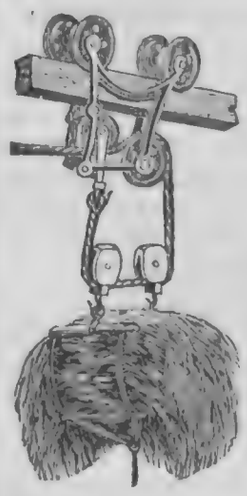

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

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"THE FARMER FEEDS THE WORLD." Fig. 158.

Field Crops.

Seeding In The Corn Field.

SOWING TIMOTHY AND CLOVER AT THE LAST CULTIVATION OF CORN.

WOULD IT ANSWER?

DODGING DROUGTH.

THE following questions were sent us last May. The answers form an interesting study of a somewhat new idea in farming.

W. O. F., Greensburg, Indiana.—What would be the result of sowing a mixture of Timothy and clover in July in corn ground at the time of the last plowing of the corn; the ground to be in the best tilth, and free from weeds? Under the protection of the corn would both the clover and Timothy get such a start as to be able to withstand any ordinary winter? Would the growth make good meadow or pasture land for the next year?

We are having a very severe drought which has already destroyed about all the spring-sown grass and clover and has very materially injured the wheat, oats and meadows. Would additional grasses make a better meadow or pasture than those mentioned above?

FROM PROFESSOR G. E. MORROW.

The plan of sowing Timothy and clover in corn ground at the time of the last cultivation in July, the land being clean and in good condition, would probably give fairly satisfactory results. This is about the time at which Nature sows Timothy seed—clover seed a little later. There are objections to the plan, however. I would prefer cutting the corn early and sowing the land to rye, sowing the Timothy seed at the same time, putting on the clover seed in late winter or very early spring, rolling the land in the spring. I decidedly prefer rye for this purpose to wheat or oats. With a fairly favorable fall and spring, the rye gives much good pasture and also a fair yield of grain. The plants sufficiently shade the ground without "smothering" the young grass or clover. The crop is cut before the hottest season, and is usually cut high enough so that the stubbles afford some protection to the grass. If one could be sure of a favorable autumn, I believe it would be safe to sow clover seed by September 1; but in case of dry weather preventing prompt germination, the young plants would probably be winter-killed.

University of Illinois.

FROM J. C. STRIBLING.

The best catch of clover and Blue grass I remember was sown on top of land after sowing cow-peas in August. The peas grew off rapidly, shading the ground well, and the September rains brought up a fine stand of clover and Blue grass, which looked rather "leggy" and feeble from the shading of the crop of pea-vines until frost came in October, at which time the young pea-vines were all killed and laid flat, thus making the best possible mulch—evenly distributed—which gave good protection to clover and grass during winter and served to shade the land and retain moisture the following spring and summer. The decoction brought out by the rains falling on the tender, frosted pea-vines, seemed to act like a charm on the young clover and grass which changed from pale green to dark green and from a feeble to a vigorous growth. I have not tried Timothy or clover sown among growing corn, but I see no reason why either would not do as well as wheat or oats sown in the same way. Oats are largely sown here among growing cotton in July and August.

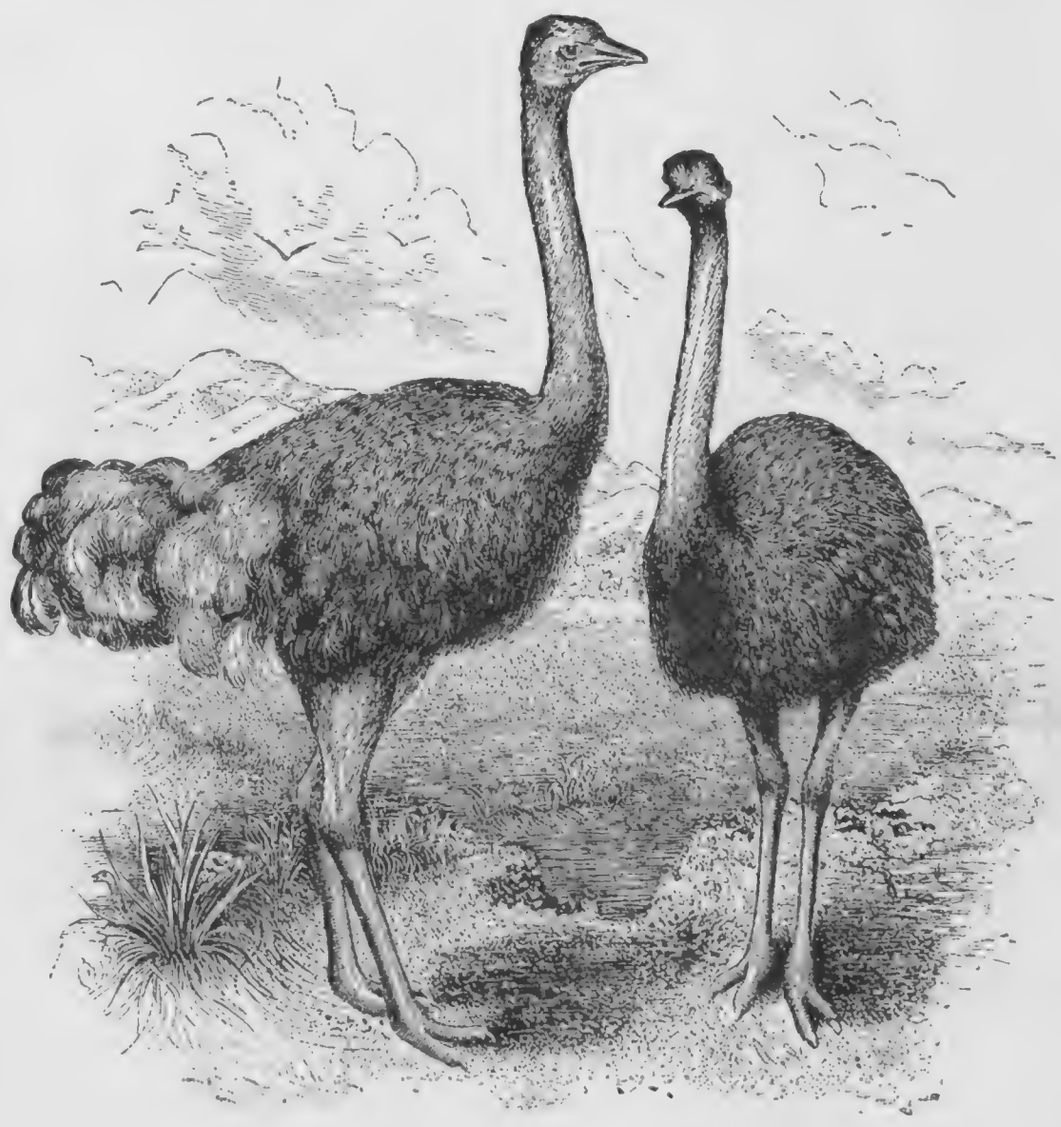
Pendleton, S. C.

FROM E. DAVENPORT.

Although I have never practiced this plan I should expect it to succeed. The Timothy certainly would thrive and the clover would be altogether likely to do so. With us both are occasionally sown with wheat, and Timothy is usually started in that way. True, clover does not always endure the winter when started so late, but I think the correspondent need have little fear of failure from the plan proposed. I should expect most grasses to succeed under such circumstances, and that a good yield of hay could be cut the next season; though I should not like to pasture it until late, provided at least, I expected to make a meadow of it, as pasturing is severe on young plants not fully established. I would be understood as giving this as my belief in the matter; I may not be correct. Our excellent authority on grasses, Dr. Beal, gives it as his opinion that it would be likely to succeed. There is little doubt about the clover, and less about the Timothy. I believe the correspondent will be warranted in giving it a careful trial on a moderate scale.

FROM PROF. W. C. LATTA.

With such a season as we have had for two years, one would probably fail to get a "catch" of clover in the corn. When the weather in July, August and September, is so dry as to kill out the spring sowing of grass, it seems to me that there is small chance for a catch late in June or early in July. Grass (clover) has been sown in this way, however, and with success in some cases. If pasture is wanted (and I judge it is, for the corn ground would make a very uneven meadow), I would



PAIR OF CAPE TOWN OSTRICHES. Fig 159.

sow clover and Orchard grass rather than Timothy and clover. With favorable weather in July and August the seeding would doubtless do well. Much would depend on these two months I think. As to the ability to stand the winter, I would say this is of secondary importance. If land is "heavy" (disposed to heave) and the winter unfavorable, either spring or summer-sown clover would be seriously damaged. With favorable weather in summer (which we can't certainly count on) the summer seeding would stand a good chance to get through the winter.

Purdue University, Ind.

FROM PROFESSOR H. H. WING.

It does not seem to me that it would be advisable to sow the seed in the corn if the land were intended to be used as a meadow, because of the rough condition in which the land is left after corn. But for land intended for pasture I can see no objections, under the conditions named, to sowing Timothy and clover in the corn at the time of the last working. Care should be taken to time the seeding after a light rain or when the soil is otherwise moist so that germination may be early and vigorous. Clover seed so sown should make sufficient growth to carry it nicely through the winter and furnish a fair crop the next year. I should recommend six pounds of Timothy, four pounds of Medium clover, one pound of Large clover, and one pound of Alsike per acre.

Cornell University, Ithaca, N. Y.

FROM HENRY STEWART.

The practice of sowing grass seed in corn ground is a bad one unless the conditions are such that it is better than having no grass at all. I have sown land in this way and had good grass following, but never good enough for pasture or mowing the first year. The time is wholly too late for clover, as the growth is slow and it is not sufficiently strong to withstand the winter. I have sown rye on the land before the last working, and a common cultivator or Planet Junior horse-hoe following will cover the seed perfectly. Immediately after the cultivator Timothy or Orchard grass is sown. I prefer the latter for pasture, as it comes much earlier than the Timothy. I have used a small V-shaped, sloping-tooth harrow for this work, which has done very well on land that is mellow and clean. The clover seed is sown in the spring, taking advantage of a time when the ground is cracked and opened by a frost.

The "protection" of the corn is not such as will help the growth of grass and clover under any circumstances, as the shade is too dense, and this practice is only justifiable as a makeshift to get something out of the land, when a regular rotation cannot be followed. I have a large field now in grass and clover sown in this way on corn the year before last. Rye was sown in July and Timothy immediately afterwards. Pea-vine or Perennial clover was sown in March of last year. I got about 10 bushels of rye per acre and a large quantity of straw, and the grass and clover made an excellent catch promising a good crop the present year but for the very dry weather and cold northwest winds. My principal purpose is finally to plow in the clover to improve the land after getting a crop of hay this year, and some fall pasture if it should be needed Under such circumstances as this, where the land needs this kind of help, and manure is not available, I consider this a legitimate practice, on the principle of "half a loaf is better than no bread;" but I would not do it or recommend it under other circumstances, believing, and I may justly say knowing, that if the land is well prepared for oats and after the oats are sown, the grass and clover seed are harrowed in with a light sloping-tooth harrow, or even covered by the use of a plank smoothing drag, dry weather will not materially injure the seeding, although it may be quite sufficient to destroy surface-sown seed without any covering by the harrow. For several years past I have not missed a grass or clover seeding made in this way.

Macon County, N. C.

FROM. S. B. HOEFGEN.

In a talk with a neighboring farmer on the above queries, he said he had no doubt that the crop would do well. He had known of clover being sown in corn at the last plowing that did well, and Timothy no doubt would do equally well, because we sometimes let the Timothy get ripe to get a better stand on a meadow that is too thin, and we generally have a thick-set meadow the next year. He said the reason why we do so little grass seeding in corn, is because we generally prefer to put wheat in the corn and sow the clover on the wheat the following spring. Another farmer told me he had sown clover three times in corn and it did well each time. His reason for sowing in the corn was that the ground was too full of stumps to sow to wheat. He seeded as fast as he plowed, but I would prefer to follow after seeding the clover with a light harrow or drag, because when I sow turnips in corn and harrow in the seed I generally succeed in getting a good stand.

If I do not harrow I fail, unless a heavy rain follows immediately after seeding and there are several days of damp and rainy or cloudy weather. As to making a crop the following year, there can hardly be a question. I think the RURAL has published statements from correspondents who have recommended the sowing of Timothy alone in the fall, because it would give a full crop of grass the following year.

Crawfordsville, Ind.

FROM C. S. PAINE.

I have no hesitation in saying that this plan will pay. I stocked a number of acres last year, sowing the Timothy and clover mixed, going through every row. The grass is now in a splendid condition; a good swath might be cut, and I shall get two crops of from three to four tons to the acre. The clover will not winter-kill in this climate as a general thing, even if sown as late as August 1, and the Timothy is sure to come out right in the spring if sown later. Last year I sowed a mixture of four kinds, viz, Red-top, ordinary clover, Alsike and Mammoth clover, and all kinds are doing well. Care should be taken to have the land as level as possible. A mowing machine will cut the old corn stubble without any trouble. A very dry season at the time of sowing the seed and a long-continued drought may cause a failure on dry land, but I have not failed on that account and I have practiced that plan for 15 years or more, and many of my neighbors practice it, all with good results. It is often the case that where the corn stands in stooks on the ground for a long time, the grass will be smothered out where the stooks stand. The new grass in the fall will present a beautiful green appearance after the corn is removed.

South Randolph, Vermont.

FROM T. B. TERRY.

If there were plenty of rain the Timothy and clover might both do well, in this latitude; but if there were not, the clover would probably not make growth enough to stand the winter, although the Timothy might come on in the fall and do well. Then there would be the objection of pretty rough ground for mowing the next year. Taking it all together, I would not favor the plan. Spring-sown clover is never killed by drought here, if sown early enough. At least I have sown very early for 20 years and never once failed. Seed sown in April frequently fails. It must be sown early enough to get a good start before the spring moisture is gone. Timothy seed sown about the first of September rarely fails here, if the work is properly done. I sow mine in the spring with the clover, however, as otherwise the clover would be sown on a Timothy sod, and stand but little chance. Thousands of bushels of clover seed are wasted in this way; but still it is the general practice here to sow Timothy with wheat in the fall, and the clover in the spring on the ground already occupied with wheat and Timothy. Then the farmers wonder why they do not get more clover. What chance do they give it?

The writer plowed under a quarter of an acre of strawberry bed last year in July. In August I sowed Timothy and clover seed, during a wet spell. Both came up and grew finely; but this spring it was a very heavy Timothy sod, and not many clover plants were to be seen. Although there are exceptions, I think the rule is that spring is the best time to sow clover seed, and fall the best time to sow Timothy, that is, as far as the good of the Timothy itself is concerned. With me clover must have the best chance it can. Clover we must have and what little Timothy we can get in with it is all right. The latter being the more feeble grower, in its infancy, the clover if given an even start will take the lead and keep it, letting the Timothy have full sway only in spots where for some reason clover does not thrive well.

Summit County, Ohio.

BUCKWHEAT.

BUCKWHEAT is a crop most in favor in regions where the soil is light, the country hilly, and the climate cool, without too early frosts. On soils that are too rich, there is usally such a rank growth of straw that the crop falls down before it is ripe, and does not fill well, sometimes not yielding any grain at all. It naturally belongs to the cooler and rougher regions with hill-sides and thin soils; it does not follow, however, that it cannot be profitably

raised on level land and better soils. In fact much of the buckwheat raised in New York and Pennsylvania is produced on level land good enough for wheat. It is usually sown on light soils for the very good reason that such soils will produce a paying crop of buckwheat when too poor to produce anything else. The varieties chiefly grown are the Gray, or Silver Hull, and the Black. The Gray is the general favorite and is the kind mostly used. The Tartarian, or "Rough," is not much grown except for feed, as the flour is of a dark yellow color and slightly bitter to the taste. It out-yields the other varieties, is hardier and can be raised farther north. I have not had any experience with the Japan buckwheat, but the farmers in this locality who have tried it, speak very highly in its favor. The center of production in the United States lies further north than that of any of our other cereals. Three-fifths of the crop grows between latitudes 41° and 43°. The 42nd parallel is about the center, and 41½ degree north latitude is about the southern limit of the district. Its northern limit is bounded only by the region of early frost and extends some seasons far up into Vermont, Northern Michigan, and Wisconsin.

There is no doubt that, like all other plants, buckwheat will do the best where the ground is well plowed and made fine with the harrow; but if the plowing is poorly performed and the ground cloddy and lumpy—which is frequently the case when the field is baked hard by drought at the time the plowing must be done—it will still try to make the best of the situation and exert itself to pulverize the soil and produce a crop in spite of the adverse circumstances.

Along the river in this region, it is usually sown from the first to the tenth of July. Back from the river, where the fog does not keep off the frost, it is sown in the latter part of June. The later it can be sown and get ripe before frost, the better will be the yield. A neighbor told me that the heaviest he ever raised was sown on the first of August; but the frosts held off unusually well that fall; and as such seasons cannot be expected often, the crop should always be put in earlier.

There is one objection to raising buckwheat—it does not seem to fit well into any regular rotation, and for this reason I have known farmers to sow the same field with buckwheat five or six years in succession and have a tolerably fair crop the last time. Some sow buckwheat ground with oats the following spring, but the scattered buckwheat on the ground will come up in considerable quantities and grow along with the oats, and although it does not injure the crop for the farmer's own use, it lessens its value for market. I have raised good crops of rye sown after buckwheat came off in the fall, although it was necessarily sown late, and then by seeding with clover in the spring, I obtain a better catch than if the rye had obtained a large growth in the fall. I plowed the ground after the buckwheat was harvested, but this was hardly necessary, for the plants furnish such a dense shade, and the roots pulverize the ground so well that it is left in a very mellow condition, and I have frequently known farmers to sow rye on their buckwheat stubble, and, by harrowing it well, get a good crop. Dry weather and hot sunshine when the kernels are forming are usually the causes of light crops. The hot sun at that particular time is said to "blast" the buckwheat. I suppose that when the kernel is in process of formation, and the shuck very thin and transparent, the heat of the sun, if great, drives out or evaporates the moisture in the incipient kernel, and causes it to wither and shrivel.

About one bushel of seed is usually sown per acre in this section, although on good land three pecks are sufficient, the thinner seeding producing a heavier, stronger straw, less likely to lodge. Buckwheat does not tiller out at the root like wheat and rye; it sends up a single stem which, if not crowded, branches out like an apple tree. If sown thickly, of course, it will not branch out much, and the straw will be finer and weaker. Buckwheat is quickly grown, requiring but about three months of summer; it costs much less labor to produce it, and pays the farmer sooner on his investment than any other grain. It will grow on poorer land and with more careless husbandry, although it responds with alacrity to better soil and more generous treatment. It is always in good demand as soon as thrashed, sells readily for cash, and the first sales are usually the best. It should never be held for a higher price except perhaps to sell for seed the following spring when it is sometimes scarce. The demand for buckwheat flour always falls off in the cities after the holidays, and millers will not usually pay as much for buckwheat after that time.

It was estimated by a miller who is well informed, that in the year 1888, Bradford County, Pa., produced a round million of bushels of buckwheat; that about one-third of the crop was consumed at home and the remainder converted into flour and sold in New York, Philadelphia, and the towns in Southern and Eastern Pennsylvania. It is the only kind of grain raised in the East in which the farmers have not suffered a ruinous competition from the great, fertile, grain-growing plains of the West. Instead of being a competitor for the buckwheat markets of the East, the West furnishes us with a good and growing market. The mill at Sugar Run has sold a good deal of flour to go 40 miles west of Chicago, and has also had orders from Kansas. Sheep will eat a little buckwheat straw if it has been saved in good condition, but it is not considered of any value except for manure, and I am sorry to say that the straw when thrashed in the field is frequently burned as soon as the machine is out of the way

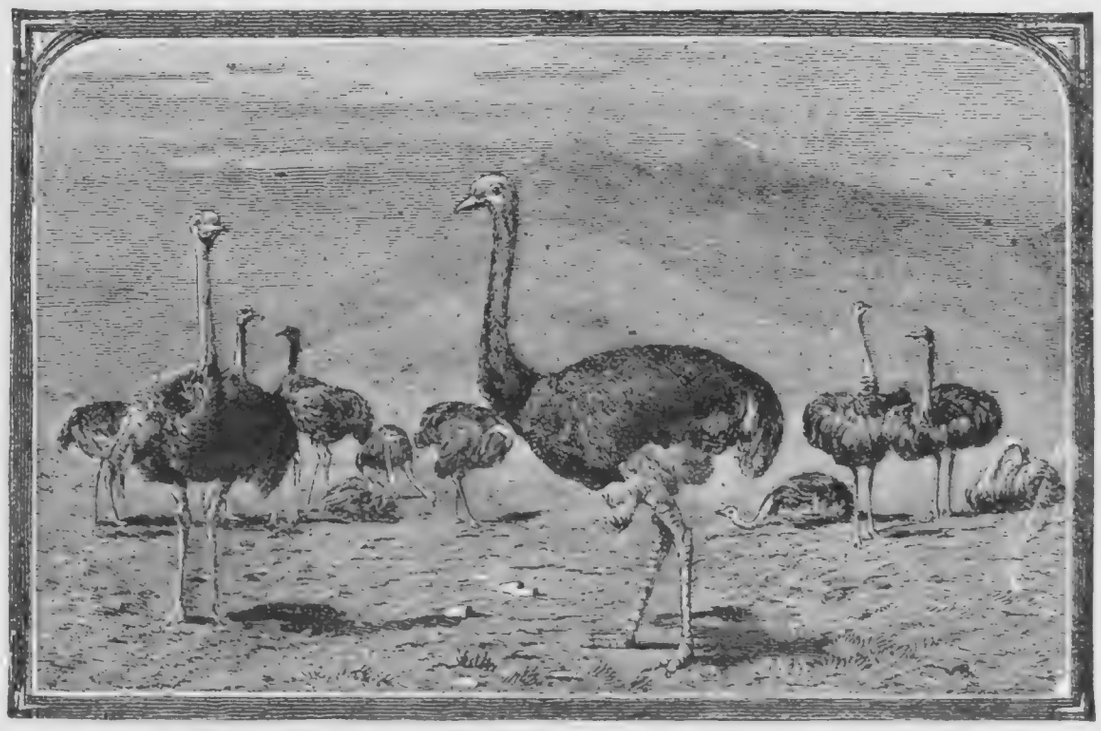
Sugar Run, Pa. J. W. I.

The Poultry Yard.

OSTRICH FARMING IN AMERICA.

In the last report of the Department of Agriculture we find a long article on the above topic. The pictures shown in this issue of the R. N.-Y. are re-engraved from this report.

It appears that ostrich farming is one of the largest and most profitable industries of South Africa. The annual exportation of feathers from that country amounts to millions of dollars, while first-class breeding birds have been sold for over $1,000 per pair.



GROUP OF CALIFORNIA OSTRICHES Fig. 160.

General Le Duc, while Commissioner of Agriculture, tried to interest our Government in a scheme of importing ostriches with a view to establishing the business of ostrich farming in Southern California. Nothing came of this, but in 1882 Dr. Charles J. Sketchly, who had handled ostriches in Cape Town, came to this country with 200 birds. They came to New York and were shipped overland to California. This long journey was a most trying one and but 23 of the birds survived it. They were taken to Anaheim, in Southern California, and placed on a farm. The first year they laid 270 eggs. The first chick was hatched July 28, 1883. The next lot of imported ostriches, 23 in number, reached New Orleans in December, 1884, and were taken to San Diego, California. Since that time several importations have been made, though the Cape Town Government became alarmed at the large exportation and imposed an export duty of $500 on each bird taken out of the country, this duty making the cost of bringing an ostrich to America nearly $1,000.

The first ostriches brought to this country were considerably weakened and impaired in vigor by the journey. The American-raised birds are said to be stronger and give fair results. From the best information we can obtain, the ostrich farms in California promise to pay a small profit eventually. The great cost of the early importations and the difficulties attending the acclimating of the birds made the early part of the work very expensive. A more thorough study of the habits and needs of the birds will result in better appliances and methods. There is enough in the business to warrant the Government in establishing experiment farms in the dry, hot regions of the far Southwest where ostriches may be kept. We spend millions for ostrich plumes. If these could be produced on the waste lands of the desert there would be a double gain.

At Figure 159 we show a pair of ostriches brought from Cape Town to California to serve as breeders. Figure 160 shows a group of ostriches that were raised in California; they are one year old and over. Figure 161 shows a group of ostrich chicks two weeks old with the dog that watches them. In the picture we have two ostrich eggs with a hen's egg between them to show the comparative size. Figure 162 shows the incubator used in hatching the chicks.

On the California farms each breeding pair is confined in a small pen until the eggs are laid. The younger birds run in large inclosures, while the chicks run with the common barn-yard fowls. The little chicks are delicate and cannot stand the damp. The ostrich lays an egg every third day. The eggs are five to six inches in diameter and weigh three to five pounds each. The shell is often one-sixteenth of an inch thick, and it is generally necessary to assist the chick in breaking it. The average period of incubation is 39 days. The birds are not good mothers, leaving the eggs on slight provocation. The male bird takes his turn at sitting on the eggs, generally staying on them 19 hours out of 24. So much difficulty was experienced with hatching in the usual way that ostrich farmers have adopted the incubator, shown at Fig. 162, exclusively. The flesh of the ostrich is considered a great delicacy in Africa while the eggs are fully equal in flavor to those of the hen.

KANSAS POULTRY NOTES.

Raising poultry on the ordinary farm in Kansas, is, I suppose, not very different from doing so in the majority of the older States, especially those of the South. Here as well as there with trees, sheds, or fences for roosts and the high heavens for shelter the birds never lack fresh air. If they were as well supplied with drinking water as pure, fewer would die from "cholera" or other diseases. But too many are supplied with no water at all and whatever they find to drink they drink from necessity many times rather than from choice, be it from a barnyard pool, hog trough, or a stream. Where many fowls are devoured by the swine the latter seem to crave for the feathered prey, evenw hen they have all the corn they can eat. Whether this appetite is caused by a too steady diet of corn, I have not been able to learn; but when a hog once acquires this habit, I have never heard of its abandoning it entirely. Fowls, as a rule, are never out of food, if a corn crop is raised; for they can have free access to that and to everything on the farm to the detriment of the profit from them in eggs. Nearly every farmer has from 75 to 150 fowls; but few get more eggs than they ought to get from 25 good laying hens. Many, however, think this number quite reasonable for they have grown up amid slipshod, careless management of poultry and of every other branch of farming. Some years I have heard of whole flocks of poultry dying from cholera. For this the best remedy I have found is carbolic acid. I put about one teaspoonful into a pailful of water, stirring it around, and set it wherever the fowls can all drink. Doing so two or three times will be sufficient. I think some breeds much more subject to disease than others. The three breeds of chicks I have raised, viz., Black Spanish, Plymouth Rocks, and Dark Brahmas, range in hardiness in the order named; I have lost 10 of the last to one of the first by disease. During a sudden blizzard before the fowls had all become accustomed to their winter-quarters two years ago, all of my Dark Brahmas that were caught in the snow died, but the Spanish lived. While the Spanish are so hardy, their feathering out in the fall is a great objection to them, but their excellent laying qualities as well as the great size of their eggs commend them. At our common country groceries eggs are sold at from five to 12 cents per dozen in summer, and in winter at from 15 to 25 cents. Some pack them down in salt after the hot weather of summer has past, and keep them for higher prices in winter.

G.

Greenwood County, Kan.

The Apiarian.

A STUDY IN REPRODUCTION.

PROFESSOR A. J. COOK.

Excellent new works in apiculture; influence of previous impregnation on subsequent progeny strongly controverted with regard to bees and poultry, and very doubtful with regard to mammalia—an interesting discussion.

Bee literature has made very substantial progress during this year. A few weeks since that immortal classic "Langstroth on the Honey Bee" came forth from the hands of two of America's most able bee keepers Chas. Dadant & Son, fully revised and embracing not only all that was admirable in the old work, but the very best of science and practice as developed in Europe and America during the last two decades, during which the progress made in apiculture has rarely been excelled by that made in any other art. This new work confers great credit on American literature, and should be in the hands of every bee-keeper in the land. More recently G. M. Doolittle, one of our most able and successful bee-keepers, has issued a work on "Queen Rearing," which is doubtless the best work on this subject, ever issued in the English or any other language.

In this work Mr. Doolittle asserts, as the result of his wide experience and observation, that if queens are impurely mated, their drone progeny will be impure even though the queen bears no taint in her blood. Akin to this theory is that held by some of our chicken fanciers, that if a hen of some distinct breed is mated with a cock of another breed or with a mongrel, this hen will be ever afterward impure. Analogous to this is the view often urged by breeders, that if any of our purely bred mammalia—hogs, sheep, cattle or horses—are impurely mated, they will be ever afterward impure; and so their subsequent offspring will very likely show taint, even though the male parent is of faultless breeding and of the same blood as the female.

I do not feel that I can deny the truth of any of these views: but I can ask, very properly, if we know that any of them is positively true. I must say that I have grave doubts in the matter.

In case of bees, the only possible chances for the queen to be tainted is for her organism to be affected by the mere presence of the sperm cells in her spermatheca. As is well known, the egg of a queen bee that develops into a drone is never impregnated. Then if a pure queen produces a hybrid drone, it can only be because her organization is affected by the mere presence of spermatozoa in her sperm sack. I know the reproductive organism is very sensitive and that the sperm cells may be in the spermatheca of the queen five years; but as these cells remain unchanged, I see not how they can affect the queen. Even suppose some were absorbed, they must be changed before this absorption, and in the blood would be like any other digested fluid. Thus from our knowledge of physiology we should doubt this theory.

But I have other reasons for doubt. When Mr. Jones first imported Syrian queens I got one, especially to test this theory. I had only Italian bees in my apiary, so the many queens I reared from this pure Syrian were all mated to Italian drones. There was no possible chance for an error, yet all the drone progeny from the mis-mated queens was entirely like the Syrian drones—not a trace was there of Italian. The Syrian drones are very marked in their characteristics and so, as this test was so extensive—there being thousands of these drones—and as I had many sharp eyes looking for Italian marks, I feel very certain that Mr. Doolittle is wrong.

But what of Mr. Doolittle's experiments that have led him to a contrary opinion? I simply think his queens were not pure. In my case there was no chance for error to creep in. In his I can't see how he can be certain. I doubt if there is a man in the United States who has an Italian queen that

he knows is absolutely pure. He may be very sure, but absolute knowledge in such cases is hard to gain. I have great confidence in Mr. Doolittle's ability, honesty and observation, but I believe in this he is mistaken.

In case of fowls, the opportunity for taint is still less. It can come only from the presence of sperm cells in the oviducts for a few days. The sperm cells enter the egg after which the latter has no organic connection with the hen. I have also tested this matter on a large scale; and am fully persuaded that the theory is in doubt. I bred chickens from Leghorn and Brahma hens that had freely mated, the first year with Brahma cocks, and the second with Leghorn, for months, yet not a chicken, of scores reared from purely mated hens after three weeks removal from the other cocks, showed a trace of impurity. When people find it otherwise, I believe either their hens or cocks are not pure.

In case of mammalia the case is somewhat different. Here the sperm cells are not only in the reproductive tubes of the female for some days; but there is, through the placenta, organic connection between the fetus and mother all through gestation. And, possibly, through cell inoculation the sensitive ovaries may become so affected that subsequent eggs will show a taint of blood. I must say, however, that I am skeptical here. The placenta, in the uterus, is some distance from the ovaries, and the organic connection, which is only membranous, exists but for a short time. I can hardly see how the mother could be affected. I think we need more light on this problem. A very extensive and intelligent breeder of mules tells me that he knows there is no truth in this theory. He has raised many colts from mares which had previously bred mules, and these colts were all horse.

Dairy Husbandry.

DAIRY DOTS ON THE RURAL NO. 2,055.

A. L. CROSBY.

AN "ALL-PURPOSE" SYMPOSIUM.—Well, the Holstein men have had their say in the RURAL, and they seem to agree that a big cow with a beef tendency is the profitable all-purpose animal. Very well, but to be convincing, figures ought to have been given showing the cost of feeding a big cow for a year and the amount of milk and butter she gave in return. One of the Holstein cows, figure 150, attained the enormous weight of 2,030 pounds, From my experience in feeding cattle for beef, I know that an animal so heavy as that must consume a large ration merely to sustain life, then, in addition, the profit ration must be given. If it pays, all right; if it does not pay, all wrong.

It is rather singular that Holstein breeders —taking into consideration their claims for butter—have given numerous yearly milk records, but, as I remember, not a single yearly butter record. They have "estimated" the butter yield from weekly tests, but that is not the right way. Let us have the whole year. Now if the Holstein is the cow that farmers want, it is easy to show it by giving the figures, the actual cost and yield.

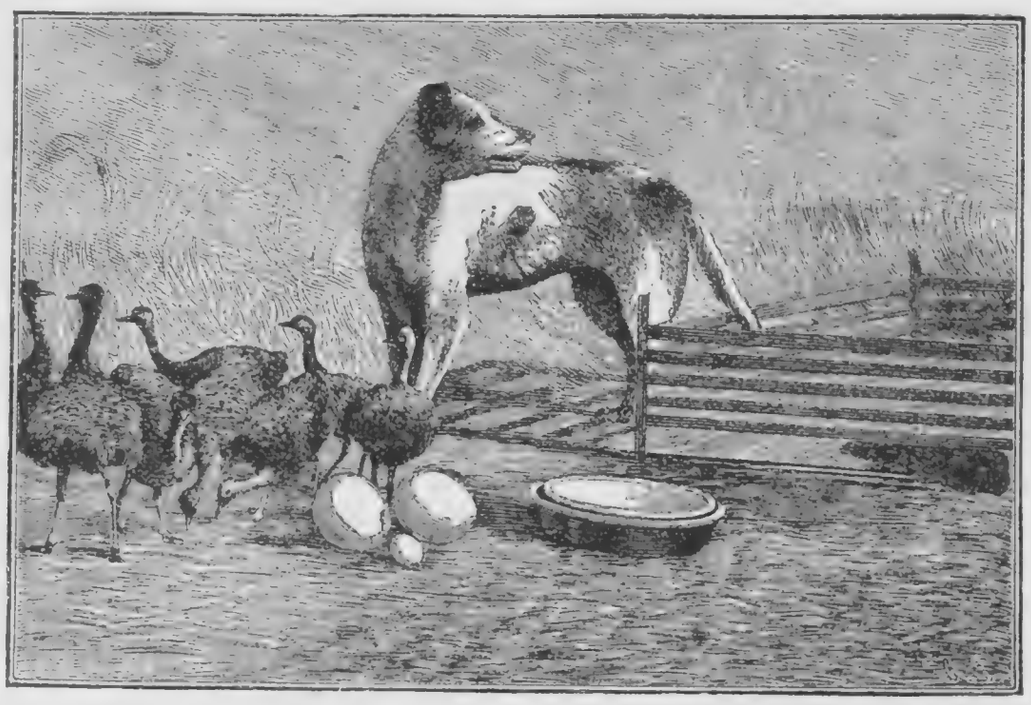
THE BEST CHURN.—P. B. S., inquires on page 398: "Why is not that the best churn which will make most butter of at least equally good quality, from the same quantity of cream?" It is, providing it does not consume too much time in churning or cleaning the churn afterwards. The churn with a dash in it will not injure the grain of the butter if it be stopped when the butter is in the granular state; but the dash will not bring the butter any quicker; it is unhandy to have and to clean and as it has no useful part to perform, why not leave it out?

In the table P. B. S. gives of the results of the churn contest, the Blanchard, a dash churn, made the most butter from a given amount of cream. Was the butter analyzed and the per cent. of water in each lot determined! If not, then the trial proves nothing so far as the quantity of butter is concerned as in 40-pound lots, one lot could easily contain a pound or two of water more than another. In churning by concussion the whole mass of cream is evenly churned; but if a dash is used. a coating of cream is formed over the whole inside of the churn, which is not reached by the dash and is not so sure of being all churned. If the dash churn will make better butter, make it with less labor, make more of it and make it quicker than any other churn, why, that is the churn we want. But if it won't, then let us swing our cream or turn it end over end.

KEEPING BUTTER.—Col. Curtis says on page 399, that in packing butter to kee for winter use: "The butter milk should be well worked out.' This must be a misprint for "washed" out, as I don't believe the Col. would advise gathering the butter in the churn and then attempting to work out the butter-milk. The Colonel writes an "awful" hand and it is no wonder the printers make errors in setting it up.

SOILING COWS.—Henry Stewart says on page 399: "The great advantage of soiling cattle is that it is exceedingly comfortable for the cows, insuring full feeding with the best food, the largest supply of the best milk, and the ease and comfort of the owner." How differently we look at things! I think the great disadvantage of soiling cows is that it is exceedingly uncomfortable for the cows, with no guarantee of full feeding unless much more than they can eat is given them, so that they can pick out the best; the grass—if grass is fed—must be of a certain hight in order to be cut, whereas, in the field the cows reject the long grass and eat the short, fine grass that the scythe would not cut unless it had a lawn-cutting edge, which it never has. It is very uncomfortable for the owner to cut it in a pouring rain or a scorching sun, especially on Sundays. It takes much valuable time, and if the field is properly pastured, does not save grass enough to pay for the worry.

As for there being no "driving of the cows," there need be none in pasturing. What's the matter with "calling" the cows? The dairyman who can't go to the gate of the pasture field and let his voice leak out in a long "Hoo-oo-oo-o-o," with the immediate effect of causing each cow to raise her head and listen, then, at the next call, give an answering "Moo-oo-oo-o," with a move in the direction of the caller, both then marching straight to the stable; I say the man who can't do this has not got as well acquainted with his cows as he should be. But if we must soil, let's do it with the help of the silo. Then things will move along with the ease and comfort—both to the cows and owner—that Mr. Stewart describes.



OSTRICH CHICKS AND EGGS AND KEEPER'S DOG Fig. 161.

Everywhere.

THE CASH CROPS.

(CONTINUED.

Kansas.

WASHINGTON, Washington County, June 6.—Our money products are hogs and corn. We sell them right here to grain men and hog buyers. Prices have been fair; but are lower now. Hogs are sold by weight, all at about the same price. Corn must grade No. 2 to bring market price; when it is damp or damaged it brings less. Time was when there was a profit in growing and feeding cattle. There is no range here now, and cattle feeding for the past two years has been at a loss to the feeder. Unless there is a change in prices, this section will undoubtedly settle down almost entirely to hogs and corn, and at the present rate of transportation there will be little or no money in corn. In improvements I could suggest a good many changes and not the least would be the appointing of a competent general agent, under heavy bonds for each township, not only to buy and sell everything; but to have the general oversight and management of all farms, giving directions as to what and how much shall be grown and the amount of labor imperatively demanded, and as to every detail in the raising of stock. He should see that every house is painted and that the grounds are suitably adorned with trees and shrubs. This would probably revolutionize and brighten the prospects of every neighborhood. F. O. C

Michigan.

MENOMENEE, Menomenee County, June 11. —1. Hay and potatoes are our cash products.

2. They are sold in the county where they are produced, and they are sold in the city to consumers.

2. Prices have been very low—too low for a profit, owing to over-production Prospects very poor.

4. Some get extra prices by marketing only first-class goods.

5. For 10 years farming has been going from bad to worse. Cash crops have not changed.

By way of improvement I would suggest that the farmers should cultivate fewer acres and do the work better than they do it now. They should also keep a milk and butter record for their cows and then they would know the difference between good and poor stock. I would also suggest that they should feed their cows well and keep fewer. By so doing they would save labor; get more money for the labor performed, and have better manure to spread on the land, and consequently better crops. They should also plant sweet corn to feed to their cows in July and August. No money can be made or saved by starving them. I would sell no hay if I had a home market for the butter and at satisfactory prices. M. M.

ROLLIN, Lenawee County, June 9.—Our money products are pork, wool and wheat, poultry, beef, butter, cream, potatoes, oats and corn. These are sold to middlemen in the nearest village, except eggs, poultry and cream, which are taken right from the farms. Prices have been fair, though our products have been occasionally sold below cost. Prices in future will probably be like those in the past. If some one makes more money than his neighbors by raising any particular article, all are likely to go to raising it until the market is glutted and they have lost more than they have made. J. O. B.

New York.

LYONS, Wayne County, June 11.—Barley, wheat, corn, potatoes, apples, peppermint, oats and hay are our cash crops. They are sold in this place to shippers. Considerable hay is also sold and it pays well at present; but if all goes out and nothing is put back, crops must shortly be greatly reduced. More stock and silage are needed to keep up the fertility of the soil. Our facilities for shipping are good, by canal or railroad. Prices are: Barley, 55 cents to 80 cents; wheat, 80 and 90 cents paid by millers and shippers; potatoes, 25 and 35 cents; oats, 27 to 40 cents, according to the kind and quality. Hay brings us from $10 to $15 per ton; apples, from $1 to $2.25 per barrel according to quality and kind. Several changes have been made within 10 years owing to the use of better machinery so that grain goes on in better shape. Then we have better facilities for making good butter, and people take more care to look up good customers who appreciate a good thing when they get it. Then ensilage, too, has come into pretty general use inside a decade. As improvements I would suggest the making of more barnyard and stable manure, and the cultivation of fewer acres with greater care. J. B.

Ohio.

NAPOLEON, Henry County, June 10.—Wheat, corn and rye are the crops from which farmers hereabouts obtain their money. They are sold to local dealers in the nearest towns. Prices for 10 years past have been lower than formerly, and we can see no prospect of an improvement in the near future. I have no knowledge of any farmers who realize more for their products than market prices. There has been little change in the past 10 years Farmers now depend for their cash upon the same crops as formerly. I would suggest the keeping of better stock of all kinds, the production of more feed and, its consumption on the farm by improved stock, and the selling of condensed products in the form of mature horses, cattle, sheep, swine or wool; or highly bred stock of any kind for breeding purposes. V. J. E.

TIFFIN, Seneca County, June 10.—The people of this neighborhood depend mostly on wheat and corn as their main crops. Corn is mostly fed to hogs and cattle, and wheat is sold right after it has been thrashed or when the price is satisfactory or when the farmers are obliged to sell. Most of the wheat is sold to shippers, and shipped to New York City, and some is sold direct to steam mills in this place. Wheat has averaged about 85 cents per bushel during the past few years. If farmers would read the RURAL NEW-YORKER and take the best out of it, there would be a bright future ahead, but with some of them there is quite a dark future. There are few who try to double their crops. Farming has not changed much in the last 10 years. By way of improvement I would suggest that farmers should raise more on one acre than they now do on two, that they should raise 500 bushels of potatoes per acre instead of raising from 75 to 100 bushels as they do now. Besides wheat and corn, farmers raise different kinds of crops in this neighborhood, such as oats, potatoes and considerable hay, which is mostly fed to stock. Seneca county is also one of the best fruit counties in the State; but the crop for this year is almost a total failure, except grapes. P. H. B.

Wisconsin.

KETCHAM, Fond du Lac County, June 3.—We are having a trying time here just now, there having been three heavy frosts within 10 days—two white and one black—followed now by one week of rain and very cold northeast winds with some snow on June 1st. The mercury was down to 44 degrees at noon. No change to-day. Corn looks as if it could not recover. Potatoes are black to the ground. The Rural No. 2 came up well; but was killed. The vines on my Contest plot are black to the ground. Grass and small grains doing well. H. D. P.

THE FARMER'S CLUB.

ANSWERS TO CORRESPONDENTS

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

WHEAT QUERIES.

D. R., Bergen County, N. J.—1. If you suspect wheat is going to lodge, what can be done to prevent it? 2. How well does wheat or rye ripen when lodged? 3. Is it economical to have the field so well manured as to endanger lodging? 4. Which will stand up better bearded or beardless wheat?

ANS.—From its own experience the R. N.-Y. can give but little information. The following answers are from successful wheat growers.

FROM A. L. CROSBY.

1. I know of nothing that will do so on my soil; on some soils salt is said to stiffen the straw.

2. If the grain is formed and in the milk, or nearly so, I think it will ripen well; but if the wheat lodges much before that time the chances are for light grain or none.

3 Well, yes, I think I would run "some" risk that way on account of the grass and clover. But a lodged wheat field is a poor piece of property.

4. In my experience the beardless is much better. After the recent storms both of my wheat fields were down, but soon got up as straight as ever with the exception of a little patch on well manured potato ground. My wheat is Fultz. If it were a bearded wheat,

much of it I think would have staid down.

Baltimore County, Md.

FROM E. DAVENPORT.

1. My knowledge of the causes and remedies for the lodging of grain is exceeding limited. It is usually caused by, or rather is associated with a deficiency in the formation of woody matter and the fibrous bundles of the stem, leaving the plant weak and often unable to bear its own weight. The difficulty appears to be constitutional; *i. e.* there is a failure on the part of the plant to perfect its normal structure—it is diseased. Whether it goes down or not will depend largely on circumstances of rain and wind, and indeed frequently apparently perfectly healthy straw succumbs to the inevitable before some severe storm.

2. It is the observation of all farmers, I think, that if grain lodges any considerable time before ripening, it fails to properly mature its seed. At any rate this has been my experience; whether this is because the plant is weak, or because of the position I do not know.

3. Lawes and Gilbert found, many years ago, that highly nitrogenous manures, with a deficiency of minerals, tended to the production of leaf rather than fruit stem. Now shade is one of the most fruitful causes of the failure to produce the proper amount of woody tissue within the stem, and no doubt the stem will be stronger and more woody where there is no excess of nitrogenous manures, and it will be able to carry its load most successfully when that load is light and low down; but these are the conditions usually associated with a poor crop. We raise grain for the heads, and want the shortest and strongest stem consistent with the production of the largest head. To attain the one end, grain, all experience teaches that the ground must be rich. The lesson that science would seem to teach, is to avoid an excess of nitrogenous manures, which tend to production not of grain, but of growth of plant, and that growth not firm and woody but long and weak. But it is nitrogenous manures that especially increase the yield of the wheat plant, and we are forced into using them freely. Certainly, any heavy crop, even if healthy, may, under adverse conditions, go down; but as a matter of practice, I would prefer to raise the heavy crops and take the chances, and I would apply manure freely, remembering, however, that a constitutional tendency to lodge will be likely to be induced by too free a use of the nitrates, causing abnormal production of leaf, and too much shading of the lower part of the growing stems.

4. Bearded varieties usually have shorter stems, and stiffer straw, and stand up better than the smooth sorts.

Agricultural College, Michigan.

FROM A. B. SAUNDERS.

1. I know of no remedy whatever for preventing an extremely rank growth of wheat from lodging.

2. Lodged wheat seldom ripens with the standing grain, being later. How well it will fill will depend on the time of lodging; if lodged while in the bloom, it will contain no grain at all.

3. No.

4. The beardless will stand best nine times out of 10. With a careful saving of the barnyard manure together with the correct rotation of crops and proper use of clover, I see no use for commercial fertilizers in Ohio.

Athens County, Ohio.

FROM JONATHAN TALCOTT.

1. Nothing, except to sow on poorer land.

2. I have had no experience with wheat or rye in lodging badly.

3. I have never had a field so manured. Generally there is too little manure.

4. Beardless, in my experience, has stood best. I raise but little wheat—no rye.

Oneida County, N. Y.

FROM D. C. LEWIS.

1. I know of no remedy that can be applied at the period of growth when the crop is falling down.

2. That will depend upon how badly it may be lodged, and at what period of its growth. If after it has headed out, I think it would fully ripen; if it lodged before, the grain could only partially fill.

3. So much depends upon the season that it is hard to decide just how much manure should be applied to produce a maximum crop. I prefer to manure so as to obtain the largest crop possible and risk the season.

4. Usually beardless wheat will stand up best under heavy manuring; but there are some kinds of bearded wheat, that will stand up just as well.

Middlesex County, New Jersey.

FROM H. L. WYSOR.

1. I know of nothing which will prevent wheat from lodging, though I have been particularly interested in trying to find out a satisfactory answer to the question. Growing wheat on an alluvial soil, where on the richest portions it lodges more or less every year, I have tried many experiments with a view to make the grain stand up, but all failed of success. I have tried salt in large quantities, commercial fertilizers containing no nitrogen, such as South Carolina floats, dissolved phosphates, potash mixtures, lime, etc., but they were of no benefit so far as lodging was concerned, if indeed they did not aggravate it. The heaviest crops of wheat are grown here on rather poor soils well fertilized.

2. As to how well wheat or rye will ripen when down, it depends upon how far either was from maturity when the lodging occurred. If nearly ripe, the grain will not be materially affected; but if just filling, it never fully matures, and shrivels badly, in some cases to such an extent as to be almost worthless.

3. I think there is no economy, but the reverse, in having a field so heavily manured as to put the crop in danger of lodging. It is true that succeeding crops will get the benefit of the manure, but that may be offset by the loss of the wheat or rye.

4. Bald wheats stand up much better than bearded. The latter hold water, the weight

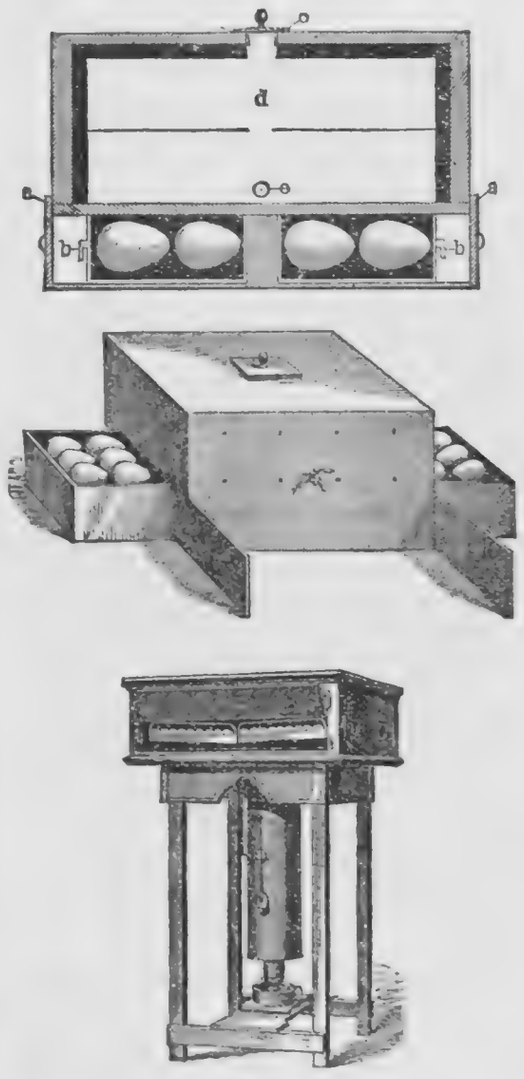


Fig. 162.

of which bends the stalks over when a brisk wind will prostrate them. Beards are not only useless but often prejudicial incumbrances.

BRINING BUTTER, ETC.

A Butter-Maker.—In preserving butter in brine; 1. How much salt should be put in a gallon of water? 2. What kind of package is best? 3. Should the butter be rolled or granulated? 4. Should it be salted before it is submerged?

ANSWERED BY T. D. CURTIS.

1. The inquirer does not say for what. If for washing butter in the granular form, we would dissolve about a pound of salt in a gallon of water, for the reason that a weak brine dissolves caseous matter, while a strong brine hardens it. If for brining butter and preserving it, make a saturated solution—that is, put in the water all the salt that will dissolve. At 60 degrees water will dissolve about 36 pounds of salt to the 100 pounds of water, or a little over one-third of its own weight. Use only the purest salt.

2. That depends on the market which the inquirer has. The general market calls for Welsh tubs of 30 to 60 pounds. For special customers fancy prints for the table are often preferred. For long-keeping, there is nothing better than the old-fashioned oak firkin, the butter being so completely covered with saturated brine that no air can get in. Air-tight packages are always best for long-keeping. Avoid stone-jars, and always consult the demands of the market for style of package.

3. Just what is meant by "roll" I do not understand. If the correspondent means whether he should pack his butter in a granulated or solid condition, I answer that he should make it as solid as he can. Some recommend keeping granulated butter in saturated brine. The objection to this is that it requires more space in the package, there is an unnecessary weight of brine, and as water contains more or less impurities—generally some organic matter—the more brine there is the more water must be used, and hence the more impurities there are to decompose and injure the butter. Hence it is better to make the butter as solid as possible, so as to exclude all unnecessary brine, but to cover the outside with brine to exclude the air.

4. Certainly. It contains on an average, 10 to 15 per cent of water. If this is fresh, it will weaken the brine, and thus diminish its preservative power. The brine in the butter should be saturated as well as the brine on the outside of it. The brine is contained only in the interstices, and does not really penetrate and salt the fat. Hence the butter may be kept in brine almost any length of time, and then, while still in the granular state, have all the salt washed out of it by using fresh water. If the water in the butter is already in the form of a saturated brine, no further salting is needed. The best way is to wash your butter thoroughly, while in a granulated condition, one or two of the latter workings being in weak brine Drain well, and then stir in about an ounce of the best dairy salt to the pound of butter. Then pack as closely as possible, with as little working as possible. Butter managed in this way requires no second working, and is best packed immediately, so as to give it the least possible exposure to the air.

CUT-WORMS.

J. J., Toronto, Can.—The inclosed grub is doing great damage cutting raspberry buds under ground, and also the shoots when three inches above ground. The pests eat the leaves and bark from young pear and apple trees. I found five, seven, and 13 at different hills of Marlboro raspberries. They eat the Minnewaski blackberries as they sprout. What will destroy them?

ANS.—The grubs are cut-worms. There are several species of these pests, varying somewhat in size and appearance, but very similar in their habits and manner of feeding. They feed during the night, burying themselves near the surface of the ground during the day, where they may often be found and destroyed. This is the surest method of extermination, as owing to their habits, they are difficult to reach with the ordinary insecticides. We would recommend 50 parts of sulphur to one part of Paris-green or London-purple sifted around the stems. The damage to the apple and pear trees was probably done by climbing cut-worms, another species of the same family. These might be destroyed by spraying the trees with arsenites, or their depredations prevented by some device which would prevent their ascending the trunk.

PRICES OF JERSEYS.

I. C., Town Hill, Pa.—I am forming a herd of registered Jerseys. I have made some purchases and am expecting to make others soon, and therefore it would be very interesting to me if the RURAL would give the recent auction prices and I think they would interest a great many other readers.

ANS.—At the Annual Combination Sale at the American Institute, the Breeders' Cup was won by a herd of five young stock, which sold at an average price of $190 per head. The herd of 29 head, embracing Mary Anne of St Lambert, averaged $607.94 each, Mary Anne bringing $2,100, and her daughter, Marianne Pogis, $2,300. At the series of Jersey sales in Tennessee, 31 head averaged $199.19; 10 head, $81.; nine head, $150 55; eight head, $60; four head, $50; three head, $110; and one head, $120.

GRAPE-VINE BARK LOUSE.

J. R. A., Reno, Pa.—What are the insects, like beet bugs, which are destroying my grape-vines, specimens of which are inclosed?

ANS.—This curious insect is a bark-louse which is found in different parts of the country from time to time and which belongs to an undescribed species of the genus Lecanium. It is allied to the black-scale of the olive in California and to the hemispherical-scale of our greenhouses. It can be very readily destroyed by the application of a dilute kerosene-soap emulsion. This genus, Lecanium, is a very large one and a very difficult one to study. Undescribed species occur upon a large number of plants in this country.

Miscellaneous.

B. R., Cadiz, Ohio.—Would it be advisable to breed a yearling colt this fall at about 16 months of age?

ANS.—No, the mare is altogether too young.

E. S. L., Holmen, Wis.—Are the rice plants of the South and the wild rice of the North closely enough allied botanically so that a cross can be made between the two? Is there any reason why such a cross would be impossible?

ANS.—Zizania aquatica is probably referred to. This so differs from rice (oryza) that it is probable a cross could not be effected.

"Chenango," Smithville Flats, N. Y.—1. Of whom in New York can I buy buhach or pyrethrum powder and London-purple? 2. Where can I get salt-glazed vitrified sewer pipes in 12-inch lengths?

ANS.—1. So far as we know there is none of the genuine buhach for sale in New York. The stock in California is limited. Persian or Dalmatian insect powder may be purchased at almost any drug store. London-purple is sold by the Hemingway London Purple Co., 90 Water street, New York. 2. Glazed pipe is sold by Jackson Bros., Albany, N. Y.

C. C. P., Brooklyn, N. Y.—I have a field of about seven acres that has been in corn for three years, highly fertilized. I intended to put it in grass this spring, but have been delayed till it is now too late. What is the best thing to plant for hay for my horses? Hungarian has been recommended; but I am told that it hurts a horse's wind, and my horse has a tendency to heaves already, unless fed carefully. What would the RURAL recommend under the circumstances, and how late can I put it in?

ANS.—Hungarian grass does not hurt horses in any way any more than Timothy would, if cut at the right time. You can sow Hungarian grass at once. It will require about 70 days for growth, and should be cut when it is coming into bloom.

DISCUSSION.

FRUIT BLOSSOMS.

PROFESSOR J. L. BUDD, AMES, IOWA.—Using the article by Mr. Proctor in the RURAL of June 8, as a text, the whole subject of the profuse flowering of the small fruits and orchard fruits at the West without setting fruit was discussed this morning in the Junior Class in Horticulture. In a very brief way the outlining of our conclusions in the RURAL may at least draw out some points of interest from some one or more of its numerous family of close thinkers and observers. These conclusions may be briefly formulated as follows:

1. So-called pistillate varieties of the strawberry on favorable soils and in favorable seasons, will develop enough perfect pollen on the short stamens to set a crop of fruit, while the same varieties on less favorable soil, or in less favorable seasons, will not bear a paying crop unless fertilized by perfect blossoms in adjoining rows.

2. Western experience favors the belief that purely pistillate varieties will not set a crop of fruit when remote from pollen-bearing sorts, yet if the season be favorable for the flight of bees and insects we often have a "sprinkling" of berries.

3. In our climate, and on our rich drift soil, some varieties of the raspberry, blackberry, grape, and all the orchard fruits, blossom profusely, but fail to set fruit when standing apart from other varieties on account of abortive or imperfect pollen, or the premature development of the pollen.

4. The intermingling of varieties of nearly all our small fruits and orchard fruits, has been found profitable. As our experience has seemed to settle the strawberry question as stated, I will only refer, at this time, to some of the reasons for the expressed beliefs in regard to the impotent and prematurely developed pollen, and the mingling of varieties in planting. My attention was first called to this important subject by the investigations growing out of the queries propounded by Dr. J. S. Houghton, of Philadelphia, in regard to the unfruitfulness of the Duchesse d'Angoulême pear, when by itself. In 1867 he succeeded in getting Prof. Thos. P. James and Prof. Horatio C. Woodward at work with the microscope and a full supply of the seemingly useless blossoms. After critical investigation, the conclusion reached was that the flowers were sexually perfect; but suffering from general debility. "Thus," says Dr. Wood, "the anther cells are large and finely formed, but they contain scarcely one-third as much pollen as those of more fruitful sorts. It seems to me further that the pollen grains are not so well developed, nor so crowded with granules." He adds; "What if there are comparatively few pollen grains. Provi-

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies.

dence has so provided that the great mass of pollen is superfluous.' It seems to me highly probable that the appreciable want of strength is associated with a similar, but less apparent degradation as regards quality."

Since that time Prof. Planchon, of France, has given much attention to this subject and found that on soils not altogether favorable the anthers of grape blossoms would appear to be larger and better developed than those in normal condition, yet the pollen was wholly abortive.

Dr. Stoll of Germany, also assured the writer that the anthers of certain varieties of the apple grown on the black drift soil of North Silesia were perfect in appearance, but wholly defective in pollen, At our college the same condition of pollen has been often detected in the blossoms of plums, grapes, apples, etc.

The cause of this condition of the anthers is as yet not wholly apparent; but, reasoning by analogy, we may reach conclusions not far astray. The Duchess, Hibernal, Silken Leaf, or Longfield apples; the De Soto, Wolf, Cherry, Wyant, or Early Red plums, the Spate Amarelle and some other very hardy cherries, the Concord grape, the Downer's Prolific strawberry, etc., have perfect foliage and a habit of determinate growth. Irrespective of the character of the season and almost without regard to soils, the cell structure of the wood is perfectly stored with nutriment for sustaining the first growth of spring, with enough to spare for perfect blossoms and starting the newly set fruit.

On the other hand, the varieties that blossom profusely without setting fruit are notoriously those that fail to complete the work of cell storage prior to the advent of the first severe frosts, yet many of these unsatisfactory varieties for common prairie culture develop perfect wood, perfect blossoms and perfect fruit when grown on soils more favorable for perfect maturation of wood, even in our own State; yet it is often the case that such showy bloomers will set fruit when adjoining varieties, with perfect pollen will not. Close observation has shown that the stigmas are usually perfect and that the statements of Lindley and other European scientists are reliable, viz: that when the fertilization of the stigma is deferred from any cause, the flowers will remain perfect—as Lindley says—"as if in expectation of that event for which they were created." When pollenation is deferred on account of defective pollen, the stigmas will retain their perfection and nectar for many hours waiting for the insect, or the pollen brought by the breeze, from adjoining varieties.

Another reason for intermingling varieties is found in the fact that some hardy varieties with perfect flowers in our climate ripen their pollen prematurely: but in mixed planting the pollen perfected before the stigmas are ready to receive it may be just in time for neighboring varieties. The effect of abnormal heat on the development of the anthers should receive more attention from our scientists. The close-observing Thomas Meehan has stated that in West Europe in monœcious plants, such as English hazel, the "female flowers would remain at rest under a temperature which was sufficient to excite the male flowers to active development. Hence a few warm days would bring the male flowers to maturity, while the female flowers remained to advance only under a higher and more constant temperature." Our liability to brief periods of summer-like temperature in early spring gives us many cases of this kind, where pollen is developed before the stigmas are ready to receive it. But in such cases the waiting stigmas may be fertilized in mixed planting by pollen of sorts maturing a little later. In these notes the object is to draw out the observations of others.

MILK FOR THE BABIES.

A. L. CROSBY, CATONSVILLE, MD.—P. H. R. says in a late RURAL, that "cow's milk is quite dissimilar to woman's milk." That may be so, but in the absence of mother's milk give the baby cow's milk (properly diluted, if it is Jersey milk; if it is Holstein milk it is watered about right for little babes) and it will thrive.

I was glad to read Mr. Gregory's views upon the healthfulness of eating diseased meat, if it were properly cooked. From what I have seen, and still more from what I have heard about diseased cattle being slaughtered for food, I try and keep my thoughts off of the subject while eating "bought" meat. But I guess Mr. G. is right; if diseased meat is thoroughly cooked there is not much danger in eating it. But how about milk from diseased cows? In this case we eat the raw disease: not only that, but we give it to the babies. Is it any wonder that there is so large a per cent. of deaths among babies? It is sometimes like this: The boy is sent to the field to drive up the cows and takes the dog along to help; the cows come into the barn-yard on the full run; the weather is hot and the man who milks, being tired and cross, kicks and curses the cows because they won't stand still. Is the milk from cows so treated fit food for a baby? Or perhaps a cow is sick, but so long as she gives milk that is not bloody, it is put in with the rest and sold. How is that for baby food? Or the baby's mother goes out to spend the evening; there is dancing and she dances two or three times ("that won't hurt me," she says), eats a late supper finished off with ice cream and cake, goes home, baby wakes up, mother nurses it; next morning baby is sick; next night dead. The doctor calls it "convulsions," but it is not that, it is infanticide caused by raw disease in the mother's milk. One of my neighbors who sells milk lost a cow the other day. The veterinarian said she died of apoplexy of the heart. My neighbor continued the *post mortem* after the veterinarian had gone, and found that a piece of wire had pierced the stomach. The cow was "all right" that morning, her milk was good (?), was sold as such and honestly too, as she showed no symptoms of disease, but there must have been some raw disease in that milk which, if it found the right breeding ground in a baby's stomach, may have caused a little string of crape to appear on some one's door knob.

ON THE FENCE.

S. E., MONTGOMERY COUNTY, OHIO.—I was much interested in reading Prof. Porter's article entitled "What are the Agricultural Colleges Good For" and I am pleased to learn that the publication of the article has attracted the attention which it deserves. The Professor has certainly made out a strong case. No one would be more gratified than I would be to be convinced that he is mistaken. I would be loth to believe that the more a boy is educated in the line of agriculture the more he will be disinclined to pursue it. Yet the logic of the Professor's article indicates that this will be the usual result unless such education is conducted somewhat cautiously and sparingly. On the other hand it will be difficult to convince the average farmer of the utility or necessity of a technical course of training at an agricultural college so long as graduates of these colleges do not demonstrate their superior fitness for agricultural pursuits, and so ong as our most successful and practical farmers come to the front without the aid of the agricultural colleges, while they almost entirely ignore our farmers' clubs and institutes.

EFFECTS OF THE FROST.

J. H. A., RANDOLPH, N. Y.—There is a good deal said about the damage done by the late frost in this part of the State. The truth is that the people are croaking all around that everything has gone up or down. It's true we have had a very severe frost and that it has done no good if no harm, but what is the use of groaning about it. I have had no time to croak or groan. I made up my mind at once that doing so would be of no use, so have kept right along and if anything, worked all the harder and thought all the more, and I believe I am all the better off for it, too; for I find my work is well up with the time of year, my grass and grain are looking fine. I can't see that wheat is injured and I find a fair crop of apples in the orchard. My corn is nicely up again and seems to be growing. I have lots of good feed for the cattle in my pastures. Now what more could I ask? If I were to find fault at all, it would be that I have had to work a little too hard some of the time, yet it affords me much pleasure to look around and see that the work has accomplished something.

A "GENERAL-PURPOSE COW" MAN.

J. S., CORNING, IOWA.—People are telling about the sort of cow that suits them, so I may say a little about the kind of cow that we think we must have here. We want one that will give a good yield of butter and whose steer calves make good feeders which, when fat, are good enough for export. I have been breeding and selecting for 16 years; but the cow I want seems a long way off yet. I have tried crossing a Jersey bull on grade Short-horn cows, but I could not discover that it helped the butter either in quantity or quality, and the steer calves—well, I don't believe one could find in Webster's-Unabridged all the words my neighbors used in describing them.

ANOTHER DAIRY RECORD.

A. R., NOTRE DAME, IND.—On an Indiana farm on January 1, 1889, it was found that 1,702 pounds of milk made 87 pounds of butter and again on February 12, 1889, 249 pounds of milk made 120 pounds of butter, the thermometer standing at 62 degrees Far. On May 17, 1889 the usual test showed that 768 pounds of milk produced 31 pounds of butter, thermometer at 70 degrees and finally, on May 21 it was found that 800 pounds of milk, made 36 pounds of butter, the thermometer being between 59 and 60 degrees Far. The cows producing this amount of butter are of common stock, with the exception of a few Holstein grades, and their feed was Timothy hay, with ground corn and oats.

O. T., ELIZABETH, N. J.—J. J. H. G. on page 398 of the RURAL, makes some very interesting, though I must confess, to me not very attractive statements. Are all the efforts of legislators, boards of health and others in authority to protect the people at large from danger incurred by eating diseased, decayed, and tainted meats, and other foods, the result of ignorance, bigotry, and prejudice? Are we so far behind the natives of Northern India? Are we, with our boasted civilization, so far behind the times as the statements of J. J. H. G. would imply? It may be all "sentiment," but I don't want any diseased or rotten meat on my table, and, further, my eyes and nose are not "all the police" I need. In the case of the car-load of cattle afflicted with "lump-jaw" mentioned in the news columns of the RURAL recently as having been seized at Buffalo, a physician who examined them said they contained poison enough to kill all the people in the State, and we are told, further, that after such cattle are dressed, it is impossible to tell their carcasses from healthy meat. In New York only a few days ago, the authorities closed up a lot of stalls on one of the piers, on the ground that the exhalations from the sewers emptying into the river under the piers, rendered the meats and vegetables there exposed, unfit for food. This was done "in deference to public sentiment." Are not all the laws against adulteration of foods enacted in deference to this same sentiment? The average legislator cares about as much for the health of the community as he does for the tariff, which is very little. His chief concern is to be re-elected. So it is best not to discourage this sentiment. I don't want any diseased or decaying meat on my table, and when I cannot get that which I am reasonably certain is healthful, I shall live on fruits and vegetables even though they be raised on such "disgusting substances" as night-soil.

A. C. P., BINGHAMTON, N. Y.—On page 403 of the RURAL a correspondent asks how to dry rose petals. Spread the petals on a sieve in shallow layers, dry in a cool dry place out of the sun. For perfume jars where the looks are of no account, mix layers of leaves with fine dry salt between. The whole process is very simple, but requires care and some skill.

TO SEVERAL INQUIRERS.—The R. N.-Y. sold the entire stock of the Rural New-Yorker No. 2 potato to J. M. Thorburn & Co., several years ago. They propagated it and placed it on the market the past season. All the other seedsmen in the country who offer it for sale were obliged to purchase their stock of that firm.

What Others Say.

FERTILIZERS. In the proceedings of the Western New York Horticultural Society we find a most interesting and instructive essay on fertilizers. For an imaginary experiment Dr. Caldwell, the writer, says let us bore some holes in the bottom of a pail, and lay a piece of coarse flannel over the bottom, merely to keep the sand or soil with which we afterwards fill the pail, from running out through these holes; then we will nearly fill the pail with some clean sea-shore sand, and pour in some manure water; in a very short time some of the liquid will appear at the bottom of the pail, having sickered down through the sand and through the flannel. We examine the liquid, and so far as appearance goes it is the same kind of a liquid that was poured in, and if the chemist makes an analysis of it he will find that it contains every thing that was in the manure water to begin with. Now if we change the experiment a little, and in the place of manure water use a weak solution of potash, or of a phosphate, or of sulphate of ammonia, or of nitrate of soda, we shall get just the same result practically; the water that comes out at the bottom will contain just as much potash or phosphate or ammonia as that which went in at the top; only a close chemical analysis could show any difference.

Now let us vary the experiment, and put some good loam in the pail in the place of the sand, and begin as before with manure water; we shall no longer find that what comes out is just like what goes in; instead of being dark-colored and bad-smelling it will be much lighter-colored, if not as clear as well water, and as odorless; we can tell by our senses that it has given up much of something to the loam, and a careful chemical analysis will show at once that there has been much of a loss that we can not make out by sight or smell—that, in fact, nearly all the potash, phosphate and ammonia is wanting. If, as before, we vary the experiment again, and instead of manure water pour a weak solution of potash over the soil, almost no potash will come through, and so it will be with the phosphate or the ammonia salt. Further, if we take this pailful of soil after it has been charged with any one of these substances, and drench it with water, we shall find it almost impossible to wash out the potash, phosphate or ammonia salt, left there from the solution that was poured through in the first place; we may wash the soil with a hundred times as much water as that which was first poured on and still not get out again all that was left there.

The wonderful property of the soil, by which some of the most valuable constituents of the food of plants are seized hold of at once, as soon as presented to it in solution, and securely stored up till called for by the proper parties, is one that has a very important bearing on the farmer's work. It is this that makes it safe for him to spread his stable manure in the fall for a crop in the spring; it is this that makes it safe, within limits, to put on a rich dressing all at once without fear of so charging the soil water with plant food as to damage the plants; it is this that distributes the food uniformly in the soil, so that the plants will find it wherever they go, thus inducing a good and wide-spread root growth, that is so much more serviceable in time of drought than a growth would be confined in spots here and there, where the roots might chance upon a rich deposit of phosphate, potash, or nitrogen compounds. And with all these advantages there is not coupled the disadvantage that would be fatal, that this food is put beyond the reach of the crops; for they have with them the key to unlock the bank, and they can get all the food that they have vitality and energy enough to work for.

But there is one feature of the case that must be noticed: nitrogen, as nitrates, is one of the most useful forms in which to supply this very important food; many say it is by far the most important of all. Now, in this experiment with the pailful of sand in the first case, and of loam in the other, if we pour in a solution of nitrate, we shall get nitrate at once in what pases through in both cases, and as much in one case as the other, and we may try the experiment with any kind of soil with the same result; we shall not be able to find any one that can store up nitrate, while any and every one will store up potash and phosphate in quantities far beyond the most liberal dressing that would ever be applied to it.

This fact has an important bearing on the use of any fertilizer containing nitrates, and the lesson it teaches is that such a manure should be applied to the ground while the crop is growing, and in moderate doses at a time, never in the fall for a spring crop, and not even all at once in the spring, but at two, three or four times during the rapidly growing season. Scattered on the surface of the soil, not even the highest heat of the midsummer sun can convert any of it into vapor so that it will pass off into the atmosphere; it will be secure there till the rain comes; then it is quickly taken into solution and carried into the soil, where there must be an abundant root growth of vegetation to take possession of it on its way down; for on its way down it will surely go as long as any water flows through the soil to carry it.

It seems to Dr. Caldwell almost certain that a dollar invested in nitrogen, as nitrate of soda, with the proper management of its application to the crop, will yield a better return than a dollar invested in nitrogen in any other form.

The lesson is, that nitrogen in every form is liable to loss by leaching through the soil. Potash and phosphate, when once put on the soil, the farmer can forget and yet not lose; but as to the nitrogen he must ever be on the watch, and his aim must be to get it back again in his crops as soon as possible. The fewer the weeks or months in the year, in the warmer season when the bacteria are producing nitrate most rapidly, that the soil is bare of any growing crop the better; and the richer the soil the greater the need of constant vegetation on it, from spring to fall, to catch the nitrate. This may be an advantage, perhaps, that market gardeners have over the ordinary farmer, that they have their rich and well tilled soil, in which nitrification must be going on very rapidly, so well covered with crops during the warm season that there can be very little loss; and we may find there an argument against summer fallow

ing, that the nitrate formed while the land is unoccupied by vegetation may be lost before the crop is put in which is to be benefited by the fallow. Certainly some sort of a useful crop should come in late in the summer, so that the leaching out of plant food may not be allowed to go on all winter.

FULL AS A TICK.

MR. W. J. GREEN, of the Ohio Experiment Station, says in the Massachusetts Ploughman, that the cost of bunching asparagus may be reduced nearly half by using small rubber bands instead of strings in bunching. Unless labor is very cheap the saving is sufficient to pay for the additional cost of the rubber bands.....

LEAVING out the question of economy of labor, rubber is so much superior to strings that it could be used with profit even though it cost five times as much as at present. This is because no matter how tightly tied, strings will become loose after the asparagus has become slightly dried, and the bunches will fall to pieces .....

MR. GREEN commenced using rubber bands in order to save time in bunching, and found that they paid him on that account alone, but the dealers were quick to observe the advantage that it gave them, and the asparagus soon sold at an advance of about five cents per dozen bunches above the regular market price.

A GOOD METHOD of bunching is to slip a rubber band over an ordinary tea-cup, holding it near the top of the cup. Then fill the cup with the asparagus to be bunched, thrusting the heads of the shoots downward into the cup. When the cup is full, pull the rubber band over the top of the cup upon the asparagus; remove the bunch from the cup and slip another band over the bunch near the tops. This makes a bunch of about the right size and leaves the top of the bunch nicely rounded. All that remains to be done is to square the buts with a sharp knife.....

WM. C. STRONG says, in Popular Gardening, that grapes are usually increased in size at least 25 per cent. by girdling or ringing and the time of ripening is hastened from ten days to a fortnight, or more, depending upon the season. With some varieties this point of time determines very certainly the success or failure of the crop. The time for doing this work of ringing is soon after the setting of the fruit, when the berries are about the size of peas.....

THERE is a good deal of difference of opinion on this subject. R. N.-Y. readers have already had the views of its correspondents. Professor Maynard of the Mass. A. C., says that no injury to the vines girdled has ever been detected, even where the girdle was made on the main trunk near the ground. The time of ripening is generally hastened by one or two weeks. Careful sugar tests show no injury to the quality of fruit. The fruit was larger, more beautiful and sold for from three to five cents per basket more than that from ungirdled vines. For reasons of economy of the vine, only a part of the cane of each vine should be girdled and only those that are to be cut away.....

HE further says, in the same Journal (Popular Gardening), and he merely repeats what we have quoted from his reports, that good results were obtained when wires were twisted about the canes, but only when twisted very hard with pincers. For this purpose about No.20 annealed was used and the work done late in June. From his experience he believes that girdling will result in profit to the vineyardist, and in much pleasure to those who are growing choice late grape varieties..

OUR RESPECTED FRIEND, Secretary E. Williams, says ringing or girdling is done for the gratifying of one's curiosity and vanity or perpetrating a fraud.....

PROF. W. A. HENRY, of the Wisconsin Experiment Station, alludes, in the Breeder's Gazette, to a plain cow in the herd, that had no friends. She minded her own business strictly, giving a fair amount of milk, and might have been sold at almost any time for about what she cost ($35). In the same barn were several animals that had cost much more money and were supposed to be superior. A churn test showed that this cow was giving fat enough to make one pound and fourteen ounces of butter daily, while some of the superior cows, standing beside her eating the same amount of feed, gave but little over one pound per day. Such a difference as this will not strike some farmers as very important, perhaps; let us look into the matter a little further. With butter at 20 cents per pound this cow was giving about 37 cents' worth per day, and the other cows from 20 to 25 cents' worth. Here is a difference of fully 12 cents per day in favor of the unpretentious cow. But these figures do not show the entire difference by any means. It cost something like 15 cents per day to feed and care for each of these cows. Subtracting this from the value of the product, we have 10 cents a day for the supposed good cows and 22 cents a day, or more than twice as much, for the plain cow.....

DAIRYING is hard work, Prof. Henry concludes. Cows must be milked and fed seven days in the week and twice a day. Why should a man do this year after year, treating all his cows alike, when a portion of the herd is steadily working to bring him in debt at the end of the year, and another portion yielding good profits? Prof. Henry guarantees that 99 farmers out of 100 who will start a thorough investigation to determine the merits of each animal in the herd will welcome the traveling cattle buyer to the farm within one month from the time the investigation begins.....

MR. O. S. BLISS'S acquaintance, as he informs the Philadelphia Press, an aged Scotchman, has stabled a herd of Ayrshires, the most vigorous and active of cattle, without loosing them from their stalls from fall till spring, through more winters than Mr. Bliss can remember, and no man's stock ever comes out in the spring in better general condition than his. He has prospered until he has absorbed farm after farm, while his neighbors who croak about his cruelty to his cows have kept on in the old way of wasting food, milk and flesh into the wintry air till several of them have been compelled to sell out and seek a more genial climate in which to practice their method of wintering cows .....

THE editor of the Press says that a cow in order to maintain her vigor must have in addition to abundance of wholesome food, pure air, sunshine and a chance to tone up her muscles with moderate exercise. These are essential to the health and well-being of every other animal in the Universe, and the Almighty made no exception in the case of the cow.....

THE Kentucky Experiment Station found last year, that copperas (sulphate of iron) decreased the yield of ear corn per acre five bushels.....

THE LONDON GARDEN, in a plain article instructing its readers how to prune rose-bushes, says that the commonest mistake is the leaving of the older branching spray wood that has already flowered. Rose bushes at the beginning of the year generally consist of several much-branched stems which carried bloom in the previous summer, and several strong straight shoots springing from the base of the plant. In the case of Hybrid Perpetuals, these older branching stems should be cut completely out, leaving only the new shoots from the base which themselves should be then considerably shortened. If the old spray would be left in it produces no flowers worth having, while the weak and crowded growths with which it becomes covered afford a perfect harborage to every known Rose pest. Nevertheless, it is a common thing for the unlucky rose bushes in many gardens to be uniformly clipped over with the shears, much as a hedger might top a hedge and then the people wonder why they never have good roses.....

THE only way in which a fine healthy growth can be obtained strong enough to be exempt from the attacks of aphides and able to carry beautiful flowers is by cutting out all the old wood that has done its work in having flowered the year before, and relying solely upon the straight new shoots. The extent to which these should be shortened depends rather upon their thickness than upon their length. If they are no thicker than a cedar pencil they may be cut right down to the base; if they are as thick as a finger they may be left three inches, six inches, or nine inches long where the wood is sound—that is to say, is well ripened and uninjured by frost. At first it may seem to many a great waste of material to cut these stout shoots, which are often five feet or six feet long, down to within six inches of their base, but it is rarely advantageous to leave a greater length than nine inches at the outside. It must be borne in mind that the new growth starts from the tops of the pruned shoots, and therefore if these are left long the effects of a high wind in early June are liable to be disastrous, the weight of foliage and flower buds at the end of a long stem causing them to sway to and fro and chafe against each other, or even to break short off.....

MR. J. J. H. GREGORY says, in the New England Farmer, that the White Barletta onion is the earliest of all. It is of a fine white color and bulbs raised from the seed sown will mature about as early as those raised from sets .....

DR. TALMAGE says, in the Observer, (N. Y.) that early rising is not necessarily commendable. All depends upon what one does after he gets up. It would be better for the world if some people never got up.....

A NEW seedling coleus has been raised by Mr. W. H. Cornish. The greater part of the leaves are clear carmine marked with deeper, redder spots, while the scalloped edge is a light green. It is a very promising plant, and will be used largely by florists for decorative purposes. Mr. Cornish has several new greenhouses in which he will propagate this and other novelties. The coleus is as yet unnamed .....

ABSTRACTS.

——DR CALDWELL, in N. Y. Tribune: "Allowing 1,600 pounds as the weight of a two-horse load of stable-manure, and calling its quality just ordinary, 14 loads would contain as much nitrogen, posphoric acid and potash as would cost nearly $25 if purchased in commercial fertilizer."

——"I ALWAYS say to my students, when I come to this subject in my lectures, that any bed of muck is worth trying, for it may be a small mine of wealth, and that it should not be condemned as worthless till a fair and thorough trial has been given to it, and that the only way to find out whether it is worth anything is to give it such a trial in the field."

——"THERE come hard experiences in most lives, when self-denial must be practiced and many things which are desirable done without; but it is to a great extent left to our choice whether this shall be during the strength and enthusiasm of youth, or when the infirmities of age are upon us." [Note this well, young readers of the R. N.-Y.]

——DR. PETER COLLIER: "It is entirely within bounds of facts to assert that there are at least 10 per cent. of our farmers, in whatever branch of agricultural industry they may be engaged, who are getting double the return of the average of those engaged in that branch—twice the bushels per acre, twice the pounds of butter per cow, and this, too, simply by improved methods and intelligent application of the fundamental principles of success which should govern their practice."

—— PACIFIC RURAL PRESS: "There is a foolish desire on the part of American youth to avoid work, or at least what is termed hard work, but no one need expect to succeed without work and plenty of it. That which appears easy looks differently when we can get at the actual facts. Many, tired of farming amid the stones and stumps of New England, come to California, buy an orange grove or a fruit farm, and imagine that all they have to do is to sit down and watch their fruit grow."

——PROFESSOR A. J. COOK, in the Proceedings of the Western New York Horticultural Society: "The best remedy for the curculios is Paris-green or London-purple. It will kill them sure. They eat both leaves and plums."

——HOARD'S DAIRYMAN: "A 'light straw' is the color wanted for butter."

——"THE practical questions are whether cud-chewing, by bovines, does not obviate much of the supposed necessity of having them roam especially for exercise; and if so, whether the pasture that will raise three or four times as much of soiling and silage foods, cannot be profitably dispensed with. We think the main question has been amply demonstrated, and the farmers who choose, can avail themselves of the new method, with confidence that they will succeed."

——COL. F. D. CURTIS, in Hoard's Dairyman: "I have said comfort was essential in the dairy. This must not end entirely in the effort to keep the cows out of the cold. In summer they should be kept out of the heat and flies. More milk and butter can be made from cows kept up the year round than in any other way. I would make an exception of the nights in hot weather, and turn them out into a night pasture. If not kept up all of the time, and fed in a stable on succulent foods and bran and meal, then they should have a regular feeding night and morning. He is not a wise dairyman who does not follow this plan."

——COMMERCIAL BULLETIN: "The melon that is probably the least likely to be surreptitiously carried off is the cantaloupe."

S. G. CURTICE, Western New York Horticultural Society: "To-day a Western mining camp can set forth as elaborate a menu, from the soup to the plum pudding, making use of canned goods only, as any of our metropolitan hotels. At our sea-side resorts green peas and fresh tomatoes are served, in their season, from the little green cans, without suspicion on the part of the guests that the vegetables are not freshly picked, and greatly to the profit of the landlord who could hardly spare from his working force an army of pea-shellers and tomato-parers."

——JOSEPH HARRIS; "At the present price of wheat we cannot afford to buy nitrogen as a manure for this crop, and still less for corn. The profit of using nitrogen depends on the price of the product. Artificial manures will make trees grow, but it would not pay to use them on a timber lot to grow wood for fuel at $3.00 per cord."

——"BUT it should be understood that when we use manure for fruit trees we should see that the fruit trees get it. If we grow wheat, oats, potatoes, beets, strawberries and seeds among our peach, pear and apple trees, we should have to furnish an excessive supply of nitrates before the fruit trees would get much of it. The greater portion would be absorbed by the annual crops and weeds, and it may well happen that a moderate dressing of manure would, by increasing the growth of the weeds, actually lessen the crop of fruit, for the reason that the greater the growth of weeds the more water they evaporate and the drier would be the soil where the roots of fruit trees are searching for food and water."

——"THE soil itself will hold the phosphoric acid and potash and the plants will hold the nitrogen."

——T. D. CURTIS, in the Dairy World: "The proper way to give practical instruction is through a permanent institution, where all the conditions, from the breeding and feeding of the cows to the perfection of the dairy product, are under perfect control. This alone will secure practical results which will be a satisfactory ocular demonstration to the looker-on and listener."

——N. Y. HERALD: "Dear Sun—When you get right down to bottom facts—this is *sub rosa*—our real objection to the sunflower as a national emblem is that the thing is everlastingly seedy. Now will you give up the fight and come over to the sweet-scented and modest violet?"

As a Drink in Fevers
Use Horsford's Acid Phosphate.

DR. CHAS. H. S. DAVIS, Meriden, Conn., says: "I have used it as an accessory in cases of melancholia and nervous debility, and as a pleasant and cooling drink in fevers, and have been very much pleased with it."—*Adv.*

Miscellaneous Advertising.

Dyspepsia

Does not get well of itself; it requires careful, persistent attention and a remedy that will assist nature to throw off the causes and tone up the digestive organs till they perform their duties willingly. Among the agonies experienced by the dyspeptic, are distress before or after eating, loss of appetite, irregularities of the bowels, wind or gas and pain in the stomach, heart-burn, sour stomach, etc., causing mental depression, nervous irritability and sleeplessness. If you are discouraged be of good cheer and try Hood's Sarsaparilla. It has cured hundreds, it will cure you.

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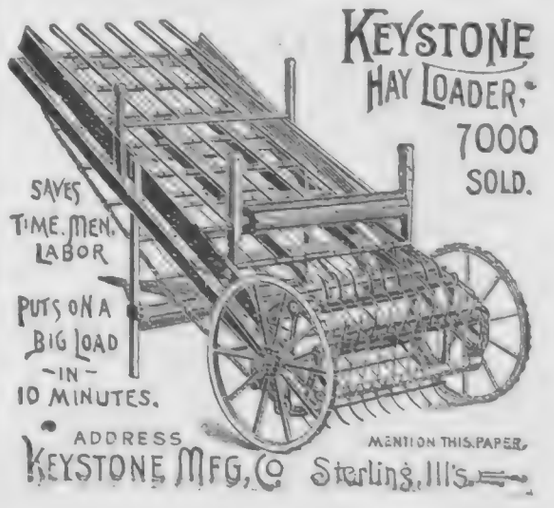
For Internal and External Use.

Stops Pain, Cramps, Inflammation in body or limb, like magic. Cures Croup, Asthma, Colds, Catarrh, Cholera Morbus, Diarrhœa, Rheumatism, Neuralgia, Lameback, Stiff Joints and Strains. Full particulars free. Price 35 cts. post-paid. I. S. JOHNSON & CO., Boston, Mass.

BEACHAM'S PILLS cure sick headache.



THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

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SATURDAY, JUNE 29, 1889.

NEVER before, in the experience of the R. N.-Y. people, have blackberry vines been so laden with fruit. The writer has just counted 200 clusters upon a single plant of Taylor's Prolific, the clusters averaging 20 berries each, making 4,000 berries on the plant. Other varieties are similarly laden.

THE Rural Farm has nine acres of Armstrong (Landreth), the finest wheat we have ever raised. In years past, this variety has generally lodged more or less. Last fall the fields were given a good spread of unleached ashes. Though gales and heavy rains have been more frequent than in ordinary seasons, no portion of the wheat is down.

AS OUR readers were at the time advised, we grafted half a dozen cions of the Japan quince upon an apple tree in the spring of last year. The cions have made a growth of 18 inches and one of them bloomed a week or so ago. The union does not seem quite congenial, however, as the quince the past spring made a rather feeble growth.

CAN Western farmers afford to produce sorghum cane? This is a question that is puzzling many Kansas and Iowa farmers just now. It seems to be settled that the sugar factories can pay not over $2.00 per ton for the cane. At that price, will sorghum pay as well as corn? Must sugar-producing plants be grown so cheaply that there will be little or no profit to the producer? A number of our Western friends are writing us on these topics. Their opinions are interesting. We shall print them shortly.

"Instinctive unrest may be noticed among animals as the precursor of a storm, but these appearances are not reliable, as such animals really know no more about the weather than their owners."—C. S. RICE, page 438.

THE grubs of the asparagus beetle, the ways of which we have had only too good an opportunity of observing the present season, prefer the terminal shoots and leaves, they being more tender than those below. They eat the youngest leaves first, then the bark as they descend, leaving only the dry, dead twigs above them. The R. N. Y. sprayed its plot of asparagus thoroughly with pyrethrum and hellebore. The remedy is by no means a perfect one, as after two sprayings many grubs and beetles were still feeding upon the plants. We shall next try London-purple or Paris-green.

SUGAR of milk is a substance quite largely used in the manufacture of pills, homœopathic medicines, etc. Heretofore, American manufacturers have been obliged to secure most of their supply of this material from Switzerland and Bavaria. It is now proposed to supply the market with a home-made product, and already two factories are running in New York State with a third to follow shortly. Milkmen will find in these factories, a small measure of relief from the present over-production of milk, and if cheaper manufacturing processes can be developed so that all the sugar of milk needed in this country can be made at home at a reasonable cost, there will be saving enough to make itself generally felt.

WITHIN the past 10 days the R. N.-Y. has made a thorough trial of using unleached ashes and Paris-green instead of plaster and Paris-green upon potato vines. It was hoped that the ashes would repel the flea-beetle, and serve just as well to extend the poison as plaster, while, at the same time, serving, as the rains carried it to the soil, as an excellent fertilizer. Our ashes were sent to us by Munroe, Judson & Stroup, of Oswego, N, Y., and were of the best quality. One pound of Paris-green was used to a barrel of the ashes, and after a thorough mixing, it was sifted on the vines. In two or three days it was evident that the leaves were harmed by the application. Possibly an inferior article of ashes would serve better.

THE Superintendent of the next Census wisely calls attention to the need of correct estimates of the valuation of farm property. Any man who has acted as assessor in any rural community knows what a large proportion of farmers have difficulty in setting a fair estimate on their property. This should not be so. A man doing business of any kind ought to know what his business is worth. It is very important that the census returns should be as reliable as possible. These returns, singly or collectively, are made the basis for figuring and deductions that vitally concern farmers as well as every other class of citizens. Let us be ready for the next census so that we can give intelligent and reliable estimates concerning our business.

A SUBSCRIBER in Thomas County, Kan., after speaking of unusually bright agricultural prospects says:

"Many farmers, I am sorry to say, are being induced by the bright prospects to incur heavy debts which will place them at so great a disadvantage that they cannot reap the full profits or enjoy the happy results of a bountiful harvest. Our loan agent informed me last week that he had, since the first of March, made 25 loans, aggregating $9,000, on real estate tributary to our little town of about 100 inhabitants."

Here we have a suitable text for a long sermon. Gentlemen—when times get so promising that money comes into your hands, the proper thing to do is to hold on to it

WHETHER it is in accordance with science and practice to place the manure or fertilizer very near the surface, incorporate it *with* the surface soil, or place it several inches or a dozen inches below is a very important question, and one that the experiment stations might well work upon. This is the fourth year that the R. N.-Y. has placed fertilizers immediately below and four inches above seed potatoes. Until the present year the answers given by the crops have been contradictory. At present the plots which received the fertilizer *above* the seed pieces are looking notably better than those that received it below. The very wet season may have something to do with it.

The largest crops of corn which the R. N.-Y. has ever raised were from fields upon which the fertilizer was sown broadcast and harrowed in.

IN Northern New Jersey many farmers are straw growers. They raise the rye that gives them the heaviest growth of straw. This straw will sell for more money than the grain from a Western wheat field. It seems to be generally understood that a straw farmer must live near a great city in order to make his business pay a profit. There is hardly a rule of agriculture, however, that will not present exceptions. A friend in Eastern Oregon, hundreds of miles from any town of importance, writes that he wants the grain that gives the heaviest straw. The crop is cut before the grain is ripe, and cured and stacked for hay. This is fed to cattle and horses which have legs to carry themselves to market. This "grain hay" gives more feed than any of the grasses. Wonderful are the different methods employed in the agriculture of this country. No one can justly claim to "know it all."

NEW ENGLAND appears determined still to maintain its immemorial reputation for leading in reformatory movements, and in this respect, of course, Massachusetts holds the proud position of leader and representative of her five sister States. The grand old Bay State has just come to the front, in needed humanitarian legislation, not only of all other States in the Union, but of all States in the world, by enacting a law against the docking of horses. Who can gainsay the proud claim of the Massachusetts Society for the Prevention of Cruelty to Animals, that it has obtained the first law in the world against this heartless fashion; secured the first three and only convictions ever obtained for the practice, and offered the first and only prize—$100— for evidence leading to conviction? Eighty-two ladies holding the highest position in Boston society have just issued a protest against the cruelty, and if only the other ladies in the country—God bless them!—would join their advanced Massachusetts sisters, how long would this inhuman fashion be able to withstand their righteous indignation?

"I sow my Timothy in the spring with the clover, however, as otherwise the clover would be sown on a Timothy sod and stand but little chance. Thousands of bushels of clover seed are wasted in this way."—T. B. TERRY, page 426.

AFTER a very bitter contest, lasting several months, the Rigsdag of Sweden has passed a law which prohibits the importation of oleomargarine from foreign countries—chiefly America and Holland—and places severe restrictions upon the manufacture of the product at home, and the cable tells us that the Swedish farmers are jubilant because they have at last received the protection they justly claimed. People acquainted with both sides of the Atlantic agree that, as a rule, laws are more faithfully enforced on the other side than on this. It may turn out, therefore, that the Swedish farmers may continue to have more cause for rejoicing at the enactment of an "anti-oleo" law than American farmers have. In spite of the general national "anti oleo" law passed by Congress and the various circumscribed laws passed by different States, the production of oleomargarine in this country last year was one-third greater than in the preceding year—it had increased from 30,000,000 to 45,000,000 pounds! The Treasury statistics show no proportionate increase in exports of the product; so that it must have gone into consumption chiefly at home. The object of all the laws was to restrict its sale, and this object all the laws failed to accomplish.

IT would seem that as the formation of successive trusts goes on, the new monopolies learn how to improve upon the lessons of greed set by the old. In some cases too the Lilliputians among them outdo the Brobdignagians in unscrupulous covetousness. A good example of this is the Wood Acid Trust. This is commonly known as the United States Acid Manufacturers' Association. It was completed at Binghamton, N. Y., on April 9, last. Its members make crude wood alcohol as their chief product, and acetate of lime and naphtha as by-products. Last April, owing to excessive competition and over production, there was little or no profit in the business. The combination, however, at once put up the price of crude wood alcohol from 47 to 57 cents per gallon, or over 20 per cent. and there was a proportionate advance in the by-products of the factories. The results were eminently satisfactory to those present at the second meeting of the association, held at Olean, N. Y., the other day, at which all the leading factories in the country were represented. It was voted unanimously to maintain the existing price of 57 cents per gallon on all the crude alcohol now on hand in factories and warehouses, and to fix the price at 60 cents for the new product made during the coming 60 days. Are farmers in any way more interested in the operations of this "combine" than the general public? Yes; for wood alcohol offers itself as a cheap substitute for grain and fruit alcohols in mechanics, manufactures and arts, and farmers are naturally more interested than others in a competing business.

KEEP IT BEFORE THE PEOPLE.

"SOME manures, such as common salt or nitrates, circulate with the water in the soil, in dry weather rising to the surface, in wet weather descending. Other manures (phosphate and potash) unite with the soil near the surface, and either remain there or, at all events, descend with extreme slowness. As an instance of the extreme slowness of the descent of manure, I may mention the dung applied to our permanent wheat crop—14 tons annually for 40 years. Almost the whole of the accumulation of fertility is to be found in the first nine inches from the surface. *Under ordinary agricultural processes, it may be said that manure only enriches the surface soil.*"

Thus Sir J. B. Lawes wrote to the R. N.-Y. several years ago. Reasoning from such data (the most trustworthy we have), Mr. Mapes holds the opinion that fertilizers, as well as manures, should not be placed too near the surface for the reason that the roots of plants are thereby induced to grow nearer the surface and to suffer in consequence during periods of severe drought. This has not been the R. N.-Y.'s experience.

A TARIFF ON BANANAS?

IT appears that many small fruit growers believe that the trade in bananas, pine-apples and other tropical fruits is of considerable injury to the trade in American fruits. Some of them go so far as to demand that a high duty should be levied on foreign fruits. Strawberry growers have complained most bitterly this year. While strawberries were at their best, the markets and street stands were literally crowded with pine-apples and bananas, and strawberries, being the more perishable fruit, could not wait until the glut could be relieved; consequently, thousands of boxes were spoiled. Now the strawberry growers say that if the supply of tropical fruit had been cut down, the berries would have commanded better prices. There may be something in this, and yet people buy bananas and pine-apples because there are distinctive flavors and qualities about these fruits that are not found in others. A strawberry never will take the place of a banana to the person who wants a banana. The trade in tropical fruits is rapidly increasing. In 1888 there were admitted, free of duty, $5,787,867 worth of such fruits, and $3,154,654 of this amount went for bananas. In the same year duties were paid on $14,714,456 worth of fruits, including figs, lemons, oranges, prunes and raisins. With the exception of figs and raisins, there has been a gradual decrease in the value of the imports of dutiable fruits. The values of the fruits admitted free of duty have rapidly increased and this is most marked in the case of bananas In 1884 $1,878,279 worth were imported while in 1888 $3,153,654 worth were received.

"If of German parentage they are sure to lift the mortgage. If of Irish, they are not quite so sure, and if of an old American family, they are still less sure of doing so." W. L. DEVEREAUX, page 438.

BREVITIES.

READ Henry Stewart's article on page 439.

STRAWBERRIES owing to the excessive rainfall, are rotting on the vines.

THE R. N.-Y.'s prediction of a drought this summer in the East has thus far been fulfilled to the extent that it has been the wettest season within our remembrance.

THIS seems to be a year for remarkable "freaks" in poultry doings, Mr. Henry Stewart sends us the following note:

"A peculiar egg.—I have an egg laid by a seven-year-old Light Brahma hen which has laid over 1,000 eggs. It is one inch long and ¾ of an inch in diameter; it contains another egg and nothing else, as the small inner egg will rattle in the outer shell when it is shaken. How does this come about?"

PROF. PORTER will see by reading Prof. Budd's article on page 429, that the agricultural colleges are even now working in the line he indicated. The junior class at the Iowa College, taking an article in a recent R. N.-Y. for a text, spent a very interesting hour in discussion. Is such a discussion of no practical benefit?

THE bean farmers in Western New York have suffered considerable damage from the continued wet weather. It has been next to impossible to prepare the land properly. During a recent ride through Western New York we noticed hundreds of bean fields in which but little work could be done. The wet weather has also hindered corn.

PRESIDENT CHAMBERLAIN begins an elaborate reply to Professor Porter. The R. N.-Y. is glad to see so much interest taken in this subject. President Chamberlain makes a good point in saying that the agricultural colleges that have brought discredit upon themselves are those that have drifted away from the original purpose of the Morrill bill and taken up the studies that Professor Porter thinks would produce better men.

A FRIEND in Connecticut has started out to raise the largest possible crop of potatoes that can be grown on an acre. He plowed the ground early and applied 3,000 pounds of potato manure broadcast. He planted 52 *bushels* of early Maine potatoes in rows 14 inches apart—the sets 10 inches apart in the rows. The work will all be done by hand and 1,000 pounds more fertilizer will be applied broadcast! Has he overdone the thing?

MR. CROSBY talks sense about calling the cows: see page 428. Last Decoration Day the cows in the R. N.-Y.'s pasture broke through the fence into a neighboring wood. One man rushed into the woods to drive them back. He shouted and yelled, but the more noise he made the deeper the cows went into the wood. Another man, a German, stood at the fence and called pleasantly. Every cow stopped and turned her head to listen. They were easily driven back while he called.

Educational.

"WHAT ARE THE AGRICULTURAL COLLEGES GOOD FOR?"

PRESIDENT W. I. CHAMBERLAIN.

THANKS for the RURAL'S invitation to reply to Professor D. G. Porter's recent article on the above subject. It needs a reply, and yet the task is difficult. Two columns of general, scattering criticisms cannot be met briefly. I do not know Professor Porter or what place he fills, but he seems to me to write without sufficient knowledge or recognition of actual facts, and of the great difficulties to be overcome.

FIRST, ACTUAL FACTS.

In his headings we read "strong tendency to divert from farming promising young men who would otherwise be farmers." But this tendency lies in the college idea, and not in the agricultural-college idea. In the old-time colleges, up to the time the agricultural colleges were opened, about *one-half* of the graduates came from the farms, and less than *one fiftieth* ever returned to the farms. The Massachusetts Agricultural College, quoted by Professor Porter, has by his own figures done *twelve times as well*, and the Michigan Agricultural College has done twice as well as that, sending about half of its graduates and over half of its undergraduates into agricultual and horticultural work of some sort. The tendency or fault lies *in the name, college, and in its traditions.* Some of our agricultural colleges have fought manfully to turn the tide and change the tendency, and should have unstinted praise—not blame—for this good work. Others have yielded to the old college idea and done little for agriculture. They have done exactly as Professor Porter recommends in answer to his own question; "What then ought we to do?"

"First: Turn the agricultural colleges into schools of general culture, assimilating their courses of study largely to the academical courses in regular colleges. If you cannot learn agriculture at a college, there are other things you can learn which will be even more important."

They are the colleges that have done little for agriculture. *They* are the ones that joined the land grant to an existing college or university as a tail to a kite. *They* are the ones that agree with Professor Porter that "it is an easy inference and an easy mistake to suppose, because a law school is good to make lawyers, and a medical school is good to make doctors, that an agricultural school must be good to make farmers. And it is doubtless true that some of our agricultural colleges were founded upon this 'folly,' implied if not expressly stated in the terms of the Morrill Land Grant Act.'

But those colleges that think as Professor Porter does on this point are *not* the ones that, in the opinion of farmers, have done most for agriculture. Does Professor Porter realize just what his words mean? They seem to me to mean *a diversion of trust funds* from their true intent. Each State legislature was by the Morrill Land Grant Act made a trustee. It could *refuse* the trust as founded upon a "folly", but it could not righteously accept the trust and divert the funds to other uses on the ground that the grantor was guilty of a "folly" in specifying what should be done with those funds. Suppose a case: A wills a million dollars to found a Presbyterian Theological Seminary, names B as sole trustee, and dies. Now B may refuse the trust as a "folly" but he *may not* accept the trust, pronounce it "folly" and divert the funds from A's expressed or even "implied" intent. He may not accept the trust and then say: "Christianity is a delusion. Miracles do not happen. Hume and Robert Elsmere have settled that. I will turn this seminary into a school of general scientific culture, assimilating the course of study largely to the courses in our schools of technology. Since Christianity is defunct, and students cannot learn theology at the seminary there are other things they can learn which will be even more important." No, B may not do this; yet this is very nearly what Professor Porter seems to propose, a *diversion of funds* from the admitted intent of the grantor. "If you cannot learn agriculture at a college, there are other things you can learn which will be even more important." But agriculture was one of the things specified in the grant. It may not be suppressed by the trustee.

Again: Professor Porter seems to me to write without sufficient knowledge or recognition of facts in assuming that agriculture is the only thing required by the Morrill Law to be taught in these colleges. "Mechanic Arts and Military Tactics" were by that law placed on the same footing with "Agriculture." This fallacy is quite general and grows in part out of the name "agricultural colleges." This name was assumed for convenience. The entire name was too long and cumbersome—"Agricultural, Mechanical and Military College." "Industrial College," though short, would not do, for the term "industrial" had been degraded and cursed by being applied to penal institutions, "work-schools" or "reform schools" for depraved or criminal youths; as if industry were fit only for the criminal classes; as if useful trades and industries should be taught only as a punishment for crime—in reformatories and penitentiaries!

And so, for convenience, these new colleges were chiefly called "agricultural," omitting two-thirds of their title. And the assumption has been that unless all their students became farmers the colleges were recreant to the trust. Indeed the Michigan Agricultural College, the oldest and one of the best, that did a noble work under a grand man as President, (T. C. Abbott), aided by grand men, as Professors, (Kedzie and Beal and Miles and Fairchild and Cook and others), nevertheless at first yielding to its name and to the idea that it was better to do a part well than the whole less thoroughly, that noble college, I say, for the first 20 years made itself almost wholly agricultural and did little for the "mechanic arts" or "military tactics." Now, however, it is enlarging its work, more in the full spirit of the Morrill Law.

But even the cumbersome name, "Agricultural, Mechanical and Military College," would fail to give the true idea of the Morrill Land Grant Law. It suggests too much of the apprenticeship and trade idea,—of *simply* learning to hoe and harrow, to mold and cast, to hammer and forge, to plane and turn,—and too little of the knowledge of underlying sciences and principles. But the law itself makes prominent the latter idea without neglecting the former. It says explicitly: "The *leading object* shall be, without excluding *other* scientific and classical studies, *and including* military tactics, to teach *such branches of learning as are related to agriculture and the mechanic arts* in order to promote the *liberal and practical* education of the *industrial classes* in the several pursuits and professions of life." (The italics are mine.) The old-time colleges had educated chiefly for law, medicine, theology and literature. The "leading object" of the new Land Grant Colleges was to educate "the industrial classes" for "agriculture and the mechanic arts;" that is, for the various *industries* as distinguished from the learned *professions;*—for the callings that use *hand and brain* as distinguished from those who use the *brain alone*, or almost alone. This seems to me to be a fair interpretation. It was the interpretation put upon the law by my predecessors in the presidency of the Iowa State "Agricultural" College. The results of this idea honestly carried out may be shown from the statistics of the college or of any class. For convenience I quote from page 7 of my own report as president, printed in the "Twelfth Biennial Report of our Trustees, made to the Governor of Iowa," December, 1887.

"The class that graduated this year, November 9, 1887, numbers 43 members, including two gentlemen who took certificates for special work nearly equivalent to the full course, and two who took the second degree. Four were ladies. The *industrial* character of the course of study, and of the atmosphere of the College, can be seen by the occupations in life already chosen by the members of this graduating class, as follows:

Veterinary medicine	12
Agriculture, horticulture and stock breeding	9
Civil engineering	6
Mechanical engineering	3
Practical chemistry	2
Pharmacy	1
Dental science and practice	1
General business management	1
Total in strictly agricultural and industrial callings	35
Not decided	1
Law	3
Teaching (temporarily)	3
Medicine	1
Total in professional callings	7

It has been the custom of certain agricultural writers to name the Agricultural Colleges of Michigan, Kansas, Massachusetts and Mississippi as the only ones that have held faithfully to the agricultural and industrial idea of the Congressional law that gave them their endowments and prescribed the character of the work to be done. Clearly, from the above showing, such writers should enlarge the list so as to include the Iowa State College of Agriculture and Mechanic Arts."

I might add that all our gentlemen students not actually disabled physically, and most of the ladies, have two years' instruction in tactics with military drill from 3¼ to five hours per week; also that any who doubt the industrial character of the callings classed as such above, may perhaps glance over the list with me.

VETERINARY MEDICINE.—Well, about 90 per cent. of our annual agricultural income, and at least 50 per cent. of our total annual income in Iowa, comes from live stock. How can an agricultural college better promote the interests of agriculture than by thoroughly educating veterinary physicians and surgeons to take the place of quacks and save the lives and health of our live domestic animals. The practice is largely surgical. Hand and brain are used. It is industrial. The skilled fingers of one of our senior "vets" tied the artery of a valuable horse for me, severed by barbed wire. He would have bled to death in 15 minutes, if helped only by my clumsy fingers not trained with my mind in a classical college. The next item needs no remark. The two added make 21 in the direction of agriculture, for some of the "vets" went on to stock farms and not into general practice.

CIVIL ENGINEERING.—Is not this industrial? Who build our railways, lay our curves, build our bridges to make life safe? Who span Niagara, and the East river at New York and lay the foundations for the industries and the commerce of the world?

MECHANICAL ENGINEERING.—This is one of the "mechanic arts." What has more blessed the world than the spur given to invention by study of the underlying sciences grasped in the general term "mechanical engineering. "Is not this college worthy of praise rather than of blame for the fact that it turns 35 graduates in a single year into agriculture and the industries and only seven into the old professions, including teaching? Is not that a grand work for "Agriculture and the Mechanic Arts?"

Again, Professor Porter seems not to know or recognize facts when he says: "Now it is a fair presumption that most of the young men intended to become farmers, else why should they go to an agricultural college? And the college instead of helping to make them farmers actually took them away from the farm and sent them into other pursuits." No, they do not all or most of them come intending to become farmers. Fully half or more come headed towards other industrial pursuits. They come in Iowa because they want a collegiate education, and because of the great advantages offered at this college. The endowment is munificent, larger than that of all the other colleges in the State, yielding $60,000 per year. The equipment and apparatus are excellent. The instruction in the sciences that underlie agriculture and all the industrial arts is unsurpassed in the West. Tuition is free, room rent nominal, board at cost and boarding hall and furniture rent free. Then, too, the *home influence* is away from the farm. Sons of wealthy farmers often come here to get a scientific or literary education expressly in order that they may *not* be farmers. I have several in mind. One whose father owned 1,000 acres of excellent land wanted to take a special literary course, skimming what language and literature he could in one year from our whole course, to go elsewhere then and study law. I did not admit him, and he went elsewhere on the same errand. Another boy from a 6,000-acre farm staid here one year and then went to a classical college! Even Professor Porter admits this adverse home influence, even though he charges the chief fault upon the colleges. He says:

"There is indeed one view in which the agricultural colleges are positively detrimental to agriculture. As at present managed, their influence is to take young men away from the farm, who would otherwise have been farmers.

Take a boy from his father's house and farm at the period when his habits and tastes are most rapidly forming; dress him up like a gentleman and send him to college to mingle for three or four years with other boys similarly treated; even in vacation when he comes home as a visitor, coddle him with the notion that he has been studying so hard that he needs all the time for rest and recreation—for that is what vacations are for—and what have you done to make a farmer of him even if he has been spending these three or four years in this gentlemanly way at a so-called agricultural college? Not much surely. But you have done a good deal to give him a disposition to keep up his gentlemanly habits, and to keep away from the farm forever."

Here the home influence is most at fault, not the college, especially if the boy be taught, as Professor Porter teaches elsewhere in this very article, that "apprenticeship and special training are indispensable in other vocations but unnecessary in farming;" that "scientists and specialists confer benefits on agriculture but might make unsuccessful farmers;" that "agricultural papers and reports of agricultural experiment stations tell farmers all they need to know about theoretical and scientific matters appertaining to agriculture;" that the drill in sciences closely related to agriculture is not so valuable even for the farmer "is in no wise comparable to the usual academical course in other colleges." These are the home influences and this the kind of talk that turn the boys away from the farms, and against which the agricultural colleges must struggle, rowing as it were up stream and against wind and tide.

With no discourtesy to Professor Porter, I must be permitted to say that I think such teaching as his does incalculable harm, and that it seems to me agricultural heterodoxy to say that Greek, Latin, Rhetoric and Astronomy are incomparably better drill and foundation for the *farmer's* life work than Geology, Chemistry, Botany, Physiology, Zoology, Principles of Breeding and the like.

I wish to add, too, without discourtesy, that it seems to me well-nigh presumption for any individual to stamp as "folly" the vital idea of the Land Grant Law on which Senator Morrill and his distinguished co-laborers spent so many years of patient study, and which the Old World had been at work on almost a century. President Buchanan *vetoed* a similar bill with the same weak fatuity that let the South secede. The Congress that revised and passed the bill again was the Congress that restored the Union, and as grand a body of men as ever sat in council; and Lincoln signed the bill with the same hand and heart and head that wrote and signed the Emancipation Proclamation! These men had studied well and long the agricultural and technological schools of Europe. They saw the former helping to stop the world's long wail of lost fertility of soil, and desired to bring in that same knowledge before *our* fertile fields were wasted and the same wail was begun here too. They saw the European technological schools sending us engineers and skilled mechanics, and artisans of skill, and artists, and inventors, because our colleges were still pursuing "the usual academic (classical) course," and they determined that we would train such men here and not import them longer. This was their "folly;" and grandly have the results justified the wisdom of it. The Colleges of Agriculture and Mechanic Arts have done a noble work in spite of the encroachments of the old college and university idea, which they were founded to correct and supplement. They have driven the old colleges into science with the laboratory methods more than the latter have drawn them into classics and literature. Latin and Greek are sickly, exotic plants even in those Land Grant colleges that are most impressed with the university idea.

Another article will notice some of the real difficulties which I do not think Professor Porter fully appreciates, and will also consider the wisdom of the remedies proposed by him.

Iowa Agricultural College, Ames, Iowa.

P. S.—I notice by last week's RURAL, received since the above was written, that Professor Porter claims to have used the word "fallacy" instead of "folly" of the Morrill Act. Well the "fallacy," stated as a syllogism, is as follows:

Major premise: All callings based on knowledge of scientific principles and on practice in detail are more successfully followed with such knowledge and practice than without. Minor premise: Agriculture is such a calling. Conclusion: Therefore agriculture, etc. Now, which premise does Professor Porter deny?

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

THERE is frying and frying. One old housekeeper declares that the reason why this mode of cooking is regarded with so much contempt is because so few women know how to fry. They usually set the pan on the stove, throw in some fat, and while it melts put into the greasy mess whatever they wish to cook. Then it is allowed to frizzle until it is done—and a barbarous mode of cooking this is. Properly, if such meat as steaks or chops should be cooked in the frying pan, that utensil should first be heated until it is *thoroughly* hot; then it should be rubbed over with fat just to keep the meat from sticking. When this is done, the outer surface of the meat becomes hardened at once, so that there is no escape of juice, nor is there any possibility of its becoming soggy or soaked with fat. This mode of cooking is sometimes called a "Philadelphia broil."

ACTUAL frying is not at all objectionable, nor especially indigestible when rightly done. In such case the pan should not be used, but a saucepan, and the article fried should be put into boiling fat, like doughnuts. If there is not enough fat for the food to float in, or if it is not at the boiling point, the result will be unsatisfactory. Fish-balls, croquettes, rissoles and fritters are all best when cooked in this way. It is not an extravagance, for the fat can be used over several times—so long, in fact, as it is sweet. One should keep in separate vessels the fat used for frying fish, meat or fritters.

* * *

SOMEHOW, we can't help thinking that many tired housewives tire themselves chiefly with works of supererogation. There is so much unnecessary work, on which depends little real comfort. Take, for example, the subject of pie. Pie-making is not easy work—there is all the tedious standing while mixing and rolling crust, and the trouble of preparing the fruit. It is a decided bother all round, and yet so many seem to think that fruit has but one mission in life, and that is to fill pies. We find that fresh or stewed fruit, with some sort of nice crackers, makes a far better dessert than pie. There can be no question of its greater wholesomeness, and it is liked into the bargain.

* *

IF we could only find out the real truth, we should discover that many a woman does more than she ought—more than she is fit for—merely because she is afraid to give in. She fears being accused of not being as smart as her neighbors. We certainly ought not to mind what the world thinks, but we usually do. It is a thousand pities that any one, knowing her own duty, and doing it should fear lest it should not be plain to her friends. It is so easy to be misjudged, but after all, that is an imaginary evil when compared with the real evils of pain and weariness that follow over-work.

OUTINGS IN NEW ENGLAND.

XI.

MARY WAGER FISHER.

OUR first halt, after leaving Oswego for the New England sea coast, was at North Adams, in Massachusetts. The laddie desired to see the Hoosack Tunnel, and so, in mapping out our route of travel, we arranged to go by the railroad which takes its name from this tunnel and passes through it, and no one day's ride by rail could well be lovelier, than that between Oswego and any point in the charming Deerfield Valley in the Old Bay State. One feature of the East that invariably surprises a Westerner, is the amount of uncultivated land. The man who has been born and reared in the West naturally thinks of the East as being crowded with people, and having every inch of land cultivated to the highest degree. What else so reasonably explains the large and constant migration to the West? But all throughout New York State, even, there is yet much uncultivated land and much that is poorly tilled. From Oswego on to Syracuse the farming was ordinary, although the country itself is beautifully rolling and everywhere glorified by elm trees. One of the pretty little lakes that we passed, is called Como, and another, which was better named, is called Onondaga.

For some time we followed the slender stream of the Mohawk, with its willow-planted shore, and lying on a friendly level with the surrounding land, and the lines of a song I heard in my childhood came into my mind, "Oh sweet is the vale where the Mohawk gently glides," etc. We noted stone as well as stump fences, both of which have a picturesque and substantial look of their own, that is a relief to the trim airiness of the fences of wire. Whatever objections may be raised against fences, they give a certain boundary and outline to the country, that are restful to the eye, and to the mind, and when they are built of material native to the region, as of stones or rails, they add to, rather than detract from, the general landscape effect. So much can be done with stones, that people who live where the soil is free from them, lose one of the most satisfactory resources in nature, and I know of no other one thing, that is not to be counted among the necessities, that can be made to yield more pleasure than a garden wall with a sunny exposure. So many things can be trained on it, and the spring time is fully a fortnight earlier in its sunny warmth, and better than elsewhere. The walled gardens of Europe, while they shut out public view, are within, veritable paradises. A home, with its grounds, well fenced in looks far more home-like, secure, and private, than any fenceless abode can be made to look, and the commonest fence of rough, unpainted boards can be made with running roses and vines, an inclosure fit for a king.

Eastward from Troy the fields were better tilled, many were sowed with buckwheat, and in bloom—there is rarely a lovelier sight. It is a curious fact that so many country people who easily enough recognize a field of buckwheat in bloom, fail to recognize an isolated blossom. I once had a flower-stand at a fair, and as Anaximander had a quantity of buckwheat in bloom I cut of it plentifully, using the flowers in bouquets and in vases. Every one commented on them, asking what the rare flower was, and when the reply invariably came "Fagopyrum," nobody seemed any the wiser. By and by we began to catch glimpses of the Hudson, and having an hour or two to wait at Albany, Anaximander went to see the Capitol, and returned much disappointed, finding no end of fault with the shabby construction of a building upon which such lavish expenditure had been made. In getting into Massachusetts we passed through a corner of Vermont, and the laddie thought if the States were of different colors, as they are on the maps in the Atlas, it would be very convenient for travelers. North Adams itself is not far from the Vermont line, a town high up in the mountains with mountains all around it and the spreading city climbing up their sides. One of the favorite drives led to a point not far from the town which was said to be the highest point in the State, and from which five States could be seen. One member of our little party became slightly ill, and for a remedy Anaximander asked at a drug store for blackberry brandy, and he had quite a history in getting some because of the regulations imposed upon apothecaries in Massachusetts in regard to selling "intoxicating beverages." After considerable red tape, his name, residence, the amount purchased, and the purpose for which it was intended by the buyer, were written in a book, and he was required to put his signature to the statement.

We were greatly pleased with the hotel in which we were for several days lodged. All the dining-room waiters were young women, very neat in their dress, hair and petticoats, both worn short, plain skirts, erect figures, light in step, and no clatter of dishes. The landlord said that he made it a special feature of his hotel that the dining-room service should be as expeditious and noiseless as possible. The town is characteristically New England—handsome churches, a public library, green grass a-plenty, and well cared for trees. The laddie was not content with the prospect before him of riding through the tunnel, but he must *walk* a little way in it, but when he found that it was the longest driven railway tunnel in the country, being four miles more or less in length, he lost his appetite for a longer promenade. The entrance to it is very pretty, but the 10 minutes required to pass through it by rail seemed almost interminable and intolerable. It was a great piece of engineering to dig from opposite sides of the mountain in such a way that the two tunnels should lead directly into each other. A graphic account of the construction of this tunnel through the Hoosac mountains published in the Atlantic Monthly several years ago, had made such an impression upon the laddie's mind that he had never forgotten it, and it was this that endowed the tunnel with so much interest to us. All through the Deerfield and Connecticut valleys the scenery was enchanting, rivers, waterfalls, mountains, the beautiful trees, the lichen on fences and walls, the prim, clean-looking white houses, the old-fashioned lumbering stage coaches—a glorious ride, which, however, landed us in Boston in a pouring rain! We went to a near-at-hand, palatial-looking hotel, where we ordered a room away from the street in order to secure quiet, and were kept awake nearly the whole night through, by the clatter of servants in the court. The atmosphere after the rain was of extreme sultriness, which seemed to have bred innumerable mosquitoes, which swarmed through our open windows and their buzzing and biting, completed the pandemonium. The morning, however, dawned fine and clear, and we took an early train for the north shore.

THE DEMON OF DISCONTENT.

REV. CHARLES T. WHITE.

THERE is a kind of discontent, which works our good in the end. It is the handmaid of ambition, and prudent ambition is always praiseworthy. We are each in duty bound to make the most of ourselves, and our abilities. To confine our activities within a narrow circle, when a little effort on our part opens before us an ever-widening circle of success and usefulness is traitorous to our Creator. It is the old story repeated of burying in the earth the talent which God has given us. It is well-nigh criminal to withold from our fellowmen the benefits we might have conferred upon them.

The great ones of earth have risen from obscurity to honor and fame by reason of this spirit of discontent. There is need of caution here, however, lest an overestimate of our own abilities, or a wrong estimate of our fitness for some untried task lead us into serious error. There is no end to the measuring line of our fond self-conceit. Put the youth in his teens through a year's academic schooling, let him weigh his petty acquirements in balances of his own construction, and if he be of hopeful temperament, he straightway imagines himself an embryo Shakespeare, or perchance an Edison in roundabouts.

The young miss at boarding school rattles off sentimental crudities, and in view thereof, deems herself an apt pupil of the immortal nine. These youthful conceits are not without purpose. Despise not the roseate tints of the morning sky, though they fade into more sombre hues after! They have a brightness all their own, and gladden the eyes and heart for a season. The ideal, which the imagination creates in cold outline, the work of a litetime sometimes endows with life and beauty. Oftener we gaze too long, idly upon what must ever be unreal, and the imagined grandeur of what we might have been pursues us through life like an avenging Nemesis, stealing the gladness out of our lives, and making us to be dreamers rather than willing workers. Alas, how much of this restless, aimless discontent there is in the human heart! How many of vain wishes and desires are continually welling up from the hidden depths of the soul, only to be dissipated into nothingness, like the air bubbles, which burst upon the tranquil surface of the water! We leave the rank weeds growing in the corn-field, and wish we might have been princes. We dabble our hands languidly in greasy dishwater, and envy the lady of wealth, whose "coach and four" swept past the kitchen window. We drop the needle from tired fingers, and see in retrospect the shapely hand, which might have wielded a poet's pen or an artist's brush. Ah, and "what fools we mortals be!"

Is there not enough of the bitter in life already, that we must needs import from no man's land fresh supplies of worm-wood and gall, therewith to make Marah, like the sweet draughts of nectar, which we might else drink unalloyed? Think not yourself alone the imagined victim of a hard fate! This foul folly of discontent is widespread as the race. No doubt the crowned king in his weariness of court bustle, and political intrigue is longing this moment for the plow boy's noontide siesta under the grateful shade of the spreading maple, and perchance the jewel-bedecked heiress of a kingdom would not scruple to exchange her hateful finery for the torn calico gown and the bare brown feet of the country maiden, who picks whortleberries on the hillside. The farmer, broiling in a July sun, pauses a moment in his toil to watch the village doctor driving by in his carriage, and mutters something about a "mighty easy time." The physician roused at midnight, rides six miles in a driving storm, with the thermometer dropping into the twenties, and vows between his chattering teeth that the life of a dog is preferable. And so the story goes from one end of the world to the other. The clerk envies the employer's capital and the employer envies the clerk's exemption from the harassing cares of business. The tired student gazes from the windows of his musty attic upon the merry hay-makers, and would fain exchange a page of hard-acquired Greek for an hour of freedom, and care-free toil in the fragrant meadows. The farmer-lad driving home the cows from pasture at milking time meets the high-school professor on a solitary ramble, and remembers with shame-facedness that his trousers are ragged and his last summer straw hat sadly battered.

Surely could some mighty magician wave his wand over the heads of us poor grumbling mortals, and cry to all *Presto* change, ah then, how would smiles, for the moment at least, transform the faces of men! But not for long. In a month, we would be seeking the magical power, which might change us back to our old selves, and restore to us the old familiar surroundings, in which beforetime the demon of discontent permitted us so little pleasure. I wonder sometimes, when I hear women talk about the future emancipation of their sex, if they rightly realize the nature of the coming slavery. Emancipation indeed! Some of our farmers' wives, and daughters even have caught the infection, and loathing the daisies, and the buttercups, and the lilac's perfume, and the music of birds and bees, and the home duties, and the home peace, are longing for liberty. Liberty forsooth, and where will you find it, if not in the heart of God's beautiful nature, and under the star-lit sky, and in the genial radiance of the fireside? Man, (and woman too,) is nearest ideal freedom, as he is nearest the place where God places him, and the dwelling place of sinless man, let us remember, was a garden. To be sure there were no thorns and thistles there, no hard, grinding toil, no weariness and weakness, no trembling hands and aching hearts, but despite all, there is yet something of the Eden freshness upon the face of nature, and the soul is stronger and purer for its constant contact with these reminders of its innocence. There are thousands of men doubtless, who would gladly better their coveted "rights" for a few hours of sweet undisturbed repose upon the breast of nature. The demon of discontent, fair ladies, invades the heart of even that creature of rare opportunities—man. Feminine aspirants, despair not to seat yourselves upon the Judicial bench, to throng the halls of assembly, and to besiege the presidential chair for appointments! Come, and welcome to the stifling court-room, and dingy office, while we lawyers, senators, judges will scuttle away in haste to the country home for a breath of pure air, and a drink of cold water from the "old oaken bucket," and a sight of the grand old mountains, and the fresh green fields.

GOLDEN GRAINS.

THE ATLANTA CONSTITUTION reminds its readers that genius is a dazzling thing, but it won't plod. Talent is forced to plod or get left, and so, with the instinct of self-preservation, it generally plods. Genius starts out a petted darling, and ends by dodging the bailiffs and dying in the poorhouse, while talent raises a monument in its honor and pays the bill out of its well-filled pocket.....

SHALL I ever forget my early home? asks Talmage. Yes, when the flower forgets the sun that warmed it; yes, when the mariner forgets the star that guided him; yes, when love has gone out on the heart's altar, and memory has emptied its urn into forgetfulness—then, home of my childhood, will I forget thee.....

IT was Faber who said let us serve God in the sunshine, while He makes the sun shine. We shall then serve Him all the better in the dark when He sends the darkness. The darkness is sure to come. Only let our light be God's light, and our darkness God's darkness and we shall be safe at home when the great nightfall comes.....

COTTON MATHER says: "The ability to do good in any case imposes an obligation to do it." The apostle James says: "Therefore to him that knoweth to do good, and doeth it not, to him it is sin." Paul says: "As we have therefore opportunity, let us do good unto all men, especially unto them who are of the household of faith." The Independent adds not to do good, as and when we have the opportunity, is sin. There is a large amount of this form of sinning among men.....

A. P. GORDEN says that sorrow is only one of the lower notes in the oratorio of our blessedness.....

IN matters of conscience first thoughts are best; in matters of prudence last thoughts are best, says Dr. Hall.....

> Dear ties of mutual succor bind
> The children of our feeble race:
> And if our brethren were not kind,
> This earth were but a weary place.
> —*Bryant.*

RUSKIN says that though you may have known clever men who were indolent, you never knew a great man who was so; and when he hears a young man spoken of as giving promise of great genius, the first question he asks about him is always: "Does he work?"..

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

HOW.

HOW some people manage to concoct the "messes" they make from good materials is a standing mystery to me! Take

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria

ham and eggs, for instance. How often we see the dish served with the ham dried and tough till it resembles shoe leather more than anything else, and the eggs done till they look like India rubber; yet what is nicer for breakfast than a good dish of ham and eggs? There are several ways of preparing this, but to my mind the nicest ways are as follows: Cut the ham in rather thin slices, lay in hot water for 10 or 15 minutes, then wipe with a dry towel, and broil in a double wire broiler over a clear fire. Lay on a hot dish; over this lay your eggs nicely poached; garnish with parsley.

Another way of cooking ham and eggs, which, to me, is always a relish is as follows:

Cut half a pound of lean boiled ham (the proportion must be arranged to suit the size of the family) into little squares, put in a pan with an ounce of fresh butter and eight or 10 eggs, a pinch of pepper, (and if you like, a table-spoonful of chopped chives), place on the fire and stir continually till the eggs are done enough. (They should not be very stiff) Serve on buttered toast.

Beef-steak is another thing that is abominable unless properly cooked. Steak should be broiled. Place it in an open wire broiler, and broil over a clear, quick fire. Turn repeatedly so that one side will not be done too quickly for the other. Place on a hot platter, add pepper and salt, dot with good butter. The second cut of the round, if cooked in the following manner, makes a very good dish. Have the steak about an inch and a-half thick. Take the point of a sharp knife and cut little gashes on the surface. In these interstices stick small pieces of the beef fat—(this prevents the meat from drying or scorching.) Place in a broiler, and broil over a clear, hot fire; add butter, pepper and salt when taken up.

The potato is another abused article of food. The tubers should be taken out of the water in which they are boiled as soon as they are done. Then hold over the fire till dry—this makes them mealy. If you want them mashed, break them up with a fork, add a little milk and salt; beat till they are creamy and light. Place in a dish, cut a little depression in the top, add a generous lump of butter. Place in a *hot* oven for a few moments if possible, as this will make them a lovely golden brown.

Never draw the tea till you are about to add the finishing touches to the tea-table, as it becomes bitter and loses its delicate aroma if allowed to stand.

The best coffee is made in a French coffee-pot (which has a double compartment, or a bag for holding the coffee grounds.) But a very good pot of coffee may be made if the following directions are carried out to the letter. Have the pot thoroughly clean from all dregs. Place the required amount of coffee in the pot. Add a portion of a raw egg. Mix thoroughly. Then pour *boiling* water over this, set on the fire and let it come to a boil. It is not necessary to have the coffee boil, and boil, as some people think, for if it does all the strength goes up the chimney, and it gets thick and muddy.

DORA HARVEY VROOMAN.

AROUND THE HOUSE.

ANNIE L. JACK.

IT seemed strange to have the Wreath or Cinnamon roses blooming in May; but June is more than half over and they are yet only opening fully. The hot wave that came over the land last month touched even here, and everything came forward with magical haste. In the garden we felt like saying to the violets: "Stay, O stay a little while!" When the lilacs bloomed and faded, and the apple trees with their pink and white beauty "came and went," I longed to be where they would not fade so soon, "and never withering flowers" kept constantly coming to my mind. Then a friend from British Columbia came to visit me, and she said the flowers stayed there quite a long while, but they were a long time coming out: I thought how delightful that would be.

"But," she said, "the asparagus grows so slowly that it is quite tough before it is ready and there are no green meadows."

"O" I said. "I should not like to live there—no clover blooms, no restful green for the eyes." And so every life has some compensation, every loss has a gain, if only one could be content.

Meanwhile the spring flowers are only a memory and the roses are here. It has been a hard winter. Mabel Morrison, the fair sister of our Baroness Rothschild, with others less noticed stands, black and dead in our rose garden; but we fight along, replace and try again. Grapes, too, are "sick," as the guidmon says. White grapes, without exception and no matter where they are growing, prove tenderer than black.

It is a sad thing to go out the first fine spring morning and find so many favorites dead; but perhaps it is good for one or we should forget that we too are mortal, and grow too proud of our successes. In the house all is in summer quiet and freshness. There is a smell of linseed oil lingering about the floors and the sweet, faint odor of shellac; but the June roses find us ready for them, and for their contemporary, the strawberry: for I never can in any way disassociate them.

Our neighbor has been troubled with moths in her carpets and keeps her house redolent with camphor tar, the smell of which is offensive to many nostrils. I suggested to her a thought of my own that came from observing her daughter putting down a carpet before the floor was dry, and I fully believe this to be the cause of the moths. Floors should be thoroughly dried and if anything is put under the carpets, a few branches of red cedar picked off the stems and smoothly strewn over the floor are pleasant and effectual for keeping away the insects that seem to abound everywhere. This is for any locality where druggists are not plentiful.

STRAY THOUGHTS.

"OF all sad words of tongue or pen, the saddest are these, it might have been."

How utterly useless and wrong it is to dwell on that idea! What *is*, is for our best good, and we need waste no time speculating on "might-have-beens."

We all may be what we "might have been." How much better this second theory. We might have been honest and faithful, pure and just. We might have been found always doing our duty, always obedient, always ruling our own spirit, always careful to choose our words well; and, surely, if we have not "been," while we live we have opportunity to "be."

As for happiness, it comes only from a consciousness of well-doing. Fleeting pleasure we may enjoy for a short time; but we need look back with no regret to a happy "might have been" unless we could picture ourselves doing right.

If you wish to knit woolen yarn that has been raveled, you can straighten it in this way: wind it tightly around a clean board, wet it thoroughly, and let it dry before taking it off the board.

Last summer we had more red currants than we could well use, so we canned some juice. This spring we have made excellent jelly with it.

The following is our *best* way of cooking pie-plant. Wash well, and cut in half-inch pieces. Sprinkle over it a small spoonful of saleratus, and pour on sufficient boiling water to cover it. Let stand one minute, stir well, and drain in a colander. Have ready a thick sirup, made of granulated sugar, pour in the well-drained pie-plant, and boil slowly till it is tender, but not broken. Very nice.

Here is a German dish: Into two table-spoonfuls of sweet milk break two eggs. Stir in all the flour you can, and knead well. Roll very thin, cover with flour, begin at one side and roll it up. With a thin, sharp knife, cut thin, round slices, which should unroll, making long threads of tough dough. Add flour to these, and continue till the long roll lies before you a pile of these long threads. Have boiling water in a kettle, and drop them slowly in, stirring carefully. Add salt and pepper; boil 10 minutes. Add a generous lump of butter, and a quart of rich, creamy milk.

MRS. L. H. NILES.

THE following hints from Harper's Bazar as to what is worn will, we know, be appreciated by the woman who makes her own dresses and trims her own hats.

AN all-black lace dress has Marquise net with large-flowered design, draped over black satin to form a Greek apron in front, caught up on the right but with the left side full and straight, bordered with moiré ribbons. Two flounces of lace are placed in jabots down the middle of the back. A ladder of four bows of moiré ribbon is set down the left side, and two flat bands of wider ribbon are down the back outside the jabots.

THE fashionable corsage is slightly elongated, being neither a round waist nor a basque, but something between these, extending just beyond the waist line, and either slightly pointed or else broadly rounded in front and back, the fulness which is shirred on the shoulders being flattened there in small plaits. If the short-waisted Empire effect is desired, a wide sash is set on a waist made as described, but if the natural length of waist is allowed to be seen, a narrower ribbon sash, quite straight or else slightly twisted, is set permanently on the belt of the skirt, and the skirt is put on last (after the bodice has been fastened), the join between waist and skirt being hidden by the belt.

SKIRTS of walking dresses, in order to be stylish, are made quite long, but this is an untidy and inconvenient fashion that cannot be commended. The perfectly straight skirts, with plaits of varied width, or shirred all around the top, or else those with slight drapery on each hip, are used for both elaborate and simple dresses. The foot-plaiting is no longer generally used on skirts, but the Empire flounce of lace or of the fabric, gathered, or else cut in tabs to fall on a lace flounce, is a fashionable finish for the front and sides of straight skirts. Pretty little butterfly bows almost meeting to form a ruche are made of ribbon, and set at the top of the square-cornered tabs that fall in a frill below.

FULL sleeves are so varied in shape that some pattern can be found to suit any figure; for instance, they can be set high on the shoulder seams for those whose shoulders are too broad and square, or they can be made to project outward if the shoulders are too narrow; they can be tucked flatly, if the top of the arm is too large, or they can be caught in loose folds around arms that are too slender. The moderately large mutton-leg sleeves, full above the elbows and slender below, are found to be most generally becoming. All such sleeves are worn extremely long, covering the wrists entirely, and are very simply finished at the ends. With very sloping shoulders, a good effect is given by adding a standing ruffle of the material, doubled just across the top of the arm-holes, two inches wide in the middle, tapering to nothing on the sides. Coat sleeves are still preferred for many dresses, but even these are now enlarged at the top, either merely raised slightly above the arm-holes, or else with the outside material lengthened and widened beyond the lining, and caught there in slight folds that are broad or high, as best suits the wearer.

SAILOR hats are again in great favor, not merely for yachting (where they are worn with the simplest band around the crown), but for country wear, with morning and afternoon toilettes. As their severe shape, with slight trimming, is not becoming to all faces, the milliners are trimming them much more elaborately, not with loops up the front, as they were worn last year, but with loops and wings coming from the back pointing forward far over the crown, with a broad sash ribbon that lies flat in front, but is gathered in high pointed ends, like a jabot, at the back. Still another fancy puts flowers, especially small white flowers, all around the crown instead of a band, and loops of white thick faille ribbon are set to point upward on the top of the low crown. Colored straw sailor hats are particularly stylish when trimmed with black; as, for instance, an old-rose straw hat has the back of the brim caught against the crown by loops of black moiré ribbon, which point quite high, and hold a blackbird poised as if flying downward. The same ribbon is twisted around the crown, and an inch-wide band of black velvet is set under the brim as a facing, but does not cover all the straw.

Miscellaneous Advertising.

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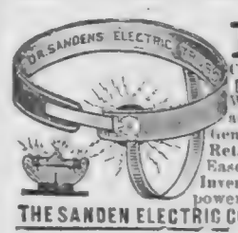

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News of the Week.

HOME NEWS.

SATURDAY, June 15, 1889.

A yellow fever scare in Brooklyn! Dr. Duncan, surgeon of the Pacific Mail Steamer Colon, was sick on her arrival here a week ago. He was taken to his home in the City of Churches where his disease was diagnosed as yellow jack. He has just been transported to quarantine station, and there the doctors are disputing as to whether the trouble is yellow or bilious remittent fever. The people in the neighborhood of his place in Brooklyn are still anxious..... ..Thursday the venerable Simon Cameron was stricken with paralysis at his home at Donegal Springs, Pa., and his condition is critical. This is the second stroke .... .. Jay Gould is soon going to the Paris Exposition,.....Bonham, Texas, has struck oil.....The Kearsage is on her way to Porte au Prince, Hayti, where Legitime is besieged by Hippolyte. Just 25 years ago she sent the Alabama to Davy Jones's locker. . Tuesday last Pennsylvania voted on a Prohibitory amendment to the State Constitution, and returns, nearly complete, from all parts of the State, give the majority against it at 185,173. This overwhelming defeat is a sad setback to the Prohibitory movement. Both the great parties will pay little attention to it in the next Presidential campaign. A suffrage amendment repealing the poll tax of 25 cents per head for those who paid no other State tax, before they could vote, was defeated by 225,729. The farmers, as a body, voted against the repeal of the law.....Three years ago Rhode Island's vote for a Prohibitory amendment to the constitution stood 15,113 in favor and 9,230 against. Last Tuesday Little Rhody, by a vote of 28,449 to 9,853, decided to repeal this amendment. Three-fifths of the votes cast were necessary to secure the repeal of the law—but there were 5,469 in excess of that majority. All along there has been an utter disregard of the law, which so disgusted the people that they have wiped it out by 14,000 more votes than the number that enacted it..... It has just been discovered that the omission of one word in engrossing the Weldon Extradition Bill lately passed by the Canadian Parliament has made it retroactive, contrary to the intention of the legislature. The bill originally stood: "This act shall only apply to any crime mentioned in the schedule, committed after the coming into force of the act." In copying it, the word "only" was intentionally or unintentionally omitted, and the Minister of Justice says this makes it apply to all boodlers, embezzlers, and other criminals who have hitherto found a comfortable and safe refuge in the Dominion..... ....The trustees of Miami University, at Oxford, Ohio, Thursday conferred the degree of LL. D. upon President Harrison, Secretary of the Interior Noble, and John W. Herron, all alumni of the college..... Prof. E Benjamin Andrews of Cornell University, formerly of Brown University and a Brown alumnus, was unanimously elected President of Brown University, Thursday, vice Dr. E. G. Robinson, resigned ..... Great destitution amounting in some instances to starvation, exists among the locked-out miners in Illinois and Indiana.....Ex-Governor Hartranft of Pennsylvania has been appointed a member of the Cherokee Commission ..... Gen. A. C. Meyers, who was Quartermaster General of the Confederate Army, died at Washington, D. C., Thursday. .... Indiana's Supreme Court has decided that shaving is not a necessity.....Indications point to the nomination by the Ohio Republicans of Governor Foraker for another term.....Having concluded that the Valkyrie will have at least a fighting chance, her owner, Lord Dunraven, has finally concluded to sail her against the fleetest American yacht for the America Cup. The Volunteer, last year's victor, will probably be chosen as their champion by "our side."..... W. E. Howard, one of the "electric" sugar swindlers, has been promptly found guilty by a jury in this city, and awaits sentence. The rest of the gang now in the Tombs will be promptly brought to trial .....A Local Option bill has passed the Michigan Legislature. The desire for Local Option and High License laws is being greatly strengthened everywhere by the current setting in strongly against Prohibition. The straight-out Prohibitionists, however, will carry on the fight all the harder.....There sailed from New York for Liverpool on board the Bothnia, Thursday, 300 delegates to the World's Sunday-school Convention, which meets in London on July 2..... Contributions to the Conemaugh Valley relief fund continue at the rate of about $25,000 a day from all sources. Remittances from foreign countries as far off as China and Australia, and also from theatrical benefits given especially for the purpose, are included. Work would be vigorously prosecuted at Johnstown and the other devastated places were it not that a strike among the workmen hampers operations. They want more pay and better rations. The banks have advanced the $1,000,000 to Gov. Beaver without a guarantee for its return by the legislature, and from 75 to 80 per cent. of the amount will be used in clearing up the valley, and the rest at Lockhaven, Williamsport and other places ravaged by floods. Those in a position to judge, say the public funds are being wisely expended, and that all that may be given will be needed. The disaster instead of diminishing business in Pittsburg, Philadelphia and other markets, has made it specially lively, as heavy orders for all sorts of goods have been pouring in from local merchants, the Charity Committee and the State authorities.. ....Three hundred and forty-five Mormon proselytes landed at Castle Garden Thursday. .....The University Board of Madison University, Hamilton, N. Y., have unanimously voted to change the name of the institution to Colgate University in honor of the Colgate family, and especially of James B. and Samuel Colgate, who have been great benefactors of the institution. From the first the family has given it over $500,000. Banker James B. lately built an extension at a cost of $150,000, and merchant Samuel is now building another to cost $100,000. This Baptist University, now over 65 years old, will begin its new career with an endowment of $1,200,000 in addition to its educational plant, grounds and buildings..... The Cronin murder case in Chicago, from a tragedy has almost become a farce. The two men arrested here for complicity in the crime have been released, as all formalities for extradition had been neglected, and three persons sent on from the Windy City to identify them as persons connected with the horror, failed to do so. It has been found advisable to keep all Irish policemen off the case, and it is said all who are members of the Clan-na-Gael in Chicago will be dismissed from the force. Dan Coughlin, a detective, now in jail, is one of the men chiefly implicated. Martin Burke, a fugitive from Chicago, has been arrested, as one of the chief actors, at Winnipeg, Canada, and identified by a Chicago police officer. Chief of Police Hubbard is "exultant over this fact" and says he expects to have the whole mystery cleared up soon. The Canadians will be only too glad to surrender Burke as the Clan-na-Gael is detested by all loyal people across the border. Alexander Sullivan, ex-president of the Land League, has been released on $20,000 bail, and the general opinion is that his shrewdness, if not his conscience, kept him free from any provable complicity in the crime. Many other arrests are expected..... John W. Bardsley, who brought the first English sparrows to America, died at his home in Germantown, Pa., on June 17.—No talk of a public monument to his memory.... ....A Chippewa Indian war scare in Minnesota drew several companies of United States troops on a wild goose chase to the Mille Lacs reservation where 70 Scandinavian squatters were badly frightened. A drunken Indian had wounded one of them—hence all the hubbub..... ..... While the rainfall in the East in May was the greatest in the records of the Signal Service, the rainfall hitherto in June has been the heaviest all over the country since 1880. Last Sunday was the wettest kind of a day nearly all over the country. Uniontown, Kansas, a place of 600 inhabitants, was swept away by a flood caused by heavy rain and the bursting of a dam; Augusta suffered also from a cloud burst, and Fort Scott "had the heaviest rain in 30 years." All that section of the country suffered severely. "The heaviest rain for years," did a world of mischief in the country about Abington, Illinois. "The most terrible rain storm of recent years" caused much loss and more dismay in West Virginia; and the Shenandoah Valley about Martinsburg, Va., was swept by a downpour. Western New York, especially Chemung county had a pluvial visitation almost as disastrous as that of a fortnight ago ..... The price of castor oil has been enormously increased by the "trust" controlling its production and sale.....The ice trust in this city has doubled the price of ice..... New Hampshire has elected W. E. Chandler to enliven the United States Senate for a term of six years .....Last year 45,000,000 pounds of oleomargarine were made in the United States against 30,000,000 in the previous year. The sales kept pace with the manufacture.....A handsome granite monument has been placed on the grave of Edward Payson Roe, the novelist, clergyman and horticulturist, in the village cemetery at Cornwall on-the-Hudson, New York..... .... Last Saturday night Governor Hill, of this State, completed his labors on the 451 bills left on his hands at the adjournment of the legislature. He witheld his approval from 166. This year he approved, in all, 570 bills against 586 last year.....General Miles telegraphs that the reports of Indian massacres in Sonora, Mexico, are unfounded..... Canadian authorities are urging upon the British Government the necessity of an early settlement of the Behring Sea trouble ..... John Gilbert, the veteran actor and "born" gentleman, is dead..... ..Ex-Commander-in-Chief Fairchild, of the G. A. R., has been appointed a member of the Cherokee Commission, which is persuading the Indians to cede some of their lands to the United States, for the formation of the proposed Oklahoma Territory .....The Sioux Commissioners at the North are having a hard time in trying to induce the Indians to sign the treaty ceding 11,000,000 acres. His bitter opposition to the measure has restored Sitting Bull to health enough to fight against it..... Tuesday Mr. Belmont's four-year-old gelding, Raceland, won the Suburban Handicap, at Sheepshead Bay, near this city, the greatest racing event of the season. Purse $10,000; jockey "Snapper" Garrison; distance, 1¼ mile; time, 2.09 4-5. He was the general favorite .....Wednesday four persons were killed and several others injured because an engineer had orders to make up for lost time, and ran his engine at the rate of 60 miles an hour round a sharp, sloping curve on the Panhandle railroad, three miles east of Steubenville, Ohio. The rear cars were whipped off the track and utterly wrecked on a 25-foot embankment.....At Columbia College, in this city, 170 doctors were graduated the other day. The German government is contemplating strong measures to prevent so many young men from studying to be doctors, by withdrawing public aid to tuition, because the great surplus of the profession begets much shiftlessness, idleness, trickery and scandal.....Nebraska has 5,031 miles of railroad the assessed valuation of which is $29,584,325.....The Fairbank Canning Company, of Chicago, has purchased the entire plant of the East St. Louis Dressed Beef Company for $500,000. It is expected that from 1,000 to 1,500 beeves per day will be killed by the new owners..... .....

Where Simplicity Avails.

Before adding another line we wish to state that it is Compound Oxygen, of which we would speak. Having thus admitted our purpose we call attention briefly to what the voice of experience has to say:

MARION, Va., August 27, 1886.

"I am happy to report my mother now in her 75th year, much improved in health since using Compound Oxygen."

MRS. VIRGINIA B. HALLER.

NEWPORT, R. I., June 13, 1887.

"No one seems to appreciate the blessing of getting out more than I do. I also realize had it not been for the Compound Oxygen I would not have been here to enjoy this blessing." LYDIA B. CHACE.

We publish a brochure of 200 pages, regarding the effects of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, June 22, 1889.

IN England the Parnellite-Times case is still dragging its slow length along.....The Cronin murder is the very sweetest sort of "nuts" to the Times and all the Anti-Home-Rulers. They chuckle over the Kilkenny cat fight between the rival factions of the Clan-na-Gael and over the "*imperium in imperio*" which the disclosures reveal as existing in this country. Since the Phœnix Park assassination of Lord Cavendish and Secretary Burke, nothing has so injured the cause of Irish Home Rule as the brutal Chicago murder. Every revelation of the deeds, methods and motives of this dark lantern organization is eagerly recorded for subsequent use against the cause advocated by the Parnellites. There's no doubt that British antagonistic influences of all kinds are busily at work in stimulating, suppressing or diverting the investigation .. A strike among sailors, firemen, oilers and coal-passers in Liverpool, London, Glasgow, Belfast and the other chief ports in the United Kingdom, has greatly hampered the "stevedoring" and departure of ocean steamers and other vessels for the last fortnight. No other class, even among the "pauper labor" of the Old World, receive such small wages and such bad fare and usage for such hard work, and the wonder is that they didn't strike sooner. A ship-owners' combination has been formed to resist their demands, but now that they are massed in an association, they must at once get a good deal of what they ask, and at intervals afterwards get even more than they have the face to ask for now. The same classes of seagoing men have also struck in several continental ports in the North, where wages are lower than even in the British Isles. Once inaugurated, the movement is certain to spread and grow stronger..... ..... A new war scare is just subsiding in Europe. The Regents who rule little Servia during the minority of King Alexander, are strongly in favor of Russia, while the late King Milan was equally strongly in favor of Austria. The other day Russia proposed to form a military convention with the Regents giving the Czar control of the Servian army, and they would doubtless have agreed were it not that Austria threatened to march an army at once into the country. Baffled for the moment, Russia is sure to persist in her designs, and is now trying to secure the deposition of the present boyish Servian King, and to put in his place the Prince of Montenegro or the subservient heir of the late Kanageorgevic dynasty. If Austria became embroiled with Russia, Germany and Italy must come to her aid, and then France, to avenge 1870, would have joined Russia; Greece and the Balkan States must have promptly taken sides, and Denmark as well as Norway and Sweeden couldn't well keep out, and it is probable that all Europe would have become embroiled unless victory inclined decidedly to one side or the other early in the struggle..... It is also charged that Russia is massing troops heavily on the Austrian frontier, and that Montenegro, her inalienable ally, is ready at any moment to offer a *casus belli* by an outbreak against Albania, Turkey, or Servia. Russia, however, insists that her intentions and movements are peaceful, and the scare is subsiding, while, of course, all parties are distrustfully watching each other..... There's an awful famine in some of the Chinese provinces. China is opposed to railroad construction mainly because such rapid and easy transportation would throw hundreds of thousands of porters and boatmen out of employment on the roads, rivers and canals; but it would prevent these constantly recurring famines in densely populated districts..... Latest Central African advices indicate that Emin Pasha will accompany Stanley to Zanzibar or some other point on the eastern coast of the Dark Continent. Emin's abandonment of the region which he has been trying to defend and civilize for so long a time, and probably of a large number of his faithful followers who couldn't accompany him, is generally looked upon as a severe though only temporary check to the civilization of that region. There's a good deal of talk already of building a railroad from the east coast to Lake Victoria Nyanza which would soon lead to the opening up of Eastern Central Africa. On the western coast a company has already been organized for the construction of a railroad 260 miles long from Congo Falls to Stanley Pool on the Congo river. This will afford transportation around the rapids of the river which stretches its devious course across two-thirds of the continent, making a mighty detour to the north and south and affording a longer stretch of navigable waters than does the Mississippi to Alton, lengthened by the Missouri to the head of navigation. The King of the Belgians, the founder and supporter of the Congo Free State, has contributed $2,000,000 to the stock of the company, and the rest has been subscribed chiefly by Scotch and English capitalists with $50,000 from C. P. Huntington, president of the Southern Pacific Railroad. The work is to be begun off hand, and will, no doubt, ultimately extend to the Atlantic coast. Great things are expected from it by merchants, engineers, navigators, philanthropists and missionaries. Its construction would, it is said, be a death blow to the terrible slave trade which still flourishes fatally in the region it would help to open up to humanizing influences.....

AGRICULTURAL NEWS.

SATURDAY, June 22, 1889.

FROM nearly every part of the Northwest, West, and Southwest, comes the complaint of too much rain, in many places accompanied by high winds, and, in some cases, by hail. The wheat is about all in shock in Tennessee and Kentucky, but rain has greatly retarded work, and seriously injured the crop. Harvesting is also well under way in Missouri and Kansas, but heavy rains have interfered with the work. Through other sections, wheat and other grains are lodging badly on account of the heavy rains. In the corn belt, the wet weather has prevented the proper working of the corn, and the fields are consequently getting very weedy and grassy. There has been damage by lightning in many places, and high winds have created great havoc in others. In the Chemung valley in Southern New York, heavy rains caused a flood nearly equal to the one of May 31, and which submerged all the lowlands along the river. The crops on these lands were all destroyed by the previous flood, and now all the labor that had been expended on replanting has come to naught. Parts of West Virginia have been visited by terrific storms. Berkley county was visited by a terrific gale of wind followed by a thunder storm, and this in turn was followed by hail. The hailstones were said to be three or four inches deep in some places, and crops were ruined. In some instances live stock was killed. Still in spite of these discouragements, the wet weather has been very favorable for the growth of most crops on uplands, and we shall hope for abundant harvests..... A large area was sown to wheat in Manitoba this year, and although growth has been rather slow, the prospect is good for a large crop.....The Jute Bagging Trust is trying to circumvent the anti-trust law of Missouri; where its headquarters are, by having its products sold before the law goes into effect..... ... .California beeswax is expected to arrive in commercial quantities this season. Samples shown are very handsome, and prices would fully equal rates for State.....There are inquiries for Pacific honey, new crop, at 8½ cents.....California Lima beans have been advanced to $3.40. Stocks are small and in few hands..... A new pest has made its appearance in Grant County, Indiana, which threatens to destroy the wheat, oats and rye crops. It is a small green bug or parasite that attaches itself to the base of the grain, and sucks the life out of it. It is believed that the backward crops will be utterly destroyed. Reports from adjacent counties indicate that the parasite is widespread..... A Frenchman has invented a textile fabric which he calls artificial silk.....Hon. William W. Wright, of Geneva, N. Y., President of the Board of Control of the New York Experiment Station, is dead at the age of 76.. .....The first meeting of the commission created by the last legislature to establish a Meteorological Bureau and Weather Service in the State of New York, was held in Ithaca, June 19 The board organized by the election of Hon. A. S. Draper as President, Hon. Simeon Smith as treasurer, and Professor E. A.

Miscellaneous Advertising.

SEND 10 Cts. in P. O stamps to **E & O. WARD,** Produce Commission Merchants, for circular about **Shipping Produce** Also recipe for **Preserving Eggs.** Established 1845. **No. 279 Washington St., New York City.**

FARMERS AND OTHERS

having spring or running water can have the water conveyed to their premises by using a Hydraulic Ram. More than 800 different styles. **Lift and Force Pumps, Hydraulic Rams, Etc.** Send for circular and prices. **RUMSEY & CO.,** Seneca Falls, N. Y., U. S. A.

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34 PARK ROW, NEW YORK.

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Agents will be supplied with canvassing outfit on application.

Entered at the Post-office at New York City, N. Y., as second-class mail matter.

Fuertes as director of the service. W. O. Kerr was appointed clerk to the committee. The temporary organization hitherto under the auspices of the Chief Signal Office of the Army was merged in the State service contemplated by law. The service begins with 45 regular volunteer stations and six United States stations, 49 of which stations display weather signals, and 81 crop correspondents. The central office of the commission is located at Cornell University..... A. D. Chase, of Watertown, N. Y., has been appointed statistician of the Agricultural Department for South Dakota ..... The first of the series of dairy conferences to be held at the fairs in New York State, was held at Walton, Delaware county, June 19. Col. Curtis and William H. Gilbert were the instructors, and gave a practical demonstration to the farmers present of the processes of butter-making. The cream from 200 pounds of milk from a herd of grade Jerseys was churned, washed, salted and worked, and was found to weigh 13¼ pounds, and to be of fine quality and color. In the afternoon a similar test was made with an equal quantity of milk from a herd of common cows, including a small proportion of Jersey grades. The quantity of butter obtained was only 7½ pounds, but the quality and color were good. Mr. Gilbert declared the average proportionate yield throughout the State to be about the same as the latter sample..... The 69th anniversary of the Rhode Island Society for the Encouragement of Domestic Industry, will be held at Narragansett Park, near Providence, September 23 to 27. David S. Collins of Cranston, secretary ..... Some sort of a fungus has attacked the cherry trees on Long Island, and threatens serious damage.... ....Later reports about the insect mentioned elsewhere as threatening destruction to the grain crops in Indiana, say that complaints are increasing. They come chiefly from the central and eastern part of the State, but the ravages of the little bug have already spread to Northern Indiana, and the secretary of the State Board of Agriculture regards the reports as alarming. The insect is what is known among agriculturists as the "green midge," another species of which is the "red midge." The latter last appeared in that region about 15 years ago and did great damage to the growing wheat. The "green midge," the little destroyer which is now doing such alarming work, has not been seen by farmers since 1865, when it almost entirely destroyed the wheat crop of Indiana and neighboring States. Millions of them appear in a field, settling upon a stalk from which they draw the sap, causing the grain to shrivel before it is matured. The insects are green in color. Little is known about the insects because their appearance has been rare .....Latest reports give cheering news of the prospects for wheat in Minnesota and Dakota. The crop promises an increase of several million bushels over last year.....

SPECIAL BUTTER, CHEESE AND HOP REPORTS.

UTICA, N. Y., June 22, 1889.—The cheese market has been very active during the week, the sales being large, and prices good. On Wednesday, 22, 595 boxes were sold. Sales for the week approximate 50,000 boxes. Prices run from eight to 9⅛ cents, averaging about 8½. Sales are much heavier than at this time last year. Extensive purchases were made by Candian buyers.

The butter market was weak, the supply being fully equal to the demand. At the other markets there were few sales. Prices ranged from 16 to 20 cents.

The hop market is dull, and but few sales have been made at 20 to 21 cents. The vines stood the storms well, and no vermin are reported. The prospect for the new crop is good.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, June 22, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	5 5-16	5 9-16	.....
Strict Ordinary	8¾	9	.....
Good Ordinary	9 11-16	9 15-16	.....
Strict Good Ordinary	10⅛	10⅜	.....
Low Middling	10⅝	10⅞	.....
Strict Low Middling	10⅞	11⅛	.....
Middling	11 1-16	11 5-16	.....
Good Middling	11 9-16	11 13-16	.....
Strict Good Middling	11 13-16	12 1-16	.....
Middling Fair	12¼	12⅝	.....
Fair	12⅞	13⅛	.....

STAINED.

Good Ordinary	8 3-16	Low Middling	9⅝
Strict Good Ord	8 13-16	Middling	10 9-16

WOOL.—Spring Texas, 17@25c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 30c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 33½c; Scoured Colorado, 53c.

POULTRY--Chickens, spring, per lb, 13@17c. LIVE FOWLS, near-by, per lb, 12@13c; fowls, Western, per lb 12@12½c roosters, per lb, 7c; turkeys, per lb 9@10c; ducks, western, per pair, 70@0.90c; geese, western, per pair, $1 15@$1 40.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per lb, 12@—c; do do, common to fair, 8@11c, do, iced, dry picked, choice, 8@10c. Fowls, western, do, choice, 10½@11c; do, nearby, do do, 11½@12c; Chicks and Fowls, mixed, 12@14c; do do do, scalded, 10@11c. Squabs, white, per doz, $3 00@$3 25 do, dark, do, $1 75@$3 00. Chickens Philadelphia, dry picked, 20@23c, do Jersey, do, choice, 20@23c do nearby, do, good 20@23c; do Western, do do, 18@22c; do do, feed, good to choice 16@18c. Ducks, spring, choice, per lb, 14@18c; do do, good, 12@14; do Western, good, 12@14c. Geese, Western, good, 8@10c

HOPS.—State, new, best, 22@23c; do, prime, 20@22c; do, low grades, 13@16c; do do, 1887, 8@9 do do do California, common to prime, 14@20c; choice, 20@22c

HAY AND STRAW.—Choice Timothy, 90@$—; do good do, 75@80c; do medium, 65@70c; shipping, 60@70c; do, Clover, mixed, 55@65c. Straw.—No. 1, rye, 70@75c; short do 50@55; oat, 40@45c.

BEANS.—Marrows, new, $2 00@$—; new mediums choice, $2 00@—; pea, $2 00@—; red kidney, $2 40@2 60 white kidneys, choice, 2 35@2 60; foreign, mediums, 1 35@1 55; California Lima, $3 15@$3 40; green peas, $1 25@—.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@—c, and farmers' grades at 6@7½c. Pecans, 5@7½c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Bermuda, per bbl, $3 50@$6 50; Maine do. $1 50@$2 00; State do, $1 75@$2 00; Florida, do, $3 00@$4 00; Savannah, do, $3 00@$4 00. Norfolk do, $3 00@4 50; Cab., new, $0 50@$0 75. Peas, per bbl, $1 25@$2 50; Squash, per crate, $0 75@$1 00. Beets do, $0 50@$1 50; Asparagus, per doz., $0 50@$1 50; Tomatoes, per crate, $0 50@$1 50 ONIONS—Bermuda, per crate, 75c; New Orleans, per bbl, $2 50@$3 00; Beans, string, per crate, $0 3@$0 75; Cucumbers, per crate, $0 40@$1 50; Radishes, per bbl., 50c@$1 00. Peas, per basket, $0 75@$1 50. Turnips, per 100 bunches, $2 00@$3 75

FRUITS.—FRESH.—Strawberries, per qt, 5@15c; Watermelons, per 100, $15 00@$27 00; Oranges—Florida, best, box, $5 00@$6 50; do, good lots, $3 00@$4 50. Lemons, $2 75@$4 00; Cherries, per lb, 3@15c; Huckleberries, per qt, 3@13c; Gooseberries, per qt, 5@8; Raspberries, per pint, 6@15c; Plums, per qt, 4@8; Peaches, per crate, $0 50@$2 00.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 4½@6c; do new, common to prime, 3½@4¾c; sliced, new, 2¾@3¾c; quarters, 2½@3¼c; chopped, 1¼@1½c; cores and skins, 1@—c. Cherries, new, 10@14c. Raspberries, new, 17@19c. Blackberries, 4@4½c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 10@14c; do do, unpeeled. 5@6c; North Carolina sun-dried, peeled, 6½@8c. plums, 5@5½c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 13 25@13 50; short clear, $14 00@16 00. Extra Prime mess, $12 50@$— prime do, $12@$12 25 and family mess, $13 25@14 00. BEEF—India Mess, in tierces, $12@12 50 Extra Mess, in barrels, $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $7 50@8 00; Family at $11—@$14. HAMS—$13 50@$14 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 6¼@—c; Pickled Hams, 11¾c; pickled Shoulders, 6½@6¾c; Smoked shoulders 6½c; do Hams, 12¼@12½c. Dressed Hogs.—City, heavy to light, 5⅝@6⅜c. Pigs, 6½c. LARD.—City steam, $6 30; June, $—; July, $6 84, August, $6 99; September, $6 99; October, $7 15; South America, 7.7c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes lower; Early Rose, 27@30c per bush.; Burbanks and White Stars, 28@32c; Hebron, choice, 35@40; New Potatoes. Florida, per bbl, $1 75@$3 50. Provisions were steady. BEEF.—City family, per bbl, $9 00@$9 50; do, packets, $8@8 50; smoked beef, 10@10½c; beef hams, $14 PORK.—Mess, $14 00@$—; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@13c; do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6¼@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6½@7.

CHICAGO.—MESS PORK.—$11 55@11 60 LARD.—$6 47@—per 100 lbs; Short Rib sides (loose), $5 80; dry salted shoulders, boxed, $5 25; short clear sides, boxed, $6 12@$6 25.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 18@18½; Elgin best, 18@—; Western, best 17@17½; do prime, 15½@16½; do good, 14½@15; do poor, 13@13½. State, Dairy half-firkins, tubs, best, 17@17½c; do do prime. 16@16½; do do fine, 14½@15; Welsh tubs, fine, 15½@16; do do, good, 14@15; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 14@15; do fine, 12@13; Western dairy, fine, 13@14; do fair, 11@—c; do poor, 9@10c; do factory, fresh, best, 12½@13, do prime, 11½@12; do good, 10@11; do poor, 8@9c.

CHEESE.—State factory, fancy, 9@—c; do do fine—@—c; do do, prime, 8½@8¾; do do, fair to good 7¼@8c; Ohio, flat, prime, 7@8c; do good, —@—c; do, good, —@—; Skims, light, 5½@7c; do medium, 2@4; do full, 1@2c.

EGGS.—Near-by, fresh, 15@—c; Canadian, 14¾c Southern, 14¼@14½c; Western, best, 14½@14¾c. Duck 14@16c; Goose, 20¼@25c.

PHILADELPHIA.—BUTTER weak. Pennsylvania creamery extra, at 16@17c; Pennsylvania Prints, extra, 19c; B. C. and N. Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were firm; Pennsylvania firsts, 15@16c; Western firsts, 14½@15c; Cheese dull—steady; demand fair; New York full cream, at 9@9¼c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Elgin creamery, 15½@16½c. choice Western, 15@15½c. choice dairy, 12@13½c; common to fair, 8@10c. Eggs firm at 12@—c.

GRAIN MARKETS.

WHEAT.—Sales—Ungraded Winter Red at 81¼@85¼c; Walla Walla White, 85½c; No 2 Red, afloat 84⅛@84¼c; do, in store, quoted 82½c; No. 2, 82½c; do July, 82⅝@83c; do August, 82¼@82⅝c; do September, 82⅞@83¼c; do October, 84c; do December, 85¾@86¼c. RYE has a light demand, but prices are well maintained. BARLEY MALT—unchanged in price and quiet. CORN—Cash trading was again quite active, and the market had a firm support, in some instances showing a slight advance. Ungraded mixed 41@42½c; Steamer mixed, 40¾c, elevator; No. 2 mixed, 41½@41¾c, elevator, 42¼@42½ afloat; 41¾@42c, arrive, 41¼c c. f. and l. lake and rail; yellow c. f. and l. 41¾@41½c; No. 2 June, 41½c; do July, 41½@41 13-16c; do August, 42⅛@42½c; do September, 42⅛@42¾c; do October, 43¼@43½c. OATS—Cash lots ruled less active and unsettled. Graded mixed were firmly maintained, while White closed ¼@½c lower on freer offerings. No. 3, 27c; do White, 32½c; No 2, 28¼c; do White, 33¼c; No. 1 White, 38c; Mixed Western, 26@30c; White do, 33@39c; No. 2 June, 28⅛@28¾c; do July, 28⅝@29⅛c; do August, 28⅝@29⅛; do September, 28⅝@28¾c. FEED—Quoted 40 lbs, 60c; 60 lbs, 55@60c; 80 lbs, 60@65c; 100 lbs, 70@80c; Sharps, 80@85c; Rye Feed, 70c.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, June 22, 1889.

BEEVES.—Kentucky "Stillers" sold at $4@$4 40; poorest to best Grass and Corn-fed Cattle at $3 80@$4 80. Most of the sales were at $4@$5 60. Several carloads of cows changed hands at $2 70@$2 90 (tail ends selling at $1 85); and Bulls ranged in price from $2 50 to $3 25.

MILCH COWS.—Receipts about 80 head this week. Dealers report a rather firmer feeling for good cows, with sales at the range of $27 50@$45 per head (choice) at $50 each.

CALVES.—Buttermilk Calves sold at $2@$2 30 per 100 lbs; Mixed Calves at $3@$3 75; Westerns at $2 90; Fair to Choice Veals at $3 50@$4 50, and 32 head at $4 75. Mixed Calves, 146 lbs average, at $3 75 per 100 lbs; Veals, 158 lbs. at $4.

SHEEP AND LAMBS.—Ordinary to Prime Sheep sold at $3 37½@$5 12½ per 100 lbs, and Common to Choice Southern Lambs at $6@$7 50. A few Common States sold at $5 50. Sales—Ohio Sheep, 92 lbs average, at $5 per 100 lbs Virginia do, 103 lbs. at $4 25; Bucks and Ewes, 107 lbs at $3 50. West Virginia Lambs, 61 lbs. at $6 50; Virginia do, 56 lbs, at $6; Maryland do, 68 lbs, at $7 25; Kentucky do, 71 lbs, at $7 50. Western Sheep, 80 lbs, at $4.

HOGS.—No sales on live weight. Market nominally unchanged at $4 50@$4 90.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING JUNE 22, 1889.

H. G.—J. A. F.—J. B.—E. P. E.—R. K.—J. G.—E. C. G.—E. C. G.—J. McC.—J. N.—C. C. P.—J. E. H.—J. E.—B. D. H.—J. W.—J. O. B.—O. H.—P. C.—J. L. B.—J. A. F.—W. J. B.—A. C. J.—A. A. C.

Miscellaneous Advertising.

SARATOGA.—COUNTRY RESIDENCE and FARM of 120 acres, five miles from Saratoga Springs, near small village. Large Orchard, good buildings, and water Easy terms. Address WM. C. WEEDEN, Greenfield Center, N. Y.

FEARLESS.

This Threshing-machine received the two last **Gold Medals** given by the New York State Agricultural Society; and has been selected, over all others, and illustrated and described in that great work, "Appleton's Cyclopedia of Applied Mechanics;" thus, establishing it as the **standard** machine of America. **Straw-preserving Rye-Threshers, Clover-hullers, Ensilage-cutters, Feed-mills, Fanning-mills, and Wood Saw-machines;** all of **the best** in market. The **Fearless Horse-powers** are the most **economical** and **best** Powers built for the running of Ensilage cutters, Cotton-gins, and general farm and plantation use. For free Catalogues, address MINARD HARDER, Cobleskill, N. Y.

FLORIDA.

The Land of Oranges, Fruits and Flowers. Choice Orange Groves and Farming Lands for sale; cash or instalments. Big inducements for the next 30 days. Don't wait until the cold weather drives you out of the cities and when prices are high, but invest now if you are wise. Our lands are situated among churches, schools, railroads, etc. Good hunting and fishing. For full particulars address the Magnolia Land Improvement & Emigration Co., No. 5 Broadway, New York, Room 5

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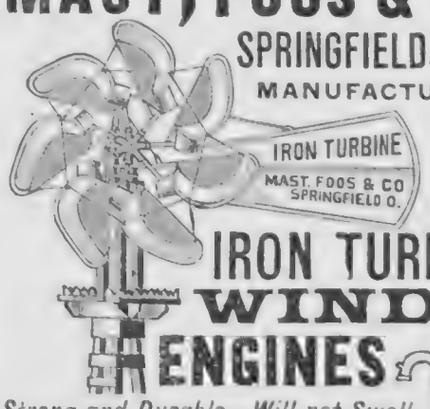

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BUCKEYE FORCE PUMP

A CHILD CAN USE THEM.

Works easy, and throws a constant stream. Has Porcelain Lined and Brass Cylinders. Is easily set. Is the Cheapest and Best Force Pump in the World for Deep or Shallow Wells. Never freezes in winter. Also manufacturers of the BUCKEYE LAWN MOWERS, Buckeye Wrought Iron FENCING, Cresting, etc. Write for Circulars and Prices.

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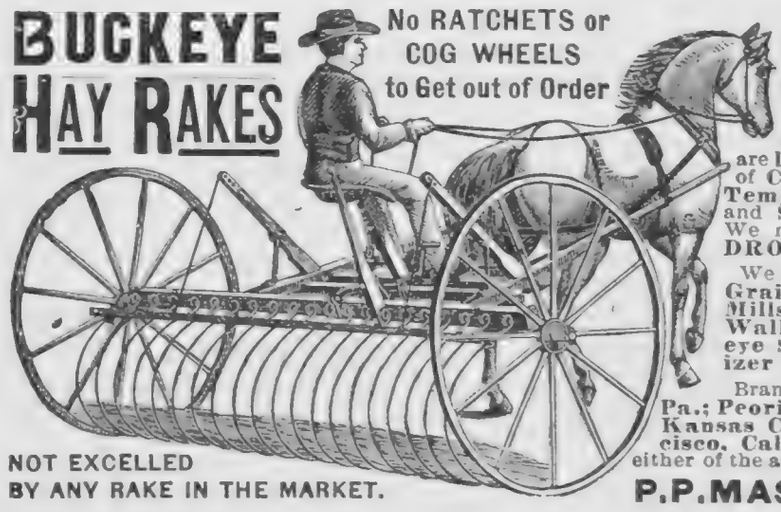

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We also manufacture **Buckeye Grain Drills, Buckeye Cider Mills, Buckeye Riding** and **Walking Cultivators, Buckeye Seeders, Lubin Pulverizer** and **Clod Crushers.**

Branch Houses: **Philadelphia, Pa.; Peoria, Ills.; St. Paul, Minn.; Kansas City Mo.;** and **San Francisco, Cal.** Send for Circular to either of the above firms or to

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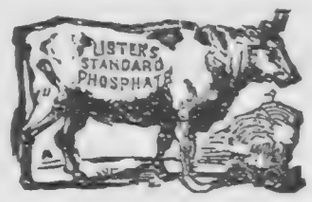

RUSTLESS IRON WATER PIPE.

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MAINE STATE FAIR,	B. F. & F. H. BRIGGS.
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ENGINES, BOILERS, CHURNS, BUTTER WORKERS, AND EVERYTHING USED IN CREAMERIES OR DAIRIES. SEND FOR CIRCULARS GIVING FULL PARTICULARS. VT. FARM MACHINE CO., Bellows Falls, Vt.

A TELESCOPE FOR ONLY $1.00 WARRANTED.

We have imported expressly for our summer trade **2,000 large French Telescopes** at a very low price; they **open 32 inches** in three sections, and measure **closed 11 inches.** They are nicely brass bound with brass safety caps on each end to exclude dust, &c. The lenses are very **Powerful Crystals** polished by LEMAIRE & CO., of Paris. With this fine telescope objects miles away are brought close to view with astonishing clearness. Never before was a telescope of this size sold for less than from $5.00 to $8.00 and we shall offer only a limited number at this price. Every sojourner in the country or at seaside resorts should certainly secure one of these instruments, and no farmer should be without one. Sent by mail or express, safely packed, **prepaid for only $1.00; 6 for $5.00.** KIRTLAND BROS. & CO., 88 Fulton Street, New York City.

Meteorological.

"WEATHER-WISE."

How People Foresee the Weather.

RAIN INDICATIONS.

THE WEATHER ON LAKE MEMPHREMAGOG.

EVERY locality has its special weather signs, depending on the prevailing winds, the trend of mountain ranges and river valleys, and, much as regards their usefulness, upon the stored experience of those who have been interested, pecuniarily, in studying the aspects of the clouds, and the atmospheric conditions.

Westerly or southwesterly winds, in our section, always mean fine, dry weather, when settled in that quarter. Variable winds, in summer, especially if gusty, or very hot, still weather, portend sudden showers, or thunder storms. "A southerly wind and a cloudy sky" mean warm rain of more or less duration. "All signs fail in a dry time," but the longer we wait for rain the more we get when it comes, and with a south wind the more difficult it seems to get steady, dry weather again. Easterly winds are rare with us, as the trend of the long Connecticut valley, with its bordering mountains, tends to make the easterly winds of Southern New England assume a southerly course. If strong enough to reach us decidedly easterly, they bring cold rains of moderate duration, which clear off fair, and the weather stays so. As to moon signs, though still often quoted, and though no amount of failure is sufficient to cause them to be forgotten, the only one I have ever found worth anything to me as a farmer, is the fact that a full or nearly full moon tends to disperse the clouds so that though in its lesser phases we may not see the moon for a week, we are very sure to see it during the week of approximate fullness. The agricultural consequence is, that when the moon fulls the last of May, or thereabouts, and also at the full in September, we are pretty sure to get frosts, especially in frosty localities. As for plans, experienced farmers take advantage of those signs as above stated, which show the least prospect for wet weather, for those operations which require dry weather for their success. T. H. HOSKINS.

Orleans County, Vt.

NEW JERSEY INDICATIONS.

It is very difficult to tell what the weather will be 24 hours hence. The atmospheric changes are often so sudden as to baffle our best calculations, yet there are certain signs that seldom fail us. 1. If the sun rises clear in the morning and then goes under the clouds, as we call it, within half an hour, in nine cases out of 10 it will rain before 12 o'clock. 2. If the sun sets in a heavy bank of clouds it is about certain to rain before morning. 3. If the wind veers suddenly to the southwest with a damp atmosphere, it is very apt to rain within 24 hours; but if the rain is withheld for 36 hours it is not likely to rain until the wind changes to another quarter, and if one is engaged in work that requires dry weather, such as harvesting hay, he should push the work vigorously as long as the wind holds in the southerly quarter. 4. Sun-dogs, so-called, are indicative of rain within 18 hours, and seldom fail. 5. The feathered tribes calculate very accurately as to what the weather will be 12 to 24 hours ahead. If one sees the fowls go about picking up food, and they are late in going to roost, it is very likely to storm before morning. The cooing or mourning of the dove indicates rain soon. These are the principal signs by which my actions in regard to my work are governed, and I find them about as correct as anything that comes under my observation. J. P.

Princeton.

CENTRAL NEW YORK.

A "weather prophet" is without honor at home or abroad. The man who claims to foretell the weather for next week or next month is justly ridiculed whenever his name is mentioned in connection with such predictions. That an experienced observer can usually discern the approach of a rain-storm in time to avoid serious loss through misdirected labor, is true. Reliance may be placed on indications of fair weather for to-day and to-morrow, and work may be so planned from day to day as to profit by this fact. With comparative certainty of the weather for this short period, very little damage to hay or grain will be sustained by the careful manager.

While some of the indications of rain are easily described and understood, others can hardly be made plain by words alone. If the farmer says that it "feels like rain," he mentions an important sign when taken in connection with other indications. But just what is meant by "feeling like rain" it is difficult to tell. Humidity, denseness, and temperature are involved in this condition of the atmosphere, that usually precedes rain. Again, the farmer says that it looks like rain, and in an hour after says the appearances of rain have passed away, but the change is hardly perceptible except to careful observation.

"All signs fail in dry times," but except in continued drought the absence of dew in the morning is a fine warning to look out for rain. If the wind is in the east and veers to the southeast or south and continues there, it will rain. Sometimes the wind will be in the south through the day with indications of rain, and toward night these appearances will pass away. This may occur for two or three days in succession, and usually terminates in a heavy rain. Look out for rain as long as these daily threatenings continue.

When signs of rain have been noticed for some time and the sky is generally cloudy, if small, dark, scudding clouds are seen it will rain very soon. Two sets of clouds, one above the other, moving in different directions, indicate catching weather. If, with a partially cloudy or hazy sky, the sun shines at intervals with what is termed scalding heat, rain may be expected. This scalding sun is different from the ordinary hot sun of fair weather and is readily recognized by the observer of rain indications.

Most of our regular rain-storms begin with the wind in the south or southeast, afterwards changing to west or northwest. After such a rain if it clears in the night, the weather is not to be trusted until proved. Often after such clearing, clouds will return and light showers may be expected. Sometimes rain-storms come from the West. After several clear days, if with a light wind, a continuous bank of cloud appears in the west, extending well north and increasing towards evening hay or grain should be well secured, as it will probably rain.

The moon has no appreciable influence on the weather or the growth of crops. The idea that certain days, known as "almanac days," have any connection with the weather for future weeks or months is too absurd to receive intelligent notice. Instinctive unrest may be noticed among animals as the precursor of a storm, but these appearances are not reliable, as such animals really know no more about the weather than their owners. Where bees are kept, a regular cloud of workers may be seen hurrying home on the near approach of a storm. Their warning is of no use, however, as they do not start for home until the danger of immediate rain is plain to everybody.

After a day or two of rain, if the clouds disappear and mist or fog drifts from the lowlands and streams to higher points, and the wind comes from any point between west and northwest, and there is neither haziness nor scalding sun, two or three days of fair weather may be confidently expected. The wind is often in the east in the morning, changing to the west by nine o'clock; but this is no sign of rain. Unexpected showers will sometimes overtake a careful observer, but attention to the few weather indications above noticed will usually enable the farmer to secure his hay and grain without serious damage.

Lewis County. C. S. RICE.

Miscellaneous.

FARM HELP.

W. L. DEVEREAUX.

LABORERS on the farm engaged by the month are mostly of American birth, in Wayne as well as in surrounding counties. A large share, however, are the sons of Irish and German immigrants. If these are counted in together with the direct immigrants hired by the month, not more than half the number of monthly hands will be natives or long-resident Americans. Men employed by the month are very often the sons of small farmers of the afore-mentioned nationalities, who are working hard to pay for farms on shares, and having the proverbial large families, can spare some of the boys as they grow up. These boys usually make good help for the farmer who hires. Their wages commonly begin with the same number of dollars per month as there are years in their lives, but their monthly wages very soon increase though they never get above $23.

Very many more than would at first sight appear are born of American families, and are well educated young men, reliable, and really valuable assistants, competent to take the lead in the farming operations of their employers. After working in the capacity of monthly hands for several years, the majority from every nationality, without any exceptions, drift to the West, or to the railroads. A few lay up money and establish themselves *in farming* by renting farms, or by sticking to some piece *of land* by making a "first payment" and tilling the soil into paying for itself. If of German parentage, they are *sure* to lift the mortgage. If of Irish, they are not quite so sure, and if of an old American family, they are still less sure of doing so.

In a circumscribed locality where there are 100 monthly hands, I estimate that after a half generation, there will remain only 15. Of these four will be Irish or close descendants of Irish parents, who have taken up farming on their own account; three will be German who have adopted the same calling; and three will be Americans who have done likewise. Five will have settled down as day farm-laborers in tenements, or else they will be owners of small lots, nationality proportioned as before. Although the above ratio is against the prospect that a majority of Americans will in the future own farms, it is a fact in this region that American owners greatly predominate now, and will always do so; for the American or Yankee farmers' sons, or some of their sons, buy most of the farms or divisions offered for sale.

In some localities numerous Italian day laborers are employed at extra work and as extra laborers in busy seasons, but for our constant and chief reliance, a monthly hand is secured by almost every farmer, and he is usually engaged to begin on April first for seven months, under a few simple, unwritten conditions, boarding with his employer, or with his foreman. He attends to the chores in the morning before the day laborer begins for his 10 hours' work. He again does the chores at night after the 10 hours' work is over, and he also does them on Sundays, but less stringently, though some farmers employ men who are willing to follow their lead and management in working from sun to sun, or rather from twilight to twilight, chores included. Very many, however, regulate the work, chores and all, quite close to the 10-hour system.

I think farmers are a unit on the plan of securing the best man possible, and paying him his price; but the man who demands the very highest price is rarely the best. Activity is the great requirement, and with this, a sturdy boy at work with the manifold horse-power implements used now in farming will accomplish more than a strong man. Farmers complain that hired men accomplish less than formerly, while wages continue to tend upwards, which arouses them to the employment of more labor-saving machinery, and improved systematic labor-saving plans. A few farmers employ men by the year, and most of these have families and reside in tenements on the farms. Here are the wages or rather allowances demanded of a farmer here, the other day, by one of this class of laborers: "$17 per month, house rent, cow pasture and feed, fire wood, the use of one acre of land and time to work it." It calls for a very nicely drawn contract.

Wayne County, N. Y.

BOOK REVIEWS.

WE are in receipt of volumes III and IV of The Riverside Library for Young People, published by Houghton, Mifflin & Co., Boston and New York. They are devoted to different branches of natural history are both written by women who have evidently studied their subjects with an interest born of love for the study. They are such books as we are glad to see put upon the market at a reasonable price. "Birds Through an Opera Glass," by Florence A. Merriam, treats of a large number of our common birds, in a charming style, with all technical terms omitted. The author has studied the subjects in a praiseworthy way, by observing them while at home in their native haunts, instead of, as is generally the case, after they have been cruelly murdered. Under "Hints to Observers," the author gives a few simple rules for studying the habits of our native songsters to the best advantage. In an appendix is given an arrangement for classifying birds as they are named; the general characteristics of birds; classifications of birds described, and a list of books of reference for those who may desire to pursue the subject further. Would that we might see such a book as this in every home, especially where there are young people.

"Up and Down the Brooks," by Mary E. Bramford, describes, in a bright, chatty, interesting way, a great many insects she has found in the brooks of Alameda county, California. She says, however, that members of the same families of insects will be found in or beside almost any brook, East or West. She says also that the various types of boy encountered probably exist in both sections. These books are both profusely illustrated, and in their neat, handy form and attractive style, should meet with a large sale.

Miscellaneous Advertising.

INFANTILE Skin & Scalp DISEASES cured by CUTICURA Remedies.

FOR CLEANSING, PURIFYING, AND BEAUTIFYING the skin of children and infants and curing torturing, disfiguring, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair, from infancy to old age, the CUTICURA REMEDIES are infallible.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease, from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c. RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., Boston, Mass.

Send for "How to Cure Skin Diseases."

Baby's Skin and Scalp preserved and beautified by CUTICURA SOAP.

KIDNEY PAINS, Backache and weakness cured by CUTICURA ANTI-PAIN PLASTER, an instantaneous pain-subduing plaster. 25c.

Practical Hints TO BUILDERS.

A LITTLE BOOK of 100 pages containing solid facts that every man contemplating BUILDING should know before letting his contracts. Short chapters on the kitchen, chimneys, cistern, foundation, brickwork, mortar, cellar, heating, ventilation, the roof, and many items of interest to builders. Mailed free on receipt of 10c. in postal stamps Address **National Sheet Metal Roofing Co.,** 510 East Twentieth Street, New York City.

The Worcester Buckeye Mower

Has Patented Self-Oiling Pitman, Insuring Safety and Perfect Working.

as a Scythe which Cannot be Broken; Has an Inside Shoe which Cannot be Clogged; Has Patented Chafe Plates.

Always Maintaining **the Shear Cut.**

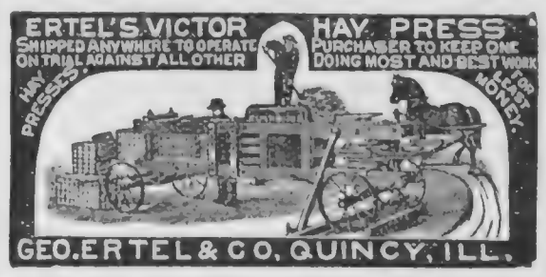
No other Machine has these improvement Don't fail to see it. Send for 1889 Circulars. We refer to **Thirty-five Thousand** farmers in New England who use the **Worcester Buckeye.**

Agents Wanted in Unoccupied Territory.

THE RICHARDSON MANUF'G CO., Worcester, Mass.

STOCK FARM FOR SALE.

3,000 ACRES, excellent soil, close to depot, well watered; fairly improved. Will be sold with or without 75 head of high grade Percheron Horses. Desirable unincumbered property will be accepted as part payment. For full particulars, address **R. H. PRUDFOOT,** East Pierre, So. Dakota.



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Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

SETTLEMENT OF AN INTESTATE'S ESTATE.

T. S. M., Newark, N. J.—My grandmother who died seven years ago, without leaving a will, owned a farm in this State and considerable other real property besides some personal property. The heirs now are my three aunts, and two children of a fourth aunt who died since my grandmother's death. These children are 15 and 13 years old. In my opinion the property does not bring in one-third as much income as it ought to bring, under proper management. How can it be settled? Can it be sold by auction? If not, how can I compel the other heirs to make it a source of the income it ought to bring?

ANS.—In the settlement of an intestate's estate, the first step is to secure the appointment of an administrator. The Surrogate of the county in which the deceased resided at the time of his or her death, has power and authority to grant letters of administration, and application should be made to him. The administrator having been appointed, it becomes his duty to collect the effects of the estate, pay the debts, and under direction of the court make a just and equal distribution of the personal estate. He may sell personal property at auction after advertisement of the sale. Any one being a co-partner, joint tenant or tenant in common, in New Jersey, may apply to any Justice of the Supreme Court, or of the Court of Common Pleas, in the county wherein the lands lie, for a partition of the real estate. Three commissioners will then be appointed to make the partition. If it can be done without prejudice to the interests of the owners, the land will be sold and a distribution of the proceeds made. After partition or sale and distribution, each owner may make such use of his part of the property as he pleases.

LIABILITY OF THE POSSESSOR OF ANIMALS.

N. C., Breesport, N. Y.—A let a farm on shares to B with a lot of cows. B's 23-year-old son has a rather vicious dog which bit a fine Jersey heifer on the shoulder and pulled off the tails of four cows while driving them some time ago. This the son admitted. A remonstrated with B for letting such a brute remain around his premises, and then attempted to shoot the dog; thereupon B's son threatened to shoot a cow, and no restraint was put on the dog. Since then the dog has bitten off the tail of a very fine Holstein heifer. Neither B nor his son is financially responsible. Has A any remedy?

ANS.—If the dog is not licensed anybody can kill him with impunity. Such a brute is also a public nuisance, and as such any court will order his execution. If the son were to carry out his threat by killing a cow, he could be criminally prosecuted for malicious mischief. If B were financially responsible, there would be no difficulty in legally collecting from him actual, if not exemplary damages for the injury done by the dog. In some of the States double or triple damages are awarded in such cases. The circumstance that the brute belongs to his son, would make no difference with regard to B's liability for damages. Not only is the owner of an animal liable for its acts; but one who harbors it or allows it to remain on his premises or to resort to them is also liable; that is, one is liable who having control of a house or premises, suffers or permits such an animal to stay on the premises in the way such domestic animals are usually kept—as a member of the family, so to speak.

DUTY OF CUTTING WEEDS, ETC., ON HIGHWAYS.

T. M. S., Lawrence County, Ohio.—A great number of weeds are flourishing along the highway near my farm; must I cut them down to prevent the seeds from infesting my land, or is it not the duty of the road supervisors to do so?

ANS.—It is certainly the duty of the road supervisors to cut the highway weeds. The Ohio law provides that the road supervisors shall cut down and destroy all weeds, burrs, bushes and briars growing within any county or township highway, in June and August each year. They may allow a land owner a reasonable compensation for destroying the pests in the roads on which his land abuts, and credit the amount on his road tax for the year. The compensation must be fixed by the supervisors before the work is done; but if any one does the work before contracting with the supervisors for it, he cannot compel the supervisors to grant him any credit for it. The superintendent of any turnpike road on which toll is charged, must cut down all such pests growing within the turnpike, and if he neglects to do so before September 1., the trustees shall cause the work to be done, and they have a right of action against the turnpike company for the amount paid for the labor, together with a penalty of 100 per cent. to be recovered before any justice of the township.

Various.

"DID NATURE MAKE A MISTAKE IN THIS ARRANGEMENT?"

HENRY STEWART.

Wastes of Nature; definition of Nature; enormous wastes of vegetable and animal life; races created to be the prey of others; wastes of the human race; wastes of worlds; Does Nature make mistakes? Is Nature another name for God? Are "wastes" of Nature mistakes only to our finite minds?

THE RURAL asks the above question in its editorial columns in regard to the valuable feeding qualities of the cactus of the West,—the "prickly pear" I presume is referred to—and its formidable spines by which its use—its only valuable property—is prevented. What a pertinent and far-reaching question this is! It has been occupying my mind for some time past, as I have been studying the various phenomena which may be aptly classed under the term "the wastes of Nature."

To consider this question will afford a vast amount of useful study and thought for every man, woman and child; for all are interested in these wastes, and the human mind is most powerfully attracted by the mystery resting at the bottom of it, which may be materialized to the mind in the question "What is Nature?" Nature may mean different things to different minds; but I think all may unite in accepting this view of it; viz.; it is that supreme power, law, force, or personality, as it may be to different persons, by which what we call natural processes, or the preservation and progressive condition of the Universe, and with it all that it contains, were originated and are continued. Assuming this grand power, against which every living thing is powerless, to be the controlling force for good or evil, we ask, is it good or evil; or both good and evil; and does it make mistakes, and waste its energies in useless or disastrous and sometimes cruel blunders? Those abundant beds of cactus which one sees all over the driest and most arid Western plains, are full of life-giving nutriment and water, and sufficient of themselves to nourish and sustain vast herds of cattle which may be perishing of starvation and thirst, were it not that Nature, which is supposed and believed to be omniscient, all-wise, and entirely good and beneficent, has adorned the plants with the cruel spines that effectually repel the eager animals from the stores of food and water contained in them.

During the last few weeks, a withering frost passed over a large part of the Southern country destroying every apple and peach blossom and fruit bud, and the young corn and wheat; six weeks of dry weather, excessive heat and drying winds have all but destroyed the grass; the quail and partridge nested and the young birds were nearly hatched when a cold, sweeping rain storm flooded the country and destroyed the broods. These are but minor instances. Millions of seeds are produced by plants of which but one in millions becomes effective. One race of animal life subsists only to be devoured by another, and even the human race is subjected to this prevailing—shall I say mistake? An account of the African slave trade recently published in one of the leading monthlies, gives an amazing picture of this seeming fruitless and destructive mistake of Nature and of its awful waste of human life. One single raid of the brutal, bloody savage Arab hordes upon the negro country depopulated a district as large as the whole of New England, and turned fertile fields and populous villages into a silent desert, with only its silence appealing to reason and human sympathy, by calling attention to the desolated fields, charred ruins, and bleaching bones, as the only residue left of what was previously the homes of two million human beings living in peace, comfort and happiness, all unsuspicious of danger until the night attack of the slave catchers and their murderous bullets and swords brought death and destruction. Of this population all were slain suddenly or perished in the most miserable manner during the march to the slave markets, except one-quarter of one per cent. of them; one young man, or girl, or useful woman or child only out of 400 souls surviving the horrid "mistake of Nature."

So the fruit grower kills myriads of insects, which, were they let alone, would reduce him to starvation, and on every hand we find destruction of life that has been produced at great cost of energy and natural force, through parasites of all kinds down to the infinitesimal microbes, incomprehensibly vast in number and effect, which produce fatal diseases and feed upon the life of both plants and animals. Everywhere we see the most lavish waste where we might be led to look for a wise economy of force or energy, and the mind's eye, looking through the glass of science towards the earth's inevitable ending, sees the final destruction of every living thing upon it, and a dead world, a ruin—such as is the moon—coldly, and we may think, uselessly "walking" along its endless path, giving useless brilliance to the cloudless nights of a useless satellite, and as far as we know, equally useless adjacent planets.

Has Nature made mistakes? Are all these instances, and numberless others to which the mind may turn, evidences of something wrong in the arrangement of the Universe? Are all these things that are apparent to the thoughtful mind, the origin of the belief, in the primitive man, of the existence of an Evil Spirit whose malevolence blasts the intended benevolent fruition of Nature, and turns what might have been good or useful to something injurious and worse than useless; a belief which has come down to us through unknown ages of transition as the idea of something evil which exists as a controlling force impossible to be resisted without supernatural help and which has taken the form of a Devil, to the human mind?

That there is a vast amount of—evil—as we term it; but let me say, of mistaken and misdirected force—in the Universe no one can deny or doubt. The very creeds of the orthodox churches have this idea embodied in their confessions of faith, but whether it is a mistake on the part of Nature (call this a Creator, a law, or a force, as men may; it differs not in the principle involved) or a well defined purpose of the Creator or the power which originated the supreme and resistless forces which control the whole Universe (either view is as grand and sublime and as truly religious as the other), we cannot now tell. Let us hope we may be able to do so in another and future life when such things may become clear to us and the true and high destiny of the human mind and intelligence may be reached by its full development. If it were otherwise, and the human soul were doomed to extinction as a dead planet or animal, then, indeed, we might fear that Nature had made a mistake in denying to mankind an intellectual development for which the human soul yearns, and for which it lives hopefully through a life fretted and filled with blasted hopes, disappointments, cruel mistakes, and sins and suffering the unerring punishment which so quickly follows these, and causes untellable sorrows and pangs. But Nature I think has not made this mistake, and perhaps the thought that it has made any blunder at all is a mistake of our own imperfect intelligence.

CATALOGUES, ETC., RECEIVED.

UTAH AS A STATE.—This is a copy of the report of the Committee on Territories to the House of Representatives. It presents, in a condensed form, the arguments for and against the admission of Utah. It looks as though the Committee tried to make a special plea for admission. In the matters of population, wealth, educational advantages, etc., etc., it is very likely that Utah is entitled to a place among the States. The existence of polygamy and the power and teachings of the Mormon Church on that subject are the great objections urged against admission. This Committee would evidently have the public believe that these objections are not so serious as is generally understood. The R. N.-Y. does not believe that the American people will agree with this view. It seems likely to the R. N.-Y. that with Utah maintaining a State government, the power of the Mormons for mischief would be greatly enlarged.

ENSILAGE AND SILOS.—E. W. Ross & Co., of Springfield, Ohio, have issued two very attractive volumes that farmers will want to read. One of these pamphlets treats of the famous Ross silage and fodder cutter. Our readers will remember that a good proportion of those who contributed to our short symposium on the cost of ensilage, are using the Ross cutter. An examination of this pamphlet shows very plainly why this cutter is popular. Every part of the machine is carefully illustrated and the reader is convinced that it is strong, durable and effective. We consider this circular a very effective advertisement because it so clearly points out what it aims to show. The other pamphlet is a compilation of letters and essays on the subject of ensilage. This system is quite young yet, and new developments are constantly being made. Even the man who thinks he knows all about it can learn something from this admirable volume.

THE WHITE MOUNTAIN FREEZER.—Circulars from the White Mountain Freezer Co., Nashua, N. H. We would like to have some one tell us why ice-cream should not be served in the farm house? Ice-cream, as we eat it, is a more healthful food than cake and does not cost much more either. By the use of the White Mountain freezer the labor of preparing it is reduced to a minimum. We would like to see one of these freezers in every good farm house in this country. They are designed for cold work, but they will be the means of wonderfully warming up the family happiness. Our readers will not be able to find any better freezer than this. You need one. Send for this circular and see if we are not right.

METAL RAILWAY TIES.—Bulletin No. 3, Forestry Division, United States Department of Agriculture. In this bulletin may be found some valuable information on the use of metal ties on railways as a substitute for wooden ties. It appears that 256 patents for such ties have already been taken out in this country. While American railroads have done little besides experiment with the metal ties, European railroads have quite generally adopted them. The first cost of the ties is considerably greater than of those made of wood, but they last longer, are safer and are lighter and more easily handled. From the statement made in this pamphlet, we should say that the timber demanded for railroad ties need never cut any serious figure in forestry matters.

SOME LATE WORDS ABOUT LOUISIANA.—This pamphlet is issued by T. W. Poole, Commissioner of Immigration of Louisiana. It is a special plea in favor of Louisiana as a home for Northern immigrants. It is a good thing to read before making an investigating trip to that State.

MASSACHUSETTS EXPERIMENT STATION.—Bulletin No. 34 discusses a variety of topics. Prof. Humphrey is endeavoring to throw some light upon potato scab. He sends a list of questions that farmers are requested to answer. These questions refer to different fertilizers, different methods of planting, etc., etc. The creamery record of the Station for 1887 and 1888 affords a basis for some interesting figures. A good many farmers are going into dairying because they believe that when butter is sold from the farm it takes less of the fertilizing elements than are taken in any other farm product. This seems to be a general belief among farmers. The figures given in this bulletin show how true this belief is. Here it is shown that in selling the cream from the farm but 3.05 per cent. of the total fertilizing value of the feed was sent away. If the butter were made at home this proportion would be even less. When whole milk is sent away from the farm, 20 per cent. of the fertilizing value of the feed goes with it.

CONSULAR REPORTS.—No. 102 contains a variety of interesting matter. The Congress of the Central American States is described. There is also quite an interesting account of the industries of the Argentine Republic—a country that is attracting world-wide attention now. Brazil is another country that is calling for immigrants. Rubber production on the lands along the Amazon offers a field for American energy—though we believe there is still ample space for this energy at home.

Miscellaneous Advertising.

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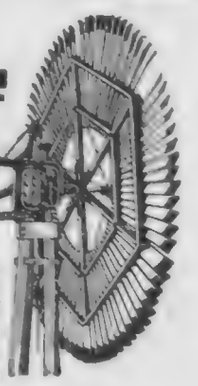
IDEAL



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THE most unpleasant constellation to see of a winter's night is the grate bare.—*Harper's Bazar.*

FISH are not weighed in their own scales, simply because fish-scales are not built that weigh.—*Puck.*

MINISTER: "Will you take this man to be your lawfully wedded husband?" Omaha belle: "If you please."—*Western Rural.*

THE poet who rhymes hail-storm with maelstrom will please consider himself "run through" with a blue pencil.—*Harper's Bazar.*

THE pretty young misses at church fairs are continually laying themselves liable to arrest on the charge of robbing the males.—*Rochester Express.*

A LITERAL TRANSLATION.—French-American (translating his Bible for an American friend): "The ghost is willing but the meat is weak."—*Life.*

VISITOR (to butler, who is showing him through the picture gallery of the old mansion): "That's a fine portrait. Is it an old master?" Butler: "No; that's the old missus."—*Boston Courier.*

YOUNG LADY (to music dealer): "I want 'Your Love.'" Young clerk: "Hem! Would like to accommodate you, but the fact is I promised it to another girl at a leap-year party."—*Arcola Record.*

CUSTOMER (to bird fancier): "My wife wants a parrot. What's the lowest you will take for that bird?" Bird fancier: "Fifty dollars, sir, is rock bottom." Parrot: "Come off, you've tried to sell me for 20."—*Life.*

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WOMAN (to tramp): "And if I give you a nice plate of hash, you promise to saw some wood?" Tramp: "Yes, 'm." Woman (doubtfully): "I dont know whether I can put confidence in you or not." Tramp (reproachfully): "You ought to, ma'am. I have confidence enough in you to eat the hash."—*Mirror and Farmer.*

"So your name is Dorothy! Well, Miss Dorothy, do you know that you are the perfect image of your papa?"

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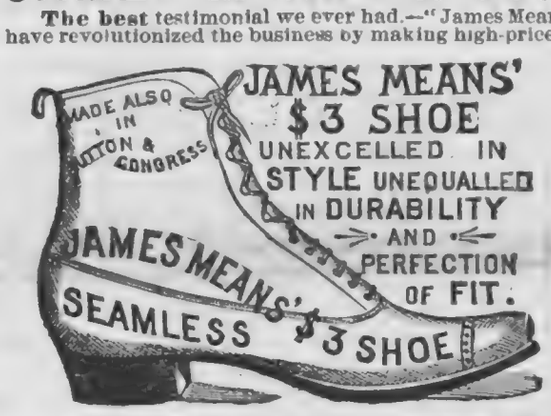

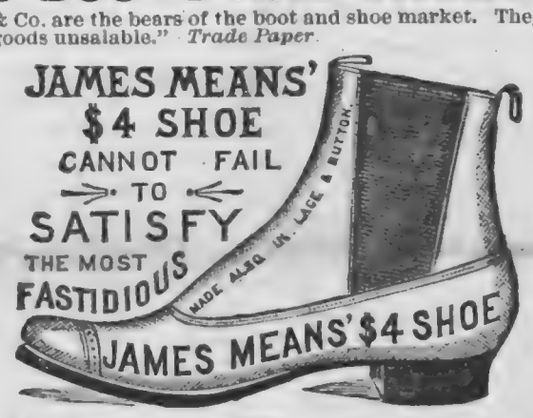

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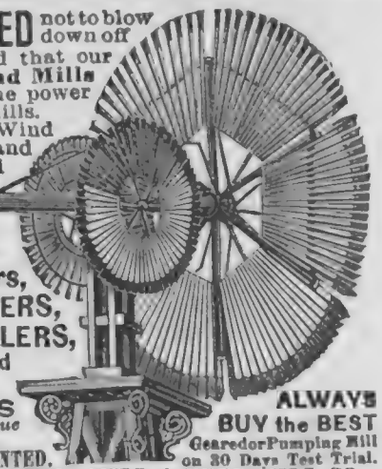

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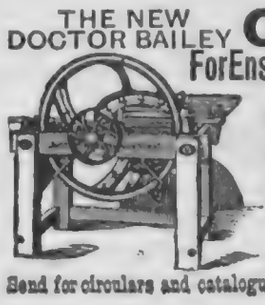

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII. NO. 2058. NEW YORK, JULY 6, 1889. PRICE FIVE CENTS, $2.00 PER YEAR.

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Farm Topics.

NEW JERSEY FARMS THAT PAY.

EDITORIAL CORRESPONDENCE.

NO. I.

REFERENCE was made two weeks ago to a visit recently made to what the R. N.-Y. considers an ideal farming community. It is proposed in this and subsequent papers to give a record of this visit with such reflections upon the wisdom of the agricultural methods employed there, as were suggested to the mind of the writer. The point chosen for observation was Cranbury, Middlesex County. This place is situated some 50 miles from New York City. The railroad facilities are such that farmers near Cranbury are unable to raise and ship "market truck" successfully. The same may be said of milk. There are too many changes of cars to be made before the milk can be placed in New York. Strawberries are raised to some extent and efforts are being made to establish an interest in peach culture; but the main business of the community is the production of potatoes, hay, corn and wheat—crops that theoretical farmers would be least likely to recommend for a section within 50 miles of New York city. It was mainly because the farm practices of the Cranbury farmers seemed to throw the recognized rules of agricultural economy out of joint that the R. N.-Y. was anxious to see how such farming paid.

Here are two statements made in the R. N.-Y. office within the past month.

1. "Within 40 years the farming lands of New England, New Jersey and Eastern New York will be reduced to the condition of a desert. The land west of the Alleghanies can produce more food than the people of the country can consume and railroad transportation is being so perfected that the Western farmer can undersell the world in any market. Whenever a section of country begins to use large quantities of chemical fertilizers, its agriculture is surely doomed—just as the man who begins the continued use of stimulants must bid farewell to health. The future of Eastern agriculture is easy to predict. The majority of the manufacturing enterprises must, sooner or later, go to the places where their raw materials are produced. The great seaports will, of course, remain. The country for a few miles around them will support thousands of foreign gardeners and fruit men, but back of this strip, lightning trains from the West will run through deserted farming sections given up to wilderness and desolation." This dismal prophecy was made by a Western farmer who evidently meant what he said.

2. "In 40 years from this time, the rich lands of the country will be at the East, while the poor lands will be at the West. Every principle that is supplied to the soil in stable manure, can be supplied by a system of rotation, in which chemical fertilizers form the basis of fertility. The crops will grow larger and larger, the soil richer and richer, and the labor less and less exacting. The Western farmer of the future will have to perform all the drudgery of dairying and stock keeping. The Eastern farmer need do but little of this work, but may substitute for stable manure the easily applied chemicals." This bright picture was drawn by a farmer who sells fertilizers, and uses his crops and the condition of his soil as the best advertisement he can find.

Which is right? The conservative farmers will say, "Neither." Which is nearer right? Perhaps the condition of the soil and the crops at Cranbury may help to determine. The farms about Cranbury are mainly given up to a five-course rotation as follows:

1. Potatoes on corn ground. The land is plowed in the spring and a liberal supply of complete potato fertilizer is applied. Farmers usually begin with a small amount of fertilizer, but as its effects become more and more apparent the amount is increased until from 1,500 to 2,000 pounds per acre are used. 2. The potatoes are dug in time and wheat is sown on the potato land with a seeding of Timothy. In the spring clover seed is sown and in some cases a top-dressing of fertilizer—200 or 300 pounds per acre—is applied. 3. The ground after wheat, stands in grass two years. 4. After the last mowing in July, all the stable manure on the farm is spread on the sod. It remains there until spring when it is plowed under and the ground is planted to corn. The next year the corn field is planted to potatoes with the fertilizer and so the rotation continues.

This, in a nutshell, is the system of farming that is making these farmers comfortably well off. It is a system that is based directly on fertilizers. Ask what sort of a farmer A, B or C may be and you will be told that he uses 700 pounds, 1,000 pounds or a ton, as the case may be.

In Iowa a man is a 500-acre farmer, or a 1,000-acre farmer. In Michigan the farmer may be graded by the number of sheep or cattle he keeps; in Ohio by the number of acres of good wheat; on Long Island by the number of cauliflowers or the size of the asparagus plantation; in Vermont by the number of maple trees tapped annually. Cranbury farmers seem to be graded by the number of pounds of fertilizer they use on an acre of potatoes. The farmers are full of fertilizer talk. It is impossible to start a conversation on any subject without being drawn into the great topic. There is good reason for this when we remember that each of these farmers pays all the way from $400 to $1,000 in cash each year for fertilizers.

Perhaps the best way to give a fair idea of the way these farmers look at agriculture is to report the conversation the R. N.-Y. held with them.

R. N.-Y. "How long is it since you began the use of chemical fertilizers?"

FARMER L. "I have used them in small quantities for years. For 14 years now I have been gradually increasing the amount used per acre. I now use about 1,800 pounds per acre, but I do not think the limit of profit will be reached until I reach 2,200 pounds."

R. N.-Y.—"What induced you to put on your first heavy dressing?"

FARMER L.—"I visited a farmer on Long Island, who had used over a ton on potatoes. I had never before seen such grass as he had growing. He seemed like a close man, too, and I thought it it would pay him to use a ton it would pay me to try 1,500 pounds. I tried it on the potatoes and sowed wheat and Timothy as usual. I could not see a great deal of benefit on the potatoes and not quite enough benefit on the wheat to pay; but when the grass came there was no question about it. I never cut such a crop before."

R. N.-Y.—"How large is your farm?"

FARMER L.—"Just 100 acres."

R. N.-Y.—"How much stock do you keep?"

FARMER L.—"Three cows and my working teams."

HEAD OF A CALF. From Nature. Fig. 164.

R. N.-Y.—"How much hay did you sell last year?"

FARMER L.—"Ninety tons, besides what I fed to my stock."

R. N.-Y.—"Will you keep more stock in winter?"

FARMER L.—"No. It does not pay me. I used to feed steers, but since the dressed beef trade has developed, such feeding does not pay. I do not like sheep. The only use I have for live stock is to turn my stalks into manure. The disposal of these stalks is the most serious problem we have. We can sell our grain, but the stalks bother us."

R. N.-Y.—"Why not use rye in the place of wheat for seeding? The extra value of the straw would make the crop more profitable."

FARMER L.—"Hay is our great crop. Anything that interferes with that we wish to avoid. Our experience with rye is that it is not so good as wheat for seeding. If we put on all the fertilizer we want for the grass the rye is quite sure to lodge badly. With wheat we are reasonably safe to put on all the fertilizer we want. When we put fertilizer on our potatoes, we look forward two years to the grass crop. That is why we put on so much. For years and years we thought with other farmers that fertilizers were so soluble that it was only safe to put on just enough for one crop. That is all nonense. On ordinarily level ground we find fertilizers as safe in the ground as out of it, safer too with wheat and grass coming along to make use of them. The more fertilizers I use, the more money I make."

Dairy Husbandry.

IS CREAM CREAM?

EVIDENTLY NOT!

WIDE DIFFERENCES SHOWN.

AN INTERESTING DAIRY SYMPOSIUM.

Answers by Dr. Collier, Prof. Babcock, Dr. Hoskins, Dr. Henry Stewart and T. D. Curtis.

THE R. N.-Y. asked the above question a few weeks ago. The discussion was started by the following question. The answers which accompany it seem to settle the matter conclusively:

T. E. B., Schuylerville, N. Y.—Will a certain amount of cream make the same amount of butter that another exactly similar amount will make, provided they are raised under the same conditions—in a Cooley creamer, for instance—but taken from the milk of different cows of different breeds? Co-operative dairying in which the milk of all is received as though it were of equal value is certainly unjust; is not the system where all sorts of cream are received as of equal value, bulk for bulk, more or less so?

FROM DR. PETER COLLIER.

I think cream varies quite as much as does milk, and, further, I believe that, if two samples of milk from different cows of different breeds shall be set under conditions absolutely the same, even granting that chemical analysis shall prove the composition of the two samples of milk to be the same, or even the composition of the samples of cream which may be secured from them—I believe, I repeat, that the difference which we know to exist in the mechanical condition (since milk is practically an emulsion of fats in a solution of the caseine and the other soluble constituents) will be sufficient to make an appreciable difference in the amount of butter which may be obtained by churning, especially if this operation is conducted in the same way with both samples of cream.

I think it is safe to say that, despite the immense importance of the dairy industry, the art of butter making—the raising, ripening and churning of the cream, and the working of the butter—is at present far in advance of the science, and that hundreds of dairymaids throughout the country are able to make first-rate butter, who cannot tell lactic acid from quartz, and are in profound ignorance of the existence of soluble fats as well as of every scientific principle involved in the art which they have brought to such success. This ought not to be. The rule of thumb, with good judgment, suffices for the one out of the hundred, but for the 99 others there is no hope other than the clearly ascertained principles of science by which their work may be guided.

Readers of the RURAL are, of course, aware that it is for the solution of such questions as this correspondent asks, and also of other questions of the same nature, that this experiment station has recently been securing representative animals of the several leading dairy breeds, and we at present have at the station six Holstein-Friesians, five Ayrshires, four American-Holderness, four Guernseys, and expect to add to these Jerseys and Shorthorns, and possibly representatives of other breeds.

We hope and expect, as the result of our investigations, to be able to determine the relative value of these several breeds for the production of milk, butter, cheese and beef; as also the results produced by different food rations, and, in short, the many practical and scientific questions which at present are brought up whenever dairy practice is under discussion.

N. Y. Agricultural Experiment Station.

FROM DR. T. H. HOSKINS.

No; the same amount of cream by weight or measure, will not make the same weight or grade of butter. Some cream will not make more than half as much butter from an equal measure as other cream. The business is all guess-work when done in this way, and very decidedly against those farmers who have the best butter cows, or are the best feeders. The "raising under the same conditions" will not remedy the matter at all. In a neighborhood of farmers where cows and their owners are severally about all alike, the co-operative plan may not work much injustice; but it becomes a fatal enemy to improvement, and butter made in such factories is necessarily of an inferior grade, no matter how skillful the operator of the creamery may be. "Cream is cream" just as water is water, or meat is meat, or bread is bread; but cream is not sufficiently alike from different herds and under different keeping to be paid for at one price.

Orleans County, Vermont.

FROM PROF. S. M BABCOCK.

The composition of cream depends nearly as much upon the physical properties of the milk from which it is derived as upon the conditions under which it is separated. Variations in the specific gravity and in the viscosity of the milk serum have a decided influence upon the quality of the cream. A high specific gravity tends to crowd the fat globules closer together, and gives a cream rich in fat. A very viscous serum prevents a near approach of the fat globules to each other, and gives a thick cream that is comparatively poor in fat. As both the specific gravity and the viscosity of the milk serum vary with different cows, and even with the same cows at different times, we would expect considerable differences in cream from different herds. Some idea of how great this difference may be is shown by analyses of cream made at this station during the past year. The milk was all set in Cooley cans, ice being used in all cases, so that the conditions of creaming were nearly uniform. A number of analyses of cream, taken at random from our books, show the following per cents. of fat: No. 1, 20.80; No. 2, 19.40; No. 3, 24.10; No. 4, 22.42; No. 5, 14-10; No. 6, 16.90; No. 7, 18.14; No. 8, 17.90; No. 9, 24.60; No. 10, 15.87. We have in these creams a variation from 14.10 per cent. to 24.60 per cent of fat, and their value for butter production would be nearly proportional to these figures, so that No. 9 would be worth nearly 75 per cent. more than No 5. I believe that this variation is no greater than would be found in creams received at a factory from different patrons. In other words, I believe that just as much injustice may be done by dividing the receipts of the factory according to the amount of cream supplied, as by giving equal values to equal weights of milk. No system of division is just which does not provide some means for determining the butter value of the milk or cream.

Wisconsin Experiment Station.

FROM DR. HENRY STEWART.

It seems as if through all kinds of human industry a general average must be struck and one "must bear another's burdens." It is at present certainly so in all co-operative enterprises; for if not, why should co-operation be desirable or effective for the general good? Human industry can never be more perfect than the men employed in it are, and if some are incompetent, or weak, or helpless, the more able are forced to assist them by the inevitable pressure and influence of circumstances. Hence in all co-operative enterprises, such, for instance, as a creamery or cheese factory, there is a constant effort to equalize the burdens and the benefits, but it is clear that this process of equalization has not yet been perfected.

Then we may inquire, 1, how and to what extent inequalites exist, and, 2, in what manner they may be removed or adjusted. The former question is more easily answered than the latter; but yet in considering it carefully and intelligently some clue may be given to a solution of the latter.

Will a certain quantity of cream from one cow make the same amount of butter that the same quantity of cream from another cow will, under similar conditions? This question is to be considered from a view of different cows of the same breed, and cows of different breeds. Hence it relates to cows and to breeds.

No doubt cows vary very much in character as to quality of milk, which is the only point that need be considered, quantity not being an element in the question. Every man or woman who has kept and milked any two cows knows this to be a fact. It may be taken as indisputable. But is this difference of sufficient importance to amount to an injury or injustice to some of the patrons of a creamery, and to a gratuitous advantage to others? I think it is unquestionably. My own experience during several years, carefully noted and recorded, has proved to me that the actual value of cream for butter product varies considerably in cows of the same breed; and also that the cream from one cow, churned alone, will make less butter than the same cream will when churned with that of other cows; the difference between the two depending not only on the actual quantity of butter in the cream, but on the condition of the fat by which it is more perfectly gathered from the cream when helped by other cream. This difference depends upon the size of the fat globules, as well as their density and hardness. Some cream contains globules of much smaller size than those in other cream, and in the churning the smaller globules become attached to the large ones quite easily, and do not escape, ungathered, in the butter-milk. These smaller globules escape when the cream of the particular cow is churned alone. I have found such a difference in this respect as to amount to a loss in keeping the cow, so large a portion of the butter escaped from the churn in the butter-milk. The cream of some cows may be churned in five minutes. This is because the globules are large and the fat is soft and adherent; that of other cows will require 30 minutes or more, the difference being due to the smallness and hardness of the fat globules. But if these different creams are mixed, the time of churning may be 15 or 20 minutes, or even less. I have had butter fully gathered in eight minutes from mixed cream from which, when churned separately, the butter came in various times, from five to 30 minutes. And this was from cows of the same breed, Jerseys; but they were of different ages, the quick-churning cream being from a young cow, and the slow cream from an old one.

These facts seem to show that an important advantage is gained by the creamery system, that in no way whatever affects the interests of those who do not gain anything, taking the ordinary method of separate churning as a test of the value of the cream. The method of Prof. Short, which secures all the fat from the milk by a chemical test, would do justice to many cows that would be condemned by the churn test. But it cannot be doubted that the cream of different cows does vary considerably in its actual value for butter product. Cream has been found to contain, in different samples raised under the same process of setting, from 50 to 72 per cent. of water; from 19 to 43 per cent. of fat; and from 8.80 to 14.75 per cent. in caseine, where the quantity of fat was the same in two samples. These cases were of cows of the same breed. I am well satisfied that these variations may exist in cream without any apparent visible differences, and chemical examination alone can detect them.

As to breeds, there is still greater certainty in respect to differences in value of cream for butter. I well remember a test made several years ago in a dairy of pure Ayrshires and Jerseys, which showed that while the cream gauge indicated 33 per cent. of cream in the Ayrshire's milk and only 25 per cent. in that of the Jersey, the latter cream made one-fourth more butter, for the same quantity. It is well known that Jersey cream is made up of larger globules than Ayrshire cream is, and consequently the latter cream would necessarily contain more milk, hence be less rich in fat. This peculiarity of the Jersey is shared by the Guernsey, and by some of the best native cows which I have tested in this respect; while that by the Ayrshire is shared with the Devon, Dutch and Short-horn. No doubt there are cows of any of these breeds which are exceptional, but the influence of breed upon butter products from equal quantities of cream is so distinct that I am sure that if one dairyman were to use a good pure-bred Jersey or Guernsey bull in his herd and rear the calves to cows, and used the grades in his dairy and sold his cream to a creamery at so much per space, and another did the same with a good bull of any other breed, the former would contribute largely to the pocket and prosperity of the latter in every case. Differences of individual cows are equalized in a herd of the same breeding; but in herds of different breeds, the natural inequality must always exist.

Consequently the system of co-operative butter making, in which cream is bought by measures or spaces, cannot fail to be unjust to the contributors who have better cows of any breed, or cows of a better breed than the others. And the only remedy for this inequality is a perfect test of the actual quality of the cream of each herd to fix the value, which may remain constant under equal systems of feeding, and of setting the milk for cream.

Macon County, N. C.

FROM T. D. CURTIS.

The question is asked: "Co-operative dairying, where milk is received as though of equal value, is certainly unjust. Is not the system where cream is received by gauge more or less so?" I answer, it certainly is, and efforts have been made for years to get a test that will give the true butter-making value of cream. The first was the Schock & Bolander churn. Then followed the oil-test. Later we have Prof. Short's test by first saponifying the cream. But the last two, while giving the amount of oil or fat in the cream, do not show how much of it is available as butter by churning; hence, I consider the churn-test the most reliable. When it was first discovered that "cream is not cream" of the same value in all cases, a noted test was made at West Liberty, Iowa, where the cream of each patron on a large route—some 70 in number, if I remember rightly—was tested by taking a gauge that it had been assumed would make a pound of butter, and churning it in a small jar. The result showed that while the gauge of some samples of cream made only eight ounces of butter, that of others made 24 ounces; but the average was 16 ounces. This made the creamery all square, but robbed the 24-ounce man of 50 per cent. of his dues to make up for the lack in the eight-ounce man's cream, which had 100 per cent. added to its value! This difference in the butter value of cream is now so well understood in the West that no creamery, that I am aware of, is run without applying some test of value for every man's cream.

There are several causes for the difference in value of the cream of different cows and different herds. The cream of some cows is naturally richer than that of others. Breed, feed, care and shelter or no shelter, have their influences. A sudden change in the weather, from cold to hot, or hot to cold, varies the quality. Let a cold, wet spell strike a herd of cows running in the pasture, and they will not only shrink in their mess but give milk of inferior quality, the effect extending to the cream. The cream of the milk of the same cow varies from day to day, without any apparent reason. A cow that comes out poor in the spring gives poorer milk and cream than she would if she came out in good condition. A poor, half-starved herd gives poor cream, that turns out poor white butter—butter having less nutritive qualities than butter made from the cream of well-fed cows. Hence the wrong and injustice of artificially coloring butter, as it enables the dairyman who has a herd of poor, half-starved cows to get just as much for his butter as is paid for that of a much higher nutritive quality. As a rule—with perhaps some exceptions, but I know of none—the well-fed cow, which gives rich cream, that makes highly nutritive butter, also gives it a nice if not a high natural color. This fact is sufficient argument against artificial coloring. The natural color of butter largely indicates its quality, all other conditions being the same. But while we are in a measure approximating justice in the creamery or butter factory, we are going on in the same old way in the cheese factory.

Some advocate the oil-test. But while this may closely decide the amount of fat in the milk, it does not show its real value for cheese-making, since there is more variation in the per cent. of caseine than of fat, and a low per cent. of fat may accompany a high per cent. of caseous matter. There is still a lack of equity in all forms of associated dairying. This points to the ultimate carrying on of all dairying in large, well-conducted private

dairies. I may add that the size of the fat globule has much to do with the butter value of cream. The larger the fat globules, and the more of them, the higher the butter value of the cream; while the fat globules may be so small that few of them can be churned in-

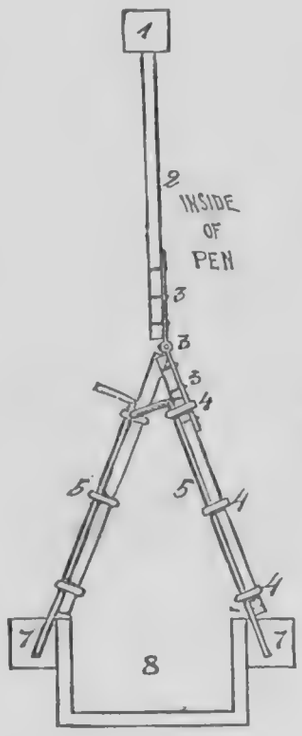


Fig. 165.

to butter, and hence are run off in the buttermilk. There are instances on record where no butter could be churned from cream or milk which analyses showed to be rich in fat. It seems strange that it takes so long for the general public to become familiar with well-known facts having a direct pecuniary bearing on the several different callings. But I believe the dairymen are the slowest of all.

WHAT TEN WOMEN DID.

It was at the meeting of the Ladies' Aid Society for April 1888. As is our custom, we lingered to talk a little while after the meeting had adjourned. No general subject had been started, when our president said:

"One thing, ladies: Please don't let us discuss the blizzard or the might-have-been of the pastor's last sermon!"

"Suggest something fresh, wise, and original!" said Sister Soule, in her sarcastic way.

"All right," returned Sister Ray. "We have just the right time to talk about the milk problem, which is agitating all the men-folks."

"If we could only think up a remedy!" I said, and three or four echoed the remark.

"I can tell you my idea," said Mrs. Ray.

"But excuse me," Mrs. Orr said. "I do not understand what you are talking about," (she had but just removed to town.)

"Why, it's the milk," said half a dozen at once. "You see we've all been sending to the condensing factory, and getting two and three-quarters cents the year round. But they shut down on April 2nd., and now there is the general query: 'What shall we do with our milk?'"

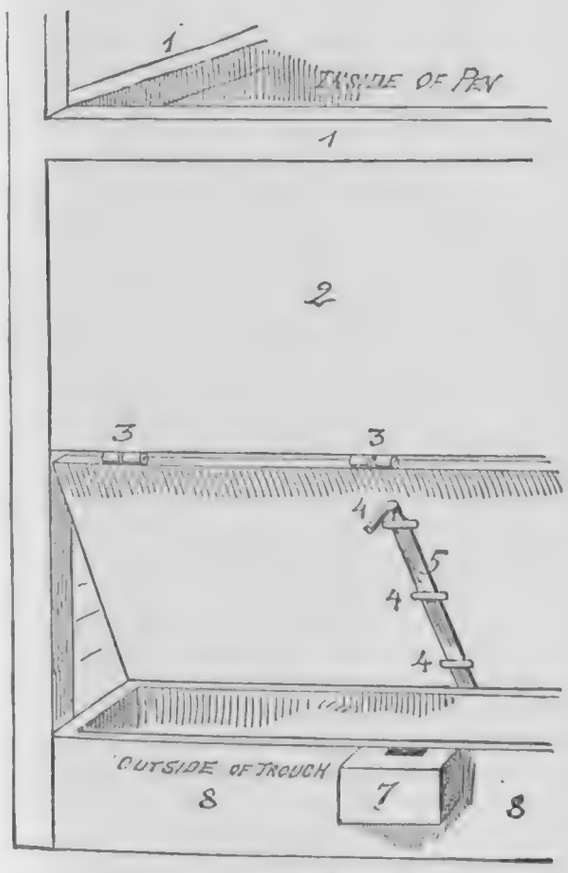


Fig. 166.

"Send it to New York, and get two cents; to the cheese factory, and get 2 1-10th cents; to the whole-milk factory, and get still less?" rattled Sister Soule.

"Yes, that's just it!" we all said. "It is impossible to hit upon anything to take the place of the condensing factory!"

"Unless folks start a co-operative creamery," said Mrs. Edson.

"Which they will not!" said the president. "It is *the* thing, but it won't go."

"Unless we make it," said Sister Ray.

"How?" asked Gran'ma Esty." Those that know say we can't start one, ef fur no other reasin, cos it wouldn't be nowise pos'ble to git a buildin' up in time."

Mrs. Ray smiled.

"See here," she said. "Of the 28 dairies on this side of the creek that furnished to the condensers, 13 can be controlled by women, and eight or 10 of those women are here today. Now, can't we organize?"

"How?" I asked.

"Well," she said, "buy the outfit and—"

"Fit out what?" asked Mrs. Soule.

"The building is ready," she said. "That is our new horse-barn. John will not use it till winter, if I say so, having the old barn. The basement under the carriage-room is all bricked, and the ice-house at one end is full. We can fit it up nicely for a creamery."

"At what cost?" some one asked.

"For $100 to $150," she said. "Here are the items:—One 150-gallon cream-vat is $60. A No. 6 Davis swing churn is $18. A No. 3 Eureka worker is $10. A Nesbitt printer is $5. That is $93, and all else put together will not make it exceed $150, including the minor fixings, drains, and carpentry."

"Well!" was the general exclamation. And it was well. In an hour we had organized a Ladies' Creamery Association, capital $500, divided into 50 equal shares. Three-fifths were "signed" on the spot, and the remainder in four days, and all by women, too.

John Ray's new barn was "just the thing." Built on a side-hill, it had a basement 30x48 feet, which was originally intended for a pig-pen. This was divided into work-room, cream-room and storage-room—the ice-house adjoining, and no boiler-room provided, as we decided to "run it by hand." The outfit was put in, and all in order, for $132.65, each patroness buying her own Cooley creamer. The building was rent-free; the drainage was put in free, and we agreed among us to take turns butter-making and cream-collecting. "We" were ten women, all "good butter-makers," and representing a total of 118 cows. It is but fair to say that the men let us have our way (though they laughed some), and that we got along without their help altogether, except that we had to have the ice-box filled for us, and the milking done by men. All of the rest we did ourselves, assisted by the dog of one of the patronesses, which was employed to churn for us. A as butter-maker, and B as cream-gatherer and assistant, would take charge one week (beginning May 5), then C and D would take charge a week, and so on around. All had a voice in things; but Mrs. Ray was president, I was secretary and sales-agent, and Mrs. Fox was secretary. The 10 "directed" as one. Everything was otherwise conducted as in any co-operative Cooley Creamery.

We discontinued operations early in November. Now I might proceed to tell how profitable it was—for it was so—if it were not for one thing, and that was that we all agreed "neither to boast nor whine, whatever the outcome might be." But it *paid*. (The commission merchants did not, however, until I had a lawyer's help.) Last March, on the occasion of our annual meeting, the men came in and proposed a "General Creamery." Let me say, with all candor, that we graciously admitted them, being satisfied with having shown them that with small capital and lots of pluck, 10 women can settle the "milk problem." It is not my purpose to write of the present association, their organization, new factory, etc. We made it possible: that is all. One word to farmers' wives: If there is no creamery in your town, believe the general opinion that it pays, and instead of waiting for the men, *go ahead!* MRS. L. C. M.

Westfield, N. J.

Entomological.

THE WIRE-WORM NUISANCE.

READERS of the R. N.-Y. are requested to pass along several rows of their potatoes and see if here and there stems with curly or wilted leaves be not found. If so, let them remove the soil from each stem near the surface and two inches in depth. If the leaves are merely curled, it will be found that a wire-worm (millipede) has eaten the stem so as nearly to sever it, or that it has bored into the stems in which case the grub may be found within the stem an inch or so above or below the orifice. Large, strong stems may be eaten nearly in two, and yet present a green appearance. The curl in the leaf is the first evidence that the stem is so nearly severed that it can no longer convey the required amount of sap to the leaves and stem above. The stem often begins to rot after the "wire-worm" has attacked it, in which case the vine falls over and dies. For the past two weeks the writer has examined many plants thus injured, not only at the Rural Grounds, but upon neighboring farms, and there is little doubt that it is these many-legged insects (Iulus) which are the cause, though a number of farmers ascribed it to "blight" or the excessively wet weather that has up to this time prevailed. In one patch of potatoes, 12 in a row of 66 plants showed either the curly or wilted leaf, while two entire plants had fallen over, the stems having rotted apart. The illustrations, Fig. 167, will show the reader one of these stems and the character of the injury sustained, while Fig. 168 shows the appearance of the stem just below the ground.

We have found not alone the hard "wire-worm" which seems to be made of hard rings closely joined together and which curls up like a spiral wire as soon as touched, but also the softer, more active grub, at work, both on the outside of the stem and on the inside. As many as five of various sizes, from a quarter-of-an-inch long to the mature grub have been found in one stem.

The R. N.-Y. would like to learn through its readers if these larvæ are at work else where upon the stems of potato vines, or if, owing to local causes, their depredations are confined to a limited a rea.

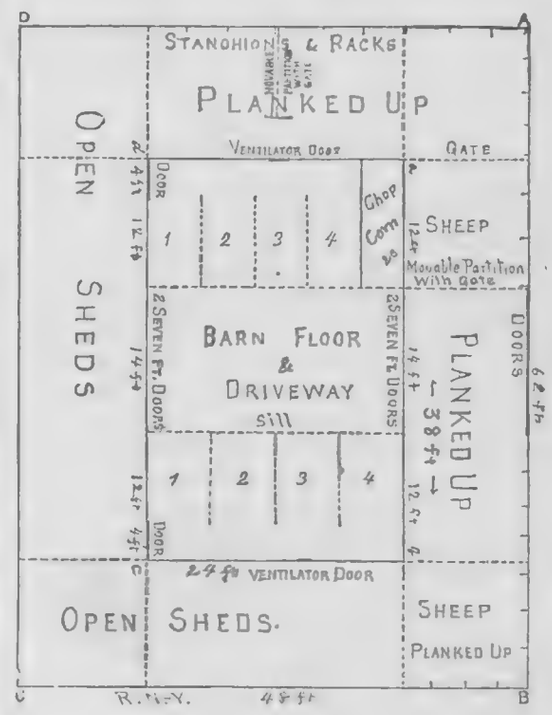


Fig. 169.

The entomological name of the wire-worm that coils up upon being touched is Julus Canadensis. That of the other is probably Scolopocryptops sexspinosa.

WORK OF THE CUT-WORM ON POTATO VINES Fig. 167.

The Swineherd.

HOG TROUGH DEVICE.

THE device shown at Figures 165 and 166 may be an old thing to many of our readers, yet we are led to print it from seeing the numbers of hog pens that are without any handy means of pouring food into the trough. Figure 165 shows a side view of the hanging door, while Fgure 166 shows a front view. The pictures show the working of the device without much explanation. No. 1 is a joist forming the upper edge of the pen; 2 is a boarded space; 3 are hinges on which the door swings; 5 is an iron rod; 8 is the trough and 7 is a slot cut in a block. To feed or to clean out the trough, the door is swung back, and the iron rod 5, is pushed down into the slot 7. This keeps the hogs away from the trough until the feeder is ready for them, when the door is swung back and the iron rod pushed down into the slot at the front. This is a great deal better than trying to pour the feed over the side of the pen.

Architecture.

A CONVENIENT VIRGINIA BARN.

WHEN I moved to this farm there was no barn on it. As I was a young man, and just

Fig. 168.

beginning the business of farming, every one had something to say about what kind of a barn I ought to build. I was somewhat like the Dutchman who invited all his neighbors to a big dinner, after which they were to tell him where to "set his barn." After dinner each neighbor had a different place and plan

whereupon the Dutchman said: "Now dake yoursells home. I sets de parn shust vare I please." So I set to work to build a barn of suitable size and of convenient arrangement, keeping in view both the size of the farm, the amount of farming I proposed to do, and also, the latitude of the country where the farm is located. Of course, I especially make a note of these two facts for the benefit of other young farmers who may begin operations on a run-down farm—it is not wise to build too large a barn on a small farm, nor to double-board, felt-line, and "dig out in a hill" a barn for the ordinarily mild climate in this section of Virginia. Colts, cattle and sheep do very well in this climate running in the fields all the winter, with the exception of periods of storms, winds and sleets, which seldom last more than 24 hours, and in most winters we rarely have to feed much before Christmas. Taking into consideration these facts, and others which I may at some time refer to, I hit upon the following barn plan. I will give exactly as I built from it, pointing out my mistakes, so that other young farmers may not fall into the errors of my way, should any one ever decide to adopt the plan shown at Figure 169.

The main building is 24x38 feet with 15-foot posts, (the posts ought to have been 20 feet) with a 12-foot lean-to all around. The ground-plan is drawn on the scale of one-eighth of an inch to the foot. The capacity of this barn is eight stalls for horses, four of them are roomy for harnessing work horses, and four smaller for horses, or colts, that are not worked. The sheds which are planked "up or down" on the north or west sides, will hold 50 calves and 100 sheep. The cows find ample shelter and protection under the open sheds on the south side and east end. The closed sheds are furnished with stanchions, along the outer walls, also with gates for partitioning them off. The loft is all one open area, extending over the main building and sheds, and is closely laid with straight-edged planks. The design of the ground-plan and loft, will be better understood from the following diagram. The joists over the stalls are seven feet in the clear; the joists over the shed six feet in the clear, at the outer end. The loft of the barn floor is closely laid with planks, with the exception of a six-foot opening through which the hay is to be taken up. The hay loft will hold 102 loads of clover hay. The hay for the horses and stock in the barn-yard is all thrown down on the barn-floor, thus saving waste; the hay for the stock in the closed shed is thrown down through a 2-foot opening left all around the outer edge of the loft right over the stanchions and rack. The barn floor is fully large enough to contain bedding for the horses, or to hold lambing ewes on sleety nights. It will be seen that the fighting or master calves can be stanchioned, and the others left free, so that nearly twice the number can be housed in the same space. There is a drop of one or two feet where the lean-to joins the main building. This is a comfortable and convenient barn, I think, for a farm where 100 acres are annually cultivated. Any mechanic can readily make out a bill for the lumber. G. C.

Montgomery County, Va.

Educational.

"WHAT ARE AGRICULTURAL COLLEGES GOOD FOR?"

NO. II.

PRESIDENT W. I. CHAMBERLAIN.

In my first article on this subject I said that Prof. Porter seemed to me to write without sufficient knowledge, or at least recognition, of the great difficulties which our agricultural colleges have to overcome. Let me mention a few of these.

First comes the reluctance of farmers' sons to study agriculture and of their fathers to have them do so. As President of a college that has 300 students in its four classes, I have a pretty good chance to observe. Except the engineers, all male students are required to take the equivalent of three lectures or recitations per week, the first two years of the course, in agriculture, including horticulture and stock-breeding. I am besieged with requests to excuse students from these studies and always refuse. I once nearly lost the good-will of a prominent trustee, *a large farmer*, by refusing to excuse his son from the class in stock-breeding. He didn't like the book, written by one of our foremost live-stock writers. He didn't like the teacher, one of our own graduates, a man of much experience in fine stock-breeding. He said his son could study it as well at home, where the chief business was buying, feeding and handling steers. He wanted him to have Algebra, Geometry, Rhetoric, History, Latin and such like studies. I told him that, if I excused the son of the Chairman of the Trustees, (as he was then) I should establish a precedent that I must follow for every student that asked, and that would be a practical abandonment of agricultural instruction, the very thing the college was endowed to give. This is one of many cases. The very farmers who shout that we are not agricultural enough, send their sons t classical colleges, or if they send them here demand that they be excused from what we require of all in agriculture, horticulture and stock-breeding. Even among the pure and applied sciences those that squint most sharply towards agriculture, like Entomology, Structural and Pathological Botany, Comparative Anatomy, etc., seem less popular with farmers' sons than Calculus, Physics, Astronomy, Psychology, Political Science and the like. Quite a number of the present Senior Class have now a petition before the Faculty to take German next term instead of lectures on Veterinary Medicine and Surgery, under one of the keenest, most interesting veterinary surgeons in the entire West. We have the farmers and their sons *to convert*. Even in the Michigan Agricultural College, for years the main trouble has been with the agricultural studies proper, and the field and garden practice.

Now I mention these facts, not to urge that we should give up agricultural instruction, as Prof. Porter advises when he says: "If you cannot learn agriculture at a college, there are *other things you can learn* which will be *even more important*." No, that would be misuse of trust funds. But I do mention them to show that Prof. Porter and others do not recognize the odds against which we work, and to show that it is *not* true that "all who come here intend to be farmers," and that the "agricultural college takes them away from the farm." The trouble lies further back, in the heresy, preached by Prof. Porter and believed by most farmers, that the thorough scientific education given in an agricultural college will not make a man a better farmer if he follows farming with zest; that "agricultural papers and reports of experiment stations tell farmers all they need to know about theoretical and scientific matters appertaining to agriculture." Acting on this heresy, the boy that *is* to be a farmer is kept at home and the boy that *isn't* to be a farmer is sent to an agricultural college to fit him to be something else! And acting on this idea, he and his father often insist that, so far as may be, he omit all studies that smack too much of the farm.

Another thing closely related: Boys come from the farm to college to learn what they do not already know. They think they know all about farming, and hence don't want to learn. Then, too, the deeds of deftness on the farm are going out as machinery comes in. It takes as much knack and training to mow a smooth swath, to cradle grain, rake and bind, shear sheep and chop wood, rapidly and skillfully, as it does to lay brick, case doors, plaster, paint or hang wall paper well, or run an engine-lathe or locomotive. Scythe-mowing is a lost art on the wide prairies. We can't find a student who can do deftly these things of hand-knack, and if we should require here the drill needed to give deftness in these old hand processes, the students would leave college. They come to study science, underlying principles, as a rule, not farm processes. These so far as needed and as adapted to present tools and machinery, they get or should get at home. The difference is not, as Prof. Porter says, that "everything that can be called a profession or trade depends on scientific attainment or acquired skill; an apprenticeship of some kind must precede capable work in every kind of mechanical occupation," and that this is not so in farming. The boys on the farm, as Prof. Porter says, get, or should get, knack, apprenticeship. They do not get underlying principles. These they can get at the college, and these, I maintain, are as essential to the highest success in farming as in law, medicine and divinity. Farmers have hitherto not had this drill in principles, in related sciences, and hence have not ranked socially or in success with educated men in the professions or in business.

One Thing More:—Scientific training in other callings gives foremanships and the position and pay that come from the superintendence of labor. But from the youthful and crude condition of agriculture and agricultural colleges in this country, such paying foremanships are not yet largely offered to graduates, as in Europe. But our agricultural college graduates are now finding many more such openings, in breeding establishments, and as experimenters in stations, and as instructors in colleges, in nurseries, greenhouses, in management of country estates of rich men, in landscape gardening, etc. And to those who are at all wise, the partnerships in large fruit, grain and stock farms, between the father with his business and farm experience, and the son with his scientific knowledge, should always be most inviting ones. I *know* that the education given in the agricultural colleges of Michigan, Massachusetts, New York, Mississippi, Missouri, Texas, Kansas, Colorado, Iowa and other States makes the graduates better farmers and broader men, and that in nearly all the Land Grant colleges the instruction towards the mechanic industries has been admirable.

Second:—I am to consider the wisdom of the changes proposed by Prof. Porter. His plan is: "First, turn the agricultural colleges into schools of general culture, assimilating their courses of study largely to the academical courses in regular colleges." To this I am totally opposed, because, first, as already stated, I regard it as a clear diversion of trust funds from their true intent; second, because I should regard it as a retrograde move. The old "academic course" was largely barren of results in science and the industries; and literature and the professions were comparatively overstocked. Since our course of study was laid down in this college, 20 years ago, the "academic course" has, by the spirit of the age, been driven towards us tenfold more than we have been drawn towards it. And the great majority of the recent immense endowments have been for schools, colleges and universities of technology and practical and applied science, rather than for those that have the "regular academic course." As David said of his child, so may the "regular colleges" say to the scientific and technological colleges; "We shall go to them, but they shall not return to us."

Prof. Porter's second proposition is:

"But do not take the boys away from the farm even to learn these things. Let them understand that they can be just as much gentlemen, in the true sense, on the farm as in other pursuits, and that culture is just as useful and just as ennobling there as elsewhere. To this end let the college course be arranged so as to consist of at least four to six-months' winter terms, leaving the summers entire for other uses. The advantage of this arrangement would be that the boy would not be taken away from the farm long enough to acquire a distaste for it and a disposition to lead an easy, effeminate and, as he thinks, gentlemanly life. In fact, he would not be taken from the farm at all. He would be there every summer, and all summer long, helping his father with the extra zest and the acquired manliness that his winter's opportunity had given him."

But could you teach the boy as much of agriculture and related sciences in four months of winter? We here have eight months of summer for a purpose. To teach botany we want the plants in growth and bloom. To teach entomology we want to watch the bugs (insects) in their various stages of development, while they are developing; that is, in spring and summer, not winter. To teach the uses of insecticides and the modes of spraying, we need the students in summer when the coddling moth and the cabbage worm and chinch bug are abroad in the land. In short, the deductive, "cloister" studies that need only book and brain, like Latin Calculus and Mental and Political Philosophy, can be studied on Prof. Porter's plan. The inductive and industrial sciences, that use objects, field work, growth, development, manipulations, these things require in part the summer and the open air.

Prof. Porter continues:

"Thirdly. Turn the institutions now called agricultural colleges into farm schools and experiment stations during the summer. In these let every branch of agriculture be carried on and illustrated in the best possible manner, and let the work be done of preference, and, as far as possible, by young men who desire to become proficient in practical agriculture. Let these young men be paid as much as other men would be for the same amount of work."

This is good in part. It is just what the best of our agricultural colleges are now doing all summer, in connection with their regular instruction in underlying sciences. But this contradicts and subverts Prof. Porter's idea of leaving the young man at home six or eight months of summer! But if these "farm schools" are to be carried on for illustration and instruction, I doubt the propriety of paying the students *for the instruction they receive*, as advised in the last sentence of the quotation. If they are working to make money for the college or the State, then pay them. If they are working *to get instruction for themselves* out of the experiments tried, then why pay them for receiving this knowledge, any more than for experimenting in the chemical, botanical, physical or entomological laboratory or dissecting room, or in military drill of the college campus? The moment you single out agricultural and horticultural experimentation, and pay the pupil for what he learns there, and yet *make him* pay for material used in the chemical laboratory, that moment you degrade the agricultural experimentation into commercial farming, and make your student a common unskilled laborer and not a learner. The student must be put where and at what he can *learn* most; the paid laborer must be put where and at what he can *earn* most.

It is a long and difficult task to lift farming from an illiberal labor to a liberal profession; to make it an applied science, a skilled art instead of an empirical drudgery. It will be long before the bulk of the farmers "manure with brains." Never will farmers rank socially and financially with those that have studied far more than they in their own line of work. They will not be induced to study underlying sciences by telling them, as Prof. Porter does, that "the agricultural papers and reports of experiment stations tell them all they need to know about theoretical and scientific matters appertaining to agriculture." As well burn theological seminaries and law schools and medical colleges and let young men of no education and no special training enter these professions trusting to the religious papers, and the law and medical journals to "tell them all they need to know" about preaching, pleading and practicing.

The agricultural colleges are trying to meet the problem as well as they can. But it is new and untried work. The oldest of these colleges in this country is but a trifle over 20 years old; while the colleges that train for the learned professions and for literature have existed for centuries. It really does not seem to me that Prof. Porter has helped towards the solution of the problem.

Agricultural College, Ames, Iowa.

Everywhere.

RURAL SPECIAL REPORTS.

California.

Pleasanton, Alameda County, June 5.—The Rural arrives regularly, and it gives me pleasure to say that the longer I keep it the more highly it is appreciated. Haying is nearly over, with a good crop on volunteer lands. The late rains damaged early cut to a considerable extent; but the prices for that cut later, will probably be low. Grain is ripening fast with the promise of a fair crop. Reports from other parts, are that the aphis did some damage to late-sown Chevalier barley, which is the best-paying grain crop in this county. Prices rule low for all produce, excepting buckwheat. Fruits of all kinds are plentiful with the exception of Moorpark apricots and some varieties of peaches, which were affected by the curl-leaf. Land is held at very stiff prices, from 300 to 500 dollars per acre being asked for good valley lands. At that rate a man without the necessary capital to buy outright, would have to work and slave a life-time to clear 150 acres.

J. C. M.

Delaware.

Dover, Kent County, June 18.—We have had a vast amount of wet weather of late and the effect of it will be felt during the entire season, especially in sections where the land is low and wet. Harvest commenced yesterday, but the bulk of the crops will not be cut till later in the week or probably next. Wheat on high land is apparently a fine crop, but much has been hurt by water. Some complaints of scab or blight are made, but I think the trouble is not bad enough to affect the crop. We are behindhand in haying. Last week was the proper time for cutting clover, but none was cut on account of the weather, and the present prospect is that this week will be but little better. Anyway the wheat must be attended to even if hay is neglected. We have had but little hot weather but an unusual number of thunder storms. Some damage has been done by lightning. Corn looks fairly well on high land, but on low land there has been so little time dry enough to work it that the weeds are about to take the lead. Some of us on high land are cultivating our corn for the third or fourth time while the crop is from one foot to three high; but this does not apply to half of the crop in the county. Some few fields of oats look fine, but the greater part of the acreage sown looks injured by too much wet. Strawberries were a fine crop, but growers realized very poor returns for them. So far as this section is concerned, the peach crop will be very light; but a full crop is reported farther down the State. The rose bugs have been here in countless multitudes destroying about all of the grapes and not a few peaches and apples. Early truck is plentiful, and potatoes are large enough for use. The hay crop, even if housed in good shape, will not be up to the average. What we most want at present is good weather for a week or so; otherwise many a farmer will meet with serious losses.

A. G. S.

Illinois.

Dixon, Lee County, June 17.—Farmers hereabouts were invited by the Anglo-Swiss Condensed Milk Company, of this town, to assemble on June 1, and make and sign contracts for milk for the year, and the period for doing so expired on June 15. The contracts were to run four months. The prices for milk were to be on a basis of 90 cents per

cwt. for six months and $1.30 for the other six months, making an average of $1.20 for the year. It was a new undertaking here, and consequently some of the farmers were slow in taking hold of it. The first milk will be received on the evening of July 8, and the milk from 800 cows has already been contracted for. The company will run only one vat or pan at present, for they must have the milk from 10,000 cows to enable them to run to their full capacity. The heavy parts of the outfit are already in place, but an immense amount of light machinery is now being put in. The present pay roll amounts to $2,000 a week for the mechanics and laborers. The general manager says $1,000,000 will not more than pay for it. An artesian well 1,700 feet deep is located within the factory and gives 400 gallons of water per minute. Another well about 600 feet northwest of the factory, is 1,600 feet deep and produces 600 gallons per minute. The weather is pretty wet. Oats and wheat are looking very rank. Clover is a good crop and will be cut by June 20. Corn has had a hard struggle with frosts and cold winds, but the outlook for the crop is very favorable now. Prices are: corn, 28 to 30 cents; oats, 16 to 18 cents; good butter, 10 to 12½ cents. I am glad to see that the RURAL is coming down on trusts, which are the enemies of the farmers in general.

J. W. K.

Kansas.

VIDETTE, Shawnee County, June 17.—The extreme range of the thermometer so far in this month has been between 60 and 98 degrees, with two inches of rainfall. Wheat promises to be very good. Oats good in straw; corn is making a good growth with a few exceptions where chinch bugs are at work. The abundance of rain we are having is a hindrance to the bugs and an advantage to the crops. All kinds of fruit promise to be plentiful. Everything looks flourishing for the agriculturist. J. E. M.

Michigan.

MARLETTE, Sanilac County, June 18. Wheat, oats, barley, peas, horses, cattle, sheep and wool are our money products. They are sold at the elevators and shipped East. Some barley is fed to stock. All of it should be and no beer should be made. The farmer would then get more profit. The best of the white peas are sold to be used for the purpose of adulterating ground coffee, etc. We have a good cheese factory that makes an excellent cheese, and also a creamery; therefore some are paying greater attention to their cows and increasing the number of them, and with the aid of the silo, the prospect is fairly good. An oat-meal mill is nearing completion here. It is said to be the only one in the State. Prices at present are: Wheat, 77 cents; oats, 23 cents; barley, 50 cents; peas, 40 cents; wool, 15 cents to 32 cents. Some farmers have a better grade of stock, are better feeders, and obtain better prices. Then by cleaning their seed grain thoroughly, sowing their seed early on carefully prepared soils, they generally have paying crops. I do not know of any that are making any one branch a specialty. I have been paying more attention to sheep than to anything else. I have a flock of Shropshires, also Merinos, and some half-breeds. I filled my silo with uncut corn; and fed the silage to horses and cattle. They ate it all up, but the sheep did not eat all they got of it. I should prefer cut fodder for sheep. Of late years many have been reading the R. N.-Y. and several other valuable papers, and they have improved much in the general management of their farms, and appear to prosper, in spite of hard times. Many herds have been much improved by the introduction of Short-horn blood. Farmers have good teams and are raising good colts. I think those farmers who have not tried growing peas, should do so. They leave the land in good condition for fall wheat; the straw is good sheep fodder. Two or more acres sowed with rape make a good pasture for sheep in the fall. Last year I had four acres of rape sown broadcast, five pounds per acre, in June, and found it a great help towards getting my sheep in good condition for the winter. The great thing to bring prosperity to the farmers would be Prohibition. It would give us a better market for our grains. Instead of the low price given by the Brewers' Trust we would get the fair price regulated by the demand of the people. If there were no liquors, there would be more money in the hands of the poor, and consequently a greater demand for our products. This would, of course, increase the sale and the prices would go up.

J. M.

ROLLIN, Lenawee County, June 17.—The cities are increasing in population faster than the country and must be fed so that the outlook for the future is brighter. The temperance question will not rest until it has been settled right, and then there will be more money to spend on nice fruit and good meat. There are some farmers here who are getting extra good prices for their products. A number of men are sending their butter directly to the consumers the year round, and getting 20 to 25 cents per pound for it all the time; whereas it brings now in our local market only 11 to 12 cents. Some introduce new kinds of wheat, oats and potatoes, and sell them for seed at a large advance on the market rates. Some raise blooded cattle or sheep or hogs and sell their progeny to farmers at better figures. The following changes have been made within 10 years: Hay is now baled and shipped as far as to New York and Boston. Now we have canning factories in many villages. We raise sweet corn, tomatoes, squashes, pumpkins, berries, etc., more than we used to do. Our farms are small; more of them are under 80 acres than above that figure. Quite a large number of our farmers sell more or less wood or timber every winter, and maple sugar making in the spring is an increasing industry. In fact our resources are great and varied; if this were not the case we never could bear the strain that is upon us, what with monopolies and trusts, sharks and tramps, floods and frosts, drougths and taxes. We still, however, survive. Though often down, we are seldom in despair. J. O. B.

Minnesota.

MENTOR, Polk County.—Considering the unfavorable conditions our grain crops have had to contend with this spring, it is a wonder that the small grains look so well as they do. We have had the driest spring in the history of this settlement. Unusually heavy winds have blown a large amount of grain out of the ground and in a good many places it was necessary to seed the ground all over again. Heavy frosts, too, about the first of June thinned out the oats somewhat, but what there is left now is doing remarkably well for grain that has not had a thorough wetting since it was planted. Pastures are very short and dry. I have never known the cows to do so poorly in June. Creameries are paying 10 cents per inch for cream in cans 12 inches in diameter. It is hard to dispose of stock at any price for cash. What little money there is in the country seems to be in the hands of loan agents. Unless we have rain soon our hay crop will be very short. There has been a good deal of comment among the farmers in regard to the Meat Inspection Law. Most of those I have talked with do not seem to be able to see anything beyond the 50-cent inspection fee, and are growling at our lawmakers for putting another burden upon the already down-trodden farmer. Before the Inspection Bill passed meat was hard to sell at 2½ cents per pound on foot; now it is rather easier to sell it at the same price, and that is about the only material difference we have been able to see thus far. F. A. H.

Nebraska.

SIDNEY, Cheyenne County, June 18.—Cattle and corn are the main branches of industry, which farmers depend on for cash. These products are sold here (Sidney) except cattle, which are shipped to Omaha. Prices have been very high for corn, etc., but low for cattle, but prospects are favorable for the future. A few by having good stock and raising a good quality of produce get extra good prices. The land here less than five years ago was all used by the cattle-men. The immigration to this part of the country has changed it from a grazing to an agricultural section. One of the best changes for the benefit of this country would be to import a high class of pure-bred cattle and horses to improve the stock that is here. J. D. B.

New York.

PRATTSBURGH, Clinton County.—Developments since the frost of May 29th show a fair prospect for currants and berries of all sorts on my premises. There will be very few pears, no grapes, plums, peaches, quinces or cherries, with a prospective yield of apples, from over 200 bearing trees, that I would willingly exchange for five bushels of sound fruit in autumn. Hay a light crop in this region. Winter and early-sown spring grains on dry land are promising. Corn backward and sickly. As a whole, the present prospect is against a recurrence, this year, of any complaints about over-production. W. B. P.

Ohio.

LODI, Medina County, June 17.—Wheat and milk are our money products. Wheat is sold to warehousemen and milk to the cheese factories. Wheat has averaged about 80 cents per bushel; milk 80 cents per cwt. There appears to be no prospect of better prices in the future. There are farmers who get prices above the average. They excel in the quality of their goods, are reliable, honest and "square" in every line and they sell to those who know and appreciate good things. There has been some change in a few localities within 10 years. Potatoes and horses are raised more than formerly. Low prices for buckwheat have probably caused the change. I. W.

THE FARMERS' CLUB

ANSWERS TO CORRESPONDENTS

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

KILLING SNAPDRAGON.

A. R. Q., Farmingdale, N. Y.—Does the RURAL know of any way to kill snapdragon? The more I turn it under the better it appears to come up.

FROM W. J. BEAL.

I think there is no royal way to kill troublesome weeds; but thorough cultivation will subdue any plant. If it is not allowed to get a leaf above ground for even a short period, it must die. Linaria vulgaris is no exception to the rule.

Ingham County, Michigan.

FROM W. B. PRATT.

I am not conversant with "snapdragon;" but a farmer a few miles distant describes it as an annual, with bushy tops, pale yellow flower, growing only on wet land bordering on rivulets, never invading uplands, nor increasing under neglect in its natural home. He assumes that continuous pulling year after year and the consequent prevention of the ripening of new pods would in time effect its destruction.—[It is a perennial.—EDS.]

Steuben County, N. Y.

FROM J. TALCOTT.

I know of no way to eradicate any noxious weed except to destroy it root and branch. The worst pests are those that propagate from the roots. Those that grow from seeds only are much more easily destroyed. If the plot is not large, by digging it over and carefully picking out all the roots for a few years, all weeds must succumb. The more thorough the work, the speedier their destruction. The morning glory or India creeper is one that spreads from the roots and no cold will kill it in this latitude.

Oneida County, N. Y.

FROM DR. B. D. HALSTEAD.

This is a vile weed and it cannot be easily overcome. The snapdragon "butter and eggs" "toad flax" or "Ransted weed" takes almost complete possession of the soil. The only way to eradicate it is by frequent plowing and removing the roots. Keeping the plants closely cut will prevent the formation of seeds, but the plants themselves are long-lived. If the infested soil is turned frequently there will be an end to the trouble. How many weeks or months it will require depends upon circumstances. The weed killers must follow the illustrious example of the spider, and try and try again.

Middlesex County, N. J.

FROM A. A. CROZIER.

This imported weed has become exceedingly troublesome in all the Northern States east of the Mississippi and is spreading into other parts of the country. Besides the above name, it is known as toad flax, butter-and-eggs and Ransted-weed. It is said to have been brought to the United States by a Mr. Ransted of Philadelphia, probably for ornament, as it was often cultivated in flower gardens at an early day. It has become so common as a weed, however, that it is no longer offered by seedsmen. It occurs mainly along roadsides and in pastures, its fetid odor preventing stock from eating it. It is perennial, grows in continuous masses, and spreads by its creeping root stocks. To eradicate it I would suggest plowing the land deeply and carefully in June, and sowing to buckwheat or millet, following, the next year, with a hoed crop and remove any that may remain. In the West or in a dry season it could probably be killed by shallow plowing in July or August, setting the plow so as to prevent the furrows from falling flat, after the manner of breaking a prairie.

Iowa Experiment Station.

FROM PROF. H. H. WING.

Snapdragon or butter-and-eggs (Linaria vulgaris) is a perennial, spreading from root-stocks. It also produces an abundance of seeds. It is therefore a doubly troublesome plant to subdue. An absolutely bare summer-fallow or a positively clean hoed crop for two or three seasons in succession must kill it out. The question is whether it is worth the time, the trouble and the interference with rotation that such a course would entail. One or two other courses that give promise of success are open. The first is to mow the land early, turn the sod under, make the soil rich and fine and sow to millet or Hungarian grass. The success of this method depends on getting a quick and vigorous growth of the millet. A hoed crop should follow the next year. The second method is to pasture the land with sheep so heavily that they will be induced to eat every living plant. Of course, the sheep must have grain of some kind supplied to them. This method has the additional advantage of adding to the fertility of the land and I have known of instances in which it has proved efficacious.

FROM J. H. ACKLEY.

I am wholly unacquainted with snapdragon except as a flower in the garden; but the question gives rise to a few thoughts as to the management of pestiferous weeds on a farm. My experience with them has led me to believe that they can be wholly exterminated if properly treated, and I find the plow is the main tool to be used in their extermination. The next important point to be studied is at what point of their growth it can be used with the best results. Hence the nature of weeds one may wish to destroy, as well as their habits must be studied, and they should be handled when their growth is the most vigorous, and hence when they are most tender, for if they are severely dealt with at this stage of growth, they will receive the greatest injury. To illustrate this more fully, I give my experience with Canada thistles. A three acre lot became overrun with them. I fought them on all sides by hoeing and cutting them back; but all this seemed only to make them grow more vigorously. I came near giving up the field to them in despair. While in this mood, I began studying this matter and the thought of being beaten by a thistle made me desperate, and I resolved to fight the pests to the end. It was a newly seeded meadow, and there was a very poor catch when I "went" for them about the middle of June. They were so rank that I had to first roll them down, then turn them under, plowing deep, and I sowed the field to fodder corn. The weather was warm, and it grew very rapidly and got far ahead of the thistles. Again I plowed it early in the fall, sowed it to oats early in spring and treated it to a coat of 200 pounds of fertilizer to the acre, seeding it to clover. The result was a fine lot of oats, a good catch of clover, and a sickly lot of thistles that never headed out, and to-day the field bears as stout a lot of clover as anybody could wish for; while the thistles are so scarce that it is hard to find one. I have tried the same process on other lots, except that I did not plow the ground a second time until spring, and this I think preferable. Even if it is plowed in the fall it should be turned over again in the spring so as to make sure of the pests' destruction. This treatment can, I believe, be applied to any and all obnoxious weeds successfully.

Cattaraugus County, N. Y.

GROWTH OF POTATO VINES AS AN INDICATION OF YIELD OF TUBERS.

F. P. Q., New York City.—I planted some potatoes in trenches, according to the RURAL'S system, Mapes's fertilizer being used in the bottom of the trenches and also on top of the seed-pieces, which were cut to one and two eyes to a piece, planted on April 25, and covered with six inches of soil—a rich sandy loam. The day after planting there was a heavy rain. The vines are now three feet high, strong and stocky. I have been obliged to drive in stakes along the rows so as to tie the vines to them to prevent them from falling down between the rows, as I planted peppers there. The varieties planted are White Star, Early Puritan, Seneca Red, O. K. Prolific, Rose's Beauty of Beauties, Empire State, Early Ohio, Clark's No. 1, Queen of the Valley and Rural New-Yorker No. 2 The last was a long time coming up and is not so bushy in growth as the others. What sort of a yield is indicated by such a heavy growth of vines?

ANS.—Your fine vines indicate, in the R. N.-Y.'s opinion, a heavy yield of tubers. This is an old question and one which we have endeavored to solve. The R. N.-Y. has *never* raised a large crop of potatoes unless the vines were correspondingly vigorous in growth. As a *rule*, the crop of tubers will be proportionate to the size of the tops. This we have shown again and again by our published estimates as judged by the size of the vines at certain periods of growth. We can at this time show our readers 26 little plots which received at

the rate of from 440 pounds to 2,200 pounds of fertilizer to the acre. Without a single exception an increase of vine growth is shown by an increase of fertilizer. This experiment has been tried for eight or ten years and always with the result that the yield is proportionate to the size of the vines. When we have immense vines and small yields, it is due to some unfavorable condition. For example, if at *this* time you plant late potatoes in a rich soil, and the rest of the season prove favorable, you will have heavy vines but a small yield of tubers. Again, one-sided fertilizers, such as unleached ashes, have given us heavy vines and a small yield.

UNWHOLESOMENESS OF OLEOMARGARINE.

Reader, Fulton County, N. Y.—I noticed that Dairy Commissioner Brown made the statement that oleomargarine is indigestible, and, therefore, unhealthful. Is this the case?

ANS.—In the 2nd Annual Report of the New York State Dairy Commissioner it is stated that artificial butter is not a wholesome article of food on the following grounds:

First, on account of its indigestibility; second, on account of its insolubility when made from animal fats; third, on account of its liability to carry germs of disease into the human system; fourth, on account of the probability of its containing, when made under certain patents, unhealthy ingredients. The first and second points were arrived at by a series of experiments upon the artificial digestion of different fats. These fats were cod-liver oil, butter, oleomargarine butter, the commercial oleomargarine oil, lard oil, benne oil, cotton-seed oil, lard, and mutton and beef suet. The surprising statement is made that "rancid butter is probably more readily digested than fresh, and is not poisonous, the repugnance to it being simply one of taste." It is said that "lard is difficult of digestion." In support of the third and fourth points, a number of diseases are mentioned which are communicable from animals to man, and the methods are mentioned by which some of them may be communicated. It is stated that the heat applied to the fats employed in making artificial butter is not sufficient to destroy these disease germs. It seems to us that this is a very important consideration. The commission appointed by the Academy of Medicine at the request of the Prefect of the Seine in France, disapproved of the article on the ground of its indigestibility. It was never allowed to be sold in the public markets of Paris except under its own name, and its sale is now prohibited.

ABOUT STRAWBERRIES.

E. I. L., Speedville, N. Y.—I want to prepare as a strawberry bed a piece of ground which is infested with white grubs that work at the roots of the plants. 1. How can the pests be exterminated? 2. How deep should the ground be cultivated? What would be the best fertilizer? Would salt be of any use? 3. How much superphosphate, at the outside, should be applied per acre? Are ashes beneficial; if so, how much per acre should be used? How about hen manure? 4. What three kinds—early, medium and late—would it be best to plant? 5. Which are reliable firms from whom purchases can be made?

ANS.—1. The best way to get rid of the May beetle grub is to keep the land fallow and to dig it up or plow it the last thing in the fall or in midwinter if the land has become open and sufficiently dry. 2. Plow the land as deep as possible without bringing up the subsoil. We should not use salt. 3. Wood ashes (unleached) and bone flour are excellent. Instead thereof, muriate of potash, bone and sulphate of ammonia may be used. Two thousand pounds of a complete fertilizer may be used. If unleached ashes can be purchased at a reasonable price, use as much as two tons to the acre. In this case a thousand pounds of bone may also be used. 4. Crescent, Downing, Sharpless, Bubach and Gandy's Prize. 5. Ellwanger & Barry, of Rochester, N. Y., and other nurserymen who advertise in the RURAL.

RHEUMATISM IN A COW.

J. E. P. R., Laconia.—A cow of mine became stiff in her limbs two days after she had dropped a calf. She eats well, chews her cud, and gives the usual amount of milk. I think she took cold, and if cattle have rheumatism, I believe that is what ails her. Is it?

ANSWERED BY DR. F. L. KILBORNE.

The case is very likely one of rheumatism, which is not uncommon in the cow. If there is swelling or stiffness of the joints especially, or other fibrous structures, with a tendency to shift from place to place, or if the stiffness is aggravated by cold, dampness, or exposure to wet, the trouble is probably due to an attack of rheumatism. For treatment give a dose of purgative medicine to unload the bowels. One pound of Epsom salts, one-half pound of common salt and one ounce of ginger, for an average cow, the whole dissolved in a quart or two of water and given as a drench. If the cow is small or under three years of age, reduce the dose one-third. Then three or four times daily give two-dram doses of salicylate of soda for several days, or until the stiffness disappears. Rub the limbs once daily with the following liniment: Olive oil one pint, strong aqua ammonia one-half pint, camphor gum two ounces, spirit one pint. First dissolve the camphor in the spirit, the oil with the ammonia, then mix. Shake well before using.

"NO PLACE LIKE HOME."

H. C., Lemars, Ia.—In the RURAL of June 8, Professor Sheldon tells us of the very deplorable condition of English farmers. If the case is so bad, why do English farmers, as a class, *not* come here? It is sufficiently well known that few have done so. I began asking this question several years ago: I am asking it still.

ANS.—It is doubtful if the question ever will be answered entirely satisfactorily. It is a part of human nature to think that our neighbor is better off than we are. There are doubtless men in all parts of the world who grumble at their surroundings, and see "better times" in every other land than in their own. Yet they rarely move away to experience the better times. "There's no place like home." That accounts for a good many instances where men stick to seemingly undesirable locations. Two classes of people are able to pull themselves away from home associations: those who are too thoughtless to really value home or are too enthusiastic to fully count the cost of removal, and those whose homes have been made unbearable by some mighty despair or some terrible sorrow.

GIRDLING GRAPES.

G. E. H., Ulster Park, N. Y.—1. At what stage in the growth of grapes should the vine be girdled to hasten the ripening of the fruit? 2. Is there a special tool for the purpose; if so, where can it be bought? 3. Does girdling injure the flavor of the fruit?

ANS.—1. As soon as the fruit is so far developed that satisfactory selection of canes to be operated on can be made, which will be soon after the berries swell. If deferred till later, the effectiveness of the process will merely be more or less diminished. 2. We know of no tool especially intended for this purpose. None is, in fact, needed—beyond a sharp budding or pruning knife. Indeed the effect may be as certainly produced by winding twine or wire tightly around the cane at the proper place for ringing. 3. The effect is to considerably enlarge the fruits upon the girdled cane, to generally hasten the time of ripening, and to more or less injure the flavor; while the cane is nearly or quite ruined for either future growth or fruiting.

LUMP ON THE UDDER OF A HEIFER.

T. E. B., Schuylerville, N. Y.—About a week ago I noticed a lump about the size of an English walnut on the left fore-quarter of the udder of a two-year-old heifer now on grass and due to calve on July 13. The rest of the udder does not seem at all congested, and appears to be all right. What is the cause of the trouble, and what's a remedy?

ANS.—The lump is probably the result of some injury to the udder. Unless near the base of the teat, or even then, it may never interfere with the flow of milk, in which case no treatment is necessary. When the heifer comes fresh, if the lump is found to obstruct the flow of milk from that quarter, you should employ a skilled veterinary surgeon to open the passage. Painting now once daily with compound tincture of iodine might reduce the size of the lump.

Miscellaneous.

Mc. A. K., Winchester, Va.—Is the Cinnamon Vine the same as the Chinese Yam, and does it ever bloom?

ANS.—Yes, it is the same. The vines bloom very freely and the yams are hardy. The bloom is not showy, but the odor is that of cinnamon as nearly as it can be described.

W. J. M., Canaseraga, N. Y.—A tumor now as large as a hen's egg, has been growing on the stifle joint of my mare for four or six years; what will remove it?

ANS.—Apply an active blister, and repeat once or twice if necessary. A competent veterinary surgeon might be able to safely cut it out.

C. W., Waukegan, Ill.—1. Mr. Childs's catalogue highly recommends the Tree blackberry; what does the RURAL think of it? 2 Is the Black-bearded Centennial wheat likely to be hardy here?

ANS.—1. As soon as announced, we wrote to John Lewis Childs for several plants of the Tree blackberry, but they were not sent. At any rate they were never received. We don't believe in it. 2. The Black-bearded Centennial is tender at the Rural Grounds and probably will so prove with you.

J. H. B., Lansing, Mich.—1. What is the clover a sample of which is inclosed? 2. What is the best tame grass for a piece of marshland which appears to be getting too dry for wild grass?

ANS.—1. The small yellow-flowering specimen is Trifolium procumbens—Yellow clover or Low Hop clover. The pinkish-flowering one is Trifolium reflexum—Buffalo clover, valuable for pasture, as cattle are fond of it. We do not known why it could not be cultivated profitably in some portions of the country where Red clover may fail. Trifolium procumbens is thought to be of little value, being an annual and not growing tall enough. 2. Red-top is the best grass we know of for moist situations.

DISCUSSION.

"TRAIN UP A CHILD."

"A SON."—An article from "A Reader," in the RURAL some weeks since, giving his experience as a boy with regard to his father and farm life, leads me to say that there are other and brighter pictures of farm life which we may do well to contrast with his dark side of farming. I was born and reared upon a farm. My father was not rich, neither was he poor. He made me to feel, as long as I can remember, that I had the same right to opinions as he, and though I was often wrong, he never made my mistakes the subject of ridicule, but often brought out the results as valuable lessons by which I now often profit. I do not recollect that he ever gave me any certain piece of property to do with as I saw fit, but he made me interested in the whole, by saying "we" and "ours," instead of "me" and "mine," and not restricting me with regard to my personal expenditures. When I arrived at a suitable age to go into society, he said to me at one time: "I am pleased to see you go and enjoy your life while you are young; but be cautious with regard to the companions with whom you associate, as they will have a strong influence on your after life." I always had free permission to invite my friends to our house, whenever I wished, and I preferred doing so to going from home for the purpose of having their company.

With regard to money matters, he advised me faithfully, and instructed me carefully. One piece of advice which I shall always recollect was something like this: "Remember that we are not rich; that we have nothing to squander on drink, or burn up in smoke; but also remember that we only go this road once, so do not be niggardly and deprive yourself of the good things of life that are really good, whether they are to benefit, instruct or please." He never gave me but one dollar that I recollect, but frequently he told me to go to his pocket and get what I thought "we" could afford to use. And I assure you I never misused the privilege. When I was about 16 he told me I had better begin keeping the farm books, and about three years afterwards I began looking to all the farm business, always asking his advice, and being governed by it.

On my part, I never deceived my father intentionally, and, although I often made mistakes, he was always patient with me, and when he asked me with regard to anything, either my mistakes in business or the follies and mistakes of boyhood I always told him just as it was, and what was best, and did me most good, was that father believed just exactly what I told him, and I do not think he ever asked any one, to verify my report.

Now the result of all this early training is that I am a farmer. I could not be anything else. My father's farm and mine join each other, and I manage both. He is now a venerable old man, and I am near middle age, but still we are all to each other that we ever were. He trusts me implicitly, and I love him sincerely. There is scarcely a day in which he does not come to my house. He sometimes asks what is the order of the day, and often gives me good advice for he is able, and when well enough often lends a helping hand about some light work.

Do you wonder that I am a farmer; that I love the dear old home where I have been so kindly cared for; and that I love the good, kind old man, who has many times denied himself for my sake? And if more parents would pursue a like course with their sons, respect their ideas, and encourage them to think and act for themselves, and that instead of being mere machines for earning and accumulating the almighty dollar, they are reasoning, intelligent human beings, on whom the welfare of the nation depends, we would soon have a nation of able, energetic and progressive farmers, who would make farming pay.

SHOULD IMPORTED TROPICAL FRUIT BE TAXED.

J. H. G., QUEENS COUNTY, N. Y.—A late RURAL mentions the fact that some fruit-men feel that the sale of tropical fruits hurts the trade in home products.

We have a good deal of complaint among farmers because of the low price of their fruit products. Apples have scarcely brought enough to pay the farmer for picking and packing; strawberries are sold at ruinous prices and there is every prospect of a still poorer market for other small fruits. One of the reasons for these ruinous prices is the plentifulness and low prices of tropical fruits. With bananas retailing at 10 cents per dozen and fine pine-apples at 10 cents apiece, it is not strange that people do not buy apples or small fruits. It is the custom of the manufacturers to demand protection as soon as a foreign product comes into competition with the home product. Now, it is evident that the products due to the sunny skies, fertile soil and cheap labor of the tropics are coming into direct competition with those produced by the labor of the American farmer.

Why not, therefore, put a tariff on bananas and pine-apples and other fruits, which shall prevent their importation to any great extent? There is now an insignificant duty on oranges, but bananas and pine-apples are free. If a duty be put on these and other foreign fruits, sufficient to prevent their importation, the price of apples, pears and small fruits will be doubled in a year. In the year 1888, $3,482,846 worth of bananas were imported. Suppose all, or nearly all, of this vast sum had been spent for apples and pears, would the market have been glutted and prices ruinously low? If the policy of protection is to prevail, let it apply to farming as well as to other industries.

PYRETHRUM AND POWDER GUNS.

J. R. H., MOUNTAINVILLE, N. Y.—The air gun I use for the destruction of insects with pyrethrum, is simple and inexpensive, costing only 25 cents. It is of cylindrical shape, slightly conical, made with small circular pieces for top and bottom, with a spiral spring between them. It is about four inches long, covered with thin leather, and holds about one-half pint. By placing two fingers on the top, and the thumb at the bottom, the little gun is closed together and the dust is thrown in a cloud through the foliage with two or three pressures. I think such guns can be found at any of the New York drug-stores. As to how often, and the best time to use the pyrethrum, it should be used every day, at noon, especially if the weather is dry and hot, as at that time all the insects are actively at work, and can be found, but in a humid atmosphere the powder appears to be much more fatal; for instance, when there is dew or on a damp day. When the atmosphere is in this condition the powder is fatal to the asparagus beetle and its larvæ. The question: "How does pyrethrum kill the insects?" would bring forth some very interesting information. The theory presented to my mind is that it poisons the lungs, as it acts upon the pests in a few seconds after the cloud has enveloped them, apparently before they have had any time to eat any of it, and they really pay little attention to it until they commence to rub themselves with their feet. A prominent physician has informed me that an insect has no lungs. He said that insects breathe through tubular passages and these passages were stopped up by the powder; but if this be the case, why should not other fine powders answer the same purpose?

HIS FAVORITE CHURN.

P. C., MILFORD, N. H.—In a late RURAL I saw the criticism on the New Hampshire Experiment Station director in regard to the trial of dairy apparatus. Now, I do not think the director said that the Stoddard was the best churn; but he does say that there is practically no difference in the efficiency of the three churns mentioned and if there is any preference it must come from convenience in handling and ease of operation. On this point there is no doubt in the mind of those who have actually operated the churns here at the Station. For ease of handling and cleaning and for perfection in the granulation of butter, the Stoddard churn stands at the head. The Blanchard is open to the objection that it has inside floats which seriously interfere with the granulation of butter. The Davis is harder to operate and is more difficult to clean. I see no need to criticise the director for telling the farmers what they ought to know. Eight years ago we wanted a new churn. There were in my neighborhood two Stoddard and one Blanchard. Each owner thought his churn the best. I went and

saw them in use, and I cannot see how granulated butter can be made with a Blanchard churn; but the granulation was perfect with the Stoddard. I told the man who had the Blanchard churn that I did not want one, and I never have changed my mind. I bought a Stoddard for making granulated butter: it is good enough for me and it is certainly easier to clean, and any one making a trial of the two will chose the Stoddard every time if he wants granulated butter and a churn that is easy to clean.

MORE ABOUT FLEA-BEETLES.

S. F. B., PATAHA, WASHINGTON.—Here is my experience with flea-beetles. Last July they came in such swarms as to cover my garden. All the radishes, turnips, cabbages, etc. were black with them. I did not know what to do, but commenced experimenting. First, I dusted the plants with hard-wood ashes; then wet them and put on more ashes, then lime, then salt water, several kinds of insect powder, snuff and tobacco water, but all of these they seemed to like. The only remedy I found was to dust the plants with fine road dust. In that way I saved a few turnips, but perhaps the pests found something more to their liking. Yesterday I found them swarming over my mustard and turnips. Many thanks will be due to the RURAL if it succeeds in finding a remedy for this pest. This is a warm, dry month and acres upon acres of grain are burning so that farmers are turning stock upon it now. Water is getting low even in streams that have never been known to be shallow. If this weather holds a few weeks longer, many farmers will be in great need, for in this section there are hundreds who depend solely on wheat growing. This is not a fruit-growing region, but what orchards there are, are loaded with fruit of a fine quality.

ASHES AND SOOT FOR THE FLEA-BEETLE; BUSH LIMA BEANS.

H. L. N., NEWBERN, VIRGINIA.—The flea-beetles have appeared regularly on my potatoes for quite a number of years back, but never, except once, in such numbers as to threaten the destruction of the crop. On that occasion I got rid of them by the application of unleached hard-wood ashes. Two applications caused them to disappear. The beetle is the same which destroys young cabbage plants. These plants could not be grown here if they were not kept dusted with soot or ashes.

A note in the R. N.-Y., of June 8th says the new Bush Lima bean furnishes the starting point for a dwarf variety of the old Lima. The RURAL has failed to notice that a dwarf variety of the Large Lima quite different from Henderson's Dwarf Sieva, was offered this spring in the catalogue of the Northrup, Braslan & Goodwin Co., Minneapolis, Minn. The bean is claimed to be three-fifths of an inch long, one-third of an inch broad and one-sixth of an inch thick, and cream yellow in color. The pods, containing from five to seven beans, are produced in clusters.

R. N.-Y.—This is not a bush bean with us.

IN FAVOR OF AGRICULTURAL COLLEGES.

C. F. O., DARIEN, CONN.—I am glad to see so many of the R. N.-Y. readers speak a good word for the agricultural college. I am not a college-bred farmer, I am sorry to say, but I would advise all young men who contemplate following the farm for a living, to take a college course if possible. Let them learn all they can before they settle down on the farm; they will find plenty to learn afterward. While Professor Porter may be in a sense correct when he says that a college education is not *necessary* for a man to become a practical farmer, surely what is learned at the college will do no harm, and 99 times out of 100 will prove of great benefit, even if the student does not follow the farm at once for his living. While I am a young man and am learning all I can that pertains to agriculture, both from practice and from the experience of others, still there is scarcely a day that passes without my seeing that those who have had a college course, have the advantage over me in many ways. So my advice to young men is to take a college course if they can. They will *never* regret it.

ANOTHER GRADE JERSEY TEST.

E. C. G., PENN YAN, N. Y.—Here is the result of a week's test of my three-quarters Jersey two-year-old heifer.

Total weight of milk	164 pounds.
Average per day	23½ "
Total weight of cream	23 "

Total weight of butter 11 pounds, 10 ounces. Fourteen per cent. of the milk was cream. This heifer had given milk about six weeks. For four weeks preceding and during the test she had no grain of any sort, only good pasture, salt, and water, and she was confined in the barn-yard every night. The cream was churned in a Davis Swing churn at a temperature of 64 degrees for 30 minutes; the buttermilk was drawn off, and the butter washed in cold water till the water ran clear. It was then salted, one ounce to the pound, while worked in a Lilly butter-worker. Age and feed considered, who can beat this record? Let me say a word for the Davis Swing churn—ours has been in use six years and we consider it perfect in every way.

What Others Say.

POTATO SEEDLINGS.—Our friend "Joseph," in our esteemed contemporary Farm and Fireside, has the following:

"It is the simplest thing in the world to produce a lot of potato seedlings from the seed (provided you have it). The seed sprouts very readily, and makes strong plants that can be transplanted with the greatest ease. But now the trouble begins. The potato-beetle is very fond of the young and tender foliage. This pest has just ruined a patch of seedlings for me, and not a single plant escaped—all met the same fate. Fortunately, I have plenty more seedlings in the frame, and when I set them, which will be in a few days, I shall cover each with one of my unpatented plant pots, and dust them thoroughly and often with peroxide of silicate. I feel confident this treatment will insure their safety, and when the protection has to be taken away from them, the Paris-green remedy, I think, will keep them from very serious harm."

The R. N.-Y. was the first of the rural papers to raise potatoes from seed in so far as the writer is aware. This was some 12 years ago. We have, since that time advocated seedling potato culture without much let up. Our view has been that farmers may raise seedlings that will be found to be better adapted to their farms than any of the hundreds of kinds offered for sale. Then again in the case of a lucky hit, the variety might be sold to some enterprising seedsman for a price that would well repay the producer for all his time and trouble. As "Joseph" says, the seeds will *sprout* about as readily as tomato seeds. Again, as he says, the trouble begins when the little tender plants are set out in the open ground. The beetles attack both leaf and stem and destroy them in a few days. The seedlings can *not* be saved by any application of arsenic or other poisons. The leaves and stems which the beetles or grubs will eat before they are killed will destroy the vines. Besides, they are so tender that they cannot even stand the application of plaster alone—much less of poisoned plaster. We will guarantee, friend Joseph, that you will kill every vine to which you apply peroxide of silicate. Kindly let us know the result of your trial.

The R. N.-Y. method, and it is a successful one, is to thump the plants from the little pots and set them a foot apart in rows three feet apart.

Mosquito netting, one yard wide, is then stretched lengthwise of the rows and supported above the vines by sticks placed at intervals of four feet, thus Λ, like the rafters of a double pitch roof, and the peaks are connected by horizontal sticks tied to the peaks, or where the two sticks meet, giving all needed support to the netting above, while the edges on either side are held in place below merely by covering them with an inch of soil. We have now a mosquito two-pitched covering which is quickly made and at merely the cost of the netting. This protects the vines thoroughly until they fill the triangular space when they are large and strong enough to stand poisoned plaster, and the netting may be removed to be used a second time the next season.

BRIEFS.

PROFESSOR BUDD of Ames, Iowa, deems the Downer's Prolific still the best strawberry for home use.....

A WRITER in the American Florist gives a description of a visit to the island-home of C. A. Dana. He takes occasion to speak of Mr. Dana's accomplished superintendent as follows:

"Mr. Falconer is an enthusiast, caring nothing for labor so that his eyes and heart may be gladdened by the vigor and beauty of the plants he delights in. His knowledge is gained by the most careful and thorough study. For 15 years it has been his habit to collate all the facts that can possibly be known concerning the innumerable plants of which he has had charge."

There is no other writer upon horticultural topics in general whose articles are more highly prized than those of William Falconer. Well they may be. He writes from experience gained by a thorough early education in the pursuit of his choice.....

WILLIAM FALCONER mentions, in that excellent journal the American Florist, that of his collection of lilacs he prefers Marie Legraye. Not only are the panicles of immense size, but they are produced in extravagant abundance, and the plant is a capital grower.

The new climbing Perle des Jardins, Miss Taplin says, in the same journal, is a beautiful rose that will naturally excel the old favorite, Niel, in its constant blooming.....

MISS TAPLIN also remarks, while speaking of the R. N.-Y. Rosa rugosa seedling, that there is no doubt it will be an admirable outdoor rose; its vigor, hardiness and incessant blooming are the qualities that will make it popular.....

THE reason why more men do not make dairying pay, says the Dairy World, is because they refuse to believe that there is any study or investigation needed in regard to the care, treatment and management of the dairy. If they chance on a success, they call it luck: and if they fail, they never investigate the matter to see wherein they fail, so as to steer clear of a repetition. Success in the dairy depends entirely upon the dairyman. A good dairyman, first of all, will see that he has the necessary appliances to insure success—good cows, suitable feed and buildings, and the proper utensils and knowledge for turning out a first-class product. In fact the intelligent and enterprising dairyman would be satisfied with nothing less.....

REMEMBER to try Japanese buckwheat.....

"Do all fine butter makers follow essentially the same rule?" is a question answered in the Ohio Farmer by a noted dairy authority. They do not, he says. No two exactly agree, and some show wide variance, but, after all, a similarity runs through all the different makes. Milking a good cow, generously fed, well housed and kindly treated, milk set as quickly as can be after milking, cream taken off before the milk sours, and churning at a pleasant acidity, are the rules with 99 out of every 100 fancy butter makers. They wash out the butter-milk with water. Most of them use weak brine. They use less salt, about an ounce to the pound, in the wet butter, which leaves a half ounce or less of salt to a pound of finished butter. No butter maker of great reputation holds butter for a better price, but sells as fast as made. This is now substantially the royal road of the butter makers, and he doubts if any one to-day is getting top market prices for butter made by the methods of 20 years ago.....

"THE farmer's dollar is heavy," says Emerson, in one of his admirable essays; "it is no waif to him. He knows how many strokes of his labor it represents. His bones ache with the day's work that earned it. He knows how much land it represents—how much rain, frost and sunshine. He knows that in the dollar he gives you so much discretion and patience, so much hoeing and thrashing. Try to lift his dollar, you must lift all that weight."....

WORD FOR WORD.

—PUCK:

"COUNTRY AND CITY: Miss Sheafe.—Ah, look at that wheat rising and falling yonder in the breeze! How beautiful!

Mr. Weetfit.—Ah, but you ought to see it rising and falling in the Produce Exchange!"

—PROFESSOR S. W. JOHNSON: "If you put potash or phosphoric acid on a soil of average quality, you need not fear that any surplus not consumed by the current crops will go to waste. The soil, if it be anything better than a sand pit or a gravel-bank, will retain these elements with a firm grasp. It is otherwise with lime, with sulphuric acid, and especially with nitrogen. These substances are more freely soluble in water, and are therefore liable to be carried down or away by heavy leading rains. To conserve them against loss is as important as to restore them when deficient, and amending the texture of the soil, increasing its water-storing power by suitable tillage, by incorporating with it porous vegetable matters in stable manure or buried green crops, is a necessary part of any rational system of treatment."

—ORANGE CO. FARMER: "Too many fields of buckwheat are destroyed by frosts. We think it safe to estimate that a thousand bushels are lost by early frosts for every bushel that is taken from the crop aggregate by too early planting."

—COLMAN'S RURAL WORLD: "The creamery boom has evidently struck the State of Missouri. From a number of points comes the information that contracts have been made with men in that line of business, and that thousands of dollars, generally six or seven thousand, are being put into a single plant."

—KANSAS CITY LIVE-STOCK INDICATOR: "No matter how much a farmer fancies he knows, while he breeds to a scrub or grade sire his progress will be like that of a man walking on keen ice, up hill, in comparison with that of an adept on skates."

—WESTERN RURAL: "Trusts are organized to steal other people's money. They are a conspiracy to pick people's pockets; they are operated upon the same theory that the highway-man adopts. He puts his victim in his power and commands him to deliver or be shot. He does not argue. His pistol does his talking. The trust does not argue. It comes with its sugar and demands your money, or you will drink your coffee without sugar. It comes with its twine and demands its price or you can go without twine; it comes with its oil and robs you because you must have oil. It is organized, systematic robbery, and it is done in the sacred name of law. That is the most galling part of it. A government of the people, by the people and for the people permits a few conscienceless plunderers to rob the millions, without so much as a remonstrance. A discussion has just been settled by a Chicago court that the gas trust is practically legal. It sometimes seems as if government was expressly organized for the protection and encouragement of the well dressed villains of society.

—LIFE: "WHILE Europe is industriously engaged in shipping her paupers and convicts to the United States, the United States is just as busy shipping her millionaires and their families to Europe. It doesn't take a political economist to determine in whose favor is the balance of trade."

—INSECT LIFE: "We learn from the California Florist and Garden for March, 1889, that during the year 1888 there were imported into the United States from Dalmatia and other places between 200 and 300 tons of dry pyrethrum flowers, while California's product was 52 tons."

Horsford's Acid Phosphate.

If you are Nervous,
and cannot sleep, try it.—*Adv.*

Miscellaneous Advertising.

Scrofula

Probably no form of disease is so generally distributed among our whole population as scrofula. Almost every individual has this latent poison coursing his veins. The terrible sufferings endured by those afflicted with scrofulous sores cannot be understood by others, and their gratitude on finding a remedy that cures them, astonishes a well person. The wonderful power of

Hood's Sarsaparilla

in eradicating every form of Scrofula has been so clearly and fully demonstrated that it leaves no doubt that it is the greatest medical discovery of this generation. It is made by C. I. HOOD & CO., Lowell, Mass., and is sold by all druggists.

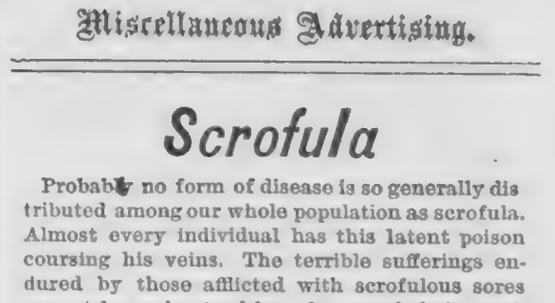
100 Doses One Dollar

JOHNSON'S ANODYNE LINIMENT ESTABLISHED 1810.

For Internal and External Use.

Stops Pain, Cramps, Inflammation in body or limb, like magic. Cures Croup, Asthma, Colds, Catarrh, Cholera Morbus, Diarrhœa, Rheumatism, Neuralgia, Lame-back, Stiff Joints and Strains. Full particulars free. Price 35 cts. post-paid. I. S. JOHNSON & CO., Boston, Mass.

Beecham's Pills act like magic on a weak stomach.



THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, JULY 6, 1889.

IT may be worth noting that the vines of the potatoes growing in the barrels have not been attacked by potato beetles and by comparatively few flea beetles.

THE dressed beef men have always argued that their meat is carefully selected, cleanly handled and packed. They should ride a few miles out of New York to some of the smaller suburban towns and see how they like the way our meat comes to us. It is taken off the ice in this city, put in ordinary, open baggage cars, dumped off the cars to the station platforms, where it stands in the broiling sun until the local butcher can put it into his ice box. Now this meat costs us just as much as did that of several years ago, when butchers killed and dressed their own beeves—many of which were raised right on our own farms.

WHAT is to be done with the thousands of lazy, shiftless young men one notices in all our large cities? They are absolutely opposed to all useful labor. It is useless to find them opportunities for earning money—they will not stay in any place, however favorable, more than a few days. They are simply worthless scamps who are perfectly willing to eat and drink up the hard earned savings of mothers and sisters, or to depend upon theft and fraud for their livelihood. This worthless, idle class is constantly increasing in numbers. The problem of providing for it will become one of the most important that Americans will be called upon to settle. There is absolutely no place in this country for a class of vicious non-producers. The idle rich, who do nothing but spend money are bad enough; but the healthy poor who will not work and who do their best to discourage work in others, are entirely out of place in America.

"Do you wonder that I am a farmer; that I love the dear old home where I have been so kindly cared for? Read "Train up a Child," under Discussion, page 446.

A FRIEND in New York State is engaged in the business of supplying hay for the horses in this city. In speaking of his methods of curing and handling hay, he says: "Clover is the worst weed the dealer has to contend with."

Another friend in the same State supplies milk for the city market. He writes that he has about decided to so rearrange his rotation that he will raise no Timothy, as he believes that clover will pay him better—make more milk. Thus with one clover is a worthless weed, while with the other it is the most valuable plant on the farm. Both of these men are successful farmers. One takes pride in sending to the city the best possible quality of hay; while the other is anxious to produce the largest possible number of cans of milk per acre. The point we want to bring out is that the time has gone by when general rules of agriculture will answer for those who perform special work. Nature has provided a special tool for each department of farm economy. She does not put these tools into the farmer's hand without a request from him. She puts the whole list within his reach. He is to hunt out the one best suited to his special work.

THE GRAIN APHIS.

THE farmers of Ohio, Indiana and Southern Michigan are much alarmed by the presence on the wheat of Aphis avenæ, or the grain plant louse. In Indiana they call this the grain midge. This is a very wrong term. The midge is a two winged fly, much like the Hessian fly. The orange fly lays its eggs on the berries, and the orange maggot absorbs the juice from the berry and so causes it to wither. This plant louse is very different. It works on all kinds of grain—oats, barley, rye, etc. It also inserts its beak and sucks from all parts of the plants—stem, leaves and head. This grain Aphis is no new pest. It has often done serious damage, and was fully described by Dr. Asa Fitch as early as 1865. The one comforting thing about it is, that it is rarely very destructive two years in succession. As is well known, dry weather is very favorable to the development and increase of plant lice. It is very probable that the very dry weather in April and May explains the raid made by the pests the present season. It is equally true that wet weather is unfavorable, and destroys the lice. It is to be hoped that the present numerous and copious rains of June have been in time to kill the lice and save the crop.

From the nature of the case, the excellent plant-louse specific, the kerosene and soap mixture, can hardly be employed in combatting the grain aphis. We can only hope that the rains will bring relief, and rejoice that we shall probably be exempt from the scourge another year

ANTI-TRUST LEGISLATION.

WHO was it that predicted that in 15 years the business of this great country would be consolidated in a few trusts, and that the social system would then consist of a few families of enormous wealth, a middle class of lackeys, and a great laboring class of degraded working people? Is there any serious likelihood of such a revolution in 15 or twice 15 years? It is an obvious fact that in spite of public sentiment and much legislation, trusts are multiplying alarmingly and enlarging their scope and influence, and all legislation hitherto formulated against them appears ineffective. Indeed, all the acts hitherto passed seem defective in some respects. The Kansas law, for example, prohibits combinations tending to "advance, reduce or control" price or cost to producer or consumer. The Texas law is drawn with equal looseness, and that of Iowa is by no means well formulated, while the Missouri enactment, although better in form, does not appear to possess any terror for trust-makers, the National Lead Trust having recently made fresh headway in St. Louis, and a plug tobacco trust being now in process of formation there. Is it possible that the trust magnates hire shrewd lawyers so to formulate anti-trust legislation that it must prove inoperative? The tersest, clearest and most coherent bill of the kind yet formulated is that just passed by the Michigan Senate, and which is pretty certain to pass the House also. It was framed by Judge Christiancy, and is a model for such legislation. What is the use of anti-trust laws if the smart lawyers whom the trusts' immense resources are prompt to hire, can "drive a coach and six" through them?

MR. HALE'S PEACH CULTURE.

THE R. N.-Y. congratulates you, Mr. Hale, that in opposition to the advice of experienced friends, you should have engaged in peach culture, and that the present season, in spite of untoward conditions, the prospect of a profitable crop was never better. The frosts which injured the crop in many States and destroyed it in others, merely served in Mr. Hale's orchard to effect a judicious thinning out of the fruit, and he now has well-grounded hopes that his peaches will be as large, as highly colored and as abundant as those of any other peach orchard of similar size in the entire country. Mr. Hale has made departures in his peach culture from the usual methods, which are both original and instructive. He spreads upon the orchard 400 pounds of muriate of potash every year. He uses the muriate simply because it is the cheapest form of potash. This, as he believes, induces a fine color in the fruit. Besides the potash, he uses 1,000 pounds of fine raw bone per acre. This gives the phosphoric acid and all the nitrogen, which the trees seem to require. His trees are not troubled with the yellows but are thrifty and sound. He leaves the peaches on the trees until they are *ripe*. Then careful selections are made in harvesting and each basket is *guaranteed* to be filled with fruit of the same quality from the bottom to the top.

His varieties are the Mountain Rose which ripens from August 25th to September 10th; Oldmixon, ripening from the 10th to the 20th of September; Stump the World, ripening from the 15th to the 25th, ending with some Late Crawford, Ward's Late and Morris White. Go, you, good peach-growers, and do likewise. Mr. Hale's farm is in South Glastonbury, Conn.

PROHIBITION.

SO far this year four States have voted on the question of constitutional Prohibition, and in all the amendments were defeated by majorities so large as to leave no doubt of the wishes of the majority of the people. In New Hampshire the adverse majority was 5,503; in Massachusetts it was 45,820; in Pennsylvania 185,000 and in Rhode Island 18,000. Judging from legislation on this subject of late, it is evident that the prohibition sentiment in the country is stronger in the West than in the East. This, no doubt, is due to the fact that there are fewer large cities and towns in the former than in the latter. As an almost invariable rule, the States in which large numbers of workingmen are centralized in cities are opposed to Prohibition. The very class that would be most benefited by the abolition of the liquor traffic are most bitterly opposed to it, and the cities where laboring men congregate in greatest number roll up the heaviest majorities in favor of the saloon. It is a trifle curious that while Republicans make special claims as antagonists of the whiskey power, the above four States are strongly Republican in national politics. Local option or high license is the form in which Republican advocacy of temperance generally finds expression. Laws in support of the former enable any county in which the general sentiment is in favor of Prohibition, to enforce it; laws in support of the latter increase the revenues of the various municipalities, diminish the number of saloons, and weed out the more disreputable among them: but there is absolutely no proof that the decrease in the multitude of these plague spots causes any diminution whatever in the consumption of intoxicants, and this is the main point in the whole temperance agitation. What difference is there in the effect of the sale of liquor whether a dozen men become intoxicated in a dozen different rum mills, or whether they all become drunk in one? Politicians and liquor men are generally jubilant at the idea that the late defeats have given Prohibition a death-blow. The idea is ridiculous. The party engaged in the Prohibitory movement may have to reform its party lines, and drop some of the issues that have weighed heavily upon it; but there is too much vitality in it, and too much importance in the issue for which it is contending, to permit it to surrender because of these setbacks. What great reformation was ever effected without overcoming some temporary checks?

HOW ABOUT IT?

AFTER a long and earnest battle with politicians, Prof. J. W. Sanborn has been removed from his position as Dean of the Missouri Agricultural College and Director of the Missouri Experiment Station. The R. N.-Y. has obtained a history of this contest, and it is a history that ought to make the farmers of Missouri blush with shame and indignation. The R. N.-Y. believes Prof. Sanborn to be one of the ablest agricultural teachers in the United States. It is also satisfied that he is an honest, faithful, fearless, energetic and competent official. So far as we know, nobody has ever disputed these facts—not even those who secured his removal. In reality, he was too honest, too faithful, too fearless of the gang of political boodlers who have no use for the University of Missouri except as a part of their political machine. They were unhappy because they could not control the little "patronage" that fell in the way of the agricultural college. Whenever they undertook to make this college a part of their political machine, they found Prof. Sanborn squarely and unflinchingly in their path. Unable to get rid of this opposition in any other way, the politicians artfully engineered a political crusade against what they termed "the management of a Yankee and a Republican." As a result of this movement the legislature refused to make any appropriation for the university until Prof. Sanborn was removed. Then the professor's friends weakened, the appropriation was voted and Sanborn was removed.

This contest should not be permitted to drop. Prof. Sanborn distinctly states that the university authorities have for years misappropriated the funds belonging to the agricultural college. The R. N.-Y. believes, from the information it has at hand, that these charges can be substantiated. When the Hatch Bill was passed, the R. N. Y. stated that it would give its earnest support to the stations and colleges just as long as they showed evidences of a desire to do honest work. It also stated that it would do all in its power to correct abuses and punish mismanagement. The time has now come to determine whether politicians and boodlers are to run these stations or whether farmers and their representatives are to manage their own affairs. Now, Secretary Rusk, and Assistant Secretary Willets, what do you propose to do about this matter? The R. N.-Y. demands an investigation of the conduct of the directors of the Missouri Station. Prof. Sanborn makes definite charges. Are you going to ignore them? The public want to know about these matters. If you do not stamp all political jobbery out of the work of these stations you will lose the influence and respect of the class of farmers you need to help you in your work. The Hatch Bill provides a remedy and a punishment for misappropriation of the experiment station fund—doesn't it? Investigate the Missouri Station, and if the facts warrant it, apply that remedy sternly and quickly. This is an important matter. Let us carry it right through to the end.

"They think they know all about farming and hence don't want to learn. . . . . It is a long and difficult task to lift farming from an illiberal labor to a liberal profession; to make it an applied science, a skilled art instead of an empirical drudgery. It will be long before the bulk of farmers 'manure with brains.'"—PRES. CHAMBERLAIN, page 444.

BREVITIES.

How is your potato contest plot, good lady?

GOOSEBERRIES.—Millions of them! We have never before seen so large a crop as that which is now maturing at the Rural Grounds.

A CANADIAN subscriber says that the flee-beetle troubles him only in small patches of potatoes. In the large fields it does comparatively little harm.

THE Parker Earle strawberry will come to stay—if its behavior at the Rural Ground *this* season may be taken as a guide for other parts of the country.

THE FLEA-beetles have nearly disappeared and the R.N.-Y.'s hopes are proportionately strengthened that its Contest Plot will this season meet with success.

SPRAY asparagus plants, infested with the asparagus beetle, with Paris-green or London-purple water. Use a heaping tea-spoonful of the first and two of the latter to two gallons of water.

THE R. N.-Y. has sprayed grape-vines with the Bordeaux Mixture with a view of repelling the rose-bugs, as suggested by Col. Pearson. But the sprayed vines were infested the same as those not sprayed.

AN abundant hay crop seems assured. All that is needed is curing weather. Stocks of Western hay on hand from last season are large and the South is increasing its hay product. Prospects are not very bright therefore for high prices.

A brother of the great horse Spokane, the Montana phenomenon of the race-course, the cynosure of yelling thousands, petted, caressed and belauded, toils in front of a street-car in St. Louis. Will the present favorite's career end in the same monotonous drudgery?

AN effort will be made at the Paris Exposition to enlighten the French people as to the great merits of the American cranberry. There is a future for this fruit. Its consumption is largely on the increase and there is every possibility that a good export trade can be built up and maintained.

WHEN it is desired to catch the horse at the R. N.-Y. farm it is only necessary to go to the fence with a pail containing a little skim-milk. The horse will come on the trot the moment she sees the pail. We have lived on farms where it was necessary to spend an hour or more chasing the horse at pasture.

SECRETARY BLAINE tells the Chicago Board of Trade that he is about to take "decided action" with regard to the French and German prohibition of American pork importation. Good for Blaine! His "vigorous foreign policy" has done well for the maltreated Oceanic Samoans; why shouldn't it be exercised with equal force and success in favor of the calumniated American Hog?

THE R. N.-Y. has frequently noticed how much of the pea crop is wasted by market gardeners. The vines are permitted to become hard and woody before being harvested. The peas are picked and then the vines stand in the sun or wet until the ground is wanted for another crop. These pea vines make an ideal crop for the silo. The stalks of sweet corn form another admirable silo crop. The time may come when the silo will enable gardeners to compete with the Dressed Meat Trust.

THE R. N.-Y. makes its so-called Bordeaux Mixture by the following simple formula: Half a pound of copper-sulphate; dissolve this in hot water. Half a pound of unslaked lime; slake this and add enough water to make two gallons (one pailful) in all. If this is to be forced through any of the spraying nozzles, it will be economy to run it through a fine sieve before spraying. The original Bordeaux Mixture can not be forced through a nozzle. Besides, it is so strong that it will seriously injure the foliage of potatoes and roses, and must, therefore, do some harm to grape-vines.

Farm Economy.

BUCEPHALUS BROWN'S NOTIONS AND IDEAS.

FIRE-FANG.—Is fanged dung "as worthless as straw?" The chemists don't say so, nor do the crops. Analysis shows that this overheated manure is worth more, pound for pound, than it was before it fanged. The loss to the owner is in the fact that there is a great deal less of it. As the loss in value is less than the loss in weight, a ton of fanged manure has more money and manurial value than a ton of the same before fanging.

WORTH KNOWING.—A knowledge of this fact has enabled me to make a little profit, though at the expense of reputation as a farmer. I buy a good deal of dung, and always pay the same price per load for the fanged as for the unburned. I have been too long accustomed to have the know-it-alls laugh at me, to be much disturbed. We all know what Solomon thought of this kind of laughter.

"A LITTLE LEARNING, ETC."—When a pile of dung heats strongly, it loses weight; and very fermentible manure will heat sufficiently to lose more than half its weight. What is it that has left the pile? Nearly all of it is water; but if there is any ammonia, gas or carbonate in the manure, some of this will go off with the water vapor. A very little ammonia makes a very big smell; and the loss of this is much smaller than we are apt to think. I cannot just now put my hand on the record of any analyses of fanged dung, but I have seen them, and while they show a proportional excess of potash and phosphoric acid, there was still a fair amount of nitrogen compounds left in it.

WHAT GOES ON?—What changes take place in the manure under this treatment? First, concentration by evaporation. A large percentage of the moisture, practically all water, goes up by ventilation. Where the manure is or becomes dry enough to need irrigation from the urine tank, much of the water from this is also evaporated. Altogether, this evaporative process greatly reduces bulk and weight, while preserving all the manurial value. Second, a de-and re-composition goes on, which gives us the plant food in a more available, and therefore more valuable form, at the same time improving its physical properties—making it fine and even in looks and quality, and so capable of producing evenness in the crops, and in the future condition of the soil to which it is applied.

WHERE MUCH SOFT FEED IS USED, a considerable amount of dry bedding may be necessary in order to have the manure firm enough to keep swine on it. Covered drains in the cement floor might help the situation in some cases, but few farms are unable to provide or obtain enough dry material of some sort for this use. Dry muck (air-dried for a year under sheds) or dry sawdust, spent tan, and many other cheap absorbents can be used. I believe the wisest course is to use most of our composted manure for growing grass, either as top-dressing or in seeding; and to grow our hoed crops on turned sod, or on fallow with bone fertilizers, wood-ashes, potash salts, and the like. With good management, no manurial nitrogen need be bought on stock and dairy farms.

MODERATE THE HEAT.—How shall we do it? In several ways. Perhaps the easiest and cheapest way is to keep hogs on it. Many object to keeping swine in a manure shed, pit, or cellar, as being injurious to the health of the animals, and to the wholesomeness of the meat. If it injures the health, then there is no boubt about the injury to the meat. But there is no better, more salubrious or more comfortable spot to winter swine than in a well-lighted, well ventilated and properly managed place where manure is being rightly managed. The only vapor that comes up from such manure is the vapor of water, slightly impregnated with some harmless volatile matter. Doubtless such places can be badly mismanaged; but as long as the manure is kept safe from injury, the hogs will be all right.

NO EXCESS OF WATER.—This is a main point. If all the urine goes down or out with the manure, you will have a slush-hole sure enough, in which the pigs must wade, or swim. A urine tank is indispensable, with a pump and leaders provided to irrigate the mass as needed. And there should also be a place where the swine can be penned. In this place they should have their cleanly strawed beds.

COMPOSTING MANURE.—When manure is mixed with bedding material and other rough vegetable waste, the question arises, how shall we fit it for use? In the first place, I would never allow any long corn stalks or like fodder among my manure. Such stuff should always be cut before it is fed. Then how much composting will pay? That must depend upon how good your arrangements are. But if it pays to allow about double price for increased solubility in commercial fertilizers, it certainly ought to pay for some labor spent to have the availability and mechanical condition of stable manure so greatly bettered as it can be by judicious composting.

COMPOSTING WITHOUT FANG.—This is entirely controllable, several methods being applicable. Sufficient compression prevents it entirely, as we see in sheep pens and box stalls. But if air is entirely excluded, the manure is not much improved. The presence of a certain amount of air, which is excluded by a preservative compression, is necessary for the progress of that decomposition which increases solubility. We want the manure to heat, but we must be able to control the heating process.

MOLD IS NOT FANG.—Sometimes people standing by when we are drawing out manure, seeing the matured article sometimes appearing a little moldy, insist that it is fanged. No such thing. Mold is a plant. Injuriously heated (fanged) manure is never moldy. Its light, whitish appearance, to which mold has some resemblance, misleads the observer. The heat produced in fanged dung destroys all mold germs. They may re-appear in *old* fanged manure, but when fresh there is no mold on it.

NITROGEN IN DUNG.—In dung as voided there are practically no volatile nitrogen compounds. These are produced in the progress of de- and re-composition, which goes on in the heap according to its conditions and circumstances.

HANDLING AND SAVING MANURE.—Mr. Saunders, of Ohio, (p. 396,) advocates keeping manure in ridges not over four feet high, exposed to the weather, and says he has very little fire-fang. He is opposed to keeping it under cover. I keep all my manure in sheds, mixing all sorts together, and find no difficulty in preventing loss from heating. I desire to have it heat, but I do not allow it to fang.

HANDLING MANURE.—Manure is costly to handle, and I do not wonder that thinking farmers strive to avoid handling it more than they are obliged to. Manure never gains in potential value by keeping. In this sense, it is never worth more at any time than when it is dropped. Clear horse, sheep, hog and hen manure is fit for application to crops when dropped; and the plan of Mr. Macpherson, of Lancaster, Ontario, by which the dung of his cow stables (the fluid being piped to a reservoir,) is dropped through scuttles to dumping platforms in the basement, is an excellent one for a dairy farm.

Pomological.

THREE RUSSIAN PLUMS.

PROF. J. L. BUDD.

Mistakes made in the early distribution of three varieties; their advantages over other kinds; habits of growth as well as size and quality of fruit of the Black Prune, White Nicholas and Early Red; their hardiness and freedom from injuries from insects.

AT the Chicago Convention of Nurserymen I stated, in answer to queries, that the Early Red plum from Russia was proving one of our best plums for sections where the West European varieties and their seedlings measurably failed on account of winter injury to the trees, the rotting of the fruit, or loss from the attacks of the curculio or plum gouger. This public remark has brought several letters of inquiry, mainly from parties east of the lakes. I answer in the RURAL, as we have made blundering work in the distribution of three of our Russian varieties.

We received them from Dr. Regel, in 1880, under their Russian names, which we could not then read. At first they were propagated and sent out for trial as "Russ. No 1"—now called Black Prune; "Russ. No. 2"—now called White Nicholas; and "Russ. No. 3"—now called Early Red. Later, by accident, cions used in top-working were mixed. This gave us a lot of mixed cions we could not then separate. Some of these we sent out under the name of "Mixed Arab," as the Black Prune is grown in Russia in the interior as Black Arab. We said at the time that we could not afford to lose the mixed cions and that when they reached the bearing stage the red, white and black fruits would tell their own story as to proper names. All of these varieties are proving hardy in tree, perfect in leaf, and excellent in the quality of fruit.

THE BLACK PRUNE (No.1) is spreading in habit of tree with quite large, broad, light-green leaves without luster. The fruit is prune-shaped, about as large and as good in quality as the medium German prune, and is nearly free from the attacks of the curculio and plum gouger, so far as noted. In tree and fruit bud it appears to be quite as hardy as any of our native Western plums.

THE WHITE NICHOLAS (No. 2) is upright in habit and only develops the terminal buds on the preceding year's wood, giving it a peculiar expression, as the leaves are mainly at the points of growth, and on the numerous fruit spurs. The leaves are small and much like those of the Early Red except in their greater width. The fruits are also, in size and shape, much like those of the Early Red, but yellowish-white in color. So far they seem curculio-proof.

THE EARLY RED (No. 3) has been most widely distributed, as by top-working we soonest learned its value. In tree it is much like the White Nicholas, but the habit of having its leaves at the points of growth, with rosettes on the fruit spurs is still more observable. The fruit—in pairs—is found on the spurs of the two-year-old and older wood, and makes peculiarly rapid growth during the early period of development. At this time (June 15) the fruit is fully four times as large as that of our largest and earliest native sorts. Perhaps this early rapidity of development, and the accompanying supply of water in the cell structure, may give warning to the curculio and gouger that it is not a proper place for egg deposits. Be this as it may, I have not as yet seen a single mark left on a specimen of this plum by insects. When fully mature the fruit is oval in shape, deeply sutured, purplish red in color, and about like the Richland in size and quality. While it is likely to prove valuable in parts where the Lombard is perfect in tree but liable to injury from rot or curculio, it will have its greatest value in parts where such sorts as Moore's Arctic are killed to the ground, as they are with us.

Agricultural College, Ames, Iowa.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

IT is a fact that every woman is inclined to have what we call a "good cry" every now and then. It settles the nerves and relieves the feelings, but it is a bad practice to indulge in too often. One is apt to become chronically lachrymose, to the great detriment of both health and spirits. Life is too short to be spent in mourning All the same, if you *must* cry, do it without bitterness, and get over it as quickly as possible.

* * *

LAST year we spoke of domestic picnics—not big, formal affairs, where every one puts on her best gown and her company manner, but just a quiet, restful day in the woods, with a lunch thrown in. It is a capital rest for a busy woman, if she will only make up her mind to enjoy it. Just take the children and determine that no outside cares shall interrupt the pleasure. Out-door life is one of the best things in the world to give health and good temper; pity that housekeepers are apt to get too little of it.

* * *

How much time do you give to essentials—how much to unnecessary trifles? We recollect some old rhyme—maybe we do not quote it correctly, but it was something like this:

"There's too much labor goes to a bonnet,
There's too much stitching goes to a shirt;
Nothing is worth all the work we put on it—
There's nothing that's constant but labor
and dirt."

We don't take quite such a discouraging view of things, but certainly people do a good deal more than they need. In our house keeping, we should put cleanliness first, and insist upon it, too; but once satisfied that the place was clean and tidy, we should not care whether we gave our guest as many different kinds of cake as our neighbor or not, nor do we believe that many men would wish to see their wives overworked and miserable just for the sake of always providing an elaborate meal. Be moderate in all things, extra work among the rest.

* * *

DURING the summer there are many calls for simple medical aid, and it is well for the mother to be prepared in this direction. Ammonia for insect bites, alcohol for eruptions caused by poison, and simple medicines for disorders of the stomach, are most often needed. Such a reliable medicine as what is called by druggists the "Sun Cholera Mixture" will often prevent serious illness when rightly administered. The dangers of drinking too freely of cold water, or eating unripe fruit, should be impressed upon the children; teach them something about the care of their own little bodies, and the mother's responsibility is somewhat lightened.

* * *

ALL sorts of puffed or fancy sleeves are in vogue, but the most fashionable seems a modification of the old leg-of-mutton, with most of the fullness pushed up to the top. Often the fullness is wrinkled crosswise, like a mousquetaire glove. By the way, the mousquetaire glove is in great favor again, being worn entirely for dressy occasions; it harmonizes with these Directoire styles. Certainly, the fashions never were prettier than now, and they have the added charm of convenience and good sense.

OUTINGS IN NEW ENGLAND.

XI.

MARY WAGER-FISHER.

IF we had not previously decided upon Marblehead Neck as our terminal point, it would have been difficult to decide what place to choose on the long stretch of North Shore that lies between Boston and Halifax. All along that deeply indented, rock-bound coast, cottages and villages are strung like beads on a rosary—every place has its own peculiar charm. Marblehead is about 20 miles from Boston and can be reached by steam or horse-cars. Boston millionaires have their steam yachts and use them as vehicles of transportation. The railroads pass through Lynn and Swampscott, with Nahant lying on the end of a stretch of sand out at sea;—then come specified beaches and bluffs, Clifton, Devereaux, Marblehead, Salem, Beverly Farms, etc. Longfellow used to spend much summer time at Nahant where the sound of the Bells of Lynn was borne across the water to his ears. At Devereaux is the fine old mansion, used as a boarding house, where "we" sat within the farm-house old,

Whose windows looking o'er the bay,
Gave to the sea breeze damp and cold
An easy entrance night and day.

the first stanza of "The Fire of Driftwood"—and the next descriptive of Marblehead:

"Not far away we saw the port,
The strange, old-fashioned silent town,
The light house, the dismantled fort,
The wooden houses, quaint and brown."

The masses of rocks on which Marblehead is built are Syenite and porphyry interlarded with seams of greenstone, while there is no marble at all as marble is commonly designated. But the name suits the town as it is founded on rocks which look as though all the winds and waves of the mad Atlantic could never dislodge them; while the historic people of the town seem to have partaken of the solidity and sturdiness of its foundation. All through the Revolutionary times Marblehead was Boston's right-hand. A Marblehead Captain is said to have been the first to hoist the American flag, and Commodore Tucker "captured more British vessels, guns and seamen than any other Captain in the service" and his descendants are still there, sea-faring men, who ferry and row many thousands of people annually across the matchless harbor that lies between the quaint old town and the Neck, now planted with hotels and cottages for occupancy of the summer sojourners. The Neck is practically a long island, three miles in circumference, connected by a beach or causeway, to the mainland. While it has the harbor on one side, it has the open sea on the other so that one can sit and watch the ocean dash against the enormous masses of porphyry, or look across the quiet harbor, white with sails of yachts, to the old town which rises on its bluff of rocks like a medieval fortress. It was from a very early period the resort of fishermen who found the rocks a good place whereon to dry their fish, and so the town grew without plan or foresight. Wherever it was convenient between the rocks to put a house was one located, and the streets ran around to the houses without any formality of side-walks. The result is, that a quainter or more picturesque town does not exist in this country. Old St. Michael's Church, built in 1714, remains substantially unchanged. Its pastor, David Mossom, was the parson who performed the marriage ceremony for George Washington. As the town throve and men grew rich, it became quite a center of fashion. The Lee mansion, now used for offices, is a splendid example of anti-revolutionary architecture. It cost $50,000. Its hall and stairway are remarkably fine, and the paper is still on the walls which was manufactured expressly for them in England. Washington and Lafayette were both entertained here. A number of eloquent men have been born in Marblehead—among them, Elbridge Gerry, one of the signers of the Declaration, and Judge Story of judicial renown, and the father of a son equally eminent, the

sculptor, W. W. Story, who has lived for many years in Italy. During the years preceding the Revolution Marblehead was a commercial port, second only in importance to Boston. In 1839 there was a fleet of 98 fishing schooners owned in Marblehead, and manned by Marblehead fishermen. The town is not large, yet during the Secession War it furnished 1,048 men for the army and navy. Its patriotism is one of its notable features. This neighborhood was, in aboriginal times, a great rendezvous for the Indians who found the hard rocks peculiarly well suited for stone implements, and large collections of Indian relics have been made by the inhabitants. The flora of the region, notwithstanding the rockiness of the soil, is very interesting. Among plants peculiarly associated with Marblehead, may be mentioned the genista, or woad-waxen, the Deptford pink, Emerson's "Rhodora," the orchids calapagon and arethusa, violet, saxifrage, calombine, anemone, Houstonia, adder's tongue, bellwort, shadbush and meadow rue. The swamps in season are aflame with azaleas, blue flag and scarlet lilies, and in September the varieties of golden rod are *said* to number 28. I never found over eight or nine, but my own collection was made in one afternoon's careless saunter, and was doubtless very incomplete. After spending one day in the old town we were enabled to settle ourselves very comfortably on the "Neck" where I made it my first business to get well, and at the end of one week I was able to sit up all day, which for many a month I had been unable to do, and from that time on, my recovery continued. The effect of a strong sea air, upon some persons is quite magical, inducing sleep, and greatly improving the appetite. Upon the occasion of my second visit to the "Neck" in the following summer, the beneficial effect of the air was much less. It produced a great deal of headache from being too strong for me, but the fine appetite and good sleep resulted as aforetime. There were no pests in the way of mosquitoes, or gnats, to speak of, no sand—everything was as clear, and sweet as sea air and a clear sweep of sea winds could make it.

FOR THE GUEST CHAMBER.

BY OLIVE E. DANA.

THERE is no room that affords better scope for decoration than the "spare room," and there is no apartment or department where decorative skill, issuing in "fancy-work," is more legitimate or appropriate. Girlish fingers have been quick to seize their opportunity and use it. But it often seems a pity that the energy and skill here spent, were not materialized in some other form than that too often given them. Things which absorb so much time and strength, albeit they are the products of so-called leisure hours, should have three qualities which are not always found in them—utility, beauty, and durability. And there are many things really admirable and of lasting value that may be fashioned even by inexperienced hands for this apartment, things that a Penelope might own or over which one of our own Puritan grandmothers would not have disdained to bend.

Some of these things, designed for the guest-chamber of a new home, have lately come to my notice, and as I have watched them growing under busy hands in odd moments, I have wanted to tell the "RURAL" readers of them. And to begin with the bed, as one ought: It is a return to a fashion beyond our remembrance, this bestowal of needlework in dainty lavishness upon bed-linen. Our grandmothers did it, and maybe our mothers' trousseaux displayed a little of it, but it has been so long gone by that it is practically a new fashion. And who does not like the suggestion of womanly thrift about it?

In this case, the sheets were made of fine bleached cotton, with a hem of the usual width, or about four and one-half inches, above which the threads are drawn and a row of hem-stitching set in. The pillow cases, of width of course to suit the pillows, and also of a fine quality of cotton, receive a corresponding finish. One pair of sheets, with, of course, the pillow-cases to accompany them, receive a little more attention in that more threads are drawn and a row of fine, eye-trying Mexican work is inserted. Some people might prefer linen, when so much work is to be bestowed, but the cotton answers very well. We never outgrow our liking for white spreads, though we too, have lavished love and leisure on silk patchwork. And a downy, springy bed, made up with the bed-linen here described, nicely laundered, with only the usual snowy covering, for the outside, for the pillow-shams might well be spared, would tempt the weariest traveler to swift and sweet repose.

Next in order comes the dressing-case, and for this a long linen scarf, decorated as suits the taste or skill of the maker, is fashionable and sensible. Those I most fancy are of butchers' linen, moderately coarse, and unbleached. They are about one and two third yards in length, and a half-yard in width before making. They have all around a hem an inch and a-quarter in depth, done in narrow hem-stitch. In each end are three rows of drawn work, of the same width as the hem, with corresponding spaces between them. Across each end is a border of wide lace, crocheted of unbleached linen thread.

The bleached linen might be used for such covers, if preferred, and they are very pretty without the lace, in which case the ends should be finished with a knotted fringe. One row of the drawn work also makes a neat and tasteful decoration. With such a covering, the many mats of the old-time toilet-sets could well be spared, and the bureau display only the tasteful pincushion, a favorite material for which, and a durable one, is satin. It may be lace-covered, but is quite pretty without it.

The commode may be covered with a scarf similar to that intended for the dressing-case, though it may be elaborate.

Round mats of white cotton, crocheted in simple patterns, and with or without the edge of color, are dainty and serviceable.

And this article of furniture admits of one other bit of decoration both unique and useful, in the form of a pitcher-scarf. This requires one-third of a yard of butchers' linen, the width of the linen sufficing for the length of the scarf. It has an inch-wide hem, done in hem-stitch, and a row of drawn work in each end. It is to be hemmed only on the sides, as the ends are finished with knotted fringe some three inches in depth. This small scarf, it may be added, is to be thrown across the top of the pitcher, serving instead of the clumsier towel to keep out floating dust, which will otherwise settle on the water therein.

SMOKING IN PRIVATE.

J. H. G.

MANY of the ills to which human flesh is heir, are the direct result of smoking tobacco. It is impossssble to estimate or trace the evil consequences of the filthy habit. It affects the innocent as well as the guilty. The innocent victims of the tobacco curse may be numbered by the thousands. The person into whose face the deadly fumes are blown always suffers more than the smoker, who inhales the smoke only to blow it out again. How many delicate lives are wasting away in the polluted air of the home of the habitual smoker? The following story, vouched for by the New York Graphic, is an example of what is going on in thousands of homes all over the country.

"My little girl," said a pretty young mother the other day, "has been nearly killed by her father's smoking. You see when I married I determined to be very liberal and advanced, and to do what I could to make home as attractive to Tom as his club. Mother would never allow smoking in her house, except in the smoking room, but I made sage reflections upon the tactlessness of women in managing men and determined that Tom should enjoy me and his cigar together whenever he pleased. When my daughter Lillian first began to be brought out of the nursery she was as round and rosy a baby as ever you saw, but we had not been having her with us much as we sat together until she began to grow listless and pale and lose her appetite. I called in our doctor, but nothing did her any good; she seemed to be just dwindling away, and she continued to dwindle until her father was called away on business for a month. Then she picked up and was quite bright again by the time he came home. That happened several times, until I said to myself one day as she was frolicing with me: 'Her father never saw her like this.' Then it suddenly flashed on me that there was something very queer about this. The upshot was that we found out beyond a peradventure that it was living in her father's tobacco smoke that was killing the child. I don't feel so much wiser than my mother now as I used to, and smoking at our house is again practiced on ancestral principles—at the top of the house."

LETTERS TO A COUSIN.

I.

DEAR COUSIN: What do you do when it rains? If you know how to amuse yourself and appear pleasant and agreeable to others during a cold, windy, drizzly week I implore you to share your secret with me. Uncle George reads novels. He likes the kind with a hero, "dark, dashing and bold" and a "maiden fair with golden haire" and lots and lots of love. Do you want just such a book? Then get "Shandon Bells" or any other one of William Black's, for I think he writes the sweetest love stories under the sun. I used to enjoy them, oh so much! I think I shall never forget when "Three Feathers" was running in one of our weekly papers. I had been bribed by a dear aunt not to read any love stories for a year, with the promise that she would then give me something worth reading. So I did not read this story from beginning to end, but I could not resist the temptation to read "bits" of it now and then—with burning cheeks and a guilty conscience. Still I did not feel very faithless when I accepted "Little Women" at the end of the year, or think the reward unmerited. After that, all of Miss Alcott's books were read and re-read with delight. I think now that there have been no better books written for children.

I read the other day that the great Tolstoi cobbles shoes when it rains and he cannot get out to enjoy his favorite recreation of plowing or mowing. He says: "You cannot conceive what a satisfaction it is to plow. It is not very hard work as it seems to many; it is pure enjoyment. You go along lifting up and properly directing the plow, and you don't notice how one, two and three hours have gone by. The blood runs merrily through your veins; your head becomes clear; you don't feel the weight of your feet. But the appetite afterward, and the sleep!" There, cousin, did you have any idea that plowing was like that? But I remember you have brothers, who have probably expatiated at great lengths (as boys will when they get enthusiastic) about the calm, sweet repose that fills their souls after a day's plowing, and you have doubtless wished many and many a time that you were a man and could go out and share their joy.

Seriously, dear, the great man is right. Nothing "in the world" (Max O'Rell calls that expression an Americanism) is so health-giving and exhilarating as out-of-door work. I have planted out three long rows of sweet peas this afternoon and picked three quarts of strawberries, and I am sure I don't feel half so tired and stupid as I would if I had worked just three button-holes. Of course, a great deal depends on the point of view. If you like to work button-holes, it will not make you tired to do them, or three times three times three; but I imagine that three more would be like the "last straw"—and you would be too nervous thoroughly to enjoy resting as you could had you been digging in the garden for the same length of time.

I received a "Rocky Mountain" cactus today from a friend in Denver. She said it had lovely large pink blossoms on it when she found it, and she told me that if I have no room for it in the flower beds I should plant it in the vineyard, so I infer that it will grow in any place. But I have put it in a large pot and watered it with hot water—I have read in some place that hot water was best for cactus—and I hope it will flourish and be a credit to—to the fair donor (I had almost said to myself). If it doesn't I shall write an elegy on the "Transplanted Cactus," in which it will be made to mourn and pine away with longing and home-sickness for a waft of wind from its dearly beloved Pike's Peak; and Mary, when she reads of its untimely death, will feel that she was very, very cruel indeed ever to have sent it so far away from its kindred; even if they were a prickley set, I doubt not that they were just as dear to the heart of the little cactus, as one little downy chick is to another little downy chick.

Flowers are the loveliest of all gifts—don't you think so? I would rather have this little cactus than any elaborately embroidered fancy-work my friend could have sent me. The fancy-work that so many girls spend half their time in making grows old and faded in a few years if it is not kept carefully folded away, and what good is it to any one in that case. But a little slip of a begonia will have one or two flowers the first year; five or six the next, and 25 the third year, growing larger and more beautiful each succeeding season and it is constantly on exhibition so that all your friends may admire it. I admit that the plant might die and the argument would seem to be lost, but you know your tidy or banner might be whisked off into the fire and that would be equally disastrous. Flowers and pictures, and books and music—these are the gifts that give ever-increasing joy and consolation to the soul. A dainty little souvenir received at Christmas time was a book of Colorado wild flowers, containing some half dozen specimens—yellow columbines, some grasses from the mountains, the Indian Paint Cup, a purple flower I had never seen, and a spray of golden rod. I remember the little inscription under in gold paint was:

"Golden rod lifted her leaves to the sun;
He bent and kissed them every one."

Golden rod would be my choice for our national flower, but, as some one said, we have a bird for our emblem and that is sufficient, unless circumstances should give us a flower some day. To deliberately choose a national flower seems a cold, unnatural proceeding. There ought to be some legend sacred to the hearts of our countrymen connected with a thing of that kind.

But good bye, dear, and remember that you are to tell me how to spend a rainy week in the country. Remember that last clause and don't advise entertainments that are indigenous to the city alone. I have appealed to you because I feel sure that your Yankee inventiveness has long ago enabled you to find out some better way than we Westerners have for spending rainy days.

Affectionately your cousin,

DOCIA DYKENS.

GOLDEN GRAINS.

THE CHRISTIAN UNION reminds its readers that there is a time for all things and that very much of the trouble that exists in the world is due to the fact that we do those things we ought not to have done and leave undone the things we ought to have done.....

TIMELINESS is as important as fitness. The right thing may become wrong unless it is in the right time. Look well to the time of doing anything; there is a time for all things. Choose the right time for saying things. If your wife looks wearied and worn out, be sure it is not the right time to tell her that the dinner is not hot, or that the bread is sour. Comfort her—cheer her up.....

IF you are annoyed or vexed at people, just remember it is not the right time to speak. Close your mouth—shut your teeth together firmly, and it will save you many a useless and unavailing regret and many a bitter enemy.....

IF you happen to feel a little cross—and who among us does not at some time or other?—do not select that season for reproving your noisy household flock. One word spoken in passion will make a scar that a summer of smiles can hardly heal over.....

IF you are a wife, never tease your husband when he comes home, weary from his day's business. It is not the right time. Do not ask him for expensive outlays when he has been talking about hard times—it is, most assuredly, the wrong time.....

IF he has entered upon an undertaking against your advice, do not seize on the moment of its failure to say, "I told you so!" In fact, it is never the right time for those four monosyllables.....

O, if people only knew enough to discriminate between the right time and the wrong, there would be less domestic unhappiness, less silent sorrow and less estrangement of heart. The greatest calamities that overshadow our lives have sometimes their germ in matters as apparently slight as this. If you would only pause, reader, before the stinging taunt, or the biting sneer, or the unkind scoff passes your lips—pause just long enough to ask yourself, "Is it the right time for me to speak?" you would shut the door against many a heart-ache.....

THE world hinges on little things, and there are many more trivial than the right time and the wrong.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

"FOURTH OF JULY."

"FOURTH OF JULY is coming again How shall we celebrate it?" is the question asked by all the boys and girls. Many families have a grand family picnic where all members, from grandfather down to the tiniest

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria.

baby they can boast of, meet together to have a day of it. They go to some cool, shady wood where the old folks sit and talk of the days when they were young, play a few quiet games and talk of crop prospects, etc. The young lads and lassies swing, play "Jolly Tars," "Drop the Handkerchief," "Copenhagan," etc., the children jump rope, romp, climb trees, and race till luncheon is ready. What a jolly, jolly time they have then, eating all the best "goodies" from the pantries of half a score of good housewives. Then come singing, dancing, etc. Then the ride home in the moonlight. This is the way many of our farmer-folks spend the day. They have very few fire-works and they are better off without them.

In Manayunk and Roxborough (two suburban districts of Philadelphia, which used to be considered away off, but which now form part of the city) it has been the custom for many, many years to have the annual Sunday-School picnics on that day. All the schools turn out and march together. It is a very pretty sight to see hundreds of children dressed in their holiday attire, marching two and two, singing as they go.

The Fourth of July is exclusively American, and belongs wholly to the United States, hence the reason of the great demonstration which is manifested all over the Union. How many of our boys and girls ever stop to think of what they are celebrating for? How many of you remember that it was on the Fourth of July that the DECLARATION OF INDEPENDENCE, which made us FREE, was signed, in the year 1776? And how many of you can tell who the signers were? In these days when we have just been celebrating our centennial under the present mode of government, it seems to me that it would be quite apropos for us to have a little talk about this very matter. Shall we?

Well, then, to begin with—those who signed the DECLARATION OF INDEPENDENCE were as follows: John Hancock, William Floyd, Philip Livingston, Francis Lewis, Lewis Morris of New York; Richard Stockton, John Witherspoon, Francis Hopkinson, John Hart, Abraham Clark of New Jersey; Robert Morris, Benjamin Rush, Benjamin Franklin, John Morton, George Clymer, James Smith, George Taylor, James Wilson, George Ross of Pennsylvania; Josiah Bartlett, William Whipple, Matthew Thornton of New Hampshire; Samuel Adams, John Adams, Robert Treat Payne, Elbridge Gerry of Massachusetts; Stephen Hopkins, William Ellery of Rhode Island; Roger Sherman, Samuel Huntington, William Williams, Oliver Wolcott of Connecticut; Cæsar Rodney, George Read, Thomas McKean of Delaware; Samuel Chase, William Paca, Thomas Stone, Charles Carroll (Carrollton) of Maryland; George Wythe, Richard Henry Lee, Thomas Jefferson, Benjamin Harrison, Thomas Nelson, Jr., Francis Lightfoot Lee, Carter Braxton, of Virginia; William Hooper, Joseph Hewes, John Penn, of North Carolina; Edward Rutledge, Thomas Hayward, Jr., Thomas Lynch, Jr., Arthur Middleton of South Carolina; Button Gwinnett, Lyman Hall, George Walton of Georgia. The men who drew up and wrote this great Declaration were Thomas Jefferson of Virginia, Benjamin Franklin of Pennsylvania, Roger Sherman of Connecticut, Robert R. Livingston of New York, and John Adams of Massachusetts. It was signed in Carpenter's Hall, Philadelphia, Pa.

The boys (and girls, too) of to-day are to be the rulers of the future, and it is well to teach them what this blessed freedom which we now enjoy cost those brave men of the past, who gave or ventured their lives to gain it. Let each heart beat to the words of

"My country 'tis of thee,
Sweet land of liberty,
Of thee we sing.
Long may our land be bright,
With Freedom's holy light,
Protect us by thy might;
Great God our King!"

DORA HARVEY VROOMAN.

SCHOOL DAYS.

ANY one to whom school has always been a weary, monotonous drag to be escaped as early as possible and remembered with the other afflictions of life, will be satisfied with the title alone of this, and will turn to some other part of the paper, so my readers will be only those who have loving memories of their school days and at times long for their return.

Busy people sometimes live for years so wrapped up in their work that the world takes a great stride meant to benefit them, and they do not know it until some seeming chance or some lull in their rush of duties shows them what has been going on around them while they worked.

The schools for grown folks that have sprung up all over our country are examples of one line of these benefits for busy folks. The Chautauqua gatherings in all parts of the land, and the summer school for teachers, on the lakes, at the seaside, and on hills and mountains, with their enthusiastic gatherings, show that there are thousands who have a perennial love for school life when it is offered in attractive form.

There are now schools where any earnest student is welcome and can feel at home, no matter what his or her age or attainments may be, and where the newest methods of instruction make even the rudiments of knowledge interesting. The pioneer of these schools, with terms of only 10 weeks, so that students are coming and going all the year, at their own convenience, has been among us for years, waking up sleeping faculties, increasing and intensifying the powers of hundreds who come within its doors, and aiming every term to do more and better work for its students, at the least possible expense.

There are many thoughtful, studious people who are working alone at some favorite study—history, natural science, modern or ancient language—and they feel the need of stimulus from other minds bent to the same work. Every mind grasps a subject in its own peculiar way, as, for instance, each student of history reads differently between the lines, getting near the truth in proportion to the extent of his general knowledge and his ability to enter into the spirit of long-gone and wholly different times.

Viewing any subject through the eyes of another enlarges our thoughts of it. We look across fertile farm-lands to a glorious sunset and see that the whole landscape is made radiant, and we feel the beauty with keen enjoyment; but an artist friend comes into our circle and points out the tints that make up the glory in sky and earth, the blendings of one into another, and the soft shades of freshly plowed land and the deepened colors of woods and grain and pasture fields. And the artist's view of the scene comes like a fine old lace over an already beautiful fabric; it is ours, too, ever afterwards whenever we stand in the sunset glory.

So the lonely student will find that a few weeks in a class will bring to him new thoughts, give him new points of view and enrich his work. A teacher who knew of what he spoke said to his class:

"There are hundreds of people who would go to school if they thought they could." Many think themselves too old or that it is beyond the limits of their incomes. But we ought never grow too old to find pleasure in learning. Few energetic people do. The workers of the world enjoy the paper or magazine that is devoted to their work, and study it with the zeal of true students. Our people are alive to their own hunger for knowledge. The farmers and their wives know that the farmers' institute where they learn the most, is the one they enjoy the most. They renew their school days as they listen to the teachers of dairying, small-fruit growing, poultry or cattle raising, or general farming, and as they take part in the discussions, the old-time recitations are recalled.

Every faculty we develop makes us safer from sickness and discouragement, at least as eminent medical writers tell us, and one must be very irresponsive or out of tune with his fellows who can attend a gathering of men and women for study without finding growth and development for some part of his nature social, intellectual or moral.

Most, if not all of these schools recognize the human hunger for spiritual growth and are pervaded by Christian influences. During 10 weeks spent in one of these schools the feeling often came that those who were not filled with a Christian spirit were missing the best part of all the school had to offer them—not only in the Bible classes and daily religious exercises, but in every class-room and in every study, there are so much comfort and encouragement and deep pleasure in acknowledging God's hand in all the works studied.

It is so easy and natural but such a fatal thing to fill our days with critical or bitter thoughts of the imperfections of human lives and human learning; but by doing so we grow ugly and hard and bitter and more hateful to ourselves than to any one else. There is an eternity of good to strive for; there is a universe of God's wonders to explore, and "if we seek these things we shall find them" and grow into their beauty by filling our thoughts with their truths. If we are always awake on the "Godward side" of our lives, they will be broader, deeper and truer. If you are studying alone, go to one of the summer gatherings for study and inspiration; or if winter gives more leisure, find out the schools that are open all the year round, and go for one term. Everything grows by what it feeds upon—minds and spirits as well as animals and plants—and the higher faculties need food and exercise even more than the body needs them.

One term of hard work with enthusiastic thinkers can be made as profitable for the future as the busy days of harvest spent in storing up food. We all feel mental and spiritual hunger, and ought to work harder to satisfy this with good and wholesome food and surroundings than to provide for physical hunger. ALICE BROWN.

SOME JOTTINGS.

IN "The Family-Pocket-Book" discussion, I said nothing, not because of lack of interest, but because wiser people gave my views better than I could. I do know one thing, however: the average husband of to-day will not adopt Mr. Terry's views, and, as Victor Hugo said: "To reform a man you must begin with his grandmother," and Dr. Holland, when asked when the training of a child should begin, said: "100 years before he is born," I think the training had better be begun soon, if that golden day when both members of the matrimonial firm shall have equal rights in the family purse, is to come before the millennium dawns.

I know one thing more, too: if any one means to practice true economy, he or she had best keep a strict account of expenses. One never knows what things do cost till they are "put down in black and white."

All my Scotch blood protests against hearing oatmeal called "unwholesome." Properly cooked, served with cream and a little sugar, and properly *eaten*, that is, slowly, and accompanied by a slice of brown bread, oatmeal can not fail to give strength and plumpness to the eater. Of course, no two stomachs, any more than any two heads, or any two leaves on a tree, are just alike; but, next to "mother's milk," is oatmeal for "natural food" *I* say.

People are apt to attribute the "national disease, dyspepsia," to pie, and "this dreadful American climate, you know," but this dreadful American *hurry* is more to blame than anything else. If people would take time to masticate their food like human beings, instead of bolting it like dogs, and take time to live sanely in other respects, there would be less complaint of dyspepsia.

A recent article in the RURAL NEW-YORKER was made to refer to "*non* scientific temperance instruction," which was, of course, a mistake of the types, as the temperance instruction given in our schools is on decidedly scientific principles. AUNT BETTY.

Miscellaneous Advertising.

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Is incomplete without a bottle of
AYER'S
Hair Vigor.
It preserves the hair, keeps the scalp clean, and is everywhere the favorite dressing.

"I have used Ayer's Hair Vigor for promoting the growth of the hair, and think it unequaled. For restoring the hair to its original color, and for a dressing, it cannot be surpassed."—Mrs. Geo. LaFever, Eaton Rapids, Mich.

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WHITE MOUNTAIN FREEZER.

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"Frozen Dainties."
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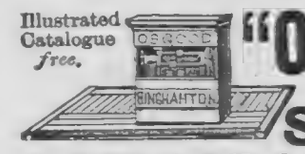

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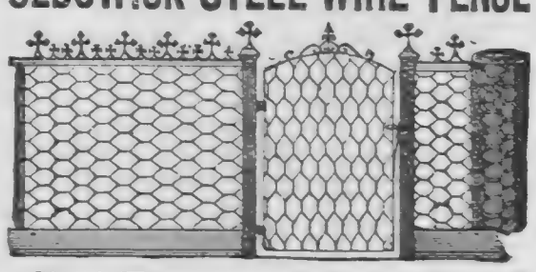

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THE NEWEST THING AND THE BEST.
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PAINLESS EFFECTUAL
BEECHAM'S PILLS
THE GREAT ENGLISH MEDICINE
WORTH A GUINEA A BOX

For Bilious and Nervous Disorders, such as Wind and Pain in the Stomach, Sick Headache, Giddiness, Fulness, and Swelling after Meals, Dizziness and Drowsiness, Cold Chills, Flushings of Heat, Loss of Appetite, Shortness of Breath, Costiveness, Scurvy, Blotches on the Skin, Disturbed Sleep, Frightful Dreams, and all Nervous and Trembling Sensations, &c. THE FIRST DOSE WILL GIVE RELIEF IN TWENTY MINUTES. This is no fiction. Every sufferer is earnestly invited to try one Box of these Pills, and *they will be acknowledged to be a Wonderful Medicine.*—"Worth a guinea a box."—BEECHAM'S PILLS, taken as directed, will quickly *restore females* to complete health. For a

WEAK STOMACH; IMPAIRED DIGESTION; DISORDERED LIVER;

they ACT LIKE MAGIC:—*a few doses* will work wonders upon the Vital Organs, Strengthening the muscular System; restoring long-lost Complexion; bringing back the keen edge of appetite, and arousing with the ROSEBUD OF HEALTH the *whole physical energy* of the human frame. These are "facts" admitted by thousands, in all classes of society, and one of the best guarantees to the Nervous and Debilitated is that BEECHAM'S PILLS HAVE THE LARGEST SALE OF ANY PATENT MEDICINE IN THE WORLD. Full directions with each Box.

Prepared only by THOS. BEECHAM, St. Helens, Lancashire, England.
Sold by Druggists generally. B. F. ALLEN & CO., 365 and 367 Canal St., New York.
Sole Agents for the United States, *who* (*inquire first*), if *your* druggist does not keep them,
WILL MAIL BEECHAM'S PILLS ON RECEIPT OF PRICE, 25 CENTS A BOX.

News of the Week.

HOME NEWS.

SATURDAY, June 29, 1889.

LAST Monday William Walter Phelps of New Jersey, Chief of the three American Commissioners to the Samoan Conference at Berlin, returned with the treaty made between the United States, Germany and England for the settlement of the late troubles in those Pacific islands, and the future control of the scattered kingdom. It is the general acknowledgement that the Americans secured every substantial point they made—because they were just, of course, and also because we were or seemed to be determined to fight for our objects and the other parties weren't willing to get embroiled with us about such a comparatively small matter in view of the present ticklish position of affairs much nearer home. The treaty signed guarantees self-government in the Samoan Islands under the joint control of the United States and Germany, England to act as arbitrator in the event of any differences arising. The Samoans are to elect their own king and sub-king or viceroy and to be represented in a senate composed of the principal chiefs and an assembly elected by the people. The Germans are to receive a small indemnity for their losses, and a special court is to be appointed to deal with the complicated land question Things will remain as they were before the treaty was completed until December..... On Wednesday Commissioner Phelps was nominated to be Envoy Extraordinary and Minister Plenipotentiary of the United States to Germany as a reward for his successful diplomacy in making the treaty. All agree that it is an excellent and well deserved appointment. The new Minister is nearly 50 years old, a New-Yorker by birth and a New Jerseyite by residence, rich, generous, thoroughly honorable, naturally clever, finely educated, with a knowledge of German and French, and four terms' experience in Congress. He is very popular here and also in Berlin, his return to which private business will delay for a short time..... A company to make lumber out of straw was incorporated in this State Monday..... Editor Noquin, of the Sentinel, New Orleans, the other day accused Editor Flacquet, of the Comet, of having been drunk at a picnic. Flacquet proved his hand was the steadier anyhow, by killing his traducer in a shooting scrape in the street.....The appropriations for paying pensions are all exhausted. Some attribute the blame to General Black, late Commissioner of Pensions, for not asking money enough; others lay it to Corporal Tanner, the present Commissioner, for squandering too much. The present fiscal year ends June 30, and the appropriations for the next year will be available after July 1. Already $90,000,000 have gone for pensions during this fiscal year, and Tanner wants $15,000,000 more..... .... During the last Administration the Lady of the White House was the butt of silly, ill-bred jokes from one set of witlings; during the present Administration, another set are busy poking similar jokes at the Baby of the White House..... Last Saturday the Montana horse Spokane, won the American Derby at Chicago, beating six others among them the Kentucky horse Proctor Knott, winner of the great $30,000 Futurity stakes here last year. His owner then refused $40,000 for him, expecting large winnings this year, but Spokane has defeated Proctor three times this season. The Derby was 1½ mile long; time, 2 41½; stake, $10,000. About $1,000,000 changed hands in bets. Spokane was the favorite at six to five on: the odds against Knott were two to one, and eight to one against the California horse Sorronto that came in a good second..... The Sullivan-Kilrain fight "The greatest of the century" is to take place near New Orleans on July 8, for $10,000 a side. Both men have been training hard and faithfully, and are reported to be in prime condition "fit to fight for their lives" They will start south in a few days. Betting is about even among disinterested outsiders; but the partisans of each are giving odds..... Nearly 400,000 acres of land in the Adirondacks have been sold to an Albany syndicate... ..... Monday the French-Canadians at home and in this country celebrated in style the feast of St. Jean Baptist, and the 353 anniversary of the landing of Jacques Cartier near Quebec—the beginning of the French settlement in Canada. At Fall River and Chicago, where French-Canadians are numerous, processions with allegorical cars and floats marked the day as joyously as in the Province of Quebec, and the fete lasted three days. Crowds of visitors flocked from all the surrounding country. The holiday originated in 1834 to commemorate the rebellion in Quebec when the English unsuccessfully attempted to banish the French language from the public schools.....Last Tuesday Mrs. Whiteling, the first woman ever hung in Philadelphia, suffered the death-penalty there at Moyomensing prison. She was 41 years old, short in stature and weighed 180 pounds. In the spring of 1888 she poisoned successively her husband, her nine-year-old daughter, and her two-year-old son, and after her arrest confessed the murders. She was to get a total of $199 in insurances on the lives All efforts to gain a commutation for this Borgia of the slums very properly failed. She died rejoicing at the certainty of soon meeting her murdered family in Heaven!.....Mrs. Lucy Webb Hayes, wife of the ex President, died at Fremont, Ohio, at 6.30 Tuesday morning, having never spoken a word or recovered consciousness since stricken with apoplexy the previous Friday. Born at Chillicothe, Ohio, in 1831, where her father, Dr. James Webb, was a prominent physician and active anti-slavery leader. Finely educated, refined, thoroughly amiable, sincerely religious, judiciously charitable, of medium hight and graceful figure, a model wife and mother, she was respected, admired and beloved in life, and is widely and sincerely mourned in death..... The longest legislative session ever held in Connecticut came to an end last week. The most important bill it passed was a makeshift modification of the Secret Ballot Law vetoed some weeks ago by Republican Governor Bulkley, who signed the new law last Saturday .....Senator Manderson of Nebraska, has just had his pension raised without soliciting, and been gladdened by the receipt of $6,000 for back pay at the higher rate.....On July 4, the Tammany Society will celebrate at Tammany Hall, this city, the 100 anniversary of its foundation and the 113 anniversary of the Declaration of Independence.....The Pennsylvania Prohibitionists are now likely to try to elect members of the legislature from the 29 counties that favored Prohibition, and then by political bargaining they will try to secure Local Option.....Thomas Nast the cartoonist, has just concluded a four-years' engagement with the publishers of the humorous paper, Time, of this city. He has just returned to N. Y. after a long sojourn in California.....Twenty of the leading nations of the world will be present at the International Marine Congress to be held next October at Washington. It will prescribe a number of maritime rules to be observed by ship-masters of all nations, and especially decide upon the limits of "navigation lanes" to be taken by vessels going east and west between this country and Europe, for greater safety in avoiding collisions between each other and with icebergs... .....Rev. William Henry Beecher, eldest brother of the late Henry Ward Beecher, died at Chicago on Sunday, aged 87 years..... An extra session of the Rhode Island Legislature will soon be called to revise the statutes regulating the liquor traffic..... Parson W. E. Howard, the convicted "electric" sugar swindler, has been sentenced to nine years and eight months' imprisonment at Sing Sing at hard labor, as "a swindler, perjurer and hypocrite." .....The lately organized British-American Association, at its annual session at Boston, the other day, "resolved" that Minister Egan should be recalled from Chili because he isn't in good odor with Englishmen. Among others, a copy of the "resolutions" was sent to Gov. Thayer of Nebraska, where Egan lived, and the Governor has bitterly denounced the association for unjustly trying to blacken the Minister's character, impertinent intermeddling, and impudent bigheadedness generally..... Ohio has 6,753 Sabbath Schools, but 6,000 more are needed to take in the half million youths still out of the fold.....The railroads in the Vanderbilt system have discontinued Sunday trains as far as possible. The Vanderbilt family, under the leadership of Elliot F. Shephard, is becoming quite religious..... Well clad, well educated, well fed, debonnaire Charles L. de Baun, defaulting assistant-cashier of the Park National Bank of this city, who had been always fully trusted, generously paid and well treated and had, in return, stolen from the bank $95 000, was sentenced, Monday, to five years and six months in Sing Sing. Same day tattered, ill educated, half-starved, dirty-looking L. M. Moore, who had never had more than half a chance, and didn't see that till it had swept by, was sentenced to six years in the same place for failing in an attempt to steal a $15 suit of clothes from a Baxter street Hebrew dealer in second-hand garments. De Baun stole deliberately for five years; Moore tried to steal on the impulse of the moment. One had everything; the other, nothing.....The Manhattan brass works, the largest makers of brass in this city, were cremated Monday. Loss $300,000.....The latest is a Glass Trust now being formed, to control all the glass factories in the country. It has already gobbled up nearly all in New York, many in Ohio and several in Pennsylvania..... In 1888 the government's revenue amounted to $6.32 per head of 60,000 000 population, and its expenditures, not including payment of the national debt, to $4 47 per head. The national debt amounted to $17 71 per head, and the interest thereon to 65 cents. The duties collected on imports were $3.47 per head, and the internal revenue $2 07.. ... Governor Foraker, of Ohio, was unanimously renominated, on the third ballot, by the Republicans at Columbus, on Wednesday, in the largest convention ever held in the State. After two ballots, all the delegates stampeded to Foraker amid the wildest enthusiasm. Born July 5, 1846 in Highland county; worked on a farm when a boy. Entered the army when 16 as a private, and came out at the end of the war a captain; graduated at Cornell in 1869, and was admitted to the bar in Cincinnati shortly afterwards Elected Judge of the Superior Court in 1870; defeated for Governor in 1883 by Judge Hoadly, but defeated the latter in 1885, and was re-elected in 1887. Democrats say he can't carry the State this time; Republicans say he can with a whoop. ....Wednesday the Rev. Dr. Bradford B. Raymond was installed as President of Wesleyan University, at Middleton, Conn....

General Simon Cameron died at his farm at Donegal Springs, Pa., at 8 o'clock Wednesday evening, June 26, having been prostrated with paralysis six days before. Born March 8, 1799; had a terribly hard struggle to get an education; but got it. Apprenticed in a printing office at 17; became owner and editor of the Harrisburg Republican in 1820. Elected State Printer next year and for the seven following. Entered politics in 1823 and soon afterwards became Adjutant-General, hence his title of General. Later became banking mogul, railroad magnate, insurance president, Indian agent, and United States Senator twice, Secretary of War, Minister to Russia, and again United States Senator twice, resigning at the age of 78, in 1877, to make place for his son J. Donald Cameron. Since then he has lived in comparative quiet. Always energetic, hard-working, shrewd, saving, a steadfast friend and a bitter enemy, and for a life-time a politician of politicians, he rose from poverty and obscurity to great wealth and political influence. Having outlived a multitude of enmities, full of years and honors the old man has joined the majority, leaving regret alone among the living..... Wednesday morning in a collision of three freight trains on the Pennsylvania railroad, 40 miles east of Pittsburg, 30 persons were killed and many injured. One locomotive and 30 cars plunged over an embankment into a creek 50 feet below. A car-load of lime set fire to the debris that remained on the track. None of the crew remained to tell the tale ... .Secretary Tracy says he will neither make nor permit to be made, in his Department, any appointment or removal on party grounds. Merit will be the only consideration in the Navy.....An association of colored farmers in South Carolina is said already to number 40,000 members. It is about to establish an exchange to promote business intercourse..... For the purpose of taking up all other indebtedness of the road, the Chicago, Milwaukee and St. Paul Railroad Company has made to the United States Trust Company of this City a mortgage for $150,000,000—the largest ever made..... A penniless young surgeon of the United States Army is going to marry $4,000 000 and a daughter of James G. Fair, the California bonanza king, and Nevada United States ex-Senator ..... Owing to the opposition to the execution of murderer Kemmler by electricity at Auburn, N. Y., about this time, a referee has been appointed to take testimony in regard to the effect of an electric current on the human body. The report is to be made on July 30, and Kemmler is, therefore, sure of at least a month's respite. Should the Courts decide the new law unconstitutional there will be some doubt whether any legal punishment for murder exists in this State since the law went into force, for, as it expressly repealed all previous laws on the subject, if it is itself unconstitutional, by what law will those who may commit murder until the enactment of another law, be punished ?.. How is it that the Democratic papers which for four years kept up the cry "Turn the rascals out," are all now either mum or grumbling that the "rascals" are not kept in?.....The engineers of the Union Pacific, instead of striking to obtain their "just rights," submitted their demands to arbitration, and now they've got all they wanted. Chief Arthur declares he will never again sanction a strike..... Just after President Harrison's inauguration Major Armes, a persistent crank, grossly insulted Governor Beaver of Pennsylvania at Washington by pulling his nose for a fancied insult. He was tried by court-martial and instead of being dismissed from the army, was mercifully allowed to remain on half pay for five years, on condition that he wouldn't go beyond 50 miles from Washington. A number of Pittsburg blackguards, who are disgruntled with the Governor, have just advertised their vulgarity by presenting the disgraced officer with a $100 gold medal as a token of their high appreciation of his cowardy affront in attacking an old maimed soldier. The fellow's friends say he will gladly accept and wear the badge of disgrace, though at the trial he swore that he had not even attempted the outrage..... Captain Winfield S. Schley who has been Chief of the Bureau of Equipment and Recruiting in the Navy Department with the rank of Commodore, has voluntarily resigned to take command of the new steel cruiser Baltimore, the largest of the new fleet, thus giving a practical illustration of his opinion that one man shouldn't monopolize a good thing too long..... Now 'tis the Detroit aldermen who are charged with boodlerism.....John Crouse of Syracuse, New York, has just left $10,000,000 behind him on this side of the Styx..... Vancouver, Washington, has, in great part, followed Seattle up in flames and smoke .....The embezzling bank officer this time is John Mc Master, teller of the Farmers and Mechanics' South-side Bank of Pittsburg, who has misappropriated only $150,000 .. ..The Treasury Department has spoilt the plans of a ring which had been formed to get millions from the Treasury through jute-bagging drawbacks....

In Harmony with Nature.

When we adjust effort to capability we usually succeed, for the highest good comes from acting in harmony with nature. How is this priniciple embodied in Compound Oxygen?

1st. It is composed of nature's simples in salutary adjustment Oxygen with Nitrogen, to which the vitality of positive magnet zation is added.

2d. It is administered, not for the purpose of usurping natures' prerogatives, but, to encourage and then preserve her kindly moods.

Here are cases in point.

STILLWATER, N. Y., May 31, 1887.
"I feel very thankful that my attention was ever called to Compound Oxygen."
E. H. SMITH.

ATTLEBORO, MASS., May 28, 1887.
"Those suffering from catarrh will find Compound Oxygen the most wonderful remedy of the age. That's a fact for we are using it!"—*Attleboro Advertiser.*

PLUMVILLE, PA., April 25, 1887.
"I am an earnest advocate of Compound Oxygen treatment and have recommended it to my afflicted friends." EMMA L. DAVIS.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 312 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, June 29, 1889.

AMONG the general European bellicose talk and belligerent preparations, a Peace Congress is sitting tranquilly in Paris. Some look on its members as sage messengers of "peace on earth and good will to men;" others as silly disciples of the immortal Three Tailors of Tooley Street..... Our old visitor, the Russian Grand Duke Alexis, has incurred the furious anger of his elder brother, the Czar, by his scandalous intrigue with the beautiful sister of the late General Skobeloff who is morganatic wife of Duke Eugene of Leuchtenberg, "the handsomest fool in Europe." Alexis has been deprived of his office of Lord High Admiral of the Fleet, and most of his other honors and banished to Siberia. Duke Eugene, who was an accommodating husband, has been sent from the Russian court and capital, and his wife has been granted "permission" to reside indefinitely abroad. Imperial morality is badly shocked by a blot on imperial dignity.....After heavy losses on both sides, the sea-going strikers at Liverpool, having been starved out have had to "cave in"—for the present at any rate.

Miscellaneous Advertising.

POT GROWN STRAWBERRIES

We will have our usual fine supply ready about July 15th. Catalogue containing correct descriptions of the best **Old** and **New** varieties, with cultural directions, mailed *free.*

ELLWANGER & BARRY, MOUNT HOPE NURSERIES, ROCHESTER, N.Y.

THE FAMOUS CLIPPER MOWERS.—Send for Machines, Extra Parts and Price List, to **CLIPPER MACHINE WORKS,** Keene, N.H.

CELERY PLANTS.

White Plume, Golden Heart, First-class Plants; ready now. $1.25 per 1,000; 5,000 or more, at $1.50 per 1,000. **M. GARRAHAN,** Kingston, Pa.

The Famous Chester County Herd of
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The Best Herd in the United States, composed of the finest obtainable strains. Herd headed by Chester (No. 2628), N. C. W. R., Sows, Queen of Chester (No. 6580), Null's Pet (No. 6952), Nancy Second (No. 6954). Write for prices end particulars.

S. H. NULL, West Grove, Pa.

DO YOU WANT TO BUY
A CAR-LOAD OF
PHOSPHATE
this Fall? If we have no agent near you, we will be glad to quote you low prices. Send for circulars.

FREDERICK LUDLAM,
140 Maiden Lane, New York.

H. S. MILLER & CO.,
—MANUFACTURERS OF—
Pure Animal Bone
FERTILIZERS!

For all Crops and Soils. Factory and Principal Office on Passaic River, Newark, N. J. Baltimore Office, 202 & 206 Buchanan's Wharf, foot of Frederick St. Write for "Farmer's Manual," mailed **Free.**

Newtown Double Geared, Level Tread Horse Powers.
AND THRESHERS AND CLEANERS ARE THE BEST.

We also manufacture Self-Dump Rakes, Corn Shellers, Farm Rollers, etc. Send for Circulars and Price Lists. A. BLAKER & CO., Newtown, Bucks Co., Pa

WANTED MALE and FEMALE AGENTS To Sell DR. DAM'S REMEDY direct to the people. Every bottle guaranteed to cure or benefit or money refunded. We have in our employ over 3,000 people. Persons wishing to work for us on salary, or persons wishing to devote a part of their time to our business and work on commission, should send references and get terms. Address

DAM'S REMEDY CO.,
405 Columbus Avenue, Boston, Mass.

STEAM! STEAM!
Quality Higher, Price Lower.
For Strictly Cash, Complete Fixtures except Stack.
2-Horse Eureka Boiler and Engine, $135
4- " " " " $210
Other sizes at low prices.
Before you buy get our prices
B. W. PAYNE & SONS,
Drawer 57. Elmira, N. Y.

FOR SALE—TWO Fine adjoining **FARMS** in Greene County, Ohio, containing **165 and 190 Acres** respectively; convenient to schools, churches and railroads, and surrounded by free turnpikes. Improvements; neighborhood and land first-class. Will be sold at a bargain
JOHN M. BROWNE.
Room 31, Times Building, Chicago, Ill.

FOR SALE—Orange Grove. Some of the trees set out 1876. Healthy location. Profitable banana garden, guavas, pineapples and other varieties of fruit, including peaches. Address
T. E. WOODWARD, Eustis, Lake Co., Fla.

NEW YORK COLLEGE OF VETERINARY SURGEONS and SCHOOL OF COMPARATIVE MEDICINE (Chartered 1857).—Session of 1889 and 1890 begins **Tuesday, Oct. 1st. 1889**
For information and circulars, apply to
H. D. GILL, V. S., 332 E. 27th St., New York.

AGRICULTURAL NEWS.

SATURDAY, June 29, 1889

FROM the June Report of the Department of Agriculture we learn that the area of wheat is slightly in excess of last year's, and the condition high, although there has been some injury in certain localities from excessive rains and floods, gullying uneven or declining surfaces and inundating bottom lands. Whether this injury will make any considerable local reduction of reported averages will be determined later. In Pennsylvania, Maryland and Virginia this cause of reduced condition will have a perceptible influence on production. Special reports from Virginia say that wheat has not filled, and that fields with sufficient straw for 30 bushels per acre, will not yield 10. The fields present a beautiful appearance, but the grain is not there. This is owing to the extremely wet weather. In Dakota, wheat in the fields which were sown with frosted seed, is spindling and unthrifty. The average condition of rye is high. The average condition of oats indicates a medium crop. The usual breadth of barley is reported, and the condition is said to be good. Cotton presents the lowest average condition of any farm crop, the weather having been too cold, and the seed-bed too dry for proper germination, and later frosts have injured it to some extent. The area planted has been somewhat reduced on the Atlantic coast, and increased in the States west of Alabama. Peaches average poorly in the districts of principal production. Unseasonable frosts and wet weather have reduced the crop materially. New Jersey and Delaware promise very light crops, while Maryland and Virginia show better prospects.....The N. Y. State Board of Assessors met with the town supervisors and assessors of Orange county at Newburgh, recently. One supervisor said that he did not believe there was a single farm in Orange county actually worth its assessed valuation, while cities and villages are assessed on an average about 75 per cent. The State Assessors said they had found wherever they went through the State that farming lands were decreasing in value..... .....The two cars sent out by the California Board of Trade with the exhibits of the products of the State arrived at Jersey City last week. They have been visited by crowds of people. This free agricultural and industrial exhibition has been on the road since December 6, last. It was sent out to induce immigration to the Golden State.....New Bartlett pears have been received at San Franciso and sold at $1 per box. Very few choice Lima beans are on sale. The asking rate is $5 per cental..... ..... The Tenth Annual Meeting of the Society for the Promotion of Agricultural Science will be held at Toronto, August 26-27. W. R. Lazenby, Columbus, Ohio, secretary..... Considerable interest is being manifested in the possible enlarged production of California olive oil. The quality of such samples as came to hand during the early cultivation of olives on the Pacific equaled the high grade of Italian or Spanish pressings. There is a large line of trade that will support the venture if prices at all favor, as against the foreign make. Growers assert that they can compete in the article, and arrange themselves successfully with the producers who entered fruits which before had exclusive shipment from the Mediterranean..... The army worm has made its appearance in Elkhart county, Ind., and is going through the wheat, rye and oats at an astonishing rate. Farmers are much wrought up over its work..... .Another Dairy Conference was held at Spencer, Tioga county, N. Y., June 8. A picnic and institute combined were contemplated, but a heavy rain necessitated holding the meeting in the town hall, where a very interesting meeting was held.. ..... The Treasury Department has decided that so-called annatto, consisting of a solution of annatto and turmeric in cottonseed oil, and used as a coloring for butter, is not the annatto extract of commerce which is exempt from duty, but is properly classified as an unenumerated manufactured article, dutiable at the rate of 20 per cent. ad valorem.....E. T. Turner, C. E, has been appointed director of the New York State Meteorological Bureau and Weather Station.....Large numbers of Shire horses of best breeding and quality have been purchased during the last few weeks for exportation to this country. Nearly all are for breeders in the West.....A New York grocer was recently fined $50 for selling oleomargarine as pure butter..... Abbott & Blake have purchased the Clipper Machine Works at Keene, N. H., from the executors of the former proprietor, and will continue the manufacture of the Clipper mowers and reapers.....The 21st Annual Fair of the South Carolina Agricultural and Mechanical Society will be held at Columbia, November 11 to 15 A new main building has been constructed giving over 20,000 square feet of floor space. The railroads offer liberal excursion rates. The premium list is extensive and liberal, and an appropriation from the State legislature insures prompt payment. Thomas W. Hollaway, secretary, Pomaria. ..... Governor Hill of New York signed the bill giving the Hatch money to the Cornell University Experiment Station, but vetoed the bill providing for the distribution among existing agricultural societies of the unused appropriations of former years, and an item of $1,300 in the supply bill for printing 5,000 extra copies of the report of the annual meeting of the State Dairymen's Association..... The hop louse made its appearance in great numbers in some parts of Montgomery county. N. Y.....Australian lady bugs have been introduced into some of the California orange groves, and it is hoped that they will destroy the scale insect. This bug belongs to the same family as those found in New York, which are known to feed upon the hop louse.. .....

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, June 29, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	5 3-16	5 7-16	.....
Strict Ordinary	5⅝	5⅞	.....
Good Ordinary	9 9-16	9 13-16	.....
Strict Good Ordinary	10	10¼	.....
Low Middling	10⅜	10¾	.....
Strict Low Middling	10¾	11	.....
Middling	11 15-16	11 3-16	.....
Good Middling	11 7-16	11 11-16	.....
Strict Good Middling	11 11-16	11 15-16	.....
Middling Fair	12⅛	12⅝	.....
Fair	12¾	13	.....

STAINED.

Good Ordinary	8 1-16	Low Middling	9⅝
Strict Good Ord	8 11-16	Middling	10 7-16

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

POULTRY--Chickens, spring, per lb, 14@17c. LIVE Fowls, near-by, per ℔, 11½c; fowls, Western, per ℔ 11½@—c; roosters, per ℔, 7c; turkeys, per ℔ 9@10c; ducks, western, per pair, 70@0.90c; geese, western, per pair, $1 15@$1 40.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per ℔, 10@—c; do do, common to fair, 8@9c, do, iced, dry picked, choice, 8@—c. Fowls, western, do, choice, 10½@11c; do, nearby, do do, 11½@12c; Chicks and Fowls, mixed, 12@14c; do do do, scalded 10@11c. Squabs, white, per doz, $3 00@$3 25 do, dark do, $1 75@$2 00. Chickens, Philadelphia, dry picked, 24@26c, do Jersey, do, choice, 18@26c do nearby, do, good 18@26c; do Western, do do, 18@22c; do do, iced, good to choice 16@18c. Ducks, spring, choice, per lb, 14@18c; do do, good, 12@14; do Western, good, 12@14c. Geese, Western, good, 8@10c.

HOPS.—State, new, best, 22@23c; do, prime, 20@22c; do, low grades, 13@16c; do do, 1887, 8@9 do do do California, common to prime, 14@20c; choice, 20@22c

HAY AND STRAW.—Choice Timothy, 90@$—; do good do, 75@90c; do medium, 65@70c; shipping, 60@65c; do, Clover, mixed, 50@55c. Straw.—No. 1, rye, 65@70c; short do 50@55; oat, 45@50c.

BEANS.—Marrows, new, $2 00@$2 25; new mediums choice, $2 00@2 25; pea, $2 00@$2 25; red kidney, $3 00; white kidneys, choice, 2 35@2 60; foreign, mediums, 1 35@1 55; California Lima, $3 15@$3 60; green peas, $1 35@—.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@—c, and farmers' grades at 6@7½c. Pecans, 5@7½c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Eastern Shore, per bbl, $2.-50@$3 50; New, poor to good, $1 00@$2 50; Old, $1 00@$1 50, Norfolk, New, $2 50@$3 50. Cabbage—New, per 100, $1 50@$2 50. Cucumbers, per crate, 50c@$1 25. Squash, per bbl, 75c@$2 25. Tomatoes, per crate, 75c@$1 25. Onions—New Orleans, per bbl, $3 00@$3 25; East Shore, do, $2 25@$2 50. Beans, string, per crate 40@75c. Asparagus per doz, 75c@$1 50.

FRUITS.—FRESH.—Peaches, per crate, $1 00@$4 00; do. per box, 75c@$1 25. Cherries, per lb, 4@14c; Huckleberries, per qt, 10@15c. Gooseberries, per qt, 4@5c. Plums, per qt, 10@12c. Apples—Southern, per bbl, 75c@$2 50. Strawberries—Western N. Y., 10@13c. Raspberries, per pt, 4@8c. Watermelons, per 100, $12 00@$25 00. Currants, per lb, 4@5c. Blackberries, per qt, 10@18c.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 4½@6c; do new, common to prime, 3½@4½c; sliced, new, 4¾@3¾c; quarters, 2½@3¼c; chopped, 1¼@1½c; cores and skins, 1@—c. Cherries, new, 10@14c. Raspberries, new, 17@19c. Blackberries, 4@4½c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 10@14c; do do, unpeeled, 5@6c; North Carolina sun-dried, peeled, 6½@8c. plums, 5@5½c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 13 25@13 50, short clear, $14 00@16 00. Extra Prime mess, $12 50@$— prime do, $12@$12 25 and family mess, $12 75@13 25. BEEF—India Mess, in tierces, $12@12 50 Extra Mess, in barrels, $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $7 50@8 00; Family at $11—@$14. HAMS—$13 50@$14 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 6½@—c; Pickled Hams, 11¾c; pickled Shoulders, 6⅛@6⅜c; Smoked shoulders 6½c; do Hams, 12½@12½c. Dressed Hogs.—City, heavy to light, 6@6½c. Pigs, 6¾c. LARD.—City steam, $6 35; June, $—; July, $6 94; August, $7 03; September, $7 11; October, $7 17; South America, 7.6c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes lower; Early Rose, 27@30c per bush.; Burbanks and White Stars, 28@32c; Hebron, choice, 35@40; New Potatoes, Florida, per bbl., $1 75@$3 50. Provisions were steady. BEEF.—City family, per bbl, $9 00@$9 50; do, packets, $8@$8 50; smoked beef, 10@10¼c; beef hams, $14 PORK.—Mess, $14 00@$—; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@13c; do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6¼@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7½c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7½c; butchers' loose, 6½@7.

CHICAGO.—MESS PORK.—$11 85@11 90 LARD.—$6 62@— per 100 lbs; Short Rib sides (loose), $5 95; dry salted shoulders, boxed, $5 87; short clear sides, boxed, $6 25@$6 37.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 17@18; Elgin, best, 18@—; Western, best 17@17½; do prime, 15½@16½; do good, 14½@15; do poor, 13@13½ State, Dairy half-firkins, tubs, best, 17@17½c; do do prime, 16@17; do do fine, 14½@15; Welsh tubs, fine, 15½@16; do do, good, 14@15; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 15@15½; do fine, 12@13; Western dairy, fine, 13@14; do fair, 11@12c; do poor, 9@10c; do factory, fresh, best, 12½@13, do prime, 11½@12; do good, 10@11; do poor, 8@9c.

CHEESE.—State factory, fancy, 9½c; do do fine, —@—c; do do, prime, 8¾@9c; do do, fair to good, 7¾@8c; Ohio, flat, prime, 7¾@8¾c; do good, —@—c; do, good, —@—; Skims, light, 5½@7c; do medium, 2@3; do full, 1@2c.

EGGS.—Near-by, fresh, 15@—c; Canadian, 14½c Southern, 14½@14½c; Western, best, 14@14½c. Duck 14@16c; Goose, 20½@23c.

PHILADELPHIA.—BUTTER firm. Pennsylvania creamery extra, at 16@17c; Pennsylvania Prints, extra, 18c; B. C. and N. Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were firm; Pennsylvania firsts 16@16½c; Western firsts, 15@16c; Cheese dull—steady; demand fair; New York full cream, at 9@9½c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Elgin creamery, 15½@16½c; choice Western, 15@15½c. choice dairy, 12@13½c; common to fair, 8@10c. Eggs firm at 12@—c.

GRAIN MARKETS.

WHEAT.—Sales—Ungraded Winter Red at 82¼@89½c; No. 2 Red, free on board, 85⅛@87c; do in store quoted, 85½@86½c; No. 2 June closing at 86¼c; do July, 84¾@86⅛c; do August, 84⅞@86⅛; do September, 85@86¾c; do October, 87½c; do December, 88⅛@90c, RYE—In better demand at higher prices. Sales—Western, for export, 50c. BARLEY MALT—Unchanged in price and quiet. BARLEY—Rumored sales, California, 70c. CORN—Ungraded mixed at 41@44c; No. 2 mixed at 42c elevator, 42¾@43⅛ afloat, spot and arrive, 42⅜@45⅛c cost, freight and insurance; No. 2 White, 44c bid afloat; No. 2 June, 42c; do July, 41⅞@42¼c; do August, 42⅛@42 15-16; do September, 43⅜@43¾c; do October, 44⅛@44¾c. OATS—No. 3, 27½c; do White, 32½c; No. 5, 28½c; No. 2 Chicago, 29c afloat; No. 5 White, 33½@33¾c; No. 1 White, 38c; Mixed Western, 26@30c; White do, 33@39c; No. 2 June, 28⅛@28⅝c; do July, 28¾@28⅝c do August, 28⅛@28⅝c; do September, 28¼@28⅝c; do October, 28⅝@28¾c; do White, June, 33¾c; do July, 33¼. FEED—Quoted, 100 lbs, 70@80c; Sharps, 80@85c; Rye Feed, 65@70c.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, June 29, 1889.

BEEVES.—Poorest to best grass and corn-fed steers sold at $3 75@$4 50; "stillers" at $3 70@$4 35; bulls at $2 40@$3 40; cows at $2@$2 75.

CALVES.—Market active at an advance of ½c per lb on veals, and ¼c on buttermilks. Buttermilks ranged from 2c to 3⅛c per lb; Yearlings, fed and mixed Calves sold at 3@4c; Common to Choice Veals at 4 to 6c.

SHEEP AND LAMBS.—Sheep were in light supply and higher, and Lambs sold at an advance of ¼ to ½c per lb; Bucks and "culls" brought $2 50@$3; Texas Sheep, $3 50; Common to Good Native do, $4@$5; and Common to Choice Lambs $6 25@$7 60. Sales—Western Sheep, 77 lbs average, at $4 70 per 100 lbs; Kentucky Lambs, 68 lbs, at $7; State Lambs, 54 lbs, at $6.75; Bucks, 109 lbs, at $2 50; Ohio Sheep, 76½ lbs, at $2.25; Kentucky Sheep, 120 lbs, at $4 50; Indiana Sheep, 108 lbs, at $5, Texas do, 69 lbs, at $3 50; Virginia Lambs, 78 lbs, at $7 60.

HOGS.—Nominally firm, and dealers quote $4 70@$5 for fair to prime Hogs.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING JUNE 29, 1889.

K. C.—McC. K.—R. C.—F. A. H.—H. L. J.—F. D. W.—F. P. C.—J. C. M.—J. B. O.—Mrs. F. A. W., thank you,—M. D. C.—J. M. M.—E. S. B.—J M, M.—M. D. S.—H. D.—T. H. H.—T. V. M.—M. J. A.—G. H. B.—J. A. F,—. L.—H. M.—W. C. A.—A. C. B.—C.—J. A. S., all applications for R. N.-Y. No, 2 have been filled.—P. J. B —W. F.—P. H.—W. C. A.

Miscellaneous Advertising.

SEND 10 Cts. in P. O stamps to E. & O. WARD, Produce Commission Merchants, for circular about Shipping Produce Also recipe for Preserving Eggs. Established 1845. No. 279 Washington St., New York City.

JONES HE PAYS THE FREICHT. 5 Ton Wagon Scales, Iron Levers, Steel Bearings, Brass Tare Beam and Beam Box for $60. Every size Scale. For free price list mention this paper and address JONES OF BINGHAMTON, BINGHAMTON, N. Y.

LINSEED OIL MEAL For Feeding all Domestic Animals. Use, with your other feed, at least One-Third Linseed Oil Meal. Write us for prices and other particulars, and mention the RURAL NEW-YORKER. DEROIT LINSEED OIL COMPANY Detroit, Mich.

DEATH TO INSECTS in house, garden orchard and fields. Liquid and Powder Spraying Apparatus. From one to four dollars each. Coal Oil Sprayers for the hen house and garden. Vines, etc., $2.00 each. Circulars with cuts and price sent free. Poisons wholesale and retail. THOS. WOODASON, Mf'r, 451 East Cambria St., Philadelphia, Pa.

AUTOMATIC MILK AERATOR. Removes the taste of GARLIC, CLOVER and NOXIOUS WEEDS. Send for Circular. E. W. COFFIN, Ashland, Camden Co., N. J.

IRRIGATED LANDS In Rio Pecos Valley, in Southeastern New Mexico. Choice limestone soil; abundance of pure water; a delightful climate all the year; almost continuous sunshine; altitude 3,500 feet; healthiest locality in the U. S., no consumption, no malaria. 20 acres will yield a competency. Write for particulars, naming this paper, to Pecos Irrigation & Investment Co., 84 Monroe St., Chicago, Ill.

I DRINK WATER!

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We also manufacture Field Rollers, Plows, Feed Cutter and Crusher Hand & Power Corn Shellers, etc. Send for Illustrated Catalogue & Price List. S. S. MESSINGER & SON, Tatamy, Northampton Co. Pa.

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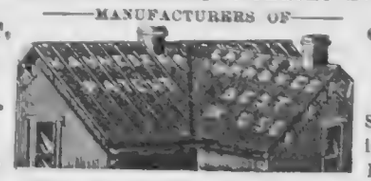
"What! Corns and Bunions all gone?" "Yes, I am happy to say, through the merits of Hanson's Magic Corn Salve, I can now walk with ease." HANSON'S MAGIC CORN SALVE. If your druggist does not keep it, do not let him convince you that some imitation is just as good. Send by mail to W. T. HANSON & CO., Schenectady, N. Y. Every box is warranted to cure or money refunded. PRICE 15 and 25 CENTS.

PILES, Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository. Sufferers will learn of a simple remedy FREE by addressing TUTTLE & Co., 78 Nassau Street, New York City

THE KANNEBERG ROOFING COMPANY, CANTON, OHIO. (The Originators of Strictly Genuine Steel Roofing.) The KANNEBERG PATENT, Latest Improved Folded Lock Seam. Strictly Genuine Steel Roofing. MANUFACTURERS OF CORRUGATED IRON.



(Four Sizes of Corrugations.) Crimped Edge Iron Roofing and Siding, Beaded Iron Siding and Ceiling, Water Proof Building Paper, Ready Mixed Paints, Etc. Write for Catalogue, Price List and Samples. Mention the RURAL NEW-YORKER.

The Syracuse Nurseries! Old and Reliable, Are growing the Largest and most Complete Assortment of Nursery Stock in America. In BUDDED APPLES and STANDARD PEARS they acknowledge no competition—quality considered. Nurserymen and Dealers will consult their own interests by getting prices in this Superb Stock before buying. Special inducements to buyers in large quantities. SMITHS, POWELL & LAMB, SYRACUSE, N.Y.

Indust'l Societies.

TWENTY-THIRD SUMMER EXHIBITION OF THE QUEENS COUNTY AGRICULTURAL SOCIETY.

(RURAL SPECIAL REPORT.)

THE summer exhibition of the Queens County Agricultural Society, was held at Mineola, L. I., June 19 and 20. Although the attendance was large and the display of implements, fruits, flowers, etc., fully up to that of previous years, yet it is a question whether it would pay to hold an exhibition at this season if it were not for the city and town patronage attracted chiefly by horse trotting. In short, the implement and horticultural display seems like a side show. The chief attraction and the thing which takes up most of the time are the trials of speed. In fact, horse trotting is made such a prominent feature of the meetings that it calls forth an apology from the officers in the premium list. They say:

"We recognize soundness, strength, style, speed and endurance as the valuable qualities of the horse. We believe it to be incumbent upon agricultural societies to encourage an improvement in each of these attributes. The horse best adapted to the general requirements of the Long Island farmer, and the horses which are developing the greatest fleetness, are the descendants of the same imported parents. We therefore offer special premiums for sound horses that shall show the most perfect combinations of rapid movement and staying powers, believing that, however much these qualities may be perverted upon the track, they are not one whit the less essential to complete attainment of the practical aims of agriculture. We believe the breeding of horses to be one of the most remunerative of farm industries. Liberal premiums are offered to overcome the neglect in which this branch of stock breeding has fallen."

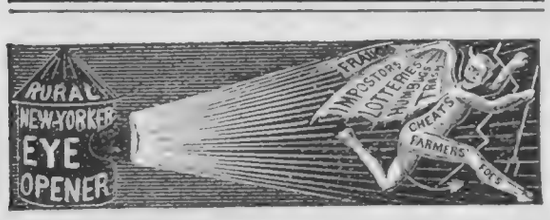
However we may deplore the depravity of human nature, it is evident that it is impossible to have a successful agricultural fair and a horse trot at the same time. As soon as the trotting began the main building and the plot on which the implements were exhibited were deserted, and with the exception of a few stragglers, remained deserted until the close of the fair.

The show of implements was very much more attractive than usual and before the trotting began attracted considerable attention.

H. M. Willis was on hand as usual with a full line of implements, some of which were of local manufacture. The Worcester Buckeye mowing machine which has had such an enormous sale in New England, was exhibited here for the first time. Its merits were apparent and quite a number of machines were sold. The Hudson Cultivator and Aspinwall Potato-planter attracted much attention. Potato growers were very enthusiastic in their praise of both implements. Aultman, Miller & Co. showed their new harvester. It is light, simple and apparently just the machine the Long Island farmer wants.

Mr. Albertson showed a great variety of implements. In the main building there was the usual variety of flowers and small fruits. Among the exhibitors who took prizes for flowers were Julius Schaff, of Floral Park; R. P. Jeffery & Son; Mrs. Titus, of Mineola, and others. For the best variety of vegetables the first prize was awarded to George Matthews of Great Neck, second to Parke Goodwin of Roslyn, third to J. H. Van Nostrand of Elmont.

J. H. G.



WITHIN the last fortnight the Eye-Opener has noticed reports telling how the old gold-brick swindle had been successfully practiced on six different persons in various parts of the country, and attempted in vain on another, who was probably a reader of the RURAL NEW-YORKER and therefore wide-awake to such frauds. Take a case in California as a specimen of the others, for, of course, the *modus operandi* in all is substantially the same. As usual, two adventurers "worked" the game. Their dupe was a farmer named Banks, who lived in Los Angeles county. A rough, bluff, hearty-looking, elderly man called on him and delivered to him a letter from a man by the name of Banks in Missouri The letter said that the Missouri Banks believed the California Banks was his brother and he wanted to tell him a secret worth big money. This he could get from the bearer, who was quite trustworthy. On inquiry, the bearer hinted at a fortune which could be obtained by purchasing a gold brick which an old Indian chief had brought from Mexico. The chief was then not far off, and was awaiting the messenger's return. Banks knew that the supposititious Missouri namesake couldn't be a relative; but his cupidity was excited. Accordingly he went with the stranger, saw the old Indian, heard a remarkable yarn about the finding of the gold, which had been melted into a brick for convenient handling, and received some drillings made from the brick in his presence. These he took to an assayer who declared they were rich gold. This was in the forenoon; in the afternoon Banks drew $5,000 from his bank and raised $3,000 more on some securities, making $8,000 in all; accompanied the stranger once more to the place where they had left the guileless Indian, and a transfer of the brick for the greenbacks was at once made. Two days later Banks carried his treasure to an assayer who dumbfounded him by declaring it was good brass. Sulphuric acid ate it when applied. On recovering his senses, Banks became furious, and after another assayer had confirmed the opinion as to the worthlessness of the brick, he applied to the police. The rascals were so well disguised, however, that there's little hope of capturing them. Last January the same men played the same game in the town of Los Angeles and cleaned up $5,000 from a wide-awake merchant!

In another case, a plausible humbug after hanging, in a quasi-mysterious way, about a farm in Yadkin County, Ohio, long enough to excite the curiosity of its rich old owner, easily got into conversation with him, and, after exacting a promise of secrecy, confided to him a secret which he had obtained from a moribund friend just before his death in the Illinois State prison at Joliet. Shortly before his arrest for another offense, in the Prairie State, he had robbed a rich jewelry store, in a large city, his plunder being chiefly gold vessels, watches and ornaments worth considerably over $12,000. These he had melted into a gold brick so that they could not be recognized and could be easily handled. Being closely pursued by detectives, he had buried his treasure on that very farm, and having been captured shortly afterwards, had never been able to recover it. Expecting to escape or secure a pardon, he had kept the secret until he disclosed it to his friend on his death-bed. The stranger then produced a worn diagram of the place where the treasure lay concealed, and promised the farmer a share of it, if he could identify the place. From several landmarks on the crude drawing, this was readily done. With the utmost secrecy the two dug at the spot indicated, and after a while struck a small box containing the brick. Next day they went to the neighboring town and submitted to a jeweler filings taken from one of the ends of the brick. He had no hesitation in declaring they were 18 carat gold. After leaving the store, the stranger appeared to become frightened at the sight of a man who passed them more than once and appeared to scrutinize the brick-bearer closely. The latter said the man was a detective who had, he feared, recognized him, and after some talk, he persuaded the farmer to pay him $6,000 for his interest in the brick. Though he declared it was worth over $11,000 he was willing to accept $6,000 at once so as to escape straightway into Canada. He may have done so, for neither the farmer nor the officers set on his tracks have hitherto found him. Of course, the brick proved to be merely brass. It had been buried some time before, and the diagram had been roughly handled to give it the appearance of age. The swindler was well paid for the ingenuity and patience with which he had worked the game, even if it had taken him a month to achieve success. In both these cases and in all similar ones, one or more parts of the brick are made of genuine gold—either a little bit on one corner or the plugging of a hole or both—and filings or drillings of these are submitted to experts so that the dupes may believe that the whole brick is composed of the same metal. It is a swindle frequently practiced, and as the right sort of greedy, gullible, rich simpleton is usually selected with care beforehand, it is generally splendidly successful.

NO CLASS is free from the depredations of swindlers. These sleek, soft-spoken, plausible gentry have no more reverence even for the clergyman's cloth, than is to be found in the heart of the toughest blackguard in a city's worst slums. A pair of rascals have lately been victimizing dear, innocent parsons in various parts of New Jersey under somewhat peculiar circumstances. They have been driving round in a buggy, after having first sent notices to their intended dupes that they are about to call. On arrival, they exhibit pieces of broadcloth which they represent as the very finest goods made in England, and they declare that they are sold to ministers only. They generally manage to make a sale; but on taking the cloth to the tailor their dupes always find that it is very poor stuff, worth very much less than the prices charged. Really, however, they ought to be thankful that they got anything at all for their money, as such swindlers generally manage to leave their victims completely in the lurch.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

THE NEW DOG LAW FOR NEW YORK STATE.

S. N., Medina, N. Y.—I notice by the papers that Governor Hill has signed a new law from which New York, Kings and Erie counties are exempt. What are the provisions of the new law?

ANS.—The law referred to is known as the Mase law. It provides for the collection of the following taxes upon dogs over four months old: Upon every bitch owned or harbored by any one or more persons or family, $3; upon every additional bitch, $5; upon every dog other than a bitch, $1; and upon every additional dog other than a bitch, $2. Every owner of a dog shall cause the same to be licensed, annually, on or before May 1, and to be registered in the office of the clerk of the city, village or town. The clerk's fee for each dog registered is 15 cents. All licensed dogs must wear collars, marked with the owner's name and its registered number. Every person owning or harboring a dog, who shall neglect or refuse to have it registered is liable to a fine of $3 to $7. These fines are to be placed in the county treasury to the credit of the fund constituted for satisfying such damages as may arise in any year from killing or injuring sheep by dogs in the county. Any dog not registered or collared may be lawfully killed by any constable or policeman, who shall be paid 50 cents for each dog so killed. When it shall appear by certificate of the fence-viewers that the owner of any sheep killed or injured by dogs has sustained damages which he cannot collect from the owner of the dog, or in case the owner of the dog cannot be discovered, such damages shall be paid by the County Treasurer from the fund to be raised by the dog tax, and from other moneys. As stated by our inquirer, the law does not apply to the city and county of New York, or to the city of Brooklyn or Kings county, or to the city of Buffalo or Erie county. Neither does it apply to any dog owned by any person, association or corporation engaged in the business of breeding dogs or rearing pedigreed or registered dog stock for the purpose of exhibition under the rules and regulations governing the American Kennel Club.

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CATALOGUES, ETC., RECEIVED.

NEW JERSEY EXPERIMENT STATION.—Ninth Annual Report. A great deal of the matter contained in this volume has already appeared in the R. N.-Y. The director makes a very remarkable statement when he says that there are in New Jersey, 2,069,819 acres of upland unimproved, of which more than half are now capable of profitable cultivation. He also says that there are in New Jersey—generally supposed to be the State most in need of manure and fertilizers—soils which have, within six inches of their surface, enough potash and phosphoric acid to supply the crops for 100 years to come, and a good stock of nitrogen besides. They need "a more complete exposure to the benignant influence of air, moisture and warmth," in other words, better plowing and harrowing. A feature of the report is an account of the investigations made to indicate the value of waters suitable for the production of food fish and shell fish. There are 150,000 acres in New Jersey that are capable of being utilized as oyster farms. There are also 13,000 acres in lakes, ponds and streams in which valuable fish can be produced. The Biologist of the Station gives quite a long account of the oyster interests of New Jersey, that will prove instructive reading to all who like oysters. The R. N.-Y. is glad to see the New Jersey Station take this interest in oyster culture. An enlargement of the business will increase the revenues of the State and make more plentiful an excellent article of food. The R. N.-Y. has frequently called attention to the value of the sorghum sugar industry to New Jersey. The pith of what is stated in this report is that in any good farming section of Southern New Jersey, the farms within one mile of a sugar house can be made to produce 222,000 pounds of sugar without disturbing the present system of crop rotation. The station has continued its experiments with Alalfa, and is still confident that it is a profitable plant for New Jersey farmers.

MINNESOTA HORTICULTURAL SOCIETY.—Volume 27 contains a report of the proceedings of this society from March 1888 to March 1889. It is a very interesting volume. The essays are pithy, practical and pointed. We are very glad to see that the ladies are given ample space in which to discuss the best methods of cooking and eating the products of horticulture. There is one quite remarkable feature in this volume, that we have not noticed in others. The managers requested horticulturists of other States to send suggestions as to crops that they thought would be particularly suited to Minnesota soil and climate. This has resulted in some excellent suggestions. The grape, the cranberry and the blueberry are suggested as fruits that might be made to serve as special products of Minnesota. Minnesota blueberries ought to become a valuable commodity. The members of the Horticultural Society seemed to think so, for they spent quite a little time in discussing the practicability of transplanting the bushes and even cultivating them. The general opinion seemed to be that this could be done with profit.

FODDER ANALYSIS, ETC.—Bulletin No. 6 of the Cornell University Experiment Station is devoted to the consideration of various topics pertaining to agricultural chemistry.

FEARLESS THRASHING MACHINE.—Catalogue of the Empire Agricultural Works, Minard Harder, proprietor, Cobleskill, N. Y. The "Fearless" is evidently disposed to be true to its name. It seems not in the least afraid to compare itself with any other thrashing machine now before the people. The reasons for this confidence are easily found in the catalogue which ought to be examined by all who think of buying a thrasher. The R. N.-Y. knows they will be interested in the catalogue and it feels sure they will meet with honorable treatment in their dealings with this house. The Smalley ensilage and fodder cutters are also made by this firm, which has secured the exclusive right to sell these implements in the East.

AMERICAN NURSERY ASSOCIATION.—The enterprising secretary of this association, Mr. Charles A. Green, sends advance sheets of the essays read at the late meeting in Chicago. There are many useful things in these essays, which the R. N.-Y. will give its readers in due time. The great trouble about making an abstract or a quotation from these essays lies in the fact that they are so compactly written that it is hard to condense without spoiling them. When these essays are published in book form every person interested in buying or selling nursery stock will want a copy.

A NEW METHOD FOR ESTIMATING FAT IN MILK.—This is described by Charles L. Parsons in Appendix C. of the New Hampshire Experiment Station. Mr. Parsons repeats the well known argument in favor of the testing of cows. It is not very pleasant to think that there are still dairymen who feed and handle cows that do not give milk enough to pay for their food, yet we know very well that such men live and try to do business. Again, it is necessary that some distinction should be made between the different samples of milk sent to a creamery. If this is not done, some of the patrons will be called upon to help carry those of their neighbors who produce thinner milk. Mr. Parsons gives the Short's method, described at length in former RURALS, full credit; but quotes its author as saying that it will not give accurate results with milk containing under one-half of one per cent. of fat. This, he thinks, shuts out the analysis of most skimmed milk and some butter-milks. His process is somewhat like that devised by Prof. Short—in some respects simpler. He uses four solutions: gasoline, caustic soda, alcohol and soap, and acetic acid. Prof. Short uses two solutions, a mixture of caustic soda and caustic potash and a mixture of sulphuric and acetic acids. It is needless for us to give the details of this method. As it all depends upon tables of figures printed in the bulletin, the reader might just as well get the bulletin himself and study it out.

DANGER IN DECOMPOSING FOOD.—Prof. H. E. Stockbridge, of the Imperial College of Japan, was called upon to examine food eaten by persons who died suddenly with symptoms of narcotic poisoning. He publishes his report in the form of a bulletin. The food consisted of a variety of edible mushroom and a native dish consisting of a mixture of fish and rice. After a very patient research, Prof. Stockbridge discovered a compound which he identified as muscarire, the poisonous constituent of the "toad-stool," and he also proved to his satisfaction that this substance was developed in the native dish of rice and fish which is allowed to become very "strong" before being eaten. This is the first reported case where death by poisoning has been traced to this substance as a product of decomposition, but there are good reasons to think that it is first simply because no previous examinations have been made. Prof. Stockbridge concludes that "we are forced, by the facts developed in his analyses, "to recognize the danger of eating either animal or vegetable food after decomposition has begun, since this process may result in the development of deadly poisonous alkaloids resembling in physiological properties, strychnine, morphine, brucine, and other of the most powerful poisonous alkaloids hitherto known only as products of vegetable growth. Many diseases of a cholera-like character, perhaps even this most dreaded malady itself, may result from the consumption of food in which the process of putrefaction has begun. From a legal standpoint, chemists, physicians, and jurists are now compelled to recognize the possibility that many supposed cases of criminal poisoning are in reality the result of ptomane-formation, either in food or in the decomposing body after death."

Three weeks ago, Mr. Gregory, in these columns, took the ground that the danger from eating decomposing meats was largely or entirely removed by a thorough cooking. Prof. Stockbridge's experiments indicate that there is danger in eating decomposed vegetables and fruits, many of which are eaten raw

POTATO ROT.—In Bulletin No. 2, Volume 2 of the Tennessee Experiment Station, Prof. F. Lamson Scribner discusses two diseases of the "Irish" potato. Every person who has ever raised potatoes is acquainted with potato rot, yet not one in 1,000 has ever tried to find out what this rot is, its cause or its remedy. Prof. Scribner's examinations have been very carefully made and he has succeeded in making his description remarkably clear. There is more "mystery" about the growing of the potato crop than about that of any other crop grown on the farm. The wisest and most carefully planned arrangements are quite often upset. Rot has done its full share toward doing this, and potato-growers will be glad to have an opportunity of fighting the disease intelligently. Prof. Scribner says that the disease known as potato rot, results from the growth of a parasitic fungus on the potato plant, similar in habit and botanically related to the downy mildew of the grape. The growth of this parasite is favored by or even dependent upon certain climatic conditions. The disease is most severe on heavy, poorly-drained soils, or in seasons when foggy, sultry weather prevails. Prof. S. says there is nothing to prove the quite prevalent belief that rot is due to an enfeebled condition of the potato plant resulting from years of cultivation. He says, in fact, that "it is not the climate, or the soil, or any vital exhaustion of the potato itself that causes the rot; it comes from the attacks of a minute parasitic plant which infests the potato, penetrating in its growth both the tops and the tubers."

This parasitic plant belongs to the class of fungi and is of microscopic size. When a man is told that his potatoes are being eaten up by potato "bugs," it is easy for him to understand what is meant. When he is told that these fungi are devouring his plants—rotting them—it is not so easy to understand, because while the "bugs" can be seen, the fungi are invisible to the naked eye. Yet, the only difference is, that the fungi break down the tissues while the "bugs" devour them. Plants may become diseased from the stems or from the seeds. The effect on the tops of the potato plants is to produce what is known as blight. The vines are killed to the ground and then the tubers begin to rot. The spores, a germinating principle of the fungi, are so small and light that they are carried through the air without difficulty. When they alight on potato vines in sufficient numbers and have moisture enough, they at once begin to develop and if wet, sultry weather continues, the chances are that they will spread over the plant and cause "blight." For such attacks Prof. Scribner recommends the Bordeaux Mixture, so frequently described in these columns. In fact, almost any preparation containing sulphate of copper seems to kill the fungi. The "germs of the rot" are frequently put into the soil with the seed pieces. Great care should be taken in the selection and preservation of potatoes for seed. Moisture is the great promoter of the evil, and, while we cannot control the weather, we can plant only in dry, well-drained soil, dig in dry weather and keep storage pits or cellars dry and cool. The fungus is most active between 60 and 70 degrees F. At 40 degrees its development is insignificant, while at, or about 80 degrees, the vitality of the spores is quickly destroyed. At 105 to 110 degrees it has been found possible to destroy the germs, and this temperature, maintained for a few hours will not injure the tubers for seeding purposes. It is also said that the tubers may be disinfected by soaking them in a solution of sulphate of copper before cutting.

MAGAZINE REVIEW.

LIPPINCOTT for July is of peculiar interest to American readers, dealing as it does with individuals and topics which have had so much to do with our country's greatness. The second instalment of "Recollections of George W. Childs," deals almost entirely with General Grant, with whom he was very intimate from the time he formed his acquaintance in 1863 until his death. He gives us such an insight into his life and character, as can be given only by one intimate friend of another. We learn a fact not generally known that General Grant had considerable artistic taste and talent. A reproduction of one of his paintings is given as a frontispiece. "Our Greatest Inventor" is described to us as Captain John Ericsson. The general public knows of him chiefly as the inventor of the Monitor, the destroyer of the Merrimac, but this is a very small part of his many wonderful inventions, several of which are enumerated in this article. The "twin screw propeller" with independent engines, which has just been used so effectively by the steamer City of Paris and is now talked of as a brilliant novelty, was used by Ericsson more than 50 years ago in a Thames river tug-boat, and again nearly 20 years ago in 30 different gun-boats built by him for the Spanish government. It is certainly not very creditable to our government that its indifference, to put it in a mild form, should allow these and similar inventions to be appropriated by foreign powers. He built the first steam fire engine, the first tubular boiler, and in seven weeks, when only 26 years of age, designed and built an engine which ran 30 miles an hour. His diligence and devotion furnish an example worthy of emulation by the youth of his adopted land. In "Authorship in the South Before the War," Thomas Nelson Page gives his views of the causes that led to the comparatively small amount of literary work done in that section. Judge Tourgee contributes another instalment of "With Gauge and Swallow" under the sub-head of "A Dissolving View," the old firm dissolving upon receiving another partner. The complete novel is by M. G. McClelland, and is entitled "Ten Minutes to Twelve." Some choice bits of poetry are sandwiched between the longer articles, and the other departments are well filled with their usual complement of good things. The answers under "Our One Hundred Questions" contain much interesting information. Edgar Fawcett criticises Mrs. Chanler's last novel, and Anne H. Wharton has some satirical remarks to make about "The Courtesies of Summer Resorts." J. B. Lippincott Co., Philadelphia, Pa.

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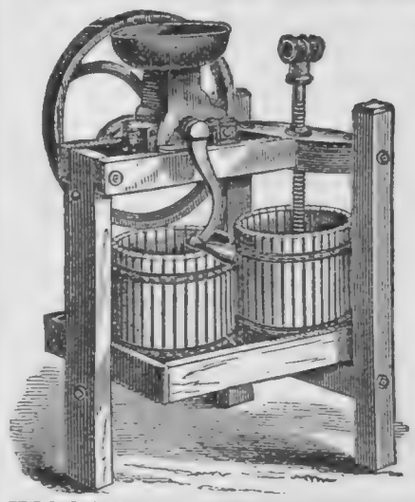

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WHEN THEY DO IT.—Quaver: "I wonder when street bands get the chance to practice together, since their members, I am told, have other occupation during the day." Sure-tone (covering his ears): "Now!"—*Life.*

MR. MORRIS TOWNE: "I see Edison has invented a far-sighted machine:" Mr. Harlem Rhodes: "Yes; I wish he had put it on the market before I began to build a Queen Anne cottage in a suburban 'Park.'"—*Puck.*

WE might as well let St. Louis know first as last that she can never be annexed to this city. We will buy her, but we don't want her around here. She is too grassy for a town and not quite grassy enough for a pasture.—*Chicago Times.*

MOTHER: "I gave each of you boys an apple. Charlie, you said you would not eat yours until after dinner, and you, Bobbie, said the same. Have you deceived me?"

CHARLIE: "No, mother, we didn't eat our own apples; I ate Bobbie's and he ate mine."

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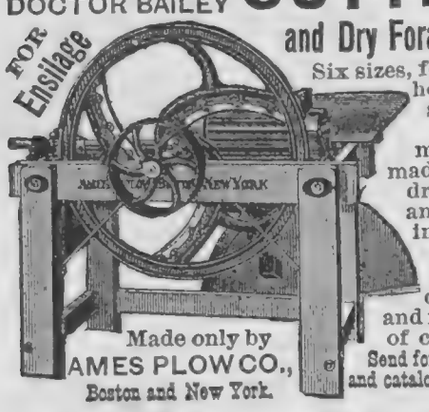

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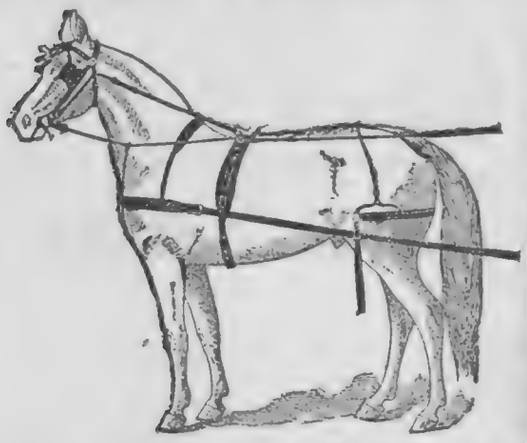

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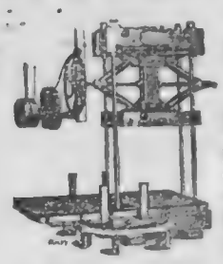

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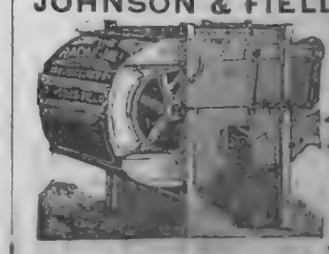

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII NO. 2059 NEW YORK, JULY 13, 1889. PRICE FIVE CENTS, $2.00 PER YEAR.

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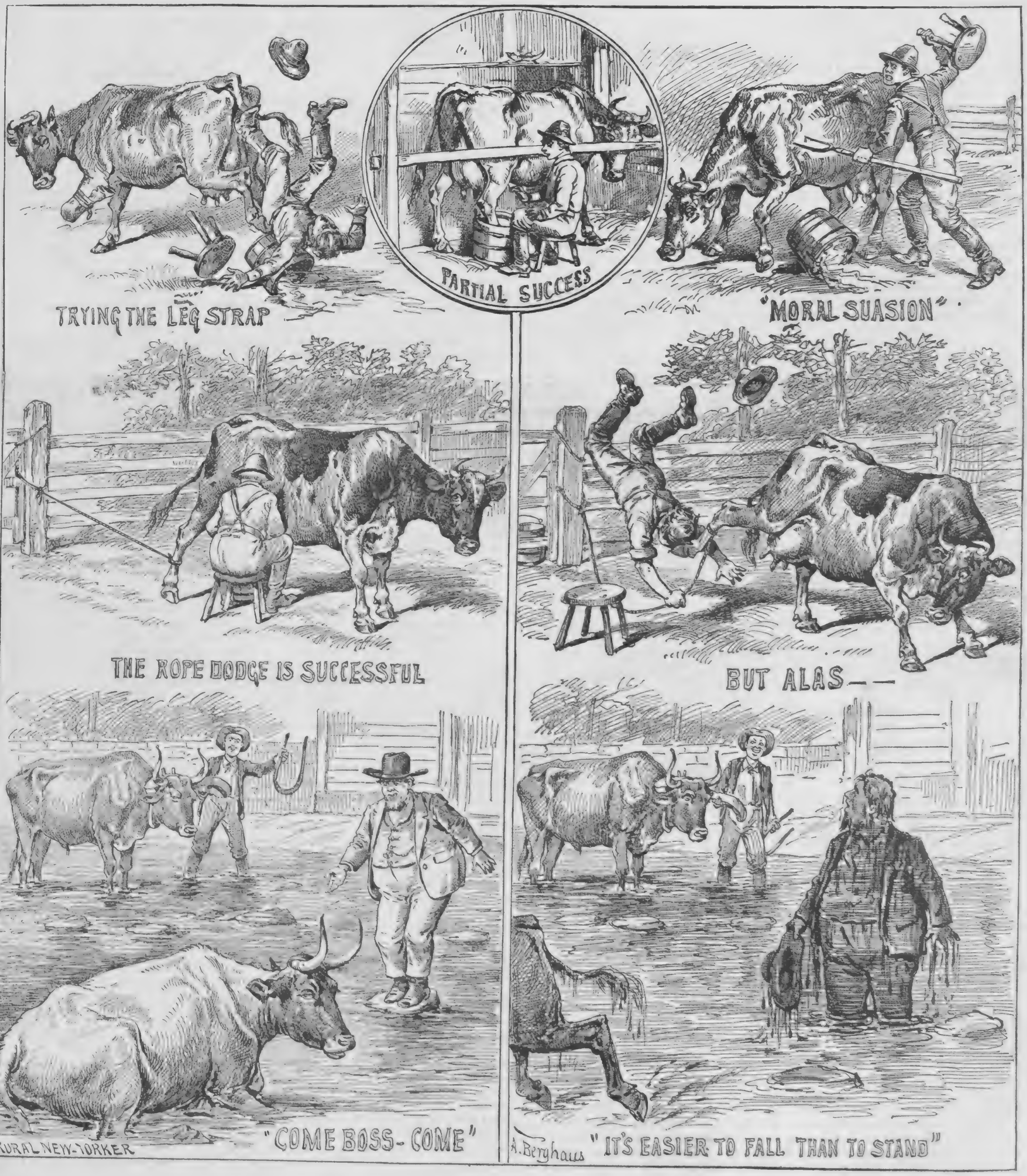

SOME BARN-YARD MEMORIES. See page 459. Fig. 171.

Rural Topics.

What are You Farming For?

SENSIBLE REASONS GIVEN.

FARMING NOT ALL "A DOG'S LIFE."

The "Bright Side" in Plain View.

OUR readers will remember that last winter we asked for answers to the above question —"What are You Farming For?" It is evident that a man should be able to give some reason for conducting the business that provides him a living. The question was asked in good faith. The R. N.-Y. has always contended that *farming* is an honorable, pleasant and fairly profitable way of making a living. While it is pleasant to have this idea confirmed, we should cheerfully have published the result had it been different. The Fourth of July season seems a fitting one for the printing of these answers. At the time of this glorious holiday we should, if ever, be proud of our country's prosperity and thankful for the chances our land affords for pleasure and happiness. These answers have been selected at random. There are hundreds more like them.

FROM ILLINOIS.

I BELIEVE this is a good subject for discussion. I have lived in town, but not since I was large enough to do much work. I have thought a good deal on the advantages of various lines of occupation outside of farming; but I have always come to the conclusion that with the same amount of business sagacity needed to succeed in any other business, farming would yield as large a net profit and be more healthful and at the same time afford a more enjoyable diversity of employment, with the advantage for those engaged in it of not being tied so closely to the office or the hot city. Of course, with plenty of money any business can be managed so that recreation can be taken. My natural leaning and disposition seem to give me a liking for the farm, though I have found that it requires more painstaking effort and more thorough knowledge on nearly every subject than I possess, to make a brilliant success. It appears as though capitalists and corporations of all kinds conspired together to fleece the farmers; but still I believe that mill and factory hands and other day laborers in coal mines and large cities have the hardest squeezing at such times as the present when flour, or any other staple necessity, is suddenly advanced in price without any advance in wages.

I am a farmer then, because,

1. I like a farmer's life best.

2. Because I seem fitted by nature for the rough farm life.

3. Because I believe it is the most healthy and enjoyable.

4. Because it affords an interesting and unending series of subjects for study and investigation. W. S.

Pleasant Valley.

WHY do I farm? For health, pleasure and profit. Health comes from the out-door life; pleasure from the contact with nature; profit from a good farm and good farming—an additional source of pleasure. J. G. P.

Cedarville.

FROM CONNECTICUT.

IF I were to answer: "I am farming for a living," the question would be equally proper: "What are you living for?" At the age of 40 I bought a run-down farm and began farming "to make it pay," and soon found I had a long and laborious task before me, and in reply to the inquiry often made: "Does it pay?" I could not say "no," which would imply that I was working for *naught* or without an object. I prefer to answer, *Yes.* I love the occupation, God is my landlord, and I am His tenant, and I will do what I can towards raising provisions for my brethren in other occupations, while they are exerting themselves to supply those wants which I have neither the humor, taste, capacity, nor time to attend to. One brother has supplied me with an engine, which greatly reduces the labor of cutting feed for my stock, etc., etc.; another has invented a machine for mowing my hay, which causes a great saving of labor, and another has improved it so that I can mow a swath of seven feet instead of four, with little, if any, additional labor for the team. Another has lately supplied me with a plow, on which I can ride, and do more, and better work than I could in the old and far more laborious way. And still another brother, has sent me a potato-planter, with which a man with a helper, can furrow, distribute phosphate, drop the seed, and cover it, at the rate of five to six acres a day, and do the work better than it was possible to do it in the old way. Then I have several brothers who are doing their utmost to gain information about the prices of farm products, and the best markets, and the most improved methods of production, and sending the news to me every week. These brothers have helped me wonderfully in the management of my business as a tenant, enabling me to increase my products greatly, and greatly to reduce the manual labor. Can I say that "farming don't pay," when I derive so much pleasure from the occupation, and have so many intelligent and willing brothers to help me, each in his own way, and in a way in which I could not help myself? J. J. WEBB.

New Haven County.

FROM VIRGINIA.

"WHAT am I farming for?" I spurn with disdain the idea that it is because I can do nothing else, and I have little regard for the man who has little enough sense to advance such an idea. I farm chiefly for two reasons: 1, because when I arrived at the years of maturity, with due thought and consideration I chose this as my vocation in life, not because I could do nothing else, for I had sufficient means to take a first-class professional education or to engage in any business requiring a moderate capital; nor were any influences exerted over me to direct my choice. The fact is that I was encouraged to take to medicine. Since I have been a farmer (about six years) although I have not at all times been successful, still each day has brought to me a greater love for my business and a satisfaction with my choice, and a determination to add my mite to the promotion of its interests. 2. I believe farming to be decidedly more conducive to good health than many other kinds of business. And now from a business standpoint, I would not exchange places with any gentleman in New York or any other city, because I value contentment more than money. R. R.

Peaksville.

FROM IOWA.

YOU ask me what am I farming for: here is my answer in four words: To get a living. When I started in life I put on the farmer's yoke and have worn it ever since. I was energetic and had a love for the work and I thought that as the years rolled by the yoke would cease to gall, that I would lay up a competence that would make my paths those of pleasantness and peace. In 30 years of arduous toil and strict economy, this has been partly realized; but not to the extent that I expected, and I find that to-day unless I practice strict economy, watch my business closely and keep abreast of the times, the yoke becomes burdensome. This I believe is the experience of very many farmers. They are losing their interest in their work and are on the defensive in trying to keep the wolf from the door, and I have no doubt that this state of things will exist until the cause is removed and the farmer gets his share of the profits of the country.

Belle Plain. H. B.

WHY do I farm? Because I was raised on a farm and love to farm, but it is very trying to one's ambition to be a renter and move from one place to another. Almost all landholders think anything is good enough for a renter; such a one cannot have everything to suit his notions. A renter has to work at a great disadvantage and is blamed for not doing better. There are so many renters that want to take care of farms, consequently a good man has to suffer with the poor ones.

Blevinfield. W. H. G.

FROM NEW YORK STATE.

"WHY am I a farmer?" This question has raised quite a train of thought in my mind, and I have not come to a very satisfactory conclusion, as there are a number of reasons for my being a farmer. I was born a farmer, or rather the son of a farmer, and when I say that, I mean that my father was a man who took such an interest in his farm that he was anxious to have it look nice and produce good crops. I was encouraged in such ways by his actions, and was taught that the farmer's life was not one to be despised, and that the tradesman must look to the farmer for support, as "the farmer must feed them all." While attending school I was encouraged to write compositions on the different occupations of the farm. There was a flower-bed near the house that was mine, and also a place for setting out berry-bushes, etc. But that was a rough place, where nothing but weeds grew. I had to dig these up and get out the stones and prepare the ground ready for the bushes, so I was taught that it was not all easy work. But then, I have not had the advantages that others have had on account of lack of means, nor what I might possibly have had, had not my father been called to rest from his labors and trials when I was only 18, and, being an only son, I had to take charge of the farm and help support the others. And from that time to this I have had encouragement from a loving mother and sister to do the best that my means would permit, and we have also had the RURAL and other papers and books to encourage us to higher aims. And my determination is to so improve my farm as to make it equal to the best around us, if I cannot get it ahead, or if I cannot attain to the hights that the professors of our colleges have attained, and numbers of others that I might mention.

Then when I contrast my occupation with those of friends who are in business in the villages around me, and see the lives they live, I conclude that I am as well off as they are, although some have things nicer than we, and have more advantages as to society than it is possible for us to have. But if I am not mistaken, all can see things that they wish they might have different from what they do have. G. A. B.

Groton City.

I AM inclined to think with many others that "farming don't pay," from a business standpoint, and socially and intellectually it is almost a complete ostracism. Between paying taxes and other necessary expenses and striving to make both ends meet, the intellect generally gets "stunted" and narrowed down to two ideas: how to make $1 go as far as $5, and how to economize more closely this year than last. But notwithstanding all this, farming has a bright side and I hope all may see it. They will if they look for it, for it consists in the liberty, sunlight and fresh air, in the flowers of spring, the green fields of summer and the fruits of autumn, and even in the frosts of winter. To the student and lover of Nature, country life is an earthly paradise. M. T. W.

Sandy Hill.

I FARM with the intention of improving the farm. I always try to leave a field in better condition when sown down to grass than when plowed up. I think that the farm is a very good bank to make deposits in, and I regard it as much safer than most of the ordinary banks. J. B. MC C.

Mount Morris.

I FARM because I like it. I am built that way. I believe farmers don't get the pay.

Lockport. W. H.

FROM MICHIGAN.

I FARM because I think that it is the most honorable and independent occupation a man can follow. If one tries to make home attractive and pleasant he can keep the boys away from town and the allurements that are always sure to be where people congregate together. I think that a man can make farming pay if he attends to his business and keeps up with his work; moreover, he will have time to spare to read good papers and learn what is going on outside of his own neighborhood.

Three Rivers. S. M. S.

I AM a farmer because I love a farm life. Every tree, flower or blade of grass that the all-wise Father has made is dear to my heart. Another thing—what work can a woman do that will pay her as well? She can plant potatoes, raise cabbages and onions, cultivate fruits, take care of the chickens, make butter and can really do as well as a man if she wants to; for she can have a hired man, the same as the man farmer does. He does not do all the farm work. There is one thing I will never raise—that is tobacco. H. A. H.

Carpenter.

FROM OHIO.

WHAT am I farming for?

1. Because I like farming better than any other business.

2. Because it is a very profitable business if pursued with the intelligence and diligence necessary to success in any other vocation. There is no money in growing the average crops of the country. I do not believe half of the farmers take an agricultural paper. In all other kinds of business it is necessary to keep well posted, and farmers will surely get left if they don't get out of the old ruts. The world moves. J. W.

Lodi.

WHY do I farm? Circumstances favored my starting in business on a good farm, and notwithstanding the feeling I may have had to the contrary, as well as the anxiety of my friends, I am still here. I might make more money at something else; but I don't propose to experiment to find out. When a man has an opportunity to provide well for his family, with a little surplus to lay by and contribute to the wants of those around him, he is, in my estimation, in a most desirable position to let well enough alone. W. L. A.

Flushing.

HERE are some of the reasons that influence me in following the vocation of a farmer: Born and reared on a farm, the most pleasurable memories of boyhood and early manhood cluster around it. Blessed beyond most boys in a father who always kept faith with me, who never refused a reasonable request, and who never forgot that he was once a boy, I led a happy and contented life, though a busy one, and learned to love it with a love that will doubtless last as long as life is spared. Under such conditions I grew to be a farmer as naturally as I grew to manhood: and knowing it best and liking it best I have never entertained serious thoughts of any other vocation. An ardent lover of Nature, what is more natural than that I should choose an occupation in which I became a coworker with her and in which success largely results from understanding and complying with her laws and in an intelligent study of her secrets.

An enthusiastic lover of field sports, the farm affords opportunity and leisure days for recreation with rod and gun. And on a farm, other things being equal, the home attains its highest perfection, a strong argument in the eyes of a man to whom home life is everything. The farmer's independence is proverbial and his opportunities for mental and moral culture are ample. If illiterate at the present day, he is so from choice not from necessity. And his table is always supplied with fresh, wholesome food. He need not be imposed upon with diseased meat or stale fruit and vegetables. Very few dwellers in large towns and cities know how a strawberry tastes fresh from the vines; and can never know the pleasure of plucking and eating fruit from vines and trees that their own hands have planted: Nothing, too, would tempt me to peril the future of my boy by exposing him to the temptations and artificiality of the city. On the farm I shall expect with a fair prospect of the fulfillment of my expectation, to see his young life expand and develop in harmony with his surroundings—trees, birds, flowers, and all that is lovely in nature.

The RURAL is doing a grand work in educating the farmers to a point where they will understand their capabilities and appreciate their opportunities. G. W. B.

Indiana.

FROM INDIANA.

I FOLLOW farming because I like the business; I think I am better qualified to farm than to do anything else. I believe the farm the best place on earth to raise a family: the fact that the little ones come in contact with the rough corners of farm life and notice the development of plants and animal life as they grow up, develops in them better characters and stronger minds. W. M.

Bassett.

FROM WASHINGTON.

I FARM because I can always have work, usually at good wages, and I am my own employer. Farming is a safe and sure business, and our living profits seem to come more directly from the hand of Him who gives us "rain and fruitful season." I once tried for two years working out to make money faster. Farming pays better. A few days' fruitless search for work at one time and dismissal from one job because I had mistaken my orders gave me a taste of the trials of those who depend on other men's pleasure for their living and confirmed me in choosing the peaceful happy life of a farmer. D. N.

Oakville.

FROM MISSOURI.

I FARM for a living and to make money. I have so far done both by raising mixed crops—corn, wheat, potatoes, cabbage, tobacco and garden truck, with plenty of hay.

Berwick. J. G.

FROM MINNESOTA.

WHAT am I farming for? This is truly a most important question. If a man has no definite, well defined motive in view he should at once quit the field and give place to some one who has. No one can hope to attain success in any vocation in life unless his heart is in his work. If his work is degrading, the sooner his interest in it abates, and he is induced to seek for more ennobling and elevating employment, the better. Farming is an

ennobling and instructive calling. Nature blooms in sweet profusion all around the farm, stimulates the imagination to lofty hights, to study the sublime as spread in rich and abundant profusion in the pastures verdant with the sweet and luxurious grasses, for the sustenance of the animals most useful to man. Then what a delight there is in seeing that these are properly cared for; that the most profitable returns are made from stock that labor, as well as from those that give milk or butter, cheese or meat or clothing.

"Again what are you farming for?' For the profit which comes from well directed labor, intelligently employed; for the health and strength, activity and usefulness the employment gives; to be better able to meet the great

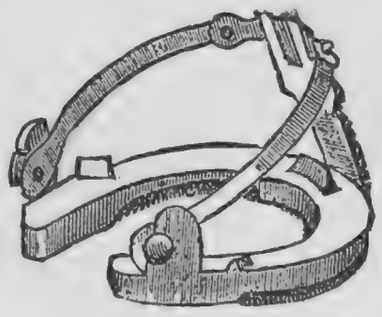

Fig. 173.

responsibilities of life that rush in upon us every hour; to be lifted higher in the sphere of exalted thought and noble aspirations, the true dignity of true manhood. How can it be that he who is so intimate with Nature, should fail to profit by the wonderful lessons she teaches, in "hill, and vale, and stream?" Certainly he who fails to do this cannot love her; most surely his heart is disinclined to listen to the music of her voice. Little wonder that he groans: "Farmin' don't pay." Nature is a generous giver when she is loved and petted, but poverty punishes a slight to her. These are some of the many answers I would give to the question for A. D. 1889.

Goodhue County. W. E. R.

I AM a farmer from choice. When a boy I had much to do with horses, as my father kept a livery stable. It was always a pleasure to get out into the country, and I thought at that time that I would some day be a farmer. At 20 I went into a dry-goods store, where I remained four years as a clerk. Then I went on a farm and I've been farming ever since. I have no idea that I would have enjoyed life so well in any other business. It gives me more pleasure to make two blades of grass grow where only one grew before, than it does to make a trade by which I gain money.

Wright County. J. L.

FROM NEBRASKA.

WHY am I a farmer? Well, because I wanted to be—not because I had to be. I was raised on a farm and staid there until 19, then followed railroading for two and one-half years and was doing well when I quit to take a homestead, and here I have been for nearly 20 years. I took a piece of raw prairie; now I have thousands of trees, including about all kinds of fruit trees that will grow in this climate, also a fine collection of evergreens, the poorest of which I think is the Norway spruce. The best I have is the Austrian pine. I like it better than the Scotch pine. I have no White pine. I may also say that I am a

Fig. 174.

farmer because I like to be my own boss and no one is trying to beat me out of my job—as there always is on a railroad. For my love of the farm I can thank the RURAL in part at least, for I have had the reading of it since my boyhood days. Success to it! May its coming days be still better than the past!

Steele City. D. T. G.

FROM PENNSYLVANIA.

THE RURAL wants to know why farmers farm. I follow the business because I like it; because I think it as profitable as most other occupations, if we apply to it the same business principles and the same judgment; because the farm is a good place to raise a family of boys or girls. If the boys make good farmers they are qualified for any other business which requires pluck and perseverance, and one reason why I farm is because of the farmer's independence of the opinions of others, as he is not dependent for his success upon the patronage of his neighbors. I am not a city farmer, as I have lived on a farm nearly all my life. I. R.

Poughkenamon.

I BECAME a farmer, not because I had to, as the head of the house or home was an artisan and worked at his trade. We wanted a home where we could do as we wished, which we had found impossible in a rented house. The children were too noisy; the cat was a nuisance; our neighbors' chickens destroyed our garden when we had any. We had to buy every pint of milk, every dozen eggs, every bushel of potatoes, every cabbage, etc., and could not always get them, or, when we did, perhaps they would not be fresh, so we bought a small farm of 37 acres so that we could have a cow, pig, some chickens, etc., and plenty of water without having to carry it so far. Now after living here a few years, we have learned to love the freedom of the farm and find by devoting to it as much time as we would to any other trade, that there is money in it. Of course I do not say that anyone can, all at once, become rich in farming, but he can enjoy better health and comfort, and more luxuries than the ordinary tradesman or mechanic can. Then there is the freedom from rent, a great bugbear to the man who falls sick or who finds work slack. If a farmer with a family were to leave his farm and take a place at a trade and get $12 per week, he would wonder where his money went to if he had to buy the same things he had without price on the farm. M. L.

White Mills.

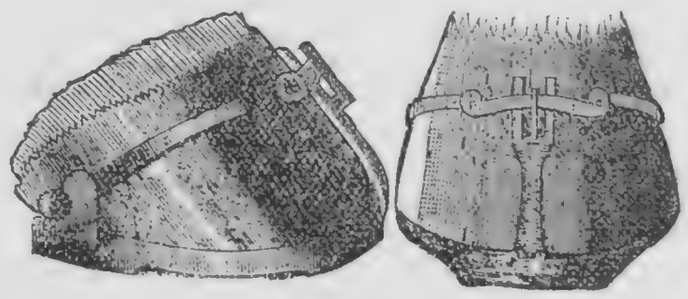

Fig. 172.

WHAT are we farming for? Mainly for good health and pure enjoyment. The more of our own food we produce, the more certain we are of its purity and wholesomeness. With good, pure food, good health and home attractions, the purer are our enjoyments. Farming is a success for us. But we are also farming to produce a basis for speculative gambling operations. C. W. G.

Waynesboro.

BARN-YARD MEMORIES.

READERS of the R. N.-Y. will remember a picture, printed last fall, entitled "A Tale of a Tail," which illustrated the misfortunes of a man who tied the tail of the cow he was milking to the strap of his boot. We cannot think of any of our pictures that has called forth more pleasant comment than this "Tale." It seems as if half of our readers have seen "some other fellow" in just about the plight of the milker in the picture; and those who have not met with a similar case have some other barn-yard experience to relate that they consider just as laughable. Among the many barn-yard tragedies that have been submitted to us are the following. Our artist has illustrated them on the first page. We let the historians give their own words:

A KICKING COW.

DR. W. J. BEAL.

"THAT reminds me;" I mean the cartoon on the milking of a cow. Possibly the following may be a pointer for another cartoon: For kicking cows I never succeeded in finding a suitable remedy. I have made many experiments, but never succeeded to my satisfaction. Since I quit milking, perhaps better races of cows have come into existence. When a lad, I used to take up one fore foot and slip on a strap to hold it up, letting the cow stand on three legs; but a smart kicker even then would always beat me. I tried a bar pressed close up to one side of the cow in the stable, with partial success. I have since heard that a rope or strap tied tightly around the body in front of the hips is a sure thing. I never tried it, but I have tried moral suasion, scolding, talking gently, whistling, pounding with milking stools, pitch-forks, using big whips—all to no purpose. A good kicker was sure to worst me when I least suspected it.

Toward the last of my checkered career as a milker, after having tried many experiments, having read all I could find and sought the advice of every one; after frequent trials and spilt milk and soiled clothes; after shedding many tears and losing my good disposition (all true); after giving much serious thought to the subject, I hit upon the following original device, which seemed to be a good thing. I tried it at the next milking, when no one was near to notice success or failure. I tied a slipping noose about the right hind foot of the cow and the other end of the rope to a gate post, and started up the cow till the rope was straight. She could not get away, she was properly "histed," and could not get her foot into the pail. I sat down to milk. It was "Old Brock," our worst and most experienced kicker. I milked her for once with great satisfaction, and was delighted with my new plan. I talked to her in triumph and set the pail of milk through the gate. I induced her to back up so as to slacken the rope, and sat down to untie it. She stood quietly until the rope was freed. I was stooping right behind her. She looked around to take in the situation, struck me a smart blow on my forehead, and started on a run, while I rolled over in the dirt and saw a firmament of golden stars. I did not pursue the cow. She was still the victor, as she always had been. I wore a large lump for the next three weeks. I never tried the remedy again, nor did I milk the cow when I could possibly induce the hired man to do so.

Agricultural College, Mich.

CALLING THE STEER.

E. J. MCWAIN.

THE RURAL'S pictorial illustration of a "Tale of a Tail" reminds me of a laughable incident or barn-yard scene which was enacted in my presence in old Vermont before I came to this country. I was living at home on a farm with father, and one of our neighbors, a Deacon of the village Congregational church, about 60 years old and weighing 250 pounds, an excellent man but somewhat noted for his eccentricity, superintended but did little else upon his farm, as he had grown-up sons who performed the labor. His farm team was always a yoke of oxen. His barn-yard was quite large and, like all such yards in that country during the spring work, was probably a foot or more deep with slush or a mixture of snow, mud, manure and black, filthy water, making a conglomerate somewhat of the consistency of porridge, with an occasional knoll and the smooth round surface of a stone affording a precarious footing in passing over it. While the yard was in this condition one spring day, the oxen were chewing their cuds lazily in different corners. Having occasion to yoke them up, one of the boys accompanied by his rotund father went to the barn for that purpose. The young man took the yoke and went to the off ox and put the end of the yoke on him, and taking out the other bow, and holding it in his right hand, and elevating the other end of the yoke with the other, was loudly calling to the other ox to come under the yoke, but he continued to chew his cud without noticing the order. The old gentleman made his way as best he could towards the ox on these knolls and stones, until he stood some 20 feet from him, with both feet on the rounding, smooth surface of a stone. He could advance no further without stepping into the slush up to his knees. There he stood, waving his hands in the air, and hallooing at the ox to drive him under the yoke. While in this attitude his feet slipped from the stone and he fell heavily forward at full length, face downward, into the mud and slush. He deliberately rolled over on to his back and as deliberately proceeded to rise. Having regained his feet, standing to his knees in filth, which was dripping from his besmeared face, spit from his disgusted mouth and running off his garments and the tips of his fingers, he looked up to his son and quietly remarked: "Well, I find it is easier to fall down and run the risk of getting hurt than to exert myself to stand up." Being short in stature, and somewhat wheezy, the whole scene, though unfortunate, must have been a source of no small merriment to the most lugubrious. But to be fully appreciated it ought to be seen. No description could do it justice.

Falls City, Nebraska.

I AM VERY MUCH INTERESTED in the RURAL'S Rosa rugosa hybrids, and want to know all I can about them. Last Christmas I sent to Thos. S Wan, London, and got several of the new Rugosa sorts—Paul's single white, Paul's single red, and two others. They have made a great growth. C. H. S.

Niles, Cal.

Farm Economy.

NEW AGRICULTURAL DEVICES.

THE Paris Exposition has drawn together many new machines and devices that promise

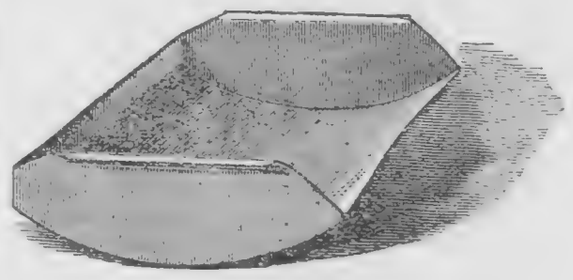

Fig. 175.

to be of service to farmers. Our English contemporary, the Mark Lane Express, prints pictures of some of these devices, which we have re-engraved.

THE NAIL-LESS HORSE SHOE.

This invention is shown at Figs. 172 and 173, and the pictures fully explain the contrivance. It is said that these shoes are in use in London to a considerable extent. Those who use them seem to think that a horse is rested by having his shoes removed when not at work, just as a man would be.

THE SPEEDWELL CREAM RAISER.

This invention is shown at Figs. 174 and 175. Fig. 174 shows the vessel into which the milk to be creamed is poured. A is a glass eye-piece to measure the amount of cream; B is an outlet pipe for drawing off milk; C, C, C, C are compartments to assist in the rapid cooling of the milk, and R is the upper portion of the creamer, just large enough to admit the skimmer, Fig. 175. To use the contrivance, the milk is poured into the vessel, which is filled nearly to the top. The legs, C, C, C are placed in cold water so that all the cream rises to the top of R. When the cream is ready for skimming, the skimmer, Fig. 175, is passed through R at a depth indicated through the glass, A, and the cream is thus easily removed. One defect that users will find in this is the fact that the small compartments at C, C, C, C, while valuable in promoting rapid cooling, will be difficult to clean properly.

Farm Topics.

NEW JERSEY FARMS THAT PAY.

EDITORIAL CORRESPONDENCE.

NO. II.

R. N.-Y.—Can you give me a statement of the sales from your 100-acre farm in one year?

FARMER L.—Here is an account of my sales from the farm for 1888—1889, closing with April 1, 1889:

From cattle and pork	362.16
Corn	130.00
Potatoes	1,304.16
Hay	925.00
Wheat	331.32
Miscellaneous sources	64.19
	$3,116.83

R. N.-Y.—But your soil is unusually strong.

FARMER L.—It was not so when I bought it. I can easily raise double the crops I could 10 years ago, and chemical fertilizers have done the work for me. I would like to see an acre of farm land in New Jersey so poor that I cannot, by the aid of fertilizers, make it yield paying crops of potatoes and hay.

R. N.-Y.—When shall you be satisfied with the condition of your farm?

FARMER L.—When the soil is so uniformly strong that I can, whenever I wish, put it all into grain and grass with the certainty of averaging over two tons of hay per acre. Soil that will do that is good enough.

R. N.-Y.—Have you ever tried low-grade fertilizers or special manures containing one or two fertilizing elements?

FARMER L.—Yes, and my experience teaches me that it is economy to buy the highest grade of a complete fertilizer that I can get. I do not see why potash, phosphoric acid and nitrogen may not have intrinsic values as fixed and permanent as the intrinsic value of flour, sugar or clothing. Staple articles of food that go to sustain life have a fixed value, depending upon the cost of production, handling and transportation. Cheap sugar sells for less per pound than good sugar, but you have to use more of it. The "sweetness" costs as much in one grade as in the other, and the cost of hauling and handling the cheap grade is the same as that for the higher grade. The same elements that go to make first-class Timothy hay are used in forming trees, logs, lumber. Sawdust, then, should make as good a feed as the hay. But what will a horse say to this? The proposition is ridiculous; and yet, is it not as sensible as that made by a man who says that a $25 fertilizer is just as good as one costing $40, because one contains almost as much phosphoric acid, potash, and nitrogen as the other? A man can make a cheap fertilizer by using leather and South Carolina rock that might analyze well. Another man might use nitrate of soda and bone, that wouldn't analyze much better, and charge twice as much for it, and yet his fertilizer would be far cheaper than the other. The cheap fertilizer would represent to the plant what the sawdust would to the horse. No, sir; in my opinion it is economy to use a high-grade fertilizer every time, and on my farm I doubt if I can use too much of it.

R. N.-Y.—Do you fear Western competition?

FARMER L.—No. It has driven us out of the cattle business, but fertilizers have given us an advantage over the West. Within 60 miles of us are some 4,000,000 people that must be fed. It is a pity if we can't find some article of food that we can beat the West at producing. Hay and potatoes are our great money crops. Croakers tell us that electricity will, sooner or later, so supplant horse power in the city that the demand for hay will fall off. The thing to do in that case is to use every means to improve the quality of the product. The greater the supply, the better the sale for the part of it that can be graded "No. 1." We have a soil and climate here admirably adapted to the production of potatoes and hay, and we can put just as much brains and business into these crops as anybody in any other part of the country.

R. N.-Y.—Is there any reason why farmers' boys should leave such farming as this?

FARMER L.—It would seem not from the way our best boys stay. Farming with fertilizers is a science that calls for the best thought and study a man is capable of. Any young man who studies such farming fits himself for a profession that will enable him to earn a good salary. Thousands of city men are buying large farms. They cannot run these farms themselves, but they are ready to supply ample capital and pay good salaries to the right men who will serve as managers. Here are good chances for capable farmers' boys. The graduates of our agricultural colleges ought to fill more of these positions. They might make by filling them more than two-thirds of the young doctors or lawyers ever will make.

R. N.-Y.—What is the size of your farm?

FARMER S.—I have 132 acres.

R. N.-Y.—What is your rotation and how do you use fertilizers?

FARMER S.—Mine is a five years' rotation as follows: 1. Potatoes, using 1,500 pounds of potato fertilizer per acre. 2. Wheat, with 400 pounds of the same fertilizer per acre. 3 and 4. Grass—no manure. 5. Corn with all the farm manure I have, with a little fertilizer in each hill to stimulate an early growth. If I have not enough farm manure I use complete corn fertilizer, which is applied with the grain drill. This acts also as a harrow, and dispenses with further harrowing. In fact, the harrow with us is a little-used implement as compared with its use in some other sections.

R. N.-Y.—So I have noticed. I have seen very few of the newer harrows about here. But how do your crops compare, under this system, with former ones?

FARMER S.—I consider that all crops, grain, grass, wheat and potatoes have doubled. When I started the large use of fertilizers, my father, an old man, did not think it would pay. He thought we were putting too much cash into the ground. The old plan of using fertilizers was to put on as little as possible—that is, to apply just as much as a single crop could use and no more. The idea was that fertilizers were much safer in the barn than in the soil, and that what was left by the crop was generally washed out and wasted. So 400 or 500 pounds per acre were all they dared to use. My father could not see where the money spent for 1,500 pounds would come back. He lived long enough, however, to see enough of an increase in the crops to convince him that the heavy fertilizing pays. We believe that the only way to make fertilizers pay is to use lots of them. I do not know of a single farmer who has worked up to 1,500 pounds that would go back to a smaller quantity.

R. N.-Y.—How much stock do you keep?

FARMER S.—My working teams and three cows. Last winter I fed some steers, but such feeding does not pay. I want some way of using up my corn-stalks.

R. N.-Y.—Some farmers at the East buy farrow cows in the fall, milk them through the winter, making butter, and sell them for beef in the spring.

FARMER S.—I would like to try that. I think it might answer here.

R. N.-Y.—Are most of the farmers prosperous about here?

FARMER S.—Generally so. I presume we have as small a proportion of farm failures as country neighborhoods usually show. I want you to go and see Farmer D. He has what I call a model farm. He has 100 acres of land. He bought it 20 years ago and paid from $175 to $200 per acre for it. It would not sell for much over half that now. He has never done anything but farm, yet he has paid for his land, bought another farm and has now money enough to buy another. He is a steady, industrious, careful man. He never left the farm to run about and try to be elected to some little township or county office, but he has kept at home, worked hard, watched every point, and as a consequence, succeeded.

R. N.-Y.—A man that will work that way will succeed in any kind of work won't he?

FARMER S.—It looks so. There is no other way to success that I know of.

R. N.-Y.—How much stock do you keep, Farmer D?

FARMER D.—Three horses, two mules and 10 head of cattle. I have 100 acres of land, which cost me from $175 to $200 per acre.

R. N.-Y.—How long have you used high-grade commercial fertilizers?

FARMER D.—Only five years. This year I bought 10 tons. I use 1,500 pounds per acre on potatoes. My wife sometimes complains about the amount of cash I spend on fertilizers; but my experience is that the more I spend in this way, the more money proportionately I get back. Last year I sold $1,100 worth of hay. If you want to see what fertilizers have done for my hay crop, notice the farms on either side of me as you drive past them. They are run on the old plan and will not average over one ton per acre. I have laid aside in one year, $1,900 from my farm. That was a year of extra good prices and crops. Still, in that year I paid for all my help; now I have three sons large enough to help me. One of my sons, just married, has taken a farm just across the road. It is on poor soil, but he is bringing it up with our usual crops, only using rye in the place of wheat.

R. N.-Y.—Does your rotation differ from that of other farmers about here?

FARMER D.—No. We have about the same plans. We raise corn, potatoes, wheat and grass, put our farm manure on the corn crop and our fertilizer on the potatoes and thus manage to keep work going all through the season. When the land is plowed in the spring we plant potatoes; then comes corn planting; by the time the potatoes are cultivated the corn is ready to work in; when the potatoes are sprinkled it is time for haying; then come harvest and thrashing; then we are ready to dig potatoes; then come corn cutting, and after that wheat seeding.

R. N.-Y.—You make farming pay then?

FARMER D.—Well, it seems so. The fact is that our farms are assessed for the same amount, whether we use 400 or 1,500 pounds of fertilizer. If by using 1,500 pounds we can double our crops, it is pretty good business policy to do so, we think.

The R. N.-Y. talked with many other farmers and looked at the growing crops on several farms. The answers given above are typical; enough of them have been given to show the way the best farmers around Cranbury are conducting their business. Let it be remembered that the R. N.-Y. merely acts as a reporter. This is not a special plea in favor of large dressings of high-grade fertilizers. We merely state exactly what we saw and heard. Any farmer can go and see for himself what these farms around Cranbury are doing, how they are improving and how chemical fertilizers are actually taking the place of stable manure.

The Cranbury farmers are emphatic in saying that their prosperity is due to the use of commercial fertilizers in large quantities on potatoes. The R. N.-Y. saw no evidence to controvert this claim. The fact remains, however, that only a skilled farmer can afford to farm on a 1,500-pound scale. The man who is not willing and able to exercise the keenest powers of his mind in the handling and selling of a first-class product should never try to run his farm to its fullest capacity. These fertilizer farmers at Cranbury are students. There was an agricultural report in every room that we entered and all the volumes had evidently been read and reread.

These farmers seem to be solid men in their community. They could well afford to use fertilizers. Most of them seemed to have some capital to work on so that the expenditure of large amounts of cash for the fertilizer would not cripple them. Farmer D's experience is exceptional. He seems to have started with less money than any of the others, yet now seems to be making as much profit as any. The R. N.-Y. knows of hundreds of discouraged, debt-burdened farmers who toil year after year on land that grows poorer and poorer. It is impossible for any intelligent man to fail to see, after a visit to these Cranbury farms, that these poor lands can be restored to fertility and the hard life made easier. But how are these discouraged farmers to begin? That is the question that suggests itself at once.

There is little place for pastures in the Cranbury system of farming. The design is to have every inch of land under some paying crop. Hence there is a constant inclination to decrease the amount of stock. But for this sheep would doubtless pay well, as consumers of corn-stalks. Most of the farmers keep so little stock that fences ought to come down and the long lanes that run through most farms be reduced to a space wide enough for a wagon road.

To sum the matter up, the R. N.-Y. is led to conclude that some farms at the East are actually increasing in fertility by the use of fertilizers, that it will be many years before these Cranbury farms become a part of the "desert" prophesied by our Western friends, and that few farms in the West growing the same products pay better profits or maintain their fertility so perfectly. This is all we can say. Are the plans pursued at Cranbury suitable for general adoption in other Eastern neighborhoods? That is something you must think out for yourself.

Everywhere.

RURAL SPECIAL REPORTS.

Iowa.

DES MOINES, Polk County, June 24.—June has been wet and cold. There have been very few days of good growing weather for crops. Corn is small and many fields are green with grass and vines. Unless warm weather comes soon and lasts late, our prospect for a full or average corn crop will be slim. The weather has been favorable for a heavy growth of small grains and grass. Our grass is fine, and there is a good prospect for a good crop of hay. Oats are falling badly and will be greatly damaged. Our rains have been attended of late with hard driving winds, and lands are badly washed. We have the promise of a large crop of potatoes. Cabbages, onions, beets and peas are doing well, and are in great supply. But it is impossible to get a vine of any kind to grow. The striped cucumber bug was never so bad, and defies all remedies. We have two new insects here: one is the strawberry worm, which makes its appearance early in the spring, and is a greedy feeder on the foliage, and unless the pests are, or can be, destroyed, it is useless to plant strawberries. The other is the squash grub. It seems that it is hatched from an egg laid on the stem of the vine, near the ground, and eats its way into the vine, and soon destroys it. The pests were very bad here last season. F. S. W.

North Carolina.

S. WASHINGTON P. O., Pender Co., June 25.—Corn, peas, potatoes and stock are in good cultivation. Almost all farmers are through with laying by their crops, which are the best for past three years. We have had few rains and a season good for all crops. Our fruits are almost ripe. Large quantities of Orange cane have been planted and it is looking fine. Most families have enough to make a year's supply of sirup. No dairying is done here, although we have fine natural pasture. Our cattle are almost all scrub stock. I have Devon cattle, Berkshire swine and Cotswold sheep. D. J. M.

New Hampshire.

DOVER, Stafford County, June 26.—We have had a hard season thus far. On the morning of May 27 the mercury stood at 32°. Ice made over an eighth of an inch thick, and frost did much damage. Since that time the mercury has been at 40° two or three times, and more or less rain has fallen nearly every day. We have had heavy thunder showers, and the lightning has done a good deal of damage. Grass is looking well and there will be a pretty good hay crop, but haying is not coming on as early as was expected on account of having so much cold weather. A few have begun on pieces that were lodged, and if the weather is good the first of next week a good deal of grass will be cut. W. E. R.

THE FARMERS' CLUB

ANSWERS TO CORRESPONDENTS

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

PROTECTING PASTURING CATTLE FROM FLIES.

D. A. C., Sandwich, Mass.—Are there any practical means by which cattle in the pasture can be protected from the attacks of flies, etc.?

ANS.—Here are replies from a number of good dairymen. The R. N.-Y. can add little to the list of remedies. Who can?

FROM C. M. WINSLOW.

I never tried anything. It would be quite expensive to wash a large herd over every day or two with any wash.

Brandon, Vt.

FROM L. F. ALLEN.

I have never succeeded in putting any wash or substance on cattle to prevent flies from disturbing them in pastures. Every part of the animal cannot well be washed or anointed by any preparation, and all exposed parts will be accessible to flies. At milking times during the fly season cows should be in dark stables, where flies will not trouble them. That has been my practice for many years, and it has always been effective.

Buffalo, N. Y.

FROM W. M. BENNINGER.

The best plan I find for keeping flies off cows is to pasture the cows at night, and keep them in a cool stable in the day time, and have good fly doors on the stable. I find some put fly covers on their cows. I pasture mine early in the morning and late in the evening, and keep them in a brushy swamp during the day, where they have plenty of fresh water and shade.

Walnutport, Pa.

FROM G. W. DREW.

Little experience have I had in this matter. I have seen blankets made of cotton cloth used with fair results; also a liquid made by boiling walnut leaves, moistening the coats of the cows occasionally with it.

New Haven County, Conn.

FROM W. E. RINES.

The only thing I have tried is burdock leaves steeped in water until the liquid is very strong. Three years ago next August one of my cows slit a teat open when she was giving 15 quarts of milk per day. I sewed it up and kept her in the barn a month. Of course, there was more or less milk on the floor. I used the burdock water and it kept the flies away.

Stafford County, N. H.

FROM SMITHS, POWELL & LAMB.

We have never had occasion to protect our cattle from flies, having at several points on our farm growing timber in which the cattle rest at pleasure. In the Adirondack region where the "black flies" are troublesome we have known of parties putting on their cattle a preparation made of tar oil or tar and lard, which, if applied frequently to the ears, will, to some extent, keep the flies away, but it would never be practical for a large herd.

Syracuse, N. Y.

FROM J. W. INGRAM.

I have never tried anything to prevent cows from being annoyed by flies when running in pasture. I have seen it stated that sponging

the bodies of horses and cattle with a strong tea made by steeping red peppers in hot water would prevent flies from biting the animals when in pasture, but I have no personal knowledge on the subject.

Bradford County, Pa.

FROM W. B. PRATT.

A wash of a decoction of hickory leaves, also tar water scented, have been used, but without such results as to encourage a repetition very much. Efforts of the kind have finally ended in an abandonment of the animal to such protection as could be gained from shade trees and its own switch, with a feeling of unavailing pity for it.

Steuben County, N. Y.

FROM M. MORSE.

I know of no practical means of protecting animals at pasture from being attacked by flies. I have heard of several washes, among which is a decoction of walnut leaves, and of pyrethrum, but in my experience they proved worthless when tried on horses.

Norfolk County, Mass.

FROM PROF. A. J. COOK.

I know of no practicable way to keep the Ox Bot fly from laying eggs upon our cattle, except to keep the cattle in the barn, as I suggest in my little pamphlet on "Silo and Silage." It is wise economy to stable our cattle and feed silage in summer. Pasturing is very expensive. By feeding silage, an acre will keep a cow for a year. Then the gad-flies will do no harm. If it is not thought wise to do this, the next best thing is to cut the trees from the pasture. Cattle pastured on wood lots or where there is much shade are far more liable to attacks from the gad-fly than those in open pasture fields. The presence of gad-flies is not very harmful unless the cattle are to be slaughtered, when the pelts are of much less value in case the warbles are thick under the skin. The best course then is, to keep the stock in yard or barn, the next best thing is to keep them in open, unshaded pastures in July and August.

HOW TO BUILD A BRICK CHIMNEY.

W. M., Pittsford, N. Y.—How should a brick chimney 30 feet high be built to have the best possible draught?

ANS.—If this refers to the chimney of a dwelling-house it may be replied simply that it should have a flue not smaller than eight inches square for each separate fire; the flues should be straight, or, if necessary to pass out of a direct, upward course, the deviation should be as small as possible. The flues should be made of the best hard brick; no soft brick should be used and the flue should be plastered smoothly all over the surface as it is carried up so as to leave an even surface without roughness or projections to impede the draft, cause irregular currents of air or gather soot.

If the chimney has fire-places connected with it, these should have a contracted throat made in this form:

Fig. 176.

There will be no downward currents caused by reflux of air in a chimney built in this way. If it refers to a single chimney as for a furnace or a boiler, the chimney should taper outside gradually to the top, but the flue should widen a little as it goes up, not more than three inches, however, in 30 feet. This enables the cold air which rushes in above the fire to expand as it gets heated and makes a stronger draft below, which, of course, in all chimneys, is a great advantage. The plastering of the flue in every chimney is indispensable, and to prevent the plaster from cracking with the heat, cow dung is usually mixed with it and it is well tempered before it is used.

KEEPING CELERY IN WINTER.

A. C. J., Cuba, N. Y.—I want to excavate a space 16 feet long, six feet wide and 2½ feet deep for a celery bed or trench, and wall it up with brick or stone and cover with plank, straw, etc., during cold weather. Will it keep the celery without rotting and will it need ventilation during warm weather? I can't preserve celery in a trench with any satisfaction, and it is not crisp and nice when blanched.

ANS.—In order to keep celery well during winter it must be kept in a cool temperature, say, 35 degrees to 38 degrees, dry overhead and only slightly moist at the root. Where a large quantity is stored together ventilation is necessary. Crisp and nice celery depends a good deal upon the variety grown and the cultural conditions before storing. After storing, dryness wilts it, wet rots it, warmth sprouts and "draws" it and robs it of flavor. Celery stored when green will keep for months without bleaching crisp; but celery that is half-bleached before storing, will soon attain perfection after being stored; and the red celeries are better flavored than any white celeries. The pit you propose to excavate and build should do very well; but be particular about having the drainage thorough and that no water can leak through the top; also provide means of ventilating. But in getting up such a substantial pit, why not widen it by two feet more, and shorten the length in proportion? Then raise the side walls two feet above ground level and bank up against them with dirt, and cover all over with a secure span-roof. Then you could have a narrow passage in the middle to walk in, and a celery bed on each side, and you could go in and out there in winter whenever you felt inclined to.

POISONING BEES.

Several subscribers.—We hear from various sources that the practice of spraying orchard trees with the Paris-green solution has resulted in wholesale poisoning of bees. What is the truth of the matter?

ANS.—Prof. A. J. Cook, of Michigan, writes the following in answer to our inquirers:

It is a compliment to our civilization that until the present season no reports have come of injury to bees through the use of the arsenites in spraying for the codling moth. True, I have urged caution each season for the last 10 years; but some people are both heedless and careless. And the wonder is that all have acted so wisely. We now have reports from Illinois and Michigan, of serious loss from not heeding this advice. Let it be understood by all, that *trees should never be sprayed* with London-purple or Paris-green until the blossoms have all fallen off; otherwise the nectar will be poisoned and the bees in collecting this will suffer death, and in conveying it to their hives may poison the honey. Neglect of this caution is the more inexcusable as it is best even for the destruction of the codling larvæ to wait till the blossoms fall; else a rain may wash all off before any good is done. It is to be hoped that all the RURAL'S exchanges will publish this article, so that the people before another spring, may all know of the danger and wrong likely to follow neglect to heed this suggestion. It is desirable that all legislatures should legislate on this question. A heavy fine consequent upon such practice would be a good teacher, and make apt learners. Every effort should be made that our fruit growers may know of the danger and wrong of too early spraying.

SMUT IN WHEAT.

E. S., Sorgho, Ky.—What is the cause of smut in wheat? Is it due to an insect? Is there a preventive?

ANSWERED BY B. P. GALLOWAY, CHIEF OF SECTION OF VEGETABLE PATHOLOGY, DEPARTMENT OF AGRICULTURE.

This disease is not due to the work of insects, as you suppose, but is caused by the growth of a minute parasitic plant or fungus through the tissues of the wheat stalk. The dark-colored, ill-smelling powder is made up of innumerable spores or reproductive bodies, each of which is capable of infecting a healthy wheat plant, if it can come in contact with it under the proper conditions. The only time when infection is possible is when the plant is young, and to guard against this the spores on the seed wheat must be destroyed before the latter is sown. This may be accomplished by treating the seed by either of the following methods: 1. Soak the grain in a one-half per cent. solution of blue-stone for 16 hours, then pour off the liquid, dry the grain and sow immediately. 2. Dissolve 10 pounds of blue-stone in eight gallons of water, place the solution in a tub and pour the wheat into it, taking care not to put in enough to come to the top of the solution. Stir it well, skim off the floating kernels, pour off the solution, then drain and dry the wheat. It is not safe to leave the grain in the solution longer than 15 or 20 minutes.

INJURY TO DWARF LIMA BEANS.

W. C. A., Medfield, Mass.—One of my neighbors sent for a package of the Bush Lima beans, and planted them in his garden, a good, sandy loam. They all came up, but did not look bright and vigorous. Soon they began to disappear, and finally every plant went under ground. The accompanying specimen was taken up just after it disappeared. What is the explanation?

ANSWERED BY PETER HENDERSON.

I think there is no doubt that the injury is a consequence of the cold, wet season, which, of course, is very injurious to all tropical growth, and the Lima bean is one of the most tender of all the vegetable kingdom. There has been a great deal of complaint even with the ordinary Valentine and other kinds of kidney beans in Western New York; hundreds of acres of them have been injured, and in many cases they have had to plant again.

ANOTHER ANSWER.

My theory is that the common fish or angle-worm did the mischief, having come up to the surface in the wet weather and pulled the plant down, although I have not seen one at work.

HYBRID PERPETUAL ROSES, ETC.

J. M. M., Ontario, Canada.—1. Can the Clematis Jackmannii be propagated by layering? If so, when and how ought it to be done? 2. Name a few fine Hybrid Perpetual roses, which are particularly characterized by a hardy, vigorous constitution, and free flowering, whose flowers are "good," if not the very best? 3. If the plums in which the curculio has laid its eggs have been destroyed by frosts, can the pest be propagated in another way? 4. Name the best periodicals published in the United States devoted wholly, or in part, to Botany and Natural History; also the best illustrated work on American scenery.

ANS.—1. Yes. Layer it now and it can be cut from the parent stem next spring. 2. Gen. Jacqueminot, La Reine, Mabel Morrison, Jules Margottin, Abel Grand, Baron de Bonstettin, Anne de Diesbach, Baroness Rothschild, Caroline de Sansal, Boieldieu, Charles Margottin, Countess of Serenye, Francois Michelon. 3. No. 4. We do not know of any works of this kind.

THE ELM LEAF-CURL PLANT-LOUSE.

Toronto Subscriber (lost letter) incloses elm leaves infested with insects about which he asks several questions.

ANSWERED BY L. O. HOWARD, ACTING U. S. ENTOMOLOGIST.

ANS.—The insect is the common American Schizoneura or Elm Leaf-curl Plant-louse (Schizoneura Americana). It is too late in the season to attempt to do anything against this insect which will soon be taking wing and will disappear for the season. We do not know its hibernating habit, and the only remedy is to prune the first leaf curls when they appear in the spring. On account of its habits it is a very difficult insect to reach with any spraying mixtures.

ALSIKE IN DAKOTA.

L. E. H., Madison, Dakota.—Would Alsike do well in this latitude?

ANS.—Alsike clover is considered to be fully as hardy as Red clover, but not quite so able to resist drought. It has succeeded fairly well in several limited trials at the Iowa Agricultural College. We would not advise sowing it extensively in Dakota until its value there is better known.

Miscellaneous.

L. D., Greenwich, Conn.—Should the runners be kept off the strawberry plants while they are bearing fruit?

ANS.—Yes.

E. L. H., Helena, Arkansas.—Are there any particular tools made for caponizing fowls? If so, where can they be obtained?

ANS.—Yes, it is the hight of cruelty to attempt this operation without the use of special tools. W. H. Wigmore, Philadelphia, Pa., makes a good set.

"*Z.," Lawford, Pa.*—1. How should two-year-old rhubarb plants be treated so that they may bear a crop? 2. When should the stalks from roots set out this spring be used?

ANS.—1. If the plants are strong and the soil and cultivation good, two-year-old plants should yield a full crop. Pluck freely during April and May, remove the flower stems as soon as they show themselves, and stop plucking, except for an occasional dish, after the first of June. 2. Under good cultivation, next spring.

A. S. A., Pittsfield, Ill.—1. Will seedling peaches produce the same kinds from seed again. 2. Where can I buy one-year-old fruit trees true to name. 3. What does the RURAL think of the Durand strawberry. 4. Who was the originator of the Fay currant.

ANS.—1. A few kinds will often reproduce the variety from seed in all essential respects. But the R. N.-Y. is not aware that any variety can be trusted so to do. 2. The Storrs Harrison Co., of Painesville, Ohio, are the nearest to you of the trusty firms we recall at this moment. 3. It thrives in a few places and in rich soil. It is an exacting berry and will never be popular over a wide range of country. 4. A Mr. Fay. It was introduced by Geo. S. Josselyn of Fredonia, N. Y.

G. W. D., Birmingham, Conn.—Are Buhach and Persian Insect Powder the same? My druggist gave me the latter when I asked for the former, and there was no marked result from an application of it against rose-bugs. I used a heaping table-spoonful in two gallons of water and sprayed the vines every alternate day for ten days. Spraying my plum trees with London-purple, as the RURAL advised, worked like a charm. The trees are loaded with fruit and but few are stung.

ANS.—Buhach and Persian Insect Powder are both made from the same flowers, viz., pyrethrum. Buhach is the trade name for that manufactured in California. Our friend may be assured that if it had no effect upon the rose bugs, it was an inferior article.

DISCUSSION.

THE COLOR OF BUTTER.

HENRY STEWART, MACON COUNTY, N. C.—The inquiry recently suggested by the RURAL in an editorial note, has often occupied my thoughts and studies during several years past, and several examinations of cows after slaughtering, in regard to the source of the color of the butter, have been made. The results may be given as follows:

Cows vary in two ways in regard to this peculiarity: First, as to their natural function or structure which causes their fat, both in its separate disposition and its distribution through the tissues, to be of a higher color than that of other cows. For instance, the suet and other separately deposited fat of a Jersey or a Guernsey and of some few abnormal cows of other breeds, is more deeply yellow than that of other cows; the skin, which contains considerable fat, partakes of the same high color, and wherever fat is deposited in the tissues this color is perceptible. The butter of these cows partakes of the same coloring. Second, cows vary in their ability to extract the coloring matter thus deposited in the tissues, from the food. The assimilative capability of cows varies as is well known. Some cows will consume, digest, and assimilate greatly more food than others; and some will extract more of the fatty elements of the food than others. Food has an important result upon the quality of butter. This is well known to every practical dairyman, and it is undoubtedly due to a physiological fact known to physicians. The fats of food are not changed in the animal system as the other carbonydrates are. Starch and other soluble cellulose are changed into sugar before digestion, and any excess of the carbon not burned in the system to produce the natural heat indispensable to health, is either excreted as waste or is changed into fat by some natural chemical process of digestion or assimilation. But this does not happen with fat. The fat, existing in minute globules in vegetable tissue, is emulsified, first and partly by the saliva in the acts of mastication (and rumination) and lastly and completely by the mechanical action of the stomach and by the pancreatic fluid. The emulsion so formed contains the actual fat globules of the food as far as the cow is able to make use of them as nutriment, or extract them from the food. (And cows vary in this ability). The fat thus emulsified passes directly into the blood and is deposited from it in various parts of the body where it is wanted. A Jersey cow of large butter productio therefore has the fat of the food in intimate connection with the blood, and in its natural condition, color and other qualities unaltered. A recent proof given by the Washington Agricultural Department to the effect that butter from cows fed upon cotton-seed meal—a very oily food—contains so much of the unchanged oil as to approach closely in character to oleomargarine and might be classed as such, made from the oil of cotton seed by any chemical test, confirms what I have repeatedly stated from the results of my own experiments in the dairy.

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies.

The fat thus in the blood is deposited in the milk glands of the udder, each lobule of which has its nucleus of fat in the form of a globule in it. This fat has its natural color; but does it not in its separation with the other elements of the milk carry with it some of the coloring matter of the blood, and thus acquire a high yellow color, which is nothing more or less than a diluted red? I think it does for the following reasons: I had a pure Ayrshire heifer which coming in with her first calf gave milk as red as blood. The calf would not drink it.

To investigate this peculiarity I experimented with the milk. There were the peculiar red blood corpuscles in abundance in it, showing that the secretion of the milk had not been perfected, but that blood had exuded from the tissue of the udder instead of milk. The blood contained fat globules which separated in the form of a deep orange-colored cream, while the red matter settled to the bottom of the pans. The cream churned gave deep, reddish orange-colored butter of very good flavor, but so dark as to be useless. Another cow, a pure Jersey, which I used for experiment for five years consecutively, gave exceedingly high-colored colostrum on calving. This was set for cream and the cream churned. The butter was almost as deep a color as that from the Ayrshire cow. After calving it is well known that the circulation of a cow is much excited and the udder is gorged with blood, more or less in different cows no doubt. Here was an abnormal case in which the milk was blood and another in which it was milk, and the butter from each differed very little in the reddish-yellow color of it. This reddish-yellow color of Jersey and Guernsey butter from newly calved cows and when the circulation is abnormally excited, is a frequent peculiarity. Then, does not this color in such cases come from the blood, and is not the color coming with gradual y decreasing intensity always derived from the blood? If I am correct, this result explains why high color is allied with breed, or with special cows which possess distinctly peculiar functional properties, and is the reason why most of the Jersey and Guernsey cows (but not all of them) are able to yield not only the large quantity of butter from the same quantity and character of food, but to confer a special quality and color upon it.

This in no wise conflicts with the physiological fact referred to, for the disposition of the fats of the food in the way referred to is carried to excess in the largest butter-producing cows, and is developed to a less degree in other cows. One winter I fed red and yellow mangels in my dairy for some weeks, and sugar beets the rest of the winter season. The butter made during the mangel feeding was distinctly more highly colored than that made when feeding beets, and so much so that the artificial coloring used (to satisfy my customers) was somewhat increased during the feeding of the beets. The feeding has something to do with the color beyond question, as any one may find if he will change from good clover hay, corn meal and cotton-seed meal, to straw, buckwheat bran and wheat middlings. But even then some cows will make yellower butter than others on the same foods. The peculiarity then is, after all, through the blood or breed, and a functional characteristic of the cow.

FARM HELP.

O. H., GREELEY, COL.—The farm laborers in this section are of several nationalities, but mostly Americans from the Eastern States. We have Germans, Swedes and Danes; but more than one-half are American-born. Probably 10 per cent. ultimately farm for themselves. This section has no great industry except farming, hence it is hard for farm hands to live through the winter here. There are at this moment many men in Colorado who are unable to earn enough to pay their board. I think the number of cowboys employed on the range is steadily decreasing and the number of farms where stock is fed through the winter is increasing. Wages range from $25 to $35 per month and board found. Most of the help is hired about April 1. I have never known contracts to be made and signed. For my own part, I pay promptly, and if for any reason a man does not want to stay with me, I could not endure to have him. The necessary Sunday chores must be done in part at least by the hired men. That generally goes without saying. I once had a hand who had conscientious scruples about watering the horses or milking cows of a Sunday; but he did condescend to come down in his slippers and eat some of the breakfast which the women prepared. I had not thought to make any stipulation about the Sunday chores. I was about as much amused as provoked at this unprecedented turn of affairs; but did not retain him long. I observed later that this hand was not too good to break the moral law.

In this section men are generally treated like members of the family. This is not always fair to the family, as the presence of an outsider interferes with discipline, and prevents the free exercise of family tastes. On some of our farms the men have separate houses where they sit and sleep, and where they have a chance to do as they like. This seems to me fair all round; for I must say that, first and last, I have had great reason to feel dissatisfied with the habits, language and morals of many of my hands, and I can conceive that my reading aloud to my family cannot always be pleasing to the hired men who have to hear it if they sit with us. My own course in hiring men has been to hire high-priced hands. That is best for me. Five or even $10 a month are no great object as between a first-class and a poor hand.

Almost the politest man that ever darkened our doors was a Welshman, and he would not have been in Colorado except that his health failed. He never entered the room where he supposed we might be, without knocking. On the other hand, we have had modest young women whose training was so defective that they would bolt into private rooms that they must have known were such. I suppose that half the hired men I ever employed would open my bed-room door to speak to me, instead of knocking, if I were sick and in bed. Some of the best workers I have ever had have been the most unprofitable in the end. Twice or more they have become well acquainted with some branch of my business and taken it out of my hands. This has been done in a manner unfair, if not dishonest.

I have never employed more than two city boys, and they were mannerly, teachable, companionable, and generally satisfactory. I have had quite a number of well-educated men, some of whom were college graduates. Hired men who can discuss the topics of the day with intelligence, and make good suggestions about the work, are a delight. I like my men to be able to originate a pleasant thought now and then.

DIFFERENT MANURES.

J. W. I., SUGAR RUN, PA.—Some months ago the R. N.-Y. asked if there was much difference in the manure from different sorts of animals. By the manures of farm animals, I understand their voidings, both solids and liquids, unmixed with straw or other substances used for bedding. The value to the farmer of the manure of all animals depends on the quality or richness of the food they consume. The manure of cattle fattened on corn meal, is worth more than twice as much, bulk for bulk, as the manure of cattle that are fed only hay. The manure of animals wintered entirely on straw, would not be much, if any, better than the same amount of rotten straw, and probably not so good, as some of the richest ingredients would inevitably be extracted by the beasts to support animal life. It would seem from this that the manure of all animals fed entirely on the same substances would be exactly alike in quality: but such is not the case. Some animals masticate their food finer than others, digest it better, and probably extract less of the fertilizing substances from it. In my experience, the manure of sheep, fed entirely on grass or hay, is richer, weight for weight, than the manure of horses and cattle fed entirely on the same substances.

When cows and horses are both fed about the same amount of grain, there is not much difference in the quality of their manure for common farm crops; but horse manure, having the property of heating as it ferments, is obviously the best for hot-beds and starting vegetables early in the season when the ground is cold. Hog manure, where hogs are kept in the pen, is composed almost exclusively of grain, and consequently is richer than any other except that of poultry. Hogs are naturally neater than other animals, and if properly encouraged will take one corner of the pen for a privy, and consequently their manure can be obtained without much admixture of straw, and being also very free from the seeds of grass and weeds, it is very suitable for a garden manure. According to my experience, poultry manure (except the dung of geese and ducks) is the richest made on the farm. It is better than hog manure, because, in addition to the grain the fowls eat, they obtain for themselves, if running at large, a considerable part of their diet in insects and worms, and this without doubt improves the quality of their manure. Experienced poultry raisers usually supply their fowls, so far as possible, with scrapple and other waste animal products which make the hens lay better, and improve the quality of the manure.

Formerly I mixed my hen manure with plaster and used it as a top-dressing for corn. It had a good effect; but lately I have put it together with the hog manure on the garden. Cattle and horse manures, when fresh from the stables, contain too much straw, and unless composted and rotted are not suitable for a garden. If I practiced putting all kinds of manure on the fields, I would mix them all together thoroughly, so that they could be spread more evenly over the ground; the crops grown thereby would present a more uniform appearance, and produce a more uniform yield. A hungry man does not quarrel with his dinner. A hungry soil never rejects the gift of any kind of animal manure, and will respond most bountifully to the giver, if it only gets enough to satisfy its craving appetite and provide the necessary strength.

WHAT ARE THE OPPRESSED PEOPLE GOING TO DO ABOUT IT?

C. W. W., NORWALK, OHIO.—"What are the oppressed people going to do about it?" asks the RURAL on page 416 in regard to the trusts. There is a choice of just two things which they can do about it—First, they can do as they are doing—go on and pay tribute to the last cent they can bear to the railroad kings, the oil kings, the sugar kings, etc., as they are coming more and more to do; become abject subjects of combinations of capitalists who can do every line of business, and furnish every needful product cheaper than feeble individual enterprise without the like great capital can possibly do while they take tribute at their own pleasure from every man, woman and child in the land, whose occupation they have largely taken away.

Second; they can unite their strength into a combination greater than any trust or all trusts, which shall measure the needs of the people and supply them; which shall have for its object not the enrichment of its managers, but the service of its people, whose creature it must be, and that at the least possible instead of the greatest possible price. The day of small things has gone by. Competition having become universal through free communication, has eaten small competitors up, and forced greater combinations which in turn have consumed each other. The trusts are the result. The march of events cannot be turned backward. There remains just these two things for the people's choice—monopolies of moneyed kings, having for their object the enrichment of themselves by laying on the people the largest tribute that they can collect; or monopolies of the people themselves, having for their object to give the public the best service at the lowest cost. Can we doubt which of these two the people will choose when they realize their dilemma? The trouble under which they are groaning must grow worse and worse too, until they choose to act for themselves, and they can't do everything at once. Mr. Curtis is right, in the issue of June 8th. Better begin with the railroads. Doing so will count far more than anything else within reach, and better lose as little time about it as possible too.

The post-office is our model, and it is through Congress that our object must be reached. Who will act?

THE PARKER EARLE STRAWBERRY.

T. V. MUNSON, DENISON, TEXAS.—On page 414 of the RURAL for June 22, Mr. "W. B.," of Dayton, O., claims to have plants of a berry he purchased under the name of Parker Earle, and proceeds to describe a variety produced by me some years ago, as No. 3, and which Mr. J. T. Lovett was to disseminate as Parker Earle *should it prove worthy*. But after testing it, we considered it not sufficiently productive, and the variegated foliage it developed in the third year of its existence, and which it has since retained, was also against it. According to agreement with Mr Lovett, the variety was not to be named Parker Earle, unless he introduced it, which he has not done, except in so far as to place plants with a few parties for testing. If "W. B." bought the variety as Parker Earle, as he states, then somebody has committed an act not altogether honorable or honest. I sent out a few plants of No. 3, after Mr. Lovett gave it up, as Earle (not Parker Earle), but since then I have withdrawn both the name and variety from dissemination, as it is too shy a bearer to bear any name or be introduced. The true Parker Earle is an entirely different variety, and has never been disseminated, except that a few plants have been put in the hands of men above suspicion, to be tested. If there are any others who have received or bought plants of Parker Earle or Earle, of the description given by "W. B.," they will do the country a service by labelling them Munson's No. 3. They are unworthy to bear the honored name of Parker Earle, but there is a berry bearing that name of which Mr. Earle himself will be very proud, I have every reason to believe, and we shall see that it be not dishonored by being confounded with any other sort.

CULTIVATORS, "BUGS" AND POTATOES.

L. P. W., QUINCY, ILL.—In response to C. K., page 415, I am glad to say that I think the Hudson Bicycle Cultivator will "fill the bill" completely. On the strength of its being advertised in the RURAL and Mr. T. B. Terry's recommendation, I ventured to order one this spring, more especially for the benefit and interest of my youngest son (11 years old), who is very much pleased with it and soon became able to use it to good advantage. If C. K. will investigate this implement he will not be disappointed or find anything that will come more fully up to his requirements, for it is "easily handled" "works with little waste of land in turning" and is "adjusted for narrow or wide rows and deep or shallow plowing." I do not know of any walking cultivator that can be handled as easily as this riding one.

I am surprised at the article on the "Disappearance of the Colorado Potato Beetle" page 413, as its statements are just the reverse of what is true at this time, in this vicinity. I do not think I ever saw the old "bugs" more numerous than they were early in the season, but later the very wet, cold and unseasonable weather seemed unfavorable for their propagation and it looked as though they might disappear, until a short time ago when the young brood appeared in full force and now they are increasing rapidly. I have about three quarters of an acre of New Queen potatoes, the product of one pound planted last year, which I have preserved so far most effectually by hand-picking, having commenced as soon as the plants came through the soil.

THE RIGGS PLOW.

J. P., PRINCETON, N. J.—C. K., Bellville, N. J., will find the Riggs plow one of the best two-horse cultivators in existence. It has pole and handles. The operator walks behind and guides the machine. It has six reversible plows, three on each side of the row, that will turn the earth to or from the plants as desired, and will work any depth, from one to four inches. It has a roller attachment and is used for more purposes than any other implement I know of. It is used for covering peas, potatoes, corn, etc., and the ground is rolled over the seeds at the same time. As a cultivator it has no peer. In the early stage of the plants the front plows are set to turn the earth from them, the next turn it back again, while the hindmost thoroughly work the remainder of the soil. This cultivator is employed in Mercer county to the exclusion of almost every other, and is used for all crops grown in rows not less than 30 inches apart, such as peas, beans, potatoes, cabbage and corn, until the plants reach a hight of about three feet. This is very easily managed, especially in turning at the ends of the rows. No farmer here considers his list of tools complete without a Riggs plow.

W. P. M., MONROE, WIS.—Walking cultivators are latterly taking the lead in this locality, because better work can be done with them, and they are much easier on the team. Some farmers have discarded riding cultivators for walking, and could not be induced to change back. Can you write best with your feet or hands? A walking cultivator gives full control of the shovels to the hands; a rider to the feet only. I have seen some without a pole, but they are not liked and are no longer sold. All makes of walkers that I know of have four shovels only; some riders have six. With either kind space must be left for turning at the ends of the rows, or more or less corn will be broken down. Most kinds do good work, but still there is considerable difference between them. The new patterns with parallel movement, so that the shovels remain at right angles to the line of the row, no matter how much they are swung to one side or the other, seem to leave but little to be desired, unless flat culture is desired. The shovels will not do that, and can scarcely be run so shallow as one could desire. An attachment, called "moker" will do that. A "moker" consists of three steel five-eighth inch rods flattened at one end into a shape like a diamond cultivator tooth, and fastened in a cast-iron bar or bars, which can be attached to the shovel shank in place of the shovel—providing the shank is round and not over one inch in diameter. Four make a set. With them properly adjusted there are 12 teeth, with which one can scarify the surface, or cultivate to any depth up to six inches for a width of three feet with a tooth every three inches and without ridging or throwing dirt at all. Such a tool can work corn or anything else as soon as the rows can be followed, and as close to the plants as is desired. If hilling is desired, or grass and weeds get the start too much, the shovel can be used. Several walking cultivators are good; but I think the best one I have ever seen is the new pattern "Farmer's Friend" made at Dayton, Ohio. The "mokers" are made by the Sandwich Enterprise Co, Sandwich, Ill., and cost about $3 per set of four.

F. S. W., SMYRNA, DEL.—In reply to C. K., Belleville, N. J., I can say the Little Diamond riding cultivator answers fully the re-

quirements. He will also find that riding cultivators are easier to handle than walking cultivators, besides saving an infinite amount of walking. Walking cultivators are tongueless with the exception of one or two makes. C. K. will find, as the majority of farmers have found, that more work and better can be done with a riding than with any walking cultivator ever made, both relatively and absolutely.

J. H. A., RANDOLPH, N. Y.—C. K., Belleville, N. J. asks for a two-horse cultivator. P. P. Mast makes the simplest and best I have seen. I have used one for five years and think it would please him.

What Others Say.

POINTERS.

JOHN GOULD says, in the Weekly Press, that it is a mistake to suppose that sour cream makes more butter from the cream than sweet. Souring adds nothing; it simply assists the churn to recover more fat from the cream. In sweet cream the emulsion is perfect. If sweet cream is diluted about three times its bulk in water at 80 degrees, and allowed to rise a second time, the difference between the amount of sweet and sour cream butter will be inconsiderable, showing that souring the cream is, after all, only another way of liberating butter fats from the combined sugar, cheese, and fibrin emulsion. It was asserted by the late Professor Arnold that the adding of a small amount of pure cider vinegar to sweet cream just as the churn started would cause all the fats to come.....

IN a Scotch exchange (so says the Breeder's Gazette), it is narrated that last year when the price of potatoes was so low that they were fed quite freely to stock in some instances, a farmer of an inquiring turn of mind determined to test the preservative power of the silo on them and accordingly cut a quantity and placed them among chaff at the bottom of the "pit." Upon opening the silo recently the potatoes were found—so the account avers—as fresh as the day they were incarcerated, so to speak, and the cattle evince a decided appreciation of them if the avidity with which they are devoured be taken as evidence.....

IT has been found, says Hiram Smith of Wisconsin, that by raising a crop of fodder corn and putting it into the silo every acre will winter three cows and there is hardly one acre in Wisconsin that will winter one cow.

Corn put in the silo makes a great deal better feed than hay, and makes as good butter as ever was made in June, and the change from summer to winter dairying costs almost nothing. It may be done gradually; the cost is nothing, and there is all the time an increase of production.....

MR SMITH'S first silo was filled with corn, fed to 10 cows in the barn. He filled the silo from less than three acres, and kept 10 cows over the winter and three cows until the last of August, so as to see what the effect would be on the production of milk in the winter. They were confined in a small, dry yard; there is a shed in the yard, and water from a spring running through a pipe. They had plenty of water and all the silage they could eat, and eight pounds of bran. He fed a little hay, but they did not care for it; therefore he fed the cows all winter until the last of August without any other feed, practically, but silage and wheat middlings or bran.....

MME. GEORGES BRUANT. A writer in the London Garden, says that the new hybrid Rugosa raised from a cross between Rosa rugosa and the Bourbon Tea Sombreuil, is now flowering freely. The buds are fuller and better formed than those of last year, though still somewhat rough-looking; but from their pure whiteness they are decidedly effective on the plant, which is exceedingly vigorous and free, and their fragrance is simply delicious.

BECAUSE farmers cannot accumulate wealth, it is the fashion, says the N. Y. Times, to declare that they are poor and that farming does not pay. This is contradicted by the plainest facts. Can those be poor who produce the wealth of the world; whose products feed and clothe the world, and whose own necessities are first provided for most bountifully?.....

FORTY years ago the American farmer thought himself rich if after his domestic supplies were secured, he had a little left for moderate luxury. There are rich poor men and poor rich men, and the farmers who so wrongly think or imagine themselves to be poor are really the rich ones in all that makes one contented and happy in a rational and true way.....

FOR an industrious, reasonably skillful farmer may have such an income from his farm, all counted, as would be thought liberal by a city man who pays high rents and prices for what cost the farmer nothing that he counts, and who cannot afford the hire of horses and carriage, which the farmer never figures up. The wastes of farm life are fewer and less; the healthfulness of it far surpasses that of a city house, the comforts are more and greater, every physical need is better supplied, and the necessities of the mind are met incomparably better. .....

TO RIGHT-THINKING persons and those who are able to manage their affairs with discretion every advantage is in favor of the farmer, and where he complains of hardships or disadvantages the city dweller suffers every one that he does to a far greater extent. If the farmer complains of his work let him think of the artisan of the city depending upon the favor of an employer and spending his wages as they are earned, with the complete stoppage of income if he is sick, and the slave of the bell or whistle which calls him to his toil and holds him there without cessation until the hours are fully told, and compare this with his own circumstances.....

THE Red cedar, says Garden and Forest, is the most widely distributed of North American conifers, and in some parts of the country it is one of the most common trees; but it is in a few favored localities only that it grows in a way to produce the straight-grained material essential for pencil-making.

The distillation of oil of cedar, for which there is now a large commercial demand, from the sawdust and other refuse, has been profitable in the pencil-mills at Cedar Keys in Florida, and might be carried on to advantage in other parts of the country. It can be made, of course, from wood of the poorest quality.

THE LONDON LIVE STOCK JOURNAL has a wholesome belief in the arguments which have been advanced by Prof. Fleming and Mr. Dollar, veterinary surgeon to the Prince of Wales, that peculiar hoofs require peculiar methods of shoeing. Anybody who enters a shoemaker's shop must be struck with the show of lasts—not one of which is the same. There are no lasts for horses' hoofs; but if we had, the variety would be very interesting. In fact the horse's hoof, like the man's foot, must be measured and fitted.....

"ONE now sees farmers buying light, shallow-running cultivators and harrows, when but a few years ago a cultivator must be a subsoiler or nothing. That now and then a man succeeds admirably by deep cultivation of corn is no argument when the one success must disprove a whole line of average failures. The old argument that cutting off the top-roots made the lower ones run deeper and make a larger layer of fibrous feeders is not being proved.

THE drill system of planting is coming in very fast here and is very satisfactory all around. This year many are using force-feed wheat drills to plant corn with. They stop up all the feed throats but two, three and a half feet apart, shut down the feed so as to get on about six quarts per acre, and if after dragging they find too much corn they pull out some. Others use the single rower that drops a grain of corn each 10 or 12 inches. This system causes better preparation of the ground and few farmers now say: 'Get in the corn in any shape; the land can be fitted as we cultivate.'

So says John Gould in the Weekly Press—and so, to-day, say the majority of progressive farmers. But 12 years ago the R. N.-Y. stood alone in its earnest advocacy of "shallow cultivation, drill-planting and surface fertilizing." It was several years after this that Dr. Sturtevant, the American Agriculturist and a few other journals were advocating "root-pruning."....

PROF. C. V. RILEY makes the following remarkable statement in the American Agriculturist:

"At River Edge, N. J., they found last season that a mixture of pyrethrum and water made a very excellent liquid to spray upon the vines. *It destroyed all of the insects which it touched and seemed also to have a preventive action. The proper proportion can only be obtained by further experiment.* Col. Pearson, of New Jersey, has also found that the original fungicide mixture of sulphide of copper and lime and water sprayed upon grape vines has *both a poisoning and deterring effect upon the rose-bug.* This insect is one which I hope to have a good series of experiments made upon with a view of determining just what is best to be done."

The Italics are ours. There are several decidedly erroneous statements in the above, which the Agriculturist and Prof. Riley ought to correct. The pyrethrum water did *not* "*destroy* all of the insects which it touched." Neither did it seem to have "a deterring effect." We found it necessary to spray all infested plants nearly every day during the hight of the rose-bug season. Most of the beetles receiving the spray would in 20 minutes or less either fall to the ground or fly away. In the former case they would lie on the ground or grass and wriggle for from six to 24 hours. *Some* would die; many would recover. These results were verified by collecting the beetles after they had received the spray and placing them in tomato cans covered with mosquito netting. As for the "proper proportions," these are well known and no further experiment is called for. Supposing that the powder is fresh and pure, one heaping table-spoonful to one gallon of water will affect the beetles in just the same way that a larger quantity will do, while less than that has been found less effective. In fact the table-spoonful of powder to one gallon of water is just as effective as if the beetles were treated to the dry powder. We are not aware that Col. Pearson ever said that he found copper sulphate (not "sulphide") and lime (the Bordeaux Mixture) "has both a poisoning and deterring effect upon the rose-bug." He thought it *might* have since the sprayed vines were, it seemed, less infested than those not sprayed.

Now the R. N.-Y. with a view to testing this question, sprayed about half of its vines thoroughly with the Bordeaux Mixture. Some of those so sprayed (Moore's Early and Berckmans, *e. g.*) were injured more by the rose-beetles than *any* of those not sprayed....

A WRITER in the American Agriculturist, after giving the details of a potato experiment made by himself, says:

"A valuable experiment, and one well worth trying by any one interested in the matter, would be to fertilize a number of similar and adjacent sections of ground with gradually increasing amounts of fertilizer (say 200 pounds, 300 pounds, etc., to the acre), and determine which gave the maximum economy—*i, e.*, the greatest net gain after deducting the cost of fertilizer from the value of the crop.

This is one of the experiments the R. N.-Y. began, at least 10 years ago and has continued since. The results are (1) that the more impoverished the soil, the greater is the increase of crop from increased quantities of high-grade potato fertilizer up to 1,800 pounds to the acre. A larger quantity of fertilizer (2,000 pounds) increases the crop, but the margin of profit then becomes doubtful. Second, if the land needs all kinds of plant food, the crop will not profitably be increased by the use of one or any two. Third, that the richer the land, the less is the crop increased by fertilizers. The R. N.-Y. commenced these experiments when experiment stations were scarcely known in this country.....

THE experiments of this kind being carried on the present season at the Rural Grounds, as judged by the vines, are more emphatic than ever before in answering, without any contradictions, the question of how much fertilizer may profitably be given the potato. Beginning with 440 pounds to the acre, the amount increases to 880, 1,760 and 2,200. There are four duplicates and in every case, the larger quantity of fertilizer is plainly shown by the larger vines.....

DIRECT.

NEW YORK HERALD:

"MRS. R B. Hayes, the friend of unfashionable virtues.

——FARM JOURNAL:

"Cross-bred pigs will grow the fastest.

One long pig will outweigh two chubs.

Save the pigs with long bodies for next year.

The best breed is no breed; that is cross-bred.

Use a thoroughbred sire and a sow with the most length of body.

If the old sows have done well, winter them. Do not keep them fat.

——THE coming horse for the farm should be a mule. The mule can be kep on one-third less than the horse.

——A VERY simple method of curing the gapes in chicks, and one that is successful in the hands of some persons, is to pinch the wind-pipe. With the left hand hold the head of the bird up and the neck straight, and with the thumb and finger of the right hand pinch the wind-pipe smartly, slightly rolling it. Begin as low down as possible and follow it upward to the mouth. Be careful to release it frequently to give the bird a chance to cough up the crushed parasites."

——PUCK: "The burglar makes hay while the moon shines."

——HENRY STEWART: "The new 'invention,' so called of ripening cream by the use of a lactic ferment, which has been claimed to have been made by a Mr. Boyd, a creamery owner in Illinois, is said to consist of a mixture with sweet cream of a certain quantity of soured skimmed-milk which has been warmed to 90 degrees and then kept for 24 hours in a close vessel from contact with air. This soured milk, or "lactic ferment," is called a "starter." There is nothing new in this process in principle. It is simply souring the cream by adding sour milk to it, and this had been done years ago by our grandmothers in effect, but not precisely by the use of a closed vessel to put the warmed milk in to sour. It has been quite common to pour the remnants of the cream ripened in the usual old-fashioned manner into the fresh cream to sour it in time for churning. In fact, in the business of dairying, as in other agricultural methods, more has been forgotten than many persons who claim to be inventors of new processes ever knew."

——THOMAS MEEHAN in the Philadelphia Press: "The York and Lancaster rose, with its beautiful striped flowers, is now uncommon in gardens, though here and there to be found in country yards. These and all other roses can be increased by layering at this season. A slow but sure way. Small depressions in lawns can be readily filled up by sprinkling fine earth over them a little at a time. Strong grass will easily push through half an inch of earth Put it on right after a mowing."

——PROF. A. J. COOK, in N. Y. Tribune: "Mr. J. A Pearce, Grand Rapids, Mich., had a fine apiary of fifty-eight colonies this spring, when the fruit-trees blossomed. A neighbor sprayed his orchard when in full bloom, while Mr. Pearce's bees were working in full force. Result: the bees are seriously poisoned; are dying rapidly."

——HIRAM SMITH: "You see, a cow will chew her cud six hours every day if she is properly fed, and that is about as hard work as chewing gum."

——LIEUT. GOV. JONES: "The more a man knows the greater will be his veneration for the man who knows more than he."

——LONGFELLOW:

"Study yourselves: and most of all note well.
Wherein kind nature meant you to excel."

For Sunstroke

Use Horsford's Acid Phosphate.

DR. A. L. ZURKER, Melrose, Minn., says: "It produced a gratifying and remarkable regenerating effect in a case of sunstroke."—*Adv.*

Miscellaneous Advertising.

Purify the Blood.

We do not claim that Hood's Sarsaparilla is the only medicine deserving public confidence, but we believe that to purify the blood, to restore and renovate the whole system, it is absolutely unequalled. The influence of the blood upon the health cannot be over-estimated. If it becomes contaminated, the train of consequences by which the health is undermined is immeasurable. Loss of Appetite, Low Spirits, Headache, Dyspepsia, Debility, Nervousness and other "little (?) ailments" are the premonitions of more serious and often fatal results. Try

Hood's Sarsaparilla

Sold by all druggists. $1; six for $5. Made only by C. I. HOOD & CO., Lowell, Mass.

100 Doses One Dollar

JOHNSON'S ANODYNE LINIMENT ESTABLISHED 1810.

For Internal and External Use.

Stops Pain, Cramps, Inflammation in body or limb, like magic. Cures Croup, Asthma, Colds, Catarrh, Cholera Morbus, Diarrhœa, Rheumatism, Neuralgia, Lame-back, Stiff Joints and Strains. Full particulars free. Price 35 cts. post-paid. I. S. JOHNSON & CO., Boston, Mass.

FOR A DISORDERED LIVER try BEECHAM'S PILLS.

EMPIRE POWER and SEPARATOR
BEST, CHEAPEST and MOST IMPROVED in the market.

We also manufacture Field Rollers, Plows, Feed Cutter and Crusher Hand & Power Corn Shellers, etc. Send for Illustrated Catalogue & Price List. S. S. MESSINGER & SON, Tatamy, Northampton Co. Pa.

THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, JULY 13, 1889.

SPECIAL NOTICE.

IN reply to inquiries we may state that the lower portion of the flowers of the potato R. N.-Y. No. 2 is purple. This purplish color covers about *half* the corolla. The outer portion is nearly white. This variety *never bears white* flowers. The stems also are, here and there, *tinted* with purple. They are long-jointed and do not branch as freely as most other varieties.

The R. N.-Y. wheats promise to give a heavier yield than ever before—probably close upon 40 bushels to the acre. It interests our farm neighbors greatly that such a yield should be the outcome of single grains planted a foot apart each way.

THE wet weather has served to discourage a good many haymakers. A great deal of hay has been put into the barn in a condition that would not have been tolerated in a dry season. Indeed, some of this hay is in such a state that quite a number of farmers are nervous about "spontaneous combustion;" several have written the R. N.-Y. about the matter. Next week we will give some little space to this subject. Other farmers, particularly those in Canada, are thinking seriously of putting a good deal of their grass into the silo. They are tired of "haying between showers" As we write, the sun comes out again warm and bright, and we sincerely hope its presence betokens suitable harvest weather.

"When I contrast my occupation with those of friends who are in business in the villages around me, and see the lives they live, I conclude that I am as well off as they are, although some have things nicer than we, and have more advantages as to society than it is possible for us to have. But if I am not mistaken, all can see things that they wish they might have different from what they do have."—G. A. B., page 458.

THAT audacious intruder, the English sparrow, is justly denounced by the Department of Agriculture. He is accused of eating grains and seeds in destructive quantities, both in field and garden, of destroying great quantities of vegetables and fruits, and of maltreating and driving from their homes many of our cherished warblers and other birds, and of being noisy, quarrelsome and filthy. To get rid of the pests it is recommended that bounties should be offered by the various States to promote their wholesale destruction. Individual efforts to exterminate them in the way of nest destruction, shooting, trapping and poisoning are strongly urged. A strong objection to the last, however, lies in the danger that other birds as well as other creatures would be endangered by it. What are you doing to abate the nuisance?

A MICHIGAN subscriber sends the following request:

"Will the RURAL ask some of its subscribers who have a hay press, to put up a few bales of freshly cut Timothy, clover or corn, as an experiment? It seems to me that it would be so much like silage, that it would probably keep if packed very solidly."

The R. N.-Y. seconds this request. Will not hay press men try this? Some experiments have been made in years past in this matter, and the weight of evidence seems to be against the practice. The difficulty seems to be that the pressed grass will not keep well. However, the experiments should be continued until we know all about it. We can readily see that baled grass would find a good sale in the city markets. The question is—is it possible to bale the grass? We hope some of our readers will help answer this question.

"If a farmer with a family were to leave his farm and take a place at a trade, and get $12 per week, he would wonder where his money went to if he had to buy the same things he had without price on the farm."—M. L., page 459.

IN addition to the trial contest plots, the R. N.-Y. is trying to raise large yields of potatoes on a measured acre, and also on a half-acre. These crops are looking well just now, and with a continuance of the rainy season we hope for good yields. There is quite a difference in the number of potatoes found in a single hill. Here is the result of a little investigation made the other day: The potatoes were all small and we counted all of them, even those just beginning to form. By "hill" we mean the vine or vines that grew from a single seed-piece.

Brownell's Winner	20 and 21
Rural New-Yorker No. 2	16
State of Maine	11
Clark's No. 1	8

The Brownell's Winner and State of Maine are growing in the same field and have received exactly the same amount of fertilizer. Does the large number of tubers formed on the Brownell's Winner indicate a heavy yield of small potatoes? We think not, but rather believe that with plenty of moisture, a majority of the tubers will be of marketable size. We shall all see in the fall.

ACCORDING to Ex-Governor Glick, of Kansas, for many years an extensive cattle raiser, the beef and pork combine at Chicago, and Kansas City and other Western packing centers, has worked more harm to the farmers and stock-raisers of his State than all the grasshopper invasions and droughts that ever devastated it. Recent developments before the National Railroad Commissioners at Chicago show one way in which such combinations injure farmers. One packer had reluctantly to confess that in November, 1886 he, with eight others, signed an agreement to keep down the price of hogs and keep up the price of pork by closing some of the packing houses and regulating the supply. The agreement has been maintained ever since and will not expire before next November. Each packing house has to do only a certain percentage of the total business of the pool Eac week it pays a bonus which averages 4¼ cents, on each hog killed over its quota, and receives a bonus of so much per hog on the number less than its quota which it kills. Over $300,000 have been already paid out in this way, and some of the firms which have packed no hogs whatever for one or two years have continued to receive the bonus. Of course, the aggregate amount of the bonus as well as the extra profits made through the agreement comes from the pockets of the producers and consumers. The combine fleece the public on both sides with both hands. In spite of all that has been said against such combinations, they continue to flourish more and more vigorously.

"When a man has an opportunity to provide well for his family, with a little surplus to lay by and contribute to the wants of those around him, he is, in my estimation, in a most desirable position to let well enough alone."—page 459

WHO IS TO JUDGE EXPERIMENT WORK?

THE R. N.-Y. is informed that the Hatch bill provides no remedy for the wrongs perpetrated at the Missouri Agricultural College, and that the Department of Agriculture at Washington has no control over the action of the directors of the stations. They report, so our informant states, to the Governors of the States, and furnish copies of such reports to the Washington Department and to the Secretary of the Treasury. The Secretary of the Treasury accepts such reports as conclusive. The R. N.-Y. was under the impression that the powers of the officials of the Department of Agriculture were larger in such matters. If, as stated, they have "no control over the action of the directors," it is certainly unreasonable to call upon them to apply a remedy?

But who is responsible? It may be just as well to settle this matter now as at any other time. We are establishing a precedent. The directors of these stations are to be held responsible for the proper use of the money appropriated for experiment work, but who is to decide as to the quality of that work?

The R. N.-Y. does not think the directors of the Missouri Station have shown themselves proper persons to superintend valuable experiments. They have certainly permitted personal and political antagonism to guide their actions, and we firmly believe that an investigation will reveal a clear misappropriation of funds. Now then, the R. N.-Y. wants to know who is to hold these directors responsible? When the Hatch bill was before Congress, the R. N.-Y. pointed out this very defect. We were assured that certain amendments would surely remove it. One of the prime movers in securing the passage of the bill, wrote the R. N.-Y.—page 25, 1887. "If it appears from the reports of any station that the funds are being misapplied, the agricultural press of the country will see to it that this fact is brought to the attention of Congress, when the appropriation will either be withdrawn, or the station will be allowed another year to amend its ways, according to the discretion of Congress." This read well before the stations were established, but how about it now? Are the agricultural papers of the country to be the sole judges? Who decides upon the value of these bulletins and reports?

The R. N.-Y. could easily pick out a dozen that are not, in its opinion, worth the paper they are printed on. There ought to be some central power that can weigh the work of the stations, investigate reputed wrongs and be able to apply some remedy. Perhaps there is such a power. Where is it? That is what the R. N.-Y. wants to know. When it is located we will try and get it to establish a precedent. Some *of the framers of* the Hatch bill should make these points clearer than they are.

"Five or even $10 a month are no great object with me as between a first class and a poor hand."—Page 462.

TAKE YOUR CHOICE.

TAKING the best catalogue near at hand, we find announced, under a display heading of "Non-poisonous insect powders" first "Peroxide of Silicate" and second "Hammond's Slug-shot." The price of either by the barrel (say 200 pounds) is four cents per pound or eight dollars. These compounds ought not to be called non-poisonous since their insect-killing power depends upon arsenic in some form. It is true that the poison is so extended with harmless substances, such as plaster or lime, that in 99 cases in 100 there is little likelihood of any animal eating enough of the mixture to kill or even sicken it. Nevertheless there is a *chance* that, through accident, oversight or negligence, the poison may not in the *hundredth* case be thoroughly and equally distributed through the diluting substance and that therefore, a small quantity might, if lapped by horses or cattle, or accidentally mingled with their food, endanger life.

That Slug-shot is a well-prepared insecticide the R. N.-Y. knows to be a fact. That it is no better in any way than a pound of pure Paris green thoroughly intermingled with 200 pounds of plaster, it *believes* to be a fact. Now a barrel of fine plaster costs, say $1.25. A pound of fine Paris-green costs, say, 30 cents, or one of London-purple, 20 cents, estimating them at the highest figures. The barrel of plaster and the poison can be thoroughly mixed in one hour at a cost of less than 25 cents for labor. We have now at a cost of $1.75, 200 pounds of an insecticide just as effective and just as safe as is either Slug-shot or Silicate at a cost of $8.00 for the same quantity. If this statement is not trustworthy, gentlemen, tell us wherein it is faulty and the R. N.-Y. will gladly revise it accordingly.

It is quite against the R. N.-Y.'s pecuniary interests to present such subjects in this way. Both firms advertise their insecticides freely, and the R. N.-Y. has been favored with its full share of their patronage. If our readers prefer to pay $8 and freight for an article no better than they can manufacture at home for $1.75, that is their affair. Directing not controlling their choice is the R. N.-Y.'s province. As Slug-shot and the Peroxide of Silicate are mentioned together in the above remarks as if of equal value, it is simply just to add the remark that whereas we have never known the Slug-shot to harm the foliage to which it has been applied, harmful effects have invariably followed the use of the Silicate.

"Why do I farm? For health, pleasure and profit. Health comes from the out-door life; pleasure from the contact with nature; profit from a good farm and good farming—an additional source of pleasure."—page 459.

BREVITIES.

A WORTHLESS cur makes valuable soap grease.

READ what Prof. A. J. Cook says about poisoning bees.

THE cows like sweet apples. The horse will not refuse them either.

IT seems to be "every man to his taste" in cultivators in "discussion" this week.

MAKE ready for quite a surprising discussion of the proposed tariff on bananas.

IT seems too bad that our cattle must suffer from the attacks of flies. Can we not think of some practical remedy?

READERS who have ever had any experience with feeding hogs on swill or hotel refuse, hauled from the town, are requested to send us their names.

FOR an impartial, dispassionate, thoroughly sensible discussion of the "Woman Question," read "Women as Women" by "Aunt Ancient" on page 466.

FOR the light, sandy soil of the south portion of Long Island, there is no other strawberry that *approaches* the Charles Downing for size and quality. It is for that section the perfect berry.

IT will be remembered that for three years past a large amount of powdered sulphur has been used on the R. N.-Y. potato contest plot, and that it has been thought that it has protected the tubers against the wire-worms, which in this soil seem to cause "scab." This year no sulphur was used.

A FARMER in Clinton county, N. Y., sends the following reasons for being satisfied with life: "I have two boys, one 18 and the other 16, and a girl 14 years old, the best wife in the country, as good a hired man as they make, and 200 acres of land to look after. I do not think I need to complain."

THE leaves of cherry trees on certain parts of Long Island have been destroyed by a fungus, so that the trees look as if it were November. Some of the main roads near the R. N.-Y. Farm, which are lined with cherry trees, planted for ornament as well as for fruit, present a desolate appearance, far more in keeping with late fall than mid-summer. The R. N.-Y. is endeavoring to find out the cause of and remedy for this new destroyer.

SEVERAL newspaper correspondents notably Mr. De Young, of the San Francisco Chronicle, having declared that the American exhibit of cereals at the Paris Exposition would hardly do credit to a county fair, Secretary Rusk inquired about the matter, and has just received a cablegram from General U. B. Franklin, the American Commissioner, saying: "All juries that have examined the agricultural exhibit of the United States pronounce it excellent in all respects. So do I." Of the $250,000 appropriated by Congress for the American display, $25,000 were set apart for the agricultural portion of it. Surely a creditable show could be easily made for that sum.

A PHILOSOPHER of Cobden, Illinois (H. M. T. C.), after showing that human beings are fond of clustering together in proportion as they are uncivilized—when danger induces it—or uncultured—when they have no thoughts, either of their own or preserved in books, for company—goes on to show, very fully, how the occupied mind becomes freed from superstitious fears, such as that of being alone in the dark, and from temptations and beguilements which a craving for company exposes one to. He concludes that it is of first importance to the well-being and happy existence of young people to provide them with occupations interesting enough to be sufficent companionship for some time, until at length such habits of research and industry and thought are formed as to establish self-content, self-reliance and self-control. Such young persons will be welcome in any good society, yet will be well satisfied with only their own. A boy who can work contentedly alone in his own shop or garden, or a girl in her room for hours, has safely secured a chief condition for a happy, contented, useful and honorable life.

The Poultry Yard.

PROFIT IN POULTRY.

"Do you think there is any money in poultry?" said a young farmer to me one day. "My wife has the hen fever and thinks of going into poultry raising quite extensively another winter, for the purpose of raising broilers. She likes to fuss with hens, but when I go near them, they fly all over me, get on my head, and are altogether too familiar; I can't stand it." His question was a fair one; it has been asked hundreds of times before, and in all probability will be asked times innumerable in the future. Any man embarking in any new venture, financial, mechanical, agricultural or otherwise, wishes to know whether the dollar he puts into it is likely to be returned to him with a few added cents as interest on his investment. Any man (and man embraces woman, 'tis said,) with a sound head will settle this point before embarking in any new enterprise.

In the case mentioned above it is safe to say that the farmer referred to will not make poultry pay. He "can't spend time fussing with them." He doesn't want them "climbing all over him." He had better "quit the business before he begins it." If there is one occupation that requires "fussing" more than another, raising poultry is that one. The secret of success in the whole business is attention to little things. That farmer's wife will be very likely to make it pay, if she goes at it in the right way. Women are usually more successful with poultry than men, for the very reason that they will pay more attention to the details.

As to the profits to be derived from poultry, the same pains-taking care, and the application of the same business principles that would insure success in any other occupation, combined with a thorough knowledge of the business, would prove fairly remunerative in this. There have been many failures and disappointments among beginners These have usually resulted from over-enthusiastic individuals embarking in it without sufficient experience, or a willingness to give proper attention to details. A man has a small flock of hens which prove quite profitable, yielding a net income, say, of one dollar per head. Ten hens, $10 dollars profit; 1,000 hens, $1,000 profit. Thus he reasons. Why not? If the poultryman can surround his 1,000 hens with the same conditions which surround the 10, there is no earthly reason why he cannot make a proportionate profit. But, can he? Hens will not succeed in large flocks, hence they must be kept in small numbers.

He must expect to spend more time in caring for a large number than he would for the smaller one. He must learn the business thoroughly before engaging in it extensively. He must remember that good things come slowly, and must not expect to make a fortune all at once. If he really wants to make a business of keeping poultry, he should try a few hens at first and get all the information he can from all possible sources. If he succeeds with the few, he may increase the number by raising chickens from his own flock, and thus avoid the cash outlay necessary if hens are purchased. This may seem like a slow way, but it is a safe one, and the poultryman will thus be more likely to make the fortune he is after, than he would be in any other way.

If he has the broiler business in mind, the same remarks will apply about beginning in a small way. Artificial incubators, brooders, etc., are a necessity, and the outlay must of necessity be considerable. Incessant attention is necessary, and while physical strength is not so indispensable as it is in some other occupations, those who are averse to hard work had better shun the business Yes, there is money in poultry, just as there is money in dairying, in fruit-growing, stock-raising, etc., but as there are many who fail to get the money there is in these and other occupations, so there are those who will fail to get the money there is in poultry. F. H. V.

NOTES.

The only sure cure for an egg-eating hen is a sharp ax or hatchet vigorously applied just back of the ears. The mischief may sometimes be prevented by making the nests so dark that the hens cannot see the eggs, but this is simply a preventive, not a cure.

Change the Feed.—The hens appreciate a change of diet as well as you do.

If you have any fowls to dispose of this year, get them in good condition and sell them as soon as they stop laying for the summer. They will sell for more then, and much feed will be saved.

This is the time of year when the theorist comes to the front with his cures for gapes, lice, cholera, etc. Some man with a half-dozen hens knows more about these complaints than the experienced poultryman who has kept fowls all his life.

Miscellaneous.

FARMERS AND TRUSTS.

The situation viewed from a dealer's standpoint; human selfishness and greed, common to all classes, the immemorial cause of monopolies of all kinds; those who complain loudest against trusts ready to join one for their own benefit; moderation of trusts; prices regulated by the relation of supply and demand. If prices can be fairly forced up by a natural scarcity, why not by an artificial one? It is equally wrong to force prices up or down beyond a reasonable profit on the cost of production and handling; the artificial organization of society responsible for all the evils; an instance in point; the moral of it all.

There are two sides to every question, it is said, and the longer I live the more clearly I apprehend the truth of the saying. It would seem that there could be only one side to the matter of monopolies—of trusts—and yet there is a standpoint in which at least an apology can be made for the evil things. Monopolies have existed as long as man has existed: they are not a new thing. They are of all grades, big and little. It is the big ones which the enormous wealth of the period has promoted, that cause the excitement. They all proceed from the selfishness of the human heart, and this selfishness is not confined to one class, whether capitalist, manufacturer, merchant or farmer, to men of large means or of small. The men who are loud in their outcry against combinations are just as ready to combine when they can. Farmers have made combinations as well as other classes. They have not succeeded, perhaps, but success is not in the discussion. It may be said that they have not aimed at obtaining extortionate prices, and it can be said with as much truth, that other combinations have not aimed at anything more than to secure fair profits which they could not separately do. A patent gives a monopoly to one man and often he gets enormous profits in consequence, yet it seems to be conceded that he should have them. If an article becomes scarce the price is raised and no especial complaint is made unless the scarcity is due to the action of a known combination. If a scarcity of flour is threatened, and the retail grocer puts up the price, who complains whether it is advanced five or fifty per cent.? As soon as the scarcity is surmised, the farmer asks more for his wheat, and if there is no open combination there is a tacit agreement to force the price up. Where is the difference, morally, between this attempted combination, and the salt trust or the binder-twine trust? Now if it is a wrong to force the price of salt, wheat or other product to a higher price, or one unnaturally high, it is as much a wrong to force the price down below a living price. It is the same wrong whether the price is made to go up or down, and it all comes from the selfishness of man, from the artificial situation of society, and this is no worse in one class than in another.

All this can be shown more clearly by an illustration which is apt and true, as it happened in the experience of the writer, and it was this story that I now relate that brought these thoughts to my mind.

Last year the best manila binder twine was sold by the makers at 12½ cents per pound in large lots. At least that was the price paid for 10,000 pounds by a dealer, a neighbor of mine. He sold out his stock of hardware, but was unable to sell the twine with it, and he then placed it in my hands to sell on commission. Dealers were asking farmers 16 cents per pound for the best quality of twine, which would yield them a profit of three cents per pound. In large lots the price would be cut. The crop of wheat was very short and twine plentiful. The prospect of selling the whole stock on my hands was poor, so the owner determined to put the price at 14 cents which would yield him a profit of perhaps a-half cent over freight, and a small commission. The sale was well advertised. Do you think the farmers rushed in to take this good twine at a low price? Well, they came; but they were not satisfied with the price. They went from one store to another, quoting the price of inferior twine, joined together to beat down the price and actually compelled the greater part to be sold at a price without profit or below cost to the dealer. They were not any better satisfied with it at 14 cents than they will be this year at 18 cents or over. What do you think the feeling of this dealer will be in regard to this particular trust? Probably he will not shed tears if those farmers have to pay a much higher price this year than last. Then how can those farmers consistently condemn the trust? Which shows the greater selfishness?

The moral of this is that no class can lay claim to the virtue of unselfishness. If men get too greedy and require us to pay them what we regard as too much profit, let us fight them as we can, but do not let us assume that we as a class of producers or dealers are superior to them. As society is now organized, it is the practice of every class, including farmers, to buy cheap and sell dear. Society is organized on the principle of selfishness, nor is it likely to be changed until the millenium. Yet it is our duty to restrain this greed not only in others but in ourselves as well.

I hope the meaning of this article will be seen. It is only to make the matter clear that it is written—to show that one class should not be arrayed against another; for here the injunction: "Let him that is without sin cast the first stone," aptly applies. If any man or any set of men claim too much, let us use every honorable method to circumvent their designs, but don't let us whine and exclaim against the greed of men when no class is exempt from the failing. This is written from the standpoint of a DEALER.

Since the foregoing was written, the following appeared among the Associated Press dispatches—a very apt corroboration of what has been said and one that needs no further comment:

Evansville, Ind., June 24.—A combination of farmers exists in this part of Indiana that is having serious effect on the merchants in various towns. The farmers combine and agree to purchase from only one store in a town, the owner agreeing to sell at a net profit of 10 per cent. The farmers reserve the right to examine his books and invoices. In some instances dealers have obtained two invoices—one true, the other false—to show the farmers' committee. If the combination continues, as it probably will, a number of merchants will be compelled to leave for other fields of business. Already there has been a serious embarrassment in consequence of this attempt to destroy competition. DEALER.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

Just now—indeed at all times—the question of cleanliness is most important Careful bathing, or thorough washing and sponging all over the body, is a necessity. As a matter of fact, one may bathe as thoroughly with a couple of basinfuls as in a big tub, only the process is not so agreeable. Have a rug to stand on—a large square of burlap is good—and then see that the washing is well performed. A few drops of ammonia in the water will remove any odor of perspiration. If the skin on the face and hands seems harsh and dry, put a tea-spoonful of glycerine in a basin of warm water, and the difficulty is removed. In summer, especially, women with delicate skin should take care that they do not scrub too hard with a rough towel, as it is apt to chafe the skin.

* * *

Fully as important as the complexion during the warm months is the care of the feet. Thorough cleanlinesss is the only producer of comfort. Those unfortunates who are troubled with much perspiration from the feet will do well to put a very few drops of carbolic acid in water for bathing them. This prevents any odor. Another necessity for the comfort of the feet is regular cutting and filing of the toe nails. With proper care there is comparatively little risk of the tortures of an ingrowing nail.

* *

And the hair too needs extra care in the summer. It should not go longer than a week without washing, for when there is much perspiration it is in great need of cleaning. Don't we all know people, otherwise clean, whose hair seems positively *frowsy*—we can use no other word—for want of a good washing? Use either Ivory or tar soap; the former cleanses without irritating; the latter removes dandruff and seems to stimulate the scalp. When rinsing the soap out, a few drops of ammonia in the water will be beneficial, but too much dries out the hair, and renders it very unruly. In addition to the washing, thorough and frequent brushing must be insisted on. Thorough brushing is the one thing necessary to give hair its natural gloss.

As for hair dressing, the fashion now is to wear anything most becoming. Those loose, untidy French twists are very bad style now, but the hair may be worn either high or low. Neat, trim styles are most fashionable, but the tight, exaggerated Psyché knot is little worn. Most stylish for young women is a flat, round knot of fine plaits, worn just above the nape of the neck. This is the basket plait; according to the highest model it is just as flat and round as a basket lid. It is most becoming to small heads.

OUTINGS IN NEW ENGLAND.

XII.

MARY WAGER FISHER.

To sit on piazzas and hear people talk is one of the inevitable amusements at the sea-shore, and in listening to the chatter of women I was often reminded of the talk in Mr. Howells's novels. A young California lady once said to me: "Do the women in New England talk as Mr. Howells makes them talk in his books?" I replied in the affirmative, and when I mentioned the matter to a young Boston teacher, she laughingly said: "Yes, we *do* talk just as he makes us talk. He couldn't have hit us off better, if he had sat on a hotel piazza for a week and taken down the conversation stenographically." One of the Marblehead cottagers who knew everybody and whom every body liked, was quite a character in this way. He had graduated from Harvard with distinction, but at the expense of his health which, as he believed, was irretrievably ruined, producing some heart and nervous troubles which prevented him from sleeping while lying down, so that for a quarter of a century he had slept in a rocking chair. It was his habit, every night, to run around the "Neck" for exercise and to induce sleep, and for 30 years he had daily run three miles. He was an active, cheerful man, of great intelligence, an omnivorous reader and in his early manhood he had been a clergyman and had preached in a good many country churches. His ideas of living were of great simplicity, and he practiced what he preached, which was better. He often talked of the foolish way in which people wear out and waste themselves in efforts to imitate the methods and styles of others, a weakness which sacrifices all interior growth to outside show. In this way he explained the decline and failure of farming in New England, in the neighborhood of towns, like Adam, laying all the blame upon the woman—the desire of the farm women to dress like their town sisters and to furnish their country homes like town houses—pianos, silk gowns, and hire help instead of doing the work themselves.

Of course, in a place like Marblehead, with its beautiful harbor, yacht clubs and no end of pleasure boats, a great deal of time is spent on the water in rowing and sailing. One day we took a skipper and yacht and sailed 20 miles up the coast to Gloucester, a fish town, the foremost fishing port in the world, and just how it has happened that Gloucester, of all the Atlantic coast towns, has retained its supremacy in fishing, I am unable to say. It is a very picturesque place—with some 20,000 people, or more—and a great resort for artists, whose white umbrellas are pitched about in great profusion. The fishing outfit of the city counts 500 sail boats, and $3,000,000 worth of fish are taken annually. The shops of boat gear—ship chandlers' shops—are very interesting. A good many of the Gloucester young men obtain service in the merchant marine and serve in the navy. There seem to be a great many idle men on the wharves, and it is an easy matter to start one off on a sea yarn. On our way up we sailed across Salem harbor, past the beautiful Beverly Farms, a favorite outing place with Dr. Holmes, (Whittier lives near Salem); past Manchester-by-the-Sea, where the sandy beach sings when you walk on it; past Magnolia, so named for its native trees, uncommon elsewhere in New England, and so on to Gloucester. On the way, we passed a rocky island called "Norman's Woe" (see Longfellow's poem), Little and Great Misery Islands, and in sight of the Isles of Shoals well out at sea. Celia Thaxter, the poetess, has made these islands somewhat famous, especially the one called Appledore. A greatly admiring friend of hers told me that Celia's father, becoming disappointed and disgusted with the way the world wagged, bought a farm on Appledore, and removed thither from the mainland with his wife, a sweet and lovely creature, and the three children, all of tender years. Here Celia—the only girl—grew up in a hermit-like way. The wind blew so in winter that in passing from the house to the barn, they had to go on all fours to keep to terra firma. When Celia was about 14 years old, a young

college student, dreamy, poetic and impractical, came to the island. He was the first young man, besides her brothers, that she had ever known. They fell straightway in love and were married, and they went near Boston to live. The young husband's name was Thaxter; he had some property, but his devotion to poetical things obliged the wife to be the chief burden-bearer of the family, and in order to increase their revenues, she acted upon the suggestion of an acquaintance who appreciated her fine mental gifts, to try her hand at writing. She wrote a poem, sent it to the Atlantic Monthly, and in due time received $10 for it, with a request for more, which settled her bent for literature. Subsequently her husband died, and she built a cottage near her old home where her brothers still lived, and where she still makes her home in summer. She is the mother of three sons, one of whom is a physician. She is exceedingly clever, paints well, is gifted in anecdote and repartee, and is a fine talker. In winter she lives in Boston.

Although we sailed merrily enough on our upward trip, we had rather a sorry time coming back, as the wind had risen, the sea was rough and it was a frequent occurrence for a wave to send a shower of spray over the deck of the yacht, which would have drenched us to the skin, but for our great coats of water-proof. The members of the party who were given to sea-sickness succumbed, but although it is a malady from which I do not suffer, I think it is exceedingly fatiguing to be long at sea in any kind of a craft.

The frequent yacht races at Marblehead furnished much entertainment, as well as the music at the club houses. It was always a sight to see the "Volunteer" come in, her mast standing higher than any building in the town. Mr. Burgess, her designer, and the architect of many another fleet boat, lived on the "Neck"—a man far less striking in appearance than newspaper portraits represent him to be. We chanced to be out in a dory one day, and seeing the Volunteer at anchor, asked leave to go on board, which was pleasantly granted. It was interesting to see with what ingenuity, lightness with strength had been combined. Eighteen men formed her crew. One day an unusual-looking ship appeared in the harbor, which proved to be the "St. Mary," the New York training school ship. She was built in 1846 to catch slavers, and after a varied career was put to her present use. She is an antiquated boat, but well enough fitted for training boys for the sea, or for training out of them the sea-going desire. For parents afflicted with lads inclined to be unruly, or bound to go to sea, it is a very good thing to place them in this school of which a year's experience is generally enough to cure them of their idiosyncrasies. Some of the boys, however, like it well enough to become sailors in earnest. The discipline on board obliges them to do with punctuality what nearly every boy finds detestable—to keep his bed, wardrobe, etc., in perfect order and neatness, wash and mend his clothes, and learn how to cook, to wash tin dishes and to scrub.

"DON'T."—AT HOME.

OLIVE E. DANA.

THIS little word has been overworked of late, but there is still need of its application in the household. There are certain occasions, trifling maybe in themselves and taken singly and belonging among the minor morals, concerning which one longs to say emphatically: "Don't." Not that we who write are altogether void of offence in these matters. Indeed, this monosyllabic contraction of the imperative mood is never spoken so sharply and forcibly as when we say it to "our own selves." And indeed there are few of us to whom it might *not* be said sometimes. But to specify—and first, concerning mealtimes.

Don't let us air grievances, in the form of scolding or complaint, either, at the family table. It is the poorest of all places to vent irritation. If one's own digestion is unaffected thereby—as is unlikely—there are others to whom eating under such circumstances becomes well-nigh impossible.

Don't discuss or mention at table, distressing, disturbing, or otherwise disagreeable occurrences or subjects, or recount details that are in any way saddening, of sickness, death or accident. Indeed, in most cases it were better not to dwell at all upon such particulars or to relate them at length. And certainly such a recital should be prohibited at table.

Don't make mention too often of particulars concerning the food, its price, preparation, and the like. Mr. Emerson's example, as told in that recent and interesting volume, "Emerson in Concord," is a good one. It is said that "he took whatever was set before him with healthy appetite, but hardly knowing or asking what it might be. Rarely he noticed and praised some dish in an amusing manner, but, should any mention of ingredients arise, he always interrupted with 'no! no! It is made of violets; it has no common history', or other expressions to that purpose."

And especially do not allude to the food before you, to food in general, or to anything else, in any way that can affect the most fastidious appetite. Grown people will of course very seldom offend in this way, yet even they sometimes do. And children should surely be taught gentle manners.

Don't let us shorten the meal-hour, always too brief, by hurrying to get cleared away, by comments on the lateness of the hour or the work yet waiting, or sit down with too many evidences of the preparatory work visible either on the person or around the room—the sleeves still rolled up, and the soiled apron unremoved; perhaps, sir, with even your hat still on your head. All these things hinder both appetite and the ease of mind that should accompany it. If we could have a dining-room always! But it is often one of the unattainable things in our country homes, especially in winter. Lastly, "Don't" let us "run in" at our neighbors at meal-time. It is so much better to go earlier or later, and most errands can wait, the friendly chat always.

WOMEN AS WOMEN.

AUNT ANCIENT.

AFTER the last meeting of the Women's National Convention the editor of one of our prominent dailies, asked why some "old-fashioned" woman did not read a paper at the meeting on "Women as Women." A male writer in the Epoch attributed the "rudeness of women," to their "growing independence." A noted journalist writes of women's inaptitude for the duties of a public office; while a correspondent of an educational journal says that "at least one-half of all the teachers in our public schools should be men." Such queries and opinions as these, coming from men of presumably broad views, furnishes another proof of man's inability to regard women as at home in any sphere save the domestic.

To be sure, there are implanted in every woman's heart a love of home and a desire for family ties, but as she advances in intelligence there will be less likelihood of her exchanging the means of an ample subsistence for a home and husband unless the husband be a congenial spirit and one that is worthy of a good home. It is not my purpose to discuss, in detail, the advantages to mankind in general arising from an enlargement of woman's sphere and her increased facilities of obtaining an honest livelihood; neither will I dispute the opinion of men that woman is most lovable when she retains every vestige of true womanliness and figures in the capacity of a sister, daughter, wife or mother. If among the numberless vocations that have been opened to woman there is one that has a tendency to make her less a woman the privilege she has of entering that vocation should be immediately disallowed. No woman can afford to lose the charms of a gentle womanhood, and the more she is brought into contact with men, the greater is her need of those qualities which are essentially feminine. While woman has gained the right to stand upon a social and intellectual level with man, every woman, no matter what her calling may be, has duties to perform and responsibilities resting upon her that belong to her sex alone. Her influence should always be informing and stimulating, her efforts persevering and quiet. If there be any that take exception to the last requirement, let them remember that in no place is a female blusterer ever sanctioned. No quality of mind or habit of life that is distinctively masculine can be tolerated in woman by the opposite sex.

Opposites attract, and all women who are desirous of pleasing men and of influencing their actions will cultivate the graces of a pleasing femininity.

To add to the qualities which constitute woman's innate womanliness, her dress, her manners and her education are deserving of especial attention. "Dress," some one has said, "is an index to character." A woman's dress in particular indicates the degree of her modesty, her refinement, and were it not for what has been said concerning the dress of intellectual women, I would add, her intelligence. Aside from this, I have observed that in proportion to the number of genuinely feminine traits that a woman possesses is her love of neatness and cleanliness in dress increased. It does not argue in favor of a frivolous or shallow mind for a woman to be neatly and stylishly dressed. The intellectual and moral status of the woman who dons a tasteful apparel is several degrees higher than that of the gaudily dressed woman, and I am bound to add that there must be something sadly wrong about the mind or nature of the woman who persistently ignores the most becoming fashions for the sake of showing an independent spirit, or because she has no desire to be considered attractive. Every woman should exercise a daily care in the matter of dress, not only because her self-respect is augmented thereby, but because men, from the most polished down to the most uncouth, love to see their female friends evince a taste for neat and becoming costumes.

When I say that woman craves the esteem and admiration of man, I have in mind the pure-minded woman and the honorable man, and it is not to such a woman's disparagement if she dresses herself to please her lover or husband, or is especially considerate of her personal appearance in the presence of her male friends. The silly sentimentality and extravagance in dress, which characterize some women are to be severely condemned, but the desire to be charming in the eyes of her friends cannot be set down to any woman's discredit. It is a natural, a legitimate feeling and one that is altogether womanly. It has always been a mystery to me how woman can degenerate into an abominable slovenliness, as some do, as soon as they have captured husbands or have little children to love and rear. Surely such creatures lack the qualities which are the distinctive mark of a lovely womanhood.

A woman's manner to a greater degree even than her dress marks the extent of her claim to the title of woman. The manners of a true woman are the reflex of a gentle spirit and a kind heart. They are manifested by a low voice that "excellent thing in woman" and by the unostentatious way in which the truly feminine nature delights to move and act. In direct opposition to her mode of deporting herself is her manner of thinking. The model woman is a vigorous thinker. Her education has been directed to that end and if parents would have their daughters exemplify the beauties of a strong and pure womanhood it behooves them to begin early the work of moral and intellectual development in the minds of their daughters. Every father that has a serious thought concerning the welfare of his country will educate his daughters. The weal or woe of a nation depends in a great measure upon the extent to which its mothers are educated. The work which men have agreed upon as rightfully belonging to woman cannot be accomplished efficiently by the unwomanly, the weak-minded or illiterate of the sex. A clear understanding, a refined manner, a cultivated taste, good judgment and strong moral tendencies are conspicuous qualities of the woman who fulfills her highest mission. Ignorance and a slavish dependence upon men are not womanly characteristics. Women like men have their distinguishing traits and their attractiveness to men is increased in proportion to the prominence which these traits assume. The true woman does not detract from her worth as a woman when she engages in any work to which duty calls her; womankind has not been degraded by the labors of such reformers as Ellice Hopkins, Frances Willard or Lucretia Mott. Men have not found their wives less helpful, homes have not been made less bright or little children less happy because of the interest which women have manifested in politics, literature and the arts, and in the advancement of their own sex.

A discussion of the subject "Women as Women," at the Women's Convention was not a necessity, for every loving mother, every affectionate wife and every tender sweetheart is a testimonial to that truth which cannot be gainsayed. Woman is first, last, and all the time a woman, and as such she longs for no wider kingdom than a home, no stronger sceptre than love, and no greater power than that which she wields over a husband and children.

To have such an ambition a woman need not be "old-fashioned," she need not be a conservative or a domestic slave, for it is an attribute of the highest, the lowliest, the most gifted and the strongest-minded of the sex.

GOLDEN GRAINS.

DR. JOHNSON SAID: Exert your talents and distinguish yourself, and do not think of retiring from the world until the world will be sorry that you retire. He hated a fellow whom pride, or cowardice, or laziness drives into a corner, and who does nothing while he is there but sit and growl. Let him come out and bark.....

IT is said that a clergyman in one of the Bahama Islands proposed that the service be shortened for the convenience of his parishioners. A day or so afterward he received this protest: "Indeed, sir, our ladies will neber tink it worth while to dress only to sit in church for one hour." We wonder if such a remonstrance could come from any other place? Certainly, it would not be heard in this country.....

IN a St. Albans church, on a recent Sunday says the Messenger, a little lad looked on with surprise as the contribution boxes were passed around. He had an idea that the cash was being distributed gratis, and so, just as the box was leaving the pew in which he sat, he put his chubby little hand in among the change and brought out a fistful, and was quite disgusted when his mamma made him disgorge.....

HARPER'S WEEKLY reminds us that it would be well to remember our friends while they are living and not wait until after they are dead before we manifest our appreciation of them.....

IT is an odd thing that no sooner has death claimed our friends for his own than we begin to say and do a multitude of things of little use at all then in comparison to that which they might have been had they come in advance of death. Then out of hand we flock to the house with offers of assistance and proffers of friendship; we rob our gardens and our hot-houses and send cut flowers in profusion, and funeral wreaths and crosses and pillows and anchors and stars to encumbrance and do all we can, though late to hide and disguise and sweeten fate. But if we had flocked to the house while the dead could have been aware of it how much pleasure and excitement and relief from monotonous or lonesome hours our sick friends might have enjoyed when all was a tiresome round of day and night and medicine and solitude, when a bunch of flowers brought in would have brought a light to the dull eyes, of joy both over the gift and the giver, joy which no broken columns of tuberoses and ivies, costing small fortunes, can bring to the eyes of the dead! Even could we have been admitted to the sick room itself, we could have brought there the murmur of the outside world by the mere knowledge given to the patient that we were within the gates, some break, some cheer, some good..... .....

THEN, too, how profuse we are with our good words after their ears are stopped with dust. We do not hesitate then to say all that is true or even more than is true in praise of the departed. It is as if we had suddenly discovered in the sand a jewel fit for kings to wear; we make an outcry and hold it up to the light and turn it this way and that, and exclaim and marvel and admire and call on others to do likewise. There is nothing to say about this person now that the place once filled is vacant. But if we had said a tenth part of it all when it might have been heard by the living person, of how much more worth it had been! What joy and satisfaction it might have given! The subject of it all might have felt as if satisfied to leave life with such appreciation. But it was not spoken, and life went on without it; and now we regret it, and do the same thing over with the next friend..

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

"Too little rest, too little sleep,
Too many hours to sow and reap;
At last, disease and pain
The strongest rope parts strand by strand,
Beneath a ceaseless strain."

EXTRACTS FROM SUNDAY EVENING TALKS AT THE RURAL GROUNDS.

"THE little foxes that spoil the vines." The Song of Solomon, 2:15.

That remarkable genius, Mother Goose, has indited one stanza so pertinent to the every-day affairs of life, that it seems to me it should not only appear in every child's nur

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children she gave them Castoria

sery book, but be graven on the walls of our homes and places of business. Certainly it ought to be graven on the tablets of our memory that:

"For every evil under the sun,
There is a remedy or there is none;
If there be one, try to find it,
If there be none, never mind it."

For if we bore this fact ever in mind, it might help us to tide over the ills of life with less of peevishness and repining, and to seek more perseveringly forthe good gifts which fortune holds in store for us.

The little evils of life are perhaps the ones that are hardest to bear, just as pin-pricks give us more annoyance in proportion than some act of surgery. To the little evils of life, then, we should first learn to apply a remedy or accord a good-natured indifference; and when we are perfect in the art of meeting small ills philosophically we shall be very apt to meet the larger ones with equal fortitude and serenity.

And this discipline should commence in childhood. Girls and boys need to learn early that they must expect tumbles, and bruises and knocks and hurts, and to endure them with stoicism. You will never find a child develop into greatness which was eternally coddled in its youth. Too much sympathy and concern expressed about every tiny bruise and ill make children babyish and peevish; they blame the earth for hurting them, the furniture for knocking them, the sun for making them hot; and they grow up into fault-finding men and women, inclined to sulk and grieve over every little trifle, instead of seeking their remedies, or taking them as they come with a smile.

How many of us have seen the woman whose brow has been clouded for hours at the upsetting of a goblet of water, or tracks of mud on the carpet, and the man who has darkened and flashed like a thunder-storm because dinner was a quarter of an hour late, or a button was off his shirt?

I doubt if there is a household to which Mother Goose's admirable lines might not teach a lesson, if there is an individual who might not profit by a frequent refreshing of the memory concerning them. It is an old axiom, and a true one, that there is no use in crying over spilled milk. If there is any way to be devised by which the spilling of milk in the future can be prevented, why set to work and devise it. Do all the cross words in the dictionary and all the frowns which the human countenance is capable of putting on undo the evils which befall us?

Do our exclamations and the ugliness we display to all with whom we come in contact, sew rents, mend breaks, get the meals on time, restore lost articles, or alter the state of the case whatever it may be?

If they did, there might be some satisfaction in our cross words and ugly looks, but how many of us looking back upon the expressions in which we gave way to our feelings, do not remember something we wish we had left unsaid?

Then why not "never mind" the little accidents which are trying but irreparable when once they have occurred, and make efforts to guard against their recurrence in future?

Drive in the projecting nail, and it will not tear your frock again; hold your delicate china more firmly next time; tell your wife to begin her preparations for dinner a few minutes sooner, etc. As to fretting against the weather, we all know that no amount of worry or execration is going to clear away the clouds one minute sooner; and we only succeed in having cloudy weather inside as well as outside. Those people who are impatient and irritable, who fly into a passion or sink into the sulks every time a trifle annoys them, resemble nothing so much as grown-up babies, and there is no end of these grown-up babies in the world, both masculine and feminine.

Every life has its evils, both big and little. Is it because there is not enough unhappiness in the world that we must magnify the small ills? Why not try to get the most enjoyment instead of the most unhappiness out of life?

It is "the little foxes that spoil the vines." So it is the constant worrying over little things that spoils our lives, that robs us of half the enjoyment that, I believe, we were intended to draw from life; for I don't believe God put us here to be miserable, except through our own wrong doing, Adam and Eve notwithstanding. Instead of making ourselves, and everybody around us, uncomfortable whenever we tear our clothes, break our china, get a reduction in salary, see our neighbor wear a better suit than we can afford, or are beset with any similar evils, we will just call to mind that bit of wisdom: "It is the little foxes that spoil the vines," and resolve with heroic philosophy to "never mind."

TALKING of the various ways in which different people affect us, a guest made the remark that after the visit of a certain friend she always felt as tired as if she had worked from six o'clock in the morning until nine at night.

ODDS AND ENDS.

BEAUTIFUL and artistic portières for doorways (or curtains for windows) are made from silk rags, woven in the same manner as ordinary rag carpets. If regular stripes are desired, the rags may be sewed to give that effect, but if they are put together "hit-or-miss," or just as they come, they will produce a sort of Turkish or Persian effect. To my mind, this is far prettier than any set pattern could be.

THE best salad dressing is, to my taste, a French Mayonnaise, pronounced Mah-younaze. This is said to have been named in compliment to a French noble, the Duc de Mahon, and was first called Mahonnaise. The following is according to J. W. Parkinson, the celebrated authority on such matters. Take the following ingredients: One pint of olive oil; the yelks of three eggs; one pinch of powdered bay leaves; one pinch of white pepper; two table-spoonfuls of vinegar; two table-spoonfuls of lemon juice.

The eggs must be *freshly laid*, and every drop of the white carefully separated from the yelks. Put the latter into a soup plate or shallow bowl and set on a large dish containing ice; add the spices and stir steadily round in one direction until the paste is entirely smooth and ceases to thicken, using a box-wood fork for the purpose. Then add, very slowly, in a fine stream, half a pint of olive oil, then the lemon juice, another half-pint of oil, and, lastly, the vinegar, stirring steadily and briskly in one direction, during the latter process until the sauce thickens no longer. Then set into the ice-box till wanted.

If all the materials are of the best quality and skillfully worked, the sauce should resemble in body and color, a rich, boiled custard, and fall from the spoon in a thick mass. More oil can be worked into it, but it would be too rich for many tastes. This result will vary somewhat with the temperature, and the quality of the ingredients; but the proportions named are as nearly correct as possible.

MRS MEAD, a California woman, prefers plowing to housework, so last fall she hired a girl to do the indoors work, while she herself took charge of a four-horse-plow. She and her husband between them put in 230 acres of wheat, and they are mutually delighted with the experiment.

THE following is a cooling ointment for sun-burns, etc.: Elder flowers, two pounds; lard, two pounds; simmer till crisp and strain. Apply on retiring, or several times during the day if you can do so. This will be found to greatly benefit the complexion during the summer months. Now is the time to gather the elder flowers, as they are in bloom. You need not make the full quantity as above, but half or a quarter of the amount. But the flowers can be obtained only *once* a year, so I think it best to make enough to last for some time.

ELDER flowers also make dainty fritters. Gather a quantity of pure, white, full clusters of the blossoms, shake them free from possible dust or insects, have your batter (made like ordinary fritter or cake batter) ready, drop a fritter into the pan, which must be hot and covered with melted butter, then dip the flowers into the fritter and cut the stems off. As soon as brown turn. You may sweeten the batter if you prefer. Serve with sugar and cream, or eat with butter alone. There is not much stability about these, but they are exceedingly dainty, and make a nice little delicacy for a meal.

D. H. V.

BLACK CURRANT JELLY FOR SORE THROATS.

A RECENT guest spoke highly of the soothing qualities of black currant jelly for throat diseases. Put a small quantity of the jelly into the mouth and let it dissolve slowly. Our guest mentioned several instances in which, if a cure was not effected, at least great relief was obtained from this simple remedy. For her own use she cuts the firm jelly into small tablets, rolls them in sugar and lets them harden.

COVERS FOR JARS, ETC.

A VERY convenient cover for a jar, pail or other dish in which one wishes to store pickles, sauces, cookies, fried cake, meats, etc,, is made by taking a square of board large enough for the utensil to be covered, plane and cut off the corners so that it will be less liable to be in the way; then on the under side put a smaller piece of the same shape or just a long or square piece as most convenient, only small enough to go inside of the jar, and you will have a cover that will be in no danger of breaking, and one easily cleaned. We have used them 10 or 15 years and they are just as good as when first made, and if we happen to want an extra supply of pie-plates we do not have to ransack the cellar for them. It is well to make smaller ones for the gallon jars as they take up less room.

C. R. DAVIS.

DINING-ROOM NOTES.

"THERE are so many ways to use cream," said Mr. Smith as we sat around the dinner table, "besides the prime one of butter making." It is often an ingredient for all kinds of pastries, and during the small fruit season it is occasionally pressed into service, but more often milk is used and that is what curdles in the stomach and so often causes distress. Next to peaches, there is no more delicious dish than mellow, juicy apples, chopped fine and well buried in thick, sweet cream and sugar. If the apples are sweet only a little, if any, sugar is needed.

HAM, nicely fried, is greatly improved by pouring sweet cream over it and setting the dish in the hot oven a few minutes. Prepared in this way, it is very appetizing and the gravy makes a delicious dressing for potatoes and bread.

CRISP lettuce with cream and vinegar is very fine. Pure cream does not curdle in the vinegar. Creamy milk may do very well for tea and coffee, but does not fill the bill, to mix with acids.

A TEACUPFUL of cream improves the flavor of asparagus, peas, beans, etc. It is also a good addition to chicken gravy, and, used with sugar, makes an excellent dressing for puddings.

A Cow may eat her head off twice through the winter for aught I know; but, comparatively speaking it is a very slim living a farmer has without at least one or two good cows on the farm. The surplus hay might be sold perhaps for more money than the cows would bring in market. But it would never be used to buy cream, whatever else it might get, and cream and milk are luxuries fit for a king, and none too good for the kings of agriculture.

THE farmer who does not know the taste of cream, has got to learn that it is far more to be prized than honey in the honey comb. So don't put all the cream in the churn, to be made into butter to be packed away, to be sold next winter when it has, in all probability, become "just a little strong;" but enjoy the delicious flavor of it now while it is in its prime.

OLD potatoes are wonderfully improved in flavor and appearance by having them pared and thrown into cold water several hours before cooking. Then, if they are put into boiling water and kept boiling till just "done," and then drained immediately, they will be as white and "mealy," as when first dug in the autumn.

MAY MAPLE.

Miscellaneous Advertising.

The Aged

Who need help in their many infirmities, especially those afflicted with rheumatism, find great relief in

AYER'S Sarsaparilla.

"One year ago I was taken ill with inflammatory rheumatism, being confined to my house six months. I came out of the sickness very much debilitated, with no appetite, and my system disordered in every way. I commenced using Ayer's Sarsaparilla and began to improve at once, gaining in strength and soon recovering my usual health. I cannot say too much in praise of this well-known medicine."
—Mrs. L. A. Stark, Nashua, N. H.

Ask your druggist for

Ayer's Sarsaparilla,

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

Price $1; six, $5. Worth $5 a bottle.

BEECHAM'S PILLS
ACT LIKE MAGIC
ON A WEAK STOMACH.
25cts. a Box
OF ALL DRUGGISTS.

W. R & CO'S IMPROVED BUTTER COLOR

IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the buttermilk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere. More of it Used than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & Co., Burlington, Vt.

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Made cheaply and quickly by using a Triple Motion
WHITE MOUNTAIN FREEZER.

Will freeze in half the time of any other Freezer and produce cream of the finest quality. Inquire for the "White Mountain" of your local dealer in house-furnishing goods.

"Frozen Dainties,"
A book of Choice Receipts for Ice Cream, Sherbet, Water Ices, etc., packed with each Freezer this season, or will be mailed upon receipt of ten cents in stamps.
White Mountain Freezer Co., 134 Holl's St., Nashua, N. H.

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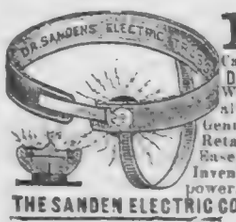
GRATEFUL—COMFORTING.
COCOA

GOLD MEDAL, PARIS, 1878.
W. BAKER & CO.'S
Breakfast Cocoa
Is absolutely pure and it is soluble.
No Chemicals
are used in its preparation. It has *more than three times the strength* of Cocoa mixed with Starch, Arrowroot or Sugar, and is therefore far more economical, *costing less than one cent a cup.* It is delicious, nourishing, strengthening, EASILY DIGESTED, and admirably adapted for invalids as well as persons in health.
Sold by Grocers everywhere.
W. BAKER & CO., Dorchester, Mass.



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Warranted Best Truss made, to CURE all Curable cases or Refund Money. Only genuine Electric Truss in World. Perfect Retainer. Gives instant relief, speedy cure Ease and Comfort day and night. This New Invention combines science, durability and power. Price $3 & $5. Illus. pamphlet free.
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Also, manufacturers of Iron Cresting, Iron Turbine Wind Engines, Buckeye Force Pumps, Buckeye Lawn Mowers, etc. Send for Illustrated Catalogue and prices to **Mast, Foos & Co. Springfield, O.**

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15 Cts. per Foot, material 8 feet wide.
Adapted for **Residences, Churches, Cemeteries, Farms, Gardens, &c.**
All needing Fences, Gates, Arbors, Window Guards, Trellises, etc., write for our illus. price list, mailed free.
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IMPROVED Made of best material by skilled workmen, built on correct principles and fully warranted; 17 YEARS' EXPERIENCE. Sent on trial. Write for Circular and Price.
Stover Mf'g Co. Freeport, Ill.

News of the Week.

HOME NEWS.

SATURDAY, July 6, 1889.

UNFORTUNATE Conemaugh! The other day a fire destroyed a large part of the houses the great flood had wholly or partly spared in Johnstown, and during the week enormous downpours among the neighboring mountains have flooded the valley, the water rising high on the first floors in the houses in Johnstown, destroying or damaging all the furniture saved from the big flood. Business is sluggish, and there's a world of discontent and grumbling at the distribution of the marvelous relief fund contributed by the liberality of the nation. Nearly two-thirds of the fund is still in charge of the depositaries where it was raised; over $325,000 of the $510,000 raised in New York City remains here yet. At all the great collecting centers contributions are still coming in. Those received here during the week averaged about $675 a day. It is proposed to have 1,000 houses made in Chicago, put them up in the valley, furnish them plainly and donate them to the needy. The number getting relief is steadily being cut down, as employment gives support. The sufferers want lump sums, and many who are in no real need insist that their losses should be made good, in part at least; but the managers say the money was given to relieve distress, not to compensate for losses.....

An English syndicate is buying up the shoe factories of Massachusetts, and another is negotiating for the purchase of the flour mills of Minneapolis. English capital at home is content with from 2½ to four per cent. interest; it can make much more than that by directly controlling American manufactures, especially when it is done "trust"-fashion. There's too much wealth and enterprise, however, in this country to permit any of its large industries to be monopolized or wholly controlled for any length of time by non-resident aliens.. Canadian millers in mass meeting at Toronto are about to protest against the refusal of Parliament to protect them against competition with American millers. The import duty on flour is 50 cents per barrel, while the duty on the amount of wheat necessary to make a barrel of flour is 67 cents—a discrimination of 17 cents per barrel in favor of American millers..... Sir Julian Pauncefote, the British Minister, has just bought a small farm outside the limits of Washington City, and will raise his own farm supplies and garden "sass"..... One man claims $300,000,000 worth of San Francisco under an alleged old Mexican grant; while another will be content with $2,000,000 worth of St. Paul, under a newly resurrected or invented real estate claim.....

The Dominion offers the "States" a reciprocity in lumber. It wants 60,000,000 American customers in exchange for 4,500,000 Canadian customers.....Fred Douglass has been appointed Minister to the colored Republic of Hayti. The struggle there between Hypolite and Legitime is still going on, though the latter's authority is confined to Port au Prince, a straggling town of about 17,000 inhabitants. .....The Old Star Route cases against Steve Dorsey and others have at last been "nolle-prossed" at Washington. That's the last of the scandal.....G. W. Wright, of Philadelphia, Supreme Treasurer of the Mutual Insurance Order of the Tonti, and also connected with the Pente and Iron Hall, is $40,000 short in his accounts with the Tonti. The order is reported amply secured by bonds of several surety companies. Trusted officials are the greatest dangers to such associations. ..... Carlotta Patti, elder sister of Adelina, and nearly equally famous as a singer, is dead. So is Maria Mitchell, lately of Lynn, Mass., probably the greatest female astronomer that ever lived ..Prairie fires—the most extensive ever known in Montana—have burned over 100 square miles in Canada county.... The tenth annual meeting of N. Y. French-Canadians was held in a large hall in this city Monday. The object was to urge F.-C. to become American citizens while still retaining their own language. The advisability of annexation was also discussed, and the general sentiment was in favor of it.....The amount of money that can be sent from this country to Germany, or the other way, by money order, has been increased from $50 to $100.....Much to the indignation of the natives, Mormon missionaries are working quite successfully in several parts of West Va., especially in Ritchie county.....

The License Courts in Pennsylvania have enormously cut down the number of liquor stores, but their work will be seriously affected by a decision just rendered by the Supreme Court, which has ruled that they have no power to refuse licenses to brewers, wholesale liquor dealers and bottlers, if they are of good, moral character, temperate and American citizens. Owing to this decision 229 persons to whom licenses were at first refused, have just secured them in Philadelphia alone. .....Another strike among the Pennsylvania coal miners! They can make only 90 cents a day, and want five cents a ton more. Over 12,000 men are out about Altoona, and more are going out unless their demands are granted..... ..Theodore Dwight Woolsey, D D., LL. D., for many years President of Yale College, died at New Haven, Conn., Monday, aged 88 years.....The sickly green two-cent postage stamp is to go ..... The government has contracted for 550,000 enameled bricks, to be used in the construction of the Congressional Library. Can't such bricks be made at home? The government pays no import duty..... Durango, a place of 5,000 inhabitants, in Southwestern Colorado, was almost entirely cremated Monday.....

After the failure of the great strike on the Reading Railroad somewhat over a year ago, President Corbin issued an edict that no men belonging to the K. of L. or any other labor organization would be employed on the road or in the coal mines and works under its management. Since then 60,000 men have quit such societies, and not a man in the company's service to day belongs to one. Then the company organized a "relief society," the dues to which average $2 per head per month, ranging from 75 cents to $4, according to the employé's position with the company, and the men got a hint that it was the safer plan to join it; those who failed to take the hint, were quietly dropped. The company receives each month nearly $60,000, or $720,000 a year, as dues from the relief society and acts as banker, while its officers manage the society's affairs. It has its own sweet way just now, but many of the employés are secretly kicking..... The total reduction on the public debt from June 30, 1888 to July 1, 1889, was $88,182,200, and there still remains a net surplus of upwards of $50,000,000 in the Treasury..... At the Fall River cotton mills there have been chronic strikes of late, as the cotton lords jewed the hands down to starvation wages on the ground that their business was unprofitable. Now they are declaring unusually large dividends ..... The Sullivan-Kilrain fight is billed to come off next Monday somewhere within 200 miles of New Orleans, and both men have arrived in that city in the "pink of perfection." The Governors of Louisiana, Mississippi and Alabama have issued proclamations forbidding the fight within the borders of those States, and the Governor of Mississippi has offered a reward of $1,000 for the arrest of the principals should they disregard his prohibition, and secured from the other two Governors permission for Mississippi troops to cross a part of the States, if necessary, to prevent the outrage. The betting now is strongly in favor of "Boston's Pride," though the "Baltimore Pet" has hosts of backers. The odds in favor of the "Big 'Un," however, vary from $100 to $50 to $100 to $80. The newspapers are giving columns of news space to the fullest details of the preliminary preceedings, and have made ample and very expensive arrangements for full reports of the "mill," while their editorial columns bitterly denounce the brutality of the whole thing! Who'll win? Well, doubtful things are mighty uncertain. ..... Mrs. Anna Pickett, widow of the gallant Confederate General George E. Pickett, who led the famous charge on the last day of the battle of Gettysburg, is to marry General James C. Lynch, of Philadelphia, who was Colonel of the 106th Pennsylvania Regiment which formed part of the first brigade which met the charge of Pickett's men. They first met on the Gettysburg battle-field a year ago during a reunion of the Blue and the Gray. He is now a well-to-do builder of 57, and she a very handsome woman of 50, who has been a clerk in the Pension Bureau, at Washington, ever since President Grant appointed her after her husband's death..... The Cronin murder case still drags ineffectually along in Chicago. There are reports that two or three other members of the Clanna-Gael who shared Cronin's opinions with regard to the rascality of the "triangle," or three directing spirits of the organization, have also shared his fate; while several others in different parts of the country are afraid for their lives, threatened by the patriotic thugs. Just at present everything is "pending."..... Oklahoma City, which had no existence two months ago, had a grand Fourth of July celebration, attended by hundreds from the surrounding country. The grand stand broke down under their weight, and 10 were killed and over 100 more or less seriously injured..... ...The Glorious Fourth was well celebrated everywhere except where heavy down-pours wet-blanketed the festivities. About the usual share of deaths, maimings and conflagrations are reported as among the results of the general rejoicing.....New York's present area is only 26,000 acres; Philadelphia's 82,000; Chicago's 111,360!!! ..... Last Saturday the Michigan legislature passed a secret ballot law at general elections. Tickets are to be printed by the State, of uniform size, color and texture. A railing and gate in front of each polling place, with a gatekeeper who shall admit but one voter at a time, are provided for in the law, and also the construction of booths in which the voter may prepare his ballot in secrecy. This is substantially the Australian voting system which so many of the States are adopting ...

... The value of taxable property in New York City in 1888 was $1,553,442,431; the commissioners say it now amounts to $1,603,839,113 ..... In preparation for a big show at the Census, Chicago, has just annexed Hyde Park, Lake, Lakeview, Cicero and Jefferson, making an addition of about 300,000 to her population, bringing the total up probably to 1,100,000. Her area now is 174 square miles—by far the largest area of any city in the country. It will now be in order for St. Louis to annex about half of Missouri..... Captain Dawson, an earnest, whole-souled man, editor of the News and Courier, Charleston, S. C., had made his paper second to none in the South, but as he was outspoken against humbugs, frauds and Bourbonic old-fogyism, as well as against super-exaltation of the "colored man and brother," he made lots of enemies, while he had hosts of friends. In his family, as governess to his children, was a very handsome and smart young woman, whom his wife had brought from Switzerland a couple of years ago. A Dr. McDow, a married man with a child, made love to the girl, and tried to induce her to elope with him. Some weeks ago Dawson called at the Doctor's office to remonstrate against the latter's persistent attempts to corrupt the governess of his children. He had on a heavy overcoat, and carried only a light six ounce walking cane, while his gloves were on—little appearance, therefore, that he expected a fight. The Doctor shot him dead "in self-defence," and tried to hide his body by burying it in a cellar closet. While he was in jail awaiting his trial, the crack artillery organization in the State spontaneously elected the murderer as member of their chivalrous ranks. The negroes had been down on Dawson on account of some of his writings, so seven negroes and five white men were put into the jury-box to decide the fate of his slayer. The only living person who knew the facts of the murder was McDow, and his life depended on the way he told of it. The jury believed him, or pretended to do so, and acquitted him, "amid the wildest applause." The general impression, however, even in his own State, is that he is a foul murderer, who may yet meet the doom he has just escaped by a political jury verdict.....

At 1:20 Tuesday morning a mile west of Thruxton and 30 west of Lynchburg, Va., an accident on the Western Division of the Norfolk and Western railroad, caused 34 deaths and more or less serious injuries to 93 others. A heavy 24 hours' rain had caused a washout 80 feet long and 50 wide, over a gulch in which the water was 10 feet deep. Into this the engine, running 30 miles an hour, plunged, carrying with it the tender and eight cars, leaving only the last of three sleepers on the track. The locomotive boiler exploded scattering burning debris all around. These set fire to all parts of the train not submerged in the gulch, and even the last sleeper was cremated .....

Encouraging.

Here is encouragement for those afflicted with that terrible scourge—*Nervous Prostration.*

BUNKER HILL, IND., March 14, 1888
"I feel that I cannot say too much in praise of the Compound Oxygen Treatment."
Mrs. FLORENCE BLUE.

ROCHESTER, N. Y., Jan. 11, 1884
"I began the use of Compound Oxygen and have much reason to be grateful for it."
REV. CHAS. W. CUSHING.

BENTON HARBOR, MICH., Nov. 28, 1887.
"I am indebted to you beyond all other Compound Oxygen purchasers."
BENJAMIN J. EAMAN.

BROOKLYN, N. Y., June 4, 1888.
No. 331 Decatur St.
"I was induced by a friend to try your Compound Oxygen Treatment. The result was marvelous. I will always recommend Compound Oxygen as the greatest vitalizing agent known for I certainly find that it has prolonged my life." MRS. E. H. HENDERSON.

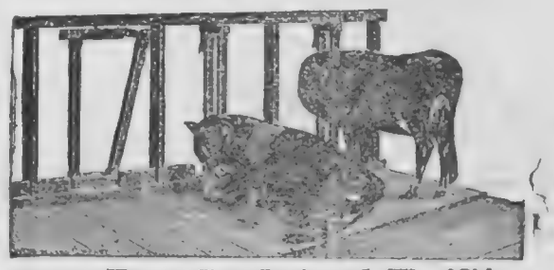
As you are aware we publish a brochure of 200 pages, containing the full history of Compound Oxygen, and a record of cures in many interesting cases. It will be sent free of charge to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa; or 312 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, July 6, 1889

AFTER all, the United States make only a despicable show at the Paris Exposition. The exhibit of cereals from which so much was expected, wouldn't do "much credit to a county fair." Other departments are on the same miserly scale. Much of the blame is attributed to the inaction of the Commissioners who are gobbling up a good share of the appropriation in salaries and expenses. But, then, the United States have never made a good show at any European Exposition. Manufacturers haven't much of a foreign market, and don't seem to want more. The Exposition is a grand success, however. During the last 14 days of June upwards of 2,000,000 visitors passed through the wickets. In every respect it's the finest thing of the kind ever seen. Probably the greatest attraction is the 1,000-feet-high Eiffel Tower which commands a view of 35 miles all round the horizon ..... The Princess Louise, eldest daughter of the Prince of Wales, has just been engaged to the Earl of Fife, about 40 years old, rich and moderately popular. Englishmen are jubilant that Europe has not been ransacked for an eligible princeling for the royal princess..... Prince Albert Victor, eldest son of the Prince of Wales, has become engaged to his cousin, Princess Victoria, of Prussia, sister of the Emperor of Germany. It was at first thought that the Queen would make an ample settlement on him out of her large private accumulations; but the House of Commons has just received a message from her asking an extra provision for him in addition to the $30,000 a year he now receives from the people's pockets. ..On the southeastern coast of Africa, stretching from Zululand northward, for over 1,000 miles, to the Zanzibar Coast, is a rather narrow strip of territory belonging to Portugal, the northern part of which is known as Mozambique. At its southern end, about 75 miles from Zululand, and 54 from the Boer Republic of Transvaal, is Dalgoa Bay, the largest town in the territory, and the finest harbor on the eastern coast of Africa. Stretching for 500 miles along the west coast of Africa, opposite Mozambique, are the two settlements of Angola and Benguela, also belonging to Portugal, which claims the intermediate region, from 1,100 to 1,500 miles across, by right of prior "discovery and exploration," though nothing has hitherto been done to "improve" either, as the country is almost entirely unknown. The head-waters of the Zambesi river which empties into the Mozambique Channel about the middle of the Portuguese east African possessions, take their rise not far from her western possessions. England has pushed her encroachment as far north as the Portuguese possessions on both the east and west coasts and in the middle, here and there, as far north as the Zambesi, omitting the Transvaal, and is very anxious to get hold of Dalgoa Bay. Some time ago Portugal granted to some English capitalists the right to build a railroad from Dalgoa Bay to the Transvaal frontier—50 miles away—where it was to meet another road, 250 miles long, running through the Transvaal to Pretoria, the capital, and thence to the gold and diamond fields farther west. Owing to an alleged infraction of agreement, Portugal has just seized upon the nearly completed road, to the intense indignation and wrath of all England, and although Portugal has agreed to leave the matter to arbitration, England has sent three ironclads to Dalgoa Bay. She scouts Portugal's claims to the connecting belt in Central Africa, but the claims are countenanced by Germany and France..... Lately a small fire occurred in the Imperial palace, Pekin, China, and the astrologers at once declared it was due to the recent introduction of a distant railroad system. Hence an anti railroad scare and stoppage of the work. The fright is passing off, however, and in spite of popular opposition railroad construction is likely to be continued, as the control of the roads of the northern provinces has been placed in the hands of Li Hung Chang, the leader of the progressive element in the Flowery Kingdom..... The new Japanese constitution modeled on a European basis of representative government, was promulgated a few months ago. The freedom of the press and full liberty to adopt "Western" fashions are among the concessions. The ladies of the Court and the higher classes at once began to follow the Parisian fashions, and reaction has just set in. The followers of the "old school" at once began to guy the novel dresses, and public ridicule has compelled the ladies of the Court and most of the others to return to their time-honored habiliments. The railroads, telegraphs and other modern improvements are still popular however..... Like England, Switzerland has long been a refuge for political conspirators and malcontents of all sorts, but being in the heart of Europe instead of on its outskirts, the Swiss refugees are more dangerous to European monarchies than the English. Germany a few weeks ago, led off by strongly protesting against the toleration extended to them. Subservient Italy and Austria, of course, followed, and autocratic Russia, galled by Nihilists, joined the trio. Little Switzerland boldly said she would not permit the refugees to act illegally against her neighbors, neither would she tolerate outside interference with her internal affairs. There's a German threat that it would be mighty convenient to partition her between Germany, Italy and France, each getting the cantons in which its language is spoken. Italy would thus be compensated for the loss of Savoy and Nice to France; and France for the loss of Alsace and Loraine to Germany. Germany would "rectify her frontier" more satisfactorily, while she and Italy would be brought into direct communication, as their territories would adjoin, forming a dividing rampart between Russia and France from the Baltic to the Mediterranean .....

Miscellaneous Advertising.



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The only practical *SWING STRANCHION* invented Thousands in use. Illustrated Circular free.
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Splendid location. Good Salesmen. Prompt Returns. Reference: Sixth National Bank.

WANTED.
An active, energetic man with capital and experience, to build up a farm to the standard of "Windsor Farm," Denver, or "Deerfoot Farm," Conn. Address giving references and experience, **C. A. Roberts,** Care of The Roberts Hardware Co., Denver, Colorado.

PILES. Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository. Sufferers will learn of a simple remedy FREE by addressing
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CELERY PLANTS.
White Plume, Golden Heart, First-class Plants; ready now. $1.75 per 1,000; 5,000 or more, at $1.50 per 1,000. **M. GARRAHAN,** Kingston, Pa.

The Famous Chester County Herd of
CHESTER WHITE SWINE.
The Best Herd in the United States, composed of the finest obtainable strains. Herd headed by Chester (No. 2628), N. C. W. R., Sows, Queen of Chester (No. 6580), Null's Pet (No. 6952), Nancy Second (No. 6954).
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A full and complete line, from the hand-machine up to the largest, of the **Smalley Cutters,** the **fastest cutting, strongest, most durable** and **best** ever built, including **Carriers,** both straight and angle, of any length required, and **Extras** and **Repairs** of all kinds, constantly on hand. Having the **exclusive** control and sale of these Cutters and all the appliances for the same, for all of the New England States and a large portion of the entire East, together with the right to sell in nearly all the Southern States, application for illustrated, descriptive and free pamphlet, showing **"why ensilage pays;"** and for free catalogue of both **Tread** and **Lever-powers, Threshers, Wood Saw-machines, Feed-mills** and **Fanning-mills,** should be made to the undersigned, proprietor of the old and reliable Empire Agricultural Works, over 30 years under the same management. **Agents wanted,** and **special prices given** for introducing in new localities. Address
MINARD HARDER, Cobleskill, N. Y.

AGRICULTURAL NEWS.

SATURDAY, July 6, 1889

ACCORDING to a correspondent of Bell's Messenger, no one section of the Paris Exposition possesses greater interest to British farmers than the one devoted to the agriculture of the United States. The work of grouping the many and varied objects of interest and study in this collection involved much patient care and discrimination on the part of the American commissioners, and the results achieved reflect credit alike on the commissioners and the country they represent. Upon entering the United States court at the east end the visitor sees a display of forest products from the great lumber regions of the States. These are exhibited in various stages, from the raw timber to the manufactured product. Associated with this display is a model of a tree-planting machine of great merit, the machine itself having been proved capable of planting as many as 8,000 or 10,000 trees in a single day. Close at hand is seen a valuable series of wall charts, illustrating in graphic form the economic features of cereal cultivation, agricultural education, railroad development, and subjects of allied character. A collection of cotton fiber products includes a large number of specimens of raw cotton, cotton seed, cotton-seed cake and oil, and cotton-oil soap. Adjacent to this exhibit is a variety of specimens of flax, jute, and of the ramie fiber grown in Texas. Next is a collection of the wools produced in different parts of the Union by the various breeds of sheep at present in favor with American farmers. The native fruit industry is illustrated by an exhibit comprising raisins, oranges and nuts, models of apples, pears, and other cultivated fruits, and a series of American wines. At the other end of this court the surroundings are chiefly corn and honey. The grain exhibit is almost bewildering in the number and variety of products. In one case alone there are upwards of 250 varieties of seed grains—"corn" or maize in every conceivable form, from all the principal grain-growing regions of the Union. An instructive collection of prepared food-stuffs includes pearl hominy, yellow Indian meal, crushed wheat, rice, and rice meal. A remarkably fine exhibit of hops is appropriately flanked by a series of bottles of American beer. The honey collection includes honey in every known form, a series of bee appliances, and the packages in general use for shipping and marketing the products of the hive. The very beautiful display illustrative of the economic entomology of the United States, prepared by Prof. Riley includes specimens not only of useful insects, but of the many insect pests, including Hessian fly, army worm, Rocky mountain locusts, and numerous others which annually inflict enormous loss upon American farmers. The specimens are shown in conjunction with specimens of the plants which they attack in order to indicate the nature of the injury, and to suggest remedial or preventive measures. The exhibit of vegetable products includes preserved sweet corn, grown for table use, tomatoes, peas and other vegetables, bottled or canned. Forage plants and grasses are presented in a collection of great variety and interest, and while the grasses include a few forms known in British agriculture, most of them are of a characteristic American type. The silk industry is not overlooked. Illustrations are afforded of the various stages of manipulation through which the raw material passes, and there are shown 64 specimens of cocoons produced in the United States, including several specimens of a cross-bred race, raised with no outcrossing for 18 years A carefully made selection of tobacco products from Virginia, Kentucky, Connecticut and Maryland serves to show what perfection the tobacco industry has attained. A small group of sugar maples and sorghum plants will remind the continental cultivators of sugar-beet that their industry is one that has not escaped the competitive instincts of American enterprise. A large collection of cut meats, lards, hams and canned products from Chicago packers and well-known houses in the Eastern States bears testimony to the efforts that are being made to secure for the States a world-wide trade in the animal produce of the prairie and the corn field. A number of very graphic charts and maps indicate the growth and development of this industry from 1810 to 1884, and give the numbers of animals and their values in periods of five and 10 years. The dairy display is included in the animal products exhibit, but is not yet complete. The cheese and butter exhibits will be contained in a refrigerator, constructed for the purpose. The butter has been selected with a view to the development of European trade, but it will include a number of small packages, such as are used for the home trade in the States. In connection with the dairy exhibit is an ingenious working model of a creamery operated on the cream-gathering system as usually practiced by American factory butter makers. ..... The agricultural implement department is included in a separate section..... ..State Dairy Commissioner Brown has under consideration what steps are necessary to be taken to enforce compliance with the law passed at the last session of the New York legislature to prevent deception in the sale of vinegar..... .....Prof. Snow of the Kansas State University, says that a disease has made its appearance among chinch bugs, which is thinning their ranks rapidly. He terms the disease white fungus, but many entomologists call it chinch bug cholera. The disease is very contagious. Prof. Snow shut up a number of healthy bugs with a few dead ones and they all died in a few days. Prof. Snow says any field can be cleared of the bugs by scattering a few dead ones therein. The disease is prevalent all over the West..... Farmers from different parts of Iowa report that a strange insect is at work in the corn fields. It is a small green bug, which works at the root of the corn, and destroys its vitality. The ground in some fields appears to be fairly alive with the pest..A black beetle half-an-inch long with a snout one-third of its length and known to entomologists as the sculptured corn curculio, is ravaging the growing corn in New Castle county, Del..... The Connecticut State Agricultural Society will hold its 20th exhibition at Meriden park and town hall, September 17—20. Very liberal premiums are offered for "speed," and ordinary ones for agricultural products. W. F. Andros, secretary, East Hartford..... The 10th Annual Fair of the Sussex County Agricultural Society, will be held at Newton, N. J., September 10—13. In the Premium List are given the points of excellence of the different breeds of cattle, together with the scale of points used in judging. The society offers comparatively liberal premiums, but those offered for "trials of speed" overtop them all. Among the latter, however, is a new feature, a purse of $100 guaranteed for the fastest-walking farm team, single half-mile dash, to be driven to a common farm wagon..... Gov. Hoard has appointed W. C. Thom of Beloit, Dairy and Food Commissioner of Wisconsin..... The Buffalo fly is said to have made its appearance in New Jersey, two fatal cases having occurred in one herd. This is a common pest in low, swampy places in the South, but so far as we know, has not before appeared so far north.....The Agricultural Department has sent out an expedition through the Southwest to collect specimens of wild fruits, grasses and grains of that region. .....A beef-skinning contest at Springfield, Ill., was won by a Springfield butcher in six minutes, 57 seconds.....The Nebraska State Horticultural Society meets at Fremont, July 17—18. An interesting programme is promised .....Farmers of the State of New York held a preliminary convention at Rochester, N. Y., on July 3, to arrange for a State Convention, the object of which is to adopt means to increase taxation on personal property, and shift it from the land. Knights of Labor were invited to send delegates with a view to uniting the farmers and Knights in an aggressive movement..... .....Oscar O. Gibbs, formerly editor of the Farmers' Review, of Chicago, died at Kenosha, Wis., recently of paralysis..... Secretary Rusk has made the following appointments; Thomas Taylor, Massachusetts, Microscopist, $2,500; George Vasey, Illinois, Botanist, $2,500; H. E. Vandeman, Kansas, Pomologist, $2,500.....

Crops & Markets.

SATURDAY, July 6, 1889.

HERE AND ELSEWHERE.

THE winter-wheat harvesting line has advanced as far north as Ohio and Indiana, and the crop as a general thing seems to be quite satisfactory. Spring wheat is not so promising, while corn is very backward. There is plenty of old corn reported in the West, though but little of it seems to be coming into market.

The butter market is weak, with no prospects of higher prices. The receipts at this market have been very heavy, and the bulk of the stock has gone into cold storage. There is little prospect for advanced prices for some time to come, unless for the best grades. The Utica cheese market showed a decline in prices, but the quality of the offerings was good. The price ranged from eight to 8¾ cents. At Little Falls the ruling price was 8¼ cents, Prices at the other markets in Northern New York ranged from 8⅛ to 9⅛ cents.

The New York hop yards are reported as looking fairly well.

THE FRUIT MARKET.—This city is well supplied with all kinds of fruit both tropical and home-grown. Strawberries are on their "last legs," and with the abundance of other fruits, go slow at low prices. Raspberries, blackberries, huckleberries, currants, gooseberries, cherries are very plentiful. As usual, the best grades sell at good prices, but poor fruits are a drug on the market. The presence of early yellow Crawford peaches is a novelty at this early period. Georgia furnished the supply. California will send a similar variety shortly. Some California apricots and peach plums, 818 boxes and 160 boxes respectively, were sold by auction Wednesday. The apricots brought $1.15 to $1.70, and the plums $2.35.

The price of beans has jumped up on account of light arrivals.

Sweet corn has made its appearance. Other vegetables are in full supply.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, July 6, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	New Orleans. Uplands.	New Orleans. and Gulf.	Texas
Ordinary	8 3-16	8 7-16	.....
Strict Ordinary	8⅝	8⅞	....
Good Ordinary	9 9-16	9 13-16	.....
Strict Good Ordinary	10	10¼	.....
Low Middling	10⅛	10¾	....
Strict Low Middling	10¾	11	.....
Middling	11 15-16	11 3-16	.....
Good Middling	11 7-16	11 11-16	.....
Strict Good Middling	11 11-16	11 15-16	.....
Middling Fair	12⅛	12⅜	.....
Fair	12¾	13	.....

STAINED.

Good Ordinary	8 1-16	Low Middling	9⅝
Strict Good Ord	8 11-16	Middling	10 7-16

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@58c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

POULTRY.—Chickens, spring, per lb, 12@17c. LIVE Fowls, near-by, per ℔, 10@10½c; fowls, Western, per ℔, 10@10½@—c roosters, per ℔. 6c; turkeys, per ℔ 9@10c; ducks, western, per pair, 70@0.90c; geese, western, per pair, $1 15@$1 40.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per ℔, 10@12c; do do, common to fair, 8@9c, do, iced, dry picked, choice, 8@—c. Fowls, western, do, choice, 11½@—c; do, nearby, do do, 12@13c; Chicks and Fowls, mixed, 12@14c; do do do, scalded, 10@11c. Squabs, white, per doz, $3 00@$3 25 do, dark do, $1 75@$2 00. Chickens Philadelphia, dry picked 24@25c, do Jersey, do, choice, 18@28c do nearby, do, good 18@28c; do Western, do do, 16@22c; do do, iced, good to choice 15@18c. Ducks, spring, choice, per lb, 14@18c; do do, good, 11@14; do Western, good, 10@14c. Geese, Western, good, 8@10c.

HOPS.—State, new, best, 22@23c; do, prime, 20@22c; do, low grades, 13@16c; do do, 1887, 8@9 do do do California, common to prime, 14@20c; choice, 20@22c

HAY AND STRAW.—Choice Timothy, 90@$——; do good do, 75@80c; do medium, 65@70c; shipping, 60@65c; do, Clover, mixed, 50@55c. Straw.—No. 1, rye, 65@70c; short do 50@55; oat, 40@—c.

BEANS.—Marrows, new, $2 50@$——; new mediums choice, $2 50@——; pea, $2 50@$——; red kidney, $3 00; white kidneys, choice, 2 60@——; foreign, mediums, 135@1 55; California Lima, $3 60@$——; green peas, $1 45@$1 50.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@——c, and farmers' grades at 5@7½c. Pecans, 5@7½c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Eastern Shore, per bbl, $1.-75@$2 00; New, poor to good, 0 75$ @$1 50: Old. $1 00@$1 25, Norfolk, New, $1 75@$2 25, Cabbage—New, per 100, $1 50@$2 50. Cucumbers, per crate, 50c@$0 75. Squash, per bbl, 75c@$1 50. Tomatoes, per crate, 50c@$1 50. Onions—New Orleans, per bbl, $3 00@$3 25; East Shore, do, $2 25@$2 50. Beans, string, per crate40@75c. Asparagus per doz, 75c@$1 50. Corn per 100, 50c@$1 00. Onions, Egyptian, per bag, $ 3 25@$3 50.

FRUITS.—FRESH.—Peaches, per crate, $0 50@$3 50; do. per box, 75c@$1 25. Cherries, per lb, 4@14c; Huckleberries, per qt, 9@12c. Gooseberries, per qt. 4@5c. Plums, per qt. 10@13c. Apples—Southern, per bbl, $1 50c@$2 50. Strawberries—Western N. Y., 5@11c. Raspberries, per pt, 2@8c. Watermelons, per 100, $12 00@$25 00. Currants, per lb, 4@5c. Blackberries, per qt, 4@12c.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5¼@6c; do new, common to prime, 3½@5⅛c; sliced, new, 3@3¾c; quarters, 2½@3¼c: chopped, 1¼@1½c; cores and skins, 1@—c. Cherries, new, 10@14c. Raspberries, new, 17@19c. Blackberries, 4@4½c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 10@14c; do do, unpeeled, 5@6c; North Carolina sun-dried, peeled, 6½@8c. plums, 5@5½c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 13 25@13 50; short clear, $14 00@16 00. Extra Prime mess, $12 50@$— prime do, $12@$12 25 and family mess, $12 75 @13 25. BEEF—India Mess. in tierces, $12@12 50 Extra Mess, in barrels, $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $7 50@8 00; Family at $11—@$14. HAMS—$13 50@$14 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 6½@—c; Pickled Hams, 11¾c; pickled Shoulders. 6½@6¾c; Smoked shoulders 6½c; do Hams, 12¼@12½c. Dressed Hogs.—City, heavy to light, 6@6⅝c. Pigs, 6¾c. LARD.—City steam, $6 35; June, $——; July, $6 94; August, $7 03; September, $7 11; October, $7 17; South America, 7.6c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes lower; Early Rose, 27@30c per bush.; Burbanks and White Stars, 28@32c; Hebron, choice, 35@40; New Potatoes. Florida, per bbl., $1 75@$2 50. Provisions were steady. BEEF.—City family, per bbl, $9 00@$9 50; do, packets, $8@8 50; smoked beef, 10@10¼c; beef hams, $14 PORK.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@13c: do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6½@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8¼c; bellies, in pickle, 8@8¼c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6½@7.

CHICAGO.—MESS PORK.—$11 85@11 90 LARD.—$6 62@— per 100 lbs; Short Rib sides (loose), $5 95; dry salted shoulders. boxed, $5 37; short clear sides, boxed, $6 25@$6 37.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 17@17¾. Elgin, best, 19@—; Western, best 17@—; do prime, 15@16; do good, 14@14½; do poor, 12@13. State, Dairy half-firkins, tubs, best, 17@ ——c; do do prime, 16@—; do do fine, 14½@15; Welsh tubs, fine, 15½@16; do do, good, 14@14½; firkins, best, —@—c; do prime, —@—c; do fine,—@—c. Western Imitation Creamery, best, 14½@15; do fine, 12@13; Western dairy, fine, 13@14; do fair, 11@12c; do poor, 9@10c; do factory, fresh, best, 12½@13, do prime, 11½@12; do good, 10@11; do poor, 8@9c.

CHEESE.—State factory, fancy, 8¾c; do do fine, —@——c; do do, prime, 8@8¼c; do do, fair to good, 7¼@7¾c; Ohio, flat, prime, 7¼@8c; do good, —@—c; do, good, —@—; Skims, light, 5½@7c; do medium, 2@3; do full, 1@2c.

EGGS.—Near-by, fresh, 14½@15@——c; Canadian, 14c; Southern, 13@14c; Western, best, 13¼@13¾c. Duck, 14@16c; Goose, 20¼@25c.

PHILADELPHIA.—BUTTER firm. Pennsylvania creamery extra, at 16@17c: Pennsylvania Prints, extra. 20c; B. C. and N. Y. creamery. extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were dull; Pennsylvania firsts 15@16c; Western firsts, 14@15c; Cheese dull—steady; demand fair; New York full cream, at 9@9¼c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Elgin creamery, 15½@16½c, choice Western, 15@15½c. choice dairy, 12@13½c; common to fair, 8@10c. Eggs firm at 12@12½c.

GRAIN MARKETS.

WHEAT.—Sales—Ungraded Winter Red at 85¼@87¾; No. 2 Red afloat, 87⅜@87½c; do, in store, quoted 85¾c, and do f. o. b. 86⅝@88⅜c, according to delivery: No. 2 July, 85¾@86⅜c; do August, 85¼@85⅞c. do September, 85¼@85¾c; do October, 86¼@86⅞c. do December, 83½@87⅜c. RYE—Dull and somewhat nominal. Western quoted at 50⅝@51¼c: State, 52@53¼c CORN—Continued free buying by shippers serves as a strengthing feature to the cash market. Ungraded Mixed at 42@43½c; No. 2 Mixed, 42¼c elevator, 43@55½c afloat, to arrive and spot; 42½@42¾c, c. f. and i.; No. 2 July, 42⅛@42 5-16c; do August, 42⅛@42¾c; do September, 43⅛@43¼c: do October, 43¾@45½c. OATS.—Sales—No 3, 28c; do White, 32½c; No. 2, 28⅜@28¾c; do White, 33¾c; No. 1 White, 38c; Mixed Western, 27@30c; White do, 33@39c; No. 2 July, 28¾c, do August, 28 11-16@28¾c; do September, 28⅜c; do October, 28¾c; do May, 32c; do White, July, nominal.

LIVE STOCK MARKETS.

NEW YORK, SATURDAY, July 6, 1889.

BEEVES.—No trading. Feeling steady. Dressed Beef slow and dragging at 5¾@6¾c per lb. with a few choice sides selling at 7c.

CALVES—Fair to prime Veals sold mainly at 4@4½c (few choice at 5c). Dressed Calves slow. Country dressed Veals sold at 5@7c (few 7½c), and city dressed at 6@8c; dressed Buttermilks at 3½@4½c.

SHEEP AND LAMBS—Sheep in fair demand and steady, and prime Lambs firm and wanted. Sales were at 3¾@5¼c per lb for poor to good Sheep, and 6⅝@7⅜ for Lambs, with Choice sold as high as 7½c. Dressed Mutton quiet at 8@10c, and dressed Lambs in fair demand at 9@12c.

HOGS.—No sales on live weight. Nominally weak at $4 50@@$4 90 per 100 lbs.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING JULY 6, 1889.

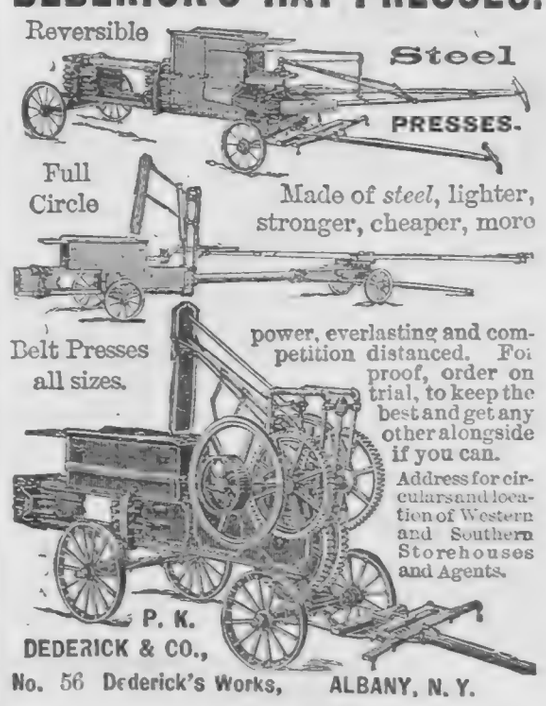
S. H. & Co.—J. A. F.—T. V. M.—O. S. B., thank you.—M. J. A.—E. G.—J. A. F.—G. F. B.—J. N.—G. W. D.—D. B. C.—W. M. G.—"A Reader of the RURAL.—S. D. L. B.—A. A.—W. D. G.

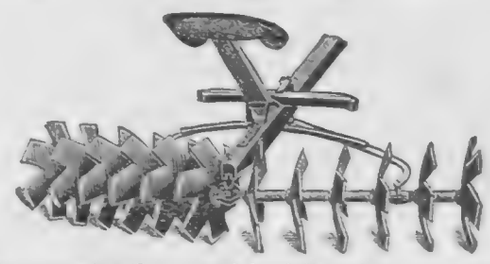
Miscellaneous Advertising.

SEND 10 Cts. in P. O stamps to **E. & O. WARD,** Produce Commission Merchants, for circular about **Shipping Produce.** Also recipe for **Preserving Eggs.** Established 1845. **No. 279 Washington St., New York City.**

PATENTS THOMAS P. SIMPSON, Washington, D. C. No atty's fee until patent obtained. Write for Inventor's Guide.

DEDERICK'S HAY PRESSES.





For preparing the ground for fall seeding, the Clark's Cutaway Harrow will more than pay for itself in one season. No use for the plow on stubble land. Take it and try it and you will buy it. Send for new circular.

Higganum M'f'g Corp., Sole Man'f'rs,
HIGGANUM, CONN.

TO LADIES.—MRS. L. L. JACKSON'S popular **Dress Guide** and **Self Instruction Book,** completely revised, with **Sleeve Guide,** for cutting latest style sleeve, now ready. Simple, satistactory, perfect. Send for circulars
Address **FAMILY DRESS GUIDE CO.,**
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IRRIGATED LANDS In Rio Pecos Valley, in Southeastern New Mexico. Choice limestone soil; abundance of pure water; a **delightful climate** all the year; almost continuous sunshine; altitude 3,500 feet; **healthiest locality** in the U. S., no consumption, no malaria. **20 acres** will yield a competency. Write for particulars, naming this paper, to **Pecos Irrigation & Investment Co., 84 Monroe St., Chicago, Ill.**

MANAGER WANTED on SALARY $2000 per YEAR
To open a branch office in your locality. Business purely mercantile. One that will inspire you with pride, pleasure and profit. Trade established. No peddling. **J. E. SHEPARD, Cincinnati, O.**

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EMPIRE PAINT & ROOFING CO., 1128 & 1130 Race Street, PHILADELPHIA, PA.

Literary.

A NEW TREATMENT FOR MALARIA.

THE increasing difficulty concerning help in this portion of New Jersey is yearly assuming greater importance. Out-of-doors and in-doors there is an evident deterioration of quality of the help employed. Several causes combine to render such an opinion justifiable. Our help is chiefly of a colored variety. The love of applejack interferes sadly with the sobriety and reliability of the males, while the younger females evince an indisposition to work, that is trying to an ambitious housekeeper. Of course, this charge does not include all, but there is an average growth of the objections referred to, which is greatly to be regretted. In consequence of this condition of things employers find it to their advantage carefully to cultivate the virtue of patience, and exercise a calm resignation to the inevitable. A mental obtuseness to the failings of our employees may also be profitably practiced, although from a strictly moral point of view perhaps it is not to be recommended. A few generations back the ancestors of our colored population were slaves. It may be safely assumed that if their forefathers were abused by the early slave-owning settlers, their numerous progeny are now amply avenging the fate of their suffering sires on the heads of their present employers. A few antiquated specimens of native Jerseymen still survive as day laborers, but from obvious causes their number is yearly diminishing. The blacks fill the chief requirements in the house and on the farm and their follies or their virtues, such as they are, crowd hard on the white laborer. Slowly he has ceased to compete and has either given up the ghost entirely or gone to more congenial soils or social environments. A few Italians are creeping in. At first the advent of these human ants was viewed with disfavor by the farming community. No depleted hen roosts or traditional resorts to the knife or dagger have been recorded, and now they are not an unwelcome alternate with the darkey. As yet, however, they are a large minority and Cato and Julius and their confreres have comparatively undisputed sway.

The superstitions and reverential belief in the mysterious power of charms and spells still maintains as vigorous a hold on the mind of the average African-American as it did on the minds of his savage ancestors. Perhaps it may not be so aggressive and dangerous, but it is there, nevertheless. Those yielding to such folly may be church members in good standing; they may be the loudest shouters for Christian glory and, withal, sanguine candidates for the straight gate, but a rabbit's foot when properly wrapped in red flannel, with a few hairs of a black cat, the claws of a crow and toe of a toad, with some other equally potential mediums, will invoke an influence for good or bad that all the strength of the church may not equal. Especial confidence is felt in the evil effects of spells, which the bad-minded and vicious are able to cast on their victims. Fortunately it often happens that the neighborhood affords some happily endowed person who can impose a counter charm or so advise a remedy as to down the evil spell or prove an antidote for dangerous cases.

The following tale of horror that a colored neighbor related to me on the subject of "black art" will serve to illustrate the state of tribulations from the machinations of an old woman, which he was firmly convinced had been practiced on him and from which he was still suffering. I have endeavored to give it in the dialect that the excited patient used most of the time when telling his troubles. The fellow was several degrees removed in intelligence above the average colored day laborer. He was the owner of several acres of ground, a neat little cottage, a horse and wagon of which he was modestly proud, a cow, and numbers of other little comforts that combine to render a darkey's heart a light one indeed. Although the snows of 74 winters have whitened his kinky wool, yet they have shown little inroad on his well-knit frame and Cato's services are in active demand by resident farmers who want a good day's work done. He had recently suffered from what was doubtless an attack of malaria superinduced by working near low and marshy ground. Not appearing as usual about his house for a few days, I stopped one morning to learn if his illness had taken on a serious turn. I found him stretched on a "shake-down" close by the hot kitchen stove. He partly arose as I entered with: "Boss I'se 'bleeged to yo' fur comin' to see a pore sick man, but I'se better'n I was, yes I'se good deal better; in fac, I'm jess finishin' off gittin' well. I'se had a doctor, leastwise I call him a doctor; doan [spec white folk would say he was a doctor, but dar's sometings white folks doan b'leeve and curous 'nough dey can't be made to b'leeve nuther, but cullud folks knows dey is true.

Has he holped me? You jess bet he holped me; he's 'bout done cured me."

"What did he do for you, Cato?"

"Dat's it now, boss; dat's it, 'twould'nt do no manner er good to tell you, cause, 's I said b'fore, white folks doan bleeve nothin an tain no use to argyfy wid you."

"Go ahead, Cato, if the doctor cured you that's proof enough certainly."

"Well, den, you 'member dat ole cullud woman I hed ter keep house for me last spring? Yes, well wot you spose she wanted ob me? Why, sah, she jess wanted me 'ter marry her—fac, sah"—

"She could have done much worse than try to persuade you to marry her, could she not, Cato?"

"Not much wuss fur me, boss, 'bleeged to you; but you doan s'pose I'd marry sich an ole darkey's she wus?—no, sah, Cato knows bettern'n dat, an I told her so too.

'Well den,' she says 'Cato you'se kin keep house fo' yous'f. I doan keep house fur no 75-yar-old widder like you be,' an' she packs up her duds an lit out 'bout de maddest pussun dat ebber let dis place.

Now, right hyar is whar de trubble all cum in. After she lef I went up stairs an slep on de same bed me and my wife Susan used ter sleep on 'fore Susan died, an dat's de same bed de ole woman slep on fore she lef my house—Well next mawnin I felt curious like—I'se hed misery time'n gin but nothin like dat feelin—De ole woman when she lef she says: 'Cato, yo'll git de misery shore,' and she had 'bout de meanest look ebber seed on a woman's face. Well, I kep on gittin wus an gittin wus and finally I 'cluded ter go'n see dis doctor—I tole him how I lost my wife, Susan, an how I hed a house-keeper 'twanted ter marry me, an' how mad she wus wen I 'fused to marry her an 'bout my sleepin' on de same bed de ole woman slep on, an' now, boss, you jest mind wot he said, he says: 'Cato, you'se had a blight put on you, you'se got a enemy. Hain you ben sleepin on de same bed dat enemy slept on?' I tell you, boss, he jess knowd all bout dis case, fact, I nebber seed a man knowed so much's he knowed.

'Cato you mus put a stop to de wuk of det enemy er youse'l jess foller Susan—shore'—

'But how kin I stop him, doctor,' sez I—'an sez he,

'Did'n I tole you you'se been sleeping on same bed dat enemy slep on? Now you mus bu'n dat bed; take 'er way in de back lot somewhar—anywhar—an bu'n it. Nothin but fiah'll cure you, Cato. Wen you bu'n de bed, youse'll jess bu'n de life out'en dat enemy an de blight'l let go twonct an' mor'n likely dat enemy won't live the yar out.'

Last week I tuk de straw tick an de fedder tick out'en de back side my orchard an bu'nd em both and hyar I am gittin' well ebbry day. Now, boss, wot you tink ob dat? Ain' dat de proof?"

"Didn't he give you any medicine to take, Cato?"

"Yes, he gib me sum bitter medicine out'en er bottle, but tain' dat wot's curin' me; 'tain't dat, its bu'nin de bed wots doin' de work."

"Well, Cato, the doctor has done a good work, he has filled your stomach with quinine and your wooly head with nonzense, and that nonsense has cost you a good bed."

"Dar you is now, boss, wat'd I tole you? Sich unbleevin' wuk'll mak it mighty hard for you ebber to git frue de eye of a needle; maybe some ob dat 'proved 'chinery on your fahm 'l git yo frue, but i'se mighty feared not." Cato's idea of bringing the temporal aid of farm machinery to assist a weak spiritual faith sufficiently to enable me to make a safe passage through the eye of a needle, was unique even if not practical. A. T. T.

Franklin Park, N. J.

MAGAZINE REVIEWS.

ST. NICHOLAS'S list of song and story for the youngsters is so good that it is difficult to select from it, but perhaps the most interesting is the short sketch, with photographic portraits of Yoshi Hito, Haru No Miya, the child of modern Japan, by Eliza R. Scidmore. The present ruler of Japan passed his early life, like his ancestors, in the strict seclusion of the imperial palace, his sacred face unseen by his subjects, and going abroad only in a covered palanquin to some other high-walled palace or temple. But his only son, Haru, who will be 10 years old the last day of next August, and who is about the size of one of our six-year-old boys, is quite emancipated, making laws of conduct for himself in a way quite horrifying to the old nobles. He answers his father back, (though very politely) contradicts, and gives his own opinion as if it were an ordinary father he addressed, instead of the Son of Heaven, the 121st ruler in Japan's unbroken imperial line. The young prince's opinions and ways are said to greatly please the Emperor.

A laughable incident occurred at a school entertainment at Tokio, when he was only seven years old. Noticing a small American boy with his hat on, he ordered his aide to go and tell the boy to take off his hat; but becoming impatient, before the officer could reach the offender, young Japan left his seat, marched down, and himself knocked off the offending hat. "Young America never stopped to see who the aggressor was, but struck back, and in a few minutes the future emperor and one of our future presidents had clinched, and were slapping and pounding each other in the most democratic manner. The horrified nobles and the frightened parents of the American separated them. 'That boy slapped me first, when I wasn't doing anything to him!' persisted the young American. 'I have punished that boy for his impoliteness in wearing his hat in my presence!' said the pompous princeling." Young Haru is a colonel in the Japanese army, and wears the military uniform. One set of gray-headed nobles escort him to school, and carry his books to and fro, while others attend the mite of a prince during his play-hours. He plays foot-ball and other school games as earnestly as he studies, and has decided upon English as the first foreign language to learn.

"Louis the Resolute" is another story from real life. It tells how a lad walked from Chelsea, Mass., to Washington, to secure a naval appointment. After encountering what seemed unconquerable difficulties, which he overcame by his unyielding perseverance and resolution, he finally attained his desire, though a special law had to be passed to get him into the navy. A fac-simile of the autograph note sent by Mr. Lincoln to the Secretary in the lad's behalf, is an interesting feature of the article, which is contributed by Harriet Taylor Upton.

"Grandpapa's Coat," by Alice Maude Ewell, portrays the social and home life of the young people of Revolutionary times very prettily. Grandpapa was a Whig who had sworn to wear the same coat till the war was over. Nancy and Cis, who lived with him, and who were "mightily set up (as was more common with gentlefolks of those days than now), about being Hardwicks of Hardwick's Choice," patched the coat with crooked and puckered patches, and finally with a piece of bright yellow buckram, "so that Grandpapa *can't* wear it to the ball," as Nancy said. The story is illustrated with several taking pictures, including one of the two sisters.

"Among the Florida Keys," by Charles Frederick Holder, is the first of a pleasant series of articles on Natural History, written in an entertaining style, and with plenty of boys in it. There is another installment of "The Bunny Stories." The Bunnies are pictured with rabbits' heads, but the rest of the bodies look strangely like those of boys and girls, and it is not difficult for the least bright of our little ones to apply the Bunnies' good resolutions and imitate their good deeds. "How a Battle is Sketched," "How Mattie Went to Meeting," "How Rockets are Made," and directions for making soap bubbles help make up the prose, and there are half a dozen or more finely illustrated poems, besides an odd picture of "Mermaids and Their Pets," drawn by Mildred Howells, the daughter of the novelist, W. D. Howells.

THE CENTURY for July presents a very timely article by Charles Barnard, entitled "Inland Navigation in the United States." The Americans are great travelers, and one of the pleasantest modes of travel during the summer season is by water. Mr. Barnard pictures the delights of a water voyage on many of our inland water-ways. He states that on June 30, 1886, we had 5,467 steamers in use on our coasts, rivers and lakes. We have over 20,000 miles of navigable waters traversed by regular lines of steamboats. "We have several great routes on which one can travel for a week without changing his state-room." There are hundreds of towns whose only means of communication are by water, and millions of people receive their mail by steamboat. "No man can fairly be said to know this country until he has seen it from the deck of a Sound or coastwise steamer, or from the guards of a Western river boat; until he has looked over the waters of the great Northern lakes, steamed through the Golden Gate, or gazed from his state-room windows upon Alaska glaciers." Descriptions are given of Western river boats, stern-wheel boats, Sound steamers, and many others, ending with a description of the new Sound steamers Puritan, Connecticut and City of Worcester, the Hudson river boat New York, and the screw propelling ferry-boat, Bergen. The Puritan which made its first trip about three weeks ago, is the largest and finest boat of its class ever built. It is 420 feet long over all, has four decks, 91 feet wide at the center, and is 70 feet high. The boat can carry comfortably 3,000 passengers, and has sleeping accommodations for 1,200. It is lighted by electricity, and is propelled by engines of 7,500 horse-power. The article is profusely illustrated. Mr. Kennan's Siberian article is entitled: "The Free Command at the Mines of Kara," and describes a night visit to the political exiles. The Lincoln history deals with the circumstances attending Lincoln's renomination, the Wade-Davis Manifesto, and Horace Greeley's Peace Mission. The artist, Frederic Remington, gives his experiences among the Apache and Comanche Indians, and his article receives added interest through its criticism by Hamilton Wright Mabie under Open Letters. "The Last Trip In," the picture by Mrs. Mary Hallock Foote, is also a Western scene. Bishop Hurst in "The Temperance Question in India," gives the results of his experience and observations during a recent visit to that country. The native appellation for intoxicating liquors is a striking and suggestive one: "Apka Shrab" or "Government Shame Water." Other very interesting articles are "Women in Early Ireland," "Presentiments, Visions and Apparitions," "An Echo of Antietam," etc. A number of poems lend spice to the feast of good things. The Century Co., New York.

SCRIBNER for July opens with an interesting article on the "Telegraph of To-day," by Charles L. Buckingham. A complete history of the evolution of the telegraph from its first invention to the present time is given, together with explanations of the duplex and quadruplex methods, the Wheatstone, chemical-automatic and stock telegraph instruments, deep-sea telegraphy and the methods of finding breaks in cables, communication between ships at sea without a wire, telegraphing from moving trains by induction, etc. The article is profusely illustrated, and while some parts of it ar too scientific to be interesting reading to the average man, there is much valuable information for the general reader. "How the Derby was Won," by Harrison Robertson, will prove attractive reading for the devotees of horse-racing. Another installment of Robert Louis Stevenson's "The Master of Ballantrae" is given. "The Rock of Beranger," by T. R. Sullivan, gives the incidents of a walking tour made by two young men in the mountains of Switzerland. "The Governor," by George A. Hibbard, is a very cleverly written story. The Governor, after acquiring riches and honor, decides to pay a visit to his boyhood's home, which he had left nearly two score years before, because the girl upon whom he had lavished his boyish affection had been won by another. By chance he is taken to the house of his birth, which he finds inhabited by his hated rival, a retired country doctor, and his interesting family, the youngest daughter of which is to be married on the morrow. He stays. The bride confides in him as to "Jack's" position with a firm in the city where they are to live, and his hopes as to a partnership. A telegram goes from the Governor to the city, and during the reception following the wedding, one is received by "Jack," apprising him that arrangements for the partnership can now be consummated. Some half-dozen complete stories, with several poems and a comedietta in one act, complete the number. Charles Scribner's Sons, New York.

Miscellaneous Advertising.

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CATALOGUES, ETC., RECEIVED.

MUNSTER AGRICULTURAL AND DAIRY SCHOOL.—This school is located at Cork, Ireland. It is maintained by the Irish Commissioners of National Education. It is a school for young women, though a few young men are admitted at times. These young women are taught the principles of good dairying from the feeding of cows to the marketing of butter and cheese. There are also facilities provided for the study of plain cookery, cookery for the sick, the proper use of kitchen utensils, etc., etc. In 1888, 75 young women attended the school. There has been a gradual falling off in attendance for several years. Various reasons are assigned for this, the most probable being the introduction of the factory system in the south of Ireland. This system lessens the number of farmers who make their own butter. The graduates of the school seem to be doing very well. Many of them are enterprising enough to manage dairies or even butter factories.

Particular pains have been taken to build up a herd of superior butter cows at this school. Unfortunately we are not told what breed has been selected.

In 1886 the herd averaged 251 pounds of butter per cow; in 1887 245 pounds and in 1888 247 pounds. Great attention is given to the feeding of milch cows. Mr. R. H. Beamish occupies more than half the report in an essay on what he calls an improved method of feeding. We must confess to an inability to make out what the author of this essay is driving at, beyond the following statements. 1. A good cow pays a better profit than a poor cow. 2. When the dairyman discovers the food best suited to his purpose he should stick to that and avoid all violent changes of food. 3. Cows should be fed on the same principles whether milk and butter are low or high in price. It is no economy to cut down the food when dairy products fall off in price.

HOUSEHOLD PESTS.—This subject was selected by Prof. C. H. Fernald for Bulletin No. 5 of the Hatch Experiment Station at Amherst, Mass.—(We wish somebody would explain why there should be *two* experiment stations at this place.) The Buffalo carpet beetle, the pitchy carpet beetle, the bacon beetle, clothes moths and ants are the insects selected as most needing a bulletin. The R. N.-Y. cannot see that Prof. Fernald has given us much information as to methods of killing these hated pests. The habits of the insects are well described and there are numerous suggestions.

MARYLAND EXPERIMENT STATION.—The First Annual Report of this institution is at hand. It occurs to the R. N.-Y. that this station devotes a good deal of space to giving its own history and telling what it proposes to do. This station claims to be the first one to be established in America. February 1856 is the date given. Mr. Bishop, the Horticulturist, discusses some potato experiments. He says that many experimenters have concluded that "the larger the quantity of seed planted, the greater the corresponding crop." Mr. Hayward has cultivated the Soja bean and feels like recommending it for Southern farmers. An interesting fencing experiment has been started. Posts have been set in 10 different ways to see which will stand longest.

ROAD LEGISLATION FOR THE AMERICAN STATE.—No. 3, Volume 4, of the publication of the American Economic Association. By Jeremiah W. Jenks. It is hardly possible to think of a question of economic science that is of more lasting importance to the American farmer than that of the wise regulation and maintenance of country highways. Prof. Jenks has prepared a very valuable essay full of apt illustrations, pointed suggestions and logical reasoning. The R. N.-Y. is glad to give a synopsis of his views, because road legislation is a matter that appeals strongly to the good sense of the American farmer. American country roads are, as a rule, greatly inferior to roads of a similar class in England, Germany or France. Even the German laborers who come to this country are quick to recognize this. Do we realize that our inferior roads may be caused by an inferior system of working them? The astonishing growth of our railway systems, and the hardly less wonderful development of water navigation, have gone far toward taking public attention away from common roads. Few of the present generation of Americans realize that before the perfection of railroads, the construction and maintenance of common highways was a question of national importance, more of an element in political contests than any of the railroad questions of the present day.

Madison, Monroe and Jackson felt called upon by their interpretation of the Constitution to veto bills appropriating money for the construction of roads, yet they had to acknowledge the wisdom of such appropriations. Since 1830 when railroads began to take the place of the larger wagon roads, the question has been dropped from national politics. It might be profitable for the country if to-day, it could be substituted for some of the present party differences. When we talk about the wonderful convenience of our railroads, we are apt to forget one very important point, viz:—every pound of freight and every passenger must pass over our common roads before reaching the railroads. Think of it. The iron roads of which we are so proud, are absolutely dependent upon our common roads for their freight. We have tables of statistics giving the cost of transportation of various articles over the railroads, but who estimates the cost of transportation by wagons and horses? The Agricultural Department estimates that the average cost of hauling 100 bushels of wheat one mile is 60 cents. That is, it costs the average farmer more to carry each bushel of wheat one mile than it does the average railroad to carry one ton the same distance. Have you ever thought of this before? When you do think of it, just remember that the difference in force required to haul a ton over the best possible stone track and the common dirt road is as 12½ to 200; that is, the force required on the dirt road is 16 times that required on the other. This will give you an idea of the importance of this road question.

The system of road legislation now employed in many parts of our country comes from a form introduced from England by the earliest settlers. The elective township or district road officers and the labor tax are the main features of this system. In former times when population was sparse and traffic almost wholly local, such a system was well enough. To-day the circumstances attending road traffic are so different that one would naturally suppose that an entirely different system of road legislation would be practiced. It is not so. People have clung to old traditions and customs, oftentimes to their own disadvantage. Prof. Jenks discusses the history of road legislation and then gives his ideas as to the system that would most benefit Americans. He goes to the countries possessing the best roads and undertakes to show why these foreign roads are superior to ours. He infers that there are just as good road-making materials in America as there are in France, Germany or England, and that our climate is no more trying on roads. These things being true, our disadvantage must be in the system of supervision and construction.

The most important point about German and French roads is that they are divided into different grades or classes. The State or national roads, those running between the larger towns and cities, are built and supported by the government and managed by government officials. These are military roads and are kept in perfect repair, funds for maintaining them being raised by taxation just as funds for any other public service would be raised. Then come the provincial roads. These connect the military roads and are supported mainly by the province through which they pass. Connecting these provincial roads are local roads which are supported by the village or country district and placed under local authority though the State sees that they are kept in good repair. In France the roads are under the management of State engineers whose chief is the Minister of Public Works. One hundred years ago many of the country roads of England were in a terrible condition, Arthur Young described a ride over one of them as "18 miles of execrable memory." To relieve the country, turnpikes were established—built and managed by the Turnpike Trusts, which collected tolls and thus paid themselves. These trusts failed though they helped the roads greatly. There are still many toll roads in England, though Ireland and Scotland are freed from them. The English are now working towards a system that will give the government a general superintendence of road affairs, the details to be worked out by county and local authorities.

After reviewing foreign road legislation, Prof. Jenks proceeds to suggest plans for American legislation. He would abolish all toll roads as soon as a due regard for the rights of the corporations permits. Roads should be classified with reference to their relative importance. In most States three classes will answer. These classes are:—

(*a.*) Roads of the first class, main roads connecting large towns in the same or adjoining counties or those much used for long-distance traffic, should be controlled solely by the county authorities and supported by county funds. So far as such a road served in part of its length as a local road the town benefited thus might contribute to its support.

(*b.*) Roads of the second class, those connecting roads of the first class or serving as principal feeders to them, also those serving as connecting roads for two or more townships, should be supported mostly by the towns in proportion to the benefits received, aid being given by the county in case of special expense, such as the building of a costly bridge, or in case of real inability to pay on the part of the town. The management of these roads, details of working, etc., should be in the hands of the county authority.

(*c.*) The roads of the third class, merely local roads, should be supported by the town and managed by town officials.

The classification is to be made by the county supervisors or other county authorities. They are also to hire on a salary a civil engineer, who is to be responsible for roads of the first and second class. He could also act as county surveyor. The county is to be divided into suitable districts large enough to keep two men busy whenever the weather is such that road work can be done. These men are to look out for all minor repairs, etc. Highway labor is to be abolished unless it be in the case of a certain rate above the ordinary limit. Provision should be made for borrowing money, under strict conditions, to make permanent roads. A State engineer, or a State board of engineers should be appointed with general supervisory powers.

The main points urged by Prof. Jenks are a proper classification of roads, the employment of skilled engineers and the doing away with highway labor.

ORITUARY.

Isabella Smith.

"QUICK death is easy—he who dies slowly dies a thousand times;" and so passed from earth away mild-mannered, pure-minded, industrious "Bella" Smith, an aforetime compositor in this office. The grim messenger came suddenly to this young girl and at a time when in the exercise of an apparently intensified cheerfulness, summoned to her aid in order to enliven the somewhat dampened spirits of a much-loved younger sister, who was about to be deprived by time and distance of the society and companionship of one to whom she was bound by the most tender ties. Alas! how utterly weak and powerless are words to afford consolation and comfort to those who are comfortless!

"Sister, thou wert mild and lovely,
Gentle as the summer breeze,
Pleasant as the air of evening
When it floats among the trees.

* * * * * * *

Yet again we hope to meet thee,
When the day of life has fled;
Then, in Heaven, with joy to greet thee,
Where no farewell tear is shed."

On Tuesday last, in the beautiful cemetery of the Evergreens, all that was mortal of this gentle girl was reverently laid to rest.

THE POST-OFFICE CLUB.

IT has been noticed that our parrot has been remarkably quiet of late. I should have explained before this why he has not been heard from. It is quite a sad affair all around. About 10 weeks ago the parrot thought he had a chance to clinch his monotonous argument. A Western man visited our place. He came to the store one night and proceeded to give us a dismal prophecy as to the future of Jersey farming. Western men are usually great talkers and they seem to know so much more than we poor Jerseymen, that they have a monopoly of the conversation. This man made us feel very tired. He said that within 50 years the West would reduce agriculture to such a science that it would raise all the food needed in the country. Railroad transportation, he said, would be so developed that we would have absolutely no show at all. All we could do, he said, would be to leave our poor lands and move out West where a man could farm all day without ever leaving his comfortable seat. He did talk it off in great style—there is no doubt about it—and it made many of our young men feel pretty blue. We older men know there is a great deal of nonsense about such talk. There is just as good a chance in one corner of this country as there is in another, and so it goes. Sound sense and energy can make farming prosperous anywhere. But I tell you this Western talk was just nuts for our parrot. How he did enjoy it! He fairly danced on one foot at the dismal picture our Western friend drew.

"*Farmin' don't pay! Farmin' don't pay,*" he croaked as the Western man knocked the cover off the sugar barrel in one of his violent gestures.

Now the store-keeper has a fine large cat that is a great favorite with all the club members. He has reason to think farming a very good business, for he is presented with a variety of farm products that go to keep him fat and sleek. Consequently he has reason to hate the parrot. When he saw the bird dancing in glee therefore he gave a sudden spring and caught our great agricultural critic by the neck. Before we could drag the cat off he had shaken the parrot well. Perhaps we didn't jump as fast as we might have done. The fact is the potato beetles have been so numerous this spring, and we have worked so hard trying to fight them, that we feel hurt whenever the parrot croaks.

The cat had given the parrot's neck a good twist. I think he must have thrown the vocal chords all out of shape. For a long time the poor bird had nothing to say. He stood in the corner with his head under his wing. At last a tired farmer painted a very dismal picture of agriculture, and the parrot held up his head, opened his mouth, and croaked: "Farmin' —— pay! Farmin' —— pay!"

It appears that the cat so hurt his throat that he can't say "don't;" therefore he gives the lie to his own thoughts every time he speaks. This hurts his feelings so that he sulks and says nothing. A very sad case, we think.

SMALL PICA.

Miscellaneous Advertising.

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Oh, swaying nest, by summer winds
Like rustic censer lightly swung,
How slight the tie that lightly binds
Thy weight the swinging boughs among;
A tiny home, soft sheltered 'neath the eaves,
The emerald cornices of fluttering leaves.
I bend above with loving eyes
To peep into the downy home,
And with a cry of real surprise
Set off across the fields to roam.
Whoo—whoop! There are as near as can be guessed
Four hundred thousand hornets in that nest.
—*Burdette, in Farm Journal.*

AN UNPARDONABLE SIN.—Editor's wife: "I wonder what can be the matter with Mrs. Smith; she hasn't returned my visit yet." Editor (absent-mindedly): "Perhaps you neglected to inclose a stamp."—*Harper's Bazar.*

"MINNIE has been to see me to-day," said a little five-year-old; "and she behaved like a lady." "And I hope you did, too;" said her mother. "Yes, indeed I did; I turned somersets for her on the bed."—*Old Colony Memorial.*

PROPRIETOR of South Fifth Avenue Hotel (to waiter): "See if the gentlemen in parlor A have finished discussing their dinner yet." Waiter (returned): "Dey am fru eatin' boss, but dey ain't done cussin' it yet."—*Western Rural.*

WINKS: "What a sad, anxious face that man has." Jinks: "Yes, I noticed it. He has a strained, haunted, afraid-I-wont-catch-the-train expression. I guess he works in the city and lives in the suburbs."—*Philadelphia Record.*

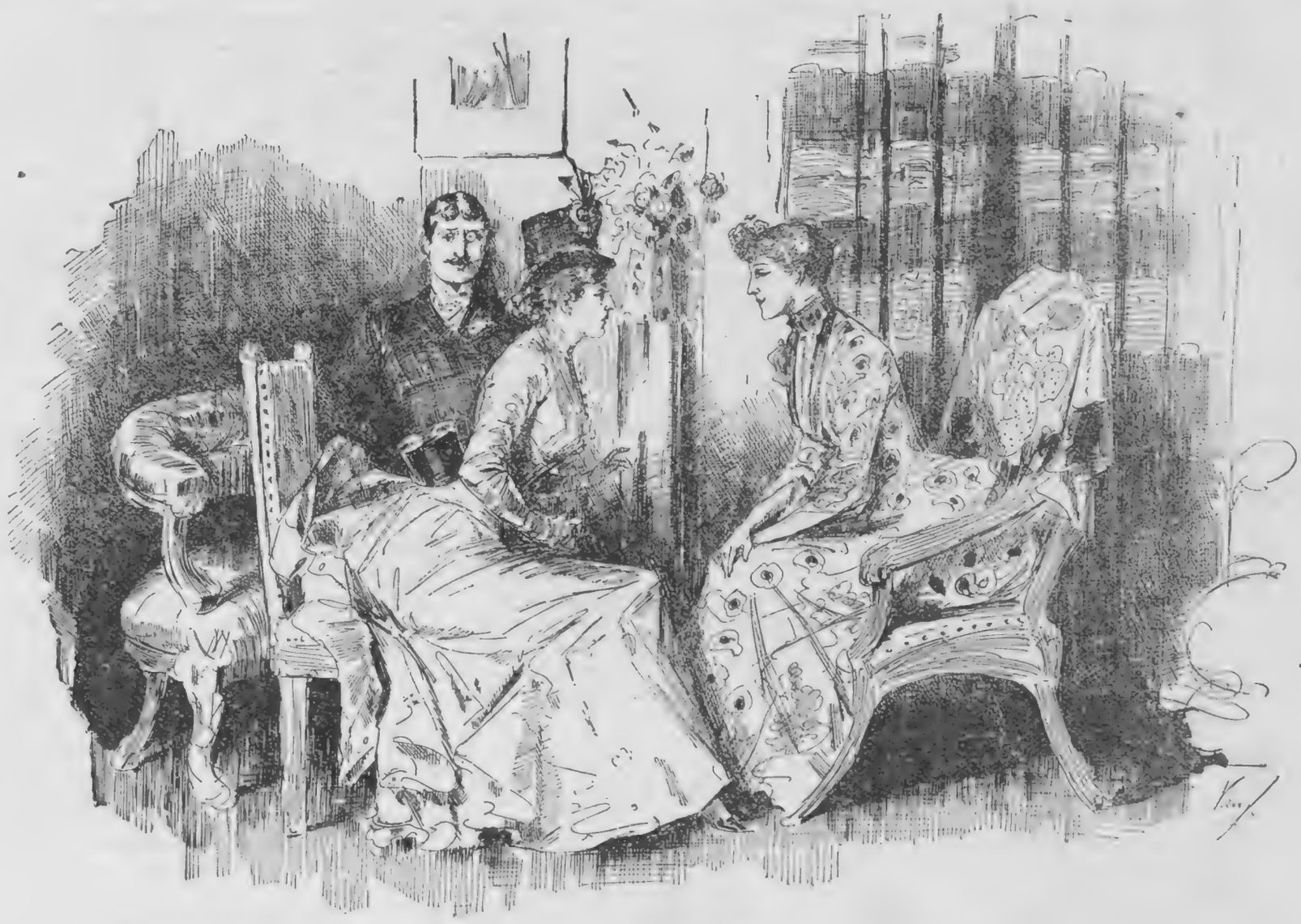
AFTER having listened at a Thanksgiving dinner to Jones's stale jokes, Smith said: "I say, Jones, the Thanksgiving turkey is luckier than we are." Jones: "In what way?" "He isn't stuffed with chestnuts until after he is dead."—*Texas Siftings.*

PERHAPS no newspaper writer was ever more disturbed by a trifle than was the society reporter who, in describing the belle of a recent fashionable party, intended to say "she looked *au fait*," but found it "she looked all feet."—*Terra Haute Express.*

"TALK about cheap postal rates: I've seen 125 pounds go for a two-cent stamp," remarked Mr. Keeplent. "When was that?" said Mrs. K., laying down her paper. "This morning, my dear, when you went to the corner drug store for a stamp."—*New England Farmer.*

A RICH member, on entering chapel found a stranger seated in his pew, whereupon he wrote on the leaf of his prayer-book: "My pew," and handed it to the intruder. The stranger wrote underneath: "Nice one too. How much do you pay?" and sat hard.—*Home Journal.*

MISS BACON (they have been discussing orchids): "And now, Professor, I want you to tell me all about the plant from which electricity is made." Professor Hohonthy (aghast): "The which?" Miss Bacon: "You certainly must have heard of it. Father says its high cost prevents the general use of electric lighting—I mean the electric plant."—*Harper's Bazar.*



A SOCIAL DISTINCTION.

JEANNETTE: "Loud! In bad taste! You are so prudish. But do join us. Why, the fashionables are always doing it!"

DOROTHY: "That may be, but nice people never do it."

Miscellaneous Advertising.

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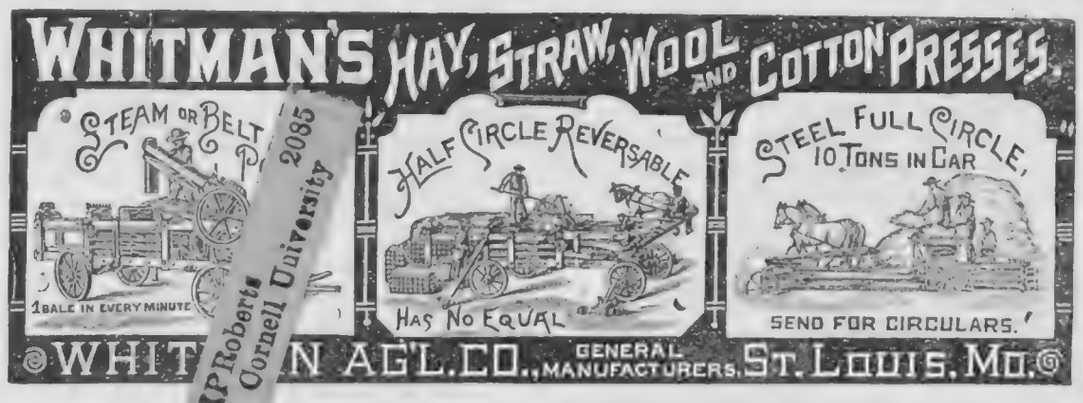

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII. NO. 2060. NEW YORK, JULY 20, 1889. PRICE FIVE CENTS, $2.00 PER YEAR.

[Entered according to Act of Congress, in the Year 1889, by the Rural New-Yorker, in the Office of the Librarian of Congress, at Washington.]

Horticultural.

Notes from the Rural Grounds.

THE PARKER EARLE STRAWBERRY.

TWELVE or 15 years ago, there was some fun in looking out for all the new kinds of strawberries as they were announced, procuring a few plants, setting them out, each kind with a label bearing the date, etc., entering them in the RURAL book of reference, watching their growth and fruitage, and, later, eating the berries and deciding upon their merits or demerits, and at length giving our readers the results. As many as 150 different varieties have thus been studied during a single season—never less than 75. When we tell our readers that scarcely more than a dozen of this great number of carefully-tested varieties are notably superior to the kinds which were favorites when we commenced this work, they will hardly be surprised that we find ourselves growing tired of the work. Still the work, during the past season, has been carried on with unabated diligence if with somewhat less fun, and it is with a sense of real pleasure that we have to announce that one of the varieties under trial bids fair to fill a previously unoccupied place. It is the Parker Earle, shown at Figs. 179 and 181. True, we have tried it but for a single season. True, the season has been one of unusual rainfall, giving in great abundance the "more water" and "still more water," which many suppose the strawberry plant must have to do its best. We have merely to inform our readers just how this new-comer has behaved itself during this first year of trial, and then leave them to judge whether it may be deemed worthy of trial in their own gardens.

FROM THE R. N.-Y. RECORD.

"JUNE 1, 1889.—Plants received in June of last year. The largest and strongest vines ever raised here the first year from summer-set plants. A foot high. Peduncles strong and upright, as many as 12 to a plant, each carrying from 20 to 30 berries. Its magnificent foliage may enable it to ripen all these. Suckers freely. None ripe. . . . June 5: Medium to late in season of ripening. A few ripening now. The berries usually turn to an ivory-white before coloring, as if they were white berries. . . June 8: Berries medium to large, very often crinkled. Shape ovate, very often largest in the middle, tapering to both apex and stem. Neck prominent. Mild in quality; that is, neither acid nor as pronounced in the strawberry flavor as the Charles Downing, Henderson or Prince. . . . June 16: We have picked more berries from the 24 plants of this variety than from any other 24 plants ever raised here. The quantity of berries in various stages of maturity is something surprising. Many are rotting from excessive rains. Rather soft at this time as are all other kinds. In the earlier part of the season the berries seemed firm enough for shipment. Color rather light red. Foliage continues perfectly healthy. . . . June 28: We are still picking a few from the Parker Earle. It holds out with the latest. Berries are now fairly firm and of medium size and good quality. It is a most promising variety."

Our engravings are the direct reproductions from photographs, the one showing the productiveness of an average plant; the other the *average* size of the berry. There is little need of exaggerating the good points of this berry in any way.

THE ORIGINATOR OF THE PARKER EARLE.

JAMES NIMON, whose photo-engraving is herewith presented at Fig, 180, is of Scotch-Irish parentage and was born January 2, 1849. He spent his boyhood days from the age of 10 until he was 21 years old, among the peach orchards, and nurseries near Middletown, New Castle county, Delaware. In April 1872 he concluded to take Horace Greeley's advice: "Go West, young man, go West and grow up with the country." He spent two years in Carroll county, Illinois, where he made the acquaintance of Miss Nellie E. Rood, whom he married in October, 1873, and immediately moved to Leavenworth, Kansas. Here he engaged in the nursery and greenhouse business until December, 1879, when through the influence of friends and a desire to again engage in the peach business, he moved to his present home, Denison, Texas, where he is known among his horticultural friends as the "Silent Worker," having taken an active part in the development of the horticultural interests of this section. He is well known among Texas agriculturists for the system in his work in horticultural exhibitions, and among fruit dealers for the excellence of his products and the perfection of handling and packing of the same. The production of the Parker Earle strawberry so stimulated him as an originator that in 1888 he grew many other seedling strawberries, which fruited for the first time in 1889. Many of these are fine. One especially produced a very fine crop of beautiful berries which ripened exceedingly early. This promises to make a splendid companion for the Parker Earle. This season it was ripe and gone when the Parker Earle and Crescent began ripening.

HISTORY OF THE PARKER EARLE.

DENISON, Texas, June 8, 1889.

Ed. R. N.-Y.: In response to the RURAL'S

RESIDENCE OF JAMES NIMON, DENISON, TEXAS. From Nature. Fig. 178.

request, I give the following history and data concerning the Parker Earle strawberry.

In May, 1886, while one day visiting Prof. T. V. Munson, of this place, we were viewing his strawberry plantations, and discussing the subject then much written up in the papers—the influence of pollenization, and its effects upon the characteristics of the fruit pollenated. Before us were Crescents growing alongside of Mr. Munson's very characteristic seedling No. 3, which has a perfect flower, and we concluded that if the theory be correct—that the strawberry fruit would show the markings of the variety that pollenated it—the Crescents in this case would certainly do so. Failing to find any proof of the truth of the theory in the fruit examined, I suggested that I would plant the seed from a number of the berries under examination, which were typical Crescents, and taken from plants well exposed to the No. 3 referred to, so that we might determine from the offspring whether or not cross-fertilization had really taken place. A considerable number of plants were obtained, most of which showed the unmistakable characteristics of the No. 3 more than of the mother Crescent, proving beyond question that cross-fertilization had taken place.

Among the seedlings were several fine varieties, one a large, dark crimson, known as No. 2, very early, much inclined to overbearing, and of so much promise that I am still holding it on probation, but the one that eclipsed all the others, and which promises to eclipse all others is now known as Parker Earle. It produced its first fruit in 1887, and again the original plant, with its sets in a short matted row, bore a crop that astonished every one who saw it for the beauty and quality of the fruit produced, the yield being at the rate of 15,000 quarts to the acre. The original plant was allowed to remain in the same place but was much neglected, and this season it had formed a matted row three feet long and about one foot wide, which yielded one full quart at each of three pickings, and I am satisfied that at least half that quantity was wasted by neglect and the depredations of birds.

The following record was kept of a plot of 25 rows, four of which were Parker Earle, set nine months ago; five rows Captain Jack, two rows Cumberland Triumph, and 14 rows Crescent. All were treated as nearly alike as possible, except that the Parker Earles were not planted until the latter part of June, while the others were planted in March, '88, and all the runners of the Parker Earle were removed to another plot for the purpose of increasing the stock, thus leaving only the 229 old plants in four rows about three feet apart, the rows being 3½ feet apart.

The other varieties named were left in regular matted rows, that would average one foot wide, without a break, and 3½ feet apart. The Parker Earle—229 plants—produced 251 quarts picked, or 62¾ quarts to the row. The other 21 rows produced 1,150 quarts or 54 16-21 quarts to the row. The fruit of the Parker Earle sold the season through in our market at nearly one-third more per quart than that of the other varieties, except the Cumberland Triumph which brought the same price, but gave the smallest yield of all. In a neighboring plantation were Jessie, Bubach, Cloud, May King, Warfield No. 2, etc., etc., but the verdict of all was that the Parker Earle was much superior to any of them.

So it seems that in solving a problem in horticulture, we also gave birth to a noble variety of this most cherished of fruit. And I trust it will be an enduring monument to him whose honored name it bears.

JAMES NIMON.

OVERBEARING BLACKBERRIES.—I noticed in the RURAL the report of the enormous crop of Taylor's Prolific blackberries. Last year we had a great crop of the same. We picked once or twice and the rest all fell off, leaving the hull. This year they seem still more prolific. Thinking there was a deficiency of leaves on the stalk to support the fruit, I have cut off half of the fruit stalks, and some more than half, and I would recommend the RURAL NEW-YORKER to try to save them in the same way. The Agawam is not as full and the Erie I think is about the right proportion. Try part, at least. ISAAC HICKS.

Westbury, L. I.

I HAVE 12 vines from the Niagara grape seeds the RURAL sent me. Six of them bore grapes last year and they were very nice—not large but medium in size and nearly all round. One is oblong, but all are of a light green color when ripe and are fine-flavored. I lay all my grapes on the ground and throw some sticks or vines on them. I can't tell whether these will winter without this precaution, but I think they are excellent. S. C. R.

Miscellaneous.

"A TARIFF ON BANANAS."

WOULD IT HELP FRUIT-GROWERS?

GENERALLY AGAINST IT.

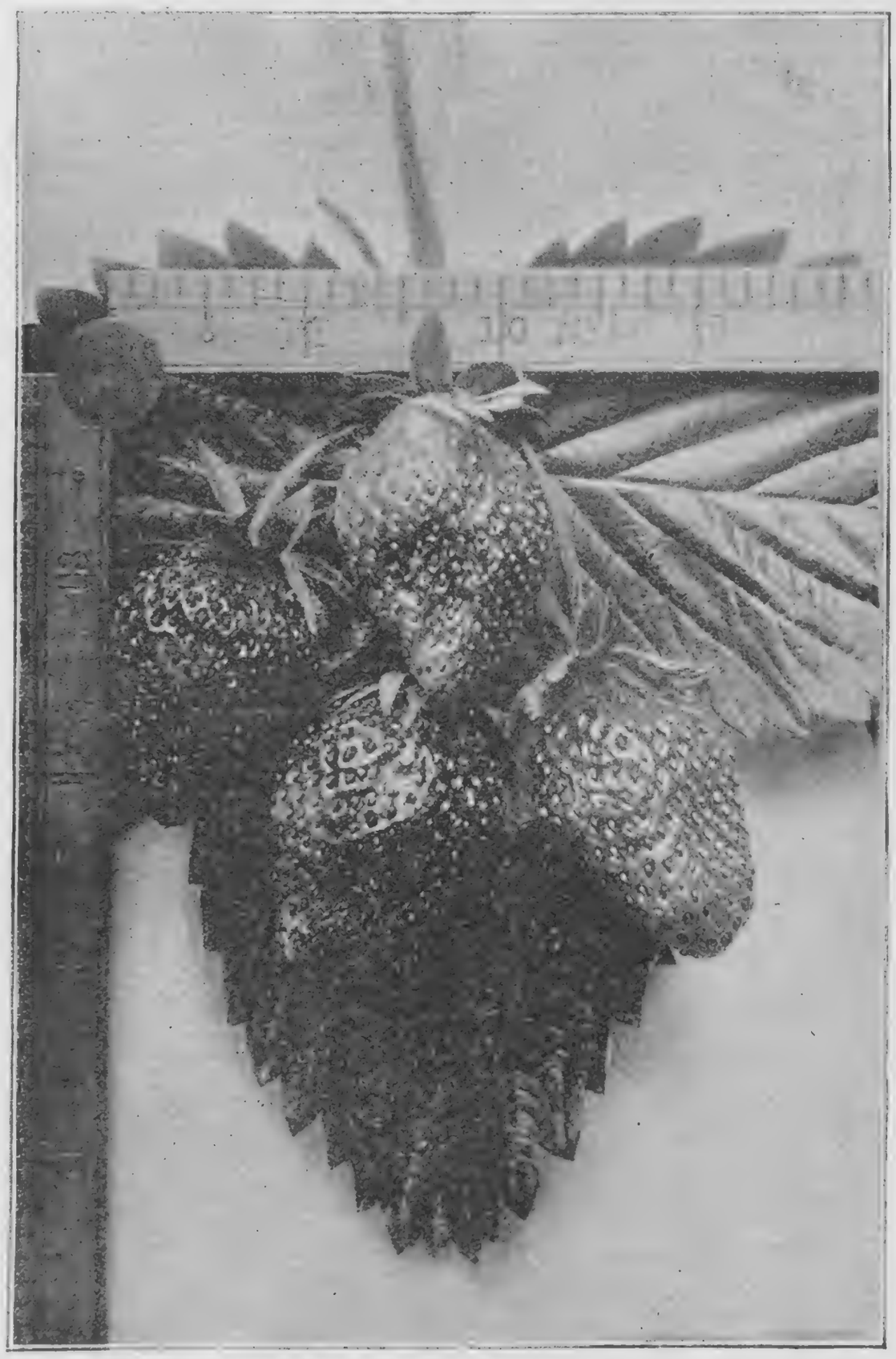
AN INTERESTING DISCUSSION

Two weeks ago, the R. N.-Y., under the above caption, spoke of the fact that some strawberry growers attribute the low prices of this season to the presence in the market of vast quantities of bananas and pine-apples which were sold at surprisingly low prices. Such growers claim that the price of strawberries was regulated by the price of the bananas, the public demanding a certain quantity of fruit for a certain amount of money, this amount being regulated by the price of the cheapest fruit.

An examination of tariff legislation for the past 50 years shows that no less than a dozen changes have been made in the tariff on bananas and pine-apples, these two fruits being considered most harmful to the business of strawberry growers. Under the tariff of 1846 bananas and pine-apples were taxed 20 per cent. *ad valorem*. In 1857 this was reduced to 15 per cent. and in 1861 the fruits were made free. In 1864 a duty of 25 per cent. was levied and in 1868 this was reduced to 20 per cent. Thus far the two fruits had been put in the same class but after 1868 they were separated. In 1871 the duty on bananas was reduced to 10 per cent. while that on pine-apples was kept at 20 per cent. In 1874 both fruits were made free. In 1875 bananas were taxed 10 per cent. and pine-apples 20 per cent. This continued until 1883 when both were made free again. They have been admitted free ever since to this date. The fruits were put on the free list mainly through the efforts of the large importers in this city. The removal of the tariff has been very profitable to them. One importer told a R. N.-Y. representative last week that his companions in the business could well afford to pay $50,000 to prevent a renewal of the tariff. As to the extent of the business, here is a statement showing the values of banana importations for the past five years:

1884	$1,878,279
1885	2,156,873
1886	2,356,843
1887	2,682,143
1888	3,153,645

In 1887 $437,009.41 worth of pine-apples were imported, and in 1888, $537,198.35 worth. Thus we see that in 1888, $3,690,843 worth of the two fruits were brought here free of duty. The importations for 1889 are, thus far, largely in excess of those for a corresponding period of 1888. It must be remembered that besides the quantities of these two fruits, there were also imported, in 1888, $2,084,004 worth of olives, tamarinds, plantains, cocoanuts and other nuts and fruits free of duty. And besides this, during the same year there were imported other fruits and nuts, including oranges, lemons, raisins, peanuts, limes, dates, figs, grapes, prunes, etc., to the value of $15,106,551 on which duties were paid averaging 29.64 per cent. *ad valorem*. It is also well to remember, in this connection, that the total value of all orchard products sold or consumed in the United States for 1880 was $50,876,154. It is impossible to give any reliable statistics as to the value of the annual product of strawberries.



PARKER EARLE STRAWBERRIES From Nature. Fig 179.

The following opinions are interesting:

FROM FRED GRUNDY.

There are banana cranks in every town and village, who would have bananas if they cost 10 cents apiece, and if the market at the same time were flooded with strawberries and all other kinds of berries at five cents a peck. The person who wants a banana or an orange generally wants that particular article, and nothing else will satisfy him. More bananas have been sold in this town this year than in any five previous years. They sold simply because they were cheap—two for five cents. I do not think, however, that their sale checked that of berries to any appreciable extent. The demand seems to be about as brisk as usual. If bananas were dearer—say ten cents apiece—I am satisfied that but very few would be sold here. Of course, a high tariff would increase the price of such fruits and naturally check importations, but whether that would help berry-growers is a question. If berry-growers will glut the market they must take the consequences. If people were determined to have a certain quantity of fruit, irrespective of kind, they would buy that which was cheapest; but I observe that when all fruits are dear many go without and turn to their flesh-pots and cabbage, while those who can afford it buy the fruit which best tickles their palates, be it pine-apples or strawberries. A tariff is all right when levied on such articles as can be plentifully produced under our own flag, but keep it off all good fruits that we cannot grow. Last year I was cloyed on raspberries, and this year I am selling them and buying bananas, prunes and oranges.

Christian County, Ill.

FROM SECRETARY E. WILLIAMS.

I am not one of those who believe a high or even prohibitive tariff on bananas would be of the least benefit to the strawberry growers. As the RURAL remarks, "a strawberry never will take the place of a banana to the person who wants a banana." This can be reversed with equal truth—a banana never will take the place of the strawberry to the person who wants a strawberry. The two fruits are too entirely dissimilar in character and uses. A very high tariff on bananas might stimulate the culture and slightly enhance the price of Florida-grown bananas, but the area in this country suited to this fruit is too limited for the product to make much impression on the demand, and transportation to our northern markets would increase the cost so as to place them beyond the reach of the masses. To enable Florida banana-growing to yield much profit in this market the prices would have to be materially advanced, and bananas are now often more of an expensive luxury than the masses feel justified in indulging in. With pine-apples the case is different. The area in Florida suitable to this fruit is much larger, very much larger than that fit for banana growing, and the imported pines come in direct competition with the domestic product, and of necessity the price of the foreign article governs and regulates that of the home-grown fruit. I look upon bananas and pine-apples as more of a dainty luxury than strawberries. Berries of all kinds I regard as among the essentials. They may be styled the essential luxuries of our table, and I doubt very much whether, if our markets were bare of foreign fruits during the strawberry season, it would materially affect the prices of berries. It would probably increase the sales, as merchants and dealers would be inclined to buy and sell more of them. I know it is very easy to attribute the low prices of strawberries to the abundant supply of foreign fruits, but the over-supply and inferior quality of the berries have much more to do with the price than anything else.

Our Southern friends take the cream of the prices with their berries and vegetables, and the keen edge of our Northern appetite is cloyed by the time our home products are placed before the public. The prices as well as the quality of the Southern supply have reached a low stage to which our hot weather contributes, and purchasers have become so used to low prices by the time our strawberries are offered that they hesitate to invest heavily and curtail the amount of their purchases at an advanced price. It is very easy for prices to tumble, but much harder to rise. If our dissatisfied growers would follow their consignments to market and see the quantity, condition and quality of the competing articles, they might perhaps get an idea regarding over-supply, improper distribution, or even utter worthlessness of the fruit offered, that would throw a ray of light on the cause of low prices which would locate it nearer home. The scarcity of an article always tends to elevate the price if there is a demand for it, while a superabundance or over-supply has the opposite effect. The principal domestic fruits that I consider materially affected in prices by the imported articles are oranges, lemons, pine-apples and grapes, and that these feel the depressing effects of importations I think no one will deny; but I cannot see that a high tariff on bananas would visibly affect the price of strawberries. Others may honestly think differently, and nothing short of a trial would prove which was right.

Essex County, N. J.

FROM M. CRAWFORD.

It must be regarded as a hopeful sign that

strawberry growers are commencing to clamor for protection—not to enable them to pay better wages, or to develop the resources of the country, or because theirs is an infant industry and needs fostering. If they were more cunning and less honest, they would give some plausible excuse, as all others have done. They ask protection on its own merits so that their profits may be increased. The time has come when in many localities the market is over-supplied, and growers are at their wits' ends to find purchasers. In looking for some way out of the difficulty they have tried the plan of growing better berries and have sent them to market in a more attractive condition, but even this inducement to purchasers is inadequate. The sugar that sweetens berries is made dear and hard to get by protection, and by a trust that could not long exist without protection; the cans in which the surplus may be put up are raised in price by the same means; and why not protect the growing of the berries that flavor the sugar and fill the cans? It is now proposed to have the government interfere and raise the price of bananas and pine-apples with the expectation that fewer will be consumed, and so the demand for home-grown fruits will be increased. Of course, there is no justice in such legislation, but as nearly all other classes are protected, by all means let strawberry growers have their share in the prosperity that comes from the protective system.

Summit County, Ohio.

FROM H. M. ENGLE.

There is no occasion to rush for a tariff on bananas, since they cannot take the place of berries. There have been seasons heretofore when markets were glutted with fruits. Another season may bring about changed conditions. There is a tendency among the people to consume more fruits and less animal food, especially during the warm season, and if this increases it will add largely to their health and happiness. Let us encourage the use of more fruits and of less flesh, especially of such as is of questionable soundness.

Lancaster County, Pa.

FROM WARD D. GUNN.

Yes, a tariff on bananas. I see no good reason why a foreign tropical fruit like the banana, coming in direct competition with the products of our own soil and labor, should be exempt from duty. If the American protective system furnishes tempting markets to foreign producers, why should they not pay for it?

Ulster County, N. Y.

FROM PRESIDENT T. T. LYON.

I believe it to be sound policy on the part of our government to encourage the home production of everything susceptible of being economically produced in our climate. If, therefore, the growing of bananas is one of these practicable interests, it should be encouraged. And if, owing to the cheapness of the labor employed abroad, or other cause, the home grower is unable, for the time, to profitably produce bananas, in competition with free importations, the protection of a tariff on importations is doubtless as proper here as in the case of any other imported article. Excepting only for the need of revenue to the government, I deem it impolitic to impose a tariff save upon the principle already stated. It would seem that all the various and occasionally conflicting interests of our soil should receive, as nearly as practicable, equal favor from the government, aside from that already specified. A paternal government, such as ours, cannot reasonably be expected to extend a helping hand to any one of its numerous interests at the expense of another, and for that reason, if for no other, a tariff upon sub-tropical and tropical fruits should be confined within the limits required to develop the growth of these upon our own soil, leaving Northern and Southern products to compete freely with each other in our home markets. If the Northern fruit-grower will eschew the miserable, though showy trash with which the markets are so largely burdened, and give reasonable attention to the quality of his products, he will have little occasion to dread the competition of the banana or even of the pine-apple in his local markets.

Van Buren County, Michigan.

FROM DR. T. H. HOSKINS.

I am glad, even in so limited a way, to see the RURAL desirous to discuss the most important economic question of the day. It is a shame that political intolerance amongst a people claiming to be the freest and most enlightened on earth, should compel the closure of all but party papers to such subjects. The party papers never discuss any public questions fairly. Fairness is not their object. *That* is party success through popular passions and prejudices, and these are stimulated and pandered to by political editors in a way which shows a most cynical estimate of the intelligence of their readers.

As to a duty on foreign fruits, in behalf of the domestic production, if our national policy is to be protective one, I think, as a fruit-grower, that we ought to have as high a tariff tax on all foreign fruits as we can drive our Representatives and Senators in Congress to enact. We have a great country, extending widely in latitude and longitude, and we only need one large West Indian island, say Cuba, to make us a world by ourselves, with perfect free trade! But, then, would not our own Cuban bananas hurt us just as much as the foreign ones do now? Here we, in Vermont, think nothing of that free trade which makes us victims of Western competition; but we are ready to fight to "protect" ourselves against the poor and pitiful competition of the ice-bound province of Quebec. Yet we should probably make little opposition to the annexation of Quebec or of all Canada! The wisdom of our attitude in this matter is hard to see. We cry out for "protection;" every industry insists upon it. But when all are protected alike, we shall discover that protection is no better than free trade. So far, we have not all been protected alike; and farmers practically get little or no protection. In the very nature of things they cannot, because in most of our products home competition brings prices down to rock bottom, lower than anywhere else. Manufacturers and trade have been going the same way; but Rockafeller's great invention of "THE TRUST" is supposed to be a cure for that. Can we unite the different branches of agriculture and horticulture into trusts? If we cannot, (and that seems self-evident,) what *can* we do to defend ourselves? Will a heavy duty upon bananas solve this question? Let us try it, by all means. A good many minds are iron-clad against all forms of demonstrative reasonings, short of the "*reductio ad absurdum.*" Let bananas be taxed. Lots of them are sold in our streets, within half a mile of my orchard. Why have I been so blind that I did not see that they were ruining my business? And I, like a fool, have been buying and eating them!

Orleans County, Vt.

FROM P. M. AUGUR.

With regard to taxing imports of bananas, all I have to say is that, on general principles, I believe in "the greatest good to the greatest number." That American fruits suffer from the great influx of bananas is undoubtedly true, and fruit-growers have as good reason for protection as any other; yet I have no desire to act selfishly in the matter, and I am glad that the common people may partake freely of this tropical fruit. Banish the saloon, and the $900,000,000 now wasted thereby will build up every industry, and domestic and foreign fruit will both alike find a quick demand.

Middlesex County, Conn,

CORRESPONDENTS' VIEWS.

CHOICE APPLES.—The Westfield Seek-no-Further, in the vicinity of Chautauqua lake, is universally subject to cracking, sometimes so badly as to render it unfit for market. In flavor it is *par excellence* a dessert apple. For a cooking apple I prefer one more tart. There are few that excel the R. I. Greening, the Esopus Spitzenberg, Northern Spy, or one more mild, the Baldwin. The latter ranks among the first in this county.

Chautauqua County, N. Y. H. A. W.

I HAVE been testing a few valuable potatoes according to the trench system; but owing to heavy rains they have all decayed, while potatoes planted in accordance with the old way—in hills—are up one foot high and are looking fine; there is not a missing hill. The trench system will do for sandy loam. The Rural No. 2. are up and doing nicely.

Charlotte, Vt. O. H. A.

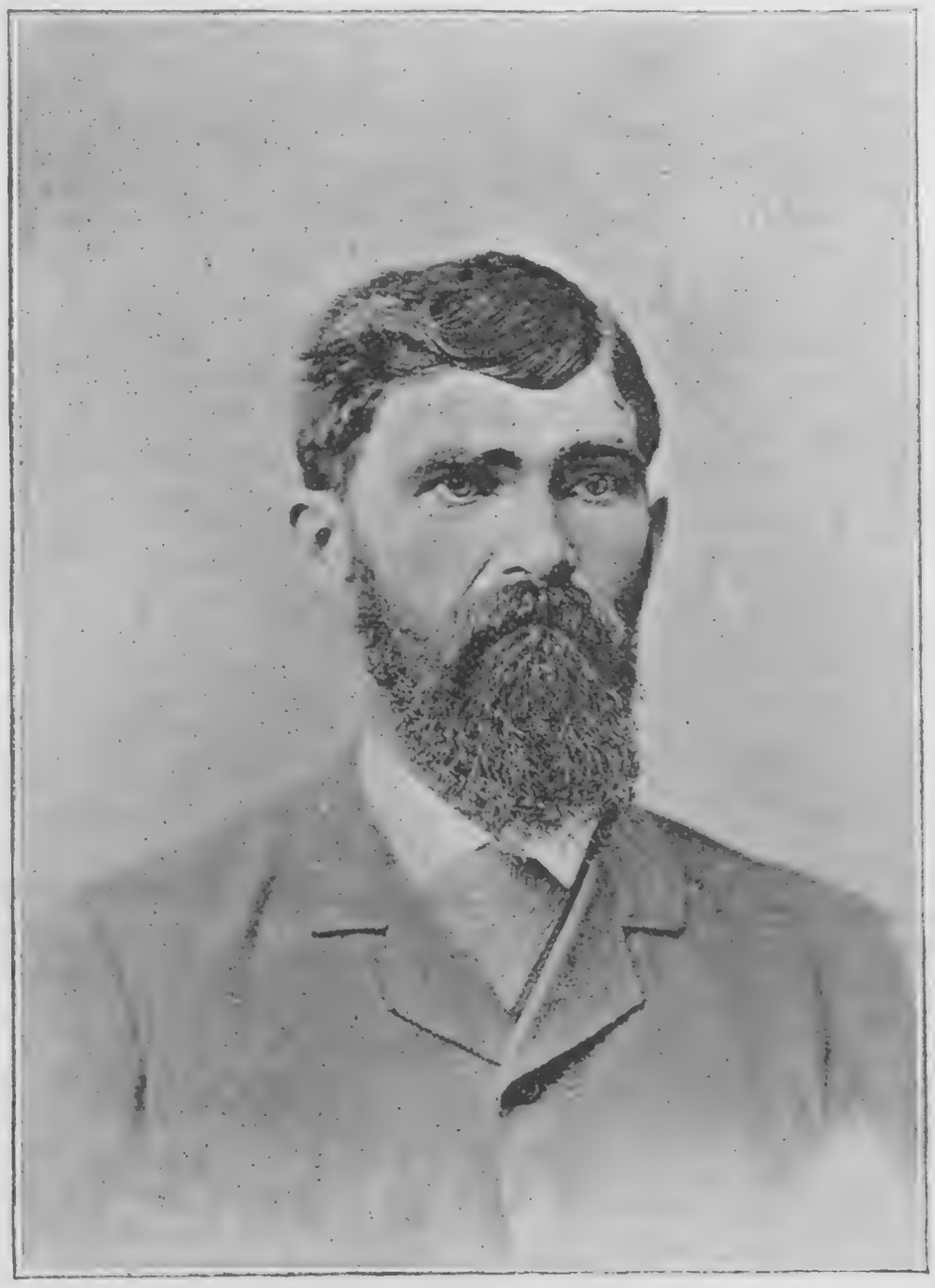
REPORT ON A CONTEST PLOT.—My contest potatoes were planted according to the R. N.-Y. method, about the middle of April, on moderately rich, sandy soil very easy to work, but weedy. The trenches were plowed out six inches deep, five bushels of ashes were scattered in them, and the potatoes, cut two eyes in a piece, were planted in the bottom, cut side down, no manure but the ashes being used in the trenches at planting time.

The vines were a long time coming up, and grew very slowly afterward on account of the protracted, severe drought, which was never broken with rain enough to wet the ground from April 11 till May 27. On May 21 the weather turned very cold, with heavy frosts on the 23d, 25th, 26th, 28th and 29th, and on the latter date the worst snow storm ever known so late in the spring. Unprotected potatoes were killed by the frosts. I partly saved mine by drawing the earth down on them. They were a good deal hurt for all that, and when uncovered they were pallid, ragged-looking objects. On account of the damage from drought, frost and cold weather, my hopes of making much of a figure in the contest have grown very faint, but I mean to continue taking good care of my plot to see what it will do. I have had it dressed to-day with water from the barn-yard (about 30 pailfuls) for the nitrogen supply, relying on the ashes for potash. In about a week the plot shall have another such dressing.

Did I use too much seed? It took a peck of R. N.-Y. No. 2 and half a bushel of Burpee's Empire State to plant the plot, which is at the rate of 30 bushels to the acre. The R. N.-Y. No. 2 came up first and are now much thriftier, larger and greener than the Empire State. They were bought of Thorburn. They are budded quite full, and if we can get a little warm weather the blossoms will soon be out.

June, so far, has been very cold. Nothing grows but wheat and peas. Corn that was planted three weeks ago is just peeping through the ground and looks as if it were made of white paper. Apples and cherries are not hurt by the frosts. Peaches are a complete failure and strawberries are not much better. MRS. E. D. C.

Thornville, Michigan.



JAMES NIMON,

Originator of the Parker Earle Strawberry. Fig. 180.

Farm Topics.

AGRICULTURE; AN ART, A BUSINESS A SCIENCE,

T. H. HOSKINS, M. D.

I.

AS AN ART.

FARMING, as an art, is as old as civilization—when, after recognizing the food value of a single plant, a man first tried to promote its growth and increase, he found the task attended with difficulties; and in surmounting those difficulties he acquired some of the elements of the art of agriculture. In this art many ancient people became very proficient. Considered from this point of view, it is probable that ancient agriculture reached as high a development as the best among modern nations. We have types of this to-day in the agriculture of China, Japan, India and Egypt. Neither mechanic arts nor science have contributed, except in a trifling degree, to its progress. It began as a manual art simply, and so it remained, practically unchanged, until the opening of the modern era. In every country, and in each district of all large countries, rules were gradually worked out which were found to serve in practice; and these were handed down from generation to generation. Intermingled with them were many superstitions—unfounded beliefs in regard to the action of certain supposed or real forces, natural or supernatural, upon the growth of crops. But it is a singular fact that the part played by these superstitions was but slightly, if at all, unfavorable in their effect upon results. They often made the work difficult and tedious; but men in all ages have had such an eye to the main chance that superstitious notions, while they might and did cause the expenditure of much needless work, were not of sufficient force to greatly lessen results. They did as much good, probably, in restraining waste of effort in vague experiment, as they did harm by inducing needless operations. Numbers of old agricultural maxims, superstitious as they now seem, were really well based, and embodied the observation of many in a pithy saying that endured, because it was in a way true. Slowly a body of facts was collected and transmitted that enabled well-trained farmers to so regulate their operations as to achieve success. As yet, our modern science has done more in recognizing and explaining ancient rules, and placing them upon intelligible bases, than in discovering valuable additions to them. It is only just now that the systematic collection and comparison of well observed and skillfully recorded facts have begun to lay the foundations of a new agriculture, in which a sound reason for doing a needed thing will supersede a grotesque or fanciful one.

When the activity of European effort was transferred across the Atlantic to America, new conditions were encountered that have not yet been rightly understood or surmounted. The eastern parts of North America much more closely resemble Eastern Asia than Western Europe. The consequences have been unfavorable to our agriculture. The maxims of European agricultural art did not fit American conditions; and the result has been that the wisdom of the ancients has seemed like folly among us. Setting aside the slight and slowly acquired knowledge of scant two centuries, under these strange conditions, it may be said that, as compared with the older nations, American farmers hardly possess any true art of agriculture. The European dogmas mislead us and we have worked out very few sound ones to replace them. This is both an injury and a benefit. It harms us to have no good empirical rules transmitted from father to son; but it benefits us to be comparatively free

from obstructive beliefs, which very slowly admit the clear light of demonstrative science.

The shifting character of our population, in its efforts to over-spread and occupy a vast virgin continent, acts continually to hinder the foundation of agricultural art. Our bountiful soil prevents our blunders from doing us the injury that otherwise might end in destructive and fatal loss; yet in the settlement of many new States the settlers have crept very close to the verge of starvation, for want of an acquired art of agriculture, adapted to their special conditions. Situated as we thus find ourselves, American farmers stand, in default of art, deeply in need of science, not only of general scientific knowledge, but of highly specialized knowledge, as made needful by local conditions. What will do in Dakota will not do at all in North Carolina. What is right for Florida is exactly wrong for Oregon. The essentials in Iowa are pernicious errors in Maine. Now, mankind seems, under some ill-recognized influence to have always builded more wisely than it knew; and have we not done so here in America in the foundation of agricultural colleges and experiment stations in every State and Territory of our Union? The plan has been much divided, and as a fact it has been yet but poorly carried out. But having no art, do we not, here in America, stand in especial need of a Science of Agriculture, and having the beginnings of these institutions, will not our needs, now being so rapidly realized, force their development, and drive us on to insure their success?

Everywhere.

LONG ISLAND NOTES.

FOREIGN MARKET-GARDENERS AND FARMERS SUPPLANTING AMERICANS.—The farms and market gardens in the close vicinity of New York City and Brooklyn are passing from the hands of their original owners, chiefly descendants of the English, into the hands of foreigners. This is due chiefly to the fact that Americans are unable to live as they have been accustomed to, and compete with the immigrants. Americans work themselves and hire all the labor they can pay for, while their families keep their houses in order; the children attend school and live and dress comparatively well. On the other hand, not only do their competitors work themselves, but they keep their whole families in the fields from early morning until late at night. Housework is neglected and school is not thought of during the busy season. What will be the final result of this evolutionary process? Will the level of farm labor go down, down, until it is on the same plane as that on which the tenant farmers of England and the peasantry of the Continent slave for a hard-earned and scanty livelihood, or will the foreign element become Americanized? The Germans, accustomed to hand labor, do not take kindly to the American way of doing things. A plow and a hoe seem to be about all the implements they require, and it is really suprising how clean they keep their ground with these tools. The secret of their success is persisent, continuous hard work.

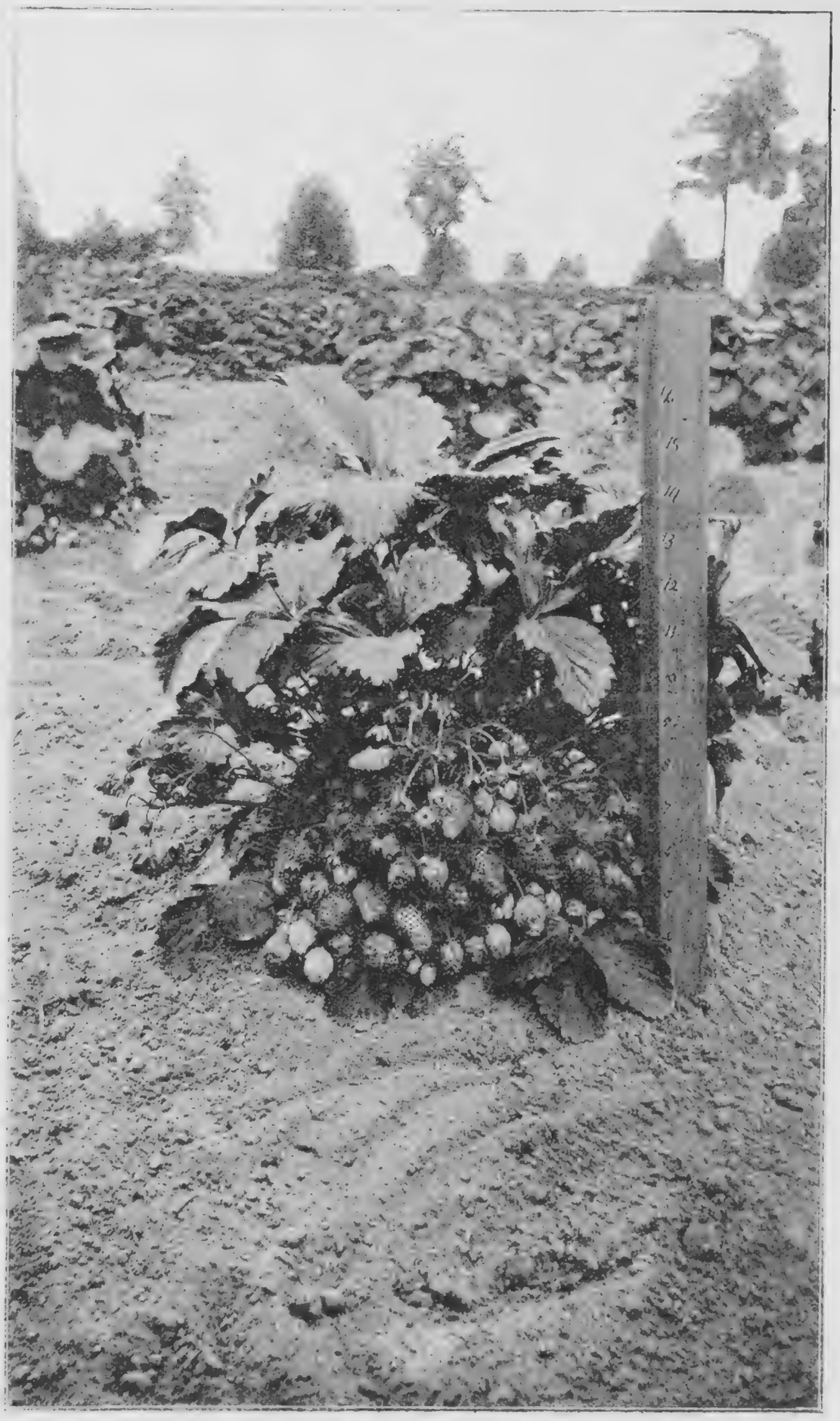
SCARCITY OF POTATO BEETLES.—For some reason the potatoes raised by the local market gardeners are comparatively free from potato bugs. It must be that early planting on very rich soil, causes so rank a growth as to make the vines distasteful to the pests. It may be that the application of London-purple very soon after the vines are up, with persistent hand-picking, is the secret of the scarcity of the bugs. At any rate, they are not nearly so troublesome in the market gardens as they are on the farms.

ASPARAGUS, for many years a profitable crop, has not brought enough in the city markets this year to pay the cost of cutting, bunching and marketing. The high prices of previous years had induced the planting of large quantities of this important vegetable, and the low prices will prove a great disappointment to the younger market gardeners. As usual when there is an over-production of anything, the large crop has glutted the market and the price has been hammered down to ruinous figures.

NEW VEGETABLES.—One of the effects of the introduction of foreign methods in market gardening has been a demand for vegetables not formerly grown to any great extent on Long Island. It is strange how quickly the city customer learns to appreciate a new vegetable. Leeks, cauliflower, kohl-rabi, salsify, Brussells Sprouts and a great variety of other vegetables now in common use, were seldom raised by the farmers of 20 years ago.

A BAD PRACTICE.—What is to prevent a potato grower from selecting some of the best tubers raised from any of the older varieties and calling it a new potato? I recently saw a plate of potatoes exhibited as a new variety. They were very large and handsome, but to the casual observer they did not differ in any respect from the Thorburn. This practice of giving a name to a mere variation of a well known and distinct variety and introducing it as something novel, is doing an immense amount of harm. It is carried to an extreme and should be stopped.

CROPS.—It may be news to some of the readers of the R. N.-Y. that on Long Island there are fields of grain a mile or more in length and that the harvesting methods of the West are followed here. I recently saw five mowing machines at work in one field, all mowing together. In an adjoining field five horse rakes were going. This was on the plains at Garden City. The crops this year seem very good. Corn, however, is an exception; it seems to have suffered from the wet and cold.



THE PARKER EARLE STRAWBERRY. From Nature. Fig. 181.

STRAWBERRIES.—Has there been any real improvement in these since the introduction of the Sharpless? Many of our leading growers have tried nearly all the new seedlings, only to return to the Sharpless as their chief market berry. I have a friend who picked 32 quarts of Sharpless from a small patch in a short time while he could not have gathered 10 quarts from all his other varieties put together.

THE SEVENTEEN-YEAR LOCUSTS have again appeared on the north side of the island. It is impossible to describe the condition of the forests after a visitation from these horrible pests. At times the trees seem fairly alive with them. The damage, however, is not as great as would at first appear. They eat off all the leaves and the trees turn yellow and look as though they were dead, but they come out the next season as fresh and green as ever.

THE FARM HELP PROBLEM.—The larger farmers on the east end of the Island are trying to get along with less help. They would solve the "farm help" problem by using the latest and best labor-saving implements. The Aspinwall potato planter and the Hudson Bicycle cultivator have taken the place of hand labor in the cultivation of potatoes. The result has been larger crops, produced at a much less cost than by the old methods.

A NEW POTATO DISEASE, if such it may be properly called, is known in some parts of the island as the "black stem." Opinions differ as to whether it is caused by wire-worms or by some sort of rot or fungus. Should it increase to any great extent, it will prove far more damaging to the potato crop than either the flea beetle or the potato bug.

RAVAGES OF THE ROSE-BUG.—The wholesale destruction of the foliage of the cherry trees by the rose-bug is likely to nearly or quite ruin the crop of cherries, and the pests may do even the trees irreparable injury.

GOOD WORK OF YE OLDEN TIME.—Mr. C. L. Allen of East Hinsdale, the well known horticulturist, has one of the finest libraries in this country. Among his books are works on horticulture printed in the Seventeenth Century. The illustrations in these ancient books are wonderfully true to nature; more so, Mr. Allen says, than the average drawings of the present time. It is rather humiliating to find that after two centuries of supposed development in floriculture and the engraver's art, we can find so few points of superiority in our modern books on the subject. RAMBLER.

RURAL SPECIAL REPORTS.

Kansas.

PARSONS, Labette County, July 2.—After a very wet spring and considerable loss from floods on the Neosho river and its feeders, we have had 10 or 12 days of warm weather which, while injurious to oats (causing rust) has given us time to finish the cultivation of crops and reap the wheat and oats. The crops of wheat, oats, small fruit of all kinds, vegetables, and grass will prove better than ever before known. We were just beginning to call for rain, when this morning, it came, and is now coming down—one of those rare rainfalls in Kansas, which fall gently and quietly and become absorbed as they fall. Early apples and peaches are just coming into market and selling at very low prices—apples and peaches at 30 to 40 cents per bushel.

Field corn will probably prove a big crop, even though some has been "laid by" in a weedy state. Kansas crops promise well in the aggregate, and low prices will be the rule if similar conditions prevail in other States. Corn is just beginning to tassel and may be considered somewhat earlier than usual, though there is great difference in the growth, some of it not being over two or three feet high, while some is eight or 10 feet. Many of our farmers consider that no particular benefits come to them from big crops, as such crops are followed by low prices, while small crops are followed by high prices. But it is certain that benefit will inure to the consumer. J. B.

Ohio.

BRISTOLVILLE, Trumbull County, July 5.—Hereabouts some depend upon the flax crop as the best crop for cash, as it brings ready pay for both seed and straw. The seed is mostly sold at Warren, Ohio, our county seat, where it is worked into oil, and the oil-cake is sold for feed. The seed has brought $1.10 per bushel, but the company has agreed to pay $1.50 per bushel for seed delivered before the 17th of August this year. The straw is bought in two places, each about eight miles from here. The price paid last season was $8 per ton. Wheat is raised to a considerable extent also, and is shipped on the railroad passing through this town. It brought $1 per bushel last fall and winter, but now it brings only about 90 cents per bushel. These are the most important crops that are raised around here, although some farmers raise some others on a small scale to sell for cash. Most farmers raise some stock for sale—hogs, cattle and sheep—but prices are very low at present. I do not know of any farmers around here who get better prices than those obtained by their neighbors. Prices of almost all products are lower than they were a few years ago, and the tendency seems to be downward, and the prospects are not very bright for farmers, as prices are low and money pretty scarce. The farming of this section has not changed very much within a decade. Farmers, however, do not keep so many dairy cows as they did a few years ago, while they raise more young stock and wheat. A decrease in the price of dairy products helped to cause the change. Otherwise farmers depend on about the same routine of crops as in the past. The prospects for farmers are not very bright around here, but we must keep on and try to do the best we can and hope for better times. It will not do for farmers to give up, even though prospects may not look very encouraging. J. S. B.

Texas.

DENISON, Grayson County, June 29.—In a journey of about 500 miles, which took me through portions of 13 counties in central northern Texas, I find the most promising crop conditions I have ever seen over the same extent of country.

Corn, with but few exceptions, is now in the roasting-ear condition with plenty of moisture in the soil to fully mature the crop, which will certainly be the largest ever produced in the State. The cotton crop prospects are also above the average. Some complain of too much rain for the bottom lands, which has prevented cultivation in places until the grass and weeds have such a start that some pieces have been abandoned. But farmers in the section referred to certainly have good cause to feel jubilant over their prospects. J. N.

THE FARMERS' CLUB

ANSWERS TO CORRESPONDENTS

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

WILL SORGHUM PAY?

Is sorghum a paying crop at $2 per ton of cane? That is, will an acre of land produce

as much money at this price for sorghum as it will in other crops?

FROM H. L. JONES.

Farmers cannot afford to raise and haul sorghum cane for $2 per ton—and it would not pay as well as ordinary farm crops, in the long run.

Salina, Kansas.

FROM D. K. GOODRICH.

There is not much sorghum raised in this section. I do not think it pays. Our main crops are corn, oats and hay. And then we have some creameries as fine as one would wish to look into, and it is through these we get our money back.

West Union, Iowa.

FROM JOHN ENFIELD.

An average of seven to 10 tons per acre is right, though 10 tons are nearer the average, some land bringing as high as 15 tons, as it is weighed at the mill—blades, tops and all. Farmers can afford to raise and haul sorghum, provided they do not have to haul it too far. A team can haul about one to 1½ ton per load. The greatest expense is the cost of hauling. Teams and men are worth about $2 per day. To raise and harvest sorghum costs about the same amount per acre as corn. Corn does not average more than 30 bushels per acre here, one year with another. It is now worth 20 to 25 cents per bushel—$6 to $7.50 per acre. Cane at 10 tons per acre and $2 per ton would bring $20 per acre for the same work needed for an acre of corn. The comparative profit in cane and corn, is represented by the difference between $7 50 per acre and $20, less the cost of hauling. If seven tons made the crop, the difference would be $7.50 to $14. Sorghum cannot be profitably hauled more than three miles, so mills should be located in the center of the cane fields. Cane does not exhaust the fertility of the land nearly as much as corn or any other grain crop. Both soil and climate seem to be peculiarly adapted to the sorghum plant in Kansas.

Mapleton, Kansas.

FROM J. E. MANS.

The sorghum mills located here pay $2 per ton for cane, seed included. The average yield is eight tons per acre. The farmer located within two miles of the mills can raise cane, though there is only one point in favor of doing so—quick returns for labor and money invested, as the cash is paid for the crop as soon as delivered. Last year I raised 23 tons 1,045 pounds of cane, (not for the Sugar Mill Co.,) not including seed, on two acres. This cane was manufactured at a local mill. I received 10 gallons of sirup per ton, for which I received 30 to 35 cents per gallon, at retail. The seed I had thrashed and the yield in all was 70 bushels, and I sold it at 50 cents per bushel. This crop was raised on bottom land. I had to haul it three miles. By keeping the seed I realized a better profit than would be possible with corn, wheat, oats or any other crop, except possibly when Old Hutch runs a corner.

Vidette, Kansas.

FROM J. E. HESTON.

I do not think sorghum pays as well as corn. It is of slow growth, and has to be hand-hoed at least twice, and a crop that would make from seven to 10 tons, would be extra. And an extra crop of corn would be from 60 to 75 bushels per acre, and it would supply fodder enough to keep a cow all winter, and corn at 25 cents per bushel. Then again, the tending can be all done with a plow. I do not think farmers can afford to raise and haul sorghum.

Mount Pleasant, Iowa.

FROM J. J. MARTIN.

Sorghum at $2 per ton would pay well where we did not have to haul it more than five miles and by having plants at different central points, farmers could supply the mills with all they could work up for the season when cane is to be taken care of. Farmers here, generally, are not very busy and what we would make would be almost clear gain, and again, sorghum has been a sure crop here, rain or no rain.

Pratt county is well adapted to sorghum raising and the county would assist and encourage a sorghum plant. It seems as though Secretary Rusk is the right man in the right place and one who means business for farmers.

Iuka, Kansas.

SPONTANEOUS COMBUSTION OF OVER-HEATED HAY IN THE MOW.

A., Westover, Md.—Is there danger of spontaneous combustion of hay from over-heating in the mow? If clover or Timothy hay gets too warm in the mow should air be admitted or excluded? Should the hay be opened or left alone "to sweat it out?"

ANSWERED BY HENRY STEWART.

The possibility of spontaneous combustion of hay is a much disputed question. There is every reason scientifically to disbelieve this possibility, and so far as known there has never been a clearly established fact to prove it in practice. Combustion is caused by active oxidation. This oxidation in a mass of closely packed hay will begin no doubt when the hay is damp, and fermentation occurs, which is inevitable under usual conditions. But the oxidation cannot go further than the supply of oxygen in the substance of the hay will permit, which is no more than to carry the heat up to 120 degrees or perhaps 140 This heat always occurs in the silo, but no silo as yet ever burned by spontaneous combustion because combustion cannot occur at any temperature produced in any moist or damp substance until it has become quite dry and is exposed to a free current of air. Spontaneous combustion may, and often does, occur in oily cotton rags, but the chemical action is then very intense because of the large quantity of oxygen in the stuff, its porous character and the easy access of air which supplies all the oxygen needed for active combustion. These requisite conditions are not present in a mass of closely packed hay, and combustion is easily prevented by keeping the mass pressed down and by not disturbing it. The heat then never exceeds a point of safety or such as will merely discolor the hay and cause it to become brown. This does not injure the hay but makes it more palatable and digestible, in the same way that the heating of silage under similar conditions changes its digestibility and makes it somewhat better for feeding than the green fodder is. Salt is an obstacle to fermentation and a liberal sprinkling of it on the hay when it is unavoidably packed away in a damp condition, will decrease the fermentation and prevent any injurious excess of it.

Spontaneous combustion of hay in the stack or mow, I believe, to be as much a myth as the spontaneous combustion of persons who have soaked themselves with alcohol, and which has been alleged to have occurred in some cases. Ancient stories to this effect have been current but without any evidence other than popular superstition; no medical evidence of any kind has been brought to support this belief which was as common 40 or 50 years ago as the belief of spontaneous combustion of hay is to-day. Cases have occurred in which the hay, especially clover, has been found blackened even, in the stack, but this change is exactly similar to the slow carbonization of leaf mold, or swamp muck or vegetable matter in the damp woods, and not to any actual excessive heating to a point when combustion or charring could have occurred. Where I am now residing the climate is very damp, the annual rain-fall exceeds 60 inches and sometimes amounts to over 100 inches, consequently it is impossible to dry hay in the field and it always goes into the stack or barn, damp and sometimes moist, but although it has heated very much, I have not found it to exceed 140 degrees at the worst, and as it packs closely by reason of the dampness, this heat is retained for weeks; but no case of combustion has ever been known or even alleged here. If hay so heated is left undisturbed it will not burn, but will cool off gradually, the moisture often being deposited in drops like dew on the surface of the mass. Sometimes a sort of mildew which appears like fine dust or white smoke escapes from such hay when it is opened after it has cooled, but as long as the hay is not disturbed and it is kept from access of air in a tight barn even this mildew rarely amounts to inconvenience or injury; while salting will prevent it.

HYDATID OR TUMOR ON THE BRAIN IN CALVES.

H. M. G., Well's Tannery, Pa.—Two three-month-old calves died here lately from some ailment with the following symptoms: They seemed to become blind and walk round and round in a circle. If they came against any object they would push it down if they could, and continue the circular movement. Occasionally they would stop and turn their heads round to the right side, then start and run as though trying to get away from something they feared. One of them ran against a fence, pushed it down and crossed over; then wheeled and came against it again, pushed it down again and crossed over as before; and did the same thing several more times, all the while keeping up the circular motion. During a paroxysm each bawled as if caught by a dog, fell down and was unable to get up again. On examination after death, part of the smaller intestines were found nearly black, and the kidneys were also discolored and one was much larger than the other. They were both large and fat. They had been on grass all spring, and had plenty of skimmed milk and wheat bran. They appeared in good health till the attack became noticeable. What was the matter?

ANSWERED BY DR. F. L. KILBORNE.

The symptoms indicate pressure on the brain, as from a tumor, ruptured vessel, or the presence of a parasite or hydatid, the Cœnurus cerebralis or cystic form of the Tœnia cœnurus, a tapeworm of the dog, the immature form of which lives in a cyst in the brains of sheep and young cattle. The embryo in this cyst when eaten by a dog develops into the tapeworm or mature form. The eggs passed by the dog are eaten by the calf or sheep with its food, the embryo making its way to the brain where it produces the disease commonly known as "gid," "sturdy" or "staggers." This parasitic disease is met with quite commonly in sheep in some countries, and less commonly in young cattle. Killing all stray dogs or worthless curs will prevent a large proportion of the cases of this as well as other similar diseases. In the hands of a skillful operator an operation is sometimes possible by which the parasite may be removed. But the simplest and best course to pursue usually is to send the calf immediately to the butcher, the meat being perfectly wholesome for food.

CHRONIC NASAL DISCHARGE, OR GLANDERS, IN A HORSE.

M. M., Fergus Falls, Dak.—In No. 2042 of the RURAL I got some information about an ailing horse of mine. Since then he has not improved very fast. He has a fastidious appetite and does not seem to get any strength from what he eats. He is fed one feed of oats and one of bran mash, gets once in a while a feed of carrots and has for the last 14 days had the benefit of the new, fresh grass. He is still discharging through the nose a thin slimy stuff, which is, after feeding, mixed with some of his cud, which returns through the nose. Also when he drinks, the water returns through his nose. There is no sore at all in the nose He has a kind of hoarse, deep cough, and when he neighs the sound is hoarse and unnatural. His eyes look bright, he is not inclined to move around except at a walk, but every day he rolls himself in the pasture. His winter hair is shedding, but not as quickly as usual; his coat is hard to groom. Any further advice with regard to him?

ANSWERED BY DR. F. L. KILBORNE.

If there is a veterinary surgeon at hand you had better have the horse examined to make sure it is not a case of glanders. If you cannot well have such examination made, watch for ulceration well up in the nose; such ulceration is a pretty sure indication of glanders, when the horse should be destroyed at once. In the meantime the nose might be injected daily with a solution of one dram each of sulphate of zinc and carbolic acid, with two ounces of glycerine, dissolved in a quart of water. When used the solution should be milk-warm, and injected with a nasal siphon made especially for the purpose, or with a piece of half-inch or inch hard rubber tubing three feet long, and a funnel in one end. Insert the siphon or free end of the tube into one nostril, pack around with cotton, and inject until the solution comes from the other nostril. Repeat on the other side. The general condition may be improved by giving two table-spoonfuls of the following powders in the feed twice daily:—Sulphate of soda and gentian each one-half pound; powdered nux vomica one ounce.

OBSTRUCTION IN A COW'S THROAT; RETAINED AFTERBIRTH IN A COW.

S. L. T., Fairfield, Neb.—1. When one of my cows dropped her calf in the spring of '88 she was thin in flesh, and would bellow as if there was in her throat something which she was trying to get rid of, and this habit has continued ever since. In the spring of this year she had another calf, and is now giving a good mess of milk. Can anything be done for her? 2. What should be the treatment of a cow which doesn't get rid of the placenta soon after calving?

ANSWERED BY DR. F. L. KILBORNE.

1. Apply the following strong liniment over the region of the throat once daily until the skin is quite well blistered: Equal parts of strong aqua ammonia, sweet or raw linseed oil, and oil of turpentine well shaken together. If you can feel any swelling or lump about the throat blister it more severely. 2. If the afterbirth does not come away in 18 to 24 hours it should be carefully removed, before the neck of the womb has closed so as to prevent the introduction of the hand. Grasp the protruding mass of membranes in the left hand and pull gently from side to side. Insert the well soaped or oiled right hand into the womb, and with thumb and fingers carefully squeeze out or separate each attachment or cotyledon (about 50 in number when complete) being careful not to tear the buttons or cotyledons from the womb. When all are separated the membranes will readily come away. After the removal of the afterbirth, wash out the womb with tepid water, and finally, inject a weak antiseptic solution—one dram of carbolic acid or of sulphate of zinc dissolved in a pint of water, may be used for this purpose. A piece of soft rubber tubing three or four feet long and one-half inch in diameter, with a six-inch funnel in one end, will be found very convenient in washing out and injecting the womb. If a discharge continues after the operation, inject the antiseptic solution once daily until the discharge ceases.

HOTEL SLOPS AS HOG FEED.

F. D. P., Asheville, N. C.—I want to feed 125 hogs and have about 100 acres of woodland pasture for them. I can get enough ordinary hotel slops at the town four miles away, to feed from 100 to 150 animals, with the addition of this pasture. To deliver the slops at the pasture would cost $350 a year. Would it be cheaper to haul the slops or spend the same amount of money for corn and oats? I can buy the corn for about 45 cents per bushel and the oats for 34 to 40 cents in the fall. Are slop-fed hogs more liable to cholera than those that are grain-fed, both having a large pasture to run in and plenty of fresh water? Of the 125 head at least 100 would be three months old on February 1.

ANS.—Hotel slop usually contains the best of all food for swine, being composed of both vegetable and animal matter. It consists of about the right proportions of nitrogenous and carbonaceous elements for the production of the best kind of meat, with a proper proportion of lean and fat intermingled and not laid on in alternate layers. Pigs fed upon it have been made to reach a dressed weight of 250 to 350 pounds in nine or 10 months. If the slop costs nothing but the hauling, the expense of food would amount to less than $3 per head which, with the charges for attention, would make the pork cost less than three cents per pound. This is much less than the cost by feeding grain at the prices mentioned, which would be at least five cents per pound under the most careful management. As diseases in swine are chiefly produced by excessive grain feeding and the slop will probably be a much better balanced food in regard to the right elements of nutrition, there should be no danger of cholera (intestinal fever) by the feeding of this slop.

INJURY TO FETLOCK JOINT OF HORSE, FOLLOWED BY BONY DEPOSIT.

W. A. S., Manchester, Iowa.—My six-year old horse injured his left hind leg on a barbed wire fence when a colt. The ankle joint became swollen, but the animal didn't become lame till driven on the road three years ago, when he went lame so badly that I couldn't use him. The swollen ankle became hard, and though fired and blistered still remains in that condition. Can anything remove the evil?

ANS.—A personal examination would be necessary to enable us to advise a very satisfactory course of treatment in a chronic case of this kind, that has been repeatedly treated by such active measures as firing and blistering. From a description we cannot tell whether the present condition is due to the injury itself or to an improper course of treatment when first injured. The latter is very often the case. Firing again by a competent operator followed by an active blister, would probably be the course most likely to produce favorable results. A complete recovery cannot now be expected.

SWELLED JAW WITH ABSCESS IN STEER.

L. S., Prescott, Washington Ter.—Among 220 head of cattle one four-year-old steer has a swollen lower jaw, and emits a yellow, sticky fluid from its nostrils. Some neighbors say I ought to cut open the place and scrape the bone; others think I ought to kill and bury it. What does the RURAL say?

ANS.—If you have reason to believe the animal has "lump jaw" or "big jaw"—actinomycosis—it would be best to destroy him at once because the disease is communicable by inoculation not only to other cattle but to man. Your description of the symptons indicate actino-mycosis, a parasitic fungus, as the probable cause of the disease. It would be a safe precaution to destroy the animal, and burn the head. The flesh of such an animal should not be used for food. If the swelling and discharge are due to an injury the proper treatment would be to open the abscess, scrape the bone if found diseased, and then treat as an open sore.

POLYPUS OR TUMOR IN TEAT OF COW.

D. F. C., Sandwich, Ill.—There's an obstruction in one of the teats of a young cow that dropped her second calf two weeks ago.

It is quite hard and about the size of a grain of wheat and appears to be movable. It drops down in the milk duct and nearly closes the opening, often doing so altogether, so that milking is a tedious business. With a little manipulation it can be gradually forced up the teat into the udder. How can it be removed?

ANS.—Relax the teat in a warm solution of belladonna, and then insert a steel loop or a small instrument with an eye large enough to slip over the tumor and twist it off. Failing in this, an incision may be made through the side of the teat, the tumor twisted off and the wound carefully sewed up. In this case the milk should be drawn through a milking tube until the wound is healed.

THE SILO FOR GRASS.

S. S. M., Rossmore, Ont., Can.—All I have read about ensilage relates to corn silage; isn't the silo a good place for preserving hay, or rather grass, both clover and Timothy? We are having very wet weather here and if it continue there will be little chance of curing hay in the ordinary way.

ANS.—In England grass and clover are used almost exclusively as silo crops. Corn does not do so well in England. This accounts for the difference frequently shown in analyses of English and American silage. Many Western dairymen are using clover in the silo. Prof. Henry, of Wisconsin, has sent us samples of clover silage that were excellent in quality. We have never seen silage made from Timothy, but we see no reason why it should not be good.

PREMATURE SHEDDING OF MULE'S HAIR IN SPRING.

M. R. B., Meade Center, Kan—The hair of a mule comes off every spring so that he looks as if he were shaved. In other respects he is all right. What is the trouble?

ANS.—Probably the general condition of the mule's system in the spring is such that he sheds his winter coat prematurely before the spring coat is ready to appear. If there is no eruption or itching of the skin no treatment is necessary. Possibly a good purging earlier in the spring (with five to eight drams of aloes) followed by alkalies (the carbonate of potash or soda in half-ounce doses daily) might bring the shedding and growth together as it should occur. A restricted diet with little or no corn or other heating agents would also favor a return to the natural method.

WHEN TO PRUNE.

P. S. W., Salem, South Dakota.—At what time in the year should fruit, willow and shade trees be trimmed? How high should fruit trees be pruned?

ANS.—The wounds caused by pruning will heal up as well if the trees are pruned in midsummer as at any other time. As a rule, we should prefer late fall pruning for your climate. The R. N.-Y.'s preference is to prune fruit trees so that the trunks may be protected in a measure from the heat of a midsummer sun. That is, we do not approve of pruning high.

Miscellaneous.

G. L. P., West Farmington, Me.—The value of the rock, of which you inclose specimens, is just what it is worth for building purposes. It is iron pyrites, sometimes called "fools' gold."

L. C. L. J., New York City.—How can I get rid of grasshoppers on trees in a garden? They eat holes in all the plants, but do not touch a mash of bran, sugar and arsenic.

ANS.—We should try spraying the plants with hellebore—one heaping table-spoonful to two gallons of water. Make a paste of the powder by adding hot water. Then stir it in the cold water.

Subscriber (address mislaid).—Is an aneroid barometer good on the farm as a weather indicator?

ANS.—An aneroid barometer is said to be about as good as any. No barometer, however, will forecast the weather with accuracy; such articles are only valuable in connection with observations of the wind, sky and temperature. It does not pay to spend much time in watching a barometer or thermometer. A great many people spend so much time watching for a storm as not to be prepared for it when it does come.

W. E. R., Dover, N. H.—My 20-year-old mare weighs 950 pounds, and is an excellent roadster. She is in splendid shape and condition and apparently good for years. Would it be advisable to try to raise a colt from her?

ANS.—Twenty years is not an extreme age for a mare to breed. The noted Goldsmith Maid was older than that when she had her first colt, and it is more than probable that your mare will be prolific. A horse that has been well cared for is quite likely to live 30 years in useful condition, and is therefore not older at 20 in proportion than a person of 40 years.

DISCUSSION.

THE MOON AS A WEATHER INDICATOR.

J. T. B., HUSTONVILLE, KY.—The weather during the last quarter of the moon is a forecast of that which will prevail during the next three weeks—at all seasons. My observation leads me to place almost implicit reliance on this rule, and I am convinced that it is applicable to neighborhoods if not to farms. Temperature, sunshine, clouds, winds, rains, snows, etc., are relatively proportionate throughout the four phases of the moon, beginning with the last quarter. The variation is of degree rather than of kind One summer four seasonable weekly showers fell on neighboring farms north of me, and not once did enough fall to "lay the dust" on mine. Another year the same thing happened south of me. Each time the first rain to pass me was in the last quarter of the moon. My conclusion from limited notes is that the weather of the last quarter is nearly always the most pronounced. My notes have not been regular or systematic, but they have been sufficient to arouse a lively interest in the weather during the last quarter of the moon. With us the drought of '87 began and closed in the last quarter of the moon. Of the multitude of weather signs current, and the scores of weather prophets the white-caps and fool-killers have skipped, I take no stock unless their predictions are corroborated by the condition of the weather during the last quarter; for the "failure of all signs in dry weather" hinges thereon. Nineteen years ago my wife and I set up house-keeping, and before our garden began to give us anything for the table we discovered that fertilizers and showers of rain on alternate days were necessary to a successful competition with more fortunate and experienced neighbors, and I began the study of weather signs, watching and hoping for the rain while casting about for the fertilizers for the next crop. One afternoon indications of a long-looked-for and much-needed rain were excellent, but evening came and still no rain fell, though a heavy bank in the west sustained hope. I observed to a friend: "We'll have rain to-night." "No," said he, "since my attention was directed to it I have never seen a spell of dry weather broken by a rain at night, however flattering the indications." I have never seen an exception to this rule. Subsequently I was sitting on the front veranda at a neighbor's when a drought was on, and he observed: "We'll have rain within 24 hours." "Why?" I asked; "Why," he answered, "lightning in a clear north sky is a sure sign." I have never known that sign to fail; but I have not watched it closely. When the cloud is visible in the north the indication is uncertain. In an interview with Prof. Tice in the 70's, I was surprised to find so many of our weather signs new to him, and I have concluded that Josh Billings's Almanac was about the best all-round weather maker that I ever consulted. It is astounding to find such abiding confidence in the weather indications of patent medicine almanacs as well as in their claims for their stuff; for, "experience is the school in which even fools are presumed to learn something." Whilst I write, the rain is so heavy north as to obscure the groves a mile away, and 'tis scarcely dripping from the eaves here. This is a repetition of last week's experience during the last quarter of the moon.

BUILDING UP A DAIRY HERD.

G. W. H., ROCHESTER, MASS.—Some months ago I gave the butter record of 12 grade Jerseys—3,777 pounds for 12 months. I am asked to state more about the herd. For the last 25 years thoroughbred Jersey bulls have been used. About 14 years ago a grade heifer was found to make butter of Guernsey yellowness, and she could make two pounds per day. She also held her milk well as she could be milked nearly all the time. She was taken as the mother of the herd, and bred to Jersey bulls. Ten of her descendants are now in milk, and are extra-good butter-makers. Several of them will make fully 365 pounds in a year. One made 17 ounces from six quarts of milk in a day, when due to come in in 30 days—another was put into the barn, and fed upon dry hay in order to dry her off when nearly ready to calve. She is now giving a little over eight quarts of milk per day—enough for more than a pound of butter—and has been in milk over two years, and is due to calve in September. Another is just out of milk, but not dry. She is due to calve in nine days. One two-year-old now in milk bids fair to equal any of them. he is a granddaughter of the old cow her sire and mother being half brother and sister. I have five younger ones which look promising. I have a bull over a year old, son of the old cow, sired by a pure-bred Jersey of noted strain, which I have used as far as I think prudent on account of his near relationship. The blood in the veins of this herd must be nearly all Jersey, and I shall now use a Guernsey bull—a calf from the celebrated Millwood herd of Framingham, Mass.

This bull has an extra butter record back of him, consequently I look for a still further improvement. I am confident that a careful start, intelligent breeding, a vigorous selection of the fittest, liberal feeding, and kind treatment would in 10 years double the butter product per cow of the country. In the account which I gave, the herd averaged about 314 pounds of butter for the year. At that time only nine, including the old mother of the family, were included, else the showing would have been even better. Five more have been added to the herd this year and the record has improved although they are only heifers.

H. C. E., SANDWICH, MASS.—Here is what I believe to be very effectual in driving the flea-beetles off, if it does nothing else. It is the plaster and kerosene mixture recommended for squash vines, viz.: To every quart of the plaster add a great spoonful of kerosene. I have added, however, a one-third more. If this is sprinkled on potato vines it will drive the beetles off. The finer the plaster the better. A very great quantity is not required.

LODGED WHEAT.

W. L. D., CLYDE, N. Y.—From the frequency of extraordinarily heavy rains and much wind, wheat has been subjected to an unusual test of its strength of stem. If grown—constructed—out of a soil where there was an abundance of nitrogen, the structure of the stems is faulty or weak, and the wheat lodges badly. Now, a heavy piece of wheat is usually considered a pleasing thing for the farmer, even if lodged; but it is often a wasteful growth, including wastage of fertility. The straw is weak and soft, seeming to lack in phosphate of lime, and the growth being protuse and quick the cellular tissue is perhaps put together with too little silex. The grain also shrinks so much that its selling price is lowered and indeed it is of poor quality. Wheat which has been down several days from the force of heavy storms at the blooming time or just after, is injured even though it may rise again; while that which does not recover yields shrunken grain equal to that "pungled" by the weevil, if it yields much of anything. Inquiry is always made by millers about the lodging of wheat, and this year in many sections, local millers have declared the prospect is poor for good wheat, and a No. 1 price will not be paid. To be sure there is a loss in over-enriching the soil for some crops—for wheat for instance.

One of the features in this matter is spot fertilizing, from which arise little lodged patches presenting a dotted appearance in a field of grain. This comes from the careless application of barn-yard manure, generally due to drawing and placing it in the field in small piles some length of time before plowing; thus some spots receive too much of the nitrogenous stuff and others not enough. It is quite certain that there would have been less loss by spreading it immediately and, where possible, surface application is the best way of doing so with thorough harrowing; for in this way spot fertilizing of high-grade fertilizers in over-doses, occasions the same results—over-balanced growth, poor grain or no grain. An over-dose of phosphoric acid or potash would not in this respect work the damage that ammonia would. It seems very properly that in almost all formulas for superphosphates, the immediately available mineral constituents exceed the nitrogenous in supply. This is safe. In an extravagant use of fertilizers for good results, there is much danger of over-reaching. One should distribute the fertilizer so as to bring every square rod up to an even standard. Let us try to get a big wheat crop, yet not the biggest. Keep on the lesser side where the growth stands up.

MORE "WEATHER-WISE" FOLKS

F. S. W., DES MOINES, IOWA.—I have no signs for telling the coming weather. I never pay any attention to such things. I have the assurance from inspiration that so long as time lasts, we are to have seed-time and harvest, winter and summer and also wet and dry weather. Now, it has always been my plan to try to have work for all these various conditions of the weather. If I prepare a piece of land to-day to be planted to certain kinds of seed to-morrow, and it rains to-night and makes the land too wet to plant, I do something else until the weather and ground are right for planting. While I am on this subject, let me say that I never plant anything in the moon, as I always plant in the earth. At this busy season to be successful in farming, we must know how to economize every moment. When it is too wet to use the horse cultivator, there are places where the hand hoe can be used, or plants can be set out, or the weedy fence corners and walks can be cleaned up. Pig-pens, barns and tools can be looked after and repaired and cleaned up. When the cold weather comes, there is still plenty to do, wood to chop and haul, manure to be hauled out and other things can be done so that we can be kept busy in all kinds of weather. I am aware of the fact that our Signal Service is enabled by working on scientific principles, by numerous observations over a wide area and constant practice, to tell what the weather will be to-morrow, but to do so is a task too heavy for me. If we farmers could have daily access to the Signal Service bulletins, they might be of great help to us in planning our work ahead; but these bulletins are posted up in the city in the Post-office, and at this busy season there are many farmers who do not get to the city more than once in a week. Until we can have better access to this only source of reliable weather indication, we had better adapt ourselves to the weather, instead of trying to adapt the weather to our wants; paying attention to old signs and moon changes—which do not amount to anything. "Christian Science," "faith cures," and weather signs, or anything else which is not based on scientific reasoning I have no use for.

"ALL SORTS."

S. H. C., HARKNESS, N. Y.—The contest plot of potatoes that my wife planted or helped to plant, as she cut the seed pieces and dropped them, is looking fine. I never saw so many stalks, or larger, healthier-looking ones. I am afraid the tops are too large. The flea-beetles have not hurt them much. They seem to come too early to do much damage. The contest plot was planted May 6, and my field of about five acres on the 10th and 11th. When planting them, if the pieces lay any time, say 20 minutes, before they were covered with earth, they would be covered with the beetles. I was afraid the latter would injure the seed, but now I do not think they did any damage, as the vines are covering the ground and are covered with blossoms. Why is it that I never have any seed-balls? One of my neighbors who planted early, told me that when he cultivated his they were covered with beetles. He had a rather long whiffletree that brushed the vines or tops some, and he could see the little fellows flying off. They seemed to go down on the ground and the cultivator covered them. He has seen only very few since. He thinks that killed them. I have seen very little of their work in my fields and we have not had as many of the Colorado beetles as usual. Perhaps the weather has had something to do with their work as well as with mine. I cut potatoes for planting May 8, and the mercury stood 94 degrees in the shade. Last Monday there was a promise of a few days' good weather and I cut five acres of newly seeded grass, mostly clover and a very good crop. I raked a part, and on Tuesday I finished raking, and drew in one load and found it too green. Tuesday night it rained hard, wet it through and yesterday I spent all day trying to dry it. I got it partly dry and some of it in bunches, the rest in windrows that had been turned. This morning when I woke up it was raining and it is raining now.

EARTH-CLOSET DEPOSITS AS MANURE.

W G. W., TYRONE, PA.—E. S. Gilbert tells us that the accumulation from an earth-closet spread on a piece of meadow produced scarcely any perceptible improvement on the grass growth. The same want of early effect has resulted here, but the ground has yielded very well ever since where an application was made several years ago. Dr. Caldwell says that the earth from the closet has very little manurial value, even when it has been used for the closet two or three times over. It is strange that analysis should give no better account of what is almost the sole reliance of the best gardeners in the world—the Chinese and Japanese. We all know what a close and careful keeper earth is of all manurial matter committed to its keeping. Apparently it gives from its stores year by year only so much of phosphoric acid and potash as the plants in the ground can use during their growth, and this seems to be measured and limited by the amount of nitrogen which the plants get. This, too, is measured out to them, and with even greater strictness, for the nitrogen must pass through a preparatory ferment which can take place only in a rare combination of weather influences on comparatively a few days of each year, and to a limited extent. If the earth could freely give up its means for vegetable growth it would be soon exhausted. Famine and death would soon follow an inordinate feast, and the earth would become the

grave of all that feed and live upon it. Is not this wise ordainment by which first plants and then animals get their daily bread and no more from year to year, the explanation why closet dejections composted with earth give to the vegetation where they are placed, only a moderate augmentation of growth in any one year. The nitrogen has been locked up, to be given out again but slowly. The Asiatics use the manure in a nearly fresh condition and so get more from it the first season.

CATTLE NOTES, ETC.

W. E. R., DOVER, N. H.—I have used sawdust in the stable three or four years, and had rather have dry pine sawdust than anything else. It makes a good bed and can be kept under cows better than other kinds of bedding. It is a good absorbent and with it the cow manure can be handled much more easily and made a good deal finer than when it is not used, and that I think is worth something, as the finer the manure is the better it suits me.

"What will cure warts on cows" is often asked, so I will tell how I get rid of them. A yearling Guernsey heifer had one somewhat larger than a silver dollar on her belly a little forward of her bag. I took a piece of fine strong shoe thread a foot or so long, and tied it close to the belly, in a knot that would not slip, and drew it pretty hard. Every day or so I drew the thread a little harder, and in a few weeks the wart was gone and I could not tell where it was taken off. Sometimes there will be one on a cow's teat; I twist it with my fingers a few times, and it is gone. I can get rid of them in this way without waiting for the cow to be dry.

For seeding down good strong mowing land I use half a bushel of Timothy, one bushel of Red-top and 10 pounds of clover. Can any one give a better mixture? I have sown some in the early fall. Some say that if sown at any time before September, clover will do well, but I get a better stand by sowing in spring with or without grain.

PROTECTING CATTLE FROM FLIES.

A. L. C., CATONSVILLE, MD.—I know of no way by which cattle may be protected from flies while in the field unless they be entirely covered with sheeting or netting, and how short a time this would last if put on I have not had curiosity enough to find out by trial. If there is a wood lot with plenty of underbrush in it adjoining the pasture, the cattle will go there to brush off the flies, rest and ruminate, then go to the field for a fresh supply of feed.

I tried Lawford's Sheep Dip on a bull tethered out, but it did little good; in a short time after applying it the flies would cover him as thickly as ever, although I mixed the dip very strong. While on the subject of flies, I will mention the invention of a friend of mine which he uses while milking. It is in the shape of a large sack ripped down one side and put on the cow coming well down nearly to her feet. Every part except her head being covered, she has no occasion to switch her tail and she couldn't switch it if she wanted, which is a great relief to the milker.

A slit can be cut in the cover opposite the udder so as to allow easy access for milking.

GROWTH OF WHITE CLOVER.

O. S. B., MONMOUTH, ILL.—In the Grass Number of the RURAL in which many of the various kinds of grasses were mentioned and their characteristics, merits and demerits described, I notice "White clover" represented as growing from four to six inches high, and as the opinion of the writer of that article and my own do not agree, I inclose a sample of the aforesaid clover which will illustrate my ideas of it. This sample was taken from my pasture of 200 acres, on which I have pastured, since March 21, 100 head of cattle one year old and over, and 21 head of horses two years old and over. The pasture has never been plowed or cultivated in any manner, and is seeded to a volunteer growth of Blue grass and White clover. The Blue grass stands from two to 4½ feet high. I have seen Blue grass over six feet high. If stock is lying low on level land a man on horse-back must approach within 15 to 20 rods, and many times much nearer, before he can find them. All kinds of grain and fruit in this part of the State are very promising at present.

R. N.-Y.—The bunch of clover stems and heads received average two feet in hight.

W. F. A., EAST HARTFORD, CONN.—The Early Essex potato has again proved its superiority as an early variety, beating the record of this or any other potato. E. E. Gardy, of South Windsor, Conn., marketed fully grown and apparently fully ripe potatoes on June 21, planted April 17, under ordinary field culture, with Bradley's Potato fertilizer alone. These potatoes were dug on the 66th day from planting, which is most remarkable considering that it is in the earlier part of the season. Several growers will begin marketing this variety to-day—June 24. Mr. Gardy says his entire field is ready to be dug, and he estimates the yield at 200 bushels per acre at this date.

What Others Say.

BUTTER FROM JERSEY AND LOW-GRADE COWS:—At the meeting of the N. Y. Dairymen's Association held at Walton, Delaware County, after explaining the objects of the society and making clear the native, chemical composition and parts played by each of the constituents of milk, cream and butter, the object-lesson proper was given. As we glean from the Philadelphia Weekly Press, the cream from 200 pounds of milk, representing four-fifths of one day's milking of 21 grade Jersey cows, was dumped into a rectangular churn, which was revolved at the rate of 48 revolutions a minute for 20 minutes. Then the buttermilk was drawn off, the butter treated with strong brine, again washed with water, the butter skimmed off and placed on the worker. After being worked for a few minutes and salted at the rate of an ounce to the pound the butter was found to weigh 13¼ pounds. It proved to be excellent in color and taste. In the afternoon a similar test was made of the cream from a like quantity of milk from a dairy of 17 low-grade cows, including but a small proportion of the Jersey strain. The churn was made to revolve 56 times a minute, and brought butter in 16 minutes. This lot of butter was good in quality, but it weighed only seven and a half pounds. The difference shown in favor of the Jerseys was a striking demonstration to all present, particularly to the owner of the scrub dairy. It spoke volumes in favor of the special-purpose cows of good breeding. This would have been clearer, however, if the total quantity of milk given by the low-grade cows had been stated, for while 200 pounds of Jersey milk may make twice as much butter as 200 pounds of Holstein milk, for instance, still if the Holstein cows give twice as much milk as the Jerseys, there is an equal quantity of butter and twice the quantity of skim-milk in favor of the Holsteins. Still there is no doubting the fact that the majority of farmers in New York State, as well as in other States, are not living up to their privileges as dairymen and there is a broad field for just such effort as the New York Association is making to place the cold facts before them.

RIPENING CREAM:—Col. F. D. Curtis never churns his cream less than 24 hours old, and he aims to have it 48 hours old, and tries to keep it in such a condition, that it will be 48 hours old. It is then only slightly acid. This helps the process of separating the butter globules. When the cream is properly ripened, it speaks for itself. It looks light-colored, and has a bright, satiny appearance, cracks open on the top, and you can almost see the butter right in the cream. As soon as it reaches this point, it wants to be churned right then and there.

Now the great trouble with the average dairyman is he doesn't observe these things closely enough. He does not skim the milk properly, and the cream is kept too long.

Col. Curtis would not put old cream with sweet cream. Warm your cream up to about 75 degrees, but sourness does not ripen the cream. By a little neglect in ripening the cream, you can not get all your butter. He has no doubt that he has lost 5,000 pounds of butter during the last 10 years by not ripening his cream properly. He would get his cream partially ripened, put his sweet cream in, and let the whole ripen. By repeated experiments he found by these means he had been losing about 10 per cent. of his butter. By ripening his cream together, he has no trouble in getting at least 10 per cent. more butter than he ever did by the old method, and he attributes this loss entirely to the ripening.

SPICE.

FLOWERS OF SULPHUR, retail price about 10 cts. per pound. Tobacco dust, an excellent remedy for lice, etc., also retails at 10 cts. the pound The price of flowers of sulphur by the 100 pounds is about $4 50. Tobacco stems are steeped in water and the water sprayed upon infested plants will rid them of aphidæ etc. These stems are offered at $2.00 per 100 pounds in bales.....

THE Caledonian of St. Johnsbury, Vermont, evidently thinks that farming pays in that locality. It says that beginning at a farm half a mile outside the limits of the village, and following that line all the way to the next town, a distance of 12 miles, there are 11 contiguous farms. On every one of these farms the owner has not only been able to get a living, but all have laid up money, and the owner of every one is now what might be called forehanded. Several of these men are worth from $10,000 to 15,000 each, while one of them is worth at least $30,000, and this has been made off the farms on which they now live.....

THE price of transplanted celery plants is now about $6.50 per 1.000; of cabbage plants $6 00 per 1,000.....

A FRENCH physician, Dr. P. Jacquin, insists that a child that has a cough should always be kept in bed, or at least in a warm room constantly free from drafts, and that there is no safety in any other course. This is reasonable, for as cold is caught from a sudden chill of some local part of the body, while we escape colds if the chill affects the whole body equally, (as when we are at sea, or moving about briskly in all directions during chilly weather on land,) so, to get rid of the cold, and get free blood circulation in every part of the body restored we must remain for 30 hours or more where there will be absolutely even warmth all over the body. Nothing secures this so well as a good bed.....

FARMERS who are interested in the breeding of horses can scarcely have failed to take note of the present popular desire for a useful horse that is equally well fitted for the saddle and for harness, says the N. Y. Times. Comfort in driving is more generally desirable than rushing through the air with the dangerous speed of a locomotive, and the healthful and pleasing use of the saddle is as appropriate for women as for men.....

THIS growth of the public taste is in a legitimate direction and will consequently prove permanent. It is in accord with human nature and as near as we in America can get to the popular English recreation of hunting, which is not possible under our different land system. A jog at the rate of 10 or 12 miles an hour on an excellent country road is a pleasure that is unsurpassed by any other of the many rural delights that are to be enjoyed in "the country," and it is a good thing that the popular good sense has turned in this direction.

MULES for work and horses for profit and pleasure will be the outgrowth of the destined increase in the rearing of pleasure horses.....

THE LONDON AGRICULTURAL GAZETTE says that the women, who milk 10 cows each, night and morning, in the west of Scotland, get only 50 cents a week for their work. This is poor payment for services which include Sunday labor. They work on the land as well, and the time they spend with the cows, night and morning is not taken off the time of a day's work, for which 24 cents are paid. Still, it is not surprising to learn that increasing difficulty is experienced in obtaining women to milk the cows.

ABSTRACTS.

——ORANGE COUNTY FARMER: "During a recent drive through a farming section with a nervous horse, no less than seven ill-bred curs ran out from farmers' houses to yelp at us. Why any farmer will tolerate such a nuisance is more than we can explain."

——COLMAN'S RURAL WORLD: "What is the good of a State agricultural college anyhow? Farmers of Missouri, this question is yours."

——PROF. R. C. KEDZIE: "Shrunken and immature wheat has little value for making flour, and many persons suppose that its food value is of a low order. But young grains are richer in nitrogen compounds than the fully ripened and plump berry. The value of such grains for stock feeding is not to be measured by their flour-producing quality. These wheat screenings are worth more for stock food than the same weight of plump wheat. The value of such materials when ground and fitted for mixing with coarse materials, like straw, etc., is obvious to the intelligent stock feeder. The material should be ground to kill all seeds of weeds, as well as to secure complete digestion."

——BREEDER'S GAZETTE: "Well, sir, it has cost me just $20,000 to find out that the so-called 'nice, neat heads and horns, in beef cattle are a delusion and a snare, and I want to see your herd.' While an ugly 'spike' horn is never to be preferred to one of more desirable proportions, there is no gainsaying the fact that the hardiest and most vigorous varieties of cattle are anything but feminine as regards conformation about the head. The often-admired 'dish-face' in connection with the 'heifer-horn' almost invariably denotes a bull badly deficient in vital power."

——LONDON AGRICULTURAL GAZETTE: "Putting on one side considerations in respect of our native wheat crop now standing on the ground, the absorbing interest of the trade, so far as wheat is concerned, appears to be centered in the promise of unusual abundance in the United States and the damaged outlook from drought in parts of Russia. Supposing results should prove in accordance with present indications in both countries, what then? Well, America can afford to hold a big crop on speculation, and Russia is supposed to have still on hand the greater part of her enormous growth in 1888; the one country may sell or she may not, but the other is sure to sell all she can possibly ship, whatever our times prices may be. Consequently, a big crop in America would not necessarily involve lower rates for export; and, on the other hand, a crop failure in Russia—or in a big portion of it—would not necessarily make wheat cheaper at her ports for more than another year, so that these conflicting elements are pretty evenly balanced."

——HON. H. C. ADAMS: "It is of no direct benefit to me that you should believe a word I say, as to how cheaply I can make cream with a Jersey cow by soiling her, or how cheaply I can grow strawberries per bushel Simply as a selfish individual, I might hope you would not believe a word I say—my market would be more sure than to have you as competitors."

——N. Y. HERALD: "It is with farming as with all else. It is better not to bite off more than you can chew."

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Miscellaneous Advertising.

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THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, JULY 20, 1889.

SPECIAL NOTICE.

IN reply to inquiries we may state that the lower portion of the flowers of the potato R. N.-Y. No. 2 is purple. This purplish color covers about *half* the corolla. The outer portion is nearly white. This variety *never bears white* flowers. The stems also are, here and there, *tinted* with purple. They are long-jointed and do not branch as freely as most other varieties

THAT it will not pay to bag grape flowers or buds is the conclusion the R. N.-Y. arrives at from the trials made this season. Most of the bud or flower racemes so bagged failed to set fruit.

IN its account of the system of farming employed near Cranbury, New Jersey, the R. N.-Y. gave the number of head of stock kept by the different farmers. By way of comparison, we would like to have farmers in other parts of the country tell us how many head of stock they keep. Tell us the number of acres and then the number of cattle, horses and sheep. This will make a very interesting comparison.

Two more of the R. N.-Y.'s hybrids between the raspberry and blackberry are bearing fruit. One plant shows in the leaves and stems a resemblance to both parents. The berries, which consist of from one to five or six drupelets resembling those of the blackberry, have yet a decided raspberry flavor. There is not a perfect berry on the plant The other hybrid has large, peculiar foliage different from that of any other raspberry, yet of the raspberry type. It bears yellow fruit about the size of Golden Queen, and of good quality.

THE Umbrella Pine (Sciadopitys verticillata) is bound to become a most popular evergreen tree wherever it will succeed. Why? Because it is exceedingly hardy, exceedingly distinct. It is just as different from other hardy conifers as is the Common Hemlock from the Norway Spruce. It is a slow grower in early life, but each succeeding year the growth increases. Our only specimen is now about 10 years old from the nursery. It is but four feet high, and when we say that it has grown this season 11 inches, its slow growth of preceding years will be understood.

YESTERDAY was a bad day for trusts on the Stock Exchange of this city. Speculators had been investing in trust certificates without knowledge as to the number of such certificates that had been issued. Of course, the value of the securities depended largely on the number on the market. On Thursday five of the trusts are reported to have made a statement on the matter, and though the shadow of doubt has been cast on the truth of this, the vastness of the capitalization given, so frightened investors that there was a stampede to sell out, prices tumbled, and the end is not yet.

WHY not sell live poultry now? When the hens begin to stop laying is the time to get rid of them. Live poultry will bring more money now than at Thanksgiving or Christmas. Consult any year's market record and see if this is not so. The R. N.-Y. believes that 60 per cent. of the people who send live poultry to this market lose the price of the feed given after August. The same thing occurs every year. There is always a glut at the holidays, always dissatisfaction, always loss. Send the poultry now. After they stop laying they will be loafers anyway. Who wants to support loafers?

QUESTIONS involving the rights of railroads and the rights of the public are being discussed with interest just now. Have the railroads any business to encourage law-breaking and ruffianism? The recent brutal prize-fight was rendered possible by the action of the management of the Queen and Crescent Railroad. In the face of the proclamation of the Governor of Mississippi, the fighters and the thugs that followed them were carried into Mississippi and out again, every effort being made by the railroad employés to dodge the authorities and prevent arrests. The R. N.-Y. wants to know why such action does not constitute a punishable offence.

The R. N.-Y. learns of a "Lamb Club" formed by a party of Tennessee sheep men for the purpose of breeding and selling spring lambs to the best advantage. The lambs are sent to the New York market, great pains being taken to secure the best possible specimens as well as to ship them in good condition. By combining and concentrating their business, the members of the club are enabled to secure lowest rates of transportation and to present lambs of uniform grade. Thus far, as we are informed, this club has been quite successful. We know of manufacturers of maple sugar, honey and butter who have done business on much the same principle and in every case with success. There is a lesson here for other neighborly communities.

SHOULD the White Lead Trust succeed in its endeavors to buy or force out all the manufacturers of white lead in the country, paint will be effectually cornered by trusts; for the production of linseed oil has been controlled by one for two years. Marvelous is the precision with which these monopolies pounce upon articles of prime necessity as subjects for extortion and plunder. There's a growing belief that ere long the people, in sheer self-defense, will throw open our markets to the world's competition in products controlled by trusts. The duty on white lead averages 40 per cent.; that on linseed oil, 55 per cent. How unsatiable must be the greed of the combination that seeks to levy an exorbitant tribute from all who use paint, seeing that it is not satisfied with such a margin as that beyond the cost of production and a reasonable profit to outsiders!

THE R. N.-Y. learns of a difference between a Grange in New York State and the Director of the Geneva Experiment Station. One of the conditions to be observed in sending samples of fertilizers to the station for analysis is that the package must be labeled plainly with a copy of the printing upon the bag; that is, a copy of the manufacturer's claimed analysis must be sent. As we understand the matter, the Master of the Grange wanted the station to analyze a sample of fertilizer, but refused to send a copy of the claimed analysis. He proposed to deposit it with a Justice of the Peace and send it to the station after the station's analysis had been rendered. Dr. Collier refused to make the analysis, unless the Grange would comply with the regular conditions. We are not told why the Grange would not forward the claimed analysis. We would like to know why not.

THE R. N.-Y. experimented last fall with buying live pullets in the New York market to serve as winter layers. The purchase was based upon the theory that chickens can be reared in Central New York, shipped to this city and sold at a slight profit for less than it costs in our neighborhood to rear them. This is probably true. We bought some pullets for 35 cents each, that we could hardly have raised for less than 45 cents. The risk came in the impossibility of determining anything about the laying qualities of the pullets. Several of those we bought died soon after bringing them home; one proved the best layer in the yard, while at least half of them did not begin to pay for their keeping. On the whole, the experiment did not pay. This year we put our best layers in a pen by themselves with a fine Dorking rooster, and used the eggs from this pen for setting. We believe this will give far better satisfaction.

THE trade in dressed beef is driving beef cattle away from Eastern farms. What are farmers to do for live stock? Many of them are increasing the size of their dairy herds, but this increase will not go beyond a certain limit. Already we find farmers who prophesy that within five years the dairy business will be entirely overdone. The R. N.-Y. does not believe that good butter will ever go begging for a market. The poorer grades will undoubtedly have to do so. But what we want to say is that many farmers are afraid of dairying and want some sort of live stock besides dairy cows. And the latest plan is to revive horse breeding at the East. In many localities near our large cities, horse raising is almost a lost art. One must travel miles before finding a good stallion. There is a good demand for well-bred coachers and roadsters, particularly for matched pairs. Will such stock take the place of cattle on Eastern farms? We would like to have our readers tell us what they think about it.

Two weeks ago, page 445, the R. N.-Y. called attention to a new method for estimating fat in milk, devised by Mr. Parsons of the New Hampshire Experiment Station. In this notice it was stated that the method depended on a table of figures and also that it was quite similar to the method devised by Prof. Short. On a careful examination, the R. N.-Y. finds that these statements are hardly fair. The table of figures was printed simply for convenience. A formula such as is used in the Short's method, could be used if desired. The method is quite distinct from Short's and appears to have the merit of making a more complete separation, of the butter fat. In fact, the method seems well adapted to the use of creameries or large dairies. Mr. T. A. Hazen, manager of a Vermont creamery, writes us that he has used the method in two testings of the milk furnished by the patrons of his creamery, and is well pleased with it, as it gives better results than either the lactocrite or the oil-test churn, both of which were previously used.

The Canadian Government, through its savings banks, is paying four per cent. interest on deposits. Indeed, owing to the expenses incurred by advertising the business and paying commissions to postmasters, the rate, it is estimated, averages, 4.1 per cent. The Government began to pay this rate at a time when other banks were paying as high as five per cent. Since that time the rate of interest all over the world has moved down; but the Dominion savings banks have failed to respond to the movement. Thus the government banks have become competitors with other banks, and the natural effect has been to keep the interest rates above the natural level. The depositors in the savings banks are gainers by this condition of affairs; but the debtors of the Dominion and those who want to borrow money are losers, as they have to pay a higher rate of interest on loans. Farmers are, for the most part, among the latter class, and the policy of the Government in this line is therefore against their interests. The chief attraction which should be offered by the government savings system should be the government guarantee of the security of the deposits, and in no case should the rate of interest on them be higher than that paid by private institutions.

TARIFF THOUGHTS.

SOME of the figures relating to the trade in tropical fruits are worth repeating here. In 1880 we imported fruits as follows:

Dutiable.	$15,106,551
Free of Duty	5,774,847
Total	$20,881,398

The total value of the orchard products of this country for 1880 was $50,876,154. Of course, the value of these products for 1888 or for 1889 is greater than that of 1880, still it seems evident that we depend too much upon other countries for our fruit supply. The development of Florida orange groves will doubtless result in cutting down our orange bill, and California certainly ought to be able to supply us with more of our raisins.

The discussion of "A Tariff on Bananas" which we give in this issue, strikes the R. N.-Y. as being very fair. The men who discuss the matter are vitally interested, as most of them depend upon the sale of fruits for a good share of their living. The R. N.-Y. would like to give figures showing the quantities of strawberries produced, and the prices paid for them during the years when the tariff on bananas was in force. Such figures are not obtainable. The pith of the matter seems to be that the American people like bananas. Even those who grow their own small fruits, buy and eat the foreign fruit. We cannot supply the trade on our own soil. When bananas are plentiful and cheap the public naturally demands a low price for other fruits. What then are we to do?

HEMP.

LAST year raw foreign hemp to the value of $1,791,941, was imported into this country, against $847,449 worth in 1887. In addition to this, $73,362 worth of hemp tow was imported, against $119,125 worth during the previous year. The duty on raw hemp is $25 per ton; that on hemp tow, $10 per ton. Hemp yarn or twine to the value of $77,990 was imported, against $62,316 worth the previous year. The duty on this is 35 per cent. There was also imported several million dollars' worth of manufactured fabrics consisting wholly or partly of hemp.

In 1879, the year included in the last census, only 5,025 tons of hemp were produced in the United States, against 12,746 tons in 1869. Of the total, 4,583 tons were produced in Kentucky, 209 in Missouri, 78 in Michigan, 72 in Kansas, 20 in Minnesota and two in North Carolina. Lately the growing of Kentucky hemp has been attempted by about 30 farmers in Rensselaer and Washington Counties, New York, where the plants grow to a hight of six to eight feet. The producers say the crop brings in $50 an acre and that the success of the experiment will probably make hemp a staple product of that section. Why is it not grown more extensively in this country? Surely with the protection afforded by the tariff, all we need of the raw material at any rate, ought to be produced at home. Twenty years ago Ohio and Indiana ranked next to Kentucky as hemp-producers, while in 1879 not a pound was raised in either. If hemp raising were tried in many other sections of the country, it would doubtless be found that the crop would thrive as profitably as it appears to do in Central New York.

BREVITIES.

THE R. N. Y. has just planted an acre of fodder corn on oats sod.

DAIRYMEN seem to be settling upon corn silage and clover hay as an excellent bulk ration for dairy cows.

THE HILBORN, as to size and quality of the berry, is the best blackcap at present on trial at the Rural Grounds.

THE R. N.-Y. has a fine field of fodder corn—Thoroughbred Flint. This variety has remarkable suckering qualities and will evidently make magnificent fodder.

WOULD you rid your lawn of plantain? Wait until after a *heavy* rain. Then gather all the leaves of the plantain, taking a hold as near the "crown" as possible. Pull steadily and, in nine cases out of 10, the roots will come up entire. The R. N.-Y. speaks from experience.

MR. F. D. DOUGLAS, president of the Vermont Dairymen's Association and one of the best dairymen in the country, is to write us a series of articles on dairying. Mr. Douglas writes: "I am much pleased with the R. N.-Y. and prefer to write for it rather than for any other agricultural paper."

THE advantages of working a hill farm are most evident in such a season as this has been. Corn on the low lands of the N. J. Farm is poor and sickly owing to too much wet. On the uplands where the soil is warm and dry, the stand is excellent. Give us a dry season and the conditions would be almost reversed. It is hard work to climb the hill, but a sight of this year's crop fully repays one for the journey.

PRIOR to this season the R. N.-Y. has never met with much success in raising Tea Roses out-of-doors, for the reason that they were never properly treated. This year a round bed, 25 feet in diameter, was well enriched with old horse and hen manure, deeply spaded and leveled. In this about 100 Teas, for the most part yellows, were planted, strong, pot-plants having been ordered from the Storrs, Harrison Company, Ellwanger & Barry, Robert Scott & Son, J. N. May, and Peter Henderson, and transplanted about the 20th of May. Well-rooted, stocky plants of this kind soon adapt themselves to the change and in such rich, mellow soil will soon begin to bloom. If little, cheap plants are ordered by mail, they do not begin growth until midsummer and then flowers are few and small. During very dry weather, the bed must be drenched with water occasionally if we would have large, perfect buds and flowers. Insects are readily held in check if the plants are kept in a vigorous growing condition. A little hellebore and pyrethrum water sprayed upon them from time to time is all that is required. Among the roses blooming at this time freely, the following (yellow or nearly so) may be mentioned as the most charming: Perle, Comtesse de Frigneuse, Mad. Jos. Godier (China), Marie Van Houtte, Mme. Welche, Namenlose Schone, Isabella Sprunt, Caroline Custer and Sunset. But if, at this time we were to choose but one, it would be Perle.

Educational.

THE AGRICULTURAL COLLEGES.

PROFESSOR PORTER'S REPLY.

I OUGHT to feel flattered by the abundant attention which has been given to my article published a few weeks since and, doubtless in common with other readers of the RURAL, I have been much interested in the communications of the eminent gentlemen who are connected with the agricultural colleges.

Director Thorne, of the Ohio Agricultural College, believes that the intellectual progress of the age should not stop at the gates of agriculture. I agree with the sentiment fully. Indeed I go further, and believe not only in intellect for agriculture, but more especially in intellect for agriculturists, since the latter implies the former and much more besides. It is true that colleges do not make lawyers and doctors, but there is more need of "bringing together student and teacher and illustrative material" in a college class-room in the case of these than in the case of young men who desire to become farmers. To suppose that there is not, would be a "fallacy." It may be a fallacy to suppose that a college can do much to make a farmer anyway. When the graduates of the agricultural colleges are seen to beat other farmers in the same field and under the same circumstances, and to do this uniformly and unmistakably, there will be no need to vindicate or defend these colleges. But when, instead, some of the graduates withdraw from the field altogether, and others fail to distinguish themselves in a manner commensurate with the advantages they are supposed to have enjoyed, then, surely, some explanation is in order. Director Thorne admits that the agricultural colleges, with some exceptions, "have most lamentably failed to do their legitimate work." I did not think of making so sweeping and serious an accusation as this. But perhaps here my lack of experience is at fault; for I must admit that I have never made an actual investigation into the practical working of these colleges I have simply examined the reports of managers and the courses of study as published in the catalogues, to get what they were *trying* to do; and giving them the credit of success thus far, I have made my criticisms entirely on *a priori* grounds, not being able to see that it would amount to much in the direction of practical agriculture if they succeeded in doing all they were attempting to do.

Director Thorne seems to think the managers of the agricultural colleges are men of too much general culture and teach too much besides farming and connected sciences. He would get the colleges out of what he terms "the ruts of scholasticism," believing that farmers and farmers' sons are not to be caught by the chaff of classical learning. He here raises the old question between different courses of study, upon the discussion of which it is not necessary to enter here. But his position seems to involve the possible "fallacy" of supposing that you can teach or learn in a college much that has a direct bearing on practical agriculture which you cannot learn better and more easily in another way. This fallacy will not become a "folly" unless it is persisted in against reason and experience.

Dr. Beal, of the Michigan Agricultural College, says the leading thought of our best agricultural teachers is to make better and broader men while also training them for the farm; and he finely remarks that the man is more important than the farm, and that we cannot count a man as a successful farmer unless he is a success as a man, with all of which I heartily agree. In fact, I find myself at difference with Dr. Beal only on two points: first, on the question whether the agricultural colleges, as at present conducted, have a tendency to take boys away from the farm, and then in reference to the proposed winter education of farmers' boys. Now, without having any statistics at hand from which to form an estimate, and judging simply from my own observation, I am decidedly of the opinion that more than one-quarter, or even than one-half of the young men who study law become lawyers, and I might say the same of those who study medicine or engineering.

In reference to the second point of difference, Dr Beal apparently mistakes my proposition, perhaps owing to a slight, but unfortunate typographical error. I would not turn the agricultural colleges into academies, but would have them colleges still, and keep them at least up to their present grade. I would have a *college course* of winter terms, with the studies of each year rising above those of the previous year in regular order, so that at the end, the student would have finished a four years' course of study. I would do this because of the great economy both of time and money it would render possible. Dr. Beal is doubtless aware that less than 200 days of study are included in the usual college year, about 120 days besides Sundays being devoted to holidays and vacations. A winter term could be arranged so as to give 140 days of study, or about three-fourths of the present college year, leaving the summer entire for work on the farm.

I cannot think that I have made the mistake in estimating the expense of such a course of study which Dr. Beal supposes. Any capable young man brought up on the farm, can earn an average of $20 a month for six months. There are $120 for his labor during the summer. Board in the college need not cost more than three to five dollars a week, that is, $75 to $120 for 24 weeks. Any one can see that the question of expense would not be serious in case of any capable young man who desired in this way to acquire a liberal education even if he were entirely dependent, as he generally would not be, upon his own exertions. A few could doubtless obtain situations as teachers and earn more during the winter; but probably not more than a quarter as many, as in most parts of the country there are already ten applications for every vacancy in teaching. It is also more manly to take your even chance where there is room for all. Besides, the man who studies in summer and teaches in winter will never be likely to do much on the farm.

It will be observed that nothing is here determined with regard to courses of study. It is simply a question of practicable methods. If it is thought that the student will become more of a man by studying agricultural chemistry and bovine anatomy than by taking the usual course of mathematics, languages and natural sciences, there is nothing in the plan proposed to prevent his doing so. We only ask that intelligent farmers' sons in average circumstances, not simply the wealthy, be given a chance to take some course of study in the colleges and universities endowed for their benefit—a privilege from which they are at present precluded because the arrangement of college terms is not adapted to their opportunities and necessities.

Professor Budd of the Iowa Agricultural College, will see that here is abundant provision for preliminary courses of study which shall equal those of the German gymnasium for those who shall afterwards desire to pursue special courses in agricultural chemistry or veterinary medicine; for the plan is as available for preparatory and post-graduate courses as for a regular college course. The intelligent farmers' sons of America will study and keep studying long enough to attain any desirable end, if they can be allowed to do so without interrupting their productive industry, and so that the expense of college study will not be absolutely prohibitive, as in most cases it is at present. Among the many experiments to solve the problem of education for farmers' boys as mentioned by Dr. Beal, the one here proposed has never found a place. With better natural facilities for liberal culture than any other of the industrial classes, they are still left behind all the rest.

If Dr. Beal's experience shows that young men drift into the agricultural colleges for the same reasons that they drift into other colleges, then the indication would seem to be that education, not agricultural education especially, but general education, is what they are drifting after. To the same intent is Mr. Collingwood's testimony that "a vast majority of his college mates came to the agricultural colleges because they found they could partly pay their way by work on the college farm." If this is the case, how many more would go to the winter college with its more liberal course of study, and the opportunity to wholly pay their expenses by work on other farms. The work of a young man cannot generally be as remunerative on the college farm as on his father's farm, and the opportunity for work at the college is necessarily limited. Let the boys work in summer when their labor can pay and does pay, and when there is opportunity for all, and then with the proceeds let them attend college in the winter when there is little to be done on the farm, and when half of them can be spared as well as not.

Now, suppose that a young man wants to become a competent agriculturist in any of the branches of agriculture; suppose, for example, that he wants to learn market gardening, a branch which has no proper illustration on his father's farm; what shall we do with him? Shall we send him to an agricultural college to study botany and bovine anatomy and kindred sciences for three or four years? or shall we send him for a part of one year to a farm school where he can see the whole thing illustrated, and learn it all by assisting in doing it? If he be a bright young man he will learn the whole business in a single season. It will cost him nothing but his time, for his work will pay his expenses, and he will know how to do the same thing on his father's farm, or his own the next year. He will also learn much about other branches of agriculture, for they will be carried on at the school, and he will have abundant opportunity to observe and make notes of the various operations and methods; and "one lecture a day by the professor" will explain the reasons and principles of all that is done.

I cannot understand Mr. Collingwood's remark that not a corporal's guard of capable young men would attend such a school. The farmers' sons of the Northern States are intelligent, resolute, self-reliant, and capable of earnest work. They are not snobs and dudes, and have given no occasion for such an estimate of them. Perhaps Mr. Collingwood is laboring under some misapprehension with reference to what is proposed. At least his own testimony, as cited above, seems to contradict his opinion.

Since the above was written I have read President Chamberlain's interesting papers, and will notice briefly some of the points which he makes. I do not clearly perceive the distinction he draws between the "college idea" and the "agricultural college idea." A college, as I understand it, is a place where young men go to study for the purpose of general culture or to acquire professional or technical knowledge. Agriculture is learned not so much by the study of books as in other ways. We want the farm school, the experiment station and the agricultural newspaper for that. The three-term or the all-year college, whether agricultural or not, so far as I can judge, takes young men away from the farm. It makes them ministers, lawyers, doctors, teachers, engineers, veterinarians, and professors of chemistry, botany, entomology, etc. So far it is all right. We do not want to keep all the boys on the farm. In our past history, the farm has furnished many of our ablest professional men, legislators and statesmen, and it ought to furnish a no less proportion in the future. There is no place like the farm to give a boy a good "send-off" towards capable manhood, whatever occupation or profession he may choose to pursue.

Now, we want all of these professional men that there is room for, but we do not want any more; and an agricultural college would be doing a very small business if it only furnished veterinarians for its own State and professors for the experiment station of the State. Whether these few professionals are to get ther education in a so-called agricultural college or in a university proper, is not a very serious question. But the question where the hundreds of thousands who are to stay upon the farm are to get their education, and especially the question whether they are to have any chance for liberal culture or not, is very serious. This problem the agricultural colleges and State universities have not helped us to solve so much as they might and ought.

Those who are to stay upon the farm should have the opportunity of education in such form as not to interrupt the continuity of their industrial home life, or slacken their interest in it, or cut off the means of support derived from it. I believe there is nothing which so well answers all the conditions of the problem as the winter college to alternate with the summer farm school. Therefore I say, turn the agricultural colleges into schools of general culture where the sons of farmers can pursue any desirable course of study during the leisure months of winter with great economy of time and at very small expense.

I confess I was not aware of the iniquity lurking in this proposal as involving an unfaithful dispensation of trust funds until President Chamberlain pointed it out. But I should doubtless, at the present moment, be overwhelmed with confusion and mortification in view of it, had not a thought occurred to me which has afforded me considerable relief. Fortunately the testator in this case is not dead, but is still of sound and disposing mind and memory, fully competent to change the conditions of the trust. And doubtless upon the representation of any State that the great purpose of the grant, namely, "the liberal and practical education of the industrial classes" would be best promoted by a larger liberty in the dispensation of the funds, permission to make any desirable change could be easily secured from the national government.

But let us consider for a moment what is meant by the language of the grant as it now stands. Among the "branches of learning related to agriculture" which it must be "the leading object to teach," may be mentioned chemistry, botany and veterinary medicine. The relation of these and of most other "*branches of learning*" to practical agriculture is very remote; and to suppose that any farmer or any farmer's son could afford to spend three or four years' time and some hundreds of dollars in money to learn them merely because of their practical relation to his business, would be nothing less than a "fallacy." But it seems to me that the terms of the grant would be liberally fulfilled if the college develops these sciences in their relation to agriculture so far as they have such a relation, and holds itself ready to teach them so far as such instruction is called for. In this way we should get our veterinarians and professors of agricultural chemistry, botany, etc., and for my own part I do not see why these sciences may not be developed and taught in connection with a large and well equipped university as well as in a special and separate college. But in either case the great object of the grant "the liberal and practical education of the industrial classes" will remain unfulfilled.

President Chamberlain adds his emphatic testimony to that of the other gentlemen to the effect that the young men who go to the agricultural colleges of the West, go for general culture, and in many instances will not take the so-called agricultural studies at all unless they are compelled to do so. And in this connection I may as well admit that, as suggested by President Chamberlain, I had a very inadequate conception of the difficulties under which some of the agricultural colleges are laboring. If he and his coadjutors are trying to teach stock-raising, bovine anatomy and agricultural chemistry to classes who are unwilling to learn them, they are surely undertaking a very difficult task indeed. And if they feel impelled to this attempt through a sense of obligation to a literal fulfillment of the terms of the land grant, I think they would do well to apply to the State legislature and Congress for relief.

The testimony which President Chamberlain gives as to the strong feeling of farmers and their sons in favor of liberal culture, does not seem to me to warrant the confidence with which he predicts that the old and tried courses of study will fall from the position they have so long and honorably held.

At the close of his first paper President Chamberlain proposes to me a dilemma in the form of a syllogism. I beg leave to amend the syllogism. I would state it as follows:

All occupations, whether industrial or professional, are equally dependent upon such knowledge as can best be acquired in a college class-room, or in the lecture hall of a university.

Agriculture is an industrial occupation.

Therefore, it is as important to send a boy to college to learn farming, as it would be to send his brother to college to learn law, or medicine, or theology.

I most emphatically deny the major premise. From what President Chamberlain says in his last paper of the equal importance of a knowledge of underlying principles in agriculture, and in law, medicine and divinity, I should almost expect he would affirm it. At any rate the syllogism in its present form will serve to illustrate the difference in our respective positions.

President Chamberlain's objections to the methods I have proposed do not seem to require an extended reply. It will be seen that in the plan of a summer farm school for "practical education" to alternate with the winter college for "liberal education," there would be abundant opportunity to teach botany and entomology so far as they have any relation to practical agriculture, with the use of insecticides, spraying trees, etc.

President Chamberlain objects to paying the young men for their work. I think that every State in the Union, every Northern State at least, is abundantly able to carry on a farm school at which every branch of agriculture would be properly illustrated. If the young men simply look on they should of course not be paid. But if they take the places of the workmen five hours a day, as proposed, thereby saving so much to the State, I see no reason why they should not be paid as other men would be for performing the same labor. They would earn better by assisting regularly at the work, and would acquire that deftness of hand which President Chamberlain complains that they lack; and the product of the farm should pay for the labor performed upon it, whether by students or others.

So notwithstanding the arguments and objections so ably stated by the distinguished gentlemen who have done me the honor to notice my previous article, I still think we ought to give our farmers' boys the winter college for the opportunity of general culture, the "liberal education" of the grant, and the summer farm school for instruction in practical agriculture, adapting the two institutions, or the two parts of the same institutions to each other as best we may.

New Haven County, Conn.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

WHIPPED CREAM is one of our favorite summer sauces; we eat it with all sorts of fruit and fruit puddings. It is very easily whipped, so as to be quite stiff, and may then be flavored. If the cream is either too poor or too rich it cannot be whipped properly; in the former case it will not stiffen, and in the latter it turns to butter. We whip ours up with a Dover egg-beater.

* * *

WHIPPED or clotted cream with bread and honey is a dainty approved by many old country people. Thunder and lightning is the old Cornish name for this dainty. Clotted cream is a Devonshire dish, made by standing the vessel of milk on the stove, after the cream is risen, and letting it scald, without coming to a boil. When the cream begins to wrinkle the pan is removed; when cold the cream is skimmed off, making thick clots. It is advisable to stand the pan in another, containing water; otherwise it is liable to burn, and this flavors the cream.

SENSIBLE TROUSSEAUX.

EVERY GIRL who expects to become a bride—and we all expect it, with more or less certainty—feels an interest in the preparations for that important change, and yet it is a matter concerning which we can get little definite information. Even the simplest trousseaux we see described often exceed the allowances of many girls; for example, a recent article on this subject gave the disposal of $210; this sum was chiefly laid out in outside clothes, the underwear being excessively meager, while there was no allowance whatever for household linen. The sum quoted would seem pitiful indeed to Miss Flora Mac Flimsey, but plenty of girls accustomed to both comfort and refinement are compelled to content themselves with a similar amount. The outfit is not shabby, either, but they must give the "must-haves" preference over the "may-wants." The possession of a certain stock of household linen is imperative—very often the lack of this causes the prospective bride to decide upon boarding, a very unsatisfactory substitute for home life, save in exceptional cases.

To begin at the beginning: a girl without means of her own—that is to say, one who has no marriage portion, who marries a young man on a moderate salary—has no right to wear an elaborate wedding gown, with veil and accompaniments. It is out of keeping with her circumstances, although many girls forget this. If the wedding takes place in the summer she may wear a pretty white muslin gown, and the quaint Directoire modes are very bride-like in this simple material, but in the winter, when a white gown means either silk or wool with expensive trimming, it cannot be recommended for an economical trousseau. Simplicity is best, and more befitting to the sacramental rite which is so often turned into a purely secular festivity. A morning wedding obviates this apparent necessity for a white gown, and the bride may then wear her best cloth, which will be called a traveling gown.

If our moderately circumstanced bride can afford two good cloth dresses and one silk, she may surely get along with what she already has in her wardrobe. She should try to have a dozen of all-muslin under-garments; if she has more they will only become yellow in her drawers, and she should have half a dozen each of summer and winter flannels. Three flannel petticoats, two heavy and one light, one flannel dressing sacque, and one of muslin. Coverings for hands and feet must not be forgotten, and get all these things before investing in tea gowns and all such. For the same moderate trousseau get one dozen sheets, one dozen pillow-slips, six table-cloths, two dozen napkins, two dozen chamber towels, two dozen kitchen towels, two bed-spreads (Marseilles) two pairs of blankets, and as many quilts and comfortables as money or industry will procure. A further article will give more details of this "setting out."

COTTAGE MAID.

WHAT TO READ IN SUMMER TIME.

OLIVE F. DANA.

WHY should we think that we can read only stories, and the lightest of them at that, in summer time? And who was the wise man who said he would fain match his book with the season and the weather? These thoughts come as I think of books for summer reading. To the first I am conscious that exceptions may be taken. Some of us do improve our mid-summer leisure with other reading than fiction. And, moreover, there seems to be no good reason why that very ample leisure should not itself be the warrant and opportunity for other books, to be perused leisurely and remembered long and pleasantly.

To the second query, too, I object, in the sense of differing on the ground there is charm and force in contrast. Yet there are some books which savor so strongly of summer fields, and suggest so unmistakably birds and bees and blooms, upland pastures and shady brooksides, that one turns instinctively to them as the bright out-door world opens its doors again. First and foremost among such books are the works of John Burroughs. I don't wonder that the "Journal of Education" has in its editorial columns a plea that teachers and others should learn to "read, know and love him." This genial editor himself notably observant and appreciative, enthusiastically says that "John Burroughs is the one American of to-day whom the schools should know and teach appreciatively and critically. He is the one man who balances science and literature, nature and human nature, fields, forest and studio." And again, "He tells us what we might have known ourselves, and we wonder why we did not see it or tell of it." This last is emphatically true. There are a great host who need no introduction to Mr. Burroughs as an author; there are doubtless many more who may thank the giver of the advice alluded to, learning the value of the books to which it would fain lead them.

And following the principle of contraries, I would recommend not only "Pepacton," "Wake Robin," "Locusts and Wild Honey," and "Signs and Seasons," with the rest of his comely and inviting volumes, but his latest also, which is of "Indoor Studies," and has therefore a more pronounced literary flavor than its predecessors. It seems to me that most readers enjoy Mr. Burroughs most when he discourses on out-door topics. Yet his vision is keen, as well as wide in its range, and the critical instinct is strong and the critical faculty exceptionally well developed in him. And these essays are full of interest, often of a near and very human sort. Especially interesting is the last, an autobiographical, which he names "an egotistical chapter."

Many will regret that this otherwise delightful volume contains that utterance of his, "An Open Door," which is in its spirit and substance so alive to the Christian faith, and wonder again at the belief or unbelief which made such a production possible, which seems, also so unlike the usual animus of Mr. Burroughs's writings. This aside, the book is, like all his works, wonderfully fresh, sane, sound, sensible, entertaining, instructive.

Another book especially fit for summer-time is "Emerson in Concord." It depicts the poet and the author as he appeared and was at home—as father and friend, neighbor and townsman, and so is full of unique interest, and is thought-provoking, as indeed every echo of Emerson's self must be. There was such a solid sub-stratum of reality about the man, and, underlying his most ideal utterances, such a permeating leaven of sense in his most poetic moods and loftiest flights, that every emanation from him is wont to be of an invigorating character. And if we sometimes dissent from his conclusions, opinions, convictions, we have been maybe led only to establish our own on surer basis. The motto at the beginning of the volume, taken from Mr. Emerson's own journal, will bear repetition: "I want to tell you something, gentlemen. Eternity is very long. Opportunity is a very little portion of it, but worth the whole of it. If God gave me my choice of the whole planet or my little farm, I should certainly take my farm."

What a boon to book-loving, impecunious people is the public library! How much comfort comes out of it, and what a large income of profit and pleasure returns from the dollar or two we spend in yearly fees! Let me hope that every RURAL reader has such a privilege and improves it.

OUTINGS IN NEW ENGLAND.

XIII.

MARY WAGER-FISHER.

OUR third summer outing in New England, was again at Marblehead Neck, but only the laddie was with me, Anaximander having gone on a business trip to the North Pacific coast. I went with a good deal of hesitation to that rock-bound place, because of the lad's fondness for rocks and water, and fear of a thousand possible accidents, not one of which happened, uselessly afflicted my worrying capacity. To go out in a dory, to swim, to forage around in the rocks for crabs, to wade out in the sea for star-fishes, to fish and fill the pockets of his knickerbockers with what he caught and forget all about them until next day, or bring them home in his hat, to build on the rocks bonfires of drift wood and roast all heard of and unheard of sea denizens, and eat them, to come in every other day soaking-wet from neck to heels, to have rows of stockings, shoes and trousers always hung up for drying, to buy a new pair of rubber-soled shoes once a week regularly for the busy little feet, formed a large part of my occupation for those six weeks of bliss—for the boy! He had all his bottles of alcohol filled with "specimens," he knew every nook and cranny of those magnificent rocks, knew when the tide would ebb and flow, and so increased his natural passion for boat building, that his den at home has long been dubbed the "Navy-yard." A party of young women from Vassar College, interested in marine studies, were often to be seen out in the water, in bathing suits, and with their trained eyes, were always finding strange and wonderful things, that others did not see. One of them had in her room a coral plant which she had secured a year previous in the water at Nantucket, and it was still alive and thriving. She kept it in a glass turreen in sea water, and fed it upon bits of shredded barnacle, and it was curious to see the tentacles open to take in the food. Its growth was accomplished by putting forth buds.

The veins of greenstone in the porphyry rocks being of a softer texture, had been so acted upon by the beating of the surf as to be worn away in some exposed places inland, to the distance of several yards. When the surf was fine the water would rush in these narrow passageways with great force, throwing the spray up to a great hight. These fissures go by various names—the "churn" being a favorite one. When the surf was fine, the great rocks would be covered with people watching the grand sight, and there is nothing monotonous in the sight of a rough sea. To paint the water in action is the despair of many artists, and I remember one young woman who declared to me one day in accents of despair: "I *cawn't* get it! I cawn't get it!" But she continued persistently to work at it, for I often saw her afterward, working away in the shade of her long-handled, white umbrella, which she planted directly on the beach.

The light-house and the light-house keeper's dog, a *true* Newfoundland as he declared, were always objects of interest, the lantern on the light-house being invariably run up at a certain hour. The dog was long in body, very short in the legs, and bore no resemblance to what commonly passes for a Newfoundland canine.

Another point of romantic interest was the Fountain Inn well, where one could get a drink of water. Agnes Surriage, a very pretty girl, was employed as a servant in the Fountain Inn in 1742, and one of the guests at the Inn, a young English Baronet named Frankland—then Collector of the port at Boston—saw her and became deeply interested in her. She was sweet 16 and barefoot; he gave her money to buy shoes and, later on, took her to Boston and educated her. She seems to have lived with him after that in an illegal way, and went with him a dozen years later to Lisbon, in Portugal, and was there at the time of the great earthquake. Frankland, who was out riding with a lady, was buried in the ruins of falling buildings. Agnes began a search for him, and hearing his voice, at once tried to rescue him. She raised stones and timbers off him with her own hands, working like a demon in his behalf, and finally liberated him. The man, then touched by her faithful devotion which had saved his life, married her and presented her to his friends in England as his wife, the Lady Agnes Frankland. So the story runs, and it has been used as the basis of a novel, called "Agnes Surriage."

Two or three times we went to Salem—the horse-car fare, a distance of 3½ miles, being but seven cents, and a charming ride through the country fields. It is now a city of 30,000 inhabitants, and a very pretty one. It has one of the most interesting museums, called the "East India," in the country. The merchantmen of Salem in olden times brought back from the East exceedingly beautiful things, including the utensils used by the Orientals in their work, and these have been brought together, with a multitude of other curios, forming a unique and extraordinary collection. Not far from this museum is the house where Hawthorne lived—a plain, brown wooden house, directly on the street. Was *ever* a gifted man or woman born in a fine house? Of course, one associates witchcraft with Salem, and we went one day to the Court-house to see the witchcraft papers, which contain full reports of the trials of the accused. The original documents are difficult to read, but very amusing because of the spelling. These papers have all been copied in a legible clerkly hand, and both copies were placed at our service. I looked over the testimony relative to two or three of the accused—especially that of Rebecca Nourse—and more senseless, worthless "testimony" it would be impossible to imagine. And yet, evidently, the various witnesses related what they believed to be the truth!

Such is the amazing power of superstition upon ignorant minds. It seems strange to-day, that there was not enough common sense, and common every-day bravery and penetration to have rescued the victims of that "strange delusion," and I felt astounded that day, more than ever before, that human beings were put to death on such paltry stuff as was offered by the witchcraft witnesses. The house in which Rebecca Nourse lived at the time of her accusation is still standing, and it is nearly 200 years since she was hanged. The frame of the house is of solid oak and the rooms are small and low-studded. Her body was brought home after the execution in the night, and on the following night it was buried in the family burial plot nearby. Four years ago her decendants erected a monument over her grave. On the front is this inscription:

REBECCA NOURSE.

YARMOUTH, ENGLAND.

1621.

SALEM, MASS.

1692.

"Oh, Christian martyr who for truth could die,
When all about thee owned the hideous lie,
The world redeemed from superstitious sway,
Is breathing freer, for thy sake, to-day."—

the lines being by Whittier. We also saw a vial in which were sealed up a dozen round-headed pins called the witches' pins, believed to have been used by the "witches" to torment their victims.

GOLDEN GRAINS.

Happy the man, and happy he alone,
He who can call to-day his own;
He who, secure within, can say,
To-morrow do thy worst, for I have lived to-day.
Be fair or foul, or rain or shine, the joys
I have possessed, in spite of fate are mine.
Not heaven itself on the past has power,
But what has been has been, and I have had my hour. *Dryden*

THE CHRISTIAN UNION says that a courteous man always predisposes people in his favor; he creates everywhere an agreeable impression; makes people willing to serve and anxious to help him. Many a man of very ordinary mental force has achieved striking success in business simply because of the kindliness of his spirit and the courtesy of his manner. Honesty and ability without courtesy lose a good deal of their effectivensss in every-day business life.....

THERE is profound truth in the words of Phillips Brooks, "the only way to flee away from God is to flee into him." The only way to escape the worst sufferings and the deepest anguish of life is to accept the will which is being worked out in us and through us, and co-operate with it.....

AGE resisted means steady growth in artificiality and frivolity; age accepted means deepening experience and widening life. Some one has said, with the deepest wisdom, that the way to get the most out of life is to accept completely each stage of it, to drink to the bottom the cup which youth and maturity and age hold to the lips, and so to take from life all that lies in its hands.....

ONE of the secrets of successful living is the steadiness of aim and the resolution of will by which one bends circumstances or events to the working out of his own purpose; the other great secret of life is hearty, intelligent, and complete submission to its conditions and to all that it brings.....

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria

THE difficult things, if they are inevitable, are the very things which the wise man sets himself to accomplish first of all; the easy things may be done at any time. Submission does not mean, as some of the old anchorites thought, the effacement of self and the surrender of all the joys of natural life; it does mean a deep faith that there is a wisdom higher than ours which has fixed the conditions of our life, and from whose hands come the events which make our history; and that our part is neither to ignore nor to struggle against that which comes to us from the Infinite Wisdom, but to work with instead of against the higher purpose. The prize scholars in the great school of life are not those who evade its lessons, but who learn them the most thoroughly.

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

HOPE.

A GENTLEMAN once said to a little colored boy whom he met by the way:

"Sonny, how old are you?"

"Well," replied the obon youth, "'ef yer gose by wat me muffer says, I'se six yeahs ole; but 'ef yer gose by the fun I'se hed, I'se mos' a hundered."

This is the way we measure our age. The cares and sorrows which come to one add more wrinkles and gray hairs than do the years. My years to some of my readers might seem but few, but when I think of the sorrows which have fallen to my lot, I feel like the little darkey did in regard to his pleasures—almost a hundred. Some time ago while brooding over the past, eating out my very heart in bitterness, my eye fell upon the following lines which were in a paper that had come around a parcel. They seemed to set themselves into my mind and have since helped me over many a rough place. Hoping they may help some one else, I repeat them:

"Has your life a bitter sorrow?
Live it down.
Think about a bright tomorrow,
Live it down.
You will find it never pays
Just to sit, wet-eyed, and gaze
Live it down.

Has your heart some secret trouble?
Live it down.
Useless griefs will make it double.
Live it down.
Do not water it with tears—
Do not feed it with your fears—
Do not nurse it through the years—
Live it down.

Have you made some awful error?
Live it down.
Do not hide your face in terror;
Live it down.
Look the world square in the eyes;
Go ahead as one who tries
To be honored, ere he dies;
Live it down."

How easy it sounds to say "Live it down," but when one thinks of the loved ones lying cold 'neath the sod, is it so easily done? Ah, no! But our grief cannot bring them back—perhaps a loved father, a self-sacrificing mother, a tiny, sweet-faced baby the touch of whose warm little fingers seem almost yet to linger on our breast, a tender lover, or husband—tears are of no avail! We who have given up our loved ones can never forget, but if there are still those living who have a claim upon our hearts, it is unjust to them to spend all our days in weeping. Those who are with us yet, may, before many days go by, pass over beyond, and then we will remember in bitterness what we might have done while they were yet here.

No, we can never forget. In the silent night the loved faces come before our eyes; we see the same old smile, we hear the soft tones, hear the loving words repeated by the dear voices that have been hushed and stilled by death. These are our sacred hours, and then it is that we may weep if we will, but when the day dawns, bringing new duties, we must take up our tasks and do them faithfully, living in hope for the future. We must battle bravely to live down our useless grief and fretting.

"For love of the living we take up our cross,
And strive to be cheerful and brave,
When hopes fondly cherished
Have faded and perished,
And buried our heart in a grave.
For still there are duties for us to perform,
A chance for more generous giving
To those who are left,
And when death has bereft
More closely we cling to the living.

We may feel that there's nothing remains to be done,
That all need for exertion is o'er
When our hands are unclasped
From the dear one's they grasped,
For whom they can labor no more;
But He who sustains in trials like these,
New strength and fresh energy giving,
Provides a swift cure,
And our ills we endure
With patience, for love of the living.

Though deeply our hearts are attached to the dead,
And the past that is always so sweet;
Though the scenes of delight,
So sacred and bright,
Can never their beauty repeat,
Some pleasures in life we can find to enjoy
By comforts and kindnesses giving,
For 'tis true as we know,
That our love we may show
To the dead, by our care of the living."

This is the way we must look at life. When we are very young it seems as if we could not do so, but as we grow older we become more philosophical. If we all give up when Death steals into our homes and robs us of our loved ones, what will become of the world? For is there a home where he comes not? If he has not visited you yet, he will some day. You may be the first one called. Be brave and patient. Do each day what that day brings to be done, then when the messenger does call, you will have no neglected duties to leave behind. DORA HARVEY VROOMAN.

FLORENCE NIGHTINGALE wrote the following to the Band of Hope of the Mayfield Free Church of Edinburg:

"Don't think you can do anything worth doing in a fit of enthusiasm, but train yourselves carefully to any work you are called on to do; and think nothing too small to do carefully, or to train carefully for, that is for the good of your fellow-creatures. For instance, good or bad cooking may make or mar the lives of thousands, and those, too, who are trying to do great things for our race. God sends us real and lasting enthusiasm—that is, the spirit of love and of power, and of a sound mind to carry us through our training and our discipline. It is He dwelling in us. That is His goodness to us."

SOFT SOAP.

HAVING lately read considerable in the RURAL and other farm periodicals on making soft soap, I thought I would give my experience, as it has extended over 40 years of married life and in my girlhood at home we never failed to make our barrel of soap, any more than the "gude mon" failed to put in his spring crops. With one or two exceptions, I have made it in the good old-fashioned way from lye of my own leaching, and shall evermore make it in that way.

We found the same difficulty when using bought lye or potash, that your contributors complain of—that it would not keep. We used Babbitt's extract of lye and while it made nice, white soap it would not keep. In a little while it had a bad odor. Others have used potash with the same results. All the difficulty I ever found in making the old kind (if the ashes are good) is that it will come before the grease is eaten up, if put in the rough, and that necessitates taking the top off and putting the soap away, and then putting back the grease, and adding more lye. But we have obviated that difficulty by never using any grease in the rough. We never put in any more bones, but pick them clean, and then, if we wish, throw them into a low box where the hens can pick them without scattering them around the yard, and where we can gather them up, burn and pulverize for the poultry yard. We keep an old dripping-pan, or spider where it is handy to throw in our scraps of fat meat and the rinds of shoulders and hams, and when it is full enough we put it in the oven and bake until it is crisp and brown. Take out and pour off the fat for soap and break up the refuse for the hens. You will be surprised at the amount of fat that will come out of what you had supposed was already cooked clean. In the same way serve all uncooked scraps of meat or tallow. These and the scraps from lard and tallow rendering are all we use, and the latter being clean and already tried out, can be used without even boiling, if one wishes.

It is true that many farmers in the country do not make their own soap any more, even though they are always wishing they had a few gallons for house cleaning and rough work. They say: "Bar soap is so cheap, and then we do not own a large kettle." It is not a necessity to have a large one, though very convenient. If your keg or barrel for soap is good and strong, put your grease into it, and heat your lye hot and pour it on, stirring it every now and then as you add hot lye. Keep doing so until the lye seems to have eaten up the grease, and the stuff is of the right consistency.

For putting up a leach, we have a frame made three feet long, or more, and two feet wide, and a couple of inches higher at the back than at the front. On this we put a wide board for a large barrel; cut a crease in it outside of the barrel and let the sides come together within a few inches, from which place it should run into a jar or kettle (wood is not fit for that use as it will shrink and fall to pieces afterwards). Bore a few gimlet holes in the lower side of the barrel, set it on the frame and put half a dozen sticks crosswise in the bottom, and on these put a handful of hay or straw. Put a couple of quarts of lime on this, if you have it.

Now put in three or four pailfuls of ashes, pound them down, then add a pail of water, keep on doing so until the barrel is full. Let it stand and soak a couple of days, covered from rain, with a jar under it, or until you are ready to go at it in good earnest. Then keep the ashes covered with water and you will soon have lye enough for your purpose. Watch the jar to prevent the contents from running over and wasting the strongest lye. We always keep our leach standing after soap making so that if at any time we want a weak lye for cleansing purposes we very soon have it by putting on a pail of water. It is nice for hulling corn. Keep the barrel covered, and if at any time the jar gets full from it, throw the contents back into the barrel. A pound of dissolved borax adds a good deal to the bleaching and cleansing qualities of a barrel of soap. It is cheap and will take the place of all fluids and powders for making washing easy and will not in the least injure the clothes. C. R. DAVIS.

GRENADINE is again worn.

FOULARDS are very popular.

MOHAIR (Alpaca) is the goods most used for traveling dresses.

ACCORDEON plaiting is pretty and popular. It is, however, quite expensive and not very lasting.

WHILE the high standing collar is still worn, many dresses are seen cut quite low in the neck and finished with a turned-over plaiting or simple binding A wide linen and lace turned over collar is worn with the last finish.

"Enjoy thy youth, it will not stay,
Enjoy the fragrance of thy prime,
For oh! it is not always May.
Enjoy the spring of Love and Youth,
To some good angel leave the rest;
For Time will teach thee soon the truth—
There are no birds in last year's nest."

Miscellaneous Advertising.

Most Reliable

For all affections requiring a purgative,

Ayer's Pills

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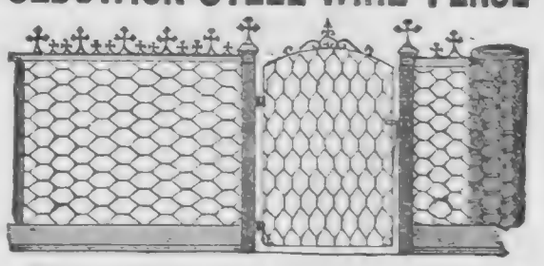

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News of the Week.

HOME NEWS.

SATURDAY, July 13, 1889.

EVER since "trust" certificates have been prominently put on the speculative markets, men have wondered how many certificates had been issued, and what was the amount of their capitalization. On the matter all the trusts were mute. The Stock Exchange here insisted that for the protection of investors, a statement on these points should be made by each of the trusts whose certificates have been on the market. The Exchange possessed similar information with regard to other quoted stocks, and there was no reason why the trusts shouldn't report their standing. After some hesitation, five of them did so last Tuesday. Here are the figures, the amounts of the capitalization being given at par:

NAME OF TRUST.	NUMBER CERTIFICATES.	TOTAL CAPITAL.
Lead.....	830,188	$83 018.800
Sugar.....	498 565	49 856.500
Cotton-oil.....	421,852	42,185,200
Distillers' & Cattle Feeders'.....	307,266	30,726 600
American Cattle....	133,961	13,396,100
Total.....	2,191,832	$219,183,200

As most of them are at a premium, the actual money value of the certificates is considerably more than $219,183,200. The Lead Trust is one of the newest, and less than two months ago its capital was $32.000,000. Since then the monopoly has absorbed six large companies, chiefly in Brooklyn, Philadelphia and St. Louis, and for each of these the managers have issued new certificates and increased their capital stock to a corresponding amount, but it is incredible that they were worth anything near $50.000,000. The general conviction is that at least half the amount is "water" on which the dear public will have to pay heavy money interest. The managers of this trust and those of the Standard Oil Trust, the parent and prototype of all trusts, are the same. The Standard Oil has never applied to the Stock Exchange to have its certificates dealt in, and its affairs are still secrets known only to the managers.....Lately elected Senator W. D. Washburn, of Minneapolis, the most extensive miller in the country next to C. A. Pillsbury, has finally withdrawn from the milling business. He was also largely interested in banking, lumbering, railroading and countless smaller side-issues, like the Minneapolis Stock-Yards Company, and some months ago became temporarily financially embarrassed. Friends came to his aid and he has tided over his troubles with a competency of $500,000, and henceforth will give all his attention to his Senatorial duties..... The Republican New York Legislature, at its last session, passed a demagogic, vote-alluring bill making $2 a day the lowest wages for men working for the State, and Democratic Governor Hill signed it. Correspondingly large appropriations were not made, however, and 500 out of 1,200 hands employed on the canals and large numbers employed in other State works have been discharged, and more will be, because there will be no money to pay them. Much grumbling at the deceptive political boon..... The will of the late Arunah L. Abell editor and proprietor of the Baltimore Sun, gives sums ranging from $300 to $1,000 each to the compositors, reporters and editors of the paper. Peace, oh, peace to his ashes!..... A large cave whose walls are lined with veins of solid silver is reported to have been lately discovered near Hermosa, N. M. "King Solomon's Mines" are nowhere in comparison.....A very fatal type of diphtheria throughout Massachusetts is greatly alarming parents and others..... The capture of the books of the Clan-na-gael has led to the disclosure that 25 members of the notorious camp 20, that tried and condemned Dr. Cronin are on the Chicago police force. Small wonder little progress has been made in discovering the criminals!..... ....Excluding the Pacific railroad bonds of $64,623,512, the interest-bearing debt of the United States is now reduced to less than $830.000,000, with a total annual interest charge of about $41.000,000. On August 31, 1865, the interest-bearing debt stood at the enormous total of $2,381,530,294, with an annual interest charge of over $150,900,000. What a wondrous falling off is there, my countrymen!..... Ex-Beauty Langtry is pretty badly ailing at Long Branch.....Gen. Sherman's eldest son was ordained a Catholic priest by Bishop Ryan of Philadelphia, a week ago.....The compilers of the the New York Directory estimate the population of the city at 1,755,500, on a basis of five to each family, and suppose that 400,000 more who have business in this city but live in Brooklyn, New Jersey, etc., go in and out daily .....The Farmers' Alliance and the various trade-unions of Alabama, which held a demonstration at Birmingham on the Fourth, excluded the colored men. ....There is an organized movement to induce the negroes of the South to emigrate to Oklahoma, where 100,000 are expected by next July. Oh, yes; there'll be a trifle more than standing room for them!..... The Persian Minister at Washington, Hadji Hassein Ghooly Khan, can't see any fun in the jokes attempted by the American press on himself and his august master, the Shah, and is about to leave the country in disgust and anger, amid a paragraphers' chorus of: "Oh, pshaw, Ghooly!" ..... Mr. David Kimball Pearsons, one of the busiest men of Chicago, 69 years old, has given $100,000 to Lake Forest University; $50,000 to Knox; $50,000 to Chicago Theological Seminary; $50,000 to the Presbyterian Seminary; $60,000 to the Presbyterian Hospital; $30,000 to the Young Men's Christian Association, and $20,000 to the Women's Board of Foreign Missions, besides $250.000 in various other ways and in smaller sums. The liberality of such men should be blazoned abroad both as an honor to their generosity and a reproach to the niggardliness of most other rich men..... Tuesday Mr. J. B. Haggin's horse Salvator, won the Lorillard stakes for three-year-olds, at Monmouth Park, near this city: course, 1½ mile; time, 2.37½; value of stakes, $23 450. Salvator is considered king of the three-year-olds, having won, in three weeks, besides the Lorillard stake, the Realization worth $33, 375, and the Tidal worth $7,000, at Sheepshead Bay—a total of $63,825 for his ten-times millionaire owner. "To him that hath shall be given." Haggin's satisfaction must be checked by grave charges made by four of his most prominent competitors of foul play during the race.....The late Simon Cameron's estate is valued at $1,700,000, nearly all of which has been divided among his family..... The President has appointed Horace A. Taylor of Minnesota, Commissioner of Railroads, and Prof. Thomas C. Mendenhall, of Indiana, Superintendent of the Coast Survey—two good appointments..... Shortly after the law was passed providing for a private secretary for each United States Senator at the public cost, Senator Reagan, of Texas, appointed his wife his private secretary. The practice is spreading. T. J. Morgan, the new Commissioner of Indian Affairs, has just appointed his wife his private secretary at a salary of $1 000 a year, and Dr. Dorchester, Superintendent of Indian Schools, has got his wife appointed special Indian agent at $6 per day and expenses A considerable number of Senators and other public officials have their sons and daughters in offices connected with their business; but the wife is now coming to the front as an office getter. Of course, there are loud charges of nepotism; but equally, of course, they all come from the "outs," who jeeringly exclaim: "A public office is a private snap" or "a family perquisite."..... ... Mrs. Charles Kendall Adams, wife of the President of Cornell University, died at Ithaca, N. Y., the other day..... John Norquay, ex-Premier of Manitoba, a Scotch-Indian half-breed, died at Winnipeg a week ago..... After all, it appears that the four new stars which Secretary Tracy ordered to be added to the 38 old ones on Old Glory, should not have been placed there before the Glorious Fourth next year. None of the four Territories has yet become a State, as none has formed a constitution or done any of the several other things prerequisite to admission, and a star is to be added only on the first Fourth of July after the admission of a State. The Treasury Department takes the above view of the matter. The nation at large, however, appears to side with the Navy against the Treasury... There's some nonsensical talk about a syndicate to be called the Irish-American Republican Association, whose object will be to establish an Irish Republic by purchasing the sovereignty of Lower California from Mexico, or of another strip of land or an island from Canada, Chili, Peru or some other government. It is supposed that rich Irishmen will readily drop their money in the enterprise. Of course, the chief object of the Republic would be to serve as a basis for hostile action against England. No recognized government would ever listen to such a project, and nearly every bit of the world is now under some recognized government..... Samuel Latham Mitchell Barlow, the well known N. Y. lawyer and politican, died suddenly of heart disease, at his home at Glen Cove, L. I., Wednesday, aged 63. His fees were always heavy, ranging as high as $100,000!..... .The British Columbia Board of Trade want reciprocity with us..... Miss Gwendline Caldwell, 25 years old, born in Kentucky and educated in New York, who inherited $2,500,000, and some time ago gave $300.000 towards the founding of a Catholic University at Washington, is to marry Prince Joachim Napoleon Murat, Prince of Cleves and Prince of Berg, grandson of Murat, the first Napoleon's great cavalry marshal, and king of Naples, and of Queen Caroline, sister of the great conqueror. Joachim's mother was a Miss Fraser, a school teacher, whom his father married while in exile with his uncle Joseph Bonaparte, ex-King of Spain, at Bordentown, N. J., where the Prince was born 55 years ago. He was a great favorite under Napoleon the Little, and a great spendthrift. He is a widower with three married children, has a fair property in hand and is suing the Italian goverment for $10,000,000, the private fortune of his grandfather, the King of Naples, shot to death by the Italians after the Battle of Waterloo, in 1815 ..... Two fanatics of Lancaster, Pa., have just prosecuted Farmer Joseph Adams for violating the Sabbatarian laws by getting in his hay on Sunday in anticipation of a downpour. .....Gen. Bragg, of Wisconsin, Democratic ex-Congressman and ex-Minister to Mexico, and a brave soldier, has been dropped from the roll of the Fond du Lac Grand Army by a vote of three to one. The trouble began with his opposition in Congress to the Dependent Pension Bill a couple of years ago .....During a big strike at Duluth, Minn., in a conflict between the strikers and authorities, a week ago, three men were killed and a large number injured .....An English syndicate is now hot after the best American restaurants. Delmonico refused an offer of $1,000,000 for his three places in this city the other day..... The second trial of boodler, ex-Alderman McQuade of this city, is under way at Ballston, N. Y., to which it was removed on the ground that people here had formed an opinion in the matter. So have the Saratoga County farmers, apparently, as it has been a difficult job to get a jury. The trial promises to be long, and a fee of $2 a day with board, is a small temptation to farmers at this busy season..... Lord Edmond Fitzmaurice, the middle-aged and impecunious brother of Lord Lansdowne, ex-Governor-General of Canada, and now Governor-General of India, is about to bestow his hand and courtesy title on Miss Caroline Fitzgerald, an heiress of this city, 26 years his junior. She's somewhat of a poetess, a good classical scholar, and a member of the American Ornamental Society.....The Chicago Common Council, 30 in number, has given the Standard Oil Company the exclusive privilege of laying an oil pipe through the city and maintaining it for 25 years. The city gets not a cent for the valuable privilege; but the boodling aldermen, it is charged, get $30,000. The Mayor may veto the measure, however.....Mrs. John Tyler, widow of President Tyler, died at Richmond, Va., Wednesday evening, of congestive chills, aged 69. The following "White House ladies" are still living: Mrs. James K. Polk and Mrs. Harriet Lane Johnson, Mrs. Grant, Mrs. Garfield, Mrs. McElroy, President Arthur's sister, Mrs. Cleveland and Mrs. Harrison.....The Sugar Trust is fast gobbling up all the sugar refineries in the country. Its last bonne-bouche was the refinery at St. Joseph, Mo., the stockholders of which get $18,000 for doing nothing. About 200 hands are thus forced to do the same, but of course, they get nothing for doing it..... At Carnegie's Homestead Iron Works at Pittsburg, 500 more men went out on strike Wednesday, when the new sliding scale, reducing their meager wages, went into force..... .. Constitutional conventions of the four new States, in session at their respective *pro-tem.* capitals, are hard at work elaborating constitutions. Of course, several crude propositions are being discussed by some of them, but it is quite probable that its new constitution will be the best adapted to the conditions of each State, however it may compare with those of the old States in which the conditions are different. Time enough to tell about them when they're completed.....After the expiration of his term, on Jan. 1, 1890, Gov. Fitzhugh Lee of Virginia, will accept the Superintendency of the Lexington (Va.) Military Institute, where Stonewall Jackson was Professor of Natural and Experimental Philosophy and Instructor in Artillery Tactics, at the outbreak of the war..... Grumbling still continues among most of the sufferers in the Conemaugh Valley, Pa. Thus far $1,750,000 have been expended by the Flood Commission. The maximum number of persons provided with board was 31,950, while the regular commissary roll is now 7,000. All immediate necessities have been provided for, and some payments have been made on account of actual property losses. The local doctors put the number of deaths at 10,000; the canvassers who went through the valley put it at 5,000. The property loss is now estimated at $10,000,000. The relief fund was large enough to give $700 to every family hurt by the flood ... ... Heavy rains in Fulton County, N Y. and a cloudburst near Johnstown—name of ill omen!—caused a tremendous flood in Cayadutta Creek, a tributary of the Mohawk, Monday night. Mills, bridges and other obstructions along the banks were swept away and very heavy losses inflicted. Johnstown was flooded and a crowd collected on a stone bridge crossing the turbulent creek to watch the wreckage rush by. Part of it struck the bridge and knocked it to pieces, 15 people being plunged into the torrent. Four bodies were recovered next morning and one since. Fonda, Gloversville and several neighboring places also suffered severely, and a large number of farmers lost heavily by the floods.. Martin Burke, the Winnipeg prisoner, having been fully identified as one of those connected with the murder of Dr. Cronin, is held for extradition, and stands a splendid chance of swinging for his share in the atrocity..... Mr. Roosevelt, the new Civil Service Commissioner, is gaining golden opinions from all sides on account of his manly way of enforcing the law..... There are now 213 cotton-seed mills in the South, with an aggregate capital of $20,000,000, against 40 mills with a capital of $3,500,000 in 1880..... As was feared, the Cotton Oil Trust has virtually secured control of the Southern Cotton Oil Company, which was to be for all time its unapproachable rival..... Last Monday, at Richburg, Miss., 103 miles north of New Orleans, in presence of over 3,000 spectators who paid $10 to $50 for the privilege of seeing the contest, John L. Sullivan, Boston's Pride, showed his title clear to the pugilistic championship of the world, by defeating Jake Kilrain, Baltimore's Pet, in the 24-foot ring, according to the London prize ring rules, after 75 rounds of square, honest, brutal and brutalizing fighting, lasting two hours and 18 minutes.....

The Unfamiliar.

WITHOUT especial reason, except that it is unfamiliar, we are all disposed to avoid good that comes in unusual guise; and it matters not that it is unusual good.

Nevertheless this is natural: it is right to be careful and conservative. It saves a great deal of trouble. In the end, the endorsement of careful people, which is sure to come if the merits of the case demand it, is all the more valuable.

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DR. O. A. DARBY,
President of Columbia Female College.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 312 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, July 13, 1889.

A NEW national organization of which Editor O'Brien is the author and Parnell the President, has been started in Ireland. When Parnell first decided to make use of agrarian agitation for political ends, he joined Davitt in forming the Land League. When that was virtually suppressed as illegal, he substituted for it the National League. When O'Brien originated the Plan of Campaign for the avoiding of rent-payments, he allowed his colleagues to direct the details of the agrarian warfare. When the Pope condemned it as immoral, the tenants gradually lost faith in its virtues, and the landlords combined their forces and established a Landlords' League. This threatens to expel all malcontent Irishmen—nearly the whole population—and replace them with subservient colonists from England, Wales and Scotland. The new Parnellite organization, called the Tenants' Defence League, is meant to protect the tenants and antagonize the landlords' association. It is in reality the old League with a new name, and a distinct agrarian aspect. It has already received the support of Gladstone, John Morely, Minister Egan, and Archbishop Croke, and is hardly open to criticism from the Vatican. It is supposed that it will bring Liberals of all shades of opinion to its support. The Government will no longer deal merely with the "men in the gap," but with the whole Irish race, backed up by all who favor Home Rule, and who are opposed to rack-rentism. Its chief proclaimed object is "to raise a fund for the purpose of giving legal assistance against combining landlords; and not to divert rent from its proper channels." It's the latest and probably the best device for securing support for the Irish cause, and hampering or preventing hostile action..... Wilkie Collins, celebrated for the elaboration of unguessable plots in novels, has had a second stroke of paralysis at his home in London. He is 64 years of age and has been hard at work grinding out novels all along. As with his friend and co-laborer Dickens, the tension is too great, and, like him, he'll probably die of over-work .... Since their European triumphs in 1870, wherever Germans have made settlements abroad, they have carried things with a high and arrogant hand regardless alike of the rights of the natives and of settlers belonging to other nations. They are now practicing, in the Marshall Islands, the same greed and intolerance that led to the explosion in Samoa. Reports are numerous and loud from English and American traders of the oppression and exactions to which they have been subjected; while the condition of the oppressed and overtaxed natives appears deplorable indeed. The Samoan troubles having been settled, with no great glory to the Fatherland, it looks as if the Teutons were determined to excite an indignant geographical interest in another Oceanic island group also.....Under Captain Wissman, too, they've just been trying to civilize

Miscellaneous Advertising.

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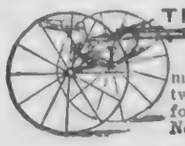
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the East Africans about Pangani by slaughtering several hundreds of them, after which they occupied the deserted place..... When in 1882, Arabi Pasha, commander of the Egyptian forces under Khedive Ishmael, rebelled against the grinding taxation imposed upon the peasantry to satisfy the enormous interest demanded by the foreign capitalists who had recklessly loaned extravagant sums to the spendthrift ruler, England and France, whose subjects were the heaviest creditors, started jointly to suppress the rebellion. The lately established French Republic, however, apprehensively withdrew just as Alexandria was to be attacked, leaving England to finish the work single-handed. England having done the fighting, monopolized the advantages, and France has been disgruntled ever since. After the final defeat of Arabi at Tel-el-Kebr, and the occupation of Egypt by the British, England pledged herself to evacuate the country when it could be done with safety to the financial interests of the creditors of the new Khedive and without danger from internal or foreign sources. Since then France has frequently insisted that England should keep her plighted word by withdrawing her troops; but the English government, which since Tel-el-Kebr has spent $200,000,000 in various military expeditions there, has never recognized a time when this could be done. Like Austria's "temporary" occupation of Boznia and Herzegovina, Turkey's Adriatic provinces, during the Turko-Russian war of 1878, England's temporary occupation of Egypt, Turkey's African dependency, was intended to be permanent.. ....Lately the British government made arrangements with the Rothschilds to convert $135,000,000 of the Egyptian $500,000,000 debt, drawing five per cent. interest, into a four per cent. loan, thereby saving $800,000 interest a year. The only gainers would be the wretched, half starved, overtaxed fellaheen, or peasantry, whose taxes would be lighter. All the Treaty Powers acquiesced except France, which insisted that, as a preliminary, England should name a particular date at which she would evacuate the country. This has blocked the project. The French elections are approaching, and a show of resistance to English projects, especially in Egypt, is sure to be popular among the voting masses; hence the fellaheen must continue to bear the crushing weight of their old-time burthens..... ....Some weeks ago the successor of the Mahdi sent an army of 8,000 fanatical dervishes north from his capital, Khartoum, with instructions to annihilate the Khedive and Queen Victoria unless they embraced the true faith. On their march northward along the Nile, they encountered the Egyptian troops under Col. Wodehouse and other English officers, a week ago, 20 miles south of Wady Halfa, the most southern point now garrisoned by the Anglo-Egyptian troops Of the advancing force 900 were killed and 700 taken prisoners, many dying of thirst, as the Egyptian troops and gunboats on the Nile kept them away from water. They are still pushing north, however, 6,000 strong, and English reinforcements are being dispatched from Malta and other near-by garrisons to block their way into Lower Egypt..... Sir Provo William Parry Wallace, G. C. B. Senior Admiral of the Fleet, is living near Chichester, England, at the age of 99. He was second lieutenant of the Shannon in her duel with the Chesapeake in Boston Harbor 76 years ago, and at the close of the engagement was in command of the frigate because all the senior officers were shot down in action. The capturer of the Chesapeake has been bed-ridden for 10 years but always cheerful. ..... Buffalo Bill has been engaged by the French government to teach 100 cavalry officers to ride in the American fashion. The 100 will instruct others. It is said that Bill will soon deturone General Boulanger in the affections of the French people. ..... The venerable French-American Dr. Brown-Sequard, 72 years old, and famous during over 40 years for his supereminent skill in nervous disorders, told the medical world the other day, through the Biological Society of Paris, that after 20 years of close search for some device for sustaining and prolonging life, he had at last found it. He cuts out certain organs or glands from living animals, crushes them at once in a mortar in distilled water, and from the mass extracts an essence which he uses as a hypodermic injection. He first experimented on feeble animals, with marvelous success. He then administered two injections to himself, and immediately felt 10 years younger while his capacity for work was increased threefold. While the best physicians here praise Dr. B.-S.'s great skill, they believe as little in his elixir of life as in perpetual motion or the philosopher's stone.....

AGRICULTURAL NEWS.

SATURDAY, July 13, 1889.

SECRETARY RUSK on Monday established a division for editing reports and bulletins issued by the various Divisions of the Department, and putting them into language that can be understood by the general reader. These synopses will be furnished promptly to all newspapers throughout the country. George William Hill of Minnesota, will have charge of the work .....The 43d Annual Fair of the Burlington County Agricultural Society will be held at Mt. Holly, N. J. October 7—12. Henry Budd, secretary, Mt. Holly.....Australian apples were received in San Francisco in June, and were sold for $3 per box..... The Farmers' Alliance of Mississippi has leased the State penitentiary of Mississippi and will immediately manufacture cotton bagging on a large scale.....That Fourth of July bale of cotton at Albany, Georgia, reached this market Monday. Primus Jones raised it, Carter & Bradley shipped it, C. B. Taintor received it, and Henry Clews & Co. bought it. The price here was 16⅛ cents per pound, the cotton classing as middling. .....Croft's Mills in South Carolina expect to turn out 300,000 yards of bagging made from pine straw by the first of October. This will make the jute trust pine..... ....The Fourth Annual Fair of the Society of Agriculture and Horticulture of Westchester County, will be held at White Plains, N. Y. September 23-28. All articles are entered free of charge. E. B. Long, Secretary, White Plains ..... Col. R. P. Pepper, of Frankfort, Ky., sold his five-year old horse, Acoyte, by Onward to J. S. Corry, of Massillon, Ohio, for $40,000... A curious blight has seized upon the maple trees lining some of the most exclusive streets in Brooklyn, notably Quincy Street and Nostrand Avenue. The blight consists of millions of caterpillars, which have laid their eggs along the under side of the smaller branches and caused the leaves to wither. Although English sparrows are plentiful, they seem to pay but little attention to their fellow pests.. .....Smith Scudder, living near Plainfield, N. J., was killed on Monday afternoon by being thrown from his mowing machine in front of the knives.....State Dairy Commissioner Brown had a conference with the cider-vinegar makers on Tuesday. The question discussed was how best to enforce compliance with the law passed this year prohibiting the adulteration of vinegar, more especially by the whisky-vinegar makers of the Western States, who, it is alleged, sell their adulterated productions in this State. It was stated the Vinegar Trust, which was composed mostly of Western manufacturers, went to pieces about three months ago, and since then the competition has been so great that little if any profit is derived from the vinegar industry .... The ornithologist of the Department of Agriculture has little doubt that the beneficial qualities of the Cedar bird, or Cherry bird, exceed its injurious ones. It does much good by destroying injurious insects .....The New York Hop Growers' Association will have its annual picnic on Sylvan Beach, Oneida Lake, July 27..... A Percheron stallion chased a Pennsylvania man in a dog-cart for three miles, and smashed the cart after the man had escaped to a place of safety. Secretary Rusk has been presented by Gen. Felix Agnus with a milk white percheron horse, 17 hands high, which the Secretary rode at the party at Gen. Agnus's several weeks since. He says he will send the animal to his Wisconsin farm .....Some days ago the State officials of New Jersey notified Secretary Rusk of their intention to raise the quarantine against pleuro-pneumonia. To this the Secretary made a vigorous protest, appealing to the State officials to aid the Department in protecting the export cattle trade of the country against the ravages of the disease, which is now confined to the territory in the immediate vicinity of Jersey City. In case the local quarantine is raised, however, the Secretary gives notice that he will at once establish and enforce national regulations to effect the desired end.....

Market Notes.

SATURDAY, July 13, 1889.

THE supply of fruits of all kinds in this market is abundant, and the quality generally excellent. The shipments of apples fully equal the demand which is only moderate. A variety known as the Hosse from Georgia, opens up well. Peaches are plentiful, and there is a good demand for the best qualities at good prices. They come mostly from Georgia and California. Pears are abundant. Some very fine Le Contes from Georgia, and Bartletts from California are offered. The first car lot of California Bartletts came last Saturday, and were held at $4 to $4.50 per 40-pound box. Cherries are about out of market. Plums and apricots are plentiful.

New York is supplied with the luscious fresh fruits of California through the California Fruit Union, now in the third year of its existence. From May 1 to November 1 cherries, apricots, peaches, plums, pears, nectarines and grapes are sent to this market, and owing to a perfect system of transportation in refrigerator cars are delivered generally in good condition. The fruit is shipped through by express in six days, and is sold by auction on the morning of arrival, so that there is very little delay in reaching the consumer.

The present season opened about June 1, since which time eight or nine car-loads have been received and sold, one of the sales being a full car-load of cherries. E. L. Goodsell offers on Monday, next, at auction 803 boxes and crates royal apricots, 39 boxes peach plums, 360 boxes Bartlett Pears, 88 boxes German Prunes, 132 boxes Purple Duane, Washington, and Magnum Bonum Plums.

Prices for these fruits have generally been satisfactory excepting for apricots which have been very low. Small fruits are abundant and cheap. Red and black raspberries, blackberries and huckleberries retail for 10 cents for the best, and lower for other grades, the price depending upon the stage of decay. The warm, damp weather has been very unfavorable for handling such fruits. As is usually the case, the best grades bring good prices, while much poor trash will not pay shipping expenses.

While tropical fruits are not so much of a dependence as they were earlier in the season, they still form quite an important source of supply. Oranges are not very plentiful, but bananas, pine-apples and lemons are in profusion everywhere. Havana sugar pines may be had for 10 cents, three for a quarter. Hucksters go about with their wagons piled high with lemons, in the same way the farmer draws potatoes or cider apples, and a quarter will purchase 25 fine ones.

The vegetable market is weak, there being heavy arrivals and only a moderate demand. Potatoes are growing more plentiful and the price is constantly declining. Cabbages are very low. Good cucumbers are in demand, but poor ones not wanted; tomatoes, ditto. Very good sweet corn from nearby gardens is offered, and brings fair prices. There is a demand for good egg plant. Some asparagus is still offered, but it meets with slow sale. There is a large supply of beets, carrots, turnips, squashes, etc.

The supply of butter far exceeds the demand, and prices are lower in consequence. Much good butter is being bought for cold storage, but poor grades are not wanted. Eggs are well cleaned up, and prices have advanced accordingly.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, July 13, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	8⅛	8¾	.....
Strict Ordinary	8 15-16	8 3-16	.....
Good Ordinary	9⅞	9⅛	.....
Strict Good Ordinary	10 5-16	10 9-16	.....
Low Middling	10 13-16	11 1-16	.....
Strict Low Middling	11 1-16	11 5-16	.....
Middling	11¼	11½	.....
Good Middling	11¾	12	.....
Strict Good Middling	12	12¼	.....
Middling Fair	12 7-16	12 11-16	.....
Fair	13 1-16	13 5-16	.....

STAINED.

Good Ordinary	8¾	Low Middling	9 15-16
Strict Good Ord	9	Middling	10¼

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

POULTRY.—Chickens, spring, per lb, 12@15c. LIVE FOWLS, near-by, per lb, 11@——c; fowls, Western, per lb, 10½@11@—c; roosters, per lb 6c; turkeys, per lb 9@10c; ducks, western, per pair, 60@0.80c; geese, western, per pair, $1 15@$1 40.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per lb, 10@12c; do do, common to fair, 8@9c, do, iced, dry picked, choice, 8@—c. Fowls, western, do, choice, 11½@—c; do, nearby, do do, 12@13c; Chicks and Fowls, mixed, 12@14c; do do do, scalded, 10@11c. Squabs, white, per doz, $3 00@$3 25 do, dark, do, $1 75@$2 00. Chickens Philadelphia, dry picked, 20@22c, do Jersey, do, choice, 18@22c do nearby, do good 12@16c; do Western, do do, 10@16c; do do, iced good to choice 15@18c. Ducks, spring, choice, per lb 14@18c; do do, good, 11@14; do Western, good, 10@14c Geese, Western, good, 8@10c.

GAME.—Golden Plover, per doz. $1 75; Grass do, do $1 00@$1 25; English Snipe, do, do. $2 00.

HOPS.—State, new, best, 22@23c; do, prime, 20@22c; do, low grades, 13@16c; do do, 1887, 8@9 do do do California, common to prime, 14@20c; choice, 20@22c.

HAY AND STRAW.—Choice Timothy, 90@$——; do good do, 75@80c; do medium, 65@70c; shipping, 60@65c; do, Clover, mixed, 50@55c. Straw.—No. 1, rye, 65@70c; short do 50@55; oat, 40@—c.

BEANS.—Marrows, new, $2 45@$——; new mediums choice, $2 45@——; pea, $2 45@$——; red kidney, $3 25; white kidneys, choice, 2 60@——; foreign, mediums, 135@1 55; California Lima, $3 60@$——; green peas, $1 45@$1 50.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@——c, and farmers' grades at 5@7½c. Pecans, 5@7½c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—POTATOES.—Eastern Shore, per bbl, $1.-50@$2 00; New, poor to good, 0 50c @$1 25. Old. $1 00@$1 25, Norfolk New, $1 50@$2 00. Cabbage—New, per 100, $1 50@$2 50. Cucumbers, per crate, 30@40c. Squash, per bbl, 75c@$1 50. Tomatoes, per crate, 30c@$2 50. Onions—New Orleans, per bbl, $2 50@$3 00, East Shore, do, $2 25@$2 50. Beans, string, per crate 40@75c. Corn, per 100, 50c@$0 75. Onions, Egyptian, per bag, $3 00@$3 25.

FRUITS.—FRESH.—Peaches, per crate, $0 50@$1 75; do, per carrier, $1 50@$5 00 Cherries, per lb 4@8c; Huckleberries, per qt, 5@9 Gooseberries, per qt, 4@5c Plums, per qt, 8@10c. Apples—Southern, per bbl, $1 50@$2 50; New Jersey, do, $1 50@$3 00 Raspberries, per pt, 2@7c. Watermelons, per 100, $12 00@$30 00. Currants, per lb 4@5c. Blackberries, per qt, 2@7. Pears; per bbl., $6 00@$6 50; do, per crate, $1 75@$2 00.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5½@6c; do new, common to prime, 3½@5½c; sliced, new, 3@3¾c. quarters, 2½@3¼c; chopped, 1½@2c; cores and skins, 1@—c. Cherries, new, 9@13c. Raspberries, new, 17@19c. Blackberries, 3¾@4c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 10@13c; do do, unpeeled. 5@6c; North Carolina sun-dried, peeled, 6½@8c. plums, 5@5½c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 13 25@13 50, short clear, $14 00@16 00 Extra Prime mess. $12 50@$— prime do, $12@$12 25 and family mess, $12 75@13 25. BEEF—India Mess in tierces, $12@12 50 Extra Mess, in barrels. $6 75@7 00 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $7 50@8 00; Family at $11—@$14. HAMS—$13 50@$14 00, Winter packing. CUT MEATS.—Quoted 12 lb average. Bellies, 6½@—c; Pickled Hams, 11¾c; pickled Shoulders 6½@6¾c; Smoked shoulders 6½c; do Hams, 12¼@12½c Dressed Hogs.—City, heavy to light 6@6¾c. Pigs, 6¾c. LARD. City steam, $6 35; June, $—; July, $6 94, August, $7 03; September, $7 11; October, $7 17, South America, 7.6c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes lower; Early Rose, 27@30c per bush.; Burbanks and White Star, 28@32c; Hebron, choice, 35@40; New Potatoes, Florida, per bbl, $1 75@$2 50 Provisions were steady. BEEF.—City family, per bbl. $9 00@$9 50; do, packets, $8@8 50; smoked beef, 10@10½c; beef hams, $14 PORK.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@13c do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6½@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8¼c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6½@7.

CHICAGO.—MESS PORK.—$11 85@11 90 LARD.—$6 62@—per 100 lbs; Short Rib sides (loose), $5 95; dry salted shoulders, boxed, $5 37; short clear sides, boxed, $6 25@$6 37.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 16¼@17. Elgin, best, 18@—; Western, best 16@16½; do prime, 15½c; do good, 13½@14; do poor, 12@13. State, Dairy, half-firkins, tubs, best, 17@——c; do do prime, 15@16; do do fine, 13½@14½; Welsh tubs, fine, 15@—c; do do, good, 13½@14; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western imitation Creamery, best, 14@——; do fine, 12@13; Western dairy, fine, 13@—; do fair, 11@12c; do poor, 9@10c; do factory, fresh, best, 12½@13, do prime, 11½@12; do good, 10@11; do poor, 8@9c.

CHEESE.—State factory, fancy, 8¾c; do do fine, —@——c; do do, prime, 8@8¼c; do do, fair to good, 7@7½c; Ohio, flat, prime, 7¼@7¾c; do good, —@—c; do, good, —@—; Skims, light, 5½@6½c; do medium, 2@3; do full, 1@2c.

EGGS.—Near-by, fresh, 16@——c; Canadian, 15c Southern, 14@15c; Western, best, 15c

PHILADELPHIA.—BUTTER firm. Pennsylvania creamery extra, at 16@17c; Pennsylvania Prints, extra, 20c; B. C. and N. Y. creamery extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were dull; Pennsylvania firsts 15@16c; Western firsts, 14@15c; Cheese dull—steady; demand fair; New York full cream, at 9@9¼c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

CHICAGO, ILL.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Elgin creamery, 15½@16½c; choice Western, 15@15½c, choice dairy, 14@13½c; common to fair, 8@10c. Eggs firm at 12@12½c.

GRAIN MARKETS.

WHEAT.—Sales—Ungraded Winter Red at 86¾@89½; No. 2 Red afloat, 90½c; No. 2 Milwaukee, c. f. and i., 88⅞c; No 2 Red, in store, quoted 88¼c; No. 2 July, 89@89¼c; do August, 88⅜@88½c; do September, 86⅜@87¼c; do December, 87⅞@90 7-16c do May, 93¼@94½c. RYE—Quiet, firm and unchanged. Western, 51@52c; State, 53@54c. CORN.—Sales—Ungraded Mixed, 42½@43¼c; No. 2 Mixed, 42½@43¾c, elevator, 43½@43 7⅛c afloat, to arrive and spot; No. 2 July, 42¾@43⅛c, do September, 43⅜@43⅝c; do October, 43⅞@44½c. OATS.—No. 3, 27c; do White, 32c; No. 2, 27¾c; do White, 33@33¼c. No. 1 White, 38c; Mixed Western, 26@30c; White, do, 38@39c; No. 2 July, 27⅝@27¾c; do August, 27⅞@28c; do September, 27⅝@27¾c; do October, 28½@28¾c; do November, 27⅝c; do White, July, 33c.

LIVE STOCK MARKETS.

New-York, Saturday July 13, 1889.

BEEVES—City Dressed Beef is having a moderate demand at 6c to 7c for ordinary to Prime Native Sides.

MILCH COWS-Receipts for the week thus far 81 head. There is no change in the market, and the rather light arrivals have been sold at $30 to $45 per head for common to good stock, and trash as low as $20 to $25.

CALVES.—Buttermilks sold at $2 50@$2 75 per 100lb Western Calves at $3 75, and Common to Choice Veals at $4 50@$5 50.

Dressed Calves in fair demand at 4@5c for Dressed Buttermilks, 5@7 1-2c for Country Dressed Veals, and 6@8 1-2c for City Dressed (few Fancy selling at 9c).

SHEEP AND LAMBS—Sheep are in rather light supply, and were very firm, selling at $5@$5 50 for Medium to good quality. A few Coarse Jersey Ewes brought $4 32 1-2, Lambs were easier, and sales showed a decline equal to about 1-8c per lb. Poorest to Best Lambs ranged from 6 1-2 to 7 1-2c.

Dressed Mutton firm, and selling in the slaughterhouses at 9@10c, in Washington Market at 8@9 1-2c, Dressed Lambs weak, with sales 10@11 1-2c (best carcasses bringing 12c).

HOGS—Nominally steady at $4 60@$5.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING JULY 13, 1889.

H. M. B.—A. W. S.—J. F. F.—A. B. T.—J. M Y.—J. J. T.—H. A. S—G. H. W.—Mrs M. C. A.—C. M. D.—J. D B.—C. H. S.—C. E. T.—W. J. B.—E. D.—C. H S.—J. M. W.—J. O. B.—O. H. S.—E. S.—A. E. W.—V. L.—J. C.—J. W. S.—J. C. M.—A. H.—J. L, B.—

Miscellaneous Advertising.

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Literary.

NECESSITY OF EDUCATING FARMERS' DAUGHTERS.

LAURA A. REINHART.

THE true end of education is the harmonious development of mind, body and spirit. All educating forces which act upon the individual should bring about symmetrical development. Our present ideal of an educated person is so high, so noble, so pure, that the term "educated" can not be applied unless the individual demonstrates this threefold development. Man is endowed with innate powers that are susceptible to all educating forces that are brought to bear upon him. When these powers receive systematic and proper exercise, the progress is greatly enhanced. The age is past in which woman was considered inferior to man in these natural endowments of moral, intellectual and physical powers. Woman has proved o be man's equal in a great many of the arts and sciences; and in the science of practical ethics and in the fine arts his superior; so that the plea of inferiority is no longer accepted by our best critics. What she lacks in physical energy, she more than makes up in moral force. I think that all reasonable persons will accede that woman is endowed with the same faculties as man, and if developed and trained with equal care and attention, she promises the same degree of usefulness. The fact that farmers' daughters have not, as a rule, attained to the same degree of intellectual development as their sons, does not argue that they have not the possibilities; but rather proves that they have been, as a class, greatly neglected. Again, if we compare the average country girl with the average town girl, we must accept the former's inferiority in this one phase of the question—mental training. But do not judge too hastily.

Let us look for a moment at the kind and amount of physical training farmers' daughters receive. Even in early childhood, they are brought under those influences that are conducive to a healthful, bodily growth:—a large scope of territory over which to roam, few desires that are not gratified by the silent, yet persuasive influences of Nature all around, teaching lessons of activity, of cheerfulness and unselfishness. In our rural districts Nature has full sway over child nature. The songs of birds, the babbling of the brooks, the rustling leaves, all produce a harmony sweeter, grander and more perfect than the commotion in cities and towns. In fact, the very environments of children living in the country are conducive to healthful physical growth. It is a fact beyond doubt that farmers' daughters are favored with bodily training, which makes them useful in after life. We are awaking to the fact that the seemingly undue attention which the early Spartans have to their daughters was not a mark of weakness; but rather of an intellectual insight into the true order of development. A mind that resides in a heal hful body has more chances for development than one in an ailing body.

Why is industrial education all the rage the world over? Men are realizing that the mind in too many instances has been educated at the expense of the body. It is, however, not necessary to urge farmers to give more physical training to their daughters. Do we not find that, in many instances, the farmers require of their daughters the same manual work as they do of their sons? Is not a caution in place? Is it right to take your daughters out of their proper spheres and deprive them of the most careful training in household affairs, by obliging them to do work in the fields? I am glad to notice that this practice is on the decline.

It will not be out of place to notice the moral culture farmers' daughters receive. I wish to state, right here, that the conditions of a healthy, moral growth are more generally met with in the country than in cities and towns. Removed from the enticing influences of fashion, which first infatuate, and then ridicule; removed from the frivolous and the gay; from perilous centers of vice and immorality, we realize that we are highly favored when we receive our training in the country. The pure air, the blue, unclouded sky, the shining sun, the springy turf beneath our feet are all we require to make us feel that we are in regions of delight. All these speak in some way to the spirit and raise new emotions of purity. Farmers, as a rule, give much attention to morality, truthfulness and early piety. The lessons of morality which children in country districts receive, are not counteracted by vicious associates and the manifold wicked influences which stunt the keenest sensibilities, dampen the purest emotions, inducing so many young people, coming from respectable families, to lead irreligious lives. How many young ladies who have left their country homes, with all principles of morality and Christian sobriety deeply written upon their hearts, may be with a mother's tears, on coming into towns where they are brought under the vile influence of corrupt society, have yielded and become wrecks on the quick-sands of time! Friends, we need to give the greatest attention to make our daughters morally strong. The future actions and conduct of your daughters proceed from the prevalent state of their minds, as water flows from the fountain. Impure thoughts will lead to impure desires, and impure desires will lead to improper actions. We need to guard the rising generation more than ever, as the tendencies of the age in which we live are toward immorality.

But let us, in the next place, notice a few reasons why farmers' daughters should receive due mental discipline. Is it not in many communities the prevailing sentiment that girls do not need the same amount of education as boys? This is especially true of a great many farmers. While they greatly care for their daughters in providing for them food, clothing, and future legacies, they fail to see how utterly helpless they leave their children by not giving them, at least, a fair education. Is there any reason why country girls should not be polished for society? It is an incontrovertible fact that farmers have the means to do this. Why, then, is this deplorable neglect of allowing so many fair maidens to grow up in ignorance? Is it not because so many farmers have a wrong conception of life? A great many good-hearted, sober-minded and industrious farmers consider the true end of their being reached, when they have provided for their daughters houses and lands. These provisions are right and proper in their place; but without a well disciplined mind, without true Christian courtsey and refined manners, these material things will not lead to true joy and happiness. Make home-life beautiful, and parents will sow seeds of gentleness, true kindness, and fidelity in the hearts of their children, from which they will reap happiness and virtue. But how is this possible where ignorance is supreme? And as the daughters of our farmers promise to become the mothers of future generations; and as mothers have the privilege of giving the first lessons in this triune development of mind, body and spirit, how important it is to properly educate them for this grand and noble work. How many great men give warm tributes for their success to their intelligent mothers? The memory of the happy home of childhood is the grandest legacy any farmer can leave to his children.

The hallowed influences of a home in which there was a strong, social element, and refined manners, will never be forgotten. A home in which there is ignorance is full of darkness and gloom, while a home in which there is culture and refinement, is full of sunlight and joy. Educate your daughters and their homes will be graced with pictures, refined by books, and gladdened with sweet music. You will have homes in which there will not be the blasts of passion, no storms of hate. You will have homes in which the wife and mother shall not lose her charms by unremitting drudgery and toil. Educate your daughters and we will have homes in which happy children shall see the beauty of love and the beauty of holiness. We will have homes of plenty, of sympathy, of self-sacrifice, of devotion. Homes of culture and of love.

MAGAZINE REVIEWS.

A MAGAZINE devoted to the interests of all women, especially those engaged in active pursuits, is the Business Woman's Journal. The July-August number gives a short sketch of Mrs. Ella Dietz Clymer, the new president of Sorosis, of which she was one of the incorporators. A very interesting sketch is given of Clara Barton, "the angel of the battle-field, the pestilence and the flood," who has recently been again brought into prominence through her devoted labors among the sufferers at Johnstown. Senator Sumner once wrote of her: "She has the talents of a statesman, the command of a general, and the heart and hand of a woman." Short sketches and incidents are given of Wi-ne-ma, the Indian woman who saved the life of Col. Meacham, at the lava-bed massacre, Mrs. Emma F. Pettengill, a successful Brooklyn stenographer, and many others. "What Occupation Shall I Choose?" is a very valuable article for the times. The magazine is replete with valuable information for the large and ever-increasing army of business women. Mary F. Seymour, 38 Park Row, New York.

PANSY for July cannot fail to please the little folks for whose benefit it is published. It contains, among many other sprightly stories, several Fourth-of-July poems and sketches. "Margaret's Fireworks," by Pansy, is a bright little story with a moral to it. "A Practical Joke" tells how a naughty boy played a very cruel trick upon a helpless cat, and how he was punished for it. The illustrations are numerous and excellent. D. Lothrop Company, Boston, Mass.

TO FIND a new field for magazine work, in this time of the reign of magazines, would seem almost an impossibility. Yet this honor belongs to the publishers of "The Home-maker," of which Marion Harland is the editor. We have met many of its contributors before, in the pages of other household literature. Christine Terhune Herrick, for instance, who edits the department called "With the Housewife," and Catharine Owen and Anna Alexander Cameron, who write for that department. In the body of the magazine, the current number, which is the fourth of Vol. 2, contains poems by May Rebecca Lenox, Katharine Philips Williams, and Margaret E. Sangster; an editorial on "Advice-giving;" a short sketch of John Randolph, "J. R. of R.," which leaves a new and more pleasing impresssion of him than we have been wont to have; four chapters of "Hope Harding," a serial by Lucy C. Lillie; the concluding portion of a fine description of a fine "Old New York Homestead," by the Editor; "Guenn at Home" written and illustrated by Walter Satterlee. "In Wonderland, No. 3," in which Estella Thomson describes the Home and Harvest of the Fig; "Household Decoration No. 4," by Hester M. Poole; and "A Stranger," a pathetic story by Ella Thomson. The above fill about half the pages. The rest are devoted to the special departments: Our Young People, Our Baby, etc. One would almost say the departments were too many, the articles too short. Among the many very fine illustrations two noticeable ones are: "Guenn" which forms the frontispiece and which, though perfect in its way, doesn't look the least like one's ideal "Guenn," and a copy of the fascinating Gilbert Stuart portrait of John Randolph at 32, which the beholder would swear was the likeness of a beautiful, dreamy lad of scarce 16.

BOOK REVIEWS.

ONE of the most charming of American writers was Hawthorne, and one of the best of his works is the Scarlet Letter. This popular novel is now published in the "Riverside Paper Series" at the low price of 50 cents, which places it within the reach of many who could not afford an expensive binding. Houghton, Mifflin & Co., Boston and New York.

ALLURING ABSURDITIES.—Fallacies of Henry George, is the alluring title of a pamphlet by M. W. Meagher, in which he purposes, first, to overturn erroneous theories and false teachings on the great question of wages, and, second, to suggest practical remedies for existing evils involved in that question. The book deals mostly in theories, and, in common with other theorists, the author has fallen into numerous "absurdities." He would remedy existing evils by statute limitation of wealth, a minimum of wages below which no man shall work, and a graduated income tax, so that the larger a man's income, the more tax he shall pay, proportionally. He very sensibly gives the leading cause of poverty as intemperance, and he admits that this is not a theory, but the result of "observation and experience." There is a large class of persons in this country who imagine that all existing evils can be remedied by legislation. To such, this book will be especially welcome. Price, 25 cents, American News Company, New York.

Miscellaneous Advertising.

NEW YORK COLLEGE OF VETERINARY SURGEONS and SCHOOL OF COMPARATIVE MEDICINE (Chartered 1857).—Session of 1889 and 1890 begins **Tuesday, Oct. 1st, 1889.**
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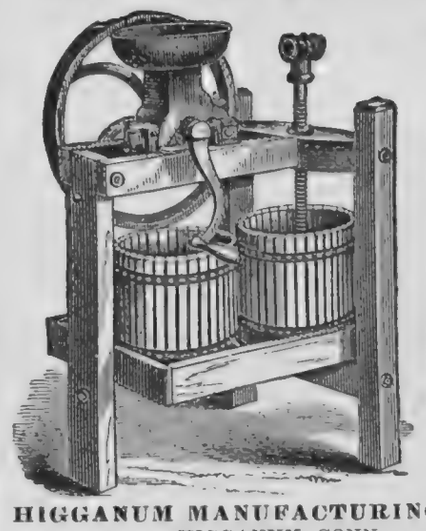

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STRAWBERRY PLANTS, FRUIT TREES, SMALL FRUITS, DUTCH AND CHINESE FLOWERING BULBS, WINTER BLOOMING HOUSE PLANTS, FANCY POULTRY, PEKIN DUCKS, BRONZE TURKEYS, GERMAN HARES, &c. Our annual Fall catalogue, 1889, of Seed Wheat, Plants, Poultry, &c., will be ready by July 20. Samples of 7 new, hardy and productive varieties of Winter Wheat, including the ironclad **RELIABLE** and celebrated **LEHIGH No. 6.** will be sent with catalogue for 10c. in postage stamps. Address, **SAMUEL WILSON, Mechanicsville, Bucks Co., Pa.** Catalogues free on application.

CATALOGUES, ETC., RECEIVED.

PROCEEDINGS OF THE AMERICAN FORESTRY CONGRESS.—The report of the meeting held at Atlanta, Ga., last December, makes a pamphlet of 55 pages. All who are interested in forestry will find something to interest them in this pamphlet.

MINNESOTA EXPERIMENT STATION.—Bulletin No. 7 of this institution contains a number of interesting articles. This station seems to be doing good work. Its bulletins are always readable and plain. Some experiments have been made to try to determine the best varieties of corn for ensilage. This is an important matter in a State like Minnesota where the silo is becoming a recognized feature of stock farming. Most of the silo advocates have urged farmers to plant the large Southern corn for ensilage. Because this corn gave a large, fine-looking stalk, it was supposed to be superior to local corns for the silo. Last year Prof. Porter of the Minnesota Station, conducted some experiments that went to prove that flint corn, such as was ordinarily grown in the State, gave more value in silage than the larger Southern corn. This year's experiments, quite elaborately conducted, indicate the same thing. The fact seems to be that the local corn that gives best results for grain and stalk in any given locality is also the best ensilage corn that can be found. This has been shown at other stations and it seems pretty well settled. Some experiments with warm water for cows show the same results as those of last year. There was practically no difference in effect from the warming of water to 70 degrees or cooling it to 32 degrees or ice-cold when given to cattle which were comfortably warm at the time. There is quite an interesting article on cross-fertilizing corn, which the R. N–Y. will refer to at a later date, as also an illustrated article on washing and salting butter. Some drawings of different methods of constructing greenhouse walls are very well done. As a result of his experiments, Prof. Green remarks that probably the cheapest warm wall for general farm purposes is one made of wood with a four-inch air-space which is filled with dry sawdust or some other good non-conducting material.

When a hollow wall is to be filled with sawdust or similar material, it is all-important that the material should be dry when put in and then be so protected that it cannot get wet either from water coming in at the top or the sides.

In making a dead-air space the sides of the wall should be tight both inside and out, in order to prevent any circulation of air and to have it a true *dead-air space.* Dead air is the best of non-conductors, but its efficiency depends to a great extent upon the number of times it is broken up and multiplied.

While dry sawdust gave very excellent results as a filling for walls in this case, it is probable that dry chaff, cut straw or hay would answer nearly as well for the same purpose.

ALFALFA.—ITS GROWTH, COMPOSITION, DIGESTIBILITY, ETC.—This is the title of Bulletin No. 8 from the Colorado Experiment Station, Fort Collins, Colo. It seems hard for Colorado people to say too much in praise of Alfalfa. Many Eastern farmers have tried the plant, with varying success, but after they have said all they possibly can in its favor, the fact remains that Alfalfa attains its highest state of perfection in the dry, hot regions of the West. Nature designs this wonderful plant to fit in where other plants might fail. This being the case, it is right for the Colorado Station to seek to determine the best modes of culture and handling. We give below the substance of what the station has determined.

For hay use 20 to 25 pounds of seed; for seed, 12 to 16 pounds. For hay on sandy soil, sow the seed alone; on cloddy or clayey soil, sow wheat, oats and barley in small quantity. Timothy and Orchard grass sown with Alfalfa, keep it from lodging, and become a preventive of hoven in the feeding of cattle and sheep. Sow with a drill, as soon as all fear of frost is gone. Cut just before blooming—somewhat earlier than Red clover. When slightly wilted, rake into windrows and then put in small cocks to be cured. Alfalfa is a dangerous pasture for cattle or sheep. When fed green or wet it seems to have a greater tendency to bloat cattle and sheep than any other forage.

Some experiments were made to determine the comparative chemical value of Alfalfa and also its digestibility as compared with other foods. Here are the conclusions:

1. The quantity produced by the many cuttings make it much more valuable than the other clovers or grasses.

2. It is as digestible as clover hay, constituent by constituent.

3. Its chemical composition shows that it is a rich, strong food, when properly cured.

4. Its feeding qualities are excellent, being relished by all farm animals.

5. It is also an excellent flesh and milk-producer. In general, it will do to say that it has about all the good qualities of a forage plant, with very few poor ones. It has shown a tendency to split up, or diverge into several well marked varieties, under careful cultivation.

AMERICAN VETERINARY COLLEGE.—The catalogue of this institution, which is located at 139 and 141 West 54th. Street, New York, is sent by the Dean, Dr. A. Liautard. This is an excellent college, and its popularity increases year by year. Located, as it is, in this great city, it is possible for the managers to secure a vast number of sick or wounded animals for treatment, and this work, of an eminently practical nature, is made a very strong feature of the college course. The R. N.-Y. has frequently pointed out the possibilities open to the skilled veterinarian. We can only say that this college affords excellent facilities for securing a thorough groundwork in the principles of the science.

"MURRAY" BUGGIES AND HARNESS.—Catalogue from the Wilber H. Murray Manufacturing Co., Cincinnati, Ohio. Every reader of the R. N.-Y. ought to be interested in a good bargain. It is also highly probable that 90 per cent. of its readers need a harness or a carriage of some sort. It naturally follows that this catalogue will be apt to give them about as much pleasure as any similar volume ever can. Farmers will be sorry if they do not look into this matter. The prices quoted for harness and buggy are certainly very liberal. The goods, as we are informed, are well-made and durable. "No pool for us" is the firm's motto. If these prices are the result of that decision, what must be the profit on harness and carriages sold by others? Send for particulars to the above-named firm.

WHITMAN AGRICULTURAL CO., ST. LOUIS, MO.—The new catalogue of this excellent house is an elegant affair. The fine hay presses for which the Whitmans are famous, would bring credit enough to any house, yet it appears that there are dozens of other implements made at St. Louis, the making of any one of which would afford business for an ordinary manufacturing company. Horse-powers, wood-sawing machines, corn-shellers, grinders, cider-presses, seed-sowers, harrows, scrapers, trucks, cars, cutters—in fact just about everything. There are 175 or more pictures of implements. This statement gives an idea of the wonderful business conducted by the Whitman Company. This is a fine house to do business with.

THE GREATER HALF OF THE CONTINENT.—This is the title of an article originally written by Mr. Erastus Wiman for the North American Review. It has been reprinted in pamphlet form and quite extensively distributed throughout the northern portion of the United States. Mr. Wiman, as is quite generally known, is an enthusiastic advocate of a "commercial union" between the United States and Canada. His object in preparing this pamphlet was to make a special plea for Canadian resources and possibilities, so that the "Yankees" might understand that the proposed "commercial union" would not be such a jug-handled affair after all. And he certainly makes out a very good case for Canada. Without Alaska, the United States include 3,036,000 square miles. Canada fills out 3,470,392 square miles! We think so much of our own country that we are apt to think of Canada as a narrow strip of land along the St. Lawrence river, forgetting all about the immense areas of undeveloped, yet wonderfully fertile lands that stretch away to the north and west. Another popular American idea, is the belief that Canada is a region of frost and snow—most of it a sterile and inhospitable waste. Mr. Wiman combats this idea, and undertakes to prove that the Canadian climate has, on the whole, as few drawbacks as are to be found in any section. Between the lines of latitude which include the greater portions of the Dominion, he says the development in the United States has been most marked. Nothing in the history of the world can equal the development of the commerce of the great lakes. Another test of climatic advantage is found in the ability of Canadian soils to produce wheat. The steady movement of the wheat-producing regions of this continent has been to the north. Plenty of R. N.-Y. readers can remember when the Genesee Valley in New York State was the great producing region, with Rochester as the "Flour City." The wheat region has moved. The nursery and seed business has made it necessary for Rochester to spell her name differently as "Flower City." Minneapolis is now the center for wheat and flour, because the wheat-producing regions have moved north and west. They must go on in the same direction. Are the "British capitalists" who are reported as buying up flouring mills foolish or do they know that within a few years the natural course of wheat culture will drive the profitable region over the Canadian line? Canada is dotted with lakes and streams. These tend to equalize temperature and at the same time provide an abundance of fish-food. The distance between Hudson and James Bays and the large cities of our Western and Northwestern States is much less than that between these cities and the Atlantic ocean. The fish that fill these bays could be transported to the Western cities much more easily than they are now brought from our coast. Mr. Wiman finds an agricultural advantage even in the intense cold of the Northern Canadian winters. Ages of long winters have produced a frost line in the earth far down below the surface. During the warm Canadian summer, so Mr. Wiman argues, this bed of frost is turned, by the bright sunshine, into a well-spring of moisture, constantly exuding and supplying the delicate roots of the wheat plant with needed food and drink. Canada is also admirably suited for the production of barley for brewing purposes. As for timber, there seems absolutely no limit to the forests of pine and other valuable woods that await the woodman's axe. And these forests are just as conveniently located as regards transportation facilities, as are those of Michigan or Wisconsin. And again with minerals, Mr. Wiman claims that no country in the world possesses so much iron as Canada, in no land is it so easily mined, and nowhere is it quite so easily accessible to manufacturing centers. Copper, nickel, gold and silver are also found, while thousands of square miles of coal deposits are known to be ready for the miner. Add to this the vast stores of mineral phosphates that Canada boasts and we have a dazzling array of mineral wealth.

Now, says Mr. Wiman, "What destiny awaits it all?" His answer is summed up in a few words: "A political union, to those best informed, seems most difficult and distant. To these, however, a commercial union which, so far as trade and commerce are concerned, would be just as advantageous, is among the early attainable possibilities."

In a recent address before the students of Colby University in Maine, General B. F. Butler discussed this question of a "commercial union" with Canada, which is certainly the most important question of the day to those who live along the Canadian line. Gen. Butler referred to the surprise frequently expressed, that Canada did not join with the 13 American colonies in the War of the Revolution. At that time Canada was no more a British province than Virginia or New York. She had a large French population which fact would seem to make her hostile to England. Why did she not rebel? It appears that the Pope refused to allow the Canadian Catholics to take sides against England. His belief was that England would conquer America. In that case, those who remained true to English interest would be surest of reward. The Pope was mistaken as to the result of the war. Suppose Canada had joined the 13 colonies! Would the history of this continent have been different?

INTER-STATE COMMERCE COMMISSION.—The rules of practice governing cases and proceedings brought before the Commission are sent by the secretary, Edward A. Moseley, Washington, D. C. They are handy for reference.

ELLWANGER & BARRY, ROCHESTER, N. Y. Circular of strawberries, naming the best old and new varieties. The pot-grown plants are recommended to all who desire to obtain a good crop of fruit the first season. The Mills grape and Windsor cherry are also catalogued.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

REMEDY AGAINST A PRIVATE NUISANCE.

L. N. L., New York City.—I own a nice house in a country village up in Connecticut within two hours' ride of this city. My neighbor's house adjoins mine, or rather an ell jutting off the back part of it. My neighbor keeps a lot of poultry, and close up to my ell, he has fenced off a hen-pen 30x50 feet, and in this he persists in keeping from 50 to 60 hens and four or five roosters. For about one-third of the pen he used the walls of my basement to the ell as a fence, so that his hens are directly under my kitchen, and but a short distance from my dining-room and bed-rooms in the second story. In warm, damp weather there is a sour, sickish odor coming from his pen, and when the windows are open it comes into my house. I have remonstrated with him twice for keeping his hens so close to my house, to the annoyance of my family, but he always gets mad and abuses me. The Board of Health claim that they have not the power to kill or remove the poultry or make him do so; they can only compel him to keep the pen clean. This they ordered him to do. Ever since he found out that I had lodged a complaint against him, he has been trying in every way to annoy me. Is that hen-pen a nuisance? If so, is it a public one? If so, has the village a right to abate it? If it is a private nuisance, what is my remedy? The hens are nearly as annoying to other families on the street as to mine.

ANS.—The hen-pen appears to be clearly a nuisance. It is not a public nuisance, because that is one which arises from violation of public rights, and produces no special injury to one more than to another of the community If the fact of the nuisance can be established a court of equity will issue an injunction against its continuance, or a suit for damages may be brought in a court of law.

Miscellaneous Advertising.

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"JOHNNY," said the father, severely, "are you still reading that history?" "Yes, father." "Well, you drop it pretty quick and hustle out with your base ball bat and go to practicing. If you ain't careful you never will get to be famous."—*Merchant Traveler.*

MISS U. (who has been waiting outside in the coupé): "What kept you so long, mamma? Couldn't you match the braid?" Mrs. U. "Oh yes! But I inadvertently put my purse into my pocket, and it took me nearly half an hour to find it again."—*Terre Haute Express*

CITIZEN (at florist's): "Have you any plants with bugs on them?" Florist: "No—No, indeed! I dont keep such things." Citizen (disappointedly): "I was in hopes you did. My wife never lets me smoke in the house except when there are bugs on the plants."—*Burlington Free Press.*

A LITERAL INTERPRETATION.—Miss Green (just returned from a Western tour): "Oh, Mr. Noddy, we had a most delightful trip! The Yellowstone Park was beautiful and the sunrise which I saw there was simply grand!" Mr. Noddy: "Yaas? But—aw—excuse—me—but I wasn't aware that the sun ever rose in the West."—*Harper's Bazar.*

EVIL COMMUNICATIONS.—Mrs. Nibbs: "I'm shocked, Willie Jones, to hear you use such awful language, positively shocked. I think it's high time your mother took you in hand." Willie: "Yes'm, she has. She told me this morning I must stop 'sociating with your little boy, 'cause he was makin' me as bad as hisself."—*Philadelphia Record.*

[ANOTHER BRUTE.]

EDWARD: "I suppose you learned at Vassar the inexplicable difference between the anatomy of the dog and that of other animals?"

SOPHIA: (who has just been graduated with an M.D.): "Why—er—not that I remember. What is it?"

EDWARD: "His lungs are the seat of his pants."

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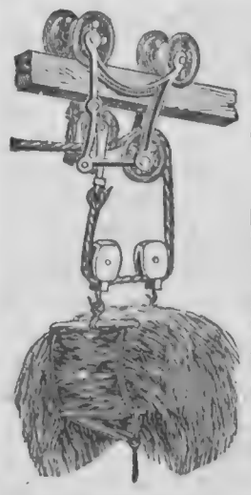

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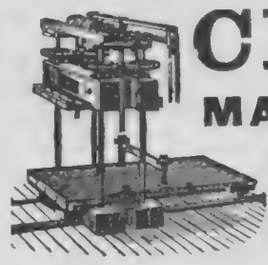
Percheron Horses. *French Coach Horses.*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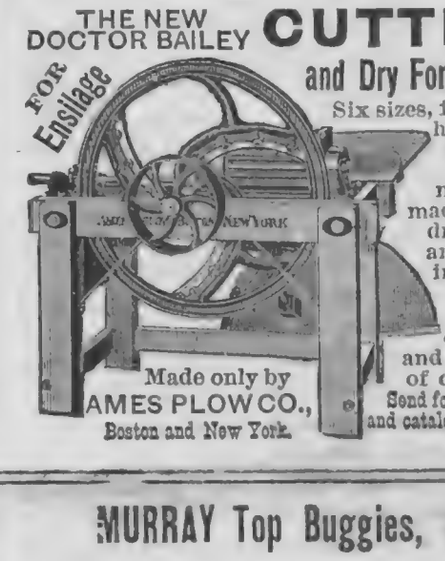

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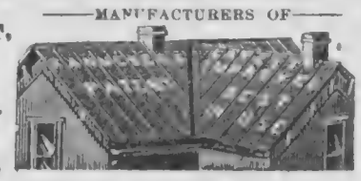
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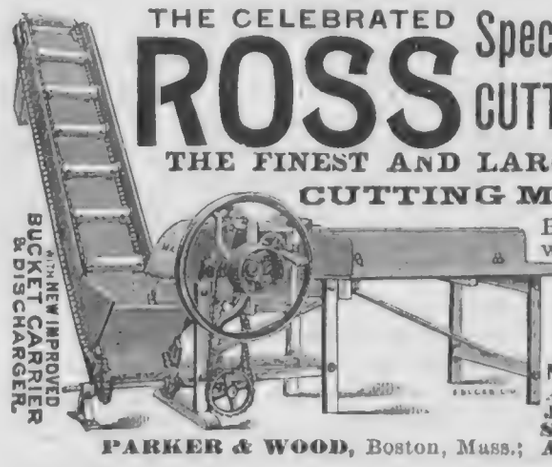

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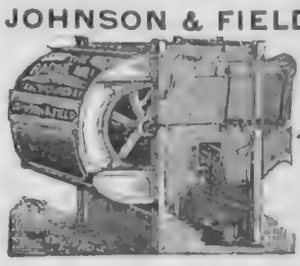
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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RURALISMS

Notes from the Rural Grounds.

A REMARKABLE VINE.

ABOUT six years ago, the R. N.-Y. received from Ellwanger & Barry, a single plant of this remarkable vine. It was planted on the north side of an arbor already well covered with Clematis, Dutchman's Pipe and Chinese Yam ("Cinnamon" Vine), so that its roots and the growth for a year or so could never receive sunshine either in the morning or afternoon. In this close northern exposure it grew rapidly, endured the winters perfectly and it is now the most notable exponent of a rapid, peculiar growth we have ever seen.

From the roots issue three main stems each of the same diameter—about one and one-half inch. These older stems exfoliate the bark just as does the old Ninebark, Spiræa opulifolia, now changed to Neillia opulifolia by shameless, heartless botanists who are never happier than when they can upset and confuse the lessons which their instructors taught, and which have been learned moderately or fairly well by the average school girl or boy. The stems, before they are old enough to shed their bark, are of a light brown or drab color speckled with tiny dots of light gray. The leaves are of a dark-green color, ovate acuminate, just a trifle inclined to heart-shape at the base, and minutely and sharply serrate. The petioles are about two inches long, of a red color and covered with short hairs.

After this vine, which bears the name of Actinidia polygama, has become fixed in its new quarters, the second or third year let us say, its growth exceeds that of any vine we know of. It is supplied with neither tendrils

ACTINIDIA POLYGAMA. From Nature. Fig. 183.

nor adventitious support. A shoot will start out at a right-angle with the stem and grow almost horizontally or at any angle until it reaches an object. Then it twines, curls itself about the object several times and continues its course until it reaches another twig or branch, when it makes two or three turns about that and still grows on. The stems thus closely encircled are held as if by an iron cord to be choked to death as their growth demands more space.

The specimen of which a section is shown at Fig. 183, has nearly taken possession of a latticed octagon arbor about 10 feet high by five across. It has reached out arms on all sides sometimes extending them horizontally, or nearly so, for 10 or 12 feet without support, until reaching the trunk or branches of the nearest tree it has, serpent-like, climbed up to the top and there as if not half satisfied reached out and circled about for other objects upon which to continue its wonderful growth.

About the arbor above alluded to are four magnolias from 15 to 30 feet high and distant from 10 to 15 feet. The Actinidia sprays wave gaily from the tip-topmost branches of all. Another peculiarity of this peculiar vine is that the many branches are of nearly the same girth whether six or 20 feet from the roots, being from a-half to three-quarters of an inch in diameter. The leaves are sometimes opposite and for the rest irregularly alternate. The leaves vary greatly in size, some of those from the older wood being as large as five inches long by four across.

The white flowers are sufficiently well shown in the illustration not to need any detailed description. They begin to bloom here early in June, continuing about two weeks. They are white, fragrant of a "woodsey" odor and rather fleeting. A few days ago the writer was looking over an illustrated Japanese work recently published. This Actinidia according to it, is found in many parts of Japan. The mystery is that it has not been introduced to this country before. The book states that it becomes arborescent with age.

We have no doubt that, confined to a single stem, it would in a few years make a fine tree. "It often stretches across ravines," the account continues, "or climbs about and entangles the tops of the branches of trees. In June two or three leaves toward the top of the branches become snow-white." This has not occurred in our own specimen. The book says that the "fruit, which is the size of the top joint of the little finger, can be eaten either raw or prepared by drying. When fully ripe it assumes a reddish-yellow color. It contains many seeds." The book states that cats are "exceedingly fond of the stems and leaves and eat it voraciously. They even rub their bodies over upon it. Whenever the leaves or stems are burned, cats follow to the source of the odor, gathering about the fire, rolling upon their backs secreting an abnormal amount of saliva and seeming for the moment as if mad."

The R. N.-Y. cats having been supplied with a lot of the stems and leaves, regarded them with utter indifference. The work says that persons "suffering from cramp, or colic use a decoction of the leaves," and it is said to be a very effective remedy.

Finally, friends of the R. N.-Y., if you want a quick-growing vine that is absolutely hardy; that will grow luxuriantly in a northern, shady position; that will travel from tree to tree, forming pretty arbors and wild entanglements, try the Actinidia polygama.

That this vine has not been referred to by the rural press before, is probably because the editors and writers thereof know nothing of it. It is really a grand plant in its proper place.

OLD RUBBER BOOTS.—Nearly every one on the farm wears leather boots, and also buys a pair of rubber boots for the deep snows and slush of winter and spring, and they do good service in keeping the feet dry and comfortable, so by the time warm weather comes on, by reason of cracks and holes in the feet, they are thrown away 'till the "tin peddler" comes along and carries them off for a cent or two a pound. During the summer season most farmers wear heavy shoes on the farm, because they are more comfortable than boots in warm weather. But to get the cows during a rainy morning in the tall, wet grass, or to catch the horses that have been "turned out" over-night is a disagreeable duty, for one comes in wet nearly to the knees, which is not pleasant. Well, take those old rubber boots that reach to the knees, cut the worn-out feet off and during rains or mornings with heavy dews, just put on these rubber leggings; then put on your shoes, and you will take some comfort, and bid defiance to the wet grass.

Johnson's, N. Y. M. H. C. G.

Horseman.

THE COLT.

THE FIRST YEAR OF ITS LIFE.

How the Farm Horse Starts.

FEEDING, HANDLING, TRAINING.

PRACTICAL FARMERS TALK.

FROM JOHN M. TRUE.

My experience in the raising of horses has been largely confined to grade draft stock. I have a high-grade Percheron that now, when 20 months old, weighs 1,400 pounds. He is in only fair condition, and in no sense coarse or ill-proportioned. He was dropped in September, ran with his dam through the winter, and was weaned when six months old. He was fed generously on oats, wheat bran and good hay until pasture was good, and then during the summer ran on June Grass pasture without grain of any kind. I consider the care and feed here mentioned well calculated to produce the best results in rearing the young colt.

I am satisfied that the fall colt has many advantages over one born in the spring, especially when the dam is to be worked while suckling the colt, as there is less danger at this season of injuring the colt from overheating the dam. Again, the fall colt after he has been weaned goes at once upon grass feed and there is little danger of checking his growth at this trying period. The spring colt that runs with his dam,—the mother not being worked—until he is about six months old, if he is then well fed with oats, bran, hay and corn fodder during the winter, with a good stable at night and a sheltered yard for a daily run, should do nearly as well as the fall colt. But if the dam is worked during the summer, the colt should not be allowed to follow the mother in the fields or upon the road, but be taught to remain in a roomy stall or paddock while the mother is at work. Care should be taken that the dam be not overheated or excited, rendering her milk unfit food for the colt. During the first month the colt should be allowed to suckle the dam every two or three hours. He should be taught early to eat grain and then be fed liberally. He should also have ample means for exercise. Exercise for the colt the first year is all-important. Plenty of feed regularly given, and plenty of exercise regularly taken insure healthful development.

Handle the colt from birth. Teach him that he has nothing to fear, and he will soon become gentle and easily handled. Halter-break him while young.

The young colt should be fed and handled for continuous growth and development. If stunted during the first year from lack of feed or from exposure, he will never fully recover from the ill-treatment received. I have no confidence in the desirability of any toughening or hardening process in the raising of young animals, by short or improper feed, or by an uncomfortable exposure to the elements; but if from necessity or prejudice, this ordeal is ever to be passed by the colt, he should be spared during the first year.

Sauk County, Wis.

M. H. C. GARDENER.

I consider it just as necessary or important for a farmer to raise colts, as a part of the farm production, as it is for him to raise calves to replenish his dairy, or ducks, chickens, turkeys, etc. They are all insensibly growing into money, something that the farmer of the present day of low prices, sees or rather handles but little of. It costs but little to raise a colt, and no more to raise a good one than a scrub, except a little more in first cost. And it soon grows up to be a three or four-year-old, and the owner discovers that he has an available horse at but very little cost; whereas if he went out to purchase a horse that would suit him, he would find that it would cost him from 150 to 250 hard-earned dollars. That is just the difference between raising a colt and buying a horse—the colt imperceptibly grows into money and very quickly too; while it takes money and plenty of it to buy the horse. I have raised a number of colts, and, when a boy, my father raised a good many, so I have had a fair opportunity to observe how a colt should be treated, to thrive and become available for service when three or four years old.

THOROUGHBRED STALLION, TRUEFIT.

Re-engraved From The London Live-Stock Journal. Fig 184.

I have seen many a young horse by the side of which the owner could stand and pointing to his noble-looking animal could say: "There's a horse that never ate a quart of feed in his life from the time he was weaned until he was broken to work;" but when he puts his noble-looking horse to work he finds that the animal is still a colt, for he has no stamina for work, because he hasn't been braced up with feed during his growing years, to fit him for the activities that fall to the lot of a four-year-old horse. I have seen very many cases where colts had only hay to eat in winter, and where they seemed to thrive on it and fill out in shape, but the muscle-building process did not keep pace with the growth and development of the body. A colt needs good feed and must have plenty of it if the owner expects a four-year-old horse to do road or farm work to a moderate extent.

My way is to keep the mother in a well-fed, healthy condition, and after the colt is foaled, she ought to do no work for two weeks; but this rule is hard to follow, where farmers are short of horses, and during the busy season too. Then when she is put to work she is fed liberally, and the colt is not allowed near her when she comes in from work very much heated. I never allow a colt to follow the wagon when taken off the farm. A colt soon learns to turn around and go into the yard when the mother is driven away. Teach the colt to do this while he is young, and it saves a good deal of worry and trouble.

By the time the colt is ready to be weaned it has learned to eat feed with its mother, so one can give it a small ration of feed—bran, middlings or not very strong feed till cold weather. During winter I keep the colt in a box-stall, and feed three or four quarts of middlings once a day, and after the cattle have been shut up for the night I let the colt have the run of the yard, to be shut up again in the morning. This gives him the necessary exercise and a colt seems to prefer the open yard at night to the stall, no matter how cold the weather is. Be sure to halter-break the colt when a few weeks old. Doing so saves much future trouble. The next season he may be turned out to grass and the following winter he should be well fed on muscle-producing food, and then it is well to make him familiar with harness. Towards spring drive him alongside a trusty horse a few times, but with no load to draw.

With this method of bringing up a colt you will find that when he is three years old you have a healthy, well-developed colt that will do quite a considerable amount of service willingly on the road or farm. But if you expect a three-year-old, or even a four-year-old to work alongside of a 10-year-old, through thick and thin, and not even mind it, you will be greatly disappointed.

Orange County, N. Y.

FROM C. F. WOOLEY.

I like the mother to be of good health, bone, size and disposition, an easy mover, from a sire of good health, size and disposition, and a good, easy mover if not fast. With a good disposition a colt can be broken with much less trouble; if a colt has not that quality it needs much more care to break him and he will be likely to balk, kick or play some other vicious tricks upon slight provocation. With good size and figure if a colt has a good gait and is a free mover, he will bring here from $200 to $500 if fit for a carriage team. If he has not style enough for that, he will pay well for business purposes. I would prefer that the mare should have reasonable work (not excessive) until about two weeks before foaling. By having the advantage of grain feed and exercise the mother and colt will be stronger. When the colt appears let it and its dam run to grass, if the mother doesn't hold her flesh and give plenty of milk. I sometimes feed a little grain. I like to keep the colt growing all the time during the first year. I halter-break it when it is six months old and wean it at from six to eight months of age, and aim to keep it growing nicely by feeding two quarts of oats and bran twice per day. Sometimes for a change I give a feed of corn, and feed hay nights and mornings, and cornstalks at noon, or I vary the feed, according to the supply of each. I always aim that my colts shall have exercise in a lot or out-yard with plenty of light and room every clear day, and box-stall them at night. One should be sure to keep them growing all through the winter by giving them plenty of good feed, but I would rather not give them too much corn, and when they are turned to grass in the following spring they will soon shed their coats and present a pleasing appearance. I value the growth of good colt stock at $50 per year and upward.

Monmouth County, N. J.

FROM J. F. FERGUSON.

I have raised only a few good colts. It has been my practice to purchase sucklings or yearlings in the fall. I never had any good colts from mares I worked. I have raised a few good ones from coupling large Clydesdale two-year-old mares with a line-bred trotter or a Thoroughbred stallion. In this way I have obtained some fine colts which grew up into good, hardy, long-lived horses.

Wean the colt when seven months old; before weaning teach it to eat grain with its dam; feed it one quart of oats and two quarts of bran morning and night until late spring before putting it to pasture. I prefer to put the colt in a box-stall, and in connection with this there should be a yard in which he could run in fair weather in winter. When he is put to pasture look well to it that he has plenty of pure water—one of the main things in a colt pasture.

D. J. Cochran, of Almont, Mich., is the most successful colt-raiser of this section, and this is his rule: "Couple two-year-old mares with a Clydesdale horse in June. Keep the colt and dam at pasture as long as there is any pasture. Wean the colt when the dam is on dry feed, having taught the little thing to eat oats, etc., as described above." He stops breeding the mares when he has to work them, as he thinks the teamsters teach the colts to be ill-tempered before they are born, and he believes that their constitution is broken with high feeding also, before they come into the world.

Almont County, Mich.

FROM S. S. MORDEN.

I aim to have my colts foaled as near the first of May as possible, so as to have pasture for both mare and colt at the start. I usually give the mare bran mashes for a week or 10 days after foaling, and then turn her and the colt into a good pasture with abundance of water, and allow them to feed themselves till cold weather comes on in the fall. Then I put them both in the stable and wean the colt by tying it beside the mare, and allowing it to suck but once or twice per day for a week or more, when I remove it to a separate stable and complete the job of weaning. While weaning the colt, I teach it to lead by putting a collar on the mare and tying the colt to it, and then leading the mare around till the colt gives up struggling and follows along quietly. I have found that this method of breaking to lead saves one a good deal of tugging and jerking, and insures against the possibility of the colt getting away altogether, and learning a bad habit.

After taking the colt from the mare I feed it clover hay, if I have it, or the best hay I have if I don't have clover, and a ration of bran and ground oats three times a day for the first winter. The second and third winters I usually substitute straw for hay and increase the bran and grain ration. I prefer a stable with a ground floor for colts, and after they are thoroughly halter-broken I usually et them loose in the stable—sometimes four to six in one stable. I do not attempt to do more than halter-break a colt till it is nearly three years old, when I break it to harness, both single and double, and also to the saddle; and by kind treatment from first to last I have never had any difficulty in making good, true, kind, serviceable horses. I might add that my experience has mostly been with half-bred Percheron horses.

Prince Edward County, Ont., Canada.

FROM J. D. BRUBAKER.

The first and most essential point in raising good horses is to see that when the mare has foaled, the colt has a sufficient quantity of proper nourishment to insure rapid growth. The food should consist mainly of the nourishment afforded by its dam for at least four weeks; then it should be taught to eat some oats which have been previously soaked for at least five hours, being careful not to give it too much; first give about half a pint and increase the quantity as the colt gets older. The colt should run with its dam in the pasture, when it will not require so much feed as oats; but when the mare is required to work, the colt should be put up in the stable, and fed a little oats and a little green cut grass, and it will thrive better, and it will be better for the mare, than if the colt is allowed to follow the plow, harrow or mower, which might injure it; but during the nights it should be turned out with the mare on grass, as a colt needs, the first year of its growth, all the exercise it can get to develop its legs and form and toughen its hoofs, as well as the other parts of its body.

In localities where for the greater part of the year the weather is wet and the soil rather spongy, the hoofs should be pared off at the points in order that the lower and upper muscles of the legs may be properly developed.

The training of a colt is one of the chief things in making a valuable horse. The colt should be taught to lead and drive single when or before it is six months old. For "breaking," "training" ought to be substituted; but if one does not teach a colt how to work, lead and be dutiful while it is a colt, it will certainly need "breaking" later on. Training colts when they are colts enhances their value one-half or more. Feed colts and teach them at the same time, and do it when they are young, and when they grow up they will regard you as their master.

Cheyenne County, Nebraska.

FROM A. B. TUCKER.

It is as impossible to raise a good colt from poor parents as it is to raise a good crop of grain from poor seed and a worn-out piece of land. In the first place, one should know what he is breeding for. A horse should be bred solely with a view to the labor he is to perform. The first thing for the breeder to do, therefore, is to decide what he wants to do with the horse. Let us suppose that he is to be used as a farm horse; for in these days it is poor business for the average farmer to undertake to raise trotters. In this case, I would recommend any of the draft breeds, as the Clyde, Norman-Percheron, Shire, etc. There are good and poor horses belonging to all the breeds. To raise a good colt both parents should be selected with reference to their individual points of excellence. For ordinary use a mare to breed from should be short-legged, with a deep and roomy chest, small head, wide hips and be so built as to indicate a robust animal, and she should have a good disposition. If possible, always avoid raising colts from a mare with a large head and ears, or from a slab-sided, long-legged animal, or from animals that have diseases such as ringbone, spavin, etc., or from animals with a bad disposition. In case I had such animals and wished to raise colts, I would dispose of them even at a sacrifice, and procure others better adapted to the use I intended to put them to; for in horses, as in other things, "like produces like," or, in other words, the offspring will inherit the general traits or a mixture of the qualities of both parents. We should therefore try to get the best breeding stock that can be procured. There is no profit in raising inferior horses, for it costs no more to feed, shelter and care for good horses than for poor stock, and after one has cared for a colt for two to four years, he likes to have something to be proud of, instead of being disappointed, as he would be, in nine cases out of 10, should he breed from inferior stock.

As to the care of a colt, my mode of treatment is about as follows: After the colt is a week or two old, I generally use the mare at ordinary farm work, taking care not to overwork or over-heat her. The colt is generally left at the barn in a large box-stall, made so tight that the little thing cannot get fast or hurt itself. The mare is fed liberally with all the hay she can eat, and also gets about six quarts of oats at a feed three times a day, except when she is not at work; then she is turned into the pasture. As soon as the colt can be induced to eat it gets all the oats it will eat, and when the mare is out at work I cut an armful of green grass and put it where the colt can get it. I also set a pail of water so that it can always have plenty to eat and drink, and I find that by so doing the colt will soon learn to eat and drink, and will scarcely mind the absence of its dam. The colt is generally allowed to run with the mare until it is from five to six months old, when it is weaned, after which it receives about the same care and feed as before.

During the first winter the colt should have a good warm stable, and plenty of good hay, and two or three quarts of oats twice a day. A couple of ears of corn at each feed also would not go amiss. A handful of oil-meal in its feed, two or three times a week, is also beneficial. Should the colt be inclined to be troubled with worms, a tablespoonful of salt and wood ashes, equal quantities, mixed, and given in its feed twice a week, will keep it in a healthy condition, and even though it may have no worms, the dose will be good for it.

I can give no set of rules for feeding and caring for a colt, that will work well in all cases, for some colts should receive treatment entirely different from that best for others. The great point to be always kept in mind is to get the greatest amount of growth on the animal the first year. I do not say that it ought to be kept "hog-fat;" but it should be kept growing. The grand results are obtained from regularity in feeding, with grain enough to keep the animal growing continually; for a colt that is stunted the first year of its growth will never make the horse that it would have been with proper care.

While speaking of feed and care, we should not forget to give our colt plenty of pure water to drink, and in winter it should not be compelled to drink ice-water, and then stand and shiver for half an hour. But perhaps all farmers have not got their barns as handy as I have. My stable will scarcely ever freeze even in the most severe weather, and my watering trough is right in the barn, and I find it a pleasure instead of a task to take care of my horses in cold weather. Then again, we should give the colt plenty of exercise in the open air. He should be turned out into a lot every day except when it is stormy or bad weather outside, for exercise is essential for the development of the muscles and the general health of the animal. As to the mode of training and handling: When the colt is a week or two old I train him to the halter. Generally two or three lessons will be sufficient, and if it has been done with care and kindness, he will never forget it. From this time on he is handled more or less every day. He soon learns that he has nothing to fear and will come when he is called. A colt should always be treated with kindness, and should never be plagued or tormented, as doing so produces a bad disposition. When a colt is a year old, I generally train him to the use of the bridle, and also to be ridden, and when he is two years old he is trained to be driven, both single and double. All this training goes on step by step, care and kindness being exercised. The whip is an instrument I have very little use for. I haven't a horse or colt that would know what it was for, and were I to show them, they would look at it, and smell at it, and want to taste it to learn if it was good to eat. My neighbors ask me how I manage when I want to drive my steady farm team on the road without a whip to touch them up, and I tell them my horses seem to understand what is required of them and will step off at a lively pace, and instead of my having to "push" on the lines, or touch them up with a whip, I have to hold them back to steady them, or they would go so fast as to overheat and hurt themselves.

Some men think that they will have a picnic or a smash-up when they undertake to break in a colt; but with kind and gentle treatment such as I give mine, they would have nothing to fear. Last season I put in a two-year-old colt to work and the third time it was hitched up, a 12-year-old boy hitched it to my buggy without the assistance of any one. I have never yet raised a colt that after it was a year old, I could not take from the pasture and ride without a bridle or even a halter. Indeed the young things would step around among the other horses, and hold up their heads as though they were proud of the honor of being ridden. This I attribute to kindness on my part, for I consider it no harder when handling them, to speak a kind word, and pat them on the neck, than it would be to give them a kick, and shout at the top of my voice: "Get away there!" Then again, I maintain that a man who has no love for a horse could never raise a good colt, for he would neglect to care for it, and should he undertake to "break it," he would no doubt spoil what might have been a good horse, for his idea of training a colt is, first of all, to let it know what a whip is for, and its second lesson is a continuation of the first, and the third and fourth are repetitions of the others until the colt knows nothing except the whip.

But, to condense my method in the smallest space I would say: Select good, sound and gentle horses to breed from; feed liberally and treat your colts with kindness; for the saying is no more true in the human family, than in the animal, that "love is the cause of love,"

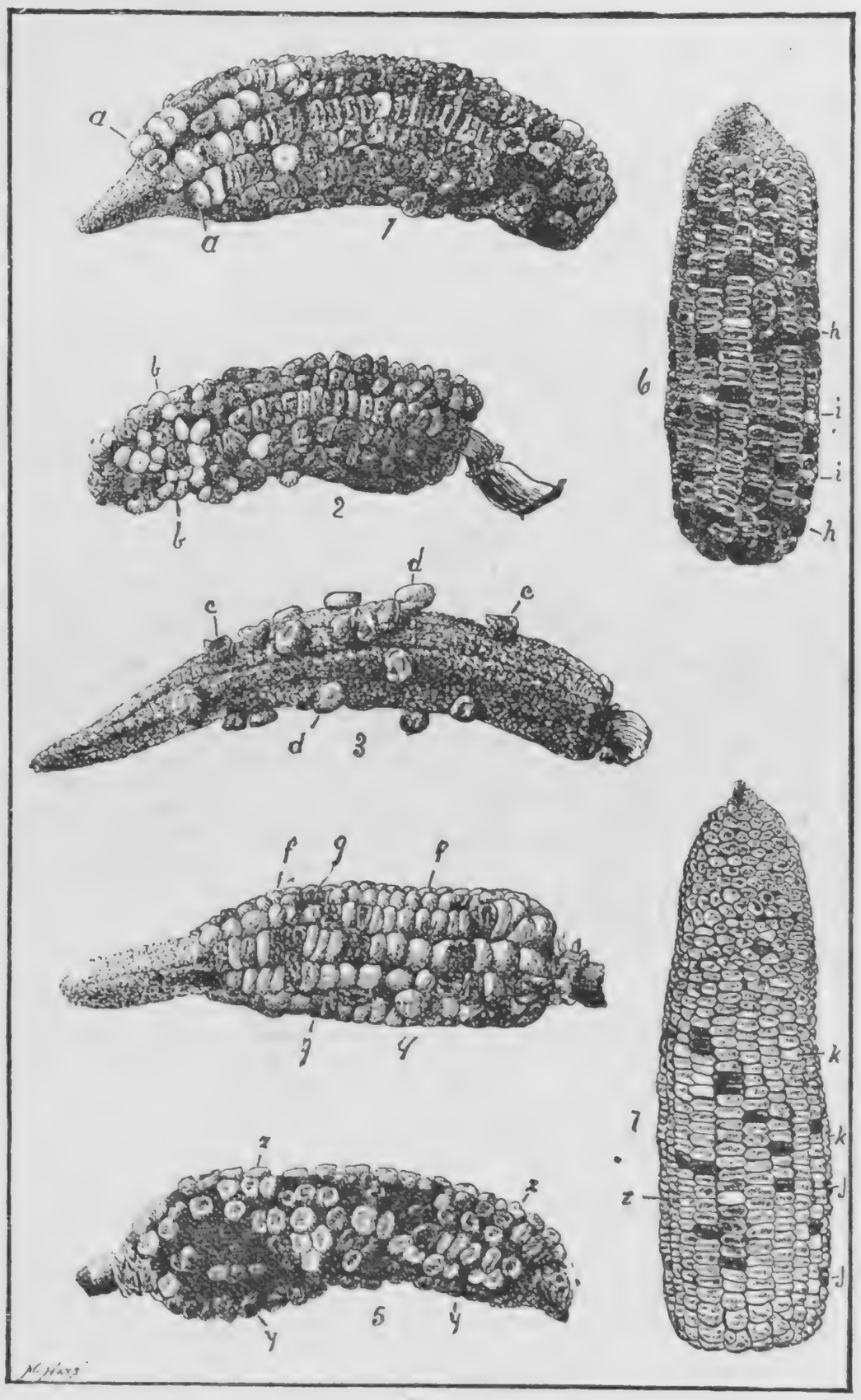
Jones County, Iowa.

FROM H. A. WHITTEMORE.

Before taking the colt from the dam for the purpose of weaning him, prepare a box-stall with a ground floor and a manger which he can easily reach, being neither too high nor too low, with a feed-box for grain. Take him at once from the mother and having previously prepared a feed of fine, well-cured hay, place him in his stable away from the smell or sound of any horse. Give his feed at regular intervals. In addition to the hay give him some roller-process wheat bran. Always scald this with boiling water and after it has cooled feed about one quart at a time twice a day. From the first handle him with gentleness but firmness, and continue until he knows you are his friend. Use the card and brush every day. Water regularly but never give enough to chill him. If you have it you will find much benefit in feeding sweet milk every day, and this you may continue even until he is two or three years old or older. Be sure the feed is sufficiently liberal to keep him growing. Under no circumstances allow him to become stunted, or even cloyed. Always see that his appetite is good and natural. Keep salt where he can always have access to it, for I find it a great promoter of health. Through the weaning process increase his feed by adding a small quantity of clean oats, until he gets at least two quarts a day of oats and bran—always scalded. Let the handling be with that kindness that inspires confidence, but always be the master. If possible give a few potatoes or carrots twice a week; these seem to keep the bowels in a healthy condition.

To halter-break, begin by holding the colt and afterwards tying him for a short time and increase the period until you could leave him in safety for any length of time.

To handle a colt successfully one must be self-possessed and determined. After one has learned the animal's disposition, then kindness should be his rule, but he should punish wrong as well as reward right. Take all gearing or halter off and with a whip begin the lessons in obedience. Tap him gently and speak firmly to him and when he obeys, give him a bit of an apple, a lump of sugar or something he likes, to reward his obedience. If you have made a good point leave him to rest. Next time commence at the place where you left off, but soon try to make him repeat his old tricks, and make these the basis on which to build up success. Whenever you go to his stable, meet him with something to attract his attention, and by doing this you will soon teach him to know his name and come to you.



CROSS-FERTILIZED CORN. Fig. 185.

Then see that he is ready to do for you what you taught yesterday, if he is, then add another lesson.

If you desire a substantial growth and good development you must combine both warmth and comfort with feed. The stable should be free from all direct or cool draughts, and the temperature should be as nearly uniform as possible—never going down to the freezing point. Daily exercise is essential; but if he is left loose in a box-stall or in a yard he will of necessity get considerable; still this is not like that in the open air. You may commence at a very early age to use the bit and lines if you desire; but I am partial to "whip training." I always know I have the complete confidence of my colt; then I take some simple thing, and having made a success of it, leave him, never working him any considerable length of time at first. As one advances, the lessons may be longer. 'Tis an easy matter to teach a colt to turn around, to back, etc., with the whip. You may begin early to teach him to lie down and many little tricks—and certainly if he is of an intelligent nature he will soon commit them to memory and before you are aware of it you have a trick colt.

One of the greatest stimulants to a rapid, healthy growth is regularity in feeding enough to keep up the animal heat and supply Nature's demands; but one should never overload the stomach. Sufficient fresh water is also indespensable, and then thorough grooming. Currying and brushing should never be neglected for one day. One may object to the labor; but if two colts are fed exactly alike, and one goes without the grooming, while the other is regularly groomed, the latter shows an improvement of more than 10 per cent. over the other and the difference between the beauty of the one and the shabby looks of the other will repay all trouble.

Chautauqua County, N. Y.

THOROUGHBRED STALLION TRUEFIT.

Our picture of this animal, see Fig. 184, is reengraved from The London Live Stock Journal. He is an excellent type of a breed of horses that have brought fame and fortune to English breeders. Truefit is now nine years old and has won many battles on the track. He is now used in the Stud of Mr. W. Burdett-Coutts where he gives promise of great success as a sire.

Field Crops.

CROSS-FERTILIZING CORN.

In the last bulletin issued by the Minnesota Experiment Station, Mr. Hays, the assistant in agriculture, gives the result of some experiments on corn. After giving an idea of the possible value of new varieties of corn, he describes the botanical characteristics of the corn flower. This is a subject the R. N.-Y. has had much to say about. The chief point of interest in Mr. Hayes's article is the excellent illustration of the results of his crossing. We give this picture at Fig. 185. The agricultural department at the station was testing about 50 different varieties of corn for ensilage, so that it was possible to secure a wide range for the experiment in crossing. About 100 sets were covered with bags a few days before the silks appeared. Pollen from selected stalks was dusted upon the silks after these had reached the proper stage. The bags were then adjusted and left until all danger of other pollen entering had passed. Cloth bags were thought to be better than those made of paper. Many of the ears that were covered by bags showed signs of being crossed by third varieties. Probably the pollen was mixed before it was applied.

In the picture, Figure 185, Nos. 1, 2, 3, 4 and 5 were covered with bags, while 6 and 7 were allowed to become fertilized in the natural way. Number 1 represents an ear grown upon a stalk of Mammoth Sweet Corn. It was cross-fertilized with pollen from a stalk of large yellow dent corn from seed grown in Australia, formerly taken there from Illinois. The kernels shown to be of light color (*a*, *a*,) are light yellow and as smooth as grains of flint corn. There are only 15 of these grains on the ear, and only one or two show clearly the dent form. These grains vary in color from nearly the deep yellow of the male parent to the light straw color of the female. A few kernels show that Black Mexican pollen from the adjoining plot reached the silks of this ear. All other grains on the ear appear like the grains of Mammoth Sweet Corn.

Number 2 is a cross between a large white dent, White Giant Normandy, and Crosby's Early Sweet. The kernels figured light colored are pure white, nearly as smooth as grains of flint corn, only showing a slight folding of the outer covering, and are hardly as large as the other kernels on the ear, all of which appear like grains of pure Triumph Sweet Corn (*b*.)

Number 3 was produced on a stalk of Triumph Sweet, white, and was cross-fertilized by Smedley Yellow Dent. Nine of the 22 kernels on this ear appear to be unmixed kernels of sweet corn, (*c*, *c*,) while the other 13 (*d*, *d*,) all show signs of the cross. Some of these are nearly smooth, but most of them are more or less wrinkled.

Number 4 grew on a stalk of Crosby's Early Sweet, white, and was fertilized by pollen from a flint variety, Squaw Corn. Two-thirds of the kernels (*f*, *f*,) are light-colored, only slightly dented, and appear much more like flint than like sweet corn. The other one-third (*g*, *g*,) are wrinkled like kernels of sweet corn, with no gradation between the two.

Number 5 represents an ear which grew on a stalk of Mammoth Sweet Corn, white, and the grains were artificially fertilized with pollen from Black Mexican Sweet. Some kernels (*x*, *x*,) on this ear are as light in color as those on ears of unmixed Mammoth Sweet Corn, others (*y*, *y*,) are nearly or quite as dark as any on ears of unmixed Black Mexican Sweet, and there are all gradations of color between these two extremes.

Number 6 grew on a stalk of Long's Early, No. 45, which stood but a few yards from the plot of Black Mexican, and was left uncovered. About one-third of the grains (*h*, *h*,) show the Black Mexican cross in all shades of the mixture of the two colors. The other two-thirds show no Black Mexican cross, but a few nearly white grains (*i*, *i*,) indicate that pollen from another white variety had some influence.

Number 7 was also produced by a stalk of Long's Early and was also uncovered. Besides various grains (*j*, *j*,) showing the Black Mexican cross and others showing a cross with a whiter variety of sweet corn, there is a grain at *z*, which is a typical yellow dent grain and seems to have been produced by pollen of a yellow dent variety at least 10 rods to the eastward. It is proposed to continue these experiments at "breeding corn," and farmers in various parts of Minnesota are requested to send to the station ears of any varieties that are considered particularly well adapted to their parts of the State.

Dairy Husbandry.

BRITISH DAIRY ASSOCIATION

PROFESSOR J. P. SHELDON.

A visit to the homes of the Galloway and Ayrshire; Cheddar cheese-making; its adaptability to various soils, climates and countries; its great extension in Great Britain; cheese exclusively a "dairy" product; crop rotation in a Scotch dairy district; the Ayrshire the prime favorite in her original home; the best cow for cheese-making; excursions of the British dairy farmers; their advantages.

The British Dairy Farmers' Excursion and Conference, which is now an annual and most interesting feature in the transactions of the association, was this year laid in the Southwestern counties of Scotland,—the classic land of Burns, the home of the Ayrshire cow! This corner of "bonnie Scotland" is often spoken of as Galloway, just as one would speak of the north of Ireland as "Ulster," and of your Northeastern States as "New England;" but in reference to Galloway the name does not indicate a province composed of a number of counties, as is the case in Ireland. Here, indeed, it is that we find, especially in the counties of Dumfries and Kirkcutbright, the Galloway polled cattle in all their sable glory, the home of the Ayrshire being chiefly in the counties of Ayr and Wigton; and here it is that we see as good a system of arable dairy farming, and of Cheddar cheese-making as can be found anywhere in Great Britain.

In this part of Scotland it was that the late Joseph Harding of Somersetshire, the apostle of modern Cheddar cheese-making, implanted the system which, more than any other, has proved its adaptability to various soils, climates, and countries, viz., the Cheddar system. Mr. Harding was employed to introduce into this essentially cheese-producing district the system and method which had already attracted so much attention, and right well he did his duty. Addressing an audience in Ayrshire, in 1854, he said—speaking of different pastures, systems of farming and climates—"I will take the milk from any of them, and make the same cheese anywhere. Cheese is not made in the field, or in the byre, or even in the cow—it is made in the dairy." In this cosmopolitan adaptiveness, then, of the Cheddar system of cheese-making, Harding was a firm believer at and before the time when Jesse Williams started the first cheese factory in America.

There are many large dairy farms in Ayr and Wigton, and the land is to a great extent under arable cultivation. The Ayrshire is the universal cow in these counties, and it is not at all uncommon to find herds of 50 up to 200. The soil for the most part is a rather light, friable loam, and it is managed, generally speaking, on a six-course rotation, viz: one year oats, second year green crops, third year oats, followed by three years' grass. With the second oat crop the grasses are sown, consisting of Rye Grass, Cocksfoot, Timothy and clovers, and they come into pasture the following spring. The land is well farmed, and weeds of all kinds find no quarter there. These temporary pastures, in fact, are cleaner than permanent ones, for all weeds are eradicated at all events once in six years, and fresh grass seeds are sown.

The Cheddar system has completely supplanted the old Dunlop mode of cheese-making, and many of the farm dairies are little factories, equipped with every convenience, and scrupulously clean. The cows on many farms are let to a "bower," who makes the cheese; the farmer receives, in payment for the season's milk, generally about 480 pounds of cheese per cow, the surplus over and above this quantity being the bower's pay and profit. A so-called "hundredweight" of cheese is 120 pounds in this country generally, in Cheshire it is 121 pounds. It speaks well for the milk-yielding capacity of the Ayrshire cow in her own habitat, that, over and above four cwts. of cheese in the season, she will yield sufficient to pay the cost of making the season's cheese, and a profit besides; for to do this, the average yield of milk per cow cannot be far short of 600 gallons. We may admit, indeed, the Ayrshire cow to be the best cow in existence for cheese-making purposes; and, as a matter of certainty, she will—size and weight of cow being taken into consideration—yield more milk than the cow of any other family or breed in the bovine race.

The conference opened on Tuesday, June 11, in the Town Hall at Stranvaer, under the presidency of the Earl of Galloway. First there were an address of welcome and a response thereto; these were followed by a paper on "The best methods of feeding cattle for dairy purposes," and an able discussion. Next came a lunch, and afterwards a drive to the Dunrage Creamery, to the farm of Mr. Frederick, whose Cheddar cheese won the first prize at last year's London Dairy Show, and to the splendid pleasure grounds of the Earl of Stair, at Castle Kennedy. On each of the three following days a paper was read, followed by a discussion, and high-class farms were visited. Two of the four days were spent in Wigtonshire, and the other two in Ayrshire, and the conference was well attended throughout. These excursions into first one and then another of the dairy districts of the British Islands, are doing considerable good amongst dairy farmers. They rouse up our sleepy ones, and set people on to think out the matter and to talk about it. The object is to create a new and active interest in dairy farming as a business, and in cheese-making and butter-making as arts closely allied. Unless this can be done, British dairying will not reach the high position which our soil and climate place within its reach. *But it is being done*, and there is already an advance all along the line, wherever the association has paid a visit. But the work of dairy education is perennial and permanent. Many years will elapse before all the dairying districts have been visited, and then it will be time to visit them over again. And again, new generations are constantly springing up; and these need teaching, like those which have gone before.

Sheen, Ashbourne, England.

DAIRY NOTES FROM A DAIRY RANCH.

CARE OF CREAM.

Why butter doesn't come, and how to make it do so; feeds for quantity and quality of products; treatment of cream before churning; "ripening;" cream from different milkings; temperature of cream all-important in churning; how to regulate it; trouble from faulty thermometer; frozen cream; cream from farrow cows; thick and thin cream for churning.

"Why does not my butter come?" is a question one often sees asked in the agricultural papers during the winter season. Ever since I was strong enough to help bring the butter from the cream in the old-fashioned dash churn, I have had more or less to do with butter-making, and for the last 11 years have superintended the churning of from 1,000 to 1,500 pounds of butter yearly; yet never do I remember a churning of cream that did not eventually come to butter. Now and then a churning has been aggravatingly slow in showing the golden grains; but at last they came and with them a hard-earned experience that helped us to guard against a similar trial of patience and strength in the future.

To begin with, let us presume that the cows are well cared for and fed on a variety of grain, hay and possibly roots, that they get salt and water regularly. All the profit the cow can be expected to yield to her keeper, in milk and butter, comes from the nutriment she can be induced to take over and above what is needed to keep her alive.

This the dairyman understands and he acts accordingly. He also understands that certain articles induce a flow of milk without much improving the quality, and that other articles add to the richness of the milk and improve the quality of the butter. Among the first might be mentioned potatoes and bran, and in the latter class corn-meal and oats. After the milk has been strained and set with due regard to cleanliness, the gathering and treatment of the cream before being put into the churn, will decide how quickly the butter shall come, and what its quality shall be.

Perhaps no cream will churn as quickly and thoroughly as that gathered from shallow pans where the milk has been heated until wrinkles began to show on the top.

When all butter-makers used common milk-pans in which to raise their cream, we heard very little about "ripening"—in fact, the cream ripened as it gathered on the surface, and the one thing to guard against was letting it become over-ripe, thereby injuring the quality of the butter. Sweet cream requires more churning than sour cream; therefore if the cream for one churning is gathered at different times, it is necessary to stir the mass every time a new installment is added, and in case of cream gathered from the deep cans, 12 hours should pass after the last sweet cream is added, to give it time to ripen, else just that amount of cream will go out with the buttermilk, unchurned.

The great thing in successful churning is to have the cream at just the right temperature when commencing—60 degrees in summer; 65 degrees in winter. Should you begin to churn while it is too cool it will foam and swell. When this occurs stop churning at once, and make a test with the thermometer. Cream needs close watching for the first 15 minutes of churning. If it is not right, every turn of the crank increases the difficulty. If it is too cool, it will be another case of "wouldn't-come." If agitation is persisted in; if the cream is too warm, before you have thought of the thing you find a frothy, white, inferior article of butter floating in the churn. Of course, the cream was at the right temperature when you commenced churning, but something has happened. It is a very cold day, and that heavy churn has acted like a block of ice upon the cream. You rinsed it with hot water, but that didn't take half of the frost out of it; you make a test and find the cream several degrees cooler than you expected. Or it is a very sultry morning and your thermometer tells you the temperature of the cream is going up. In this case put fine pieces of clean ice in the cream until it is sufficiently cool. In the other case warm the cream with boiling-hot water.

Hold the dipper of water in the left hand, pour it in slowly and move the dash meantime with the right hand. Use boiling water because it does no harm, and because there is less danger of getting the churn too full. If the churn does become too full, it is a saving of time to divide the cream and make two churnings.

It is an exceedingly tedious piece of work to accomplish a churning when the dash cannot come out of the cream. But suppose the cream has been ripened to the right degree of acidity, the temperature is all right, and still the butter refuses "to come?" There is a chance the fault may be in the thermometer. I once spent hours of hard work trying to bring butter at 65 degrees till, in a fit of desperation, I raised the cream to 70 degrees and soon had as nice butter as could be desired. The trouble was due to a faulty thermometer, but the churning worked well enough after I had learned where the difficulty lay. While ripening cream, keep it as near the temperature desired for churning as possible.

Some think butter cannot be made of cream that has been frozen. One winter when I had only one pan of milk to set night and morning, I scalded it and set it in a summer milk-

room where it sometimes froze before the next morning. Day by day as I gathered the cream, I put it in a stone churn where it froze and remained frozen until I had enough for a respectable churning. Then it was set in a tub of hot water by the kitchen fire, and stirred occasionally until it came to 65 degrees. Then it was colored, and churned as readily and satisfactorily as in the summer time. Thin cream churns more thoroughly than thick cream, so it is advisable to put a little milk or water into very thick cream. You may be sure by the richness of the butter-milk that your cream did not yield a fair amount of butter; yet you can very seldom prove it by churning the butter-milk. Intense cold has the effect of separating the cream from the butter-milk in such a case. One frigid morning I found a large vessel of butter-milk from the churning of the day before covered several inches deep with grainy cream. I gathered and churned it, but got only about half the butter from it that I thought the churning had failed to yield, and this was of interior quality. Cream that is a little sweet, but of the right temperature, will come without growing thick.. Sour cream usually thickens in coming. The length of time necessary to churn depends upon the quantity of cream somewhat. If the butter comes very quickly there is danger that the cream may not be thoroughly churned, or that it was too warm; when all hopes of making a fine article must be abandoned, for in that case the firmness of grain can never be recovered. It is claimed that milk from a farrow cow will not churn; but farrow cows are not profitable so the wide-awake dairyman soon hands them over to the butcher and fills their place with something that will pay for keeping.

S. E. H.

Valley Home Ranch, Weld County, Colo.

BETTER COWS AND HOW TO GET THEM.

J. W. NEWTON.

Beef stock being no longer profitable in the East, more attention must be given to dairy cows; dogs the great hinderance to profit in sheep; 300 pounds of butter per cow per annum the standard; this to be obtained by selection and grading up the herd; how to do so economically; a good dairy bull indispensable.

THE farmers of the East are confronted with a new problem. In the past it paid to fatten beeves. Steers, oxen and other stock could be fed and sold at a good profit. A man could raise a yoke of steers, work them enough to nearly or quite pay for their keeping after they were old enough to work, and then turn them over to the drover for a good round sum. Now men who have oxen to dis pose of feel discouraged. Three cents and a-half or less per pound for them will cause farmers to keep fewer oxen and steers.

But some kind of stock must be kept, at least by the majority of farmers. Some can grow crops with commercial fertilizers and sell what they raise. Many are raising more horses. I think mutton sheep, and especially early lambs would pay as well as any stock, always provided the cruel dogs can be kept away. But the great mass of Eastern farmers are dairymen from necessity or choice.

Here, too, conditions are changed. Those who supply cities with milk are not troubled by Western competition; but those who make butter must compete with the West, with oleo, and with each other. The man whose cows average only 100 to 150 pounds of butter per annum, will learn that his kind of farming does not pay. He will work hard to cut grass, to plow and plant, and sow and reap, and will not earn as much as he could by working out. The progressive farmer has his eye on 300 pounds of butter per cow. He may not have yet reached that mark; some have, but our hopeful farmer is working up to it. Suppose he makes 250 pounds per cow and gets say, 25 cents per pound, he will receive from each cow in butter and the by-products—skim-milk, etc.—about $70. "Dont-pay" farming will get from $30 to $40 per cow. The good cow does not eat much more than the poor cow, often not as much home-grown feed.

It is evident that good cows are going to have a great deal to do with the prosperity of Eastern farmers. The question is: How are farmers to get them? Jersey bull calves were advertised in the RURAL awhile ago at $100 each. The advertisers said that farmers could not afford to buy cheaper ones. That may be true, but it is also true that a great many farmers cannot afford such bulls.

Thousands of farmers could not sell their farms, stock and tools for more than $2,000 or $3,000; some would have to sell for less, and yet they make a living, often a good living. For such men to invest $100 in a bull calf would be very unwise. The calf might die, and the farmer would feel the loss for years. I do not know about other butter breeds, but Jersey bull calves eligible to registry can be got for $25.

But many farmers would think this a great price for a calf, and such can get calves out of registered bulls and from thoroughbred or high-grade cows for lower figures. Men that have large herds or even small ones, are often willing to sell really good calves at very low prices. It all depends on the demand and other circumstances. But there are Jerseys and Jerseys. Some are very poor, and a man who wants to get good cows must take care lest he buy too cheap.

Often it is better to take one's best cows to a good bull if one is within reach. A number of farmers, or a grange, or the patrons of a creamery residing in a neighborhood, could unite to get a bull to improve their cows. It is well to get thoroughbred heifers, if one can do so; but if a farmer doesn't understand feeding and caring for thoroughbred stock, he had better work into better cows by degrees.

But by all means, if you are going to keep cows for butter, get butter cows. To do this is to take a long step towards making the farm pay. Dont spend your time and strength on poor stock, and remember that the bull is half the herd, that like begets like, and that blood will tell. Never use a scrub or common bull if you are going to keep the calves. When a farmer keeps good cows, people will soon find it out, and if he has a cow to sell he can get a better price than the owners of ordinary stock can get. There are a host of reasons why farmers should steadily improve their stock, and yet how few are doing it!

Lamoille County, Vt.

Miscellaneous.

CORRESPONDENTS' VIEWS.

RULES FOR RENOVATING A WORN-OUT FARM.—Never let the stock run over the farm when the land is wet and soft. Never plow or till the land when it is too wet. Return as much fertilizer to the ground as you remove from it each year. Clover your land at least once in three years. Never haul the clover straw off the field. Leave it on either as a protection or mulch. Six years ago I bought a farm so poor that my neighbors said it would not produce seed enough to plant it again. By observing the above rules, it is now producing as good crops as are grown by my neighbors. I used nothing but stable and barnyard manures. Good farming pays. If you treat Mother Earth well, she will treat you well in return. S. H. E.

Medina County, Ohio.

THE FARMER NEITHER A DULLARD NOR BOOR.—It is a great mistake to attribute want of mental culture to the American farmer. He must know more or less of most of the practical sciences in order to take care of his animals, his crops, his machines, to forecast the weather for his seeding and his harvesting, and the prospects of demand for his marketing. He not only reads the papers, but he has undisturbed time to ponder on what seems important, to digest it, and form well considered conclusions. Only his tongue is not so fluent, or flippant, his thoughts not so nimble, his principles not so adaptable, his hands and dress not so free from dust and rents, and his enduring fiber not so supple as among the sedentary room-imprisoned, over-sheltered denizens of the town. W. G. W.

Tyrone, Pa.

Everywhere.

CUMBERLAND VALLEY NOTES.

A "happy valley;" a beautiful and prosperous region; thrift; good, convenient markets; crops this year; rotation of crops; prejudice against "fertilizers;" profitable orcharding; extensive use of traction engines, depreciation in price of land; pleasant homes; an abundant water supply; the great Grange picnic; recent floods.

Is there a more beautiful and fertile valley in the world than that which is known as the Cumberland Valley, Maryland, extending from the Blue Mountains on the southwest to the Susquehanna on the north? The land is fertile and well cultivated; it is evenly divided into regularly shaped fields, well fenced; the barns are large and commodious and the houses are comfortable and well cared for. The people are, as a rule, church-going, virtuous, thrifty and apparently as happy and contented as possible. Altogether it is a model agricultural section. One of the reasons why the farmers of the valley are thrifty is because they find an excellent home market for all their surplus products (except wheat and rye and, sometimes, hay) in the local villages, thus saving cost of packages, freights, commissions and the numerous other charges which eat up the profits of farmers less fortunately situated. The prices, too, are usually based upon the quotations in the R. N.-Y. or from some similar sources and are often quite as high as those obtained in the large cities. The markets are never glutted and prices are therefore comparatively uniform.

The wheat crop in the northern part of the valley is not quite up to the average owing to the heavy rains. On the lower meadows the grain is badly lodged and cannot be harvested without considerable loss. In the lower valley the crop is about up to the usual average, and will be harvested without material loss. Corn is backward and the acreage is comparatively small. The wet weather caused it to come up very unevenly. Potatoes, too, have come up unevenly and will hardly be an average crop. No regular rotation of crops is practiced. Each farmer has a system of his own. As a rule, the rotation is a matter of prejudice or convenience. It is not practiced scientifically. Clover is frequently plowed under. Many of the farmers are strongly prejudiced against commercial fertilizers. They say that they value their land too highly to ruin it by stimulants. As a rule, they use special fertilizers, chiefly the lower grades of wheat fertilizers. They are not disposed to pay more than $20 per ton for any they may purchase.

Hundreds of acres of the lower valley, on the northern slope of the Blue Mountains, have been set in peach trees. The orchards which are in bearing have proven very profitable and almost all the farmers have set orchards. One orchard is said to have netted its owner over $40,000 last year. Major Alvord, of the Maryland Agricultural Society, thinks that western Maryland will soon become a great peach-growing section. He is spending considerable time among these orchards and his report concerning them will doubtless be of great interest and value. The use of traction engines is on the increase. The roads and bridges are being made to accommodate the engines, and it is found that for many purposes they are cheaper than horse power. It is estimated that there are several thousand traction engines in use in central Pennsylvania. As a matter of course, they work best on hard, level roads, but they will pass over any ordinary obstruction or climb quite steep hills. Traction engines have superseded the old-fashioned portable engines almost entirely. It is about as easy for a team to do the thrashing as to transfer the engine. It is very much easier and more economical to utilize the engine to move itself and the thrasher from place to place. The sale of traction engines is rapidly increasing. One of the reasons why steam power is becoming popular is the high price and scarcity of good work horses; another reason is the scarcity of good farm help. An engine of, say, 10-horse power will do an immense amount of work. Such an engine consumes from 500 to 700 pounds of coal per day, costing, say, $2.

Notwithstanding the apparent prosperity of the farmers of the valley, the value or at least the selling price of the farm lands is constantly depreciating. A conservative estimate places the depreciation at fully 33⅓ per cent. within the last few years. The worst of it is that the depreciation still goes on. At forced sales there are very few buyers and only nominal prices are obtained. Mortgagees usually buy in the places which are sold under foreclosure. When will farm lands reach a price which will attract buyers who want to follow farming as a business? Until then low prices must prevail. One of the things which make the valley so attractive is the excellent condition of the front yards. In some localities it seems to be the fashion to shut up the front of the house and live in the kitchen; it is not so here. Almost every front yard is adorned with a great bunch of hollyhocks, honeysuckles and other ornamental flowers and shrubs. The farm-house without a handsome front yard does not look complete.

The water supply is unsurpassed. On every side there are springs and creeks, the latter being in many cases large enough to run the local grist-mill. The larger towns draw their supply of water from the adjacent mountains.

The Grange picnic to be held at Williams Grove, beginning on August 26, is looked forward to with eager anticipation. It is expected that it will be the largest combined fair and picnic ever held in this country.

The recent floods carried away many bridges and washed the roads very badly in places, but did no very serious damage. Some of the lower meadows were badly washed, but not seriously enough to injure the grass or corn. RAMBLER.

RURAL SPECIAL REPORTS.

California.

ONTARIO San Bernardino County, July 2.—We have been here nearly three years and are delighted with the climate and country. We have a small fruit farm of five acres and are getting along nicely, and my husband's health and that of many other invalids has improved astonishingly. D. L. B.

Canada.

ST. CATHERINES, Lincoln County, Ont.—Wheat, barley, corn, oats, hay, horses, cattle, fruit and vegetables of all kinds, are our cash products. The wheat is sold to millers here; the barley is sold to breweries and exported. All other products are sold here, except fruits, which are mostly exported to Toronto, London, Ottawa and Montreal. Prices are generally good. Last year's crops of apples, potatoes and turnips, yielded poor returns, however. Future prices seem likely to be fair. Some get extra prices by marketing first-class products. During the past 10 years farming has changed to fruit growing, fruits yielding better returns than other farm products. I would suggest the cultivation of fewer acres and better work. S. D. W.

Kansas.

IUKA, Pratt County, June 28.—We have splendid prospects this year for everything. None of the big stories of Kansas production are over-estimated this year—there are many fields of oats that will yield 100 bushels or more per acre. All kinds of fruit are in abundance, and so is everything else.

J. J. M.

New Jersey.

TITUSVILLE, Mercer County, July 15.—Grass is very heavy; not all harvested yet: much of it has been damaged by rain after it had been cut. Wheat about an average; straw generally short and rather thin. Oats a full average crop; nearly ripe. Corn about an average for this time of the year; a good proportion of it needs more tending to. Constant rains have hurt the prospect for a fine crop, as many pieces are weedy, and the stand is not very good. Potato prospect poor. The crop on many pieces came up badly, and as the ground was too wet to work, weeds grew apace and beetles throve disastrously, and, moreover, the potatoes show signs of rot. J. W.

Pennsylvania.

BINGHAM, Potter County, July 8.—It commenced raining on Decoration Day and rained till the night of July 3d. Orchard fruits are all killed and so are small fruits. Oats are a good stand on high land. Grass is good on new seeding. Old meadows are light on account of the freeze. Potatoes are going to be light on account of wet weather. Of corn there is none. Rye is splendid and bids fair to be a large crop. Spring and winter wheat isn't much raised—only on new land. S. S. C.

ANSWERS TO CORRESPONDENTS

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

INCREASING SIZE AND VIGOR OF JERSEYS.

Several Subscribers.—Are breeders taking any steps to improve the size and general constitution of Jersey cattle?

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies.

Ans.— Messrs Miller & Sibley of Franklin, Pa., are reported to be breeding with this special end in view. They write the R. N.-Y. the following account of their methods:

"We can give no formula for breeding large and rugged Jerseys. We have believed from the first in strong constitutions being necessary to the success of any herd. Without constitution as the first requisite all else will fail. With that end in view, we purchased many individuals that would have been rejected by fanciers who were seeking typical lawn cows. The points in Jerseys which prejudice us against individuals are those external evidences of lack of constitution as indicated mainly in thin, mellow skins, or what has been termed paper skins. We object to fine, delicate limbs and small, crumpled, waxy horns. Although our herd is nearly solid-colored, fawns and grays predominating, yet in our opinion color should never be recognized as a point of merit. [Its chief value is as an indication of purity of strain or breed. EDS.] Our practice is to turn our herd out every day in the year for exercise. This rule is not deviated from except in cases of cold sleety winter rains. In the management of bulls our practice has been to put them on a tread-power properly arranged with a governor, and exercise them half an hour each day. This, in our judgment, tends to increase lung capacity and to strengthen bone and sinew, and under this treatment Stoke Pogis 5, now over 10 years old, is as ready and active as a yearling. In all probability the preferable method would be to have paddocks built where the bulls could have constant liberty in half-acre or acre fields. For the last few years to increase size and vigor we have made it a practice never to breed a heifer until she was two years old or upwards. Time enough has not elapsed to determine fully the value of this plan, but such limited observation as we have had convinces us that it is one of the most important factors in breeding for size and constitution. We believe in liberal but not high feeding with as great a variety of forage as can readily be obtained, and with an abundance of light and fresh air in the stables. In winter our stables are never allowed to get warmer than 45 Fahrenheit or colder than from 38 to 40 degrees. We believe our stables are cooler in the winter than the majority of stables from the fact that the ventilators are always open, no matter how cold the outside temperature may be.

FEEDING FOR EGGS.

H. D. T., Phillipsburgh, Mont.—What quantity of Indian corn will fully feed 150 choice White Leghorn cocks and hens for one year, on a grassy range of several acres? If the hens are fully fed on corn, potatoes and pumpkins, and well housed and cared for, how many eggs can be reasonaby expected from them in a year?

ANSWERED BY P. H. JACOBS.

ANS.—Corn is an unsuitable food for laying hens, being deficient in lime, and containing an excess of carbon, which promotes the laying on of fat, which is not favorable to egg-production. If the hens have a range they should be fed no grain at all in summer, but may be allowed eight pounds of chopped lean meat (liver or other rough portions will answer) at night. In winter they should have all the chopped clover hay they can eat, in the morning. About three pounds of hay will answer for 150 hens. The chopped hay is scalded at night, in a tub, a cloth being thrown over the tub, and in the morning a mixture of five pounds of bran and ground oats may be incorporated with it, the mess salted to season, and fed in troughs. At night a pint of wheat may be fed to each dozen hens. Twice a week give a pound of linseed meal for the 150 hens in the clover, and twice a week feed a pound of chopped meat to 20 hens. On such a diet the hens should lay well if kept warm. The object should be to keep the hens at work scratching. Exercise is the best egg-promoter. 2. Corn, potatoes and pumpkins will answer also, provided the clover and meat are added. To produce eggs the hens *must* have nitrogenous food. If cared for, and not over-fed, each hen should lay 10 dozen eggs per annum. Some will lay 140, and some will lay 100 or less. Much depends on individual characteristics, as no two hens are alike in every respect.

Miscellaneous.

C. W. D., Terrell, Texas.—Is the Taylor Blackberry earlier than the Kittatinny?

ANS.—No, it is later than the Kittatinny.

A. H., Archer's Fork, Ohio.—The R. N.-Y. hopes to give a full description of fish ponds and fish culture with good photographic illustrations.

J. C. M., Pleasanton, Cal.—1. Where can I get a corn-husking machine? 2. Is there a self-feeder and band-cutter manufactured for husking bound grain? If so, where?

ANS.—1. The Keystone Manufacturing Co., Sterling, Ill. 2. We do not know of any.

"A Reader," Hagaman's Mills, N. Y.—What is the weed a specimen of which is inclosed?

ANS.—The specimen sent is Echium vulgare—Viper's Bugloss. It is a most pernicious weed. Being a biennial, it can be exterminated by hoed crops.

H. A. S., Rock City Falls, N. Y.—1. What proportion of nitrogen should go with wood ashes for potatoes? What would be the cost? 2. With about 25 loads of manure per acre for wheat, would it pay to put 10 to 12 bushels of wood ashes?

ANS.—1. To every acre use one bag of nitrate of soda or sulphate of ammonia or half of each. Any fertilizer firm will furnish either. The cost will be about $5 per bag. 2. Yes, decidedly, unless the land happens to be already well supplied with potash and phosphoric acid. Our friend should guard against such an application of manure as would be likely to cause the grain to lodge.

W. L. K., Westmoreland County, Pa. 1. What is a good plan for attaching three horses abreast to a wagon so that the tongue will be properly adjusted between two of them? 2. Is there any danger that hay put into the barn green will burn by spontaneous combustion endangering the barn? 3. What does the RURAL think of Buckingham and Prince Edward Counties, Va., as places where a Northern young man with limited means but a liberal education could settle with fair prospects of success?

ANS.—1 On page 158 you will find two excellent devices for three-horse eveners. 2. This was answered last week. 3. We do not know much about the chances in those counties. Unless one has some capital he may be able to do as well at home.

J. W. W., Ont., Canada.—I send the RURAL a bunch of roses cut from a bush of Hybrid Perpetual Moss Roses which always bore white flowers until last summer when they began to sport. Some of the flowers would have from one to two rose-colored petals, in others from one-third to one-half would be of that hue, while in the same cluster some would be of a deep rose color and others pure white. At present there is in one of the clusters of buds one that is larger than the rest and there is absolutely no moss on it. What is the cause?

ANS.—It is no doubt a case of what is called "sporting" for want of a better word. This is very common with roses and some of our finest varieties have been obtained by propagating the sport. It is known that most of our garden roses are the results of crossing or hybridization. Under peculiar conditions it would seem that the blood of some ancestor, previously impotent, becomes potent and asserts its potency in growth. That is the best explanation the R. N.-Y. can give.

DISCUSSION.

"IS CREAM, CREAM?"

"A COOLEY MAN."—In the RURAL'S discussion on the subject: "Is Cream, Cream?" I see that the correspondents don't keep to the main question, with the exception of Prof. Babcock. The question is not whether cream raised in all sorts of apparatus is the same, but it is whether the cream raised in the Cooley is the same, and the man who asked the question, should have put in, "when raised according to the prescribed rules." The density of the cream varies with the temperatures at which it is raised. What Prof. Collier says, that "the art is a good deal ahead of the science," is true. I know that cream from various sorts of milk raised in the Cooley, when run according to rule and the divisions made by the spaces, comes nearer to yielding all the contents of butter fat in it than that raised by any other device. Anybody who has had any experience, knows that it is not practical to make a division by the chemical test, for every chemist of any experience can tell that more butter always comes out of the churn than the chemical test calls for. The chemical test shows only the butter fat, while butter takes the butter fat, water, a small portion of caseine, etc., and the proportion of this part of caseine depends upon the apparatus in which the cream is raised. In all the analyses made lately cream raised in the Cooley has less caseine than that raised in any other apparatus. The object is to exclude from the cream as much caseine as possible, as caseine is what spoils butter.

Prof. Cooke has written an article on the question of a cream-raiser and where its offices end and where the offices of the churn and of the butter-maker begin. This question arose from the fact that the Cooley Creamer in the New Hampshire test got the fat out of the milk cleaner than any other apparatus; but Prof. Whitcher insisted on having the Cooley cream churned before it was ripe, and consequently by Whitcher's own analysis there was about 15 per cent of the fat that went off in the butter-milk in the Cooley, and Whitcher claimed that it was the fault of the Cooley Creamer, while experienced men, like Prof. Cooke and Mr. Philbrick, the Chairman of the Committe at Hanover, claim that it was not the fault of the Cooley but the fault of the manipulator of the cream.

In discussing this question the disputants got mixed, one claiming that Prof. Cooke said that the cream was cream, while one who reads his article can see that he says nothing of the kind. What Prof. Cooke said was that success in handling the cream and getting the greatest amount of butter fat out of it after it had been taken from the milk, depended upon the skill of the manipulator, and not upon the cream-raiser; but the superficial fellows have got it mixed with the idea that one mess of cream will make as much butter as another mess per space, or gauge or gallon. Prof. Cooke was not discussing that matter at all.

R. N.-Y.—This correspondent sends newspaper clippings of articles written by A. W. Cheever and Prof. W. W. Cooke, of Vermont. Prof. Cooke has this to say:

"In the course of our work we have tested cream from several different processes and from the same process under various conditions. All our results have tended to show that after the skimming is done, that is the end of the influence of the skimming device, and that the cream can be churned thoroughly, that is, without much loss of fat in the butter-milk, no matter what the system of creaming was, provided the person in charge handled that cream properly. The cream from each system of skimming will require its own individual treatment to get the best results. And the butter-maker will have to study the conditions and treat each cream according to its needs, and not think because a certain method of mixing, ripening and churning will get the best results from one cream that therefore it should give equally good results on the cream obtained from other systems. It might be added that the system used in obtaining the cream must be properly used and not abused in order that it should not have an effect on the churning qualities of the cream. Milk may be spoiled before the cream is taken from it, and then no method of churning can get good results. I should lay this down as a general principle: The per cent. of fat in the skimmed milk is the result of the system used for obtaining the cream. The per cent. of fat in the buttermilk is a measure of the skill of the butter-maker."

Mr. Cheever thinks Prof. Cooke's "general principle" is correct. Mr. C. says he does not often trust himself to say that he *knows* anything about dairy matters, yet he is prepared to stand by the following:

"I know that when a dairyman changes from one method of creaming to another method there must be changes in the method of churning in order to obtain equal results. I know that cream taken from scalded milk set in small open pans requires very different treatment in the churning room from cream raised on milk poured into deep pails and set in cold water. I know that some cream requires to be thinned with milk or water before it is churned in order to retard the separation and prevent loss of butter fat in the butter-milk, and that other cream requires a ripening process before going into the churn, and also requires a larger churn for the amount of butter obtainable, and that without the ripening and the large churn there will be a loss of butter, and very likely a serious impairment of quality."

Mr. C. also says that an "inch" or a "space" is a measure of the relative quantity of different samples of cream exactly as a "dozen" is the measure of the quantity of different samples of eggs or as a "quart" is the measure of different samples of milk. The space method of measuring cream is not perfect, but it seems as fair and just as any yet devised. Buying and selling eggs by count is not equitable, yet eggs continue to be sold in this way. It is the same rule as that employed by towns, railroad companies and manufacturers in paying even rates for a day's work when everybody knows that work by one man may be worth a good deal more than that by another. The system may not be quite just, but it seems as just as any other could be. Cream sent to a factory should be treated as nearly alike as possible by all the patrons.

This cream question is evidently of vital importance to creamery patrons. This discussion will be continued next week.

SAND FOR BEDDING; KILLING CATERPILLARS.

M. C. A., EGYPT, MAINE.—In the R. N.-Y. of June 29, a quotation is made from Dr. Caldwell, as follows: "Any bed of muck is worth trying, for it may be a small mine of wealth." Less than a year ago I bought a piece of property which had been seeded with grass. It lies flat. Last March it was concluded to use "sand" for the bedding of one of the horses that had been addicted to eating litter of various kinds. I was delighted with the results. The two white stockings of the horse were kept perfectly clean and he did not get soiled like horses bedded on yellow or red sand. The sand was frozen, so I had to be very sparing in its use and all sorts of schemes were indulged in to get the requisite amount of bedding. In order to get the frost out quickly we put a large, shallow panful in the oven. The odor of sulphurous gas was so pungent that I thought I was poisoned by the fumes, and had recourse to aconitum, the antidote in such cases in homœopathic practice. The silver on the table in the room was discolored. A large pan of water standing on top of the stove formed enough sulphuretted hydrogen to blacken two silver spoons which lay on the bottom of the pan. So very black were they that it required the best silver polish to remove the discoloration. This goes to prove that the sand must have contained alluvial deposits largely charged with sulphur. The roads were in such a horrible condition after the snow, that it was impossible to get sand up, and the bedding that had been used was washed and the water thrown on the grass. Now the places where the water was thrown are very luxuriant with a dark-green grass; while manure, liquid and solid, fails to bring out the vivid green that the sand washings do. Would it pay to haul it over bad roads, as a top-dressing for agricultural purposes? Phosphates that cost $2 a hundredweight, have been thickly applied to the grass by the side of the sand-washings, and I cannot see any difference in the sward, either as to thickness or color, while the horses will go straight up to graze on the grass on the sand-washing spots, of which there are several, so that the grass there must be sweet. I have tried liquid hen manure, also stable manure, from horses and cows, and cannot see enough difference to make one remark a change on this run-down land, while every one will exclaim at the "greenness" of the different varieties of grass grown on the land on which the sand-washings were thrown.

I have not seen in the RURAL any account of the ingenious method resorted to by a Franklin man for killing Tent-caterpillars. On fruit trees, especially apples, it is said to be very effective by all who have tried it. He loads his gun with powder alone, holds the muzzle about two feet from the nest, and the concussion and effects of the powder instantly kill all the worms, and destroy the nest, etc. The limb of the tree is uninjured. The torture of the old methods which are less effective in ridding the trees of these pests, is dispensed with. I think such a quick and easy death to these very annoying insects, should commend itself to the Daughters of the King. For nests high up on branches not otherwise accessible, he ties his gun to a pole or a piece of wood, and discharges it by means of a string to the trigger. The method is not very expensive; as a light charge of powder and common caps are used. The cost is about half a cent a discharge.

R. N.-Y.—Our correspondent should send a sample of this sand to Director W. H. Jordan, of the National Experiment Station at Orono, Maine, for analysis.

DOES INFECUNDITY OF THE STRAWBERRY SEED AFFECT THE BERRY?

M. A. BECKWITH, AGRICULTURAL EXPERIMENT STATION, NEWARK, DEL.—Mr. Proctor's article on this subject on Page 385, is evidently based entirely upon theory. Possibly some of the so-called imperfect-flowering varieties of strawberries will, under favorable circumstances, produce a sufficient number of stamens to fertilize the ovules and insure a full crop of fruit; but such instances are rare. It is a well known fact among strawberry growers that among the pistillate varieties every third or fourth row must be planted with a variety which produces an abundance of pollen; otherwise the small amount of fruit that is produced will be very knurly and imperfect. I have spent considerable time among the fruit-growers of this State and the above opinion has been corroborated by many of our largest growers of strawberries, who have practically demonstrated its truth. During the past four years I have artificially pollenized a large number of the blossoms of different varieties of strawberries as well as other fruits. In no instance where the blossoms were protected so that pollen could not reach the pistils were any fruits formed. While connected with the New York Agricultural Experiment Station at Geneva, N. Y., I conducted several experiments to determine whether the pistillate flowers of the strawberry would produce fruit without the aid of pollen from other blossoms. The flowers in every case were protected by covering them with thin paper or with cloth, so that pollen could not reach the pistils. In one instance a number of plants of the Crescent Strawberry were grown in

pots in the greenhouse and were protected from insects by means of fine netting. All blossoms artificially fertilized produced fruit, while none of the others gave any appearance of fruit. If Mr. Proctor will plant a bed of Crescent Strawberries entirely isolated from all other varieties he will be perfectly convinced that it is necessary to grow perfect-flowering varieties near them in order to obtain even a fair crop of fruit from the Crescent plants. I recall an instance of a small bed of Crescents that was grown at the Experiment Station at Geneva, N. Y., which was nearly 10 rods from another bed containing 15 different varieties. The plants produced an excellent crop of fine fruit that season. The next year the different varieties were all removed and the bed of Crescents, three-fourths of which were young plants and ought to have yielded an abundant crop of fine fruit, produced only a poor crop of small knurly berries.

POTASH IN FRUIT CULTURE.

ELI MINCH, SHILOH, N. J.—I saw in the R. N.-Y. for July 6th, an article on Mr. Hale's peach crop. I have long held to the views expressed in that article, and have advocated them in our State Horticultural Society, as our reports show. The effect of potash is to perfect the pollen and make a perfectly pollenized fruit that will resist cold and frosty weather far better than one poorly pollenized. This has been often confirmed in my experience with potash in peach culture, in the use of which I have been a pioneer. My present peach crop shows the value of potash in making a more perfectly set fruit, being the most promising in my section, where the peach this year is almost a failure from cold, wet and unfavorable weather. The liberal use of potash is, as I have long held, in many cases a preventive of the yellows, and a restorative for many diseased trees that show the symptoms of the so-called yellows. Soils naturally deficient in potash, should have an annual broadcast application of at least 400 pounds of muriate of potash per acre.

L. C. W., CALDWELL, WIS.—A late RURAL gave a description of the potato pests in the Rural Grounds and that neighborhood. The same blight flea-beetle and wire-worm are at work in the stalks of the potatoes in this section. Their ravages are worst among the early varieties, more particularly the Ohios. Three-fourths of all the potatoes planted in this section are early sorts, and according to the present outlook there will not be over one-third of a crop. Potatoes upon light soil are affected worse with blight and also with the flea-beetle and wire-worm in the stalks.

H. A. S., ROCK CITY FALLS, N. Y.—In reply to the inquiry of A. R. Q., Farmingdale, N. Y., relating to the snap-dragons, I would say that a liberal dressing of salt will effectually exterminate the pest. It is impossible to get rid of it by pulling.

S. F. W., ALLENTOWN, N. J.—I have just cut some nice mixed hay from level-worked corn ground. The stubs were cut when frozen the ground was rolled to settle the hills and it has worked well.

What Others Say

WHY is not the power of the wind more often made available on farms for doing light work? asks Henry Stewart in the N. Y. Times. The windmill has long been useful and in many localities has been synonymous with a corn or flour mill, cheaply grinding the farmer's grain and adapting itself automatically to the changeful breezes. And now that these engines have been greatly improved they seem to be vanishing out of use. This is to be deplored. For the light work of pumping water, cutting fodder, grinding grain, shelling corn, thrashing, cutting up silage, or cutting fire-wood, a windmill may repay its cost at least once every year, and with careful usage may last 40 or 50 years, or be replaced piecemeal, as it wears, in that time, and then be as good as new. A windmill attached to a barn or a silo is an evidence of the good sense, thrift, and respectability of the farmer who owns it, and is to be preferred before a great many of those other things over which farmers waste money uselessly.

SAUNTERINGS.

A CORRESPONDENT of the London Farm and Home, writing from Natal, South Africa, tells of a Kaffir fowl which he has owned for 10 years, and which has laid two eggs a day for 20 days out of every month during that time. Shades of Uncle Isaac! where are the Light Brahmas now? The much-vaunted achievements of Leghorns, Minorcas, Hamburgs, and others with their phenomenal records of 200 eggs per annum, sink into insignificance beside the record of this benighted biddy in the "Dark Continent." Should some enterprising American poultry breeder secure such a breed, the birds would be worth their weight in gold, and would pay a high rate of interest on the investment.....

THE experience of the Kansas Agricultural College with a stone silo has been most disastrous. During the two years they used a silo of exposed stone masonry, their loss of silage must have been nearly or quite 50 per cent. of its contents. Even where this stone-work was brushed over with a thick paste of cement and lime, there were found six inches to a foot thick of rotted silage in contact with the masonry. Afterwards the stone-work was sheathed over with inch stuff, leaving a two-inch air-space between the sheathing and the wall. The same silo since has preserved its contents without loss.....

D. M. Dunning of Cayuga Co., N. Y., has expressed the belief, in Popular Gardening, that he has found a remedy for the cabbage maggot. He found the cabbage roots "entirely encased in maggots." To 100 gallons of liquid manure he adds five pecks of quicklime. Stir this for 10 minutes. A pint is poured around each plant, the maggots are killed and the plants grow thriftily.....

ON the fourth of April, Mr. G. W. Robinette sent us several clusters of peculiar apple flowers with the following note:

"I send you some twigs of a wonderful apple tree which bears apples without bloom, without seed and without core. The apple is good, of medium size, and keeps until late winter or early spring." G. W. ROBINETTE.

Flag Pond, Va.

This same apple has several times been referred to in these columns by Dr. Hoskins, we think, and others. A magnifying glass showed that there were petals, though small in size and of a greenish color.

A recent article in the American Garden gives a portrait of these blossoms. Prof. Bailey, the writer, says that the pistils, instead of being five, as in normal flowers, are from 13 to 15 in number. There are no stamens.....

THE HOLSTEIN-FRIESIAN cow, Lady Baker, produced 34 pounds six ounces of unsalted butter in seven days. This statement, supported by a number of affidavits, is made in the Breeder's Gazette by Thomas W. Wales, of Iowa City, Iowa.....

So many varieties of grapes have been brought forward with extravagant and extraordinary claims which have not been sustained, that the careful and practical grape grower views with many grains of doubt, if not of suspicion, the new grape which is offered as "earlier than the Hartford; as healthy and as hardy as the Concord; better than the Delaware; and whose fruit never rots, and foliage never mildews." So says the conservative George W. Campbell. By claiming too much, introducers of new grapes have often misled and disappointed a generous, and perhaps too confiding public.....

WE have been striving, and hoping, and expecting to obtain the perfect grape, with all the excellencies, and at the same time suited to all localities. We have not found it, and we probably never shall. But we have varieties, that with intelligent care succeed admirably in particular localities, and are grown with both pleasure and profit to their owners. The same varieties in situations unsuited to their special characteristics would only result in failure and disappointment. When the fact is fully understood and acted upon, that varieties must be selected with reference to climate, soil and location, disappointment will be less, and success more certain.....

THE R. N.-Y. hears first-rate accounts from the Eastern States of the Early Essex Potato. We are told that it is decidedly earlier than the Early Rose, a heavier yielder and of better quality. This was introduced some years ago, as older readers may recall, by R. D. Hawley, of Hartford, Conn.....

ORCHARD AND GARDEN says that there is a demand for good home-made jellies and jams. This suggests a profitable occupation for some women who are earning money at home in other and more laborious ways. The jellies sold in our stores are mostly artificially manufactured and a brand of natural, home-made goods would soon bring prosperity to the maker.....

BRAN cakes are a French invention. They are largely used by the French government as feed for its cavalry and artillery horses. Two bucketfuls of loose bran can be compressed into a space but little larger than a man's hand. The compressed process consists, first in superheating the bran, and, then, second, in submitting it to a heavy pressure. Bran can be preserved for any length of time by this process. It keeps sound, clean and healthy. Cavalrymen in the French army put the cakes in their haversacks along with their own food and feed it without change of condition directly to their horses, one cake being a big feed, for a horse. Mr. George Bain, as Colman's Rural World reports, says that the invention might be of great practical utility in this country. On account of the bulkiness of bran it is impossible to ship it out of this country, and the saving that could be effected in freight charges and expenses in handling, if the bran were compressed, between points in this country, would amount to a very large sum. Mr. Bain is talking of putting in a plant in St. Louis for bran compression. The cost of the operation, after the machinery is once procured, amounts to about 60 cents a ton. All to whom Mr. Bain displayed the bran cake were charmed with the idea of compressed bran.....

A CORRESPONDENT of Farm and Home says that the cow that suits him best is a cross between the Jersey and Holstein. If pure on both sides at the start and then kept as nearly half-and-half as possible, this will result in cows that will retain the good qualities of both breeds; that is, rich milk and a good quantity of it. The cows will be of medium size, very hardy, quiet and good feeders, and in his opinion they are better adapted for farms than thoroughbreds.....

WORD FOR WORD.

— N. E. FARMER: "WINTER dairying will gradually force progressive dairymen into more intensive systems; better cows, better maintained, and on fewer acres, and possibly with the silo, soiling in some of its forms will take the place very largely of the summer pasture of wide range."

—SOUTHERN CULTIVATOR: "HE who loves home most loves his country best."

—DR. HOSKINS, in the Vermont Watchman: "We truly believe that if it were not for a little lingering shame, and if the State as a whole would permit it, common schools would be abolished by the popular vote in a good many New England towns. This is what we have been brought to, in great part, by 40 years of emigration, carrying off the most enterprising, energetic and pushing portion of our population."

—"OUR grangers have paid out more money to traveling shows and agricultural horse-trots, to demoralize their boys, than would have made the Grange the leading and most useful institution in the State."

—OHIO FARMER: "Despite all the terrible statutes and threats, and invectives, and abuse that have been fired at the dog for years, he grows more numerous, more defiant of law, and more of a privileged character every year. There is a reason for this, founded in the most noble attributes of the human heart. A man loves a devoted, faithful, disinterested friend, and that is what a dog is to his master."

—WESTERN RURAL: "When the mechanic strikes or does anything else to oppress the farmer, he works injury to himself: when trusts rob the farmer they are working ultimate ruin to themselves, for when all the greed that is robbing agriculture has succeeded in bankrupting it, grass will grow in the streets of our cities, the wheels of the factories will stop, commerce will be dead and desolation will be universal. Prosperous farmers make a prosperous people. Bankrupt farmers will make a bankrupt nation."

—AGRICULTURAL SCIENCE: "There are men in stations, who are born politicians, and who do not exercise the proper influence over their fellows. The advancement of science and practice, is, with them, secondary to advancement of themselves; in other words they are not in love with their work. Their influence is pernicious. There is another class of workers, men honest in all things, yet who do their work so carelessly and inaccurately their teaching is damaging. They mean to do well, but they are not capable."

—C. M. DEPEW: "The best lawyer is the one that always keeps his client out of court in a bad case and only goes in with a good one. In every suit one party or the other must be in the wrong and come out unsuccessful. It is the business of a lawyer on the losing side to discover his error before going into court."

—DR. PEABODY: "Science has repeatedly gone off with the fullest assurance on a false scent, and we have no more reason to place undoubting confidence in the theories of the 19th century than in those of the 17th."

—INDUSTRIALIST: "The measured acre which has grown wheat without manuring or rotation for nine consecutive years will this year, on the farm of the Kansas Agricultural College, raise its average considerably above the 23.4 bushels of the previous eight years. Full figures will be given later."

—LONDON AGRICULTURAL GAZETTE: "Sir J. B. Lawes, Bart., having endowed the Rothamsted Agricultural Experiment Station with the sum of £100,000, for the purpose of carrrying on the investigations after his death, has now appointed the trustees, who met at Rothamsted, and elected the following officers: Dr. John Evans (Treasurer to the Royal Society), chairman; Sir John Thorold, deputy chairman; Dr. Hugo Mueller, treasurer; and Mr. Herbert Cox, secretary. The trustees were conducted over the experiments by Sir J. B. Lawes and Mr. C. B. Lawes and afterwards discussed the steps to be taken for working the trust."

—EDITOR CHEEVER: "So in manufacturing establishments, on railroads and in the trades men are paid even rates for a day's work just as eggs are sold by count, not because the system in either case is quite just, but because the injustice is too small to be worth the cost of adjustment."

—PROF. SHELTON. "In our trials we found the cream a most discordant element. In the case of every cow employed with each kind of feed, the milk giving the largest display of cream often gave the least butter product."

—O. C. FARMER: "The farmer who breakfasts on fried pork, who eats pork and potatoes for dinner and more of the same sort for supper at this season of the year, should not find fault when he discovers himself to be ill. His table should abound with berries and fine vegetables. He owes it to himself and to his family to see that it is thus supplied. We are glad to know that the number of farmers who neglect this duty is steadily diminishing, but there are still enough remaining to make this admonition necessary."

—N. Y. HERALD: "To the Young Graduates—Do not let it out that you know more than your father. No doubt you do, but spare his feelings."

When the Energies Flag

Use Horsford's Acid Phosphate.

Dr. T. C. SMITH, Charlotte, N. C., says: "It is an invaluable nerve tonic, a delightful beverage, and one of the best restorers when the energies flag and the spirits droop."—*Adv.*

Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

That Tired Feeling, so oppressive, overpowering and difficult to throw off, may be the warning of wearing out or breaking down of the system. It is entirely overcome by taking Hood's Sarsaparilla, which gives great mental nerve, bodily and digestive strength.

JOHNSON'S ANODYNE LINIMENT ESTABLISHED 1810.

For Internal and External Use.

Stops Pain, Cramps, Inflammation in body or limb, like magic. Cures Croup, Asthma, Colds, Catarrh, Cholera Morbus, Diarrhœa, Rheumatism, Neuralgia, Lame-back, Stiff Joints and Strains. Full particulars free. Price 35 cts. post-paid. I. S. JOHNSON & CO., Boston, Mass.

BEACHAM'S PILLS cure sick headache.

EMPIRE POWER and SEPARATOR

BEST, CHEAPEST and MOST IMPROVED in the market.

We also manufacture Field Rollers, Plows, Feed Cutter and Crusher Hand & Power Corn Shellers, etc. Send for Illustrated Catalogue & Price List. S. S. HESSINGER & SON, Tatamy, Northampton Co. Pa.

THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
HERBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, JULY 27, 1889.

Now, right now! *This* is the time to do it! Read the Rural Grounds sermon under Domestic Economy, ye procrastinators!

FARMERS in lonely districts at the South have long felt that the burial of the dead is made unnecessarily expensive by the extortionate charges of dealers in undertaker's goods. Not long ago an Undertaker's Trust was formed and the result has been to force prices for burial equipments to a higher rate than ever before. In fact, the situation has become unbearable, and the Georgia Farmers' Alliance has come out in open warfare against the Trust. The South is overrun by agents for various tombstone companies who well understand the art of working upon the sorrows and sympathies of the afflicted.

IN England the open air silo has been quite successful. Some of our friends have urged the introduction of the silage stack into this country. Much of their advice was not based upon experience; they simply urged what they thought *ought* to be valuable. Experiments do not round out their claims. In the Northern States the weather is such that silage is much better fed out and handled under cover. A good deal of the out-door stacks have spoiled and the work of hauling to the barn is too much. The American silo should be in the barn. That point seems settled. The plan of curing corn fodder described in the R. N.-Y. by Mr. C. S. Rice is about as close as we are liable to get to an open-air silo.

It is as impossible to raise a good colt from poor parents as it is to raise a good crop of grain from poor seed and a worn-out piece of land.—page 491

IN a late English work on the use of chemical manures, the following occurs:

"Farmers often make the mistake of adding an excess of manures (plant food) to their land. What are the results to ourselves if we go to excess in eating and drinking? Why, disease. It is exactly the same with farm crops. Many crops are spoiled by over-manuring the land."

Not long ago the R. N.-Y. was in doubt as to the wisdom of making a late application of fertilizer to potatoes. A farmer who was appealed to for advice, replied:

"I do not think potatoes are enough like human beings to be made sick by over-eating. They can never take up more plant food than they can digest."

Now which is right, good reader?

IN December last, as noted in the R. N.-Y. at the time, the Department of Agriculture received from the Chief Secretary of Queensland, Australia, a request that the Department should nominate to the government of the colony, a suitable person to be appointed as instructor in agriculture. Last Thursday Secretary Rusk selected our contributor Professor Edward M. Shelton, of Manhattan, Kansas, for the position, and so notified the Australian government. Professor Shelton has been for many years Professor of Practical Agriculture in the Kansas Agricultural College. He has also been connected with the Michigan Agricultural College, and has taught practical agriculture under the auspices of the Japanese government. Secretary Rusk says Professor Shelton is the best man available in the United States for the position, and is confident that he will creditably represent the country. In this opinion the R. N.-Y. fully coincides.

THE R. N.-Y. is glad that Secretary Rusk has established an Editorial Division in the Department of Agriculture. As heretofore stated in these columns, the head of this Division will edit the various reports and bulletins that are issued by the Department, and issue an easily-read synopsis that will take the place of the great volumes to which we have previously been treated. The big volumes will appear by themselves; but we venture to say that very few of them will be read. The need of such work as that proposed by the new Division is pointed out on page 503 of this issue. "Colic in Horses" and "The English Sparrow" are very striking illustrations of the need of an editor. The R. N.-Y. will continue to review the bulletins and reports in its own way. One word of caution. During the next year farmers will be favored with a perfect deluge of information from the experiment stations. This new system of editorial work will provide abundance of "copy" for editors who do not now look inside the reports. The point to remember is that these reports are the results of experiments and must be tested at home before being largely adopted.

For "breaking," "training" ought to be substituted; but if one does not teach a colt how to work, lead and be dutiful while it is a colt, it will certainly need "breaking" later on.—page 491.

FARMERS throughout the country will watch the proceedings of the constitutional conventions of the four new Western States with interest. In forming their constitutions these States will have the advantage of viewing the results and failures of measures tried in older States. On the general principle that it is easier to start right than it is to get into the right rut after running for awhile in the wrong one, we may reasonably expect that the delegates to the conventions in the Dakotas, Montana and Washington, will use the utmost care in preparing their State constitutions. We shall look with a good deal of interest to see what action is taken in the matter of taxing railroads, controlling trusts and corporations and disposing of school lands. In the Dakotas particularly, where farming is the chief industry, the action taken in these matters may fitly represent the views Western farmers have arrived at. Judge Cooley, in addressing the North Dakota delegates, said that one great tendency in forming a constitution was to leave too little to the people. The constitution of an intelligent people should grow and develop, keeping pace with great changes in society and industry. Surely these Western delegates have a wonderful chance to produce model constitutions.

SPECIAL NOTICE.

IN reply to inquiries we may state that the inner portion of the flowers of the potato R. N.-Y. No. 2 is a light purple. This purplish color covers irregularly about *half* the corolla. The outer portion is nearly white. The proportion

of white and purple is shown in the illustration which was carefully drawn from nature. This variety *never bears solid white* flowers. The stems also are, here and there, *tinted* with purple. They are long-jointed and branch less freely than do most other varieties.

THE DAIRY BUSINESS.

THERE is to be a boom in the dairy business. More butter and cheese will be made and more milk and cream will be offered for sale. This will mean over-production and lower prices unless new markets can be found. There is a market for millions of pounds of our butter and cheese in Europe—we mean for millions of pounds more than we now send there. This market never can be secured until every pound of butter and cheese that leaves this country is guaranteed. Only first-class goods are wanted. This relief for our dairy markets will never be found until the quality of American butter equals that of Danish or French butter, and American dealers inaugurate such a system of inspection that goods below the standard cannot be shipped. The R. N.-Y. believes that this system of inspection will, sooner or later, be perfected, and we believe that this will mean a good increase in our dairy exports, but butter-makers must back up the butter dealers.

Does the R. N.-Y. advise the farmers who are driven away from beef making by the dressed beef trade to take up dairying? No direct answer can be given to this question. Too much depends upon the man. Some men are natural dairymen; others never can make good butter. The writer of this enjoys taking care of a cow, while the hired man loves a horse, but can hardly be induced to milk. We regard any general advice to farmers in this line therefore as absurd. One thing is sure—an over-production of inferior grades of butter will improve the chances for disposing of first-class butter. This is a principle of business that has been proved a dozen times. Butter making is a science. In all the history of the world there never was a time when facilities for the study of this science were more easily available. Feed, cow and tools; these are the dairy factors that all must recognize. The three must be perfect—that is best adapted to the local conditions. Recognizing the great importance of the dairy industry and the peculiar interest just now attached to it, the R. N.-Y. will endeavor to give special attention to this department hereafter.

I maintain that a man who has no love for a horse could never raise a good colt. His idea of training a colt is, first of all, to let it know what a whip is for, and its second lesson is a continuation of the first, and the third and fourth are repetitions of the others until the colt knows nothing except the whip.—page 491.

THE GREAT INTERNATIONAL EXPOSITION OF 1892.

IT appears to be the universal opinion that the four hundreth anniversary of the discovery of America by Christopher Columbus, which will occur in October, 1892, should be celebrated by holding, on this hemisphere, a grand international exposition in which the world may be made familiar with American resources, American products, American manufactures, American enterprise and American characteristics and achievements. All agree that the exposition should be held in this country, the most powerful, most populous, most enterprising, most advanced in all the arts and sciences of all the countries in the New World. In what city in this country should it be held? The nearly universal opinion is that New York is the most appropriate place. Washington is the chief rival claimant for the honor, as the capital of the United States. But Columbus did not discover the United States—he discovered America, and New York is the acknowledged commercial, artistic, industrial, scientific, and literary capital not only of this country, but of the whole continent from Point Barrow to Cape Horn. Washington has neither accommodations for visitors nor means of amusing them during their stay, nor even facilities for getting them there. It is on one of the by-ways of the nation so far as the transportation of domestic exhibits and visitors is concerned, and inconveniently sidetracked on it in regard to those from abroad. It is a huge boarding-house for clerks and transients. It is the head-center of the politicians of the country, and the undertaking there would degenerate into a vast political job. It has few public-spirited citizens rich enough to aid the enterprise materially by contributing towards its cost. It lacks executive ability to organize, complete and manage so great an undertaking in a manner worthy of the nation, and it lacks energy, tact and broad-minded liberality to make it successful.

On the other hand, New York has already 215 well-known hotels with ample accommodations for 75,000 people, and minor hotels and boarding-houses that will easily accommodate 100,000 additional; while there is room for 200,000 more in private houses and flats which would be at the disposal of the public during such an occasion. Then there are hundreds of hotels and boarding houses in Brooklyn, with its 1,250,000 population, on one side; and in Jersey City, with its 200,000, on the other, to say nothing of the accommodations in Staten Island, and numerous towns in Long Island, New Jersey and Connecticut, within easy reach of the city by rail and water. Then there is a multitude of restaurants suitable to all tastes and pockets scattered everywhere throughout the city. There would be no difficulty whatever in comfortably housing and feeding from 400,000 to 500,000 strangers in New York and its environs, and this can be said of no other city in the country.

What other city has so many theatres, art galleries, libraries, clubs, churches and other sources of amusement and mental as well as moral improvement for visitors, who must, perforce, pass most of their time outside the Exposition walls? Then, think of the vast resources in this way of the suburbs across the East and North Rivers!

No other city in the nation or in the world has such ample transportation facilities for exhibits and visitors. All the great railroad lines of the country converge to this outlet. There are eight main lines, and 1,750 trains now arrive and depart every day, and the number could be greatly increased if the traffic demanded it. Then there is a multitude of local steamship lines along the Sound and up the North River, and a still greater number to seaboard cities from Portland, Maine, to Galveston, Texas. These lines could run excursions at low rates and furnish food and beds to a million in the course of the season. The more foreigners who can be induced to make displays at the Exposition and to visit it, the greater will be its success, and no other city can approach New York in its transportation facilities with other nations. Official statistics show that over seven eighths of the people who come to this country from all directions land here. There are no fewer than 54 regular lines of steamers that leave this port for the chief seaboard cities of the world, affording transportation facilities for passengers and freight to all parts of the world, even to distant China, Japan, and Australia, while hundreds of "tramp" steamers supplement these to places whose traffic is less.

New York can justly boast of the public spirit, wealth and enterprise of her citizens, and should the great International Exposition be held here, all the necessary capital can be readily subscribed. Then again, New Yorkers are accustomed to handle large affairs, which their great executive abilities render successful. Without derogating a particle from the advantages and virtues of the various other claimants for the Exposition, it is the simple truth that the transcendant housing, feeding, amusing, instructing and transportation facilities of New York, as well as the wealth, public spirit, enterprise and executive ability of her citizens, fit her pre-eminently to make the Exposition a source of instruction and profit to the industries of the country, an honor to the Nation and a beneficial object-lesson to the world.

"To skim off the virgin fertility from large tracts, as rapidly and with as little solid advantage as possible, and to pass on and on, repeating the same process in illiterate and ragged independence, has been a distinguishing mark of American farming, East and West, North and South."—DR. HOSKINS, page 497.

BREVITIES.

CORN will be good property.

PRICES for No. 1 hay promise to be highly satisfactory. The crop has been large but a good deal of it has been injured by the continual wet weather.

SOUTHERN stockmen are a little excited just now over the probable feeding values of cotton-seed hulls. The R. N.-Y. is of the opinion that it will be found that the greatest values of these hulls lies in the ashes used as a fertilizer.

THE dairy worker who colors butter in the churn works on the principle employed by the one who depends upon green grass for a color. They both aim to get vegetable coloring matter into the product. In one case the cow does the work, and in the other the dairy worker does it.

IN all the poultry shows held in England, the Dorkings still lead while Langshans seem to be second. The American breeds do not seem to meet with much favor yet. The R. N.-Y. likes the Dorking fowl and is breeding chickens from a Silver-Gray Dorking rooster for next season's hens.

IT is reported that preparations are being made by large cattlemen to push heavy shipments of live cattle to Europe next month. There is reported scarcity of good cattle in Europe just now. While these shipments will relieve American markets somewhat, it is not probable that prices will be seriously affected.

Rural Topics.

AGRICULTURE; AN ART, A BUSINESS, A SCIENCE, ETC.

T. H. HOSKINS, M. D.

II.

AS A BUSINESS.

"BUSINESS is business," but American farmers generally have not so recognized their vocation. The old hundred-bale cotton planters, the sugar planters, the great tobacco planters, the hemp planters, the hop planters and the sheep and cattle ranchers have generally looked upon their specialties in a business aspect; but just so far as they did so they have renounced the name of farmer, have tried to claim for their vocations distinctive titles, and have assumed a more important social position, analogous to that of the professional, commercial and manufacturing classes. So long as the possession of systematized knowledge and its useful application are so universally recognized as advancing the title of the possessor to social distinction, the drawing of such lines will have to be recognized, even in the most democratic society. Our distinguished men in America are distinguished not so much by any personal assumption, as by the spontaneous recognition of their importance as citizens by the whole community. We have, in fact, no other basis upon which public consideration of the individual can steadily rest.

Aside from the class of exceptions here indicated, there is no country on earth where the ownership of land confers so little personal importance upon the individual as in America. Until lately, land has been the one thing of which we have had too much; and the term "land-poor" has even become an epithet of contempt. To skim off the virgin fertility from large tracts, as rapidly and with as little solid advantage as possible, and to pass on and on repeating the same process in illiterate and ragged independence, has been a distinguishing mark of American farming, East and West, North and South. Here and there real homesteads have been established by men of a different type; but they have been with difficulty maintained. The trumpeted attractions of this, that and the other new locality, have drawn away the young; and the attempts to fix families, and build up true homes, have been almost universally a dreary failure.

But the era of wide expansion is drawing to a close. Arable North America has been thoroughly explored, and the "moving on" tendency is evidently abating. No one part of the country is found to possess any marked superiority over another. The blessings of Providence have been very evenly distributed, and on the whole one place is about as good as another. If there be any actual superiority, all things considered, it would appear to reside in those parts which have furnished the greatest number of emigrants; for toward those old States there is already a reflux, and to them are constantly being made the appeals for financial aid which they certainly could not grant, were they so inferior in natural resources to the newer sections as they have been represented. They had themselves in the early days no "old States" to appeal to for aid. Their capital has all been developed out of their natural resources by the industry, skill and prudence of their people; and to-day the "great and rich" West is looking continuously, eagerly and successfully to the "worn-out East" for the promotion of that very progress it so loudly vaunts. Nothing is truer than that the East is the "rich daddy" whose dollars enable the West to "spread herself."

It is right in the East, too, that business principles in their application to farming are being most rapidly developed. Many men who in their youth abandoned the farm for trade have, in middle life, returned to the farm, and they have brought back to the work then the methods of trade, which have proved thoroughly helpful upon the land. All through New England (and it is the same elsewhere) are to be found ex-merchants and manufacturers engaged and deeply interested in agriculture. Such men are not content with the old ways. They see at once how slipshod and wasteful those ways were, and they set themselves to improving them. In some respects farmers of this class are apt to be rather fanciful, and not quite mindful of the peculiar conditions which surround all agricultural work. But they have generally learned how to learn; and they take the luck of seasons, and the teaching of mistakes, patiently. They come up smiling at all our agricultural meetings, and while they present the statistics of their farming in clear and convincing figures, they share with the rest of us the knowledge extracted from every failure, as well as from the more and more frequent successes.

One asks "what are these business principles"? Briefly, they consist in the substitution of exact knowledge for guessing; of the application of sound principles for loose inaccuracy, and the use of weights and measures, records and figures, as means of getting at the best way of doing all sorts of work, and the final exclusion of all ways that cannot be justified in the same manner as commercial operations are justified. Every young farmer would be the better for a business education, if it did no more than enforce upon him the importance of system, accuracy, promptness and untiring perseverance. "Well enough," and "about right," are terms that must be dropped out of the vocabulary of the farm.

Farm Topics.

SOME COGITATIONS.

FRED GRUNDY.

ALAS FOR THE CONTEST PLOT!—I have just been looking at a prize patch of potatoes wherewith a certain party proposed to capture a thrashing machine, back-action churn, or some similar implement. As I gazed I smiled. I smiled as I thought of the energy and assurance "she" displayed when those potatoes were planted. How a night-mare of drought sat upon that patch and the tubers remained in *status quo* for five long weeks, while the prospective thrashing machine went glimmering! How they finally came up only to meet the omnivorous cut-worm and be smitten in their youth, while the prize back-action churn disappeared in the haze. How the cut-worm grew corpulent and gouty, and finally withdrew in favor of his co-laborer, the frisky gentleman in the striped jacket, who increased and multiplied and fared sumptuously every day. How the rains fell and the floods came until the patch resembled a submerged forest, which grew paler and paler as the days went by like a Mississippi bottomite afflicted with the shakes. How the back-action churn simmered to an aquapult, then to a book, and finally to a few garden seeds, which are also fading and floating away into the "nevermore!" Thus do bright anticipations attenuate and disappear. Thus does the energetic husbandman—or woman, as the case may be—spit on his hands and roll up his sleeves when he hears the song of the blue bird in the spring time, only to roll them down again when the melancholy days come, and vow a great vow that he'll manage things differently next year.

THE CUTAWAY HARROW AHEAD.—I have seen two farming operations this season, which were new to me. A neighboring farmer plowed 35 acres of wheat stubble last August, intending to put it in wheat again in September. He changed his mind, however, and decided to keep it for corn this spring. He began work on his corn land first, and when he reached this piece the season was getting well along. As there was no trash to speak of on the ground he supposed he could prepare it for planting by going over it with a disk and common harrow, but when he came to try it he soon learned otherwise. The winter rains had run the soil solidly together, and it was now baked so hard that the disk made scarcely any impression upon it. After fooling away a couple of hours, he came to the conclusion that it would have to be plowed, and he set his man at it. A kind neighbor who owns a Cutaway harrow offered to lend it to him, telling him that it would "chaw that land up like a mice." He accepted the offer and tried it, and, sure enough, it did "chaw it up" in style. By going twice over he made a perfect seed-bed without using a harrow. The corn came up evenly and a prettier stand it would be hard to find anywhere. I had seen the Cutaway harrow on exhibition, but had never before seen one actually at work. It is a valuable implement, and for such work as this, is much superior to the disk, because it cuts in deeper and digs up and loosens the soil better.

THE HARROW AGAINST THE CUT-WORMS IN CORN.—The other operation was fighting cut-worms with the harrow. In the early part of May, when the weather was cold and the ground almost as dry as dust, the cut-worm was abroad and hungry. Just across the road a neighbor has 30 acres of corn, and it did seem as though the pests would clean it up for him. He said to me: "I'm not an advocate of harrowing young corn, but this is a desperate case, and I have decided to give the worms a rasp, let the consequences be what they may." It was plain that the worms would get most of the corn if let alone, while if he riffled them up with the harrow a few times there was a possibility that he might save a portion of it. As he harrowed, a flock of blackbirds followed close after and gobbled up every worm that was uncovered, and there were hundreds. The ground was perfectly clear of trash, so but little corn was torn out, while he kept close watch and uncovered all that the harrow covered. As a result he now has a very fair stand of corn—enough to make at least 40 bushels per acre. Sometimes it is advisable to harrow corn, and sometimes it isn't. It all depends upon the condition of the ground.

STRAWBERRIES AND RASPBERRIES.—This is the 17th of June, and just winds up a month of strawberries. My quota has been limited to a heaping big saucerful three times a day, with sundry and numerous "specimens" whenever I passed the patch. We began with the Crescent and by the end of another week will finish with the Jessie. Crescent and Capt. Jack gave us the most berries, Bubach the largest, and Jessie the fairest to look upon. During the very rainy weather the Bubach tasted much like a washed-out turnip The Crescents never failed to be sufficiently acid for all practical purposes. They never needed lemons to give them snap. The Jessie is a pretty berry, but I couldn't find any plant with several quarts on it, *a la* Col. Green.

As the strawberries depart the raspberries come in. The Tyler bushes are now flecked with big, shiny black beads. The Turner is beginning to blush, while the Cuthbert is still blooming. Five or six weeks of raspberries will bring us to blackberries, and the Kittatinny bushes are full. Snyder ditto. Then come grapes, peaches, apples, etc., etc. Who wouldn't own a *modicum* of soil and grow an unceasing stream of fruits, at the fountain-head of which he can feast unvexed? Tra la!!

Christian County, Ill.

Arboricultural.

TWO NEGLECTED SHADE TREES.

IT need not be understood that because I say two, I do not know that there are many of our noble native forest trees the merits of which are too little known; but my attention has recently been particularly called to two of them.

THE TULIP TREE.

Only a few feet from where I write stands a fine specimen of Liriodendron tulipifera, the Tulip-tree, White-wood or Yellow Poplar, now in full bloom; but I know of no other in the vicinity. Perhaps one, and the principal reason why this tree is not oftener seen as a shade tree is the supposed difficulty of transplanting it from the woods; but that difficulty is readily overcome. Take up the tree when an inch or two in diameter, early in spring, or as soon as the leaves drop in the fall, shorten the tap-root and cut off the stem about a foot above the root; then plant properly, and at least 90 per cent. will grow and do nicely. These trees may be raised from the seeds, which, if planted soon after they ripen in October, will germinate and send up fine shoots the next spring; but if planted in the spring they will not make a showing until the next year.

The Tulip-tree belongs to the Magnolia family, and is common in the Atlantic States from Canada south, but is often found beyond the Alleghanies. It likes a moderately good, light loam or sandy soil, moist, but not wet, and in favorable locations grows to an enormous girth and hight. Downing mentions a specimen whose stem, five feet from the ground, measured 22 feet and a-half in circumference, and was 130 feet high. The flowers are large and beautiful, tulip-shaped; but they are borne so high as often to escape notice. The leaves are large and peculiar in form, rich and glossy. The tree is seen to its best advantage when standing alone. Differences in soil and situation change the color of the wood, that is, white or yellow, as circumstances determine, but make no difference with the general appearance of the tree. Among its other merits as a shade tree is its freedom from insects, only a few species being attracted to it.

THE YELLOW-WOOD.

The other tree to which I desire to call attention is Cladrastis tinctoria, the Virgilia lutea of Michaux, commonly known as the Virgilia or Yellow-wood, fine specimens of which may be seen in Brooklyn Park; but it is found at its best in Kentucky and Tennessee, though it is not abundant even there. It seldom grows more than 40 feet high. The leaves are pinnated in form, and expand late in the spring. The flowers in this vicinity are seen about the first of June in racemes or clusters, pea-shaped and pure white, reminding one of those of the Honey Locusts, with a slight and agreeable perfume. The bark is smooth, of a greenish-gray color, and the leaves in autumn take on a bright yellow tint. Its heart-wood is yellow and from it a coloring matter is often extracted; hence its common name. This tree is also quite difficult to transplant, as it has many small fibrous roots that are so tough that it is almost impossible to cut them with a spade; but it grows readily from the seeds which ripen in August. It is quite a rapid grower and blooms when 10 or 12 feet high. It deserves to be better known.

L. A. B.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

ONE of the most delightful books for our girls is "The Five Talents of Women," by the wise and witty author of "How To Be Happy Though Married." The five talents of women, according to Mr. Ruskin are: "To please people, to feed them in dainty ways, to clothe them, to keep them orderly and to teach them." Some French author says that a woman's talents are opportunities for doing good—suppose we add that to the other five, and we have the ideal of womanliness. It is worth noting that while the æsthetic Ruskin puts pleasing people first, he puts feeding them next—indeed, the two often go together.

* * *

Now, a good many good women often lose sight of that important matter of pleasing people; they seem to think, as cares and duties thicken, that they may attend solely to material duties, without thoughts of pleasing in other directions. True, some are so situated that any attempt at pleasing, further than attention to thickly-crowding duties, seems impossible; yet many there are who lose opportunities in this direction. We recollect reading somewhere of an epitaph over a hard-working wife in some rural cemetery. It was very brief—after the name and age there were but these words:

"She was so pleasant." Just think how much daily happiness that implied—it was worth a whole column of ordinary praise.

* * *

As for feeding people in dainty ways and clothing them, a good many busy women are apt to do too much of both. But "to keep them orderly," you see that is put as a purely feminine power, and whenever we see a man or boy bang down his hat on one chair, his coat on another, and his boots just anywhere else, we always feel that some woman has neglected her duty. Orderliness doesn't often come by nature, although "order is Heaven's first law," but training will make it second nature. Begin at the beginning; let the children understand from babyhood that what they throw down, that must they pick up; that everything has its time and place, and it will save many an hour of picking up. Disorder leads to dirt, too, as a natural consequence; teach a child to be clean and orderly, both in person and belongings; it is a very good foundation for other virtues.

* * *

THE last talent in the list, that of teaching, seems essentially a woman's prerogative. We don't mean just teaching A, B, and C, but molding mind, manners and morals to be a harmonious whole. A child's mother is always the first and best teacher, the most natural one, and sad it is to see a mother unfitted for this office. A good and wise mother is the greatest blessing this world affords, and she who exemplifies the five talents quoted, certainly deserves this title. Read the "Five Talents of Women," young women and old, and, if you contemplate the double life, follow it with "How to be Happy, Though Married." The author, Mr. Hardy, is an English clergyman, a Christian, a gentleman, and both wise and witty too. Few can read either book without benefit.

* * *

KEEP COOL. That sounds ironical these dog-days, when there are baking and churning and sweeping to do, everything to be done, and one pair of hands to do it. Yet there is no doubt that calmness of mind does much to produce coolness of the body. If we

could only keep serene and happy, whether everything is done just so or not!

* * *

THERE is no doubt that we do a good deal of unnecessary cooking in the summer. Of course, where there are men doing heavy work it is manifestly impossible for them to live on fruits, vegetables and cereals—we believe that a certain amount of meat is absolutely necessary. But there is no reason why all the fruit should be cooked up into pies and puddings—give it to them in its natural state, or stewed. Stewed fruit, with good bread and butter, is, in many cases, more wholesome than pies, and certainly it does not cause the same amount of back-breaking work. We do like pie, but not when it adds excessive weight to the burden of work, already heavy. Such fruits as blackberries or raspberries are often more wholesome stewed than raw—the seeds are very irritating to many digestions. They are not very desirable for little children.

* * *

A REALLY wholesome dessert for the time of harvest apples is the old-fashioned Brown Betty. It is made in various ways, but we like the English mode. The apples, peeled and cored, are stewed until quite soft with very little water and a bit of lemon peel; when done, they are beaten to a pulp, a little butter and sugar mixed in and then put aside to cool. When cool, two eggs are beaten light, and mixed with the apple; then an equal quantity of bread crumbs. A buttered mold is thickly sprinkled with browned-bread crumbs, this is filled with the mixture, and a layer of crumbs put over it. Bake in a slow oven, then turn out and eat with cream.

OUTINGS IN NEW ENGLAND.

XIV.

MARY WAGER-FISHER.

THE meagerness of the soil and the abundance of rocks about Marblehead, would seem to make the burial of the dead in the ground a difficult operation, as it evidently was in the olden times, as many of the graves were dug in the slender valley between the rocks. It is a custom borrowed from England, to bury about the meeting-house or church, but it is a custom to be deprecated in all localities where dwelling-houses are likely to be built near-by, as I believe it is an established fact that wells drain the land from half a mile around, and it is not pleasant to think of drinking water that has percolated through the remains of our ancestors.

The date of death on the oldest stone in the Marblehead grave-yard is 1681. Quite a number of Congregational preachers were buried there, and it is curious that, next to New England, the stronghold of Congregationalism is on the Pacific coast. A white marble monument commemorates a sad event for the little town, when the entire crews of 10 fishing boats, consisting of 65 men and boys, perished on the Grand Banks of Newfoundland. Not many negroes who were slaves in New England had their graves marked by tombstones, but there is *one* in this old graveyard, and the inscription on it is a curiosity.

Agnes, Negro
Woman Servant
To Samuel
Russel, Aged About
43 years, Dec'd
July Ye 12, 1718.

Another stone to the memory of Mrs. Miriam Grose, testifies to the fact that she left, in the 81st year of her age, "180 children, grandchildren and great-grandchildren"—an appalling progeny! However much it may be considered out of taste to tell tales on tombstones, a loquacious graveyard is, nevertheless, a valuable contributor to history and a great source of entertainment to visitors who feel a mournful interest in that kind of literature. The most conspicuous building in Marblehead is Abbott Hall, named from Benjamin Abbott who bequeathed $100,000 to his native town, and part of the bequest was used in the construction of this building which has a lofty tower, 160 feet and one inch high, and which gives the finishing touch to the pictorial view of Marblehead, as seen from the water. There is a fine reading-room in the hall, a public library and several fine paintings, one of which is Willard's famous "Yankee Doodle," which was shown at the Centennial in Philadelphia.

When the time came for us to leave Marblehead, we went up into New Hampshire to visit friends in Nashua. It had been many a year since I had seen them, and it was with a sense of pleasure at being recognized at once—it seemed indeed but a short time, but with a tall lad at one's side, one cannot help feeling that the years have rolled away in stern reality, and carried with them a sorely begrudged portion of the freshness of youth. Nashua is full of Canadian French spindles and factory girls, but its environs are charming. The trees were in superb autumnal coloring and to see the New England landscape in its glory, is to see it in late September. In our drives, into the adjoining country I saw what I have never elsewhere seen, a lonely building in a lonely field, labeled "Small-pox Hospital."

To see French-Canadian or any other class of laboring foreigners, is to be impressed with the superiority of the good looks of Americans. I never yet saw in even the commonest American—an American of two or three generations—the pitiful lack of intelligent expression, of mental alertness, that so often characterizes the physiognomy of the low-bred European. The consciousness that one has a chance to better his condition very quickly acts upon the countenance, and I believe that one could form a very accurate estimate of the government of a country, by simply seeing the faces of the people.

We returned home by way of Worcester, Hartford, New Haven and New York to Philadelphia, the entire route in New England being one long panorama of gorgeous color, reflected in numberless lakes, rivers and smaller waters. Birches grow in great abundance along the streams, and lean forward in lovely clumps as if to catch a glimpse of their pretty bodies. The Capitol Building at Hartford makes a brave show, and at New Haven the Soldiers' Monument forms a striking shaft against the sky. Hartford in the earlier days in Connecticut, was the literary center of the State—Lemuel Hopkins, Trumbull, Theodore Dwight, Mrs. Sigourney, and Noah Webster lived there. Mrs. Stowe has made it her home also, living there with her twin daughters. But so great has been the clock-making glory of Connecticut, that in riding through the State one half expects to hear everything vibrating with the "tick-tock" of time-keeping machinery. Wooden clocks of the high old pattern were made at Waterbury 200 years ago; but in 1821 the manufacture of brass clocks was begun, and in less than 20 years the State produced clocks to the value of more than a million dollars annually, and for years the world has been supplied with Connecticut clocks and watches. The Connecticut Yankee has a strong natural bent for mechanical pursuits, and his ever-present idea is, not to work but invent some machine that will do the work for him. English visitors to work-shops of New England are surprised at the intelligence of the mechanics, and their use of tools and methods, that are so exceptional in the shops of England. When Dr. Howe of New York invented his machine for making pins at one operation, he could find the kind of workmen he required only among the Connecticut brass-clock workers, and so it came about that the manufacture of pins was established in Connecticut, and to make pins, brass wire mills had to be established; in such wise Yankee cleverness has turned New England into a vast manufacturing center. It doesn't pay to farm, the men say; for they can't compete with Western products. But if the "surplus women" were to turn their attention to horticulture, they would undoubedly give to the soil a new value. Some one has said that the Pilgrim Father had an amazing faculty for settling on the most unpromising localities to be found in the new world—which is in a way true. The Yankee of to-day has a thousand times his shrewdness—he would have "gone West" at the beginning! But with all the money-making possiblities of the West and South, there is a charm about New England that appeals to the mind and heart as no other section of our country does. It is to the nation much what one's birth-place is to the individual, and people from every State in the Union come in the summer outing season to her rock-bound shores.

A PICK-UP DINNER.

COTTAGE MAID.

AN oft-recurring spasm of economy was chiefly responsible for Mrs. Brown's determination to make a dinner without any extra marketing, and she went through ice-box and pantry, fully resolved that she would make their contents do, whether scanty or the reverse. A family of three was to be provided for—a task often more difficult, as far as economy is concerned, than where there are more. Young Mrs. Brown took the various "left-overs" from her ice-box and surveyed them with critical disapproval.

"One scrag of beef-steak and two cups of gravy—that means soup," and the fragments were soon simmering, to the surprise of her school friend, who regarded such things as a legacy for the ash-barrel. A bowl of stewed tomato from yesterday's dinner next appeared, so it was decided that the simmering compound should become tomato soup. A little dish of cauliflower in white sauce, a few cold potatoes, and part of a cold roast chicken were severally revealed.

"The chicken is too much dismembered to be eaten cold, so it becomes a mince," observed the housekeeper. The dressing was removed and put aside, while the fowl was separated and put on to stew slowly until the flesh parted readily from the bones. This took about an hour and a half. When thus cooked, the bones and meat were removed from the gravy. Skin and bone being put aside, the meat was minced and returned to the gravy together with the dressing which gave an agreeable flavor to the whole. This simmered for half an hour; 15 minutes before it was served it was thickened with a teaspoonful of flour smoothly dissolved in milk. Half an hour before dinner-time the soup, in which a spray of parsley and bit of celery had been simmering, was strained, and returned to the stove. The tomato was warmed and then strained through a sieve before being added to the stock, and seasoned. Fifteen minutes before dinner, it was slightly thickened with a tea-spoonful of cornstarch dissolved in milk; after boiling five minutes it was lifted to the back of the stove.

"How much tomato do you use in a dish of soup?" inquired Mrs. Brown's schoolmate.

"I cut my coat according to my cloth," said that culinary artist with a laugh. "Really, I think the proportions are nearly equal of stock and strained tomato, but I use just what I happen to have, without reference to exact proportions."

"What becomes of the cold potatoes?"

"Why, a salad. Here is half a lettuce, dish of cold potatoes, and a few pickled beets,—and a bit of parsley—we will have a fine salad. Here is one forlorn poached egg left from breakfast, which we will boil hard, and use in the dressing."

Mrs. Brown took her oval glass salad-boat, and put a border of crisp lettuce leaves all around it, with here and there a slice of crimson beet nestling in the soft green. The cold potatoes were sliced as if for frying, sprinkled with chopped parsley, and piled in the center of the dish. Over all a dressing was poured, made as follows: The yelk of one egg, boiled hard, was rubbed into a smooth paste. To this was added one salt-spoonful of salt, half a salt-spoonful of pepper, and a little mustard. Two table-spoonfuls of olive oil were slowly stirred in, until thoroughly mixed, and to this were added two table-spoonfuls of vinegar. A few drops of onion juice are by many considered an improvement. In the meantime some smooth, well-scrubbed potatoes were baking, while the left-over cauliflower in its sauce, was warming in the double boiler.

For dessert, Mrs. Brown made an old-fashioned Brown Betty, after an English recipe, as follows: Stew half a dozen cored and peeled apples until quite tender, with a piece of lemon rind, a little water, and sugar to taste. When reduced quite to a pulp, mix in a piece of butter, and let it stand till cold. Beat a couple of eggs, and mix them and the apples together with an equal quantity of grated bread. Have ready a buttered mold, sprinkle it very thickly with baked bread crumbs, fill up with the apple, etc., and then add a layer of crumbs. Bake in a slow oven, turn out carefully, and serve with cream.

When dinner-time came, pieces of toasted bread were laid in a tureen, and the soup was poured over them, a bit of the bread being served in each plate. The minced chicken was garnished with triangular pieces of toast, and the baked potatoes, cracked open on leaving the oven, to avoid soddening, were brought to the table wrapped in a napkin. The toast garnishes and the Brown Betty made a tasty and economical means of using stale bread. The table was prettily set, and the dinner, being carefully cooked and well served, gave no idea of being a "left-over," but, then, careful cooking and tasteful serving will make the plainest meal appetizing.

GOLDEN GRAINS.

Lyman Abbot compares doctrines with trellises, to which vines may cling if the vines be living.....

Ruskin says if you want knowledge you must toil for it: if food, you must toil for it; and if pleasure you must toil for it. Toil is the law. Pleasure comes through toil, and not by self-indulgence or indolence. When one gets to love work his life is a happy one..

Carlyle said that when he gazed into the stars, they looked down upon him with pity from their serene and silent space, like eyes glistening with tears, over the little lot of man. Thousands of generations, all as noisy as our own, have been swallowed up by time and there remains no record of them any more; yet Arcturus and Orion, Sirius and the Pleiades are still shining in their courses, clear and young as when the shepherds first noticed them in the plains of Shinar!.....

Marion Harland talks to mothers in a motherly way when she says that she who would be the mother of heroes, must bear herself heroically in their sight. Our little tempers, polite prevarications, lapses from the right, line of honor, or of Christian charity, our faults which are many, and our foibles which are legion—these tell for us upon our clear-eyed babies tenfold more powerfully than do the neat didacticisms we reckon as precept upon precept, the strong measures we classify as line upon line.....

The Germans have this good proverb, that thefts never enrich; alms never impoverish; nor prayers hinder work.....

It is said that the greatest pleasure is to do good by stealth and have it found out by accident.....

Beecher said that he loved little people. It is no slight thing when they who are so fresh from God love us.....

The reason, why so few men are made on a large pattern is that it is not safe to trust a man out in the world with large brains. There is a great economy therefore in that direction!

Colton says that, to look back to antiquity is one thing, to go back to it another. If we look back to it, it should be as those who are running a race, only to press forward the faster, and to leave the beaten still further behind.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

Ah, many a one is longing
For words that are never said;
And many a heart goes hungry
For something better than bread.
—JOSEPHINE POLLARD.

EXTRACTS FROM SUNDAY EVENING TALKS AT THE RURAL GROUNDS.

"*Now is the accepted time*," not to-morrow, not next week, not any time but *now*, and that means the present moment.

Accepted time—what is it? The time to be taken—for what?

For whatever we have to do. If "procrastination is the thief of time," then *now* is the bolt that will prevent it from stealing the best from our lives. The Spanish "manana" "manana"—to-morrow, to-morrow,—expresses too often the unconscious thought that influences what we do, until, without realizing that we are doing so, we live out the motto—"Never do to-day what can be put off till to-morrow." And then we wonder how so much work could have accumulated.

There is no time but the present. *Now* is all we have. Yesterday *was now then*. To-morrow will be *now* when we come to it. But *this* moment is the *now* that should be the accepted time if we would have the best and most from life; and secure successful results in whatever we undertake.

When I was a girl, I found that procrastination and I were becoming too good friends for my good. I procrastinated in the most dangerous way—that of *thought*. Whatever I had to do or to learn, the unconscious tendency of my thought was this: next time I will do it better—next time I will learn it perfectly. But gradually I awoke within myself to realize that the next time never came for what had been neglected: other things demanded the *now* and unless I made *that* the accepted time for doing thoroughly what was my duty, my life would be a tangle of imperfections. Of course, I could not realize the importance of *now* as I

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria.

do to-day. My present convictions on the subject are the outgrowth of the experience and discipline of years. But if I have succeeded at all, in accepting *now* as *the* time of my life for whatever I have to accomplish, I owe it in a great measure to the example of my mother, who never procrastinated in any duty, and I hope she understands now how grateful I am to her. I believe that we must begin to accept *now* in our thoughts before we can show by our lives our appreciation of its meaning. Concentration of thought into the works of the present moment means life to us. Diffusion of thought results in worry and that means wearing out in an unnecessary way, sooner or later.

We have a task to perform. Instead of putting the mind into it *now*, and getting all the good we can from doing it well, we allow our minds to drift to other things. Our work is consequently half done and we are tired and dissatisfied, we know not why, all because *now* has not been the accepted time in our minds.

We feel depressed and miserable and think that *some time* we shall feel happy again. Why not be happy *now*? Isn't there just as much happiness in the world at the present moment as there can be at any future time? Isn't the unhappiness in our own thoughts? Why not make *now* the accepted time for facing about and smiling? Be like the old woman who thought on her mercies—because she had two teeth and they met. I often think of B. G. when he was a little boy in S. A. He had a violent temper and when unable to have his own way would throw himself on the floor and kick and scream. His mother talked with him about it and tried to teach him the meaning of self-control. He promised to control himself next time. But when the next time came and he could not do just as he pleased, he waited a second and then threw himself on the floor kicking and screaming in the usual way. When his mamma reminded him of his promise, he said: "I am not going to control myself *now*; I am going to wait till next time." The older we grow the more fully we shall realize that there is no next time; *now* is the accepted time. We are half listening to a conversation or a lecture or perhaps reading very hurriedly something that we should like to understand if it were not so much trouble *now*. Some other time will do as well we think, but before the other time comes some one may ask us the very questions we ought to be able to answer, but we cannot do so, because we did not make *now* the accepted time when we had an opportunity.

Men and women in this busy world often feel the absolute need of a little rest *now*, but they are perhaps anxious to finish some work begun, and, instead of saying, "I will rest awhile and then be able to work all the better for it," they put it off until they are obliged to rest on what is sometimes called "a bed of sickness." Fifteen minutes of rest *now*, when needed, is surely more economical than 15 days later on. A lady who retained her strength and youthful looks to a great degree, was once asked how she managed to keep in such good condition and she replied that every day she took ten minutes for absolute rest, and no matter what the pressure was in her family affairs, she would not allow her mind to dwell on the thoughts of anything that worried her. She dropped everything unpleasant from her mind. In fact, she tried to drop everything and become as nearly like an oyster as possible. In all that she did she took what she called short views of life; that is, she made *now* the accepted time and never had cause to worry. If some of the tired over-worked men as well as women, could adopt this into their lives, we should all be worth more to ourselves and each other, and our duties would not become such burdens. In his conversation last night Mr. Carman probably meant that a breakfast, dinner or supper was an accepted time to eat, not to talk.

There are so many places in life where now is the accepted time that it seems to be almost the hinge upon which our actions swing. The stitch in time that saves nine, means taking the stitch *now*. "Order is heaven's first law." Putting things away in their places *now*--not accepting any other time. A little book could be written called "Now" as a companion to "Don't."

Now is the time to be glad.
Now is the time to speak a kind word.
Now is the time to be polite.
Now is the time to be orderly.
Now is the time to be patient.
Now is the time for self-control.
Now is the time to be loving.
Now is the time to be brave.
Now is the time to get wisdom.
Now is the time to improve.
Now is the time to keep well.
Now is the time to be true.
Now is the time to be neat.
Now is the time to be earnest.

Now is the time to remember that the material things of this life are not lasting, and that our thoughts *now* are leading us either up or down, making us noble or unworthy for eternity. Therefore in all that we think, say or do, let us remember that now is the accepted time for all that is noblest and best in our natures.

Simple gowns—straight skirts, gathered waists, full sleeves—are growing in favor.

"DIAMONDS IN THE ROUGH."

MUCH generous praise has been bestowed on the class of mankind that come under the description of diamonds in the rough. I wonder if there is a diamond field in the world where cut and polished diamonds are picked up? And I wonder how much value would be placed upon a rough diamond if it were certainly known that all the work of the most skillful workman could never polish it or bring out any greater beauty than it chanced to possess in the rough state? There has been a great deal written about true hearts under rough exteriors, kind hearts behind rough manners, and a contrast has been made with the polished paste of false hearts under faultless manners, graceful selfishness, and there is truth in it; but it has led some to despise the true polish, that brings out in a diamond its great beauty and value. The Christian Union in an editorial, says: "We never value social training more than when we see people of broad sympathies and pure motives entirely misrepresented by their lack of manner."

Before any beautiful effects can be produced by drawing, a great deal of work uninteresting perhaps, tedious certainly, discouraging often, must be patiently gone through with. Before inspiring, invigorating social effects can be produced, a great deal of practice and training in the details of forms, with seemingly useless care, must be intelligently followed. Many insist that the spirit of kindness is enough, but if the well of brotherly love never failed it could not be understood at all times without its usual forms of expression. A man who declares that the spirit of the beautiful is all he needs to make him an artist, is no more foolish than the man who says a spirit of kindness is all he needs in society to make him an inspiring power there. In both cases the spirit is the great transcendent necessity, but can a man really possess this spirit in its strength and not be urged by its power to reach the needed forms, through no matter how much of drudgery.

A good workman appreciates good tools, and will not work without them if he can get or make them. It is the shiftless workman who hates his work, who does not care whether his tools are fit or not. Our manners are our social tools. They are no more politeness than a hoe is a clean garden, or than the plow is a mellow field; but it is easy to see the connection between them. In beginning an untried work the first question is naturally, what tools have others used in this work, and after faithfully trying the tools others have approved, and having grown skillful in their use, the workman has then reached the point where he can intelligently invent other tools for the work. If he has genius enough they will be better than the old ones; if he has not the genius, and is a wise man he will discard his own imperfect inventions and go back to the tools others have perfected.

Men may experiment in certain lines in social intercourse after mastering the forms long usage has proved good, but to cling to peculiar ways of their own, that are not agreeable or that fail to show the heart's kindness, limits the man's power as the use of a cradle in the wheat field limits the man who scoffs at the self-binder his neighbor uses.

Prof. Heber Holbrook, in an address on politeness to his students, giving them some of the well-tried laws of social intercourse, said: "Treat people in such a way as to put them at their ease; be respectful to others and they will respect you. Be appreciative. Irving needed applause to enable him to play well, an irresponsive audience cheats itself; so we cheat ourselves when we do not respond to the efforts of those who talk to entertain us. We must strive to acquire the power to make our neighbors comfortable. What man is going to be jolly, generous, attractive to you if you meet him with sour, insulting manners. The treatment we receive from our friends comes from our own actions. Those who are surrounded with friends do not think of self, do not struggle to be entertaining; they are thoughtful of the mind of their neighbor. We know ourselves that we can talk freely to a genial person when we cannot to others. We cannot sit stolidly and think the whole world is going to come to us. Expect the highest and keep expecting it, and give of your highest and best."

Will any one who follows these directions, forever remain a "diamond in the rough?" Appreciate the unpolished gems, weigh the paste at its true value, but do not deliberately reject all polish because some cannot tell the difference between a finished gem and worthless imitations.

Many men and women of the truest, kindest thoughts, give no pleasure to others in a social gathering, and get very little perhaps suffer keenly for lack of the polish they affect to disdain. The lack of such an entirely outside and superficial thing as suitable dress may make the wearer and his friends uncomfortable and mar their pleasure—destroy the very aim of the gathering. Dress should be so in harmony with the occasion that it will not obtrude unpleasantly upon any one's notice, least of all on the wearer's, and it may be safely forgotten. Such dress is the hight of comfort as well as elegance.

Such things as phrases, motions, harmonies of action and of dress, are only tools, but ought always be the most suitable for the social object in view. By their use the true "diamond," though "in the rough," will become the polished, cherished stone, or, better, will become the man or woman of ready, timely sympathy for grave, or gay, for trying occasions, and for the moments of overflowing fun and harmony in social intercourse at home and abroad. ALICE BROWN.

BLACKBERRIES were never more plentiful in Bergen County, N. J., and we are going to conserve some of the juice for medicinal purposes in this way: Put well-ripened fruit into a preserving kettle and place over a slow fire until the fruit is thoroughly scalded. Remove and when cool strain and press out all of the juice. Pass this through a flannel bag and to each quart allow a half pound of rock candy pounded fine. Return to the fire and simmer 15 minutes. When cold add a pint of the best brandy you can get to every three pints of the juice. Bottle and cork. Excellent for summer complaints.

THE CHRISTIAN UNION gives some excellent advice to the woman who is going to the country—whether farm-house or hotel—as to what she shall wear. It says that every year the fact is being recognized that the people who dress elaborately at the summer resorts are those who have limited social opportunities at home, or who are vulgar, consequently without a sense of the fitness of things, or who have recently come in possession of money that makes costly belongings possible.

It also sensibly says that it is a mistake for people of moderate means to concentrate all the resources of purse and taste on "dress-up" dresses. Common sense and refinement are on the increase among us, and laces and frills are things of the past, except for the vulgar and ignorant. Flannels, not laces, occupy the foreground, they give the stamp of social position.

Miscellaneous Advertising.

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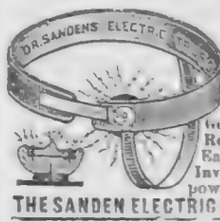

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News of the Week.

HOME NEWS.

SATURDAY, July 20, 1889.

AFTER a long silence General Master Workman Powderly is out in a long letter bitterly scoring President Corbin, of the Reading Railroad Company, for his course in preventing members of labor organizations from obtaining employment at the Reading Works. He earnestly urges the absolute necessity of ballot reform in the Keystone State as a prerequisite to legislation doing justice to the rights of all sorts of labor against the workings of unscrupulous capital... .The Knights of Labor, whose organization has been losing a great many of its members of late, is going to make an effort to revive interest in its proceedings by holding a mass convention soon... Last Wednesday at the Labor Congress now in session at London, England, the American, English, Belgian, Spanish, French, Danish, Polish, Austro-Hungarian and Portuguese delegates agreed upon a series of resolutions declaring in favor of eight hours as the maximum per diem, a holiday weekly, the suppression of labor for children under 14 years, equal opportunities and wages for the two sexes, etc..... During the past year there has been a very considerable decrease in the number and importance of strikes in this country, whereas the reverse has been the case both in the British Isles and on the continent. Bradstreet's tells us that since January there have been reported 266 strikes, involving 75,110 strikers, against 389 strikes and 111,501 strikers in 1888, and 511 strikes and 212,317 strikers in 1887... ....The vast increase in labor-saving machinery is the chief ground on which the operatives everywhere base their claims for shorter hours. Recent German statistics show that four-fifths of the steam machinery in the world has been constructed within the last 25 years. Full details are given of the steam power in each country of the world, and the conclusion arrived at is that all the steam machinery possesses 46,000,000 horse power. Then it is calculated that the one-horse power of a machine operated by steam is equivalent to the strength of three ordinary horses, and the strength of an ordinary horse is equivalent to the combined strength of seven men. From all this the Statistical Bureau at Berlin draws the conclusion that the steam machinery of the world does the work of 1,000,000,000 men, or twice the working population of the globe. No account is here taken of the tremendous amount of wind-power or water power employed for industrial purposes in the world. Workingmen insist that they should derive some advantage from this enormous substitution of steam power for human labor..... The inhabitants of the Conemaugh Valley, and especially those of Johnstown, have been almost turbulently indignant during the week at the tardiness with which the generous contributions of the country have been doled out for the relief of the needy by the State Flood Commissioners. So far as can be reasonably calculated, $3,500.000 have been contributed in cash through the official receiving centers. Governor Beaver secured what was needed of $1,000,000 more to be used in clearing away the wreckage for sanitary reasons. The Governor values the clothing and provisions sent direct from the donors to the sufferers at $600,000. Large cash contributions have also been distributed by the Odd Fellows, G. A. R. Posts and other associations among suffering members of their own organizations. The total loss of the property in the valley is now estimated at only $9,500,000. Most of this was lost by the Cambria Iron Works and other wealthy companies or individuals who will hardly expect any of the fund. The ordinary sufferers therefore ought to be financially better off after the flood than they were before. Half a million dollars were distributed by checks yesterday to those who needed the money most, and about $1,500,000 more still remain at the disposal of the State Commissioners. The cash distribution is expected to revive business throughout that section as the recipients will be in a position to make purchases and enliven trade..... ..... A Skewer Trust and a Tooth Pick Trust are among the latest.....It is reported that the Government is about to transfer Geronimo and the Apache prisoners in Alabama to the Onalla Reservation in North Carolina—a better plan than to send them back to the demoralizing influences of their old home..... Mayor Cregie of Chicago, has, very properly, nullified the folly of the aldermen in giving for 25 years, to the Standard Oil Trust, the exclusive privilege of running a pipe line through a thoroughly built up and populous section of the city, which would be a continual threat of another conflagration ..The Delaware Breakwater, at the mouth of the Delaware, which has cost the United States millions of dollars, has been declared a failure, and steps are to be taken to have a better harbor made there, at a cost of not less than $5.000,000..... On his way North from New Orleans, triumphant Slugger Sullivan was arrested at Nashville, Tenn., on a telegraphic request from Gov. Lowry, of Mississippi, but was presently released by a Nash. ille Dogberry whose decision was utterly inexcusable, as ignorance of law is no excuse in a judge. Since then both Boston's Pride and Baltimore's Pet, together with their seconds, have been dodging requisitions from the doughty Governor who says he will use his best efforts to punish them and their abettors for violating the laws of his State. He also threatens to take measures to secure the forfeiture of the charter of the Queen and Cresent Railroad for aiding in bringing about the fight. His efforts are worthy of all praise; but half the official fuss would probably considerably lessen the number of murders and other outrages committed every year by pisto., shot-gun and rifle in Mississippi. But, then, the fist is there the blackguard's weapon, the pistol or knife, the gentleman's..... ..... An English syndicate is negotiating for the purchase of the distilleries of Kentucky. Those only that make Bourbon or aging whiskeys are wanted.....The State officers of Indiana have succeeded in negotiating the sale of the $3.900,000 of bonds issued for the purpose of refunding the school fund loan. It is stated that New York capitalists have been found who were willing to take the paper.... ... . Postmaster-General Wanamaker wants to fix the payments for the transmission of government official telegrams during the fiscal year 1890, at one mill per word for all classes of messages, instead of an average of one cent per word hitherto paid. In telegraphing the Signal Service reports alone this would make a difference of $114,-000! Congress appropriated for the work $118,000, but under the new rule it would amount only to about $4.000—or one-thirtieth of the appropriation. Jay Gould's Western Union would, of course, be the chief loser. It appears, however, that it has been doing business for favorite private parties for one mill per word. The government gives very important privileges to the telegraph companies, and the law requires that the government messages shall have priority over all other business, and the lowest rates, in return. The wires of the telegraph companies run into every newspaper office in the country, and the general opposition to the proposed government retrenchment shows that the managers well know what wires to work..... Last Sunday three of the pulpits of Charleston, S. C., thundered against the infamy of murderer McDow's acquittal. At a recent union of the Protestant clergy of the city the aid of the pulpits in the city and throughout the State was invoked to put down such deeds of criminal violence, and the warfare is to be kept up. McDow expected the people would soon forget or condone his "little indiscretion;" but the rascal may find that the citizens of South Carolina are not so lost to all sense of justice and decency as he imagined.....The troubles at Carnegie, Phipps & Co.'s iron works at Homstead, Pa., were compromised a week ago; both sides having made concessions. Had the settlement been delayed, it is probable that the bloodiest labor riot ever known in this country would have occurred, as 10,000 armed workingmen from Pittsburg were ready to march to Homestead to drive off all scabs, and "kill off Pinkertons," as a strong gang of Pinkerton men had been hired to protect Hungarians and others willing to take the places of the strikers..... Far up the St. Lawrence, in the village of Seeley's Bay, tyrotoxicon in ice-cream prostrated 200 church picnickers a week ago, four of whom have died. Ice-cream at festivities seems outrageously productive of this lately discovered poison.....The whole number of officials now protected by the civil service rules is 27,597, of which number 8,212 are in the departmental service, 2,298 are in the customs service, 11,767 in the postal service and 5,320 in the railway mail service.... ..... What an extraordinary number of cloud-bursts there have been this year, with disastrous results always to property and often to life. Few parts of the country can hitherto complain of drought; while many have ample cause to complain of too much rain..... Heaps of testimony are still being taken in this city before the referee in the electric-execution investigation and the more testimony taken the more conflicting it becomes and the harder for anybody to analyze it and come to a decision in the matter. It is lengthened out by the efforts of rival associations interested in the use and manufacture of electric devices.....In spite of frequent denials, the organization of that Salt Trust is now virtually complete. It's to have a capital of $20,000,000, of which $5,000,000 are to be held openly by Englishmen, who will no doubt quietly buy up most of the rest. The stockholders in the English Salt Company at home, have been notified that they have the first chance to invest in the American enterprise which owes its organization to the managers of their own monopoly. All the large salt works in this country are in the "pool," and the rise in the price of salt is to start at $1 per barrel..... F. J. Seymour, manager of the American Aluminum Company, died suddenly of paralysis at Findlay, Ohio, the other day, carrying with him to the grave the secret he had discovered of extracting aluminum from clay. Most of the details of the process were patented; but the most important point of all—the employment of a chemical process at the critical moment—was kept a secret by the inventor. President of the company Gen. Alger of Michigan, and its vice president Senator Palmer, together with the other stock-holders are in a pickle. The works have been compulsorily stopped, as nobody knows how to run them. Investments in blind-pools are always mighty risky..... Sir Julian Pauncefote, the new British Minister at Washington, is becoming extremely popular owing chiefly to his sound common sense and ordinary-good-natured-citizen manners.. A bogus announcement that Secretary Blaine was certainly about to resign from the Cabinet, ostensibly on account of ill health, has greatly helped the papers to fill their columns with denials, reiterations, re-denials, and editorial comments during the week—no unwelcome boon during the "silly season," when legislatures are not in session and other sources of "copy" are uncommonly scarce. Indeed nearly half the "news" in the papers nowadays consists of bogus domestic and foreign announcements to be followed by denials, etc , etc.....The Carpenter Type-setting Machine Company has just been incorporated under the laws of Illinois, with a capital of $1,000,000. Its wonderful machines threaten to drive most of the compositors out of all the printing offices in the country, as the new machines, it is said, can do their work faster, cheaper and—as well..... The circulating medium decreased $17,000,000 in May, and the same in June, but there are $8,000,000 more in the hands of the people than there was a year ago, and $63 000,000 more than there was at this time in 1887..... .....Politicians are regarding with interest and curiosity the conventions of the four new States to form constitutions. At the last elections 164 Republican and 161 Democratic Representatives in Congress were elected. One Democrat who has since died will be succeeded by another. The new States will elect five Representatives, all probably Republicans, except possibly the one from Montana. These with those who may take the place of some Democrats who will probably be unseated by the majority, will give the Republicans a "working majority" in the Fifty-first Congress..... It is stated that an English syndicate has nearly completed the purchase of the great flouring mills at Minneapolis, and also of those at Milwaukee and St. Louis, and is negotiating for the transfer of mills at various other points. It is also said that another British syndicate wants to purchase, for $5,-000,000, Warner's proprietary medicines at Rochester, N. Y. There are also reports of several other English syndicate enterprises here. It is estimated-that $1.000,000,000 of English capital is now invested in this country and that the interest takes abroad $100,-000,000 a year. A large share of English capital invested here, is, however, a total or partial loss, and a good deal more is, for the present at any rate, unproductive. Americans are quite willing that Englishmen and other trans-Atlantic speculators should invest all the money they please here, confident that, in the long run, American shrewdness, enterprise and (often) unscrupulous business tactics will get a fair share of it..... A School Book syndicate composed of all the chief school-book publishing houses in the country, went into force on July 15, when all the traveling salesmen were withdrawn, leaving the sale of school books to be conducted entirely by the producing centers. The syndicate now consists of Van Antwerp, Bragg & Co., and Clark & Maynard, of Cincinnati, Harper & Bro., D. Appleton & Co., Ivison Blakeman & Co., Taintor Bros. & Co., and Ginn & Co., of New York, and the J. B. Lippincott Company, the Christopher Sower Publishing Company, Cowperthwaite & Co., Porter and Coates, and E. H. Butler & Co., Philadelphia. The principal source of their additional profits, will, they say, be the savings made by dispensing with traveling agents. Each firm employed from 15 to 50 of these all the time, and their salaries ran from $1,800 to $3,500 a year besides traveling expenses. It is said that they also spend a great deal of money in "treating" and bribing school trustees in order to secure sales. As all the houses guarantee not to cut the prices of books under certain specified figures, there is little doubt that the syndicate will soon place a thumping tax upon learning even the alphabet..... ..... The officers of the Southern Cotton Oil Company very emphatically deny that their organization has been absorbed by the Cotton Oil Trust. Their Company, they say, is entirely independent and will remain so..... Friends of Senator Washburn of Minneapolis, indignantly deny that he is or has been financially embarrassed. He's all right and has lately sailed for a trip to Europe with his family. As soon as he left his enemies meanly and maliciously spread abroad circumstantial but mendacious reports that he had been saved from utter financial ruin only through the generous interposition of friends.....The grain elevator men of Minneapolis are gnashing their teeth because the city assessor has assessed 8 000,000 bushels of wheat in the elevators. This was never done before. The elevator men claim that the wheat receipts change hands so often that it is impossible to charge the assessments to the right parties. If they can't make these pay, they're sure to saddle the loss on the public by elevating charges..... While the capital and manufactures of New England are constantly drawing heavy profits from every other part of the country, recent statistics show that that section annually buys from the producers of other sections 550,000 tons of grain, 525,000 tons of flour and $50,000,000 worth of meat. It also affords a market for 50 per cent. of the wool product of the country, and for 25 per cent. of the cotton crop. Can any section of the country be really an enemy to any other section ?.... . ..... The Rhode Island Legislature has just met in special session, to enact a license law. The bill puts the wholesale license fee at from $500 to $1,000, the amount to be determined by the License Commissioners. The retail fees run from $400 in Providence down to $250 in smaller towns, according to population..... ..... There's a project on foot for combining all the railroads in a mighty "trust," as the only certain remedy against destructive freight rates warfare in future, and the surest method of wringing from the public big interest on the capitalization of the roads, whether money or "water." It is proposed that the railroads be united in "territorial groups" which again are to be placed under the management of a central board of trustees. In theory the new organization would give to the public the best service at the least cost; while the stockholders would be saved from depreciation of their securities by excessive multiplication of competing lines and ruinous rate-cutting wars. The great obstacles to such a happy consummation are the gambling and intrigues of the inside railroad rings of presidents, diectors and managers, who speculate with the property committed to their care regardless of anything but their own greedy interests. These "wreckers" treacherously and often fraudulently raise or depress the stocks by their reports and rate-cuttings to suit their own ends, and so long as the projected organization is likely to hamper their manipulation of the roads under their control for their own interests, there is little chance of a Railroad Trust. Under the present arrangements hundreds of "wreckers" have splendid opportunities of legally but unscrupulously pocketing the money of others; under a great trust a few great magnates would have wider opportunities of doing so, but the general crowd would be shut out..... The British-American Association of Massachusetts in session at the Hub, fulminates bitter denunciations against Patrick Egan, Minister to Chili, because he is an Irishman suspected by some Englishmen of complicity in the atrocious Phœnix Park assassinations; against President Harrison, for his shameful subserviency to the Irish, shown by appointing Egan; and against Governor Thayer, of Nebraska, for his official insolence, thick-skinned ignorance and gross presumption in venturing to berate members of the association. Thayer's conduct "has caused the name of American citizen to stink" in the metaphorical nostrils of these "British-Americans.".....

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WE have discovered a way out of the narrows. We want to say a great deal about Compound Oxygen, but there is neither the space provided nor the time.

So we will trust to your sagacity to catch the saving suggestions embodied in the following:

JONESBORO, Tenn., June 4, 1888.

About six years ago I had a number of hemorrhages, followed by fever, great exhaustion and nervous prostration; had but little appetite and much insomnia. I was led to try your Compound Oxygen. The hemorrhages ceased, appetite returned, slept well and general health became better than it had been for years. REV. C. A. DUNCAN.
Pastor of Presbyterian Church.

COLUMBIA CITY, Ind , Mar. 19, 1888.

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We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, July 20, 1889.

SIR CHARLES RUSSELL and Mr. Ackworth, the two chief lawyers for the defendants before the Parnell Commission, have withdrawn from the case together with Mr. Parnell, on the ground that it would be folly to expect an impartial decision from that tribunal appointed and selected by a bitterly partisan government for partisan purposes. The Court ordered that all the books of the Land and National Leagues and even the private bank-books of Parnell and some of the other defendants should be produced in court and submitted to the scrutiny of the Times Government lawyers, and the order was obeyed. Then the Parnellites insisted on the production of the books of the Loyal and Patriotic League on the ground that they would show that a wicked conspiracy had been concocted by its members to bribe Pigott and other witnesses against the Parnellites to commit forgery and perjury to ruin the reputation and influence of the Irish leaders. The Court decided against them, and their immediate withdrawal from the case virtually involves the collapse of the investigation, though it is still carried on in an uninteresting, one-sided fashion. Many insist that Parnell and his followers should have withdrawn immediately after the exposure of Pigott's forgeries and perjuries, and there is little doubt but that would have been the best move. The Commission was organized on September 17, 1887, and the case was opened on October 24. Ten months have been occupied with testimony and argument. A decision against the Parnellites on several counts at least, is a foregone conclusion, but it will be like the whistling of the wind through the broken rigging of an abandoned hulk on the ocean—nobody will pay much heed to it..... The English are concentrating a considerable force in Southern Egypt, under General Grenfell, Commander-in-Chief of the Anglo-Egyptian forces. Nad-El-Jumi, the Dervish leader, says he has been sent by the Mahdi's successor to conquer the world, and he has about 3,500 brave, reckless, ill-disciplined and ill-armed troops and about 2,000 ragged camp followers to do the little job. They are still pressing northward in parallel lines with the Egyptian troops and gun-boats along and on the Nile.....The marriage of the Princess Louise, eldest daughter of the Prince of Wales, to the Earl of Fife, is to take place on July 27, at Buckingham Palace, London. The Earl has been made a Duke. Instead of making special grants for the children of the Prince of Wales on their marriage, as hitherto proposed, Parliament will increase the Prince's allowance by $200,000 per annum so as to enable him to provide marriage portions for his children .... On June 2, the bursting of water-spouts and terrible tornadoes flooded a wide district in Northwestern China, overwhelming nine villages and destroying 6,000 people. The water

Miscellaneous Advertising.

This Threshing-machine received the two last **Gold Medals** given by the New York State Agricultural Society; and has been selected, over all others, and illustrated and described in that great work, "Appleton's Cyclopedia of Applied Mechanics;" thus, establishing it as the **standard** machine of America. **Straw-preserving Rye-Threshers, Clover-hullers, Ensilage-cutters, Feed-mills, Fanning-mills, and Wood Saw-machines;** all of **the best** in market. The **Fearless Horse-powers** are the most **economical** and **best** Powers built for the running of Ensilage cutters, Cotton-gins, and general farm and plantation use. For free Catalogues, address
MINARD HARDER, Cobleskill, N. Y.

is reported to have been 36 feet deep on the level country! Several great floods have been very disastrous to life and property among the teeming population of China of late. The last calamity, however, is trifling compared with the flood which wiped out 100,000 lives along the Yellow River in September, 1887.... ..A Beet Root Syndicate Bank is to be founded at Brussels, Belgium, with a capital of $15,000,000 and branches and agencies in all the principal cities in the world. It will do no speculative business, but will sell sugar on commission and make loans to manufacturers of beet sugar and also furnish them with news concerning the sugar markets everywhere ..... There's considerable talk about the Pope's leaving Rome and finding a refuge in Spain, hoping for the restoration of the temporal power of the Papacy should Italy be crushed in a general European war. The "temporal power" was first firmly established by Charlemagne in 744. During the troublous times between 1309 and 1377, the residence of the Popes was changed from Rome to Avignon, a town in Provence, southeastern France, now possessing about 40,000 population. Since then the official residence of the Popes has been at Rome except for short intervals. Eugenius VI. was driven out for seven months by a popular insurrection in 1433. Pius VI. was taken prisoner to France (where he died) by Napoleon in 1798, and his successor Pius VII. met the same fate in 1809, and did not return till 1814. Pius IX. escaped from the city in disguise during the revolution of 1848, and remained away nearly a year. The temporal power was abolished 1870 by the occupation of the city by the Italian troops on the withdrawal of the French garrison to take part in the Franco-Prussian war. Though without much material power, the Pope's influence is still tremendous among the 250,000,000, Catholics throughout the world..... The Czar has decreed the total suppression of the Lutheran Church in Russia. There are upwards of 3,000,000 of Lutherans, mostly, if not all, of German parentage, special protégés of the German government which has frequently intervened in their favor. They occupy the western and northern provinces of the empire and pray heartily that they may soon become German subjects. Intense indignation, of course, in Berlin..... The sad but glorious fate of the late Father Damien, the leper martyr of the Sandwich Islands, has roused public attention to the growing prevalence of leprosy in England, to which it is brought from China, British India and other Eastern countries. A leper ward is to be opened in London, and provisions are to be made for the outcasts in other parts of the Kingdom. A meeting presided over by the Prince of Wales, the other day, resolved to erect a fine memorial to Father Damien at Molokai, the barren little island set apart as a leper settlement in the Sandwich Islands..... Tuesday last a Portuguese crank harmlessly shot at the popular, progressive and liberal-minded Emperor Dom Pedro of Brazil. The final abolition of slavery in the Empire went into effect last year, and contrary to the fears of the timid, the freedmen have kept the peace and have been diligent in doing the work for which they were paid on the plantations. Emancipation there was as much of a bugaboo in 1888 as it was here in 1863.....

FIVE HARVEST EXCURSIONS.

THE Burlington Route, C., B. & Q. R. R., will sell, on Tuesday, August 6th and 20th, September 10th and 24th, and October 8th, Harvest Excursion Tickets at *Half Rates* to points in the Farming Regions of the West, Southwest and Northwest. Limit 30 days. For circular giving details concerning Tickets, rates, time of trains, etc., and for descriptive land folder, call on your ticket agent, or address P. S. EUSTIS, Gen'l Pass. and Ticket Agent, Chicago, Ill.—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, July 20, 1889

IT seems that a person may be presented with an article, and yet not receive it. Secretary Rusk says that he will not receive the horse recently presented to him, and that he would not receive any present from any body. We need more of this kind of public officers. ..... A Massachusetts inventor has patented a method of baling silage.....California fruit-growers are experiencing considerable difficulty in securing necessary help to gather and dry their fruit at a price which they can afford to pay. Chinese labor has proved the best as well as the cheapest in the past, but this is getting scarce, and a higher price than formerly is demanded ..... Robert Bonner, the dispatches say, has offered $65,000 for Axtell, the three-year-old stallion that trotted the Minneapolis track in 2:15½ the other day, and a Chicago man, acting for unknown capitalists, has supplemented this offer with one of $80,000, both propositions having been refused. The owner of Axtell is C. W. Williams of Independence, Iowa. The horse was sired by William L., a son of George Wilkes. Axtell made a record of 2:23 as a two-year-old, the best record ever made by a stallion of his age, and which created a great sensation. The West seems to be coming to the front in horse-breeding ..... Professor H. M. Wiley, Chemist of the Agricultural Department, has recommended to Secretary Rusk the appointment of the following persons as assistant chemists, to be assigned during the fall to duty at the sorghum sugar experiment stations: T. F. Sanborn, New Hampshire; Ervin E. Elwell, Michigan; Lewis H. Bradford, S. B. Merrill and M. C. Meachem, Kansas. Professor Wiley will come to New York next week to secure apparatus for the new sugar stations established this year by Secretary Rusk..... .....Secretary Hunt, of the New Jersey State Board of Health, has telegraphed Secretary Rusk that the latter's protest against the raising of the pleuro-pneumonia quarantine by the State authorities would receive immediate attention..... Our Scotch exchanges report large sales of Clydesdales for exportation to the Argentine Republic, as well as to the United States. The first sale of new wheat of this crop was made last Saturday at the Produce Exchange. The lot of 100 bags was raised in New Jersey, and brought 95 cents a bushel.....Santa Barbara County, California, claims a grape vine of immense proportions. The circumference of the trunk six inches above the ground is six feet two inches. It is seven feet high, and the main trunk is divided into branches which are trained on an arbor, and extend 110 feet one way and 90 feet the other. The annual yield of grapes from it averages four tons. Another big vine is on the Machado ranch, 19 miles southeast of San Diego, near the Mexican line. It is of the old Mission variety, and was planted in 1850. From the roots a trunk five feet in circumference reaches up about six feet, where it divides into three large branches which in turn divide and send out other branches, twined over an arbor; the whole vine covers something over half an acre of ground. This immense canopy of vine and fruit is within easy reaching distance of the ground. The average yield is from three to four tons of grapes.....

Anyone having a second crop of hay to cut, especially clover, should have Symmes' Hay and Grain Caps. Manufactured at Concord, N. H., by the Symmes' Hay Cap Co. Price, $37.50 per 100.—*Adv.*

Market Notes.

SATURDAY, July 20, 1889.

FREQUENT reference has been made in these columns to the supply of California Fruits in this market. A visit to one of the auction rooms where this fruit is distributed with bewildering rapidity is both interesting and instructive. To such a science has railroading been reduced, that the exact time of the arrival of the cars direct from the place of shipment, 3,000 miles away, can be foretold. The consignees advertise the time of sale, and the articles to be sold. The loaded cars reach the docks in New York the same morning, the contents are overhauled, samples are taken of each lot, the condition is noted, any bruised or "wets" are parceled out by themselves, and the samples are opened and displayed in the auction room, each lot being labeled and numbered.

Catalogues of the different lots by number, together with their marks and description are in readiness before the sale. As the prospective buyers examine the samples, each marks upon his catalogue the price he thinks the goods are worth. When the hour of sale arrives, all are ready; if the auctioneer be one minute late, cries of: "Time!" are heard, so thoroughly do these men realize that time is money. The auctioneer mounts the platform; no time is spent in praising the quality, or in useless talk; the goods have all been examined, and each man knows exactly what is what.

The choice of several lots of Royal Apricots is offered, the lots contain generally 50 boxes, sometimes less. The start is slow, and low. No one seems anxious to raise the price, and the first choice sells at the lowest price of any of the 800 boxes. The buyer is entitled to his choice of any of the lots offered, or to 20 boxes of any lot, not less than 20 boxes being sold unless a lot should contain a smaller number, which sometimes happens. The remainder of the lots is disposed of in the same manner, and then several more lots are grouped together in the same way. The auctioneer with an eye like a hawk's and with a tongue you might readily believe had more than the proverbial two ends to it, sees every motion and every suggestion of a bid, and is ready to profit by it.

Truly, selling the fruit is as much of an art as growing it, and a proper division of labor should be to the advantage of all.

Next, first choice of several lots of Bartlett Pears was offered, and these were disposed of the same as the apricots. Then a lot of German Prunes, Magnum Bonum, Purple Duane, Washington, and Peach Plums were sold, after which the samples, and a few boxes of "wets" and "bruised" were offered. About 800 boxes of Royal Apricots were sold, the price ranging from 60 cents to $1 50 per box. The Bartlett Pears ranged in price from $2.80 to $3.50 per box, about 350 boxes being sold. Thirty-nine boxes of Peach Plums brought $4.60 per box, while the sample box sold for $4.45. There were 88 boxes of German Prunes, which went for $1.90 per box, the sample box bringing $2.10. A dozen crates of Magnum Bonum Plums sold for $2.15 to $2.55 per crate, while 100 boxes of Purple Duane Plums brought from $2 25 to $2 60 per box. Thirteen boxes of Washington Plums sold well, bringing $3.40 per box, the sample box selling for $4.05. The goods are sold on 10 days' credit, the purchaser paying cartage.

The sale of this entire lot, comprising two car-loads, occupied just one hour. A striking feature of the crowd present was the number of Italians, many of them buying heavily.

These sales are of weekly, and sometimes almost daily occurrence, and are a popular and successful means of handling fruit rapidly and satisfactorily.

THE live stock market at interior points was not very active, and prices ruled somewhat lower, excepting for sheep, which show a continual, steady advance. Wool has also maintained a firm price, and shows an upward tendency. Prices are considerably higher than at this time last year. From present prospects, the prices of grain are likely to be well maintained, especially for wheat and corn. The best quality of hay is likely to bring good prices. Best grades of butter sell readily, but the market is over-stocked with poor trash. Eggs are plentiful.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, July 20, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	8½	8¾	.....
Strict Ordinary	8 15-16	8 3-16	.....
Good Ordinary	9⅞	9⅛	.....
Strict Good Ordinary	10 5-16	10 9-16	.....
Low Middling	10 13-16	11 1-16	.....
Strict Low Middling	11 1-16	11 5-16	.....
Middling	11¼	11⅜	.....
Good Middling	11¾	12	.....
Strict Good Middling	12	12¼	.....
Middling Fair	12 7-16	12 11-16	.....
Fair	13 1-16	13 5-16	.....

STAINED.

Good Ordinary	8⅜	Low Middling	9 15-16
Strict Good Ord	9	Middling	10¾

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

POULTRY--Chickens, spring, per lb, 13@16c LIVE Fowls, near-by, per lb, 13@13½c; fowls Western, per lb, 13@—@——c; roosters, per lb, 7c; turkeys, per lb 9@10c; ducks, western, per pair, 50@0.70c geese, western, per pair, $1 15@$1 40.

POULTRY.—DRESSED—Turkeys, dry picked, good to choice, per lb, 10@12c; do do, common to fair, 8@9c, do, iced, dry picked, choice, 8@—c. Fowls, western, do, choice, 11½@12c; do, nearby, do do 12@13c; Squabs, white, per doz, $2 50@$——; do, dark, do, $1 50@$1 75. Chickens, Philadelphia, dry picked, 20@22c, do Jersey, do, choice, 18@22c do nearby, do, good 12@16c; do Western, do do, 10@16c; do do, iced, good to choice 15@18c. Ducks, spring, choice, per lb, 12@16c; do do, good, 10@12; do Western, good, 10@12c. Geese, Western, good, 8@10c.

GAME.—Golden Plover, per doz, $1 75; Grass do, do $1 00@$1 25; English Snipe, do, do, $2 00.

HOPS.—State, new, best, 21@22c; do, prime, 18@20c; do, low grades, 13@16c; do do, 1887, 8@11 do do do California, common to prime, 14@19c; choice, 20@21c.

HAY AND STRAW.—Choice Timothy, 90@$——; do good do, 75@80c; do medium, 65@70c; shipping, 60@65c; do, Clover, mixed, 50@55c. Straw.—No. 1, rye, 65@70c; short do 45@50; oat, 40@—c.

BEANS.—Marrows, new, $2 40@$2 45; new mediums choice, $2 45@——; pea, $2 40@$2 45; red kidney, $3 50; white kidneys, choice, 3.00@——; foreign, mediums, 135 @1 55; California Lima, $3 60@$——; green peas, $1 45@$1 50.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 8@——c, and farmers' grades at 5@7½c. Pecans, 5@7c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—New, poor to good, per bbl, $0 75@$1 00; Norfolk, New, $1 25@$1 75; Long Island, $1 50@$1 75. Cabbage—New, per 100, $2 00@$2 50. Cucumbers, per 100, 30@40c. Egg Plant, per bbl, $3 25@$8 00. Tomatoes, per crate, 50c@$2 75. Corn, per 100 45c@$1 00. Onions—Potato, per bbl, $1 00@$1.25, East Shore; do, $1.00@$1 25; Egyptian, per bag; $2 25@$2 50; Jersey White, $1 75@$2 25.

FRUITS.—FRESH.—Peaches, per crate, $0 50@$2 00 do, per carrier, $1 50@$3 00 Cherries, per lb, 4@8c; Huckleberries, per qt, 5@9 Gooseberries, per qt, 4@5c Plums, per qt, 8@10c. Apples—Southern, per bbl, $2 75@$2 50; New Jersey, do, $0 75@$2 50 Raspberries, per pt, 2@4c. Watermelons, per 100, $10 00@$18 00. Currants, per lb, 2@5c. Blackberries, per qt, 2@5. Pears; per bbl., $1 75@$3 50; do, per crate, $0 75@$1 00.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5¼@6c; do new, common to prime, 4@5½c; sliced, new, 3@3¾c; quarters, 3@4c; chopped, 1½@2c; cores and skins, 1@—c. Cherries, new, 9@13c. Raspberries, new, 17@19c. Blackberries, 3¾@4c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 10@13c; do do, unpeeled, 5@6c; North Carolina sun-dried, peeled, 6½@8c. plums, 5@5½c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 13 25@13 50; short clear, $14 00@16 00. Extra Prime mess, $12 50@$— prime do, $12@$12 25 and family mess, $12 75@13 25. BEEF—India Mess, in tierces, $12.50@14; Extra Mess, in barrels, $7 00@7 50 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $7 50@8 00; Family at $11—@$14. HAMS—$13 50@$14 00, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 6½@—c; Pickled Hams, 11¾c; pickled Shoulders, 6½@6¾c; Smoked shoulders 6½c; do Hams, 12¼@12½c. Dressed Hogs.—City, heavy to light 6@6½c. Pigs, 6¾c. LARD.—City steam, $6 35; June, $——; July, $6 94, August, $7 03; September, $7 11; October, $7 17; South America, 7.6c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes lower; Early Rose, 27@30c per bush.; Burbanks and White Stars, 28@32c; Hebron, choice, 35@40; New Potatoes, Florida, per bbl., $1 75@$2 50. Provisions were steady. BEEF.—City family, per bbl, $9 00@$9 50; do, packets, $8@8 50; smoked beef, 10@10½c; beef hams, $14 PORK.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@13c; do, S. P., cured in tierces, 9½@11c; do do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6½@7.

CHICAGO.—MESS PORK.—$11 85@11 90 LARD.—$6 62@— per 100 lbs; Short Rib sides (loose), $5 95; dry salted shoulders, boxed, $5 37; short clear sides, boxed, $6 25@$6 37.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 16½@17. Elgin, best, 18@—; Western, best 16@16½; do prime, 15½c; do good, 13½@14; do poor, 12@13. State, Dairy, half-firkins, tubs, best, 17@——c; do do prime, 15@16; do do fine, 13½@14½; Welsh tubs, fine, 15@—c; do do, good, 13½@14; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 14@——; do fine, 12@13; Western dairy, fine, 13@—; do fair, 11@12c; do poor, 9@10c; do factory, fresh, best, 12½@13, do prime, 11½@12; do good, 10@11; do poor, 8@9c.

CHEESE.—State factory, fancy, 8¼c; do do fine, —@——c; do do, prime, 7½@8c; do do, fair to good, 6¾@7c; Ohio, flat, prime, 6¾@7½c; do good, —@—c; do, good, —@—; Skims, light, 5½@6½c; do medium, 2@3; do full, 1@2c.

EGGS.—Near-by, fresh, 15@15½c; Canadian, 14¾c Southern, 14@14½c; Western, best, 14@14½c.

PHILADELPHIA.—BUTTER firm. Pennsylvania creamery extra, at 16@17c; Pennsylvania Prints, extra, 20c; B. C. and N. Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were dull; Pennsylvania firsts 15@16c; Western firsts, 14@15c; Cheese dull—steady; demand fair; New York full cream, at 9@9¼c; Ohio flats choice, 8¼c; do, fair to prime, 7½@8c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Elgin creamery, 15½@16½c; choice Western, 15@15½c. choice dairy, 12@13½c; common to fair, 8@10c. Eggs firm at 12@12½c.

GRAIN MARKETS.

WHEAT.—Sales—Ungraded Winter Red at 88@90½c; No. 2 Red, 90¼@90¾c; do f. o. b, 89¾@90c; do f. o. b., in cars, 89c; do in store, quoted 88½c; No. 2 July, 87½@88¼c, do August, 84¾@85¾c; do September, 84½@85¼c; do October, 86¼@86¾c; do November, 86⅞@87⅞c; do December, 87½@88¼c. RYE.—Unchanged and quiet. Western, quoted 50@51c; State, 51½@53c. BARLEY—Further sales of 20,000 bushels California at a shade under 70c. CORN.—Sales—Ungraded Mixed, at 42@44c; No. 2 Mixed, 42¾@43c, elevator, 42½@43⅞ afloat; 43½c to arrive; 43@43¼c c. f. and l.; No, 2 White quoted 49c; No. 2 July, 43c; do August, 43⅛@43¼c; do September, 53½@43⅝c; do October, 44@44 3-16c. OATS.—Sales—No. 3, 26c; do White, 32c; No. , 27¼@27½c; do White, 33c; No. 1 White, 37c; Mixed Western, 25@29c; White do, 33@39c; No. 2 July, 27⅛c; do August, 27½@27¾c; do September, 27½@27¾c; do October, 27¾@28c; do May, 30⅝c.

LIVE STOCK MARKETS.

New-York, Saturday July 20, 1889.

BEEVES.—A carload of very ordinary Colorados sold at $3 30, Texans at $3 50, Inferior to Prime Natives at $3 75@$4 55, including "Stillers" at $4 20@$4 50. A few Bulls and Stags were bought at $2 55@$3 75.

MILCH COWS.—Receipts, 133 head. Demand moderate at just about last week's quotations, or at $30@$45 per head for ordinary to good.

CALVES.—Buttermilk and fed calves sold at 2⅜@3½c. per lb; mixed lots at 3½@4¼c. and ordinary to choice veals at 4@6c. (24 head at 7¼c). Calves, 177 lb average, at $2 50 per 100 lb; do, 201 lb, at $3 20; do, 220 lb, at $3 25; do, 180 lb, at $3 50; Mixed do, 152 lb at $4,

SHEEP AND LAMBS.—Common to prime sheep sold at $4@5 50 per 100 lb, and Bucks and "Culls" at $3 50. Poorest to best lambs ranged from $5 50 to $7. Ohio Sheep, 82 lb average, at $4 80 per 100 lb; do, (Bucks and Culls), 74½ lb, at $3 50; State Sheep, 92 lb, at $4; do, 121 lb, at $4 25; West Virginia Lambs, 59½ lb, at $5 65; State Lambs, 68 lb, at $6.12½; Kentucky Lambs, 66½ lb, at $6 25; Kentucky Sheep, 100 lb, at $4 25; Indiana Sheep, 109 lb, at $5 30; Texas do, 73½ lb, at $4.75.

HOGS.—Nominally steady at $1 75@5 15 per 100 lb.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING JULY 20, 1889.

J. O. B.—W. E.—J. H. H.—P. H J.—J. H. G.—C. W W. F. E. Y.—N. D.—C. F. O.—I. J. B.—P. B. P.—W. B. P.—J. M. C.—G. C. B.—G. H. F.—A C.—C. E. L.—J. A. S.—H. C. P.—U. S. W.—P. P. P.—N. P.—P. P. L.—B. B.—M. C.—P. M. A.—E. W.—

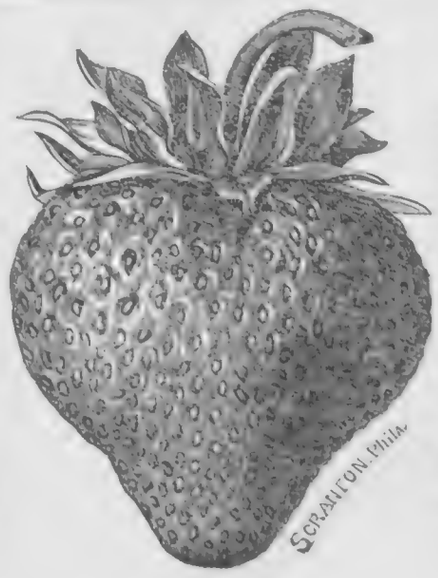
Miscellaneous Advertising.

SEND 10 Cts. in P. O stamps to **E. & O. WARD,** Produce Commission Merchants, for circular about **Shipping Produce** Also recipe for **Preserving Eggs.** Established 1845. **No. 279 Washington St., New York City.**

BUDS of **WONDERFUL PEACH** and other **Valuable Fruits.** Catalogue free. **WM. PARRY.** Parry, New Jersey.

NEW YORK COLLEGE OF VETERINARY SURGEONS and SCHOOL OF COMPARATIVE MEDICINE (Chartered 1857).—Session of 1889 and 1890 begins **Tuesday, Oct. 1st, 1889.** For information and Circulars, apply to **H. D. GILL,** V. S., 332 E. 27th St., New York.

WINTER WHEAT **A NEW VARIETY.** Has a record for several seasons in regular field culture of **50 bushels to the acre.** Write for descriptive circular and price to **E. E. CARR,** **Erie, Erie, Co., Pa.** **GIVE IT A TRIAL.**



POT-GROWN STRAWBERRY PLANTS

Yield a crop of largest, finest berries the first season or ten months. Sure to live even in dry weather. BIDWELL, BUBACH, DOWNING, CUMBERLAND, JERSEY QUEEN, JESSIE, MAY KING, PARRY, SHARPLESS. 50 cents a dozen; $2 50 per 100.

Gandy, latest, largest, grand; **Monmouth,** the earliest, very large, splendid **Louise,** highest flavor, beautiful, large, midseason, 75 cents per doz; $3.50 per 100. DAISY, EUREKA, JUCUNDA IMPROVED, MIAMI, the four most promising new sorts; $1.00 per doz.; $5.00 per 100. An illustrated pamphlet giving full descriptions and complete instructions for cultivation mailed free.

Ordinary layer Plants of all worthy varieties, new and old, also priced in pamphlet.

J. T. LOVETT CO., Little Silver, N. J.

Literary.

MAGAZINE REVIEWS.

THE recent death of Father Damien in the Sandwich Islands, concluded a life of heroic self-denial and devotion, which has seldom, if ever, been excelled or equaled. In the century from 1778 to 1878 the population of the islands dwindled from 100,000 to about 44,000, and much of the decrease was due to that dreadful disease, leprosy. In 1865, the Hawaiian legislature ordered the removal of all lepers to the island of Molokai, where they were left to their own resources. Without hope, with little food or shelter, these miserable outcasts abandoned themselves to the wildest excesses. At this point, Father Damien, a Catholic priest, then a young man of 33, requested permisssion to go and live among the lepers. Among these wretched beings, he has since lived and labored, acting, as he himself wrote, as "physician of the soul and body, magistrate, school-teacher, carpenter, joiner, painter, gardener, housekeeper, cook, and often undertaker and grave digger." Thus he labored until released by death, dying himself of this loathsome disease. This, in brief, is the story told in July Lend a Hand, a Record of Progress and Journal of Good Citizenship, by Mrs. Bernard Whitman. It also contains a report from the Massachusetts Society for promoting Good Citizenship; extracts from "The Spirit of Laws;" a sketch of John Frederic Oberlin; an article on "The Rights of the Child;" "The Midgton Library, A True Story," and much other matter that is calculated to help in making the world better. The editor is Edward Everett Hale, D. D., and the publishers J. Stilman Smith & Company, Boston.

BOOK REVIEWS.

THE GARDEN'S STORY, or Pleasures and Trials of an Amateur Gardener, by George H Ellwanger, is a recent addition to floricultural lore. It relates entirely to the flower garden, and is written by a professional who has evidently had access to a well-stocked library during its preparation. This may account for his somewhat ornate style, which is hardly in keeping with the subject. Still there are many good things in it, for which we may possibly forgive the author his rather free use of foreign words and phrases, which sometimes cannot fail to render his meaning obscure to the ordinary reader. The book starts with the earliest hardy flowers and plants of spring, and follows the ever-changing procession till it closes with the blue monk's-hood, the last to be stricken down by the frosts of autumn. Mr. Ellwanger gives as a garden maxim a trite, old truism that is applicable in any garden, or on any farm—"whatever is worth doing at all is worth doing well." There are none too many books of this character, and any additions of merit will receive a welcome. D. Appleton & Co., New York.

A PHILOSOPHER IN LOVE AND IN UNIFORM, is the title of a small, paper-covered novel, by the authors of "Napoleon Smith." It is a reminiscence of the Civil War and furnishes some interesting summer reading, though some parts of it are rather exciting for hot weather. The Judge Publishing C., New York.

For the Young.

NOTES BY THE WAY.

OMAHA, Douglass County, Neb.

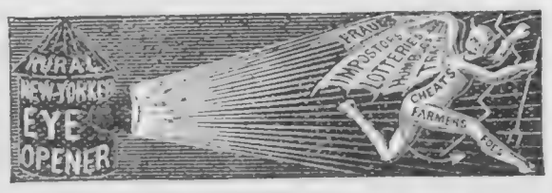
Dear Uncle Mark:

FOR many years I have held the position of mailing clerk on the R. N.-Y. It was my duty to see that each one of its thousands of subscribers received his paper regularly each week from Maine to California. This was no small job, and required close attention to business. To have Samuel Brown of Oklahoma receive his paper each Friday night, was my duty, and how many thousands of Samuel Browns you have got! In Nebraska (a very fine farming country) I always observed you were well represented, and one day I made up my mind to take the advice of that venerable sage "Greeley" and "go West." Nebraska being the State I desired to locate in, I left New York on one of the principal railroads for Chicago. All night long we were in New York State asleep, all but the engineer and trainmen. They, like detectives, never sleep. The morning cast its gray light on us near Jamestown in Chautauqua County. This is a fine farming section as well as I could judge from my car window. The fences seemed to me very funny. Look at those up-turned stumps all in a row. The conductor informed me that nearly all the farmers in that county fenced in their property in this manner. My only reply was "Oh"! So much for being a city lad. I was wondering what I would see next that would surprise me. Were I to see a dairymaid pumping water into a milk can and mixing in plenty of chalk, I would have given the performance no thought. I would have turned over and gone to sleep again. We next flew through a narrow strip of northern Pennsylvania, before passing into Ohio. Our road took us through the northern part of this grand State, great in many industries, but especially in agriculture. We passed through several large manufacturing towns and cities, and I was much interested in reading the signs on big establishments and factories whose advertisements I have seen so many times in the RURAL. I cannot give a good description of these towns, for one can hardly judge correctly of a place by its looks around a railroad station. I was much disappointed with what I saw of the State of Indiana, but perhaps it grows better away from the railroad line. It was very late when our train arrived at Chicago, the Windy City, which deserves its nickname. One can wear a clean pair of cuffs and a collar in Chicago only one day and then they are ready for "Wah Sing", the laundryman; while in New York with ordinary care the limit is three days. Many parts of Chicago are very smoky because there are so many mills and factories, but I liked the town. A resident asked me how I liked it. "My Dear Sir," said I, "I think it far ahead of New York." "Why, I thought you were from Gotham," said he. "So I am," I replied; "but I am honest when I say that Chicago is far ahead of New York." Do you ask why, dear Uncle? Ask a man in your town: "How can I get to Wall Street?" The answer will be: "Walk five blocks"—a very definite answer truly. In Chicago, on the other hand, they tell you very politely where and how to go. The public buildings, stores, hotels, parks, drives, private homes far exceed those of New York. State, Dearborn, and Clark Streets are the Broadways of the city. I was loath to leave the town, but my goal was farther west. I landed at last in Omaha. I was much pleased with the State of Iowa through a very beautiful part of which I traveled. I am not surprised that the RURAL is so well represented there. I was struck with the fact that fertilizer men would make a poor living doing business here in the West. I was reminded of the cartoon in one of the issues of the RURAL a couple of years ago, representing the ghost of the exhausted fertility of the old Eastern States, which threatened to extend, in the near future, its baleful influence to these lusty young States of the West also.

All crops hereabouts are in a flourishing condition, especially corn. I never saw such corn fields as in Iowa, and Nebraska; the Eastern farmers are nowhere in this respect. Omaha is a very beautiful city, full of life and push and it is growing rapidly. It has excellent newspapers, and many fine public buildings.

Your nephew,

GEORGE T. MOREY.



Many innocent farmers have been swindled in various parts of the country of late by gangs of slick sharpers who practice the same game with several variations in the details. From an account of the tricks of one set, however, those of the others can be easily learned. Take, for example, the case of a number of farmers in Bucks and Huntingdon Counties, Pa., who have lately been swindled pretty heavily by a gang of gentlemanly-appearing rogues. Having reconnoitered the ground beforehand, one of the gang drives up to a farmer's house, and requests permission to store in the barn a number of pitch-forks, which he says are of superior quality. Permission having been granted, the farmer is told that the forks comprise the last of a large consignment, and will be sold at very low figures to close the transaction. A tempting offer is then made to the farmer of 50 per cent. commission on all sales made by him while the goods are temporarily in his charge, and a long agreement, most of which is in fine print, is next produced. The agent alleges that it is merely a stipulation with regard to the commission, which is for the safety of the farmer and the satisfaction of his own principals. He asks the farmer's signature as a mere matter of form, and often the farmer gives it without taking the trouble to read the paper carefully. That bit of careless neglect is sure to cost him from $100 to $500, however, for he soon learns that he has signed a contract to buy a lot of worthless forks at exorbitant figures. Some substitute plows, churns, or other farm devices for forks; and with these exceptions the game is played in substantially the same way in all cases, and it really wonderful how often it is successful.

CONCERNS CENSURED.—Under this head the Eye-opener, will, from time to time, give the names of concerns he has seen denounced in other papers, but which have not been investigated from the RURAL office. The New England Shoe Company is advertising pretty liberally in country papers; but the Chicago Farm, Field and Fireside does not feel justified in recommending it.....The Grarman Detective Agency, Cincinnati, Ohio, is denounced by several papers as a fraud. There never were so many bogus detective agencies as are now flourishing..... The Como Paper Company advertises great bargains, giving its address at 325 Dearborn Street, Chicago, Ill., but the latest Chicago City Directory mentions no such company in the city. It is doubtless one of those frauds whose "managers" have their offices in their hats, and hire letter boxes in cigar or liquor stores to enable them to pocket the remittances of their dupes.....The bogus publication Heart and Hand, is catching it hard on all sides. Subscribers complain that they have never got even a single number of the paper. Doubtless, however, it will do an enormous amount of self-puffing during the next subscription season.....The Empire Co-operative Association is denounced as a humbug.....

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

LAW WITH REGARD TO THE FLOW OF SURFACE WATER.

J. J. T., Buffalo, N. Y.—The farm adjoining mine is in some places higher than mine, and during a rainy season the water runs over and leaches out my land, doing considerable damage. Can I compel the owner of the higher land to make a ditch to conduct the water into his own creek, a job which will not cost much? He insists on letting the water take its natural course?

ANS.—When two fields are adjacent and one is lower than the other, the owner of the upper field has a legal right to have the water that falls upon his land flow off upon the land below. Hence it is held that the owner of the lower field has no right to raise an embankment to stop the flow, nor has the owner of the upper field any legal right to make any excavations or ditches by which the flow of water is diverted from its natural course and a new channel made on the lower ground. Neither can he collect into one channel waters usually flowing off into his neighbor's field by several channels and thus increase the rush upon the lower field. This is the law in Pennsylvania, Ohio, Illinois, Missouri, Iowa, California, North Carolina and Louisiana. The Courts of New York, New Jersey, Connecticut, Massachusetts, Rhode Island, Vermont, New Hampshire, Maine, Indiana, Wisconsin and Kansas, however, have repudiated this doctrine. They hold that the lower proprietor may, for the improvement of his farm, lawfully fill up low places, on his land, although by so doing he obstructs or prevents the surface water from flowing thereon from the premises above, and thereby injures the upper proprietor.

LAW AS TO CLEANING A DRAINAGE DITCH.

"An Old Subscriber," Trumbull County, Ohio.—A drainage ditch runs through my land from the farm above me and through the land of two farmers below me before it empties into a good-sized creek. The man just below me allows weeds and trash to choke up his part of the ditch so that, after heavy or even moderate rains, the water rests for some time on my land doing it considerable injury at some seasons, because it cannot flow properly through the choked ditch on my neighbor's farm. Have I any redress?

ANS.—In Ohio every person through whose lands any ditch runs, is required to keep the same open, free and clear of all obstructions on his premises, and in case of failure, he shall be liable to pay all reasonable expenses of removing the same. On complaint of any person aggrieved, the county auditor shall appoint a competent person to examine the same, who, if he find the complaint to be true, shall notify the owner of the land to remove the same within a reasonable time, not to exceed 20 days. If the owner fail to do so, the examiner shall cause the work to be done, and certify the expense thereof to the auditor, who shall place the same, with all fees and other expenses in the case, on the duplicate as an assessment on the land.

LIFE INSURANCE POLICY.

L. T. N., Elmira, N. Y.—I'm about to take out $20,000 life insurance which, in case of death, I desire to be paid to my wife, child and another, the child's part to be held in trust till he reaches his majority. To whom should the policy be made out—to my wife or to my estate so that I could dispose of it by will and make my executors guardians of the child?

ANS.—The better way would be to have the policy made payable to the executors, administrators or assigns of the insured. It would be well also to have it covered by a deed of trust, containing conditions which would apply to every possible contingency, including revocation. This would leave the policy under the control of the assured during his life and would insure its being applied according to his wishes after his death.

A WIFE'S RIGHTS OF INHERITANCE.

M. T., Lodi, N. Y.—A widower with grown children, and possessed of personal property and a valuable farm, married a second wife, but has no children by her. Should he die before she does, to what part of his estate is she legally entitled?

ANS.—In New York if he dies without having made a will, the widow will inherit one-third of the personal property and will have her dower right in the real estate, which is a life-interest in one-third of it. But the husband can make a will leaving all his personal property to his children and cutting his wife off from all but the dower in his real estate; of that he cannot deprive her. The property rights of married women, and their rights of inheritance from their dead husbands vary considerably in the different States.

New Jersey Inquirer.—A man died here lately leaving a wife but no children or no property. The father of the dead husband is living and has real estate; should he die intestate, will his dead son's widow have a legal right to any part of the estate?

ANS.—No. The childless widow inherits from her husband only, and as he is dead, he can't inherit from his father.

B. S. L., Davenport, Iowa.—If a single man makes a will and marries afterwards, does the marriage entitle the wife to her third?

ANS.—A will made before marriage is void and valueless to all parties affected by such marriage. If a person has made a will before marriage, a second will should be made after the ceremony, as the other is of no value in any State in the Union.

Miscellaneous Advertising.

DO YOU WANT TO BUY
A CAR-LOAD OF
PHOSPHATE
this Fall? If we have no agent near you, we will be glad to quote you low prices. Send for circulars.
FREDERICK LUDLAM,
140 Maiden Lane, New York.

WARREN, HARPER & BRO.,
Fruit and Produce
COMMISSION MERCHANTS,
110 Dock Street,
PHILADELPHIA, PA.
Splendid location. Good Salesmen. Prompt Returns. Reference: Sixth National Bank.

NEW YORK COLLEGE OF VETERINARY SURGEONS and SCHOOL OF COMPARATIVE MEDICINE (Chartered 1857).—Session of 1889 and 1890 begins **Tuesday, Oct. 1st, 1889.**
For information and circulars, apply to
H. D. GILL, V. S., 332 E. 27th St., New York.

WANTED.
An active, energetic man with capital and experience, to build up a farm to the standard of "Windsor Farm," Denver, or "Deerfoot Farm," Conn. Address giving references and experience, **C. A. Roberts,** Care of The Roberts Hardware Co., Denver, Colorado.

IRRIGATED LANDS In Rio Pecos Valley, in Southeastern New Mexico. Choice limestone soil; abundance of pure water; **a delightful climate** all the year; almost continuous sunshine; altitude 3,500 feet; **healthiest locality** in the U. S., no consumption, no malaria. **20 acres** will yield a competency. Write for particulars, naming this paper, to **Pecos Irrigation & Investment Co., 84 Monroe St., Chicago, Ill.**

CATALOGUES, ETC., RECEIVED.

NEW HAMPSHIRE EXPERIMENT STATION.—First Annual report. The law creating the experiment stations provides that they shall report yearly to the governing authorities. The New Hampshire report is the first we have seen. Others will doubtless soon follow. This report contains a general review of the work of the year, and reprints the various bulletins that were issued from time to time. The station seems determined to devote its chief energies to dairy and stock-feeding problems. Cream raising, ensilage and stock feeding are some of the subjects that receive special prominence. There are one or two things in this report that are important enough to demand a second thought. It has always been the rule with agricultural instructors to advise farmers to "reduce" bones by composting them with wood ashes, keeping the mass well moistened. The R. N.-Y. has been of the opinion that burning the bones would be the cheaper plan in the end. Some experiments at the New Hampshire Station put a new face on this matter. In all cases where ashes were used to reduce bones the soluble phosphoric acid was made insoluble; while the ashes cause the bones to crumble, the loss by reversion is too great to be offset by this improved mechanical condition. Director Whitcher says regarding this practice:

"Liebig conferred a lasting favor upon agriculture when he taught the use of sulphuric acid as a means of rendering soluble the phosphoric acid in bone; but whoever encourages the use of ashes as a means of fermenting and preparing bone manure, not only cancels the good work of Liebig, but in place of it introduces a practice which is the very reverse, namely, rendering insoluble that which was available or soluble before fermentation took place. There is also a loss of nitrogen in the process, which makes the damage still greater."

In the dairy department, Mr. Wood gives the results of some experiments with churning sweet and sour cream. He estimates that, on an average, 20 per cent. of the fat in milk is lost either in the skimmed milk or butter-milk. He says that when we churn at a temperature of 50 to 55 degrees there is no practical difference in the thoroughness with which sweet and sour cream may be churned. If we are to churn at a temperature above 60 or 62 degrees there is a profit in allowing the cream to become slightly acid. While none of Mr. Wood's experiments are conclusive, it seems to the R. N.-Y. as though he inclines towards advocating the churning of sweet cream at a lower temperature than that usually employed. He is careful, however, to urge those who churn at a low temperature to avoid overloading the churn. A churn from one-fourth to two-fifths full has given him the most satisfaction. Again, there is greater danger in having the cream too thin than there is in having it too rich and thick. "A cream yielding one pound of butter from 2½ pounds of cream is a good standard."

THE ENGLISH SPARROW.—This is the title of a large book of 408 pages with numerous tables and illustrations, and a large map that is sent out by Dr. Merriam, of the Department of Agriculture. If this ponderous volume were an argument against trusts or anarchy, or some other social wrong, there might be some dignity about it, but to hurl it at the little English sparrow seems like taking a Gatling gun to shoot a house-fly. The volume proves most conclusively that the English sparrow is a great nuisance. As nine out of every ten persons who know the bird have long been convinced of this fact, we do not see the exact need of this ponderous explanation. Agriculture has better uses for money than this. Imagine the good that would result to American agriculture if the pains-taking search and laborious investigation that are evidenced in this work could be spent upon some more practical subject.

COLIC OF HORSES.—In Bulletin No. 2, Volume II. of the Ohio Experiment Station, (Columbus, Ohio), Dr. Detmers has a lengthy article on the above subject. It is a learned article, and, so far as we can judge from a hasty reading, tells about all one can tell about this disease. But it is too long. Does Dr. Detmers realize how long it will take the average farmer to read this volume understandingly? "If inflammatory processes, especially in the peritoneum, are developing, a good and promptly acting counter-irritant, applied to the flanks, will have a tendency to reduce the inflammatory process in the interior of the abdominal cavity." There we have a semple sentence. The man who gets up the veterinary notes in the "Spavin Cure" almanac can put that into six words and his "cure" will attract 10 readers where one can be induced to read this able discussion of the causes and treatment of a dangerous and common disease. This bulletin presents an excellent example of the class of work that will do the station little good. "Words, words, words!" as Hamlet says.

Gentlemen, you must remember that you are not talking to a class in the lecture room, but to a class of business men who want the facts, presented in a simple manner. It would take too long to prepare a synopsis of this bulletin. The R. N.-Y. understands that the Department of Agriculture, at Washington, is soon to begin the publication of pamphlets on the various diseases of domestic animals. We hope the Department will not take this one as a model.

FOREST TREE PLANTER'S MANUAL.—This pamphlet of 55 pages, is published by the Minnesota State Forestry Association, and sent by C. L. Smith, Minneapolis, Minn. The object of the author was to prepare a handy manual for the use of all who were in any way interested in forest tree planting. It is an excellant book.

OUT-DOOR SILOS.—A year ago the R. N.-Y. gave Prof C. S. Plumb's experience with silage stacks. In the report of the Farm Superintendent of the Geneva Experiment Station, we find an account of further experiments with an "out-door" silo. This "silo" is simply a stack of green stalks or hay very tightly pressed by means of boards and wire ropes which are drawn into place by wheels and levers working much like an ordinary hay press. The first experiment, 1887, was not, in all respects a success. Early in September, 1888, another experiment was begun. Foundation for the stack was made by spiking together three sets of two-inch planks which were 14 feet long and 10 inches wide. These were placed edgewise on the ground about 3½ feet apart, and on them were placed planks forming a low table 10 feet square. Joists four by four inches square and 14 feet high were raised at the corners perpendicular to the bottom, and stayed for guides in building the stack. September 14, 16,681 pounds of stalks were put on the foundation. These made a heap 9½ feet high. Four loads were placed within the joists and when the filling had reached the top edges they were raised their width. The green corn stalks were drawn fresh from the field, weighed, and piled on the stack with the buts all brought out to the board guides. In laying on the stalks great care was taken to keep the top level. This was accomplished by putting in thin layers and placing the buts of the second layer over the bent-in tops of the first, with the next two layers put on in the same way at right angles to the first. These four layers would fill about the width of the boards. On the 15th, 6,518 pounds of sorghum were put on. The sorghum was three feet deep, but raised the pile to only 10¾ feet. Then 9,406 pounds of corn were put on the last thing at night (Saturday), which raised the stack nearly to the top of the joists. The corn was 9 to 12 feet tall and most of it bore pretty well developed ears. This fact probably made the stack more solid in the middle, hence a little crowning? and this combined with the slippery character of the sorghum plants, caused the top to slide off before the weighting could be done the following Monday morning. This could not be properly replaced without removing the whole stack, so a new foundation was laid exactly like the first and the corn and sorghum which slid from No. 1. were put on it in the same way as given for building No. 1. Enough more corn was put on No. 2 from the field to make the whole somewhat more than 10 feet high.

Eight or 10 inches of straw were strewn over the top and partly covered with plank laid at right-angles to the improvised timbers in the bottom. Three other timbers, each made of plank in the same way as those at the bottom, were then laid across the top and so braced that they would not tip down when applying pressure, and pressure was applied by means of chains and the levers. A roof with about 30 degrees' pitch was then attached to the timber by which the pressure was applied so its weight was added to the pressure obtained from the levers. Silo No. 1 was simply covered with about two feet of straw and a board roof was laid on without further pressure. At the time silo No. 2, was being built up from the material which had begun to heat up in No. 1, the temperature was taken in many places, showing that the highest degree reached and indicated by the thermometer at the time was 134 degrees F. Exposure to the air and consequent cooling after heating up so much were considered against the good keeping of the silage.

The stacks were opened January 16, 1889. The condition of the silage, taken vertically from the bottom, was as follows. Twenty inches of bottom fresh green; 15 inches sorghum brown, yet feedable; 20 inches corn above sorghum brown, yet maybe feedable; 13 inches corn on top, somewhat brown yet feedable. It was thought that the second handling of the corn injured the quality of the silage. There seem to be two serious objections to the out-door silo: the large proportion of loss and the inclemency of our climate when the silage is to be fed. On the whole, it looks as though the American silo had better be built in the barn.

Indust'l Societies.

THE ROYAL AGRICULTURAL SHOW AT WINDSOR PARK.

(RURAL SPECIAL REPORT.)

The finest show in the Society's history; a fine display of light and heavy horses; a cattle exhibit to be remembered; excellent shows of sheep and swine.

THE exhibition commemorating the semi-centennial of the foundation of this the greatest of English societies, is said to be the best ever held. Not many agricultural societies can boast a queen for a president; not many can welcome exhibitors and visitors to a royal park, in the shadow of a royal castle. All these favoring circumstances, conspired with the efforts of the best breeders among the nobility and gentry, and the munificent prizes offered, to make it truly a royal show in more senses than one. The park attached to Windsor Castle, one of Royalty's favorite residences, 22 miles west of London, comprises about 1,800 acres; but the space inclosed for the show was about 150, and this was literally covered, the whole exhibition, with the single exception of the Queen's pavilion, being under canvas. The buildings were all 20 feet wide, those in which cattle and horses were exhibited being divided in the middle, 10 feet being devoted to stalls, and 10 to spectators while those for sheep and swine have a double row of pens through the middle. The judging is all done on the first day, in open rings where the judges' work may be viewed by all the spectators. Then during the remainder of the show the visitors may study the prize-winners, and thus be educated in a practical way. I have been particularly interested in observing the different breeds of horses and cattle, and in comparing them with what may be seen at exhibitions in our own country.

The arrangement of the horses is admirable, the light horses being placed in a class by themselves, and the heavy breeds the same, so that one may view the individuals of any particular breed together. The light horses were placed first, and of these the Hunters make up nearly half of all the entries, there being 258 out of 571 in this class. Mr. Burdett-Coutts, whose name may be familiar to some Americans, was among the exhibitors in this and some other classes. The Cleveland Bays and Coach-horses were classed together, and although the number of entries was not large, some very fine animals were shown. These valuable breeds should receive more attention on both sides of the water. The Hackney class was well filled with fine animals, both for harness and saddle. The entries in the pony class were very light. The different classes for Shire horses were well filled, and there were many fine animals of this popular breed. Prof. G. E. Morrow, of the Illinois University, witnessed the judging in this department and expressed himself as much pleased with the champions. The show of Clydesdales was excellent, and in some classes the number of entries was very large. The class of two-year-old colts was especially fine, and the judges had much difficulty in deciding as to which of two especially fine animals should receive the first prize, First Choice finally receiving the award. There were a large number of Suffolks, comprising some very fine specimens. A very striking feature is their great uniformity as to size, color and character, as compared with some of the other breeds. Some of the older exhibitors claim that this breed is not what it was 30 years ago. The entries for asses were numerous, and the fine animals exhibited were a surprise to many of the Englishmen present.

The display of cattle was a good one in all respects, and the number of entries was large in nearly every class. There were 216 entries of Short-horns which is the favorite breed with the beef-eating Englishmen. Indeed it seems to be difficult for an Englishman to speak favorably of any animal which does not show good beef points, no matter to what breed it belongs. The Herefords are said to have made their greatest show since "Farmer George's" day. They are very attractive in the show-ring on account of their uniform markings, and regular outlines. The hardy Devons, although not so numerous as some of the other breeds, were in sufficient numbers to attract considerable attention. Some of their admirers say that they cannot be surpassed by any of the bovine race. A breed which seems to be growing in favor is the Sussex. It is a beef-breed, however. In contra-distinction to the Short-horns, there were a few Long-horns exhibited, but the breed seems to have suffered a decline, very few breeding them at present. The exhibit of polled cattle was quite large and represented the Red Polled Norfolk and Suffolk, and the black Galloway and Aberdeen-Angus breeds. The Ayrshires, Jerseys and Guernseys were present in quite large numbers for an English show, but John Bull could see little to praise in these breeds except their large udders, and these are a secondary consideration with a nation of beef-eaters. During the present long-continued period of agricultural distress, however, attention to butter, cheese and milk production has greatly increased year after year, and of late the dairy breeds have been pushing steadily to the front and may soon dispute for the most important positions with the beef breeds.

The show of sheep was good both in number and quality, the Shropshires leading all the other breeds. They were closely followed, however, by South Downs, Hampshire Downs, Oxford Downs, Cotswolds, and some others which made a smaller display.

In the goat department, a hornless he-goat with the American name of Buffalo Bill, was shown. There were very few Angoras.

In the swine department there were a large number of excellent Berkshires, Large Whites, and Tamworths, with a considerable number of specimens of the black breeds. As a "kicker" over the awards of the judges, the Englishman is fully equal to his American cousin, and he isn't slow to make known his causes of complaint.

A. C. Y.

Miscellaneous Advertising.

INFANTILE Skin & Scalp DISEASES cured by CUTICURA Remedies.

FOR CLEANSING, PURIFYING, AND BEAUTIFYING the skin of children and infants and curing torturing, disfiguring, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair, from infancy to old age, the CUTICURA REMEDIES are infallible.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease, from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c. RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., Boston, Mass.

Send for "How to Cure Skin Diseases."

Baby's Skin and Scalp preserved and beautified by CUTICURA SOAP.

KIDNEY PAINS, Backache and weakness cured by CUTICURA ANTI-PAIN PLASTER, an instantaneous pain-subduing plaster. 25c.

TO LADIES.—MRS. L. L. JACKSON'S popular **Dress Guide** and **Self Instruction Book**, completely revised, with **Sleeve Guide**, for cutting latest style sleeve, now ready. Simple, satisfactory, perfect. Send for circulars

Address **FAMILY DRESS GUIDE CO.**, Box 131, Indianapolis, Indiana.

CALF Weaners and Sucking Cow Muzzles. The best in the world. Send for Circular. **B. C. RICE, Farmington, Conn.**

The Famous Chester County Herd of

CHESTER WHITE SWINE.

The Best Herd in the United States, composed of the finest obtainable strains. Herd headed by Chester (No. 2623), N. C. W. R., Sows, Queen of Chester (No. 6580), Null's Pet (No. 6952), Nancy Second (No. 6954). Write for prices and particulars.

S. H. NULL, West Grove, Pa.

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34 PARK ROW, NEW YORK.

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Yearly orders occupying 14 or more lines agate space..... 25 "
Preferred positions.....25 per cent. extra.
Reading Notices, ending with "*Adv.*," per line, minion leaded..... 75 cents

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" " Six months..... 1.10
Great Britain, Ireland, Australia and Germany, per year, post-paid..... $3.04 (12s. 6d.)
France..... 3.04 (16½ fr.)
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Humorous.

The RURAL NEW-YORKER *is prepared to offer very liberal terms to good, responsible,* PERMANENT *agents. Correspondence solicited.*

CAR-FARE.

Have you ever watched the warfare
Of two women over carfare?
Each aflame with generous feeling,
Depth of heart and purse revealing;
Each inspired with gentle horror
Lest the other should pay for her?
But take note—the more insistent
Of the combatants persistent,
She whose hand most promptly snatches
At her pocket-book's stiff catches,
She who murmurs: "Don't be strange, dear,
It's all right, I've got the change dear!"
She—though I am sad to say it—
Always lets the other pay it!
—Madeline S. Bridges, in Puck.

"PASSENGERS are not allowed to stand on the 'L' car platforms; they are compelled to."—*Puck.*

THE "green postage stamp" may be sickly, but it can still carry an ounce of manuscript from Maine to California.—*Pittsburg Chronicle.*

"THE bustle has had a great deal of prominence lately. But, come to think of it, that's the nature of the bustle."—*Baltimore American.*

A GIVE AWAY—She: "All extremely bright men are awfully conceited, anyway." He: "Oh, I don't know; I'm not."—*Harvard Lampoon.*

JULIA: "Mamma, Mr. Dolly insulted me awhile ago. He called me a pig." Mamma (indignantly): "Tell me his exact words." Julia: "He didn't use the word pig; but he said I was in clover."—*Puck.*

"MR. B—— Did you say or did you not say what I said you said? Because C—— said you said you never did say what I said you said. Now, if you did say that you did not say what I said you said, then what did you say?"—*The Courier.*

"MR. PRESIDENT," said a caller, "I do not want an office." "I am very glad to see you," replied Benjamin with a grateful pressure in his hand-shake; "you are a curiosity." "No, Mr. President, not a curiosity. I am a Democrat."—*Puck.*

MRS. HARRIS (looking up from a letter): "I'm so glad that we sent Harry to Yale. I knew he would make his mark. He says that he is already considered one of the best scholars in the college." MR HARRIS: "Let me see that letter. That isn't 'scholars' it is 'scullers."—*Chicago Herald.*'

'WHAT a wonderful painter Rubens was, remarked Merritt at the art gallery. "Yes," assented Cora. "It is said of him that he could change a laughing face into a sad one by a single stroke." "Why," spoke up little Johnnie, in disgust, "my school teacher can do that."—*Burlington Free Press.*

LADY THYRA, reading catalogue: "Two dogs, after Landseer." Lady Myra: "But where is Landseer? I don't see him." Lady Thyra: "Why, surely, you don't suppose he would stay there with those two ferocious-looking brutes after him. I know I shouldn't if I were in his place."—*Burlington Free Press.*

IT was Bilkins's wedding day, and he was teasing his kid brother-in-law. "Well Johnnie," he said, solemnly, "I'm going to take your sister away off and have her all to myself, where you won't see her any more." "No! Really, are you?" said the kid, curiously. "Yes, I am. What do you think of it?" "Nothing. I guess I can stand it if you can."—*Michigan Farmer.*

AN old negro stood watching the electric cars as they glided along through the streets of Richmond without visible power. He evidently regarded them as "a rash intrusion." and thus soliloquized: "Dar now! what is the white folks gwine to do next? Dey done 'scard de nigger, and now gwine drap de poor mule."—*Youth's Companion.*

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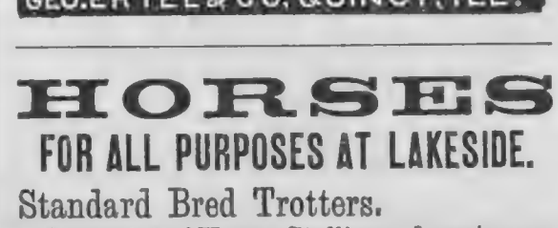

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Floricultural.

THE "SUNSET PLANT."

EARLY in the past winter a catalogue was sent to us by the Lewiston (Idaho) Seed Company, which gave considerable space to what the company deemed a new plant. The catalogue gave it the name of "Sunset Plant," and was at that time endeavoring to ascertain its botanical name if, indeed, it were known to botany. At the R. N.-Y.'s request a plant (or rather the roots) was sent to the Rural Grounds in January. We append a description as given by the Lewiston Seed Company:

"The floral plant which we have named 'Sunset' was first observed by us four years ago growing on the high sandy bluffs on the east side of Snake River. Specimens transplanted at that time to our grounds proved so interesting that we sent several of the plants to prominent botanists, floral writers and horticultural journals for identification. It was then we ascertained its rarity. Up to this time no one has named it, although handled by so many for the purpose. The larger out-door plants are two feet in hight and three feet in diameter, formed by shoots sent up in early spring bearing leaves closely resembling those of the Fish Geranium, and half hidden in the leaves appear long spikes of sunset-tinted flowers. Its hardiness is simply wonderful, thriving in the driest locations when every other kind of vegetation surrounding it withers, and enduring our greatest cold without the least protection."

Our own plant grew vigorously and began to bloom in early May. The flowers start from the axils of the leaves, as shown by Fig. 187 drawn from nature, and are borne on short petioles in clusters of two, three or four. The petals are heart-shaped, five in number and the flowers of a salmon color, are about an inch in diameter. The color of the buds is a pleasing shade of deep orange. The plant continued to bloom profusely until it was set out in the open border and it is now again in bud. The stems are about two feet long and need support. The leaves, as shown, are, in form, like those of the currant and of a light, glaucous color. The whole plant bears a general resemblance to Malva rotundifolia, the "Cheeses" of the children.

Now as to the name: we at first supposed it to be Malvastrum coccineum. We then found that the same plant is printed in Thorburn & Company's catalogue as Malva miniata. To settle the question, a flowering branch was sent to Prof. Vasey, Botanical Division of the United States Department of Agriculture, who identified it as Sphæralcea Munroana, formerly Malvastrum Munroanum.

The Lewiston Company writes us as follows: "We removed a plant to our grounds four years ago, which is now probably eight or 10 years old. The plant then was perhaps four feet across and three feet high. It is now seven feet in diameter by four feet high with about 100 stems or stalks, all of this season's growth. The leaf and bloom also show a proportional increase in size. We are pleased to learn that you have decided upon its identity. It has been sent to a great many for identification, but you are the first to locate it." The "Sunset" plant may not set the world on fire, still it may prove of considerable value for certain positions and uses.

THE "SUNSET PLANT." From Nature. Fig. 187

Pomological.

APPLE SCAB.

FUSICLADIUM DENDRITICUM.

B. T. GALLOWAY.

There is perhaps no disease of fruits more familiar than that which forms the subject of this paper. From the earliest times it has been talked of and written about, but despite all this it is only within the last few years that an intelligent effort has been made to study and combat it. As is now pretty generally known, scab is caused by a minute parasitic fungus which attacks the fruit, leaves and young branches. This fungus, it must be remembered, is a plant like the apple upon which it lives, and, like the latter, it exists for a certain period, produces bodies analogous to seeds and then dies. Its appearance upon the fruit (Fig. 188) is so well known that a description of the effects it produces is not necessary here. It might be well, however, to say a few words in regard to the time when the scab spots first appear, as this knowledge will enable the fruit-grower to combat it in a more intelligent manner. In the first place, scab often, and we may say, as a rule, makes its appearance early in the season, frequently in fact before the apples have attained the size of peas. At this time it of course requires very close scrutiny to detect the little black specks which mark the points of infection. They are usually present, however, and, if suitable conditions of moisture and heat exist, they soon develop into the well known scab spots. If only a few of these spots occur, the general contour of the apple is not materially affected; if, however, the spots are numerous, the fruit rarely attains full size, is very likely to become hard and knobby and when in this condition it is fit only for the hogs.

It is not generally known that the scab spots increase in size after the fruit is harvested and stored for the winter. This, however, is the case, as has been shown by careful observations; moreover, it is known that if there is much moisture present, as is frequently the case in cellars where fruit is stored, the diseased apples will infect healthy ones when brought in contact with them. With these facts in mind, let us turn for a moment to the fungus as it occurs upon the leaves, and note the effects it produces there. The leaves are rarely attacked before they have attained full size, and the presence of the disease is first made manifest by the appearance of small, more or less circular, greenish, velvety spots (Fig. 189). These rapidly enlarge, soon run together and in many cases ultimately cover the greater portion of the leaf.

The spots are visible on both sides of the leaf, but, as a rule, they are darker and more velvety upon the upper surface. As the season advances the affected leaves often become twisted, and finally, if the disease is more than ordinarily severe, they drop from the tree. It is obvious that where the foliage is affected in this way, the vitality of the tree is greatly impaired and in consequence a crop of small and inferior fruit is the result. It will be seen therefore that whether the fungus occurs upon the leaves or fruit or both, the apples are in the end certain to be injured. Having now noticed some of the more familiar effects produced by the scab, let us direct our attention for a moment to the

MICROSCOPIC CHARACTERS OF THE FUNGUS, WITH THE VIEW OF ASCERTAINING HOW IT GROWS AND REPRODUCES ITSELF.

A thin cross-section of one of the scab spots on the fruit, shows, under the microscope, that the fungus is confined almost wholly to the surface, and that for the most part it consists of a compact mass of more or less dark-colored, minute cells which are seated directly upon the healthy tissues of the fruit. This mass of cells is the body of the parasite; it is at once the root, stem and leaves of the plant, or in other words, it appropriates the nourishment necessary for its existence; not, however, from the air and soil as the apple does, but from the apple itself. In doing this it destroys the delicate tissues of which the fruit is composed and as a result a scab spot is formed. From the exposed surface of the mass of cells referred to above—which by the way may be called the stroma or bed—there arise numerous short, brown stalks, upon the free ends of which are borne the spores or reproductive bodies of the fungus. These are as a rule, egg-shaped and are attached by their larger ends. They are very minute, frequently less than one fifteen-hundreth of an inch in diameter, and are occasionally divided by a transverse partition. Each scab spot gives rise to immense numbers of these bodies; in fact the greenish, velvety appearance already referred to is due to their presence together with that of the stalks that support them. They germinate readily in water by sending out usually from the small end a slender tube which, if in contact with a healthy apple or leaf, bores into the tissues and once therein soon develops into a stroma. The development and spread of the fungus may proceed in this way throughout the growing season, its most rapid growth taking place during the spring and autumn months. This is a wise provision of nature for the fungus, but an exceedingly unwise one for the apple, as thereby the parasite is enabled to produce a big crop of spores the last thing in the fall. These live over winter on the young twigs, the old leaves and fruit; and the following

spring they begin germinating at about the time the fruit is forming, finding at this season just the conditions necessary for rapid development. This in part explains why, as stated in the beginning, infection of the fruit usually takes place in spring. Another reason for this, and one perhaps to which more importance should be attached than to the preceding, is that at this period the cuticle or skin of the apple is thin and delicate, consequently it is more easily penetrated by the germ tubes from the spores.

At Figure 190 is shown a section of the skin of an apple affected with the scab. The upper figure illustrates the germinating spores. These drawings are very highly magnified.

It will be seen from the foregoing remarks that the life history of the fungus, so far as known, is exceedingly simple, yet, notwithstanding this, the importance of knowing how the fungus lives will become more apparent when we discuss the means employed for combating it. Before taking up the latter subject, it might be well to have it understood that the development of the fungus on the leaves is practically the same as that which takes place on the fruit. The same dark-colored stroma, bearing its stalks and spores, is produced in the former as is in the latter case and it is these that give to the spots the appearance already described and shown at Fig. 189.

TREATMENT.

From what has been said it is obvious that the first steps in the way of treatment should be taken with the view of getting rid of as much of the infectious material as possible. Beginning then in autumn, the affected leaves and fruit—such of the latter as may be unfit for the hogs—should be carefully raked together and burned. Where the trees are badly affected some advocate the pruning and burning of the young twigs, and it is very probable that this will result in much benefit, as the spores which winter upon these are almost certain to infect the leaves and fruit the following spring. After taking such steps as will insure the destruction of as many of the spores as possible, some fungicide, that will prevent the rest of the spores from infecting the leaves and fruit, should be applied. For this purpose a solution made by dissolving one-half an ounce of sulphuret of potassium (liver of sulphur) to a gallon of water, will be found as cheap, practical and efficacious as any. Make the first application of this solution when the young fruit is about the size of peas, taking care to spray with sufficient force to reach all parts of the tree. If the weather is unusually cold and moist at this time, extra precautions should be taken to bring the fungicide in contact with all of the fruit. The second application should be made 10 or 15 days later, after which it should be repeated at intervals of two or three weeks until five or six sprayings in all have been made. Pumps and nozzles, suitable for applying these solutions, may be obtained at very reasonable cost from almost any of the firms who deal in insecticide apparatus.

In conclusion, it might be well to say that, before storing the fruit it should be carefully assorted and all the scabby apples thrown out. The importance, too, of keeping the fruit as free from unnecessary moisture as possible, is evident from what is known concerning the development of the fungus.

The Swineherd.

FEED AND SKULL FORMATION.

Mr. Olof Schwartz Kopff contributes a paper to the last bulletin of the Minnesota Experiment Station, in which he states some curious facts regarding the skull and teeth of the hog. Without going into the details of the experiments recorded by Mr. Schwartz, we may say the following are his conclusions:—

I. The order of succession of the teeth in our precocious pigs remains the same as in the primitive hog.

II. The times when the teeth appear are variable, according to the race, feeding and health. The same breeds, raised under the same conditions, will show the same appearance.

III. The form of the skull depends upon nutrition, health and more or less employment of certain muscles of the head and neck.

Mr. S. says that the pig has, perhaps, the most elastic and changeable organization of all of our domestic animals. It also has the advantage of being able to digest all kinds of food as an omnivorous animal; last, though not least, it multiplies more rapidly than any other domestic animal, even the sheep. Therefore it has been at all times regarded, and properly, too, as the animal *par excellense* for experiments in breeding, and the pig is the best example of what men have accomplished in the production of animals. Hitherto zoologists have been of the opinion that the form of skull of a fixed species is unchangeable from generation to generation, we may say for thousands of years. This is correct as long as we think of individuals raised in the freedom of nature and under natural and similar circumstances. But domestication, with its forced feeding and breeding for various demands, has brought about changes in many respects, and it is now evident that the form of the skull does not rest merely upon heredity. Continued weakness, caused either by disease or insufficient food, produces a long, slender skull, while the skull from a strong pig shows a remarkable expansion in its latitude and altitude.

Besides the nutrition influence, a strong or weak muscular action plays an important part in the production of form. The pulling and pressure of muscles extensively used for certain purposes, especially those of the head and neck, will give the head a characteristic shape. Pigs which are prevented from rooting will acquire a short, high and rounded head, while those which are forced to root to secure a portion of their food will develop a long and slender form of head. If we force both experiments to the greatest degree possible, we shall produce those extremes which distinguish the wild pigs from our improved races. That this is true is proven by the fact that when our domestic hogs are returned to absolute liberty, it will require but a few generations to reproduce the original skull of the wild pig. And, vice versa, we have called into existence from the primitive hog all those different representative types of our day, by careful and continued selection, gradual assortment, and particular attention to the desired qualities of form, size, etc. The striking difference between the skull of a primitive hog and a modern one is seen in our pictures, Fig. 191 showing the skull of a Texas boar, the typical wild hog, and Fig. 192 showing the skull of a Yorkshire sow—the "lazy" hog par excellence.

Farm Economy.

PLOWING BY STEAM!

IS IT PRACTICABLE?

TRACTION ENGINES vs. HORSE POWER.

All old books on agriculture contain a chapter on steam plowing in which the practice is hinted at as a possibility. Many trials of steam plows have been made in England, and while some of these implements have given fair satisfaction, they now seem to be giving place to a new implement—the steam digger. In this machine a number of heavy spades take the place of plows These spades are driven into the soil by mechanism somewhat similar to that employed in a hay tedder. Thus these large spades work in the soil with much the same movement as is given to an ordinary spade in the hands of a strong workman. The diggers are hauled over the ground by traction engines. They dig at the rate of an acre per hour. The steam digger has not yet been brought to this country, so far as the R. N.-Y. is aware. Some of the makers of traction engines have produced a "plowing outfit" to accompany the engine when desired. One that seems to have been quite successful is made by the Geiser Manufacturing Co. This is quite a simple contrivance. Six large plows are attached to a heavy frame which can be fastened behind a traction engine with suitable connections for raising or lowering the plows. In plowing, the engine moves across the field, hauling the frame behind it and plowing a space six times as wide as the ordinary furrow. The R. N.-Y. has been communicating with a number of persons who have used this "outfit." The points we most desired to make clear are covered by the following questions:

1. On what soils does the steam plow do its best work and on what soils does it fail?
2. Must the land be entirely level?
3. How does the cost compare with that of horse-work?
4. What speed can be maintained?
5. Can the steam plow work in soft or wet ground?
6. Is it at all probable that steam plowing will become general in any section of this country? Is it to be a factor in the work of large farms only?

FROM J. F. MILLER.

I have never used any steam-plowing machinery, but a neighbor has a road engine and I employed him to break up some land for me. He uses the engine to run a thrasher and to plow and to do anything that a stationary engine will do. It will travel over any ordinary country road as easily as a wagon, and haul almost anything that is hitched to it. In plowing for me he used six plows, cutting about 14 inches each in width and about 10 inches in depth. The plows are fast and cut everything and turn it under. I consider the work done much better than any that can be done by horses. It breaks any soil, and works as well in rolling as in level land, but will not work if the hill-sides are very steep. The owner charged me $2 per acre for breaking land, and I believe he broke about 15 acres per day. The speed is about equal to that of a good pair of horses, but it could be made to run faster if desired. The great trouble with this engine is the difficulty of keeping it fed with water, as it does not carry much water and requires an extra team and frequent stoppages to obtain a fresh supply. It can work wherever horses can, if the land is not too steep, but it requires careful attention, and several hands to keep it supplied with water. It is entirely too expensive ever to come into general use—costing about $3,500—except upon large farms where there are large quantities of land to be broken up, grain to be thrashed, silage, etc., to be cut and hay to be pressed. It is not adapted to the cultivating of crops after they are planted.

Gonzales, Texas.

FROM G. W. HUGHES.

I have tried the steam plow over a year and have plowed 300 acres with it. I have found no soil in which it failed to do extra-good work except where the land was too wet to be plowed. I think it will plow anywhere and in any kind of soil when the latter is dry enough to be plowed, and it will do much better work than can be done in the old way by horse power, except where the ground is too hilly or rough to run a traction engine over, and the cost of plowing by steam is less than half that of plowing by horse-power. It travels about as fast as a good brisk team, pulling six 14-inch plows or turning seven feet at once going across the field. I think in a few years steam plows will be in general use all over the country like steam thrashers, and that every man who gets a traction engine for thrashing will get one large enough to pull plows and he go around plowing just as he now goes around thrashing. I use my engine almost all the year, beginning in the spring plowing about 15 acres per day. Through the thrashing season I run a 36 inch cylinder separator. After that is over, I do fall plowing. When it freezes up I use my machine for shelling corn and grinding feed. I can, and have shelled and ground 90 bushels of corn per hour, and the cobs will more than make fuel for the engine while doing that amount of work.

Hume, Illinois.

FHOM J. N MANCHESTER.

I have been using steam power on the farm for three years and it has been very satisfactory. It is adapted for all good farming land that is free from stumps and stones. I have used my outfit among stumps, but the work is rather tedious and slow. The plow works well on ordinary hilly ground and the engine is so constructed as to keep the water on the crown sheet going down hill.

It would cost me fully one-third more to do the same amount of work with horses, and then it would not be done as well as the steam power does it. The engine can travel about three miles per hour. It cannot work in soft or wet soil; but when soil is in condition to be plowed, there is no trouble in using this outfit. I believe steam plowing will become general on all large farms, Where a man has 200 or 300 acres to plow, and has other work for the engine to do, I consider it a paying investment. I use my engine for hauling grain to market. Last spring I delivered 7,000 bushels of ear corn at Wapakoneta, Ohio, which is 17 miles from my farm, making the round trip every other day. I had 12 wagons attached to the engine and each wagon averaged from 60 to 65 bushels, making about 775 bushels each trip, and the expense of this was about one cent per bushel, besides the use of the engine and wagons. Part of the road is quite hilly. In 1887 I attached two self-binders to the engine and cut 150 acres of wheat. I also use this engine for sawing wood and lumber, and thrashing, etc.

Belle Center, O.

FROM W. L. SHERWOOD.

Our steam plow is adapted for almost all kinds of soils. It has never failed in any soil. It makes no difference whether the ground is level or not. I have plowed up and down hill where the grade was more than six feet to the rod without any trouble and with as much ease as on level ground. I can generally do as much work in one day with the steamer as I can do with a team in 15 days, and the quality of the work cannot be beaten by any team and hand plow. It doesn't cost me over $4 a day to run the outfit and generally a great deal less. The speed depends on the nature and condition of the ground. In good mellow ground I can go about twice as fast as horses; in tough prairie sod a good deal less. When the ground is in a good condition to plow with horses, one can plow with the steamer. I have no doubt that in a few years steam plows will be used as much as the self-binder is now used to cut grain. For when one gets his plowing done he has a first-class steam engine, large enough to run a thrashing machine, a saw-mill, a feed-mill or any other farm machinery. The size of the farm a man has doesn't make any difference; if he hasn't enough to do for himself, he can always find other people who want plowing and other work done although it is better if a person has a farm large enough to keep his machine employed all the time.

Brashear, Mo.

FROM H. H. BURNS.

I have had such a machine for two years and it has given great satisfaction. The character of the soil makes no difference. I have plowed the blackest gumbo which no one could have plowed with a team. The cost of steam plowing depends on the price of labor and coal. I can plow about 15 acres per day. It takes two men on the engine, one to steer and one to fire and tend to the plows, and one team and man to haul the water. About 15 to 20 bushels of coal are used per day according to its quality. We have very poor coal here. The expense will depend on the wages paid to the hands. I pay the two men on the engine $2.00 each per day, the man and team hauling water $2.50; the coal, say, 18 bushels at 11 cents per bushel $1.98, making together $8.48 for plowing 15 acres; when a man plows here by the acre with a team he gets from $2 to $2 50 per acre. Then I can plow with my steam plow where no man can plow with a team at any price. The speed is ordinarily about two miles per hour, but it depends altogether on the nature of the ground and on the two men on the engine. The ground must not be too soft, but it can be worked at almost any time when it is fit to be plowed by a team. I believe that steam plowing is the coming great improvement where the farms are large. I use my engine not only for plowing but also for thrashing, running a saw-mill, and grinding corn. The first steam plow was brought here about five years ago, by some farmers who had a big lot of waxy gumbo land with which they never could have done anything with a team, for when it was not too wet, it was so hard and dry that it took five horses to move a plow. The people took the steam plow on trial; took it into the same field with six plows, and the engine pulled them better than the five horses pulled one plow. From that time on they put in from 200 to 400 acres of wheat on that waxy land and were well satisfied.

St. Charles, Mo.

Farm Topics.

BUCEPHALUS BROWN'S NOTIONS AND IDEAS.

Those Jersey Farms, whereon such large quantities of commercial fertilizer are found to pay, illustrate strongly how necessary it is for the farmer to understand the ruling conditions of his locality. These Jerseymen are near enough to the big cities to get fancy prices (compared with those obtainable in interior States) for two common crops—potatoes and grass. Wheat is, of course, used as a convenient seeding crop to protect the young grass from the sun. There can be no profit in it, and not a great deal in the corn. The money crops are, clearly, the early potatoes and the fancy hay.

The Profit in Potatoes.—But even at a distance from business centers, potatoes and grass may still be found the most profitable crops, with this difference, that the potatoes only will pay freight over a long haul, and the grass must be fed at home. Thus the Aroostook region of Maine makes a rotation of potatoes, small grain (wheat or oats), and grass, it being too far north for corn as a sure grain crop. New England farmers do not

take very kindly to barley, partly because they don't favor the use to which much of it is put, while many of those who are not so particular have not the skill to grow prime malting grain.

As to Fertilizers.—In my own neighborhood, as heavy a dressing as 1,500 pounds of the Stockbridge potato fertilizer is being

Apple Scab. Fig. 188.

tried, where 600 to 800 pounds have been thought all that would pay. The hint was taken from an accidental excess, which showed remarkable results at digging time. A good deal of risk has been run, in one field of about 20 acres, where the crop was planted April 16—23, and was coming into bloom when, for several nights, at the end of May, the temperature ranged perilously near to freezing. At this date—June 10—they are almost ready to dig for the early potato market. There will be a heavy yield, and no doubt a large profit, although there will be a haul of 230 miles to market. But the field is less than a mile of level road from the station.

Rather a Gambling Crop.—The friend who is growing the crop, (and another field of 40 acres planted later) is a close reader of the Rural; but I think he will not take offense at my styling his splendid field of early tubers by this name. It is really as much so as hops were here, until the Pacific coast supply froze our hop-growers out. The chances are a good many that potatoes planted so early will be destroyed by frost. It would require the figuring of a skilled "actuary" to settle whether in the long run such early planting would pay. But it is hardly a practical question, as the seasons are rare when it can be done.

The Price.—These potatoes, if they strike the market just right, may net the grower as much as 70 cents a bushel, or even more. They will be nearly full-grown when dug, and will escape all risks from rotting, if properly ventilated on the car. But how about the 40 acres of the later crop? Can they pay a profit over all expenses, including $30 worth of fertilizer per acre? The land is light and level, and the whole work is as much as possible done by machinery, including planting and digging.

Some Random Figuring.—I think our farmers generally do not average much over 100 bushels of merchantable potatoes per acre. The census puts the average yield under 80 bushels, but that looks much too low to me. They continue to grow the crop in this way, and think they get a little profit on it, (where access to a shipping point is not too difficult), at an average price of 35 cents a bushel at the cars. Planting, fertilizing and harvesting are done by hand; and the patches, per farm, probably do not average more than two or three acres. Experience will, I think, justify the statement that without any other manure, potatoes on turned sod, getting 600 pounds of Stockbridge, may, with clear culture, be made to give the grower 150 merchantable bushels, or, at 35 cents, $52.50 per acre. To pay the cost of adding 1,000 pounds more fertilizer, there must be an increase of nearly 60 *bushels.*

Special Advantages.—I do not believe our farmers could, as a rule, get a new dollar for an old one by this practice. But where a man has large, level fields of good potato land, handy to the station, uses the best improved machinery, and ships on his own account, the condition of things is bettered. Many wastes are then prevented, and many losses forestalled. If his fertilizer costs him but $30 per acre, and his crop nets him 45 cents, he is clearly in a better condition than the small farmer, especially when the latter has to make a long haul over a bad road, and sells at the car. If the added 1,000 pounds of fertilizer add 100 bushels per acre to the crop, there is a profit. But, then, we are saying nothing about the extra risks of rot, a glutted market, etc.

The Secondary Profit of improved succeeding crops has a right to consideration here. If the grain can be bettered and the grass doubled, even for one year, it may pay even the common farmer to be more liberal with his fertilizer on the potato field—provided he gives clean culture, which, so far, he has generally failed to do. A clean field of potatoes in early September is a rare sight on the average farm; and no man can afford to buy manure at two cents a pound to grow weeds.

A Still Better Way.—The skilled farmer who can command the cash to do business with, can certainly gain something by purchasing his fertilizers unmixed, and to a considerable extent unmanufactured. Fine ground bone or dissolved bone black, or mineral phosphates, with potash salts and nitrates bought for cash and intelligently mixed on the farm will give a large saving to the farmer who has command of the chemistry of fertilizers. As I can get plenty of good ashes I have used a mixture of equal parts of bone and Stockbridge, sowing on ashes before the first cultivation. To get on an equal quantity of plant food in this way is cheaper than to use a fully manufactured fertilizer. Over 20 years of experience have proved to me that here is an important saving. The young, progressive farmer ought to, and must, know something of the chemistry of manuring, if he wishes the best results at the least cost.

Rural Topics.

AGRICULTURE; AN ART, A BUSINESS, A SCIENCE, ETC.

T. H. HOSKINS, M. D.

III.

AS A SCIENCE.

With the birth of organic chemistry—the chemistry of life and living things—began the possibility of making agriculture a science. But dealing with living things, and their relations to things not living, the science of agriculture must deal from the start with questions which can only be solved by much careful study, and by slow degrees. Matter when endowed with life, is governed by different laws from those which control it on the plane of inanimate existence. On this new plane it forms a vast number of combinations, and in all of them conducts itself quite differently, and to very different ends, from the way it does when lifeless. Plants and animals are composed of but a small number of elements. Many of the substances existent and more or less active in the inorganic world have no part in the organization of living things. Life indeed produces its great and varied results with very simple materials. A few invisible gases, hardly cognizable by our senses—oxygen, nitrogen, hydrogen—combined with a few simple solids, some of them metals—iron, calcium, potassium, sodium;—others, metalloids—sulphur, phosphorus, carbon, chlorine—these alone,

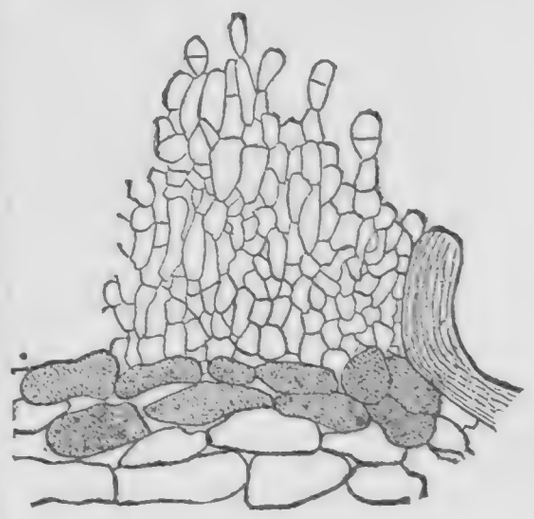
Apple Scab. Fig. 189.

or nearly alone, are the material substances with which mysterious vitality achieves its marvelous results in the world of natural things.

The scientific farmer—the man who proposes to apply scientific facts to the realization of economic results for his own and the public advantage—must seek to acquaint himself with all the laws governing in the realm of vegetable and animal life. He must do this not as a theorist, but as men like Edison or Ericsson make themselves acquainted with physical laws—having a direct purpose of applying such knowledge to practical ends. He will require a good working acquaintance with both organic and inorganic chemistry; with geology, so far as relates to the formation and composition of soils; with physiology, botany and natural philosophy. These must be the leading subjects of instruction in every well organized school of agriculture; and all of them must be treated there with a close view to their practical application, as is done with their special subjects in all schools designed to fit men for particular branches of work among their fellows, for the general good.

A store of such information in the mind of an active man with a love for farming, makes the business a delightful one, because he is not stepping blindly along, or plodding forward with the guidance only of dry, unreasoned maxims, handed down out of the experience of the past. He goes forward with light on his path that constantly increases; and he may feel that he can plan his course, in confidence that it is at least a measurably true one, leading to results that may be calculated in advance.

Scientific farming has passed the time when it can be made the subject of derision. Agriculture, like seamanship, is not an exact science, because it has to do with uncontrollable natural forces. But just as mathematics and astronomy and meteorology com-



Apple Scab. Fig. 190.

bine to aid and facilitate navigation, so the sciences named place power in the hand of the farmer with which his predecessors were unfurnished, and which his competitors at this time generally lack. It is just as absurd, therefore, to decry science in farming, and to assert that farming may be made quite as successful without it, as it would be for the navigator to neglect the compass, the barometer, and all the other scientific aids belonging to his profession, and to hold that the seamanship of the Phenician sailor is sufficient for all his needs.

This comparison may be followed farther with profit; for just as it is impossible for a youth to make himself a successful seaman, fit to control and direct the course of costly ships, without continuously combining practice with science in his training, so it is with him who would be a scientific farmer. Work and study must go together, hand in hand, from the first step of his school training to the last. He must have for his instructors not a corps of obstructionists, but a body of living, energetic practitioners of the arts of tillage, cropping, breeding, and so on, through every portion of the business of agriculture. Every principle must be demonstrated in action to the eye and mind of the student; and more than that, he must be tested and tried, to determine whether he is really learning how to do what he is being taught. Agricultural schools that will do for the farmer, what West Point and Annapolis do for the soldier and sailor, will soon be crowded with pupils, who will justify their existence most completely.

The Poultry Yard.

POULTRY EXPERIMENTS AT THE NEW YORK EXPERIMENT STATION.

Experiments have been made at this station for the purpose of determining the approximate amount of food required for a fowl,

Skull of a Primitive Texas Boar. Fig. 191. Page 506.

the average weight of eggs, and their loss of weight in keeping, the difference in the composition of eggs, and whether any difference is due to the influence of food or of breed. Only 16 fowls were used in these experiments, which is to be regretted, as a larger number would have more nearly furnished the conditions under which fowls are ordinarily kept. The birds were placed in four pens, each containing four pullets of the following breeds, numbered in the order given. Light Brahmas, Laced Wyandottes, Single-comb White Leghorns, and White-crested Black Polish. They were fed ground oats moistened with water in the morning, raw apples at noon, and whole corn at night. The trial lasted from January 23, to February 26. Without going into details, which are given in the report, the average amount of grain consumed per fowl per day, for the large breeds, was 4.38 ounces, and for the small breeds 1.95 ounce. The total amount of food consumed on the average per day was 6.65 ounces for the large against 3.52 ounces for the small breeds. The total gain during this time was, for pen No. 1, two pounds 15½ ounces; pen No. 2, three pounds 8½ ounces; pen No. 3, one pound 4½ ounces; pen No. 4, 15 ounces. None of the pullets was laying. This shows the greatest gain in favor of the Wyandottes. The amount of grain consumed by the small breeds was 45 per cent. of that consumed by the larger. In a later trial when the hens were laying, the amount consumed by the smaller was 72 per cent. of that consumed by the larger.

On March 1, the fowls were arranged for a feeding experiment in which the influence of different feeds on the composition of the eggs was to be observed. Pens No. 1 and 2 contained two Brahma and two Wyandotte pullets each. Nos. 3 and 4 contained two Leghorn and two Polish pullets each. The pens and open yards attached were uniform in size and other conditions. All were supplied with ground oyster-shells and pure water. The experiment lasted for six months. The feed of Nos. 1 and 3 contained a larger proportion of albuminoids than the feed for Nos. 2 and 4. Pens 1 and 3 were fed from a mixture of linseed meal and wheat-bran in the morning,

Skull of a Yorkshire Sow. Fig. 193. Page 506.

and wheat at night. Pens 2 and 4 were fed corn meal in the morning and wheat at night. For the first few months all the pens were also fed raw apples, and sometimes, instead, boiled potatoes at noon. They were fed all the meal that they would eat, but always much less wheat than they wanted. The amount consumed differed somewhat from week to week. The daily average, however, for each fowl was, for the larger breeds, about 1.4 ounce of the meal and 1.6 ounce of

wheat; for the smaller breeds, about .9 ounce meal and 1.2 ounce wheat. After May 1, each pen was fed freshly-cut green grass daily. The feed in Nos. 1 and 3 was always the more readily eaten and the fowls always appeared lively and healthy. In pen No. 2 one Wyandotte was sick in March, and one Brahma died in June. In pen No. 4, one Leghorn was sick in March, and one died in April. All comparisons between the pens were made on the average of one fowl. The two Wyandottes in pen No. 2 were allowed to sit for two months from May 18. The Leghorns in pens 3, and 4, all wanted to sit for some time, though very indifferently. During the last month or more, most of the fowls were moulting, and very few eggs were obtained. A small number of eggs might reasonably be expected from fowls fed continually on one food, but the great difference in yield is noticeable. The average number of eggs per fowl for the whole period was, from pen 1, 12.5; pen 2, 33.75; pen 3, 12 25; pen 4, 41.42. The Laced Wyandottes in pen 2, and the W. C. B. Polish in pen 4, besides laying more eggs, kept their weight better, although the Light Brahmas, in pen 1, and the S. C. W. Leghorns in pen 3 were in better health.

This experiment would seem to show that corn meal was more favorable to egg-production than linseed meal. Although single experiments are of little value as determining positive results, yet they are of considerable value in suggesting future experiments.

The weight of eggs diminished by keeping, owing to the evaporation of water. The per cent. of fat was higher in the brown-shell eggs, while the shell of the white eggs was heavier. Further experiments in feeding both for eggs and meat are contemplated.

Miscellaneous.

COST OF LIVING AND BUYING GROCERIES FOR THE FARM.

J. M. MUNCEY.

ARE you a farmer? If so have you ever kept a faithful and detailed account of your expenses so that you know what your food costs? Some of the principal items in the cost of living, as my "House Expense" account shows, for 1887 and 1888, are butter, meat, wood, flour, potatoes, coffee, coal, sugar, tea, eggs and milk. Let me give the figures roughly. The total expense for 1888 was $500, and the above-named items figure $347. Remember that I have taken careful inventories of the food on hand at the beginning and close of the year. The food produced by the farm is estimated at its cash value. Now I wish to urge the importance of protecting ourselves in the purchase of all groceries that will not be damaged by keeping. There is a multiplicity of organizations and "combines" in this country, and why can the retailer of groceries object if a dozen or half-dozen farmers combine and purchase important articles of diet at wholesale prices, and in $300 or $500 lots. It may rob your townsman of a profit, but you certainly would be doing nothing but what he would do under the same conditions.

I am on a 250-acre farm, keep 45 to 60 cattle, four horses, a number of hogs, raise 20 to 30 acres of corn, and put up 60 to 100 tons of hay. I employ one regular farm hand, and in haying time I hire three or four extra hands, and at other times of the year employ extra help occasionally. I presume my books will show an average of 4½ persons to consume the provisions named. That includes the housekeeper. This will give the reader some idea of whether my living was extravagant or not.

SUGAR.—We used $26.74 worth of granulated sugar in 1887, and $30.87 worth in 1888. Now, suppose at wholesale you could buy it for 5⅞ cents per pound, as I did in 1887. On 414 pounds, you would save probably $10.35, providing the retailer was selling 12 pounds for a dollar.

Do not buy anything but granulated or strictly pure, refined, dry sugar. Every scientist and domestic economist of note will tell you that white, dry sugar is the cheapest, and contains the highest per cent. of sweetness. The only reason why some farmers' wives persist in saying and thinking that "brown sugar is the sweetest," is because when placed on the tongue the sensation of sweetness is more quickly perceptible. This is due to the fact that the grains of that sort of sugar are much finer and are more quickly dissolved by the saliva in the mouth. Another reason for buying sugar by the barrel is that you will save what your careless on or employé loses when bringing the dollar or two dollars' worth home. Perhaps it rains before he gets home and the paper gets wet. Perhaps you have the sugar put in a sugar box or pail, and that is upset. Such accidents do happen in very well regulated families. And another thing: you are not bothered with a whole bundle of groceries when you go to town after lumber or repairs to machinery or some miscellaneous load.

COAL.—If you use hard-coal for, say, one base-burner, you should figure on about 50 pounds per day. In '87 it cost me 20½ cents per day for 107 days, to heat a room about 16 x 14, with a bed-room adjoining. Coal was $8.50 per ton. I used 49 pounds per 24 hours. Buy it by the car-load and place the business with a representative, intelligent honest man.

WOOD.—I used 9¾ cords in '87, that cost me $31.25, aside from hauling and sawing.

FLOUR.—Miss Parloa says buy enough flour in the fall to last a year. Of course, it must be kept in a dry, dark place. Some good housekeepers think so. From November 12, 1886 to January 1, '87, we used 8 4-10 ounces per grown person per day. In 1887, in 5,013 meals, we consumed 913 pounds of flour, or an average of 8 7-10 ounces per person per day so that I think 8½ ounces per head will be a fair estimate for every farmer to make. Buy the best flour. Every good cook says it is the cheapest and less of it is required to make a given amount of good bread. Perhaps it would be advisable to buy a few sacks of second-grade flour to be used for pastry.

TEA.—We used tea once a day and consumed 10 pounds 14 ounces in '87. This is an average of one-tenth ounce per person and meal. A family of five would need nearly 12 pounds for a year, if used once a day, and 24 pounds, if used twice a day. It pays to buy tea at wholesale.

COFFEE.—I used 82 pounds in '87, costing $14.88. It was bought green and burned at home. It was a question about the profit of this practice as the memory of some housekeepers proves that occasionally some of it is "burned up." I think it economy though if the entire attention is given to it while burning. According to my figures, you need about two-fifths of an ounce per person, per meal. Some farmers use Arbuckle's altogether. Of course, each man can decide for himself and the purchase being made accordingly.

There are many other imperishable articles that may be purchased with advantage, and on which each woman may make a safe estimate to suit her conditions—hard soap, soda, dairy salt, ginger, extracts of lemon and vanilla, starch, matches, pepper, vinegar, sirup, kerosene, rice, chimneys, baking powder in small cans, cinnamon, cloves, canned-corn, prunes, chocolate and raisins. It will not be to a farmer's profit, I think, to buy a box of raisins. If consumed in, say, six months or less, it will probably pay. About $2 can be saved on a barrel of kerosene. The cash value of the barrel is 90 cents to a dollar. The kerosene of 150 test ought to be bought for $13 or less. At least one cent a bar can be saved on soap, and 10 to 12 cents per pound on baking powder if bought in whole sale quantities. I say most emphatically that it will pay every farmer to borrow the money, if necessary, to purchase his groceries at wholesale prices. I insist honestly that more farmers must begin to figure the cost of production of farm products, and the cost of living, or soon they will be left year after year with no profits, and perhaps a loss. Protect yourselves. It is not necessary to pay 600 middlemen their profits. They may need them; so do we.

FROZEN FODDER.—Professor F. H. Storer, in answer to inquiries about the feeding value of frozen corn-fodder, says, in the RURAL NEW-YORKER, that the damage done by freezing is due, first of all, to the tearing asunder of the cell walls in the plant by the expansion of the contained liquid when converted into ice; that if the fodder is wilted there is less cause of such disruption; but if the plants are tense with liquid, and standing exposed, they are doubly liable to injury, as the transpiration from their surfaces carries away heat additionally to the radiation. The mere act of freezing does not of itself injure the nutritive value of the fodder. It is the fermentation of the sugar in the plant, owing to its being exposed to the air in the broken cells, that causes the real trouble. If it were practicable to keep the fodder at a low temperature, this could not occur; or if it could be packed in a silo at once it would be out of reach of the microscopic organisms which induce the decay.

There is something not yet explained to us by investigators in regard to the destructive effects of frost on plants, fruits, roots, etc. As a remedy is sometimes found worse than the disease, so the thawing, if rapid and in open air and light, seems the crowning cause of the harm attributed to the freezing. For, as every one knows, if the thawing is effected very slowly, as in case of a frozen nose, by keeping it covered with snow, or roots of a hardy plant by being buried in the ground without any bending or breaking, or apples thawed slowly in a cool cave, or under earth or spring water, the objects escape destructive injury. Do the disrupted parts settle back rightly adjusted into their places, during this quiet, undisturbed condition, and so become fit again to carry on their functions? It is an important question. "W."

Everywhere.

RURAL SPECIAL REPORTS.

Illinois.

DONNELSON, Montgomery County, July 10.—We have had a very wet season so far. Oats are good and ready to cut. Hay is a fine crop. Corn will not be more than half a crop. Blackberries are abundant. Grapes good. White Clover fine and honey in plenty. There are no chinch bugs to trouble us yet; it has been too wet for them. R. C. P.

Indiana.

ROCKVILLE, Parke County, July 19.—Six inches of rain have fallen in the last seven days. Wheat is a little over one-half an average crop, and is in danger of sprouting in the shock. Our farmers, as a rule, thrash from the shock and sell at once. It does not pay to raise wheat in Indiana, but what other money crop can be substituted is now the question. Corn promises a fine yield and is almost secure from drought. Oats have a very large acreage and a fine yield is expected, but last night's terrific wind and rain storm may reduce the average. Grass yielded a fine crop of hay, and pasturage is first-class. Potatoes surely promise the largest yield we ever had. All vegetables are good crops, but as we have no market here, few of them are well grown. Daniel Webster once replied to the query: "Will the practice of law pay?"—"There is room for paying work on the upper shelf." But this does not apply to raising vegetables and fruits in our town, as our grocerymen buy wilted and any class of vegetables and fruits and set the market prices, and all go at their figures. Berries have been about half a crop. Apples, pears and peaches short.

A. C. B.

Michigan.

BIG RAPIDS, Mecosta County, July 12.—The winter and spring were unusually dry. The snowfall was unusually light and there was scarcely any rain after November until May 10. Never in the history of this country were the lakes, streams and ponds so low in the spring. Only great autumn droughts have ever before reduced the amount of water on the surface of the ground so much. On May 30, we had hail and snow, and ice formed nearly one-half inch thick. Corn and potatoes that were up were generally killed to the ground, and in some instances seeds rotted in the ground. Both clover and Timothy were injured, but seasonable rains and good weather have given us a good hay crop, and all others promise well, except corn, which is fully two weeks late. Potatoes are exceptionally fine. The wheat crop is better than for many years, but is somewhat injured by the aphis, some of the grains being shrunken. Many heads are now full of dead insects, which under the microscope show wounds, as if made by a parasite, though I have not been able to see the parasite itself. Apples, plums, cherries, etc., (peaches are not much grown here) were generally killed by the May 30th freeze. So were strawberries, but other small fruits are abundant. On the whole, the present outlook for the farmer is better than at any time in the last five years. H. C. P.

DEER LAKE, Lake County, July 19.—Hay, oats, potatoes and turnips are our money crops here. They are sold in the cities and to miners and other laborers. Hay is worth $15 per ton; oats 50 cents; potatoes 75 cents; turnips 75 cents. I do not know of any farmers who get extra prices for their products. There has been no change within the last 10 years. Farming is not done very extensively in this country. People depend on iron and gold for a living. J. H. S.

HURON COUNTY, July 9.—Crops are looking very well. Fall wheat bids fair to yield 30 bushels to the acre, on an average. The hay crop is very fair. Stock looks well. The farmers are all busy hay-making, and harvest will soon be here. Owing to the cold, wet weather in May, the corn crop will be light.

D. E. S.

Minnesota.

MINNESOTA CITY, Winona County, July 11.—Potato beetles have been so scarce that it has been unnecessary to use poison. A few mature beetles are to be seen, but there are almost no slugs. Potatoes, barley, and oats never looked better. Corn had a slow time of it through May and a part of June, and some was slightly frost-bitten, but during the past three weeks of warm weather it has grown wonderfully. Some which was planted early, (May 2nd and 3d) and which was quite badly frosted is far ahead of that planted a week later, and which escaped the frost; it is beginning to tassel out. Winter wheat will be a fair crop. J. M. D.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

THE CULTURE OF BLUEBERRIES.

Several Subscribers.—1. Can blueberries be successfully transplanted? 2. Are the berries improved in size or flavor by cultivation? 3. Is such improvement in yield or quality enough to justify one in making a business of blueberry culture? 4. How would the profit in such culture compare with that found with other small fruits?

ANS.—This matter was discussed at the last meeting of the Minnesota Horticultural Society. This discussion was started by a suggestion made by Pomologist H. E. Van Deman, of the Agricultural Department at Washington, to the effect that blueberry culture might be made a profitable industry for Minnesota people. The R. N.-Y. requested several members of the Minnesota Horticultural Society to answer the above questions. Their answers follow. We shall be glad to hear from others who have had experience with blueberries.

FROM PRESIDENT WYMAN ELLIOT.

So far as the discussion on the cultivation or domestication of the blueberry at our last horticultural meeting went, the testimony was that the bushes could be transplanted with success, but whether they will bear fruit enough to pay for the expense is a question yet to be solved. I think there is a good field for investigation for our experiment stations in this work, and trust the RURAL may be able to give them points in that direction. It is one of the subjects that needs more elucidation for a large number of our people are interested in blueberry culture. I trust the excellent RURAL NEW-YORKER may be the means of spreading the knowledge so much needed.

Minneapolis, Minn.

FROM J. O. BARRETT.

I have repeatedly tried to transplant blueberries, putting them into different soils, but I have always signally failed. I also attempted to raise them from the seed, and failed again. Hence I cannot definitely answer any of the questions asked by the RURAL. I shall renew my experiments during the coming fall, varying the treatment, and hope to report favorably after a thorough test. I have no doubt of ultimate success; and then the cultivated blueberry will be a decided improvement on the wild sort, so that it will take a place among the profitable small fruits.

Brown's Valley, Minn.

FROM SECRETARY C. L. SMITH.

1. Yes; the blueberry can be transplanted, the operation requiring about the same care as the transplantation of larches or young evergreens. The bushes should be dug in October and puddled and heeled in until the following April. If well set, mulched and shaded, 80 to 90 per cent. will grow. If the bushes are dug in April and planted immediately, 75 per cent. will live. 2. I have not tested the transplanted kinds long or thoroughly enough to tell how much the fruit is improved. Indeed I know of no improvement in quality having been made. 3. The yield from regular systematic planting would be profitable on cheap lands with favorable conditions. 4. My experiments and observations would lead to the conclusion that under average conditions the returns from other small

fruits would be more certain and profitable than those from blueberries. Blueberries bring an average price here fully 33⅓ per cent. below that of raspberries and 25 per cent. below that of currants. I cannot think of any system of cultivation that would bring the yield per acre of blueberries up to that of currants, while the expense of propagation and cultivation would be much greater with the blueberry than with the currants.

From what I know at present I would recommend their cultivation only to experimenters and amateurs as a source of pleasure not likely to prove one of profit. They should be planted quite shallow in sandy land six inches apart in rows three feet apart. Cultivation should be confined to the middle of the rows, never running nearer than eight to 10 inches. The plants should be mulched along the rows. They can be renewed by layers. The old wood should be removed every two or three years. The less they are disturbed about the roots the better they seem to thrive. I have never known them to respond to manure or cultivation like currants and gooseberries. They are liable to injury from frost or drought. The wood and buds for next year's crop are formed this year, so that it takes two good seasons to insure a full crop. The blueberry is a fruit we know so little about that there is room for experiment. A third or fourth generation of seedlings may get so far away from the Indian as to respond to the hoe, cultivator and fertilizers. In my opinion that is the direction in which we should look for success.

Minneapolis, Minn.

FROM SECRETARY J. S. HARRIS.

I do not reside in the blueberry region and consequently know but little about blueberry growing; but I believe that, like many of our other native fruits, the blueberry will have to go through a process of cultivation by the growing of seedlings, or propagation by cutting, for a period, before its cultivation becomes an assured success. 1. The plants as we get them from the woods, do not bear transplantation well. 2. I cannot say that the cultivated berries are materially improved in size or quality over those growing wild where the ground has been burned over once in two or three years to clear it of rubbish and renew the vines. 3. Cultivation increases the yield and facility of picking sufficiently to pay for the trouble, and the loss of an occasional crop. 4. Too little is known of the effects of cultivation to determine the profit from blueberries as compared with that from other small fruits. There are barren places on many farms where it would pay well to introduce the blueberry, even if no cultivation were given it farther than an occasional burning off.

La Crescent, Minn.

FROM A. W. SIAS.

The blueberry is perhaps the most important representative of the genus known as the Heathworts. I was born and reared near the beautiful grounds of Dr. Hoskins on the shore of Lake Memphremagog, Vermont. The shores of this and Lake Champlain abound in whortleberries. I have seen the time when a person could pick a 10-quart pailful in 30 minutes on my father's land. We had three varieties—the tallest bush was known as the huckleberry, and bore a dark-colored fruit. Then we had what we called the high and low-bush blueberry, the high-bush bearing much the larger fruit, and the most sought for. I never knew any one to undertake their cultivation in Vermont, but I have proved by actual experience that the bushes can be successfully transplanted and cultivated in open ground. I found a patch of about an acre of the low-bush blueberry about 10 miles from this city several years ago, and planted a few bushes with the ripe fruit upon them. They lived and continued to bear fruit till my stupid hired man dug them up, supposing them to be weeds. I notice little, if any, difference in size, or flavor of fruit under cultivation. I am of the opinion that such improvements might be reached by planting the seeds of the largest and best berries for a series of years. Doubtless blueberry culture could be made remunerative in any Northern market where the wild fruit was not too abundant, and could be made as profitable as that of currants or gooseberries.

Rochester, Minn.

INSECT IN WHEAT:—NOT INJURIOUS.

E. S., Pickrell, Neb.—What are the small black beetles on the inclosed specimens of infested wheat?

ANSWERED BY DR. J. A. LINTNER, NEW YORK STATE ENTOMOLOGIST.

The insects are small (one-twelfth of an inch long) oval, shining black beetles, with small, almost hidden heads, and clubbed antennæ. The scientific name of the insect is Phalacrus politus (Linn.). From the occurrence of the beetles, in large numbers, on heads of wheat browned and shriveled, it was but natural to accept it as a wheat pest, but an examination of it shows it to be entirely innocent of the injury with which it was associated. The species belongs to the Coleopterous tribe of Necrophaga, which embraces the most useful scavengers of the insect world, unless it be the family of Muscida—the flies. Their food is mainly dead animals (as in the Sexton-beetles), decaying vegetable matter, fungi, etc. Phalacrus and two other genera, constitute the family of Phalacridæ containing 23 species of small, oval, convex, shining beetles, which, according to Drs. Le Conte and Horn, "are found on flowers and sometimes under bark." They immediately follow in systematic classification, the family of Scaphidiidæ, embracing very similar forms, which, according to the authors cited, live in fungi. Of the seven species of Phalacrus recorded, I find the food of only one given, viz., that of P. penicellatus (Say), of which it is noted: "It occurs in many parts of the United States in the seed-vessels of such plants of wheat as are destroyed by the parasitic vegetable called smut."

The food-habits of P. politus are presumedly identical with those of the above. The examples submitted to me for identification were taken from the two discolored and somewhat dwarfed wheat-heads received, while none were found upon another head inclosed, for contrast, as "uninjured". Upon stripping the kernels of the injured heads, each one was of a marked brown color, and upon cutting open or crushing with a light pressure, one could see that the whole interior consisted of a mass of pulverulent dark brown fungoid matter, commonly known as "smut". The extent to which this pernicious fungus had been fed upon by the beetles, was not evident from the limited material sent. None of the kernels showed openings eaten into them, but this would probably have been unnecessary so long as their splitting open, as seen in several of the kernels, gave ready access to their contents. To the degree to which the smut is eaten by these beetles, they will prove of benefit to the farmer in preventing, through the destruction of its spores, the spread of the disease.

FEEDING COLTS BY HAND WITH COW'S MILK: GOITRE IN A HORSE.

R. R., Bridgeport, Mo.—1. The dam of a three-month-old colt was accidentally killed; how should cow's milk be prepared to feed the foal? 2. A horse of mine has goitre. Neighbors say it is due to drinking our well water. My mules also show small goitres already. How can the trouble be prevented and the goitres removed.

ANSWERED BY DR. F. H. KILBORNE.

1. The milk of the cow is richer in fats than that of the mare, while the mare's milk is sweeter than that of the cow. For a young colt the milk of the cow may be simply sweetened; but after the colt is two or three months old substitute sweet skimmed milk, which may still be sweetened a little. In addition to the milk, the colt of three months should have grass and a ration of oil-meal, flax-seed, scalded oats or bran. One-half pint of oil-meal or flax-seed boiled with two quarts of bran or oats will make an excellent ration for the colt. This quantity will make the colt three feeds. Should the bowels become too loose, reduce the quantity of oil-meal. Or if they become constipated, one or two tablespoonfuls of raw linseed oil may be added to his ration until relieved. It would be well to change the ration somewhat from week to week so as to give the colt a change. 2. In recent cases of this kind rub the goitre daily with compound tincture of iodine until the skin is slightly blistered, then use it less frequently. Give only rain-water for drinking-water. This will probably be all the treatment necessary in this case. In more chronic or advanced stages of goitre it is often desirable to give one dram of iodide of potash nights and mornings on an empty stomach, in addition to painting the outside with iodine. In a large goitre a diluted solution of iodine is sometimes injected directly into the swelling. The continual use of rain-water only for drinking-water will prevent the goitre.

THE EARLY HARVEST AND RED ASTRACHAN APPLES.

J. S., Plainfield, Ind.—I have just had an argument with my sister about the Early Harvest Apple. She claims it to be a red, striped apple, while I claim it to be a bright yellow; which is right? Please describe the Red Astrachan Apple.

ANS.—Downing thus describes the color of the Early Harvest: Skin very smooth, with a few faint white dots, bright straw-color when fully ripe. The Red Astrachan is pretty large, rather above the middle size and very smooth and fair, roundish, a little narrowed towards the eye. The skin is almost entirely covered with deep crimson, with sometimes a little greenish yellow in the shade, and occasionally a little russet near the stalk, and covered with a pale white bloom. Stalk rather short and deeply inserted. Calyx partially closed, and set in a slight basin which is sometimes a little irregular. Flesh quite white, crisp, moderately juicy, with an agreeable, rich, acid flavor. Good to very good. Ripens from last of July to middle of August.

FISTULOUS WITHERS.

S. S. C., Bingham Center, Pa.—My four-year-old mare is in good health except that she is troubled on the withers by large tumors which broke some time since, emitting yellow matter. This dried and peeled off in white scales. The matter no longer oozes out regularly; but is penetrating down on both sides. What should be the treatment?

ANS.—This is a case of fistulous withers. The abscess or pipe on each side should be freely opened at the bottom to allow of the drainage of the pus; and this lower opening should be kept from closing by a tape tied in the wound as a seton. Carefully syringe out the wound night and morning with a stimulating wash—zinc chloride one-half dram, or carbolic acid one dram in a quart of water.

Miscellaneous.

Several Subscribers.—The nailless horseshoe recently illustrated in the RURAL, is an English invention not yet placed on the American market.

A. B., Bergen Co., N. J.—The potato planter spoken of is the Aspinwall, made by the Aspinwall Manufacturing Co., Three Rivers, Mich. Send to them for full particulars concerning it.

J. J. T., Buffalo, N. Y.—Tile-ditching machines are made by the Streator Engine Works, Streator, Ill; the Kemp & Burpee Manufacturing Co., Syracuse, N. Y., and the Elevator Ditching Machine Co., Newark, Ohio.

J. H. M., Addison, N. Y.—How much Paris-green should be mixed with 25 pounds of flour to be put on potato vines in order to kill the beetles? I injured some of the vines of my early varieties by too strong an application.

ANS.—One-eighth of pure Paris-green for the lowest; one-quarter of a pound for the highest. *Thoroughly* intermingle.

G. C. B., North Rochester, Mass.—Could I build a small silo in a corner of my house cellar for experimental purposes? Would the steam from it be detrimental to the people in the rooms above? Would it injure the timber or flooring overhead? Would the vegetables stored in the cellar, be more exposed to frost than they usually are on account of the dampness due to the silo?

ANS.—We would not advise this experiment. There is an odor about a half-empty silo that is not agreeable to many people. It would also make the cellar too damp and would certainly not help the timbers and flooring.

DISCUSSION.

FALLACIOUS TESTS IN THE DAIRY.

C. E. LITTLE, OCEAN COUNTY, N. J.—The article in the RURAL of May 27th from G. W. D. which was graced with the suggestive caption, "As Long as a Piece of String," is worthy of study, because of the clearness with which it demonstrates several facts of great value to the average dairyman. Not that the facts are new discoveries, but they are strongly developed by the table of comparative products of his six grade Jersey heifers, only two years old, and tested during the second week's milking. A little study of these test records, which are reproduced below, plainly demonstrates that no one can tell which is his best butter cow by the quart-cup test,—by measuring her milk. This is fact No. 1; also that the percentage of cream is a delusive test: fact No. 2; also that the amount of the cream is a fallacious test: fact No. 3. These facts being demonstrated, then it follows that no dairyman knows which are his best cows, if his judgment has been formed by such fallacious tests. And it is safe to say, that 19 out of 20 have no other evidence in the matter than that found in either the quantity of milk, or the quantity of the cream; while this test of G. W. D. shows that the quality of the cream is not only a very important factor, but the uncertain factor till the churn and the scales have developed it.

Here is the test for one day, to which reference is made:

No. 1.	No. 2.
6 pounds of milk.	4 pounds of milk.
9 per cent. of cream.	15 per cent. of cream.
9 ounces of cream.	8 ounces of cream.
6 ounces of butter.	6 ounces of butter.
No. 3.	**No. 4.**
6½ pounds of milk.	10¼ pounds of milk,
8 per cent. of cream.	8 per cent. of cream.
10 ounces of cream.	8 ounces of cream.
7 ounces of butter.	7 ounces of butter.
No. 5.	**No. 6.**
6¾ pounds of milk.	7 pounds of milk.
16 per cent. of cream.	6 per cent. of cream.
6 ounces of cream.	6 ounces of cream.
5 ounces of butter.	4 ounces of butter.

I have re-arranged the products in milk and cream, in the following order of merit:—

QUANTITY OF MILK.	QUANTITY OF CREAM.	PERCENTAGE OF CREAM.
No. 4 10¼ lbs.	Nos. 3 & 4 7 oz.	No. 5—16
No. 6 7 "		No. 2—15
No. 5 6¾ "	Nos. 1 & 2 6 oz.	No. 1— 9
No. 3 6½ "		No. 3 4–8
No. 1 6 "	No. 5 5 oz.	No. 6— 6
No. 2 4 "	No. 6 4 oz.	

By the aid of my pencil I find that to make one pound of butter it requires as follows:

OF MILK.	OF CREAM.
No. 2, 10 6-10 lbs.	No. 4, 18 27-100 oz.
" 3, 14 8-10 "	" 5, 19 20 100 "
" 1, 16 "	" 2, 21 32-100 "
" 5, 21 6-10 "	" 3, 22 83-100 "
" 4, 23 4-10 "	" 1, } 24 "
" 6, 28 "	" 6, }

Evidently "all cream is cream" only in the same sense that all milk is milk. My object is to determine which of the six heifers is the most valuable animal. I find number 4, yielding 10¼ pounds of milk, the best for the milk-dealer. Numbers 3 and 4 excel in the quantity of cream, while number 5 takes the lead in the richness of her milk, as indicated by the highest percentage of cream. But for the butter product neither the heifer that gives the most milk, nor the one that gives the most cream, nor the one that gives the highest percentage of cream, is the most valuable of these six young cattle.

Number 3 producing seven ounces of butter, is the best of all for the butter dairy, although she stands in the fourth rank as a milk producer, and in the same rank for percentage of cream. Number 4 shares the honor of first position as a butter-maker, with a slight discount. No. 3 produces a pound of butter from 14 8–10 pounds of milk; No. 4 from 23 4–10 pounds, thus requiring 58 per cent. more labor in milking and handling to get the same amount of butter.

It may be observed that the poorest milker of the six, though yielding but four pounds of milk, outranks the largest milker, giving 10¼ pounds, the difference of one ounce of butter daily, being more than offset by the fact that to produce 100 pounds of butter from No. 2 requires the labor of milking, setting and handling only 1,060 pounds, while one must do this work for 2,340 pounds to get 100 pounds from No. 4—a difference in labor amounting to 120 per cent. So that the heifer that seems to be inferior to all, as usually judged, is proved by this test to be better than the one that by the same fallacious tests, stands at the head of the list. Indeed, I have a suspicion that the smallest milker is really the most profitable of all these heifers. I close by suggesting that the most pressing need of American dairymen is the invention or discovery of a method of testing a dairy, which shall be simple so that men of the field may use it, and fairly inexpensive, and also accurate.

R. N.-Y.—The method devised by Mr. Parsons of the New Hampshire Experiment Station, is well worthy of trial.

THESE WHEAT EXPERIMENTS.

T. B. TERRY, SUMMIT COUNTY, OHIO.—On page 414 V. A. S., gives us the result of some experiments in growing wheat. At the close of his article he gives his conclusions as to how to grow the best winter wheat crop in Michigan:—

Sow, about September 15, one bushel to the acre; drills about 16 inches apart; top-dress from the barn-yard; mulch with wheat straw, buckwheat straw, potato-vines, marsh-hay, etc. Rake off the mulch with a sulky horse-rake, about April 1; cultivate till the wheat is 10 inches high. With fair soil such treatment will bring from 30 to 40 bushels to the acre, as was proved in the experiment above given.

If V. A. S., will put in, say, 10 acres of wheat a year for five years, and treat it in the same way he concludes to be the best for growing a crop of winter wheat in his locality—if he will do this and actually grow "30 to 40 bushels per acre," on "fair soil," then I will have much more faith in his system than now. I do not doubt his entire honesty; but it will not do to draw positive conclusions from such a little experiment for a single season. Men should be praised for carefully mak-

ng experiments in new directions; but to say that a point is "proved" by a single little experimental strip is almost too hasty. I hope our friend will keep on with his experiments and, after a few years, I hope he will not find, as many of us have, that he knows less than he thought he did years ago. As to his conclusions, the averages of many experiences would show his time of sowing about right; but perhaps a little late. Five pecks to the acre in drills seven inches apart, would suit most of our best wheat growers. Some would top-dress where there was difficulty in getting a good stand of grass; but more would prefer to apply the manure to some previous crop. Mulching with straw is all right, particularly in exposed places; but that raking off of the mulch to cultivate—why, it might pay on strawberries where one gets $400 to $500 an acre; but then I would put it back after working the ground. Mellow earth on the surface makes a good mulch; so does straw. There is little difference. If the straw was on there I should certainly leave it on a crop bringing as little per acre as wheat. In a large way, it is possible that the earth stirring would be cheaper than the straw; but it would seem to me very unwise to remove the straw mulch to mulch the ground with mellow earth which is practically about all the cultivation would do. Now I may be wrong; but I want our friend to put straw on 10 acres of wheat next fall, rake it up and draw it off in April and cultivate the field as he states, and then give us his exact labor bill and receipts from wheat. No, better, let him put in half the field this way and half in seven-inch drills and leave the straw on. I think he will never rake off five acres again.

I put straw on part of a field, last fall, that has a northwestern exposure, and left it on. In 1883 this hill-side was winter-killed so that I plowed up the field. In 1886, the last time it was in wheat before this year, there was hardly a shock of grain on perhaps an acre and a half. So poor was this spot that it reduced my average to 25 bushels per acre. Only once in all my past experience have I had a good crop on that exposed place. This year, with the straw on it, it is heavy and even all over. I had the same sort of experience last year in another field. I cannot say whether I will get "30 to 40 bushels per acre;" but there are 660 large shocks standing on 10¾ acres, besides a large load that had to be mowed because it was down so badly.

I believe V. A. S. is doing good by advising us to mulch our wheat when we can. I know a number of farmers who have tried it and are well pleased. Hundreds of straw stacks in Ohio might have been used in this way to good advantage last fall; but it will take lots of "proof," to make me try raking it off after I get it on. And then I would not want my wheat plants so crowded as they would be with a bushel of seed in 16-inch drills. And still again, how can one sow clover if he cultivates until his wheat is 10 inches high? It would be so late here as to make the chances about even that hot, dry weather would kill it, and a grain crop without clover wouldn't be any better for me than a bank without money. I have a little experiment plot this year of this kind (wide drills), and the clover, sown early, has grown so tall that, as the boys say, it will be a picnic to cut the wheat. In my seven-inch drills the heavy wheat has just kept the clover down so that the binder goes over the top.

WHEN TO SELL POULTRY.

H. F., WAYNE COUNTY, N. Y.—On page 480 the RURAL asks, "Why not sell live poultry now?" Because hens which are doing their duty should lay for several weeks yet. If they are well-fed and still refuse to contribute their quota of eggs, by all means sell them. The roosters which are to be disposed of, should go at once; in fact they should have gone before. Hens will usually lay until about August, and then all which it is not desirable to keep over winter should be disposed of. It does not pay to keep hens after they are two years old. They are more liable to disease; they get broody oftener and lay fewer eggs between times, and are not likely to begin laying so soon in spring. August is the best month in which to sell. The market is then more nearly cleaned up of old stock, and the young chickens have not begun to arrive from interior points. I have practiced shipping during that month for several years, and have received more for my poultry than my neighbors who insisted on keeping their chickens until Thanksgiving, when they had "got their growth." I not only had more money for a half-grown chicken sold in August than the same chicken would bring two or three months later, but I saved that much feed, besides the labor of caring for him, and the possible loss from disease, vermin and inquisitive peds. Still I know people who will not sell their chickens early, because they are not so heavy as they will be in the fall. I have obtained 15 cents per pound for half-grown chickens in August, which I might have sold for six, or possibly seven in November. If you are keeping chickens for fun, it may pay to keep them until fall or winter, but if you are raising them for profit, it should not take very much arithmetic to show the most profitable time to sell. But when you send your chickens to market, send attached to their bones as much corn and other fattening foods as possible. Confine them in airy, comfortable, clean coops, feed them all they will eat up clean, mostly corn, both whole and ground, and mixed with ground oats or bran; give plenty of gravel and green feed, and, above all, plenty of pure water. In from 10 to 14 days they will be in fine condition for market. I have had the best results by shipping to New York. I make light but strong coops, about 18 inches high, with tight bottoms, the remainder of lath, close enough together so that the fowls cannot get their heads through, and of such a size that they will not weigh over 150 pounds when filled. I put them on the afternoon express, with their crops full and a supply of water, and they are in New York next morning. I drop a postal to the consignee at the time of shipment notifying him of what I have sent, and when. I have for some time shipped to a commission merchant who for several years has advertised in the RURAL, and his sales have always been satisfactory. The coops are marked with my return card, and if the expressmen feel like it they will generally return them free, although they do not agree to do this.

MORE ABOUT "CRANBURY" FARMING.

N. D., NEW YORK CITY.—The articles which have appeared in the RURAL on the system of rotation pursued by the farmers at Cranbury, N. J., are interesting and suggestive, but not conclusive. There is a lack of details and some of the statements made are apparently contradictory. Thus, for instance, on a farm of 100 acres with the five-course rotation adopted there can only be 40 acres in grass each year, and as the farmers, according to the second article in the RURAL, have not yet brought up the fertility of the soil to the point of producing two tons of hay per acre, it is clear that the total amount of hay grown on this 100-acre farm cannot exceed 80 tons; yet the farmer owning it states that he sold last year 90 tons over and above what was used for working teams—presumably two teams, though this is not stated—and cattle. Evidently there is something loose here. To enable outsiders to form a correct judgment on the premises, we need more detailed and exact information. What, for instance, is the yield of corn per acre? How many bushels of potatoes per acre are produced? What amount of farm-yard manure is used yearly? How many teams and men are employed? In short, let us have a look at the receipts and expenses of one of these farms for the whole year. It is obvious that the system is not perfected, otherwise there would be no complaints of the difficulty of getting rid of corn stalks. With the large amount of corn and corn fodder raised, one would think it ought not to be an unprofitable job to feed a few steers yearly at prices that would defy competition. But, as I have said, the articles are interesting and suggestive, and most RURAL readers, I am sure, are obliged to the paper for their publication.

R. N.-Y.—One object in printing these articles was to call out discussion and comparative statements. These will follow and then doubtless every desired detail will be presented. As to the heavy yield of grass on the 100-acre farm mentioned, it may be stated that the five-course rotation has not yet been fully developed. For example, the R. N.-Y. saw one large hay field of over 20 acres that had been cut three years and was ready for another cutting. Over one-half the farm is in grass this year because the rotation had not yet been completed. Thus it will be seen that the yield of hay could have reached 90 tons. Some of the land will yield over two tons per acre. The desire is to have the entire farm *average* that. The R. N.-Y. will endeavor to secure an itemized account of the yearly expenses and receipts from this farm. In the meantime we shall be very glad to hear from other farmers.

"IS CREAM, CREAM?"

DIRECTOR G. H. WHITCHER, HANOVER, N. H.—I see that the old question of the butter-making value of cream is again under consideration. It is a very important matter. There are hundreds of creameries where patrons are compensated for their cream by volume—either by the inch, the space or the gauge—and in all of these cases it is not only assumed, but insisted upon that a given volume of one lot of cream will give as much butter as the same volume of any and all other creams. Up here in New Hampshire it has been regarded as heresy even to suggest the possibility of there being a variation in the butter-producing value of cream raised under like conditions of temperature, etc.; nevertheless, like the belief in witches, etc., the "cream is cream" fraud has to go, and creamery patrons must be paid in proportion to the fat that is contained in their cream, not in accordance with the bulk of it, which may be varied by peculiarities of the milk.

In our work here at the New Hampshire Experiment Station, samples of cream raised under identical conditions vary from 19 per cent. to 28⅓ per cent. of fat. If we call a pound of butter fat worth 20 cents, this means that two farmers bringing such cream should receive $3.80 and $4.70 per hundred pounds respectively, instead of $4.25 each which they would receive under the polite system of robbery so prevalent in cream-gathering factories. By this system one man is overpaid by 45 cents per cwt; the other underpaid by 45 cents—a total discrepancy of 23 7-10 per cent. of the actual value.

I have results much wider than these, but I only select those where the conditions are strictly alike. But the worst feature is that in practice the conditions are not all alike. The milk of one herd may be set at a much lower temperature than that of another, and a cream may be thrown up which contains much skim-milk with the fat, while the milk of another, set in a higher temperature, is dense and rich. Under these circumstances, it is not uncommon to find one cream 30 per cent. richer in fat than another, yet all is paid for alike. Farmers must put a stop to this, for there are methods of testing cream within the reach of every creamery, and not to use them is to encourage injustice and injure both the farmer and, in the long run, the whole creamery business.

GRANULATION OF BUTTER.

J. M. C., HOPKINTON, N. H.—Considerable discussion has arisen of late, growing in part out of statements made by the Director of the New Hampshire Experiment Station, regarding certain churns as being better adapted from their construction for perfection of granulation than others. "P. C." of Milford, N. H., in the RURAL of July 6, says he "cannot see how granulated butter can be made with a Blanchard churn." He ought to know that granulation is perfected by stopping the churning process at just the right time, due regard being had to the temperature of the cream, etc. Now, churning beyond that point will cause those particles of butter to adhere together in any churn. I have used the famous Porter Blanchard's Sons churn for years beside other churns, and find no difficulty in perfecting granulation by means of it. I infer from "P. C.'s" statement, that he never used a Blanchard churn—he only saw his neighbor using one. Now, if he understands the process of granulating butter and will himself try a Blanchard churn, his testimony will have more weight. As to the process of cleaning, plenty of hot water, and a few revolutions of the crank will settle that matter in a very few moments.

If "P. C." rests his objection to the Blanchard on the ground that floats interfere with the granulation, I should say that the violent motion of the Stoddard churn, end over end, would have a tendency to cause the particles to adhere, and require more watchfulness than the gentle motion of the floats in the Blanchard.

SOME CHOICE STRAWBERRIES.

"W.", TYRONE, PA.—The Charles Downing Strawberry, which the RURAL finds still the very best on sandy New Jersey soils, is, all things considered, our very best here, on heavy clay, in central Pennsylvania. It does not bear more than Cumberland or Indiana, or Captain Jack, or Crescent, but it does quite as well, and is equally reliable, as uniformly large as the Cumberland or Indiana, most attractive in color, and the best in flavor when eaten from the plant. The Cumberland is a noble fruit, so large, so vigorous and so easily grown that we think it first choice for home planting. Indiana rivals it in extreme vigor and in fruitfulness and length of season; and is a finer berry of peculiar color approaching salmon, the same all over and all through. I received it a number of years ago from its originator, E. Y. Teas of Dunreith, Indiana. It has stout cable-like runners, and sends them out in more vigorous profusion than any other sort. Its foliage continues healthy, and is as large as that of Cumberland, but of a distinctly different tint of green when seen in mass. I have these and Charles Downing growing luxuriantly on heavy clay not stirred for years excepting on surface, and by the taking out of exhausted plants and the thinning of others. The surface is kept quite clean, and is always open, being annually mulched with sawdust or tan in December to which some ashes are added in the spring. This is an easy system of culture, practicable for women or old-men gardeners and annually successful in the most satisfying degree.

What Others Say.

THE CAUSE OF THE POTATO ROT.—A bulletin of the E. S. of the Tennessee University, as stated on p. 455, treats of potato rot. There are several kinds of potato rot, both wet and dry, which are due to various causes, but *the* potato rot—the disease which the planter always has in his mind when he says his potatoes are being destroyed by the rot—results from the growth of a parasitic fungus upon the potato plant similar in habit and botanically related to the downy mildew of the grape-vine. Owing to the fact that the growth of this parasite is favored by, and even dependent upon certain climatic conditions, many have come to regard the disease as climatic, and some who have failed to understand the true source of the malady, have believed it to be *caused* by the climate or by special conditions of the atmosphere. Potato rot has often been attributed to the character of the soil. Every one knows that the disease is most severe on lands that are heavy and poorly drained, but this severity is due to the abundance of moisture present favoring the development of fungus; the fungus is the direct cause of the rot, the soil acts indirectly, by inducing the growth of the parasite through the excess of moisture it contains.

Some have supposed that the rot was due to an enfeebled condition of the potato plant, resulting from many years of cultivation, but there is nothing to prove that this is the case. The disease has never been more destructive than during the years 1843 to 1845, and the wild potato is no more free from the malady than the cultivated varieties.

It is not the climate, or the soil, or any vital exhaustion of the potato itself that causes the rot; it comes from the attacks of a minute parasitic plant which infests the potato, penetrating in its growth both the tops and the tubers. This parasite has been artificially cultivated upon the potato and rot produced thereby; potatoes have been guarded from its attacks and thus preserved free from the disease, while potatoes, similarly situated in all other respects save this protection, have become diseased.

Season of Attack.—In the North where we raise only one crop of potatoes during the season, the rot fungus rarely becomes injuriously active before the first of August, and sometimes, according to the weather, not until a month or so later. Thus it often happens that the very early varieties escape the disease entirely, when the later sorts may be seriously injured. The former, in such cases, are harvested and out of the way before the fungus becomes wide-spread and virulent in its attacks. It appears also, though this may be questioned, that the potato plants are not particularly susceptible to infection until they have reached a certain age or stage of growth. We may see in the same field a plat of early potatoes suffering severely from the disease, while alongside there is a plat of a late sort which is entirely unaffected. Whether this exemption comes from the circumstance that the plants have not yet matured sufficiently to be susceptible to the attacks of the fungus, or from some other cause or causes, is not known.

In observing the herbaceous plants about us in the fields and woods, we cannot help noting that each has its special season of growth. Some appear early in the spring, blossom and then pass out of sight, others are conspicuous only in midsummer, while others still do not put in an apperance until late in the season. Remembering that the fungus of the rot is a plant, it cannot be considered at all remarkable that it should have a special period for development. Observation shows that it only attains its maximum development during the later summer and fall months.

Potatoes covered with from one to three inches of earth are pretty certain to become diseased if the fungus is on the tops, while those planted to a depth of four inches or more are rarely infected. It is for this reason that some practice the system of high molding or drawing up around the tops sufficient earth to cover the tubers to the depth of four or five inches. While this practice may be of value in protecting the potatoes from the rot, it is on other accounts, not looked upon with much favor by potato growers.

If the tubers become infected with the fungus they will very soon begin to rot, and un-

less dug within a short time many of them will be found entirely decayed when harvested. Sometimes the loss in the field may amount to a third or even one-half of the crop. This condition of affairs is bad enough, but the work of destruction does not cease here, for the disease continues—that is, the fungus continues to grow in the tubers, after they are harvested and stored in the pits or cellars. This growth is accelerated by warm and moist surroundings and placed in such circumstances, the disease progresses rapidly.

The Life History of the potato-rot fungus, briefly stated, is as follows, starting with the spores: The spores, lighting upon the leaves of the potato germinate in drops of dew or rain, and the product of germination—the zoospores—penetrate to the interior tissues of the plant, and after growing for a time through these tissues, the mycelium sends out, chiefly from the under surface of the leaves, slender, fruiting branches whereon are produced a new crop of spores. These may carry the disease to the other plants in the field, or to other parts of the same plant; that is, they may serve to spread the disease in the tops, which we term blight, over the entire field, or by being washed into the ground they may reach the tubers and cause the rot. At a temperature of 80 degrees and upwards, the vitality of the spores is quickly destroyed. In fact, it has been found possible to destroy the vitality of the mycelium in the infected tubers by keeping them for a few hours at a temperature of from 105 degrees to 110 degrees, a degree of heat which does not injure their value for seed. In this way, potatoes designed for seed, but suspected of containing the mycelium of the rot-fungus, may be thoroughly disinfected, and the most important source of danger to the growing crop will be thus eliminated.

It often happens that the greatest loss from rot occurs after the potatoes are dug, and one cannot be over-careful in the matter of storage if he would preserve his crop from loss. They should be kept at a comparatively low and even temperature, and especially where no dampness will collect about them. Dusting the potatoes with dry, air-slaked lime, at the rate of one bushel of the latter to 25 of the former, will help to keep them surface-dry and materially aid in their preservation.

Briefly. Select for planting a light, sandy loam or a soil which is well drained; plant only perfectly sound or disinfected seed; spray the tops with the Bordeaux Mixture or some preparation containing sulphate of copper; store in a cool, *dry* place, and keep dry.

SHORT STORIES.

FOR market purposes, among plums Mr. Charles A. Green mentions the Bradshaw, which is a large early purple variety, of fair quality, that always sells well. The tree is a thrifty upright grower, and comparatively free from the black-knot.

Smith's Orleans is of good size and showy, covered with a deep purple bloom and sells well, though only of fair quality.

IF a yellow plum were to be added it would be Prince's Imperial Gage.....

FOR home use Mr. Green, as he states in his Fruit Grower (Rochester N. Y.) would make a different selection—Green Gage, Washington, Jefferson, Yellow Gage, Reine Claude de Bavay, Lawrence's Favorite and McLaughlin.

BURPEE'S Bread-stone Turnip is said to cook thoroughly in 15 minutes. Flesh white and fine-grained, tender and sweet. One of the very best for winter and spring use. Its chief merit is that when other kinds grow strong and pithy this is at its best.....

THE White Egg Turnip is firm and tender and the quality is first-rate. The Golden Ball is a good keeper and is scarcely excelled for table use.....

KEEP the soil about late cabbages mellow..

RUTABAGA turnips may still be sown.....

THE Yellow Malta is early and of good quality. The Green Globe is very large (white flesh). The Pomeranian White Globe is good for stock. The White French is a fine keeper. The White Norfolk is late and solid. The Red-top Globe is a standard sort for the New York market. Extra Early Milan is the earliest. Red-top Strap-leaf is a popular variety for fall. ....

RED CLAWSON and Golden Cross are new wheats, originated by A. N. Jones, and they are now offered for sale. The R. N.-Y. will have a report to make on the latter before sowing time.....

THE BEST PLAN the Poultry Keeper has ever tried, and it has tried many to break hens of sitting, is to remove the sitter from the pen to which she is accustomed to one which is provided with no nest boxes. There give her generous food, abundance of fresh water, and everything her heart longs for but a nest. Don't let her be lonely. Give her for a companion a strong, vigorous, attentive cockerel. Under such associations and with such companionship the most obdurate, persistent sitter will forget her broodiness in a few days, and be ready to be transferred to her old home. This plan is not so effective as that of the R. N.-Y. though possibly more considerate. The R. N.-Y.'s way is to place the hen in a yard with a harmless dog.....

OUR contributor P. H. Jacobs, says that the "Red-Caps are persistent layers, non-sitters, and, so far, are favorites with those who have tried them. It is a curious fact that in every case those who have opposed the Red-Caps are parties who never bred them. The English consider them the best of all layers."....

AS READERS of the R. N.-Y. are aware, we have bred Red-Caps for two years and the strain is a very fine one too. They are beautiful birds, rather small, it is true. But they lay well and the egg is of fair size. Our main objection to them is their painfully large combs.....

LOVETT'S WHITE is the name of a new peach which is said to have yielded annually in certain Eastern States where most other varieties have failed. It is claimed that it is the hardiest white peach yet produced. Its season is very late. The color is a pure white; size very large; it is a long keeper; the quality is sweet and excellent. The flesh parts from the pit perfectly.....

THE GOOD is said to be a handsome, valuable new peach as large as Crawford's Late. It is said to come true from seed.....

PARKER EARLE of Cobden, Ill., remarks Mr. C. A. Green, in building a fence around his young orchards, several years ago, tried many plans for preserving the posts. Having occasion to remove the fence last winter he noted the condition of the posts as follows: Those set with no preparation were decayed an inch or more in thickness; those coated with a thick wash of lime were better preserved, but were quite seriously attacked by worms; those posts coated with hot tar were as perfectly sound as when put in the ground; those painted with petroleum and kerosene were equally as sound and as good for setting. Let the posts get thoroughly dry and then, with a pan of cheap kerosene and a whitewash brush, give the lower third of the post, the part to go into the ground, two or three applications of the oil, letting it soak in each time. Posts so treated, he says, will not be troubled by worms or insects of any kind, but will resist decay to a remarkable degree. This he finds to be the simplest, easiest, cheapest and best method of preservation.....

GOV. HOARD says in his Dairyman (Wisconsin) that common field corn, if rightly handled, will make more milk, ton for ton, than ordinary Timothy hay. Yet farmers destroy nearly all its feeding value in three ways: 1. They allow it to become too ripe before cutting and stooking. They think it will help the ears, but the ear will develop from quite a green stalk. 2. They allow it to remain exposed to the weather until the life and goodness of it are beaten out of it. 3. A great many never cut it up but turn the cattle in the field and starve them into eating the dry frost-bitten leaves and husks. For all this they pay a fearful price for waste. Many will say they cannot afford to hire help to cut up and save the corn fodder. Why cannot they as well afford to save a dollar's worth of corn fodder as a dollar's worth of hay? Every farmer expects to feed to his cows a certain amount of corn. Why not save the cost of husking and cut it into silo at once, when the stalk and ear combined are in the highest degree of excellence for feeding?.....

IT takes toil, and hard toil, to be sure, but is it a sign of smartness when a farmer has raised a fine field of fodder corn to let two-thirds of its feeding value go to waste? Is it good farming, or practical farming, to lose half of the results of your toil? Most men call it foolishness, and most men are right when they so call it.....

HERE is the recipe for the Bordeaux Mixture as Prof. F. L Scribner gives it:

"Dissolve eight pounds of sulphate of copper pure (in crystals) in 20 gallons of water; in another vessel slake 10 pounds of fresh lime in five gallons of water; when the lime mixture has cooled to the temperature of the air, pour it slowly into the copper solution, taking care to mix the fluids carefully by constant stirring. This should be prepared some days before required for use."

It will be seen that the R. N.-Y.'s formula as given in these columns a few weeks ago, does not differ from Prof. Scribner's materially, while it has the advantage of being brief and very easy to remember: One-half pound of lime to one gallon of water. One-half pound of copper-sulphate to one gallon of water....

MAJOR ALVORD says that if a tariff could be placed upon bananas and other tropical fruits without an immense amount of log-rolling he might favor it; but in the present condition of things, he thinks that the politicians and manufacturers would make a handle of such a tariff, and in the end it would only redound to the fruit-grower's injury. He says that the members of Congress are great friends of the farmers when they have an axe to grind, and that if a tariff were placed on foreign fruit, a tariff would be demanded on a dozen manufactured articles used by the farmer, so that in the end the farmer would come out, as usual, at the little end of the horn.....

IN an address made by Major H. E. Alvord, at the convention of the Maryland and Delaware State Teachers' Association, on the subject of "Agricultural Education for Old and Young," he said that we must have men who are thoroughly educated in theory and science, to enter into the fields of practical agriculture.....

THE physical and moral education which a boy gets on the farm is of such a character as to make him successful in any sphere of life..

THE farmer and his family are the seed corn of the nation. The best is selected every year for planting in the cities and towns.....

MANY seem to think that by instinct alone a man may perform the duties required on the farm, while the fact is it requires the brightest talents to become a thrifty and progressive farmer.....

THE order of things must be reversed. Instead of the brightest and best of the farmers' sons being sent to the commercial school or prepared for the "learned professions," and the dullest boy kept on the farm, the brightest boy should be kept on the farm and if necessary the dullest boy should be sent away to the town.....

AT the Maryland Agricultural College a valuable experiment is being conducted by Prof. Alvord. He has had an acre of land planted with whole potatoes no one of which weighed less than 11 ounces. It required 60 bushels of seed for the acre. From present appearances the experiment will be a success and go to demonstrate that the best way to plant potatoes is to plant large ones whole....

DIRECT.

——JOHN J. THOMAS: "Awkward, flowerless, treeless homes are abominations. The nurserymen who help to cultivate rural tastes are patriots and public benefactors."

——W. C. BARRY: "A languishing nursery business would be a national calamity."

——PROF. C. S. PLUMB: "I haven't been in the habit of indulging in much flattery, but I want to say now to you that you have certainly taken a big lead in agricultural journalism. Never has the RURAL looked so prosperous in my eyes from every point of view."

——AMERICAN AGRICULTURIST: "When a man doesn't know how to run an engine, he is not called an engineer; when he can't repeat the multiplication table, he is not called a mathematician; but any man who tries to farm, though he doesn't know how it should be done, doesn't know even the multiplication table of it, is called a farmer. He is misnamed, and that's why so many called farmers are also called failures."

——BALTIMORE AMERICAN: "Though there is a great deal of pluck about grapes, they can't help giving a wine when they are bruised."

——N. E. FARMER: "No weedy crop is ever a full crop."

——GREEN'S FRUIT-GROWER: "There are farmers who present an attractive appearance as seen at their farm work. There are others who dress so shabbily and whose beards and hair are so unkempt as to mislead the traveler who might be looking for the proprietor of the farm into suspecting that he has met a much less important personage."

——T. H. HOSKINS, in the Vermont Watchman: "We personally know farmers in every New England State and in New York who are making money right along in farming, and they have no advantage whatever over their groaning neighbors, except that they have taken pains to learn their trade well and to keep up with the times."

——"FARMING is a different thing from what it used to be, but no more different than shoemaking, railroading, merchandising, newspaper publishing, and nearly everything else. How long would even a country newspaper live if run on the lines of the country newspapers of 40 years ago? It is just so with farming. The time has come when old ways are being dropped and new and better ways adopted in every line of business."

——"This abandonment of the farms for the cities is merely temporary. Every kind of city occupation is to-day more overdone and overcrowded than farming. The big and growing cities of the West are more and more consuming the products of Western farms, which are themselves decreasing in productiveness."

——"We know a man who two years ago bought one of these 'run-out' farms, and last year cleared over $800 in cash on the potatoes he grew on a part of it."

——PUCK: "When Uncle Eben's boys complain of feeling tired in the field, he says: 'Tut, tut, you jis pitch in harder an' work it off.'"

——ELDER BERRY: "How much are these blackcaps a quart, Deacon?"

DEACON SANDERS (*the* grocer): "Twelve cents."

ELDER BERRY: "All right, Deacon; here, I've brought a quart measure along to get 'em in."

DEACON SANDERS: "Wall, Elder, I'll have to charge 36 cents for that full."

——"BIRD-SEED—Eggs."

——"WHEN marketing for chickens, always remember that the good die young."

——LARGE EARS are said to be a sign of generosity. This probably accounts for the mule's great profligacy with his heels."

——DR. KIRTLAND: "Rather than kill birds to save fruit, I would raise more fruit to attract the birds."

Horsford's Acid Phosphate

Relieves the Feeling of Lassitude so common in mid-summer and imparts vitality.—*Adv.*

Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

Is Your Blood Pure? If not, if you have boils, pimples, "humors," or indications of scrofula or salt rheum, you should take Hood's Sarsaparilla, which is the best blood purifier known. It effects wonderful cures where other preparations utterly fail. Be sure to get Hood's.

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For Internal and External Use.

Stops Pain, Cramps, Inflammation in body or limb, like magic. Cures Croup, Asthma, Colds, Catarrh, Cholera Morbus, Diarrhœa, Rheumatism, Neuralgia, Lame-back, Stiff Joints and Strains. Full particulars free. Price 35 cts. post-paid. I. S. JOHNSON & CO., Boston, Mass.

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"What! Corns and Bunions all gone?"
"Yes. I am happy to say, through the merits of **Hanson's Magic Corn Salve,** I can now walk with ease."

HANSON'S MAGIC CORN SALVE.

If your druggist does not keep it, do not let him convince you that some imitation is just as good. Send by mail to **W. T. HANSON & CO., Schenectady, N. Y.** Every box is warranted to cure or money refunded.

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THE
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A National Journal for Country and Suburban Home.

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THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, AUGUST 3, 1889.

THE BLUEBERRY.—Can it be made profitable under cultivation? See page 508.

THE Flea-beetle is again doing sad work at the Rural Grounds, and in the country thereabouts. Many fields of potatoes will not yield over half a crop, while lots of melon vines have been destroyed.

SIR J. B. LAWES writes the R. N.-Y. that Dr. Gilbert has so tried his eyes that he is obliged to take a rest. He is going to Norway. The promise of a fine wheat crop in England is very good, but dependent upon a dry July. The conveyance of Dr. Lawes's experiment grounds and laboratory to trustees and an appointment of a committee of arrangement are now accomplished facts.

SECRETARY MOHLER, of the Kansas Board of Agriculture, reports that chinch bugs seem to have been annihilated. Some contagious disease appears to be carrying them off by the million. This is doubtless the disease described by Mr. Gillette on page 85 of the present volume of the RURAL. A report from Albany states that a parasite has been discovered which destroys the clover midge in large numbers. We are all ready for more of such insects.

"*A clean field of potatoes in early September is a sight on the average farm; and no man can afford to buy manure at two cents a pound to grow weeds.*"—BUCEPHALUS BROWN. page 507.

THE development of the dressed beef business is even driving the pigs off the farm in districts near the large cities. It is very easy now to buy beef—too easy indeed for the old-fashioned farmer if there is such a person left within reasonable distance of a railroad. The pig is still a very necessary farm animal. We have not yet reached a point where we can farm without wastes of some sort. The pig will turn more of these wastes into profit than any other animal can do.

ON July 20, a single hill of early potatoes was dug in the soil which connects with the "Contest" Plot. The vines were still quite vigorous though showing some signs of approaching maturity. The hill yielded 21 potatoes, 15 of which were of marketable size, the others very small, The weight was four pounds 12 ounces which, as the seed was planted one foot by three feet apart, would be at the rate of 1,147.83 bushels to the acre. This is a mighty yield for a very early potato. It was sent to us by A. D. Wayne, of Roscommon, Michigan, who stated that the new variety was from the seed of Early Peachblow. It resembles the Early Rose, however, in every way. The quality is first-rate.

EVERY variety of raspberry growing in the Rural Experiment Grounds—whether red, black-cap or hybrid—is so affected by a disease seeemingly of fungoid origin, that raspberry culture is impracticable. During the past four years, many new kinds have been sent there for trial. Manifestly it would be unfair to the originators or introducers to make unfavorable reports regarding them.

The canes of the current season grow thriftily. These canes the next or fruiting season are attacked by the fungus when, or even before, the fruit begins to set. The leaves turn yellow and fall; the canes dry up and die, so that very little fruit has a chance to ripen.

It might have been well to spray the young canes early in the season with the Bordeaux Mixture. It did not occur to the R. N.-Y.

REPORTS come from various sources of a scarcity of potato beetles. We have not missed them in New Jersey. They are "always with us." Here is a letter from Greeley, Colorado—a communication from beetle headquarters as one might say:

"Last winter was very mild indeed. As a consequence some of the pests that afflict the farmer received no great discouragement. This spring the beetles were sitting about waiting for the potato plants to come up. They vigorously attacked potato fields, both the late and early plantings. Potatoes are the great product of this portion of the "Great American Desert." Train loads go from this point. Never before have the bugs been so bad on late potatoes. It is said that five tons of Paris-green have been used in the vicinity of Greeley alone.

ON page 510 a correspondent asks some questions about the expenses of conducting the 100-acre farm at Cranbury, N. J., from which produce to the value of $3,116. 83, was sold last year. The R. N.-Y. has a letter from the owner of this farm, that may add to the facts already brought out. He states that the farm is worked by his sons for an interest. It is therefore impossible to state the value of the labor employed in a year. The young men employ one man at $13 per month and board for nine months. During, haying and harvesting and while picking potatoes more help is hired. The corn crops, one year with another, will average 50 to 60 bushels per acre. Wheat last year did not yield over 20 bushels per acre. Potatoes averaged about 230 bushels of marketable tubers, while the hay crop exceeded 2½ tons per acre. One year with another, from 150 to 160 loads of yard manure fairly decomposed are used.

THE general public should soon be prepared for an advance in the price of sugar. The Sugar Trust is evidently getting ready for such a contingency, which will be falsely attributed to failure of sugar crops in this and other countries. In reality, however, it is packing large warehouses in Brooklyn with raw and refined sugar in order to lessen the available supply and consequently increase the price. After having shut down some of the associated refineries entirely and curtailed the production of refined sugar in others, it is now tightening the screws on the dear public by withdrawing a large share of the product from market. Considerably over 300,000 barrels have already been stored away, and trucks and lighters are kept constantly busy adding to the amount. With the price of salt raised by one trust and that of sugar by another, every household in the country will soon feel the effects of these "purely business affairs."

The Pennsylvania State Agricultural Society is in trouble about its fair grounds at Philadelphia. It owes about $70,000 and has no means of paying even a part of that sum. The Reading Railroad Company holds a mortgage for $25,000 on the fair grounds and is about to foreclose, "in order to protect itself" against other creditors who have secured judgments against the organization. It will be to its interest, however, that the fairs should continue to be held regularly, as they bring no inconsiderable traffic to the line. On foreclosure, the leasehold of the grounds and the buildings will be sold at auction, and the railroad company intends to buy them in for the use of the State Fair Association. The members of the latter, however, appear to have been poor business men, at least in their fiduciary capacity. Until quite recently, they allowed the grounds to be used only at fair times, whereas a very good revenue, it is claimed, could have been secured by leasing them at other times for picnics and other entertainments. As in the case of many an unfortunate farmer, the association's ideas were too big for its pockets. It went heavily into debt to make a big splurge, was neglectful of small economies, and now finds itself homeless. A poor example, surely, this set for the farmers of the State by their representative association.

THE R. N.-Y. "CONTEST" PLOT IN A PICKLE.

ACTING upon the belief that this season would be dry, a part of the "Contest" Plot was planted to early varieties. The vines are now dying, not that it is time for them to mature, but on account of the injury sustained by the Flea-beetle which seems to prefer the foliage of early varieties. Whether late or early, however, there is not a leaf in the entire plot that is not more or less perforated by this destroyer. So much rain has fallen that the soil is saturated and it is probable that rot will be the consequence, as the early potatoes must remain in the ground until the late kinds mature and all shall be dug before the judges in September next. It may be feared that the R. N.-Y. "Contest" Plot is in another pickle.

SPECIAL NOTICE.

IN reply to inquiries we may state that the inner portion of the flowers of the potato R. N.-Y. No. 2 is a light purple. This purplish color covers irregularly about *half* the corolla. The outer portion is nearly white. The proportion

of white and purple is shown in the illustration which was carefully drawn from nature. This variety *never bears solid white* flowers. The stems also are, here and there, *tinted* with purple. They are long-jointed and branch less freely than do most other varieties.

SELECTING THE BUTTER COWS.

THE "discussion on Fallacious Tests In The Dairy," page 509, is worth studying in connection with the recent articles entitled "Is Cream, Cream?" How are we to pick out our best cows? How are we to tell that the butter from one cow costs less than that from the cow in the next stall? It is very evident that we must find out in some way before we can conduct the dairy business on the scundest business principles; but how is it to be done? That is the point. We want a method that will prove sure, simple and easy, otherwise the farmers who most need it will not touch it.

A friend sends us the following table which he says contains a record of tests made at the last Bay State Fair:

BREED.	MILK. POUNDS.	CREAM SPACES.	BUTTER. OUNCES	BUTTER PER SPACE. OUNCES.
Devon	17½	8	11	1.37
Holstein	19½	10	11	1.10
Normandy	19¼	9½	7½	0.79
Swiss	16¾	10	11	1 10
Guernsey	18¼	9½	15½	1.63
Jersey	18¼	14	16	1.14
Ayrshire	18¼	11	13½	1.23

It seems evident from this that the dairy breeder in order to make sure of the worth of his cattle, must go beyond the amount of milk and the amount of cream, and know how much butter can be taken from the churn.

"*Agricultural schools that will do for the farmer what West Point and Annapolis do for the soldier and sailor, will soon be crowded with pupils who will justify their existence most completely.*"—DR. HOSKINS, page 507.

ANTI-DRESSED-BEEF LEGISLATION.

A CASE to test the constitutionality of the Minnesota "dressed-beef law," is now on trial before Judge Blodgett of the United States Circuit Court. The law was passed last April and prohibits the sale of dressed meats within the State unless the animals to be killed have been inspected alive in the State within 24 hours of slaughter. An attempt was made to pass a similar law in the legislatures of 19 States; but the attempt succeeded only in those of Minnesota, Indiana, Colorado, and New Mexico. The Chicago beef-packers say that if the law is upheld it will cause a serious decrease in their profits, and maintain that such a law is unconstitutional because it interferes with the provision of the Federal Constitution giving Congress the exclusive right of regulating commerce between the States, and they also claim that it infringes on the privileges and immunities granted to citizens, and is in restraint of trade. The Big Four contributed liberally towards lobbying to defeat the law before the various State legislatures, and they are now using their best efforts, regardless of expense, to obtain judicial decisions against the constitutionality of the law in the States where it was enacted. The Indiana law was declared unconstitutional by a State Court the other day, but jurisdiction in such matters properly rests with the United States Courts. Whatever may be the decision of Judge Blodgett, the case will certainly be appealed to the United States Supreme Court, so that it may be three years before a final decision is rendered. A legal contest for large stakes between the general public and a combination of wealthy corporations or individuals is likely to be strenuously carried on by the latter to the end.

YIELD OF THE R. N.-Y. WHEATS.

THE R. N.-Y. cross-bred or hybrid wheats yielded, omitting fractions, as follows:

No. 2, one thirtieth of an acre, 1½ bushel or at the rate of 45 bushels to the acre. No. 3, one-fortieth of an acre, 66½ pounds or at the rate of 44 bushels to the acre. No. 50, one-thirtieth of an acre, yielded 73 pounds or at the rate of 36 bushels to the acre. No. 51, one-twentieth of an acre, 81 pounds or at the rate of 27 bushels to the acre. This plot was injured by chickens. No. 53, one-twentieth of an acre, yielded 100 pounds, or at the rate of 33 bushels to the acre. No. 55, one-fiftieth of an acre, yielded 40 pounds or at the rate of 33 bushels to the acre.

The entire plot was plowed last August after 10 loads of stable manure had been spread to the acre. It was then harrowed and at the rate of 1,000 pounds of high-grade fertilizer was sown. The land was then harrowed until it was level and fine. It was then carefully marked out both ways in drills one foot apart, and a single kernel planted an inch and a-half deep in the intersections. This was done between September 3d and 10th. As soon in the early winter as the ground was frozen hard enough to bear, the plots were mulched with stable manure at the rate of about 12 tons to the acre.

It should be stated that this piece of land is naturally very thin and poor. It had not been cultivated for 16 years or more and was deemed too poor to yield a profitable crop of any kind. The weeds growing upon it were chiefly brambles and briers.

"*If we call a pound of butter fat worth 20 cents, this means that two farmers bringing such cream should receive $3.80 and $4.70 per hundred pounds respectively, instead of $4.25 each which they would receive under the polite system of robbery so prevalent in cream-gathering factories. By this system one man is overpaid by 45 cents per cwt.; the other underpaid by 45 cents—a total discrepancy of 23 7-10 per cent. of the actual value.*"—PROF. WHITCHER, page 510.

BREVITIES.

SOMETHING of a startler on the question of "A Tariff on Bananas" next week.

THE R. N.-Y. wants a seed-ball or so of its No. 2 potato which never sets fruit at the R. G.

THE R. N.-Y. knows of a farm hand that is so lazy that even when standing up he is unwilling to make the effort to sit down.

THE R. N.-Y. is told of a locality on Long Island where water-cress farms are being established. The industry is said to be profitable.

READ what is said about the cultivation of blueberries in this issue. If you have ever tried to cultivate this fruit, let us know your experience.

SALT mackerel is a very agreeable winter food for many farmers. The price for the fish promises to be high. The "catch" this year is very light.

Do you pasture your meadows after mowing? This is a topic the R. N.-Y. wants to discuss. Is such pasturing harmful and how much damage is done?

THE Colorado potato beetle has been observed in Central Mississippi this year. It is said that this pest has never been noticed so far south in that longitude before.

IT will be noticed that Texas stockmen find profit in feeding boiled cotton-seed. If English farmers can afford to feed cotton-seed meal, American farmers can afford to feed the entire seed.

"YOU will do genuine missionary work if you follow up this matter of experiment stations abusing the funds given them to work with. There is no doubt that this trust is being and has been abused in some cases, and it ought not to be, as I am sure the major part of the station workers thoroughly believe it should be honestly expended" So says one of our foremost young Professors of Agriculture in a note to the R. N.-Y.

Various.

CORRESPONDENTS' VIEWS.

ANOTHER CONTEST PLOT.—I feel quite proud of the prospect for my Potato Contest Plot so far. The season has been very good for potatoes. We had enough cool showers to keep them growing without need of irrigation until they were in bloom and beginning to set. Then one irrigation was all they needed. A potato grower near here thinks I have in my plot the best prospect that he has seen in the county. Potato beetles are plentiful, but with the sprinkling of a solution of Paris-green twice, they have been kept from damaging the plot. At present the vines (rows three feet apart, 10 inches in row), completely cover the ground. The kinds planted are the Carter and Paragon. In a plot last year they yielded very largely.

Fort Collins, Col. E. H. S.

CULTIVATING POTATOES IN NEBRASKA.—For raising potatoes I plow the ground reasonably deep; then harrow until the soil is thoroughly pulverized, then with marker lay off the land in rows three feet apart. Then with a small pair of mold-board shovels on my cultivator set three feet apart, I go twice in a row making a nice furrow. Then I drop the potatoes, which are cut in small one to three-eye pieces, one piece in a hill. Next a one-horse cultivator with a wheel on one end and two shovels behind does the work completely. Just before the vines appear I harrow and do so again once or twice after they are up. Then I use the cultivator three or four times, hilling up very little.

Phelps County, Neb. W. H. A.

A HANDY WEEDER.—With a cold chisel, cut six inches from the point of a worn-out scythe; then cut two inches of the blade part off the back; put on a light handle; then bend two inches of the point on a curve so that the point and handle will be at right angles, and you will be surprised to see how handy it is.

Birmingham, Conn. G. W. D.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

WHAT WOMEN ARE DOING.

THERE are 60 women among the 16,000 dentists of the United States.

* * *

IN Detroit, 2,700 women registered to vote for school directors, and they have elected a woman to the school board.

* * *

THE California legislature has passed a bill permitting women to vote for school trustees. A bill giving full municipal suffrage to women was defeated in the Senate by a close vote, 15 to 18.

* * *

IN British Columbia, where single women and widows have had municipal suffrage for many years, a proposition was lately brought before the local parliament to make them eligible to municipal offices. It was defeated by one vote—six to five.

* * *

SAYS Daughters of America: "A peculiar fact about American literary women is that many of them are domestic in their tastes and have great ability as housekeepers. Lucy Stone is a noted home-maker. Mrs. Elizabeth Cady Stanton's domestic propensities are well known. Mrs. Annie Jenness Miller, the lecturer and advocate of dress reform, has a husband who worships her. Mrs. Livermore, the lecturer, is another good housekeeper, and in addition to her public and private duties takes care of an invalid daughter."

* * *

THE plan of the Brooklyn training school and home for young girls is to take girls between the ages of 12 and 18 years, who have been left to their own exertions to earn a livelihood, and train them in various occupations; in addition to this, positions will be provided for them. Fifteen prominent Brooklyn women have this matter in hand, and have already been assured of assistance. A building has been secured on Pacific Street, where the home will be established for the first year.

* * *

A NOVEL savings society has been started in Salt Lake City. Two sisters named Mather, in their desire to help sewing and servant girls, suggested saving by depositing small sums each week, and a society was formed, each member agreeing to take a share, and deposit 25 cents each week in the bank. When the whole deposit reaches $200 or $300, it is loaned on a mortgage, at good interest. Some of the girls take two or three shares. Business men, who have been consulted, have become interested, and help the girls in making their loans. This is a sample of what may be done through small savings. Merchants point to the fact that nearly all the gew-gaws brought to the city are purchased by servant girls, who seem to have no desire to save their money, and they think this society will correct this common practice of useless expenditure. All the work of president and secretary is done gratuitously.

* * *

FRANCES POWER COBB is an exponent of so-called Woman's Rights, but she says that the making of a true home is really our peculiar and inalienable right—a right which no man can take from us; for a man can no more make a home than a drone can make a hive. He can build a castle or palace, but, poor creature! be he as wise as Solomon and rich as Crœsus, he cannot turn it into a home.

* * *

SAYS Daughters of America: "Let our girls become really thorough saleswomen, both wholesale and retail, even if it comes to traveling; let them practically learn printing, engraving, designing, light cabinet work, stenography, book-keeping, watch-making, goldsmithing, dress-making (at which the practical woman sometimes makes a fortune)—any of the hundreds of things for which their nimble and delicate fingers, native wit and taste, quick perceptions, and faithful perseverance fit them—and let them learn it as a business, thoroughly, honorably, with a determination to be first-class work-women, and soon they will share the pay as well as the work of men. And our girl will be no less fitted to be a good loving wife and mother, if she sees fit to marry; and she will not be driven into a thoughtless marriage to escape the drudgery of earning the pittance which will not support her, nor of making a sacrifice, which is generally considered to be even more disgraceful than that. Think of this, you who bemoan the thousands of unhappy marriages and the frequency of divorce. And if she is left, as many women are left, with children depending on her for support, she is in no worse condition than the widower who is left with them to care for. Think of this, you who may be widows.

Some men have objected to this idea, saying that if women are self-supporting they will not care to marry. Surely if a man depends upon his money alone to attract and keep her, the time has arrived when woman should compel him to make himself worthy of her love and possession."

* * *

THE same paper says, that if parents would teach their daughters that they have equal rights with their sons, and that they must insist on having those rights treated with the same respect; if they would teach them about our national government, instead of giving them novels to read; if they would teach them trades, whereby they might become self-supporting; if they would teach them independence in thought and action—we would have fewer unhappy women than we have now."

ABOUT VACATIONS.

OLIVE E. DANA.

IT is with vacations as with many other things in this world of ours, those who need them most are not always the ones who get them.

Yet I wonder if it isn't sometimes the fault of the stay-at-homes themselves. And "vacation" doesn't necessarily imply travel,—does it?—though indeed one might think so, from the very general use of both the word and the thing.

Why could not a busy person, (who was also a weary one) determine to get all the rest, change, refreshment, and pleasure that should come in her way (for we will suppose that this busy and tired person is a woman and a housekeeper) for a certain period? Why should not such a one person promise herself that she would make each day's tasks, for a few weeks, as few and light as should be consisent with household comfort, securing to every hour the solid rest possible to her, and enjoying every little outing or bit of pleasure that should come in her way? Would such a resolution be selfish, either in its spirit or its fulfillment? Would it not rather be not only for her own good but the good and pleasure of others, in its consequences? There are force and truth in a late editorial utterance of "Zion's Herald." "If it is felt that the daily round of duty *must* be made, then the toiler is becoming unconsciously an automaton and this is the first approach of mental imbecility and physical paralysis."

There are wont to be, in every path, little pleasures which we slight because of their littleness. Yet they make a great difference—plus or minus as we may make them—in the sum total of comfort. The short drive, even if it be wedged between bits of housework, the longer one that a free afternoon affords us, the calls on old friends, the day's visiting, the renewal of old acquaintance with nature and human nature, the stroll to the river's brink, the walk in the meadow when the grass is mown, the excursion down the river, the neighborhood tea-party or picnic, all these are not to be despised or forgotten as factors in the problem, "how to get a vacation." And I sometimes think the people who take vacations, and whose work both allows and demands them, have it in their power to determine quite largely whether certain other folks whose occupations are quite different, shall have a taste of summer leisure and pleasure or not. I heard of a pretty plan the other day. A young lady teacher, just released from wearing school-work for the long vacation, and herself not unworn by it, had had hardly a week of freedom before she gravely invited her mother, on whom fell naturally the burden of home-work and care in their little household, to visit her for a week.

She, the daughter, was to manage domestic affairs and do the housework, and the mother was to be her guest.

I wonder if some tired women, on whom fall far heavier and steadier tasks than this mother knows, would not be glad of such a vacation? And I wonder how many daughters would be thoughtful enough, or tender enough, to give it to them?

Speaking of vacations, it occurred to me the other day to look up the meaning of the word.

It comes, as I had guessed, from the Latin, from *vacatio*, which is again a derivative of the verb *vacare*, to make empty or void.

And accordingly, the first definition Webster gives of it is, "the act of vacating, making void;" and the second, "freedom from interruption, trouble or perplexity; leisure."

I don't quite like the suggestion of emptiness about the primary meaning of the word; yet, doesn't it well describe some vacations we have known of, perhaps some we ourselves have taken? And were they not wearisome and disappointing? Were we not glad when they were ended? I think, really, that the vacation or visit which one crams with work she had no leisure for before, writing articles that have haunted her, letters that should have been sent long before, reading "solid" books, or doing many pieces of sewing or fancy-work: I think such a "vacation" is far more enjoyable and restful, and more conducive to health and happiness than the "empty" sort. Between the two, however, lies the golden mean. Who is so wise and fortunate as to find it?

Meanwhile, can we not be seeking it during the mid-summer heats? And if the longer leisure of weeks of rest and recreation and travel is denied us, shall we not be taking all we can, in installments?

HOW TO KEEP WELL AND HAPPY.

MRS. S. H. ROWELL.

"I WONDER who is sick at Mr. Jeffords?" said Mrs. Bly, as she glanced out of her sitting-room window when closing the blind, "the doctor has just gone in there."

"It seems to me as if they had a great deal of sickness this summer. I really believe the doctor has been there as often as twice a week ever since they moved here," remarked Mr. Bly. A quick step on the back porch interrupted them, and Mrs. Jeffords opened the door. She was in a flutter of excitement.

"Have you any dry mustard, Mrs. Bly? Mr. Jeffords and the boys are both terribly sick; I think they must be poisoned."

Mrs. Bly hastened to get her box of mustard, and as she handed it, inquired with anxious sympathy.

"Can we do anything to assist you, Mrs. Jeffords?"

"Oh, if you would only come over—I am so nervous and tired." So she went over. Mr. Jeffords lay upon the sofa, retching and writhing with pain. The two boys had pillows on the floor, and were evidently suffering a great deal. The baby was crying in the cradle, and the family physician had Mr. Jeffords's hand in his, feeling his pulse; while an anxious expression rested on his face. It was evidently a most distressed family.

"What is the trouble, Doctor? What can I do to assist?" asked Mrs. Bly.

"I want some mustard plasters spread as quickly as possible. It seems like a case of poison. They were all well before noon."

"What could they have taken to affect them so terribly, Doctor?"

"I have not ascertained yet. I wish I could get them to throw up."

"Some mustard stirred in warm water, is a good emetic."

"So it is; suppose, Mrs. Bly, you prepare some as quickly as possible." She did so, and spread the plasters on the pits of their stomachs. The emetic operated quickly, and Mr. Jeffords began to be relieved, and the little boys grew more quiet, and finally dropped to sleep.

"Doctor, what on earth ails us; can you tell? I was as hungry as a bear when I came in to dinner; the boys were not home from school; but I did not wait, and was nearly through when they came in. My wife said she was too tired to eat; and she is not sick, you see; so it is something we have eaten."

"Yes, probably. What did you have for dinner, Mrs. Jeffords?"

"Baked fresh pork, turnips and potatoes, with bread and butter. I was ironing all the morning, and was so tired that I could not eat."

"Don't you think, Doctor, it was the fresh pork? I do not think it a very safe article of diet in hot weather," said Mrs. Bly.

"I don't know really. This family are predisposed to sickness. I am afraid there is something about the premises that is not as it should be. We eat a good deal of fresh pork at our house."

The sick ones seemed so comfortable after a little space, that the physician left, saying he would call later in the evening.

Mr. Jeffords remarked, after he had gone, that he had done nothing at all for them, only felt their pulses round, while Mrs. Bly gave all the medicines, and prepared them, too.

"Now, really, Mrs. Bly, what do you think was the matter with us?"

"Well, I think it was the meat you ate. I do not think you were poisoned, and of course the vegetables were harmless, unless you put in too much butter to make them good. We never eat fresh pork in hot weather, as we do not think it safe. Indeed we eat very little fresh meat of any kind. Eggs, rice, nice bread, berries fruits and vegetables are our living, with an occasional meal of dried beef or salt fish cooked in a cream or milk gravy."

"Don't you use meat at all, in your family, Mrs. Bly?"

"I boil a bit of salt pork with my beans, peas and cabbage, to give them a relish, and Mr. Bly sometimes eats a bite; and once in a while I broil a little ham to have a change," she answered.

"You cook chickens and turkeys, I suppose then?"

"Not during the hot summer months: they are so apt to give one colic or bowel complaints in warm weather, but we use them plentifully in cold weather, as well as meats of all kinds. We use salted fish in the summer, and this plain diet seems to agree with us all, for we keep hearty, well and happy."

"I know you do: you never have a physician I see. We have to call in a doctor 20 times a month, I expect," said Mr. Jeffords, as he rose from the sofa. "I think you were right, that it was that meat that made us sick. I will leave word and that doctor will not need to call again, and I'll save one bill! And if we can all keep as well and happy as your family are, I would never buy another pound of meat."

"Mr. Jeffords has often said he wished our children were as well and happy as yours. Ours are sick so much that they can neither feel well nor happy," said the poor mother, sadly.

"Allow me to tell you wherein the difficulty lies, or at least where I think the trouble is; you will not be offended?"

"Offended! No indeed! I wish you would, for I am worn out taking care of sick children; not to speak of my own poor health."

"In the first place, you use too much lard and butter, in your cookery; you make and eat too much rich cake, and you give the little folks too much candy and sweet-meats. They are always eating either cake or candy. You do not think of it; their little stomachs have no chance either to digest their food or to rest. They cannot feel well, and consequently are not happy. If you and your husband would think about it, you would see for yourselves that it is an injury to keep children surfeited on sweets, and the less meat they eat in warm weather, the better they will feel. I am glad you have all got over this attack so quickly, and I do not fancy you will get 'poisoned on fresh meat again this summer, especially on fresh pork. The lighter the diet one gives children the better; I saw the doctor did not accept this idea of the cause."

"I expect he likes business, but it is pretty costly business to employ a physician as much as we have always done," said Mrs. Jeffords.

"Yes, it is much pleasanter to keep well, and we shall all be happier for it."

GOLDEN GRAINS.

IN reply to a correspondent, the Journal of Commerce says that nothing is more difficult of explanation than the mental process by which a person of respectable exterior and presumed good judgment will justify himself for standing in a crowd of people on the platform of a car or ferryboat, or in a waiting-room, and puffing from his lips the smoke of a cigar or the foul fumes of a cigarette, when he cannot fail to see that the discharge goes directly into the face of some other person. We see this every day, and it is one of the marvels to be found in a civilized community.

A SUBSCRIBER sends in the following illustration of childish faith and love: "After kissing my little four-year-old daughter, (who had but recently lost her mother) good-night, I observed that she kissed her hand and then threw it upward. I said to her: 'Jennie, what are you doing?' She replied: '*I threw a kiss to mamma.*'".....

SIR WALTER SCOTT said that guilt, though it may attain temporal splendor, can never confer real happiness. The evil consequences of crime long survive their commission, and, like the ghosts of the murdered, forever haunt the steps of the malefactor. The paths of virtue, though very seldom those of worldly greatness, are always those of pleasantness and peace. .....

BEECHER said that the great art of managing a congregation lies in this: be good-natured yourself, and keep them good-natured, and then they will not need any managing...

THE wide pasture is but separate spears of grass; the sheeted bloom of the prairies but isolated flowers. However small, that cannot be insignificant individually without which greatness would not be great, nor beautifulness beautiful.....

THE man whose eyes are wide open in seeing the faults of others, and scarcely open at all in seeing his own faults, is very sure to commit two mistakes—one in not correctly judging of others and the other in not correctly judging of himself. Such a man is apt to be a sort of nuisance in every circle in which he moves.....

A GRAVE error of far too many mothers consists in the fact that they educate their daughters to make a show and a dash, as the way to get married, rather than to be good and competent wives after they are married. This is a very serious mistake in female education, and, withal, entails a great many evils upon the married life. No young woman is really fit to become a wife who is not practically qualified for the duties of the position..

A MINISTER narrates the following: While walking along one of the London streets a Paris pastor came forward and accosted me thus: "Excuse me, but were you not in Paris some time ago?" I said: "Yes, I was," and then he inquired: "Did you not, in one of your addresses there, say that the *latch was on our side of the door*?" "Yes, I believe I did say so," I replied. "Well," he answered, "I always thought it was on the Lord's side, and I kept knocking, and knocking, until I heard of your words, and what a joy came over me! I lifted the latch. Since then all has been changed; my church, my congregation, my work, and every thing about me!" Oh, remember that the latch, is on your side of the door!.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

EXTRACTS FROM SUNDAY-EVENING TALKS AT THE RURAL GROUNDS.

CERTAIN MORAL AND SOCIAL ACTS IN THEIR RELATIONS TO THE DEMANDS OF REAL FRIENDSHIP.

CHRONIC PROFESSIONAL VISITORS. "Something for Nothing" might well be given as the name of a certain sort of friendship that recognizes its obligations by a never-failing polite but indolent courtesy. There is always a gentle, apt, refined reply for all favors. "So good of you" —— "So thoughtful" —— "Pray do not let me put you out" —— "I'm troubling you so much and you take it *so* kindly." These sponges whose politeness is only equaled by their inertness, seem to assume that a polished recognition of the services rendered them is a full equivalent; that gracious manners, oily tongues, well chosen words of flattery weigh heavily against the trouble they cause. The demonstrative evidences of well-bred and easy manners, of skillfully spoken compliments have a value that pleases the ear and tickles the vanity for awhile. But they are too volatile. One soon demands a trifle of substance to help him on. There is too much fine crockery and china about the thing; too little of a solid dinner. The lunch is rather *airy* and one suffers the "gone" feeling before another meal.

Many people of this class, if judged by their smooth, careful words, seem to be models of modesty and appreciation. As a matter of fact, they are the boldest, most selfish people in the world. Don't you know of such people? Complacent, easy-going, bound to be happy, always wearing a smile; always full of grace and kindly, sympathetic words and ways—they come to your house, and though *seeing* and *feeling* that they *are not, can* not be welcome, squat themselves down, stay as long as they like and never turn a hand to help or to lessen the work of an already overworked household. They have repaid us in the coin of their sprightly conversation, of their gracious behavior and in their parting words: "You have been so kind and considerate; I have enjoyed my visit *so* much; I wish I might reciprocate in my own home; I shall hope soon to visit you again," and so on.

My own family has suffered from these incubuses as long as I can remember. I recall no less than four lustrous specimens of the genuine type, the sight of any one of whom as he entered the house would cause a cold chill and a hopeless feeling to take possession of all. Such leeches do not inspire any depth of friendly regard. They have no real friends, because there is no such thing as a mutual friendship without mutual sacrifices. Still they seem to get through life comfortably, live to an everlasting age and die with all the easy, indolent complacency that was their chief characteristic through life. While we may despise this kind of life, most of us accord a certain amount of respect for the gentle astuteness; for the amiable cunning; the ready faculty of repartee, the dignified indolence that with so little apparent effort secured them a livelihood. It is a question whether the people or families who are afflicted by the considerate regard of these affectionate and harmless tramps are entitled to any sympathy. If we are overwhelmed with visitors, we have no one to reproach but ourselves—and the more uncongenial those visitors are, the more we are reproachable. It is an act of hypocrisy to extend the same welcome to unwelcome people that we would extend to those whom we consider true and worthy friends; those who by ties of blood or for services rendered have a real claim upon our regard.

OURS AND OTHERS.

We have often heard the remark when disputes have occurred in which one's wife or husband was a main actor, "Well, I could not go back upon my wife." Or, "I couldn't openly decide against my husband, though he was plainly in the wrong." We have all of us had occasion to observe that the mother is prone to shelter her beloved daughter or little boy as against some one else's little daughter or boy. One or the other has told a lie or committed a theft. The evidence all points to our own child as the culprit. Do we pin him down as closely; do we scold him as vehemently; do we punish him as vigorously as we would have the other boy pinned down, scolded and punished if HE were the culprit?

Suppose that *your* darling little boy—your BEAUTY-boy—picks a muss with Charley Peck and Charley blacks your darling's eye and causes his nose to bleed. Are not we inclined to cut Mr. Peck in two before we have instituted a fair trial to ascertain which boy *caused* the disturbance! Suppose that your husband comes home with his ambulatory rectitude sadly impaired, would you speak of this little matter as freely and censoriously to your neighbors as you would tell them that your friend Isaacsen or Rosy-Morn returned in the same exhilarated condition?

Let us suppose that you love your wife and that you dislike Isaacsen's wife and that these two women quarrel, each making such grave charges against the other that a public investigation becomes necessary. Would you —*could* you decide against your wife! The case might be so serious that such a decision would forever cast a shadow upon the family name.

Now does love for individuals lessen our moral obligations to others! Is *your* child or husband or wife entitled to any more consideration than any other child, wife or husband!

We are all children of God. Do you think that He would discriminate against or in favor of any of us!

He is our *perfect* friend. It would therefore seem that, if we decide the question raised by *His* teachings, the wife must raise her hand to strike her own loved husband or idolized child just as relentlessly as she would to smite those whom she may dislike but who may be just as dear to others.

And there can be no such thing as a real, true friendship between two individuals either of whom would seek to protect the other from merited punishment or disgrace. If this be the truth, it seems a hard, cruel truth when first considered. It is not improbable, however, that the greatest sins and injustices of the world, millions of examples of which are being committed or enacted daily, are those which have their origin in the power of the strong over the weak. The murderer escapes the law's just punishment because he can pay $1,000 or more for noted lawyers; for false witnesses; for powerful influences both of people and of the press in his favor. Powerful monied combinations command services at their own price, and when 10,000 people are killed by the breaking away of a dam, no one is found responsible; when hundreds are smashed to pieces or burned to death by the culpable negligence of incompetent railway officials, or smothered to death in a coal-pit, no one is found punishable. In smaller instances, the employed are generally at the mercy of the employers. The hired man said what was assumed as disrespectful language to the wife. The gallant and indignant husband nearly chokes him and then kicks him off the place without ever having *asked* for the hired man's story.

Two clerks quarrel. One is a highly valuable clerk; the other of little or no account. How many employers will give a careful, just hearing to the good-for-naught if a just decision is to deprive them of the services of the one they cannot well get along without? We owe to every living person, modified in degree, every feeling, every consideration that is entertained for or extended to the nearest friend, and it is difficult to see how any one who is indifferent to the sufferings, misfortunes; to the comfort and well-being of those with whom he comes in contact, either in social or business life, will prove a real true friend to any single individual.

Any man or woman who will act unfairly to those in his or her employ will act unfairly to his children, wife or mother under equivalent provocation. Now, dear little Trav., to make this principle plain to you as well as to the rest, let me say that if Papa would not scruple to take an unfair advantage of Mr. C. or of Miss C., both believed to be earnest and honest assistants in his business, he would under intenser provocation be unfair to you, to Cerise or to Mamma.

And so, on the other hand, if you are capable of a meanness to Tommy Brown, of bullying Johnny or Mamie to induce them to serve you; of soft-soaping Uncle John to induce him to permit you to shoot his pigeons, you are equally capable of acting in just the same way towards your parents when you have an urgent wish to gratify.

HIRE ALL THE HELP YOU CAN AFFORD.—Many of our most effective workers act upon the rule: "Never do a stitch of work that you can hire or induce another person to do as well." It is a wise rule and one upon which the harmony of the universe depends. Larger insects prey upon smaller ones and parasites prey upon all; stronger fish eat up the weaker ones; the larger and more powerful of the lower animals, seemingly without the slightest sense of piety or justice, devour the weaker animal according to their whims or necessities and *man* according to *his* whims or necessities destroys or devours them all. Little moons and stars revolve about greater ones and the greater ones still about greater ones until, in so far as can be judged when we consider infinity of space, universe revolves about universe. In the vegetable world, a similar law governs all—the weaker is ever succumbing to the stronger and the "survival of the fittest" is the apt phrase that expresses the relations between servant and master. Every one serves, be he master, servant or slave. We are mutually dependent—the one upon the other—and all living things; all inanimate things; all things are alike dependent upon certain mutual continuous relations. The necessities of our nature imply destruction. We cannot move or think or act except by the power which destroys something. It is by destruction that we live; that we are warmed and fed; that we study, learn, teach, worship, hate or love. Did you ever think how many living creatures each one of us necessarily destroys every day in plowing and cultivating the land; in our war against insects injurious to vegetation, as we put it; in walking, in breathing, in building our houses, in constructing and running our railroads, in eating and sleeping?

Some one must be the hod-carrier; some one the mason; some one the builder and some one the superintendent. Then some one must employ them all and furnish the means to pay for their services. We have the wash-woman, the kitchen-girl, the up-stairs girl, the maid of all work. We have the errand boy, the counter jumper, the floor-walker, the book-keeper, the cashier, and members of the firm. Do *you* excel as a wash-woman, a cook, a salesman, a book-keeper? Do you excel as a hod-carrier, mason, boss-mason? Then that's your place. If a hod-carrier, do your work faithfully and don't do one stitch of work that you can hire or induce another to do. If you excel as a cook, there's your place. If you can render better service by buying your clothing, by employing dress-makers by all means do it. In this way you help to support others while rendering yourself more efficient in your chosen work. *No one can afford to spend his time upon less valuable work which others for less pay will do as well or better.* If you are the mistress of a home, seek to make it an instance of *model*-house-keeping according to your *means*. If by hiring the services of wash-women, kitchen-maids, chamber-maids, you can approach more nearly to perfect house-keeping, hire them *all*. *They* are benefited—so are you—so is your family—so is society. Do *thy* part well whatever it may be. But if by nature and education you are in truth a hod-carrier or a cook, pray do not assume to be a boss-mason or the head of the house. All the hired assistance in the land could not serve to make you the right person in the right place. As soon as you find you are not fitted to your occupation, abandon it, get out of it and set to work to find out what you *are* fitted for and go at that. It is misfits that upset the world. They neither superintend nor follow wisely. There is really no place for them anywhere, and *having* no place they crowd and distort all they touch or come in contact with. The great trouble in the world is that few of us really know our place; few of us are willing to make the exertion and sacrifice which *excellence* demands. *It is far better that I should be an excellent servant than an incompetent master.* We will all grant that. But who is to say that *being* an excellent servant, I would not be a competent master if I had the *chance*? There are too many of us that would rather rule in hell than serve in heaven. There are too many of us that, with little care for the harmony of things and guided by the impulses of the hour or day, and the comforts thereof, care little for the morrow, or the effect of our shortcomings upon those about us. Here we have the class of people that find everything in the world just right-wrong. Friendship! they scout the word. It is a farce. They could tell you for a week on a stretch, of the acts of kindness and liberality they had bestowed upon others not one of which was ever appreciated or repaid—their aim being merely to grind all they could out of them and then kick them out to starve. Is any one entitled to friendship that puts forth little or no consecutive, persevering effort to excel in one or the other of the necessary industries of life! Or is he entitled to friendly regard who fully capable of excelling in some humbler occupation, scoffs and snarls and bites because a higher position, for which he is in no wise fitted, is not thrown at his feet?

A FEW HOUSEHOLD HINTS

I HAVE always voted tidies nuisances. A lovely art square finished with a border of velvet and antique lace is certainly very pretty to look upon, but is never meant to rest against. I have sat down when tired and weary, when it would have done my aching back good to have rested it against the chair or sofa back, but as each conceivable place in the room where a tidy could be used was filled with one of some sort, a bunch of ribbons and laces, crazy, antique, hand-painted, etc., it was impossible. I mentally wished all such trumpery in Hades or some other place. But there are places where a tidy seems like an oasis in a desert! But the tidy must be made of something that is substantial, to be of real use. Suppose we have in our parlor or sitting-room a cozy, comfortable chair, which from this very fact begins to show the ravages of Time. There is a dingy look at the top of the back where many a curly head has rested, where perhaps "grandma" whose snowy locks are now lying beneath the daisies, used to sit for hours at a time. What is to be done about

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children she gave them Castoria

it! The rest of the chair is good, except perhaps a little worn on the arms. Here is where tidies may be used with advantage. But let us have something sensible! Well then, a neat way of making a tidy for the back of such a chair is as follows: Take two equal lengths of pongee silk (it will wash), say one of pale green and one of pink. Turn a hem on each and fasten it down with a row of feather-edge stitching. Stitch the green with pink and the pink with green. One end of each strip may be raveled out and a knotted fringe made. Knot the two lengths together loosely and throw carelessly over the shabby place; only be sure and tack it fast in several places so that it won't fall off the minute one sits down.

A pretty tidy may be made of Holland linen. Cut the desired size, trace some pretty design, such as a spray of apple blossoms or wild roses, diagonally across it, and outline with wash cotton. Fasten to the chair back with bows of ribbon to match the cotton with which it is worked. This is certainly a sensible tidy as it can be washed as often as is necessary.

Turkish towels come in very pretty colors, such as pale pink, blue, lemon, etc. Let me tell you, fair reader, that these make lovely tidies for sitting-rooms, bed-rooms, and the like. Catch the towel in the center and tie it with a bow of ribbon to correspond with the predominating shade in the towel. Then fasten on the back of sofa or chair as one does scarf. These, of course, can be washed as often as one chooses. Should they fade they can then be used for the bath-room and new ones put in their places. Very pretty ones can be bought for from 25 cents to 50 cents. Ribbons that have become a little crumpled and look scarcely fresh enough for your personal adornment may be made to do service as ornamentation for the above.

* * *

PRETTY sachet bags may be made as follows: Take two equal lengths of contrasting ribbons. Lay them together, cord to cord, and with an open button-hole stitch join them together, leaving about three inches loose at each end. Then double them back to form a bag, leaving the under ends a little longer than those meant for the top. Then button-hole stitch the sides together. Next fill them with cotton, placing your sachet powder therein. Tie together with narrow ribbon where the loose ends begin, making a dainty little bow. We made one last Christmas of the following: A half yard each of pale blue and delicate pink ribbon about 3½ inches wide, fastened together with dark cardinal floss and tied at the top with pale-blue bows. The loose ends were dove-tailed—two being longer than the other two. Heliotrope perfume was selected. If one has artistic ability a spray of wild roses or daisies may be painted diagonally across the two strips of ribbon, adding thereby a graceful finish. Or, if one prefers, the spray may be embroidered in floss.

* * *

PRETTY reminders of our summer's vacation may be made as follows: While in the fields or woods gather any pretty or oddly-colored leaves, a cluster or so of clover or daisies, a few grasses or ferns, and lay them smoothly between the leaves of a book to press. After you are at home again take them out and fasten with a little mucilage, on a square of Whatman's drawing paper. Arrange them as artistically as possible; then mark across one corner the date when, and the place where gathered. They can be framed in nice little frames of oak at a trifling cost. These make very pretty ornaments for your bed-room or library, and are pleasant reminders of your summer's jaunt.

* * *

I HAVE just ebonized a plain little wooden stand and my handiwork is such a satisfaction to me that I will tell you how it was done: First, I sand-papered the stand thoroughly, then brushed the wood several times with a strong, hot decoction of logwood chips. When dry, a coat of vinegar, in which rusty iron had been soaked, was given it. Then I applied beeswax, thoroughly dissolved in turpentine (this can be done by setting in a very warm place). The wax must be *warm* when applied. Then rub till a good polish appears.

* * *

A DISH of charcoal placed in your meat larder will keep the articles sweet and wholesome almost as well as ice. Charcoal is a great disinfectant. If occasionally used for cleaning the teeth, it will sweeten the breath when everything else fails to do so.

* * *

To wash windows and make them clear and bright, use ammonia and borax, but no soap.

To wash glass tumblers, etc.: They can be made brilliant by washing with strong tepid soda-water, then rinsing in clear, cold water, and drying with a linen cloth without nap.

* * *

LEMONS can be kept fresh for many weeks at a time by putting them into a clean, tight jar or cask and covering them with cold water. Keep in a cool place out of reach of the sunshine or light, and change the water often, not less than every third day—every second day would be better.

* * *

SMOKE-STAINED lamp chimneys can be cleaned with salt. Wash them first with warm water and soap, and, while wet, rub them well with dry salt. Vinegar will also remove the stains.

* * *

IF you have many brick paths about the yard and doorways you are doubtless troubled by their becoming green and slimy during the rainy weather we have been having. If you find that hard scrubbing does not remove the green stains, get some "Venetian Red" from the druggist's (it can be bought for five or six cents per pound. Two pounds will do a considerable amount of paving), and color the paths. First wash off the dirt, then sprinkle the powder lightly over the bricks and distribute evenly with a wet broom. This makes them a bright, brick-red. By doing this twice a month you can keep your paths in very good condition. This has also another virtue. It fills the interstices between the bricks and prevents weeds and grass from growing in the paths.

* * *

IF you have a damp or dark cellar keep chloride of lime sprinkled about at all times. It not only purifies it, but will be a sure preventive against snakes, which so often find their way into the wood-pile. Gather pennyroyal and scatter it about the house, under beds and into closets. It will kill "things that walk by night" such as roaches, bugs, mosquitoes, etc. If troubled much with mosquitoes, moisten the hands and face with liquid camphor on going to bed, and they will not molest you at all. I have lain awake and chuckled to myself over and over again as the vile little things sang their songs about the room, knowing full well that they dared not touch me.

DORA HARVEY VROOMAN.

PREPARING AND FILLING GLASS FRUIT CANS.

SEE that each can is perfect. In new cans shake either shot or an iron dish-washer to remove any small pieces of glass. Sweeten old cans by rolling them in cold drinking water. For many cans as are to be filled at one time, have as many pieces of cloth (pieces of old aprons or anything clean and kept for the purpose) wrung from cold or warm water, no matter which, and wrapped around the cans.

To fill, hold, for an instant, suspended in the can, a spoonful of hot fruit, then shake it about and add a few more, then fill nearly full, and with the can between the hands, give it a rolling movement, which settles the fruit and brings up the air, wipe the top clean, make dry with soft paper, put on the rubber, fill up with boiling juice, add the glass top and the ring (dry or cold), secure to the extent of your muscle, place where moving will not be necessary till cold, and let alone. The cloths can be removed when needed for other cans. When perfectly cold, examine the tops, and if any are doubtful, press down on the glass top, while removing the ring, and if right or wrong you will know it. Wash and wipe dry before putting cans away for good, as sticky cans are not pleasant to handle or moldy ones to look at. For keeping canned fruit, when space permits, a clean cellar bottom is preferable to untrustworthy tables or shelves.

MEDORA CORBETT.

RECREATION FOR HOUSEKEEPERS.

HOUSEKEEPERS as a class surely need recreation as much as anybody; but how seldom do they take it! The daily routine seems to leave no opportunity for pleasure-seeking, and thousands of housekeepers are enduring a monotonous existence with no prospects of anything different. This is certainly wrong. Eating, sleeping, cooking, mending and cleaning are all very useful and necessary as means to an end, but when they are allowed to monopolize life to the extent of shutting out needed relaxation and relief, it is time to call a halt.

No time for recreation? Of course not, if you wait for it; but *take it anyhow*—if not in a nice, big vacation, then in small lots. Take a day at the seashore, the mountains, the falls, the lake, the river, or just the common woods. Don't wear yourself out to prepare an elaborate picnic dinner, but pack up a simple lunch and go,—husband, children and all. If there are hired men, let them have a cold dinner for once. They will live, and thrive too.

Then if John happens to be going to the village or to see a man a mile or two in the country, and asks you to ride with him, don't tell him you really can't, for Sammy's socks must be mended, or the cellar steps cleaned, but put on your hat and go anyhow. Tuck the children around in the crevices of the buggy and be determined to enjoy all you possibly can. The cellar steps and things can wait, and in a week you will never miss the precious hour you took for a delightful, restful drive.

Then, once in a while, if you can't leave home for a whole day in the woods, live out-of doors under the trees near the house, or on the porch. That will please the little people and do you a world of good. If you must work, take your sewing with you. It is just as easy and far more healthful to make button-holes and darn socks in the sweet out-door air as to do the same work in the house. Don't let housework, however important, make an utter slave of you. I once knew of a lady with such a mania for cleaning that her sole object in life seemed to be to keep her house spotless. She swept and dusted, scrubbed and rubbed, scoured and washed from morning till night. She would follow her husband over the house with a cloth to wipe up any possible dirt or dust that might lurk in his wake, and altogether made his home life miserable by her endless devotion to her idol. Her husband, a well-to-do business man, owned a fine horse and carriage and often wished his wife to drive out with him, but she could never stop cleaning long enough, so his neighbors got the rides and she staid at home, a perpetual slave to the scrubbing-brush and wash-cloth.

If you cannot take real recreation take your work in a recreative way. Sit out on the porch or under a tree to pare potatoes and apples. Shell peas and beans by a cool window or in the hammock and quaff long, deep draughts of heaven's pure air whenever you can. Compel circumstances to yield you enough of relaxation and pleasure to fit you for better living and greater usefulness. Life is short enough and wearing enough at the best; let us all resolve that whatever our occupation, it shall not prevent us from having good times or giving good times to others.

RENA ROSS.

Miscellaneous Advertising.

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It preserves the hair, keeps the scalp clean, and is everywhere the favorite dressing.

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For Bilious and Nervous Disorders, such as Wind and Pain in the Stomach, Sick Headache, Giddiness, Fulness, and Swelling after Meals, Dizziness and Drowsiness, Cold Chills, Flushings of Heat, Loss of Appetite, Shortness of Breath, Costiveness, Scurvy, Blotches on the Skin, Disturbed Sleep, Frightful Dreams, and all Nervous and Trembling Sensations, &c. THE FIRST DOSE WILL GIVE RELIEF IN TWENTY MINUTES. This is no fiction. Every sufferer is earnestly invited to try one Box of these Pills, and *they will be acknowledged to be a Wonderful Medicine.*—"Worth a guinea a box."—BEECHAM'S PILLS, taken as directed, will quickly *restore females* to complete health. For a
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News of the Week.

HOME NEWS.

SATURDAY, July 27, 1889.

AN effort will be made in the fifty-first Congress to create a new Department of the Government to be called the Department of Public Works, with its head in the Cabinet. It would have charge of river and harbor improvements, geological and coast surveys, irrigation of desert lands and various odds and ends of public business now scattered loosely in various government bureaus. There was a regular hubbub all around among the political papers at the idea of having agriculture, the greatest industry in the nation, represented in the Cabinet; but as yet, not a word of protest has been uttered against the establishment of this Department of odds and ends, shreds and patches.....Boise City has been made the capital of Idaho for 10 years. The first legislature is limited to 18 Senators and 36 Representatives, with power to increase respectively to not more than 24 and 60 ....Judge Johnson of the Porter County, Indiana Circuit Court, has rendered a decision holding that the law lately passed by the legislature against the importation of dressed beef is unconstitutional, on the ground that such legislation is akin to the exercise of power by individual States over inter-State Commerce, and that whatever may be the nature and reach of the "police power" of a State, it cannot be exercised over a subject confined exclusively to Congress by the Federal Constitution. There will be an appeal, of course, to the United States Supreme Court, which will reach a decision—some time. Cases for testing similar anti-dressed-beef laws have also been made up in Minnesota and Colorado.....According to the report just made by the Royal Commission appointed a few years ago on Canadian railroads, railroad construction began in Canada in 1837 when 16 miles were opened for traffic. The total mileage now is over 13,000 miles and the freight carried last year amounted to 17,173,700 tons. The cost of railroad construction in Canada and the "States" has been about the same, and in both it has been lower than in any other country. The cost is highest in Great Britain and France. There's a mile of road to every 470 inhabitants in the Dominion, the proportion is less in the States. The average freight charge in Canada is 93 cents per ton, as compared with $1.04 in the States: $1.50 in Holland; $1.70 in Germany; $2.00 in England; and $2.14 in France. Little comfort in these figures for unreasonable kickers against railroad extortion. After all, isn't railroad unfair discrimination, in reality, the greatest railroad abuse here? ....
A cloud-burst near Parkersburg, W. Va. a week ago together with enormous downpours deluged a wide area, flooded many creeks and caused 17 deaths. The damage to crops was inestimable. Many of the farmers will have to depend on charity next season..... Same time western and central Massachusetts suffered from a terrific thunder storm; many trees and houses and several persons were struck by lightning.....Emmons Blaine son of James Gillespie, is engaged to be married to $2,000,000 and Anita McCormick, second daughter of C. H. McCormick, of reaper fame. Emmons's brother "Jim," as a part of his education in railroad matters, is acting as fireman on a locomotive away down in Maine... .....
The Rev. Father Curley, Director of the Georgetown University, near Washington, the oldest Catholic priest in America, and so far as known, in the world, died Wednesday. ..... The other day while some divers were searching for a recent wreck under water near Cape Henlopen, Del., they came across a cargo of tin and spelter lost on the English bark Medway in 1853. The Atlantic and Gulf Wrecking Company which employed the men, has already recovered and sold a good share of the cargo, and expects to make $150,000 in all out of it. Oh, yes, the discoverers will of course get a share—their wages if nothing more.....In Chicago two claimants appealed to the Court about the ownership of a $15,000 lottery prize, for the purchase of which both claimed to have contributed. The State Attorney has just put in a claim for the whole as a legal forfeit to the State, and the State is likely to get it.. .....Phil Sheridan's Private Secretary from 1875 to 1880 is in jail in Kansas City for horse-stealing.....New York has a two-year-old law pensioning militiamen who are injured in the service of the State. The first award was approved by Gov. Hill the other day. It was the highest—namely $72 per month, and was given to a militiaman who lost both arms and one eye by an accident, while on duty under State orders..... Chicago is to appoint a committee of 100 of her representative citizens to make vigorous efforts to secure the location of the International Exposition of 1892 within her widely extended borders. Washington will grab for all the national boodle in the enterprise when Congress convenes in extra session in October. New York citizens held a large public meeting, Thursday, in favor of the location of the Great American Fair in the Great American City... A fine bed of terra-cotta clay has been discovered on a farm near Topeka, Kansas. The chief beds hitherto in this country have been in New Jersey and Ohio. The Topeka bed, properly worked, will be worth $500,000 a year to that place. Terra-cotta is used almost exclusively for decorative and ornamental work, though drainage tiles are made of a coarse kind ..... There's a movement on foot to establish a Brick Trust with a capital of $15,000,000 in the neighborhood of New York—Pierre Lorillard, who has already over a million dollars invested in brick works in New Jersey, is at the head of the enterprise.. .....There's talk of a Natural Gas Trust to include all the works in Ohio and Indiana. Calvin T. Brice, Chairman of the National Democratic Committe, Oliver H. Payne Democratic Senator from Ohio, and other Standard Oil magnates now own most of the stock in the works and are trying to buy up the few independent companies .....
Mrs. Elizabeth Iliff Warren who made a fortune by cattle-raising on the Plains, has presented $100,000 to the Denver University..... .....Henceforth the Pennsylvania Railroad will carry baby carriages accompanied by their owners, free of charge. The Pennsylvania Railroad is second to none on this footstool.....The Land Office at Washington has decided that the Oklahoma "sooners" must be ousted from their claims, and hundreds have already filed claims on lots occupied by the "sooners"—those who entered the country before noon on April 22. The decision should also apply to town sites. If so, the titles to 650 lots in Guthrie alone will be worthless. Settling a territory in a day is profitable only to lawyers. In Oklahoma the surgeons and grave-diggers were a sadly disappointed crowd, not having got a tithe of the work they had every reason to expect..... W. W. Johnson, "a wealthy farmer," living two miles from Hillsdale, Michigan, doesn't take and can't read the RURAL. He got buncoed out of $2,000 the other day at three card monte by a brace of sharpers "who wanted to buy his farm"!!!..... .....
A Philadelphia Land Association with $1,000,000 capital, embracing many of the Quaker City's "best people" has invested heavily in property about Dallas, Texas... .....Ex-Secretary of War Bristow is at Saratoga, so the common opinion that he died years ago, must probably be incorrect .... ..Sunday night last, at Sweetwater, Wy. Postmaster James Averill and Cattle Queen, Kate Maxwell, were strung up to the same branch of a big cotton-wood with the two ends of the same rope by a lot of cowboys in the employment of the neighboring cattlemen who had for years been heavy losers from the depredations of the pair. Both were adepts in changing brands on cattle and mavericking—putting their own brands on young stock not yet properly branded. Fifty-eight freshly branded yearlings were found on their place Saturday, and stock detectives were driven off while investigating the matter. At the last the "Rustler" turned out a whining whelp and the "Range Queen," a blasphemous virago..... ... ...
There's a good deal of grumbling yet in the Conemaugh Valley. The distribution of the $500,000 in cash among the flood sufferers, begun a week ago, isn't finished yet. A large share of the contributions made by the public still remains in the hands of the collectors. Boston's gift of $187,364 hasn't been touched yet, though the holders have all along been ready to send on the whole or any part of it. Instead of putting the people sturdily on their feet again, the way the charity has been distributed in driblets threatens to make them a pack of cheats and beggars. Already there are loud complaints of fraudulent claims for help. It's very evident the relief commissioners are incompetent—they are small pegs in large holes..... .....
In Mississippi two persons were murdered and three lynched during the past week. Not a proclamation from Governor Lowry!..... Squat, thick-set, red-faced and small-eyed Mrs Mary Brady, of Jersey City, with a body weighing 250 pounds, and a tongue long enough to be a "holy terror" to her neighbors, was fined $25 with $50 costs, as a "common scold" the other day, the ducking stool having been abolished much to the regret of her neighbors.....
Kickapoo Indians refuse even to treat for the sale of their lands in Kansas..... Lewis Bros. & Co., the largest dry-goods commission house in Philadelphia, with large branch stores in New York and Chicago, has failed for $4,500,000. The concern hopes to pay its debts in full.....Charlemagne Tower, the Philadelphia multimillionaire, left behind him every cent of his $25,000,000 when he died at the age of 81 last Thursday. Did he ever do anything remarkable? Why, yes, of course—he made $25,000,000 .....
Catholic Bishop Walsh, of London, Ont., Can., has been elected Archbishop of Toronto, to succeed Archbishop Lynch who died May 12, 1888.....An English syndicate has purchased four breweries at Paterson N. J., for $2,000,000, and a small portion of the new stock. Two large breweries at Newark, N, J., were bought by another British syndicate for $2,350,000. In both cases the present owners are to continue managing the business for three years.....James B. Garfield, second son of President Garfield, is engaged to marry Miss Helen Newall of Chicago, daughter of John C. Newall, general manager of the Lake Shore Railroad.....

LATEST.—The *canard* about Mrs. Heron's danger in Corea is officialy contradicted, per cable, by Minister Dinsmore residing there... ....A number of the most prominent stockmen on the Sweetwater in Wy., have been arrested for lynching Jim Averill and Kate Maxwell, the great cattle thieves of that section..... Reports say that there has been a world of stealing wrecked goods in the Conemaugh Valley. Many of the houses along the lower river are said to be full of stolen goods.....

Beacons Along the Wayside.

When one who is bewildered discovers a beacon ahead, difficulties seem to vanish and if we except intervening roots and brambles, the haven is soon attained.

So much for what will presently be our simile.

When one, who is ill sees the good results of a means of cure, in cases far more desperate than his own, convalescence seems possible were it not for doubts and fears. Nevertheless Compound Oxygen is still a refuge for the sufferer. Here are a few encouraging beacons along the wayside:

ATLANTA, GA., March 22, 1888.
"I still recommend your remedy. It saved my wife's life and cured my boy of catarrh."
WALTER T. FORBES.

COLUMBIA, S. C., March 13, 1888.
"I have reason to believe that I have been benefited by this treatment, and commend it to those whose nervous systems need to be invigorated." DR. JOHN L. GIRARDEAN.

WILLISTON, S. C., March 20, 1888.
"I am pleased to report a continued improvement both in myself and wife. May you live long to bless suffering humanity with your Compound Oxygen Treatment.
REV. W. W. GRAHAM.

GASTONIA, GASTON CO., N. C., May 25, 1888.
"I speak to you the real sentiment of my heart when I state that I sincerely believe that had it not been for the Compound Oxygen Treatment, I would have been in my grave before this time." W. D. HANNA.

We publish a brochure of 200 pages, regarding the effects of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, July 27, 1889.

ALL the evidence on both sides being in, the Parnell Commission has adjourned for three months to give the Crown-Times lawyers an opportunity to prepare their speeches and the public—a rest. There will be no speeches on the side of the Parnellites, though there may be one.....The Parnellites are supporting Gladstone in favor of the "Royal Grants"—the incomes the Queen wants for the eldest son and daughter of the Prince of Wales soon to be married. The new Duke of Fife is willing to settle on the Princess Louise a sum equal to whatever Parliament would give, but his is-to-be mother-in-law insists on payment out of the public purse. When, nearly 100 years ago, the Crown surrendered to the nation the lands it owned and which made it independent, it was agreed that, in return, the royal family should be amply provided for by the country. The family now costs the nation $4,200,000 a year; but the annual cost from the first has been much smaller than that in any previous reign since the settlement. The Queen has been economical and saved a great deal, however, and people think she ought to settle sometning handsome on her grandchildren; then the family is tremendously prolific and threatens heavy drafts in future on the public Treasury, and a republican spirit is abroad among the masses. The Radicals in Parliament, under Labouchere, have split on this question in a friendly way from the other Liberals under Gladstone and their staunch old allies the Parnellites, and insist that the sums given to the Royal family are already too large and that further supplies should be provided by retrenchment of the expenses of the Royal household. Of course, the proposed largesses will be secured, but the vigorous opposition will make Ministers cautious in asking future bounties of the kind. Those who want the luxury of Royalty should'nt haggle about paying liberally for it. George B. Loring, ex-Commissioner of Agriculture, now United States Minister to Portugal, presented his credentials to the King Wednesday.....Thursday July 25, was Mrs. Gladstone's Golden Wedding Day. In 1839, when 30 years old, and six years in Parliament, and already marked out as a future Prime Minister by long-head politicians, he married "the handsome Miss Catherine Glynne," eldest daughter of Sir Stephen R. Glynne, of Hawarden, Flintshire, the present country home of the family. For 50 years she has been an ideal wife and mother, and he—well everybody knows what the "Grand Old Man" has been.....
There's a rumor that Mrs. Hattie Gibon Heron, wife of Rev. David Heron, lately of Jonesboro, Tenn., is under sentence of death in Corea, for preaching Christianity. Most of those best acquainted with Corea, say it's a cock-and-bull story, as the King of Corea isn't the kind of a man to permit such a thing..... ....A recent fire in Lu Chow, China, burned 23 hours, destroyed 8,000 buildings, cremated 1,200 people and caused 400 other deaths by toppling walls; 170,000 homeless people were forced to camp out without shelter, and, at last accounts, they were dying at the rate of 100 a day from hunger and exposure. For a monstrous calamity by fire or flood, look to China..... .....
M. Pasteur's system of inoculation against hydrophobia has been subjected to much hostile criticism. It has been ridiculed as a farce and denounced as an atrocity. Lately a reaction has set in, especially in England, where the Prince of Wales has taken a decided stand in favor of the French scientist. Since the beginning of Pasteur's operations in 1885, he has treated 6,950 patients, of whom only 71 have died. Of the total 1,187 were bitten by animals suspected but not proved to be mad. Of these only 12, or 1.01 per cent., died. Of the remainder 4,680 were bitten by dogs declared to be mad by competent veterinarians. Of these only 44, or 0.94 per cent., died. The remaining 1,077 were bitten by dogs which were proved to be mad by inoculating others from their bodies. According to conservative estimates, without Pasteurism, at least 157 or 15 per cent. of these would have died; but after treatment by Pasteur only 15, or 1.39 per cent. died. Many of the patients in all three classes did not come under Pasteur's care till a fortnight or more after they were bitten. Excluding these, the death rate in the first class would be reduced to five or 0.42; in the second class to 81 or 0.66 per cent., and in the other class to 11 or 1.2 per cent. Most of the patients were bitten through their clothes, so that the virus might have been wholly or partly wiped from the teeth before they entered the flesh: 540, however, were bitten directly on the face or neck. Without Pasteurism from 60 to 80 per cent. or from 326 to 432 would have died. Under the Pasteur treatment only 21, or 3.89 per cent. died. Pasteurism is likely henceforth to be recognized as an established public blessing..... .....
After all, from the standpoint of German militarism, there's considerable excuse for Bismarck's covert and open opposition to emigration from the Fatherland. Since 1871, the country has lost 1,769,297 of the most enterprising people in that way. Of these 1,618,816 came to the United States; 4,780 went to Canada, many of whom afterwards crossed over to this country; 33,443 went to Brazil; 15,599 to other parts of South America; 16,341 to Australia; 4,047 to Africa and 1,086 to Asia. At least one-third as many emigrated to other European countries, chiefly Great Britain, France and Russia; but in spite of all, the population of the Fatherland is steadily increasing at a pretty swift pace..... Down in Hayti, it was Hippolyte's turn to get whipped the other day, so his attacks on Port-au-Prince were repulsed "several times with severe loss." His besieged rival Legitime, is putting night-colored, thick-lipped Amazons on the breastworks. In this bloody burlesque of war the soldiers' pay is seven cents a day, and they seldom get it. Out of it, however, they have to furnish their own rations. Small wonder they can spare little time routing the foe, when they have to spend so much rustling for food.....

Anyone having a second crop of hay to cut, especially clover, should have Symmes' Hay and Grain Caps. Manufactured at Concord, N. H., by the Symmes' Hay Cap Co. Price, $37.50 per 100.—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, July 27, 1889

AUGUST 2 is Grange Day at Chautauqua, when Hon. J. H. Brigham, Master, and Hon. Mortimer Whitehead, Lecturer of the National Grange, will address the meeting..... August 13–16 are Grange Days at the Keuka Assembly. Addresses are promised from Lieut. Gov. Jones, Gov. Luce, of Michigan, Hon. V. E. Piollet, of Pennsylvania, Dr. Collier, Miss S. A. Little, and many others... ... ..The Eastman's Company, of New York, has been incorporated, with a capital of $750,000, to carry on the business of slaughtering sheep and cattle for the market and for shipment abroad.....A Frenchman claims to have invented a process for preserving meat, so that it can be kept wholesome, and retain its taste, flavor, and nutritive qualities under all conditions. He says that 20 workmen can preserve the carcasses of 1,000 oxen in 24 hours, at a cost of 600 francs.....

Miscellaneous Advertising.

SEND 10 Cts. in P. O. stamps to **E & O. WARD,** Produce Commission Merchants, for circular about **Shipping Produce** Also recipe for **Preserving Eggs.** Established 1845.
No. 279 Washington St., New York City.

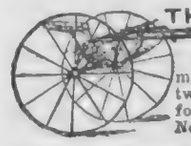
PURE DISSOLVED ANIMAL BONE, DISSOLVED S. C. PHOSPHATE.
Also Manufacturers of **Complete Fertilizer.**
WM. DAVISON & CO., Baltimore, Md,

STRAWBERRY PLANTS AND PEACH TREES FOR SALE.
25,000 Davis Seedling No. 1. From his original stock. **50,000 Peach Trees.**—all leading varieties. Call or address
L. W. GARDNER, Washington, N. J.

BIG STRAWBERRIES.
Eureka, Viola, Warfield, Rubach, and all desirable varieties for home use or market. Write for prices and July report of New Varieties. "We pay postage."
LOW J. FARMER, Pulaski, N. Y.

HOME STUDY. Book-keeping, Business Forms, Penmanship, Arithmetic, Shorthand, etc., thoroughly taught by MAIL Circulars free
BRYANT & STRATTON'S, 415 Main St., Buffalo, N.Y

MANAGER WANTED on SALARY $2000 per YEAR
To open a branch office in your locality. Business purely mercantile. One that will inspire you with pride, pleasure and profit. Trade established. No peddling. **J. E. SHEPARD, Cincinnati, O.**


THE I X L COIL SPRING ROAD CART
Beyond a doubt is the easiest riding cart made. Springs can be adjusted for one or two passengers. Before purchasing write for wholesale prices. A. L. PRATT & CO., No. 71 Willard St., Kalamazoo, Mich.

WINTER WHEAT A NEW VARIETY. Has a record for several seasons in regular field culture of **50 bushels to the acre.** Write for descriptive circular and price to **E. E. CARR,** Erie, Erie, Co., Pa.
GIVE IT A TRIAL.

WELL TESTED & APPROVED.
New, Valuable and Indispensable Fruits.
Catalogue on application to
T. V. MUNSON, Denison, Texas.

MUSIC—ART—ELOCUTION and **General Culture. Desirable Positions** open to progressive students. All interested will receive valuable information **Free,** by addressing **E. TOURJEE, Boston, Mass.**

A steamer loaded with bananas, bound from Jamaica to Boston, was burned at sea July 15 .....Policemen on the Brooklyn Bridge say that when the wind is right the Colorado beetles are blown on the bridge in clouds from the potato fields of Long Island.....There is a possibility of increased receipts of foreign beans ....The American Live Stock Commission Company is an association of Western cattle men who would not submit to the demands of the commission men for a fee of 50 cents a head for all stock sold. They have leased 400 cars from the Alton company, which are scattered from Texas to Montana, and every one of them which comes to Chicago is loaded with stock.....Reports from Carver, Mass.,are to the effect that thousands of barrels of cranberries were destroyed by the storm last week, the berries being cut from the vines by hail..... This year's yield of peanuts promises to exceed last year's.....The peach crop in Hunterdon and Warren Counties, N. J., is reported as promising not over half a crop. The quality is said to be superior, so the growers may perhaps realize as much as common..... .....Robert Elmer, an aged man, was badly gored by a bull at Asbury Park, N. J., recently..... .. Secretary Edge of the Pennsylvania State Board of Agriculture, has sent out a circular to the farmers in the State notifying them that applications for institutes should be made before October 1, as the appropriation may become exhausted..... A century ago, only 300 species of orchids were known; now authorities place the number of known species at 10,000.....1889 is the centenary of the introduction of the dahlia into England, and there will be a special exhibition of the flower by the National Dahlia Society at the London Crystal Palace, September 6—7.....The Buffalo fly has made its apperance in Pennsylvania..... Dogs killed two valuable colts for a Pennsylvania farmer living in Northampton County, recently..... ..... Prof. Lintner has discovered a very minute parasite which is preying upon the clover midge, and promises to destroy it..... Col. J. A. Price, of the Decorator and Furnisher, offers three prizes of $50, $30 and $20, for designs formed from the plant and grain of maize..... It is said that black-cap raspberries are not popular on the Pacific coast. The reason assigned is that they are too insignificant to become popular, and meet with little sale..... ... A team of valuable horses belonging to a New Hampshire farmer, were recently poisoned with Paris green which some fiend placed in their feed for revenge..... The United States honey exhibit at the Paris Exposition is quite extensive, and represents nearly all the leading makers. It occupies a floor space of 30 by four feet, besides various articles exhibited on the walls. A. I. Root, of Medina, Ohio, shows several styles of hives manufactured by him, as well as several other machines for apiarists. Dadant & Sons show some foundation so thin and clear that their name can be read distinctly through it. The show of honey itself is not good owing to much of it being broken in transit..... ....The Strawsonizer, to which frequent reference has been made in these columns, is said to attract more attention at the Paris Exposition than any other single implement. Several of these machines are at work in England and France, and it will probably be introduced in this country during the coming year..... .....

FIVE HARVEST EXCURSIONS.

The Burlington Route, C., B. & Q. R. R., will sell, on Tuesday, August 6th and 20th, September 10th and 24th, and October 8th, Harvest Excursion Tickets at *Half Rates* to points in the Farming Regions of the West, Southwest and Northwest. Limit 30 days. For circular giving details concerning Tickets, rates, time of trains, etc., and for descriptive land folder, call on your ticket agent, or address P. S. Eustis, Gen'l Pass. and Ticket Agent, Chicago, Ill.—*Adv.*

Crops & Markets.

SATURDAY, July 27, 1889.

Very conflicting reports in regard to crops come from all parts of the country, especially from the Northwest, in the spring wheat region. A reliable authority tells us one day that the Manitoba crop is almost a failure, and the next week an authority equally reliable says an average crop is assured. The completion of the harvest alone can determine. Taking the whole country together, as nearly as can be ascertained there will probably be nearly average crops of every grain but corn. The market is dull, and but little is doing, and this condition is likely to remain until the new crop begins to move freely. The price of beans is a trifle lower, but the stock on hand is not heavy, and prices will be well maintained for some time.

Potatoes sell well, and the demand fully equals the supply. Complaints of potatoes rotting reach us from various localities. Cabbage is very plentiful and prices are more satisfactory to the buyer than to the grower. Cucumbers are very plentiful and the price is low. Good egg-plant and tomatoes are in good demand. Onions plenty. Corn higher. Squash, turnips and other vegetables, in good supply.

Sales of several car-loads of California fruit, in addition to the other sources of supply, have kept the market well stocked. There is a disposition to force sales of peaches in anticipation of the incoming supplies. The best qualities of peaches, pears, apples and plums sell at good prices, but poor stock is slow of sale. Berries are about out of market, except huckleberries and blackberries which are plentiful yet. Concord Grapes from the South are in market. Muskmelons and watermelons are plentiful but good ones bring fair prices. The egg market is unsettled, but prices will soon be higher.

The receipts of cattle at Chicago have been very heavy, and prices have declined in consequence. The Northwestern ranges have begun to ship, and prices for this stock have ranged from $2.95 for cows to $3.65 for steers. Large numbers are also arriving from the Texas ranges. Really good beeves maintained nearly former prices, those suited to the shipping trade selling for $3.30 to $4.25, the bulk selling for $3.50 to $4. Stockers and feeders had a limited demand at $2 to $3, while cows and bulls went at $1.50 to $3. Veals sold at $2.50 to $4.50 per 100 pounds. Texas cattle and medium-weight natives are $1, to $1.25, and choice beeves $2 per 100 pounds lower than at the same time last year. The decline on big bullocks is at least $25 per head. Sheep have nearly maintained former prices, but unusually heavy receipts caused a decline of 25 cents. Prices range from $2.75 to $4.75 for sheep, and $4 to $5.75 for lambs. The stock comes mostly from Texas and the far West.

Hogs are selling for about $1.50 per 100 pounds less than they were one year ago, on account of large supplies. The number packed per week in the West is about 65,000 in excess of last year. The excess over last year since March 1, is about 820,000. The hogs arriving average larger and fatter than usual, so that the increase in the packed product is still greater. Choice light weights are scarce, and sell for extra prices, bringing $4.45 to $4.70, while heavy weights bring $4.00 to 4.45.

The Buffalo market was steady, and prices were well maintained. Good steers sold for $3.80 to $4.25; cows and heifers sold at $2 25 to $3.25. Michigan and Canadian stockers and feeders at $2.25 to $3; fat bulls at $2 50 to $3; stock bulls at $2 to $2.25 and veals at $3.50 to $4.25.

Sheep ruled lower in price because of inferior quality. Prices ranged from $4 to $4.75, while lambs sold at $5.50 to $6.50.

Hogs showed a slight upward tendency, under a good demand, and prices ranged from $3.25 for stags up to $4.90 for pigs.

At Pittsburg the supply of cattle was larger than usual, mainly from Chicago and the West, and prices declined somewhat. The supply of nice butcher cattle was not equal to the demand, and prices were maintained, ranging from $3.25 for light, to $4.15 for heavy. Stockers sold for $2 50 to $3.25; bulls $2 to $3. and dry cows $1.50 to $2.50.

Sheep are lower under an increased supply, ranging from $3. to $4.75. Spring lambs $3 50 to $5. Hogs sell at $4.25 to $4.80.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, July 27, 1889.

NEW YORK MARKETS.

Cotton.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	8½	8¾	.....
Strict Ordinary	8 15-16	8 3-16	.....
Good Ordinary	9⅜	9⅛	.....
Strict Good Ordinary	10 5-16	10 9-16	.....
Low Middling	10 13-16	11 1-16	.....
Strict Low Middling	11 1-16	11 5-16	.....
Middling	11¼	11½	.....
Good Middling	11¾	12	.....
Strict Good Middling	12	12¼	.....
Middling Fair	12 7-16	12 11-16	.....
Fair	13 1-16	13 5-16	.....

STAINED.

Good Ordinary	8⅜	Low Middling	9 15-16
Strict Good Ord	9	Middling	10¾

Wool.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

Poultry--Chickens, spring, per lb, 13@16c Live Fowls, near-by, per ℔, 13@——c; fowls Western, per ℔, 13@—@——c; roosters, per ℔, 7c; turkeys, per ℔ 9@10c; ducks, western, per pair, 50@0.70c geese, western, per pair, $1 12@$1 37.

Poultry.—Dressed—Turkeys, mixed, per lb. 11@12c; Fowls, western, choice, 12@13c; do, common to good, 10½@11¼; Ducks, spring, good, 10@16; Squabs, white, per dozen, $2 50@——; do dark, do, $1 50@——; Chickens, spring, 10@20c; Fowls, near-by, 12@13c.

Game.—Golden Plover, per doz. $1 75; Grass do, do $1 00@$1 25; English Snipe, do, do. $2 00.

Hops.—State, new, best, 21@22c; do, prime, 18@20c; do, low grades, 13@16c; do do, 1887, 8@11 do do do California, common to prime, 14@19c; choice, 20@21c.

Hay and Straw.—Choice Timothy, 90@95c; do good do, 75@85c; do medium, 70@75c; shipping, 60@65c; do, Clover, mixed, 50@60c. Straw.—No. 1, rye, 65@70c; short do 45@50; oat, 40@—c.

Beans.—Marrows, new, $2 35@$2 40; new mediums choice, $2 40@——; pea, $2 40@$——; red kidney, $3 50; white kidneys, choice, 3.00@——; foreign, mediums. 1.35@1 55; California Lima, $3 60@$——; green peas, $1 40@$——.

Nuts.—Peanuts are quiet. Fancy, hand-picked quoted at 8@——c, and farmers' grades at 5@7½c. Pecans, 4@6c.

FRUIT AND VEGETABLE MARKETS.

Vegetables.—Potatoes.—New, poor to good, per bbl, $0 75@$1 00; Norfolk, New, $1 25@$1 50; Long Island, $1 50@$1 75. Cabbage—New, per 100, $2 00@$2 50. Cucumbers, per 100, 30@40c. Egg Plant, per bbl, $3 00@$6 00. Tomatoes, per crate, 30c@$1 75. Corn, per 100 60c@$1 50. Onions—Potato, ber bbl, $1 00@$1.50, East Shore; do, $1.00@$1 50; Egyptian, per bag; $2 00@$——; Jersey White, $2 00@$2 50.

Fruits.—Fresh.—Peaches, per crate, $0 50@$2 00 do. per carrier, $1 25@$2 00; Huckleberries, per qt, 4@8c. Plums, per qt, 10@12c. Apples—Southern, per crate, 50@80c; New Jersey, per bbl $0 75@$2 50 Watermelons, per 100, $8 00@$18 00 Muskmelons, per bbl, 50c@$3 00, Blackberries, per qt, 2@5. Pears, per bbl., $1 50@$4. Lemons, per box, $2 75@$4 00.

Domestic Dried.—Apples, evaporated, new, choice to fancy, 5¼@6c; do new, common to prime, 4@5½c; sliced, new, 3@3¾c; quarters, 3@4c; chopped, @2¼ 2¾c; cores and skins, 1@2c. Cherries, new, 8@11c. Raspberries, new, 17@18c. Blackberries, 3¾@4c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 10@14c; do do, unpeeled, 5@6c; North Carolina sun-dried, peeled, 6½@8c. plums, 6c.

PROVISION MARKETS

New York.—Provisions.—Pork.—New mess, 13 25@13 50; short clear, $14 00@16 00; Extra Prime mess, $12 50@$— prime do, $12@$12 25 and family mess, $12 75@13 25. Beef—India Mess, in tierces, $12 50@14; Extra Mess, in barrels, $7 00@7 50 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $7 50@8 00; Family at $11—@$14. Hams—$13 50@$14 00, Winter packing. Cut Meats.—Quoted 12 lb average, Bellies, 6½@—c; Pickled Hams, 11¾c; pickled Shoulders, 6½@6¾c; Smoked shoulders 6½c; do Hams, 12½@12½c. Dressed Hogs.—City, heavy to light, 6@6⅝c. Pigs, 6¾c. Lard.—City steam, $6 35; June, $——; July, $6 94; August, $7 03; September, $7 11; October, $7 17; South America, 7.6c.

Boston.—Provisions firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. Lard, $8 50@$9 50.

Philadelphia, Pa.—Provisions.—Potatoes, Maryland Rose, per bbl, $1 50@$1 75. Provisions were steady. Beef.—City family, per bbl, $9 00@$9 50; do, packets, $8@8 50; smoked beef, 10@10½c; beef hams, $14 Pork.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@13c: do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6¼@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. Lard.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6½@7.

Chicago.—Mess Pork.—$11 85@11 90 Lard.—$(62@— per 100 lbs; Short Rib sides (loose), $5 95; dry salted shoulders, boxed, $5 37; short clear sides, boxed, $6 25@$6 37.

DAIRY AND EGG MARKETS.

New York.—Butter—New—State and Penn. best, 17@17½. Elgin, best, 18c; Western, best 16½@17; do prime, 15½c; do good, 13½@14: do poor, 12@13. State, Dairy, half-firkins, tubs, best, 17@——c; do do prime, 15@16; do do fine, 13½@14½; Welsh tubs, fine, 15@—c; do do, good, 13½@14; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 13@14; do fine, 11½@12½; Western dairy, fine, 13c; do fair, 11@12c; do poor, 9@10c; do factory, fresh, best, 12½@13, do prime, 11½@12; do good, 10@11; do poor, 8@9c.

Cheese.—State factory, fancy, 8½c; do do fine, —@——c; do do, prime, 7½@8c; do do, fair to good, 6¾@7c: Ohio, flat, prime, 6½@7½c; do good, —@—c; do, good, —@—; Skims, light, 5½@6½c; do medium, 2@3; do full, 1@2c.

Eggs.—Near-by, fresh, 14½@15c; Canadian, 14c; Southern, 13@13½c; Western, best, 13@13½c.

Philadelphia.—Butter firm. Pennsylvania creamery extra, at 17@18c; Pennsylvania Prints, extra, 20c; B. C. and N. Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were dull; Pennsylvania firsts 14@14½c; Western firsts, 13½@14c; Cheese dull—steady; demand fair; New York full cream, at 8½c; Ohio flats, choice, 7¼@7½c; do, fair to prime, 6½@7½c.

Chicago, Ill.—Butter.—On the Produce Exchange to-day the butter market was generally firm; Elgin creamery, 15½@16½c; choice Western, 15@15½c. choice dairy, 12@13½c; common to fair, 8@10c. Eggs firm at 12@12½c.

GRAIN MARKETS.

WHEAT.—Ungraded Winter Red and spring at 75@88¼c; No. 2 Red delivered, 89⅝@89¾c; do f. o. b, 88¾@90½c; do in store quoted 87¾c; No. 2 July, 87½@88c; do August, 86 5-16@87⅛c; do September, 86¼@87c; do October, 87⅝@88c; do November, 88⅝@89c; do December, 89¼@90c; do January, 90⅞, do May, 94@94¾c. Rye.—Has a light demand; Western quoted 50½@52½c; State, 53@54c. Corn.—Sales, Ungraded Mixed at 42½@45c; No. 2 Mixed, 43½@43¾c; elevator, 44½@45c, delivered, 44¼@44½c. to arrive, 44@44½c, c. i. and l.; No. 2 White, 49½@50c, elevator, 50½c, delivered; No. 2 July, 43¾c; do August, 44@44¼c; September, 44¼@44½c; do October, 44⅝@45, 1-16c. Oats.—Sales, No. 3, 27c; do White, 32½@33c; No. 2, 27⅝c; do White, 33½@33¾c; No. 1 White, 38c; Mixed Western, 26@29c; White do, 34@40c; No. 2 July, 27⅝c; do August, 27⅞@28c; do September, 27¾c; do October, 28c; do November, 28⅜c; do May, 30¾@30 13 16c.

LIVE STOCK MARKETS.

New-York, Saturday July 27, 1889.

BEEVES.—Poorest to best Texans and Colorados sold at $2 60@$3 80; common to choice native cattle at $3 90@4 60, including two carloads of very prime Ohio steers at the outside figure and two carloads of Lancasters at $4 50. The "stillers" on sale ranged from $4 to 4 40. A few bulls changed hands at $4 50@$3.

CALVES.—Buttermilks ranged from 3¾ to 4½c per pound; mixed and fed Calves from 3¾ to 4½c. and common to choice Veals sold at 4½@6c (4 head reaching 6¼c). Sales—Buttermilk Calves, 188 lbs. average, at $2 75 per 100 lbs; do 200 lbs. at $3; Mixed do. 204 lbs, at $4 50; Veals (few Buttermilks), 195 lbs, at $4 60; do, 248 lbs. at $4 87½; do, 208 lbs, at $5; 199 lbs, at $6.

SHEEP AND LAMBS.—Feeling firm for good stock, both Sheep and Lambs, but Common stock dull. Sales of Ordinary to Prime Sheep were at $3 50 to $5 12½, and a carload of Choice brought $5 25; Bucks sold at $3@$3 25. Inferior to Choice Lambs ranged from $5.25 to $6 65, and a carload of Extra Selected do sold at $7. State Sheep, 66 lbs average, at $3 50; State Lambs, 66 lbs, $5 50; Kentucky do, 65 lbs, at $5 50; State Sheep, 92 lbs, at $5 12½; State Lambs, 72 lbs, at $6 10; Kentucky do, 77½ lbs, at $6; Ohio Sheep, 107 lbs, at $5 25; Indiana Sheep, 411½ lbs, at $5; West Virginia Sheep, 80 lbs, scant, at $4; State Bucks, 125 lbs, at $3.

HOGS.—Nominally steady at $4 60@$5 10 for Common to Prime Hogs.

Communications Received for the Week Ending July 27, 1889.

F. C.—G. M. H.—J. B.—W. M. W.—H. I. Blakeslee, thank you.—W. J. B.—J. L. B.—B. B.—T. H. H.—J. L. N. nectarines received.—J. H. M.—E. W.—H. E. W,—S. C. W.—S. H.—W. F.—D. M. C.—E. T.—A. E. M. C.—D. G. P.—E. E. C.—M. W. H.—L. C. W.—A. B.—J. S. C,—N. F. H.—M. C., thanks.—C. T. S.—H. H. G.—D. S. H.—M. M.—A. T.—C. L. N.—E. B. W.—J. L.—J. E. S.—S. D, T.—L. D, C.—W. S.—D. C. L.—G. I. L.—F. R. W.—A. J. C.—I. J. B,—H. A. W.—A. S.—S. P. L.—C. T.—J. Q. A.—O. H. H. S.—W. W. C.—B. C,—C. W. C.—E. D. C.—H. S. W.—J. S.—C. M. W.—F. P. Q.—K. & H. Co,—P. B. C.—L. C. M.

Miscellaneous Advertising.

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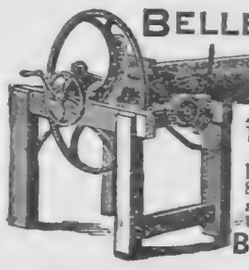

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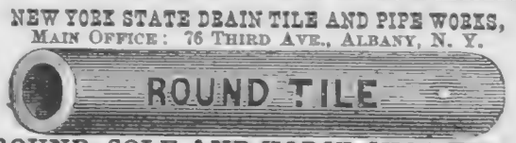

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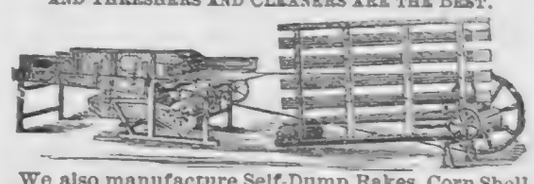

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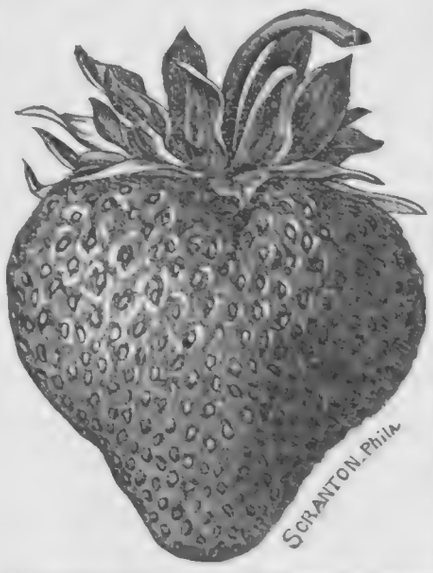

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Gandy, latest, largest, grand; **Monmouth**, the earliest, very large, splendid; **Louise**, highest flavor, beautiful, large, midseason, 75 cents per doz; $3.50 per 100. Daisy, Eureka, Jucunda Improved, Miami, the four most promising new sorts; $1.00 per doz.; $5.00 per 100. An illustrated pamphlet giving full descriptions and complete instructions for cultivation mailed free.

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Are growing the Largest and most Complete Assortment of Nursery Stock in America. In BUDDED APPLES and STANDARD PEARS they acknowledge no competition - quality considered. Nurserymen and Dealers will consult their own interests by getting prices on this Superb Stock before buying. Special inducements to buyers in large quantities.

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Literary.

MAGAZINE REVIEWS.

"FLOODS and Their Causes" is the title of an article by Felix L. Oswald in Lippincott's Magazine for August, which is of peculiar interest in this year of freshets and floods. Some of the causes assigned are those which are beyond the control of man, such as the sudden melting of heavy bodies of snow, ice-gorges, occurring chiefly in rivers flowing from south to north, phenomenal rainfalls, an instance being given where 31 inches of rain fell in France in 20 hours, land-slides, volcanic eruptions, etc. The Johnstown flood is attributed to a "combination of unlucky circumtances." But the chief cause of river-floods in their most destructive form, is the disappearance of the forests from the highlands where the streams have their sources. Such calamities may be averted to a great extent by the preservation of the highland forests, and, at the same time, more favorable climatic conditions be secured to the residents of the valleys and plains. History supports this view of the case, as what were once some of the most fertile regions of the Old World, are, owing to forest destruction, now barren wastes.

Patriotic Americans never tire of reminiscences of Lincoln. His quaint humor, his simplicity, his intense love of justice, his tenderness of heart have endeared him to the common people. James M. Scovel gives numerous personal recollections which will tend to strengthen our affectionate regard for the martyred President.

Rollo Ogden contributes "A Literary Boarder," a semi-humorous tale of the college-educated son of a pork-packer, who secluded himself in an out-of-the-way country place to do some "literary work," to the great disgust of his hard-headed father, who in common with a "certain dark-eyed young lady" was much rejoiced to find him "cured of his nonsense," and ready to return to the parental roof. The complete novel is by William H. Babcock—"An Invention of the Enemy." The other departments are well filled and interesting as usual. J. B. Lippincott Company, Philadelphia, Pa.

THE WRITER, a monthly magazine to interest and help all literary workers, contains much to aid both professionals and amateurs. There are some young writers who have, and many more who think they have, literary ability. Such will find helpful information in this magazine. The Writer, Boston, Mass. Subscription price $1 per annum.

A SALARY with expenses paid will come handy to any one who is now out of employment, especially where no previous experience is required to get the position. If you want a position, see advertisement on page 519, headed, "A Chance to Make Money."—*Adv.*

Market Notes.

A JERSEYMAN'S JOTTINGS.

SOME MARKET PROSPECTS.

DURING the summer and fall I come into New York quite frequently. Most of my market stuff is sold in the city. I find that it pays pretty well to go and see the commission men from time to time. It does them no harm to understand that you are looking after your own interests. I have studied the markets for a number of years. Just about this time every year straws begin to move in the direction of future prices. There are some signs that rarely fail, though of course, much depends upon local conditions, particularly for market truck. I usually wait until I get the July report of the Department of Agriculture, add to that the information marketmen have given me and then make an estimate. I will give a portion of it to the RURAL this year. Take it for what it is worth. I don't guarantee it, but simply give a condensation of all the facts I have been able to obtain.

Wheat.—Mr. Dodge, at Washington, states that winter wheat will be about up to an average crop. The principal winter wheat States will produce good crops. Spring wheat is less favorable. The Dakota crop has been cut by drought and on the whole the crop will be below that of last year. American farmers are naturally concerned in the condition of the crop in Europe because the amount of grain taken out of the country will go far toward determining the price of that consumed here. From the information at hand now the probabilities are that the European crop will be about an average one, The prospects are better than usual, in England, France, Germany, Spain and Italy, medium in Austria and considerably worse than usual in Russia. The crop in India is below that of last year. As matters stand now, therefore, it may be said that American wheat ought to bring a good price.

Corn.—America has practically a monopoly in the production of this crop. We supply the world, though the Argentine Republic is now demanding a share of the trade. The English want this grain more for feeding to stock than for human consumption. A high price will lead them to use more linseed-meal and less corn-meal. There is every prospect now that prices for corn will rule high. The rainy spring delayed planting and hurt the crop besides, cut worms have been at work in the West, and other circumstances have reduced the crop. For some years past Eastern farmers have been reducing their corn acreage because Western corn was poured into local markets cheaper than the home product could be grown. Now when the Western corn fields are injured we shall have to stand a higher price than usual.

Oats.—There will be a good supply of this grain. Prices will not be much, if any, lower, for oats vary less in price than any other product of American soil. In my own locality more oats have been harvested than in any previous year that I remember. As the rye crop gave a good yield of grain, many farmers there will grind oats and rye together for stock feed. Thus we hope to save corn. The rye-straw crop is not as good as usual and reports indicate that the price ought to be good.

Potatoes.—This is a crop that I am greatly interested in. Our prices are regulated by shipments from the West. Mr. Dodge is a little in doubt concerning potatoes. He says there is an increased acreage, but this increase is mainly at the far West. The increase in the older States is small. The tendency is to take potato-growing across the Mississippi River. At this date, the prospects are not quite so good as they were at this time last year. Prices ought to be better than those of one year ago—I mean for late potatoes. I think this because most of the low condition is reported from the West. The crop at the South is reported very good. The Southern crop being early will be rushed into market and in good part cleared up before our late potatoes come in. That is the way it looks now, though foreign shipments may spoil it all.

Fruits.—The Washington reports state that the prospects for the apple-growing States of New York, Ohio, Michigan, Vermont, Pennsylvania and others are poor. New York reports only 59 per cent. of a full crop. Maine and Illinois seem to have the best crops while Michigan is far below her average. The R. N.-Y.'s reports of damage done by frosts give us an idea of what might be expected. It looks as though the farmers who have apples to sell this year are to be congratulated. Peach reports are very conflicting, with the chances apparently in favor of low prices. Grape prices promise to be above the average unless California "magnates" carry out their scheme of making such cheap railroad rates that they can flood the city with California grapes.

Market Truck.—No regular reports are given as to the condition of vegetables, except by a few local societies or clubs. From what I can learn I should say that Lima Beans will be in good demand at fair prices. One danger is that their season will be shorter than usual so that more of the crop must be brought in at one time. Sweet corn ought to find a somewhat readier sale than last year, but prices will not be much improved. A shortage of the crop in the canning districts of Maine is reported and this may make business somewhat more lively for canners who depend upon this market. Tomatoes promise to be very plentiful. Canners state that the supply of canned goods is already too large so that there will probably be less relief from this source than usual. The season seems to have been favorable for cabbage and low prices should rule.

Eggs are now bringing good prices and so are live fowls. Now is a good time to sell poultry. September will be a first-rate time to buy. Dairy goods are here in abundance and some specimens find very slow sale. Some commission men who, in former years have sent out men to buy butter from creameries, will be saved the expense this year, as they have no difficulty in securing all they want. This shows how rapidly the dairy business is growing. In another article I will try to tell more about the market and the marketmen.

JERSEYMAN.

Miscellaneous Advertising.

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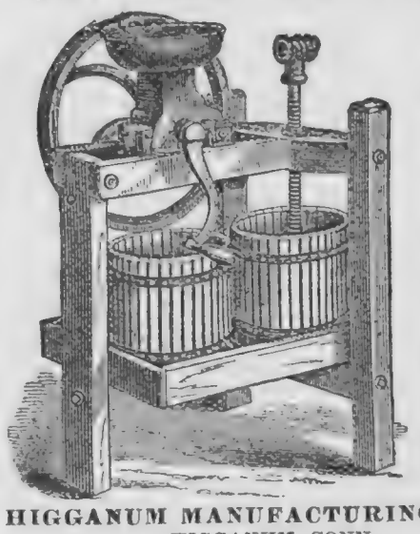

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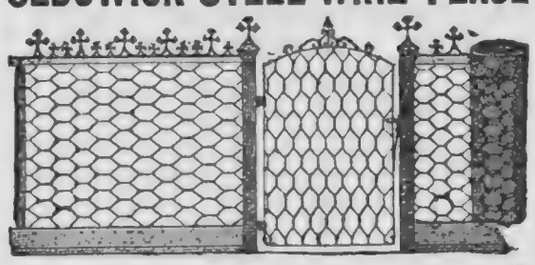

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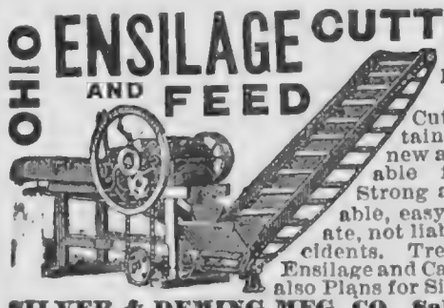

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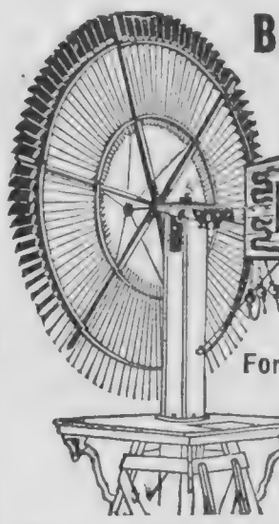

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An active, energetic man with capital and experience, to build up a farm to the standard of "Windsor Farm," Denver, or "Deerfoot Farm," Conn. Address giving references and experience, C. A. Roberts, Care of The Roberts Hardware Co., Denver, Colorado.

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CATALOGUES, ETC., RECEIVED.

TEXAS FEEDING EXPERIMENTS.—Bulletin No. 6 from the Texas Experiment Station.

The experiments recorded in this bulletin were conducted with a view to answering the following questions·

1. Is there any practicable method of sheltering range steers in winter feeding, and will it be profitable?

2. What feed stuffs that are obtainable in the State will give the best results in proportion to cost?

3. Can the common, unimproved Texas steer be fattened with profit?

These questions appear at first sight to be of local interest only, yet when we consider the fact that under the present systems of beef distribution we are all liable to be called upon to eat beef from Texas, we can see that anything that promises to improve the quality of that beef is of general interest. Texas feeders will be prompted to study the details of the experiments; the general public will be interested in the conclusions.

Director Gulley concludes that shelter for Texas cattle is necessary, and that dehorning is essential to make sheltering range cattle practicable. Silage forms an economical food. It can be made from corn, sorghum, or peavines. Cotton-seed hulls are also valuable. For the richer part of the ration, use boiled cotton seed, cotton-seed meal with some corn, rice meal or rice bran, in sections where they could be procured cheaply. This, it must be remembered, is for Texas. The cheapest and most fattening ration was found to be silage and boiled cotton seed; then followed cotton-seed meal and cotton-seed hulls; cotton-seed meal, cotton-seed hulls and silage; raw cotton seed and silage, and corn and hay at local prices. It was found that cattle fed on boiled cotton seed relish a considerable amount of salt. Some experiments were also made to determine the feeding value of sugar-cane bagasse. Analysis indicates a value for this bagasse not much below that of corn silage. Bagasse from the smaller sugar mills could doubtless be preserved in silos. A year ago the R. N.-Y. gave some facts regarding the feeding value of sorghum bagasse as it came from a northern mill. We shall have more to say about this later on. Under the head of "Suggestions to Feeders." Director Gulley has the following to say :

Two things are essential in fattening animals:

1. To keep the animal comfortable and quiet.
2. To induce him to eat the largest possible amount of nutritious food.

One is of little value without the other. To keep the cattle comfortable, shelter from rain is indispensable. Cattle fall off as rapidly during a cold, rainy spell in Texas with the temperature at the freezing point, or a little under as they do in Dakota with the temperature below zero.

Range cattle, as a rule, will not do their best under close confinement, *i. e.*, tied up by the head. They may be shut up in a building, but need room to move around.

Wild cattle must be handled quietly. *This point we wish to emphasize*, for it is entirely overlooked by too many cattlemen. A barking dog and a noisy, loud-mouthed man are two things that should never be permitted to enter a cattle feeding-pen. It should be remembered that when a naturally wild steer is struck with a whip, or disturbed in any way, he stops gaining weight for a time, and food consumed is a loss.

This is not a sentiment, but a business matter of working the animal machine to its full capacity. Dehorning seems to affect a wild steer somewhat as "throwing" affects the horse in the Rarey method of breaking colts. Then the head remaining sensitive for some time, wild steers are subdued and stand quietly together in a way that must be seen to be believed.

We are of the opinion that steers should be dehorned but a short time before shutting up to feed so that they may be fattened while their heads are somewhat tender.

NORTH CAROLINA EXPERIMENT STATION.—Bulletin 63 gives a report of a continuation of the tests of seeds, begun in 1888. The following deductions may be drawn from the experiments thus far conducted:—

1. Grass and clover seeds deteriorate very rapidly with age, and generally are not worth sowing after they are two years old.

2. That aged and deteriorated seeds are often sold by local store-keepers.

3. That farmers should test samples before purchasing seeds, and purchase directly from some reliable seed-grower, or from a local merchant who will guarantee the quality of his seed.

4. That a trustworthy standard of value for seeds, with laws, if necessary, to enforce its observance, is very badly needed.

Under the head of "Laboratory Notes" we are told that stable manure, in drying, loses but little of its ammonia. A pile of manure was exposed to a slow current of dry air, which was afterwards tested for ammonia. It was found that the amount taken from the manure by the air was inconsiderable. This matter was brought up during the R. N.-Y.'s recent visit to Cranbury, N. J. The practice there is to spread stable manure on the sod in August or whenever, during the summer, it can be hauled. Objection was made to this plan that the sun and air would "dry out" the ammonia. Farmers had not noticed such a process. The above recorded experiment, would indicate that the practice was reasonable. The sun, however, made the manure hard and cloddy, though its mulching effect on the sod was good.

DELAWARE EXPERIMENT STATION.—Bulletin 5 contains a paper on seed testing. The tests seem to have been conducted with a great deal of care. In one sample of Red Clover seed 9.18 per cent. of impurities was found. Among the weed seeds present were plantain, rag-weed, pig-weed, sorrel, dock and catnip. There were weed seeds enough in this sample to plant one seed every six inches in drills nine inches apart, supposing the usual amount of clover seed to be used per acre. Tests as to the vitality of seeds were also conducted. Prof. Chester does not seem to think that a difference of a few per cent. in the germination of seeds is of very much importance. He says that one pound of clover seed contains about 284,000 seeds. When we sow eight pounds, we get 2,272,000 seeds, giving 52 seeds to the square foot. In any ordinary clover field, he says, not more than three stools will be found on a square foot. It is probable therefore, that a good portion of the clover seed might fail to come up and yet leave enough for a seeding.

A SIGNIFICANT MOVEMENT.—This is the little title of a circular issued by representatives of the Farmers' Union, the State Grange and the Labor organizations of New York State. It appears that these representatives met at Rochester, July 3, and decided to issue this address to the tax-payers of the State. The address states, in substance, that, 10 years ago, the State debt was, in round numbers, $10,000,000 which is now substantially wiped out. Then the State taxes were $8,000,000. This year the legislature voted $12,000,000 taxes. The rate was then 2.6 mills on the dollar, now it is 3.52 mills. Personal property then paid one-seventh of the taxes, now it pays one-tenth. Then real estate was assessed at $2,376,000,000; now at $3,122,000,000. Then personal property was assessed at $364,000,000; now at $346,000,000, though any man of common sense knows it has rapidly *increased*. The farming lands of the State have decreased in value more than 25 per cent. Real estate in cities has increased in value and pays an unjust proportion of taxes, but owners recoup their taxes in increased rents. Whenever and wherever appropriations are made by those who pay no considerable portion of the taxes required to meet them, wasteful and extravagant expenditures may be expected, since no motives of economy restrain their taxing power.

The State Comptroller says: "I am sure that the actual value of the personal property of the people of the State *legally liable to taxation* exceeds that of real estate. That being so, the startling fact is apparent that we have within the State to-day *over* $2,500,000,000 of personal property that is not—but ought to be subject to taxation. * * It is apparent that the present result of taxing personal property is a travesty upon our taxing system which aims to be equal and just. A remedy is loudly demanded from the legislature."

The Governor has urged the passage of laws that would equalize taxation and each of the political parties has pledged itself to right the wrong. It is not yet righted. Untaxed capital has defeated every bill that has been introduced with this laudable end in view. The representatives who held this convention are getting tired of this business. So are we all, for that matter. This is what they have to say to the voters of the State.

"We therefore appeal to the manhood and self-interest of the tax-payers of the State and to the justice of all honorable and fair-minded men, to unite in the approaching election and choose a legislature that will restrict taxation to the legitimate needs of the State, equitably adjust the burden upon all the property liable to taxation, wipe out 'combines' and 'trusts' within its jurisdiction whose purposes are to increase the price of the necessaries and comforts of life, and especially destroy the 'publishers' combine,' which under present laws extorts exorbitant prices for the text-books used in our public schools. These indirect taxes are as oppressive and grievous as the direct taxes, and they affect a larger number of our people. To this end and for this purpose we earnestly recommend that steps be immediately taken to secure the nomination of candidates for the Assembly and Senate, in every elective district in the State, who are in favor of and will support the principles enunciated in this address. Party strength need not, and probably would not be affected by this movement. The question is simply whether our next legislature shall be chosen by the tax-payers of the State in their interest and behalf, or by political machinery in the interest of untaxed capital, to be manipulated and controlled by it." Choose ye which it shall be.

Many of the men who sign this address are known to the R. N.-Y. as thoughtful and honorable persons. We are glad they have spoken. We hope farmers will listen and act. The R. N.-Y. would like nothing better than to see this matter carried through. New York State local politicians don't approve of taking things out of the old groove. It is pretty hard in some places to elect a coroner unless he will promise to carry out his strict party principles even in his treatment of the dead, but this chance must not be neglected, even if the little party bosses are all upset. The "publishers combine" should be taken in hand first of all. Let us have cheaper and better school books.

The R. N.-Y. has not verified the figures given in the above statement. We believe, however, that the comparative statements of the assessed values of real and personal properties are fair. And the tendency among city and town people is to demand a further tax exemption for personal property. Within the past few weeks several papers of national reputation have used the statement of the N. Y. State Comptroller as an argument in favor of the complete exemption of personal property, giving as their main argument the difficulty experienced in assessing it properly. Such an exemption would throw the burden of taxation upon farm lands already over-taxed. It is in substance the Henry George theory over again. The farmers of N. Y. State, and in fact those of all the States are greatly interested in this question. The R. N.-Y. hopes that the next legislatures will show that this interest worked itself into a substantial form.

BUREAU OF EDUCATION.—Nos. 3, 4, 5, 6 and 7 of the publications of this department are issued from Washington. They deal with educational matters in Wisconsin, South Carolina, Georgia, Florida and North Carolina. The volumes dealing with the history of public education at the South are very interesting, particularly so to those who have studied the merits of the "Blair Educational Bill." There was a marked difference in the educational methods employed by the descendants of the Puritans on the one hand and the Cavaliers on the other. The Puritans founded a school and appointed a master one-half of whose duty was to teach and the other half to see that every child in the community came to school. As a result of this beginning the Northern States have always been strongly inclined towards compulsory education. The Cavalier sought the South. He had aristocratic ideas concerning the uses of education. He preferred the "academy" system of instruction where education could be bought by those who could afford it. The Puritan established the public school where the boy with a ragged jacket and patched trousers could put his tin cup into the fountain of knowledge. The Cavalier inaugurated the "pay" schools where money or pedigree divided the sheep from the goats. Up to the time of the war the South made little progress toward the establishment of public schools. Efforts were made at various times to begin the system, but the established academies and colleges never favored the plan. Private schools and tutors were quite popular. How any of the negroes ever learned to read is quite a mystery. After the war, every Southern State began a movement toward popular education. At the present time most of these States provide about 12 weeks free school during the year. The old "institutes" and academies are often run as "pay" schools for four months and as "free schools" for the threee months provided for by the State. During the "free" terms the teacher draws his money from the State while for the "pay" period he collects his money from parents. School money at the South is quite apt to "run out" early in the season. The writer taught for a short time in a Southern public school. He was paid in "school warrants" which could be turned into cash only at a discount of 20 per cent. offered by the local bank. The Southern public school system is quite imperfect yet, but the fact must be remembered that it has much to fight against, historical precedent, local prejudice and the influence of the friends of the old academies are against it. Still, it will conquer in time and work a vast change in Southern society and prospects. It is an element for good.

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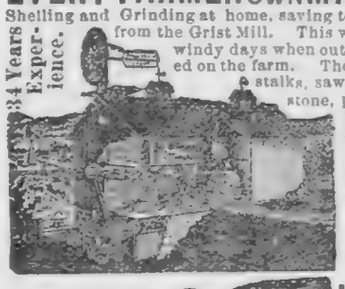

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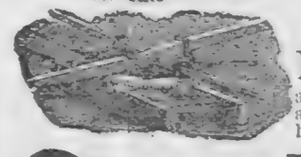

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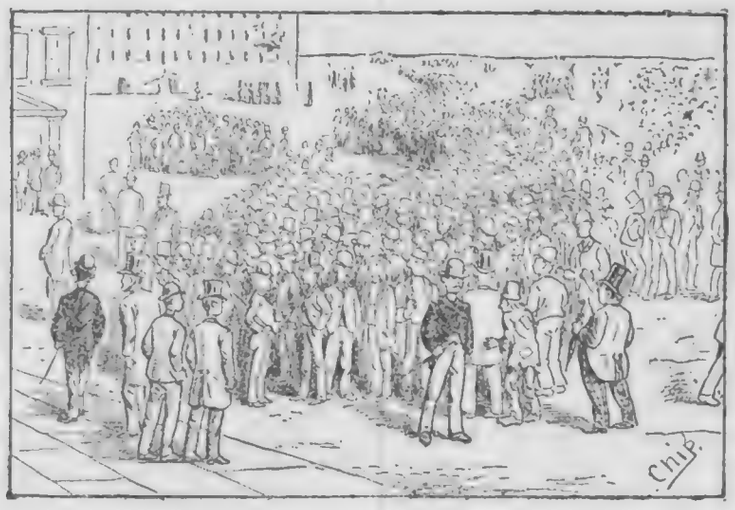

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For, although rather fat,
Yet she squeezed in her waist till her band burst. —Sydney Bulletin.

AN EARLY CROP.—Neighbor: "Well, Giggings, what are you raising?" Amateur gardener, sadly: "Blisters."—*Toronto Empire.*

THERE is one thing that the invincible Western cyclone has never yet succeeded in lifting, and that is a mortgage.—*Burlington Free Press.*

TEACHER: "Inanimate objects belong to the neuter gender. What gender is an egg?" Tommy: "Can't tell till it's hatched out."—*Texas Siftings.*

A, SOMEWHAT illiterate: "I read something in a paper about idiots. Are they human beings?" B: "Certainly, they are human beings like yourself?"—*Siftings.*

"I AM like a tree," he observed, as the clock struck 11. "I am rooted at your side." "Yes, but you never leave, do you?" And then he "put forth."—*Harper's Bazar.*

WAITER (reminiscencing with old customer): "Time flies, sah." Old customer (removing fly from the cream): "Yes; time flies were gone."—*Orange Judd Farmer.*

YOUNG SLIPJACK: "Ah, I would like to cross that field; do you think—Ah—that cow would hurt me?" Farmer: "Did you ever hear of a cow hurtin' a calf?"—*Grange News.*

"I'M so indignant that I cannot properly express myself!" cried the speaker. "Then put a stamp on yourself and go by mail," was the unsympathetic response.—*Harper's Bazar.*

OLD LADY: "I believe the Cape May boat leaves this pier, does it not?" Pierman: "Yes, marm; it leaves it every trip. Never knew it to take it over with it yet, and I've been here getting on for 40 year come this June."—*Tid-Bit.*

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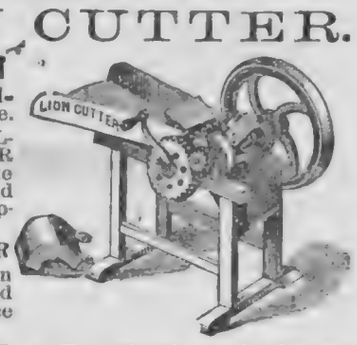

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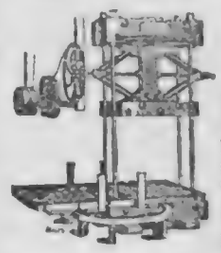

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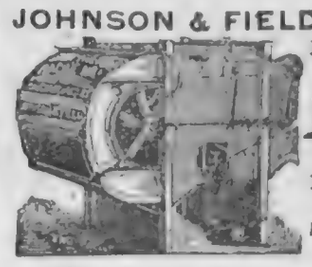

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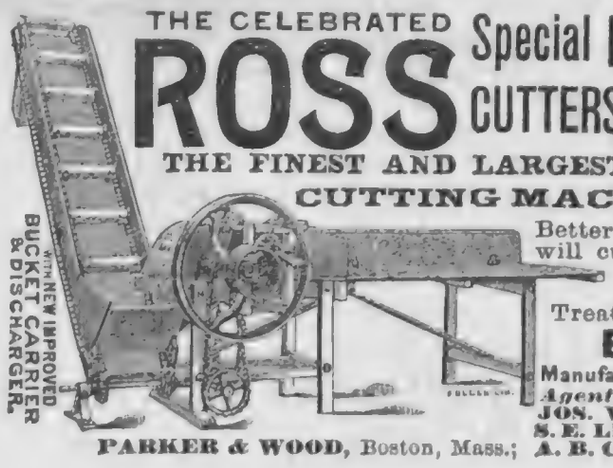

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GANDY (b) and possibly OHIO, (p) very nearly approach the above in size, and may quite possibly rival if not even supersede Kentucky and Glendale as late varieties.

HAVERLAND (p) seems quite likely to rival and even supersede Crescent as a market variety, which would be a gain in point of quality also.

LIDA (p) is of fine size, abundant vigor, and enormously productive, if, (as is indispensable) it is given rich soil, and high culture; otherwise the later berries are sure to be abortive or imperfect.

SUMMIT (p) is only moderately vigorous, and fairly productive. Its fruits, even though enormously large, are always perfect in form — never coxcombed.

PEARL (b) is very vigorous and productive. Although little above medium in size, its quality is good. It promises to assume a high position among market varieties.

GOLD (p) is only of moderate vigor. Its quality is very good. It is a very desirable amateur or family variety.

BURT (b) although of only medium size, possesses valuable qualities of both plant and fruit; which will, quite probably, render it popular as a market variety.

BOMBA (b) and MAMMOTH (b), like Jessie, produce a few very large first fruits; but rich soil and high culture are indispensable to the size of the later specimens. Whether these can be depended upon for such a purpose, I regard as uncertain.

CLOUD (p), although only planted late in August last, shows very satisfactory vigor of plant; but a longer trial is needed to decide as to its productiveness.

CLARA (b) received for trial from Cleveland, Ohio, late last autumn, has been allowed to mature a few fruits, and so far promises well.

PARKER EARLE (b) was also received late last autumn, from Texas, for trial. It gives indications of great vigor, productiveness, and superior quality—a combination of good qualities hardly to be anticipated in a variety so widely removed from its place of nativity.

DEW (b), an enormously large and wonderfully vigorous, Michigan seedling, Mrs. Cleveland (p), Ohio Centennial (p), Townsend's No 3 (b) and Townsend's No. 19 (p) all received from Ohio, for trial; also Little's No. 10 (b) and Loudon's No. 15 (b) received for trial, the present season, from Ontario, are all developing desirable qualities of plant or fruit, or both, and the same is true of a trial variety (p) received from Illinois, which it is proposed, if found valuable, to name Lady Rusk.

WONDERFUL (p), Norman (b), Pineapple (b), Miami, (nearly p), Louise (b), Hampden (p), and Crawford (b), were only planted the present season, and although several of them manifest great vigor and some also afford decided indications of productiveness, it is not deemed proper to speak of their performances upon so short an acquaintance.

A variety which proves to be nearly pistillate, was received last season for trial from Minnesota, and it has since been named Martha. The plant is very healthy and vigorous, with substantial, dark-green foliage and medium-sized fruit, of very good quality. I am not informed whether or not it is yet offered for sale.

MOORE'S PROLIFIC (b), is a recent variety said to have originated in Eaton County, Michigan. Grown in parallel, matted rows, alongside of Jessie, and given the same treatment, it proves equally vigorous and productive. The size of the fruit is the same, although it is somewhat different in form. In quality I deem the Moore somewhat superior, though but slightly so. The variety has now been grown several years in Eaton County; and for the last two years at this place. I am not aware that it has been at all advertised.

South Haven, Mich. SECT'Y E. WILLIAMS.

The PEARL and JESSIE have given me very good satisfaction during the past very unfavorable season for this fruit, and I have no reason to modify the impressions formed of them last season. They are early, ripening within a day or two of each other. The former I like the better, it is so handsome, perfect in shape, always well developed, ripens evenly, slightly necked so that the calyx is easily removed; the quality is very good, and it is large enough to meet all reasonable demands. The plants are vigorous and fairly productive. The Jessie is quite as vigorous and productive. The first berries are perhaps a little larger, with too much tendency to ripen unevenly. This it probably inherits from the Sharpless, as well as its inability to hold its flavor after reaching maturity. The Sharpless loses its fresh, agreeable flavor very soon after becoming ripe. In fact, it is really better to my taste before it is fully ripe than afterwards, and this tendency to lose character, is in my experience, the chief fault of the Jessie. I hear very conflicting and unfavorable accounts of its behavior in other localities. This is not at all strange. The soil in which it originated, I am told, is a deep stiff clay in which it withstood protracted drought unharmed, conditions not to be found in many localities this season, and the sooner the idea is abandoned among originators, disseminators and growers, that the ideal strawberry has yet been produced that will adapt itself equally well to all conditions of soil, climate and culture, the better it will be for all concerned.

BELMONT seems to possess all the virtues and few of the vices of the Sharpless, save unproductiveness and uneven ripening, and will take its place with me another season at least.

BURT, sent out last season to take the place of the Wilson, does not show the vigor and productivenss characteristic of that variety; but it is far better, in my estimation, on my soil. The plant is healthy; the fruit of fair size and handsome, rather acid without liberal additions of sugar which all strawberries are apt to receive, no matter how much nature may have placed in their composition.

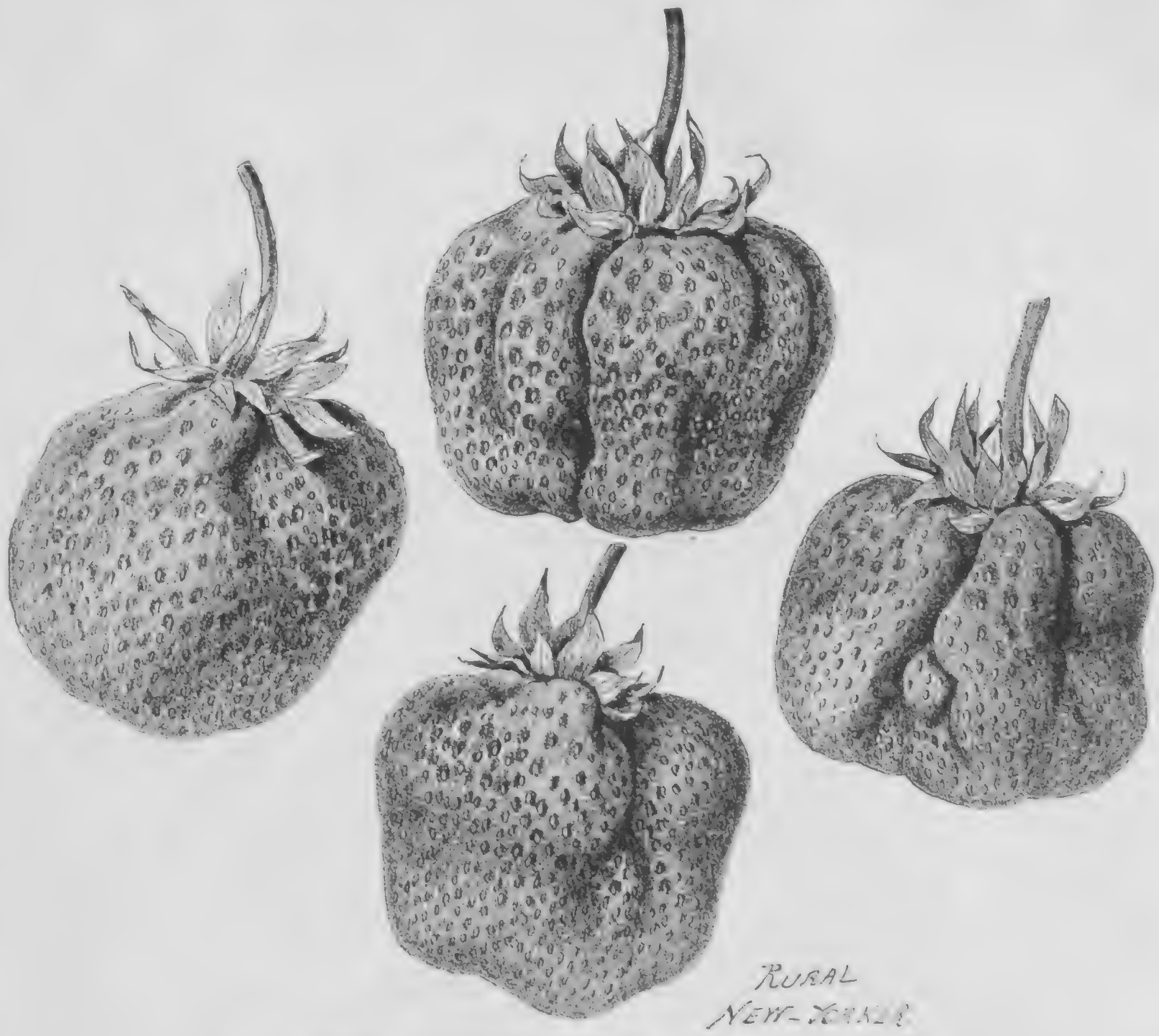
OHIO, sent me last season as new, is the old Champion (Windsor Chief) rechristened or reproduced, and its quality is well expressed by J. B. Olcott of Connecticut, who, in speaking of another variety, said it would flavor more sugar than any variety he knew of.

PRINCE (DURAND'S SUPERB) in quality is the best berry I have, though not quite so productive as I would wish; but as my primary object in growing strawberries is to eat them, I can afford to grow a few of them for this purpose.

JERSEY QUEEN, its twin-sister, is more vigorous and productive as well as larger, and more acid.

BUBACH is the most promising of the newer varieties, fruiting with me this season for the first time. It is early, large, bright-colored, handsome, vigorous and productive and ripens evenly — all valuable traits in any berry. The quality is hardly up to that of some of the others, but still I think it will do to plant more of it.

WARFIELD AND HAVERLAND are also well

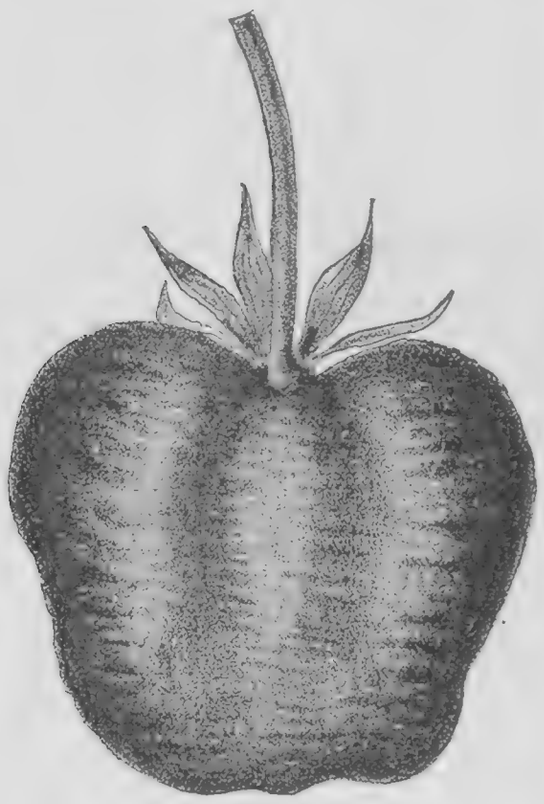


THE MARY STRAWBERRY. From Nature. Fig 196.

spoken of elsewhere, but these I have not yet fruited: in fact, new varieties multiply so fast that I cannot keep pace with the procession.

The great trouble attending my strawberry culture is the prevalence of brown rust (blight) and rot which run riot in such an excessively wet season as the past has been, and in future I must confine myself to those varieties that seem to possess constitutional vigor sufficient to resist most successfully the attacks of the fungus. That some varieties are more susceptible to this disease than others is, beyond question, a fact. While age and long cultivation of a variety may enfeeble and impair its vitality and increase its liability to an attack of this fungus, it is also very evident that some new varieties fresh from the hands of the originators, are extremely susceptible in this direction, thus rendering absolutely worthless whatever other good qualities they may possess, in regions where this malady prevails. This disease-resisting feature of constitutional vigor should be well looked after by originators of new varieties. It is on account of this fungus that I am compelled to abandon Sharpless, Davis, Jewell, Downing, Gold, Dewey, Acme, Cohanzick and scores of seedlings. Some of the above have little merit with me at their best and this fungus renders them worthless. I part with Downing more reluctantly than with all the rest. Most of those I retain are slightly subject to this disease, but they are the least affected so far. If in the future this tendency increases, they too must go.

Among all our new varieties there are many good ones, but the ideal berry has got to come so that there is plenty of room for originators yet. We want a berry as large as the Sharpless, of even shape, good color and flavor that will stand at least two days without spoiling, and stand shipping from Florida to Chicago.



MARY. Half-section. Fig. 197.

It must be as productive as the Haverland with a perfect blossom, so we have a great improvement to make yet before all these things are reached. With all due deference to the shipping qualities desired, I hope, for the sake of local growers, such a variety will never be obtained. Those long-distance-shipping berries have ruined the business for thousands of local growers by flooding the markets and sending prices down below a living profit and disgusting consumers with the utter worthlessness of much of the decayed fruit offered in our markets early in the season.

The reader of these hastily-written notes will bear in mind that they are based on a home consumption view only, without any reference to shipping or marketing purposes. I believe that strawberries were never designed by the Creator to be consumed hundreds of miles from the place of their growth. To get the most satisfaction out of this ambrosial fruit, they should be consumed within 36 hours, at farthest, after being picked and transportation should be confined to local markets. If it were so, growers would realize living prices, consumers would be better served and our markets would be rid of the decaying, unwholesome trash that constantly tends to force prices below a living profit. It is strange that berry-growers will persist year after year in spending their time and labor in producing crops in order that transportation companies and commission merchants may absorb all the proceeds. No other business or class of men could or would stand it; but I suppose as some drop out, enough inexperienced greenhorns stand ready to rush in and fill their places, which keeps the ranks full.

Montclair, N. J.

EXPERIENCE WITH THE NEWER STRAWBERRIES.

STATE POMOLOGIST P. M. AUGUR.

JESSIE: Very good; fairly productive.

BUBACH No. 5: A most decided acquisition. A good, medium-early market berry.

GOLD: A very choice berry for family use: not so vigorous or hardy as desirable for a market berry. It needs the best culture and protection.

HAVERLAND is too much like the Crescent to meet our demand, yet it has some strong points.

JEWELL: I have always been called upon to send out heavy plants, and with me the Jewells grow remarkably heavy; but the nearer fruitage a plant comes the less value for propagation; hence a young plant struck in October is of far more value for immediate multiplication than one struck in July and full of fruit germs. In other words, the smaller plants make more runners than extremely heavy ones. These points are important to be known, as my orders for this variety increase year by year. The Jewell needs single-row or hill culture, or else what we call the triple row. With us, for size, beauty and productiveness it surpasses the Jessie, Bubach and all others, as we have most convincing testimony.

THE MIDDLEFIELD.—P. M. Augur & Sons' No. 70. This is a most promising variety. Like the Jewell, it is pistillate. Unlike the Jewell, it makes runners profusely. It has a peculiarly corrugated heavy leaf. The plant is fairly hardy with abundant foliage. The berry is of excellent quality, medium to large, of a dark, glossy, crimson, with roundish, conical golden seeds evenly distributed. The fruit is very uniform in size and form, attractive to the eye and keeps well.

THE CARDINAL.—P. M. Augur's B. No. 411. This is the only variety saved out of a batch of 500. The plant is one of exceptional vigor and excellence. The berry is very large, somewhat irregular; color scarlet; quality good. It is well adapted for family use or a near market, but does not stand up like our No. 70; neither is it as high-flavored; still it stood ahead of all bisexuals on our ground for health, size and productiveness this year.

THE PINEAPPLE is praised as a very choice variety of large size and fine quality, but I fear it is of too light color to be attractive in market.

THE YALE is a Connecticut seedling in the hands of S. Hoyt's Sons of New Canaan. The plant is vigorous and productive. Color dark crimson; quality very good, and in ripening it is quite late. I regard it as a promising large, late variety. We have many other new candidates from various sources, of which it is too early to speak.

Middlefield, Conn.

THE NEWER VARIETIES OF STRAWBERRIES THAT ARE WORTHY OF COMMENDATION.

SEC'Y M. CRAWFORD.

THERE are but few such, and not one without some weakness. The Jessie, Bubach, Warfield, Pearl and Haverland come nearer to perfection than any others that are as well tested.

VALERIAN. Fig 198.

JESSIE has no weak point here, except that its blossoms are easily killed by frost. A few years ago I never expected to see as fine a berry; but now I am prepared to see even a better one.

BUBACH is the largest berry that bears as heavy a crop. The plant is faultless. The blossom is pistillate, and quite hardy. Some of the berries are divided by a suture that detracts somewhat from their fine appearance. They ripen evenly, and are of a good color. The quality is good, but not superior. The berry is not firm enough for a distant market, and its skin is too tender for continued wet weather. It is *the* berry for a near market. We sold bushels of this variety the past season, that ran from 27 to 30 to the quart.

WARFIELD will doubtless be placed at the head of the list by a great many, and this is where it belongs if one wants to ship his berries. For healthy, vigorous growth and great productiveness, it is not surpassed. It is among the first to ripen, and among the last to yield a good picking. It is about one half larger than the Crescent, and maintains its size much better than that variety. It is also superior to it in form, color, quality and firmness.

PEARL is a strong grower and a good bearer. It has a perfect blossom and is one of the first to ripen. The berries are very beautiful—long and conical with a slight neck. It is of the best quality—good even before it is fully ripe. It is of large size all through the season.

HAVERLAND is a most luxuriant grower and immensely productive. It is quite early and it matures all its fruit. It is of large size rather long, and never mis-shapen. Its fruit-stalks are weak so that the berries lie on the ground. The quality is only moderately good, and hardly that in a wet time. During the past season I fruited a large number of new varieties received from different parts of the country and of these I find the following to be very fine on my place:

IVANHOE, from southern Ohio, has a perfectly healthy, vigorous plant, and bears a very heavy crop of large, fine-looking berries. It has fruited twice with me, and I consider it a variety of great promise.

MARTHA, from Minnesota, has dark-green, healthy foliage, and is very productive. The fruit resembles the Wilson, but is larger.

LITTLE'S No. 4, from Canada, was the finest berry, all things considered, that I fruited this season. The plant is strong and vigorous, has a perfect blossom, and continues in bloom a very long time. The fruit is of great size, usually of good form, bright red and of good quality. I think it is the most productive very large berry I have seen, and it yields fine berries after most others are gone.

LOUDON'S 15 has fruited here three years. The plant is perfect, never having shown a single weakness. The blossom is hermaphrodite. The fruit is produced on large spreading trusses so that each berry may be picked without touching any other. The fruit is large, round to conical, with a neck. It is quite firm, bright red, and of superior flavor.

CARDINAL and AUGUR'S No. 70, from Ct., are two very promising varieties, and will doubtless be heard from hereafter. They are of great size, and the plants have developed no weakness as yet.

Cuyahoga Falls, O.

STRAWBERRY NOTES.

FROM C. L. JONES.

I have in cultivation only four varieties, viz: Prince, Gypsy, Jessie and Pearl. All are good on my ground save Jessie. Prince for late, and Gypsy for early are my standard sorts and are doing well. Pearl is very promising.

Newark, N. J.

FROM L. LAWRENCE.

The past season has been most discouraging. The strawberry crop in this vicinity has been very light, owing partly to the late frost and partly to a lack of fruit buds; while the almost daily rains during the picking season injured the quality. We have, however, watched with pleasure the new varieties The Jessies behaved nobly. They were loaded with fruit. The plants bore three times the amount of fruit borne by the Ontario. I never saw so high a proportion of large berries before. The soil was but moderately good. We are highly pleased with it.

We are charmed with the Crawford also. The plants and berries were grand. My opinion is that it is the berry to succeed the old Cumberland. It has all the beauty of size and shape of that variety while it is of better color and quality.

Barnesville, O.

FROM JNO. F. BEAVER.

I had one Belmont that measured 8¾ inches in circumference. I think I had the grandest show on about 400 plants of the Crawford, that has ever been seen in this county. The Summits were immense, but the Crawfords were the favorites. The largest measured seven inches.

Dayton, O.

FROM M. J. GRAHAM.

My plants of the newer kinds were set early in April, in new, rich soil that would produce 100 bushels of corn per acre. About May 10, myriads of chinch bugs attacked them and sapped the stems until the leaves dried up. I applied a heavy dressing of dry unleached ashes, scattered broadcast over the ground and plants, which drove them away. Thorough cultivation, followed by copious rains, caused the plants to take on new life.

Monmouth was very slender when planted, but has proven stocky, and the runners are nearly as heavy as those of Bubach.

On the morning of May 31 we had 10 degrees of frost which destroyed nearly al of the strawberry crop. Bubach produced some magnificent berries, fully as large as the pictures. Mammoth stands high with me, being *double* the size of Jessie and five times as productive. In fact with Mammoth and Bubach planted side by side, I see nothing farther to be desired in the way of large berries. Cornelia was quite productive and the berries of fine form and flavor.

Adel, Iowa.

FROM W. H. HOLMES.

My Jessies and Bubachs did splendidly this season. Haverland is one of my most promising varieties. Lida and Bomba are extra, but are scanty in foliage. No spring-set plants of twelve new kinds equal Cloud and Stayman in vigor of growth. These are followed closely by Crawford, Eureka, Miami, Burpee's Louise and Pearl.

Davenport, Iowa.

Notes from the Rural Grounds.

THE NEWER STRAWBERRIES.

WITH very few and generally unimportant exceptions, the R. N.-Y. has from year to year made its reports upon the new strawberries as they have been announced and tried here. When these reports please the introducers the R. N.-Y. is often complimented and thanked. But it deserves neither compliments nor thanks. When these reports speak disparagingly of the new variety, the introducer is often displeased. We have a note before us now: "I demand that you destroy all the —— plants I sent you and that you never again mention its name in your paper." This is equally unjust. The R. N.-Y. does not deserve censure in this case any more than it deserved praise in the other. The new variety was fairly tried beside a hundred others and found wanting. What are such trials made for? It is manifestly to the R. N.-Y.'s interest to give praise where praise is due. It is manifestly its duty to tell the truth freely when a variety is found to be worthless or inferior. It should always be borne in mind that the fact that a given kind of strawberry does not or does thrive here is but circumstantial evidence that it will succeed or fail elsewhere.

MARY.—Received from H. H. Alley, Hilton, N. J., July 25, 1888. Three plants only. No suckers. Plants fairly vigorous and productive. Berries all large. Peduncles not very strong. It begins to ripen in mid-season continuing to late season. The color is a bright red, rather than either "scarlet" or "crimson," the two adjectives so generally used in defining the color of strawberries. Skin glossy—seeds not deeply imbedded. Firm and regular for so large a berry. In these respects it may well be compared to the Downing, though the angular shape is more that of the Sharpless.

In early July Mr. Alley, who is a straightforward, hard-working man, brought to the office of the R. N.-Y. a quart or more of berries which he had that day picked from his own vines. The illustration Fig. 196 accurately shows the average as regards size and shape. Mr. Alley said that he picked 21 of the best and found that they weighed one pound 12 ounces. The seed of the Mary was sown three years ago. Champion was the female and Great American the male parent. The past season, Mr. Alley says, the Mary was the most productive of 500 different kinds. The quality is of a strawberry acidity not far from that of the Wilson. The flower is pistillate as we remember.

HAMPDEN (nearly pistillate) from J. W. Adams, Springfield, Mass. Another season required.

HAVERLAND from C. A. Green, Rochester, N. Y. Conical shape often as if two berries were joined in the middle. Early, not very firm, medium in size, ovate-conical, quite regular, fair quality, scarlet, mcderataly productive, peduncles weak. Another season required.

GANDY is a desirable late strawberry. Bisexual.

ENHANCE proves this season, as in seasons past, one of the most productive berries ever raised here. Quality poor, shape very irregular, size very large. Its season is from medium to late. It is bisexual. Vines very hardy and vigorous, often 18 inches high. Henry Young, Ada, Ohio.

LIDA. There is nothing to add to previous reports. Not desirable here.

BUBACH has scarcely sustained the reputation it has earned. The wet season did not suit it.

ONTARIO. Sharpless preferred.

EUREKA and CLARA both from the Cleveland Nursery Co., Ohio, will need another season. The first is nearly pistillate, the other bisexual.

CRAWFORD (b) has borne abundantly and a wet season agrees with it here. Vines not vigorous.

"SHARPLESS UPON JESSIE" (bisexual).—Plants set May '88 from Jerry Dutter, Angola, Md. Large leaves, vigorous plants. Long peduncles, rather slender. Quality good for so large a berry, better than that of Sharpless, and the vines are rather more productive. Heart-shape, often broad and flattened at the tip. Medium red, firm. Berries of the largest size. Vigorous foliage.

MINEOLA (b) from N. Hallock, Creedmoor, Long Island, May, '88. Season medium to late. Vines low and not very vigorous. Oblate-round, to broadly heart-shape. Firm, fine quality, quite productive.

LOUISE.—Plants received through W. Atlee Burpee & Company, Philadelphia, Pa., June 15, '88. Originated with N. Hallock. Bisexual. Fairly vigorous vines. Season medium to late, later than Mineola. Heart-shape, inclined to conical. Foliage vigorous. Color light to medium red. Firm. Excellent quality. June 16, we find the following additional note: Fine vines, berry averages large. It is largest in the middle, tapering to tip and stem. Light red, white like the Parker Earle before ripening. Quality excellent; quite prolific.

PEARL, received from E. & J. C. Williams, Montclair, N. J., April 1st. Vigorous vines. (b) Large berries, fine shape, ovate-conical.

STANDARD, from J. B. Campbell, North Reading, Mass., April 30. Nearly pistillate. Quality good, color light red.

VIOLA from S. K. Kramer, Gahanna, Franklin County, O., April 30. (b) Another season required.

WABASH, received from J. A. Foote, Terre Haute, Ind., in September of 1887. There is nothing remarkable about this variety.

YALE from S. Hoyt's Sons, New Canaan Conn., received September 12, 1888. Nearly pistillate. Medium to late. Foliage good. Berries from heart-shape to roundish, and quite regularly so. Quality good, quite firm. The color is a rather dull red later in the season. It does not succeed very well here as at present judged.

BELMONT will be rejected as unproductive.

Floricultural.

YUCCAS ON A CALIFORNIA FARM.

SOME of the finest species of yuccas in the world grow on the deserts of Arizona and New Mexico. One of the best is a native of the Mojave region in southern California. This species—Y. baccata—lives to a great age, and reaches a size that entitles it to be called a tree. It begins to bloom when quite small, and is very ornamental. The illustration Fig. 199 shows a portion of a row of 15-year-old yuccas, Y. baccata and Y. Whipplei, in bloom in the nurseries of James Shinn, near Niles, Alameda County, with Mr. Shinn, who is one of the oldest and best known horticulturists on the Pacific Coast, standing by one of the flower stalks. The stalks are 10 and 12 feet in hight, and the masses of large fragrant, bell-shaped flowers are very attractive. In the back-ground are groups of Australian Eucalypti, and the Coast Range foothills.

C. H. S.

YUCCAS ON A CALIFORNIA FARM. From Nature. Fig. 199.

Rural Topics.

VALERIAN ROOT AS A CASH CROP.

In collecting the notes on "The Cash Crops" which were printed some weeks ago, the R. N.-Y. learned from E. A. Fassett, a subscriber at Hancock, Vermont, that farmers in that neighborhood found considerable profit in producing valerian root. As valerian culture is rather a new enterprise to most of our readers, we have collected a few facts concerning the culture, handling and sale of the root. A picture of the stem and flower is given at Fig. 198, in which a, b and c show the seed at different stages of its development. The cultivation of this plant at Hancock seems to be a local enterprise. We have not learned of any other section where it is cultivated to any extent.

Valerian root is quite largely used in medicine as an antispasmodic. It is impossible to get at the exact amount imported or used in this country. McKesson & Robbins, leading wholesale druggists of this city, estimate the imports of valerian at 25,000 pounds yearly. They do not think the consumption is increasing. They further state that the imported root can be had down here for about five and 5½ cents per pound. A great many consumers will use only the imported article. Thus it may be seen that the market may easily be overstocked. Still the production of the root provides a profitable business for a few localities.

FROM E. A. FASSETT.

This question was asked me last fall: "Why don't we see anything in agricultural papers about valerian?" The question was asked by a farmer who had raised valerian for 30 years. I don't think he has failed to grow a crop any year in that time. He used to be poor; now he is well off. He is one among several in this section who raise valerian with good results. I suppose the reason why nothing has been said about the business is because we farmers are not writers. We do the farming, and learned men must do the writing. The men who raise the largest crops often couldn't write about them if they tried.

Valerian culture was first introduced in this section by Dr. Wm. Huntington of Rochester, Vt., about 30 years ago. He has been a dealer in valerian in this section ever since. Tons of it have been raised here yearly. It is the staple article for cash for rich and poor. After it has been once started, there is no expense in raising it. As roots are left in the ground for seed, one doesn't have to buy any in the spring, and it doesn't cost anything to winter it. After the ground is thoroughly enriched and cultivated, we get big crops. One of my neighbors claimed to have raised 2,200 pounds, two years ago, from a little over an acre; but let us put the average yield at 1,000 pounds per acre.

After the ground has been thoroughly prepared, it is furrowed out two feet apart. The roots are plowed out of the ground, where they were left the fall before for seed, and separated by cutting the clusters of roots apart. Then they are dropped into the furrows and covered. The plot must be thoroughly cultivated and kept free from weeds. The crop must be got in as early in spring and left as late in fall as possible to get a heavy yield. In the fall the crop is plowed out and after the earth has been shaken off, it is carried to the dry-house to be cut apart by girls. Then it is washed, and dried in the same way as hops and packed in barrels. To wash valerian, take the boards 10 feet long and make a box of the desired width, and place it in a brook. Have it tight enough to hold all the water needed and still loose enough for the waste water to pass off. Handle with dung forks.

Hancock, Vt.

FROM C. DOWDELL.

I have grown valerian 24 years; my best crop was 2,400 pounds, and the poorest 900 pounds. I like a clay loam, with plenty of good rotten barn-yard manure. Plant in the spring as early as possible. Manure heavily; plow and harrow the same as for corn. The sets are obtained in the early spring, from some grower, as they are left in the ground all winter. For cultivation, hand-hoeing and fingers are used for weeding, as the crop is a very slow grower for the first three months. In spring the seed has to be dug and all the dirt that can be taken out in the field is shaken off, and the roots are taken to a building used for that purpose and there women pick out any foul weeds and cut up the cores and trim off all green tops. Then the seed is ready to be taken to the field and planted. In the late fall what is intended for market is at first treated in the same way as the seed. After it has been cut by the women, it is taken to a tank through which a large stream of water is running and there it is washed by men until it is perfectly clean; then taken to a drying kiln and dried as much as possible. It is then packed into barrels and is ready for sale. We sell to wholesale druggists and manufacturers of patent medicines. I have sold it here for 15 cents per pound, but of late years it sells for eight to 10 cents.

Hancock, Vt.

I MAY say a word about protecting cattle and horses from the ravages of flies in summer. I apply on my horses that are at work in the field plowing and mowing, crude petroleum. I buy it by the barrel. It is applied with a sponge on the legs and belly. It is harmless and will not hurt anything. F. P. Q.

Dairy Husbandry.

KEEPING MILK RECORDS.

PROF. C. S. PLUMB.

Object of the record; easily kept by a careful milker; a specimen special record; a general one; advantages of the practice.

FOR six years I have kept milk records, because I thought it a matter of business importance. Could I surely estimate by guessing as to whether all our cows gave us a profit or not? A cow that will not yield a profit has no business on our farm. A big udder is often deceptive. A big appetite may make more manure than milk. A big pail of milk for the first of the season may average a small one over eight months after calving; and a big pedigree may amount to nothing. Hence we ought to resort to the scales, for we may guess wide of the mark.

Scales may be obtained at from 25 cents upwards, so the question of expense in this direction is inconsiderable. Some will say that it takes too much time to weigh each milking, and record it, but this is not a good excuse, as the milk of one cow can be weighed and recorded in one minute. Further, men who do careful, painstaking work, always take time to do it. A milker should be neat in habit and careful in work, else he is not fit to draw milk from a cow. Such a person is always glad to keep a careful watch of the way the cows are doing. I have always made it a point to get as intelligent and capable a man for caring for the milch cows as I could secure for the money and have usually paid him a little higher wages than to the other hands.

The milk is weighed in the pail, on platform scales, the latter standing conveniently in a closet, and weighing to one-fourth ounce. As soon as the weight of the milk of each cow is taken, it is transferred to a slate opposite the name of the cow milked. The figures on this list are later transferred to a paper arranged on the following plan. It is ruled and arranged so as to serve for binding. Thus we preserve the records for a series of years, and have them easily accessible. Below the tabular matter, on a margin of three-fourths of an inch, are noted the character and amount of the feed of the cows In the table the names are arranged alphabetically for convenience. I copy from the June milk record of the University Farm, in pounds and ounces, the yield of three cows, for the month, to illustrate the system, and to show the difference in productiveness of milk. Aaggie, a Holstein-Friesian, calved in November, Iuka, a Jersey, in October, and Lizzie, a grade Short-horn in November. There is no intention to make an unfavorable comparison of breed, it being simply a matter of cow, these figures being used as the only ones available in cases where the cows calved nearly at the same time.

MILK YIELDS: UNIVERSITY OF TENNESSEE FARM.

1889.	AAGGIE.		IUKA.		LIZZIE.	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
June 1	18— 4	17—10	7— 8	7— 1	5— 4	6—10
" 2	19— 3	15—12	8—..	7—..	6— 6	6— 2
" 3	18— 2	17— 7	8— 2	7— 4	6— 8	6— 8
" 4	18—	18—..	8— 4	7—10	6— 6	7— 2
" 5	18— 8	18— 3	8— 7	7— 4	7— 1	9— 9
" 6	17—12	18— 5	7— 9	7— 5	6— 3	6—..
" 7	17—12	18—..	8— 3	8—..	6— 5	6—11
" 8	17—12	18— 6	7—12	7— 5	5—15	6— 8
" 9	18— 7	17—12	8—..	7— 8	6— 6	6— 2
" 10	17— 7	17—11	8— 4	7—10	6— 6	6—13
" 11	17—14	18— 7	7— 9	7—12	5—11	6—13
" 12	18—..	18— 6	7—11	7— 6	7—..	6— 1
" 13	17—12	17— 8	7—14	7— 2	6— 3	6—..
" 14	18— 8	16—14	7— 4	7—10	6— 2	5—11
" 15	18—10	17—..	8— 2	7— 9	6— 9	5—14
" 16	17— 1	18— 5	8—..	7— 6	6— 2	5— 7
" 17	18— 1	18—14	7— 9	7— 9	5— 1	5—..
" 18	18—..	18—13	7—11	7—11	5— 2	5— 8
" 19	18— 6	18— 4	7— 2	7— 5	4—14	5— 2
" 20	19— 1	18—10	6— 6	6—15	4—..	4—
" 21	17—12	19—..	6—13	6—15	4— 4	4— 5
" 22	18—13	18— 8	6—12	6—13	4— 1	4—
" 23	19— 2	19— 3	7— 6	7— 5	3—13	4— 2
" 24	19— 4	18—..	7— 2	7— 7	3—11	4— 4
" 25	19—..	15— 3	7— 7	6—10	3—15	3—14
" 26	19— 6	17— 9	7— 8	7—12	4— 1	4—..
" 27	18—14	16— 5	7— 8	7— 6	4— 7	4— 3
" 28	18— 2	17—..	8— 4	7— 5	3—15	3—15
" 29	19— 5	17—13	8— 7	7— 9	3— 6	4—..
" 30	17—15	16— 8	7— 9	7—..	3— 7	3—..
Yield	550— 1	533— 4	230— 1	220— 6	158— 8	163— 4
Total per month	1,083— 5		450— 7		321—12	
Total to date from last calving	7,484—13		3,742— 8		3,542—10	

It will be noted that the yields of morning and evening milkings, are kept separate, and combined at the bottom of the columns into the total for the month. In addition to this, in order to know how much milk each cow is giving, the total amount is kept up from month to month. Lizzie stopped giving milk early in July, but she has produced enough to yield a small profit. Iuka will continue to give a good flow of milk till calving in October, and the same will be the case with Aaggie; hence both of these animals will make much better showings than Lizzie.

In addition to the above form of table, which is filed away each month, I have a form after the style below, containing a monthly record of all the cows in milk on the farm, which I have handy in the pocket or on my desk, for reference, in order to note at a glance what the animals are doing, for comparison:

TOTAL MONTHLY MILK YIELDS OF COWS.

1888.	No. 1	No. 2	No. 3	No. 4	No. 5.
Aug.	800	1,000	350	250	100
Sept	900	1,000	500	241	800
Oct.	910	1,150	525	190	980
Nov.	860	1,160	540	183	999
Dec.	840	1,076	500	150	975
1889.					
Jan.	800	1,000	423	100	960
Feb.	760	960	375	65	800

At a glance almost, one gets a good idea of what the cows have done and are doing. All of the figures in both tables represent pounds. I have presented the facts above, as suggestive to others, but I know from personal experience that the method is entirely practical and business-like. In closing, I would say that the three animals above referred to have been soiled under the same conditions during the entire season. A record is kept of all the food eaten by each animal.

Knoxville, Tenn.

DAIRY NOTES FROM A DAIRY RANCH.

NO. II.

DAIRYING ALL THE YEAR.

Winter dairying a comparatively new business; present dairy appliances render it easy; advantages of it; an unsatisfactory substitute; low prices for milk and high prices for butter demoralize a creamery and its patrons; a cheap ice-house.

TWENTY years ago we never heard of a winter dairy. Everybody tried to set his milk during the summer. May, June and September were the chosen months for packing the surplus butter for winter use. In the East where the dairyman had at his command soft water and cool dairy cellars, the butter that had been packed the year before was a very creditable article. Having packed butter so that it kept nice and fresh there for months, it was natural to suppose I could do the same when my dairy work was taken up in Colorado. But it proved to be an altogether different matter. Although I had the best of dairy appliances—Cooley creamers, ice, pure salt, and plenty of well-water—used the greatest care in intelligently feeding the cows and making and packing the butter, it failed to keep satisfactorily. Why, I cannot tell unless the fault may be laid to the alkali in the water, and the differences in cellars, the Westerner's cellar being generally inferior to those under the large old farm-houses of Massachusetts. A dairyman in the mountains seemed to have hit upon a solution of the difficulty. His deep cans were set in a running stream of soft water, and a grotto near-by, supplied him with ice and snow. Into square tin boxes were placed bricks of No. 1 butter, each brick wrapped in dairy cloth. The box was then filled with brine and sealed.

When it was opened in the winter the butter was very fine; but every minute after the air struck it, it deteriorated and a small family could not use a 10-pound box of it before it was really rancid. Since the public—that portion of it that do not want to eat oleomargarine—demand butter with the fresh, sweet taste natural to it, it matters little if we cannot suit ourselves in packing it. The dairy utensils of the present day make butter-making in the winter no more laborious than in the summer. If I must be out of milk in any part of the season, I should choose to be without it in May and June; for in those months everybody who owns a cow sends a pat of butter to market, often of poor quality, which breaks the market and makes it impossible to get a living price for even the best. The establishment of creameries promised for a while to overcome that difficulty; but with us, when a constant supply of good butter had held the market steady, and as the summer advanced, prices began to advance also, the farmers became dissatisfied with the price paid them for cream, and took the matter into their own hands, and made all the butter they could, and as they lacked the best conveniences, of course, it was of poor quality, and the consequence was a broken market again. One who intends to make butter at a profit, must have his own especial customers, and supply them with gilt-edged butter the year round, at gilt-edged prices.

The Western farmer works early and late during seed-time and harvest; yet the comparative leisure of his winter months might be turned to golden account if he would provide for a winter dairy. When the farm was once fenced, his corn and wheat fields would yield him a second profit as a pasture, and how easy it would be to supply the best of feed to the milch cows from those enormous Alfalfa stacks. But instead of this, it is not uncommon to see farmers selling their hay and buying their butter, and even going without milk because no one chances to bring it to their doors. Sometimes one will make a start and look up the dairy business with a view to entering it; but the first stump is run against when he finds that an ice-house is a necessity.

I have built a good ice-house with a capacity of 200 tons at a cost of $400. The sawdust had to be brought from the mountains and cost $40 per car-load. The ice-house is double-walled and battened and each wall is faced with tarred paper, the space between being left empty. To delay opening the ice-house as late as possible, I packed 30 wagon-loads of ice at the north side of the building. First some boards were put down to keep the ice from the ground; then the ice was laid as carefully as in the ice-house; joints were broken and cracks were filled with pounded ice. Over the top was spread sawdust about six inches deep; then the top and sides were thickly covered with straw and over the whole was built a rough shed of boards. When the last cake of ice was taken from there, about the first of June, it had not melted enough to lose the sharpness of its edges. We run no danger of a flood to come up and melt ice so put up, at the bottom, but we do have as warm, searching winds as any part of the United States.

In a country where lumber and sawdust are cheap every farmer should have the comfort of a good supply of ice, and that, too, at small cost. Before I could get sawdust I covered the ice and kept it, with coal-dust; but the former is more desirable in every way, in cleanliness especially. The nice butter-color furnished dairy-men makes it possible to produce as fine-looking butter when hay is fed, as when the milk comes from cows that run in a clover field: and when the cream is raised under ice-water, or poured out of a separator, the dairy-man can be sure of gathering what the milk should yield, let the weather be hot or cold.

S. E. H.

Greeley, Colo.

GIVE THE BOYS A CHANCE.—We often see farmers of 60 years who have raised families of from two to four boys, working the farm themselves. The boys have left, gone to the city, and are clerking or trying to build up some mercantile business for themselves. Why is this? Something is wrong somewhere. Did you try to keep your boys farmers by encouragement, or did you discourage them by hard work and drudgery? I fear the latter is too often the cause of the trouble. We can't expect success in any business in which interest is lacking. "As the twig is bent so the tree is inclined." In the boy we have the "twig;" let us try to so shape it that when it becomes a "tree" or man, he will be a model to his fellow beings, a pleasure to his family and an honor to his Maker. Encouragement is what is needed to get one interested. Discouragement while young generally means discouragement all through life. Farmers who work their boys hard for the sake of saving in hired help; who give them no interest in anything about the place; who keep them from school nine months in the 12, are doing nothing to make much more than slaves out of them all their lives. On the other hand, farmers who give their boys a good education and a piece of land for their own use, a pair of steers, a breeding sow, chickens or something of that sort, or who pay their boys for what work they do, are the men who are interesting them. We might go further and help them about their work; show them different hints; get them ideas; talk with them more, get them to read over the agricultural papers and discuss the different subjects; get them interested in the market reports; give them their liberty as much as possible; but impress upon them the necessity of finishing their work first. Encourage sports of all kinds and join them in the same; let them see that you are interested in them, and they will become interested in you and your work. If we were more thoughtful in these matters, I think we would see more boys staying on the farm, and caring for father who has done all he could for them. I will admit that some of our best business men, doctors, lawyers, and clergymen were once farmers' sons, but our cities to-day are more than full, and the chances for young men there are not what they used to be. We can find many a man in the city to-day who wishes he had never left the farm, and many of them probably would never have done so if they had been given a chance and encouraged.

Darien, Conn. C. F. O.

Everywhere.

RURAL SPECIAL REPORTS.

Illinois.

PLEASANT VALLEY, Jo Daviess County, July 22. The weather for the last month has, as a rule, been very hot and showery. As a consequence wheat and oats are rusted badly; but oats and winter wheat are more than average crops. No thrashing has been done yet, but the yield will be good. Hardly a field of rye is to be seen. Spring wheat is little sown and hardly worth cutting. Haying is slow work, but old hay as well as new is plenty and we don't worry about it. Potatoes promise to be abundant and by the Fourth of July nearly every one had new potatoes which were ripe enough to be dry and good. Corn is hurrying along to catch up what it lost in growth in the fore part of the season, and it bids fair to make the loss good. We have had no floods but plenty of rain.

W. S.

Iowa.

DES MOINES, Polk County, July 27.—By the latter part of July we are enabled to tell very nearly what our harvest will be. July has been favorable to the growth of all crops, and they seem to have made up to a large degree what they lost in growth by the wet, cool weather of May and June. Corn will be a good average crop, but will not come up to the crop of last year. Some fields were badly damaged by weeds and grass, and cannot recover. The crop is not so well advanced as it was at this time last year. Our oat crop was very promising, but on July 19 we had a fearful rain and wind storm which lodged it badly, making it impossible to harvest many fields except with a mowing machine. The crop is badly damaged. Hay is about an average; but we have had very unfavorable weather for putting it up, as there has been much wet weather. Oats and hay have been nearly all harvested. Early potatoes are a rather poor crop. They are in better demand than usual at this season and bring 35 to 40 cents per bushel. The acreage under the late potato crop is less than usual, and the crop is generally in poor condition. It got too badly in the weeds and grass during our wet weather. I do not think we will have so many potatoes to throw away next spring as we had last. Vegetables are in abundance and the demand is unusually good. Early cabbages and tomatoes are the only vegetables that are scarce. We will have a good crop of late tomatoes and also of late cabbages. Sweet potatoes promise well. The blackberry harvest is light but the berries are of fine quality. Sweet corn crop is extra good.

F. S. W.

Nebraska.

WESTON, Saunders County, July 20.—

Crops of all kinds are good. We had just rain enough in May to sprout corn. We had lots of rain in June and we had three heavy rains in the fore part of July and the weather continues wet. Harvest is about over, and the grain is growing in the shocks. Wednesday, 17, was the hottest day of the year, the thermometer stood at 102 in the shade. The Rural Potato No.2 was cut in pieces and planted. One hill was destroyed; the rest are doing well. The tops are dark green and very heavy lapping over the ground. The blossom was purple in color. P. P. N.

New York.

MEDINA, Orleans County, July 18.—Good crops of hay and wheat are now being harvested. Barley and oats are looking well. Corn and beans acreage small and looking bad, and on account of continuous wet weather they are very weedy. Our apple crop will be light, and what we shall have will be mostly early varieties. Of peaches and grapes, we have a few—perhaps a quarter of a crop. It has been very wet all the spring, but so far in July, we have had fairly good harvest weather. M.

Tennessee.

NORTHVILLE, Cumberland County, July 20.—We have had one of the wettest seasons known for years. Corn looks well; ears are just forming, but the weather is too wet for vines. Grapes are rotting badly. Farmers are having a bad time to cure their hay. Potatoes are splendid. There are no bugs and the 17-year locusts have all been killed by so much rain and hail—the first time I ever knew hail to be a "blessing." Fruits of all kinds are plentiful. H. H. C.

Virginia.

BOHANNON, Matthews County, July 16—We have been troubled here much less than usual by the Colorado Beetle, but the wire-worm has gone to work in pretty good earnest; he has not confined his work, however, to potato tops, but has been paying his respects to melon and squash vines as well. I. I. P.

Wisconsin.

BRILLION, Calumet County, July 18.—Taken all in all, the season in Eastern Wisconsin has not been so favorable for farmers in many years. A larger area of winter grain than usual was sown in this section. The crop has just been cut and the yield promises to be very large. Oats are very heavy; spring wheat good; barley ditto; hay an enormous crop. The corn crop is backward, and unless frost holds off until late in the fall, it will not amount to much, still this is not a very important factor in the harvest, in this immediate vicinity. Prices of milk, butter and cheese remain low; yet the abundant pastures and heavy yield of milk in part compensate for the low prices. Prices of cattle are low. This seems in part to be owing to the large receipts at the centers of trade and in part to a combination of packers to keep prices down. Armour & Co., of Chicago are destroying our local markets here in Wisconsin. Formerly our flourishing manufacturing cities furnished a market for a large quantity of meat at about Chicago prices. Now in every city of any considerable size this company has a distributing depot for its dressed meats, and compels local butchers to purchase of it, threatening, in case of refusal, to open retail houses and destroy their trade, by underselling them. In Wausau an indignation meeting was held among the business men, and citizens generally to protest against this action on the part of the above firm. It is claimed that farmers must send good stock to Chicago, at ruinously low prices; while poor beef is sent back to them and butchers must pay the monopolists their price. There is a screw loose somewhere, since every man that buys a piece of meat must pay a tax to add to Armour's millions. E. G. F.

THE FARMERS' CLUB.

ANSWERS TO CORRESPONDENTS

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

OATS FOR THE SILO.

T. J. H. Wheeling, W. Va.—Have any of the RURAL readers had experience with oats for the silo? At what stage of its maturity should it be siloed. What would be the quality of the silage?

FROM DAIRY COMMISSIONER, J. K. BROWN.

I have used nothing as yet for the silo, except corn. I have found it to be of very great value as a soiling crop.

FROM SMITHS, POWELL & LAMB.

We have used green oats for ensilage with good satisfaction. The yield was very large per acre. We cut it a little too green—just as it was coming into the milk, not fully headed—and put it into the pit very green and damp. Cattle ate it well and cows fed on it milked well. Had we dried it a little—just enough to prevent any escape of sap—we are confident the result would have been most satisfactory. Clover for ensilage is probably second only to corn. We have tried rye, but think little of it. Wheat is good. We have had good results with Timothy and nearly all other grasses. Our experience favors, first, corn; second, clover; third, oats, etc.

FROM H. S. WEEKS.

I have never used any crop in the silo except corn, for the reason that, all things considered, it is the cheapest; but I believe that if cows are kept up the year round, (and I am looking toward that system) there are other crops which can be grown expressly for silage to advantage; for while corn silage has been fed to milch cows continuously for 18 months without apparently doing them any harm, and with profit in their performance at the pail, yet on the ground that a more perfect ration can be secured cheaper than by balancing corn silage wholly with grain, by filling the silo partially with some other forage crop, notably clover, I propose to put it in practice another year. In the absence of clover, which is not a sure crop every year in this latitude, peas and oats, it seems to me, should make an excellent substitute, and I am prepared to experiment in that direction in a moderate way this season, having a few acres of oats put in late expressly for the purpose. I also hope to put some Hungarian in the silo provided it is not all needed for soiling, and with the continuance of the frequent showers with which we have been blessed this abundant year, pastures bid fair to hold out till corn fodder is far enough advanced to bridge over any shortage which may occur later. After three successive years of protracted and severe drought, we have all learned to be well fortified with soiling crops to arrest the terrible running down of our cows in milk at this season. When, I say "all," I mean all who are farming for *profit*.

PREPARING A FIELD FOR HAY.

J. I. L., Tranquility, N. J.—I have a field I wish to use exclusively for hay. I sowed Timothy and clover in oats, but was much disappointed when I mowed the field last year, so I acted on advice and let it lie until this year, with the same results. I am a young farmer. I want to treat this field in the best way. How can it be done?

ANSWERED BY HENRY STEWART.

The very meager statement given precludes any specific advice in this matter, for not knowing the condition of the field, it is quite impossible even to suggest any cause for the failure except the poverty of the soil. Grass and clover, contrary to the prevalent belief, or rather, practice—for farmers frequently seed down land to grass and clover in spite of their knowledge that the land is not in fit condition to produce a crop of anything else—require as good soil for successful growth as corn or grain. No doubt the disappointing result in this case is due to want of the requisite fertility of the soil, which grass and clover need. Had the land been manured or fertilized, no doubt the result would have been different. The description of the methods practiced by farmers who make a special crop of grass for hay, recently given in the RURAL, fitly applies to this and all other similar cases. Grass, either with or without clover, is the most valuable and profitable of all farm crops, and it is indispensable that the land for it should be prepared in the very best manner. In many years' practice I have never failed to get a good catch of grass and clover, or either alone, with whatever other crop it was sown, or when sown alone, when the land was well prepared by good culture and was liberally manured or fertilized; and I have never had a satisfactory result when seeding land under any other circumstances.

It might be suggested that this land should be plowed and resown, for a poor grass crop is like a poor cow, wholly unprofitable and wasteful of labor, time and money. But the ground should be well turned and harrowed thoroughly; if there is no manure at hand 500 or 600 pounds of the complete artificial manure should be applied; more would be better, up to 1,000 pounds to the acre. Rye may then be sown and one peck of Timothy seed per acre sown as soon as the rye is harrowed in. The land may be leveled over the grass seed with a smoothing drag, a heavy plank drawn so as to pass diagonally over the harrow marks, for grass seed needs covering quite as much as rye does. Early in the spring when the land is loosened by a light frost, one peck of clover seed should be sown to the acre. I prefer the Perennial, or Crimson Clover, commonly called Pea-vine Clover for several reasons: it makes a heavier growth; is fit for cutting with the Timothy, (my clover of this kind with Timothy, is now, July 25, just half in bloom with the other half just ready to bloom) and it lasts several years, making, the second and third years, the very best of hay and the heaviest yield I have ever secured. The thick seeding is necessary to avoid the too heavy and sappy growth of vine. Then I have no doubt the result will be fully satisfactory.

SHOE-BALLS ON ELBOW OF A HORSE.

L. D. C., Detroit, Mich.—My horse has a shoe-gall—a lump on the fore-leg just below where the leg joins the body—caused by injury from the calks when the animal lies down. About three weeks ago it broke. A veterinary surgeon on three visits prescribed bathing the sore for 15 minutes, nights and mornings, with warm water, and then injecting something to cause inflammation. The sore, however, is no better than it was three weeks ago. How should it be treated?

ANSWERED BY DR. F. L. KILBORNE.

If you have employed a competent veterinary surgeon we would advise you to follow his directions carefully. These "shoe-balls" or "shoe-galls" are often very obstinate and difficult to remove when large or of long standing, and several weeks or even months may be required to effect a cure. In the meantime the foot that caused the injury must be kept well padded at night or the horse must be kept standing to prevent further irritation to the elbow. Without this precaution, treatment will be of little or no use. The following is a general line of treatment which may be varied to suit special cases: when the tumor is recent and unbroken, bathe frequently with hot water until the heat and tenderness have subsided, then blister or apply compound tincture of iodine daily until the swelling is absorbed. When discharging, the cavity should be thoroughly washed out once or twice daily with some astringent, or antiseptic wash, as carbolic acid one ounce in a quart of water, chloride of zinc one-fourth to one-half an ounce in a quart of water, lead acetate and sulphite of zinc each one-half ounce in a quart of water, or other similar wash. The outside should be painted daily with the iodine as above. An iodine wash or ointment for the open sore, if unhealthy, may sometimes be alternated with the above washes to advantage. Finally when reduced to a moderate size containing a hard lump or tumor, it may be carefully dissected out and the cavity be allowed to heal as an ordinary wound.

CAULIFLOWER CULTURE.

S. S., Benton Harbor, Mich.—1. How is cauliflower raised? 2. Would well-drained muck pasture land, as yet unplowed, be desirable? If so, when should it be plowed and how prepared for next year's crop? 3. Which are the more profitable—the early or late varieties? 4. What mistakes would a beginner be likely to make that would cause failure or mar success?

ANS.—1. The seeds are sown, the plants transplanted, and the after cultivation given the same as for cabbage, except that the distance between the rows must be greater, not less than three feet, and more for the large varieties. 2. Yes; but it would have been better, had it been well manured, and planted with corn, or some other hoed crop this year, but it may be plowed in the spring, being careful to have the sod well inverted, and then thoroughly and frequently worked until it is time to set the plants. Stable manure should not be applied the same year the crop is grown, unless for an early crop, but commercial fertilizers, strong in potash, or ground bone are beneficial. The cauliflower growers on Long Island use fish guano with excellent results. 3. Market gardeners in this vicinity say the very early, or the late crops pay best, but this depends on the demands of the market. We should not plant very extensively for an early crop, as the demand is limited, and the crop cannot be held. 4. Some of the mistakes that occur to us are sowing cheap seed, that is, seed which is low in price; going into the business on too large a scale before any experience has been acquired, and not giving thorough cultivation. Frances Brill, Riverhead, Long Island, and J. J. H. Gregory, Marblehead, Mass., each publish a small pamphlet on cauliflower culture, which we would advise our friend to get and study thoroughly before beginning operations.

PERIODIC OPTHALMIA; WORMS IN A COLT.

H. B., Belle Plaine, Iowa.—A mare of mine is troubled with a bad eye. First the sight appeared weak, and water would run from the eye. Gradually the pupil became cloudy until the animal was almost blind, and the eye looked as if it were a glass ball filled with milky water. In time this became quite clear, and the animal could see again. This has happened several times. She has a suckling colt which is troubled with worms; what should be the treatment?

ANS.—For the mare see treatment for periodic opthalmia, frequently given in these columns. She will probably eventually become blind. Colts may have several kinds of worms and in different parts of the system, on the lungs, intestines, etc., each of which requires special treatment. You will have to be more definite. Locate and describe the worms if you have seen them; if not, how do you know the colt has worms? We can then advise treatment.

GRASSES FOR A LAWN.

F. H., Paterson, N. J.—What kind of grass seed would be best to make a good clean lawn?

ANS.—Blue Grass and Red-top or either separately. For the Middle and Northern States these are the basis of all the high-priced lawn mixtures. They are as good as any.

Miscellaneous.

W. E. B., Richmond, Ind.—Where can I procure Actinidia polygama, lately described in the RURAL?

ANS.—From Ellwanger & Barry, Rochester, N. Y.

E. C. D., Waunakee, Wis.—Where and at what price can I purchase a dozen Parker Earle Strawberries?

ANS.—Write to T. V. Munson, Denison, Texas. We do not know the price.

M. W. H., Carlisle, Ky.—Grub-worms are destroying my strawberries; is there any remedy for them?

ANS.—We do not know of any remedy except winter plowing or spading or a change of plot. They are usually worse on a freshly turned under grass sod. These grubs are the larvæ of the May-beetle.

C. T. S., Swanton, Md.—Where strawberries are kept in hills and fruited only one year, what are the objections to seeding to clover in the spring before fruiting? Would the young clover keep the berries clean!

ANS.—The clover would shade the plants too much besides drawing heavily upon the moisture and nutriment of the soil.

Elva, Bucks County, Va.—How should snap beans, tomatoes, etc., be prepared for evaporating.

ANS.—The R. N.-Y. knows of no method by which snap beans and tomatoes may be successfully evaporated on a small scale. The large evaporators have special machinery for preparing fruits and vegetables rapidly and economically. We should like to hear from any of our readers who have had experience in this direction.

A. S., Jacksonville, Fla.—Is "mullein tea" good for relieving hide-bound horses? If so, how should it be prepared and where can it be obtained?

ANS.—We are not aware that mullein tea possesses any special value as a remedy for hide-bound horses. If you had given the age of the horse, general condition, feed and surroundings, and probable cause of being hide-bound, if known, we might have advised suitable powders to relieve the condition.

E. T. R., New York City.—Would a Hackney stallion on Thoroughbred mares make good hunters and coachers? Who in England breeds Hackneys and what do they cost?

ANS.—This cross would probably make excellent hunters for light weights. For heavy weights, however, less of the Thoroughbred blood would be better. For first-class coachers a cross of a stallion of the French Coacher or Cleveland Bay breed would doubtless prove more satisfactory on a half-bred thoroughbred. John J. Lewis, Cardiff, England; Samuel Rose, Huntington, England; and Alexander Morton, Gowanbank Marvel, Kilmarnock, Scotland, advertise Hackneys in the English papers.

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies.

DISCUSSION.

THE IDLE POOR OF THE CITIES.

C. W. W., HURON COUNTY, OHIO.—On page 448 the RURAL asks: "What is to be done with the idle poor of the cities?" Judging partly from history, partly from observation, and partly from self-consciousness, I believe that idleness is not congenial to the American people, or to the Northern European races that have come among us. Like the use of opium, tobacco and alcohol, however, indulgence in it doubtless begets a tolerance for it, which ultimately may become a craving. Possibly, too, this unnatural vice may even in some degree become hereditary.

I would ask these questions: Are there places where all those who are idle might find work? Are any of the productive industries of the country seeking the services of these idlers, or is it not, rather, true that every one who finds a place where he may earn his living thereby displaces some one else? I saw an extract not long ago from a business journal in the iron trade, in which was shown the great economy effected by the substitution of crude oil for coal in the production of steam. This change, which was effected between October and March last, had in the Chicago Rolling Mills alone resulted in the displacement of nearly 100 men, while it had rather increased than diminished the out-put of the concern. An equal displacement must have occurred in the coal-mining, carrying and handling industries in consequence of this same improvement. Is it not true that the economies which are being so rapidly made in all lines of industry are of the same kind—always increasing the producing power, while employing a smaller force of laborers? If so, what wonder that "this worthless, idle class is constantly increasing in numbers." As each economy is effected, a new adjustment takes place. The workers jostle each other on, and, with some exceptions which are not hard to find, those who are finally displaced from all employment will be those in whom the tenacity of the working habit has become most weakened. But, if this is true, the existence of this class of idle poor is but a symptom and not a disease. The work of the world is now done through costly machinery, by methods which are very efficient. This puts great wealth within the reach of a few, but, unfortunately, it is not evenly enough distributed. A very unfairly large proportion of it rewards capital; while too little of it pays labor. Among the people there is need enough of the products of industry, but there is a lack of purchasing power where the need exists. There is power enough to supply all that need work, and more, but that power can not be applied to production for lack of a market. Even as it is, more energy is expended in selling most articles of consumption than in their production, and their price is more than doubled to the consumer by that fact. Should those who have been crowded out, go to work simply on their own energy? In order that they may buy anything they must sell a part of the product of their own industry. But in order to enter the market, they must produce an article as good in quality and as low in price as that which already holds it; hence they must work in the most efficient manner, through the machinery by which the line of goods which they would put in the market is produced. Unless they are to produce everything for themselves, shelter, food and clothing, and have nothing to sell, they must become employés. If, failing to find employment, they should try as best they could to supply their own needs, a Digger Indian would be better off than they; but even in that case, there is no place where they might stay and illustrate their independence. The problem to be solved, then, takes such a shape as this:

1. To provide an opportunity for every person to apply his unit of energy in the most effectual known manner, in supplying the needs of the world.

2. To identify the commercial demand with the needs of the people.

These two are the complements of each other. One cannot be solved without the other, but these requirements being satisfied, poverty would thereby be abolished. Given the power, is the world willing to abolish poverty? I have never known an instance where a sufferer from poverty would not be glad to abolish his own, but when it comes to abolishing poverty generally, I fear there will be great resistance.

WHY FARMING "DON'T PAY."

E. L. F., ELBA, N. Y.—I see of late a great deal about "farming don't pay," in every agricultural paper. Why does not farming pay? Is it on account of over-production or owing to the slack and slovenly way in which the business is carried on? A great many suppose that any one can farm. That is where many make a mistake: all of us who have been brought up on the farm are not farmers. As I was riding through a neighboring town last spring, I saw a field on which manure was being drawn. The heaps were mostly coarse straw and there were about two bushels in a heap and 30 feet apart. I stopped and asked the man what crop he intended to put in there. He said: "Oats." I asked him if the land was rich. He said no it was very poor. He thought if he gave it a good coat of manure he would get a good crop. This man is one that says; "Farming don't pay," and I should say he need not go to a guessing school on that point. Then there are other men who will plant a little patch of corn, a little one of potatoes, a little one of beans, a few acres of wheat; the same of oats, a little of everything, and when harvest comes, they have a little of everything and not much of anything to sell with which to pay their debts. Instead of raising a crop of some one thing, and having a crop to sell, such men fritter away their time and labor and say they don't think farming pays now.

I am acquainted with another man who has a large farm, but who is a good deal in debt. He grumbles all the time about hard times; but his binder is out in the orchard housed under an apple tree; his harrow is in the fence corner in the field, and his wagon is outside the barn. Next spring when he wishes to use these tools, he will find them ready for repair, and he will say nobody can make farming pay in this country.

Another man that I know of has 100 acres and last season he raised on his farm 1,100 bushels of wheat; 800 bushels of barley; 500 bushels of oats; 1,100 bushels of corn in the ear; 80 bushels of potatoes; seventy-six tons of hay; besides apples, pears, peaches, strawberries and raspberries. He feeds out all his corn and a good many oats; fattens ten or twelve steers every winter, and makes about 400 loads of manure every year. He makes farming pay.

W. F., GLEN COVE, N. Y.—Apropos of Rambler's "Long Island Notes," page 475, I would say that hereabout the truck business is passing out of the hands of the old American families because the young folks in these families take to "nicer" employment. Potato beetles were never before so abundant as they have been with us this year. Instead of giving two doses of Paris-green, as we used to give our crop in years past, I have poisoned our potato vines four times this year, and tomatoes, egg-plants and tobacco have only been preserved alive by poison and hand-picking. Last year's prices for asparagus ruled very high the whole season through; this year to begin with, prices ruled very low, but in a couple of weeks they advanced to living rates. Out of 29 kinds of strawberries I had this year, Sharpless was the best of all in weight of crop and the fine appearance of the berries. This variety seems particularly adapted for our heavy land, but it is useless on the light soil. Again, some of my neighbors say that Sharpless is unsatisfactory with them. So with strawberries in particular, it is a matter of certain kinds for certain soils and locations; but, taking it all through, I think Sharpless has a wider range than any other large-fruited variety.

"A SIGNIFICANT MOVEMENT."

V. H. F., ALBANY, N. Y.—The recent meeting at Rochester of the representatives of organized agriculture in this State, noticed in the last RURAL, is certainly a move in the right direction. The farmers of New York, in common with those of other States, have suffered from the oppression of organized capital, brought to bear upon the law-making and law-executing powers, if not upon the judiciary as well. If any one doubts this, let him study the history of attempted agricultural legislation in the different States the past winter. How many dressed-beef bills, oleomargarine bills, and other acts clearly in the interest of farmers, were ignominiously defeated? Of a long list of laws passed in New York at the last session by a Republican Legislature, and signed by a Democratic Governor, not a single one was of any special importance to farmers, the most numerous class in the State. Money was voted with a lavish hand to placate other classes, *e. g.*, the law providing that the laborers on all State works should receive not less than $2 per day of eight hours. This was a bid, pure and simple, for the labor vote, but here, with a stupidity that illustrates their unfitness for the positions they hold, these demagogues neglected to make appropriations for these increased expenditures, so that their work is likely to recoil on their own heads. By the provisions of this bill, laborers on the Erie Canal who never pretended to really earn the $1.50 formerly received for 10 hours' work, now receive $2 for eight hours. Lock-tenders who used to fight bitterly for a position paying $40 to $45 per month, now receive $60 per month, as they must work 12 hours each day. Was this legislation called for? Most emphatically not, and no one who favored it should ever receive a farmer's vote for any office again. But how does this affect the farmer? It adds to his already too heavy taxes. Its tendency is to increase the price he must pay for labor. No man will work on a farm for the wages a farmer can afford to pay, when he can get a "soft" job for 25 cents per hour. It tends to make farm help dissatisfied and exacting, even though but a small percentage of the laboring class can find employment on public works. This is but one example of many that might be given to show the need of farmers' organizations. Farmers have been too much the slaves of party. Other classes have learned the folly of this, and have proved the power of organization. Farmers in some parts of the country have done the same, but when the farmers of the whole country unite in common cause, their power will astonish the world.

THE DAVIS SWING CHURN.

E. H. ANDREWS, GLASTONBURY CREAMERY, CONN.—Let me add to the discussion on churns by answering the following questions.

"Can you get more butter by using the Davis Swing Churn than by using another?"

I say, yes.—We do get more butter from the same amount of cream, because it thoroughly churns all the cream, completely separating the butter from the butter-milk. A careful farmer living near our creamery, who has used one of the most noted cylinder or crank churns, finds that so much cream sticks to the arms and the inside of his churn, before the butter comes, and is afterwards washed off into the butter-milk, that in churning that over, he has sometimes made from his butter-milk a pound of butter for each six to eight pounds of butter made directly from the cream. One of our patrons recently received a letter from a dairyman in New Jersey, saying that he had made a discovery worth patenting—that churned butter-milk would yield from one-fifth to one-eighth as much butter as cream. The Davis Swing churn has been tested here with several other kinds, and never came out second best, and its butter-milk has no cream left in it and will not make butter.

"Is the butter made in the Davis Churn of better quality than that made in other churns?" To this I answer without hesitation, yes. The butter comes in grains about the size of wheat, varying slightly in size with the temperature of the cream. These grains of butter are easily separated from the butter-milk, almost every drop of which can be washed out; while the unbroken grains of butter remain in the churn, and can be placed on the butter-worker to be salted and balled, without giving the butter any of the "salvy" look, which comes from mashed and broken grains, so common from other churns. Butter so made, not only looks better, but tastes and keeps better.

"Does the butter come in a shorter time?" No, I do not think it does. Some rotating and beating churns bring butter a little more quickly; but the Davis Churn will bring it as quickly as any churn can do it, and do it well. We vary from 30 to 40 minutes in churning from 80 to 100 pounds of butter.

"Is running the Davis easier work?" I think it is. The smaller sizes can be pushed back and forth as easily as a cradle, and with our larger-sized churn the power required to swing it is very little.

"A TARIFF ON BANANAS."

F. R. W., MONROEVILLE, N. J.—I was much interested in an article on a "Tariff on Bananas," in the RURAL of July 20th, as an import duty on them would influence the price of other small fruits, especially strawberries. I grow strawberries myself and suffered this year from the low prices. In order to ascertain the cause and to see what I could do to improve the sale of my own berries, I went to Philadelphia in the hight of the season, stayed all night with my brother who is a commission merchant, and was in the market by three o'clock a. m., and was completely surprised—almost dumb-founded—to see the quality of the bulk of the fruit that was put on the market. Loads after loads of strawberries were piled up in front of Dock Street Market that morning, that were not worth picking, much less paying freight and commission on. They sold at from three cents a quart to 50 cents a 60-quart crate, and brought all they were worth. I was satisfied that the reason why we have to take such small prices for our strawberries, is on account of this worthless stuff flooding the market. If something could be done to stop this trash from coming into the market, we could get a better price for our fruit. It does not seem to me that putting an import duty on bananas would do any good; for when a man wants a banana he certainly would not buy a box of strawberries. I think one mistake a good many growers make is in letting the plants make too many sets. If we would shorten the runners in rows we would have fruit of a better quality, though less in quantity, and quality is what we want.

What Others Say.

MR. CRAWFORD'S STRAWBERRY REPORT FOR 1889.

OMITTING THOSE OF WHICH A SPECIAL REPORT IS MADE ON PAGE 522.

THE safest way for those who want better strawberries than those they now have is to test the new kinds for themselves. This costs far less than is generally supposed, and is the only way of judging correctly. An outlay of about two dollars a year would enable a person to do the work. He need not occupy over half a rod of ground with a single variety, and he should always test the best that he already has alongside the new candidates. A single season's experience is not always conclusive, for a variety may do well one year and make almost a failure another, but the following notes will show what most of the new kinds and some of the old ones did for Mr. Crawford this year. His farm is at Cuyahoga Falls, O.

CRAWFORD.—The plant is very large and stalky, dark green, and free from defects. It has a perfect blossom, and is a good bearer. The fruit is large to very large, somewhat irregular at first, but never coxcombed. Color, bright, glossy red, and lighter within. The flesh is firm, and of excellent quality, one of the best. It produces a good number of strong runners, and is a variety of decided character.

DAISY. Mr. Crawford finds to be vigorous, productive, early, large, roundish, bright red, and of good quality.

MIAMI.—This is a good grower and bearer, very late, and of good quality. He has fruited it in a small way, and believes it to be valuable.

OSCEOLA.—This is claimed to have many good qualities, and to be the earliest of all.

WARFIELD.—Whosoever has this may congratulate himself, for it is a very valuable sort, and more likely than any other to supersede the Crescent. With us it is equal to that variety in health, growth, and productiveness, while it is far superior in size, beauty, and firmness. It is wonderfully productive, and continues of good size for a long time. It has a tart, agreeable flavor.

CLOUD.—Mr. C. expected this to be very early and immensely prolific, but was disappointed. It commenced to ripen about a week later than the early sorts and was only moderately productive. It produced the most on the poorest soil. When grown in the matted row on very rich ground the leaves were about two feet high, but there was very little fruit.

PINEAPPLE.—This was a disappointment to Mr. Crawford, as it proved to be neither more nor less than the *Bonanza*, a variety that he tested and discarded some years ago. It was originated and named at Ada, O. A. M. Purdy, who had it on trial, renamed it *Pineapple*. It came to the surface again in Maryland last year, as something new, and was so well recommended that Mr. C. procured a stock. This last spring he sent for more, and planted half an acre, all of which he will destroy. The fruit is large but terribly misshapen, salmon-colored throughout, and as salvy as a banana.

HAMPDEN.—This was unsatisfactory in growth, and many of the berries failed to reach maturity. The fruit is quite sour and lacks gloss.

LOUISE.—Mr. Crawford had only a small bed in bearing, but he is inclined to think well of it. It is only a moderately good grower, but bears abundantly, and the fruit is of good size and quality. Some of the largest specimens are slightly misshapen, but usually they are of good form and fine-looking.

GOLD.—This is less productive than expected, but the fruit is good and very uniform in shape. It is round and rather light red. The plant is strong and healthy.

BOMBA.—This is all that was claimed for it. The plant is vigorous, sends out a moderate number of runners and makes a great many crowns. It produced a large amount of fruit that ripened early, and was of great size, dark color, firm flesh, and quite satisfactory

quality, and as uniform in shape as the Cumberland. It is esteemed for canning.

BURT.—This is the old Capt. Jack under a new name.

GANDY.—This is late, and bears a fair crop of large berries toward the close of the season. The plant is large, strong and healthy, and a good grower.

SUMMIT.—This did well, as usual, and furnished fine berries late in the season. It is quite a favorite with Mr. C., but is not generally popular on account of its inclination to rust.

MONMOUTH.—This ripens with the early varieties, and produces a fair amount of fruit that resembles the Wilson in size and shape, but it is not nearly as productive as the Warfield or Haverland.

The MAMMOTH grown in matted rows is such a poor bearer that it yields no profit.

CUMBERLAND and MAY KING did well this season as usual. They are both too well known to need description.

OHIO.—This was Mr. Crawford's latest berry this year, and he would esteem it above any other late variety if it were only larger. It is so productive, stands up so well, and is of such a brilliant scarlet color that it is quite satisfactory both to producers and consumers, although no larger than the Crescent.

HENDERSON.—Mr. C. is obliged to give this up, although it is not surpassed for quality. It is unproductive and ripens unevenly.

FALL PLANTING.—By this is meant the transplanting of runners of the present year's growth, whether it be done in July or October. By care and skill it may be done as soon as the young roots are an inch in length, or even earlier. The rule is, however, that a plant is not old enough to set until it has branched roots; nor is it self-supporting until some time later. For this reason it is necessary to remove one or more of the leaves when setting out very young plants in the summer, lest more sap be evaporated than the roots can supply. As the season advances, more roots are developed, and there is less risk in the operation. While it is true that the earlier the work is done, other things being equal, the greater will be the crop, it is equally true that plants set early in September, when there is more moisture in the air and soil, usually do better than those set in a hot and dry time. It delayed too late, the danger is that they will not get sufficiently rooted to enable them to resist the effects of alternate freezing and thawing. Young plants in the summer are comparatively tender and sappy, and much more easily injured than when more mature. If taken out of hard ground, the roots may be bruised or broken, and if exposed to the sun or wind for even a few minutes, many of the fine hair roots will be destroyed. For this reason it is not best to take up plants in a dry time. It is better to let them grow where they are until rain moistens the soil so that all the roots may be lifted without injury. The later the work is done the closer should plants be set to each other, so that they may fill the row with roots and shade the surface with their leaves. If set 12 inches apart in the row in July, 10 inches will be enough in August, eight in September and six in October. The sun should never be allowed to shine on bare ground between plants in the row during the winter or early spring.

The soil for fall-set plants should be rich, so that their roots may find what they need near-by, for they have not time to go far after it. It is well to prepare the place a week or two in advance, so as to let the ground get settled. And it is very important that the crown of the plant be not covered.

If the weather be dry and hot after planting, so that the plants wilt, they should get *one* good watering in the evening and the soil should be stirred the next morning. If this prove insufficient, they should either have some shade during the heat of the day, or the first leaves that wilt should be removed to lessen the evaporating surface.

If it is desired to test a new variety, the fall is the best time to plant it, for the reason that it will bear the next season and enable one to decide as to its value and give ample time to greatly increase the stock.

Fall-set plants must be protected during the winter. Two inches of straw will answer. Of course the drainage should be such that no water can lie on or near the surface.

When plants are received in a dry time, it is an excellent plan to plant them temporarily two or three inches apart in mellow soil where they can be shaded and watered. In a few days new roots will be formed, when, after a thorough watering, they may be removed with the soil adhering and set without a check.

SUMMER PRUNING.—The shearing of a tree or shrub into some formal shape, as of a cone or hemisphere, may have a proper place in some styles of gardening; but, in general, it may be said that the clipping of trees or shrubs into any set form is radically wrong. The experienced Jackson Dawson, of the Arnold Arboretum, said in Garden and Forest that he had seen many good collections of shrubs ruined because each one was cut into a shape to resemble all the rest. In this way all individuality is lost, whereas the object of pruning should be to develop whatever beauty each plant possesses on the lines of its natural growth. It is utterly impossible to secure any fine effects in large shrubberies where each individual is trimmed after the same pattern. Evidently the true way is to encourage each one to make the best of its natural graces, and then to arrange this infinite variety of form into a harmonious picture.

If we prune for the purpose of increasing the flowers of a shrub or tree, we must prune different species and varieties at different seasons of the year; but surplus wood and suckers can always be thinned out during the summer season, and wounds which are cut clean in midsummer will heal more quickly than those made in frosty weather. Maples, birches, yellow-woods and many other trees bleed copiously when their branches are cut in the spring, but they heal over more quickly if pruned while in full leaf. Again, shrubs which bloom on wood made the previous year, of which the early spiræas, forsythias, honeysuckles, viburnums, syringas, philadelphus and deutzias are examples, should receive their chief pruning soon after the flowers have fallen. This will encourage a growth of young wood with flower-buds for the following year. Of course, when these shrubs are cut back in early spring before flowering, the flower-buds are sacrificed. On the other hand, shrubs like Hydrangea paniculata; Desmodium penduliflorum, Hibiscus Syriacus and others, which flower on the new growth, bloom more abundantly when cut back severely in early spring. But even in this case the surplus wood should be thinned out during the summer.

After the branches of large shrubs have been thinned out, continues Mr. Dawson, stronger shoots should be pinched back with the thumb and finger, for this will hasten the growth of flowering-buds. Many trees and shrubs can be made to produce flowers and fruit at a smaller size than if they were left to themselves or pruned only in the winter or spring. This summer pinching also helps to ripen up the wood, and leaves it in good condition to withstand the cold. He has known trees which were tender, when left to grow naturally, to endure our winters fairly well when the wood had been properly stopped by pinching it in summer. This is especially true in wet seasons, when the branches often continue to grow until the frost kills them. Apples, peaches, plums, filberts and many other trees can be made to bear when quite small if the new growth is stopped once or twice in the summer. Mr. D. has peach trees five or six feet high which are loaded with fruit, the result of pinching back in summer. While trees are growing vigorously the flower-buds do not form well, but by this summer pinching the flow of the sap is checked and the buds are developed. Many plants also ripen their fruit better when the strong shoots above the fruit have been stopped. Young trees can be easily trained with very little use of the knife when they are taken in time, the surplus buds rubbed off from the lateral branches and the branches properly pinched back. In short, summer pruning is useful and indispensable for the removal of superfluous branches in the middle of the tree or shrub, and for the shortening-in of all over-vigorous branches and such as interfere with the native symmetry of the tree; and by thinning out the weak and misplaced branches additional nourishment is supplied to those that remain.

THE LATEST AND BRIEFEST.

DR. HOSKINS says, in the Mirror and Farmer, that our high-grade butter is primarily a table luxury, and is only secondarily to be considered as a food. Up to a recent date, in countries where cows, goats and sheep abound, butter has stood upon about the same basis as lard and tallow, the price being but little more and the quality often not as good.

WE farmers are apt to complain of the increase of wealth in our cities; but dairymen ought to know that without this numerous wealthy class, whose members are eager for every sort of luxury of the table, there could be no sufficient market for the extra qualities of food, which alone offer encouragement to superior knowledge, taste and skill upon the farm. The elevation of the farmer intellectually and socially is closely allied to those social conditions among the well-to-do who must buy their food of those who produce it. The high-class farmer can live and thrive only by the aid of a class of patrons able to pay well for those luxuries of life which such farmers alone are able to offer .....

THE BREEDER'S GAZETTE has been making inquiries as to the efficacy of the newly-invented "chemical dehorners." Nearly all the replies testify to complete success of the liquid horn-killers. A few failures are instanced. One correspondent avers that after a careful application of the chemical to the head of a young calf—directions being followed closely—one horn germ was effectually killed, while the other waxed strong and grew vigorously, just as though the horn-killer were a horn-tonic.....

THE good Thomas Meehan—he has done a power of good in his time—calls attention, in the Weekly Press, to several matters which may well be repeated in our columns: Some persons have a fancy for having Hydrangea paniculata as a standard. To accomplish this object cut away all but one shoot, which tie to a stake. In a season or two the stem will support itself.....

IT is the usual practice Mr. Meehan continues, to sow hollyhock seeds in spring, but if gathered and sowed as soon as ripe, plants will flower the next year, thus saving a whole season.....

TRUMPET Vines (Bignonias) are very pretty when made to become standards. Drive in a four-foot stake, tie the vine to it and let the stake be until it rots away. By that time the vine will hold itself, and it will flower perfectly every July.....

THE native Hydrangea quercifolia, commonly called the Oak-leaved, is well worthy of a place in gardens. Though a native of Georgia and Florida, it is quite at home here. Its large leaves are as broad as long. The immense panicles of flowers, though not of such individual beauty as are those of Paniculata, are most attractive, and then it flowers in July when bloom in the shrubbery is scarce...

FROM present appearance the R. N.-Y. will have a very good word to speak for Hendersons Dwarf Lima (Sieva). It seems at least 10 days earlier than the pole Lima and the little bushes are very prolific. Many will prefer the pole Sieva, as it is about the same in earliness. But there will be a place for the dwarf.....

THE LONDON AGRICULTURAL GAZETTE says that the results previously observed of the Woburn experiments are particularly marked this year, the contrasts between plots differently treated being more than usually striking. There are some very fine pieces of wheat and barley on plots dressed with liberal applications of nitrogenous and mineral manures. On the other hand, the plots to which only minerals have been applied have produced very little grain in comparison—only about as much as is growing on the land left unmanured during 13 years of continuous cropping. The transient effect of nitrate of soda or salts of ammonia is very forcibly illustrated, especially in the case of wheat. *Plots which produced 29 to 30 bushels of wheat last year after being dressed with mineral and nitrogenous manures, look like yielding only 15 to 20 bushels this season, when the same minerals have been applied without the ammonia salts or nitrate of soda. Again, plots from which only 12 to 18⅓ bushels were obtained last year, when minerals were only used for them, promise to give 36 to 50 bushels this season, the nitrogenous manures having been restored to the mixtures applied to them.....*

SUCH figures show, as far as one set of experiments may be employed towards a generalization, that nitrate of soda and sulphate of ammonia only act materially upon the wheat crop for one year, and that as soon as they cease to be applied the land is reduced approximately to the condition of the unmanured plot—and that in spite of the constant addition of mineral salts.....

ALLUDING to a recent visit to Dosoris, the beautiful island home of the editor of the New York Sun, Garden and Forest says that though the rose season was over, the pink, ever-blooming Bourbon Rose, Mrs. Degraw, was loaded with flowers, and it was pronounced by both Mr. Dana and Mr. Falconer the best garden rose in the entire collection...

THIS island contains about 45 acres. Mr. Dana one year bought and spread upon it 5,000 loads of stable manure. His ordinary annual supply is about 1,500 loads brought from New York by schooner.....

For Mental Depression
Use Horsford's Acid Phosphate.
Dr. L. C. S. TURNER, Colfax, Ia, says: "I am very much pleased with it in mental depression from gastric troubles."—*Adv.*

ABSTRACTS.

——HUSBANDMAN: "A wise course for a farmer who thinks work at the experiment farm is scientific tom foolery is to go himself to see the work before he expends much energy in condemnation."

——HOARD'S DAIRYMAN: "The good cow is a wonderful machine—almost a creator; for, feed her $40 worth of appropriate foods, per annum, and she will furnish a family with more food than they can buy in other as palatable forms for $100."

——PUCK: "To-morrow is longer than last year."

——VERMONT WATCHMAN. "An exchange says: It is constantly preached that farmers should 'be educated, should read, should profit by others' experience, etc., yet it is quite generally conceded that the most dismal failure of a farmer is he who 'knows it all.' But the reading farmer reads because he does not 'know it all' The know-it-alls have no occasion to seek information."

——BOSTON GLOBE: "It is undeniably a fact, as Peter Cooper once said, that 'if a man will put away every day half what he makes, even if it be but 50 cents, he must of necessity in time become a rich man.'"

——GARDEN AND FOREST: "In a private letter, Mr. F. L. Temple, of Shady Hill Nurseries, now in Europe, states that the most interesting flowers he saw in England were the pyrethrums, and he was surprised to find that plants so little known and grown at home were, next to the rose, the most popular ones in English gardens in June. The best double varieties are as good as the finest China Asters in autumn, and they are admirable for cutting. Among the named single varieties, Melton and Mrs. Bateman Brown were noted as the best, while Captain Nares, Mont Blanc, Flora, Haggs & Schmidt and M. Barrall were among the finest double sorts."

——O. C. FARMER: "We know a merchant who carries a stock of goods worth not less than $10,000. If he is assessed a single penny he at once swears that he owes more than he is worth and the tax is promptly remitted. We know a farmer who recently bought a farm, paying $1,000 down, and mortgaging the farm for $4,000. He is assessed as if he owned the farm free and clear, though he is willing to swear that his debts exceed his assets and he could probably honestly do so. The dry-goods man escapes because, though he owns the goods, he owes for them. So it goes."

Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

Warm Weather often causes extreme tired feeling and debility, and in the weakened condition of the system, diseases arising from impure blood are liable to appear. To gain strength, to overcome disease, and to purify, vitalize, and enrich the blood, take Hood's Sarsaparilla.

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A National Journal for Country and Suburban Homes.

Conducted by
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Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, AUGUST 10, 1889.

"POTATOES is gone" is the *verbatim* record of the opinion of one of the oldest farmers in the vicinity of the Rural Grounds.

THE R. N.-Y. hopes that all who speak of the sexes of strawberries will use the word "pistillate" to denote those varieties which have no stamens or imperfect stamens, and "bisexual" to denote those which have perfect flowers—*i. e.* both stamens and pistils.

AS THE older readers of the R. N.-Y. are aware, we have never favored planting pot-grown strawberry plants. If well grown, which is rarely the case, one may be assured of a fair crop the next season. Generally they are not well grown. The cost of expressage is outrageous. Buy layer-plants and set them out now.

AN appropriate name for the good, old Trumpet Vine would be "Humming bird Vine." These charming little birds seem to prefer its flowers to those of any other plant. We should want this old-time vine because it is so attractive to humming-birds, if for no other of many reasons why it should find a place in every garden.

AMONG many of Jones's new wheats we have raised the past year is Golden Cross, highly prized in parts of New York State The heads average three inches long, strongly bearded, brown chaff, medium-sized amber berry, two and three to a breast. Later we shall report as to the yield of a five-acre field of this wheat raised near the Rural Farm on Long Island.

Honey Sweet Corn (seed from J. J. H. Gregory and Johnson & Stokes), planted May 5th, was ready for the table July 27th. The tassels, silks and husks are usually purple. The plants grow a foot taller than those of the Crosby, and will average more ears to the stalk of about the same shape, size and number of rows, though the rows are not quite so close together or even. The quality is as sweet, we judge, as that of any variety, though we have not at this writing any of the later kinds for comparison. The objection to the Honey Sweet for market would be its purple husks.

IT is claimed that the price at which bananas are sold in this market regulates the price that can be obtained for other fruits. This is bad enough for the small-fruit growers in a season like the present when the foreign fruit is so largely imported. The consumers face a danger in the sale of over-ripe and decayed fruit. Day before yesterday a steamer arrived from Costa Rica with 8,000 bunches of overripe bananas. Inspectors of the City Board of Health seized the entire cargo and destroyed it. In spite of the vigilance of the officials, tons of decayed fruit are offered for sale.

A BOX of the new currant "Crandall" was received the past week from Frank Ford & Son, of Ravenna, Ohio. The branches were crowded with currants the largest of which were ten-sixteenth of an inch in diameter. The pictures of this currant can scarcely be said to be an exaggeration, except that the berries grow smaller towards the tip of the raceme. In flavor they are exactly the same as that of a Missouri Currant growing in the garden of the R. N. Y. The leaf is essentially the same, too, in shape though not so smooth. We do not see any reason for assuming that this is a hybrid.

THE publication of the photographic pictures to which the R. N.-Y. has frequently referred, will begin with our Fair Number. This new enterprise promises to be highly successful, and our readers may expect a treat. This Fair Number will be an excellent paper to show to your friends. The R. N.-Y. will send copies to all who may be interested in good farm literature. Send a list of your friends and neighbors. By the way, the R. N.-Y. offers special inducements to agents this year. Any person who can secure subscriptions can obtain permanent employment in the service of the R N.-Y.

THE R. N.-Y. again urges all who have occasion to talk or write about the sexes of strawberries to use the word "bisexual" (B.) to designate those varieties whose flowers are perfect, *i. e.*, bear both stamens and pistils, and "pistillate" (P.) to designate those which have flowers with imperfect stamens.

It is also well to bear in mind that the word "seedling" is properly applied only to the plant that is raised from the seed. Any plant propagated from it is not a seedling. To speak therefore of Brown's Seedling Strawberry or Brownell's Seedling Potato, when the original plant is not referred to, is absurd.

FOR an early corn for use just after Cory, Marblehead, etc., Crosby's Early is, in the R. N.-Y.'s estimation, unsurpassed. In moderately fertile soil, the stalks grow six feet high, measuring to the top of the tassel. The ears, generally two to a stalk, are borne a foot or more above the soil. The husks, like those of Stowell's Evergreen, are always of a fresh, light green. The ears, about eight inches long and from 10 to 12 rows, taper from the but to the tip. The rows are close together, and straight and the kernels of uniform size. The quality is equal to that of the Concord. Planted May 5th, the first ears were mature July 25th.

THE R. N.-Y. asked its friends to tell us how many head of stock they keep. The purpose was to make some comparisons with the farmers at Cranbury, N. J., who seem to be going out of stock keeping. Here is one of the first responses. Let us have others:—

"My farm comprises 57 acres, including wood land and pasture. My stock consists of five horses, one colt, 11 cows, a three-year-old bull and 10 head of young cattle. I wintered 28 head of horses and cattle, and keep four horses and a bull in the barn throughout the summer. I have not built a silo but propose doing so next year."

E. L. BASS, Secretary Vermont Dairymen's Association.

DR. HOSKINS sent to the R. N.-Y. last spring a few kernels of what he calls Extra-early Black Mexican Corn, produced by crossing the Blue Squaw of Dakota and Hoskins's Early Dean, claiming that it is as sweet as the Mexican and as early as the Cory. The few kernels were planted May 5 beside Crosby's Early planted the same day. The first lot was eaten July 22, about one week before Crosby's was ready. The plants in poorish soil grow less than five feet high. The ears are borne just above the soil, one, two and sometimes three to a plant. The ears average about eight inches long, eight rows. The quality was found to be much the same as that of the late Mexican. There is, however, the same objection to the new variety, viz: the cobs and kernels turn to a dull, dark color after being boiled.

THE following note touches a matter that the R. N.-Y. has alway deemed very important. Now is the time to attend to it.

"In every large flock during the summer months, there are always some sheep that do not keep in as good condition as the rest, and there are nearly always more or less cull lambs. Every sheep-grower should have a small inclosure where he can place these culls with their dams, and give them a little grain every day to help out the grass and milk ration. A mixture of corn-meal and bran, equal parts, is a very good feed for these ewes and lambs, and it is within reach of most farmers Of course, to do this gives some trouble; but I think the farmer will be well repaid as well as surprised when winter comes and he finds these sheep as good as any in the flock. To secure an even lot of sheep should be the farmer's aim, and they can be made and kept so by proper care and feed."

IN the City Hall Park in this city is a circular stone basin 20 or 25 feet in diameter. In it are a number of aquatic plants now in full bloom, and the effect is charming. The white water-lilies, with their floating green leaves, remind one of many similar flowers gathered in our inland rivers and lakes in former picnic-times. Then there are the Amazonians looking, for all the world, like immense buttercups out of their proper sphere. The Zanzibar Lily nestles its large, sky-blue flowers under the shade of the stately Indian Lotus, which rears its rosy-colored flowers high above its neighbors. While not every farmer could afford a pond of this kind, there are but few who could not have at least a tub or half-barrel sunk in the ground in which a few of our common water lilies would thrive with an occasional pail of water thrown in to renew the supply. This is a flower that never looks half so charming as when growing in its native element.

SPECIAL NOTICE.

IN reply to inquiries we may state that the inner portion of the flowers of the potato R. N.-Y. No. 2 is a light purple. This purplish color covers irregularly about *half* the corolla. The outer portion is nearly white. The proportion

of white and purple is shown in the illustration which was carefully drawn from nature. This variety *never bears solid white* flowers. The stems also are, here and there, *tinted* with purple. They are long-jointed and branch less freely than do most other varieties.

HONEY BEES IN COURT.

A CASE of considerable interest to bee-keepers was recently tried by the Supreme Court of the Fourth Judicial Department of New York State. The questions passed upon were substantially the following:

1. May the honey bee become an unlawful trespasser and a nuisance?
2. If so, can the owner of the offending swarm be held amenable in damages to the injured party?

Here is the reported history of the case. In 1887 a wealthy banker of Delaware County, N. Y., had a neighbor who kept an apiary of 20 swarms of bees within 50 feet of the banker's dwelling. The banker complained that the bees attacked and stung members of his family—that they were, in fact, vicious and offensive insects annoying his horses and other stock. The neighbor refused to remove the bees and the banker began a suit for $1,200 damages and an order for the removal of the bees. The National Bee Keepers' Association assumed the defense and thus made this a test case. The trial lasted several days and brought out much expert testimony. The jury declared the apiary a nuisance and awarded the plaintiff six cents and costs, thus establishing a precedent. The court at once issued an injunction restraining the defendant from maintaining the apiary on his premises. The defendant appealed and is now again defeated. It is said that the Bee-Keepers' Association will continue the fight by a further appeal to the Court of Appeals—the court of final resort.

THE PURITANS.

WE are making history at such a rapid pace in these days that some of us hardly realize the thoughtful significance of the recent celebration at Plymouth, Mass. Public monuments are dedicated every week. The history of this country has been a stirring one, packed full of incidents that seem to call for a substantial token of remembrance. There is nothing, however, in the history of this nation, or, in fact, in the history of any other nation, that has had more to do with the making of history than the landing of the Pilgrims at Plymouth.

Suppose those stern, determined men had gone to some Southern harbor. The entire history of the country would have been changed. New England would never have gained the supremacy she ably maintained for so long. The great West would never have been cut out of the rough by the descendants of the Pilgrims. The Pilgrims themselves doubtless owed much of their strength of character and body to the fact that they were cast upon a bleak country where the closest economy and energy were needed to preserve life. In a more favored section they might have lost that rugged strength and simplicity that gave them their peculiar power.

We owe much to Puritanism. The original Puritan was an honest man standing like a stone wall for what he considered right and fair. He has been called a bigot, a narrow minded, obstinate fellow who constituted himself as sole judge and jury and never changed his mind. He suited his time, however, and some of his principles and practices might well be revived in this age. About 250 years ago a Cape Cod man was appointed to watch for whales. He made a false report, saying he saw a whale when none was within sight. For this lie he was fined a sum of money that would amount in this age to nearly $500. Who says this punishment of liars would be out of place now? If old Miles Standish or Governor Bradford could come back today and see how we "run things," no doubt they would feel that much of their labor was thrown away. It would take them a long time to become reconciled to our "deals" and "combines." Old Miles was a man who never dodged a responsibility. When a hostile Indian sent him a snake's skin filled with arrows as a token of defiance, the old fellow filled the skin with powder and shot and sent it back. If the stout old soldier lived in these days he would answer the attacks upon popular freedom in the same spirit.

BREVITIES.

FLOODS.

BEDRAGGLED.

SWEET CORN is a trifle lower again.

POTATO vines, those of both early and late kinds, are dying.

THE blackberry crop is probably as great as any ever raised in the northern States.

DURING the last four days (July 31) there have been 3.51 inches of rain at the Rural Grounds.

ONE result of the heavy rains is that bricks will be higher; many half-burned bricks were destroyed.

A COMPOSITOR makes it *Shapeless* instead of Sharpless Strawberry. Some specimens would seem to warrant this.

EDITOR C. A. DANA forcibly sets forth the claims of the sun-flower as the fittest among the national flower candidates.

ALL who are interested in vegetable growing should read William Falconer's article on page 529. You can not find such information in books.

ABOUT the only living creatures capable of doing a full days work during the storm were the potato beetles. They never stopped but ate, and grew fat.

LIMA Bean growers are hopeful for good prices all through the season. The rains have washed out many fields of beans so badly that the yield will be quite seriously curtailed.

IT seems evident that the storm has injured the potato crop quite seriously. Potatoes ought to bring a good price this year. The corn crop has also suffered and the grain will be high.

E. WILLIAMS says, on page 522, that strawberries should be consumed within 36 hours at furthest after being picked. To suit the writer's taste, this time should be reduced to as near one hour as possible.

FROGS' legs find a ready sale in the New York markets. The present price is 25 cents per pound. The R. N.-Y. has had so many letters from those who want to know how to raise, prepare and sell this article of food, that we propose to make it the subject for a special article.

NO GAMBLING devices, side-shows or anything which might exert a demoralizing influence upon the young or old will be permitted at the New York State Fair to commence September 12 and close the 19th. We are promised by Secretary Woodward and the Executive Committee an absolutely "clean" fair.

A SUBSCRIBER who read the articles entitled "Is Cream, Cream," writes:—

"I found out what I wanted. And the point is just this; can a man, five 'spaces' of whose cream will make a pound of butter, afford to be a patron of a co-operative creamery where it takes 6½ spaces of the mixed cream to make a pound of butter?"

RAINS incessant—the rainiest season ever experienced within the remembrance of the farmers in this part of the country. The R. N.-Y. anticipated a very dry season because the rainfall for the past two years has been excessive. All the more shall we count upon excessive droughts in the near future. This is not in the way of a prediction at all—the R N.-Y. as a weather forecaster owns up that it is in disgrace—but merely as the result of a bit of *a priori* reasoning.

The Garden.

THE VEGETABLE GARDEN.

WILLIAM FALCONER.

CELERY.—I sowed our main crop out-of-doors on April 25th. Just as the seed was bursting its shell in May, we had moist weather, then a parching hot spell, and not a plant came up, every seed was wasted in the ground; so I had to resow, which I did on May 24th. This may seem very late to many growers, but it isn't, for I now have splendid plants, six inches high, and all transplanted into seed-beds. They are in time enough, for we have very little ground ready for them yet. We plant them after peas, early potatoes, onions or strawberries. The great thing with celery is to keep the plant in vigorous growth from the moment the seedlings appear till you store away the plants for winter. Don't let them get spindled by overcrowding, checked by drought, or stunted by starvation. Early celery has been set out in trenches three feet apart. This closeness is because we must blanch it with boards rather than with earth, to prevent rusting. Our early main crop was planted in rows 4½ feet apart, and our late main crops three feet for single, and four feet for double rows. For celery we manure abundantly and broadcast in fall; crop with peas or something else in spring, then in July or early August throw out our rows for the celery; the rows are six inches deep and into them a heavy dressing of fine manure is worked. The level system is not so good for us as is the trench plan. By planting in shallow trenches we use the ridge for spinach, lettuce or other catch crops, as well as for walking when watering the celery in dry weather.

SNAP BEANS.—I sow these wherever a vacancy occurs, and I am not particular about giving them regular rotation ground. They will grow in land too sour for peas or cauliflowers and too shady for root crops; and I will sow them every week till September. The last sowings will be of the White Flageolet, which although a poor bean, is dwarf, free-cropping and very early, and I can cover it easily with frames and sashes. The best of all green-podded snap beans is the Valentine, and of pole beans, Dreer's Lima. The Valentines we are now using were sown May 28th. Our earliest Valentines were sown April 11th. At that time I put in a large sowing, part for use and part for seed. The seed is now ripe, the vines gathered and spread out to dry, and the ground forked over and planted with Savoys. The seed now saved is what I shall use for August sowings.

LIMA BEANS were sowed early (May 6) because the season was early. We have a piece of filled-in land which is rich, level and moderately moist, but for some unknown reason every crop—melons, celery, cauliflower, etc.—except beans, I ever tried in it, failed; but beans grow superbly in it, and I use it year after year for Limas, and every succeeding year they seem to wax stronger; but there is no stint of manure. Note a curious point in sowing; one man sowed the seed by pushing it into the ground, eye down, and every seed grew; another sowed by laying the seed flat and covering one lot loosely, and the other lot by tamping the soil firmly on top of the beans. The firmly-tamped ones grew as well as the eye-down ones; whereas the loosely covered ones nearly all rotted. I have tried all the recorded devices for training Limas, also shortening in the vines at various times, and now unhesitatingly assert that the common method of using poles and letting the vines climb up them at will is, in my opinion, the best and least troublesome, and no amount of pinching ever gained one day in earliness.

THE DWARF LIMAS.—Now let me "speak out in meeting." I do not know, never did know, and cannot perceive what advantage we have in dwarfing the Lima. The dwarf yields no better fruit; its cropping capacity is vastly curtailed; in earliness I find it has no advantage over the vine, and its convenience as a garden crop is open to question. I certainly regard the vine as the most convenient. Among the poles we can walk around every hill in picking the beans; after the end of June the pole beans have got beyond the power of the weeds and will choke the weeds to death; but the dwarfs are at the mercy of the weeds so long as the beans live. Of course, we shouldn't have weeds in the garden, that's very true; but we don't always practice what we ought. The poles are easily placed, easily kept and last for years—that bugaboo won't scare practical people.

HENDERSON'S DWARF LIMA is a dwarf Sieva. In time of flowering and podding it is exactly the same as the common Sieva, and about 10 days ahead of the large Lima. Our plants sown May 17, are 15 to 18 inches high, very bushy and full of flower spikes; in several cases there are over 20 pods to a spike. It displays no inclination whatever to run, but is in reality a fixed dwarf. The chief use I have always had for Sieva Beans was to fill the gap between peas and large Limas; that is, to come in from the 20th to the 25th of July till the 1st or 7th of August. So long as I have plenty of peas no one wants Sievas, and as soon as large Limas come in the demand for Sievas ceases.

KUMERLE'S DWARF LIMA, FROM THORBURN.—In this we have a veritable dwarf form of the large Lima, dwarfer, if anything, than the dwarf Sieva, perfectly fixed in habit and with no inclination whatever to run. It is very free-flowering. Ours were sown May 17, and are now full of blossoms, but very few pods are set yet. It is so much of a stranger to me that I know nothing further about it, but I do wonder why so decided a novelty was not more prominently advertised.

PEAS—LATE PLANTING.—On June 3, I sowed Advancer, Abundance, Blue Beauty, Stratagem, Yorkshire Hero, and Midsummer in rows three feet apart. Blue Beauty gave us our first picking on July 12, and is very prolific. Advancer came on the 15, and, although doing well, is not nearly so full as was the Beauty. The others are not ready yet (July 19). Between these rows on July 13, I sowed Squantum Corn. It is now an inch above the ground. The peas don't shade it, and they will be off before it hurts them. On April 10, I sowed 21 kinds of peas for trial. In due time we picked from these for use and let the rest ripen up for seed. About a week ago I cleared them all off, and am now preparing the ground for celery. I always try to keep up a succession of peas till Lima Beans come in about the first of August, but it hardly pays, for after the 20th of July, mildew generally ravages the crop and they are of poor quality. I had good success with peas in the melon ground. I marked off the ground in rows seven feet apart and sowed the melons and between every second and third row of melons sowed a row of peas. These peas have yielded their crop and are now ready to be cleared off. The place where they ran will be occupied as pathways in the melon beds. This has been a good year for peas. Alpha, Champion of England and Yorkshire Hero are unexcelled for quality. Most of the new-comers are failures in this respect.

THE TURNIPS we are now using were sown May 28 and are Purple-top White Globe. We sow a little every two weeks till the end of August, for succession. All sowings made before August get very wormy in our light, heavily-manured land.

THE CUCUMBERS we are now using were sown May 25. They are the market gardeners' strain of White Spine, given me by Silas Albertson of Roslyn, and extra fine. We sow a little every fortnight. Old plants don't last long. For pickling, dig out every second row of early potatoes and in their place sow cucumbers. A nice sowing of cucumbers may be put in in August, but somewhere where a frame may be put over them in the fall to prolong their fruiting season, and one must be ready with lots of tobacco stems to put about them, as late cucumbers are much subject to lice pests.

ONIONS have done well. Large Red Wethersfield, Yellow Danvers and Southport White Globe are our main crop. Mammoth Pompeii promises well: it is a large oval onion; but for general purposes I find nothing better than the three first mentioned. For a few years back our onions have been much troubled with the onion-maggot at the roots in May, so this year I changed the patch to across the road—only about 20 feet away—and not a maggot was found; but with July came leaf-thrips, and from this pest we have no immunity. It never completely ruins a crop, as it does not appear till July, by which time the onions are half grown; but it sadly affects the longevity and large size of the crop. About the first of August our onions will be ripe and pulled and the ground will be ready for strawberries or celery.

ONIONS FROM SETS were gathered three weeks ago. They swell up and ripen quickly. The chief point about them for family use is that they come in early and can be grown well enough in light sandy land, whereas seed onions should always have good ground.

But "set" onions are poorer keepers than are "seed" onions, so a few of them are sufficient for a family.

POTATO ONIONS have behaved badly, and they have done this for the past three years. They fail to start and keep up vigorously; they "melt off" as it were. So far as flavor goes they are poor onions, but when they do well, they are a very certain crop, and the onions are large, of fine appearance, and are capital keepers. We harvested ours 10 days ago.

SHALLOTS I gathered a week ago, and they now are spread out to cure. Never were they finer. This is on account of so much rain. They are used whole, and are much sought for by French cooks. They keep well during winter, and are good stock to have, as they don't trouble us with sprouting with every warm turn of the weather. They multiply greatly.

GARLIC is not quite ripe yet; we let it stay in the ground till the necks bend over, then lift and cure, and hang up in bunches. It is very hardy. It is a good deal asked for by French cooks for flavoring, and really for ordinary domestic purposes I think we can get along very well without it. It is the "loudest" of all the onion race.

CHIVES are a nice thing to have. They are hardy, reproductive and neat, and so useful for soups and salads. The tops only are used. Cut over a few plants every now and again to have them come up fresh and green.

LEEKS we sowed on April 4, and left them in the seed rows till a week ago, when we lifted them, cut them hard back, tops and roots, and planted them out in rows 18 inches apart and six inches asunder in the row. A few of them are enough for a family. They are nice for soups, but if one has onions, leeks are seldom asked for. They are a very accommodating crop. No matter how early they are sown, they will not "bolt" to flower that year, and you can keep them in the seed row till you have convenient ground or time for planting them out. What is known as the Large American Flag is a very satisfactory kind. Get fresh seed every year, for old seed is worthless.

Queens County, Long Island.

PERFECT-LEAVED STRAWBERRIES.

PROF. J. L. BUDD.

The Downer Prolific Strawberry; varieties for Iowa; influence of "breed" in strawberries; offspring of Chili crosses with indigenous Western species best for dry interior regions; superiority of American strawberries throughout the North Temperate zone; vitality and perfect foliage to be henceforth the paramount objects in strawberry "breeding."

A "BREVITY" in the RURAL states that I "deem Downer's Prolific the best strawberry for home use." I have said that on our grounds the Downer was the best variety to use as a fertilizer for the Crescent for home use, and that it would prove the best fertilizer for market if the Downer were better in color. But this remark will not apply to all parts of the country, or even to all parts of Iowa. On our rich, black drift soil nearly all the popular varieties of the States east of the lakes fail wholly or partially on account of sunburn or rust of foliage, yet we have several excellent sorts that prove defiant to wind and weather. Notable among these are four varieties originated by J. S. Downer, of Kentucky, viz: Downer's Prolific, Green's Prolific, Charles Downing and Kentucky. The Crescent, Great Pacific, Bubach and a few others have this perfect foliage, while scores of varieties that do well on other soils and in other parts of our great domain fail to stand our extremes of summer.

"IT IS IN THE BREED."

In speaking of the reasons why some of his varieties were perfect in foliage, Mr. Downer said, several years prior to his death: "It is in the breed." Sir Henry Vilmorin has made about the same remark in regard to the strawberries that maintain perfect foliage on the interior steppes of Russia.

As the history of our best strawberries has not recently been discussed, it may be useful to indicate briefly what Downer and Vilmorin meant by "the breed" of perfect-foliaged sorts. They believed—as does the writer—that the best strawberries for the dry interior climates of both continents have come from crosses of the Chili species with the indigenous species of the West known as Fragaria Illinoiensis or F. Iowensis. On the other hand, many of the choice varieties which fail with us are derived from crosses of the Chili species with that of Virginia (F. Virginiana). While such general statements are difficult to prove in a direct way from the recorded statements of books and periodicals, the history of such advances as Keen's seedling, Hovey's seedling, Downer's seedlings, and Vilmorin's seedlings, confirms the belief in an indirect way.

Our people seem to have forgotten that the best strawberries of the North Temperate zone to-day, are purely American. So far as I know, the indigenous species of Europe and Asia have not given a single variety now considered valuable for general culture in any country. At a very early day the American species from North and South America were introduced into Europe and Asia, and their crosses are now found at the extreme east limits of Europe, and I have been assured that they are grown in Persia, Central Asia, and China.

As we have probably about reached the limit of development as to size and quality, and the value of new varieties largely hinges on the vitality and foliage of the plant, it is about time that another Downer should go back to first principles. The best varieties of the Chili Strawberry are now obtainable, and Iowa and Illinois have perfect-foliaged native sorts with fair size, *and the unapproachable flavor*, which the big South Americans lack. We should have system and method in plant as well as in animal breeding.

Ames, Iowa.

Sheep Husbandry.

SHEEP AT THE ROYAL SHOW.

HENRY STEWART.

"Golden-hoof" a prime favorite in England; numerous breeds at the show; the most useful, the most popular; heavy long-wools losing favor; the Shropshire ahead; Down, Leicester, Lincoln and Cotswold, Romney Marsh, Dorset Horned, Welsh Mountain, Cheviot, Roscommon and other less notable breeds.

THE report of the grand exhibition of the Royal Agricultural Society of England is full of interest and instruction to American farmers, but to me the sheep show is particularly interesting, not only in a personal way, but as affording an exemplary lesson to American farmers of what might be done in this country, were equally deserved attention given to this most profitable of all farm stock. Considering the narrow boundaries of the little island, having only little more acreage than the State of New York, the large variety of sheep kept is truly amazing, and shows how much the sheep quickly becomes acclimated to its conditions and how even small differences in climate, soil, and conditions of agriculture affect in a most important manner this kind of farm stock. At this show the following breeds were exhibited all in respectable numbers, and of course in the finest condition: Leicesters, Border Leicesters, Cotswolds, Lincolns, Oxford Downs, Shropshires, South Downs, Hampshire Downs, Suffolks, Dorset Horned, Romney Marsh, Devon Longwools, Ryelands, Dartmoors, Exmoors, Wensleydales, Roscommon (Irish), Limestones, Cheviots, Black-faced Scotch, Lonks, Welsh Mountain, South Hams, St. Kildas (one of the Scotch island breeds), Merino, Dorset Downs and Portland. Among the foreign breeds were Zulus, and the African long-tailed sheep.

Every one of these breeds has some special interest. As showing the tendency of English sheep culture to the more commonly useful kinds and to the neglect of the special breeds noted for some singular points of value, the numbers of the entries are significant. Thus the Shropshires made 212 entries; the South Downs 123; Oxford Downs 82; Hampshire Downs 31. All of these are of the Down class, of which the Shropshires have gone far ahead even of the old favorite South Down, and well it merits the favor into which it has sprung as the best mutton and domestic wool sheep of all the breeds. The longwools which were a few years ago in the ascendant, have gone back, the great, fat carcasses having gone out of fashion and having been found unprofitable in the present period of cheap products, in competition with the meat-making and clothing-wool-producing Down breeds. Several years ago, after a patient trial with the Leicesters and Cotswolds, I gave them up as unprofitable sheep and have since constantly advised farmers—these are farmers' sheep and not shepherds'—to let these heavy-bodied, much-eating, long-wooled sheep alone, and the English farmers have at last found it out in spite of their strong conservatism. Only seven of the big Lincoln sheep and 11 Leicesters were on exhibition at the Royal Show; and the formerly extremely popular Cotswolds showed only 60 entries, which was less than twice as many as the Romney Marsh breed which had 36 entries.

This Romney Marsh sheep is kept on the salt meadows of the southeast coast of England and is the only existing sheep which can

stand a wet foot and marsh pastures. It is a coarse animal, having coarse, long wool, valuable for special uses, but a good mutton carcass. No doubt it would find a useful place here, as the Down breeds have under the special conditions for which they are fitted. There were 31 entries of the Dorset Horned sheep, a breed which has lambs twice a year and of which some importations have been made here. This sheep is exactly fitted for dairy farms where early lambs can be disposed of, and a carcass of mutton can be divided up easily among neighbors; but it is a sheep having but one purpose, good for lambs, but poor for mutton and wool, and it will never make a popular sheep or a profitable one here.

The 34 entries of Welsh Mountain sheep are noteworthy as showing the popularity of a good sheep in the right place. Elsewhere but on its native rocky, but sweet nutritious pastures, this sheep would be of no account unless it could change its character with its environments and improve with them. In its place it is one of the most valuable sheep. Small, active, able to outrun a fox or wolf, with fine wool, especially useful for flannels—the Welsh flannel is pre-eminent among housewives—and most delicious but very small mutton, it is a conspicuous example of the survival of the fittest. This sheep would do well in many localities where the land is now lying useless, as in the Pennsylvania mountain regions; parts of New England, and especially in the Southern mountain region. This is called a small sheep, but only as compared with the 400 or 450-pound Lincolns, for a prize ram—winner of the 3rd prize only—weighed 190 pounds. I have seen a hind-quarter of Welsh mutton and helped to eat it, which weighed only six pounds; but the morsel was preferable to the 50-pound mass of a tallowy prize Lincoln. Some sheep of quite unknown character here were the Ryelands, Dartmoors, Exmoors, Devon long-wools and South Hams, all useful sheep for ordinary purposes and of local reputation only. The Wensleydale, a mountain sheep of northern England (Westmoreland), has a blue face, is an excellent mutton and wool sheep and hardy and able to rough it in the storms of summer as well as of winter, which sweep the bare sides of the Westmoreland mountains. The Lonks are large sheep of local reputation in the mountains. A related breed of mountain sheep, much more popular than this—the Herdricks—were conspicuous by their absence. Both of these sheep have some special valuable points as have the black sheep of St. Hilda Of these the fine wool useful for particular domestic uses, as for such soft fabrics as shawls, comforters, and other knitted goods, is the produce. The Scotch sheep, the Cheviots and black-faced breeds, have been tried here; but do not make their way very well. These sheep cannot withstand our hot sun and heavy rains. Their native mists and cool climate suit them, and they come to perfection on the succulent pastures always dripping—with dew—it may be called, as the rain there is mostly mist, a gentle distillation from the clouds and fogs. The Irish Roscommon is the sheep which makes up those enormous droves that are seen at the fairs so common to that verdant isle. At Donnybrook, the principal of these fairs, there are usually 100,000 sheep gathered for sale and the Roscommon sheep is the type upon which all Irish sheep are based, an excellent farm sheep, of good size and bearing useful wool of which the everlasting Irish frieze is made.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

A GIRL who cannot sew certainly loses one of the most womanly of all pleasures. Any girl in moderate circumstances who cannot make and mend all her own clothing, to say nothing of making and mending household linen, is certainly imperfectly educated. We have seen a young mother in very moderate circumstances compelled to put all her sewing out, because she had never even learned enough to make a baby's petticoat. To most mothers it is such a pleasure to sew for their little ones—to plan and devise all sorts of dainty garments. One proficient in hemstitching, feather-stitching and smocking can contrive the daintiest garments, and materially lessen their cost.

* * *

But it is not in fancy sewing only one should strive to excel. What a field for ingenuity may be found in making over garments. We have seen so many gowns that were prettier after being made over than when they were new, that we are prepared for all sorts of wonders in this line. The most exasperating thing about making over is to find oneself short of some material and when in the midst of the work. It is the best plan, when ripping apart, to promptly put useless pieces into the rag-bag, and then decide at once what must be had in the way of new goods. It does not pay to use shabby finishings and limp linings; a made-over must be well sewn, with every detail exact. Sometimes we use old linings in wash dresses, but we find it poor economy.

* * *

SOME pretty English bed-covers for a spare room were made large enough to cover pillows and all; they were of sheer white muslins with a wide hemstitched tuck, through which was run a pink ribbon. It was lined with pink sateen, and bordered with a muslin frill nine inches deep: A handsome linen cover had a deep border of turkey red twill, worked in a beautiful pattern with white silk. Above and below the border threads had been drawn in the linen making a pattern in drawn work. It was edged with red and white fringe.

"MOTHER BOYS."

MRS. JAMES STEEDMAN.

"HOW can they bear the loss, they were such mother boys," we said among ourselves when word came that a dear mother had been called from earth, leaving three sons just standing on the threshold of manhood. A week later walking home from Sabbath evening service with an aged aunt, we talked together of the sudden death, and aunt said, in almost the self-same words that had passed around our family circle: "How they will miss her! They were such mother boys." The words kept by me, as parting I wended my homeward way. And it seemed to me that had I been a stranger listening they would have explained the mother's character so well, for we are told the children love best the mother who governs wisely and well, mingling judgment with tender love in her care for them, refusing often when she longs to grant the privilege they ask, standing firmly between them and the temptations they would throw themselves among. Unthinking, unknowing youth! How oft it tries the mother heart! Bent only on the pleasure of the moment, it chafes and galls at the restraining hand of love.

Nature had bestowed a full measure of health, and strength, upon this mother, and most faithfully did she use the gifts, filling well her place in life, the center of a happy home. While there were still a score of years to look forward to, until she should in the course of nature have filled up the measure of allotted days, suddenly and without warning the message came, and, obedient as in life she answered: "Even so Lord."

Husband and sons brought their loved one to her childhood home at the foot of Schunnemunk. And in the quiet grave-yard, lying in the shadow of the grand old mountain, they laid the wife and mother to rest.

AMUSEMENTS FOR A RAINY TIME.

PEARL.

TO amuse yourself and one or two very intimate girl acquaintances, get the one nearest your own hight and style to try on, one after another, all your dresses, hats and wraps, and then do the same for her. You will be apt to wear those clothes with largely increased satisfaction after seeing for yourself just how they look "on." I don't dare to breathe a suspicion that you may also discover a stitch wanting somewhere, or that a frayed braid or lining might reveal itself in such a "dress parade," but I do venture to suggest that such times afford beautiful opportunities to plan alterations, where they are desirable.

* * *

But, Docia Dykens, why try only to "appear pleasant and agreeable?" Be so, truly within, and you need never again seek for relief from *ennui*. You are your own most constant and confidential companion; it is well worth while to train that companion who is "yours to command," into a pleasant and profitable one.

How?—By teaching her to think. Hold your thoughts steadily to a given subject for a certain length of time. Compel Docia D. also to learn to feel with and for others, and, my word for it, the world will soon find plenty to occupy you, rainy days and all. It's not really amusing at all times and all through life thinking and feeling with and for others, but it is so intensely interesting as to lift one quite above the need of amusement. And a loving sympathizer has no need to try to "appear" nice in order to be appreciated; she is as precious as gold to all who have been blessed with her sweet ministry.

What do I do on rainy days? Seek out some forlorn creature and devote myself to her or him—as the case may be—with all the assiduity of which I am capable. But, you see, I belong to the "Soul-Winner's League," and would rather lead some one "out of darkness into light" than be the center of an admiring group. Tastes differ; duties also; but to all will come the words: "Inasmuch as ye did it (or did it not) unto others, ye did it unto ME."

A WRITTEN SERMON.

AUNTIE.

HOW grand it is to be God's minister! to speak to our fellows in a name that commands respect for whatever we utter! Since women are not called to the pulpit—as a rule—they ought not to sermonize, yet for once I cannot resist the temptation to try: the text is so perfectly suited to what I want to say and I want so much to make a lasting impression.

"She will do him good, and not evil, all the days of her life."

This is a part of King Solomon's word-painting of the ideal woman, to be found in the thirty-first chapter of the Book of Proverbs, in the twelfth verse.

The expression means that "she" will do "him" good, only and unmixed good, always. It is not so long since there issued from the press a story bearing the very appropriate title of "She." To me it was worth the odd minutes given to its swift perusal, but I could not profitably have bestowed upon it any more time than I did; so, also, many a man's wife, worth all she cost him to woo and win, and maintain afterwards, is yet worth *no more*. Why no more?

Gentlemen, yours is the inalienable right to measure woman by the Scripture standard: if "she," whether wife, mother, sister, daughter, sweetheart or friend, does *you* "good and not evil" whenever you are in her company, it is well; if otherwise, beware!—Often some woman who is devoid of beauty, aged and an invalid is eagerly sought out by old and young men, and appreciated to a most flattering extent, because she is true to the scripture ideal, doing them good.

So, my dear lady reader, yours must be exceptional circumstances indeed, if there be not within reach of your best influence some masculine; and I boldly draw from my text the inference that, being a virtuous woman, you must, can, and will "do 'him' good and not evil," be he husband or father, brother or son, lover most dear, or a mere hired servant. Consider, then, in the case of every man, and, particularly if you are a wife, in the matter of your own husband, this thing of "doing him good."

God created Eve to do Adam good—a queenly mission, worthy of the woman whom God's own hand had fashioned for this work. How terribly she fell when the Evil One caused her to do him evil instead, and how many of her daughters fell with her! God made us to be "a help-meet,"—a suitable help—wherever and whenever help is most needed by man. Are you this to your husband, dear madam? Are you this to your lover, maiden fair to look upon? Are you this to friend, son, acquaintance, employé, stranger whom you chance to meet, oh woman to whom the Lord God has given the command and the power to be needed help on the upward climb?

GOLDEN GRAINS.

THE SUNDAY SCHOOL TIMES says that we should hope for the time when the overdressed young woman, with one of Ouida's novels in her hand and a dead bird's wing on her empty head, may disappear along with the male peripatetic who calls it sport to silence a throatful of melody with a bang of a hateful gun.....

If we would win others to the right, we must show that we are in love with the right, and that, however we hate the wrong, we have no feelings but those of loving kindness for the wrong-doer, whom our Saviour loves, for so, and only so, can the same mind show itself in us which shows itself in the Lord Jesus.....

Ill fares the land to hastening ills a prey,
Where wealth accumulates and men decay;
Princes and lords may flourish, or may fade:
A breath can make them, as a breath has made;
But a bold peasantry, their country's pride,
When once destroyed can never be supplied.
Goldsmith.

Few sentences have set people to thinking as the statement made by Bishop Potter in his famous sermon in St. Paul's Church: "We have exchanged," said he, "the Washingtonian dignity for the Jeffersonian simplicity, which was, in truth, only another name for the Jacksonian vulgarity, and what have we got in exchange for it? In the older States and dynasties they had the trappings of royalty and the pomp and splendor of the king's person to fill men's hearts with loyalty. Well, we have dispensed with the old titular dignities. Let us take care that we do not part with that tremendous force for which they stood! If there be not titular royalty all the more need is there for personal royalty. If there is to be no nobility of descent, all the more indispensable is it that there should be nobility of ascent—a character in them that bear rule so fine and high and pure that as men come within the circle of its influence they involuntarily pay homage to that which is the one pre-eminent distinction, the royalty of virtue!".....

THE Rev. Dr. Archibald Alexander, of Princeton Theological Seminary, was a very learned man, but exceedingly plain in his language. He knew how essential simplicity was to clearness and force. There was a schoolhouse in the vicinity, where the students held religious services and aired their eloquence. An old colored man attended every Sabbath, but the students talked so far above his comprehension that he remembered little of the sermons and understood less. But one Sunday afternoon Dr. Alexander preached. The old colored man was both delighted and instructed, and made the following comment: "A poor, unlarnt ole man, jist like myself, preached. I don' know who he was, and didn't s'pose he was hardly fit to preach. But I'm glad I went, for I can remember everything he said." In this criticism was hidden a compliment of the highest order.....

GEO. WM. CURTIS spoke at Gettysburg of the dangers of our immigration laws; He said it must be insisted more and more strenuously that it is not so much immigration that constitutes our peril, as the way in which we handle our immigrants. If we would inform them frankly that the civilization into which we receive them is a Christian civilization, maintain over them kindly but firmly the restraints of righteous law, abolish the saloon, forbid the desecration of the Sabbath, welcome their children to a school with the Bible in it, and thus quicken and intensify the assimilating forces of our national life, we should greatly reduce the danger from this source. Mere restrictions on the volume of immigration are not the safeguards against the peril it involves, but a healthier and more robust national Christianity. The evil is a moral and spiritual one and it demands a moral and spiritual cure.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

If we were asked to define, in the fewest words possible, the word "economy," we should say: "That way of living which secures the greatest amount of happiness." That man or woman who has passed the happiest life has been, in the broad sense of the word, the most economical.

EXTRACTS FROM SUNDAY EVENING TALKS AT THE RURAL GROUNDS.

IF you desire to do good in this world, be true to all with whom you have relations. Praise your friends *heartily*. Serve them with all your soul when you can, and *don't* feel that God wants you to go rummaging through their pockets to find out whether they have not stolen from you; or through their hearts to find if they are PRECISELY in the right place. Bear in mind every hour that we are choke-full of erring propensities; that it is human to err, that it is divine to forget and forgive. The spirit of real friendship will never countenance a disposition needlessly to dwell upon shortcomings and frailties—not that it would shut its eyes thereto, but that it loves the *more* to dwell upon the nobler impulses of the heart.

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria.

Let us praise *thoroughly* when we can; let us serve a friend in good faith or not at all. If we can utter no words of praise sincerely, let us keep our mouths shut unless it be a plain duty to condemn what is absolutely condemnable. *Then* let our condemnation be as sincere and outspoken as was our praise. But don't *mix* them. You can't have your pie and eat it too. He who is not for me is against me. Cheap friendship is a *fraud*. It reminds me of a man who sets himself up for a "*gentleman*" and who demands consideration as such while he isn't self-sacrificing enough to control his tobacco-chewing fondness in the presence of ladies.

* * *

ONE of the most cowardly things a man or woman can do is that of seeking to injure a person while he seems to praise him. It is the method employed by hypocrites, Wall Street speculators, lawyers and politicians to damn and yet escape the penalty of damning. It is the method of selfish friends to retain friendship without in turn making any of the sacrifices which the word friendship implies. Did it ever occur to you that the very basis of *real* friendship is founded in the desire of either to *benefit* the other? Too often so-called friendship is based upon the desire of one to help himself at the *cost* of the other.

* * *

BE sure if you would judge human nature astutely, that the happy face comes from a good heart, and that the sour face with its down-drawn lines, the wicked eye, the hard, cruel expression are true indices of evils that result from a life that has known no true economy. It seems to me one of the great evidences of the great wisdom of God that the motives and acts of man are sooner or later engraved indelibly on his face—a picture that even little children may see and interpret.

* * *

BOTANY is the study of all that gives us food, life and strength; that supports all life of every kind. It is a part of the study of God himself. Botany is God's first and choicest work. We almost see God when we look at nature. We adore Him as we inhale the odor of the flowers, as we rest in the shade of trees or vines, as we bask in the sunshine. Why is this world lovely? How would you like it if there were no trees or verdure?

A WORD ABOUT HOME.

JUST now in thinking of little things which go towards making a home, I cannot help feeling how useless and worthless they are if love does not cast her light over all. What is house, furniture, luxury, if there be not love? They cannot, without it, make home—that refuge for the weary heart, for

> "Home's not merely roof and room,
> It needs something to endear it.
> Home is where the heart can bloom;
> Where there's some kind lip to cheer it!
> What is the home with none to meet?
> None to welcome—none to greet us?
> Home is sweet—and only sweet—
> When there's one we love to greet us."

Mother, if you've been cross when the boys went away this morning, smile on them when they come home to-night. Or, if you refused your husband his good-bye kiss, give him two to-night to make up for it. Do you ever stop to think, when giving way to temper, that, perhaps, this may be your loved one's last day on earth? How do we know? How can we tell? Our fathers, brothers, sisters leave us full of life and hope, but they may never return. I do not wish people to go about with a constant gloom on their faces, but would it not be better if we were to keep a watch on our tongues? Let the bitter things be unsaid.

* * *

SOME years ago, when I first left home, I felt very lonely and homesick. I pined for the woods and fields, so one day started out for a walk, alone, going towards the woods which lay beyond the city where I was then staying. To get to these woods I had to cross a river, and as I walked towards it I passed many factories which were built on its banks. While walking along I stopped to pick up a pin. (For at home we used to repeat the old lines: "See a pin and let it lay; you'll have bad luck all the day"). As I did so, a man who had been walking behind, passed me. Scarcely had he done so—before I could rise from my stooping posture—when a wagon-load of bales of cotton fell upon him. I heard a groan and a cry; that was all. I felt utterly paralyzed and sank on a step close by. The men from one of the mills ran out, and as soon as possible, lifted the bales from off him. The sight which met my eyes never left me for months. The man was flattened out as if he had been run between two rollers. They tried to restore him but he was dead. One step more and that would have been my fate! I was then a girl full of buoyant spirits, had never seen death, was as quick with my tongue as many girls are, but from that time to this I have realized how near the portal we may be—one step, perhaps. If it should be one of our number who is called, let us try not to have anything to regret. Let us make the word "home" mean something to those we love?

DORA HARVEY VROOMAN.

Boys and girls when you are misty as to whether you should or should not do a thing—ask yourselves: "What would mother say?" In most cases, if not in all, the answer will prove a trusty guide through life.

BREAD-MAKING MADE EASY.

IN the culinary department, this subject is deservedly paramount. Good bread overshadows numerous deficiencies in minor details of the repast, while the presence of no delicacy, however tempting, can compensate for its absence; but, like rich trimming on a shoddy garment, the contrast only attracts increased attention to the spurious foundation the dainty is intended to garnish.

Nearly every neighborhood contains at least one woman who excels in the art. Her bread is the delight, almost the envy of her sisters—at least until they witness the laborious process by which it is obtained. This extremely particular task is never trusted to the servant: no, not even to her own daughters, no matter how skillful they may be with cake and pastry. Even if their young shoulders were strong enough to endure the hard work involved, they would be sure to be forgetful, and a very few minutes of neglect would ruin the whole. The dough is worked and raised and re-worked several times, and the forenoon passes slowly away, ere, with weary hands and aching head, the mother removes the snowy loaves from the oven. Many a young house-wife has labored and sweated to obtain equal results, yet in vain; and almost wished herself a native of the South Sea Islands where bread grows on trees, and is always palatable.

The effect of sour, heavy bread upon the health and consequently the happiness of its consumers, has been too often discussed to need re-discussion here. It is simply the prevention of mistakes of which I wish to speak. While the painstaking woman already referred to, will produce a superior article, most of the hard labor she deems so necessary is positively useless. The main requisites are good flour, good hops and good potatoes. With these essentials, and careful attention to the directions which follow, I believe the most inexperienced will be satisfied with the result, and never again be willing to depend on baker's bread.

First, make your own yeast, and if you have access to a garden plot, raise your own hops rather than risk buying those which have already lost half of their original strength. To make the yeast is a very simple matter: Steep a handful of hops in sufficient water to cover nicely. Meantime, grate six medium-sized potatoes, over which pour two or three quarts of boiling water. The mess should thicken like starch. Add the water strained from the hops, a tea-cupful of white sugar and a table-spoonful of salt. When nearly cold add a-quarter of a cup of old yeast; or, better, to avoid using so much old yeast, when first made take out half a tea-cupful. This will soon cool. To it add one tea-spoonful of old yeast, and put in a warm place to rise. By the time it is light, the bulk of the yeast will be cool, to which it may be added. This should be allowed to rise to three times its original bulk, about three times, stirring down *briskly* each time. Then cover closely and put in a cool place for use. Yeast so made seldom moulds, but in the warmer months it should be renewed once in three or four weeks.

From the yeast-making to the baking, a milk-warm temperature is most favorable to the process; a lower temperature retards, while freezing or scalding destroys the leavening properties of the yeast. Never put it in a place too warm to bear the hand with ease, till it is ready for baking.

For two loaves take one quart of warm water, half a cup of yeast, from one to three cups of mashed potato, (whatever is left from dinner) one table-spoonful of lard or butter and two table-spoonfuls of sugar. Mix stiff and knead for 10 minutes. Cover closely and set in a warm place to rise. I usually set the sponge shortly after tea. (Of course, this cannot be done in winter unless the fire is kept "alive" during the night.) In the morning, before commencing breakfast, the dough is worked for five minutes, then made into loaves. By the time breakfast is over, these are usually ready to bake. Thus that terrible bug-bear, bread baking is accomplished almost before the breakfast dishes are washed. No extra fire is needed in the forenoon to swelter in—only a slight prolongation of the one that prepared the morning meal.

The bread should bake from 15 to 25 minutes in a moderate oven. Much bread is ruined by over-baking. The fresh, sweet taste is literally cooked out, leaving a dry, insipid mass. A little practice will enable one to tell by tapping lightly on the loaf, when to remove it. When baked, it should be taken from the tin at once, and placed between two folds of cloth to steam. Bread made in this way is light, soft, fine-grained and absolutely free from the hop taste to which many object. Just try the experiment with some friend who thinks he can eat only "salt-rising" bread, and see if he does not relish this; while the devotee to the "hoppiest" of hop-yeast bread will be equally pleased.

If hot bread rolls are desired for tea, take sufficient dough for one loaf, add a little more lard, and knead till it is thoroughly mixed in. When the sponge is light, roll thin and cut with a biscuit-cutter. Dip half of each piece in melted butter, fold over on the other half and place in the baking-pan. When light, set in a cool place till time to bake. For rusk, take the same amount of dough as for rolls. Add one tea-cupful of sugar, one table-spoonful of lard or butter, and one egg, well beaten. Knead thoroughly and let the dough rise again, then work it into biscuit. When they are light, bake in a moderate oven. As soon as they are done, cover the top with a dressing of sweet cream and sugar, equal parts. Butter may be substituted for the cream. I am sure that no one who tries this method will desire to return to the old method of kneading and re-kneading till it fairly makes one's back ache to think of it; neither will she be worried by the anticipation nor mortified by the reality of poor bread.

RUTH RAYMOND.

A PARTIAL CONVERT.

I WAS presented a few days ago with a handle dish-cloth which I find very convenient, especially in washing around the handles of tea-cups, tumblers, narrow-necked pitchers and vases. I don't know that I could quite get used to it in washing all kinds of dishes; for it is hard to change for one who, for over 50 years, has washed in the old way, but there are many persons who cannot put their hands into any greasy water without suffering, the hands smarting and burning; for such this kind of dish-cloth would be invaluable. Mine has for a handle a round stick an inch in diameter and a foot long. When the handle is ready, cut enough coarse twine into pieces eight inches long to make a swab large enough to be wrung easily with one hand when doubled. Cut a groove about one inch from one end of the handle. Double the twine and tie it on evenly around the stick. Be sure it is bound on solidly; and it is then ready for use. We use one to clean our lamp chimneys, only we tie on sponge instead of twine, so that there will be no lint on the chimney.

C. R. DAVIS

Miscellaneous Advertising.

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That scores of people have been cured of Boils, Carbuncles, and Scrofulous Sores by the use of

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why not try it yourself? As a blood-purifier, this medicine has no equal. Listen to good advice: Take Ayer's Sarsaparilla, and no other.

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Ayer's Sarsaparilla,

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Breakfast Cocoa
Is absolutely pure and it is soluble.
No Chemicals
are used in its preparation. It has *more than three times the strength* of Cocoa mixed with Starch, Arrowroot or Sugar, and is therefore far more economical, *costing less than one cent a cup.* It is delicious, nourishing, strengthening, EASILY DIGESTED, and admirably adapted for invalids as well as persons in health.
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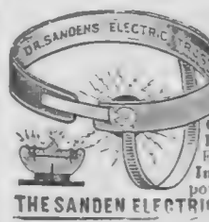

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News of the Week.

HOME NEWS.

SATURDAY, August 3, 1889.

THE rejuvenating effects of Dr. Brown-Sequard's subcutaneous injections of his newly discovered "Elixir," lasted only two months, and he is now lively and young again at 72, under the effects of a second experiment. The effects passed off in the same time in the cases of several other old men who had been similarly treated. Dr. Hammond, one of the most skillful and probably the best known physician in America, has just been making similar experiments on some feeble old subjects at Washington, and reports marvelous results in the way of restoration of mental and physical strength, and buoyancy of feeling. Some doctors are in hopes of marvelously beneficial results from a discovery which is still in an empirical stage—simply in its infancy—others declare that the fuss is all poppycock, caused by the senile maunderings of an old scientist in his dotage..... Slugger Sullivan was arrested here last Wednesday by a Mississippi deputy sheriff on a requisition from Governor Lowry indorsed by Governor Hill. No useless opposition was made and at 4.30 P. M. Thursday the party started quietly for Jackson, which they will reach on Monday. In Mississippi prize fighting is a misdemeanor punishable by a fine of not over $1,000 or under $500, or by imprisonment for not over one year or under six months, or both. Most people here think the Prince of Sluggers will get off with a fine; many, however, believe he'll be punished to the full extent of the law as a warning to all other bruisers. Kilrain has hitherto escaped arrest. .....On June 11, the United States revenue cutter Rush, cruising in Behring Sea, overhauled the British sealer Black Diamond cruising in forbidden waters. The Diamond refused to heave to until the Rush's guns were run out to sink her. An investigation discovered 103 fur-seal skins. A demand for the sealer's papers was refused, and Captain Shepperd of the Rush broke open the Diamond's cabin and strong chest and secured them. The Diamond, like several other sealers in Behring Sea, would have resisted if she had not met with superior force. The Rush also stopped the Triumph, another Canadian sealer, outside of Behring Sea, but as no seal-skins could be found, she was permitted to go. A good deal of warm feeling finds expression in hot words at the "outrage" across the border, especially in British Columbia on the Pacific coast. Such intemperate heat would be foolish at any time, but is specially so in this torrid weather. If the American officer transcended his rights, due reparation will be made; if not he'll be sustained. When, in 1867, the United States bought Alaska, the Aleutian and Seal Islands, etc., from Russia for $7,200,000, all the rights Russia had previously claimed were transferred to this country. Among these was a claim to exclusive jurisdiction over about half of Behring Sea, Russia still claiming jurisdiction over the part adjoining her Asiatic possessions. England, the United States and other maritime nations refused to concede Russia's claim at an earlier day, on the ground that it could be maintained only if the Sea were inclosed or land-locked, whereas on the south it merges into the Pacific Ocean from which it is here and there separated by the long chain of the Aleutian Isles several thousands in number. England, or rather Canada, now insists that the jurisdiction of the United States cannot extend over an open sea, upwards of 1,000 miles across, but must be confined to three nautical miles from the coast of the mainland or any island. The Alaska Commercial Company leases from the United States the exclusive right of catching fur seals in Behring Sea under strict rules against the extinction of the animals, and takes over $125,000 worth of skins a year, almost entirely on the Seal Islands, in the middle of Behring Sea. Many Canadian and a few American vessels are engaged in catching seals surreptitiously, on the islands when they can, but generally out at sea as the animals are engaged in their annual migration. Most of those struck then sink and are lost, while the skins of many of those caught are worthless at that season. These "piratical" operations have in five years destroyed two-thirds of the seals and would have annihilated the business in five more. This would be a serious loss to this country which produces the animals: to England where the skins are prepared, and to the world which uses them. The United States insists on a stop being put to the reckless, cruel, wasteful and greedy slaughter, and England is hardly likely to embroil herself with this country in support of a few unscrupulous men who persist in it for purely selfish gain..... The Canadian Department of Justice has granted extradition papers in the case of Burke, the Cronin suspect, imprisoned for several weeks at Winnipeg. A mint of money has been vainly spent to prevent his extradition. As he hadn't a cent, and all his people are poor, where did it all come from?..... On Thursday, August 1, Plymouth, Mass. witnessed the dedication of a fine monument to the Pilgrims who landed at Plymouth Rock. The day was the anniversary of their departure on the May flower from Delft Harbor 269 years ago. On November 20, 1620, Cape Cod was sighted, and on December 30, Plymouth Colony was founded: while the building of the town was begun on January 2, 1621. Thursday's celebration was fairly good in spite of a heavy downpour which deluged visitors and made the streets sloughs of hub-deep mud..... A disastrous storm of wind, rain and lightning terrified and greatly damaged Chicago a week ago. The "oldest inhabitant" had never seen anything so bad. Houses were blown down, causing several persons' deaths and wounding others; trees were up-rooted, telegraph and telephone wires prostrated; cellars and low parts of the city flooded and general havoc created. Loss over $100,000. With a sewage system for a place of only 100,000 inhabitants and a flat situation, the culverts couldn't admit the deluge into the sewers nor could the latter carry it away fast enough. Hence the town was flushed with sewage from the sewers and privies, and this having made its way into the lake, floated to the Crib through which Chicago gets its water supply. Hence danger of pestilence. So many molded bricks were reduced to mud that bricks at once went up $1 per 1,000. The drainage of the Lake City has long been a puzzling problem, now it demands prompt solution..... The Montgomery Cemetery at Norristown, Pa., draws the line at negroes. The other day it refused a burial permit to a colored war veteran despite pressure from the G. A. R.; but on the same day it granted one for the interment of a pet poodle. The veteran was incased in an ugly, plain pine coffin, however; the dog in a beautiful, silver-handled black-walnut casket. One was jolted over the stones in a rude cart; the other borne smoothly in a gorgeous hearse. .....Every summer there's either a strike or lockout, or both, in the glass-workers' trade. The men get higher wages than do any other class of operatives in the country or the world, and are protected from competition by rigid rules with regard to the number of apprentices that can be employed by any firm. The work round the furnaces is hot in summer; hence the strikes to give the men holidays and the employers an opportunity to clear out surplus stock. Both having partly gained their objects, negotiations for settlement are becoming friendly, and no doubt will soon be of fraternal warmth. Sympathy for striking glass-workers is foolishly wasted.....Charles M. Reed, a level-headed millionaire of Erie, Pa., offers to pay off the city's debt, amounting to $1,100,000, if it will give him the franchise of supplying the inhabitants with water. It would be worse than folly to give the control of a necessary of life in constant use to a speculator. .. Henry George has arrived here hale and hearty after five months in Europe, spent chiefly in lecturing. He says the single-land-tax doctrine is spreading steadily across the water, especially in Great Britain. There's a split in his party here..... Is it a matter for regret that there has been a falling off of over 100,000 in the immigration for the year? Hardly. There's no lack of all kinds of labor here already. .....A syndicate has bought the natural gas rights on 80,000 acres in Indiana, and intends to lay two eight-inch pipes, 138 miles long, to Chicago. Gas is to be pumped through these for the supply of the city, for lights and fuel, the work to be finished by Nov. 1. An Indiana law prohibits any gas being run out of the State, but the lower courts have already declared the law unconstitutional, and the higher courts are expected to do the same. ... .. An English syndicate has purchased 78 grain elevators in the Northwest, and another is negotiating for those in St. Louis. Other English syndicates are trying to get hold of the largest dry goods concerns in the country, and one is negotiating for the leather factories of Newark, N. J., the largest in the country. When these syndicates or trusts are formed, they are well "watered" and the diluted stock or certificates are offered for sale to the public, the "promoters" giving the original owners a large proportion of the "water" as an inducement to sell, and retaining the rest as their own perquisite. Their contract for the various kinds of business usually is on the "option" plan—if they can "place" the stock within a certain time the purchase is completed; if not, the enterprise collapses. Many of the "promoters" have little or no money of their own in the concerns they set "afloat," so that they may make a great deal and can lose only their labor at the most, and generally they manage to get paid for that. The American Salt Syndicate or Trust has just collapsed because the public here and abroad refused to invest largely in the enterprise. Salt is a necessary of life, and is one of the most plentiful of minerals; it would be an impossibility as well as an outrage therefore to monopolize it; and, again, the outcry here against the project frightened off possible investors. "They say" it may start again later on; but——. A financial panic is inevitable in the future when the bottom falls out of many of these undertakings..... ..... A Ballet Girl Trust! Yes, a Chicago syndicate, three-fourths of whose capital has been contributed by Englishmen, has already engaged the services of 3,000 Western Amazonian beauties. Some will get full pay and work; others half pay while unemployed. The threaters first and the dear public last must foot the bill—the least evil kind of trust: one on "luxuries pure and simple."..... The axe-wielder of the Post-Office has beheaded 13,000 fourth-class postmasters since March 4, 1888, against 9,000 decapitated in the same time under the last Administration..... ...It is probable that the Dominion militia system will be extended to the Northwest next year..... One of the richest deposits of petroleum ever struck, is said to have been found, on July 13, near Crow's Nest, in the Rocky Mountains, 4,500 feet above sea level in Canada. Samples show 91 per cent. of lubricating oil, five per cent. of heavy oil, and the rest water..... St. Louis, unwilling, of course, to yield a point to Chicago, insists that it is the best place for the great International Exhibition of 1892. The Chicago papers are villifying New York and everything about it, by way of boosting the chances of the Windy City for the Snow. Cincinnati, too, is putting in a modest but firm claim, as a central point, and Boston wants a side-show display of her own for the products of New England. New York conscious—perhaps too conscious—of her paramount advantages, is calmly—perhaps too calmly—preparing to secure the prize, while Washington is husbanding her strength until she can overwhelm Congressmen with it. All agree that it ought to be the finest thing of the kind the world has ever seen; can there be really more than one opinion as to the city that is best able to make it that?..... Ex-Senator E. H. Rollins, of New Hampshire, died at eight o'clock Wednesday morning at the Appledore House, Isle of Shoals, aged 64 years.....Based on the data of its city directory, St Paul, Minn., claims 185,000 population; based on the data of its city directory, published nine days later, Minneapolis claims 230,000! Both are marvels in their growth as well as in their pretensions.. .....A movement is on foot to celebrate the 30th anniversary of the discovery of petroleum by sinking the first well, at the junction of Pine and Oil Creeks in Western Pennsylvania, by Colonel Drake in 1859. Oil was struck at a depth of 71 feet and the flow was 400 gallons a day. The total output was 2,000 barrels in 1859; 104,000 000 in 1864; 470,000,000 in 1874, and 1,148,000,000 in 1888..... Murat Halstead, of the Cincinnati Commercial-Gazette, who was so unceremoniously rejected by the Senate as Minister to Germany, and who has been abroad for the benefit of his health since May 22, has just returned in good health, to make things lively for the Republican Senators who defeated his nomination, either as a virulent colleague from Ohio in the Senate, or as a vitriolic scorcher in the press.....The Standard Oil Trust has bought out the White Lead Trust—for $60,000,000, "they say." The W. L. T. is "protected" by 40 per cent. duty on foreign competition, and there's much talk on all sides about "disciplining" this "conspiracy against the people" when Congress meets..... State Judge Manwaring at Stillwater, Minn., last Monday, decided that the anti-dressed meat law of Minnesota is unconstitutional inasmuch as it infringes on the domain of Congress, which can alone legislate on inter-State commerce..... Recent inquiries with reference to the wages of negro labor in industrial enterprise in the South shows that things there are somewhat different from what is generally believed in the North. Inquiries were sent to 300 leading Southern manufacturers, representing blast furnaces, rolling-mills, iron works, mines, lumber mills, saw mills, etc. Replies were received which represent 9,000 negro employés, of whom 2,500 are skilled. The average wages paid common negro labor is $1.10 per day, and skilled labor runs from $1.75 to $2.25 per day, though several correspondents pay colored puddlers, heaters and rollers $4 to $5 per day. There is no difference between the pay of whites and blacks for the same class of work. The manufacturers are unanimous in the opinion that for common labor in the Southern States the negro is more efficient and useful than the white. Many state that the negro is making progress in skilled work..... ..... of the many other demands on their pockets made by various other phases of the Irish cause.....Recent bye-elections for members of Parliament still indicate a steady current of public opinion in favor of the Gladstonites. The last bye-election was in Marylebone, one of the western precincts of London, and a hot-bed of Conservatism. The Tory candidate won, of course, but there was a Conservative loss of nearly 1,000 votes from the returns at the last general elections, and a corresponding Liberal gain. The story has all along been steadily the same; Home-Rulers have uniformly succeeded to Home-Rulers; Home-Rulers have nearly always succeeded Conservatives where the former Conservative majority was small, and where it was too large to be entirely overcome, it has in nearly every case been greatly cut down. If a general election were held at present, there's little doubt that the Gladstonites would secure a majority; but the consciousness of this fact will induce the Conservatives and Liberal-Unionists to keep in power as long as they can by refusing to dissolve Parliament. This body must be dissolved once every seven years; but the term of the present House of Commons has over three years yet to run unless the Ministry should voluntarily dissolve it after a defeat on some vital piece of legislation, or if they thought that, in consequence of some turn of good luck, they could "carry the country."..... The other day a dreadful earthquake caused great loss of life and property in the western part of Kiou Siou, the southernmost and smallest of the three large islands which, with about 4,000 smaller ones, comprise the Empire of Japan. Its area is 16 836 square miles and its population about 7,500,000. In the last 1,500 years 157 earthquakes have been recorded in Japan—an average of one in 10 years. Within the last 100 years they have been increasing in frequency. The most destructive was that of 1854 when 200,000 lives were lost in Yeddo (now called Tokio) and the surrounding country..... .. .. The Yellow River in Central China, with a course of 2,000 miles and a drainage basin of 200,000, is again on the rampage in the province of Shantung through which it passes before entering the Yellow Sea. Broad, shallow and tortuous, it frequently overflows vast areas of the country along its lower course, causing enormous losses of life and property, and all efforts by native engineers to confine it within its banks have proved vain. Foreign engineering aid is considered imperative. Ten large government sections are now 12 feet under water.....

Waited Two Months.

ATLANTA, Ga., December 21, 1886.

"To make up our minds whether or no to send for a treatment of Compound Oxygen for a dear wife, who was lying at the point of death. Oh, no, there was no time to wait; it was ordered by telegraph, and a marvelous cure was effected. But would such a cure last? Let us see:

"*Your Compound Oxygen Treatment has restored my wife to perfect health.* When I telegraphed for the Treatment we were very solicitous regarding the state of her health. She had been a very sick woman for eighteen months previous to the date your Oxygen Treatment arrived. Within 90 days' time she has been restored to perfect health. *We have waited two months in order to see if the improvement was permanent before writing the facts to you, and we say with all candor that to Compound Oxygen is the credit due.*

I omitted to say that we *cured our little ten-year-old boy of catarrh by the same Treatment.*" WALTER T. FORBES.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, August 3, 1889.

SATURDAY last, the Princess Louise, aged 22, eldest daughter of the Prince of Wales, was married at Buckingham Palace, London, to the Earl of Fife, aged 40, who thereupon was created Duke of Fife, by his grandmother-in-law, Queen Victoria. The wedding presents were worth over $750,000..... The debate in Parliament on the annuity grant to the Princess and that to her eldest brother, Prince Victor on his approaching marriage, ended, as was expected, in an overwhelming majority in favor of the grant, or rather an increase of $200,000 a year to the civil list of their father, the Prince of Wales, who will hereafter provide for his own children. After all, the national income of the Queen of England and Empress of India and her family, is much smaller than that of any other royal or imperial family, considering the wealth, power, area, and population of the different governments.....The other day vast crowds turned out at Edinburg to welcome Parnell who received the freedom of the city, a mark of the highest appreciation of honorable service in military or civil life. Of course there was a strong protest from a large minority of disgruntled citizens, but all the world over, while the acts of the majority, however slim, bear lasting fruit, those of the minority, however stout, are generally barren ..... Now that the Parnellite investigation is virtually over, it is found that the Parnellite Indemnity Fund, contributed by friends of the Parnellite cause all over the world to defray the expenses of the defendants, exceeds $200,000, while the actual costs were only about $100,000. Good judgment and great economy is herein shown on part of the beneficiaries, and wonderful generosity on the part of the contributors, especially in view

Miscellaneous Advertising.

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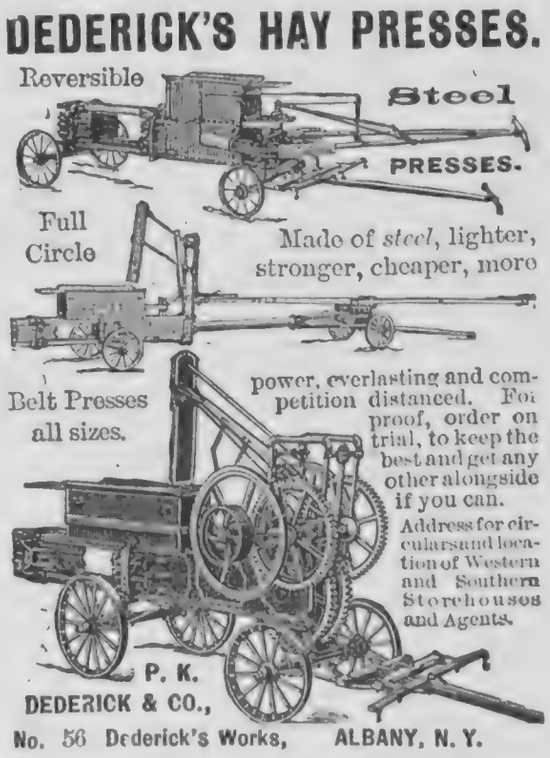

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AGRICULTURAL NEWS.

SATURDAY, August 3, 1889

THE weather for July, especially the closing days of the month, has been decidedly damp in most parts of the country, while some sections have been visited by destructive tornadoes and floods. Near Plainfield, N. J., July 30, the mountain streams back of the city, burst several dams and swept down upon the residence portion of the town, destroying many fine buildings, and flooding the lowlands below. At Orange, N. J., the same causes produced similar results, much damage to crops on lowlands resulting in each case. The same morning a tornado struck a small hamlet four miles back from Highland, N. Y., and leveled houses and barns, orchards and vineyards to the ground, and people and stock were injured. One vineyard of 10 acres was swept clean of everything, and every tree in the orchard on the same farm was uprooted. Kingston, N. Y., reports the vast grape crop almost ruined. Pittsburg, Mass. reports a flood which did much damage to crops. Severe thunder storms with much damage to crops are reported from different parts of Arkansas. On the Delaware Peninsula the peach crop has been greatly injured. One dispatch tells of farmers wading in water up to their knees to pick peaches. Heavy losses of peaches and grapes are also reported from Michigan, and other localities. Usually such reports are far in excess of the actual damage, and we trust this is the case now.... ....A Sweet Potato Trust is reported from Baltimore.....Large quantities of apricots, prunes and peaches are being dried in California..... Dairy Commissioner Thom of Wisconsin, has issued, for general circulation, a small pamphlet containing the laws which it is his duty to enforce.....It is reported that, owing to storms and low prices, 1,000,000 quarts of cultivated blackberries were left to rot on the vines along the Delaware and Maryland boundary line..... ..The American Strawboard Company has purchased the paper mills, at Lima, Ohio.....An Indiana farmer was kicked by a steer and killed. The steers should be de-(or dis-)legged.....The fertilizer factory of E Raun & Sons, Indianapolis, Ind., was destroyed by fire. Loss, $50,000 on stock. .....Lady Baker, an Iowa Holstein-Friesian cow, is reported as making in the week June 14-20th, 34 pounds six ounces of unsalted butter from 542.13 pounds of milk. To effectually silence all doubters, three affidavits are appended to this statement. The cow was milked thrice daily..... A mad dog bit several cows near Plainfield, N. J., recently, and a number of them have died of hydrophobia.....Peaches are reported so plentiful in some parts of Texas that the market is glutted .....Over 6,000 boxes of cheese were soaked with water in the cellar of a Chicago warehouse last Saturday night. As the water had previously scoured the dirty city streets, the condition of the cheese can be better imagined than described.....Large areas of land in Australia formerly unfit for stock-raising, have been rendered available for that purpose by means of artesian wells .....The use of straw for making an interior finish to take the place of lath and plaster is suggested.... ....Western railways have made a change in the minimum weight on car-lots of live stock, that is favorable to the farmer and shipper. Under the old order cars 30 feet long, and underloaded with cattle, were charged at not less than 20,000 pounds; now the minimum is 19,000 pounds for 31 feet and under..... The Statistician of the Department of Agriculture estimates the total value of oxen and other cattle—as contrasted with dairy stock—in the United States to be $14,513,708 less than the value of the same stock at the time of closing his report last year. Dairy stock has maintained its value.....The Department of Agriculture has selected seven varieties of winter wheats for general distribution. Three are new, that is, have had only a local reputation, while three are well known in some States, and unknown in others where they will be distributed exclusively. Five varieties have also been ordered from France, three being of southern origin, which will be distributed to the Southern experiment stations. The other two are wheat crosses by Vilmorin, and will be distributed to the Northern experiment stations.....The town board of Corydon, Indiana, has passed an ordinance forbiddding horses, cattle or hogs to run at large under a penalty of $10 for each offense..... Incendiaries have fired a number of farm barns in different parts of Indiana... ..... California fruits are sold at auction in Chicago, Boston, Kansas City, and other cities as well as New York.....Delaware farmers are reported to be sowing large quantities of buckwheat..Three-year-old colts now have a better record than four-year-olds, the best record in the latter class being Manzanita's 2.16, against Axtell's 2.15: The fastest five year-old record is 2:10¼ by Jay-Eye-See.... The Nelson County Agricultural Association will hold their 24th exhibition at their grounds near Bardstown, Ky. September 3-6, A. R. Carothers, Secretary.... ..... A Sweet Potato Trust has been organized in Baltimore.....Last week there were shipped from this port by foreign steamers 3,810 head of live cattle, 8,480 quarters of beef, and 47 live sheep. Shipments from other ports for the same time were, Boston, 2,716 live cattle and 5,591 quarters of beef; Philadelhia, 1,588 quarters of beef; Baltimore, 226 live cattle; Montreal, 5,625 live cattle and 5,849 live sheep. Total receipts in this city last week were 12,972 beeves, 134 cows, 7,170 calves, 44,570 sheep, and 29,574 swine..... The Philadelphia Board of Health has been prosecuting milk-men for adulterating milk. One sample was 18 per cent. water....At Saratoga on Wednesday, Los Angeles beat Hanover by a neck in a 1¼ mile dash: time 2:13... At Cleveland, August 1, Axtell trotted a mile in 2:14¾ and Guy in 2:10¾... ... ...A horse with all the symptoms of hydrophobia ran through the streets of Chicago, and bit two men and eight horses before he was shot..... ....A farmer near Ithaca, N. Y. attempted to rescue two colts which had been attacked by bees, and was so badly stung that his life is despaired of. One horse is dead, and the other is not expected to live ....State Dairy Commissioner Brown, of New York, is distributing 10,000 copies of the new law for the prevention of the adulteration of vinegar. .....Health Inspectors confiscated an entire cargo of 8,000 bunches of decayed bananas weighing 163 tons..... The hay crop of New England is said to be the largest ever cut ..... A farm in Cambridgeshire, England, valued a few years ago at $65,000, sold recently for $19,250..... Prof. C. V. Riley has received from the French Minister of Agriculture the insignia of a Knight of the Legion of Honor, accompanied by complimentary letters from the Minister and the Director of Agriculture..... Preparations for the survey for the Government Irrigation work have been begun in New Mexico, Colorado, Nevada and Idaho... ....In East and Middle Kent and Sussex, England, the largest hop crop for 70 years is expected.....East India wool is now being imported at New York.....Ocean freight rates on cattle have nearly doubled within a year.... ..... The National Wool-Growers Association met at Columbus, O., July 29. The only business reported was the passage of a long string of resolutions .....A special wool train of 20 cars was run from Los Angeles to Boston, going through on passenger time..... A California breeder lost a valuable stallion as the result of treatment by a quack veterinarian. There is a moral to this.....

FIVE HARVEST EXCURSIONS.

THE Burlington Route, C., B. & Q. R. R., will sell, on Tuesday, August 6th and 20th, September 10th and 24th, and October 8th, Harvest Excursion Tickets at *Half Rates* to points in the Farming Regions of the West, Southwest and Northwest. Limit 30 days. For circular giving details concerning Tickets, rates, time of trains, etc., and for descriptive land folder, call on your ticket agent, or address P. S. EUSTIS, Gen'l Pass. and Ticket Agent, Chicago, Ill.—*Adv.*

Crops & Markets.

SATURDAY, August 3, 1889.

REPORTS from the West and Northwest say that winter wheat thrashing is progressing very slowly on account of the wet weather; but that where it has been done, the yield has been better than was expected. Much depends upon the weather for the next few days. It is impossible to make any estimate of the spring wheat, as harvest has just begun. The crop is very uneven.

The wheat market is dull. Cable advices say that the Hungarian crop is short, but Hungary will carry over considerable old wheat; that Russia has an abundance of old wheat, and that France will need to import but little. The Australian crop is short. The visible supply east of the Rocky Mountains is 12,134,511 bushels against 22,190,501 bushels one year ago. Receipts at all points are smaller than at the corresponding time last year, and 1887. Taking everything into account, and also the fact that stocks of flour are well cleaned up, it is difficult to see why the price of wheat should not be well maintained, it not materially advanced.

Oats are the heaviest crop known in years. The weather has generally been very unfavorable for harvesting, and the crop has been injured to quite an extent. This in connection with the poor outlook for corn will tend to strengthen prices, although the stocks on hand are reported to be more than double those on hand one year ago.

Corn prospects are poor, and are growing worse in many places. In some localities there has been no regular corn weather since the crop was planted, and wet weather has hindered or prevented cultivation so the crop is likely to fall below an average. Stocks reported on hand are less than one-half what they were at this time last year. Good corn will be good property to have for some time to come.

Barley is uncertain, and it is difficult to say what the prospect is. The only certain thing about it is the very rainy weather all through harvest, which has damaged the crop considerably.

Rye has not been an extra crop, and the tendency of prices is upward both for grain and straw.

Potatoes are rotting badly in some localities, but it is impossible to tell whether the crop will be materially injured. At present, prices are somewhat higher here, because the weather has been unfavorable for digging, and the supply has been considerably reduced. Prices will *probably* be good later in the season.

The market is well supplied with vegetables of all kinds, but prices are unsettled, and the prospect uncertain

Large quantities of fresh fruits are arriving from California, but there is quite a falling off in receipts from Georgia and other Southern States. It has been terrible weather to handle fruits, as it has been almost impossible to gather them. They also decay very rapidly in the hot and humid atmosphere. A ship arrived during the week with 18,773 cases of California canned fruit.

The first bale of new foreign hops reached this city during the week, more than a week in advance of the earliest previous receipts.

Reports from the rice-growing States, promise a heavy yield of very fine quality, unless something intervenes between now and harvest. The prospect was never better at this time.

The butter market is overstocked with everything but the best grades. Good butter is in good demand. It doesn't have to look around and coax buyers. They are looking for it.

Prominent men in the fruit trade representing various sections of the country met in this city, August 1, and organized "The Florida Orange Growers' and Dealers' Protective Association." Its object is to improve the existing methods of picking, packing, shipping and marketing the fruit. The association proposes to establish an office in Jacksonville from which full telegraphic reports of the condition of the market shall be sent daily to every shipping point in Florida, together with any other information of value to growers. It will also endeavor to secure lower freight rates, and facilities for better and more rapid transportation. The Pennsylvania road agrees to run a train from Jacksonville to New York in 72 hours. The prime mover in this new departure is Mr. E. L. Goodsell, a well-known dealer, who favors the auction system of disposing of the crop. The Committee on Organization embraces representatives from New York, Boston, Buffalo, Cleveland, Cincinnati, Chicago, Philadelphia, Baltimore and Pittsburg.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, August 3, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	8½	8¾	.....
Strict Ordinary	8 15-16	8 3-16	.....
Good Ordinary	9⅜	9⅛	.....
Strict Good Ordinary	10 5-16	10 9-16	.....
Low Middling	10 13-16	11 1-16	.....
Strict Low Middling	11 1-16	11 5-16	.....
Middling	11¼	11½	.....
Good Middling	11¾	12	.....
Strict Good Middling	12	12¼	.....
Middling Fair	12 7-16	12 11-16	.....
Fair	13 1-16	13 5-16	.....

STAINED.

Good Ordinary	8⅜	Low Middling	9 15-16
Strict Good Ord	9	Middling	10¾

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

POULTRY—Chickens, spring, per lb, 12@14c LIVE FOWLS, near-by, per lb, 12½@13c; fowls, Western, per lb, 12½@13c; roosters, per lb, 7c; turkeys, per lb 9@11c; ducks, western, per pair, 50@0.70c geese, western, per pair, $1 00@$1 25.

POULTRY.—DRESSED—Turkeys, mixed, per lb. 11@12c; Fowls, western, choice, 12@13c; do, common to good, 11@12; Ducks, spring, good, 10@16; Squabs, white, per dozen, $2 50@——; do dark, do, $1 50@——; Chickens, spring, 10@18c; Fowls, near-by, 12@13c.

GAME.—Golden Plover, per doz, $1 75; Grass do, do $1 00@$1 25; English Snipe, do, do. $2 00.

HOPS.—State, new, best, 20@—c; do, prime, 16@18c; do, low grades, 12@14c; do do, 1887, 8@11 do do do' California, common to prime, 13@16c; choice, 18@—c;

HAY AND STRAW.—Choice Timothy, 90@95c; do good do, 80@90c; do medium, 70@75c; shipping, 60@65c; do, Clover, mixed, 55@65c. Straw.—No. 1, rye, 70@75c; short do 50@55; oat, 40@45c.

BEANS.—Marrows, new, $2 30@$2 35: new mediums choice, $2 30@2 35; pea, $2 30@$2 35. red kidney, $3 50; white kidneys, choice, 3.00@——; foreign, mediums, 1 35@1 55; California Lima, $3 60@$——; green peas, $1 40@$——.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 7¼@7¾c, and farmers' grades at 5@7c. Pecans, 4@6c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—POTATOES.—New, poor to good, per bbl, $0 75@$1 00; Norfolk, New, $1 25@$1 50; Long Island, $1 65@$1 90. Cabbage—New, per 100, $1 50@$2 00. Cucumbers, per 100, 30@40c. Egg Plant, per bbl, $2 00@$4 00. Tomatoes, per crate, 30c@$0 60. Corn, per 100 75c@$1 25. Onions—Potato, per bbl, $1 00@$1 50, East Shore; do, $1.00@$1 50; Egyptian, per bag; $2 00@$——; Jersey White, $2 00@$2 50.

FRUITS.—FRESH.—Peaches, per crate, $0 40@$1 50 do. per carrier, $2 00@$3 50; Huckleberries, per qt, 5—9c. Plums, per bbl. $3 00. Apples—Southern, per crate, 50@80c; New Jersey, per bbl $0 75@$2 00 Watermelons, per 100, $8 00@$18 00 Muskmelons, per bbl, 50c@$2 50, Blackberries, per qt, 1@4. Pears, per bbl., $1 50@$4. Lemons, per box, $4 75@$4 00.

DOMESTIC DRIED.—Apples, evaporated, new, choice o fancy, 5⅝@6c; do new, common to prime, 4@5½c; sliced, new, 3@3¾c; quarters, 3@4c; chopped, @2¼ 2¾c; cores and skins, 1@2c. Cherries, new, 8@11c. Raspberries, new, 17@18c. Blackberries, 3½@4c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 11@14c; do do, unpeeled, 5@6c; North Carolina sun-dried, peeled, 6½@8c. plums, 6c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 11 75@12 50, short clear, $14 00@16 00. Extra Prime mess, $11 00@$— prime do, $10 75@$11 and family mess, $12 00@13 00. BEEF—India Mess. in tierces, $12 50@14; Extra Mess, in barrels, $7 00@7 50 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $7 50@8 00; Family at $11—@$14. HAMS—$14 00@$14 50, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 7½@—c; Pickled Hams, 11¾c; pickled Shoulders, 5½@—c; Smoked shoulders 6c; do Hams, 12½@12½c. Dressed Hogs.—City, heavy to light 5½@6¾c. Pigs, 6½c. LARD.—City steam, $6 35; June, $——; July, $6 94, August, $7 03; September, $7 11; October, $7 17; South America, 7.6c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime, new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, PA.—PROVISIONS.—Potatoes, Maryland Rose, per bbl, $1 50@$1 75. Provisions were steady. BEEF.—City family, per bbl, $9 00@$9 50; do, packets, $8@$8 50; smoked beef, 10@10½c; beef hams, $14 PORK.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@13c; do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6½@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7½c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6½@7.

CHICAGO.—MESS PORK.—$10 62@10 70 LARD.—$6 07@$6 10 per 100 lbs; Short Rib sides (loose), $5 45; dry salted shoulders, boxed, $5 20; short clear sides, boxed, $5 62@$5 75.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 17@17½. Elgin, best, 18c; Western, best 16½@17; do prime, 15½c; do good, 13½@14; do poor, 12@13. State, Dairy, half-firkins, tubs, best, 17@——c; do do prime, 15@16; do do fine, 13½@14½; Welsh tubs, fine, 15@—c; do do, good, 13½@14; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 13@14; do fine, 11½@12½; Western dairy, fine, 12@12½c; do fair, 11@12c; do poor, 9@10c; do factory, fresh, best, 12½@13, do prime, 11½@12; do good, 10@11; do poor, 8@9c.

CHEESE.—State factory, fancy, 8½c; do do fine, —@——c; do do, prime, 7@7½c; do do, fair to good, 6¾@7c; Ohio, flat, prime, 6@7c; do good, —@—c; do, good, —@—; Skims, light, 5@6c; do medium, 2@3; do full, 1@2c.

EGGS.—Near-by, fresh, 14½@15½c; Canadian, 14½@15c; Southern, 13@13½c; Western, best, 13@14½c.

PHILADELPHIA.—BUTTER dull. Pennsylvania creamery extra, at 17@18c; Pennsylvania Prints, extra, 25@27c; B.C. and N.Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were firm; Pennsylvania firsts 14½@15c; Western firsts. 13½@14c; Cheese dull—steady; demand fair; New York full cream, at 8½c; Ohio flats, choice, 7¼@7½c; do, fair to prime, 6½@7½c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Elgin creamery, 15½@16½c; choice Western, 15@15½c. choice dairy, 12@13½c; common to fair, 8@10c. Eggs firm at 11@——c.

GRAIN MARKETS.

WHEAT.—Sales—Ungraded Winter Red, 84½@90¼c; part cost, freight and insurance 86@86¾c; No. 2 Red, 88½c afloat; do in store quoted 87@87¼c; do free on board, 87¾@90½c, according to delivery; No. 2 August, 85½@85⅞c; do September, 84¾@85½c; do October, 85⅝@86c, do November, 81⅞—; do December, 87 9-16@88 5-16c; do January, 79¼c: do May, 92¼@92¾c. RYE—Has a light demand. Western quoted 51@53½c: State, 53@54½c. CORN—Sales—Ungraded Mixed and Yellow, 43@45c; No. 2 Mixed, 44c, elevator, 44⅜@44⅝c. afloat; do to arrive. 44⅜c, No. 2 White, 50c, store: No. 2 August, 43⅞@44¼c, do September, 43⅞@44½c; do October, 44¼@45½c; do November, 45c; do December, 43@43½c. OATS—Sales—No. 3, 27½c: No. 3 White, 33⅛@34c elevator, 35c delivered; No. 2, 27⅞@28c; do White, 34½@35c: No. 1 White, 39c: Mixed Western, 26@29c; White do, 34@40c; No. 2 August, 27¾@27 15-16; do September, 27⅜@27 9-16c; do October, 27¾@27¾c; do November, 28¼c; do May, 30½@30 9-16; do White, August, 31½c.

LIVE STOCK MARKETS.

New-York, Saturday August 3, 3889.

BEEVES.—Native Steers ranged from $3 60 to $4 60 per 100 lbs, with a few selections up to $4 65@$4 75. Texas cattle were selling at $3 70@$3; native bulls and dry cows at $1 90@$2 90.

MILCH COWS.—Receipts for the week, 98 head. Market quiet at $30@$45 per head for Common to Good Cows. Choice are retailed up to $50@$55.

CALVES.—Buttermilks and Grassers ranged from $2 50 to $3 25: Mixed lots and fed Calves from $3 40 to $4, and Ordinary to Choice Veals from $4 50 to $6 50. Sales—Buttermilk Calves, 223 lbs. average, at $2 75 per 100 lbs: do 100 lbs, at $2 90; do 240 lbs, at $3; do 261 lbs, at $3 25: Mixed do, 244 lbs, at $3 40.

SHEEP AND LAMBS.—Ordinary to Prime Sheep sold at $4@$5 25 per 100 lbs. and small selected lots at $5 37½@$5 40; Inferior Lambs went down as low as $5@$5; 10; but decent to choice ranged from $5 50 to $6 75. Sales—Kentucky Sheep, 107 lbs average, at 4; do 90¼ lbs, at $4: Ohio, do, 88 lbs, at $4 80: Kentucky Lambs, 58 lbs, at $5 10; 70 lbs at $6: Virginia do, 56¼ lbs at 5 37½; West Virginia do, 64 lbs, at $6 50 Indiana do, 72 lbs, at $6 50; Missouri do, 61 lbs, at $5 75; State do, 66 lbs, at $6 25; Missouri Sheep, 94 lbs, scant, at $4 75; Buffalo Sheep, 82 lbs, at $4 75.

HOGS.—Nominally weak at $4 70@$5 10. A few State Hogs and Pigs were sold at $4 75@$5.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING AUGUST 3, 1889.

G. L.—S. S, Z.—C. R. & S.—B. A.—J. S. O.—L.—W. M. C.—H. H. G.—F. W. D.—C. S. R.—A. D.—J. W. S.—J. L. B.—J. C. S.—T. B. T.—J. T.—H. L. J.—A. J. C.—J. M S.—C. T. G.—J. H. W.—J. H. L—W. P. W.—E. L. B—C. T. S.—M. P. W.—C. C.—L. N.—J. W. B.—V. L.—C. N. L.—A. L. C.—E. S. R.—F. H.—O. T. B.—C. W. J.—T. D. C.—F. G.—C. F. O.—O. C. H.—D. C. L.—W. S.—C. S. M.—F. F, E.—G. H. T.—I. J. B.

Miscellaneous Advertising.

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Educational.

EDUCATING FARMERS' DAUGHTERS.

I HAVE long been an admirer of the dear RURAL, content to glean, in silence, the words of truth and wisdom always to be found in its pages; but when, in one of the last numbers, I read Laura Reinhart's article on "Necessity of Educating Farmers' Daughters," I could maintain my silence no longer: for I felt impelled to tell the writer how her kind efforts in behalf of us farmers' daughters are appreciated by at least one of the number.

So accurately has she defined our position, and so thoroughly does she understand our feelings on the subject that she has placed the matter before us more clearly than we ourselves would probably be able to state it. She has struck the very key-note of our dissatisfaction. It is not that we object to living on the farms where we were born and reared and where some of us are perhaps destined to end our days; for a life can be just as noble, just as pure and exalted when passed on a farm as elsewhere. But we do protest, vigorously, against the cruel injustice, the narrow-minded prejudice that precludes us from enjoying the same educational advantages so freely bestowed upon our no more deserving town sisters, and which they regard as their rights, and not as a privilege as do we Observation and experience, both, fail to teach us that city-bred girls have any greater capacity for learning, or any more pressing need of an education than the country girl, and yet how will the education of the average country girl compare with that of the average town girl?

The latter is our superior not only in education but in society knowledge as well. What is there in the life one leads on the farm that should tend to lessen the desire for culture and refinement? Rather would it seem that the environments of a country life are especially conducive to the unrestricted development, mentally and physically, of all that is good and pure. Does the farmer imagine that because his daughter is a farmer's girl, her appreciation and innate love of the good and beautiful are not as great as those of people whose daily lives are passed among their influences, and whose advantages are superior to hers? Laura Reinhart is right when she says it is not a lack of means that causes farmers to neglect the education of their daughters. I know of more than one farmer whose sons are sent away to attend some good college or university, and yet the father does not even dream that his daughters would appreciate the same advantages, and that they are equally entitled to them. And when the son has completed his college course, he elects his own occupation in life, learning the principles of self-reliance as he progresses; while his sister who, if she had the same time and attention bestowed on her education, would be just as intelligent, just as competent, must content herself with the meagre amount of knowledge to be obtained at the public school, and when too old to attend longer as a scholar, there is nothing left for her but to settle down on the farm, where she performs the labors of the household, in payment for which she receives her board and clothes, without a dollar she could call her own or feel free to spend as she pleases. Do fathers who raise their daughters in this way expect them to learn the lessons of self-reliance and discretion in money matters? Remember this is not a suppositious example, but a case of which I have positive knowledge, and it is only one of the many of which we know nothing.

What truth is there in the plea of farmers that a bit of book-learning and a glimpse of the refinement and culture that are possible to all, only serve to make their daughters still more dissatisfied with the farm? If a girl has a natural inclination for farm life, neither a finished education nor a knowledge of music, painting or the other fine arts is likely to detract from her enjoyment of the country; but, on the contrary, both will increase her pleasure to such a degree that the attractions binding her to the farm will be strengthened, and being able to secure all the advantages that the city, as well as country, has to offer, she will have no desire to change a country home for one that can give her nothing she does not already possess.

On the other hand, if a girl displays no taste for the occupations of rural life, and does evince a decided preference for some other pursuit, why not educate her for the vocation of her choice? Farmers, do not force your daughters, against their inclination, to live a life that is utterly distasteful to them, and one that is wholly at variance with their every idea of happiness; for few women are satisfied to live an empty life, and that is what it would be to them if their heart be not in it. A FARMER'S DAUGHTER.

Various.

HUDSON RIVER VALLEY NOTES.

THE tablelands, if such they may be called, which lie between the Catskill and Helderburg Mountains and the Hudson River, are peculiarly well adapted for successful agriculture. The soil is a heavy clay, composed chiefly of decomposed slate; it is hard to work but very strong and fertile. The only fertilizer which is used to any great extent is ordinary land plaster. The surface is level enough to permit the use of mowing and harvesting machines. The roads are easily made and kept in fine condition. The bulk of the produce is shipped by barge direct to the "best market in the world"—New York City. Land sells for a high price relatively, but there is little or no demand for it and the tendency of prices is downward. Hay is the chief "money" crop, but it is not nearly as profitable as it used to be owing to the fact that New York City now draws its hay supply from a much larger territory than it formerly did. This has been made possible by the Dederick and other hay presses which compress it in such small bales as materially to reduce the cost of freights and permit the hay dealers to obtain a supply from distant points when the price is high enough to warrant it. This makes the price of the product more uniform, but prevents large profits or rather high prices when the crop is short in any particular locality. This year, however, promises to be an extraordinarily good one for the farmers of the valley; the hay crop is enormous and even if the prices rule low, the crop will net a large amount of money. After all, the majority of truck drivers and livery-stable men prefer "North River" hay, especially the clear Timothy. For some reason, probably the heavy soil upon which it is raised, it seems to go farther than the lighter grades of hay from other localities. The hay is sold in all sorts of ways. If the farmer needs the money he can sell his hay as soon as it is cut, to be baled and delivered during the fall, or he can get the dealers to advance money upon the crop, to be deducted from the returns when they are received. The wealthier farmers usually bale their hay at their leisure and watch the quotations in the R. N.-Y., and when they think the market is likely to be at its best, they ship their hay and take whatever the dealer may return to them. The owners of the barge lines are usually dealers in hay and other farm produce, and are, as a rule, very wealthy. Why shouldn't they be? They get both freight and commission on all the hay and other produce they handle and in many cases make a good round margin of profit besides.

All the latest machines for cutting and handling hay and grain are used in the valley. The platforms at the freight depots are covered with new implements and machines, and the implement dealers are jubilant. "The biggest trade we have had in years," is what they all say.

Corn, usually a poor and comparatively insignificant crop, is even poorer than usual this year. The wet weather caused it to come up late and very unevenly. The result will be a small crop. It is, however, a matter of little consequence as it is usually cheaper to buy corn than it is to raise it. A large acreage of oats will be harvested in good condition. Wheat and rye are not raised to any great extent.

The apple crop is light. Many of the trees have been seriously injured by the coddling moth. One peculiarity of the valley is the large barns and barracks for hay. These outbuildings are not placed regularly about the houses, but are located at the most convenient spots on the farms. "Hill-side" barns are the rule. They save an immense amount of labor. Why are so many of the barns left unpainted? At the present price of metallic and other forms of mineral paint, there is no excuse for leaving out-buildings unpainted. Even the immense ice-houses along the river bank are thoroughly painted and there is no reason why so many of the barns and out-buildings should be left in such a dingy, tumble-down condition. RAMBLER.

Literary.

MAGAZINE REVIEWS.

THE August magazines might nearly all be aptly termed vacation numbers, dealing as they do with excursions by river, sea and land, scenes at the sea-shore, and among the mountains and plains. North and south, at home and abroad, for simple recreation, or in search of knowledge, have these tourists traveled.

IN HARPER'S MAGAZINE, James Lane Allen pictures "County Court Day in Kentucky." From being a meeting for the dispensing of justice, it gradually changed into a gathering for the exhibition of stock, for the hiring out or sale of slaves, for the settling of disputes by fistic encounters, for the purchase of all kinds of plantation supplies, and, not only last, but first, and all the time, drinking Bourbon whisky. Here were found the venders of all sorts of Yankee notions, the quack doctor, the politician, and all sorts and conditions of rural folk. The day is still observed, but as a holiday, and more from force of long-continued habit than aught else. "Fifty Years of Photography" by J. Wells Champney, is illustrated with a portrait of Daguerre, and gives a history of his early struggles and final victory. It traces the evolution of photography from the earliest processes, and gives many of its modern uses. It is largely used in the illustration of newspapers and other periodicals, and has tended to cheapen as well as to improve such work. In science, its uses are almost innumerable, especially in the study of astronomy; stars invisible to the eye have been photographed, and, during the present year, the aurora borealis has been photographed. Instantaneous photography has enabled us to get pictures of the race-horse at full speed, of the birds on the wing, and a cannon ball in its rapid flight, as well as to take the baby's picture with any of its varying expressions. By means of the Kodak any one with ability enough to "press the button" can take pictures of persons or objects to suit his fancy. "The Kremlin and Russian Art" is a richly illustrated article by Theodore Child, descriptive of the richness and splendor of the palaces, churches and other wonderful buildings of that mighty empire. "The Fan," by Louisa Parr, gives a history of this indispensable article from the earliest times. It is a very breezy subject for summer reading. Other articles are "A Gentle Ghost," "Mexican Lustred Pottery," "Experiences of an Amateur Photographer," "The Religious Movement in Germany," etc. There are a number of excellent poems, literary notes, and the usual editorial departments. Harper & Brothers, New York.

IN SCRIBNER we have a very entertaining description of "Tarpon Fishing in Florida," by Robert Grant. The tarpon is an immense fish, ranging from 50 to over 200 pounds in weight, and from four to six feet in length, and up to five years ago had not been taken with rod and reel. Its habitat is the Western Atlantic and Gulf of Mexico, the chief fishing ground being the coast of Southwestern Florida. The headquarters of the sportsmen are at St. James City, on Pine Island, and Punta Rassa on the mainland opposite. The season generally begins in March, or when the weather begins to grow warm. From the description given of the landing of one of these mighty fish, three hours after being hooked, we should consider it a very exciting sport for those who have the patience to wait for a bite. One gentleman had fished three seasons, and had not yet caught a single tarpon. A long article by Henry Morton on "Electricity in Lighting," gives the history of the development of this means of illumination from the first demonstration of its possibility by Sir Humphrey Davy in 1808, up to its present high state of perfection. The desirability of such a means of lighting rests in the facts that, besides giving the most brilliant light produced by artificial means, it does not vitiate the air as do gas and kerosene, or give off any heat, or is it affected by currents of air. There are over 5,000 lamps now in operation in New York City alone, and this number is rapidly increasing. Under the electric light, any city is nearly as light as day. It is believed by many that the time will soon come when stored electricity can be handled and sold in the same manner that kerosene now is, so that the isolated farmer can enjoy the benefits of this greatest of modern wonders as well as the favored city dweller. Electricity is the power of the future. This is a valuable article, giving as it does, full details in regard the different kinds of lights, manufacture of the machinery used, etc. Other articles are "Form in Lawn Tennis," "How to Feed a Railway," etc. Charles Scribner's Sons, New York.

ST. NICHOLAS has "Among the Florida Keys," by Charles Frederick Holder. This is another chapter in a summer vacation along the coral-reefs of Southern Florida. The party consists of the Professor, and several boys together with Long John, the boatman. They discover all sorts of curious corals, shells, fishes, birds, sponges and aquatic animals; catch star-fish, murrys, "Jacks," a kind of mackerel, sharks, and various other strange fish, ending the chapter by Tom fastening the grains, a kind of harpoon, in a huge shark, and being pulled overboard at the end of the line, where we shall have to leave him floundering in the blue waters of the Gulf Stream. "Midsummer Pirates" by Richard H. Davis is a very exciting account of a game called "Pirates and Smugglers" played in sailboats at a summer resort by boys from two rival houses. Joaquin Miller has a story: "Captain Duck," which tells about a Modoc Indian, and "Limber Tim," a poor orphan, who became great friends at one of the frontier forts. But the stories are not all about boys. The account of Laura Bridgman, the deaf, dumb and blind woman who died recently, is given by Joseph Jastrow. In spite of her terrible affliction, and in the face of apparently insurmountable difficulties, she secured an education, and passed a comfortable and happy life, dying at the age of 60. "Little Menan Light" also tells of the bravery of a girl 12 years old who lived with her father, the keeper of a lonely light-house on the Maine coast. "The Little Persian Princess" who traveled incognita in the shape of a cat, in search of her lost brother, is by Mary E. Wilkins. Then there are "A Mutiny on a Gold-Ship," "The Bunnie's Garden," numerous poems, and excellent illustrations. The Century Company, New York.

OUR LITTLE ONES AND THE NURSERY for August, is as usual full of delights for the tiny ones of the family. The children who were so glad it rained, so they could play in the hay-mow with the pigeons and swallows, and hunt the hens' nests and find old Pussy Gray and her kits, are represented first by "a nice piece to speak" and a picture. Then the boy who gave up his dear pet frog to make a tempting dish for his sick auntie; the little girl who sailed a boat full of paper dolls; the "Runaway Penny" which Dolly found, and which the old rooster stole from her; the pansies that turned into fairy people; the dignified cat "Sir John," who sat at the table and had a napkin around his neck when he ate; the sick birdie whose mamma couldn't get even *one* strawberry to cool his little feverish mouth, and several others are shown in picture and story. It is a real mine for mothers whose little ones clamor for stories while yet they cannot read. Russell Publishing Co., 36 Bromfield Street, Boston.

Miscellaneous Advertising.

MANLY PURITY AND BEAUTY

CUTICURA REMEDIES CURE SKIN AND BLOOD DISEASES FROM PIMPLES TO SCROFULA.

NO PEN CAN DO JUSTICE TO THE ESTEEM IN which the CUTICURA REMEDIES are held by the thousands upon thousands whose lives have been made happy by the cure of agonizing, humiliating, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair.

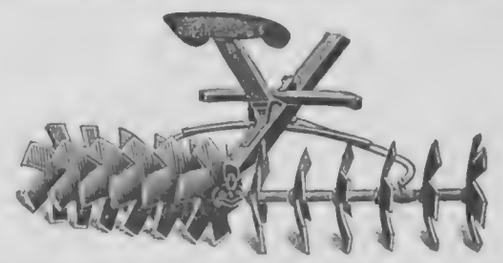
CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, are a positive cure for every form of skin and blood disease, from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c. RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., Boston, Mass.

Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

Rheumatism, Kidney Pains and Weakness speedily cured by CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster.



For preparing the ground for fall seeding, the Clark's Cutaway Harrow will more than pay for itself in one season. No use for the plow on stubble land. Take it and try it and you will buy it. Send for new circular.

Higganum M'f'g Corp., Sole Man'f'rs,

HIGGANUM, CONN.

IRRIGATED LANDS In Rio Pecos Valley, in Southeastern New Mexico. Choice limestone soil; abundance of pure water; a **delightful climate** all the year; almost continuous sunshine; altitude 3,500 feet; **healthiest locality** in the U. S., no consumption, no malaria. **20 acres** will yield a competency. Write for particulars, naming this paper, to **Pecos Irrigation & Investment Co., 84 Monroe St., Chicago, Ill.**

CATALOGUES, ETC., RECEIVED.

SUGAR-CANE.—Bulletin No. 23 of the Louisiana Sugar Experiment Station, Kenna, La., gives the results of last season's experiments with sugar-cane. Most of these results are of interest only to sugar makers. There are two points, however, that seem worthy of special notice. One deals with ensilaged cane. Three tons of cane were cut up in small pieces and packed away in cylindrical iron tanks seven feet high and four feet in diameter. The product was covered with paper and on this was packed dry bagasse to the depth of six or eight inches. Over this was spread a piece of canvas and on this again bagasse chips. It was then weighted, much like an ordinary silo. It was hoped that the experiment would show that cane could be successfully preserved in silos or cold storage rooms so that the season of manufacture could be greatly prolonged. The experiment failed. The cane came from the silo sour and malodorous, the sugar evidently having been converted by fermentation into alcohol and acetic acid. The other point of interest is suggested by the question: What shall we do with our chips? Three ways of using them have been suggested. They may be returned to the soil as manure, being evenly distributed by one of the improved manure distributors. They may be used as fuel. This seems like the simplest way out of the matter, but in reality it is the most difficult. The chips, even when pressed twice contain 67 per cent. of water, so that they require special fixtures and special fuels to make them burn. They can be made into paper pulp. Experiments are now being conducted by large manufacturers of paper to test the value of the chips.

KANSAS HORTICULTURE.—First Biennial Report of the State Society, Volume 17, sent by Secretary G. C. Brackett, Lawrence, Kansas. The R. N.-Y. did not expect to find the people west of the Mississippi excelling in horticultural literature, yet it is a fact that this is the best horticultural report this year. It is simple and comprehensive. Timely and practical subjects are discussed by people who seem to know what they talk about. The appendix, containing manuals on fruit, entomology, forestry and floriculture, is of special value.

OHIO ENSILAGE AND FEED CUTTERS.—Catalogue from Silver and Deming Manufacturing Company, Salem, Ohio. This catalogue contains the plans and specifications for a 100-ton silo, that many good judges consider about perfect. A full set of drawings is given and an itemized bill of materials follows. Besides this, there are 35 pages given up to a discussion on silos and ensilage that gives just the information the siloist wants to obtain. The pamphlet is neat, handy, and excellent in every respect. The "Ohio" cutters are used by many of our best farmers. Some weeks ago we gave the names of those who won prizes at the Cleveland Ensilage Convention By referring to the list our readers will see that the "Ohio" was very well represented.

PROF. GEORGE VILLE'S VIEWS.—The Commissioner of Agriculture of Georgia has done much to advertise and distribute the writings of Prof. George Ville, the great apostle of chemical farming. The July crop report of Georgia contains a supposed dialogue in which Prof. Ville argues in favor of plot experiments to determine the special needs of each field. Here are a few of his thoughts:

"The effect of an experiment field is irresistible—in face of the contrasts which it presents, practical men instinctively feel that they see a power working, formerly ill-understood, or misapplied. They understand that instead of cumbersome barnyard manure, there is a great advantage gained in the use of a few simple substances of a constant nature, which they can regulate, in both quantity and character, according to the nature of their soil, and can also increase the value of barn-yard manure by associating these well-known substances with its bulk.

If you are afraid of a little trouble, don't think of being a farmer. Agriculture is not called one of the fine arts, because it is in perpetual combat.

Good judgment is a first requisite in agriculture; and good judgment tells you that to grow full crops with economy, you must first know the natural fertility of your soil. No efforts should be spared in gaining this knowledge, which is the base on which to work; chance work ends in failure. You are fortunate when a dearly bought experience gives you the means of repairing the evil."

MUSHROOMS.—A pamphlet entitled Food Products by Thomas Taylor is reprinted from the Department of Agriculture's report for 1885. It contains descriptions and illustrations of 12 edible mushrooms of the United States, and also notes on how to select and prepare mushrooms for the table.

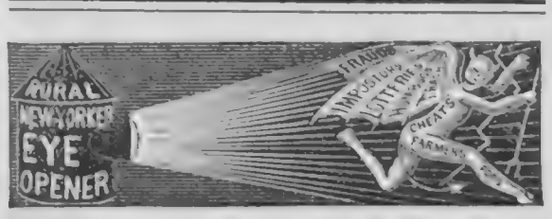
AGAINST THE SILO.—This is the only fair title that can be given a review of the two last bulletins issued by Prof. Sanborn, late Director of the Missouri Experiment Station. Everybody seems bound to praise the silo just now. It has been most persistently and effectively advertised as a very important factor in farm improvement. An argument against the silo, therefore, a question as to its economy has, just now, the merit of novelty at least. The pith of Prof. Sanborn's argument is that air-dried corn fodder is a more economical food than an equal amount of such fodder cut up and packed away in the silo. In support of this conclusion we are given a number of interesting figures dealing with the cost of cutting, hauling and handling the fodder, the amounts of water and dry matter found in it, the quantities of each sort of food eaten by cattle, the gain in pounds made by the cattle and various conclusions regarding the character of specimens of milk and butter from cows fed on dry fodder and silage.

Prof. Sanborn's experiments convince him that a given amount of dry food stored in the barn lasted longer than the same amount of food placed in the silo. While silage-fed steers made the greater growth, the ratio of growth of the dry-food-fed steers was as great or greater than the others as the silage-fed steers seemed to make a watery growth less substantial than the fodder-fed steers. Cows fed on dry fodder gave richer milk than those fed on silage, and this milk from dry fodder was the best churning milk and also contained a larger percent. of solids, while the butter made from it seemed to have superior keeping qualities. The dry food was cheaper handled and the cows seemed to keep their live-weight best on dry food. On the whole, Prof. Sanborn concludes that the trial shows that the air-drying method with dry storage in a good barn in a compact form, is decidedly the more economical method of the two, and he does not feel warranted in advising the farmers of Missouri to build silos until a radical change either in the economy of the silo or in surrounding conditions is made.

If the R. N.-Y. is able to read between the lines of this bulletin correctly, we should say that Prof. Sanborn thinks the farmers of Missouri had better build more barns before they talk about silos. And this idea is sensible. The silo is not for the sections where cattle are kept in sheds and hay is stacked out-of-doors.

We are of the opinion that Prof. S. would change his opinion on several points if the conditions surrounding him were the same as those surrounding Prof. Henry, of Wisconsin, Prof. Roberts, of New York, or others who have given the silo a very careful trial. The advice contained in these bulletins may be sound as applied to Missouri farmers, but it will hardly answer for the hundreds of dairymen in Ohio, Michigan, Wisconsin and New York, who have found money in the silo.

Here are two factors in stock keeping. 1. Warm and commodious farm buildings. 2. The silo. It makes great difference which one of these factors is first introduced. Try the silo before you reach the spirit that demands a comfortable shelter and it will doubtless prove unprofitable. Work up to the stock's comfort first and the silo will pay. There are many inaccuracies in the bulletins, and the whole experiment was marked by a series of petty blunders and mistakes on the part of the station officials, that point out the weakness of the institution. Whenever some of the wise men who framed the Hatch Bill will tell us who is responsible for the management of these stations, the R. N.-Y. will try to have the facts concerning this one brought out.



BOGUS EMPLOYMENT AGENCIES.

Among the frauds which people from the country should most carefully avoid on their arrival in New York or other large cities or towns to seek employment, are the bogus employment agencies. These are scattered in all parts of the city. All they need is money enough to advertise for a few days, a sign in front of their office dens, and inside a desk, a few chairs and a bench or two. With such an outfit, a plausible, glib-tongued, mendacious male or female scamp can swindle hundreds of needy employment hunters. Even if they have only just started in the business, they pretend that they constantly have on hand the names and addresses of a large assortment of people who are ready to afford all kinds of employment to those sent to them by the "office." Occasionally one or more of the dupes "kick" and complain to the authorities, but the matter is soon settled and hushed up and the swindle is allowed to go on. Here several such reports are made every week to the Mayor's Marshal who issues licences to employment agencies, but fraudulent places of the kind still flourish multitudinously. As a specimen, take one of five cases brought before the marshal yesterday. It is that of a notorious agency in Clinton Street, against which a number of complaints had already been made. Twelve victims appeared against it—and doubtless these did not represent a hundredth part of those who had been cheated by it in its three years' baleful existence. J. C. Valliere held a contract with it, which certified that he had paid the agents $9 for which they were to procure for him the position of collector or "any other work" in 15 days. At the expiration of that time, the poor fellow had neither money, work, nor explanation. L. Auerback had paid $8 for a like result. Agnes Simmons, a pretty 20-year-old country girl, had paid $10 for a position as sales-lady or cashier. She had called in answer to an advertisement the "agents" had put in a paper, but like several others, was told that the place had just been filled, but was informed, like a number of others, that she could get as good a place if she paid down $10. Like Miss Marie Bellevue and several others, she paid $10 out of her scanty hoard; but after wasting 15 days, not one of them all obtained a situation. George G. Eckman came to the city from a farm in Upper New York and applied to the agency for employment as a stableman. They got $10 from him; but he got nothing from them except a blackguardly tongue-lashing when he insisted on the promised situation or the return of his money. Miss Blanche Edwards could afford to pay only $1.50 as children's nurse. The rascals took her last dollar and got mad with her for insisting on receiving something in return. The Mayor's Marshal has received over 100 complaints within the last fortnight about similar rascalities committed by other employment agencies, and there's likely to be a vigorous shaking up among swindlers of that stripe soon. Even if the dens are closed, however, the owners are sure to start them again or open fresh ones of the same kind within a week or two, under the same name, or, more probably, under an *alias*.

Of course, there is a considerable number of well established and moderately honest employment agencies in the city, but these confine their business almost entirely to domestic service; and they do not advertise so extensively or glowingly as the mushroom, doubtful or absolutely swindling affairs, and are therefore far less likely to attract the patronage of strangers and greenhorns, who are apt to rely most on the most alluring promises. The fraudulent concerns are managed by the most shameless and heartless sort of rascals, male and female. They seek to make dishonest gains from the poverty and distress of the most wretched class of the community—honest people who are poor and out of work, and therefore willing, as a last chance, to risk all they can spare, and often more, in an effort to obtain some means of earning an honest if scanty livelihood. The sharpers pretend that they either have suitable openings already or can easily obtain them for any one who can raise money enough to pay for their services. On these they put whatever value they think the means or distress of the applicant will enable him to pay. While taking as much as they can get, they refuse nothing, for all they get is clear gain. Frequently they clip from the morning papers long lists of the names of people who want "help," and send applicants to these, as if they could deserve any reward for such services. A favorite trick of theirs is to send a particularly persistent applicant to various bogus addresses in different parts of the city, until finding he or she is on a wild-goose chase, the unfortunate man or woman, tired and discouraged, ceases to molest them. Occasionally, when they can secure a big fee, they send an applicant to a confederate who makes life such a burden to him that he resigns his place in a few days or a week; or if his necessities force him to hold on to the wretched place, his employer soon makes or finds some excuse for "bouncing" him. Nearly all the applicants, however, get nothing, except harsh language, in return for the fees they must pay when they make their application.

Young women who come from the country run special risk from indiscriminate application to employment agencies, some of which have regular engagements to supply "likely" help to places and persons of very questionable character. Not a month passes without the compulsory appearance of wretches who engage in this traffic before the police courts. Occasionally one is punished by imprisonment, but in four out of five cases the criminals are permitted to escape with a fine which is a mere bagatelle to them, or their cases are pigeon-holed in the District Attorney's Office and the public and the authorities soon alike lose remembrance of them. As the execrable business is a profitable one and the risks small, many are engaged in it, some of them, as exposures occasionally indicate, among the most "respectable" agencies in the city.

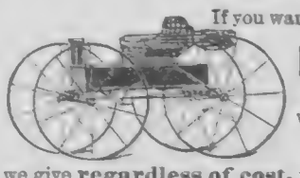
A common practice of the sharpers is to engage a number of farm hands, railroad operatives, miners or other classes of working men, get them to pay their fees and make deposits for transportation, and then send them to some place more or less distant from the city, where most of them are forced by necessity to work on terms much worse than those on which they made the contract. Occasionally some are sent as far away as Mexico, and these have cause for thankfulness if they can make their way back after months or years of virtual slavery and cruel hardships. Many agencies act in the same way with clerks and others of that class, especially with those who become troublesome on finding that they have been swindled.

Another favorite mode of swindling frequently practiced by these gentry is begun by advertising for a partner with a capital from $300 to $1,000 in a finely paying business! Mr. Greenenough answers and is dazzled by the specious promises of the agent, and apparent success of the undertaking. If necessary, the books are falsified and a bogus lot of customers are hired to throng the office during his visits of inspection and investigation. References are often given to confederates or friendly sharpers in different parts of the city. Nothing alluring or dishonest is left undone to tempt Mr. G. to invest his money. This once done, a change soon takes place. Sometimes the entire business with bills for office rent and several debts in the neighborhood, is left on his hands, his "partner" having vanished as soon as the money was transferred. At other times, he is either "frozen out" or the business proves of such a character that he retires in disgust. Occasionally the swindle has been so barefaced that he has recourse to the police court, but even then he rarely recovers his money, though sometimes he succeeds in having the sharper punished.

How are such dangers to be avoided? How are the trustworthy agencies to be distinguished from the untrustworthy? Probably the best plan for a stranger would be to inquire with regard to the standing of any particular agency, at one of the next offices of the Young Men's or Young Women's Christian Association before applying for help to any of them. Or application might be made to a neighboring clergyman or the police. In spite of their alluring advertisements, the best of such agencies can do little for any one who is not in search of "domestic" employment.

Miscellaneous Advertising.

HOME STUDY. Book-keeping, Business Forms, Penmanship, Arithmetic, Shorthand, etc., thoroughly taught by MAIL Circulars free
BRYANT & STRATTON'S, 415 Main St., Buffalo, N.Y



If you want a **BUGGY, ROAD-CART OR HARNESS,** write for our *Exhibition offer*, and see the **BARGAIN**
we give **regardless of cost,** to advertise our goods. *It will pay you.* Send 6 cts. stamps for full information.
UNION MACHINE CO., Philadelphia, Pa.

FOR A DISORDERED LIVER try BEECHAM'S PILLS.

General Advertising Rates of
THE RURAL NEW-YORKER.
34 PARK ROW, NEW YORK.

The following rates are invariable. All are therefore respectfully informed that any correspondence with a view to obtaining different terms will prove futile.

ORDINARY Advertisements, per agate line (this sized type, 14 lines to the inch)..... .....30 cents
One thousand lines or more, within one year from date of first insertion, per agate line, 25 "
Yearly orders occupying 14 or more lines agate space.....25 "
Preferred positions.....25 per cent. extra.
Reading Notices, ending with "*Adv.*," per line, minion leaded..... 75 cents

Terms of Subscription.

The subscription price of the RURAL NEW-YORKER is
Single copy, per year..... $2.00
" " Six months..... 1.10
Great Britain, Ireland, Australia and Germany, per year, post-paid..... $3.04 (12s. 6d.)
France..... 3.04 (16⅛ fr.)
French Colonies..... 4.08 (29½ fr.)
Agents will be supplied with canvassing outfit on application.

Entered at the Post-office at New York City N. Y. as second-class mail matter.

Humorous.

The RURAL NEW-YORKER *is prepared to offer very liberal terms to good, responsible,* PERMANENT *agents. Correspondence solicited.*

"WHAT color is a field of grass when covered with snow? Invisible green."—*Texas Industrial Review.*

"WHAT shall we do to get rid of smoke?" asks a Cincinnati newspaper. Move the town.—*Chicago Journal.*

LITTLE BOY, looking at lady friend: "You got shrinks in your forehead just like my mamma." He meant wrinkles.

"I SAY, doctor, you who know medicine from A to Izzard, what do you do yourself when you have a bad cold?" Physician (who does not believe in giving advice gratis): "Cough."—*Judge.*

ENTIRELY AT EASE: Ernheimer: "I yoosd lefd dot seat?" McSweeny: "Is thot so?" Ernheimer: "Y-a-a-s." McSweeny: "Ye wor a big fool. It's as aisy as anny wan in th' car-r-r!"—*Puck.*

"THAT plan of a $2,500 house you printed," remarked a constant reader to the editor, "was very fine, but one point was rather obscure." "What was that?" "It didn't say how to get the $2,500."—*Harper's Bazar.*

WHEN a sudden gust of wind strikes a woman with a Directoire gown, the way her four coat-tails shoot out at right angles from her waist puts a man's claw-hammer coat completely in the shade.—*New York Tribune.*

WAITER: "I can recommend the eggs, sir. They're beautifully fresh, new-laid, in fact!" Mac Duffer: "What, to-day?" His Spouse (horrified): "My love, what are you thinking about! You don't suppose hens lay on the Sabbath?"—*Pick Me Up.*

IT takes the stings of sixty honey-bees to kill a man; so if you ever happen to have an experience of this sort you can safely hang around and enjoy yourself until the fiftieth bee stabs you. Then it is time to be excusing yourself.—*Burlington Press.*

OLD man (at head of stairs at 2:30 a. m.): "Susie, what time is it?" Susie (with a second look at Reginald, who loosens his grip): "A few minutes past 10, papa." Old Man: "Don't forget to start the clock again before you go to bed."—*Georgetown Courier.*

A HAYS CITY (KAN.) paper prints the following remarkable card of thanks: "Mr. and Mrs. Gartland wish to express their thanks to the friends and neighbors who so kindly assisted at the burning of their hotel last Monday morning."—*Kansas City Star.*

HOW A NAUGHTY BOY WAS CAUGHT.

Miscellaneous Advertising.

CIDER HOW TO MAKE

Get Out of the Old Ruts. Use the celebrated **Jersey Apple Grinder** and New Style **Double-Power Champion Press.** An enterprising man can make **Big Pay** by starting our new **Quick Process** in any neighborhood where Cider is made in the old-fashioned way. For Illustrated Circular, address the Sole Manufacturer,

ROBT. BUTTERWORTH, Trenton, N. J.

MAST, FOOS & CO.

SPRINGFIELD, OHIO.

MANUFACTURERS

OF THE

IRON TURBINE WIND ENGINES

Strong and Durable. Will not Swell, Shrink, Warp or Rattle in the Wind.

A CHILD CAN USE THEM.

BUCKEYE FORCE PUMP

Works easy, and throws a constant stream. Has Porcelain Lined and Brass Cylinders. Is easily set. Is the Cheapest and Best Force Pump in the World for Deep or Shallow Wells. Never freezes in winter. Also manufacturers of the **BUCKEYE LAWN MOWERS, Buckeye Wrought Iron FENCING, Cresting, etc.** Write for Circulars and Prices.

PURE DISSOLVED ANIMAL BONE, DISSOLVED S. C. PHOSPHATE.

Also Manufacturers of **Complete Fertilizer.**

WM. DAVISON & CO., Baltimore, Md.

SMALLEY GOODS—including **ENSILAGE AND FODDER CUTTERS, SWEEP AND TREAD HORSE POWERS, DRAG & CIRCULAR SAW MACHINES, FARM ENGINES & PLOWS,** are positively ahead of all others in the country, **and so warranted.** Shipped to any responsible farmer in the U. S. or Canada, subject to **30 days' trial,** and to return **at our expense** if not proving just as warranted. We are prepared to build Carriers any length, guaranteed to run at any desired angle to suit silos, and claim Smalley Carriers positively superior to all others. Our 1889 "Why it Pays Pamphlet" should be read by every intelligent farmer interested in dairying or stock raising. It contains the very latest information relative to economical stock feeding. Will be mailed free to responsible farmers only, upon application, providing *mention is made of paper* in which this advertisement was noticed.

SMALLEY MFG. CO.
MANITOWOC, WIS.

N. B.—We control *original patent* for Bucket Carriers. All others are *frauds or infringements.*

Ask for Special introduction prices and terms.

The SMALLEY CUTTER, with Improved Bucket Carrier. SMALLEY TREAD POWER WITH GOVERNOR.

The Syracuse Nurseries!

Old and Reliable.

Are growing the Largest and most Complete Assortment of Nursery Stock in America. In BUDDED APPLES and STANDARD PEARS they acknowledge no competition—quality considered. Nurserymen and Dealers will consult their own interests by getting prices on this Superb Stock before buying. Special inducements to buyers in large quantities.

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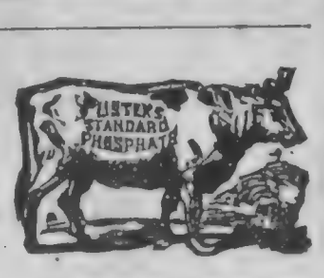

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THE RURAL NEW-YORKER

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Dairy Husbandry.

A VERMONT FARM HOUSE.

MANY of our readers will be greatly interested in the picture shown at Fig. 204. It is a typical Vermont homestead. There are thousands of people all over the country who spent their childhood days in just such a house. The old New England ideas of comfort and convenience are everywhere evident in this picture. The wide, sunny windows, the pleasant porch with the easy chairs for the older members of the family, the carriage-house under the family roof—who has not seen them all in good old Vermont? The front of such a house seems to light up with a sunny smile of welcome as the stranger nears it. And if we could look inside the house! It is the embodiment of solid, home-like comfort. Thousands of Vermont people have left the green hills in search of warmer climes. "I got tired of farming hillsides" was the explanation one Vermont man gave the writer 10 years ago on a western-bound train. He went to Iowa and before six months his eyes fairly ached for a sight of the hillsides he had found so tiresome.

The picture we show is drawn from a photograph of the residence of Mr. J. C. Oliver, 2d vice-president of the Vermont Dairymen's Association. We print it as a type of the pleasant old farm-houses that are scattered throughout New England. A portion of the dairy herd, composed of native stock, is shown in front, also a mare and her foal. The whole forms an accurate, home-like picture.

DAIRYING AS A BUSINESS.

J. W. NEWTON.

Why farmers don't make butter-making pay; how to do so; proper feed; handling the milk and cream; co-operative and proprietary creameries; marketing the butter; chicken meat or pork—which? "The dairyman of the future."

BUTTER is low. In the last RURAL it was quoted at from eight cents to 20 cents, 14 and 15 cents being about the average. The condition of the market is abnormal, owing to the unusually wet season which has caused feed in pastures to make an enormous growth. A drought next year would doubtless cause butter to be higher than it is at present, but there is every prospect that butter in the future will be low in price. To make a profit, it must be produced at the least possible cost. To make it at a cost of 16 cents per pound, and sell it for 14 cents is to go to ruin. It would puzzle any farmer to make a profit on eight or 10-cent butter. The less of such stuff made, the better. The trouble with farmers is that they try to do too many things. There

A VERMONT DAIRYMAN'S HOME. Drawn from a Photograph. Fig. 204.

are business men who can manage several different branches of business with success, and some farmers can do the same; but to take up such a business as dairying and carry it on successfully, might well absorb the energies of most men. In order to make butter at a profit the dairyman needs to study the following points:

1. To obtain foods that will make the most and best quality of butter at the least cost.
2. To keep cows that will make the most economical use of these foods.
3. To handle the milk so as to get all the butter in the best shape for market at the least expense.
4. To market the product at good prices.
5. To make the most economical use of the by-products.

These few points cover a great deal of ground. The better one understands them, the better dairyman will he be. Ignorance and lack of skill cause great loss. In the first place, feed is the raw material. Too many exalt the machine above the raw material. They think that if they get a few Jerseys they are relieved from further care, and that having good cows will insure good butter. Essential as good cows are to the profitable production of butter, feeding requires the greatest skill and knowledge. Shall the Eastern dairymen grow or buy their grain foods? Most of them doubtless can grow grain cheaper than they can buy it; but what to grow and how to grow it most cheaply are questions that need careful study. Grass, corn and clover must form the basis of our cattle feed. The West is learning the value of its bran; but neither the West nor South seems to place a true value upon cotton-seed meal. Still some are afraid of this, and its real value for a butter food is not satisfactorily determined. The value of silage is no longer in doubt, and silos are being built all over the dairy region. Poor pastures are a drawback, and soiling must be resorted to by the majority of Eastern farmers. The experiment stations are working on all these problems, and some are taking steps to determine the best breeds of butter cows.

When one looks back 10 years and thinks of the progress that has been made in methods of handling milk, cream and butter, he cannot help being hopeful for the future. Fifteen years ago a large proportion of the butter fats must have been left in the milk. Now practically all the butter fats are extracted. The limit of invention has not, in all likelihood been reached. The Swedish butter extractor will be a long step in advance, if it proves to be what its makers claim.

The co-operative creamery solves many of the problems connected with dairying; but proprietary creameries where a certain number of pounds of milk are estimated to make one pound of butter without any distinction between good and poor dairies, effectually discourage the breeding of butter cows. The cost of making butter in creameries averages about four cents per pound. Made at home, it probably costs five cents. When butter sells at 16 cents, one cent must be deducted for the cost of package, so that one-third of the price is used up in simply manufacturing the butter and fitting it for market.

As to marketing butter, the fewer hands it passes through between the producer and the consumer the better it is for both. The poorest months to make butter and the best months to have cows dry are July and August. Yet how few farmers act upon this well-established fact. Fall calves are best, and what a relief it would be in midsummer to be freed from milking and caring for milk.

As to by-products, a pound of chicken sells for about three times as much as a pound of hog or calf; and yet good authorities assert that it costs no more to grow a pound of chicken than a pound of pig. The experiment stations ought to settle this, and tell the farmers whether they can really make three times as much by feeding skim-milk and butter-mik to poultry as by feeding them to hogs, etc. The dairyman of the future must be a student and a wide-awake, energetic business man. He must lay aside prejudice and keep his eyes open. He must learn and use his knowledge. The better he can do these things, the more profitable will his business be.

Lamoille County, Vt.

THE statement made by a number of writers that cud-chewing gives all the exercise that cows need strikes the R. N.-Y. as being very absurd. It might as well be claimed that type-writing, piano-playing, singing, whistling or talking gives those of us who spend much of our time in such ways all the exercise needed. Exercise of the fingers or hands, of the head, mouth, jaws, of the lungs, feet or legs can never take the place of that which should develop all parts alike.

The Swineherd.

PORK POINTERS

HOW HOGS ARE HANDLED AFTER AUGUST ARRIVES.

MILK MAKES MEAT:
PEAS PREPARE PORK:
APPLES AID AWFULLY.

FROM MARYLAND.

What we all want from our hogs is profit, and the profit depends largely upon the feeding of the hog during the latter half of his life, or from the first of August to December. A field of cow-peas makes an excellent pasture about this time. The hogs on it will require very little grain, and a little later when the pods are ripening, no additional grain will be needed. To some this may seem an expensive way to feed hogs; but as a field thus treated will be improved almost as much as if it had received a dressing of manure, I think in most cases it will pay. If the cow-peas are not stocked too heavily they will last until corn is ripe, and then there is nothing to do but to throw in the corn judiciously until cold weather comes. I do not believe in penning hogs and feeding them entirely on corn or with feed. I think the prices of corn and pork are too close to allow much profit. To feed hogs or any other animal is a science, giving them full feed without allowing them to forage for a part of it, and if one is not pretty well up in this branch of science he had better let hog-raising alone. A neighbor of mine kept an account of the corn the hogs ate, and found, on slaughtering them, that the pork cost him 25 cents per pound. In contrast to this, the most profitable way to feed hogs is to make them utilize the waste. When I wheel a barrel of slops and skim-milk to my hogs, I do it with a clear financial conscience; but when I pay $16 for a ton of mill feed, I am doubtful about the result. Even if I otherwise were to make both ends meet and lap over, a spell of sickness may knock off the profit for two or three years' feeding, and sickness has laid hold of my hogs when they were surrounded by the most approved sanitary conditions. If hogs have a pasture or wood lot from which to get a part of their living, then the extra feed will pay well; but feeding them entirely on expensive grain food is a risk. As a man remarked while paying his bill for hog feed, "There is money in hogs, but getting it out—that is the problem." P. B. C.

Catonsville.

FROM MICHIGAN.

After harvest, as soon as the wheat is stacked, I turn my hogs upon the stubble fields. At this time they are in good growing condition, having run upon the clover field during the earlier part of the summer. Whatever wheat is left upon the ground is picked up and thus saved. Some persons object to this method of feeding, assigning it as a frequent cause of cholera. I have not, as yet, found this to be the case, since when wheat stands up well and is properly harvested not enough will be found in one field to injure the large number of hogs that I turn in at once. By the constant use of cholera preventives I have managed to keep my hogs in a healthy condition and thus far free from that dreaded disease.

If, by this treatment, I succeed in getting a large frame with a proper growth of muscle by September 1, I then begin to feed corn, for there is nothing superior to that for fattening purposes. The animals are liberally supplied with good well water, salt, ashes, etc. I consider this the cheapest method of making pork *i. e.* growing the hog upon clover, (for every successful farmer has plenty of that and it is as healthful feed as one can give any animal), and finally, fitting him for market by feeding corn.

I have been making some experiments in feeding hogs, but have not got far enough along as yet, to give accurately the cost of making a pound of pork. I think some pounds are made very much more cheaply than others; that there is a limit to the profitable feeding of any hog, and that when this stage is reached he should be sold, rather than kept because the price does not suit, or because we want to make him weigh more. Hogs can be made to gain very fast upon ground feed, but it is doubtful if it pays. I had one pen of nine shoats last year, that were fed upon swill made of ground corn and oats together with what whole corn they would eat. They gained over two pounds each per day, made very handsome hogs, but cost more than those raised and fattened by the former method. The scales can be as profitably used in feeding hogs as in the dairy to test the merits of the various cows of the herd.

More important than anything else is the kind of a hog that is fed. If one has the common scrub, it matters but little how, what or when he feeds, whether he weighs the feed and accounts for it or not, the one important item, profit, will be eliminated from the results. O. C. H.

Berrien County.

FROM IOWA.

I do not know what a pound of pork costs me. It is an easy matter to know at the end of the year how the accounts of the farm stand compared with their standing at the beginning; but on a farm where stock-raising and dairying are followed it is difficult to separate the proceeds for both so as to charge each kind with its proper share of expense. I have 80 acres in permanent pasture, clover predominating, which does not run out here as it does in the part of N. Y. where I was reared. The hogs are kept in one 40-acre field by a plank across the gateway between the two fields high enough to keep the animals in, but so low that the cattle can step over it. This summer I have 93 hogs and shoats, 52 head of cattle (no calves) and four horses. I have kept about the same number for several years and pasture has been abundant except in the summer of '87. What part of the pasture is chargeable to the hogs I can't tell; but I aim to make as much as possible of the pork from grass. The pigs come in April and September. (I follow winter dairying so that the fall pigs get plenty of milk.) Fifty spring pigs are getting a bushel of shelled corn a day; that will be their ration until the middle of September when they will get about all of the new corn they will eat at two feeds, which will be about five bushels (70 pounds) a day, on an average. Last year my April pigs treated in this way, when sold on January 15, weighed 330 pounds alive each; but last winter was unusually favorable for feeding hogs. The pigs that come in the fall are usually sold in August, at a little lighter weight, but it takes less corn to finish them off in the summer. As nearly as I can figure it, it takes about six bushels of corn to make 100 pounds of live pork with the grass and skim-milk thrown in. The cost of keeping the brood sows does not enter into the above calculation. Good water, shade, and a dry, warm bed are elements that enter into the production of cheap pork and it cannot be made without them. J. S.

Corning.

FROM NEW YORK.

For about 20 years I have given more attention to breeding and selling pigs than to fattening hogs. Only such as were no longer useful for breeding purposes and a few pigs each year have been fattened and slaughtered. A thoroughbred boar of the breed most popular and salable in this vicinity at the time has generally been used. Having begun with the large Chester-White, the Poland-China, Berkshire, Large Yorkshire and Small Yorkshire have been used, and the sows now in use are of the mixed blood of these breeds. The last cross with the Small Yorkshire boar has given good satisfaction, and up to the age of eight or 10 months the pigs will give as large a profit on a given amount of feed as any stock I have seen. The Berkshire and Poland-China are excellent breeds, but black pigs are not as salable here as white ones.

A sow that is to be kept for breeding may produce her first litter when 12 or 15 months old, and continue to raise two litters each year until four or five years of age, or until she fails to produce a full number or becomes a careless mother. A very old sow will kill her pigs by lying on them. With good care, suitable feed, and warm winter-pens, sows will raise an average of eight pigs to the litter or 16 each year, and these, sold when five weeks old at ordinary prices, will bring from $40 to $50; that is, an average yearly return of $45 for each breeding sow kept will be realized.

I prefer shorts and barley-meal mixed, for the grain feed, and think that $10 worth may be used with profit in a year when fed with plenty of skimmed-milk. When milk alone is fed, sows are liable to become costive and feverish, and loss of pigs will result. This condition is easily avoided by feeding the grain mixture above mentioned. Deducting the $10 in grain fed from the $45 realized from the pigs sold, $35 remain as pay for the milk and care. But with plenty of straw for bedding and as an absorbent, enough manure may be saved to pay for the labor expended. I have never made any very careful or extended experiments as to the feeding value of the milk used; but the amount received from the sales of pigs and pork has warranted the conclusion that it represents a considerable percentage of the profits of the dairy. When I began using a Cooley Creamer, 12 years ago, six pigs eight weeks old were weighed, and after being fed sweet skimmed-milk for a month, were again weighed, and their gain was sufficient to pay for the grain consumed and 25 cents for 100 pounds of the milk.

Judging by the amount fed daily to a breeding sow, I think she will use 15,000 pounds of milk in a year together with the grain feed above stated. Here again the feeding value of the milk is 20 to 25 cents per 100 pounds. It may be thought that such feeding involves a great amount of labor for the value received; but the farmer's profits are never large and a few hundred dollars received each year from the sales of pigs and pork may represent the entire net profit of a small farm and dairy.

In connection with butter-making from 25 cows, I usually raise 12 calves each year and keep six breeding sows. If the pigs are kept beyond five weeks old, each week adds to their value, and practically they are sold at all ages from four weeks to eight months. The business has proved satisfactory and profitable. With good care there is no danger of loss on a thrifty, well-fed pig less than nine months old.

A pen warm in winter and cool in summer, kept dry and clean is essential to success. A thoroughbred boar should be used. The sows should have the run of a yard in summer. They should not be bred too young, as dwarfing will result from such a course. A good breeder should be kept as long as she continues profitable. If pigs are fattened, 200 pounds weight is the limit of greatest profitableness. A good breeding sow will yield more net profit than the average cheese-dairy cow. A cow giving 7,500 pounds of milk in a year should be credited $15 for the skimmed milk where butter is made, if she is charged for the whole of the feed that she consumes. C. S. R.

Lowville.

Pork-making occupies an important position in farm economy in this section, as it is an extensive dairying region, and these two branches of the business go hand in hand, each making the other profitable.

For profitable pork, early pigs are most desirable. A cross of Chester-White and Berkshire makes as good a "porker" as any, as it is long-bodied and small-boned, matures early and fattens readily—all desirable points. Early pork is the most profitable, costing less per pound, while it brings a higher price in the market than pork made in cold weather.

The choicest of early pork may be made by feeding plenty of skim-milk with a small admixture of wheat middlings. Pea-pods, corn-husks, clover and weeds are relished and fed with profit through hot weather. The product of an acre or more of peas is an important item in cheap pork-making as well as a healthful and delicious table dish. As soon as the peas get too old for cooking begin to pull them for the pigs. Feed them in small quantities at first, increasing the amount as your own judgment and the pigs' appetite and condition demand or the weather warrants. Avoid heavy grain feeding in hot weather. This method of thrashing the bulk of the pea crop will be found pleasant and profitable; for where is the farmer who does not enjoy seeing a flock of clean, healthy pigs buried to the eyes in luscious, succulent pea-vines, munching with avidity the well-filled pods. If not fed to excess, they will eat every pea and nearly all of the vines, and for profit, just see them grow.

A "titman" pig of mine for which I couldn't get an offer of 50 cents because he was so small, although I received $3 apiece for his mates of the same litter, was fed on this diet, and without the customary finishing off on corn he dressed 268 pounds in September and sold for $7.50 per cwt. Two others of the same litter for which the buyer willingly paid me $6, were fed in the usual way (on milk dishwater and corn), until November when the best one weighed 275 pounds and netted the feeder $6.00 per cwt. Any one can figure out the difference and locate the profit.

I have no correct data from which to estimate the exact cost of fattening hogs, but I know that it is not much over the cost of keeping them as store stock. Of course, I don't refer to such stock as one sees during a day's drive through the country: animals that are turned out to pasture and do not see a pail of swill all summer long—long-nosed, gaunt and bony brutes.

The feed to give this kind of stock the fullness and beauty of contour that characterize

a well-fed hog will cost more than the beast will bring.

Well-bred, well-fed, well-cared-for stock is the only kind that is profitable, and many farmers are in need of just that kind. Well-bred hogs need well-bred farmers with intelligence enough to give them proper care; for, no matter how well-bred, even a hog will degenerate through neglect and abuse. Give the hog a place on every dairy farm, treat him well, feed intelligently and he will add largely to your profits. M. T. W.

Sandy Hill.

FROM NEW JERSEY.

The cheapest way to make pork is a subject that I am not prepared to discuss from practical experience and actual test. I have made a good deal of it and from my observations, I am satisfied that no other feed can be so cheaply raised for feeding hogs from the first of July to the middle of November as apples. I do not wish to be understood as saying that apples are the cheapest food; what I mean to say is that apples can be raised for about five cents per bushel, and at this price nothing else is so cheap, unless it be grass, with apples, and some corn. These, for the time mentioned, or for any time, make a very good feed, and one that will make pork very fast, if fed in reasonable quantities. I do not believe in what in this section is called the swill barrel; cleanliness is as good for a hog as for any other animal. We should treat our live stock in such a manner as to keep them in good health, and if we do this with our hogs we shall hear very little of cholera and the various other diseases to which swine are liable. The proper way to raise hogs is to have a good, warm pen, so that they will not suffer from the cold, and in all moderate weather in winter let them have a run outside, for the hog is by nature a cleanly animal. Breeding sows should be kept in good condition, but not too fat. All others should be kept growing, for each day that we keep stock intended for slaughter without adding to their weight causes a loss of so much food; that is, there is a loss in all stock intended for the butcher, and in all young stock, when not improving, and if they are once started the after-profit is doubtful. In case of hogs, I believe they should always be in salable condition, and that they never ought to be finished off by putting them up in a little dirty pen, and feeding all the corn they can be induced to eat for a period of one to six months. My shoats last year gained in weight almost a pound a day when they were 10 months old, weighing, when killed, about 275 pounds on an average. They were of mixed stock, including Berkshires, Chester-Whites and Jerseys, with no pure blood. I am of the opinion that the Berkshire pure and unadulterated is the best general-purpose hog. Probably a Berkshire boar and Chester-White sow will ive heavier pigs, and might be most profitable to the owner. The Berkshire gives the heaviest ham in proportion to the weight of the animal, and the lightest head; or, in other words, the flesh of the Berkshire is the most valuable, for it has most of the best meat and least of the poor, and the most Berkshires have sufficient bone and muscle not to break down. Breaking down I have found a great drawback to the Essex shoat. When I kept Essex grades a broken leg was nothing uncommon. A few years back I saw a man's hogs out in the orchard about Christmas without shelter, and the mercury was about zero. That man's farm grows poorer each year and the mortgage grows heavier. I can call to mind few cases where the owner increased his possessions while his stock were neglected or half fed. I. J. W.

Titusville.

A HOG'S HEAD.

OUR artist believes that the hog is an intelligent animal. He has maintained that he could produce an accurate picture of a hog's face, that would indicate superior intelligence. The picture shown at Fig. 205 is the result of his study. It is the head of a young Berkshire pig sent to the stockyards at Jersey City.

Horticultural.

TIMELY NOTES ON VEGETABLES.

WILLIAM FALCONER.

CORN was never finer. The land may be sandy, but water and manure will make a crop. We are now using Concord also Squantum that were sown May 6. Our earliest corn was a good deal injured by the cornworm, but this trouble stops about the 20th of July. We put in a sowing of Evergreen the third week of July, one of Concord in the fourth week, and will put in one of Cory tomorrow (August 2nd). Our falls are generally open enough to let us get the good of these sowings. These late sowings are put in the ground cleared of the early crop of corn, and in this way we get two crops of corn from the same ground.

POTATOES looked well till 10 days ago; then they began to "die off" fast. Rot has not appeared in our crop, but the quality of the tubers is not first-class, and a good many of them are discolored inside. I have planted Savoys in the furrows between the rows of early potatoes. I will lift a large patch of ripe potatoes next week and sow beets and carrots in the emptied ground. I shall also plant a part of it with red celery.

CABBAGE.—While we have any amount of peas, beans, corn and other succulent vegetables in summer, no one cares for cabbage, and in winter no one cares for common cabbage who can get Savoys, cauliflower and Brussels-sprouts, so I grow most of the desirable kinds. Of Brussels-sprouts I raise a lot from seed in May, and another in June. This is for convenience in planting more than to hit a season, for there is no fear of having them in too early, as might be the case with Savoys or cauliflowers. Savoys sown about the end of May were planted out early in July; the same with cabbage and cauliflower. But as I didn't have nearly land enough empty then or my full crop, I potted the remainder of the plants into four or five-inch pots, and plunged these in the ground in beds to await vacancies. This isn't nearly as much trouble as might appear, and it keeps the plants stocky, growing a little all the time, and when they are planted out they go right ahead growing. Cauliflowers I sow as late as the first week in July. This gives us nice stock for storing in frames for winter use.

A HOG'S HEAD. From Life. Fig. 205.

LIMA BEANS.—We picked our first lot—from out-door sowings—on July 29th.

PARSLEY.—I sowed a lot in cold frames July 17th. This is for winter use. Of course, the usual way is to lift some of the summer roots and plant them in boxes or frames for a winter crop; but these always "bolt" early in spring. That sown in July or August will not "bolt" so soon and will give good parsley till next June.

CHICORY.—I raise a quantity of what is commonly known as Whitloaf. It is large-leaved chicory. If sown in spring it will "bolt" before fall, and this renders it almost useless as a leaf crop. I sowed it July 17th. in rows two feet apart. This is soon enough and should give us strong crowns for winter work. We store the roots as we do parsnips in winter, and keep them as cool as we can; frost even doesn't hurt them. When lettuces begin to run short I put in a lot of these Whitloaf roots, tops up, in a soap-box filled with sandy soil, and put it in any warm place that is handy. Growth soon sets in, and the young leaves make a very good salad in winter. But they should be blanched, and the easiest way of doing this is to invert another empty soap-box over the one that has the roots in it, and the leaves grow up white and tender.

CARROTS.—Our earliest out-door sowing was put in on March 27th. This sowing has now all been cleared away and the ground planted with celery. Young carrots are a delicious vegetable; old carrots are fit only for stock-feeding. I have not yet sown our winter carrots, but intend to next week in ground emptied of potatoes. We often get fine carrots when sown as late as the middle of August. The carrots we are now using were sown on May 25th. It is not a question of—are the carrots old enough to use? that concerns me so much as—how young are the carrots? But, of course, the great majority of people are not so exacting about the tenderness of their vegetables.

BEETS.—Those we are now using were sown May 25th. All previous sowings have been cleared away. Our next to come in was sown June 22nd. We will next week sow a fair lot of turnip beets and about the 12th, a large sowing for winter storing. I used to raise a lot of long beets as well as turnip varieties for winter, but as the call is now entirely for turnip beets, I find it useless to raise the long varieties. When used as a vegetable, that is when simply boiled, they are served whole and anything larger than three inches in diameter is rejected; about two inches across when peeled is about right. Of course, for slicing and pickling larger beets are admissible.

LETTUCES.—On account of the superabundance of rain this summer we have had lots of lettuce all along; but they "bolt" almost as soon as they begin to heart. But after this they won't be so apt to run. We will sow a little every fortnight till the end of August when we will put in a large sowing for lettuce for use before winter sets in, and another sowing towards the middle of September for lettuces in winter.

Glen Cove, L. I.

ACTINIDIAS.

WILLIAM P. BROOKS.

A. polygama as sold by our nurserymen probably A. arguta, as illustrated in R. N.-Y. of July 27; the true Actinidia polygama bears white leaves on the ends of the shoots; valuable for its fruit.

I WISH to compliment the RURAL upon the fine illustration of Actinidia on the first page of the issue of July 27. It gives, as far as is possible in black and white, a very faithful and strikingly life-like representation of the plant from which it was drawn. The RURAL will, I feel sure, be glad to have me point out some inaccuracies in the statements which accompany the illustration. A residence of 12 years in that part of Japan in which this Actinidia grows most abundantly enables me to do this.

In the first place, as to the name: It is known to the Japanese as Kokuwa (ko-koo-wa, without much accent, and the first syllable very long; the others hurried). In the herbarium of the Sappow Agricultural College it is set down as Actinidia arguta. I am not certain, however, who is responsible for this naming. The earlier specimens collected were all identified by Dr. Asa Gray, and I think this was among them. I am not at present able to present other evidence that this is the correct name. Fortunately, however, I have considerable evidence that the Kokuwa is not Ac-

tinidia polygama. First: In the herbarium above alluded to we have another and quite different Actinidia, known to the Japanese as Matatabi (pronounced with a very slight accent on the third syllable—Mar-tar-tar-bee) to which the name Actinidia polygama is given. Second: Dr. Rein in his work on Japan, volume 1, page 148, mentions Matatabi—Actinidia polygama. Third: Prof. Kinch, now of the Cirencester (Eng.) Agricultural College, formerly in the Komaba Agricultural College, in Tokio, Japan, in an enumeration of the food plants of Japan, includes Matatabi—Actinidia polygama. (Transactions Asiatic Society of Japan; Vol XI., p. 6.)

These dry details concerning names will not, however, interest the majority of the readers of the RURAL, who may be inclined to ask: "What's in a name?"

What, if anything, concerns them is the fact that there is more than one Actinidia and that the statements published concerning each be accurate. What the editor writes concerning his own observations of the Kokuwa—the plant figured—is perfectly correct. It is only when he applies to the plant the statements taken from the Japanese book alluded to, that he falls into error. [Our plant was received from the nursery as Actinidia polygama, which we assumed to be the correct name. The quotation from the Japanese book referred to this species. The R. N.-Y. merely pointed out wherein the Actinidia of the book differed from the RURAL specimen as evidence either that ours was incorrectly named or that the book was in fault. EDS.] This I do not wonder at in view of the confusion in scientific names which I have endeavored to clear up, and in view, further, of the fact that the Japanese writer himself seems to have confused the two species.

The statement: "It often stretches across ravines or climbs about and entangles the tops of trees," can be true only of the Kokuwa—Actinidia arguta. The true Actinidia polygama is a far less rampant grower and usually climbs only over clumps of bushes. This plant it is, and not the one illustrated in the RURAL, which has "snow-white leaves" at the ends of shoots, a fruit of a "reddish yellow color" of the size of the "top joint of the little finger," and of the stems and leaves of which "cats are exceedingly fond." No wonder the RURAL cats displayed "utter indifference" when presented with Kokuwa leaves and stems. They proved themselves accurate botanists, not to be taken in by false "catnip.

The Kokuwa never has white leaves, and its fruit, which is far more abundantly produced on fertile plants than is that of the Matatabi, is larger, and, even when ripe, of a green color. The size is very variable, but on a vigorous plant the fruit will on an average be as large as the Green Gage Plum. Its skin is astringent, but the pulp, which is readily pressed out at the stem end, is delicious. The seeds are numerous and scarcely so large as those of the swamp blueberry. The fruit is extremely laxative when eaten freely. It would be unfit to eat dried, as the skin could not be separated and would soon make the tongue and throat sore. It is readily made into a most delicious jam, the skins being sifted out in the making. I brought home with me a number of cans made by my Japanese cook, of which I will send the RURAL a little sample. I believe that this plant will prove valuable here for its fruit; but it will be necessary to propagate it by cuttings from fertile vines as it is polygamo-dioecious, and from seed would produce a large number of barren plants. For ornamental purposes I have no great opinion of it except, perhaps, as the RURAL suggests, by implication at least, in parks to "form pretty arbors and wild entanglements" from "tree to tree." It is far too rampant to plant near houses or as a veranda climber, as has been often done here. It requires too much pruning and training, and is too liable to displace eave-spouts or to strangle other shrubs and trees.

For ornament the cats' favorite, the Matatabi—Actinidia polygama—is much to be preferred. It is, though vigorous and hardy, far less rampant than the Kokuwa, and the feature alluded to of developing snow-white leaves at the tips of shoots, adds much to its beauty. The flowers are almost like those of the Kokuwa, though more fragrant and less abundant; but as the plant grows, the flowers of both species are too inconspicuous and short-lived to amount to much from an ornamental stand-point. These vines are desirable, if at all, for the beauty and health of their foliage.

I send the RURAL dried leaves and also green shoots of both species. One of the dried leaves of the Actinidia polygama was a white one. The herbarium specimen from which I took it had six of these white leaves, instead of the "two or three" the Japanese author speaks of. The green shoot of this species—is from one of two or three living plants which I brought from Japan last fall. As the RURAL will see, it shows no white; this color is not, I think, produced on leading shoots, but on flowering laterals, and probably not on very young plants. Vines planted in my garden in Sappow had not developed this characteristic after three summers. The differences between the two species will be sufficiently evident from an examination and comparison of the specimens sent; and the Editor will see that his vine is like the Arguta and not the Polygama.

Massachusetts Agricultural College.

STRAWBERRY NOTES.

FROM WILLIAM FALCONER.

As soon as we had finished picking—this year about the end of June—I had the ground well cleaned and the roughest of the strawy mulch taken off; then with sharp four-pronged hoes we unfastened the soil between the rows. This was to cultivate the land, readily admit air and moisture into the soil and help exclude drought, and to form genial rooting ground for the runners. The runners now are strong, healthy, well-rooted and fit for transplanting. I am now preparing ground for a new plantation: it has just been cleaned of root crops. It has been heavily manured and subsoiled and marked off into rows two feet apart. I will set two plants close together in the hill, and the hills 18 inches asunder in the row, and any more runners these newly-set-out plants may make this season will be cut off as soon as noticed. If short of ground elsewhere, I will grow a row of small lettuces, radishes, Horn Carrots or other small crop between the strawberry rows; but if I have plenty room elsewhere, I will not crop between the rows, but, instead, keep them well cultivated so as to strengthen the plants. In December I will scatter some well rotted manure broadcast all over the strawberry patch; then some salt hay or sea thatch thinly over the plants to protect them from sun and wind in winter.

From the strawberry plants I set out each year in this way about the end of July or in August, I get a capital crop of fruit the June following, and always our largest berries.

The chief trouble of fall-planted strawberry plants is that they are set out too late to become large and well-established before winter sets in, hence they get heaved by frost a good deal and many of them killed. I am not troubled in this way, as our young plants are just as firmly established as are the old ones.

A farmer with plenty of land perhaps can afford to plant in spring, but a gardener cannot very well do this. We never could afford to keep our ground occupied for a whole year with a crop that has not borne us any fruit. I never do. Every rod of ground has to produce something every year. And if there is an unproductive crop in the ground, such as asparagus the first year or young fruit trees, we get catch-crops enough off the land to hardly make the presence of the unproductive crop felt.

FROM F. C. MILLER.

Nearly all kinds did well. For productiveness and good size Bubach, Jessie, Haverland and Crawford stand at the head. One picker in two hours picked twelve quarts of Jessies of superior size and quality. We sold over 200 bushels from a little over an acre and lost by rotting not less than 100 bushels. The Bubachs were immense in size, but the Haver ands out-yielded them. Crawford is the foremost and best in quality of all. The largest berry grown was a Crawford, but it is not quite as productive as I would like. Warfield is well liked; Burt not so well. I am greatly pleased with Bomba. It is productive, firm and of good quality. Monmouth was good and firm. The plants are not strong enough to mature all up to size. Gandy is a grand berry, but there were too few of them: all like its size and quality. Logan did well.

New Philadelphia, O.

The Poultry Yard.

POULTRY PICKINGS.

SEPARATING STOCK FOR FEEDING.—On the farm where the only incubator used is the old reliable hen, the flock of chickens is usually composed of birds of various sizes. Where they are fed together, as is generally done, the late-hatched and consequently the smaller and weaker ones are so crowded and run over by the larger, that they do not get their proper share of feed, and consequently make little if any gain. It is but a short job to make a covered pen of lath, old barrel staves, or strips of board, with spaces of sufficient width to admit the smaller chicks, and exclude the larger ones. Here they may be fed, and will soon learn to eat in peace and quietness. The extra gain made will well repay the slight expense.

GRADING UP.—Farmers are rapidly learning the importance of improving their horses, cattle and other stock, either by selecting the most desirable animals for breeders, or by crossing with pure-bred males, or both. The same principles should be applied in the poultry yard. The average farmer wants a hen that will lay a goodly number of eggs per annum; that will hatch a good brood of chicks under adverse conditions, and that furnishes a good carcass for the table. If he continue to breed in year after year, his stock will run out. To keep up the vigor and productiveness of his flock, new blood should be introduced. The best hens should be selected for breeders, preferably hens one year old; then—as the male is half the flock—buy a full-blood cockerel, (or more if the flock be large) of some desirable breed. *Now* is the time to attend to this matter. The flock needs culling now; breeders are anxious to sell their surplus stock at this season. Many times cockerels with some defect of plumage or coloring can be bought at low prices, and are just as good as "standard" fowls for improving common stock. This is the cheapest and best method for those who do not care to keep pure-bred fowls.

The hens should have extra care and feed during the moulting season if they are expected to do their best afterward.

Put some clover in the silo for winter-feed for the hens. A tight barrel or large box will do, if the clover is tramped down tightly and well covered.

For winter-layers, the early pullets and early-moulting hens are most valuable. Eggs are usually worth most in early winter, and then is the time when we want the hens to lay.

RAISING CAPONS seems to be a growing business, and there are many inquiries in relation to the process of caponizing. This is a cruel operation to say the least, as is evidenced by the fact that from 10 to 25 per cent. of the birds are said to be killed by it. No one should undertake to perform it but an expert, and then only when provided with the best instruments obtainable.

Milk and butter-milk are excellent for both laying hens and growing chicks.

Eggs, *if perfectly fresh*, may be packed in salt, bran, oats, etc., and kept in good condition until mid-winter. Pack so that they will not touch each other, keep in a cool, dry place, and turn the package every few days. They will keep better if the hens have no male companions.

If the nests haven't received attention, it is more than likely that they are swarming with mites. The nests should be movable, so that they can be carried out-of-doors Pour a little kerosene over the straw, or other nest-material, touch a match to it and let it alone. It is good for the hens, although rather warm for the mites. Do you know that nice, new, clean nests encourage hens to begin laying? Fact!

Everywhere.

VERMONT NOTES.

Decadence of sheep husbandry; butter tests and prices; hay; wood for fire; bee-keeping; no "quid pro quo" stone-walls; happiness on slim means; the spruce as an ornamental tree; scarcity of evergreens and young men about farm houses.

"THE sheep on a thousand hills" where, oh! where are they? The hills are here; even the sheep-paths may be traced along their sides, but the sheep have disappeared; gone I fear never to return. The primitive forest is gradually reclothing the land reclaimed from it by the early settlers. The "bush" so recently driven far up the mountain sides is again covering the valleys and is working its way slowly toward the villages. What is to be done about it? Some say the tariff on wool is too high; others say it is too low, and a few think it would be better to have no tariff at all. I am inclined to think that the temperate climate and rich grass of North Carolina and the South Western States with the low-priced labor, give rise to too strong a competition in the production of wool for northern New England, with its long, cold winters and high-priced labor. It pays so much better to haul and cut marble than it does to raise sheep that there is little hope of a revival of the sheep growing industry.

Corn came up badly and will not be over two-thirds of an average crop; but with meal from the West selling, at this season, for $18 per ton, it would seem to make but little difference whether the crop was a failure or not.

The remarkably low price of butter is working serious injury to the average farmer. I notice that many farmers attribute this to the modern system of co-operative creameries. They say that creameries have ruined the sale of home made butter and lowered the price of the product of the factories, but of course there is nothing for them to do but to grin and bear it. Shall cream be paid for according to its bulk, or shall its value be determined by the oil-test churn? This is the question which is seriously disturbing the minds of the patrons of the creameries. It is evident that all cream is not alike; that given bulks of Guernsey and Holstein cream will not produce the same amount of butter. The question is, will the oil-test churn determine accurately the actual amount of butter which each will produce? Some experts say it will; others say it will not. At any rate the oil-test churn is coming into very general use and is giving very good satisfaction.

The hay crop is enormous, but the extremely wet weather has prevented its curing in good shape. In many cases it was left standing too long. The markets must be glutted during the coming winter with poor, discolored hay. The new hay presses enable the Vermont farmer to send hay to New York and Boston and compete with the local farmers. This relieves the home market somewhat and it is probable that there will be a ready market for the surplus hay; but at very low prices. Some of the farmers are holding on to their cattle and think it will pay to feed out the surplus fodder.

The old New England custom of attaching the carriage-house and wood-shed to the dwelling-house is not without its advantages even at this season. The housewife is pretty sure of plenty of good dry wood without going out-of-doors for it. The horses, too, get better care than they would if they were a quarter of a mile away. Wood-burning engines seem very odd, yet it is a positive pleasure to ride behind them. The smoke at times is a trifle unpleasant, but they are vastly more agreeable to the traveler than the soft-coal engines so common in the South and West. It is astonishing how the supply of fire-wood on the hills of Vermont holds out. In fact, the supply of wood seems to be increasing instead of diminishing.

Bee-keeping is becoming quite an important business. Unfortunately the weather has been most unfavorable this spring. It is hoped, however, that high prices will prevail since the demand for honey is on the increase

A good many farmers have taken what are called "fresh-air children" during the hot season. It seems very odd for a wealthy city like New York to accept for its children the hospitality of the comparatively poor farmers of New England. How many wealthy New Yorkers would open their brown-stone mansions during the winter to the poor country children?

Miles and miles of stone walls, representing months of hard labor adorn (?) the hills to no purpose. In many cases they only serve as boundary lines and are not of the slightest use or value. The most docile animal can walk through them almost anywhere. Being built of stone, these fences, if such they may be called, will remain lasting monuments of the folly of a past age.

How do the people in the poorer parts of the State get a living? They cultivate only an acre or so of ground, and keep but one horse and possibly two or three cows. In the winter they earn a little money cutting firewood. So the years come and go without their handling perhaps $50 in cash during the whole year; and yet these people are in most cases contented and happy. In fact, I believe there is more happiness per capita in the State of Vermont than there is in the city of New York.

Some of our landscape gardeners might learn a valuable lesson in the hills and valleys of the State. The spruces never look so handsome as when scattered over their native hills. Let him who criticises the rough and hardy spruce, see it as it grows wild among the rocks of New England. It is utterly beyond criticism; it makes the finest landscape effect to be found anywhere in the world. It is graceful in shape and beautiful in color, but its chief attraction is the unique way it has of growing with the utmost abandon and in the oddest sort of places.

Strange—isn't it?—that in localities where such beautiful evergreens as the arbor-vitæ, Hemlock-Spruce and the White Pines grow to perfection along the hillsides and river bottoms, they are seldom seen about the farm houses.

Where are the young men? It is very seldom we see any but old men and boys at work in the fields. Will foreigners buy the old homesteads when the old people are dead and continue the work, or will the land grow up with brush, and the houses and outbuildings go to decay? RAMBLER.

RURAL SPECIAL REPORTS.

Canada.

ST. HENRY OF MONTREAL August 2.—Potatoes in this section have all been stricken with blight and are rotting badly. The last to succumb was the R. N.-Y. No. 2. They had a very fine appearance with stalks one inch in diameter near the ground. The tubers are large. The potato beetle has been very troublesome this season, the rain washing off the green shortly after it was applied. Apples are a light crop and badly spotted. The only kinds that are free from spots are the Duchess of Oldenburg, Yellow Transparent, Golden Russian White, Wealthy and American Golden Russet. I have tried spraying the trees with flowers of sulphur and also have tried burning the stuff amongst the trees; but it happened to be in seasons when the apples did not spot any where. Seasons that are too cold and wet to produce corn and tomatoes will tend to cause the spots on apples. One year out of 300 barrels of apples I had only 10 free from spots. The next year it was hard to find any that were affected in this way. Altogether it is a blue outlook for the farmers—potatoes rotting, oats rusting, no wheat, and weather too wet to save the hay. We will have to economize to make both ends meet. B. B.

Delaware.

DOVER, Kent County, July 27.—This has been one of the most trying seasons for farmers in years. The usual pressure of work through our working season has been lately increased by the extraordinary wet season and otherwise unfavorable weather. I think that it has been too wet to work our crops at least one-third of the time since planting, and the effect of the wet season will be felt for the next year. Delaware has a vast amount of low land that in a season like the present will scarcely return the seed. In riding through the country one sees hundreds of acres of corn that will not yield five bushels to the acre. Although corn on high land will make a crop, the State will produce little, if any, more than will be required for home use. The hay crop was good, but a great amount was damaged more or less in curing. Early potatoes are a good crop. In a few small sections there will be a full crop. The peach crop will be very light; many large orchards that would have been good for thousands of bushels under favorable conditions will have scarcely more than enough to supply their owners. Pears promise well, although troubled some with blight. Apples are not very plentiful, with a good home market for the same. Early truck is about gone. Sweet corn and early tomatoes are in the market. The shipment of blackberries has been very heavy. Wheat was a fair crop, but much of it has been damaged, as since harvested the weather has never been dry enough to permit thrashing for over two days at a time. Usually wheat is all thrashed before this. The machines have been out four weeks with an average of three days' work a week, and machine-men are about ready to quit in disgust. The present indication is that the bulk of the wheat will go on the market in poor condition. That marketed at present, brings from 60 to 80 cents per bushel. Pasture is usually good, but stock are losing flesh as the flies are unusually bad. The rose-bug destroyed nearly all the grapes. Farmers are plowing for wheat. The tomato crop promises to be good and the factories will start about the middle of August. Corn 40 cents; wheat, 60 to 80 cents; oats, 30 cents; potatoes new 40 cents; butter, 20 cents; eggs, 15 cents; apples 40 cents. A. G. S.

New Hampshire.

MILFORD, Hillsborough County, August 5.—I see by the RURAL that the country at large is well watered. We have had so much rain that haying has been very uncomfortable so far; but most farmers have nearly done on high ground; but there are acres of low ground that have not been cut, and if this weather continues the hay there will have to be abandoned. The oat crop about here is a total loss, as oats cut 10 days ago are flat on the ground; those cut earlier for fodder lay flat 12 days, but have not been hurt so badly that they cannot be used. One neighbor who sowed 30 bushels for fodder rather late, has not cut the oats as yet, and they are lodged badly, and I would not cut them if he would give them to me.

Potatoes are rotting somewhat and some pieces emit a very unpleasant odor. The Rural No. 2 is looking nice so far, but I noticed to-day that the plants were covered with the old beetles. I should say there were 200 of them on four hills; there are none to speak of on other kinds. Lima beans are white with bloom; they never looked so well. Golden Wax are spotted so badly that they are unfit for use. White pea beans are spotting now, but other crops are flourishing, especially vines of all kinds, and corn. The second crop of clover is ready to cut; so is millet, but the weather is too wet to dry it. P. C.

DOVER, Stafford County.—POTATOES.—This has been the hardest season for farmers that we have seen for a long time. The weather interfered with planting and hoeing. Potatoes were, however, looking well, with the promise of a good crop; but now it looks as though the yield would be poor and small. Two weeks ago, the tops were green, but the wet and muggy weather has rotted them. Now they are nearly all dead and the odor that rises from potato fields is sickening. There will be a fair crop on some early pieces, but they are rotting and store-keepers will buy only a few at a time. For a number of years I raised some Early Rose Potatoes which I dug the 7th of July, averaging a bushel of handsome, marketable tubers to 12 hills. I thought I was going to equal that yield this year, but the weather has beaten me. My R. N.-Y. No. 2 was planted later. One good sprout came from it and I planted it whole. The tops had gone like those of the others, and so I dug them to-day, for fear they would rot. I got four handsome tubers which weighed two pounds and thirteen ounces. One of them weighed seventeen ounces. For three or four years past I have raised Clark's No. 1, and like them better than any others, as they cook and keep better than others. On the 20th of July we cooked some of the old ones and they were as good as when they were dug. White Elephant yields better, but rots badly.

HAY.—There was a good crop of grass, but most of the hay will be poor. Many of the farmers do not begin haying soon enough; but will wait until after the Fourth of July any way. A few who began when grass was ready to be cut got most of the hay in pretty good shape; while many have now not done half the work. At present a great deal of hay that has been cut more than a week, is out on the fields, and the grass has started around the bunches so that it makes quite a show. When will farmers learn to begin haying earlier, and that six men are worth more in one good hay day, than one man in six days? Corn is looking pretty well, but it is backward. Oats were good on high ground; but not so good on low.

STRAWBERRIES did not do well with us this year. It was so dry last year that the plants did not run very much. They have run well this year, so next year we shall be able to have a full ration, (which will be as large as Fred Grundy's or larger) and some to spare. Other berries and Red Astrachan Apples are plentiful now. Good fruit, good air and plenty of work can be had on a farm—and what else do we need?

CORN FODDER.—For cutting fodder corn, take a light cleaver and you will like it. When the fodder is long, when you get it to the barn, cut it three or four times with a broad axe. The cows can eat it better

W. E. R.

New Jersey.

TRENTON, Mercer County, August 5.—As the wet weather seems to be quite general, I suppose I will tell you nothing new when I say it has been very wet here. Eight out of 10 days have been stormy, the rain much of the time pouring down. During Saturday the 3d the rainfall was especially heavy, accompanied with much lightning and heavy thunder. July also was an unusually rainy month. The rainfall amounted to nine and eighty-six one-hundredths inches. The average monthly rainfall is about four inches. On 15 days during the month there was rain, and nine days were cloudy. The effect of so much wet weather and the absence of much sunshine are seriously injurious to all agricultural interests. Work of all kinds on the farm is almost at a stand-still. Crops, such as oats and hay, are unharvested and in the more northerly sections of the State they are ruined. Corn is bent, and a full yield is now out of the question. I do not believe the State will average 50 per cent. of a full crop. Though the hay crop was good, much of it was poorly secured. Some—in many cases most of it—was stacked out. This, owing to the continuous wet weather must become seriously injured. Wheat is far from being a full crop.

As to potatoes, I have made quite an extended trip amongst some of our largest potato growers in the vicinity of Freehold, Monmouth County, and found whole fields in which there were only exceptional spots free from the advancing ruin. The vines have blighted within a very few days as though a fire had run through them. Varieties almost ready to dig were not more affected than later sorts that were but half grown. They all show the blighting influence of some general "epidemic." One or two of the newest varieties, it is hoped, may escape the rot, though it is hardly likely. The prospect for overproduction is not flattering. Tomatoes cannot set and melons will be a failure. Peaches, where there are any, will crack and rot. Of course, all these adverse circumstances cause loss and discouragement to the farming community. But others are also feeling the effects of this condition of the weather. Laboring men, carpenters, and masons especially, are losing much time. The building boom which has been going on in this city for the last few years, still continues. It is remarkable. But, while houses by the score in every part of the city have been begun, their completion has been very much retarded by the continuous rains. Mechanics come with their dinner pails to put in a day's work, only to return after an hour or two without having done a stroke. Unless they can make time, they must live more economically, and this means a more limited market for farm-produce as well as for other things. If the old adage "The first three days rule the month," prove correct, we may expect August to be wet; but we hope for the best. Meanwhile let us take good care of what we have; guard against wastes; improve the time and the mind, and we will pull through. F. D.

New York.

FORESTVILLE, Chautauqua County, August 1.—Haying has come and gone. A finer season for cutting and curing hay was never known, it being cool and sunny—good weather for both hay and workmen. The quality of that cut has been fine and the quantity larger than was anticipated at the time of the big frost in May. Oats are the largest and best of the kind ever grown in this section. The stand of corn is poor. Potatoes are looking fine and promise to be a large crop here. Barley is about half a crop. It is too wet for it this season. Apples are a total failure and other fruits are found only in small quantities.

Nearly all kinds of farm produce are selling low: butter sells at 13 to 15 cents per pound, while cheese brings eight to nine cents per pound; eggs 13 cents per dozen; hay and straw on the decline. Business slow and dull.

C. H. F.

SOUTH BYRON, Genesee County.—We have had an abundance of rain. Wheat, barley and hay are excellent and harvested in good condition with the exception of a part of the last. The apple crop is very light. There is a partial crop of pears in some localities. Potatoes are generally poor, with occasionally a good field. Oats a heavy growth where not too wet; but not yet harvested. I. D. C.

North Carolina.

MCKEE, Davidson County, July 30.—We are having an excess of rain. Wheat about like last year; corn on low land almost ruined by high water, but on high land better. Fruit an abundant crop, but peaches are rotting on the trees as fast as they get ripe. G. W. B.

THE FARMERS' CLUB

ANSWERS TO CORRESPONDENTS

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

AGRICULTURAL COLLEGES: SHEEP HUSBANDRY.

E. H. C., Oberlin, Ohio.—1. Which is the best agricultural college in the East and which in the West? 2. Would it be advisable for a man 33 years old to take a college course? 3. Where could I learn sheep husbandry to the best advantage? 4. What State is best adapted to the business?

ANS.—1. In the East, Massachusetts, at Amherst, Mass., or Cornell, Ithaca, N.Y. At the first-named place you can probably get a more satisfactory general course, while at Cornell you can doubtless find better facilities for special instruction. There are fewer students at Cornell, consequently better chances to obtain special work on the farm or personal instruction from the professors. In the West, Michigan, Iowa or Kansas. 2. There are many studies in the agricultural college course that are intended for younger men or boys. A man of your age probably would not want to go through the mathematics, rhetoricals, etc., etc., that might be more useful to a boy. The chemistry, botany, entomology, physiology and physics would help you in the study of practical agriculture. The R. N.-Y., on the whole, believes it would pay you best to go to a college like Cornell or Wisconsin, where, with men like Prof. I. P. Roberts or Prof. W. A. Henry, a special course could be taken. We firmly believe that a man 50 years old can learn something at these colleges if he goes to them prepared to learn. 3. The best way to learn the principles of sheep husbandry is to hire out to some good sheep-breeder, and study and work at the same time. It must be remembered, however, that a life-time is all too short in which to learn all there is to know about sheep. 4. This will depend upon the class of sheep you wish to raise. For mutton or early lambs it pays to get near a large city where the markets can be easily looked over and advantage taken of a low price for buying or a high price for selling. If you want to raise wool you should search for cheap lands with good pasture and water supply. At present we should say that Montana offers the best opening. A year spent as a sheep herder on a Montana ranch before you start for yourself, will be invaluable.

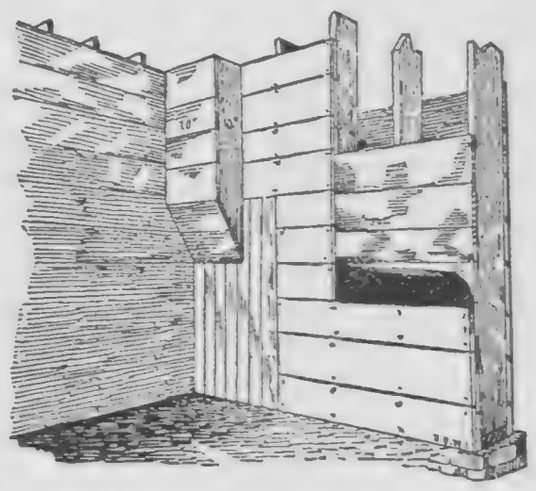
Miscellaneous.

J. W. N., Stowe, Vt.—What is the address of the American Dairyman, and the Dairy World?

ANS.—The American Dairyman, New York City, and the Dairy World, Chicago, Ill.

D. J. P., Sherburne, N. Y.—How can I get rid of live-for-ever?

ANS.—We should be glad to learn from our readers as to the most economical way of exterminating this pest. There is said to be a contagious disease affecting this plant which, when introduced, spreads and destroys it rapidly.



SILO CHUTE Fig. 206. Page 543.

C. F., Fort Wayne, Ind.—Is there any work on frog culture? How are frogs grown for market?

ANS.—We do not know of any such book. Frogs' legs find ready sale in New York. The price paid now is 25 cents per pound. The RURAL hopes to prepare an article on this subject. From investigations made thus far, it appears that all efforts to breed and raise frogs as a business have failed. The frogs that come here are mostly caught in ponds and rivers in the northern part of N. Y. State.

A. A. G., Northville, Tenn.—1. Should young apple trees that are eaten by locusts be cut back? 2. Which is the earliest strawberry? 3. What is a description of, the August Giant Grape?

ANS.—1. It depends upon the amount of injury sustained. The wood covered by new bark will not necessarily become decayed. It will be protected from rot by the bark in a measure. 2. We can't say which is the earliest. Monmouth, Crescent, Crystal City, May King are among the earliest. Crystal City has little merit beyond its earliness. Parry begins to ripen very early. 3. The R. N.-Y. has never raised this grape. It is said to be a cross between Marion and Black Hamburg. Bunches large, berries large, oblong; pulp tender with the Hamburg flavor. Leaf strong and thick. Vine hardy. The R. N.-Y. has heard few favorable reports about it.

DISCUSSION.

WILL AMERICAN SUGAR PAY?

A KANSAS FARMER.—Inclosed find clippings from the Kansas City Journal which makes some pertinent inquiries about the sorghum business. More than a year ago I gave the RURAL my views about this matter, and they have undergone no change. The scheme has

been to pocket as much public money as possible, secured from the nation and the State, as well as counties, townships, cities and such gullible innocents as can be induced to take stock, which will all be wiped out in a short time; but the few will have filled their pockets. The fact cannot be controverted that the raw material for the manufacture of sugar in this country, no matter what it is—be it cane, sorghum, beets, or anything else—can not be raised and handled at the present high price for labor in this country, and compete with the product of the unpaid or ill-paid labor of the islands of the ocean and other countries. When sugar can be laid down in our ocean ports for 4½ cents per pound after having paid the duty, what is the use of Americans trying to make it at a loss, even after the receipt of national and State help. If the time ever comes when we will have to make our own sugar in order to have any, we can make it from Maine to California, and from the Lakes to the Gulf; but not at present prices unless there be a fall in the current price of labor.

R. N.-Y.—The newspaper article referred to discusses the probable profit of sugar-making in Kansas. It appears that efforts have been and are still being made to locate sugar mills in the sorghum-growing sections of that State. The plan pursued was explained in the R. N.-Y. two years ago. The town where the factory is located is to provide the necessary money and the factories are to be operated by experts who take part of the stock besides good salaries for their services. Several towns have already raised in the aggregate $500,000 for the purpose of starting these factories, while as yet there are no official figures to show that the business is certain of yielding a profit. The article goes on to state that no figures have ever come from the factories at Fort Scott, Topeka or Conway Springs to show that they have ever made any profits or even paid expenses. It is also claimed that as soon as the new factories start up, Prof. Swenson, who claims to own a patent on the process to be employed, will commence suit for infringement, which suit will involve great expense.

A. M. Bonebrake who is connected with the Fort Scott Mill, is quoted as saying that the mill paid running expenses, but not the expenses and interest on borrowed capital. He says there will be no money in Kansas sugar until a refinery is established at Kansas City or some other central point, that can use the sugar for refining and utilize sirups. Ten mills like the one at Fort Scott can give business to such a refinery. Though not having much to do with the sugar business, the following extract from this gentleman's remarks is interesting:

"Kansas has been a State of waves on money-making, but the waves recede too rapidly for the man who desires a permanent investment, and fortunes have been lost because the infection became general. The Kansan is yet numerous who invested his all in wheat-growing, and wheat kings sailed high until their aerial ship burst, and down they came, pauperized. There was the sheep disease, which spread so rapidly, and took such serious hold that there is not a county in the State but is the home of men who had visions of a trip to Europe on the proceeds of mutton and wool, but they did not go. Then came the era of silver mines in Colorado in which were buried more than $3,000,000 of good money, for which five figures would represent all the returns. The people in Colorado fattened upon the money of people who would get rich in a short time, and who, in their fancy, traveled only in private cars, with uniformed servants to wait upon them. The town-lot mania is of recent date, and while many grew rich out of speculation, very many more "hung on" just a little too long, and are owners of fine farm property, if they only had enough of it.

Through all these stages the money loaners thrived and prospered, and demonstrated the wonderful resources of Kansas, which has continually advanced and grown rich in spite of these drains upon the people—the speculative portion of them."

HOTEL SWILL: HOW IT SHOULD BE USED.

Col. F. D. Curtis, Saratoga County, New York.—A writer in the Rural on page 477, very properly commends "hotel swill" as an excellent food for swine. These gatherings from the kitchens and tables of hotels and boarding-houses contain a great variety of food, and, as a rule, the mess is well balanced; that is, made up of very good proportions of the nitrogenous and carbonaceous elements. Fed in limited quantities, it will promote a healthy growth; or, if fed liberally, it will fatten hogs rapidly. It is well calculated for either pigs or older swine. When there is a stinted supply there is rarely any trouble; but when the supply of "swill," exceeds the daily wants of the hogs, there will be disease. The cases of extensive mortality among hogs fed on hotel swill are numerous. They are usually charged to "hog cholera," and after the hogs are all dead and the neighborhood has ceased wondering how this epidemic got among them, the thing is tried over again with similar results. The second experiment in attempting to keep the hogs on this food, is usually the last. At Willard Asylum in New York State, a few years ago, death took all the hogs which were fed on the aslyum swill and the same thing occurred at the Northampton, Mass., Asylum. The hogs fed from the swill of the large hotels at Saratoga, have, at different times, died, and also those fed on the slops from other large establishments. In all hotel swill there is a great deal of starchy food—bits of bread, pies and pudding wastes. These remnants ferment rapidly, and become the foundation for an active and general ferment of the whole mass. In hot weather they will ferment in a few hours, or perhaps right away, and especially as the fresh swill is kept in the same vessels from which the old has been taken, and these retain the germs of ferment. Under these conditions these starchy and the sugary portions of the swill become active irritants in the stomachs of the swine, or reach such a degree of fermentation as to become poisonous. This kind of food-poison, from day to day, soon produces scours, and then dysentery or cholera, as it is called, and the hogs die. There is in the swill another kind of food which is even worse in its effects than the ones I have described, and that is the meat. This is mixed all through the swill, and is acted on by the germs of putrefaction, and in this state it is eaten by the swine. Putrid meat is also inflammatory and poisonous. The hogs eating this kind of food, day after day, are sure to be taken with a malignant dysentery—"cholera"—and to die very soon. All of this trouble is unnecessary and if my suggestions are adopted, it can be readily avoided. At the asylums and hotels mentioned, all hotel swill and house gatherings should be fed before any fermentation or putrefaction takes place. It should be gathered twice a day in hot weather and no more should be given to the swine than they will eat up clean at each meal. The residue should be *buried* where the hogs cannot get at it. The vessels in which the swill is collected or transported should be changed every day and thoroughly washed out. The hogs should have access to the ground, and they should have all the coal ashes, cinders and salt they want. The coal ashes can be dumped into their inclosure by the load and the salt kept always in a tight box where they can get what they want. Where these precautions are taken there will be no dysentery, and the best of pork can be made. Too many hogs should not be kept together, especially in a close range. The smaller ones should be by themselves—15 or 20 in one bunch are as many as should be together. There should be a shed under which they could lie out of the sun and storms. The bottom of this should be dry, the troughs should be kept free from mud and filth. A great deal of valuable food is often allowed to go to waste for lack of management of hogs on common-sense principles.

"POSITIVE KNOWLEDGE."

A. L. C., Catonsville, Md.—"A Cooley Man" says: "I know that cream from various sorts of milk raised in the Cooley, when run according to rule, and the divisions made by spaces, comes nearer to yielding all the contents of butter fat in it than that raised by any other device." That is a strong statement and one would naturally suppose that a "Cooley Man" had tried all other devices for raising cream. It is very satisfactory to have such positive knowledge; but we ought to be sure we have it before we make such strong assertions. Some years ago I set my milk in submerged cans in a tank of ice-water; the result, so far as the cream was concerned, was satisfactory; but the labor of lifting out the cans for skimming was not, so I bought an Occident Creamery, which was much more convenient and saved much labor. I had a prejudice in favor of submerging the milk, and did not expect any better results from the change, so I was very pleasantly surprised to find that the butter showed a gain of exactly 50 per cent. at the next churning. I attributed this gain partly to the variation in the yield of milk, but it continued, and I was forced to the conclusion that submerging milk was not the good thing I thought it was. Now how does "A Cooley Man" explain this gain if he "knows" that the cream raised in the Cooley comes nearer to yielding all the contents of butter fat in it than that raised by any other device? I cannot explain it, as I "know" so little about these things that I am always ready to have my opinions upset at any time and in many ways. I am trying to learn what I can though, and have lately been weighing the cream to see how many pounds it took to make a pound of butter. Prof. Babcock said recently, in the Jersey Bulletin, that it required about 6½ pounds of cream raised in a Cooley Creamer to make a pound of butter. This he said in arguing against the claim that Jersey cows had made a pound of butter from—well, say less than 10 pounds of milk. The result of my weighing has been that at four different churnings, I made one pound of butter from 3½, 3⅛, and 3⅛ pounds of cream and the last time from a fraction less than three pounds of cream raised in the Occident Creamery. I suppose Prof. Babcock got his "know" from several different tests, and "A Cooley Man" must have got his "know" from trying all the devices used for cream-raising; my "know" comes from only four trials and I expect to make the fifth tomorrow, and will not be much surprised if there should be much difference in the result. I will say that my cream is from the mixed milk of nine cows, so that the freedom from water in the milk cannot be attributed to one phenomenal animal.

ABOUT SLUG SHOT.

Benj. Hammond.—Regarding recent statements in the R. N.-Y. as to "Slug Shot," it is a well known fact that the finer a powdered insecticide is made, the more effective it is. In order to get plaster as fine as possible before mixing it with the other ingredients that enter into "Slug Shot," it is first double-ground; that is, it is ground as fine as flour, and it is then bolted. These processes cost more than the plaster itself; in other words, the work more than doubles the cost of the plaster. In the next place, if potato beetles were the only insects for which "Slug Shot" was used, it would simplify matters very much; but it is used for a great variety of insects, and hence other poisons, such as tobacco, etc., have to be incorporated with it. This still further increases its cost. Then the fact is overlooked that three-quarters of the Slug Shot sold, is retailed in five and ten-pound packages, to people with small gardens, who have neither the time nor the skill to mix Paris-green with plaster. It takes only from 15 to 25 pounds of "Slug Shot" for an acre of potatoes if it is properly *dusted* on. Consequently, very few farmers buy it by the barrel. It is unjust to compare the cost of a barrel of plaster mixed with Paris-green with the selling price of a small package of Slug Shot or any other insecticide. Take, say, five pounds of the plaster and Paris-green; and put the mixture in bags nicely labeled; send it, say, 100 miles by freight; add to its cost two or three profits with the cost of advertising, and it will be found that it cannot be sold at a price less than that asked for "Slug Shot." In the potato-growing sections farmers seldom use insecticides in the form of a powder; as a rule, they use London purple and water, applied with a sprinkling machine. The consequence is that there is little or no demand for insecticides by the quantity in powdered form.

"CRANBURY FARMING" AGAIN.

D. C. L., Cranbury, N. J.—On page 510 of the Rural a reference is made by N. D., N. Y City to the articles published by the R. N.-Y. on our system of farming at Cranbury He assumes that I could not have over 40 acres in grass, and that at two tons per acre I could not sell over 80 tons of hay. The Rural's reference, on page 512, to my letter in answer to its questions should have answered all his objections except in one or two instances. I mowed last year 42 acres, and sold over 90 tons of hay. This year I mowed 38 acres and will sell without a doubt over 100 tons of hay. I do not feed my cattle any hay except in unfavorable weather when I have to house them through the night. The R. N.-Y. will remember the piece of grass near my outbuildings, containing about seven acres, that has been mowed for four years without the application of fertilizers of any description. I am quite confident the hay from it will weigh three tons to the acre. My wheat will this year yield over 30 bushels per acre, and my corn now bids fair to be a heavy crop. I cannot speak so confidently of my potato crop this year. I would not at this time estimate it at more than 175 bushels per acre, and if the present wet weather continues I may lose many by rot. I am told potatoes are rotting badly in Monmouth County, near here, and about Freehold. In reference to wintering steers, if we could buy them in the fall at prices corresponding to those at which we have to sell them in the spring, we could of course winter them at a profit.

SHALL BANANAS BE ADMITTED FREE OF DUTY?

J. M. Smith, Green Bay, Wis.—My general idea has been, and still is, that all tropical fruits and spices should be admitted free of duty, provided they could reasonably be classed among our necessary articles of food now in general use among the masses of our population. Bananas, pineapples, cocoanuts, etc., are not in general use, and are, in fact, but very little used except in our towns and cities, and even there, much the greater portion of them are used either by the wealthy or well-to-do classes. It is possible that the trade in our home-grown fruits may be slightly affected by the large amounts of these foreign and tropical fruits that are thrown upon our markets at certain seasons of the year; still I imagine that the increase, either in the sale or the prices of our home-grown fruits, would be hardly perceptible if they were entirely shut out of our markets. To sum up the matter in a few words: I think it very unjust to the great masses of our population to let the above-named fruits in free of duty and still keep up a heavy duty upon sugar, an article that is, or ought to be, upon the table of every citizen of our country. If I had the authority I should reverse the duties and do it immediately.

THE "GOOD" PEACH.

E. B. G., Manchester, Pa.—The "Good" Peach to which reference is made in the R. N.-Y. of August 3, originated about 20 years ago in the lot of the late Mr. George Allright, York, Pa. When the tree first came in bearing the fruit was so fine and attractive that Mr. Allright was induced to exhibit some at the county fair where it attracted universal attention. It was there that I first noticed it and I at once commenced propagating the trees and had no trouble in disposing of all I could raise right here in York; consequently the peach is not much disseminated, and is new to the outside world. It has of late come into the hands of several prominent fruit growers, who are enthusiastic in its praise. The tree is a very vigorous, healthy grower and abundant bearer. The fruit is of large to very large size, of a creamy white, sweet, melting and of delicious flavor, superior to any peach ripening at its season—the last of September to October. As to its reproducing itself from seed, I have no experience, but I am very doubtful, and no one should buy trees so raised under the impression that he will get the genuine "Good" Peach.

ACTINIDIA AT THE WEST.

Prof. J. L. Budd, Ames, Iowa.—I have just read in the Rural, with much interest, the notes on Actinidia polygama as grown on the Rural Grounds; but the impression should not be conveyed that this or any other member of the Camellia family will do well in the cold North, or west of the great lakes. With us the A. polygama suffers severely in winter, and in the open sunshine its foliage burns in summer, yet for a summer screen for shady porches and arbors we have nothing better, as it comes up quickly, and its foliage has the half-tropical aspect of the Madeira Vine. On the Rural Grounds, and near the coast southward, the Actinidia arguta will be apt to prove the handsomest and most useful species. As seen in arboretums in Europe, the foliage is larger, darker in color, and more shining than that of A. polygama, and the flowers are larger, more numerous, and pure white in color. In addition, the fruit is edible and agreeable in taste and flavor. The hardiest species is A. callosa of the Ameer region; but the foliage is smaller and less pleasing in expression, and the flowers are small and few in number.

What Others Say

AN EXPLANATION IN ORDER.

The following letter dated the 24th of July, has been received from Prof. C. V. Riley (United States Entomologist) now at the Paris Exposition:

Editor Rural New-Yorker:

Among the few papers which I have sent to me regularly from Washington is the Rural New-Yorker. In the issue for July 13th, page 463, you quote what you call a remarkable statement from me, published in the American Agriculturist. Will you permit me to say in the columns of the R. N. Y that I have not written a line to the American Agriculturist since Mr. Orange Judd went out of it. Hence I have made no statement in that paper, nor is the language which you quote, nor the impression which it conveys, in any way mine. It could not have been quoted from anything I have written, and therefore I disclaim it entirely. I have not seen the copy of the American Agriculturist from which it is taken, and am therefore unable to offer any explanation or solution of the matter. This is, of course, not the first time that I have been similarly misrepresented (even in your columns); but ordinarily I cannot find time to take notice of such misrepresentations. I have too much else to do.

While writing this note, however, let me also say that the article in the same issue, page 469, credited to Bell's Messenger and giving an account of the Agricultural Exhibition here in Paris, is really taken from an

editorial in the London Morning Post with some garbled passages. I believe it is very generally being copied and credited to Bell's Messenger, so that the error referred to is not yours. The editor of the Post was kind enough to give some credit, for the work *done*, to my co-laborers, Prof. Cheesman, and Mr. Charles Richard Dodge, and to myself as having had charge of the exhibit and as representative of the Secretary of Agriculture.

The Editor of Bell's Messenger can doubtless explain the matter. C. V. RILEY.

The following is the article in the R. N.-Y. of July 13, alluded to:

"PROF. C. V. RILEY makes the following remarkable statement in the American Agriculturist:

'The rose-bug is a hard insect to fight, and we have had no practical occasion to practice with it in the work of the Botanical Division of the United States Department of Agriculture. The old method was to knock the insects from the foliage or fruit into a pan of kerosene and water. This, however, is very slow work and not practicable on a large scale.

At River Edge, N. J., they found last season that a mixture of pyrethrum and water made a very excellent liquid to spray upon the vines. *It destroyed all of the insects which it touched and seemed also to have a preventive action. The proper proportion can only be obtained by further experiment.* Col. Pearson, of New Jersey, has also found that the original fungicide mixture of sulphide of copper and lime and water, sprayed upon grape vines, has *both a poisoning and deterring effect upon the rose-bug.* This insect is one which I hope to have a good series of experiments made upon with a view of determining just what is best to be done.'"

PROF. C. V. RILEY.

HARDY ROSES.—Of the newer varieties of Hybrid Perpetual Roses, says J. N. May in Garden and Forest, the best, so far in the locality of Summit, N. J., has been Mrs John Laing. Though not of a very hardy constitution, its pale-pink color, fine form and delightful fragrance make it a very desirable variety, and it is a splendid autumn bloomer. Earl of Dufferin is a grand rose of a deep bright crimson, very fragrant and of a good constitution. Lady Helen Stewart is another first class rose, with a good, vigorous constitution. Ulrich Brunner, though not particularly new, nor yet generally planted, is pleasing in shape and color. Queen of Queens has again proved one of the best bedding roses, of a pale shaded-pink color and very attractive in ever way. To Mr. May's mind, however, the best rose of this class introduced to this country this year is Gloire de Margottin. It is the clearest bright red yet introduced, very fragrant, a strong grower and a rose that pleases every one who sees it. Last of all is that grand rose, Madame Gabriel Luizet. With its satin-pink color and unsurpassed fragrance it has few equals, and it should be in every garden, no matter how small. If it were Mr. May's fate to be deprived of every rose but one for growing in the open air, he would choose this one above all others. It is still producing some good flowers, and will continue to do so all summer at intervals.

A CHUTE FOR THE SILO.—Professor E. M. Shelton, in Bulletin No. 6, of the Kansas Experiment Station, gives a description of a chute for emptying the silo. We give the picture at Fig. 206. We quote Prof. S.'s description as follows:

"The operation of feeding from the silo is usually performed from the door, as shown in the cut. In feeding, it is well to remember that if a silage surface is left exposed to the atmosphere for a number of days, it molds quite rapidly and not unfrequently a considerable loss results. On this account I prefer to feed from the top of the silage, so that more or less of the entire surface can be fed every day. To accomplish this purpose I have planned in the new silo, the chute, shown in the cut, over the door of the silo. This consists simply of a 2x10-inch plank spiked on edge securely to the silo, 20 inches from the corner. Twenty-inch pieces of shiplap lightly tacked to this projecting plank connect it with the adjacent wall, thus forming a 10x20-inch chute which passes through the inner door of the silo. We expect to shovel the silage constantly from the top, emptying the silo through this chute. As the silo empties, the pieces of shiplap may be removed, thus saving the lifting of silage to the top of the chute."

SHORT AND FRESH.

OUR friend (and every one else's friend as well) Dr. F. M. Hexamer, objects to the use of powdered pyrethrum or "Buhach" for destroying rose-bugs because "it disfigures the roses nearly as much as the beetles do." But why use the powder? It must be blown upon the beetles through a pair of bellows and this is hard, tedious work unless merely a few bushes are to be dusted. Why not spray the bushes with pyrethrum water? In this way a hundred roses may be sprayed with scarcely any laborious effort in the same time that would be required to dust a dozen, while one-tenth of the amount of pyrethrum would serve. As this powder is worth at least 75 cents a pound, the difference in cost might, also, well be taken into the account. Two table-spoonfuls added to two gallons of water will suffice for about 100 rose-bushes, while neither the foliage nor the flowers are harmed in any way.

THE New York Agricultural Experiment Station concludes that for the greatest amount of nutriment, considered from a chemical standpoint, corn should not be cut for the silo before it has reached the milk stage of the kernel. That it remains for future investigation to determine whether it is better to be cut at the milky stage or at a later period for the greatest amount of digestible and available nutriment.....

EXPERIMENTS made during the past seven years by the above station with Alfalfa lead to the following opinions or conclusions:

1. That Lucerne or Alfalfa may be successfully grown in New York State.
2. That when once established it thrives well upon clay land, but will probably do better upon good light loam.
3. That seed two years old loses its vitality and fails to germinate. Undoubtedly many of the failures to secure a stand of plants may be traced to poor seed.
4. That the seed-bed must be well prepared, and, in this latitude, it seems best to plant out the seed in the spring, and with no other crop. The seed should be but lightly covered by rolling the ground.
5. That for seven successive years at the station three and four cuttings per year have been taken from the plats.
6. That last year, the sixth in succession, the plats yielded more than 15 tons per acre of green forage, equal to 5.6 tons of Alfalfa hay.
7. That Alfalfa should be cut in early bloom, before the plants become woody.
8. That it should be cured largely in the cock to produce the best quality of hay.
9. That by chemical analysis the hay was found to be more nitrogenous than good Red Clover.
10. That cattle, sheep and horses all relish the hay and seem to do well.
11. That it is found to be more digestible than Red Clover hay.
12. That if farmers would try this crop we advise them to begin with a small piece of well-prepared land, in order to see whether Alfalfa does as well with them as it has at the station.....

THE most casual reader cannot have failed to notice the extensive and increasing investment of English capital in American enterprises and securities. Many fear that this bodes ill to this country, but the American Economist takes a different view of the matter. It says that the fact that it would be within the power and the right of the United States to confiscate the property in this country of any citizen of a State at war with the nation will prove an irresistible argument for peace. A thousand millions of English money invested in the United States would go far toward paying our part of the cost of a war with England .....

THE discarding of all early varieties of peaches for commercial purposes is urged by Colman's Rural World. If the Hale's Early and all other varieties preceding it were rooted out and destroyed and no more of such planted, it would prove a wise step, and beneficial results would follow. These early varieties are too perishable to ship any distance. They are wholly unfit for either drying or evaporating, and have not, in fact, a redeeming feature. They come into every market when there is no room for them, during the small-fruit season, and depreciate the value of other fruits, while the peach shipper never realizes anything for his shipments. A few trees for family or local use are admissible, but none should be cultivated for shipment. Each year demonstrates more forcibly the folly of raising and shipping such fruit, and the results of the present season show, as usual, that only the express companies profit by shipments of these early varieties. More late varieties and fewer early sorts should be the motto of every man who expects to realize anything from peach growing.....

PROF. MAYNARD of the Massachusetts Experiment Station, concludes from his investigations that as between cloth and glass as covering for cold-frames, etc., there is less danger of injury from sun-burning, and of a too great accumulation of heat with the cloth than with glass, and consequently less care is needed in using beds covered with this material during the day. At night, however, more protection is needed to keep out the cold.

In his experience the cloth sash is especially valuable for beds of recently transplanted plants, as the light is less intense and the evaporation less than with glass.

The cloth frame may be made at a cost of about one-sixth that of glass.

TO DISCOVER some means of hastening the fruiting of tardy-bearing trees or those that have grown largely to wood, a row of crab-apple trees was girdled. Three trees were girdled by cutting out a ring of bark one-eighth, one-quarter and one-half inch wide *at the ground*, July 12th, 21st and 29th.

Three trees were girdled just below the main branches with the three widths of girdle as in the first, July 12th, 21st and 29th.

The same as above was made on one or more main branches with the three widths of girdle, July 12th, 21st and 29th.

The results were that all the girdles made near the ground healed over readily and completely.

Those on the main trunk healed less completely, but sufficiently to ensure a good growth of tree and the covering of the injured part in another year.

The girdles made in the branches healed less completely than the last, and in two instances the new growth failed to meet and consequently the branches died soon after starting growth in the spring.

All showed a marked increase in fruitfulness over those not girdled.

Little difference was observed in the effect of the girdling made at different times or in the various widths of the ring of bark taken out.

AS REGARDS the poisonous effects of White Hellebore so commonly used to kill currant-worms, etc., Prof. Maynard quotes Blyth as follows: "20 grains of powdered root have caused death, and, on the other hand, ten times that quantity has been taken with impunity, so that at present it is quite an open question just how much may prove fatal." It is probable that the powdered root loses its active principle with age, and becomes not only less poisonous, but also less valuable as an insecticide.....

BLYTH in his "Poisons, their Effects and Detection," states that the following doses of arsenic may be considered as dangerous: two grains for an adult, thirty grains for a horse, ten grains for a cow, one-half of a grain to one grain for a dog.

There are numerous cases on record of recovery after enormous doses. In nearly all these cases, however, two conditions are recorded: first, that the poison was taken after a full meal, and secondly, that very early and free vomiting occurred. This, indeed, is doubtless the explanation of many cases which otherwise appear inexplicable....

WOODMAN and Tidy, in their work on Forensic Medicine and Toxicology, advise the administering of hot milk and water, and "emetics of sulphate of zinc or mustard; at the same time the throat should be tickled with a feather, but in no case should antimony be given. After free vomiting, give milk and eggs. Sugar and magnesia in milk is a good mixture, an insoluble compound with arsenious acid being in this way formed."....

PROF. MAYNARD finds the Lawson Pear very much like a variety called Early Harvest from Kentucky. This has fruited at the Massachusetts Station and answers the description of the Lawson (or Comet).....

PROF. MAYNARD finds the vine and foliage of the Eldorado Grape vigorous and good, but it is too late in ripening. The Eldorado is a very early grape—earlier at the Rural Grounds than Lady. Possibly he has not the true Eldorado. It is such a splendid grape where it succeeds that it should be thoroughly tested everywhere .....

Horsford's Acid Phosphate

Makes Delicious Lemonade.

A tea-spoonful added to a glass of hot or cold water, and sweetened to the taste, will be found refreshing and invigorating.—*Adv.*

WORD FOR WORD.

——VERMONT WATCHMAN: "Unlike his rather too high-toned predecessor, Dr. Collier has sought not to take his own way, or follow his own preferences, but he asks what it is that the farmers of the State want him to do, and tries to do it. He is a man of the people, bred up on a New York farm, and educated in science as a pupil, and a favorite one, of America's first and greatest agricultural chemist, Professor Johnson of the Sheffield Scientific School at New Haven, Conn."

——ORANGE COUNTY FARMER: "Party lines should have no influence on the farmer's vote. No matter on what ticket his name appears, support the man who has been found true to the farmers' interest; scratch the man who has been found wanting, and demand a pledge from all new candidates."

——FARMERS' REVIEW: "Any work, however humble, is better than to be a deadhead and a deadbeat, which is the usual fate of those who feel too good for their business."

——BREEDER'S GAZETTE: "In all his work Prof. Shelton has met with a large degree of success and has won for himself a high standing among educators of the country. By the way, it is a little odd—but none the less gratifying—that a dependency of Her Majesty should appeal to the American Government for an instructor in agriculture. Evidently 'Yankee' methods of farming and stock-breeding are appreciated abroad."

——HUSBANDMAN: "When farmers establish a trust and stay by it, other people will starve."

——N. Y. TIMES: "It is a matter of history that inventions which have eased labor, have increased wages and have greatly benefited the so-called "poor" people, the working people in fact. But this word is a rank misnomer. The industrious workers of America are not poor; the poor people are the idle, vicious, dissolute, careless, and wasteful, and these always will be poor: but even these are greatly benefited by improved machinery."

——GATES AJAR: "Winifred, if I only supposed I *could* have some flowers in Heaven I should not be half so afraid to go."

"A happy home is the happiest thing in the world. I do not see why it should not be in any world."

——PUCK: "The summer boarder can take care of himself; if he can't, a great many landlords are laboring under a big mistake."

——"MAN charges the debit of his profit and loss account to Fate; but the credit he takes to himself. This is true in the moral as well as the material world."

——"CHICAGO lives in an atmosphere of meat. It is a part of the Ills. that flesh is air to."

Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

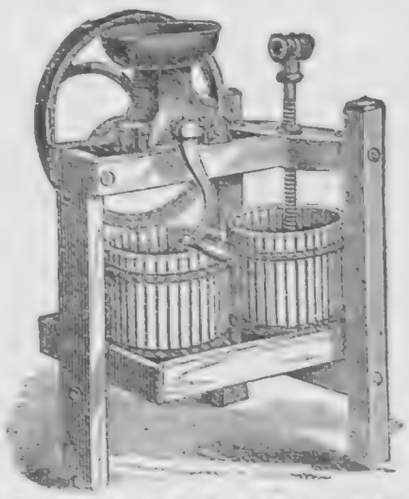
A Fair Trial of Hood's Sarsaparilla will convince any reasonable person that it does possess great medicinal merit. For all diseases of the blood, for dyspepsia, headache and nervousness, for that tired feeling or loss of appetite, it is reasonably certain to be of positive benefit.

JOHNSON'S ANODYNE LINIMENT ESTABLISHED 1810.

For Internal and External Use.

Stops Pain, Cramps, Inflammation in body or limb, like magic. Cures Croup, Asthma, Colds, Catarrh, Cholera Morbus, Diarrhœa, Rheumatism, Neuralgia, Lame-back, Stiff Joints and Strains. Full particulars free. Price 35 cts. post-paid. I. S. JOHNSON & CO., Boston, Mass.

NEW CIDER MACHINERY.



Send for new Illustrated List of Cider Machinery. Three new patterns and seven sizes, from small family size to large 8-barrel press. Please mention RURAL N.-Y. when writing.

HIGGANUM MANUFACTURING CORP., HIGGANUM, CONN.
WAREHOUSE: 38 So. Market Street, Boston, Mass.

SEED WHEAT

STRAWBERRY PLANTS, FRUIT TREES, SMALL FRUITS, DUTCH AND CHINESE FLOWERING BULBS, WINTER BLOOMING HOUSE PLANTS, FANCY POULTRY, PEKIN DUCKS, BRONZE TURKEYS, GERMAN HARES, &c. Our annual Fall catalogue, 1889, of Seed Wheat, Plants, Poultry, &c., will be ready by July 20. Samples of 7 new, hardy and productive varieties of Winter Wheat, including the ironclad RELIABLE and celebrated LEHIGH No. 6, will be sent with catalogue for 10c. in postage stamps. Address, SAMUEL WILSON, Mechanicsville, Bucks Co., Pa. Catalogues free on application.

THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, AUGUST 17, 1889

PROF. S. W. JOHNSON says that very finely ground bone is, at present, one of the cheapest sources of quickly available nitrogen and phosphoric acid. Remember this, you who use S. C. Rock, Cotton-seed meal, though the price is higher than last year, still remains the cheapest source of available nitrogen.

To dig or not to dig! That is the queston that is seriously agitating farmers who have discovered signs of rot in their potato fields. The first tendency would naturally be to take the potatoes out of the ground. But will they be better off in the air? The R. N.-Y. cannot assume the responsibility of giving anything more than a general answer. If the present fair weather continue, it will let its potatoes remain in the ground for a while at least. The R. N.-Y. will be very glad to hear from potato growers who have had experience with such seasons. Shall we dig early?

KEEP COOL! This is the R. N.-Y.'s advice to potato growers and farmers generally. It looks now as though some crops would turn out bad. Potatoes, apples, beans and some other products may prove disappointing. Keep cool. All is not lost. "It's a long lane that has no turning." In the long run farming, with careful attention to details, will pay. Some years prove unprofitable. There is no use in being discouraged. Every sort of business has its dark days, "To-morrow may be better." It is better to say that than to give up and settle into the belief that there is no hope ahead. Keep cool, friends. In any event, don't let your spirits, your temper or your courage catch the rot from the potatoes.

PROF. SANBORN discusses an important question on page 545. There are thousands of farms at the East where live stock must be kept. The farmers have always kept stock of some sort, and can not, even if they would like to do so, change to fertilizer farming yet. The trade in dressed beef has changed the whole aspect of affairs for these farmers. Beef making will not pay, dairying will not pay beyond a reasonable limit, and there is not a profitable market for all the forage that the farm produces. Therefore it is quite natural that farmers should want to investigate the profits of horse-breeding. The R. N.-Y. would like to hear from others on this subject. There is one thing we want to say about it—it never will pay to try to produce a flat-country horse on a hilly farm. The heavy, ponderous trucking breeds belong in level corn countries. There they obtain their best development. Lighter, more active animals are better suited to Eastern farming.

W. B. KEENEY & SONS, of Genesee County, New York, probably the largest handlers of beans in this country, write as follows concerning the prospects for the bean crop:—

"The bean crop last year paid quite well and arrangements were made this year to plant an unusually large amount, but the heavy rains that lasted through the most of June hindered planting, even after the land had been fitted two or three times. Crops on the Genesee River suffered more than those on higher land, and as they often yield one-third more per acre, the production will be very materially lessened in this section. Crops planted on dry land that received good care promised a large yield, but as haying and hoeing came together, beans in most cases were neglected. We cannot reasonably expect more than three-quarters of a common crop, and as many were planted about July 1, an early frost would make the crop still shorter.

The situation 'in a nut-shell' is this: With favorable weather in August and no early frost, we shall get three-fourths of an average crop. With unfavorable weather in August and an early September frost, the crop will not be one-fourth of an average."

BAD WEATHER FOR HAY.

THE hay crop is something immense this year. Ordinarily such a crop would mean low prices and a business stagnation, particularly when the fact is considered that a great surplus remained on hand from last year. But a great deal of this year's crop has been seriously damaged by the wet. President F. D. Douglass, of the Vermont Dairymen's Association, writes the R. N.-Y. as follows:

"I have over 50 acres of heavy grass now under water; while I have over 60 acres of small grain, which must be badly injured, with a continuance of such weather as we have had for some time past. There are probably 2,000 acres within 10 miles of my farm, on the same river, which would have averaged nearly two tons of hay per acre, and which are now in the same condition as my own low land. We have had a succession of floods, and there has been no opportunity for haying upon these meadows, a state of things never before known by the 'oldest inhabitant.' I have owned the farm on which I now live 23 years, and have never before had my hay crop injured by summer floods."

This is a fair sample of letters from many parts of the country. On low-ground, the hay crop has been quite seriously injured The R. N.-Y. judges therefore, that prices for the best quality of hay will continue firm.

CHEAPER TRANSPORTATION FROM THE FAR WEST TO FOREIGN MARKETS.

TO the States and Territories west of the Mississippi, the problem of cheap transportation to Europen markets is one of the most important. Their business is chiefly agricultural, and the principal products they have to send to market are therefore bulky. While they are farthest removed from foreign markets along the present lines of transportation, and have therefore to pay the heaviest freight rates, the prices for their products abroad control those for which they must dispose of them at home. It is very natural therefore that they should take a deep interest in any scheme looking to the establishment of shorter land routes to foreign markets. It is this consideration which for months has given special importance to the project of making, at the national expense, at some point on the Texas coast, a deep-water harbor to which should converge lines of railroad from different parts of all the southwestern States and Territories and from the rest of the western country as far north as Iowa and Dakota, and as far west as California. This subject has already been warmly discussed at several conventions in the West, and investigations have been made by government engineers with regard to the best place for a deep-water harbor on the Texas coast. Three points are now under consideration as the most eligible—Sabine, with a channel now about 10 feet deep at Sabine Pass, at the extreme eastern end of the State bordering on Louisiana; Galveston, about 50 miles further west, with a channel now 16 feet deep directly in front; and Corpus Christi in the western-central part of the State, with a channel at present about nine feet deep at Aransas Pass. The proposed harbor should have a depth of water to permit ocean steamers drawing at least 22 feet of water to cross the bar at any stage of the tide. Galveston appears to be the favorite place Not only is the water on the bar there much deeper than at any other Texas port, but of the 8,000 miles of railroad already constructed in Texas, nearly all have been built with reference to Galveston as the ocean outlet for the vast area of the State as well as for the States and Territories northwest of it.

An important convention is to be held at Topeka, Kansas, in October, to discuss the entire question, and to urge Congress at the extra session—which is now almost certain—to take prompt action in the matter. Delegates will be present from the States of Texas, Colorado, Nevada, Arkansas, Missouri, Kansas, Nebraska, Iowa and California, and from the Territories of New Mexico, Arizona, Utah, Wyoming and Dakota—which has only a Territorial vote as yet—as well as from the Indian Territory. Each State Committee is to be composed of five members, and each Territorial Committee of three. The argument in favor of such a harbor is strengthened by the prospect of a large South American trade which does not now exist, but which would grow up if Western produce had a cheap and ample outlet in the Gulf. A glance at the map of the United States will show that lines of railroad converging from the vast region west of the Mississippi to some port on the Texas coast, would afford shorter and therefore cheaper means of land transportation for goods in transit to Europe than a line to any part of the Atlantic coast, or to any other part of the Gulf, and a dollar saved in the freight of any product to market, ought to be at least 75 cents extra in the pocket of the producer.

OPENING OF THE GREAT SIOUX RESERVATION.

EVER since 1882 Congress has been legislating with regard to the opening for settlement of a part of the great Sioux Reservation in southwestern Dakota. This embraced an area of 22,000,000 acres, and the various tribes of the Sioux race inhabiting it, numbered about 45,000 of both sexes and all ages. As this vast tract, amounting to over 34,375 square miles, was over 1,000 square miles larger than the combined areas of New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut, the settlers in the adjoining States and Territories felt it an outrage that so large a body of fine agricultural land should be appropriated by so small a number of shiftless, unprogressive, idle Indians, who derived most of their support from the Government, especially since with the disappearance of the buffalo, a large area was no longer needed for hunting. This feeling steadily extended among all acquainted with the matter; hence the persistent and strenuous efforts to induce the Indians to sell their surplus area. The principal opponents of the measure have been the chiefs, whom the new order of things threatened with loss of influence and power as well as with great curtailment of their opportunities for self-enrichment. If half the land were sold to the United States, it was proposed that the remainder should be divided, in severalty, among the Indians, instead of being held in common according to immemorial custom. There would be amply sufficient to give a good farm not only to every family in all the tribes, but to every member, old and young, male and female. This would tend to make each family less dependent, and therefore diminish the power and influence of the chiefs. Moreover, the land having become private property, the chiefs could no longer use all they wanted of it for pasturing their exceptionally large herds of horses and cattle. Another class bitterly hostile to the proposed sale, has consisted of the "squaw men" or white men who, having married Indian wives, have settled permanently in the country and acquired much influence and a good deal of property, chiefly in cattle, horses and sheep. Under the new arrangement they also must lose much of their influence and many of their opportunities for accumulation.

There is no doubt also that a majority of the Indians, though willing enough to part with a portion of their territory for a liberal consideration, thought that by delay and haggling they could secure better terms than those hitherto offered. During the past few months, however, General Crook and the other Commissioners who have been urging the Indians to make the bargain, have strongly represented to them the probability that, in the event of their obstinate refusal, the government would either force them to accept the terms offered or take the land without payment, and that the chances for such an issue to the trouble had been greatly increased by the recent admission of North and South Dakota to the sisterhood of States, as their representatives in both Houses of Congress would be strong advocates of such a course. Having finally become convinced that they could not obtain better terms, and that they might be compelled to submit to worse, the recalcitrants yielded to the inevitable last Monday, and the Commissioners easily secured the requisite number of votes to effect the sale.

Hence the long-pending struggle is closed and 11,000,000 acres of fine farming land are ready to be thrown open to settlement as soon as the President shall issue a proclamation to that effect. As for the Indians, the interest on the $14,000,000 purchase money, will be added to their annuities, and the 11,000,000 acres still remaining to them, a region as large as the combined areas of Massachusetts and Vermont, are more than enough to give a comfortable farm to every family, and the opportunity is thrown open to them, under exceptionally favorable conditions, to demonstrate whether it is within the range of their capabilities to adapt themselves to the conditions and secure the benfits of civilization.

This settlement of the Indian problem is the most important event in the history of the Dakotas. The reservation formed a barrier between the eastern and western portions of the new State of South Dakota, thus shutting off direct eastern and western communication between the Missouri and the Black Hills, now regarded as one of the richest mining sections of the country. This barrier to progress is now removed. More important still is the fact that the 11,000,000 acres to be thrown open to settlement will afford good farms to 70,000 families, and judging from the settlement of Oklahoma, it will require vastly less than 70 days, perhaps less than 70 hours, to complete the settlement. For weeks, yea, for months, large crowds of immigrants have been encamped under canvas and in rude shanties on the eastern bank of the Missouri awaiting the settlement of the case, and thousands more have already started, or are about to start for this new Promised Land. The tract ceded extends from the Missouri River on the east to the Black Hills on the west, and from the White River on the south to the Cheyenne River, about the middle of the old reservation in the north: about 60 miles west from the Missouri, on the eastern line of Delano County, it stretches north as far as the Cannon Ball River, stretching about 50 miles to the west. It also includes a part of the rich Winnebago Crow Creek reservation on the east bank of the Missouri, south of Pierre. Three rivers and a large number of streams and creeks run through the tract, and the valleys are wonderfully fertile. The soil is reported to be for the most part a fertile dark loam, with a clay subsoil of the drift formation, which is said to be as rich as the loam of the surface and to be virtually inexhaustible. The country is well adapted for stock raising as well as for the growth of cereals. The climate is cold but dry in winter, and averages good, the mean annual temperature being 45 degrees above zero. The nights are cool and the days warm in summer. Three great railroads have already secured the right of way through the country, and will now be rapidly pushed to completion. The land will be reserved entirely for actual settlers, and will be a valuable addition to the agricultural resources of the nation.

BREVITIES.

Look out For a Varied Entertainment Next Week.

THERE seems to be no demand in the N. Y. market for sweet apples It seems more profitable to feed them to hogs.

COL. CURTIS writes about hotel swill for hogs on page 542. We shall have more to say about the disposition of this product.

THE R. N.-Y. has a photograph of the tools used on Mr. Terry's farm. We can easily count over 50. Farmers will like this picture.

SHEEP are handy animals for market-gardeners to have. They eat the vines of Lima Beans and peas and substances that other stock will refuse.

THE R. N.-Y. finds Breed's Universal Weeder an excellent tool. It will take the place of the cultivator among small plants, and as it is seven feet wide there is a great saving of time in its use.

DOES it pay to try to cure the stalks of early sweet corn? They do not cure readily and are too small anyway to amount to much as feed. We have been feeding ours green to the stock. The horses like them.

THE R. N.-Y. has never seen any chickens grow faster than the grade Dorkings. We like the Dorkings better than ever. Ours lay well, fatten readily and are handsome, intelligent, industrious, well-behaved birds generally.

"TAKE it one year with another," said a friend the other day, "an upland farm pays better than one on the low land." Is that so? Some of us have short memories. A season or so of drought might readily change this opinion.

COMMISSIONMEN are a little alarmed at the reports of potato rot. They are afraid of receiving large shipments of potatoes that will rot on their hands. Shipments of potatoes that are known to be rotting will result in loss and disappointment to all concerned.

THE wet season and consequent sticky condition of soils at all inclined to be heavy, will make the work of potato-diggers very unsatisfactory. Most of these machines are designed for shallow work anyway. It is quite safe to say that digging by machinery will not be fully satisfactory this year.

THREE valuable chickens on the R. N.-Y. Farm have broken their legs this year. As soon as discovered, they were taken into the house and treated. The leg was set—the bone being pulled into shape and a tight bandage of cloth bound around it. The chicken was then kept for a few days in a small basket. All those injured recovered and now show no signs of lameness. They liked the treatment so well that it is now hard to keep them out of the house.

Horseman.

HORSES *vs.* BEEF.

PROFESSOR J. W. SANBORN.

An important discussion; transportation charges on horses lower than on other domestic stock; advantages of Eastern over Western horses; greater care shown in horse raising in the East but less skill in breeding; horse-raising not a risky lottery; importance of good sires and dams; careless breeding common in the East; relative cost of raising horses and beeves; comparative consumption of food by both; experiments on this point; extra cost of horses, beyond the outlay for feed; expense of an extra year's maintenance; horse-raising conducted on sound principles a profitable industry.

THE following question is submitted to me for an answer: "It is proposed to encourage the breeding of horses on Eastern farms to take the place of the beef cattle that were grown there before the dressed-beef trade made the business generally unprofitable. Can it be done?"

The idea seems to be a capital one. Horses can not be transported in quarters without considerable cost for feed and attendance on the road. The horse presents, however, one great advantage to the Western grower that no other animal does—he brings more money per pound of weight than any other domestic animal, and hence less of his cost is absorbed in transportation charges. This is ordinarily a very important consideration in the production of any article at points distant from the markets for it. There are some offsetting conditions that are important. It appears to me that the New England horse is a hardier, livelier animal with more of what is termed life, and as the New Englanders call it, snap, than the Western horse. I do not know that the race-courses sustain this view. I presume that they do not. I do not know that their decision would be conclusive on this point. I am quite confident that we get more blind and maimed horses here than people get in New England.

Part of it is due to the greater care given the animals there. How much I do not know. It is hard to analyze conditions where they are so complex, without special study of them. I notice here a great amount of shoulder troubles which might be ascribed to the very cheap and poor collars used, and the more thoughtless laborers (colored labor is largely used in this State) and somewhat to the more inadequate protection from the weather, given the horses. I apprehend that this whole question of relative value of the horses of each section will be one of controversy. I incline to the view expressed.

One valuable advantage would accrue to the New England horse—it could receive on the smaller farms there, more attention and personal care in growth and training. The value of a horse, unlike that of other domestic animals, does not rest upon its pounds of weight, but upon other qualities. These qualities are various and cannot be discussed here. I may name the fact that a horse renders 10 to 15 years of service under ordinary conditions, and that $25, or $2 a year, for perfection of training and tractableness is simply nothing compared to the value in comfort and execution received. I have handled horses from large raisers and found that their awkwardness, due to inferior training was ineradicable.

More risks by injury are involved in horse than in cattle raising, but these may be accepted as only a small per cent. under good conditions, and when counted into the cost, they do not very materially affect the problem. The notion that horse-raising is a sort of lottery is a fallacy growing out of the vicious habits of breeding, which are worse in the East than in the West. A very large class of the farmers in New England raise colts only when they have a mare that is largely unfitted for service. Some lame, wind-broken, old, or otherwise unserviceable mare is bred in order to make some use of her. Breeding horses there, as a rule in farm life, is an incident, or a sort of accident, of the business of the average New England farmer. No study of the market-demands is made in a close way, and no such careful attention is bestowed on the matter as upon the breeding of sheep, cattle and pigs. Indeed I am of the opinion that the New England farmer breeds no domestic animal as well and thoughtfully as does his Western brother. This, if true, is explainable. I believe that the principle of breeding applied to the horse will result in the same certainty of success that it gives in breeding cattle, and that we can select our type and breed it, and secure sound horses right along by breeding from sound parents which are of sound ancestry. These suggestions seem to be necessary, as the process of breeding from all sorts of unsound and nondescript types has burdened New England horse breeding with unnecessary discouragement.

A survey of the inducements to horse breeding as compared to beef breeding shows an encouraging field. A 1,500-pound steer will bring, say, $75; while an 1,100-pound horse will bring $150, or the latter will bring nearly three times as much per pound as the former. Is there this difference in the cost of production? I most emphatically believe not, and that the horse is produced at a profit; moreover, a horse really well-bred—that is, bred from a good type of parents, sound and kind—is never below $150 in value, even in the hardest times.

The prevalent notion that horses eat more, per capita, than cattle is not true. It may be true that a vicious habit of feeding may convert the horse into a mere eating machine. The horse not having the advantage—or disadvantage, as it may be—of four stomachs and the opportunity to eat his breakfast over and to chew it finer, in consuming the same coarse hay that cattle do, necessarily chews it finer and hence much more slowly, and we misjudge the quantity consumed by the time of mastication. On this point we are not without testimony. The foreign trials that have come to hand show that the horse digests a little less hay than the ox; but to no very material degree; while the results may be said to be inconclusive on this point. Wolf, in making up his celebrated German feeding tables, allows for a horse at hard work, per 1,000 pounds of weight, 17 pounds of digestible food daily, and for the ox 16.1 pounds. Here is about five per cent. difference. But which does the more work? Really it requires no table of results to show us that a work horse utilizes its food for work as well as an ox. Do we not all know that a horse weighing 1,000 pounds, will plow more in a day than an ox weighing 1,500 pounds? And in almost any other work it will do more? If this be so, then the horse must utilize its food to as good an advantage as the ox, or to a better advantage so far as these facts can give evidence. The working horses on the college farm have consumed 23½ pounds of food daily, over one-half of which was in grain. A working ox consumes more. Indeed our growing steers weighing the same as these horses—1,100 pounds—consumed more per day.

It will be understood that the argument advanced by these data goes to show that horses make as good use of food as cattle do, forming a basis upon which to estimate the relative returns from horses and cattle. More direct testimony than the above is found in the experiments of Boussingault, of France, and Prof. E. W. Stewart, of New York State. Each of them fed colts by weight, and each of them found that as good a gain on a given amount of food was made by colts as by calves of equal weight. The average amount of food expressed in the equivalent of hay, required for the growth of a pound of colt after weaning, was 9.42 pounds, as found by Boussingault and Stewart. Experiments in cattle feeding mark this as a very good growth for calves of similar weight.

If it be true, then, that horse flesh costs no more than cattle flesh, or at most but little more, what reasons exist that make the horse cost more than the steer? Cost of service of stallion, care and training, and later maturity. Probably $25 will cover the first factors, while the last would mean extra maintenance fodder for one year. Now, as the average weight of a horse weighing 1,100 pounds (supposing, for convenience, we assume his birth-weight to be 100 pounds) from birth to mature weight, would be 600 pounds, we then have to supply extra maintenance rations for a 600-pound animal for one year, which at 1.8 per cent. of his live weight daily, would be 10 8 pounds daily for winter feed and a summer pasturing. This would give—hay being $12 per ton—$9.54 for hay and, say, $5 for pasturing.

The reader will understand that I calculate no grain in this extra year, and only a maintenance ration, because the amount it requires to make the growth above maintenance is the same whether we feed for two or four years, and I have set the amount required to make the growth against that required for the growth of an equal amount of steer. While I believe that the horse can be pushed to maturity as early as the steer, and that, so far as weight is concerned, that of this extra year need not be put on, yet we have to bear in mind that the horse is grown for his muscle and not for his fat, and that a flabby or immature horse is not in demand.

If we put our various sums together, we get $39 54 as the cost of a horse above the cost of a steer up to the present point. The interest and cost of the extra year's attendance (in New England the manure, is supposed to practically pay for attendance) and general or special risks of a horse over those of a steer—not absolute risks but risks more than we take on a steer—would probably make the sum over $50, so that the cost of a horse over that of a steer would be $50 on the basis of the same weight.

As the food direct costs no more for a pound of horse than for a pound of steer except as it is estimated in the $50 above, we have a 1,500 pound steer, at five cents a pound, costing $75 for food; while a 1,100-pound horse at five cents per pound, costs $55.00. If to this we add the $50 above, we get a total of $105, or to make the figures secure, say, in round numbers, $110 as the cost of the four-year-old horse.

In my opinion horse-raising entered upon thoughtfully and upon the right basis, will pay better than beef-making, and is worthy of the attention of that section of the country referred to in the question. It seems to me that a large proportion of the little and unsound horses now produced in the Eastern States are produced at a decided disadvantage.

Columbia, Mo.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

THE ART INTERCHANGE gives some very useful hints for summer fancy work. Especially pretty is a summer sofa pillow, made of heavy, soft, linen damask, well laundried to take off the gloss and stiffening. On this is stamped a large conventional design, such as horse-chestnut or oak leaves, or large-petaled flowers. The design should be outlined in white rope linen, the veins and midribs being done in the same. The open spaces between the parts of the design should be filled in with old gold rope silk darning. The surface stitches should be one-half inch long, the stitch taken into the goods less than one-quarter of an inch and the lines of the darning one-fourth of an inch apart. The darning is alternated, where one stitch is long, the stitch on the next line is taken midway the preceding one. This cushion is made up plainly, with at the corners cord and tassels of the rope linen, with some of the rope silk on the outside of the tassels.

* * *

AMONG other pillows described by the same authority are chair pillows of figured India silk. Occasional figures are worked with self-colored filo-floss, in long and short stitches, here and there outlined in gold. This cushion is bordered with a frill of cream lace.

Hammocks are made in the form of a round, cut-work design on brown linen, to be buttonholed in brown silk. The linen, when cut out, is placed over a round pillow of yellow Persian silk, puffed around the edges. The back is a plain piece of linen, also round, front and back being laced together, over the puff.

Dainty baby pillows are described, being worked with sprays of natural flowers in natural colors, bordered with a frill of the finest Torchon lace.

* * *

AMONG other books selected for our summer reading is the auto-biography of Harriet Martineau, the famous Englishwoman who wrote of political economy and social science. Her life is such a story of hard work and perseverance, under the discouragement of family trials, constant ill-health, and peculiarities of disposition, that one would imagine anyone would be the better for reading it. Naturally, she was inclined to worry—to look at the dark side, yet she says: "As I have grown older I have seen more and more the importance of dwelling on things honest, lovely, hopeful and bright, rather than on the darker and fouler passions and most mournful weaknesses of human nature." There, we should all be the better for living up to that.

* * *

THOUGH certainly an "advanced" woman, Miss Martineau had little sympathy with the extremists of "Women's Rights." She says that women, like men, can obtain whatever they show themselves fit for. Let them be educated—let their powers be cultivated to the extent for which the means are already provided, and all that is wanted or ought to be desired will follow as a matter of course. Whatever a woman proves herself to be able to do, society will be thankful to see her do—just as if she were a man. If she be scientific science will welcome her, as it has welcomed every woman so qualified. If capable of political thought and actions, women will obtain even that. The time has not come which certainly will come, when women who are practically concerned in political life will have a voice in making the laws which they have to obey; but every woman who can think and speak wisely, and bring up her children soundly, in regard to the rights and duties of society, is advancing the time when the interests of women will be represented as well as those of men."

* * *

SOME very pretty sofa pillows are simply covered with a rich material, preferably brocade, and then edged with a frill of soft silk.

* * *

"OVERDOORS," or railed shelves placed above the door, make very pretty decorations. They look like little balconies, holding china ornaments. They fit the top of the door, and are about six inches high.

LETTERS TO A COUSIN.

II.

DEAR COUSIN: You are a charming letter writer, for you always remember to answer my questions and to make some comment on what I've written you, which little attention I greatly appreciate. Some people never dream of answering a letter; they simply sit down and write of whatever is uppermost in their minds without ever giving a thought to the letter which they have received. Their letters may be interesting and entertaining, but the writers are not, strictly speaking, good correspondents. You know the old saying that "the life of a jest lies in the ears of the hearer" and if the hearer does not make a bright reply or "acknowledge the corn" one might as well never say good things. I am delighted when you write to me about people and books and tell me in your frank, bright way, how they have impressed you: then if I meet the people or read the books you have described I am doubly interested. You say that "People I've Smiled With," by Marshall P. Wilder, is an entertaining book. I read a review of it, with a sufficient number of quotations to give me a pretty good idea of the style and general tenor of the volume. The author seems to be a great admirer of Mr. Blaine and appears to consider him a genial, kind-hearted man, charming companion and a good story-teller.

Some of Mr. Wilder's remarks are very original. I don't think I ever before heard of the east wind going through one "like a piece of bad news;" but isn't the phrase wonderfully expressive? The east wind and bad news are certainly two of the most disagreeable elements we mortals have to encounter on our terrestrial journey. Of the two, however, I believe the east wind is the more depressing on the spirits.

[Isn't the talk about the cheerless, depressing and insalubrious effects of the east wind in this country a mere repetition of the talk about the effects of the east wind in Western Europe? The conditions are exactly the reverse in both hemispheres, however. In the Old World the east wind in summer is dry and hot, having swept over the solid land from the Pacific. In winter it is cold, piercing and dangerous to health after its passage across the snow-clad surface of two continents. On the other hand, the west wind is always mild, rather moist and salubrious, tempering alike the heat of summer and the cold of winter with the more even temperature brought from the broad Atlantic. Now, the conditions here are the reverse. The west and especially the northwest wind sweeping from the Pacific across the continent, is robbed of its moisture in summer and of its heat in winter, and is dry in one season and cold in the other, and at all times less salubrious than the east wind which brings the purer, more temperate and moister air from the ocean. Books written by Europeans very justly dwell on the misery of the east wind, and the talk is often inconsiderately repeated in this country where the conditions are entirely different. The character and effects of any wind do not depend on its direction, but on the nature of the country and climate from which it comes.—ED.]

Some one told me not long ago never to ask a favor of any one on a rainy day or on the 5th of July, the reaction after the Glorious Fourth usually making business men desperately uncivil. It is said that he who watches the clouds never accomplishes anything, but that is, in a measure, untrue. It is well to make hay on a fine day, and it is best to approach a person from whom you want a favor when you feel tolerably certain that he or she is in a good humor. After the dinner hour is a good time, but never, never before breakfast. "Strategy, my boy, strategy," as the old man said, will sometimes achieve success where plain, straight-forward action would fail.

But stratagem is utterly foreign to some natures. I don't suppose that you, dear,

"ever beat around the bush" for anything in your life, and if you should try, I fancy you would get hopelessly entangled. Do you remember the elaborate plans "Huck Finn" and "Tom Sawyer" made when they set out to "steal the nigger?" How, instead of simply getting away with him, they schemed for weeks, sent anonymous letters and had the whole neighborhood in a blaze of excitement, before the eventful night for their deed arrived. I heard Mark Twain himself read that part of "Huckleberry Finn" last winter, in his irresistibly funny manner. Oh, how he would sing-s-o-n-g out his words! I think he possesses the proverbial Yankee drawl in an absolutely perfect state of preservation. If I mention Mark Twain once or twice after you are certain you have heard all you care to hear about him, just let me know and I will *try* to write a letter without mentioning his name; but I won't make any promises, for I like him very much indeed, and his droll remarks are continually recurring to me, so that I may offend again and again.

By the way, was there ever any one so easily offended as our friend D—she is the most "touchy" creature I ever knew, always fancying some one is slighting her or making insinuating remarks for her benefit, when in reality no one is farther from the suspected person's thoughts than herself. To be easily offended is to make a great goose of oneself on a thousand and one occasions. If we would only think more about pleasing other people and saying nice things to them, we would not have so much time to ponder over our own grievances. If anyone were to say something to me with the obvious intention of hurting my feelings, I think I would try my level best not to let him have the satisfaction of knowing if he had accomplished his purpose. You never knew—did you?—that I could sermonize even a little bit? I humbly acknowledge that it is not my forte, and ask your pardon for having thrust my opinions upon you. A big blank sheet of paper sometimes tempts one to say more than one would say if talking face to face with another in immediate danger of being drawn into an argument in which one might come out worsted.

If you disagree with me on paper, I can take ample time to reply; but in conversation everything depends on being bright and prompt—hesitate, and you are lost. Ah, if we could always think to say the right thing in the right place, we would be spared many a regret. I read the other day of an old gentleman of 80, who still remembers with the keenest remorse a conversation 30 years ago, in which he might have made a witty epigram had he thought of it immediately, instead of just five minutes too late; and he will repeat the conversation word for word and show how aptly his remark would have come in. He must be an exceedingly vain old fellow; don't you think so? He ought to have gone home and written a book for the express purpose of introducing his brilliant jest, surely it deserved an elaborate setting if it was worthy of being remembered 30 years!

I believe I have thought of the right thing to say to you just now, and without having fatigued my brain to any great extent either. I would like to have you visit me. Do, please, come. You know the attractions of the place—they are the same now as they were ten years ago; the air and the water and the lake breezes are ever the same.

Affectionately your Cousin,
DOCIA DYKENS.

SHALL WE SEND OUR DAUGHTERS TO BOARDING-SCHOOLS?

THE day is past when any question as to the propriety of educating girls can arise among sensible people. "Give your girls all the education they will take,—strong, solid, informing education,"—is the language of the vast majority of the faithful advisers of this generation. But shall we have our girls taught at home by governesses? Shall they attend day schools, still preserving their home-life intact? Or shall they be sent away from home to study in boarding-schools and colleges for a year or more before their education is completed?

A boarding school conducted by a wise, just, refined man or woman is undoubtedly a good place for anybody old enough to leave home at all,—let us say 16 years old or more. A bad boarding-school is worse than a bad home,—which is very nearly the worst thing on earth. Only the good boarding-schools and colleges, of which there are now a goodly number in existence, are considered in this article.

We are apt to pet our girls too much. Petting outside of judicious limits, is good for neither plants, brute-beasts nor the human animal. Our girls must be taught, in these days of sudden and awful changes, to rely upon themselves; and while retaining the sweetness and modesty of true womanhood, they must be given as much of independence and of strength as we can instill into them. A girl will get these qualities far better in a good boarding-school than she can acquire them at home. Loving mothers are apt to do too much for their daughters. A girl at school has to do things for herself,—to see that, as old George Herbert quaintly says:

"God gave the soul brave wings. Put not those feathers
Into a bed to sleep out all ill weathers."

Thus she often learns to appreciate her mother's work for her—a most valuable lesson. 'Absence," too, "makes her heart grow fonder." She comes to love her home more, and "short retirement urges sweet return."

At a boarding-school, a girl comes to know other girls, often from widely separated sections of the country. Thus her ideas of manners, customs and types of character are broadened, as by travel. This, alone, is often worth the price of a year's stay at the school.

It is true also that at boarding-school, little mannerisms and disagreeble ways, unnoticed perhaps, at home, are thrown out into bold relief, and wise instructors take measures at once to remove or to modify them. "The toning-down" and "polishing-up" which a girl often gets at a good boarding-school may transform in a single year, a restless, hawking, nail-biting, stoop-shouldered hoyden, into a quiet, erect young lady.

Again, the friendships of boarding-school and college life are usually among the choicest possessions of one's prime, and are stronger than they could have become under other circumstances. Young, ardent, loving souls meet and are welded together as they never can be in later years. The love and friendship for noble teachers, too, seldom formed elsewhere as in boarding-schools, form, often, a saving influence in a girl's life.

There is nothing which brings young people to their level like sending them away to school. Thackeray refers to that "over-bearing sense of their own importance which stay-at-home people commonly learn." Even in a small boarding-school, a spoilt and selfish girl quickly observes that the earth has ceased to revolve around her as it did at home. It is a hard but a wholesome lesson.

The regular and punctual habits acquired during a year or more in a good boarding-school, are invaluable to our usually unsystematic girls. The catering of a judicious steward, under the direction of a competent faculty, is, also, much more likely to be good for youthful stomachs than the mixed diet common in too many homes. One of the most cheering signs of the times is the intelligent attention paid to diet, exercise and general health, in our boarding-schools and colleges for young women.

It is true that

"Nothing loveller can be found
In woman, than to study household good,
And good works in her husband to promote."

But in these days of complicated *menages*, a woman must be strong and keen-sighted, who attains to the true good of her household. In order to rightly train up little children, alone, she should have the wisdom of Solomon himself. No great race can be evolved by educating the fathers alone, children are the inheritors of their mother's qualities equally with their father's. There is no danger that our women will not be loving and devoted enough. Let us do all we can to make them self-reliant, reasonable, clear-headed, strong.

"All success
Proves partial failure; all advance implies
What's left behind; all triumph, something crushed
At the chariot wheels."

But with all the dangers and disadvantages,—and they are not few or insignificant,—which attend upon the sending of our girls away from home to obtain a share of their education, it would seem to be better, on the whole, that they should go.

Kate Upson Clark, in Ladies' Home Journal.

GOLDEN GRAINS.

AN exchange says everything has its use if utilized in the right way. If "sitters" could be brought to hold their convocations at the greenhouse, the tobacco smoke would destroy the insects and the scurvy stories would doubtless prove a valuable fertilizer...

TALMAGE says God does not come to the heart as we set a cask at the corner of the house to catch the rain in the shower. It is a pulley fastened to the throne of God, which we pull, bringing the blessing.....

THE haunts of happiness are varied, and rather unaccountable, but I have more often seen it among little children, and home firesides, and in country-houses than anywhere else says the Rev. Sidney Smith.....

THE INDEPENDENT reminds its readers that if every Christian were to try to secure the conversion of at least one person every year, the annual additions to the churches would be millions instead of thousands.....

ONE who can get a true sense of the proportion of things has a large part of true manliness. To know that small things are small, and that it is not worth while to bother about them; that large things are large, and that one must give his heart to them, this is common sense, and this is Christian. Dr. Crosby calls men who waste their lives in trifles "strutting Tom Thumbs, who would be majestic, but only excite smiles."....

IN Mr. Moody's talk about the Bible he said: "Take, read and feed on the whole Word of God. Don't throw this and that passage in the book aside. If you can't explain, can't understand it, don't try; don't worry because of it. There are depths in it no one, however acute his theology, can sound."....

THE INDEPENDENT adds editorially, it is the simple, solid Gospel truths that lie on the face of the Bible that will do us good. Some people are not satisfied with the gold in the mine, and so they think to improve it by "salting the mine," putting things into it that were never there, so as to have the satisfaction of digging them out again. This is not legitimate Bible study.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

Hating, sneering at others, despising others, holding yourself above them DON'T PAY. *You may hold yourself up ever and ever so high. People look at you and smile at or pity you, and the first thing you know God knocks out your underpinning and down you come and there is scarcely one to shed a genuine tear. Hate not at all. We can't afford it. Love all you can, for it is love that makes this world beautiful. Love is the basis of happiness. It is God's right bower.*

EXTRACTS FROM SUNDAY-EVENING TALKS AT THE RURAL GROUNDS.

WE can all sympathize with the old Dutchman who said that the only trouble with his life had been that his front sight was not equal to his hind sight. What he meant was that he could do excellent work, never make a mistake in fact, if he could only have the advantage of experience without being obliged to pay the usual price for it. So could we all for that matter. If we could go back in life 10 years with a careful record of all the failures and successes we have gone through no doubt, if we were honest and ambitious, we could make a much better life record than we have made. I can see plenty of instances in my own life, where a sure intimation of the course events were bound to take would have saved me a load of worry and work. With hot-headed enthusiasm I have plunged into enterprises that resulted in nothing but disappointment and loss of energy and time. In many instances I would not listen to the advice of those who could see the end. The only thing that could have stopped me would be the hard and bitter experience that could not be obtained in any way except by working it out. The enthusiasm, the making light of obstacles, the overconfidence, made up the front sight. The disappointment, the empty pocket-book, loss of time and energy make up the "hind sight."

So we find it all through life. There is always this inability to transpose these two "sights." And the point I want to consider to-night is whether this arrangement is not, after all, as just as we are deserving of? One of the fundamental laws of what we term Nature, that wonderfully incomprehensible power that seems to control and direct all life, is that nothing that lays claim to energy and growth can jump abruptly from one stage to another. There must be a gradual development, a steady growing on well-defined principles, an almost unconscious adding to from hour to hour and from day to day, before solid strength or permanency of design can be found. It is so with the building up of physical strength; it is so with the building up of character.

What spirited young man of 20 does not feel sure that he can carry out all the duties of his 50-year-old employer? How indignant he is at an intimation that every one of the 30 years that separate them must be carefully and earnestly studied out before he can hope to fill out every detail of the old man's place. Put the younger man into the older man's place and in nine cases out of 10 he would make a most ridiculous failure. In the one case where he might succeed in a business way, he would ruin his health or his disposition. It will be simply a case of trying to cut across lots through the mud. You can't possibly take a sudden jump into a place that you have not fairly and honestly worked up to, and hide your trail any more than you can hide the prints of your boots in the mud.

It seems to me that a thorough understanding of this vital principle would save much of the complaining about a defective front sight. A great proportion of the foolish enterprises that we take up, the losing games that we begin, have for their opening chapter this insane belief that somehow we can be first among all the billions of people that have lived since the world began, to break this solid rule of life. If we would only understand that we absolutely cannot hasten our natural development of strength or character or wisdom we might be saved many an hour of trouble and many a moment of desperation. And yet, in spite of all the disappointments, is it not a wise provision of this masterful Nature that separates the fore sight from the hind sight and absolutely compels us to work out the latter by the exercise of our own judgment and energy? Show me one who never was forced to do self-thinking, who always had the plans of others for guidance, who never thought over and profited by a mistake, who never paid out of his own life the price demanded for personal experience, and I will show you a weak, careless, selfish character without a single knob on which to hang true friendship, or a single hole into which true sympathy may creep and find a welcome. I do not think God ever intended that man or woman should go through life without making a single mistake. If He had, He would surely have made the two "sights" we have been talking about equal; for until they are made equal we shall all go on working away at plans that must carry some element of regret. I rather think He intended these mistakes and errors of judgment as an important and necessary part of life. They are educators, strengtheners, refiners, even comforters if we will only use them as such. I do not believe there is a single waste product in Nature. Every rule of life has its use if we will but hunt it out.

The wise man tries to fit the hind sight of one experience to the front sight of another. Success in life depends to a great extent upon physical capacity. A deep, logical mind, a brilliancy of originality, an unnatural keenness or comprehension seem to be the most powerful elements of success, but they are, every one, regulated by physical condition, the circulation of the blood, the digestion, the state of the nervous system. Say what you will, the great things of the world have been wrought out by well ordered stomachs rather than by supernatural brains. How much can I stand? What is the limit of my endurance? These are questions of absolutely vital importance. They should be made a part of every "front sight." We must go to experience for the hind sight that is to accompany them. We know that certain foods do not agree with us; we know that we take cold when we expose ourselves to certain conditions, we know that there are certain bodily signs, headaches and tired feelings that indicate some mistake in living. The "hind sight" teaches us to stop at this sign and apply the proper remedy. There seems to be a general belief that to each one is given some supreme chance, the germ of some great opportunity. If this chance be grasped and pushed to its fullest extent, success follows. Let it be neglected and the chance of a lifetime departs never to return. I have never believed in this idea though I know that with nine-tenths of my friends it amounts almost to a superstition.

Let a man or woman become convinced that his or her great chance has departed and they grow into discouraged cynics, living but to blame themselves for their supposed misfortunes. From the moment that they become satisfied that the one possible prize reserved for them has been lost, the slow and sure development that alone can make one capable of doing great deeds, thinking great thoughts or living truly noble lives is stunted. I do not believe in this one prize doctrine. Most of us start in life with a fair chance. It is true

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria

that those who succeed best are generally those who have the best knack of adaptability, who can condense their exertions, who seem to know by instinct when this condensation will give best returns, but no living person has any moral right to argue himself into the belief that his chances have all passed him or that the mistakes of his life—the hind sight may not be made as valuable to him as though his life had been one round of successes. Here is a totally deaf man making an honest living; here is a blind man supporting a family in good circumstances; here is a man without arms earning his own bread—all of them cheerful, hopeful and full of that thankful philosophy that bubbles up from every misfortune and every mistake. What a lesson such people teach to the thousands of able-bodied folks who sit down and fold their hands in sorrow because they did not know enough to take advantage of their "one chance" or because they cannot live their lives over again and thus do certain things differently. And another thing—why do we always refer to a "success" in life as viewed from a worldly point of view? This man becomes a great banker, this one manages vast railroad enterprises, this is a mighty soldier, that one is the best farmer in the country—they all proved "successful." Here we have a boy who started out in life hopeful of becoming a banker, a railroad prince or a great soldier, but who became only a poor cobbler. The world never heard of him. He could not even do superior work at cobbling. But he helped the poor and the needy, he comforted and he blessed. But he did not "succeed" as we view success. But how did God regard his life? Most of us start wrong. We must be rich, we must be great, we must have easy lives, we must be able to command as much attention as our neighbors do. And the more we strive the more are these desires intensified—the greater the disappointment when we fail, and the greater our inability to substitute the gain of our experience for what we imagine is our loss.

If life were all open before us, if we knew just exactly what to do; if there were no mystery about it all, I believe there would be no stimulants to physical or mental exertion; such a personage as the self-made man would be impossible and we would all become puppets walking listlessly through our little lives to the end. I am glad that there is a mystery about it. I do not care particularly to solve it. My "hind sight" or the portion of my life that I have already lived, seems to have taught me several rules of life that are unvarying.

Work.—There is absolutely nothing accomplished without it. The results we gain in any department of life simply represent work—good or bad, careful or careless. Nothing can ever be accomplished without work; poor work will ruin any reputation 10 times as fast as good work will build it up again.

Health.—Everything is possible with it, nothing is possible without it. Each one is given a certain degree of health. As that health is guarded and nourished, the work of that person becomes strong or weak.

Competition.—There are dozens of people starting out for every desirable place. But one can hold it. Why is he chosen? In nine cases out of 10 it is because he concentrated every energy of mind and body to the task of mastering the duties involved in that position. His temper, his ways of thinking, his ways of living were all picked over and rearranged to fit into that groove. The very successful person is a specialist. No one who spends life in jumping from one trade to another can ever master one. There always will be competition. The bright, original, keen mind welcomes it, because it presents a chance for a clearer distinction between the good and the poor.

Happiness any person can obtain, the poor and the rich, the sick and the well. A good digestion, a clear conscience and a regular employment will bring it. "How much fun can I have out of life?" I wish more men and women would keep asking themselves this question. I do not mean that life should be given up to a search for fun, but I would have more people look on the "bright side" and hunt more for the laughable side of life generally. I have the most abundant faith that if one will continue to work earnestly and studiously, concentrating his work, content to develop in the natural way, cultivating health and good nature to the best of his ability, his place in the world will be assured even if his slow and steady course should pass by the one 'supreme chance." I have made mistakes—who has not? Why should I grieve over them now and long for the impossible—a chance to try and see if I could not dodge them the second time? I shall try to not make them again. I shall take what lessons I can from them and go on to meet whatever the future has in store, and I like to believe that somewhere, some time I may get a chance in life where the conditions are such that these two sights may be even.

HOUSEHOLD SAYINGS.

IN the preface to the "Professor at the Breakfast Table," Dr. Holmes says: "How a stray sentence, a popular saying, the maxim of some wise man, a line accidentally fallen upon and remembered, will sometimes help one when he is all ready to be vexed or indignant." He might have added, "When he is ready to be discouraged, fretful, careless, or guilty of a dozen other failings [to] which man is prone." Every household has its own sayings, and a few belonging to one family circle are given below.

* * *

WHEN we know of a whole family made uncomfortable by the treatment the wife and mother gives her husband and children; or of the commotion one interfering woman can make in a church, a family, or a neighborhood, we pass to each other the household phrase, "One woman's influence!" We often forget, though, to say it when we see happy children and social circles brightened by a good and gracious woman.

* * *

WHEN the day begins late and the work goes cross-wise, the ironing interferes with the cooking, and the churning comes in the heat of the day, we exclaim: "It's no use to chase the hour we lost this morning; it grows into three before we catch it," and truly the work gets so tangled that it all takes more than the usual time, and the fretting it causes does not hasten it any.

* * *

BUT when an early start sets all the household machinery running smoothly, so that the dishes are washed and the churning is done while the day is cool, and the ironing is going on at the same time, so that it is out of the way when the "big pot" and the "little pot" must go on for the vegetable dinner, we smile with pleasure and say: "We have time by the forelock to-day." To-morrow's work will go smoother, and the canning may be done then.

* * *

MONDAY morning friends come to stay to dinner, and we plan for a full week saying: "Company to-day, we may look for them all the week," and Saturday night we tell the visitor who has come last, that he or she was expected; for our cousins, uncles, aunts and friends have made the whole week a holiday by their visits. When the saying fails to turn out true, of course we forget it, and so preserve it and our full faith in it.

* * *

ACCIDENTS never daunt us though numerous enough at times. After the first scare, on being assured no serious harm has been done, some one says: "We need not fear, it is our family luck to escape where others would break their necks." The baby falls into the cistern, but is rescued uninjured; the horse runs away, scatters the sleigh along a mile of road, but the girl-driver rolls out when the back falls off, and in an hour can laugh with the rest over the fright. But "luck" is a poor dependence, and we close the cistern and let the men drive the runaway horse in spite of the family charm.

* * *

WHEN the children build air castles, laying the foundation of each one by saying: "When we are rich," mother says: "Wealth and our family will always be strangers; you never heard of any riches in our family, did you?" And father quotes from the prayer of Agur: "Give me neither poverty nor riches," and yet we build our air castles hopefully, though perhaps less extravagantly, and often think there is better wealth than that represented by dollars and cents.

* * *

IF study seems difficult, or plans fail after hard work to make succeed, Holland's lines are ready from the household sayings: "All common good has common price, exceeding good exceeding," and the greater the prize we are working for, the higher we feel must be the price we pay in care, time, thought and work, and in that difficult coin to command—patient perseverance.

* *

AN admonition that is sometimes very irritating when misapplied, is a comfort when long days of work seem to stretch out endlessly down the future, and there is no promise of long, lazy vacations, full of the delights of eating without cooking, and of enjoyable cool, spotless rooms without touching broom or dust-cloth to make them so. When the weeks are full from Saturday to Saturday again, and the work is bringing some cherished end nearer, if not a vacation, we say with pleasure:

"Rest is not quitting the busy career,
Rest is the fitting of self for one's sphere."

* * *

ANOTHER stanza is helpful for some circumstances, and we apply it in various ways to our occupations. It begins:

"Labor is life, 'tis the still water faileth,
Idleness ever despaireth, bewaileth:
Keep the watch wound, or the dark rust assaileth."

"Now look at these tins, if they had been in use this damp weather they would not be rusty;" we say; or, "Use this table-cloth this week; it has lain here until it is getting yellow. It must have its turn on the table oftener." Then some one quotes our lines and we wonder what faculties we are letting lie idle to rust, or yellow with time. A. B.

A SUBSTITUTE FOR A REFRIGERATOR.

THE scarcity of ice has compelled us to adopt various methods of preserving meats, milk, etc. We tried placing them upon the cellar bottom and covering them with tin pans, screens, etc., but all such devices were incomplete and unhandy. We finally devised a box about five feet long, three feet wide and deep enough to hold a milk pitcher. For convenience we divided it into two compartments by placing a partition in the center. Over the top we placed two lids or doors covered with ordinary wire mosquito-netting, each fastened to the box with hinges, with a knob for lifting it. We placed this box on the cellar bottom, and it answers the purpose of a refrigerator admirably. In fact, we think things keep better in it than they do in an ordinary ice-box. The whole thing can be made from an old dry-goods box or some waste lumber and a couple of yards of mosquito-netting with a couple of hinges and knobs. J. H. G.

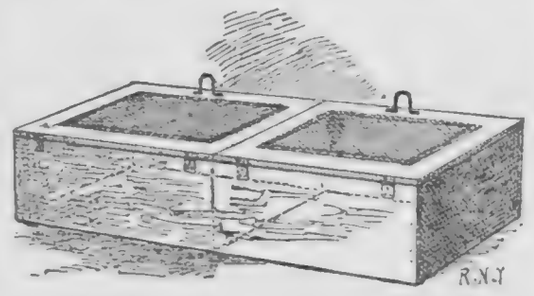


Fig. 207.

Miscellaneous Advertising.

When You Know

That scores of people have been cured of Boils, Carbuncles, and Scrofulous Sores by the use of

Ayer's Sarsaparilla

why not try it yourself? As a blood-purifier, this medicine has no equal. Listen to good advice: Take Ayer's Sarsaparilla, and no other.

"I had numbers of carbuncles on my neck and back, with swellings in my armpits, and was tormented with pain almost beyond endurance. All means of relief to which I resorted failed until I began to use Ayer's Sarsaparilla. One bottle of this remedy restored me to health."—S. Carter, Nashville, Tennessee.

Ayer's Sarsaparilla,

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.
Price $1; six, $5. Worth $5 a bottle.

W. R. & CO'S IMPROVED BUTTER COLOR

IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the buttermilk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere. More of it Used than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & Co., Burlington, Vt.

Ice Cream at Home.

Made cheaply and quickly by using a Triple Motion

White Mountain Freezer.

Will freeze in half the time of any other Freezer and prduce Cream of the finest quality.

White Mountain Freezer Co., 134 Hollis St., Nashua, N.H.

THE WONDERFUL LUBURG CHAIR. 100 STYLES BABY CARRIAGES

COMBINING 5 ARTICLES OF FURNITURE IN ONE

INVALID SUPPLIES AND WHEEL CHAIRS

We retail at the lowest wholesale factory prices. Send stamp for Catalogue. Name goods desired. LUBURG MFG. CO., 145 N. 8th St., Philada., Pa.

Automatic Brake on all Coaches FREE WHEEL CHAIRS TO HIRE. SPECIAL FREE DELIVERY.

SORGHUM EVAPORATOR

For MAPLE, SORGHUM, CIDER, and Fruit Jellies. Has a corrugated pan over firebox, doubling boiling capacity; small interchangeable syrup pans (connected by siphons), easily handled for cleansing and storing; and a perfect automatic regulator. The Champion is as great an improvement over the Cook pan as the latter was over the old iron kettle hung on a fence rail. Catalogues Free. Mention this paper.

THE G. H. GRIMM MFG. CO. HUDSON, O.

Practical Hints TO BUILDERS.

A LITTLE BOOK of 100 pages containing solid facts that every man contemplating BUILDING should know before letting his contracts. Short chapters on the kitchen, chimneys, cistern, foundation, brickwork, mortar, cellar, heating, ventilation, the roof, and many items of interest to builders. Mailed free on receipt of 10c. in postage stamp Address National Sheet Metal Roofing Co., 510 East Twentieth Street, New York City.

South-Down, Oxford-Down Merino, Cotswold and Shropshire-Down

SHEEP & LAMBS

of Superior Breeding at MODERATE PRICES. All Stock sold fully guaranteed of the Best Quality. Write for special prices at once.

W. ATLEE BURPEE & CO.,
Philadelphia, Pa.

A SOLID **STEEL FENCE!**

15 Cts. per Foot, material 8 feet wide. Adapted for Residences, Churches, Cemeteries, Farms, Gardens, &c. All needing Fences, Gates, Arbors, Window Guards, Trellises, etc., write for our illus. price list, mailed free. THE NEWEST THING AND THE BEST. Central Expanded Metal Co. Pittsburgh. | N. W. Expanded Metal Co. Chicago. St. Louis Expanded Metal Co., St. Louis.

PAINLESS EFFECTUAL
BEECHAM'S PILLS
THE GREAT ENGLISH MEDICINE
WORTH A GUINEA A BOX

For Weak Stomach—Impaired Digestion—Disordered Liver.

SOLD BY ALL DRUGGISTS.

PRICE 25 CENTS PER BOX.

Prepared only by THOS. BEECHAM, St. Helens, Lancashire, England.

B. F. ALLEN & CO., Sole Agents

FOR UNITED STATES, 365 & 367 CANAL ST., NEW YORK,

Who (if your druggist does not keep them) will mail Beecham's Pills on receipt of price—*but inquire first.* (Please mention this paper.)

News of the Week.

HOME NEWS.

SATURDAY, August 10, 1889.

AN Ice Trust at Indianapolis from the opening of the season till the end of last week kept the price of ice at 140 per cent. more than was charged last year, regardless of public protest and indignation. A week ago it attempted to put the price higher; but one dealer refused to agree to this and withdrew from the compact, having previously purchased enough lake ice to supply the whole city. He at once reduced the price 50 per cent. and now there's a desperate cutting of rates among the extortioners. *Sic semper tyrannis!*..... Claus Spreckels has given orders to duplicate his mammoth sugar refinery at Philadelphia at once. When this is done the producing capacity of the works will be about 4,000,000 pounds of sugar per day, and the entire cost of the plant between $4,000,000 and $5,000 000. The present factory will be ready for business September 15. Claus doesn't belong to the Sugar Trust, but he keeps even pace with it in putting up prices.. .....There's a movement on foot to create a Cotton Trust or Syndicate to control all the cotton mills in New England, if not in the entire country. It is stated that the amount of money already subscribed, chiefly in England, is enough to buy the cotton industry of America. The Fall River mills alone have a capital of over $20,000,000 and an investment of upwards of $30.000,000 more, owned by thousands of stockholders, who wouldn't sell for anything like prevailing prices. The present ticklish condition of European politics and the danger of a continental conflagration at any hour are inducing capitalists and all others who have money to invest, not only in the United Kingdom, but also in Germany and most of the continent of Europe, to seek for investments in this country. In the event of war all investments of hostile aliens in any country are liable to confiscation and are certain to meet with enormous depreciation in the most favorable event, hence the anxiety to make investments in this country with which there is really little chance of any European country going to war. Of course the greater the amount of capital invested here by the citizens of any foreign nation, the greater would be the pressure they would exercise on their government to prevent it from going to war in case of any embroglio with this country..... Latest advices from Graytown, Nicaragua, the Atlantic port of the projected canal, say the actual work will be under way by Jan. 1. All preparations are being now rapidly pushed forward. The "terrible example" of the Panama fiasco will be a lesson to the American Company in this strictly American enterprise. The men will be well boarded and housed and get all goods at first cost, every precaution being taken to avoid the dissipation, drunkenness, starvation, mismanagement and death that caused the collapse of De Lessep's grand scheme. Work will be pushed simultaneously from the Atlantic and Pacific coasts and it is expected that the canal will be completed in 1894 or 1895 .....The great Chesapeake and Ohio canal, the originator and first president of which was George Washington, and which was completed from Georgetown, D. C., to Cumberland, Md. in 1850, was greatly injured by the late floods at the time of the destruction of Johnstown, Pa. It had long suffered as a prize of the machine politics of Maryland, in which its whole length stretches along the Potomac. In all about $40,000,000 have been sunk in it, and now it is in danger of going into a receiver's hands, as capitalists refuse to subscribe the $300,000 needed to repair the recent damages, unless the present managers are removed and the work is entirely taken out of politics .... The 30th anniversary of the striking of oil in Pennsylvania, will occur on August 29..... A treaty of peace, or it may be only a truce, has been patched up between the leaders of the Knights of Labor, the Federation of Labor, and the Brotherhood of Railroad Firemen and Switchmen, as the programme says: "in order to disabuse the minds of our fellow-toilers of the false impression that any rivalry prevails among the various orders." Having the same object, all should certainly heartily co-operate in achieving it; but it's quite likely that the leaders will go on poaching on one another's preserves as of old.....Hippolyte has been again three times repulsed from Port au Prince in Hayti. He managed to capture 18 prisoners, however. Some of them were shot in fun, and the others after their arrival in the dusky chief's camp, had their throats cut in sight of the whole body of troops, who went into fantastic ecstasies at the sight. In savage reprisal Legitime ordered his prisoners—eight in all—to be taken to the market place where their throats were cut before the populace, who yelled themselves hoarse as each quivering victim fell. The first few were gagged; but the gags of the others were removed in order to add to the exultation of the frenzied mob by the agonized shrieks of the butchered prisoners. Civilized nations are combined to put an end to the horrors of African barbarism in the Dark Continent; why shouldn't they promptly combine to put an end to the horrors of African barbarism in the West Indies?..... ..... An election for State Treasurer and members of the legislature was held the other day in Kentucky. Of course, the Democrats carried the State, by about 40,000 majority. The Republicans are reported, however, to have made some gains in the legislature. The Prohibition vote was, of course, very light..... Martin Burke, the Cronin suspect, arrived in Chicago from Winnipeg, Tuesday. On the road he was heavily manacled and strongly guarded. The police expect he'll turn informer so as to save his own neck by putting those of his confederates in nooses. The world would be well rid of the entire crew..... The Gentiles are jubilant at their victory in the local elections at Salt Lake City, Tuesday, and will turn the present Mormon rascals out next February.....

Monday, elections in the Cherokee Nation were favorable to Chief Mayes's faction, indicating the defeat of the proposition to sell the Cherokee Strip... .....The wrangle still resounds between Postmaster-General Wanamaker and President Green, of the W. U. Telegraph Company, about the compensation to be allowed by the government for telegraphic service. The P.-M.-G. insists that the telegraph companies have received valuable concessions from the nation; Pres. Green declares that the Western Union never received "a stone, a stick of timber or a foot of land under grant of Congress." The Pacific Telegraph Line, however, from the Missouri River to the Pacific, a distance of 1,800 miles, was built upon a government subsidy of $40 000 a year for 10 years, while its net cost to the projectors was only $30,000. It was gobbled up by the W. U. cormorant and capitalized at $6,000,000! On this immense mass of "water" the dear public have been paying a heavy interest. Many of the other lines raked in by the monopoly got as generous an allowance of governmental pap..... Some time ago the New York City authorities, in compliance with a new law, ordered the various telegraph companies to remove their wires and poles from certain streets on which conduits had been laid under ground for the reception of the wires. Most of them obstinately refused to do so, the Western Union, by far the worst offender, being also the worst kicker. Mayor Grant ordered the work to be done at the city's expense. It cost $45 000, while the old poles, wires, etc., have just been sold at auction for $1,500. Jay Gould and his *confréres* are therefore $43.500 ahead..... .....There have been a number of disastrous cloud-bursts in various parts of the country during the week. They appear to be useful down in Georgia where they are called "trash-movers."..... Last Wednesday on a two-mile circular track, at Laurel, Md., a three-ton electric motor made two miles a minute for 10 consecutive minutes. The new system of transportation is intended for express packages, mail matter, newspapers, etc., and is to be pushed rapidly into public use. Edison calls it "the greatest conception since the telegraph"..... In the Connellsville region, Pa., every one of the 776 coke plants and over 14,000 coke ovens are idle on account of one of the worst strikes ever known in that scene of chronic strikes. The strikers are ferociously turbulent against incoming scabs, many of whom have been bludgeoned and maimed and a few shot.... .. Last Sunday night Spokane Falls, a growing town of about 20,000 inhabitants, in the midst of a rich agricultural country in east central Washington Territory, followed the recent example of Seattle on about the same parallel in the western part of the Territory, and for the most part went up in flames and smoke. Thirty blocks with the railroad depot and a vast quantity of merchandise were cremated. The loss is variously estimated at from $10,000,000 to $15,000,000 about one-fourth of which is covered by insurance. Temporary help is urgently needed, but Phœnixlike, a new and improved town will promptly rise from the still warm ashes of the old, bricks taking the place of lumber in the buildings..... Ever since the refusal of the Dominion government, some months ago, to disallow the grant made to the Jesuits by the Quebec legislature to compensate them for losses incurred by English "usurpation" ages ago, the discord between the Protestants and Catholics, and especially the French-Canadians, across the border, has been growing stronger and more bitterly out-spoken. All over the country the Protestants have been ringing the tocsin against the increasingly aggressive priestly domination, and the French Catholics, especially those of the Province of Quebec, find in this an excuse for more compact organization. "The division of Canada into two necessarily hostile parts," "dissolution of the confederacy," "breaking up of the partnership" and "ultimate annexation to the United States," are threats or fears that find frequent expression, in this connection, in the Canadian papers.....

Cases in Point.

With most decided emphasis, we say Compound Oxygen is good—but, as a rule, people are dallient in accepting the good at hand, for no particular reason unless it is the fear of knavery.

But when this fear is removed by others, more venturesome than ourselves through anxiety and affliction, there is no further reason for doubt.

You have not to leap in the dark, for there are many beacons along the way. Here are a number.

PENFIELD, PA., Feb. 2, 1888.
"Thanks to the Lord and Compound Oxygen I believe I am well."
A. H. ROSENKRANS.

FRAZIER, PA., May 28, 1888.
"My recovery is perfectly marvelous. I feel as if I would like every sick person to try Compound Oxygen; it has done so much for me." MISS A. M. ROBB.

DANVILLE, N. Y., July 21, 1886.
"I feel truly Compound Oxygen *saved my life* and nearly four years have passed since I came to you in such a distressing condition, and to-day I can truly say I am *entirely well* and free from *asthma* and every symptom that pertains to it." MARY Y. HEDGES.

WEATHERFORD, TEXAS, April 1, 1888.
"You have my heartfelt gratitude for the good your Compound Oxygen has done me."
MRS. FRANKIE EDWARDS.

We publish a brochure of 200 pages, regarding the effects of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, August 10, 1889.

It appears as if the decrease in immigration to this country was at least in part due to the increase in immigration to the Argentine Republic. The number of European arrivals in Buenos Ayres in May was 21.655, and in June 21,952, or at a rate of 200,000 a year. Since January 1, there has been an influx of over 118.000 foreigners against 65.000 for the corresponding period last year. In view of the fact that in 1867 and the three following years less than 200,000 immigrants a year, and for two of these three years less than 150,000 a year reached the United States—a territory three times larger than the South American Republic—it is evident that the rush into the Argentine is phenomenal. The Republic encourages immigration by paying the passage money of the immigrants, as a rule, and often by making them concessions of land..... ... Felix Pyat, the French writer, dramatist and revolutionist, died Sunday at Paris, aged 79..... ....Tennyson was four score years old on Tuesday, August 6.....The wife of the famous Marshal Canrobert died suddenly at Paris, Tuesday. The Marshal is now 81 years old.... .....

FIVE HARVEST EXCURSIONS.

THE Burlington Route, C., B. & Q. R. R., will sell, on Tuesday, August 6th and 20th, September 10th and 24th, and October 8th, Harvest Excursion Tickets at *Half Rates* to points in the Farming Regions of the West, Southwest and Northwest. Limit 30 days. For circular giving details concerning Tickets, rates, time of trains, etc., and for descriptive land folder, call on your ticket agent, or address P. S. EUSTIS, Gen'l Pass. and Ticket Agent, Chicago, Ill.—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, August 10, 1889.

"The Hillis Plantation Company" has been incorporated for the manufacture and sale of a substitute for coffee in New York.... .. C. H May, U. S. Consul-General to St. Petersburg, has made an exhaustive report to the State Department, on Russian agriculture and cereal trade. He says the exports of cereals from Russia in the past two years show an abnormal increase, due to three causes--First, the enormous crops gathered from both the black lands and the arable prairies; second, the depreciation of the paper rouble, and third, the foolish practice of systems of "corners" in the United States trade. The arable lands of Russia in Europe, excluding Poland, cover an area of 450,000 square miles. This must make Russia a formidable rival to the wheat-growers of America, and must effectually prevent grain dealers of this country cornering the markets of the world. Every corner attempted in this country gives Russia improved opportunity for disposing of her surplus. The nations of Western Europe will not pay artificial prices for grain so long as Russia can furnish such abundant and increasing supplies. These facts should teach market manipulators in this country a lesson, before our export trade is entirely ruined.... The Fourth Annual Exhibition of the New Hampshire State Grange Fair Association will be held September 10-12 ..... The 44th Annual Provincial Exhibition will be held in London, Ontario, Canada, September 9-14. Extensive preparations are being made, and liberal prizes are offered, and it is intended to make this one of the most interesting exhibitions ever held.....The Society of American Florists will hold its Fifth Annual Meeting at Buffalo, N. Y., August 20-22. An excellent programme has been prepared, reduced rates have been obtained from railroads, and a large attendance is expected. Wm. J. Stewart, secretary, 67 Bromfield Street, Boston, Mass.....The 23d Annual Fair of the Watertown Agricultural and Horse Association will be held at Watertown, Conn., September 24-26. A. H. Scovill, secretary, Watertown, Conn..... ..... The "Great St. Louis Fair and Zoological Gardens," will be held at St. Louis, October 7-12. All articles for competition are entered free, and any article exhibited may be sold. All articles and animals must be on the grounds on Saturday, October 5, and all awards will be made before visitors are admitted. All railroad and steamboat lines terminating in St. Louis offer a reduced rate of one fare for the round trip. $70,000 are offered in premiums. Arthur Uhl, secretary, St. Louis .....The Queens County Agricultural Society will hold its 48th annual exhibition at Mineola, Long Island, September 24-27. Secretary, Jacob Hicks, Old Westbury.....The Rock County Agricultural Society will hold its Second Annual Fair at Bassett, Nebraska, October 1-4. R. W. Blake, Long Pine, president, A. H. Gale, secretary..... ..... The Lane mill at New Orleans is turning out 30,000 yards of cotton bagging daily, and has orders on hand for 7,000,000 yards. This is an effectual way to settle the Jute Bagging Trust..... Florida is divided into six inspection districts, with an inspector of fertilizers over each.....The city of New York owns 781 horses, valued at $230,085. It costs about 28 cents per day to keep a fire department horse, and 78 cents for those used in the street-cleaning department..... It is said that a car-load of cheese is shipped daily from New York to California..... A Michigan cheese factory has shipped the June make of cheese directly to England realizing nine cents per pound..... The total receipts of live stock last week, at New York were 12,715 beeves, 98 cows, 5,669 calves, 34,593 sheep, 22,783 swine. This is an increase of about 50 per cent. over the corresponding week last year, on beeves, and a considerable falling off of other animals. There were shipped from this port, during the same time, 2,506 live cattle, 8,660 quarters of beef, 179 sheep. Boston shipments were 1,547 live cattle and 3,804 quarters of beef..... The Williams French Fattening Poultry Company expects to begin operations in Jersey City next week, and will fatten 100,000 head of poultry every 2.. days.....About 77,000,000 acres are planted to corn in this country this year, a slight increase over last year's acreage.....Experiments in the manufacture of sugar by the diffusion process at Lawrence, Louisiana, show a considerable increase in the yield over the mill method..... The Senate Irrigation Committee is on a pilgrimage through the West, and last Sunday distinguished itself by holding a public meeting at Aberdeen, Dakota, the first public meeting ever held on Sunday in the history of the Territory. They claim that irrigation by artesian wells is practicable..... The English are likely to have a Department of Agriculture, with a Minister of Agriculture in charge before the close of the present session of Parliament.....

Crops & Markets.

SATURDAY, August 10, 1889.

THE country at large has not been deluged with water to such an extent during the past, as during the preceding week, although there have been some heavy local rains. Light frosts have been reported from some parts of Illinois, and in the northwest, but no serious damage has resulted. The weather has been more favorable for farm work, and for securing the crops which have escaped complete destruction.

WHEAT has shown but little change, but the tendency is for advanced prices. But little thrashing has been done for the time of year, and much wheat has been badly damaged, if not entirely ruined by the long-continued rains. The receipts at interior points are very much lighter than at the same periods last year. The first new wheat consisting of two car-loads, arrived at Minneapolis, August 5, from Winnebago City, and sold for 82 cents for No. 2, and 88 cents for No. 1.

CORN prospects continue discouraging for nearly all sections. Kansas reports an immense crop, some placing the average at 105. Missouri also reports a good crop, but all other Western and Northwestern States will need a very late, warm fall to mature their crop. Texas also reports the best corn crop

Miscellaneous Advertising.

SEND 10 Cts. in P. O stamps to E. & O. WIRD, Produce Commission Merchants, for circular about **Shipping Produce** Also recipe for **Preserving Eggs.** Established 1845. **No. 279 Washington St., New York City.**

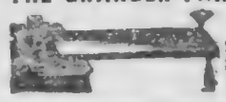
JONES, HE PAYS THE FREIGHT.
5-TON WAGON SCALES, $60.

BEAM BOX
BRASS TARE BEAM.
Freight Paid.
Warranted for 5 Years
Agents Wanted. Send for Terms.
FARMERS'
Barn and Warehouse Scales.
JONES OF BINGHAMTON, Binghamton, N. Y.

WELL TESTED & APPROVED.
New, Valuable and Indispensable Fruits.
Catalogue on application to
T. V. MUNSON, Denison, Texas.

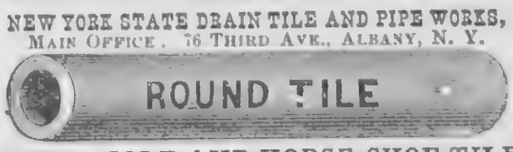
No Yellows Here.
PEACH TREES
WHOLESALE AND RETAIL.
Before ordering elsewhere call and examine our stock or write for circular and prices to **Bridgeville Nurseries.** D. S. MYER & SON, Prop's. Bridgeville, Del.

WANTED—An Experienced FARMER as manager of large farm near Stamford, Conn. Must be about 45 years old, without young children, and expert in fine butter making. Address with full particulars of experience, qualifications, references and salary expected, **Box 1215,** New York City.

THE GRANGER FAMILY FRUIT AND VEGETABLE EVAPORATORS.

$3.50, $6.00 and $10 00.
Send for circular. EASTERN M'F'G CO., 253 S. Fifth St., Phila.

BELLE CITY FODDER and ENSILAGE CUTTER.

All Sizes for Power and Hand use. Carriers of any length. Horse Powers, Etc.
Send for Free Illustrated Catalogue and Price List, with SILO AND ENSILAGE TREATISE. **Racine, Belle City Mfg. Co.,** Wis.

Established 1852. | **JACKSON BROTHERS**
NEW YORK STATE DRAIN TILE AND PIPE WORKS,
MAIN OFFICE, 76 THIRD AVE., ALBANY, N. Y.


ROUND, SOLE AND HORSE-SHOE TILE,
Over 13 inches long. By cargo or smallest quantity. Our new improved machinery makes superior round and sole tile, excelling anything offered heretofore. First Premium wherever exhibited. Price-list on application. Vitrified Glazed Pipe and Tile Machines.

ever grown. The elevators are nearly empty at Baltimore, there being but 42,000 bushels on hand in all. This is due to decreased receipts.

OATS are a very heavy crop, but the crop has been much damaged by rain, and it is impossible to tell yet what the yield and quality will be.

HAY was a heavy crop, but reports show that much of it was secured in bad order. Hay is high now, and prime hay is likely to continue so.

POTATOES do not promise very well, especially on heavy and wet land. Reports of rot are general. The market is well supplied, but dealers will not purchase heavily, fearing further loss by decay; prices have advanced somewhat for good stock.

APPLES are likely to be a very short crop. Wayne County, N. Y. reports apples 25, plums 10, pears 90, peaches 30, grapes 40, raspberries 50. In regard to the apple crop in Western New York, our special correspondent writes:

I have traveled through Orleans, Niagara, Erie, Cattaraugus and Chautauqua Counties, and I am thoroughly convinced that with few exceptions there are no good apples there. Some trees have a few apples, but they are one-sided, cracked or rusted; defects supposed to be caused principally by the heavy frosts in early summer. I do not believe that Western New York will have enough first quality apples for its home use.

HOPS are reported badly damaged by blight in Oneida County, N. Y. In some cases it is said the late varieties will not pay for picking.

CHEESE prices have advanced slightly, at Utica and Little Falls.

BUTTER is dull for everything excepting the best grades. The market is overstocked with common and poor stock.

COTTON promises an average crop in South Carolina, Georgia and Florida. Dealers and manufacturers complain that growers have not exercised proper care in the selection of seed, and that the quality of the crop is deteriorating very rapidly in consequence. They say that unless this condition of affairs is changed, there will be increased competition with foreign cotton, which is coming to market in improved condition with each succeeding year. Certainly manufacturers cannot be blamed for buying the best of raw materials, though they be of foreign production.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, August 10, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf	Texas
Ordinary	8⅜	8¾	.....
Strict Ordinary	8 15-16	8 3-16	....
Good Ordinary	9⅜	9⅛	.....
Strict Good Ordinary	10 5-16	10 9-16	...
Low Middling	10 13-16	11 1-16	...
Strict Low Middling	11 1-16	11 5-16	...
Middling	11¼	11½	.....
Good Middling	11¾	12	...
Strict Good Middling	12	12¼	....
Middling Fair	12 7-16	12 11-16	....
Fair	13 1-16	13 5-16	....

STAINED.

Good Ordinary	8⅜	Low Middling	9 15-16
Strict Good Ord	9	Middling	10¾

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 23c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

POULTRY.—Chickens, spring, per lb, 12@14c, LIVE FOWLS, near-by, per ℔, 12½@13c; fowls, Western, per ℔, 12½@13c; roosters, per ℔ 7c; turkeys, per ℔ 9@11c; ducks, western, per pair, 50@0.70c geese, western, per pair, $1 00@$1 25.

POULTRY.—DRESSED—Turkeys, mixed, per lb. 11@12c; Fowls, western, choice, 12@13c; do, common to good, 11@12; Ducks, spring, good, 10@16; Squabs, white, per dozen, $2 50@——; do dark, do, $1 50@——; Chickens, spring, 10@18c; Fowls, near-by, 12@13c.

GAME.—Golden Plover, per doz. $1 75; Grass do, do $1 00@$1 25; English Snipe, do, do. $2 00.

HOPS.—State, new, best, 17@18c; do, prime, 15@16c; do, low grades, 12@14c; do do, 1887, 8@11 do do do California, common to prime, 13@16c; choice, 18@—c

HAY AND STRAW.—Choice Timothy, 90@95c; do good do, 80@90c; do medium, 70@75c; shipping, 60@65c; do, Clover, mixed, 55@65c. Straw.—No. 1, rye, 70@75c; short do 50@55; oat, 40@45c.

BEANS.—Marrows, new, $2 30@$2 35; new mediums choice, $2 30@2 35, pea, $2 30@$2 35 red kidney, $3 50; white kidneys, choice, 3.00@——; foreign, mediums, 1 35@1 55; California Lima, $3 60@$——; green peas, $1 40@$——.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 7¼@7¾c, and farmers' grades at 5@7c. Pecans, 4@6c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—State, per bbl., $1 50@$1 65; Norfolk, New, $1 25@$1 50; Long Island, $2 00@$——, Cabbage—New, per 100, $1 50@$2 00, Cucumbers, per 1000, $1 00@1 25 Egg Plant, per bbl, $2 00@$3 00. Tomatoes, per crate, 20c@$0 50 Corn, per 100 75c@$1 00. Onions—Potato, per bbl, $1 00@$1 75, East Shore; do, $1.00@$1 50; Egyptian, per bag; $2 00@$——; Jersey White, $2 00@$2 50. State, Yellow, $1.75@$2.00 Lima Beans, per bag, $1 50@$2 50. Turnips, per bbl, 75c.

FRUITS.—FRESH.—Peaches, per crate, $0 75@$1 50; do per carrier, $1 00@$3 00; Huckleberries, per qt, 5—9c. Plums, per bbl. $3 00. Apples—Southern, per crate, —@—— New Jersey, per bbl $1 00@$2 50. Watermelons, per 100, $8 00@$18 00 Muskmelons, per bbl, 50c@$2 50. Blackberries, per qt, 1@4. Pears, per bbl., $1 50@$4. Lemons, per box, $3 75@$4 00. Grapes, per lb. 2@10c.;

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5½@6c; do new, common to prime, 4@5½c; sliced, new, 3@3¾c; quarters, 3@4c; chopped, 2½@3c; cores and skins, 1@2c. Cherries, new, 8@11c. Raspberries, new, 17@18c. Blackberries, 3¾@4c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 11@14c; do do, unpeeled 5@6c; North Carolina sun-dried, peeled, 6½@8c. plums, 6c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 11 75@12 50; short clear, $14 00@16 00. Extra Prime mess, $11 00@$— prime do, $10 75@$11 and family mess, $12 00@13 00. BEEF—India Mess in tierces, $12 50@14. Extra Mess, in barrels, $7 00@7 50 Packet, $9 50@$10 00 per bbl, and $12@$12 50 in tierces; Plate, $7 50@8 00; Family at $11—@$14 HAMS—$14 00@$14 50, Winter packing. CUT MEATS.—Quoted 12 lb average. Bellies, 7½@—c; Pickled Hams, 11¾c; pickled Shoulders 5½@—c; Smoked shoulders 6c; do Hams, 12¼@12½c. Dressed Hogs.—City, heavy to light 5½@6¾c Pigs, 6½c. LARD.—City steam, $6 35; June, $——; July, $6 94, August, $7 03; September, $7 11; October, $7 17; South America, 7.6c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes, Maryland Rose, per bbl, $1 50@$1 75. Provisions were steady. BEEF.—City family, per bbl. $9 00@$9 50; do, packets, $8@8 50; smoked beef, 10@10½c; beef hams, $14 PORK.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@13c do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6¼@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6½@7.

CHICAGO.—MESS PORK.—$10 62@10 70 LARD.—$6 07@$6 10 per 100 lbs; Short Rib sides (loose), $5 45; dry salted shoulders, boxed, $5 20; short clear sides, boxed, $5 62@$5 75.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 17@17½. Elgin, best, 18c; Western, best 16½@17; do prime, 15½c; do good, 13½@14; do poor, 12@13. State, Dairy, half-firkins, tubs, best, 17@——c; do do prime, 15@16; do do fine, 13½@14½; Welsh tubs, fine, 15@—c; do do, good, 13½@14; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western imitation Creamery, best, 13@14; do fine, 11½@12½; Western dairy, fine, 12@12½c; do fair, 11@12c; do poor, 9@10c; do factory, fresh, best, 12½@13, do prime, 11½@12; do good, 10@11; do poor, 8@9c.

CHEESE.—State factory, fancy, 8½c; do do fine, —@——c; do do, prime, 7@8¼c; do do, fair to good, 7¾@—c; Ohio, flat, prime, 6@7c; do good, —@—c; do, good, —@—; Skims, light, 5@6c; do medium, 2@3; do full, 1@2c.

EGGS.—Near-by, fresh, 16½@——c; Canadian, 16@—c; Southern, 14½@15c; Western, best, 15½@16c.

PHILADELPHIA.—BUTTER dull. Pennsylvania creamery extra, at 17@18c; Pennsylvania Prints, extra, 25@27c; B.C. and N.Y. creamery, extra, 17c; Western factory 14@15c, packing butter, 11@12c. Eggs.—Were firm; Pennsylvania firsts 14½@15c; Western firsts 13½@14c; Cheese dull—steady; demand fair; New York full cream, at 8½c. Ohio flats, choice, 7¼@7½c; do, fair to prime, 6½@7½c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Elgin creamery, 15½@16½c. choice Western, 15@15½c. choice dairy, 12@13½c; common to fair, 8@10c. Eggs firm at 12@——c.

GRAIN MARKETS.

WHEAT.—Sales—New No. 3 Red, afloat, 86½@87c; Old do quoted 90c; No, 2 Red, f. o b. 85¾@86½c, according to delivery; Ungraded Winter Red, 79@85½c; Steamer No. 3 Red (new) 75@76½c, elevator; Steamer No. 2 Red, 86c, elevator, 86½c, afloat; No 2 August, 85@85¼c; do September, 84½@84½c; do October, 84⅞@85⅛c; do November, 86¼c; do December, 87⅛@87½c do January, 88¾c do May, 91⅞ 92c. RYE—Very dull and weaker for Western, which is quoted at 51@52½c; State steady at 53@54½c. CORN—Ungraded Mixed and Yellow, 43¼@44¼c; No. 2 Mixed, 43¾c, elevator 43⅞@44c, afloat; No. 2 White, 51c, elevator; No. 2 August, 43¾c; do September, 43⅞@44c; do October, 44⅛@44 9-16c; do November, 44⅜c; do December, 43⅜c. OATS.—No 3, 26c, do White, 33c; No. 2 26½@27½c, elevator, 28c delivered for old, No. 2 white, 34@34½c; No. 1 White, 38c; Mixed Western, 25@29c; White, do, 34@40c; No. 2 August, 26¾c. do September, 26⅝@26¾c, do October, 26⅝@26¾c; do November, 27¼@27⅜c; do May, 30c; do White, August, 30¼c; do White, September, 29c.

LIVE STOCK MARKETS.

New-York, Saturday August 10, 1889.

BEEVES were $3 60@$4 80 for poor to choice Natives; Bulls at $2@$3. Sales—Illinois Steers 1,237 lbs at $4 60 per $100 lbs; do, 1,321 lbs, at $4 45, do Pennsylvania, 1 249 lbs, at $4 40; State Bulls, 1,080 lbs. at $2 60; do 994 lbs, at $2 45. Indiana Steers, 1,519 lbs, at $4 90; do 1 475 lbs. at $4 90; do 1.300 lbs, at $4 50; do Illinois 1 354 lbs, at $4 65; do Western, 1 249 lbs, at $4 45; S ate do 1,315 lbs, at $4 45; Ohio Oxen and Heifers, 1 399 lbs. at $3 90, Chicago Steers, 1,396 lbs, at $4 20; Ohio do 1.329 lbs, at $4 45; Illinois Steers, 1,296 lbs, at $4 25; Bulls, 790 lbs, at $2.

MILCH COWS.—Receipts thus far this week 103 head. The demand is slow. Sales at $35 50@$45.

CALVES.—Veals sold at 4½ to 6¼c, a few Extra at 6½c; Fat and Mixed lots at 3½@4½c; Buttermilks at 2¾@3c. Sales of Buttermilk Calves, 208 lbs, average, at $2 25 per 100 lbs; do 208 lbs, at $2 75; do, 194 lbs. at $3; Mixed do, 254 lbs, at $3 50, do, 249 lbs, at $3 6½; Fed do, 210 lbs, at $3 75; Yearlings, 368 lbs, at $2 50; Veals, 158 lbs, at $6.

SHEEP AND LAMBS.—Poor to Best Sheep sold at $3@$5 25. Ordinary to Choice Lambs sold at $6@$7 50; Extras at $7 75. Sales—West Virginia sheep (culls), 79 ℔ average at $3 per 100 ℔; State do. 104 ℔ at $3 90; West Virginia lambs, 45 ℔ at $6; State do, 65 ℔, at $6 87½@$7 50. Kentucky Sheep, 118 ℔, at $5 25; Territory do, 103 ℔, at $5 25; Virginia lambs, 73 ℔, at $7 75; Kentucky Sheep (bucks and ewes), 120 ℔ at $3 87½; Indiana do. 104 ℔, at $5; Kentucky lambs, 63½ ℔, at $6 50; Jersey ewes, 100 ℔, at $4 50; Jersey lambs, 64 ℔, at $7; do 74 ℔, at $7 50. Indiana sheep, 86 ℔, at $4 62½ State sheep, 83 ℔, at $4 65; State lambs, 72 ℔, at $7 40; do 77 ℔, at $7 75; Ohio do, 68 lbs, at $7; Texas Sheep, 93 lbs, at $5; State Ewes, 98 lbs, at $4 75 State Lambs, 59½ lbs, at $6 50,

HOGS.—Steady at $4 40@$4 90 and a few light State Hogs at $5 10. Sales—State Hogs, 99 lbs average at $5 10 per 100 lbs; do. 233 lbs, at $4 80; Roughs, 306 lbs, at $3 80.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING AUGUST 10, 1889.

R. M. C.—O. S. H.—E. H. C.—P. O. C.—"A Farmer;" thank you—J. C. B.—J. E. R. R.—G. V G.—J. O. B.—F. G. B.—H. H. G.—E. F. V.—F. F. & S.—D. J. P.—C. H. S.—W. H. B.—S. H. B.—F. G. B.—I. M. G.—L. M. W.—J. A. McA.—W. P. C.—E. J. M.—S. B. P.—J. H. F.—L. S.—C. C. W.—E. H. C.—C. B.—L. B S.—L F A—J. U. N.—F. D. C.—C. U. U.—F E B.—A J. C.—J. H. A.—C. M. B.—C. S. M.—M. B. K.—I. D. C.—I. P. R.—R. B.—S. S.—J. E. F.—C. S. R.—U. F—C. W. W.—B. A. P.—J C.—P. C.—W. E. R.—J. U. N.—M. J. L—J M U.—J. B. K.—J. S. F. K. P.—U. H. S.—J. U.—E. D. G.—

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RURAL NEW-YORKER CROSS-BRED AND HYBRID WHEATS.

A Circular containing full descriptions of these wonderful Wheats, mailed to applicants.

No. 2. Half wheat, half rye by parentage, though resembling wheat in all respects. Nearly as early to mature as rye. Stem purplish in color. Heads average over three inches long, eight breasts (or spikelets) to a side; chaff white, beardless. Often four grains to a breast, always three, of medium size, amber color and apparently hard.

No. 3. Half wheat, half rye by parentage, though resembling wheat in all respects. Nearly as early as rye to ripen. Tall yellow, stiff straw. Heads average three inches long, seven breasts to a side; chaff brown, bearded. Three grains to a breast, small to medium size, dark amber color

No. 50. Pure wheat cross. Early. Stem yellow. Heads average over three inches and somewhat club-shaped, seven breasts to a side; chaff white, beardless. Generally four grains to a breast, medium to small in size, hard, and of amber color.

No. 51. Pure wheat cross. Late. Stem yellow. Heads very long, averaging over four inches, nine breasts to a side; chaff brown, heavily bearded. From three to four grains to a breast, medium size, amber color. Stem tall and strong.

No. 53. Pure wheat cross. Medium to mature. Stems pink. Heads average nearly four inches. Breasts crowded—often ten to a side; chaff very clear and white, heavily bearded. Four grains to a spikelet—sometimes five—fair size, amber color. Inclined to club-head.

No. 55. Pure wheat cross. Medium to ripen. Stems yellow. Heads average nearly four inches. Eight breasts to a side; chaff white, heavily bearded; three to four grains to a breast, fair size, bright amber color, hard. Regular heads, that is, *not* inclined to club.

Price for packages containing twenty-five grains, 25 cents, or the collection of six sorts for $1.

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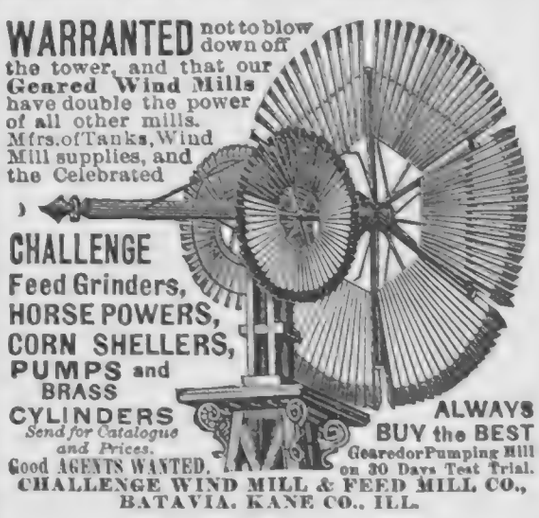

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Miscellaneous Advertising.

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Various.

A JERSEYMAN'S JOTTINGS.

ETHICS OF MARKETING.—Some years ago I listened to a discussion of the following topic: "If you know that a valuable gold mine is located under your neighbor's field and you also know that he would be glad to sell the field for the usual price of surrounding land, is it your duty to go and tell him about the gold mine, or would it be right to buy the land at his price and thus obtain possession of the mine?" This, I understand, is quite a favorite question in all text books on moral philosophy. The teachers all undertake to show that the right thing in the case is to tell the neighbor about the mine. In the discussion that I listened to it was decided that way. This is a favorite way to put the matter because it is all ideal. Gold mines are not very numerous in my part of the country, so that we can put down the moral law in great style when we discuss them. But I have often wondered how we would feel if the question were put in a more practical shape. Are we always so considerate of our neighbor's interests? Cholera breaks out among our hogs. We know it is a dangerous disease and that all the hogs are liable to it. What are we to do? Kill the sick hogs and sell the others just as soon as we can, or keep them all and lose a good proportion of them rather than sell any that may be diseased?

In one case we get our money back. Somebody has to suffer on the hogs; somebody has to eat the pork—we don't. In the other case we lose money that we cannot afford to lose, but we know that we have not put diseased pork on the market. Again, our hens have the cholera. We are sure enough that their eggs cannot be healthy. Do we tell our customers of this or do we sell the eggs and say nothing? Or our potatoes begin to rot. We may rush in and dig them, and send them at once to market, well knowing that the spores of the rot are in them and that somebody will have to suffer loss in consequence. These are matters that would be apt to provoke lively discussions at village debating societies.

The Potato Rot.—It looked last week as though the entire potato crop in our neighborhood was ruined. Farmers expected a dry season and so they put the potatoes on the lowest spots they could find. We have had a perfect deluge of rain. The ground has been like a wet sponge, and fields that gave promise of a great yield are now great masses of soft filth. It is a sickening sight. Many of our farmers depend upon potatoes for their winter cash, and it is the crop on which a good portion of the chemical fertilizers are used. Farmers are in a quandary as to what to do with the crop. Shall they dig the potatoes at once and try to sell them, or let them stay in the ground until the usual time for digging?

There seems to be a general belief that many farmers will dig at once and rush the product to the market. At present, I do not see that this belief is well founded. Marketmen say there is no rush yet at least to this market. If the potatoes are dug now they will continue to rot. During the past few days the weather has become clear and cool. If this continues the soil will at last dry out and the potatoes will be almost as safe in the ground as out of it. It might be well to dig those on lower ground earlier than usual, but unless we have more heavy rains I shall let my upland potatoes stay where they are for the present. I hope the damage will not prove so serious as farmers fear. It is true that reports of rot are general from all over the country, but the fact remains that we shall not know the real state of affairs until the potatoes are actually dug and sorted. Old potato growers assert that if one tuber in a hill becomes rotten there is no hope for the rest. I believe this depends to a great extent upon the sort of weather we have. A dry, cool August and September will make quite a change in the potato market. If potatoes are dug now, about the best thing that can be done with them is to spread them out in a thin layer in a dry cool place and sprinkle lime over them. They should also be picked over now and then and the rotten ones thrown out.

One result of the increased price of sugar will be a reduction in the amount consumed. Every member of the family will "fight the trust" by taking care to use just a little less sugar in the coffee, the tea or with the fruit. Let this saving amount to only a table-spoonful per day for the average family, and the total amount for the country would be immense. Let each family average a saving of an ounce per day, and it would mean a decreased daily sale of nearly 500,000 pounds for the country at large. This is a natural law. Whenever an article becomes outrageously high we all begin little economies. The sum total of these little economies rolls up an enormous volume. If potatoes are as scarce this winter as some people think they will be, the price will not go beyond a certain figure. Rather than pay more the consumers will eat more rice or buy more turnips and carrots.

The markets remain about the same. More chickens are coming; some very good lots are for sale. Eggs keep their price well. It will soon be time for the home-made sausage makers to capture the market. Suckling pigs are in demand but the supply is limited. Lima beans hold their price well and sweet corn is doing better than was expected. Tomatoes bring better prices than last year. The prospects for clover and Timothy seed point toward lower prices. Oats promise to be lower. There is no doubt that corn will be higher this winter than for several years past. Nobody can give anything definite about the potato crop yet. The general opinion is that the rot will not prove so bad as is now expected, except in a few localities. In any event the crop will be short and as Canada has had even more wet weather than we have had, the imports will not be exceptionally heavy. The first celery is here. Blackberries are slow of sale. A few huckleberries are to be found, but they are very poor specimens. Peaches are very poor. Pears are selling well with plums a little slow. Grape dealers expect good prices. Tropical fruits are everywhere.

Whenever the prospects for the corn crop are bad the English papers begin to urge their readers to drop corn-meal partially at least—and substitute linseed-meal. This year they have begun early on this advice. I think it would be a good plan for American farmers—Eastern ones particularly—to study out this matter too. How many have ever fed linseed-meal? How many know where to get it? If corn is going to rise in price this winter I want to know more about linseed-meal. What is its intrinsic value for feeding? I would like to know so that when the price of corn goes above this value, I can try the linseed. I think it will pay farmers well to look into such matters.

JERSEYMAN.

Literary.

MAGAZINE REVIEWS.

THE AUGUST CENTURY fully equals its contemporaries in its articles relating to out-door life, excursions, natural history, etc. It is truly a "Midsummer Holiday Number." The "Stream of Pleasure" is an illustrated account of a trip from Oxford down the Thames in a skiff, by Joseph and Elizabeth Robbins Pennell. A very entertaining account is given of their trip down this popular water-way, passing the locks, dodging the bridges, exploring the tributary streams and adjacent towns, and running into and escaping from all sorts of possible and impossible dangers. "Afternoon at a Ranch" is the title of the picture in the Far West series. S. Weir Mitchell describes the different species of venomous serpents in this country and in India in the article "The Poison of Serpents." There are in this country very few poisonous serpents, and these are continually diminishing in numbers. India is pre-eminently the home of this class, there being 15 different genera. The rattlesnake is the most common in America. The article contains several illustrations of this reptile, as well as of other species. What to do when bitten by a poisonous snake is also told. The Century has caught the "symposium" fever. The artists are the contributors of a number of articles dealing with their branch of the business. "Wood-engravers in Camp" by Frank French, tells how a small party of wood-engravers made a camping-out excursion to the regions near Hockanum, Mass. The article is illustrated with engravings taken by the author, of some of the quaint residents of the locality visited and also of a "Hockanum Wild Flower," of the genus girl. Other articles are "Originality in Wood-engraving," "Painter-engraving," and "The New School of Engraving," all illustrated. Frederic Remington contributes "Artist Wanderings Among the Cheyennes," with profuse illustrations. He tells how the Cheyennes are made useful as policemen, scouts, etc. Mr. Kennan's paper deals with "State Criminals at the Kara Mines." Dark as are the pictures presented in these papers, there is an occasional ray of light, and this article brings to the fore Col. (since made General) Kononovich, at that time the governor of the mines and prisons at Kara, a very conscientious, merciful man. The Lincoln History deals with events attending Mr. Lincoln's renomination and the exciting campaign during the summer of '64. In commemoration of Tennyson's 80th birthday, a fine engraving of the poet laureate is given as a frontispiece. Henry Van Dyke also contributes "The Bible in Tennyson." There are numerous choice bits of verse, and all conspire to make the number an exceptionally strong one. The Century Company, New York.

THE COSMOPOLITAN CO. claims to furnish a first-class magazine at a low price, and, judging by the August number, the claim is well founded. "Social Life at Ottawa" is the first article, and gives a very good description of the customs and manners at the Canadian capital. Illustrations and descriptions are given of the Government House, and of several of the leaders of society. Richard Wheatley in "The Caged Tigers of Santa Rosa," describes the Chiricahua Apaches who were formerly confined in Fort Pickens on Santa Rosa Island, Fla., but who have since been transferred to Mount Vernon, Alabama. "The Children of Arachne" by Emile Blanchard, deals with different species of spiders and describes their curious habits and homes. The European Trap-door Spider is illustrated, which not only makes her house, but closes it with a trap-door hung on hinges when she retires. Then there are the water spiders which build their houses securely beneath the surface, and then carry bubbles of air down to fill them. Many other kinds are illustrated and described, the whole article forming a very interesting lesson in natural history. Kate Douglas Wiggin asks "What Shall Children Read?" and then proceeds to give some very sensible advice on this all-important subject. W. W. Thomas, Jr. tells about "A Trip to Dalecarlia," and describes in a very pleasant way the curious sights in that far-northern land; its brightly-clad people, pretty-faced maidens, with their odd ways and quaint customs. Frederick Douglass gives a paper—"Reminiscences,"—dealing with the agitation period. It is difficult to realize that this vigorous, scholarly writer was once an illiterate slave. Cardinal Gibbons contributes "The Dignity, Rights and Responsibility of Labor." "An American Soldier in China" is an account of the strange career of General Frederick Ward, whose military genius won him great distinction in the Orient. "A Bourgeois Wedding in the South of France," "French Horses and the Grand Prix," "Social Problems," etc., complete the number. The publishers do not indulge their readers in much poetry. The Cosmopolitan Publishing Company, New York.

Educational.

THE COUNTRY SCHOOL.

THE COUNTRY SCHOOL is a unit of great value in the national problem. How shall we improve it? In answer to this question may I suggest:

1. Is not the intensity of American business life too much carried into the primary schools, drawing too heavily upon the nervous force of American childhood?

2. Will not better and more lasting results be attained by "making haste" more "slowly?"

3. May not fewer hours in the school-room supplemented by out-door and industrial teaching, be better for the child physically as well as mentally, and as a preparation for active life?

4. Can not the country child, while attending the district school, become so well acquainted with, and made so to delight in the pursuits of agriculture and horticulture, be led so gently and pleasantly into such an intimate acquaintance with, and love of Nature, as often to determine the trend of later life in the direction of rural pursuits, or of scientific inquiry?

5. Will not all this uplift rural life to a higher plane?

Well, how? Perhaps I cannot tell you. The plan will certainly require different teachers, to some extent, or at least teachers better informed in some directions. Possibly almost any bright girl of 17 tolerably well instructed in the usual common-school studies, may satisfactorily teach the rudiments of arithmetic, geography, and grammar; but to take a school of 30 or 40 children of various grades of mental capacity, and train them into accurate observers, close thinkers, and good reasoners with reference to the common things of their lives, and their surroundings, is quite a different matter, and needs more thoughtful and better-read teachers than many found in our country schools. In no school is needed teachers of a better grade of intellect than in the primary, and perhaps in no school can better use be made of a broad scientific and literary culture.

It would seem as if a part of the time usually devoted to arithmetic, grammar and geography, useful as these branches are, might be better employed.

Why should a bright child require half a dozen years to master these branches sufficiently for all usual practical uses? Suppose we take one of these branches at a time, and concentrate study upon it. Should not one hour daily, under a competent teacher, give an intelligent boy or girl of 12 or 14, as good a knowledge of either of these branches as is usually had in all the years spent in the common school? If not, why not?

Let there be no more than four in summer, and no more than three hours of in-door school work, and but one hour at one time. Allow to one of these main studies one hour's work; then reading, and reading to understand; writing—and as soon as possible writing to express ideas; drawing, and spelling; and after this oral lectures by the teacher on any topic, scientific, literary or historical, that may be thought advisable. After that let all go out-of-doors. Make each school an experiment station of agriculture and horticulture. Let the teacher conduct expeditions to neighboring farms, to the fields, the woods. Let the children learn how crops are grown and why so grown; what obstacles meet the farmer, the fruit-grower, the gardener, and how they may be surmounted. Teach them of the soil, the plant. Let each child conduct experiments of his own. Make a part of the school grounds a garden. Am I writing of Utopia? Would not the outcome of all this be a greater love of, and an intelligent interest in rural life, that would produce a class of wide-awake agriculturists, of thorough scientists, and of reverent seekers after truth and God? But it is hard to get out of deeply-worn ruts.

Let us have no high-pressure system of conducting our country schools. Let us remember that children have bodies—that physical as well as mental strength is necessary to build up a strong nation. Let us remember that brains crowded with undigested and indigestible facts of no special value in ordinary circumstances, may not be as useful organs as those trained to observe accurately, think clearly, and bring knowledge to bear promptly on the necessities of actual life.

MRS. M. P. A. CROZIER.

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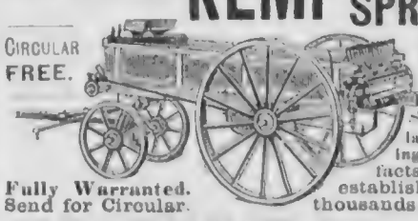

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CATALOGUES, ETC., RECEIVED.

BACTERIA IN MILK AND ITS PRODUCTS.—Bulletin No. 4 from the Storrs Experiment Station. Storrs, Tolland County, Connecticut, prepared by Professor H. W. Conn.

What are bacteria? The term is now in common use. If one is to obtain any good from scientific agriculture he must have at least a general idea of what bacteria are, just as he must know that albuminoids and carbohydrates represent two classes of substances as distinct as beef-steak and corn-meal mush. In speaking of bacteria the reader must understand that what is meant is a class of very small organisms which produce fermentation, such as the raising of bread or fermenting of cider, rotting of potatoes, decay of wood, etc. etc. Bacteria, yeasts and moulds all belong to the same family, are somewhat alike, and are commonly called by the same name—bacteria.

Milk is a medium in which bacteria grow readily. It is the development of the bacteria that causes milk to sour and cream to ripen. Remembering this fact will give a clearer idea of what is meant by bacteria. If milk, cream or butter can be kept entirely free from bacteria, the ordinary changes do not take place in them. For example: by heating milk to a boiling temperature for a few minutes for three successive days and keeping it sealed absolutely air-tight, the milk will keep sweet indefinitely. The heat kills the bacteria. Excluding the air prevents a new lot from entering.

This heating and air-tight sealing have been hailed in Norway as a "new discovery." Milk so treated is said to be "sterilized" and can be shipped many miles in safety. Milk or cream under ordinary conditions cannot be kept free from bacteria. One very common cause of contamination of milk is from vessels in which milk is placed. These, unless washed in boiling water, contain bacteria clinging to their walls. The action of the bacteria indicates clearly the absolute necessity of using boiling water for cleaning dairy utensils. We have seen people who clean milk pans by placing them in a pile, one resting in another, and then pouring hot water into the upper pan. When this is washed the water is poured into the pan below it and so on. The best dairymen take pains to apply boiling water to each pan, and we may see now that their practice is based upon scientific principles, because it is only by submitting each to a very high temperature that the invisible bacteria can be destroyed. It would be wiser even to place the pans in a hot oven for a short time after washing.

A mild heat favors the growth of bacteria while cold retards it. Hence we see the advantage of keeping milk cold and cream warm. And this matter of the temperature of cream gives occasion for an important discussion in this bulletin, of the objects of the ripening of cream. There seem to be two chief objects in this process. The butter will separate more readily from ripened cream and the churning will be easier. Again, many people believe that the butter made from ripened cream will keep longer than butter made from sweet cream. Dr. Babcock shows, in bulletin No. 18 from the Wisconsin Station, that shortly after the milk is drawn from the cow there appears "a fine, inappreciable network of fibers which produce in the milk a slight thickening somewhat like the clotting of blood." This he calls "fibrin." It will readily putrefy. When the cream rises some of this "fibrin" is entangled with it and is skimmed off with the cream. Bacteria cannot live upon pure fat. This "fibrin" attracts them and they feed upon it and decompose it Churning is a mechanical process. After the "fibrin" is thus partly dissolved by the action of the bacteria, the butter globules may be more easily shaken free. And this presence of "fibrin" may explain the better-keeping quality of some butters.

If cream is churned before the "fibrin" has become decomposed *i. e.* before the cream is ripe, the butter will naturally contain more of the "fibrin" than will butter from thoroughly "ripened" cream, and, naturally, the more "fibrin" the more bacteria.

Prof. Babcock has shown that the quicker the cream rises the less will be the amount of "fibrin" entangled with it. When cream is separated by a centrifugal machine a good part of the "fibrin" settles at the drum of the machine and less passes into the cream. It would seem therefore that such cream requires less ripening than that raised by a longer process.

THE INFLUENCE OF CERTAIN CONDITIONS UPON THE SPROUTING OF SEEDS.—This is the title of bulletin No. 7 of the experiment station at Cornell University. Prof. Bailey has conducted a number of experiments, the results of which are recorded in the bulletin. The experiments are of greater interest to the market gardener or the seedsman than to the average farmer.

Prof. B. concludes that the percentage of impurities or adulterations in seeds as ordinarily supplied by seedsmen is very small. In general, he found the more important seeds free from impurities. He says that "the endeavor to determine the relative merits and honesty of seedsmen, by means of testing their seeds, is the merest folly."

The germinating tests appear to have been carefully conducted. Here are a few of the indicated results:

Variations in temperature may cause variations in rapidity of sprouting. A constant temperature is best, and about 70 degrees seems to be best suited. There is a tolerably well-defined temperature specially suited to each species of plant.

A comparatively small amount of water gives quickest and largest results. Soaking seeds before planting does not seem to hasten sprouting if planting time is reckoned from the time the plants are put to soak.

When light has any influence, it retards or wholly prevents sprouting, but the effects of light are different in different species.

Heavy seeds generally germinate better than light ones of the same sample.

If there is any variation in vitality in reference to color, it is usually found that the stronger sproutings occur in the darker colored seeds.

Northern-grown corn appears to germinate quicker than Southern-grown corn. It is expected that seeds of most species will give similar results.

CONNECTICUT EXPERIMENT STATION.—Bulletins 98 and 99 discuss Home Mixed Fertilizers and Fertilizer Analyses. It appears that quite a good many farmers in Connecticut mix their own fertilizers instead of buying the prepared mixture sold by the fertilizer dealers. The various ingredients are bought in separate forms and an effort is made so to study the needs of a certain farm or a certain field that a fertilizer can be produced that will prove better adapted to the needs of that particular farm or field than any of the standard fertilizers that are made in large quantities and sold for use on widely different soils and situations. The continued use of large quantities of chemical fertilizers generally leads to experiments with home-mixed fertilizers. In some cases the farmer convinces himself that it does not pay to do the work. In others he concludes that his labor is well spent. In still others he thinks that a quantity of the standard fertilizer with a bag per acre of some one ingredient added will suit his farm well enough. The R. N.-Y. found an example of this at Cranbury, N. J. One of the best farmers there convinced himself by experiment that his farm needed extra quantities of potash. So in addition to a large dressing of the Mapes potato manure, he applies a bag of muriate of potash to each acre. He thinks this pays him.

Some of the Connecticut farmers seem to have made a regular study of home-mixed fertilizers. This is due to the fact that the Connecticut Experiment Station has made a special study of fertilizer ingredients and by its system of conducting experiments on farms in various parts of the State has greatly encouraged practical investigations on the part of farmers. In this bulletin (No. 98) are given lists of the ingredients used in 11 mixtures, with analyses and estimated cost. We give three of these mixtures. All who are interested in the subject should send for this bulletin which is one of the most important that Eastern farmers can get.

The following is designed as a "mixture for general use:"

834	pounds	Dissolved Bone Black,	costing	.....	$10.43
666	"	Tankage,	"	.....	9.32
208	"	Sulphate of Ammonia,	"	.....	7.80
292	"	Muriate of Potash,	"	.....	5.84
2000	"				$33.39
		Add freight to New Haven			1.60
		Total cost of raw material			$34.99

This is a mixture for corn.

450	pounds	Tankage,	costing	.....	$6.44
450	"	Ground Bone	"	.....	6.77
232	"	Sulphate of Ammonia,	"	.....	8.65
384	"	Dissolved Bone Black,	"	.....	4.99
305	"	Muriate of Potash,	"	.....	6.34
179	"	H'gh-g'de S'lp'te of Potash	"	.....	5.48
—	"		"		
2000	"		"		$38.67

And this for potatoes.

500	pounds	Sulphate of Ammonia,	costing	.....	$18.65
2500	"	Tankage,	"	.....	35.75
2500	"	Ground Bone,	"	.....	37.63
2500	"	Dissolved Bone Black,	"	.....	32.50
750	"	Muriate of Potash,	"	.....	15.60
550	"	Sulphate of Potash,	"	.....	16.88
—	"		"		
9,300					$156.96

Cost of the materials delivered $33.75 per ton.

Analyses of these mixtures were made at the Connecticut Station, with the following results: The valuation is figured on the basis used when estimating the values of standard fertilizers. The last column, "cost," gives the actual cost of the chemicals before mixing. The quantities of nitrogen, phosphoric acid and potash are what were actually found in the mixtures.

	Nitrogen.	Phosphoric acid.	Potash.	Valuation per ton.	Cost.
General Mixture.	4.94	8.80	7.89	$39.02	$34 99
Corn Manure.....	4.99	9.19	14.07	47 48	38.67
Potato Manure...	3.95	12.47	7.41	39.20	38.75

It will thus be seen that the differences in valuation and cost per ton were $5.03, $8 81 and $5.45.

The director says that the advantages claimed for home-mixing are:

1. Each ingredient can be separately examined by the purchaser and if necessary sent to the experiment station for analysis. The detection of inferior forms of nitrogen or phosphoric acid is much easier and more certain in a single article than in a mixture.

2. It is self evident that an intelligent farmer by home-mixing is better able than any one else can be to adapt the composition of his fertilizers to the special requirements of his land as well as of his crop, and how greatly the soil-requirements vary in this State, even over a small area, is strikingly shown by the field experiments annually reported by our farmers through the stations.

3 It is claimed that the same quantity and quality of plant food costs much less in home-mixtures than in ready-made mixtures because the cash purchaser of fertilizer chemicals deals directly with the importer or manufacturer, not with the middleman or retailer, and receives quotations without reference to the prices asked in his neighborhood by retailers of the same goods.

There is no longer any question as to the expediency of home-mixing in many cases. From such raw materials as are in our markets, without the aid of milling machinery, mixtures can be and *are* annually made on the farm which are uniform in quality, fine and dry and equal in all respects to the best ready-made fertilizers.

He also says that the economy of home-mixing depends, of course, on the prices which sellers of mixed goods are willing to take and on the cost of fertilizer-chemicals delivered as near the farm as mixed goods can be bought. There is always a chance for the farmer who studies the market and the needs of his farm to save enough in the purchase of his fertilizers to make just the difference between profit and loss on a crop, and in farming, as in everything else where competition is close, profit usually comes from care in these small margins of expense. Perhaps home-mixtures are not indeed always and everywhere cheaper or more economical than commercial mixtures, but it will often happen that money can be saved by the timely purchase of raw materials and their mixture on the farm. Each individual farmer ought to be the best or only judge of the economy of home-mixing in his particular case, as well as of the "formulas" which are best adapted to his soil and crops.

In bulletin No. 99 we find an analysis of wool waste. The specimen examined contained:

Nitrogen.....	2.87	per cent.
Phosphoric Acid.....	.81	" "
Potash.....	5.38	" "

It was worth $10.57 per ton as a manure and was considered suitable for fruit trees, grape vines or grass.

Damaged corn meal costing $1.80 per ton contained about twice as much nitrogen as stable manure and about as much phosphoric acid and potash as stable manure. It was recommended as a suitable manure for light, sandy soils.

The director of the station points out the fact that the fertilizing value of fine bone is much greater than that of coarse bone. The latter may lie in the ground for years while very fine bone is readily decomposed and taken up by plants.

ENEMIES OF THE WHEAT APHIS.—This is the title of bulletin No. 51 of the Michigan Experiment Station. It is prepared by Prof. A. J. Cook and contains illustrations and descriptions of the various parasites that prey upon the wheat aphis.

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Law.

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NEW YORK LAW AGAINST POACHERS OF GAME.

T. L. M., Lewis County, N. Y.—Is there in this State any law which will enable a man to protect the fish in a stream flowing through his farm? A fisherman catches fish in a stream passing through my farm, but in doing so he walks in the bed of the stream; can I hold him liable for damages for fishing in forbidden waters?

ANS.—The laws in this State relating to the taking of fish and the hunting of wild game are alike in their general provisions. It is provided that any person who shall knowingly trespass upon inclosed or cultivated lands, for the purpose of shooting or hunting any game protected by the act, or shall take any fish from private ponds or private streams not stocked in whole or in part by the State, or after public notice has been given by the owner or occupant thereof, shall be liable to such owner or occupant, in addition to the actual damages sustained, in exemplary damages to an amount not exceeding $25 or less than $15. The public notice is to be given by erecting sign-boards at least one foot square upon at least every 50 acres, upon or near the lot lines of the premises, or upon or near the shores or banks of any lake, pond or stream in at least two conspicuous places. For this notice may be substituted a written or printed warning served personally on the offender. If the inquirer owns the land on both sides of the stream, he owns the entire bed of the stream, and the fisherman traveling on it was, of course, a trespasser.

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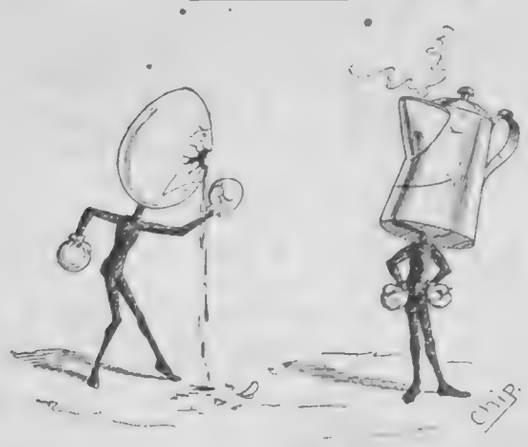

EGG: "Look here, Coffee, I've settled you before, and I'll do it now!"

MUDGE: "For Heaven's sake, Bosworth, have you been sandbagged, or in a railway accident?" Bosworth: "Neither. I hid under the bed the other night to scare my wife."—*Courier Journal.*

FRENCHMAN (proudly): "You have not in ze German empire anything so tall as ze great Eiffel tower." German (indignantly): "No, and you don't got noddings so sthoud like Limburger cheese!"—*Jewelers' Weekly.*

MASTER BOBBY'S papa is the happy owner of a hatching-machine. The other day, as the former was watching a chick energetically breaking its way through its shell, he inquired: "I see how he gets out, but however did he go to work to get in?"—*N. E. Homestead.*

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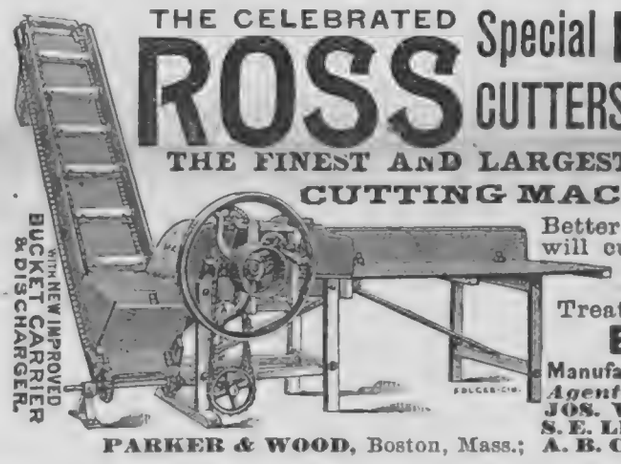

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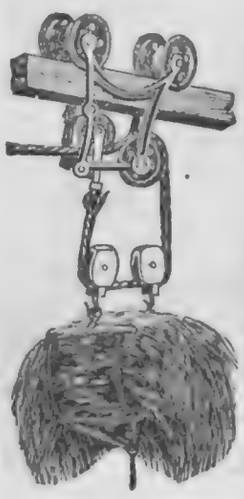

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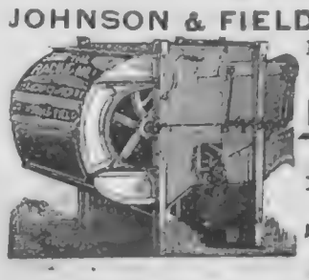

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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[Entered according to Act of Congress, in the year 1889, by the Rural New-Yorker, in the office of the Librarian of Congress, at Washington.]

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Thousands of people have said this at the mention of the RURAL'S name. *Enough Said!* Try the RURAL a few weeks, and you will find that father's paper is plenty good enough for the son.

What They Think of Us! Read This.

Here is a letter from a Wisconsin lady. It speaks for itself. We are prepared to let it take the place of an extended argument to prove the value and usefulness of the RURAL NEW YORKER:

"I am a widow and undertook to support my three children by teaching school in the central part of the State, but my oldest son had no taste or inclination for anything but farming. All his cry was: 'Oh, mamma! let's get a farm where we can have cattle and horses!' I was unable to buy a farm, so I came up here and took a homestead in the wilderness when he was 12 years old, and took the RURAL NEW-YORKER for him. I had to teach three miles from the homestead, and the next year my daughter, then 16, and this son, kept house at home, and my youngest son, 10 years, and myself kept house where I was teaching and walked home every Friday after school. But my health gave out after two terms, and we failed last February to get the money to renew our subscription. But the other day we had a dollar. There were so many ways to use it that we held a consultation to determine how to spend it. When my oldest son came to speak he said: 'Send for the RURAL for the rest of the year. I would rather go without my dinner every day for a month than to go without the RURAL any longer.

THE RURAL NEW-YORKER, 34 PARK ROW, NEW YORK.

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Farm Topics.

SUMMER SPECIAL.

Facts For Farm Folks

—TO—

CONSIDER CAREFULLY and CRITICALLY

Homely Hints---Thoughtful Themes.

R. N.-Y.

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Stewart Sounds Sunday Slogans.
Smith's Simple Statistics.
Lane Learns Lively Lessons.

—AND ALSO—

OTHERS OFFER OCEANS OF OUTLOOKS

NOTES ON A SEASON'S WORK.

T. B. TERRY.

Shallow cultivation for potatoes; a careless boy's work; Mammoth Clover for hay; ripens at a time when farmers are not so busy; experience with clover-root beetle; dodging the midge.

I WAS riding along the road, when I noticed a boy cultivating in a field of potatoes. This was early in July. I climbed over the fence to see what he was doing. I found the work just what I expected. The cultivator had five small teeth. It was set just as wide as it would go between the plants without tearing them up. There was a wheel on, which kept up the front teeth to a reasonable depth; but the boy was "riding" on the handles, and the back teeth were going down four or five inches, cutting off a large part of the roots that the young plants had thrown out, even across the rows. In this cool, wet season the roots seemed nearer the top than I ever saw them before.

Where was the owner of that boy? Well, I don't know; but I do know that I would not have had that boy go through my potato field in that way, at that time, for $20 an acre. Whether the farmer did not understand the growth of potato roots, and hadn't common sense enough to know that it was foolish to tear off half the roots and put the plants to the expense of growing them over again, or whether he knew this and started the boy all right and then failed to watch him, I know not. The result was the same anyway.

Before I left home I talked some plain English to my man (not boy). I said: "Now, see here; don't you let the side teeth of that cultivator go more than an inch and a-half deep in one single spot in this field. One inch deep will do. Look every few minutes and see just what you are doing. Keep the cultivator just as I tell you or do nothing." Then I explained to him the reason for this. Much of my cultivating was done with Breed's Weeder, a very light slanting-tooth harrow, that hardly stirred the ground more than one inch deep. My first cultivation of the potatoes, before they came up, with the Hudson Bicycle sulky cultivator, was as deep as two horses could well give. After that, shallow cultivation was given. Not only was the wheel set to keep the front teeth out; but I knew whether any one was riding on the handles or not.

The last half of June was very wet with us. It was just impossible to do anything about curing clover. The Fourth of July it cleared up, and the weather has been good for securing crops since then. But this brought haying and harvesting all together, and kept farmers from the corn and potato fields, where tillage was greatly needed. The clover cut in July, however, was past its best. I notice two farmers who have things in better shape than the majority. They have mostly Mammoth Clover, with a little Timothy in it. They are just cutting it now, after the middle of July, the clover being in full bloom. Their wheat is secured and they have had time to attend to their crops. Their potatoes now need no more attention, and their corn is laid by and they can attend to their clover as well as not. This strikes me as a pretty good plan. It certainly puts some of the haying forward to a time when the weather is usually better for curing and when the farmer is less busy.

Is the hay from large clover as good? They tell me it is about as good, if the seed is sown thickly. Certainly it is far better, cut in the full blossom, now, than hay made from the small clover, which is about dead. Many tons of such are being cut.

I mowed one piece of my small clover about the 15th of May, when it was about one foot high, and left it on a field for a mulch. There is a grand crop there now, in full bloom, promising a good crop of seed, which will ripen at a time when we can attend to it. I wished in June that all had been treated in this way. The piece thus served, and the Mammoth Clover, escapes the midge which usually ruins the ordinary second crop of small clover for seed making.

We have the clover-root beetle. The tap-roots of the plants were mostly eaten out last fall. It was a question how that clover would do if left to stand another year. A neighbor left a field. It had been mowed but one year. It started pretty well this spring, the clover throwing out numerous fibrous roots. But along in June these seemed unable to sustain the plants any longer and the clover began to die. There is only one way for us now, and that is to mow the clover one year and then plow that fall or the next spring for some other crop. The beetle then seems to do little harm. My clover last year matured a second crop that would have made two loads per acre of hay, in spite of the root beetle.

Then is the time when clover sod should be plowed any way, as soon as the roots have at-

A GROUP OF GRADE JERSEYS. From a Photograph Fig. 209 Page 556.

tained their maximum growth. Raise big crops one year and then plow it and raise big crops of something else. This is the way to make the most out of it. The clover beetle will not hurt them. It may be a blessing to some others.

Summit County, O.

THE DOUBLE-ROWED SYSTEM OF PLANTING CORN.

THIS plan of planting corn will give more stalks and sunshine to the acre than any other, and experiments have shown that 17 inches in the drill is about as close as our large corn will grow and produce ears, and I have one acre planted this year on very rich and highly manured land on the double-rowed system, viz: double rows five feet wide w th hills 17 inches lengthwise and the double rows 17 inches between them. This plan will give about 11,500 stalks per acre. Allowing 106 ears to the bushel and one ear to each stalk, this will be about 108 bushels per acre, or two ears to the stalk would be 216 bushels per acre.

In order to get the same number of stalks or hills to the acre on the single-rowed system, the rows must stand only 30 inches apart, which is too close to admit the necessary sunshine and air to form the ears; while the double-rowed system will afford a space 43 inches wide between them for sunshine and air.

I used 12-inch sweeps for plowing out one furrow between the narrow rows and I plowed two furrows with a one-horse cultivator in wide rows which lessened by one-third the number of times I had to go through the rows,

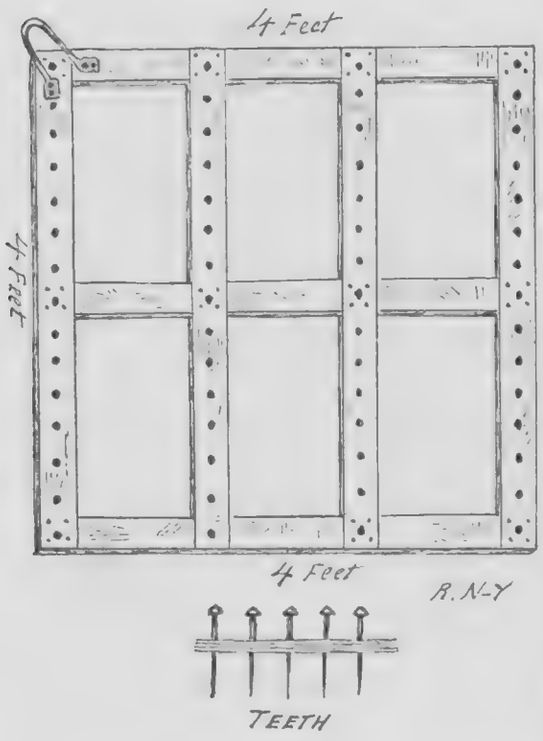


Fig. 210.

and weeds and grass cannot stand the shade in the double rows as well as in the single rows.

J. C. STRIBLING.

Anderson County, S. C.

Rural Topics.

AT A FAIR.

FRED GRUNDY.

"SAY, Bill, ain't ye goin' to see the race?"

"Why, I hadn't thought of it, John; what sort of a race is it?"

"Runnin', Boomer an' Scooter an' several more. Big thing, I tell ye! Miss half yer life if ye fail to see it. Come along, we'll be late if we don't hurry."

The first speaker was a brown-faced, hard-handed, loud-talking, "horsey" farmer, plainly dressed, evidently one of those late and early hustlers who believe there is wealth in "elbow grease," and health in pork, beans, cabbage, corn bread and molasses. The second was also a farmer; a rather neatly-dressed, pleasant, easy-going sort of a chap, and evidently one who believed in newspapers, and enjoyed pictures, flowers, nice clothes, etc. The place was the fair grounds of a noted agricultural society.

To pick up a few notes I followed this pair to the race track. John elbowed his way through the crowd and led Bill to a seat in the amphitheater, not far from the line. I took a position just above them.

"Have ye seen the hosses, Bill?" asked John.

"No," replied Bill, "Nettie and I were looking at the poultry and machinery and fine hogs so long that I didn't get time to go down to the horse stalls. She wants to get a fine rooster and a new churn, and I was sort o' looking after a good pig."

"Gosh! I went amongst the hosses soon's I got on the grounds. I don't give a cent for chickens! Hosses is my holt! Last year I

Fig. 211.

got a p'inter from a jockey an' won $17 on the races inside o' 20 minutes!"

"Is that so!" exclaimed Bill, in astonishment.

"You bet it is. Best day's work I ever done in my life! Now, don't say a word about it to nobody, but I've got $10, even up, on Boomer. You jest ought to see him—you will pretty soon, I see the marshal clearing the track now. Oh, but he's a buster! He's in *prime* condition—fit to run fer a million. Yes sir; Boomer's the winner, an' don't ye forget it!"

Just then a languid-looking chap dressed in checkered clothes and gold-rimmed spectacles halted in front of John and drawled out: "Did you say that Boomah would ween?"

"You bet I did!" responded John, emphatically.

"Bet you aw fivah he don't, awnd put tha monee in your friend's hawnds. He's a awnest mawn, I know be his looks."

John placed $5 in Bill's hand and the dude covered it.

"Bet you awnother fivah I ween the bet," said the dude. $5 more were placed in Bill's hands.

"Any moah?" queried the dude.

"I'd go you more if I had it," replied John.

The horses appeared and after some preliminary monkeying ran twice around the ring, while John and the multitude yelled themselves hoarse. Boomer led finely up to the last quarter when Scooter ran ahead and came in an easy winner.

John's face turned yellow. "Don't say nothin' about this, Bill," said he, as with a sickly smile on his features he quietly arose and slipped away through the crowd.

I followed him to the "Fine Art Hall,"

Fig. 212.

which he entered. As I came in at another door I overheard him speaking to a tired-looking woman who was seated on a small bench fanning a worrying and sweating babe that lay on her lap. "Come, Jane," said he, shortly, "it's time to go home. Where's Tommy?"

"He's just went out with Sammy Smith. He begged me for ten cents to take him in one of them side-shows where there was something funny. I guess he's down there now."

"What do ye let him fool away money on such trash fer? They're reg'lar swindlers. Ye are old enough to hev more sense an' know better. I'll side-show him when I find him!"

As they started toward their wagon I heard the woman say: "I didn't get to see nothing. Belle was so cross she wouldn't walk, and she is too heavy for me to carry. I wisht you'd o'helped me carry her round awhile so I could have seen a little of something."

Christian County, Ill.

The Herdsman.

THE MUCH-DESIRED COW.

L. F. ALLEN.

I AM asked the following questions:

1. Have you ever been able to secure a grade or cross-bred animal that could be called a success both in the dairy and at the block?

2. Has there ever been a period in American agriculture when what is known as the "general-purpose" cow paid? If so, of what breed was she?

1. In my experience of more than 50 years breeding dairy cows, I have succeeded in rearing many of what may be called "general-purpose" animals; that is, cows good for the

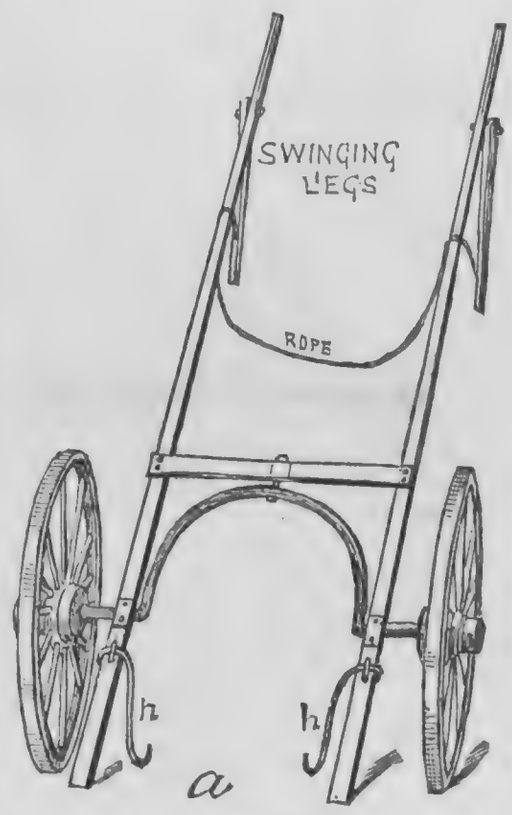


Fig. 213.

dairy and for good carcasses of beef at any age at which the owner may choose to devote them to the latter purpose. Those "general-purpose" cows were composed of grade animals chiefly from thoroughbred Short-horn bulls of good milking descent, and well selected common or native stock, their produce being various grades, extending from half-bred Short-horn higher up.

In explanation of these grades and my choice of the Short-horn sires, I will remark that the early importations of that breed into our Eastern States—say from 1818 to 1830—were from the best herds of the English breeders who attached great value to the dairy as well as to the beef qualities of their herds, being thoroughbreds, with pedigrees recorded in the early volumes of the English Herd Book. Large numbers of cows from the imported bulls were bred in New England and Pennsylvania and other Eastern States, proving first-class for general purposes of the thoughtful farmer, and such stock is still bred in various sections of our Northern and Middle States, as good general-purpose cows as can be found, but no distinct breed of them has been established, as more or less failures in either the quality of the milk or the flesh will sometimes occur.

In regard to the present status of thoroughbred Short-horns as first-class dairy cows, and the ordinary opinion of the present day that they are not good milkers, the importations of them from England since about the year 1830 have been selected mainly for their flesh-bearing qualities without regard to their dairy products, and these later importations have almost altogether been consigned to our Western grazing States where beef is the main object and the dairy is of no less account. Thus, the Western Short-horns are little sought by dairymen, and the purely dairy breeds are adopted in their place. The "general-purpose" cow is, therefore, a creature of selection rather than of a distinct breed. Even if the dairyman chooses to breed his grade cows to a thoroughbred Short-horn bull, the latter must be descended from a

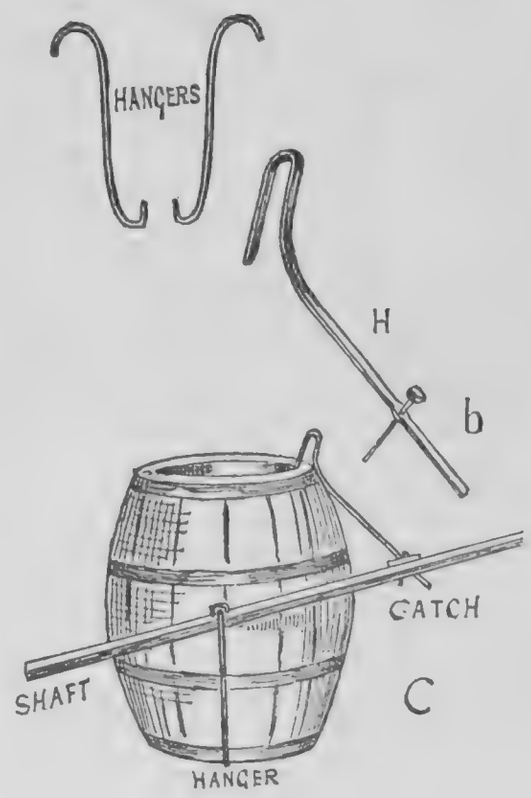


Fig. 214.

line of good milking cows of his own kind or the breeder may be disappointed in the success he looks for; if the bull runs to flesh through his ancestry, his produce may inherit that quality over that of his good-milking dam.

2. I bred from Devon cattle for more than 30 years, and they were, in their purity, more nearly the "general-purpose" animal than any other that I have known as a distinct breed. The cows, as a rule, were superior for the dairy and for beef, at any age, and their meat was of the best quality. They are of medium size, the cows weighing, at full age, 1,000 to 1,200 pounds, and well fed steers at 3½ years weighing from 1,200 to 1,400 pounds, alive. No handsomer or more graceful cattle—pure red in color—can be found, and the farmer who possesses a herd of them has as good "general-purpose" animals as he can find or better, and the same can be said with regard to their high grades.

The Red Polled cows, from what I have seen of them (never having bred them), I consider, next to the Devon, as good general-purpose cows as any others. They are of about equal size, well shaped and for those who object to horns these may take the place of Devons, either pure-blooded or grades.

The distinct dairy breeds, such as the Guernsey, Jersey or Holstein, cannot be called general-purpose cattle, as their purely flesh-taking qualities are not of special consideration, and the choice of either one of them in preference to another may be left to the decision of the dairyman. They cannot be enumerated for "general-purposes."

Niagara County, N. Y.

A GROUP OF JERSEYS.

HAVE you ever seen a more life-like cattle picture than that shown at Fig. 209? The engraving is taken directly from a photograph kindly sent us by our contributor, Mr. W. B. Pratt, of Steuben County, N. Y. It is a beautiful scene. The cows are well grouped and stand exactly as farmers have dozens of times, seen such cows stand in the pasture. It is a peaceful, restful view. The early October frosts have begun to strip the foliage from the trees. Could we paint this picture in colors, the woods would be radiant with the glorious autumn tints. Off to the left is a pretty country village. To the right rise the uplands that stand between this valley and the grape regions bordering on Lake Keuka. It is a picture that does one's eyes good to look upon. As to the value of this herd for the butter dairy, our readers are referred to Mr. Pratt's dairy record for 1888, which may be found on page 36 (January 19) of this volume of the R. N.-Y. While this picture was taken several years ago, and does not fairly represent the present herd, it at least shows the animals from which the present grades are descended. These grades, as the record will show, average nearly 300 pounds of butter per year.

Entomological.

CLEAN CULTURE VERSUS CUT-WORMS.

C. P. GILLETTE.

THE intelligent tiller of the soil knows full

well that it always pays to keep the weeds subdued in field or garden. He will be amply paid in the increased yield of the present crop and also by the lessening of his labors for another year. But there is another reason why weeds should be kept down, that few, perhaps, have noticed and that is to lessen the cut-worm attacks the following season. These worms are very general feeders, eating almost anything that grows out of the ground, not excepting buckwheat, and the more abundant the plant growth the greater will be the liability of injury from these pests. Twenty-two farmers of Iowa have reported to the station the proportion of their crops that have been destroyed this season by cut-worms on land allowed to grow up to weeds last summer. The estimates range from two per cent. to 100 per cent. with an average of 40 per cent. the smallest losses being on land that was plowed late in the fall. Two cases that have come under my observation the present season are worth mentioning. A piece of ground in tomatoes and squashes last year grew up to weeds in Aguust and September. This ground was plowed in the spring and set out to root grafts of apple, plum and cherry. For some time after the leaves should have appeared it was noticed that the buds had, apparently, nearly all dried out and spread open and the grafts themselves seemed to be dying. On examining the ground about these grafts, it was found that cut-worms were present in large numbers and during an evening visit (between nine and 10) the worms were found eating out whatever was left green in the buds. It is doubtful if there would have been a living bud left if vigorous means had not been taken to destroy the worms which were gathered by the quart and killed.

Another piece of ground comprising two or three acres was in potatoes last year and allowed to grow a perfect swamp of weeds in late summer. Last spring the field was again plowed and planted to potatoes. On the second of June I examined this field of potatoes and estimated that 75 per cent. of the hills contained cut-worms and that more than half of the sprouts that had appeared up to that time had been cut off beneath the surface. Other equally striking examples might be given but these will suffice. When enumerating cut-worm remedies we should not forget to mention clean culture.

Ames, Iowa.

NOTES.

I have been worrying in good earnest this season against the striped and cucumber flea beetles. I find that of the many substances tried, ashes and a strong tobacco decoction are the best specifics. Ashes to be effective must be used in great quantities, and in some cases they seemed to injure the plants. The tobacco decoction was even more effective than the ashes, and did no injury to the radishes or potatoes on which it was used. I used for the decoction cheap tobacco dust or waste which I secured at the large factories. I believe this remedy will give excellent satisfaction: I shall try it farther another year.

Many and serious complaints come from fruit-growers regarding injury done to peach trees, which were sprayed with London-purple. I have experimented very fully in this matter. It seems that London-purple is far more injurious than is Paris-green. The latter, used one pound to 100 gallons of water—a mixture at least twice too strong—and twice repeated, did almost no harm; a mixture one-half the strength did no harm at all. The London-purple of the first strength always did some harm and often serious damage. A rain just after the application seems to increase the damage. One pound to 200 gallons of water injures peach, cherry, apple and plum foliage often seriously, especially when repeated. It is much the most injurious when used on the peach. The leaves often fall off. Frequently one application of this weak mixture, would be followed by entire defoliation.

I find that the colored water turned carefully off after the London-purple has all settled, will still kill the foliage. Can it be that the analine is the poisonous substance? Or is it the soluble arsenic? I am now having analyses made to determine this last point. If an arsenic is to be used on the plum and peach, we must use Paris-green, and for the peach this must be very dilute. I should not make it stronger than one pound to 250 gallons of water. PROF. A. J. COOK.

Various.

JERSEYISMS.

Now is the time to begin the annual criticism on feeding off the meadows. Some say it is harmful, and some say it is not. For my part I think it depends altogether on the character of the land. Some fields can be fed, and some cannot.

Tobacco-culture exhausts the soil, and we accordingly lavish great pity on the growers. But,—did you ever think of it?—the injury to the soil caused by tobacco-growing doesn't compare with that caused by peach-growing.

How careless farmers are about lifting! One is apt to try to lift a-third more than a day laborer attempts, and the consequence is a rupture. Sixty per cent. of our farmers are so afflicted, and it is all owing to their own faults.

"What shall I decorate?" asked an insipid city boarder of me. And I showed her the butter-crocks, churn, hen-coop and mowing-machine. "Take your choice," I said. She looked at me softly, and then sighed sadly.

How can the thistle be eradicated? I will tell you: Cultivate it. Try to fertilize a thistle and you kill it. So, cultivate it as you would a rose. The pest loves poor soil, and if you make it rich, you kill it.

Be particular about the horse shoers you patronize, and always employ the same smith. Do not change. A smith gets used to a horse, and horses get accustomed to the handling of a particular man. "The best is none too good."

Never smoke or allow smoking in your barn. If possible, do not employ a hired man who smokes. Never carry a kerosene lamp or lantern into a barn. Instead, use oil—old-fashioned, but safe.

My neighbor Riggs has a mound in his pasture, graced with a board, on which he has painted: "Here lies a red heifer, poisoned with Paris-green by the carelessness of J. D. Riggs. Was worth $40." Riggs says that every time he sees it he is reminded "to be careful."

"Two fifths of the inmates of ——— Asylum are farmers." Well, farming didn't make them insane. Two-thirds of those unfortunates were rendered so by intemperance—drank cider to start with.

Peas planted May 9, bloomed in 31 days; while peas planted July 1, bloomed in 21 days. Same plot of ground, same fertilization, same kind of peas.

Joe Brown has gone into partnership with his son on his farm: "J. Brown & Son." Charley does half of the work, pays half of the expenses, and has half of the profits. Good idea, the boy being 21.

How much are you worth? Impertinent, I know; but really, do you know? Reckon it up. If you are poor, what made you so? Find out, and get rid of the cause. Wasn't it because you "got trusted" so much? That's a bad idea—very bad. JAY ERR SEE

GREAT EXPECTATIONS,—HOW DISAPPOINTED

T. H. HOSKINS, M. D.

A STANDARD old farmer's joke is on the man who said that his pig, when slaughtered, did not weigh as much as he expected; adding: "And I always knew it wouldn't. "Isn't this about the way with the crops of many of us? We think this, or that, or the other field of grass, grain or potatoes, ought to give us such and such a yield; and yet has there not been all the time a sense of doubt, causing that sinking feeling about the pit of the stomach—"epigastrum," we doctors call it—where our business conscience seems to have its head quarters? Oh, how seldom the premium crop we hoped to make materializes to the full in the bay, or the bin! Why is it so? Is it not because we have been hoping for that Will-o-the-Wisp called good-luck, to remedy some of the conscious faults and deficiencies of our work? Did we fit the ground just right, in the best manner? Did we allow enough manure, or fertilizer for a first-rate crop? Was our seed just right? Did we get it in at the right time? Did we tend the crop faithfully? Was our grass ground rich enough to stand that dry time in early June, and had we used seed enough, and was it good enough, in seeding it down?

AGAWAM BLACKBERRY. From a Photograph. Fig. 215.

The longer I live and farm, the more I am convinced that profitable farming must be found in thorough farming; and I know that unsuccessful farming follows bad business judgment quite as often as anything. Losses will result from idleness, carelessness, lack of capital, want of knowledge. All these are factors in the cases we see, where farming plainly does not pay. Yet take them altogether, they do not hurt a farmer so much as the defect of that peculiar thing known as "business sense." With this we shall never expect something from nothing, which is the worst of all the causes of failure on the farm.

Undoubtedly a man may have good luck in farming, as in buying lottery tickets. But woe to the man who puts his trust in what he calls "chance," and especially woe to such farmers. "If scarcely the righteous (i. e., the right-doing,) be saved," how can the farmer whose conscience hounds him with the continual thought that he has not been faithful, that he has not done as well as he knew how, or as he could have done, but has pacified his conscience by the false hope that he may not be obliged to reap as he has sown—how can such a man believe that he can be successful?

To carry on a farm to assured success requires as strict a training, and as faithful adhesion to duty, as to command a ship. Every thing must be foreseen and provided for, and nothing that man can do should be left to chance. It takes a first-class farmer. No wonder, then, so many declare that farming doesn't pay. But it is the best of all businesses for incompetent men—who, if they don't make it pay, survive at farming many years longer than they could hold out in any other way of life.

Here is a great fact that should always put heart into the improving farmer. The world must be fed and clothed, and only the farmer furnishes the wherewithal. The price of food and clothing must forever be based on the cost of production. The farmer who cannot get a living out of the land must give up. Prices therefore must be based upon average farming. Anything better in the way of farming than an average, life-sustaining return, *must give a profit*; and that profit must increase with the efficiency of the work. Or, in other words, the more than average farmer must make *some* profit; and if he will keep on improving his farming, and investing his profits wisely, his farming is sure to pay. The proofs of this are to be seen in every county in America.

Dairy Husbandry.

DAIRY DOTS.

MILK FOR HENS.—I don't "know," but I think that if skimmed milk is fed to the hens instead of the pigs it will yield a greater profit. Our hens get nothing to drink but milk, and they lay right straight along. One advantage in butter over milk dairying is that the skimmed-milk and buttermilk are left for use on the farm. Another advantage is that in selling butter you carry off none of the farm's fertility, whereas in selling milk you do. Still another advantage is that you do not have to go to market so often. Horses and wagons cost money; a neighbor of mine sold milk and kept two wagons; as he put it, "he had one wagon on the road and one at the shop."

MAKE GOOD BUTTER.—But we can't all make good butter; if we did, it wouldn't pay; as it is only good butter that pays, the general run of farm dairy butter must be sold at a loss in summer. Why is it that so many farmers breed their cows to come in in the spring? The result is a glut in the market and low prices. Some say that winter calves do not make as good cows as spring calves; but they do, and, besides, there is more time to attend to them and they are not bothered with flies. Then when grass comes they are old enough to get a good part of their living from it.

FEEDING CALVES.—How much milk should a calf have? My practice is to feed four quarts a day in two feeds till the calf is from 10 days to two weeks old, then gradually increase the ration. For the first week it gets new milk, by the end of the second it gets all skimmed-milk with linseed or flax-seed meal to supply the loss of cream. The calf is weaned when three days old, (if the cow is a very rich milker, when one) and is taught to drink by putting two fingers in its mouth. This is better than to put only one finger in, as by spreading the fingers a little the calf can more readily suck up the milk. When the calf is a week old hang up a bunch of the best clover hay within its reach; it will soon learn to eat it and it is surprising how much it will eat.

THE "SCOURS."—When a calf scours it is generally the owner's fault; he has given it too much or too rich feed. I wouldn't doctor, but diet it; one may let it go without one meal, and then if it is three or four weeks old, begin with the original ration of two quarts at a feed, watching the calf closely as an increase is made in the quantity. If you had watched it as closely before it got the scours it would never have had them.

WHEN TO BREED HEIFERS.—I like to have them drop their first calves when they are 22 to 23 months old. They may make larger cows if not bred so young; but I don't want a big cow for butter; mine grow too big even when bred young. Even for milk we don't need a "big" cow; size alone doesn't govern production and we have to consider the cost of feeding the extra weight. It is what we get from the cow daily, not what we get for her when we are done milking her, that makes our profit. If I were selling milk and

getting paid according to the per cent. of solids it contained, I would not want any larger cows than I would for butter making. A small cow with the right kind of machinery in her can get all the milk solids out of a given amount of feed as well as a big cow. But if you have good, big cows and they give you a fair profit, keep them, but breed them to the smallest good dairy bull you can find and if the result is a more concentrated cow I think you are the gainer. A. L. CROSBY.

Catonsville, Md.

WHENCE COMES THE COLOR OF BUTTER.

BUCEPHALUS BROWN.

THE editor of the Maine Farmer, who is also secretary of the Maine Board of Agriculture, and a practical dairyman and fruit-grower, (known to be successful at both), complains of being made "tired to read the many efforts of the know-nothing suburban at enlightening the dairyman on methods and practices in his work." This is in reference to the following from the RURAL NEW-YORKER.

"There is a much better way of making good-looking butter than by adding questionable ingredients to it, and it is a much more profitable way. It is to put the color into the feed, by feeding sugar-beets, carrots, parsnips or squash, notably the last, with a ration of corn meal and bran, in addition to clover hay and corn fodder. By these means one can in winter make butter as sweet and attractive as in June."

To which the somewhat hasty Down Easter responds by the dogmatic assertion that "it is *green* food, (not yellow), that gives the golden hue to butter, and the color goes up or down in accordance with its presence or absence."

It would be very interesting if editor Gilbert, restraining his wrath, had told us how he knows his statement to be true. The time is fast going by for dogmatic assertion, unaccompanied by proof, to be accepted as truth. Even a suburban farmer may be allowed to experiment in feeding his cows for color in their butter, and to record the result for the information of others; and however far-back another farmer may be farming, that fact alone is not sufficient to justify so much scorn.

It is quite plain that neither of the two statements necessarily invalidates the other; and it is sure that even if both were true, (as probably the majority of farmers think) they do not exhaust the truth on this subject.

I have kept cows, and milked them, for 40 years, and have always desired to have the butter of a good, natural yellow. It is a mortification to have to dye butter in order to have it sell, or look right on the table. But I have had to do it; and so, no doubt, has our Maine friend. Nevertheless, I have had cows which would make yellow butter without any green food. Also, I have had cows that would make only a very pale, yellow butter on the best of grass. As to the effect of vegetable colors, yellow or green, upon the color of butter, it has often proved very uncertain. In a chemical point of view, there is not so much difference between them as necessarily to settle the point that yellow food will not highten the color of butter in any case. My experience leads me to believe that it sometimes will; but it has also proved that it often fails.

The dominating fact in the case is, that something in the constitution of the cow herself has more to do with the intensity of the yellow in her butter than any feed; else why do we look for the yellow skin, and why do the yellow-skinned Jerseys and Guernseys give us so much high-colored butter, irrespective of feed? And again, why will a cow give a higher-colored butter on the same feed after than before calving?

Since winter dairying has become common, and the cows are made to come in late in the season, there has been much less difficulty in getting a good natural color in winter butter. The assumption that all the color of the intermuscular fat, the skin and the butter fat of the cow, is derived from the chlorophyl of the once green plants upon which cows are fed in winter, is too lacking in proof, and is confronted by too many plain exceptions to be set up as absolute truth. Both corn-meal and roots when liberally fed, have often appeared to deepen the color of the butter. I do not know of any recorded experiments carried on with accuracy to show that butter will be colorless when no food containing green chlorophyl is fed. Here is a chance for our experiment stations. Meantime, perhaps, we had all better avoid positive statements on the subject.

The Poultry Yard.

AN INTERESTING CHICKEN EXPERIMENT.

I WILL give RURAL readers the benefit of my loss and experience in rearing chickens by artificial heat. I bought the buildings in a vacated lumber camp and stocked a large boarding-house with 100 Plymouth Rocks in the fall. A large stove protected by wire netting stood in the middle of the room. Aside from the grain ration, I put away several barrels of shells and forest nuts—mostly acorns. Wild turkeys and pigeons eat acorns, and domestic poultry relish nuts after they are crushed in the bone-mill. To save time such nuts can be raked and shoveled. Scratching over the leaves gives the fowls the desired exercise in winter. Early broilers were my object, so I canvassed the neighborhood for sitting hens in December, the chicks to be removed as soon as hatched, to the loft over the stove which was provided with several lath heat registers in the hennery. The mother hens were confined in coops. The chicks had the run of the loft floor, well lighted by windows. The laying hens were on the ground floor. By February 1st I had 600 emaciated chicks which began to die by the dozen from no perceptible disease. I had a good supply of onions and cabbages so much coveted by fowls in winter. I fed them rabbit meat; still they died. Several people of culture, booked high in poultry lore, gave the cause of the mortality among them up as an enigma, when asked for a remedy, and said, "You can't raise young chicks in that way now. It's out of season and contrary to Nature." I placed a thermometer on the first floor. It registered a little above the freezing point. In reviewing the past, when the school teacher placed water on the school stove to supply moisture to the room, it came to me that I was kiln-drying the chicks; that moisture was wanted in that atmosphere which was drier than the zero air outside. As soon as the stove generated steam those chicks huddled over the registers to receive it. They also began to pay attention to their toilet, pluming themselves ,and they grew as they might have done in "balmy June." I believe that caged birds and infant children suffer in winter from fever heat.

Indianola, Ill. L.

Educational.

A STONE-MASON IN THE GARDEN.

OLIVER HOWARD.

HERE it is midsummer. Everybody is busy, and there is more work than all hands can accomplish. I chanced to hear Florence say that a man at the back door was asking for something to eat. Presently I said:

"Where is that hungry man?"

"I fed him at the door and he is gone. There he goes toward town."

I called after him, wondering what kind of a man this could be, who was willing to beg my bread when there were 17 mouths in our house, counting children, workmen and visitors, that must be supplied. "Here, sir! Do you want work?" The man walked slowly back—a strong-looking man, perhaps prematurely aged. He had not asked for work.

"Go and work in the garden this afternoon and I will give you 50 cents and your supper."

"I'll do it," he said. "Half a dollar would help me a good deal as I am fixed now."

He had been a soldier, was 53 years of age, and was a stone-mason by trade. He had held a claim in Kansas and had traveled through several cities seeking for work. He stayed with us a few days; a man who had roved over the world a great deal; an intelligent, quiet man to all appearances, strong and willing. As a "comrade," I did my best to find him a place on some stone-work at the new foundry; and at last he drifted away, after purchasing a new hat.

He was a very candid sort of a man, and as he took a good hoe in hand he said: "I shall not be much of a hand in the garden. I have never been taught. I don't know anything but just my trade." It was true. If I worked with as little skill in my garden as did the stone-mason, I would certainly some day be begging bread, too, or worse. The eye that had been trained to hew stones to a line, and to lay the foundations of great buildings securely, could see no difference between a red-root weed and a potato plant. I pointed out the slight difference in color, and the difference in the form of the leaf, but he couldn't "catch on." He tried hard to please me, and I let him alone, but yesterday in weeding after him, we were able to discern "the stone-mason's row" all the time.

Now I have a suspicion that there was a fundamental error in my stone-mason's education. He had not been taught to observe and discriminate. Prof. Agassiz would not have confounded a useless weed with a noble esculent. His trained eye would have "caught on" at once. May it not have been that the mason has this fatal lack of discrimination in his own trade, and so roams from city to city, working a few days here and there, and then pushed gently out of the way to give place to a more intelligent workman?

I trust I do not seem to be belittling the comrade. I suspect he did far better in my garden than I could possibly do with his plummet and trowel. But look at it, you who wish well to the babes in a million cradles! What about this modern narrowing down of human activities and observation? In our shoe manufactories one laborer does one small thing toward making a shoe, and that is all. No man makes the finished article. My stone-mason told me that something very similar was going on in his trade.

In all trades the tendency is to concentrate effort on some one detail, to educate one faculty, one set of muscles. Pretty soon there comes a great invention or a business stagnation and numberless helpless crafts lay all along the shores of the ocean of labor. We educate a man so that he can make a pin-head better than any other man in the world. What then? Possibly next year some inventor will give us an implement that will completely supersede the pin or human labor in making it. What then is to become of our famous pin-head maker?

The only answer I can make is this: Since competition is bound to become sharper and sharper, our boys and girls must be educated broader and broader as the field of labor narrows. If the labor that sustains me calls but for the education of one set of muscles, health, happiness, common sense demand that the gymnasium or some substitute shall train my other muscles. With trained muscles one may quickly and easily adapt himself to changes of occupation.

Most of us having eyes see not, and having ears hear not. Take a child, and what does he see in the vegetable kingdom? Most children see almost nothing. But let a botanist train the same unseeing child, and what a change! A whole new world opens to him. A thousand marvels are revealed where before he absolutely saw nothing. He would know a red-root from a potato. And the long and short of the lesson that my indigent stone-mason taught me is this: broader education for muscle and brain.

Weld County, Col

Field Crops.

POTATOES ARE ROTTING.

DR. BYRON D. HALSTEAD.

WE have had an unusually wet July, and with the thermometer at only a moderate hight during the same time the most favorable conditions have obtained for the development of the many forms of blight, mildew, rot, etc., which prey upon the farm and garden crops. At the time of writing, August 7th, the vineyards in many places insure no crop for this season; the pear orchards are frequently without foliage enough to protect the starved fruit from the sun, and, worst of all, the potato crop is certain to be small and of poor quality.

The low form of plant which has been preying upon the potato and generally known by its effects as the rot, is a very rapid grower and does its destructive work without giving much warning. This may be in part due to the nature of the mildew, but, perhaps, more to the particularly favorable conditions furnished by the texture of this plant and its nearness to the soil. In a rank-growing potato field the herbage or "tops" make a thick succulent mass, each portion of which whether it be leaf or branch is easily penetrated by the threads of the fungus. This mildew heretofore has made sad inroads in the potato crop, and invariably the seasons of much rot have been years of excessive moisture. That the plant causing the decay of the vines and tubers is fond of moisture proves no exception to the general rule for this class of plants This is especially true when the rains are coupled with much cloudiness and a moderate temperature. Those days that are spoken of as "close" are the ones in which the bread molds in the pantry, the shoes in the closet and the living plants in the garden. What other conditions favor the development of the rot it is not so easy to state. Some think that an abundance of coarse manure or like decaying substance in the soil induces the decay.

(*Continued on Page* 563.)

Farm Economy.

A HOME-MADE HARROW.

I SEND—see Fig. 210—a plan of a home-made harrow like one I have used for several years. It should be used after other harrows to make the ground fine and smooth Take seven pieces of board four feet long, five inches wide and one inch thick; fasten them strongly together with nails; then bore holes three inches apart in the cross-pieces for the large eight-inch nails so that they will go through snugly and stay with the heads one inch above the boards. Then they can be driven down if desired at any time. Put a chain or any fastening at one corner as the harrow should be drawn cornerwise. Two can be hinged together if desired. The expense will be from 75 cents to $1 if the implement be made at home. There will be 15 large nails in each cross-piece—60 in all. T. A. J.

Binghamton, N. Y.

TO REMOVE A CORK.

AT Fig. 211 is shown a simple method of extracting a cork from inside a bottle with a string. It may not be new to some RURAL readers, but after proving its simplicity, convenience, and effectiveness, I could not refrain from sending it to the paper.

A FRIEND.

SOME LABOR-SAVING APPLIANCES IN HOG FEEDING.

SCOOP FOR DIPPING SLOP FROM BARREL.—This is made from an old gallon paint can. The handle is of wood and nailed on, nails being driven through the can into the wood, and stayed by a band of hoop iron as shown in Fig. 212 in the upper part of the cut. On a cold, frosty morning it is no fun to lift the bale of the bucket from the rim. Two small blocks of wood grooved to fit the bale and then wired on as shown in Fig. 212, in the lower part of the cut, will save much trouble.

TRUCK FOR WHEELING SLOP.—Have an axle bent to fit half way around the barrel. Bolt on shafts and a cross-piece, as shown at Fig. 213. Two inches beyond the axle fasten on the shafts movable hangers (h, h) Fig. 214. The hangers should be a little over half the length of the barrel, with the lower ends sharply turned up to catch under the barrel. They may be fastened on by curving the upper ends over the shafts and driving over them a staple loosely enough to allow play, to keep them in place. The barrel in which the slot is cut should be placed on a block five or six inches high with a part of the bottom projecting on each side of the block to allow the hangers to take hold. Raise the shafts up. This lowers the hangers. With one foot and the catch in one hand shove the hangers under the projecting bottom of the barrel so that when the shafts are lowered the hangers will lift the barrel, place the bent part of the catch over the top edge of the barrel and fasten the other end to the cross-piece with a pin as shown in Fig. 214. Then wheel the barrel to the pig-pen; have another block of the same size, and reverse the operation. It will save emptying slop if two barrels are used. A swinging leg should be placed on the other end of the shaft away from the handles, with a string attached to the handle so that it can be drawn out of the way when the barrel is in motion.

Catonsville, Md. P. B. C.

Everywhere.

RURAL SPECIAL REPORTS.

Colorado.

GREELEY, Weld County.—As yet we have no very large markets for our abundant truck, except Denver, and that is so well supplied that we cannot ship thither. Cheyenne used to be a good market; but I suspect the good people of that berg used to pay higher for "garden sass" than any people on the continent. Now the truck gardeners of northern Colorado just fight for the market. One man I know, in his eagerness to hold the trade, ships large consignments of vegetables, saying to the dealers: "Take this; sell all

you can. Charge me up with what you are obliged to throw away." And a great deal is thrown away which has already cost a goodly expressage. This is the beginning of the end of such men. Shortly the mortgage will arise and, like Banquo's ghost, refuse to down. Whoever goes into the business after the plan of the fabled roasted pig which had a knife and fork stuck in its back and went about squealing: "Come eat me," will doubtless one day be eaten. What else can we expect of dealers, who are thus daily led into temptation. There are men who make their appearance on the streets of certain cities selling here and there bunched turnips, beets, radishes, etc., at *ten cents per dozen bunches.* What a slaughter of the innocents! The season is just a grand one for all vegetation, which includes weeds. Our market gardeners could not this season endure to hear the eloquent Patrick Henry thus declaiming:

"Gentlemen may cry Peas! Peas! but there is no peas."

I suppose I have 60 to 80 bushels of various kinds, and no market for them. The agricultural outlook in this vicinity is so favorable that we are prepared to hear an outcry that produce brings nothing. I wish we could raise fruit to advantage, but thus far, we have not been greatly encouraged, except with small fruits. O. H.

Indiana.

DE SOTO, Delaware County.—I have been engaged in small fruit growing here for the last five years, but this has been the poorest season in the whole five to make money. Prices have ruled very low on the account of such wonderful crops. The average price for berries of all kinds has been about $2 per bushel. I think the Snyder Blackberry is the most prolific of all the kinds that I have. The Wilson Junior is no good with me. T. M. G.

PENDLETON, Madison County, August 3.—Wheat is variable in yield and quality. Some fields produced 25 bushels per acre; others five to 10. The quality varies with the yield. The best yield is generally of the best quality, and the best farmer usually has the best wheat. The practice of thrashing from the shock, delivering the grain at the ware-house, and selling at once, is becoming general, in this part of the State. It saves time, labor, waste, and shrinkage. The price is from 40 to 70 cents per bushel. Oats are good, but hard to harvest, as they have been prostrated by rain and wind. Local price 18 to 20 cents. Corn is good for so wet a season. It has not been as well cultivated as usual. Many fields are verdant with weeds and grass. A larger amount than usual of old corn is held by farmers.

Indiana girls will have a good chance to win premiums in the potato contest, as the yield is large. S. W. H.

New Jersey.

CRANFORD, Union County, August 12.—In common with other sections, we have been blessed (?) with an extra amount of rain, but the weather now is clear and cool. The principal occupations of farmers in this section are milk-dairying and truck-farming. The rains have kept pastures in prime condition, so that cows have held out well with their milk, but the ground has been too wet to work, and much of the truck is overgrown with weeds, and is in very poor condition. Much hay was secured in very poor order. Oats and rye are the only grain crops raised; the latter was considerably below an average crop, and the former was nearly ruined by the wet weather. Potatoes are rotting badly, especially on low and heavy land. There are a great many of the "farmin'-don't-pay" farmers here. The land needs draining; it needs fertilizing, and should have a few brains applied to it. The villages are occupied by people who do business in New York, and many of the land owners think it will be a question of but a few years when the country will all be required for such residences, and they can dispose of their land at fabulous prices. There is a surplus of garden-truck, but first-class fruits are scarce, and sell at prices that will pay handsomely for the extra care needed to produce them. Eggs are worth 30 cents per dozen, but it is too much trouble "to fuss with hens." The farmer who will not "fuss" with these smaller matters, is the one who generally lets the larger ones go at loose ends, and says that "farmin' don't pay." H. V.

Vermont.

WHITING, Addison County, August 10.—We are having a very unfavorable haying and harvest season, and much of both hay and grain in this section will be entirely ruined. Such an excessive rainfall, such a succession of "cloud-bursts," were never before known in this section. We have a rank growth of all kinds of vegetation. Corn on the uplands looks well, while rust has injured nearly all the small grains, and the rot is already making its appearance in potato fields. Rust has also ruined many fields of onions, which are raised quite extensively here. The agricultural outlook with us is anything but favorable. F. D. D.

THE FARMERS' CLUB

ANSWERS TO CORRESPONDENTS

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

ARSENIC IN POTATOES.

A. H. B., Mansfield, Mass.—Can the continued use of Paris-green as a means of killing the potato beetle possibly affect the quality of the tubers? Some farmers about here attribute the bitter taste discovered in potatoes for the past few years to the use of the "green."

ANSWERED BY DR. E. H. JENKINS.

It has been abundantly proved by examination of the tubers that potatoes do not take up the smallest trace of arsenic even when Paris-green is used very abundantly for poisoning potato bugs. The bitterness spoken of must have come from some other source.

New Haven, Conn.

FROM DR. PETER COLLIER.

I have no information going to show any evil results following the application of Paris-green as usually made for killing the potato beetle. I question whether the bitter taste noticed by your correspondent in the tubers proceeds from such cause. But apropos to this matter, my attention has recently been called to very injurious results from the application of London-purple to fruit trees in this vicinity, and I am inclined to believe that the observation merits careful attention, since the two poisons would, I think, affect vegetation very differently.

FROM DR. HENRY STEWART.

The question as to the possibility of any injurious effect upon the soil or the tubers from the use of Paris-green to destroy the striped beetles which do so much injury to the potato crop, came up for discussion five or six years ago, and was then considered settled in the negative. No injury was believed by theory or hypothesis, or perceived by observation and experiment in any form or manner. But since then the use of arsenical poisons for the destruction of predaceous insects has increased enormously, and in such a manner as to favor the spread of arsenical vapors in the atmosphere, the question may well be extended, and in reviewing the experience of the past years in regard to the possibility of injury to the potato tubers, the possibility of danger in another way might be usefully discussed, or at least suggested for discussion. As regards potatoes, there can be no question, I think, of their perfect safety and inviolability from the Paris-green. Plants never take any solid matter into their circulation by their leaves, either in its solid condition as the most impalpable powder or even in a state of solution. The leaves do not even take in water through their own agency; it is contrary to the very nature of the leaves, which are beautifully varnished with a coating of wax and furnished with fine hairs for the purpose of resisting water and shedding it as it may fall upon them. The bright drops of dew or rain which may be seen upon the leaves are instances of their repellant disposition and power, and we may consequently dismiss from our minds any fear of danger from this source, and rest assured that the plants will not absorb any of the poison through their leaves. But it is well known that plants take up soluble matter, that is in solution in the water of the soil by their roots, and it is believed by many competent, intelligent persons that they do not possess the power or instinct of selection whereby they might choose the food which is nutritious and necessary and refuse that which is unnecessary or hurtful. Almost every inorganic element in the soil can be found in plants not only those which are necessary to their growth, but many which are not necessary. Traces of the metals have been found in the ashes of plants, as of iron, lead, copper, silver, lithium, arsenic and even gold and the rarer metals have been perceived in the spectrum analyses of vegetables. This being so, we cannot doubt that any substance that can be dissolved in water—and water is a universal solvent—must be absorbed to some extent by the roots of plants. The absorption of food from the soil is a mechanical process, the digestion and assimilation are chemical processes, hence there can be no selection by the roots of plants (hypothetically considered) of such substances only in the soil as are useful and necessary for the plants, and as practically studied by experiment this supposition has been completely confirmed, for by watering plants with solutions of certain injurious substances, the plants have become diseased or have been killed outright. In practice this has been proved by experience innumerable times. An over-dose of chloride of potash or of common salt; a very small dose of sulphate of iron or of sulphuric acid and the alkali (soda) of the Western plains, as is very well known, will kill the useful plants, sparing only a few which are naturally capable of resisting their injurious effects or even of assimilating them.

But arsenic and copper do not exist in the soil except very rarely and where they are found in a soluble condition to any extent the soil is barren because the vegetation is killed by them. They are only sparingly soluble, and cases are very rare where injurious results from their presence have been noticed. As to Paris-green, the arsenic and copper contained in this compound, are practically insoluble and the small quantity used of this insoluble substance would leave the merest trace of it—a quantity too small for weighing in the most delicate chemical analysis—in an acre of soil. Thus I think we may equally discharge from our minds any fear of danger to the tubers, or through them to those who consume them. But I would like to suggest to those readers of the RURAL who are interested, the question whether the prevailing practice of spraying fruit trees to destroy the apple moths and leaf-eating insects, may not be a source of danger through the well known easy sublimation or evaporation of arsenic. It has been proved beyond question that Paris-green and other arsenical compounds used for coloring wall papers in dwelling-houses have produced disease in persons through breathing the poisonous vapors. The arsenic contained in the color of the wall paper of one sleeping-room might not amount to more than one drachm or even less and the portion volatilized in the air is only a small part of this, yet it has had a most serious effect in numerous cases. An orchard may have a pound of Paris-green sprayed over it and this will contain nearly 12 ounces of arsenious acid, of which undoubtedly a large portion will be volatilized and mix with the atmosphere during the warm summer months. Is there not a serious danger to health lurking in this unsuspected source? Some of the symptoms of the prevalent summer complaint and of certain fevers may easily be mistaken for those of arsenical poisoning, such as pains in the bowels, nausea, vomiting, diarrhea, clammy skin, cold sweats, hectic fever, sense of weariness and mental depression, and it may be that these symptoms are due to the effects of the arsenic in cases in which the causes are too obscure to be easily determined.

NON-CONDUCTORS OF HEAT IN WALLS OF BUILDINGS.

R. M. C., Chiswold, Del.—I am building a house for the winter storage of sweet potatoes. It will be weather-boarded with inch hemlock, and covered with tarred-felt roofing, and I propose having a four-inch or eight-inch wall, either filled with sawdust, or without filling, if it is safe to have such a one. Is it a settled fact that a wall with a dead-air space in it is as safe a protection against frost as one that's filled?

ANS.—A dead-air space is not an effective non-conductor of heat. The radiation of heat is more easy and rapid through still air than it is through porous substances which contain air. Dry sawdust is about one-third more effective than an empty air space. The best non-conductor is a substance which has the largest number of air spaces of the smallest size. Hair, felt and the so-called mineral wool, which is really fine fibrous glass, are the best non-conductors reaching an efficiency of about 80 per cent. Fine charcoal comes next with an efficiency of about 70 per cent.; then dry sawdust is next with about 60 per cent., and an air space is the last of all with an efficiency of about 45 per cent. But air spaces differ very considerably in efficiency with the various materials of which the walls are constructed. As the material is more absorbent of heat the resistance of the air is lessened. A mere space between common boards is the least effective of all, but if the boards were made air-tight and were painted a light color or covered with smooth bright reflective metal, the efficiency would be the highest; so that practically ordinary board walls not air-tight, with an air space between them, would be but little better than a mere doubled board wall, with paper between the boards. Tarred roofing well lapped and fastened would be a considerable help, but it offers a poor resistance to heat on account of its color; all black substances absorb heat more rapidly than light-colored ones. The best sweet potato houses are provided with stoves for use in dangerously cold weather.

THE KEROSENE EMULSION.

E. H. C., Mattsville, Ind.—What is the latest way of making the kerosene emulsion, and for the destruction of what insects is it especially adapted?

ANSWERED BY PROFESSOR A. J. COOK.

I find that soap is best to use to make or form a permanent mixture of kerosene and water. Every one knows that oil and water will not mix unless compelled to do so. The object of the soap is to compel this mixture so that we can dilute kerosene oil at-pleasure. I use one quart of soft-soap or one-fourth of a pound of hard soap—whale-oil preferred—to one quart of water and one pint of kerosene oil. If desired, we may use larger quantities in the same proportion. I now stir violently till all the ingredients are permanently mixed. I accomplish this by pumping with a force pump, throwing the liquid violently back into the vessel from which it is drawn. After the mixture has become permanent we can dilute it with water to any extent. I use one of kerosene to 15 of all else. Thus 15 gallons of liquid ready to use contain one gallon of kerosene oil. With this strength it is effective, and never injures foliage.

While I find this a specific against many insects, I think it most valuable for destroying plant and bark lice. To use it with the best effect, it should be thrown violently on to the plants by use of a force-pump. This insures contact with all the insects, and as it is contact that destroys this is very important. I have never failed to destroy plant-lice, or the eggs of the same just before they hatch in spring by use of this valuable insecticide.

ACTINIDIA.

F. G. B., Gratiot, Wis.—I was very much interested in the Actinidia polygama, after reading the notes on it in a late RURAL and would like to learn some more concerning it. 1. How long would it take it to cover an arbor or trellis to make shade for about 50 colonies of bees? 2. Is it a honey-producing plant? 3. Where can I get the vines? How far apart and at what time of the year should they be set? 4. Does the American Linden or Basswood grow from cuttings? If it does at what time of the year should they be set? What is the best method of propagating it?

ANS.—1. The third year the vine would cover an arbor say 10 by 10 feet. After that it grows with great rapidity. As the R. N.-Y. specimen has been permitted to grow whithersoever it would, its growth has been upwards at the expense of lateral growth no doubt. We can not definitely answer this question. 2. Bees were not noticed among the flowers. 3. Our vine came from Ellwanger & Barry of Rochester, N. Y. 4. We do not think it does, since the usual plan adopted by nurserymen is to layer the branches in June. It may be raised from seed sown as soon as ripe. They will sprout the next spring. As told in last week's issue of the RURAL it appears that a mistake has been made with regard to the varietal name of this vine. That to which the name Actinidia polygama, has been given, is in reality, it seems, A. arguta, and *vice versa.*

LIQUID MANURE.

S. P. Q., New York City.—My method of making liquid manure is as follows: I put horse droppings direct from the stable into a barrel, pour water upon them and let the mass stand for a few days. Into another 40-gallon barrel I put 25 gallons of water, draw the liquid off from another barrel and fill this one up with it. To do this takes 12 gallons. I add one pound of nitrate of soda. I use the mixture for forcing the growth of the mammoth pumpkins I am growing, applying six gallons to a hill at a time, repeating the application twice a week. Can the RURAL suggest any improvement?

ANS.—You do not state what quantity of horse droppings you steep in the barrel. But supposing you use two-thirds of a bushel of droppings to 40 gallons of water, and to this add also a pound of nitrate of soda, and of this liquid give 12 gallons a week to each hill

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies.

of squashes, and continue this fertilizing for six weeks, to each hill would be given 1½ bushel of horse droppings, two pounds of nitrate of soda and 72 gallons of water. This we should regard as extraordinary liberality. As so much depends upon your land, the moisture already in the ground and the vigor of the plants, the strength and quantity of the liquid manure to be applied have to be governed accordingly.

SHADE FOR BEES.

C. T. S., Swanton, 'Md.—Remembering that public sentiment is mostly manufactured by the manufacturers of bee-hives, is it best to keep one's bees in a building, and would the RURAL use a corner of the barn?

ANS.—It is not wise to keep bees in a building at all. The building does no good, and it is easier to handle the bees when away from any building, shed, etc. If it is desired to shade the bees, use a grove trimmed high or an apple tree. If no trees are at hand, a board can be used for shade. This should be nailed to cleats so as to be held three inches above the hive. This shade board should be eight or 10 inches larger each way than the hive. If the hives are painted white, shade is not very necessary though, even with white hives bees may sometimes do better in shade or with a shade board.

Miscellaneous.

S. C., Vernon, Vt.—The Orange Judd Co. of this city publish a book on fish culture by Seth Green.

(*Name Lost*).—The peculiar-looking insect is really a spider known as Gasteracantha spinosa, so identified by L. O. Howard, Acting United States Entomologist.

C. T. S., Swanton, Md.—Considering the additional risk of fire, etc., and the cost of power at two places, is it, or is it not best to have one's work-shop in the barn?

ANS.—We shall have to ask our readers to give their opinions regarding this matter. At the R. N.-Y. farm the shop is arranged over the carriage room which is a part of the barn.

J. J., Toronto, Can.—1. How early can I take up red raspberries of this year's growth and be successful in planting and growing them? 2. Does it injure red raspberries to cut the young wood back after they have been planted in the fall? If not, how near to the ground should the cutting be done? 3. Can blackberries be safely planted in the fall? 4. Can Norway Spruces be planted early in the fall?

ANS.—1. Now. 2. Better let the wood mature. This will be the bearing wood next year. 3. Yes, if you mulch them. 4. No. You should wait until spring.

G. H. F., Southampton, L. I.—How is cream raised so as to be thick and solid in summer? I am using the Channel Can Creamery with plenty of ice; but my New York customers say that it is not as solid as that sold in the city. What would a small centrifugal cream separator fit for a dairy of 15 cows, cost?

ANS.—The Howell Cream Company which supplies a good portion of the cream used in the city, informs us that it sells four grades of cream, the quality being determined by the number of pounds of butter that can be made from a can of cream. Extracted cream, or that from milk that has been run through a separator is preferred. Of course, the concern uses large and expensive machinery. The De Laval Company, of Philadelphia, Pa., make a hand separator which is used by some dairymen. It costs about $125.

DISCUSSION.

POINTS IN PEACH CULTURE, ELI MINCH, SHILOH, N. J.—I have received so many inquiries in regard to a note of mine which appeared in the RURAL for July 27, on the use of potash in peach culture, that I am compelled to beg space for a reply. Potash is not the only desideratum in peach culture. I presume the peach orchard to be planted in a dry, well-drained soil that admits of no standing water, and in a location as free as possible from early and late frosts—in fact in a good peach soil. The yellows as described by the best writers may be produced by any of the following plans, and more surely so when they are—as they often are—all combined. In all such cases I will at once say that potash will not supply the loss of other needed conditions for health and longevity. The drawbacks that potash cannot compensate for are: First, weakly trees of low vitality. These may be large trees of weak roots, or overgrown trees of weak, porous wood. For vitality I always select a small tree with an abundance of small, fibrous roots. Second, shallow planting, carelessly done, the roots all crowded together in a small hole, the dirt carelessly thrown in and left loose. Trees should be set rather deep in all proper peach soils (on wet soils deep planting will be ruinous), say three inches deeper than they grew in the nursery, and always on land deeply plowed—say seven or eight inches—and also sub-soiled if possible. The object is to get a deep-rooting tree, to secure it from the effects of dry weather, from injury by any subsequent deep culture, and from being blown over by high winds.

We should form strong bodies to secure a permanent hold on the soil by allowing the branches to start low, say, a foot or so from the ground, making them start upright by judicious pruning and then we can cultivate them much more closely than if the bodies are formed four or five feet high, for in that case the branches always droop, and close culture is impossible. I always permit all buds to grow the first year of planting. A tree in this condition looks unsightly, but makes a strong, robust body: often it will be in the fall an inch and a half in diameter and possibly only four or five feet high. These trees are so bushy that they push an enormous amount of roots, and firmly fix themselves in the soil. The second year they are pruned to a single stem and an extremely strong and healthy growth follows. Three or four branches are allowed to grow the second year, all upright.

Culture is always thorough and deep the first year to cause deep rooting; each year afterwards it grows more shallow until only the surface is loosened. Other crops should never be planted in a peach orchard. They attract the moisture and sustenance from the tree. If one intends to stick to farming he had better drop peach culture. Under the treatment I recommend, the trees will grow luxuriantly and will require heading back each year, or they will soon outgrow all reasonable bounds and form long limbs which will droop with the weight of leaves and fruit. The bending will cause the rupture of the wood cells and a growth of small, wiry shoots will follow, or the yellows will appear.

We now come to potash and soil exhaustion. All soils do not need potash, though most do. I hold that in all soils where potash is needed the yellows will always appear unless it is freely used. The three great needs of the peach are phosphoric acid, potash and a small amount of nitrogen. A large application of nitrogen causes late growth and winter-killing. In my own case I use, before the trees are planted, 1,000 pounds of bone-dust per acre deeply plowed under before the trees are set. Then I annually broadcast 1,000 pounds of kainit per acre. Farther inland the cost of kainit is greater, and the use of muriate of potash and salt is to be preferred. I exhibited at the American Pomological Society's meeting at Boston, Mass., September, 1887, a peach limb three years old over 15 feet long and I had left on the tree five equally long. Such large growth is not desirable. This has all been done on land where, without potash, the yellows take the trees before bearing.

PRODUCTS AND PRICES.

AN ILLINOIS FARM, PLEASANT VALLEY, ILL.—I was much interested in those reports of profitable Jersey farms. Farmers in New Jersey have a great advantage over us in being near an almost unlimited market, thus securing better prices with less expense for railroad freight. The West can never drive them from the New York market on any bulky commodity as long as freight charges remain as at present. Our local markets are the neighboring towns. The nearest railroad town with 500 inhabitants is eight miles distant. The next is 12 miles off, with 2,500 population. Chicago is 135 miles away. There is, therefore, no chance for us to compete with Jerseymen in selling small fruits, and potatoes are seldom high enough in price to pay for raising them in large quantities, as we can haul but two loads of 25 bushels each per day to the railroad. This farm consists of 80 acres of fairly good, tillable land; 40 acres of good creek and marsh pasture, and 80 acres of rough, bushy and stony hill pasture. The stock kept are three work horses, three colts, 10 cows, 25 calves and yearlings and 20 two-year-old steers and the offspring of 10 breeding sows. The sows are full-blood Poland-Chinas and the pigs are sold for breeding purposes to neighboring farmers. Two litters per year are raised and the sows are kept as long as they behave well and bring profit. Any faulty ones not sold for breeders are fattened and put on the market. The amount of land under different crops averages about as follows: 20 acres in corn; 15 in oats; five in wheat; one in potatoes; 35 in meadow; the remainder is occupied with the orchard, garden, etc. Corn averages 50 bushels per acre. The hay crop this year will amount to 80 tons. We don't use commercial fertilizers. Other farms near by of less size and better land beat mine in the amount of stock kept. But hay at present isn't worth hauling to the railroad, where it brings only about $4 per ton. Hogs pay best at three to five cents per pound live weight. The only way in which we can make any money on steers is by buying them when two or three years old and keeping them over one winter only, feeding corn the latter part of the season so that they will get a good start with which to go on grass pasture. One should feed all the good hay they want, and not over-stock his pastures. The animals should be sold right off the grass in August or September at from $3.50 to $5.00 per cwt. One neighbor paid $32 per head for three-year-old steers in February, and in September sold them fat, off good pasture, delivered at the railroad, for $4.80 per cwt. bringing $65 per head, and he did not feed over $25 worth of corn. Another began feeding corn heavily in the early fall and by the following June he had fed to four steers 500 bushels of corn at 20 cents per bushel and then had to sell them, weighing 1,580 each, at $3.50 per cwt. Result loss, of course. Pigs picked up corn after steers. What prices do the Cranbury farmers get?

BETTER COWS.

W. E. R., DOVER, N. H.—A week or two ago I read in the RURAL an article headed: "Better Cows and How to Get Them." This would not be a hard problem to solve if farmers would give up some of their old notions and use some of the chances they have to improve their stock. When I came here, nearly four years ago, I wanted to buy a Jersey cow, and found them very scarce. Some of my neighbors told me I had better not get a Jersey, as Jerseys were wild and tender and not worth anything for beef. I bought what was called one of the best cows around here. After keeping her awhile, I concluded that my neighbors' standard for a good cow was rather low or that mine was high. After looking around a good deal, I bought two Jersey cows and sold the first one for beef. I got a Guernsey heifer from a friend in Massachusetts, and thought I would raise my own cows; but when I wanted to find a bull to use there were only scrubs; so I got a Guernsey bull from some of the best stock in Massachusetts. There are no other Guernseys about here that I know of. I am much pleased with mine, and prefer them to Jerseys. I charge only one dollar for the use of the bull; but some think that too much and will drive their cows to a scrub bull whose services they can get for 50 to 75 cents. But many who keep good butter cows bring them to my bull. I think that a man who is not willing to pay a dollar for the use of a good Guernsey bull does not deserve a good cow, but ought to have a scrub. A farmer who is making butter would be better off by keeping a Guernsey or Jersey cow until she was five years old and then knocking her on the head and burying her, than by keeping such a beast as many of the farmers hereabouts keep until she also is five years old, when they get a good price for her beef. Some of the farmers say: "My cows are the same as my father kept, and if they were good enough for him they are good enough for me." As long as farmers think that there is more money in keeping cows that make from 100 to 150 pounds of butter per year, and that butter cows are wild, tender and expensive to keep, they will not try to improve their stock. It is hard to get them out of the ruts in which they have traveled so long. When you tell them a cow will make a pound of butter from 7¼ quarts of milk, they don't call you a liar, but they look as if they wanted to, and when you tell them that a two-year-old heifer is making about 9½ pounds of butter a week, they say: "That's doing pretty well!" There are none so blind as those who will not see.

HIRED HELP.

C. C., WATKINS, N. Y.—I believe that the question of hired help is an unsolved problem with many. It seems to me that any suggestion that will tend to the betterment of the employer without injuring the condition of the employed, is a step in the right direction. Nearly all that have had experience claim that the man hired by the month, who is boarded and has his washing done in the house is a nuisance, and if the man is not, the practice certainly is. Oftentimes the farmer with this monthly help finds his man has left him at the commencement of haying or harvesting for some more paying position. Many such cases have happened here this season. Besides this, the hiring of monthly help with board in the house generally obliges the housewife to have extra help. Now, the suggestion I have to offer is that the farmer should have a tenant house and let the man board himself as far as practicable. Many small places can be purchased here on which there is a small house and barn, for about what the land alone is worth. Give such a building a coat of paint and a few repairs and the tenant house is ready. One small lot that I know of paid for itself in four years, so that the outlay was not very heavy. This way of hiring relieves the housewife of much unnecessary labor, and a man hired in this way seldom leaves his employer without good cause. Many times the tenant's wife can be hired to help in the house when such help is most needed. Of course, this only provides for one hired man, but this is all that nine out of 10 of the farmers here hire for the season, besides day help. Now let us compare the rough cost of the two ways. The tenant generally gets here about $200 per year, house-rent with a garden, cow-pasture, and fire-wood. This same man could not be hired for less than $20 per month for eight months. Without counting the extra work required in the house from the monthly hand, where is the saving? About all that need be said about the treatment of the hired man is: "Be a gentleman yourself and treat him like one." If you are his superior, show it by the use of pure language, good, temperate habits and a Christian-like behavior. With regard to work, 10 hours in the field are enough for the hired man, and I believe the farmer will get fully as much profit from 10 hours' work as from more. This way of hiring and treating a man will make an honest, industrious citizen of him if anything will.

"SEEDING IN THE CORN FIELD."

O. C. HOWE, BERRIEN COUNTY, MICHIGAN.—The R.-N.-Y. is very properly discussing all topics that pertain to the better methods of farming. I was quite interested in the issue of June 29 which treated of the subject of "Seeding in the Corn-field," and eagerly read the different ideas advanced. Clover is quite frequently sown in the corn-field by farmers here. It is sown after plowing the land the last time. No one sows except for pasture and to restore the fertility of the soil. We recognize the fact that wherever clover is growing upon land the latter is getting richer and consequently we sow it whenever we can. Prof. Latta has the right idea when he says that "with favorable weather in July and August the seeding would doubtless do well," and that "much would depend on these two months." With us the seed is sown in July or very late in June. If there be rain enough in July and August to carry the seed into the ground and keep it alive and growing, one will be quite likely to get a good stand of clover. Contrary to the advice given by Prof. Wing, I should sow as soon after the ground is plowed as possible. The seed then falls into the little crevices and is soon covered with earth. If not sown at this time, a few dews will form a crust over the soil so that the seed will have to be dragged in. Last year the weather was too dry and I lost my seeding. Two years ago I was only partially successful, but had enough for pasture. This year the weather is specially favorable and some of the clover is up now. If the frequent rains continue I shall expect a good stand. I think the practice a good one, when it works at all, for it furnishes pasture during the summer months and makes the field richer for wheat. I have adopted this method because it allows one to farm more extensively without seriously robbing the soil.

GRANULATION OF BUTTER.

P. C., MILFORD, N. H.—J. M. C., of Hopkinton N. H., says that I ought to know that granulation is perfected by stopping the churning process at just the right time. That is all right; but if one stops the Blanchard Churn at that time, are not the floats and inside of the cover covered with cream that is not churned, unless it has previously been scraped off. That has been my experience with a churn with inside floats, similar to the Blanchard. Now about the cleaning: we always wash the churn thoroughly and the Stoddard can be fastened upside down and the cover be left on the bottom of the churn, and it is not shut up tightly and so has not a close and unpleasant odor which other churns sometimes have. Now about the end-over-end motion of Stoddard requiring more watchfulness than the gentle motion of the floats in Blanchard, I can always tell by the glass in the cover, without stopping to look, just when to stop churning with the Stoddard, and the granulation is perfect, and I have heard one man who saw me churn and who has a Blanchard Churn, say, as he saw the perfect granulation: "I guess the next time I want a churn I will get a Stoddard." J. M. C., likes the Blanchard because he has used it so long and it is a good churn I admit; but for great ease in cleaning and perfect granulation of butter and ease of running, I prefer the Stoddard and think that nine out of 10 persons who are not especially interested in either, after seeing both in operation, will choose the Stoddard.

SOME SILO CROPS.

O. T. B., SOUTH EUCLID, OHIO.—I have never put oats in a silo, but I have fed oats and peas sown together to milch cows with good results. In 1888 I filled two pits with clover put in whole so that they were about four feet deep when they had settled; they were covered with loose straw and rails. The silage did not keep well; it dried out about half way down, not being compact enough to exclude the air. It came out musty, or covered with white mold, as seen in mows where clover has been put in too green. The bottom part was very fair. If I had put it all in one pit there would have been only one top and only half as much damage would have been done. Cows ate the whole with good relish. I would not recommend clover as an ensilage crop; I would prefer to cure it as hay and feed it in connection with corn silage. I put six loads of millet that had been killed by frost on top of corn silage, covered it in the same way as the clover, and opened it in three weeks. It made fair silage; but it was not equal to that from corn. I had trouble from the milk souring while I was feeding it. Corn is the stuff for ensilage.

BUTTER COLOR FROM ANNATTO AND GRASS.

W. P. W., MONROE, WIS.—In the RURAL of July 27, under the head of "Brevities," appears the following astonishing assertion. "The dairy-worker who colors butter in the churn works on the principle employed by the one who depends upon green grass for a color. They both aim to get vegetable (?) coloring matter into the product. In one case the cow does the work, and in the other the dairy worker does it." That is "bosh" and wholly unworthy of a place in the RURAL. The dairy-worker who uses dyestuff to color butter for sale, perpetrates a fraud, and intends to cheat when he does it. There is no demand anywhere from consumers for annatto-colored butter or cheese. The demand for these is wholly confined to the producers and sellers.

INSECTICIDES; A MIXER.

C. D. W., GRAND BAY, ALABAMA.—I was not much surprised at reading the editorial in the RURAL of July 13 on insecticides; but I would have been surprised had I read it in any other journal with which I am acquainted. It shows so clearly that the interests of its patrons are not subordinated to its advertising columns. Now for a good mixer; take for a pattern a barrel churn, only run the axis through the heads, with a crank on one end, and a piece of a stave cut out for a hand hole; fill half full; put in a few stones as big as your fist, if you like, and the thing is ready.

STEPHEN HOYT'S SONS, NEW CANAAN, CONN.—We hardly think the RURAL'S test of the Yale Strawberry is sufficient to judge of its success in the Rural Grounds yet. It has been one of the worst seasons for strawberries on record. Ours did not do half as well this year as they did last.

What Others Say.

SOILING AND EXERCISE: The Jersey and Guernsey cows, Henry Stewart remarks, are types of the most profitable of all dairy animals. These animals for many years past have been fed on the soiling system. Pasturage is clearly impossible upon an island of only 45 square miles or less than a square of seven miles each way, with only 4,000 acres of pasture and 75,000 or 76,000 cows, so that the cows are kept in confinement almost wholly, and in pasture are tethered within as narrow bounds as will afford the single meal only at one time. But under this system the Jersey breed of cattle has been brought to the highest point of product and profit, and has been always free from the common diseases of cows. No one hears of tuberculosis or pleuro-pneumonia in that pleasant and densely-populated island. To take American instances, we shall find that the highest and the most healthy cows are found where soiling is practiced, and whenever a test has been made of soiling, that is, feeding in yards or lots and stables on green fodder, cut and brought to the cows, as against pasture, the soiling, with its restfulness, quiet, and economy of food, has always given at least 25 per cent. more product with less consumption of fodder

SAMPLES AND COMMENTS.

THE WESTERN RURAL says that every farmer who provides himself with a beautiful home, surrounded by green lawns and winding paths, a well cultivated farm, and all that makes life pleasant, is a blessing to any neighborhood. Were there no shiftless farmers, or tramps, or paupers; if all classes could in some way be induced by proper training to become self-reliant citizens, the millenium would be on its way hither.....

ONE'S WHOLE DUTY to oneself, is one's first duty to his neighbor.....

THE MASSACHUSETTS PLOUGHMAN remarks that the Champion Quince is said to be preferable to either the Orange or Rea's Mammoth. It may be in the South, but those who act upon the above well-meant advice will, in the R. N.-Y.'s estimation, have occasion to regret it. The Champion is too late for the North.....

PROF. S. W. JOHNSON makes the valuable note, in a bulletin just received, that the fertilizing value of fine bone is much greater than that of coarse bone. The latter may lie in the ground for years while very fine bone is readily decomposed and taken up by plants. The improved condition and increased value of our bone-manures are to some extent results of the action of the Connecticut Station which in the year 1879 first carried into effect the method of valuation based on the mechanical as well as the chemical analysis. Nitrogen in the finest bone is now worth 16½ cents per pound, while that in the coarsest bone is valued only at 8½ cents, and phosphoric acid is valued at seven and four cents in the two grades respectively. Very finely ground bone is, at present, one of the cheapest sources of quickly available nitrogen and phosphoric acid.....

AGAIN he says that the price of castor pomace has advanced $5.00 a ton since last year, and in consequence it has become one of the most expensive sources of nitrogen, while last year it was one of the cheapest. Cotton-seed meal has also advanced in price but still remains the cheapest source of available nitrogen.....

AS AN illustration of the long time chess seed will lie in the ground dormant, a member of the Elmira Farmers' Club mentions in the Husbandman, the removal of an old barn which had stood on the ground 40 years. The same season a luxuriant growth of chess sprang up and covered the unoccupied land. Had this particular piece of land been sown to wheat, many farmers would have considered it a convincing proof of wheat turning to chess.....

SOMETHING NEW IN ROSES: We find the following in our lively contemporary Popular Gardening:

"The Editor of the RURAL NEW-YORKER has had remarkable luck in hybridizing roses, according to his report. A cross ascribed to Harrison's Yellow upon Rosa rugosa has brought out a new rose with flowers so much like those of the famous General Jacqueminot as to deceive good judges. The foliage, however, is different, being more like that of the Rugosa parent, and, best of all, it is less subject to the attacks of insects than anything in its line we now have, for this one is a perpetual bloomer. Notwithstanding Mr. Carman's reputation as a careful hybridizer, the question will naturally arise in the minds of many as this new-comer is compared with its assumed parents, which so widely differ from it, whether there may not be some mistake as to the parentage. However that may be, such a rose as Mr. Carman describes is a welcome addition to our all too meager list of hardy, vigorous, handsome, perpetual kinds."

It is not wise to be positive as to many things, but there is no room to be anything else in the case of our rose crosses. We have never raised a rose from any seed except from Rosa rugosa. That, it will be admitted, settles any question as to the maternity of the seedlings. The rose in question was produced by using pollen from Harrison's Yellow upon R. rugosa. No other pollen up to that time or during that season had been or was used. As self-Rosa rugosa seedlings come nearly true from seed it will not be questioned that the plant in question *is a hybrid*. If so, Harrison's Yellow is the male parent, since every bud of Rugosa operated upon was carefully emasculated before the anthers were ripe, and carefully covered with fine tissue-paper until the pollen was applied. The tissue-paper in all cases was then at once replaced and not again removed until it was seen that fruit formed or failed to form.

The next year pollen was used from Hybrid Remontants upon R. rugosa that happened to furnish it when needed. The male parentage of this second year's batch (or what is left of them) is therefore unknown. Four or five have bloomed, showing them to be rather more interesting as curiosities than valuable for any other purpose. The third season's batch originated in the same way as the second. There are about 40 of them. They have not as yet bloomed. The foliage of these as of all others, varies indefinitely—not one having that of R. rugosa and yet as they grow older, all showing some trifling resemblance—generally in the texture and venation of the leaf.

The present year we have used chiefly the pollen of Teas and Hybrid Teas upon R. rugosa. The result thus far is that we have not less than 250 plump heps each one of which will give an average of 50 seeds. It will be seen that the R. N.-Y. is making a pretty thorough trial of R. rugosa hybrids which involves an amount of painstaking labor that we should be foolish to undertake without the absolute knowledge that they are really hybrids without the shadow of a doubt. Our good friend the Editor of Popular Gardening is cordially invited to come and inspect the results of our work for himself.....

THE Orange County Farmer is glad to note an increasing interest in that part of the world in the matter of breeding draft horses. The farmers of Orange County and vicinity have tried the trotting horse business and have never made it profitable, but there is no hazard in the draft horse. He is ready for market at three and four years old, always commands a fair price, little blemishes do not affect his sale and he is as easily raised as a steer. There are many things to be said in favor of this branch of farm work.....

THE Western Rural is of the opinion that for a real bright, Pilgrim-pure, clear-cut, financial idea one should go to a New England man. It says that one has just advised a young man who has two thousand dollars, and wishes to buy a farm to loan the two thousand to some farmer and go to work for him by the month. The writer thinks the young man will own the farm in due time.....

For Sleeplessness

Use Horsford's Acid Phosphate.

DR. C. R. DAKE, Belleville, Ill., says: "I have found it, and it *alone*, to be capable of producing a sweet and natural sleep in cases of insomnia from overwork of the brain, which so often occurs in active professional and business men."—*Adv.*

DIRECT.

——N. Y. HERALD: "A curious discovery shows that cider is a dangerous beverage, for it propagates typhoid fever."

——TROY PRESS: "The man who ought to listen and learn usually does most of the talking."

——O. C. Farmer: "This talk about fancy prices is, to say the least, misleading. Because one man happens to get a private customer who is willing to pay a fancy price in order to secure a regular and uniform quality of butter, is no proof that his butter is any better than that of some of his neighbors who must be content with the market price. Some men are fortunate enough to get special customers and prices. But there are not enough such customers to go around. The bulk of the product must be sold at market prices."

——PROF. I. P. ROBERTS: "Why put manure on your fields in the spring? Is that the way the Lord manures His farm? Is that the way He has reared these great oaks and chestnuts and pines? No; He raises a plant to feed an animal to make fertility, and He always spreads manure in the fall."

——PROF. HENRY, in the Western Farmer: "I should say that a common two-strand, galvanized barb-wire, well put up, is superior to many of the rods as put up by "agents" at great cost. If one intends to use barb-wire it would be better to twist half a dozen strands into one than to use a single wire. Having done this, bury the lower end of the wire in moist earth, digging if possible down to water; or, all the better, running the wire into a well or cistern below the water. Without a good ground connection the wire may be more than useless. Having the wire properly "planted," attach it firmly to the building every two or three feet by common staples, just as you would to the posts when using the wire for fencing. The common practice of using glass thimbles for insulators to keep the rods away from the building is altogether wrong; agents no doubt use this plan to add to the expense and mystify people. Carry the wire to the highest points of the building, and let it rise several feet vertically, supported by a staff nailed to the roof. The wire may be supposed to insure safety for a distance in every direction equal to its hight above the building. Thus, if it rise eight feet above the peak of the house it guards a circle sixteen feet in diameter."

——"OF all humbugs, the lightning rod man is usually the greatest, and if we had all the money he has taken out of the pockets of Wisconsin farmers, without proper equivalent, we could put a fine library into every Grange hall in the State, and have enough left to pay the expenses of a few hundred young men up at Madison this winter to attend the short agricultural course."

——FARMERS' REVIEW: "The arguments to be used in favor of administering chloroform to animals are precisely the same as those for its use for the human subject—first, that all pain is avoided; and secondly, that the stillness produced in the animal tends to increase the ease and safety of the operation to be performed."

——JOSH BILLINGS: "We are so avarishus that even when we trade with ourselves, we go for getting the best end of the bargain."

——HOARD'S DAIRYMAN: "If there ever was a man whose stingy avarice beats the very breath out of himself, it is the man who will undertake to make a cow really profitable without feeding her liberally, of good milk-producing food. The punishment goes a step farther. Even after he gets converted to the gospel of liberality, he is beaten, unless he is just enough to himself to get a *good* cow into which he pours this liberal supply of feed."

——"THE prayer of every dairyman should be, 'O Lord deliver me from the folly and certain punishment of being stingy to my *own* cows.'"

——VERMONT WATCHMAN: "The future of farming will be revealed when the cities fail to be able to absorb nearly all the rising talent and energy of our people. When that time arrives (and it is near), we shall see fine agriculture begin to take gigantic strides. The field is boundless; the opportunities are rich. All that is waited for is *men*! It makes the soul sick to see how the opportunities and possibilities of farming in New England are overlooked."

——N. Y. TIMES: "A farm is always worth more than it will sell for. The farmer cannot live on the proceeds of the sale without spending his principal, and risking the chance of poverty or dependence, should he live longer than his probable term."

Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

Summer Weakness is quickly overcome by the toning, reviving, and blood-purifying qualities of Hood's Sarsaparilla. This popular medicine drives off that tired feeling and cures sick headache, dyspepsia, scrofula, and all humors. Be sure to get Hood's Sarsaparilla.

JOHNSON'S ANODYNE LINIMENT ESTABLISHED 1810.

For Internal and External Use.

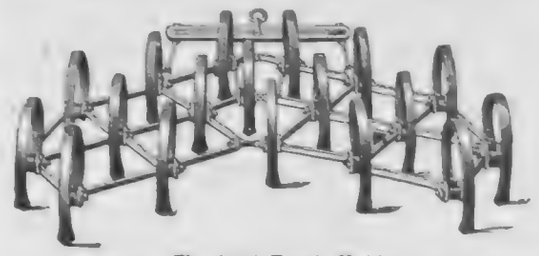
Stops Pain, Cramps, Inflammation in body or limb, like magic. Cures Croup, Asthma, Colds, Catarrh, Cholera Morbus, Diarrhœa, Rheumatism, Neuralgia, Lame-back, Stiff Joints and Strains. Full particulars free. Price 35 cts. post-paid. I. S. JOHNSON & CO., Boston, Mass.

HENCH & DROMGOLD'S

All Steel Frame Spring-tooth Harrow

A WONDERFUL IMPROVEMENT.

TEETH QUICKLY ADJUSTED BY ONLY LOOSENING ONE NUT.



The best Tooth Holder ever invented.

The tooth is held in position by a Ratchet with which it can be adjusted so as to wear from 15 to 18 inches off the point of the tooth, which is four or five times as much wear or service as can be obtained from any other Spring-tooth Harrow in existence.

Agents wanted. Catalogues free.

HENCH & DROMGOLD, York, Pa.

FEARLESS.

This Threshing-machine received the two last **Gold Medals** given by the New York State Agricultural Society; and has been selected, over all others, and illustrated and described in that great work, "Appleton's Cyclopedia of Applied Mechanics;" thus, establishing it as the **standard** machine of America. **Straw-preserving Rye-Threshers, Clover-hullers, Ensilage-cutters, Feed-mills, Fanning-mills, and Wood Saw-machines;** all of **the best** in market. The **Fearless Horse-powers** are the most **economical** and **best** Powers built for the running of Ensilage cutters, Cotton-gins, and general farm and plantation use. For free Catalogues, address

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No. 34 PARK ROW, New York.

SATURDAY, AUGUST 24, 1889

PRES. LYON page 563 pronounces the Erie and Lawton Blackberries *not* alike. To the R. N.-Y. the Erie seems a hardier variety.

Read "Farm Libraries" page 568. *What do you think of "At A Fair"* page 556?

MARCH, if you would keep up with the procession. *March*, MARCH—there is no escape from it! It is the weapon of the industrious against the idle; a weapon that God has placed in their hands as a means of equitable and humane self-preservation.

"The Red Polled I consider next to the Devon as general purpose cows."—L. F. ALLEN, page 556.

PROF. COOK, of the New Jersey Experiment Station, reports, in a late bulletin, what the R. N.-Y. has so persistently endeavored to impress upon its readers.

As a rule, he says, the fertilizer which contains the greatest amounts of nitrogen, phosphoric acid and potash is the cheapest; for the cost of manufacture, freightage and rate of commission are the same for high-grade as for low-grade fertilizers, and *the labor on the part of the farmer is increased as the grade of the goods decreases.*

The R. N.-Y. confidently anticipates the time when there will be no demand whatever for low-grade fertilizers.

"When enumerating cut-worm remedies we should not forget to mention clean culture."—C. P. GILLETTE, page 557.

THERE will be no Pennsylvania State Agricultural Fair this year. The State Agricultural Society, owing to great carelessness and mismanagement, has financially collapsed. Last Wednesday the State fair grounds at Philadelphia together with the buildings, franchise, etc., was bought in for $2,500, by the Reading Railroad Company, which forcelosed a mortgage for $25,000, which it held on the property. Investigation shows that the Association also owes an aggregate of $80,000 to various other parties. It is to be hoped other fair associations which may be disposed to run recklessly into debt, will take warning from the plight of this "terrible example."

"But look at it, you who wish well to the babes in a million cradles! What about this modern narrowing down of human activities and observation?—OLIVER HOWARD, page 558.

THE R. N.-Y. wants to know whether hay can be satisfactorily baled from the field. A number of our readers who have tried this experiment report failure. The hay will not keep in good condition. Here is a note from a manufacturer of hay-presses, which ought to have weight:

"We experimented with our machines in baling grass as cut from the field, but we did not find that it kept. Others claim that they have baled grass that was partly cured, and that it kept well; but we are of the opinion that it would not answer for general use. We know that our machines will bale it as well as any other kind; but we think no kind will bale it loosely enough so as to allow the air to circulate freely through and thus dry it out without molding."

"Where was the owner of that boy? Well, I don't know; but I do know that I would not have had that boy go through my potato field in that way, at that time, for $20 *an acre."*—T. B. TERRY, page 555.

"WHEN shall I stop the churn so as to get the best 'grain' to my butter?" There is probably no one dairy question that is asked more frequently than this. The usual answer is: "When the butter has formed in lumps about the size of wheat kernels." The man who gives this answer doubtless thinks it conclusive. The learner often sighs for something more definite. "About the size of wheat kernels" will not tell it all. The R. N.-Y. will give its readers something more definite. One of the best butter-makers in New York State will have photographs taken of his butter just as he stops the churn. We will print these photographs together with one showing the effects of too much churning. These pictures will tell more than a volume of words ever could.

"This plan of planting corn will give more stalks and sunshine to the acre than any other, and experiments have shown that 17 *inches in the drill is about as close as our large corn will grow and produce ears."*—J. C. STRIBLING, page 556.

THE R. N.-Y. WOMEN'S POTATO CONTEST.

THE reports of those engaged in this contest must be received at this office on or before October 1st.

"What shall I decorate?" asked an insipid city boarder of me. And I showed her the butter-crocks, churn, hen-coop and mowing machine. "Take your choice," I said. She looked at me softly, and then sighed sadly."—JERSEYISMS, page 557.

$25.

TWENTY-FIVE dollars are offered by the R. N.-Y. as follows: Fifteen dollars for the largest and best shaped R. N.-Y. No. 2; $10 for the second-best. Description and weight should be sent in before November next. Those only who may be entitled to one or the other of the above prizes, *as judged by their own reports*, will be asked to forward the specimens to this office.

"A farmer who is making butter would be better off by keeping a Guernsey or Jersey cow until she was five years old and then knocking her on the head and burying her, than by keeping such a beast as many of the farmers hereabouts keep until she also is five years old, when they get a good price for her beef."—W. E. R., page 560.

THE R. N.-Y.'S POTATO CONTEST PLOT.

AS has already been stated, the Women's Contest plot of the R. N.-Y. was selected on a low piece of land in anticipation of a very dry season. The vines made a rank growth until the latter part of July when the leaves began to blacken and in a few days all were dead. Several hills were examined and the tubers were found to be a mass of inexpressibly putrid rot. The varieties were R. N.-Y. Nos. 2, 3, 4, and Brownell's Winner. Whether on high or low land potatoes in the vicinity of the Rural Experiment Grounds are rotting as they never have been known to rot before.

It is believed that it is not alone the excessively wet season that has caused the rot, but that the serious injury which the vines sustained from the flea-beetle in the early part so weakened the plants that growth being checked, they had the less chance to recover in a soil constantly wet to saturation.

The yield of the *regular* contest plot will probably go beyond that of last year, but on that, too, the vines are nearly dead and from an examination of several hills, it is feared that rot will destroy so considerable a portion that it will be needless to call upon the judges to perform a task which they so kindly imposed upon themselves at the R. N.-Y.'s request.

"For general reading there are some books necessary to every household: first of all of which is the Bible; not the big, brass-clasped ten dollar book always untouched on the parlor table and fit for the only use to which it is put, the stowing away of relics of all sorts, from the children's valentines to the sacred locks of hair; but the convenient-sized reference Bible for the family reading and Sunday School work."—M. J. CARPENTER, page 568.

THE POTATO CROP.

WHAT are the facts regarding the condition of potatoes? It seems evident that the Eastern crop is considerably damaged by the continued wet weather. It may be that this damage is less than is anticipated. Possibly the accounts of rotting refer to small localities and that the real damage will have comparatively little influence on the total crop of the country. The reports from the East are quite general, however, and indicate at least that the appearance of the crop is not promising. The actual state of affairs cannot be determined until the potatoes are dug. When a man finds rot in his field during such weather as we are now having, the trouble naturally looks large to him and he will frequently find an agreeable surprise when he digs the crop. The Western crop seems to be irregular—some fields are very good and others very poor. We should say that, on the whole, the crop at the West will be fully an average one. The deficiency will be at the East and the size of the deficiency will determine the price. As matters now stand, prices should be firm and a little above those of last year. There are one or two other points about the crop that are interesting just now. Does coarse stable manure stimulate rot in a damp season? This is suggested by Dr. Halsted. We hope our potato growers will tell us what they think about it. It seems sensible to argue that potatoes should not be planted next year in fields where the rot prevails now. Many farmers plant potatoes on the same ground, year after year. This season of rot will probably make it necessary for them to begin a system of rotation. It would appear that there is little danger to public health in the rotting tubers. Prof. Stockbridge, of Japan, recently declared that decay in vegetable material induced the formation of a poisonous principle, but as this principle is always destroyed in cooking and as potatoes are never eaten raw, the danger from this source is not worth mentioning.

FORWARD—MARCH!

IT has been the unswerving policy of the RURAL NEW YORKER ever since its present management founded it upon the ruins of *Moore's* R. N.-Y., while retaining its distinctively characteristic features, to inaugurate every year, in one way or another, progressive changes which should at length entitle it to be ranked in *appearance*, as well as in contents and originality, with the most popular and refined magazines and general-news periodicals of the times.

A valid reason has never occurred to us why the farm and garden interests of our country should not be represented by journals in all respects the equals of those which represent other industrial interests of minor—certainly not of paramount—importance. Accordingly, we have now to announce that, agreeably with our progressive plans, the R. N.-Y. will hereafter be printed upon supercalendered paper of a weight which shall secure its readers the full benefit of another feature of which farm journals printed upon inferior paper cannot avail themselves, *i. e.* the employment of new photographic etchings. These are absolutely faithful reproductions of the photographs themselves, and, as is confidently believed, are so far superior, for most kinds of portraiture as to fully warrant the extra expense incurred in their use, and the consequent substitution of paper of a weight and finish essential to their perfect reproduction.

The proprietors of many of our respected contemporaries have seen fit to reduce the price of their publications from time to time, during the past five or six years, the evident object being to secure a wider distribution—a commendable object, surely, in so far as it could be secured without any notable depreciation in their value. This reduction in price, however, has later become general, so that it is problematical, at this time, whether the earlier increase, so induced, has been sustained, and whether, if not sustained, they can be conducted without a corresponding economy in the cost of their publication.

The paper upon which this edition of the R. N.-Y. is printed is the same as that which it is proposed to use in the future, or at least until it may be deemed judicious to substitute a still better grade. The first issue in September will show still further notable changes which will speak for themselves, and, as we confidently hope, merit the approval of our readers and secure a more extended constituency for the coming year.

All readers are respectfully referred to the R. N.-Y. advertisement on the third cover-page. That states, in a few words, what we have to say to both agents and subscribers.

A small cow, with the right kind of machinery in her, can get all the milk solids out of a given amount of feed as well as a big cow. But if you have good, big cows, and they give you a fair profit, keep them, but breed them to the smallest good dairy bull you can find, and if the result is a more concentrated cow, I think you are the gainer.—A. L. CROSBY, page 558.

BREVITIES.

READ the last paragraph of Dr. Hoskins's article on page 557.

THE R. N.-Y. Dorking hens are now laying well while hens of other breeds are decidedly lazy.

All readers of this paper are requested to read the advertisement on the third page of the cover.

THE first report of the Women's Potato Contest comes to us from Mrs. L. E. Wood, of Dade County, Mo., and an excellent report it is.

WE will tell all about the new "Butter Extractor" next week. We have, also, a fine report of two of the N. Y. State Dairy Conferences.

THE next symposium will discuss the economy of the practice of pasturing meadows. Mr. C. S. Rice will present the matter in a way that will doubtless startle many of our readers.

THE R. N.-Y. has in preparation an illustrated article on the newer blackberries, which may serve to guide those who are in search of such information. The illustrations will be photo-engravings from nature.

JUST now the demand is for young, round beets to be cooked whole. They must be dark-colored. No matter how good light-colored beets may be, they will not sell well. Here is a hint for consumers who don't care for "fashion."

THE second crop of potato beetles were all on hand for a great celebration. Just as they got a good taste the vines began to die. The beetles were left without food. This fact and the continued wet weather led the R. N.-Y. to hope that we may have fewer beetles next year.

WHILE there is a division of opinion as to the outcome of the corn crop, there is a general belief that the oat crop is the largest ever harvested in this country. The rains have injured the grain somewhat, but there is plenty left. Will oats be much lower in consequence of this large crop?

MR. J. N. MUNCEY not long ago, gave, in these columns, some figures showing the cost of supplying his family with sugar, coffee, flour, tea and other necessaries. It would be very interesting if we could compare these figures with those of other households. We have received one or two statements already and we would like to hear from all who keep accurate accounts. For instance, is the sugar bill of a N. Y. farm family greater per member than that of the Iowa family described in Mr. Muncey's article?

Field Crops.

(*Continued from Page* 558.)

It would be interesting to gather statistics this season to prove the truth or error of this opinion.

An extended inspection of potato fields together with many reports received from all directions shows that this is to be a potato rot year. In many places where large crops of the finest potatoes were naturally expected the yield will not be half and that of inferior quality. This is principally due to the attack of the mildew, which, starting in the middle of July upon the upper leaves, has spread to the stems and probably in many instances to the tubers. Now the vines are all dead, and of course all growth or maturing of the potatoes has ceased. The mill cannot grind with the water that has passed, neither is there any remedy that will restore life and vigor to dead potato vines. It is too late to apply a remedy. That must come next June upon a succeeding crop if at all.

The chief point now is to do the best that can be done for the potatoes that are on hand. If it is borne in mind that moisture and warmth are the prime conditions for the growth of the rot in the vines; and that the same conditions will favor the rotting of the potatoes, it follows naturally that, other things remaining the same, it is wise to place the tubers in a dry cool place. The heavy rains of the last week have soaked the soil and carried down many of the germs (spores) of the rot from the leaves to the potatoes. As soon as possible therefore the tubers should be taken from the soil and the exposure to the germs. After digging leave them to dry thoroughly in the field and then store them in small masses where they will be kept free from surface moisture and in a cool dry airy place. Shallow bins may perhaps be best. Watch the bins from week to week and remove any affected potatoes before they become the centers for rapid decay. The potatoes will be worth looking after this fall and winter.

New Jersey Experiment Station.

SELECTION OF SEED.

W. B. PRATT.

OUGHT small kernels of grain to be riddled out and only the larger ones be used for seed? Should the unit be the single kernel or the whole head? These are important questions and are answered theoretically and practically in one and the same way by nearly everybody. Are they rightly answered?

Doctor Sturtevant announced from the Geneva Experiment Station a few years ago, what some practical farmers have already learned, that neither tip nor butt kernels of the ear should be rejected. If the whole ear should be the unit in the production of Indian corn, should not the whole head or panicle of other grain also? It is often said of some particular variety of grain once popular and profitable, that it appeared to run out and its cultivation was therefore discontinued. The remedy in all such cases has been sought in a change of seed from one section of country to another, or in trying some new and perhaps loudly heralded variety. May not the cause of the deterioration have been in the farmer's practice of planting but a part of the head instead of the whole of it? May not the outer, small tip kernels be essential to preserve the length, balance and completeness of the heads of the future crop and may not a failure to give them an opportunity of doing so tend to cause a general decline? Small kernels are a feature of the normal panicle; every seed planted may be of full size, yet there will be "screenings" in the crop; and these facts make questionable the practice of rejecting the small berries as seed.

Twenty-five years ago I bought some thin soft shuck seed oats bearing the name "Golden Yellow," and I have used them continually since. They have grown white in color and have run down both in yield and weight. For several years they averaged some 70 bushels to the acre, in favorable seasons weighing as high as 39 pounds to the struck bushel. Then the yield began to run down to 65 and 60 bushels, and so on to below 45, the berry steadily growing lighter in weight. I reasoned that this could not be owing wholly to bad seasons, nor at all to a soil of lessened fertility, and that possibly my practice of grading seed and sowing only the largest kernels may have had something to do with it. Thereupon I changed my practice and have since run the seed over a fine screen instead of a coarse one, dropping out but few of the small kernels and merely blowing out the straws to facilitate distribution from the seeder. Within two years after this change of practice, improvement in the yield began to be apparent, getting last year up to 60 bushels, with prospects of further increase the present season.

My conclusion is that the correct way of preparing seed to prevent "running out" would be to weed out the foul stuff from so much of a crop as will be needed for the next year's seeding; or, better still, to sow the grain for whatever seed may be needed in wide drill marks and by cultivation insure absolute cleanliness, and then sow every kernel, large and small, that grew on the seed plot. How the small tip berries operate to maintain the future panicles in their original perfection and thus prevent decline can not perhaps be explained; but that they do have such effect is reasonably certain.

I have heard it claimed that neither large nor medium-sized nor small potatoes should be exclusively planted, but that seed should be promiscuously taken from tubers of all sizes. My own general practice has been to plant a medium-sized, single potato in a hill, and I am quite sure that there has been steady deterioration following this selection. It may be worth while for experiment stations and young farmers to test this matter, both as to potatoes and the cereals, and ascertain if what would seem to be an unnatural tendency to "run out" in grains and vegetables that are as old as history, may not be traced to a disturbance of Nature's balances.

Prattsburgh, N. Y.

Horticultural.

A LITTLE EXPERIENCE IN THE FRUIT GARDEN.

A YEAR ago last spring the writer set out a small fruit garden. It contains 100 rods of ground. The rows of grapes, raspberries, blackberries, etc., were put eight feet apart. So far all right. But a friend advised me (I was entirely green at the business) to put a row of stawberries between the raspberries, etc., all through the garden. I wanted to set out a new bed of strawberries of about that size, and thought this a good plan. Now, I do not think so. I wouldn't do it again. What did I save? Why the use of a few rods of land. What is that to a farmer with plenty of acres? What was the trouble? Why I could do but little of the cultivation this spring with a horse. Much had to be done by hand, at greatly increased expense. When I found the grape roots, and those of the raspberries and blackberries too, occupying almost all the ground, I began to see that they were stealing from the strawberries and the strawberries from them. This wasn't what I wanted. I desired to give all the best possible chance. And then, again, the tramping of the ground while picking the strawberries (it rained most of the time) and also while taking up plants in the spring, left this, my pet garden, in a shape I never allow a field to get in.

But never mind. We had perhaps 30 bushels of strawberries and raspberries any way, and the former are all cut up now, and the coast is clear to attend to the other plants. But I paid an awfully big rent for the little land that was in strawberries. Another time I would put them on land by themselves, so that I could do more of the work on them and the other small fruits with a horse, cheaply, and so I could take better care of both.

T. B. TERRY.

THE LAWTON AND ERIE BLACKBERRIES.

WITHIN the past year the opinion has been frequently expressed, by persons of high standing as horticulturists, that the Erie Blackberry is merely the old Lawton or New Rochelle, re-introduced under a new name, and so confidently has this conclusion been put forth that, to some extent at least, it is apparently being acted upon by planters, if not also by nurserymen and dealers. Having both growing and fruiting on my grounds in considerable quantity, I was impelled to institute a comparison between the two. This allegation attracted my attention, in 1888, at too late a date for a comparison while they were in fruit; but an obvious similarity was noticeable in their habits of growth, save that the Erie appeared to be of lower and more spreading habit, with somewhat more numerous and stronger spines.

Both are now, (August, 1889), fruiting freely in adjacent rows, under the same mode of treatment, having been planted in the spring, of 1888. The peculiar differences already mentioned are even more noticeable than they were last year; in addition to which, the Erie showed ripe fruit on August 1; while none appeared on the Lawton till the 7th. In form also, the Erie, although quite as large as the Lawton, is shorter and more regularly rounded. Of the 20 or more varieties growing on my grounds the Erie is one of the most vigorous, and also the most unpleasant to handle, on account of its strong and hooked spines. As to its relative productiveness, and its consequent value as a market variety, I am hardly yet prepared to speak confidently.

T. T. LYON.

CHERRY TREE NETTING.

THE birds in the prairie region congregate where trees are planted on the homestead grounds to such an extent that cherry-growing without protection is clearly impracticable. This season we have covered a few trees with mosquito netting and have picked from them full crops of perfectly ripened fruit: but from trees of the same varieties not covered, we have not been able to secure a single ripe specimen. I write this to ask RURAL readers if netting suitable for this use is obtainable in this country, and if so, where? J. L. BUDD.

Ames, Iowa.

Notes from the Rural Grounds.

THE AGAWAM BLACKBERRY.

THE R. N.-Y. has never had much to say respecting the Agawam Blackberry for the reason that not until of late years has the variety been cultivated at the Rural Grounds. The plants were received from J. T. Lovett in April of 1884. They are somewhat less vigorous than the Lawton, Kittatinny or Minnewaski; the canes are less thorny and not so deeply grooved. The plants have never been seriously injured during the winter, and it is ranked in several of the Eastern States as being as hardy as the Snyder or Taylor. The berries are of medium size, that is to say, larger than those of either the Taylor or Snyder, smaller than those of Kittatinny, Wilson, Minnewaski or Lawton. The illustration, see Fig. 215, is a photo-engraving from nature and presents the size better than any descriptive words, always bearing in mind that fruit portrayed in this way always looks to be smaller than it really is.

They are firm, of a jet black color, and the drupelets, though smaller than those of larger berries, are more uniform as to size. In quality the Agawam is not excelled in our opinion. It is sweet, tender, without any core and the seeds are smaller than those of the larger varieties. It ripens with Kittatinny, though it does not remain in fruit so long. We have seen the Agawam commended as a very prolific variety, a commendation not sustained by the R. N.-Y.'s observations. Still for home use, where one is not limited to a few square feet of land for a blackberry plantation, this variety is surely worthy of trial.

Hygiene.

DANGER IN ROTTING POTATOES.

HERE is a letter recently received from a subscriber:

"Thousands of farmers alarmed at the report of potato rot, are digging the crop and shipping it to market. Many diseased tubers are being sent in this way. In view of the interest taken in the matter will you be kind enough to furnish answers to the following questions?

1. Is a potato containing the germs of the rot necessarily injurious for eating purposes?
2. What injury or disease, if any, will it cause?
3. How long do the germs live?
4. Is there any danger to public health in the general digging and marketing of potatoes known to be diseased?"

Here are answers.

FROM DR. PETER COLLIER.

I am unable to answer either of these questions concerning rotten potatoes or rather those which are diseased. At best I should think it an open question, and in practice I would not knowingly eat such potatoes, nor would I be willing to feed them in quantity to any valuable animals. That they are fed in large quantities, and apparently without any very serious results following, by no means necessarily establishes their healthfulness, but rather the ability of the animal to resist attacks of such diseases as they are capable of causing. Then, too, these bacteria, microbes, or whatever they are called, many of which are so closely associated with one or another disease, and which are claimed to produce the diseases, have such a way of being associated with each other—a sort of microscopic happy family—that it would almost seem a justifiable precaution to avoid, so far as possible, this whole crowd. What do the bacteriologists say?

Geneva, N. Y.

FROM DR. T. H. HOSKINS.

1. Not if it be well cooked. It is not known that the potato-rot fungus is poisonous at all; but it is so offensive that animals will not eat tubers even slightly affected with it.

2 There is no disease known to be so produced. The terrible outbreak of fever which accompanied the Irish famine of 30 odd years ago, was supposed to be intensified by eating partly rotten potatoes, but this never was demonstrated, and the disease was amply accounted for otherwise.

3. It is not positively known.

4. Possibly, if extensive rotting should take place in potatoes stored in cities. In such cases, the sanitary authorities would, no doubt, promptly interfere. But the very danger of rot makes the buyers very careful about collecting large stocks; and the supply will be one of hand to mouth until the true state of the case is established. I believe that the scare is unnecessary, as the great sources of supply are,—at least as yet,—not much affected. There is no rot in Northern Vermont at this date,—August 10.

Orleans County, Vermont.

FROM ROLAND THAXTER.

1. No. Unless the potato has begun to rot, when the injury would be similar to that produced by eating any other rotting vegetable matter.

2 and 3. The "germs" of the disease as it exists in the tuber consist merely of the fungus threads; that is, the vegetative part of the fungus plant. These threads of the fungus are supposed in some cases to remain inactive in the tuber until it is planted in the following year, when they develop and thus perpetuate the disease.

4. Potatoes attacked by the rot should be dug at once as soon as the foliage has become badly affected. Such potatoes are liable to rot after digging to a greater or less extent according to the greater or less virulence of the disease upon the foliage. If stored in a cool, dry place and thoroughly sprinkled with dry air-slaked lime at the rate of one bushel of lime to 25 bushels of potatoes, they will keep much better. It is unwise, however, to attempt to keep such potatoes if they can be disposed of, since a certain percentage, if not the whole of them, will rot in time.

Connecticut Experiment Station.

FROM WM. A. BUCKHART.

1. No.
2. None.
3. Not definitely known. Under favorable conditions certainly long enough to continue the infection from year to year.
4. None whatever.

It is understood that the questions relate to potatoes that are affected by the common potato rot fungus—Phytophthora infestans—and that are *apparently* sound. Potatoes which have begun to *decay* are probably unwholesome, even though they produce no specific disease.

Pennsylvania Experiment Station.

The Garden.

VEGETABLE NOTES.

WM. FALCONER.

SALSIFY.—About this time of year a large number of the outer leaves die off. To leave them on in dry weather does no harm, but in wet weather they had better be removed as they tend to increase rot. The Sandwich Island Mammoth is less subject to this than is the ordinary Long White.

SCORZONERA is not much subject to leaf rot, but a good many plants run to flower. Pull out these and discard them as their roots are tough.

PARSNIPS.—You cannot hoe among these any more; just pull up any rag-weed, pigweed or other big weeds that may come up among them; and be careful not to touch them in wet weather, else they will poison you as badly as will poison ivy. Pull out and throw away any that run to flower. The long-rooted sorts are not liable to do this, but the round or turnip-rooted sort is very apt to bolt if sown early.

RADISHES.—I sow a pinch of seed once a week out-of-doors in any open place, say, between rows of beets, carrots, celery or any thing else, but I never give it a bit of ground apart for itself. It is only a four weeks' crop from first to last. Better sow it in frames after the first of September. And about August 20th or September 1st, according to locality, sow some Scarlet Chinese for storing in winter.

TURNIPS.—Rutabagas were sown at the end of July, after snap-beans. A succession crop of Purple-top White Globe was sown August 6th after potatoes. I will sow white turnips again about August 20th, and again about September 1st. These two sowings shall be large for winter. If our falls are mild and long the August 20th sowing will be too early; but if short and cold it will be in right time and the September one a little late. But this is a risk we always have to run. White turnips that are a little too old or large are often soggy inside; hence unfit for use.

GLOBE ARTICHOKES.—Old plants have finished bearing. Cut over all old flower stems. Young plants are in full bearing. Cut off every head as soon as it is large enough for use, to insure a continuance of flower heads. Sow some seed now and winter the plumes in a cold-frame and they will be good bearing stock for next year.

SPINACH.—Sow a row of Viroflay once a fortnight till the middle of September; then put in the winter crop, I usually sow this late crop after musk-melons.

TOMATOES never were finer than they are this year or freer from rot. Dwarf Champion was about the earliest good one we had, but it doesn't bear enough. Which is the best of all tomatoes is hard to decide, but, looking over 20 varieties now in fruit side by side, I must say there is nothing among them superior to Volunteer. At the same time, if anybody brought me the fruits of half a dozen varieties of the same type, Volunteer among them, I really couldn't tell one from the other.

EARLINESS among tomatoes bothers me a good deal; and year after year's experience knocks some of my pet theories and varieties higher than a kite. This year one variety may be ahead and next year it may be away behind. But I have a tomato which is earlier than any other I ever grew and it maintains this earliness year after year. It isn't now, and never has been on the market. It is of Spanish origin, and it is an enormous cropper. But the color is pale red, the fruit uneven, and I find it has lost its foliage this year worse than any other sort. So I have come to the conclusion that my bonanza isn't worth a cent. But I will keep it for forcing.

THE DWARF LIMA BEANS.—Peter Henderson hit me hard last week. I was his guest at dinner and we had some of these Limas, and I had to own up that as a tender, delicious bean they are unsurpassed. He knows of my partiality for tall Limas, but he assures me that while practical gardeners may share in my prejudice, the great majority of amateurs will not be bothered with poles, and many, now that they have got a dwarf form, will grow Limas, who before now wouldn't grow them at all. Our own dwarfs are in capital bearing condition, and very prolific, and still they are blooming and podding. And while Kumerle's Dwarf was a little shy at podding at first—no doubt on account of the incessant rainy weather—it is now bearing quite freely, also blooming and podding.

Queens County, L. I.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

THE formal manners of the last century seem both needless and absurd to us now, yet after all, an additional touch of ceremony would be rather an advantage to us. Just notice the average school-girl when she meets a friend on the street. It is "Hello Mame, where'r you goin'?" followed by the parting salute "So long." Now, some stilted, formal address would seem very much out of place, but not more so than these slangy, boydenish words. A girl cannot be too careful in her language, if she wishes to be regarded as a real gentlewoman. Rude and careless speech will infallibly lead to carelessness in manner.

* * *

A GIRL should be taught that she is to greet her schoolmates as well as her elders with a little bow and a pleasant, "How d'you do?"—such a salutation as, "Hello!" should never be permitted—except through the telephone. Nowadays we see a girl entering the parlor with a careless nod to her mother's callers. In the last century she would enter with a little courtesy to the inmates of the room, and then walking to the hostess or most prominent guest, would make another and a deeper courtesy. Very ceremonious it all seems, yet it was pretty and respectful.

* * *

READING the letters of a century agone one is more struck than ever with this ceremony. Mrs. Delany, writing to her mother when a middle-aged woman, began: "Honored Madam," and subscribed herself: "Your dutiful daughter and humble, obedient servant."

By the way, a most charming book to read aloud is the memoirs of this lady, "Autobiography and Correspondence of Mrs. Delany," published by Roberts Bros. She was an English woman of good birth, born in 1700. She died in 1788, after a long, busy and exemplary life. She was a woman of great culture, and during her long life made many friends of distinction. Her letters, chiefly addressed to a beloved sister, give all the current talk of the day—society, dress, and public affairs. One of her letters, addressed to a young relative, contains such excellent advice that it is as fresh and seasonable now as it was in 1774. She says; "Rise at seven, sacrifice to cleanliness in the first place; neatness of person and purity of mind are suitable companions; then, with awful attention, say your prayers, return thanks for the blessings you have received, and pray for their continuance, and for grace to make the best use of them..... I hope I need not recommend to you neatness and regularity in taking care of clothes, etc., keeping them in nice order and proper repair, *not depending* on its being *done for you.* Employ *two hours every day in plain work*, and *making up your* own *things*; it is an accomplishment necessary for every gentlewoman, and when *you* are in circumstances to make it less necessary or convenient, you will be better able to know when it is well done for you. But this is not to exclude, at their proper season, works of ingenuity: if you have learned to draw, give *one hour* to that each day, but *not* so as to interfere with what is more necessary. Bestow as little time on dress as possible, but let it always be neat, and suitable to your circumstances, (or position) and never *extravagantly in the fashion*, which is very vulgar, and shows levity of mind. Be assured that the only way to be beloved and happy, (even in a parent's house,) is to be humble, modest, attentive, and complying towards those who have taken you under their wing, adhering strictly to truth, and never *see* or *say* what is no business of yours."

Good sensible words now are these; one can hardly wonder that Hannah More wrote of Mrs. Delany as of one who "sheds a luster on our age."

OUT-DOOR STUDIES.

AS April passes into May the number of flowers claiming attention increases like a sum in arithmetical progression. A whole paper might be devoted to the violets, white, yellow, blue and purple. Deep in the woods rarer, shyer flowers are to be found; the Showy Orchis throws up its delicate spike of mingled white and lavender, and the Moccasin Flower gradually unfolds its rosy purple pouch. These two are representatives of the great orchid family, the most varied and curious class of plants we know. A majority of them are foreigners, but our own country gives us many species. The Showy Orchis—otherwise Orchis spectabilis—has two shiny, lily-like leaves; growing up from between them is a spike of oddly shaped flowers, the arched upper sepal of rosy-pink, with a tinge of purple; the lower part, or lip is white. "Preacher-in-the-Pulpit" is a common name for this flower, and it is more descriptive than popular names usually are, for the upper sepal suggests the arched sounding-board of a gothic pulpit in miniature.

The Moccasin Flower or Lady's-slipper, is chiefly noticeable for its odd, pouch-shaped lip. Our native species are not so noticeable for their resemblance to a slipper as some tropical varieties, which have given to the family its name of Cypripedium, or Venus's Slipper. The variety most frequently met with in the Middle States is the Stemless Lady's Slipper, which has a large pouch-like lip of rose-pink, sometimes tinged with purple. The lip is the most conspicuous part of the flower—not an uncommon thing with orchids—so that the other sepals and petals are quite insignificant. Occasionally the variety we are now discussing is very pale in color, sometimes pure white, and very dainty it is. It has a peculiarly rich, heavy odor, suggestive of strange tropic spices, which is also possessed in a less marked degree by the Showy Orchis. Less common than the Stemless Lady's Slipper is a yellow variety, the Downy Lady's Slipper, very charming with its clear golden color and velvety texture.

Botanical names are difficult to many; yet it is impossible to identify wild flowers by their local titles. Take, for example, the honeysuckle. When I say honeysuckle, I mean the twining shrub known to botanists as Lonicera. In many places the same popular name is applied to the wild azalea—pinxter-blossom, as it is called in New Jersey. Stranger still, the same name of honeysuckle is given to the wild columbine—aquilegia—which belongs to the Crow-foot family, and is not even a poor relation of the real, simon-pure honeysuckle. This columbine, which you will find on rocky hillsides in May and June, is rather eccentric in shape; its five petals with spreading lips terminate in long spurs, which some little imagination might turn into eagle's talons. The flower is scarlet, lined with yellow, and very showy. The compound leaves are very graceful, and altogether the columbine may be regarded as one of our handsomest wild flowers. Its English name is from some Latin derivative, meaning a dove; old botanists likened it to a flock of young doves feeding around a dish. Notwithstanding its beauty, this flower is dedicated by the old poets to folly and desertion, which Ophelia implies in "Hamlet," when she says:

"There's fennel for you, and columbines."

While another old dramatist takes it as the emblem of ingratitude.

Growing with the columbine one usually finds the little mountain pink, which is a country cousin of our garden phlox. It creeps along the ground, its fresh green leaves suggesting a moss, whence its popular name of "Moss Pink." Its bright rose-pink flowers make a glowing carpet on hillsides quite early in the spring, and it often keeps on flowering until late in the autumn. It is not really a true pink; it belongs to another natural order; though Wordsworth's description applies to our little phlox as well as to the true pink, or dianthus.

"The wild pink crowns the garden wall,
And with the flowers are intermingled stones,
Sparry and bright rough scattering on the hills."

We have another example of confusion worse confounded in common names; the little Houstonia cœrulea, as we must call it to be explicit. It is called "Quaker Lady," "Quaker Bonnet," "Innocence," "Forget-me-not," "Venus's Pride," "Dwarf-Pink," "American Daisy" and "Bluet." There, eight names to choose from; four pretty, but meaningless, and four inaccurate. It is not a daisy, or a forget-me-not, or a pink, or a bluet. The last name, which Prof. Meehan has adopted, really belongs to the Corn-flower. It is a little starry flower, faint blue or lilac, with a yellow center. It is extremely local in its habit; you may find it growing profusely in one meadow, and fail to discover it anywhere else in the same county. Properly, it grows in damp meadows, but I have found it in company with columbines on the rocks around Passaic Falls, N. J. It is really lovely, and there is little doubt that it would improve with cultivation.

Do you know the Painted-Cup? It is not uncommon, according to Gray, although I have met with it but rarely. It is somewhat hairy, with incised leaves, bright green. Its peculiarity is that the leaves around the inconspicuous flower are bright, vivid scarlet, giving the effect of a flower. It looks, to use an unpoetic simile, as if the top of the plant had been dipped into a pot of red dye. It is such a noticeable oddity that it will be recognized by this brief description. It is found flowering in low, sandy ground, from June to August. It is dedicated to Castillejo, a Spanish botanist, and has received the name Castilleia coccinea. It is a member of the Great Figwort family, to which our every-day mullein belongs.

Another member of the same family is the common Toad flax, or Butter-and-Eggs. We will call it Toad-flax, however, for the second name is also given in England to one of the daffodils. Our plant has a dense raceme of yellow flowers, with a queer resemblance to the mouth of a fairy-book dragon. It throws up a spike one to three feet high, and is very showy, but a most pernicious weed. It would not be a weed if we confined it to our gardens; but it requires that definition, because it is emphatically, a plant out of place; a different definition from that given by a precocious little girl—a weed is a plant you don't have to pay for.

COTTAGE MAID.

FEEDING THE BABY.

THE poor little babies suffer enough this warm weather; even when fed and treated aright, any carelessness or neglect may be really fatal to them. Among the many excellent suggestions given by the New York Board of Health is a series on the care of infants in hot weather, which needs no apology for its reproduction. It is as follows:

I.—NURSING OF INFANTS.

"Over-feeding does more harm than anything else; nurse an infant a month or two old every two or three hours.

Nurse an infant of six months and over five times in 24 hours, and no more.

If an infant is thirsty, give it pure water or barley-water, no sugar.

II.—FEEDING OF INFANTS.

Boil a teaspoonful of powdered barley (ground in coffee grinder) and half a pint of water, with a little salt, for 15 minutes; strain; then mix it with half as much boiled milk; add a lump of white sugar the size of a walnut and give it luke-warm from a nursing bottle. Keep bottle and mouth-piece in a bowl of water when not in use, to which a little soda may be added.

For infants five or six months old, give half barley-water and half boiled milk, with salt and a lump of sugar.

For older infants, give more milk than barley-water.

For infants very costive, give oatmeal instead of barley. Cook and strain as before.

When your breast-milk is only half enough, change off between breast-milk and this prepared food.

In hot weather if blue litmus paper, applied to the food, turns red the food is too acid, and you must make a fresh mess or add a small pinch of baking-soda.

Infants of six months may have beef-tea or beef-soup once a day, by itself or mixed with other food, and when ten or twelve months old a crust of bread and a piece of rare beef to suck.

No child under two years ought to eat at your table.

Give no candies, in fact nothing that is not contained in these rules, without a doctor's orders.

III.—SUMMER COMPLAINT.

It comes from over-feeding, and hot and foul air. Keep doors and windows open.

Wash your well children with cool water twice a day or oftener in the hot season.

Never neglect looseness of the bowels in an infant; consult the family or dispensary physician at once, and he will give you rules about what it should take and how it should be nursed. Keep your rooms as cool as possible, have them well ventilated, and do not allow any bad smell to come from sinks, privies, garbage-boxes, or gutters about the house where you live.

Where an infant is cross and irritable in the hot weather, a trip on the water will do it a great deal of good (ferryboat or steamboat), and may prevent cholera-infantum."

PATTY GARTON.

GOLDEN GRAINS.

THE following item is credited to Beecher, Lowell and others. It is too good to be lost. No man is born into the world whose work is not born with him. There are always work and tools to work withal, for those who will.....

TALMAGE tells this beautiful anecdote; One day a man was taking me from the depot to a village. He was very rough and coarse, and blasphemous; but after a while he began to talk of his little son whom he had lost. "O, sir," he said, "that boy was different from the rest of us. He never used any bad language; no, sir, I never heard him use a bad word in my life. He used to say his prayers, and we laughed at him, but he would keep on saying his prayers, and I often thought: 'I can't keep that child,' and I said to my wife; 'Mother, we can't keep that child.' But, sir, the day he was drowned, and they brought him in and laid him down on the carpet, so white and so beautiful, my heart broke, sir. I knew we couldn't keep him."....

SPEAKING of unworthy members of our church he said: "You will find worm-eaten leaves in Fontainebleau, and insects that sting in the fairy groves of the Champs-Elysees. You do not tear down and destroy the whole garden because there are a few specimens of gnarled fruit. I admit there are men and women in the church who ought not to be there;

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children she gave them Castoria.

but let us be just as frank and admit the fact there are hundreds and thousands and tens of thousands of glorious Christian men and women—holy, blessed, useful, consecrated and triumphant. There is no grander collection in all the earth than the collection of Christians."..

DR. HALL says happy men are made by general home surroundings, modest aspirations, good wives, nice children, all working on a soil, more or less deep, of naturally good dispositions. Christian men are made by Divine truth in a Divine hand.....

IF you would be pungent, be brief; for it is with words as with sunbeams—the more they are condensed the deeper they burn.....

REV. A. E. WINSHIP says, no youth however good or great may be his inheritance of faith, however regular his attendance upon family devotions, religious worship and Sunday school, is secure in his faith until he has had that training which shall enable the mind to weigh intelligently, honestly and devoutly all literary criticism of moral and religious truths.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

SOME ODDS AND ENDS FOR THE HOUSEKEEPER; COOKING TOMATOES.

A GOOD and thrifty housewife does not discard things as soon as holes make their appearance, but she sets about doing what she can to battle with Time's ravages. If tiny holes are found in table linen or garments, the first thing to do is to darn them neatly, selecting the number of thread or cotton best suited to the material to be darned, using also as *fine* a needle as possible. If the material is much worn, it is best to lay a piece of the same under the thin place and darn down upon it. This gives strength, but does not make so neat a job. A ragged tear must always have an extra piece laid under it. It is very hard to make a three-cornered tear, when darned, lie nicely, but if you begin such in the center, at the point, and darn towards the ends you will find that you can with care, succeed very nicely indeed. Dampen slightly on the wrong side (if it is dress material) and press with a hot iron, being careful to lay a thin cloth over the darn so that the heat from the iron will not discolor the goods. In this way the tear will scarcely be noticed at all.

Table cloths, (unless the holes are very small) should be patched when holes appear. First baste a square of the same material under the hole; next cut the edges of the hole even, turn under and hem down to the patch as neatly as possible. Then turn over the cloth and hem the patch to the other cloth in the same manner. This adds a neat finish to both sides and will lie flat when ironed. Always patch or darn before washing, or you cannot do it so well afterward, as the washing and ironing stiffen the edges. If the linen is figured or striped be sure to match the pattern. Calico and gingham should be mended in like manner.

If you find a hole in Balbriggan underwear or stockings you may fill it up neatly and prevent the break from spreading if you take a fine steel crochet needle and catch up the stitches that are coming undone, and then, with cotton that is suitable in thickness and color, crochet up the hole with a chain stitch. This looks neater than a darn—but if the hole is large, you may find it difficult to do—In that case a darn is necessary.

When your sheets begin to show unmistakable signs of becoming thin in the middle, do not wait till they are worn all to pieces, for then they will be of little use; but split them down the center, and overhand the two selvages together, thus putting the thin parts outside. Hem the sides. In this way your sheets will last a great deal longer, for the outside edges really get but little wear, and when turned will still be quite strong. But if you have some on hand that have become too much worn for this to be done, you will find that the outside edges will make good bolster cases—that is, if you still use the old-fashioned bolster. Save your old pieces of white muslin, for they make good dusters, and will be found very useful for cleaning windows, as they will be free from lint.

If you have a white skirt worn across the front below the belt, and perhaps a little frayed about the hem, you may mend it very nicely, by cutting the worn part off the hem, turning the two raw edges in and overhanding them. A rick-rack or crocheted edge sewed to this will entirely hide the fact that this has been done. A new yoke may be put around the top, or you may make a new top to the skirt, sewing the lower half on as one does with a "cut skirt," or a "French flounce."

When your table-cloths are worn out beyond mending, cut square pieces from the best parts of them, and hem neatly. They will make nice napkins for holding the children's lunches, or for the little ones to use at the table, for if they are stained or lost, your set will not be broken.

Tomatoes are very toothsome baked, stewed, fried, roasted or broiled, and make a delightful salad, either plainly seasoned with vinegar, pepper and salt, or with a Mayonnaise dressing. To bake them, select large, firm ones and cut a cavity in each where the stem grows. In this put a little minced onion, a pinch of pepper and salt, a spoonful of cracker dust and a generous lump of butter. Place in a deep pan and bake in a moderately quick oven.

To fry them, cut the slices thick, as the heat shrinks them, and, if cut too thin you will not be able to dish without having them break. Dip the slices into flour or cracker-dust and fry in butter. Your pan must be iron and *hot*.

If you intend having cold, sliced tomatoes, as a salad, take the necessary number and lay them on the ice about an hour before they are to be used. This makes them cold and hardens them. With a sharp knife peel the skin off and slice thinly. Dress to suit the taste.

To broil tomatoes, put them in a wire broiler and hold over a quick, clear fire. If placed in a hot iron spider (whole) and held over a quick fire they will have the appearance and taste of being broiled.

But of all the ways to cook tomatoes I am about to tell you the *best*. Perhaps you have never heard of it, (I don't believe you have), but do not let that deter you from giving it a trial, for I have never yet met anyone who had heard of it till I told her. Yet all who use this method usually gave up all other ways of cooking them. An old lady invented (if that is the proper word) it years ago and imparted her secret to me. I have told it among my friends and as they all like the mode so well I concluded to tell it to the RURAL readers as I count them among my friends. Well then, it is simply to *boil them*. Now I imagine I hear some one say. "Boil them! Why all the juice will run out and they'll be mushy!" But they won't be anything of the sort.

Select good firm tomatoes; drop them into a pail or pot of hot water and boil them the same as you would boil potatoes with their "jackets" on. The length of time of course, will depend somewhat on the size of the fruit and the quickness of the fire. When they have been boiling for about five minutes, try them with a fork. If they are soft all the way through they are done. Lift out, peel the skin off, add butter, pepper and salt. If you have any doubt on the subject, all I have to say is, *try it* for yourself and see.

Green tomatoes fried in the same manner as ripe ones are exceedingly good. They also make fine preserves and pickles.

DORA HARVEY VROOMAN.

A YOUNG girl about to start on her first journey alone, was told by her mother not to be made unhappy by any accident that might happen to her wearing apparel during her visit. A friend who heard the remark said that she thought it was such a comfort to a child, especially a sensitive one, to be told a thing of that kind when going away from parental care.

CANNING FRUIT.

AN experience of nearly twenty years in canning fruit, both at home and in commercial canneries, is my excuse for venturing into a discussion of this subject.

With many people canning fruit without sugar is a regular hobby. They claim that sugar destroys the natural flavor, makes the fruit indigestible, etc. I have never yet seen any cooked fruit that had a natural flavor, if by natural flavor is meant that of uncooked fruit. Strawberries, for instance, have a very decided flavor, but if canned without sugar, they are as near nothing as can be imagined.

I have become surfeited with natural-flavored fruit, and now I want it canned with plenty of sugar, and I'll take all risks of indigestion.

In canning berries the less water used the better the berries will be. If a few are pressed and the juice is used for cooking the others, the best possible results will be obtained. Cochineal is frequently used to give a good color to strawberries, but nothing under the sun, as far as I know, can give them a good taste.

I consider yellow peaches alone fit for canning purposes. I have never seen white or red peaches canned in a way to suit my taste. They are too insipid. Peaches properly canned should show clear sirup when opened. Soft peaches, improperly handled before canning will make a thick sirup full of floating particles. With firm fruit the sirup will be clear. If a can of peaches is opened and the fruit is firm and hard, while the sirup looks like muddy water, you can wager your bonnet that filth is the cause. For a prime article, take fruit fully ripe but not soft, prepare by hand, dropping each piece into water as soon as cut.

If glass is to be used, cook the fruit for a few minutes and can. If tin cans fastened with solder are used, the fruit may be scalded to make it pack closely, and packed with the fingers, sealed up, except a small hole, and placed for five minutes in boiling water to expel the air, seal up tightly and boil 20 to 30 minutes.

Tomatoes should be scalded, skinned, cut, and thoroughly cooked if glass is used. If tin cans are used, (and they are much better than glass), pack in the raw tomatoes as long as you can, pressing out all juice and seeds possible, and proceed as with peaches, except that it is better to boil them twice as long.

Corn and peas are very hard to keep by ordinary methods, and where one succeeds, 20 fail. Nevertheless, the method used by canneries in this section of the country is about as follows: The corn is husked and then passed through the cutting machines. Another machine removes all the corn silks, and the corn is packed into tin cans by hand. The cans are filled with hot salt water, sealed, heated and vented; the vents are closed, and the cans are finally boiled in a steam-tight kettle for about 40 minutes at a temperature of 245 degrees, more or less. The impossibility of securing such a degree of heat is the reason why there are so many failures in the household. Twenty years ago a dilute acid was used to secure the requisite degree of heat. Four or five hours' boiling sometimes will do, but oftener will not.

There is a good deal of nonsense believed in regard to the use of glass cans. Some people boil them before using; others place a silver spoon in each while filling, and a few use cloths wrung out of hot water wrapped around them. I use a dry cloth simply for convenience in handling the hot cans. By wrapping a dry cloth of any kind around each can, you can get a good grip on the ends and you can hold it any way and anywhere you want it while filling, and you can put it on a table or elsewhere without blistering your hands. Many people believe fruit put up in tins to be unwholesome, but I have never known of any injurious effects from it, and such fruit certainly is the better in taste. Where fruit is left in tins after being opened, no doubt its acids will amalgamate with the metals and form poisonous compounds. I have yet to see the first good tomatoes preserved in glass.

A MAN.

CURRANT juice, scalded (without sugar) and bottled to use with Spitzenberg Apples next winter "alf and alt" make a most delicious jelly. AUNT BETSEY.

Miscellaneous Advertising.

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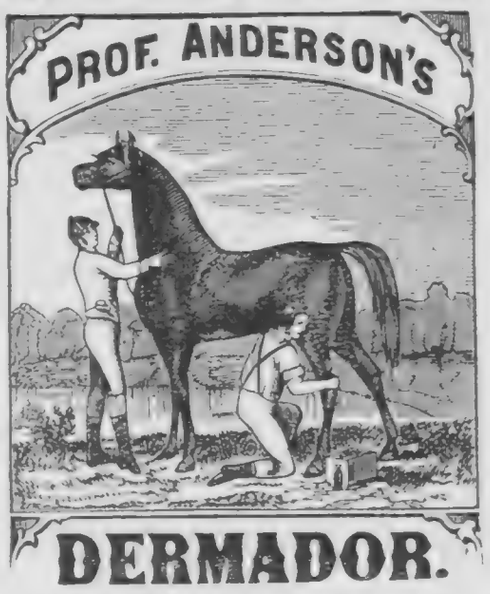

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We would say to Livery Stable Keepers make it a point never to be without this great remedy. It is a cheap, efficient and SURE medicine. With this "Dermador," there is no such word as "FAIL." It never blisters, but cools. Price 25 and 50 cents. Sold by all druggists. **D. RANSOM, SON & CO.,** BUFFALO, N. Y.

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News of the Week.

HOME NEWS.

SATURDAY, August 17, 1889.

WEDNESDAY morning, August 14, ex-Judge Davis S. Terry, 66 years old, but possessed of the strength and ability of 45, a dangerous Pacific Coast rowdy for a generation, was shot through the heart by Deputy United States Marshal David Nagle, at the breakfast table at the depot hotel at Lathrop, a town 85 miles from San Francisco on the Southern Overland Railroad. On the arrival of the train from the south at 7:30 A. M., Justice Stephen J. Field, 73 years old, of the United States Supreme Court, who had been holding Circuit Court at Los Angeles, and Deputy Nagle, passengers, were breakfasting together in the depot dining-room when Terry and his notorious wife Sarah Althea Hill, also passengers, came in. Last September Justice Field sentenced Terry to imprisonment for six months and Sarah Althea for one month for gross contempt of court, committed on his deciding against the validy of Sarah's alleged marriage with millionaire ex-Senator Sharon. On his release rowdy Terry who had been bitterly hostile to Field from early California days, openly threatened vengeance. For fear of the man, Attorney-General Miller, at Washington, had ordered Nagle to accompany Field to protect him from the male and female rowdies. On recognizing Field, Sarah at once left the dining-room to get a pistol from her reticule in the train, while Terry approached Field from behind and gave him a heavy slap on the face. He raised his hand to strike again, then Nagle, formerly city marshal at Tombstone, Arizona, and mighty quick with the trigger, shouted: "Stop! Stop!" and as Terry's fist was descending, shot him through the heart. Sarah soon returned and of course, virago-like, at once made a scene. Terry was born in Dodd County Ky., in 1823, went to California during the gold fever, was elected Chief Justice of the State Supreme Court when 33; was imprisoned for several months by the Vigilantes for stabbing one of them. Killed U. S. Senator David Broderick in a duel in 1859. Commanded a Confederate regiment in Texas during the war; was Democratic Elector in California in 1880, and the only one defeated. Since then has been notorious in connection with the infamous Hill-Sharon litigation before the State and Federal Courts in California, in which he was engaged in constant frays. General verdict: The State's well rid of him. The trouble isn't over yet, however, as virago and adventuress Sarah Althea still survives.....

The new Inman steamer City of Paris, which some weeks ago beat the record on western trip from Queenstown to Sandy Hook, has just beaten the eastern record also, having made an unprecedentedly quick trip between the two places in five days, 23 hours and 40 minutes, only 37 minutes more than her westward record. This is the first time the eastern passage has been made inside of six days. Several new flyers have just started to beat the City of Paris's time; others are on the stocks to outspeed all now built, and designers are racking their brains to plan others that will outstrip anything yet begun.

.....There are strong indications of the formation of an Earthenware Trust and a Table Glassware Combination. Earthenware is protected by a duty of 55 per cent., and glassware by one of 45 per cent.—a pretty good basis for successful combination.....

What little fighting has taken place lately in Hayti, has been against Hippolyte who has gone north, abandoning the Amazon-guarded precincts of Port-au-Prince. As a relief to last week's tragedy down there, comes the comical news that both sides have suspended fighting to get in out of the wet, as it has been raining very hard there too..... Some weeks ago it was discovered that Sherman Brothers of Buffalo, N. Y., by means of fraudulent ware-house receipts, had stolen $375,000 worth of wheat from the Buffalo elevators. Restitution to the amount of $200,000 has been made, leaving a balance of $175,000. One of the brothers has just been jailed, the other is in Canada.....The Minnesota dressed beef law was again declared unconstitutional last Tuesday—this time at Duluth, by State Judges Sterns and Ensign.

.....President Harrison has been having a glorious time of it up at Bar Harbor, where he has been visiting Secretary Blaine and several other notabilities, national and local. Next week he'll spend a few days at Indianapolis to lay the corner-stone of a soldiers' monument and attend a reunion of his old regiment. Persistent office-seekers, of course, detract somewhat from his enjoyment wherever he goes.....There's a marvelous religious craze among the negroes of the South. First a white impostor who proclaimed himself the Messiah, persuaded a number of blacks to crucify themselves and indulge in all sorts of outrageous performances in South Carolina. Then at the command of an old negro who calls himself the Prophet Daniel, three young negroes, last Saturday, to imitate Shadrach, Meshach and Abednego, rushed into a white-hot furnace of molten iron near Birmingham, Ala. To-morrow crowds of negroes will meet at church to see the cremated gulls appear as angels. The deluded blacks are doing all sorts of queer, wild, sad, horrible and ridiculous things.....

The estimated losses by fire at Spokane Falls have fallen from $15,000,000 to $6,000,000. The insurance companies will pay $2,500,000 of this. The price of real estate in the burned district has advanced considerably. It's hard to down the buoyant spirits of the mighty West..... Several doubles of Tascott the murderer of Chicago millionaire Snell, for whose arrest Snell's widow offers $50,000 reward, have been captured in several widely-separated places during the week; but the murderer's whereabouts is still a mystery to the most lynx-eyed Hawkshaw stimulated by so big a reward.....A number of Canadians have established an electric plant on the Canadian side of Niagara Falls, deriving their power from the falls. They propose to send "currents" into the United States to supply power and lights cheaper than these can be supplied by machinery driven by steam, and they have asked the Treasury Department, whether the electricity they propose to send to Buffalo and other places will be liable to import duty? Why not? Surely the electrical business is still an infant industry that needs "protection" as much as infant industries a century or so old....Poor Nevada! she has so many taxes she doesn't know what to do. With a population too slim for a prosperous Territory, she finds it a hard job to raise money enough to run a State Government..... ....Ex-Attorney-General Garland has become attorney for the Northern Pacific Railroad at a salary of $25,000 a year. The government of the United States paid him only $8,000 a year.....

Bombastes Furioso appears to be editing several Canadian papers, judging from their wild vaporings with regard to the disasters about to befall this country on account of seizure of the Black Diamond by the Rush. A prize crew of one was jocularly put on board the Diamond and he was ordered to take her to Sitka, capital of Alaska, where a United States Court could condemn her. As soon as she got out of sight of the Rush, her captain changed her course and made for Victoria, capital of British Columbia, where she arrived safely not a little to the merriment and satisfaction of all parties. Though there are probably not less than 50 Canadian and American poaching vessels illegally fishing for seals in Behring Sea, the Diamond has hitherto appeared to be the only capture made by the two United States revenue cutters cruising there. No doubt the seals thus clandestinely killed will transcend the Alaska Company's catch of $1,500,000 worth a year. Ex-Secretary Bayard wanted to place the seal fisheries under the protection of all the maritime nations—a policy much better for the seals and the seal-skin wearers too.....

Francis E. Spinner, the amiable owner of the celebrated hieroglyphic signature, is reported to be hopelessly sick at his home at Pablo Beach, Florida. Cancer in the face due to wearing a badly-fitting pair of eye-glasses, is the trouble.....Gov. Humphrey, of Kansas, on Wednesday, issued a call for that deep-water convention to meet at Topeka, on October 1. All the States and Territories west of the Mississippi are invited to send representatives. Can't have too many friends for such an undertaking in Congress.....

The general impression is that the recently purchased lands in the Sioux reservation will not be opened to settlement before spring. No crops could be raised this year and the sufferings of new settlers would probably be terrible during next winter; whereas all can have a fair start in spring. Gen. Crook says the number of Indians in the seven tribes on the reservation is not over 23,000, though estimates varied from 35,000 to 60,000. Sitting Bull and a handful of his followers are still malcontents, but helpless.....Dr. Brown-Sequard's "elixir" is being tried by doctors all over the country with very different results. As a rule it is found to act as a more or less powerful tonic and invigorator; but in some cases, it has produced little or no effect, and in several its effects have been more or less injurious, being very disastrous in a few. The effects appear to depend, in great part, on the age and condition of the subjects. They seem greatest where the patients expect great things, and least where they don't know what is being done to them. Hence imagination must play a big part in the "cures." It appears all-important that the "elixir" should be used in an hour or less after its materials are taken from the slaughtered animal; that the latter should be thoroughly healthy, and that the "elixir" and all the tools and vessels used in its preparation should be kept absolutely free from the taint of bacteria which are everywhere present. Many of the failures and injurious effects are attributed to carelessness in regard to these last points. As an "elixir of life" to restore youth, of course it's a humbug; as a beneficial tonic and invigorator, it may be a blessing. Several thousand people must now be undergoing experiments, and the real character of the "discovery" must soon be definitely known.....

Miscellaneous Advertising.

SEND 10 Cts. in P. O stamps to **E. & O. WARD,** Produce Commission Merchants, for circular about **Shipping Produce** Also recipe for **Preserving Eggs,** Established 1845.
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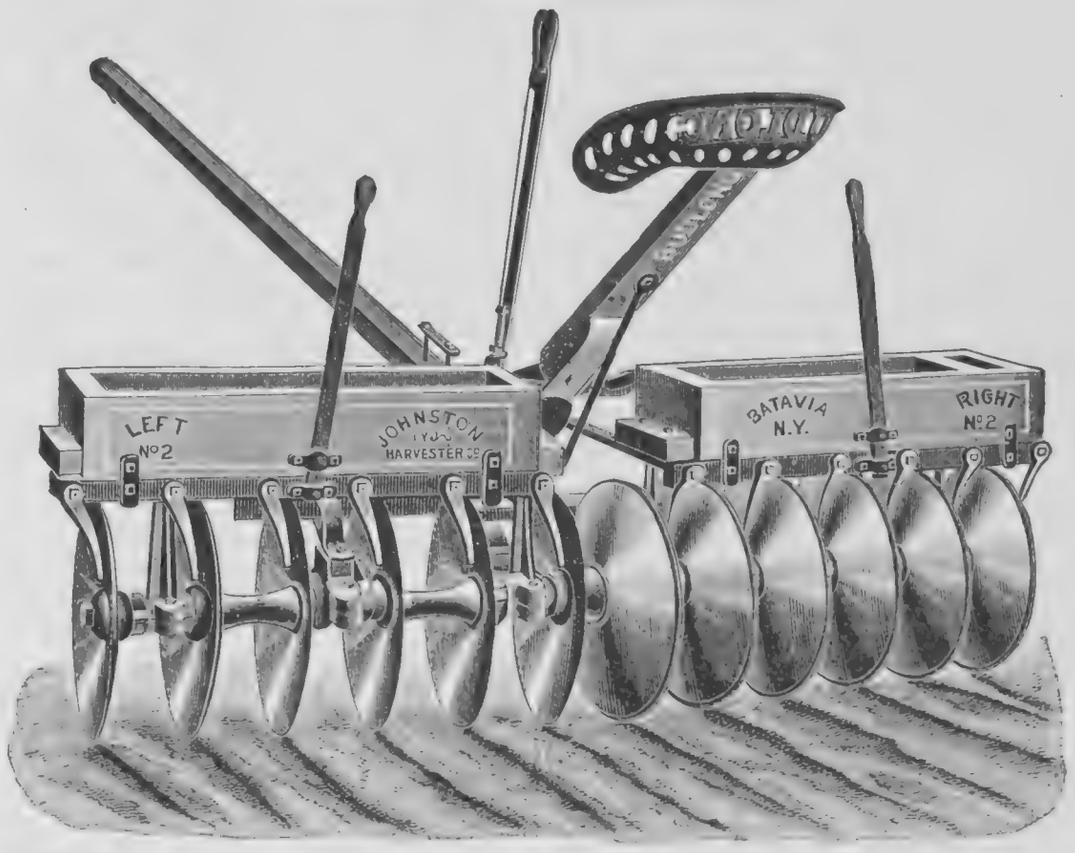
Continental Rotary Disk Pulverizers and Cultivators.



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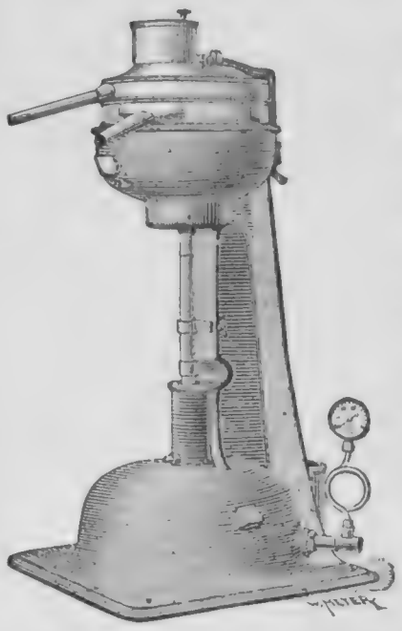

The De Laval
Cream Separators.

Hand Power, $125. $150 $200. Belt Power, $285, $350. Steam Turbine, $425.

See Bulletin No. 7 of the New Hampshire Agricultural Experiment Station, reporting test of different creaming systems, just issued, from which we quote Prof. Whitcher's conclusion:

"The figures are so plain that comment is unnecessary, and so far as one test conducted by competent and careful men can be relied upon we may place the Separator first, the Open pans second, the Moseley and Stoddard third, and the Cooley last, in point of efficiency."

Address, for any desired information,

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The Great Roofing for the South. Send for Manufacturers' References. For Steep or Flat Roofs, Factories, Mills, Lumber Sheds, etc. Send for Catalogue, Testimonials, Samples, etc.

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THE SCIENTIFIC GRINDING MILL
GRINDS EAR CORN with or without Shucks on and all small Grains, **in fact everything which can possibly be utilized for feed.**
SAFETY BOTTOM and other Practical Devices to prevent breakage should iron accidentally get into Mill.
GRINDING PLATES reversible, self-sharpening, double the capacity of all others. Sold on trial. All Mills fully guaranteed. Simplest, lightest running, strongest, fastest grinding. Send for circulars.
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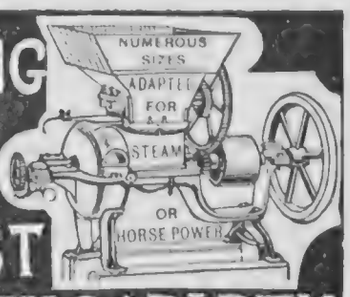

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IT IS A CONCEDED FACT that there is no better place in the United States for Nurserymen to sort up, Dealers to pack, or Planters to order, than at the **PAINESVILLE NURSERIES.** A full line of

BULBS, SHRUBS, ROSES AND PLANTS,
FRUIT AND ORNAMENTAL TREES,
Remarkably fine and complete stocks of
PEARS, PLUMS, PEACHES, CHERRIES,
APPLES, QUINCES, APRICOTS, MULBERRIES,
GRAPEVINES, SMALL FRUITS, ETC., ETC.
Introducers of the CRAWFORD STRAWBERRY.
SEND FOR FREE CATALOGUE AND PRICE LISTS. Correspondence solicited.
THIRTY-FIFTH YEAR. 700 ACRES. 24 GREENHOUSES.

Address THE STORRS & HARRISON CO., Painesville, Lake Co. Ohio.

AGRICULTURAL NEWS.

SATURDAY, August 17, 1889.

THE international show of live stock at Paris embraced a large section devoted to poultry, there being nearly 2,000 pens on exhibition. The greater part of these were entered by French exhibitors, there being a few American, and a still smaller number of English exhibitors. The Crévecœurs took the lead as is usually the case at a French show. The Houdans were poorly represented, and this breed is said to be losing in popularity. There were fine specimens of La Fléche, Courtes Pattes, and one lot of the Gray La Bresse. Of the foreign breeds, Cochins took the lead, but there were also specimens of Brahmas, Dorkings, Spanish, Andalusians, Minorcas, Langshans, Hamburgs and Polish. The American breeds were represented by Leghorns, Wyandottes and Plymouth Rocks. The French demand a white-fleshed fowl, so that the latter breeds are not likely to become popular. There were some turkeys, a few geese, chiefly Toulouse, and quite a show of ducks, principally Rouen and Pekins..... At a recent dairy conference at Ballston, N. Y., the cream from 200 pounds of milk from "native" cows with Jersey and Ayrshire crosses, made nine pounds of butter, or one pound from 22 1-5 pounds of milk. The cream from 200 pounds of milk from high-bred Jerseys, made 13.56 pounds of butter, or one pound from 14.74 pounds of milk. The Jerseys were pastured and fed grain; it was not stated how the natives were fed. It is remarked that the best dairymen attend these conferences, while the men who would be most benefited are conspicuous by their absence.....Georgia is said to have produced corn enough for home supply the present year. This has not been done before in 30 years.....Some of the implement dealers in the Northwest have been distributing binding twine made of jute and hemp to the farmers free of cost. It is said to give good satisfaction.....A stick of dynamite was fed into a thrashing machine in Indiana the other day. As an annihilator it was a success, as the machine hasn't been found since, and three men and two teams were killed..... Some experiments have been made near New Orleans in raising jute on alluvial land, which resulted in a growth 11 feet high, and a perfectly developed plant.....The value of agricultural implements exported from New York during June was $213,780. They went to almost every part of the known world..... ....The imports of sugar at Philadelphia are constantly increasing, a large fleet of sugar-carriers now being on their way to that port from the Philippine Islands. The imports will exceed those of last year by more than 20,000 tons, the increase coming chiefly from the British West Indies and Cuba..... The wool-clip of Montana this year is estimated at 9,000,000 pounds. It commands five cents per pound more than last year, or an increase of $450,000 for the season's clip..... The cost of exporting cattle from the seaboard to English markets is about $18.50 per head for freight, $4 for hay, grain and care, $2 for insurance, and $4 for commissions, selling, etc. The cattle must be slaughtered within 10 days after being landed..... The immense number of immigrants into the Argentine Republic is having its effect on the amount of corn exported. Last year 445,000 tons were shipped, this year the amount will probably reach 2,000,000 tons.... .....The wool-growers of Russia are now clamoring for a tariff on imported wool.....The Buckeye Mills of Marysville, California, have just made a shipment of 3,000 barrels of flour to Australia, the third this year. Large quantities of this flour are also shipped to China.. .....The Standard Live Stock Insurance Company, of Reading, Pa., was sold out by the sheriff lately. The concern had about $1,000,000 insurance on its books, but the only assets were a lot of old office furniture..... ... . First Comptroller Matthews has decided that the appropriation of $600,000 made by the act of March 2, 1889, for "agricultural experiment stations," can be used for the benefit only of the 40 stations for which estimates were made, namely: $15,000 each for stations in each of the 38 States, in the Territory of Dakota and at the Agricultural Department, and that no part of the appropriation can be used in the establishment of such stations in any of the Territories with the exception of Dakota, that being the only one included in the estimates on which the appropriation was based.....The Topeka, Kansas, sugar works burned, entailing a loss of $70,000.....A hairless horse imported from Australia is the latest equine curiosity in San Francisco ..... The first bale of the new crop of California hops has been received in the city, and is of excellent quality.... .....At a recent sale of Jersey Cattle in Missouri, 28 head were sold at an average price of $50 each. Either the quality of Missouri Jerseys is very low, or else prices are.....Prairie dogs have become a great pest in some parts of Kansas since their natural enemies the hawks and eagles were destroyed, and now the farmers want some method of exterminating the dogs. ..Longstreet beat Proctor Knott and Salvator at Monmouth winning the Omnibus Stakes. The mile was made in 1:44, the 1¼ mile in 2: 09¾.....The American Horse Show Association will hold its first annual show at Chicago, from October 30 to November 9. This show was formerly held in connection with the Fat Stock Show, under the direction of the Illinois State Board of Agriculture.....

Tired Nature's Sweet Restorer.

Sancho Panza, wasn't it? who cried "God bless the man who first invented sleep." And England's greatest bard has called it "Tired Nature's Sweet Restorer." Still there is another invigorating and refreshing element of existence which is also "Tired Nature's Sweet Restorer."

We call it Compound Oxygen; our patients through gratitude call it *blessed*.

No. 33 Main Street,
JAMESTOWN, N. Y., June 30, 1888.

Compound Oxygen has greatly benefited me. WM. H. PROUDFIT.

CENTER MORICHES, L.I., N.Y., July 15, 1888

I am better than I have been in eleven years. It is truly wonderful what Compound Oxygen will do. Mrs. J. F. PENNY.

MIDDLETOWN, MD., May 28, 1888.

I have been using Compound Oxygen for four weeks, and must say that it is one of the greatest medical discoveries ever made. Since using it my catarrh and hoarseness have almost entirely left me.

GEO. C. RODERICK.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, August 17, 1889.

NEW YORK MARKETS.

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

POULTRY--Chickens, spring, per lb, 9@11c. LIVE Fowls, near-by, per lb, 11½@12c; fowls, Western, per lb, 11½@12c; roosters, per lb, 7c; turkeys, per lb 10@12c; ducks, western, per pair, 50@0.70c geese, western, per pair, $1 00@$1 25.

POULTRY.—DRESSED—Turkeys, mixed, per lb. 12@12½c; Fowls, western, choice, 11@12c; do common to good, 10½@11; Ducks, spring, good, 10@16; Squabs, white, per dozen, $2 50@——; do dark, do, $1 50@——; Chickens, spring, 10@18c; Fowls, near-by, 12@13c.

HOPS.—State, new, best, 16@17c; do, prime, 15@16c; do, low grades, 10@12c; do do, 1887, 5@8c; do do do California, common to prime, 12@13c; choice, 14@15c.

HAY AND STRAW.—Choice Timothy, 95@$1 00; do good do, 85@—c; do medium, 70@80c; shipping, 65@70c; do, Clover, mixed, 60@70c. Straw.—No. 1, rye, 70@75c; short do 50@55; oat, 40@45c.

BEANS.—Marrows, new, $2 35@$2 40; new mediums choice, $2 30@2 35; pea, $2 30@$2 35 red kidney, $3 50; white kidneys, choice, 3.00@——; foreign, mediums, 1 35@1 55; California Lima, $3 60@$——; green peas, $1 40@$——.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 7¼@7¾c, and farmers' grades at 5@6c. Pecans, 5@7c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—State, per bbl., $1 50@$1 65; New, $1 25@$1 50; Long Island, $1 50@$1 75; Sweets, $1 @$4. Cabbage—New, per 100. $1 50@$2 00. Cucumbers, per 1,000, $1 25@$1 50. Egg Plant per bbl, $2 50@——. Tomatoes, per crate, 45@75c. Corn, per 100, 75c@$1 25. Onions—Potato, per bbl, $1 00@$1 75; East Shore do, $1 00@$1 50; Egyptian, per bag, $2 00@$——; Jersey White, $1 75@$2 00; State Yellow, $1 50; Orange County Red, $1 50. Lima Beans, per bag, $1 50@$2 00, Turnips, per bbl, 75c.

FRUITS.—FRESH.—Peaches, per crate, $0 75@$1 50; do. per basket, 40c@$1 75; Huckleberries, per qt, 5—9c. Plums, per bbl. $2 00@$4 00. Apples, per bbl, $1 25@$3 00 Watermelons, per 100, $8 00@$25 00; Muskmelons, per bbl, 50c@$3 00, Pears, per bbl., $1 50@$3 50; Lemons, per box, $2 75@$4 00. Grapes, per lb. 3@15c.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5¾@6c; do new, common to prime, 4@5¼c; sliced, new, 3@3¾c; quarters, 3@4c; chopped, 2½@3c; cores and skins, 1@2c. Cherries, new, 8@11c. Raspberries, new, 17@18c. Blackberries, 3½@4c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 11@14c; do do, unpeeled. 5@6c; North Carolina sun-dried, peeled, 6½@8c. plums, 6c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 11 75@12 50; short clear, $12 25@14 00. Extra Prime mess, $11 00@$— prime do, $10 75@$11 and family mess, $12 00@13 00. BEEF—India Mess. in tierces, $12 50@14 Extra Mess, in barrels, $7 00@7 50 Packet, $7 50@$8 00 per bbl, and $11@$12 00 in tierces; Plate, $7 50@8 00; Family at $11—@$14. HAMS—$14 00@$14 50, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 7½@—c; Pickled Hams, 10¾c; pickled Shoulders, 5@—c; Smoked shoulders 5¾c; do Hams, 11½@11¾c. Dressed Hogs.—City, heavy to light, 5¾@—c. Pigs, 6¾c. LARD.—City steam, $6 25; September, $6 67; October, $6 59; November, $6 35; December, $6 30; South America, 7.6c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, PA.—PROVISIONS.—Potatoes, Maryland Rose, per bbl, $1 50@$1 75. Provisions were steady. BEEF.—City family, per bbl, $9 00@$9 50; do, packets, $8@8 50; smoked beef, 10@10½c; beef hams, $14 PORK.—Mess, $14 00@$——; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 11½@13c do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6½@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8¼c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6½@7.

CHICAGO.—MESS PORK.—$10 62@10 70 LARD.—$6 07@$6 10 per 100 lbs; Short Rib sides (loose), $5 45; dry salted shoulders, boxed, $5 20; short clear sides, boxed, $5 62@$5 75.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 17½@18½. Elgin, best, 18c; Western, best 16½@17; do prime, 15½c; do good, 13½@14; do poor, 11@12. State, Dairy, half-firkins, tubs, best, 17@——c; do do prime, 15@16; do do fine, 13½@14½; Welsh tubs, fine, 15@—c; do do, good, 13½@14; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 13@14; do fine, 11½@12½; Western dairy, fine, 12@12½c; do fair, 11@12c; do poor, 9@10c; do factory, fresh, best, 12@12½, do prime, 11½@12; do good, 10@11; do poor, 8@9c.

CHEESE.—State factory, fancy, 8¼c; do do fine, —@——c; do do, prime, 7@8¼c; do do, fair to good, 7¾@—c; Ohio, flat, prime, 6@7c; do good, —@—c; do, good, —@—; Skims, light, 5@6c; do medium, 2@3; do full, 1@2c.

EGGS.—Near-by, fresh, 17@17½c; Canadian, 16½@17c; Southern, 15@16c; Western, best, 16½@17c.

PHILADELPHIA.—BUTTER dull. Pennsylvania creamery extra, at 17@18c; Pennsylvania Prints, extra, 25@27c; B.C. and N.Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were firm; Pennsylvania firsts 17@——c; Western firsts, 16@17c; Cheese dull—steady; demand fair; New York full cream, at 8½c; Ohio flats, choice, 7¼@7½c; do, fair to prime, 14@14½c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Fancy creamery, 17@8c; choice Western, 15@15½c, choice dairy, 13@14c; common to fair, 9@10c. Eggs firm at 14@14½c.

GRAIN MARKETS.

WHEAT.—Ungraded Winter Red, at 68@87½c; Steamer No. 3 Red, 76@77c; No. 2 Red, at 91c for old delivered, 89@89½c for new afloat; do in elevator quoted 87½@88c; No. 2 August, 85¾@86¼c; do September, 84½@85 3-16c; do October, 85@85½c; do November, 86¾c; do December, 87 3 16@87 15-16c; do January, 89c; May, 92½@92⅝c. RYE.—Quiet and more or less nominal; Western quoted 51@52c. Full lots of State not offered. BARLEY.—Two loads of new crop Canada (from Bay Quinte) for October delivery were offered at 80c. but the best bid was 75c. Corn.—Ungraded Mixed at 43½@45c; No. 2 Mixed, 44½c elevator, 44½@44¾c afloat; do c. f. and f., 43⅞c; No. 2 August, 44¼@44½c; do September, 43⅞@44½c; do October, 44¼@44⅜c; do November, 44½@44⅝c; do December, 43¾@44½c OATS.—No 3, 27c; do White, 28½c; No. 2, 28¾@28c elevator; 28¾c delivered; No. 2 White 32c; No. 1 White, 38c; Mixed Western, 25@29c; White do, 30@39c; No. 2 August; do September, 26¾@26⅞c; do October, 26¾@27c, do November, 27⅜@27½c; do May, 30@30½c; do White August, 30c; September and October, 29c.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING AUGUST 17, 1889.

L. S.—S. B. P.—E. H. C.—A. N. J.—T. H. H.—G. H.—T. L. W.—J. L. N—T. H S.—J. F.—E. S. B.—L. W.—M. P.—E. F.—J. F.—C. C. W.—P. T. N.—G. H. S.—J. J. W.—J. C.—W. H. R.—Mrs. L. E. Wood, potato report.—A. L. C.—T. B. T.—H. B. C.—T. M.—J. E. S.—F. D. D.—C. F. O.—B. D. H.—F. G.—E. H. C.—F. B. B.—A. J.—C. H. M. C. W. W.—J. D.—V. B. A.—J. R. H.—G. S. P.—J. F. D.—H. B. S.—I. T. R.—E. A. F.—C. W. J.—H. S.—F. E. B.

Miscellaneous Advertising.

J. M. THORBURN & CO.,
15 JOHN STREET,
NEW YORK,
BEG TO ANNOUNCE THAT THEIR DESCRIPTIVE PRICED
CATALOGUE OF
BULBS
for Autumn planting is ready for mailing to applicants.
Lily of the Valley Pips, Bermuda Easter Lilies and Roman Hyacinths For Florists, a Specialty.

Established 1852. | **JACKSON BROTHERS**
NEW YORK STATE DRAIN TILE AND PIPE WORKS,
MAIN OFFICE: 76 THIRD AVE., ALBANY, N. Y.

ROUND, SOLE AND HORSE-SHOE TILE, Over 13 inches long. By cargo or smallest quantity. Our new improved machinery makes superior round and sole tile, excelling anything offered heretofore. First Premium wherever exhibited. Price-list on application. Vitrified Glazed Pipe and Tile Machines.

600 ACRES. 13 GREENHOUSES.
TREES AND PLANTS
We offer for the Fall trade a large and fine stock of every description of FRUIT and Ornamental TREES, Shrubs, Roses, Vines, SMALL FRUITS, Hedge Plants, Fruit Tree Seedlings and Forest Tree Seedlings. Priced Catalogue Fall of 1889, mailed free. Established 1852.
BLOOMINGTON PHŒNIX NURSERY
SIDNEY TUTTLE & CO., Proprietors, BLOOMINGTON, ILL.

HILLSDALE COLLEGE, Hillsdale, Michigan. The place to go to College. The Poet Will Carleton's alma mater Buildings, Teachers, Instruction, Influences, Literary Societies—all good. Fall Term begins September 10th. Winter Term January 9th. If you are going off to school send for catalogue.

WELL TESTED & APPROVED.
New, Valuable and Indispensable Fruits. Catalogue on application to
T. V. MUNSON, Denison, Texas.

HORSES
FOR ALL PURPOSES AT LAKESIDE.
Standard Bred Trotters.
A rare lot of Young Stallions of most popular lines of breeding.
French Coach Horses.
Imported and American Bred, of very superior quality, style and action.
Clydesdales.
A Superb Lot of Young Stallions, Mares and Fillies of this valuable draft breed, the result of years of intelligent and careful importing and breeding.
Percherons.
A few unusually fine young Stallions of this deservedly popular breed.
Catalogue containing full descriptions and pedigrees mailed to parties interested. In writing mention this paper.
SMITHS, POWELL & LAMB,
SYRACUSE, N. Y.

THE PERKINS'
Wind Mill

is the Strongest and Best Self-Regulating Wind Mill made
Full instructions for erecting sent with the first mill. **All Wind Mills warranted.** For Circulars and Prices address
THE PERKINS' WIND MILL AND AX CO.,
Agents Wanted. Mishawaka Ind.
Mention Rural New-Yorker.

New Wheats from Originator Under Seal.
Early Red Clawson. $8 per bushel; 2 bush., $14. **Golden Cross,** $2 per bushel. **Jones' Winter Fife,** the coming No. One—**Hard gluten sort of the East,** 2 oz., $1. with directions for producing a large amount from the sample. Send money order or N. Y. draft. Address **A. N. JONES,** Le Roy, N. Y.

$20 Picket Fence Machine for $10.00. *Guaranteed.* Hundreds in use. Freight paid. Circulars free. S. H. Garrett, Mansfield, O.

Send stamp for Catalogue to W. H. WIGMORE,
POULTRY
—AND—
CATTLE
SPECIALTIES,
No. 107 S. Eighth St., Philadelphia, Pa.
Cow Milking Tubes, Teat Slitters, Cattle and Sheep Labels and Windy Dropsy Trocars, French Poultry Killing Knives, Caponizing Tools of every description, with full instructions, Adjustable Bands, Rings, Markers, Roop Syringes, Anti-Feather Pullers, Gapes Exterminator, and How to Make Poultry Pay.

WANTED—To correspond with a party who has made dairying a business; am willing on account of health to move south.
V. LETOVEY, Wartburg, Morgan Co., Tenn.

LOW-DOWN WAGON on high wheels—only Practical, Common Sense Farm Wagon in the world. Send for 28 reasons why.
GARDINER IRON WAGON CO.,
Mullica Hill, N. J.

225 | **DUTCH BULBS** | **$2.25**
Retail Value $5.00
Strawberry, Grape, Raspberry, Blackberry, Currant Plants.
For description, send for Catalogue free.
C. E. ALLEN, Brattleboro, Vt.

EMPIRE AGRICULTURAL WORKS
LATEST IMPROVED MACHINES in the MARKET.

It pays to get our Illustrated Catalogue and Price on Tread and Sweep Power, Thresher, Separator, Corn Sheller, Feed Cutter with Crusher, Land Roller, Engines, three to ten Horse Power.
S. S. MESSINGER & SON, Tatamy, Northampton Co., Pa.

ELLIOT'S PARCHMENT PAPER THE DAIRYMEN'S FRIEND
The Cheapest. The Best. The Highest Quality.
Over 10,000 progressive creameries, dairymen, farmers and dealers indorse it in place of muslin or wax paper, for wrapping Butter, Cheese, Lard, Meat, Sausage, Etc., Etc. Good butter demands a good wrapper. Send for samples and testimonials to dealers in Dairy Supplies, or
A. C. ELLIOT & CO., Paper Manufacturers, Philadelphia, Pa.

BUCKEYE GRAIN & FERTILIZER DRILL
Perfect FORCE FEED FOR GRAIN & GRASS SEED.
With the Celebrated GLASS FERTILIZER DISTRIBUTOR.
Greatest Improvement of the Age.
CENTER GEAR.
Ratchets in Ground Wheel.
New LEVER for shifting the HOES.

One-half the hoes forward and the other half back. This combined Drill has no equal on the market and can not fail to be appreciated by any farmer who sees it.
BRANCH HOUSES: Philadelphia, Pa.; Peoria, Ills.; St. Paul, Minn.; Kansas Cy. Mo.; San Francisco, Cal.
Send for Circular to either of the above firms or to
ESTABLISHED 1854.
Also manufacturers of
Lubin Pulverizers, Buckeye Riding and Walking Cultivators, Buckeye Seeders, Buckeye Cider Mills and Hay Rakes.
P. P. MAST & CO., SPRINGFIELD, OHIO.

Literary.

FARM LIBRARIES.

A SUCCESSFUL farmer of my acquaintance often says that he thinks one of the best habits a boy or girl can acquire is the reading habit, and he carefully promotes such habits in his own home by buying such books and papers as his children love to read, always taking care to direct them toward the best books and the most instructive papers he can find.

There is no doubt many another father who wishes to get the very best books for his family; but neither he nor they know exactly what the best books are, and so, buying blindly, books of less merit are purchased with money which would have paid for better works. What to buy must be determined, in part, by the years of an individual—rhymes and simple tales—true ones are always most relished—for the child at the knee; easy history, science and literature for the growing girl and boy, and by all means some good biographies of people of our own country, as Washington, Franklin, Lincoln. There is no objection to any good biography, but in a limited collection of books our own men should have a place rather than strangers. It is well, too, if possible, to allow for different tastes; one boy may be carried away by books on bugs and bats and squirming things, while another loves only stories of heroes and daring exploits. Probably, in either case, it would be better to induce the boy to read a little of something out of his preferred line lest he grow up wise on one side and ignorant on the other; but, whatever comes, it would be better not to put him out of the notion of reading, for it may be impossible, once out, ever to get him in the notion again.

After one has acquired a fair knowledge of general things, there is much to be said in favor of what may be called reading in a line *i. e.*, buying what one is able upon some one theme and reading upon that theme until he is familiar with all that has been written upon it, and this is especially a fault in farm libraries where the buyer is quite likely to buy only books treating of the farm, when, at the same time, he has a half dozen boys and girls starving for something just outside the farm, and a wife who snatches at every bit of poetry and sentiment that comes to her eye through the meager channels of the almanac or the country newspaper.

For general reading there are some books necessary to every household, first of all of which is the Bible; not the big, brass-clasped ten-dollar book always untouched on the parlor table and fit for the only use to which it is put, the stowing away of relics of all sorts, from the children's valentines to the sacred locks of hair; but the convenient-sized reference Bible for family reading and Sunday School work. The 10 dollars which are paid for the other useless lumber will supply a moderate-sized family with good Bibles and a concordance, and a little more money added will buy Deem's or Farrar's or Geikie's Life of Christ, any one of which is good, though I prefer Geikie. Then, second, get a dictionary, any standard one—Webster's is very good for giving definitions, the use to which it will oftenest be put—and, some rainy day, a little stand can be made to hold the book, which will do away with the greatest objection to it for home use, viz.; its size and weight.

After these two books add Æsop's Fables and Anderson's Fairy Tales for the children, and a book of Bible stories, if you can find one, and then a book or two that you know your wife loves. One cannot dictate here, for one woman loves one thing and another something else, but the husband can find out what to buy for his wife. If the wife potters lovingly day after day about a few pots or plants, ten to one she would be helped and delighted by a book on flower culture, and I know one woman in a backward Southern State who herself cultivates a plot of cotton to buy herself books on anatomy and physiolgy.

As to the husband, he, like the wife, chooses books according to his tastes: the fruit grower selects books on fruits; the stock grower books on stock growing, veterinary, and other subjects closely allied to his line of work. As a rule, the farmer is not a specialist, but has interests both in fruit and stock and grain and he wants a little help on each of these lines. For aids in fruit growing, there are numberless little treatises and collections, more, perhaps than upon both the other subjects, but a very good—probably the best single volume to own is Thomas's American Fruit Culturist, taking care always to get the best edition, which in this case happens to be the last. For vegetables there are also many books the best of which the specialist will know, but Joseph Harris's Gardening for Young and Old, or Peter Henderson's Gardening for Profit, will prove helpful, and these will prepare for other books if they are needed. In stock, there are so many kinds of stock one must know a little of a man's wants before he can answer intelligently, as the enthusiastic breeder of Jerseys could have little interest in a book upon Shorthorns and *vice versa*; or, if an exclusive breeder of horses or sheep or hogs, the cattle book would be of no value whatever. Compiled books of the cheaper class have long supplied the needs of the average reader, giving a scrappy information, possibly as much as was demanded formerly, but hardly as much as is demanded now, and there may be no better way for a man to find out just the best book for himself than to write asking information of some honorable man engaged in the same branch, or of a professor of agriculture in some agricultural college, or, better, of his agricultural paper. Another very satisfactory way would be for each one to buy several books and decide for himself which was best. For cattle, Allen's American Cattle, latest edition, is good; for cattle feeding, Armsby is perhaps the choice, but buy Stewart on Cattle Feeding and compare the two. They will cost no more than four dollars and a half, and they might make many times that amount in the difference in the value of stock fed by their methods. For pigs, Harris is a standard, and Coburn has written a good work on Swine Husbandry. Horses have innumerable works written upon and about them, but as the book most called for is a book for the treatment of diseases, I name Law's Veterinary Adviser as the most advisable single volume for the purpose, and it is also to be recommended for the treatment of other animals. Sheep have Randall's Practical Shepherd and Stewart's Shepherds' Manual. Randall has also a book on Fine Wool Sheep Husbandry, and Youatt, an old and popular writer, has a book exclusively upon sheep. If one wishes books upon bees or poultry he may buy Cook's Manual of the Apiary, Root's A, B, C of Bee Culture or any one of several other excellent ones, and Wright's Practical Poultry Keeper, Stoddard's An Egg Farm, or, Profits in Poultry and their Profitable Management.

Added to the above are books upon grasses and grains and miscellaneous works, which one will really need, but which it would be quite impossible to name in a short article; but what is to prevent any farmer from adding to his collection the much laughed at agricultural reports, and the reports of horticultural and other societies? They frequently cost only the stamps to pay the postage, and the United States Reports may be had for the asking, by addressing one's Representative in Congress. Some of the best agricultural literature of the day is published only in reports or in the bulletins of the new experiment stations of the States, and these last may also usually be had by any one who sends in his name and post-office address.

Suppose one's shelves are full of the literature of the farm, there still remains the great mass of general literature untouched, and the farm boy and girl would get up early in the morning for a chance to read the Pilgrim's Progress or The Arabian Nights, and the older ones will be glad of Shakspeare, Washington Irving, Longfellow, an English history—Knight's, perhaps, for the pictures, but Green's is excellent—some American history, some good novels, Hawthorne's Scarlet Letter, Thackeray's Newcomes, Dickens's David Copperfield, Miss Mulock's John Halifax, Scott's Ivanhoe, Wallace's Ben Hur, George Eliot's Middlemarch, and if there is any one in the family who loves a lovely child, Mrs. Burnett's Little Lord Fauntleroy. If to these could be added a little poetry from time to time, especially our American poets, Holmes, Lowell and Whittier, we should not have more books in the house than would fill out the long winter evenings, and we should not be guilty of having more books in the house than the reader could digest.

At the risk of going beyond the buyer's purse, I must say a word for an encyclopedia. It answers almost as many questions as a dictionary and answers them a great deal more fully. Johnson's is one of the best, price and all considered, and a new edition is just out.

A good way to increase a library is to bind the magazines and papers which come into the house; if one cannot afford the expense at present, a temporary binding made at home will hold them safely till one's ship comes in. Cloth is probably the most satisfactory binding of the cheaper sorts and half morocco with cloth sides is as good and handsome as need be for common work and is much to be preferred to either sheep or calf or Russia leather. A bad way to get a library is to buy of a traveling book agent who usually sells a poor class of books at a very high price. Some good books, like Grant's Memoirs, are sold only by agents, but these books are readily had of second-hand dealers at half of the first cost.

In buying books look at the print, paper and binding; if the print be blurred and defective, it will hurt the eyes to read it; if the paper be thin and grayish, the best print will not be readable upon it, and if the book open at the middle, and will not lie open on a table or flat surface, the binding is not well done and the covers and leaves will easily become loose. As a rule, avoid fancy prices, buying good print and paper in a suitable binding, which may be replaced when it wears out.

Colorado. M. J. CARPENTER.

GOLDEN ROD.

By the highway, in the meadow, on the hill-top, everywhere;
Golden rod is gaily waving brilliant banners in the air,
Such a host of tiny blossoms, grow upon one slender stem,
Making one rare combination, 'tis of the wayside flowers the gem.

Modestly it bends its blossom with its weight of burnished gold,
If it were the precious metal that its dainty petals hold,
For its rare intrinsic value, golden rod would then be sought.
All the memories clustering around it, would be lost in sordid thought.

Does the meaning name attract us; our cupidity awake,
Do we seek the golden flower for the glittering tempter's sake?
Nay! there's nothing in this flower to arouse our greed for gold;
No pecuniary value does the golden blossom hold.

For its meek and lowly bearing, rather than a haughty pride,
Do we love this favorite flower; for it flourishes beside
Humblest weeds, and barren places, of the earth it does enfold,
With an oriental covering, a gorgeous hue of gold.

Twining with the flowers of summer, golden glory of her crown,
Lingering still to deck the autumn, while the leaves are turning brown.
For their personal adornment devotees of fashion bend
At thy shrine; and beg thee humbly of thy golden crown to lend.

Golden rod, or Solidago, join, make firm, thy name implies,
In thy unity of beauty all thy wondrous secret lies.
Does not then this charming flower for us each a lesson hold?
In this plant we find a precept worth its weight in burnished gold.

MRS. D. H. GARDNER.

Miscellaneous Advertising.

THE NEW RACE COURSE.

The N. Y. JOCKEY CLUB. Article by Scott Thompson.

Page-Picture of the Grand Stand and Race Track.

Two cuts of the Betting Ring and the Stables.

See HARPER'S WEEKLY, Published August 14th.

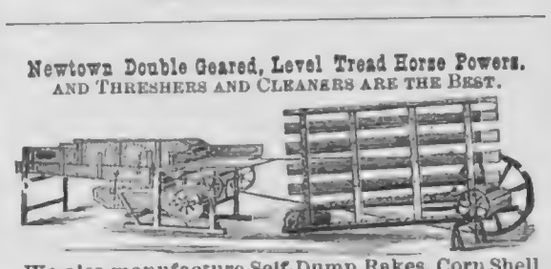
$1,000,000 worth Monuments at cost N. Y. & Mass. Granite Works. W. ROBINSON, 1146 B'dway, N. Y.

TO FARMERS AND GARDENERS.

DRIED GROUND } **POUDRETTE** { NIGHT SOIL.

The cheapest and best fertilizer made. Can be used without offense in all drills. The article is first dried, then ground. No dirt is mixed with the soil. It is pure night soil only. Can be mixed with other ingredients to excellent advantage. Price per ton, $20, in barrels, f. o. b. GEO. S. PICKERING, 135 Fifth Street, Troy, N. Y.

Newtown Double Geared, Level Tread Horse Powers. AND THRESHERS AND CLEANERS ARE THE BEST.



We also manufacture Self-Dump Rakes, Corn Shellers, Farm Rollers, etc. Send for Circulars and Price Lists. A. BLAKER & CO., Newtown, Bucks Co., Pa

STRAWBERRY PLANTS AND PEACH TREES FOR SALE.

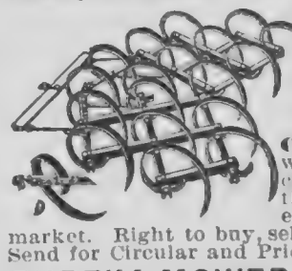
25,000 Davis Seedling No. 1. From his original stock. 50,000 Peach Trees.—all leading varieties. Call or address L. W. GARDNER, Washington, N. J.

GRIND YOUR OWN Bone, Meal, Oyster Shells, Graham Flour & Corn, in the **$5 HAND MILL** (F. Wilson's Patent), 100 per cent. more made in keeping Poultry. Also POWER MILLS and FARM FEED MILLS. Circulars and testimonials sent on application. WILSON BROS. Easton, Pa.

BROAD-CUT Center-Draft **EUREKA MOWER**

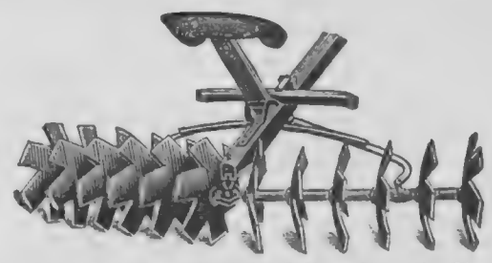
SIZES: 5, 6 and 7 Feet

Saves over half in labor, and produces better quality of hay. An ordinary pair of horses will handle with ease. A DIRECT DRAFT what you want. WIDE-CUT MOWER is



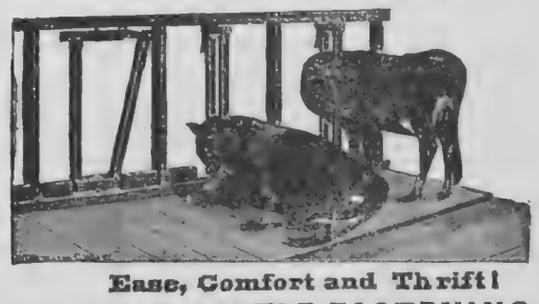
EUREKA SPRING TOOTH HARROW

Channel Steel Frame which clears all obstacles. Does not bury itself thus making it the lightest draft Harrow in the market. Right to buy, sell and use guaranteed. Send for Circular and Price List. Address EUREKA MOWER CO. UTICA, N. Y.



For preparing the ground for fall seeding, the Clark's Cutaway Harrow will more than pay for itself in one season. No use for the plow on stubble land. Take it and try it and you will buy it. Send for new circular.

Higganum M'f'g Corp., Sole Man'f'rs, HIGGANUM, CONN.



Ease, Comfort and Thrift!

THE BEST CATTLE FASTENING

Smith's Self-Adjusting Swing Stanchion!

The only practical *SWING STANCHION* invented Thousands in use. Illustrated Circular free. F. G. PARSONS & CO., Addison, Steuben Co., N. Y

IDEAL

IMPROVED Made of best material by skilled workmen, built on correct principles and fully warranted; 17 YEARS' EXPERIENCE. Sent on trial. Write for Circular and Price. Stover M'f'g Co. Freeport, Ill.

ROAD CARTS, BUGGIES, and HARNESS.

We put no prices in the paper, but if you will write we will quote LOWER THAN ANY one else. See our Exhibition offer. Will you help advertise our goods if we PAY YOU. Send 6 cts. in stamps for information if you want A BARGAIN. UNION MACHINE CO. Philadelphia, Pa.

Pennsylvania Agricultural Works, York, Pa.

Farquhar's Standard Engines and Saw Mills.

Send for Catalogue. Portable, Stationary, Traction and Automatic Engines a specialty. Warranted equal or superior to any made.

Address A. B. FARQUHAR & SON, York, Pa.

Buckeye Wrought Iron Punched Rail Fence

Also, manufacturers of Iron Cresting, Iron Turbine Wind Engines, Buckeye Force Pumps, Buckeye Lawn Mowers, etc. Send for Illustrated Catalogue and prices to Mast, Foos & Co. Springfield, O.

SAMPLE PACKAGE. Three Concord Grape Vines, or three Winter-Blooming Roses, with Catalogue, 25 Cents. WILLIAM B. REED, Chambersburg, Pa.

The Willson — Spring Singletree,

THE WONDER OF THE AGE! Marvel of strength, perfection, simplicity

Farmers and Teamsters, save your Horses save your Harness, save your Plows, save your Money by buying the cheapest Singletree on earth, and THE BEST.

Special Inducements to Agents.

THE JEFFREY M'F'G CO., 214 East 1st Avenue, Columbus, O.

CATALOGUES, ETC., RECEIVED.

CORNISH ORGANS AND PIANOS.—Circulars of the celebrated Cornish organs and pianos from Cornish & Co., Washington, N. J. The fact that this firm has numerous imitators both in Washington and elsewhere, is evidence of the excellent reputation and the superior quality of their instruments. Notwithstanding the increased capacity of their factory, they are kept busy night and day filling orders. Some of their offers are wonderfully liberal and we hope that every one of our readers will get their catalogue.

HARTFORD COMPRESSED AIR PUMP CO., BOUND BROOK, N. J.—This company makes a machine for utilizing compressed air to raise water. It is used in connection with a wind-mill. Its advantages are economy of power; several different pumps may be operated by the same wind-mill; it has no parts exposed to the weather to be clogged by sleet or snow; it requires no attention; it can be set at any distance from the source of water supply. Send for this circular.

CHAMPION EVAPORATOR, G. H. GRIMM MANUFACTURING CO., HUDSON, O.—This large and finely illustrated catalogue shows the various parts of the Champion Evaporator; the construction of the corrugations, the regulator, the portable siphon, etc., etc. It also contains much valuable information concerning the business of evaporating maple sap, sorghum, cider and fruit. In many localities this business might be conducted with profit. It is a matter worth looking into. An evaporator is often the means of saving a crop which would otherwise be lost.

BRYANT & STRATTONS CORRESPONDENCE COLLEGE, BUFFALO, N. Y.—Every farmer's son should know more of book-keeping and business correspondence than he can learn in the ordinary district school. It is possible to go through a course of study at home, which will be of very great value, and we would advise our young readers to send to the above address for circulars telling how it may be done.

THE PERKINS WIND-MILL AND AXE CO., MISHAWAKA, IND.—This is a beautifully colored village scene, showing the Perkins Wind-mill in operation. One can see at a glance the simplicity and mechanical perfection of these mills. The cut shows the three principal parts: the main casting, the wheel and the rudder. There are no iron weights, side vanes, governing balls or hooks or levers to mar the appearance of the mill and get out of order, and cause stoppage and inconvenience. Send for this circular.

DAIRY QUESTIONS.—Director Peter Collier, of the Geneva, N. Y. Experiment Station, is collecting some very valuable statistics regarding the dairy interests of New York State. He has sent out many copies of the following list of questions. We hope our New York readers will help the work along by answering them fully. Are there any who cannot answer them satisfactorily? Perhaps it would be fairer to ask if there are any who *can* answer them?

SUMMER EXPENSE FOR COWS.

Number of cows during summer.....
Pasture, grazed by cows.....Acres.....
Green forage fed cows at pasture....Acres.....
Hay fed cows at pasture ....Tons.....
Grain fed cows at pasture.....Tons.....
Average daily milk yield in summer lbs. or quarts.

WINTER EXPENSE OF COWS FOR 1888–89.

Number of cows wintered.....
Fed cows during winter:.....

Hay	Tons	Value.....
Silage	Tons	" .....
Fodder corn	Tons	" .....
Corn Stover	Tons	" .....
Straw	Tons	" .....
Other rough fodder	Tons	" .....
Corn-meal	Tons	" .....
Wheat bran	Tons	" .....
Cotton-seed meal	Tons	" .....
Linseed meal	Tons	" .....
Other grain	Tons	" .....
Potatoes or roots	Tons	" .....

Average daily milk yield in winter lbs. or quarts.....

INCOME FROM COWS FOR ONE YEAR.

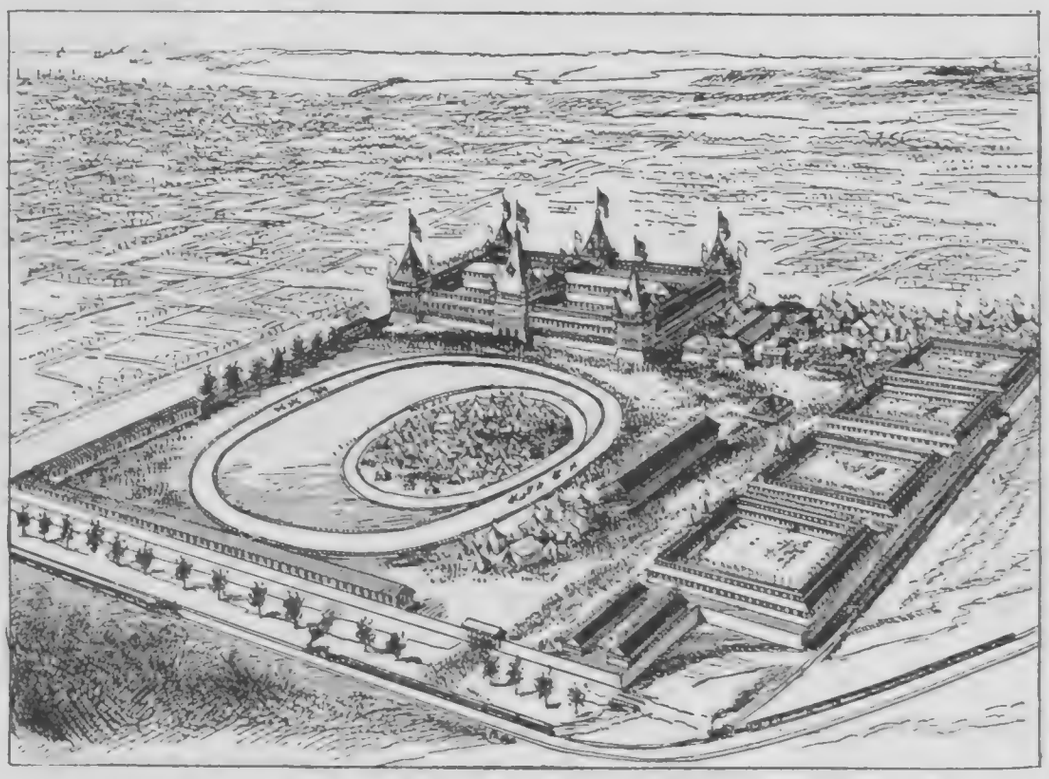
Calves.....No.....Value....
Deacons.....".....
Milk produced.....pounds..or quarts..
Milk sold.....
Butter produced.....
Cheese produced .....
Skim milk .....
Value farm per acre.....
Taxes.....

Please indicate in the list enumerated below about the amount you are in the habit of feeding each cow per day during the winter:

Hay (clover or mixed grasses).....
Silage.....
Roots.....
Straw.....
Corn stover or fodder.....
Corn-meal.....
Wheat-bran.....
Wheat middlings.....
Oats.....
Cotton-seed meal.....
Linseed meal.....
Other grains.....

ANALYSES AND VALUATION OF COMPLETE FERTILIZERS.—Bulletin 56 from the New Jersey Experiment Station. This pamphlet contains analyses of 73 different brands of complete fertilizers that are offered to New Jersey farmers. Of these 40 contain more of each of the plant food elements than the manufacturers claim. "Cary's Pure Dissolved Bone," selling price $45 per ton, was found to be worth $2.89 per ton, while "Excelsior No. 1," from the same party, selling at $40, was worth $2.42. Yet considerable quantities of these fertilizers are still bought by New Jersey farmers. Prof. Cook gives the following general suggestions:

"It is admitted by most farmers that fertilizers pay; how to buy and how to use, are questions which are becoming clearer each year. Yet the large number of brands from which to select is at times confusing to those who are influenced by names of brands and prices per ton. The fact that any brand reaches its guarantee in contained plant-food, or that it corresponds closely in estimated value to selling price, is not evidence in itself that it is better than some other brands which do not reach their claims in this respect. In addition to these points, the guarantee must be high enough to warrant the price, and the contained plant-food must be the kind that is needed. Attention cannot be too often called to the fact that nitrogen, phosphoric acid and potash are the elements sought for in a complete fertilizer; the amount, kind and quality of these determine its commercial, and to a large degree its agricultural value. As a rule, the fertilizer which contains the greatest amounts of these elements is the cheapest; for the cost of manufacture, freightage and rate of commission are the same for high-grade as for low-grade fertilizers, and the labor on the part of the farmer is increased as the grade of the goods decreases."



GROUNDS OF THE BUFFALO INTERNATIONAL EXPOSITION Fig 216.

CREAM BY MACHINERY.—Catalogue of the De Laval Separator Company, 74 Cortlandt Street, New York. The history of the separator is now pretty well known. It is a wonderful machine and thousands are now in use. This catalogue tells all about the machine and also gives considerable dairy information.

NOXIOUS WEEDS OF WISCONSIN.—In Bulletin No. 20, Prof. E. S. Goff writes on the above subject. In 1885 the legislature of Wisconsin declared certain weeds outlaws, and ordered the authorities to kill them at sight. Prof. Goff gives a list of these weeds, with illustrations, and the story of their habits. We shall have more to say about this matter later.

THE HORN FLY.—This insect is dignified by the publication of a bulletin devoted to his habits and tastes. Special bulletin F. of the New Jersey Station gives the fly the best possible send-off. Little seems to be known about him except that he likes to work at the base of the horns on cattle. Tobacco insecticides are most effective against him.

Indust'l Societies.

THE BUFFALO INDUSTRIAL FAIR.

THIS appears to be an era for the holding of large fairs at permanent locations. It seems as though the plan of holding State or sectional exhibitions at a new place each year, so that all sections may be represented, has gone out of fashion. The advantages claimed for a permanent location are many and strong, and if we may judge from the recent actions of fair managers, the arguments are convincing. The Buffalo International Exposition is an illustration of the modern idea. Last year, its first season, there was an attendance of 400,000 people, and this year's attendance promises to be even larger. At Fig. 216 we give a view of the grounds used by the Buffalo Exposition. The buildings are all elegant and substantial, and the grounds are excellently arranged for exhibition purposes. The fair will be held this year September 3—10.

Miscellaneous.

A JERSEYMAN'S JOTTINGS.

THE POTATO ROT.—This is still the main topic of interest with our farmers. We are now getting hold of the matter and can get some idea of the damage. I expect to lose just about one-half of my crop, and I think that will be a fair statement for most of New Jersey. We shall lose even more than that if we get more of these heavy showers followed by hot, scalding suns. Reports from other parts of the country are conflicting. Here is a letter just received from Central Indiana.

"You speak of damage to the potato crop, East. We have the largest crop for three years. We have much rain too, but potatoes out of sloughs are a large crop. I never before had 10 or 12 large potatoes in a hill in *drill* planting; generally three or four. I may have 1,000 bushels on five acres. We usually have about 100 to 135 bushels per acre."

Other letters from Ohio and Michigan tell a mixed up story. I still think there will be a short crop, though I notice the Department of Agriculture still goes merrily on predicting a "fine crop." This Indiana man certainly has no cause to complain this year. I think his prices will be satisfactory. A great many Michigan potatoes come to this market. The chances for the Michigan crop this year seem to be below the average.

A POTATO BULLETIN.—The New Jersey Experiment Station people are so alarmed about the rot that they have issued a special bulletin telling all they can about the disease. We all know pretty well how the vines and tubers look, and also the sort of weather most favorable for the spread of the rot. Mr. Halsted seems to think that coarse barnyard manure helps the rot along, particularly in seasons like the last, I think there is something in this. I wish other farmers would tell us what they think about it. This may be one reason why farmers always want to use fertilizers on the potato crop. In this bulletin we are advised to dig the potatoes as soon as we can. This advice ought to be qualified. On dry ground, I think the tubers are just about as safe in the soil as out of it.

I shall not dig my potatoes until about the usual time for digging. There are some fields near my place so wet that a man can hardly get in to dig. This shows what a very wet season we have had. I feel rather sorry for the potato-digger men this season, There could not be a worse time to show off the merits of their machines. Quite a number of our scientific men are telling us to spray the potato vines with the Bordeaux Mixture on the first appearance of the mildew that attacks the vines. They don't tell us how to do it or whether we can put our Paris-green into the mixture and thus make one application for beetles and rot. I fear sometimes that many of these scientific people never saw a good-sized potato field, but confine their operations to one or two plants.

Miscellaneous Advertising.

INFANTILE Skin & Scalp DISEASES cured by CUTICURA Remedies.

FOR CLEANSING, PURIFYING, AND BEAUTIFYING the skin of children and infants and curing torturing, disfiguring, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair, from infancy to old age, the CUTICURA REMEDIES are infallible.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease, from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c. RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., Boston, Mass.

Send for "How to Cure Skin Diseases."

Baby's Skin and Scalp preserved and beautified by CUTICURA SOAP.

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Leads All its Competitors. It works either rags or yarn, is Simple, Durable, and EASY TO OPERATE. Price, by mail,
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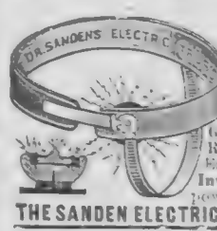
A LITTLE BOOK of 100 pages containing solid facts that every man contemplating BUILDING should know before letting his contracts. Short chapters on the kitchen, chimneys, cistern, foundation, brickwork, mortar, cellar heating, ventilation, the roof, and many items of interest to builders. Mailed free on receipt of 10c. in postage stamp Address National Sheet Metal Roofing Co., 510 East Twentieth Street, New York City.



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IRRIGATED LANDS In Rio Pecos Valley, in Southeastern New Mexico. Choice limestone soil; abundance of pure water; a delightful climate all the year; almost continuous sunshine; altitude 3,500 feet; healthiest locality in the U. S., no consumption, no malaria. 20 acres will yield a competency. Write for particulars, naming this paper, to Pecos Irrigation & Investment Co., 84 Monroe St., Chicago, Ill.

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The following rates are invariable. All are therefore respectfully informed that any correspondence with a view to obtaining different terms will prove futile.

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Humorous.

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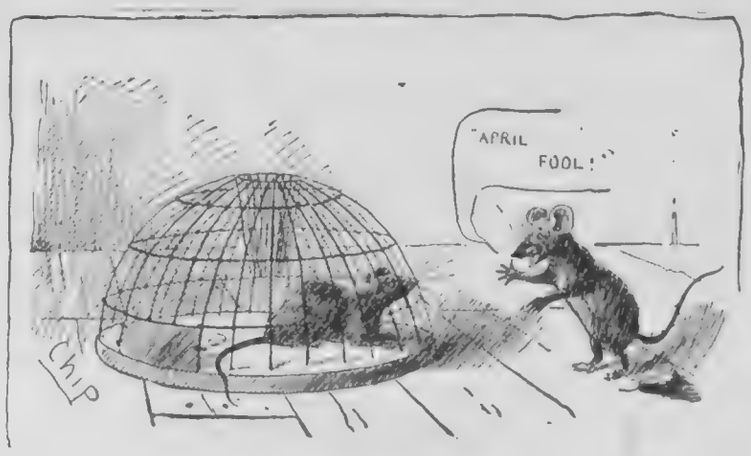
MOTHER: "Why, for Goodness sake, Adrian——"

ADRIAN: "Don't say nuthin', mother. Do you hear them shouts? We have beaten the champion Mudlung nine and killed an umpire!"

Our artist has attempted to depict the smile which lighted his countenance at this moment.



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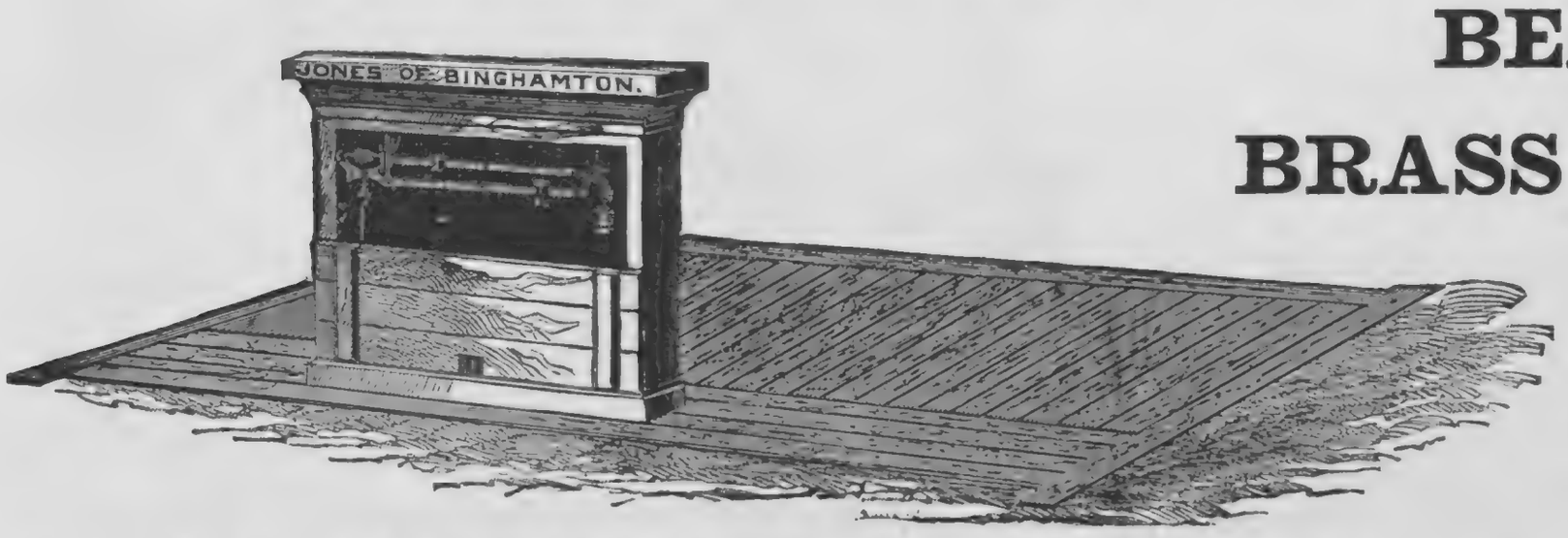

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Agricultural Chemical Works,

SOLE MANUFACTURERS AND PROPRIETORS OF ALL BRANDS OF

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These Fertilizers are Guaranteed to be Made from Animal Bones, and not from Phosphate Rock.

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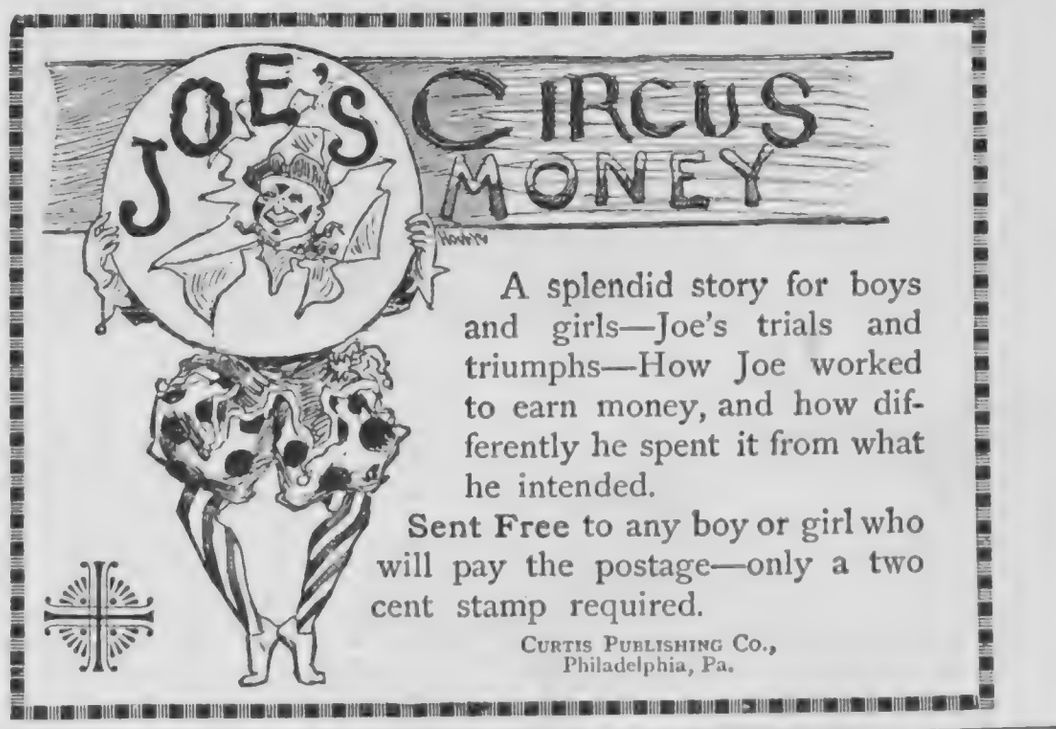

A splendid story for boys and girls—Joe's trials and triumphs—How Joe worked to earn money, and how differently he spent it from what he intended.

Sent Free to any boy or girl who will pay the postage—only a two cent stamp required.

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The FISH BRAND SLICKER is warranted waterproof, and will keep you dry in the hardest storm. The new POMMEL SLICKER is a perfect riding coat, and covers the entire saddle. Beware of imitations. None genuine without the "Fish Brand" trade-mark. Illustrated Catalogue free. A. J. Tower, Boston, Mass.

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Absolute Guarantee given to do PERFECT AND RAPID WORK.

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Were Awarded to Butter Made by the

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During the Fall Fairs of 1888, as Follows:

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	GOLD MEDAL,	
Virginia District Fair,		M. ERSKINE MILLER
	GOLD MEDAL,	
Maine State Fair,		B. F. & F. H. BRIGGS
	GOLD MEDAL,	
Bay State Fair,		H. E. CUMMINGS
	GOLD MEDAL,	
New Jersey State Fair,		HOLLY GROVE FARM
	GOLD MEDAL,	
Delaware State Fair,		FREAR & SON
	GOLD MEDAL,	
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No other creamery can show a record that will begin to compare with the Cooley Creamer. Its product for ten years has taken the leading premiums in this country and Europe.

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PEEL'S CONDITION FOOD.

Registry Applied For.

—FOR—

HORSES, CATTLE, POULTRY, SWINE.

It Eradicates all Humors, Cures Indigestion and Produces a Fine Glossy Coat.

GUARANTEED TO CURE

Hog Cholera, Milk Fever and Garget, Chicken Cholera, Roup and Fever, and to free Stock from Worms,

OR MONEY REFUNDED.

From Third Ave. Surface R.R. Co. (owners of 2,8[illegible] horses). Hospital Third Avenue R.R. Co.,
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Gentlemen: I believe Peel's Food to be the best article of its kind in the market, and as far superior to all other compound foods that I have used as the electric light is to the kerosene oil lamp.

Respectfully yours, J. HOUGH, V. S.

From the R. N.-Y. Experiment Farm.
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H. W. COLLINGWOOD.

PEEL'S FOOD CO., Prop's. BRATTLEBORO, VT.

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WASHER

We will guarantee the "LOVELL" WASHER to do better work and do it easier and in less time than any other machine in the world. Warranted five years, and if it don't wash the clothes clean without rubbing, we will refund the money.

AGENTS WANTED in every county. We can show proof that agents are making from $75 to $150 per month. Farmers make $200 to $500 during the winter. Ladies have great success selling this Washer. Retail price, only $5. Sample to those desiring an agency $2. Also the Celebrated KEYSTONE WRINGERS at manufacturers' lowest prices. We invite the strictest investigation. Send your address on a postal card for further particulars.

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For Hard or Soft Coal or Wood.

A STRICTLY FIRST-CLASS CONSTRUCTION

Fitted with Smyth's Patent Duplex Grate for Hard Coal; Flat Dump Grate and extra Heavy Sectional fire backs for soft coal. Has the largest Oven Shelf, extended Fire Chamber for Wood, Sliding Hearth, Deep Ash-Pit, Nickeled Name-Plate; with or without water-back or reservoir, as desired. Sold at same price in every State in the Union.

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We manufacture a full line of Square and Round Parlor HEATERS, Double-Heating & Ventilating Stoves; many kinds of COOKS & RANGES. In fact, STOVES for all classes and adapted to any market in the United States.

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Report of Fertilizer Analyses of the Pennsylvania State Board of Agriculture.

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820	Ammoniated Bone Phosphate,	" "	31 24	30 00
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including ENSILAGE AND FODDER CUTTERS, SWEEP AND TREAD HORSE POWERS, CORN & CIRCULAR SAW MACHINES, FARM ENGINES & PLOWS, are positively ahead of all others in the country, and are warranted. Shipped to any responsible farmer in the U. S. or Canada, subject to 30 days' trial, and to return at our expense if not proving just as warranted. We are prepared to build Carriers any length, guaranteed to run at any desired angle to suit silos, and claim Smalley Carriers positively superior to all others. Our 1889 "Why it Pays Pamphlet" should be read by every intelligent farmer interested in dairying or stock raising. It contains the very latest information relative to economical stock feeding. Will be mailed free to responsible farmers only, upon application, providing *mention is made of paper* in which this advertisement was noticed.

SMALLEY MFG. CO.
MANITOWOC, WIS.

Ask for *Special introduction prices and terms.*

The SMALLEY CUTTER, with Improved Bucket Carrier. SMALLEY TREAD POWER WITH GOVERNOR.

EBONY or REDWOOD HANDLES

No. 050.

Cut this out as it may not appear again. Mention this paper.

OUR BOSS SELLER.

THE BEST 50c. POCKET KNIFE ever offered. Brass Lined. Warranted Metal. Sent by mail. Same knife, Stag Handle, Iron lined, 50c. Stag Handle Brass lined, 60c.

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PERFECTION IN BUTTER MAKING.

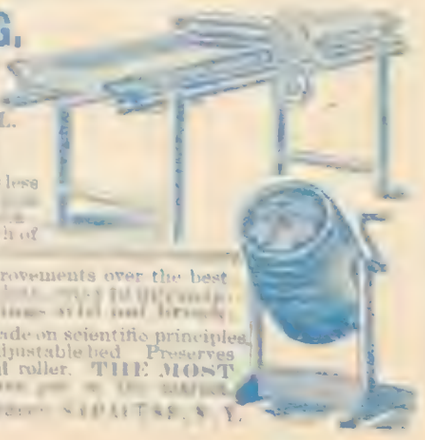
THE O. K. OUTFIT EXCELS THEM ALL.

O. K. CREAMERY Has the largest cooling surface, takes less [illegible] ings. Skimming glass whole depth of [illegible]

O. K. CHURN Has improvements over the best [illegible]

O. K. BUTTER WORKER Made on scientific principles. Adjustable bed. Preserves the grain of the butter. Solid wood roller. THE MOST PERFECT Butter Worker ever put on the market.

JOHN S. CARTER, Sole Manufacturer, SYRACUSE, N. Y.



BOOMING!!!

Yes, that's the only word that will express it. We did more business last month than any month since our existence. We have been almost rushed to death with orders, in fact we have actually got behind, and are now compelled to still further

ENLARGE AND IMPROVE OUR MAMMOTH WORKS

and the end of this month will see us in better shape to fill orders than any factory in existence.

We think we hear you say, "What remarkable success the "Murray" people have had," and we say in reply, there is nothing remarkable about it. We simply started out to do an *honest, straight-forward business*, to sell our "Murray" Buggies and Harness solely on their merits & low prices; to *stick to the people* and not to the **POOLS AND TRUSTS** which are only to *"Enrich the Rich"* and *"Impoverish the Poor."*

By the **Latest Improved Machinery, Skilled Workmen** and **Long Experience** in the **BUGGY AND HARNESS** business, we are enabled to put the **"MURRAY"** Goods on the market at

PRICES THAT DEFY COMPETITION. SOME PRICES THAT TALK.

BUGGIES!

If you value your money, don't buy elsewhere before seeing our Catalogue.

$15.00 for one of the best Road Carts made

$55.95 for either a Side Bar or End Spring Murray Buggy

$108.00 for our Murray Canopy Top Side Bar Surreys

$109.00 for our elegant Jump Seat Surrey

We're not afraid to show our prices, for we know they can't be beat.

! ! $66.90 ! !

We're the only Factory in the U. S. that **CAN DO THIS!!!**

Just think, sixty-six dollars and ninety cents for a "Murray" Brewster Side-Bar Top Buggy, and a set of "Murray" Single Strap Track Harness. It seems strange, but it's true, and we are the only Firm that can do it.

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If you want the Best and Cheapest, buy of us.

$5.95 for our No. 1 Murray Single Buggy Harness

$9.85 for our No. 2 Murray Single Buggy Harness

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$15.20 for our No. 4 Murray Double Buggy Harness

$19.80 for our No. 5 Murray Double Buggy Harness

Remember, that every harness that leaves our factory is made of the best No. 1 OAK TANNED LEATHER.

HONEST GOODS, LOW PRICES and **COURTEOUS TREATMENT TO OUR CUSTOMERS** is our motto.

Call and see or write to us for our Catalogue and Price List. No middle men between us and the consumer.

WILBER H. MURRAY MANUFACTURING CO., CINCINNATI, O.

A SINGLE ORGAN OR PIANO FROM THE MANUFACTURER AT WHOLESALE PRICE

We have decided to offer the whole of our different styles of Organs and Pianos on the Justly Celebrated INSTALLMENT PLAN.

We will ship you any Organ or Piano you wish on TEN DAYS' TEST TRIAL.

Have you got a Cornish Organ or Piano,
IF NOT, WHY NOT?
YOU CAN GET ONE
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TERMS

THE CELEBRATED **CORNISH ORGANS AND PIANOS**

AT WHOLESALE PRICES ON THE INSTALLMENT PLAN.

with the Organ or Piano we send you, we pay freight both ways. We don't want your money till you know what you are buying. Pay a small Sum down after Trial and the Balance in Easy Monthly Installments.

WE CAN SAVE YOU MONEY.

Any Organ or Piano sold on above terms.

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Send Immediately for our New 1889 Illustrated Catalogue. SENT FREE to any address.

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and Stockmen will consult their pecuniary interest; alleviate suffering, and give comfort to their animals by using the wonderful curative remedy

PHÉNOL SODIQUE

for hurts, injuries and the numerous external diseases which afflict animals.

PRICE, 50 CENTS.

For descriptive circulars and testimonials, address Proprietors, HANCE BROS. & WHITE, Philadelphia. *For sale by Druggists & General Merchandise dealers.*

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Hon. JOHN E. RUSSELL, of Massachusetts, says of THYMO-CRESOL (the Cold-water Dip): *"It will stimulate the skin, increase the growth of the wool, and destroy all parasites. I would not be without it if it cost $10 gallon. It is the best thing for sores of any kind."* Non-poisonous. Safe in coldest weather. Imported only by LAWFORD BROS., Baltimore, Md. Sample by Mail, 50 Cents. Mention this Paper.

THE OLDEST MEDICINE IN THE WORLD IS PROBABLY

Dr. ISAAC THOMPSON'S

CELEBRATED EYE-WATER.

This article is a carefully prepared physician's prescription, and has been in constant use for *nearly a century*. There are few diseases to which mankind are subject more distressing than sore eyes—none, perhaps, for which more remedies have been tried without success. For all external inflammation of the eyes, it is an infallible remedy, and for safety and efficacy it has never been equaled in removing ophthalmia or inflammation of the eyes at the commencement, and in curing chronic cases from defluxion of sharp humors. If the directions are followed it will never fail. We particularly invite the attention of physicians to its merits. For sale by all druggists.

JOHN L. THOMPSON, SONS & Co.,
ESTABLISHED 1797. Troy, N. Y.

SOMETHING TO HAMMER ON FOR FARMERS.

ANVILS.

Have your bills at the Blacksmith's and Machine Shop by having on the farm one of these celebrated ANVILS—*fully warranted*, and of the best material.

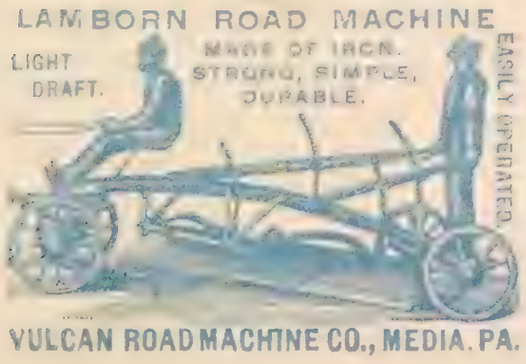
Best Hardened Cast Steel Face and Horn.

All sizes, from 20 lbs. to 90 lbs., at from $6.00 to $8.00 each. Larger sizes at 9 cts. per lb. Address, for Circulars, &c., FISHER & NORRIS,

Original and Only Manufacturers, Trenton, N. J.

LAMBORN ROAD MACHINE

LIGHT DRAFT. MADE OF IRON. STRONG, SIMPLE, DURABLE. EASILY OPERATED.



VULCAN ROAD MACHINE CO., MEDIA, PA.

For Sale by the Hardware Trade.

IF you cannot get this Meat Chopper from your Hardware Dealer, send money to us and we will express by first fast train.

ENTERPRISE M'F'G CO.,
Third and Dauphin Sts., Philada.

LAKE'S PATENT STEEL DOOR HANGER

ANTI-FRICTION.

The most perfect article of its kind made. No more breakage, cost of maintenance and satisfaction guaranteed. LAKE'S PATENT STEEL TRACK. No Wood work. Simple and durable.

Send for Circular. Manufactured by LAKE BROS., Poughkeepsie, N. Y.

Sold by Hardware Dealers Generally.

On trial in your home before you buy. Warranted For 15 Years.

Re-elected Mayor April 9. Cause for the test.

Circular and Price sent free. Be sure to write me.

(*Mention this paper.*)

I SELL DIRECT TO FAMILIES.

It is only necessary to send references as to your responsibility from any banker, postmaster, merchant or express agent and the Organ will be shipped promptly on ten days' test trial.

H. W. ALLECER,
Save money. Washington, N. J.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII NO. 2066 NEW YORK, AUGUST 31, 1889. PRICE FIVE CENTS, $2.00 PER YEAR.

[Entered according to Act of Congress, in the Year 1889, by the Rural New-Yorker, in the Office of the Librarian of Congress, at Washington.]

Floricultural.

A ROSE BUSH—PLEASANT VALLEY, CALIFORNIA.

IN Pleasant Valley, four or five miles from Vacaville, in one of the best fruit regions of California, Mr. E. K. Thurber owns extensive orchards. It is a region of great beauty, with grand oaks in the valley, and well-timbered mountains sheltering the warm hill-slopes where the earlier fruit grows. The very first fruit that goes from California to New York is raised in this locality. The illustration, Figure 218, shows a rose vine which covers an arbor in Mr. Thurber's garden; a magnolia tree shows partly at the right, and the Vaca hills are in the background. The rose is from a single stem, some 15 years old, and entirely covers a large arbor. If I remember correctly, it is a large white climber, either the old Devoniensis or the La Marque, and its size and long blooming season make it notable in the valley. It receives no irrigation. Mr. Thurber is a prominent member of the California Fruit Union, and a very enterprising horticulturist, who has introduced many new varieties of fruit in the Vacaville district, and has originated several promising varieties.

C. H. S.

Horticultural.

SEXES IN THE CASTOR-OIL PLANT.

THE inflorescence of the castor-oil plant, the arrangement of the male and female flowers and the way in which pollenation is effected, are curious and interesting. In the corn plant the male flowers are borne upon clusters of slender spikes, which we call the tassel. Below, growing from the axils of one or more leaves, is the female flower in a many-rowed spike having a very long, slender pistil called the silk. The male and female flowers are thus separated all the way from two or three to 10 feet, according to the variety planted and the fertility of the soil. Corn pollen is quite heavy so that when ripe and being shed it will fall from the tassel directly down upon the silk, if there is no air stirring to waft it elsewhere. It often happens, depending upon the variety of corn and the season, that the silk and tassel do not mature at the same time. Sometimes the pollen is ripe before the silk appears outside of the husk; sometimes the silk is receptive before the pollen is mature.

In such cases a given plant must depend upon pollen from some other plant or plants, or we shall have grainless cobs. Or, in case of a deficiency of pollen, the cobs will mature only those kernels the silks of which were pollenated. Probably insects have very little to do with carrying the pollen from the tassel to the silk. The wind accomplishes this most effectually.

Now let us examine the castor-oil flowers. The illustration, Fig. 219, page 575, is accurately drawn from nature. It shows two racemes, in different stages of maturity, of hybrid plants produced by crossing Ricinus Africanus upon R. Gibsonii last year. The prickly-looking flowers at and near the top are the female flowers, each with its red plumous, two to six-parted stigmas. The male buds resemble in shape grains of buckwheat, producing as they bloom the roundish, fine, floury masses of anthers, as shown. Lowermost upon the left raceme are two male buds just opening, as if they were strawberry flowers just setting. An inch or so above is a single male flower in full bloom. On the right raceme are one male bud just breaking open and three in full bloom. It will be seen that the male flowers are *below* and the females on *top*, just reversing the position of the sexes on the corn plant. How is it, then, that castor-oil flowers bear such an

A ROSE BUSH, PLEASANT VALLEY, CALIFORNIA. From a Photograph. Fig. 218.

abundance of fruit? Do the female flowers depend upon insects to supply them with pollen? or must they depend upon the wind to waft it up to them at the right time?

During the past month or more the writer has watched the flowers at different times to ascertain. When the air is dry and the sun shines brightly the anthers are bursting every instant. One sees a little cloud of dust, as large as a pea perhaps, that reminds him of the distant discharge of a gun. A puff of smoke is readily seen, but there is no report. This castor-oil pollen, unlike corn pollen, which is inclined to fall, rises like a puff of smoke in a still atmosphere, at length enveloping the stigmas of the pistils immediately above it. This alone would suffice, it would seem, to pollenate the feathery stigmas. Many little insects, however, were noticed gathering the pollen from the male blossoms, and occasionally they would fly to the female blossoms in their further search for food.

In botany flowers in which the anthers and stigmas do not mature at the same time are called dichogamous. They are either protandrous or protogynous. In the first the stamens are developed before the pistils as, *e. g.* geraniums, pelargoniums, many of the compositæ, umbelliferæ, labiatæ, etc. To this category the corn plant may be added as a rule, with exceptions as above noted. In the second stigmas are receptive before the anthers are matured. Botany will have to originate another specific name for the sexual development of the ricinus. We have as we write, two racemes before us. On one the fruit (resembling horse-chestnut burrs) is more than half grown while the male flowers below are for the most part immature. On the other raceme, the male flowers are far advanced while not a fruit has formed.

Farm Economy.

PASTURING MEADOWS.

WHAT ABOUT THE PRACTICE?

ECONOMICAL OR WASTEFUL?

CONDITIONS THAT DETERMINE.

AN INTERESTING DISCUSSION.

FROM C. S. RICE.

I practice the pasturing of meadows, fully believing that by so doing more profit is realized than by any other management. The oft-repeated assertion of the agricultural press that meadows ought not to be pastured has little weight with me when compared with facts within my own observation and experience. For 20 years my meadows were not pastured, but the aftergrowth failed to keep up the yield of hay or to insure against the necessity for plowing and reseeding. I was led to change my practice while in pursuit of some method whereby my cows should have plenty of suitable food every day in the year. With a large amount of land devoted to pasturing, there was often a lack of milk-producing feed during the latter part of summer and autumn. Just the other side of the pasture fence in the meadow was plenty of the best of feed at the very time when the pasture failed to keep the cows from shrinking in their milk and becoming unprofitable. I began pasturing the newly-seeded clover and Timothy meadows with the expectation that they would be damaged and would have to be plowed and re-seeded in a year or two. The result was that the cows were carried through the critical period without shrinking and their year's productiveness and profit greatly increased and, much to my surprise, the meadow was in no way damaged. Now for 15 years my meadows have been regularly pastured. The amount of land used for pasture in the ordinary way has been greatly reduced and the area used for cultivated crops increased to the same extent. A meadow that will yield from two to three tons of clover and Timothy hay when cut the first of July, will in three or four weeks have a second growth eight inches in hight and will then afford excellent pasturage for the dairy. If judiciously pastured, it will produce a large amount of feed through the fall without being fed closely or in any way injuring the meadow, and the grass will finally go under the snow in a greener condition and in a better state of vitality than when allowed to make a more mature growth and then decay. The feed should be taken when in the best stage of growth and not be allowed to come to any sort of maturity. This is better for the cows and better for the meadow. I have but very little inside stationary fence on the farm, and to secure the after-feed when at its best I have provided more than 100 rods of portable fencing. This can be quickly set up or removed. The first cost was but little, and the fencing will last many years.

My meadows have not needed reseeding as often as they did under the former management, but they have steadily increased in the average yield and for several years very little has been plowed up because of failure to produce a fair crop. Several times in the last few years a meadow that would have yielded two tons of Timothy to the acre has been plowed only because the land was wanted for the better paying crops of fodder corn and potatoes. On the farm of 130 acres I had, three years ago, 70 acres of meadow and very little of it needed reseeding. Five acres were plowed for corn-fodder and ten acres that would have cut more than two tons to the acre, were turned into pasture, and some old pastures were taken for cultivation, and reseeding. The remaining 55 acres of meadow yielded an average of more than two tons of hay to the acre. My farm is not a natural grass farm, and, when this is taken into account, it does not look as though pasturing the meadows had ruined them.

I read in a leading agricultural paper recently an article by a well known writer in which he objected to pasturing meadows because the grass would be eaten and the weeds left and the land become full of weeds. Now I have a piece of meadow that was mowed this year for the fourth crop. It was pastured when newly seeded after the grass was high enough to hide the grain stubble, and it has been well pastured each year since. I have several times during the season taken well-known farmers to this field to show them the thick, perfect stand of clean Timothy. On a recent drive of ten miles among good farms I looked in vain for an equally thick, clean, even field of Timothy, and yet I know of no farm in this vicinity where meadows are so thoroughly and systematically pastured as on my own. With a short allowance of pasture, a little clover cut and fed in June, a few peas and oats in July, with plenty of corn-fodder and good after-feed through August and for the rest of the season, one cow can be made to yield as much net profit as two or three limited to old pasture and a little fodder corn. Cows that are in the best meadow after-feed will if good corn-fodder is drawn into the field, eat alternately of each, resting awhile occasionally and will if so fed keep up an even flow of milk through the season and will come to winter-quarters in prime condition for milk or fattening.

Pasturing, if done as it should be, brings the grass to the winter in much the same condition as though it had been mown three or four times during the fall. If the second crop is allowed to attain full growth it is not as valuable for feed as it is under continuous cropping, nor is it as well for the future crop of hay.

But some one will say: "Why not cut and cure the second crop for hay?" Well, it would require considerable labor and the weather is quite uncertain late in the season, and meadows well managed will fill the barn with hay at one cutting, and, finally, it is utter folly to be forever trying to secure more hay to winter cows that are but half supplied with suitable food the rest of the season.

I know that I am advocating the unpopular side of this question, but have had the best evidence before me for years that my practice of pasturing meadows does them no injury, and is of great benefit to the dairy.

Lewis County, N. Y.

FROM C. F. OLMSTED.

FROM my experience and observation, I think it is no economy to make a practice of pasturing our meadow lands after mowing. The damage is in exposing the roots to our severe winters. I think that we, as a rule, make our mowing machines cut too closely, and what grows after mowing, generally should be left for the winter protection, instead of allowing the stock to eat it off. Our winters of late have been severe on meadows as well as on grains, from the fact that there have been so much freezing and thawing, and unless the meadows have been protected by the "after-growth," the hay crop has been very perceptibly shortened. This has been most noticeable on what we call our "heavy" soils, or those soils where drainage is not so perfect as it should be, and with Timothy more than with the other grasses. There are cases where probably no harm would be done, especially in wet seasons, where the meadow had a heavy crop, or where it is so situated that the grass grows quickly, but then these meadows I think should not be pastured too late. Most of us are anxious to turn in the stock where the meadows look fine for feed, but it would be a better plan, if we would only do so, to give the meadows a good top-dressing after mowing, with either barnyard manure or some commercial fertilizer, instead of feeding them off.

Darien County, Conn.

FROM PROF. A. J. COOK.

I have always pastured my meadows after mowing, except in case of heavy clover, when I usually save this for seed. My land is clay loam, and is manured heavily once in four years. Unless I permit it to be eaten too closely or turn stock on it too early in the spring, I see no special harm in pasturing it. Of course, any vegetable thrives best when the balance between root, stem and leaf is not interfered with. We know that we can kill even Quack Grass and Canada Thistles by constantly cutting off the tops. Thus we may conclude that we can never cut off the green herbage of any plants without in some measure injuring the same. This shows why close pasturing is so harmful, and why all pasturing is expensive. We now know that we must allow our corn to advance to the drying off stage before cutting it for silage, would we secure the greatest returns. The larger the plant the more the working tissue, and the greater the work done, or the growth. We see then why pasturing is not good economy, and why close pasturing is ruinous to our meadows.

Ingham County, Mich.

FROM JOS. WOOLWORTH.

I do not think the practice of either pasturing or mowing a second crop of grass in the

Fig. 220. Page 575.

least injurious except in so far as it exhausts the soil. If it is good economy to take off the first crop, it is good also to take off the second, only we must feed the meadow well with some good commercial fertilizers or yard manure, as most convenient, only if one has to buy one or the other let him by all means use a commercial fertilizer as it is much the cheaper all things considered. In my opinion there is one serious objection to leaving the aftergrowth to be mowed into the next year's crop: it would render it very much harder to mow.

I am not aware that the nature of the soil would make any difference, yet it might. Mowing the after-growth is allowable under all circumstances provided the yield is large enough to pay. If one has good fences, let him pasture if he likes, but he shouldn't build fences to enable him to do so, it would be decidedly too expensive.

Hampden County, Mass.

FROM E. H. COLLINS.

I have never grown Timothy. It is as exhaustive to the soil as a corn crop; while clover is a blessing in every possible way. I cut clover one year and break it. Last year I had English Clover; this year I have Alsike (20 acres). The latter made the finest clover hay I have ever seen—about two tons to the acre. Both of these clovers give but one crop, so that I could pasture if I preferred. I used to do so, but a neighbor who did not pasture aftermath had a very lively fine soil on breaking the sod; while mine was rather harsh and cloddy, and his soil remained mellow all summer, while mine would harden in spite of cultivation. I attributed the difference to the greater amount of aftermath which he turned under, and to the fact that his stock did not tramp the land when wet. Harris in his "Talks on Manures," page 157, tries to demonstrate by experiment that clover mown twice for hay contains in its roots only half as much nitrogen as that cut once for hay and then for seed. The result is shown to be similar when clover is pastured as when it is cut for hay, and no doubt the

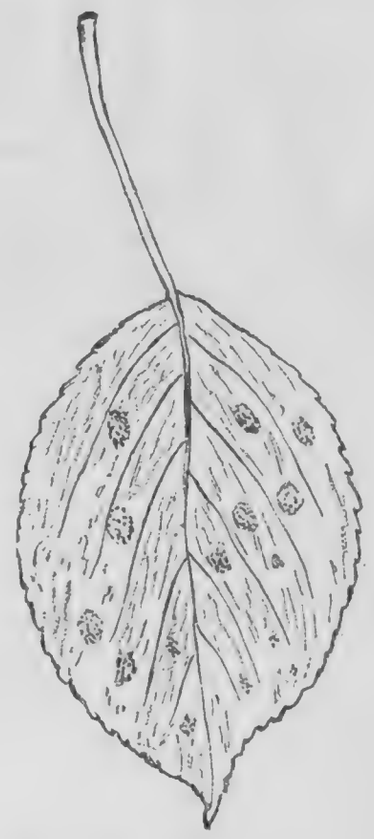


Fig. 221. Page 575.

plant matures a much larger, stronger root when not checked by cropping.

Hamilton County, Indiana,

FROM H. B. SPENCER.

To those who have devoted their land to raising grass for the purpose of making Timothy hay, the subject of the preservation of their meadows is of great importance. The labor of properly draining, enriching and preparing the ground for a permanent Timothy meadow, makes it for the interest of the owner that it should last in good condition for several years. My observation leads me to think that a rich, well-drained soil is the most natural for Timothy, and that if water stands around the roots in winter the crop is apt to die out, and what is left will rise up and form into bogs. The root of the Timothy plant is composed of little bulbs and roots, which multiply and increase from year to year, if the conditions are favorable. By cutting the grass about the time when it is in bloom, it is considered that the choicest hay for market can be made, and by so doing the bulbs too from which others sprout out and commence to form for another year's cutting, are properly matured if the conditions are favorable. To keep the bulbs and roots in a fresh and growing condition, should be the aim of the person who has a Timothy meadow.

To pasture such a meadow with animals that eat the leaves as fast as they appear, would weaken the roots so that they would be likely to be killed out in winter, especially if the ground is clayey and the soil thin and undrained. The amount of damage that pasturing a meadow would do could be determined only by dividing a given meadow and

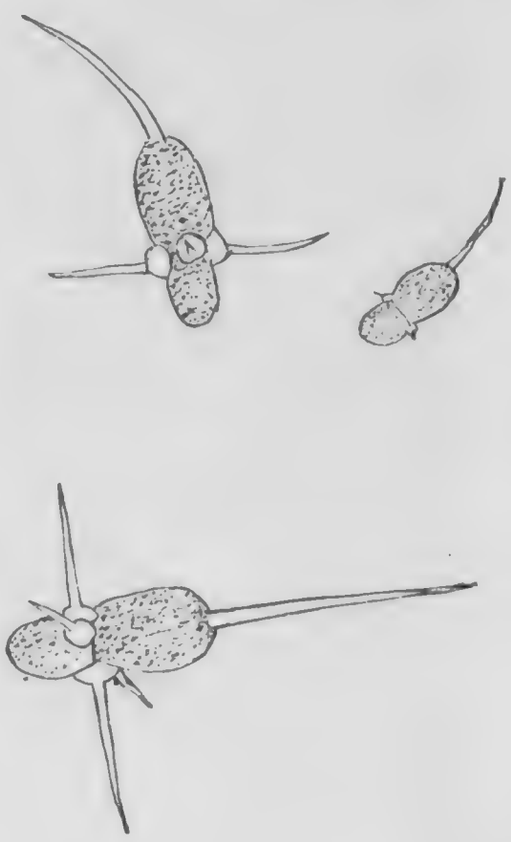


Fig. 222. Page 575.

giving each part the same treatment, with the exception of pasturing one and leaving the

other to make as large a growth as it would, and then noting the result in the succeeding crops. There are other reasons why the leaves of the grass should not be eaten closely, and one of these is the protection which they afford to the grass in the winter. The leaves hold the snow, and keep the grass from sudden changes in freezing and thawing. Therefore the practice of pasturing Timothy meadows cannot be commended; and the only exception that I know of, would be in case the soil were very rich, and the grass making too luxuriant a growth, so that the plants would be likely to smother each other and make too much dead grass in the succeeding crop; in such a case it might be judicious to pasture lightly in the fall; but not to the extent of leaving the ground bare. That there are other reasons why Timothy meadows die out, besides pasturing, I have no doubt, such as great drought, insect ravages, etc., which cannot be prevented by the farmer. But to preserve meadows, let the grass grow as much as it will after cutting it for hay, without pasturing.

Cuyahoga County, Ohio.

FROM PROF. I. P. ROBERTS.

This subject, notwithstanding all that has been written upon it, requires careful consideration, for if we get one dollar's worth of pasture this year and lose two dollars' worth of hay the next, we are greatly to blame for not learning our business. As a rule, most meadows should not be pastured after mowing. If a liberal amount of fertilizing material be applied after mowing, or in the spring, then fertile meadows may be pastured without injury. Contrary to the usual practice, we pasture our meadows, when we have any, the same as our other grass land, but never very closely or when the ground is wet. The effect of pasturing and fertilizing meadows may be illustrated by our practice this and last year. In 1887 we sowed a 16-acre field with wheat, and through a misunderstanding, about four acres were seeded to Timothy immediately after the drilling of the wheat. The following spring the whole field was seeded to clover, but the Timothy had such a start on the four acres referred to, that but little clover grew. Last year the field was mowed and afterwards pastured. This year the part producing clover was put into corn, and the Timothy was saved. Early in the spring, 200 pounds per acre of a mixture of equal parts of cotton-seed-hull ashes, cotton-seed meal and superphosphate were sowed. The hay, nearly all Timothy, was cut July 9th, well cured in the shock, and drawn in and weighed on July 11th and 12th. The area, when measured, proved to be 3.85 acres, and the yield of hay, 12 tons 190 pounds, or 3.14 tons per acre.

Grasses, like other plants, want an abundance of food. Whether we pasture and then fertilize, or whether we do neither, depends largely on conditions. Meadows on dryish, thin uplands, should not be pastured under any circumstances, because they receive no manures, the plants are weak, thin on the ground and require the winter and spring protection from cold and drying winds, which the aftermath gives. Orchard Grass if cut early, is often benefited by pasturing, while Timothy suffers most, Blue Grass or Redtop not so much. Meadows on low, rich lands, if old and too thick in the bottom to produce a fair length of grass, may often be pastured severely with benefit to them, provided they be thoroughly harrowed and treated with a dressing of ashes and cotton-seed meal or an equivalent, early the following spring. Remember that pasturing does not mean pulling the plants out by the roots, or eating off the crowns or filling the field with cow tracks. I do not believe that under ordinary circumstances it is economy to fertilize land with grass and clover, except incidentally. Cut or use the grass and clover, feed both with a liberal grain ration, at a profit, then return to the field all the voidings, which will contain more plant food than did the clover and grass. Plants were made to feed animals, while manure feeds plants.

Ithaca, N. Y.

FROM E. D. DOUGLAS.

The pasturing of meadows after mowing is a matter to be determined by their condition after each succeeding crop has been removed. In this, as in most departments of farm practice, no definite rule can be given, which will apply to all soils, seasons, and conditions. Where, however, there is but little aftermath, either in consequence of drought, or the poverty of the soil, it may be safely adopted as a rule that it should never be removed. On meadows where a judicious system of farm practice has been applied, the aftermath, with an average amount of rainfall, will be so heavy that its removal will become a matter of necessity; otherwise it will smother vegetation, and ruin the succeeding crop. There are two ways of accomplishing this removal: one by mowing, and the other by grazing. Experience has taught me that the latter is the better practice with judicious management. The removal by the mower, near the surface of the ground, of rapidly growing crops, like clover, is a severe strain upon their organism, which we might reasonably expect would seriously affect their vitality, and practically, I find this to be the result, while the more gradual, and less complete removal by grazing, is much less, if at all injurious.

In grazing, stock should never be allowed upon meadows until the aftermath is sufficiently grown to protect the stubble, nor should they ever remain late in the season, or crop too closely. There must invariably be enough aftermath left upon the ground to protect the roots from frost and hold more or less of the snows of winter to furnish additional protection. This is an indispensable condition of success, especially upon clay soils, as such soils are more readily disintegrated by frosts, and the roots of their vegetation are more subject to destruction by its action, than upon most other soils. By observing these conditions, we may secure much better results by grazing than by the use of the mower. The amount of damage resulting from mowing, or too close grazing, will depend much upon the character of the succeeding winter and spring, being much greater when the season is followed by an open winter than when the fields are well covered with snow.

A large proportion of the mowing lands here in Vermont, are what may be called "permanent meadows." They are seldom plowed, and only manured by the droppings of the animals allowed to range upon them, sometimes even in spring. In my own practice, I cannot afford to hold meadows in that condition, even without such irrational grazing. Nor do I believe that others can, unless it be in exceptional cases, as on river bottom lands or on those too far away to admit of the application of stable manure, or too rough to admit of renovation by plowing.

Such management ordinarily results in a bad mechanical condition. Many meadows having soils rich in plant food, fail to produce well, only because they are permanent meadows, and, for this reason, their soils have become hard and impenetrable. This state of things should be changed by the use of the plow and clover, and the feeding ground of their vegetation should be extended downward. We may thus also protect it from drought, from the brick-like condition in clay soils produced by excessive moisture, and from upheaval by frost. Meadows may often thus be made even without the application of manure, to produce an aftermath which will require removal. Neither can I afford to hold fields of arable land in permanent pasture. Experience long since taught me that, with an intelligent rotation of crops and a system of farming by which the plant food produced, both in a liquid and solid form is saved, and judiciously applied, old pastures may be made to yield not only abundant crops of hay, but as much pasturage after the hay crop is removed as they had previously produced during the entire season

The question, then, with regard to pasturing or not pasturing our mowing fields, depends much upon our farm management. The farmer who maintains a good mechanical condition in his soil, and who feeds his crops well, may successfully pasture his meadows after mowing. He who sells his hay, or wastes his manure, will not ordinarily be troubled with an excess of aftermath, and should not pasture his meadows. With such management the aftermath which is produced, should be allowed to remain, not only to furnish protection to the sward, but also as a source of plant food.

Addison County, Vermont.

INFLORESCENCE OF THE CASTOR-OIL PLANT.

Male and Female Flowers From Nature. Fig. 219. See first page.

Pomological.

THE CRACKING OF PEARS.

PROF. BYRON D. HALSTED.

The disfigurement due to a minute fungus; effects of its attacks upon the leaves and fruit; formation of propagating spores; tentative remedies recommended; preventives.

The pear crop will be small in some localities this year. In many orchards the leaves have already fallen from the trees and the fruit, of about half size, is cracked so badly as to be entirely worthless, as at Figure 220. There are many persons who are satisfied to attribute this bad state of things entirely to the weather; while others believe that some other cause must be sought. A wet season doubtless has much to do with the prevalence of the trouble, but there is a fungus that constantly attends the peculiar premature dropping of the leaves, as witnessed the present season. To those who have studied into the habits of the fungus and related forms that prey upon other trees there is no reason to doubt that the prime cause of the loss of the crop is a minute fungus.

This fungus attacks the young leaves and fruit and after growing for a time, it makes itself known to the careful observer in small, discolored spots which often are of a carmine red, especially when upon fruit that possesses a blush at maturity. These spots are indicated in the engraving of a diseased leaf, Figure 221, and also in the cut of the badly affected fruit. When the leaves of a tree are badly infected they curl more or less according to their thickness, and drop from the stems leaving the trees leafless. The fruit is not affected in the same way, and at the present time it is not unusual to find trees loaded with fruits and without any foliage to feed and protect them. To have the leaves fall prematurely would be sufficient in itself to injure if not ruin the crop. But in this case the same fungus that preys upon the leaves also makes a home in the green flesh of the fruit and therefore with lack of nourishment, due to the defoliation and the disorganizing effect of the parasitic fungus, there is little wonder that the fruit becomes cracked and otherwise misshapen and dwarfed and worthless.

In the center of each leaf or fruit spots beneath the epidermis produce a multitude of small, peculiarly-shaped bodies, three of which are shown in Fig. 222 in different stages of development. These spores, when mature, find their way to the surface of the infested part and are carried away by winds and in other ways. Upon some badly infested pears upon my laboratory table these spores have worked their way to the surface and stand as minute white tufts all over the dark carmine epidermis. As they are continuously formed in a shallow cavity the mature ones are raised up out of the hole in the epidermis by the development of the younger ones. They are somewhat complex in structure; that is, they do not consist of a single smooth sac, but of a number grouped around each other in a uniform manner and are armed with bristles which probably assist in their dispersion. The matter of spore formation is dwelt upon here, for these bodies correspond to seeds in higher plants and a knowledge of their presence in large numbers helps materially to explain the rapid spreading of the trouble through an orchard. The horticulturist and farmer cannot be too strongly impressed with the fact that the various fungous diseases abound in the reproductive bodies called spores. Rusts and smuts, for example, so far as the external and therefore visible parts are concerned, are composed almost entirely of spores. It is, however, the fine threads of the fungus and not the spores, that do the bulk of the mischief to the host plant, and this destructive work may be far along before any sign of spore formation is to be found. The spores are for the farther spread of the fungus during that year or for carrying it over until the next season.

The fungus of the pear causing the leaf-blight and cracking of the fruit is not a new enemy, but was discovered many years ago. It has borne several botanical names, but the one by which it is now known is Entomosporium maculatum, Lev., a liberal translation of which is, a fungus with insect-like spores that produces spots.

What to do to prevent the development of this pest is the most important subject. It is essential to know the nature of a disease before rational treatment can be administered; but the existence of a disease whose nature is well understood, but for which there is no remedy, is of course possible. When such is the case, preventive measures are the only ones. With the pest in question the investigations with fungicides have not gone far enough to warrant the recommendation of any particular course of procedure. There is abundant work in this direction for the experiment stations, and if something effective and inexpensive can be found to ward off this discouraging blight to the pear industry, it will prove of inestimable value to horticulturists and all others.

The disease does much of its damaging work upon young trees while in nursery rows, and it may be of great importance that the fungus be attacked there, especially upon the young stems, and if the young trees can be cleared of it, a long step will be taken toward freeing the orchards. It is hoped that next year pear growers will feel inclined to test the value of a number of mixtures some of which have proved effective in checking the ravages of the black-rot—Anthricuosa, etc., of the grape. It is probable that a compound of sulphate of copper and lime, if sprayed upon the trees early and often enough, will prevent the spores from germinating and thus save the foliage of the trees. The same sprayings would hit the flowers and initial fruit and thereby prevent the pears from becoming infested and disfigured. It is certainly time that something should be done. The work of testing for the purpose of finding a variety proof against the fungus is not direct enough. From a large number of reports it is evident that the disease is very general and not altogether constant; that is, a variety may suffer much in one place and almost escape in another. If the Kieffer and Lawrence are less subject to it, who wishes to discard all earlier and better sorts for these? This fall burn the diseased leaves and worst fruit, and next spring spray thoroughly with the hope of a crop.

ORCHARD NOTES.—A limited amount of rainfall is a benefit during the blossoming of fruit trees, as it apparently destroys a fungus that attacks the young fruit. During apple blossoming time, we had this year delightful weather, and most varieties of apples were destroyed by this fungus when about the size of Marrowfat Peas. In the experiment of sprinkling a tree during the period of blossoming, the leaves were healthier and also what little fruit set was sounder than on the unsprayed trees. There is an evident difference in the appearance of the apples where the trees have been sprayed for the coddling moth. They are fairer and not so wormy. It looks as though spraying for the coddling moth will pay. Vicar Pears were badly affected with the fungus, although there are plenty of fruits left on the trees. The Wealthy Apple keeps its reputation for bearing, ripens here in September and is a high September apple. It is not of high quality and ripens when apples are plentiful and prices low.

Mercer County, N. J. I. J. B.

Everywhere.

RURAL SPECIAL REPORTS.

THE POTATO CROP.

Colorado.

LONGMONT, Boulder County, August 17.—The condition of potatoes is good. There is no rot and potatoes are very rarely troubled with it. The acreage is 15 per cent. less than in 1888. The outlook is fair for an average yield. C. C. C.

Connecticut.

LONG HILL, Fairfield County, August 14.—Potatoes in this section are hardly worth digging; nearly all the large ones have rotted. Will have about one-quarter crop. Some varieties rot worse than others. With me the Early Ohio suffered terribly, while the White Flowers were nearly all sound; for Hebrons and Roses, rot is no name. R. N.-Y. No. 2 shows no signs of blight; they are a perfect potato. G. M. B.

BRIDGEPORT, Fairfield County, August 20.—About one-fifth of the potato crop is rotten, and about three-fourths of an average crop remains. D. H. W.

Illinois.

AURORA, Kane County, August 17.—The potato crop in this section is a full average I think. No rot that I have heard of prevails; the tubers are fine and worth 20 cents per bushel. I have heard that the crop was rotting up north and also in the southern part of the State, but I have nothing reliable on the matter. D. V. S.

WAUKEGAN, Lake County, August 16.—The potato crop is first-rate (100 per cent.) tubers very large and of good quality. There is no rot at present; if the weather keep dry for a week or two they will be safe from rot. C. W.

KANKAKEE County, August 18.—There is an immense crop of choice potatoes in this immediate vicinity and so far I have heard no complaint of rotting. Prices are very low owing to the systematic canvassing of our town by peddlers, causing a light demand at the grocers'. Early varieties are mostly grown. I dug one hill yesterday from an outside row and got 4½ pounds of monsters (a late variety), and I dug two hills of the same to-day and got over 6½ pounds from both; three of the tubers weighed four pounds. I plant one foot by 32 inches and according to the RURAL trench method. G. O. G.

Indiana.

GREENSBURG, Decatur County, August 15.—This is not a potato raising county. Large quantities are shipped in every year to supply the market. Foreign potatoes will often sell at twice the price of home-grown. The potato crop though was never better here than this year. They are of large size and excellent quality. They are sold to the stores now at 25 and 35 cents per bushel. W. O. F.

Iowa.

DES MOINES, Polk County, August 17.—There is no rot among potatoes, though the crop is badly damaged by grub-worms. Most farmers have dug their early crop and there is not more than half of an average, while the quality is poor. The late crop is hardly up to half an average, though favorable weather for three weeks may make quite a change for the better. Grubs are bad in this crop too. F. S. W.

DOW CITY, Crawford County, August 16.—The potato crop is good here. Frosts in May injured the crop on bottom lands; but the upland crop is good and the average will be fully up to that of former years. J. B. P.

Kansas.

EDWARDSVILLE, Wyandotte County, August 16.—Potatoes here are not rotting. The crop is a strong average, as to yield, and the acreage is slightly in excess of that in any former year. Early Ohio is mainly grown. More acres of potatoes are raised here than of corn and wheat together. E. T.

Maryland.

OAKLAND, Garrett County, August 15.—The condition of potatoes in our neighborhood is very poor owing to excessive wet. They are rotting and the flea-beetle has destroyed the foliage, which adds greatly to the short yield. There will be scarcely one-half of an average crop. H. W.

EASTON, Northampton County, August 15.—The Irish potato crop in this county is always small both in the number of acres planted and in the yield per acre. This year much of the seed of the early crop rotted in the ground. Where the stand was good, very light land yielded fairly. Elsewhere the potatoes rotted badly both in the ground and after they were dug. The fate of the late crop, planted from June 15—30, is yet uncertain. There has been very little trouble from the Colorado beetle this year. C. F. E.

Minnesota.

BRECKENRIDGE, Wilkin County, August 17.—Owing to a very dry summer, potatoes in this locality are a very short crop. Prices are high. Of course, none are rotting; but I think we will not have over one-half a crop. H. E. B.

New Hampshire.

SOUTH PITTSFIELD, Merrimack County, August 17.—Blight or fungous growth first appeared on potato vines three weeks since and it was confined to no one locality in the State and strong fears are entertained that it will soon reach the tubers. The unusual combinations of cool, dry weather will retard the growth of fungus. Not one per cent. of the small portion now harvested is diseased. The crop would have been above the average but most vines are now dead and less than a-half crop is the probability. Coos County is the great potato-growing region and the prospects of an average crop there are very poor. G. R. D.

NORTH HAMPTON, Rockingham County, August 16.—We are barely getting two-thirds of a crop of potatoes. Of this amount 20 per cent. have rotted. Potatoes are now being sold at 50 cents per bushel. G. E. T.

New Jersey.

PENN'S GROVE, Salem County, August 19.—This has been a poor year for farmers and truckers in this section. The grass crop was good; but was badly damaged in the making. Early potatoes, scalded early on high ground, and rotted late on low ground, and the late crop is badly damaged by the heavy rains. Watermelons are almost a total failure; many patches will not yield 25 good melons to the acre, and some not one, the vines having been dead for two weeks. The early tomato crop was short and the late crop bids fair to be the same. Many patches have been scalded, and on the best the latest sets have fallen off. Sweet potatoes look fair, but there cannot be a full crop, and if the prices rule as low as they have ruled for the last four years many truckers cannot make their expenses. Farms that have been offered for sale in this section the past three years have found slow sale, and if the prices and crops continue as poor in the future as they have been in the past few years, few farms will change hands except at very low figures. E. G. B.

New York.

COXSACKIE, Greene County, August 17.—As for my own potatoes, the Early Beauty of Hebrons are on a sandy soil and I find no rotten ones; there is an extra good crop; but my Rural Blush are on ground not so dry, and a little clayey. They are an extra crop but are rotting somewhat. My neighbors all find some rotten tubers. The crop is extra good all about here; but we have had so much rain and it is so warm between the showers that we expect to lose some by rot. There have been very few dug yet; only enough for use, as nearly every farmer is still working in the hay field. We generally expect to finish haying about July 25th, but here is a record of the last five weeks: during the first week there were two days—Monday and Saturday—and during the second week, five days, which gave us a chance to get in most of our oats; during the third week no one about here had a team harnessed; during the fourth week there were two dry days—Monday and Tuesday—and during the fifth week, which closed to-night—we had Monday and Friday and Saturday without rain, so you see that we have had a hard time for gathering hay. Corn about here is generally very poor. J. H. L.

BURNT HILLS, Saratoga County.—Not many potatoes dug as yet; yield not good; on low ground a complete failure; about one-third rotten on upland I should judge. Vines of late potatoes all dead. About the usual acreage planted; ground very wet at present. J. H. T.

BATAVIA, Genesee County, August 15.—Our potato crop is showing the first, or commencement of blight, to quite an extent, in the tops though it is possible with favorable weather following, not to lose the tubers to much extent by their rotting, only their quality and farther growth are said to be much affected. The weather is now cooler and drier, giving hopes of escaping a disastrous failure. H. I.

DEER PARK, Suffolk County, August 15.—Potatoes are rotting in this vicinity, but to what extent I cannot say at present as but few have been dug. Of the 60 or 70 bushels that we have just dug there was only about one bushel of rotten ones. D. C.

CUTCHOGUE, Suffolk County, August 14.—There are very few pieces of potatoes here that are not rotting. Few of the farmers have begun to dig as yet, so it is hard to tell what damage is done. As the vines were killed so early I should not think we would have more than half a crop. L. W.

KINGSTON, Ulster County, August 12.—Best authorities agree that the loss from rot is fully 50 per cent. Many fields will not be dug at all. H. H.

BATH, Steuben County, August 17.—Potatoes are rotting very badly; not over one-third of an average crop will be realized. Some people are intending to dig soon on account of the rot. Potatoes promised a good yield and fine quality until struck with the blight. G. M. D.

APULIA, Onondaga County, August 16.—Potatoes are all blighted and are rotting. Early Rose are not worth digging and Blush are commencing to rot; they look now as if they would not be over one-fourth of a crop. I planted one bushel of the Rural No. 2; I have not discovered any rotten ones in them yet. All potato vines never looked better before the blight struck them. Farmers are all discouraged over this year's crop. E. G. W.

GREENWICH, Washington County, August 16.—Potatoes are rotting badly. Some fields are struck with rust; vines dead. Prospect now is there will not be over one-half the usual crop. It is a little early to predict to what extent the rotting and rusting will lessen the crop. T. G. S.

CLYDE, Wayne County.—Early potatoes are rotting badly. The tops of late ones are dying. All the indications point towards a very light yield—probably less than half an average crop. B. W.

CORTLAND, Cortland County, August 15.—Farmers in our county are fearing rot much since the appearance of the blight. It is too early yet to make an estimate intelligently on the extent of an apparent loss. I think we can calculate on about two-thirds of an average yield. M. R. W.

Ohio.

HUDSON, Summit County, August 17.—Potatoes are rotting some, but I cannot yet say to what extent. In some places blight of some kind killed early ones too soon. Some report heavy loss, others but little. Late potatoes are also dying too soon. It is a good deal of a guess yet; but I doubt whether this locality has over half of last year's crop per acre planted. T. B. T.

WELLSVILLE, Columbiana County, August 15.—Potatoes are rotting some in the ground, I cannot tell to what extent yet, but do not anticipate anything serious. There will probably be an average crop, as potatoes are looking fine at present. F. P. L.

PLYMOUTH, Richland County, August 16.—As far as I can learn potatoes are somewhat better than an average crop. No rot as yet, but we have had a little too much rain. J. B.

WINONA, Columbiana County, August 14.—There was a large acreage of potatoes planted last spring but excessive wet weather causing weedy patches, together with a very large crop of Colorado beetles and flea-beetles will shorten the crop considerably. Prospects now for about two-thirds or nearly 75 bushels per acre. Prices are low. W. W.

Pennsylvania.

JUSTUS, Lackawanna County, August 15.—Owing to the wet season not more than two-thirds of the usual acreage of potatoes has been planted. We hear complaints of their rotting, but do not know to what extent it will affect the crop as it is too early to form any opinion. There certainly will not be more than one-third of last year's crop in this locality. G. W. G.

FRITZ TOWN, Berks County, August 19.—I judge about one-quarter of the potato crop is rotten already. If the rot keeps on at this rate it will probably take half of our crop in this neighborhood. S. S.

KNOX, Clarion County, August 17.—Potatoes are rotting badly. Some patches are hardly worth digging. I am safe in saying that the crop in this section will not be half an average crop. I have planted five different kinds of the leading varieties and see no difference as to rot. B. F. K.

Vermont.

SOUTH NEWFANE, Windham County, August 19.—I have made a personal examination of my own fields and have inquired of my neighbors as to theirs. On August 2nd, in this vicinity growing potatoes came to a dead halt, the tops all turning black and the leaves dropping. On moist or wet land the tubers are rotting badly but not much on dry or sandy land. One-half of an average crop was grown and 10 per cent. of these were rotten, giving us to-day about 40 per cent. of an average crop. As usual, my potatoes will remain in the ground, except what we use in the family, till it is decided whether they will all rot. If it prove safe to dig them I shall put them in the cellar the same day. S. M.

VERNON, Windham County, August 16.—But few potatoes are dug as yet; more acreage than common planted, those on dry upland are not rotting any yet, where planted on lowland and on clay soil, they are rotting some. The worst field that has been dug, (clay soil) had one-fourth spotted. Taking the increased acreage, I think there will be an average total amount in bushels. So much wet weather a few farmers not done haying yet. No wheat raised; rye and oats sprouted in field, damaged one-half; corn looking well, bidding fair for more than an average crop. E. P. J.

Wisconsin.

WATERTOWN, Jefferson County, August 17.—Potatoes are more than an average crop, the best for many years. I have not heard of any rotting. Probably they will be very low in price here this fall. J. M. C. F.

GREEN BAY, Brown County, August 15.—We have experienced an unusually cool and dry summer in this vicinity, very favorable for the growth of potatoes, but the late drought had ripened potato vines prematurely, which will bring it to an average crop, otherwise a crop far above the average would have resulted. No rot has been noticed so far, and will not appear unless we get very damp and hot weather before harvest. G. E. T. K.

PORTAGE, Columbia County, August 13.—Grain is all harvested and mostly stacked in this part of the country. Spring wheat is badly rusted, winter wheat and oats *good*; corn is growing finely, but will need all of September without frost to give an average crop. Stock of all kinds, excepting sheep, very low; stockers and feeders from $1.50 to $2.25 per cwt.; this includes butchers' cattle. Milch cows from $18 to $25 per head; hogs from $2.50 to $3.80 per cwt.; store sheep from $1.75 to $3.00 per head. A. E.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS

Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

WIDE-TIRED WAGONS.

Several Subscribers.—What advantages are claimed for wide-tired wagons? What is the additional cost of the wide tires? For what purposes are the wide tires mainly used? Would it pay a farmer to have two sets of wheels, one wide and the other narrow-tired?

ANS.—These questions have been referred to a number of manufacturers, and also to some farmers who have used the wide tires. The following answers give all the information we have obtained. If any of our readers have anything more to offer, we shall be pleased to have them send it along.

FROM THE KING & HAMILTON CO.

The difference in cost is from three to eight dollars according to the size of tire. Wide tires are good for sandy or soft roads. They don't sink so deeply or rut so badly. On soft roads wide tires are the lightest draft; on hard roads or with empty wagons we consider narrow tires best. We consider narrow tires best on hillside. We do not consider wide tires suitable for all kinds of road.

Ottawa, Ill.

FROM S. W. CHAPMAN.

I sell a three and a-half-inch tire, low-wheeled wagon, three feet two inch and three feet six inch wheels, which gives better satisfaction for farm use than any other wagon I sell for these reasons: They do not cut up the meadows or the roads, and are better adapted for use on the farm, because they are lower and easier to load with hay, manure, etc. They do not fail in any particular. It would not pay a farmer at the present low price of wagons to have two sets of wheels, for I am convinced no farmer would use any other wagon for farm purposes than these trucks if he once used them, unless he had teaming to do on bad, rutty roads. The proper thing for our supervisors to do would be to reduce every farmer's road tax, who would use a three and a-half-inch tire on his wagons. Then we would have better roads in Illinois.

Elgin, Ill.

FROM THE MITCHELL & LEWIS CO.

The difference in cost of broad tires is $5 per inch. The advantage of broad tires: In sandy roads the wheels will not sink so deeply, making draft lighter. The draft on a hard road is about the same as a narrow one, possibly a trifle more, as they present a greater surface for friction and resistance. Broad tires are better in sand, narrow on a hard, hill road; in mud a narrow felloe will hold less mud, therefore we think it is preferable. The broad-tired wheels on wagons are getting into favor more and more every year They are certainly better for the roads as they do not cut up the road nearly as badly as the narrow tires. Speaking from a manufacturer's standpoint, we would prefer to make the regular, narrow-tired wagon, as there is less detail about it, unless a certain width could be universally adopted all over the country. This would certainly be a great thing for keeping the country roads in good condition.

Racine, Wis.

FROM M. J. SNIVELY.

Wide-tired wagons are mostly used as farm wagons and with three to four-inch tire. A team can draw a heavy load over soft ground where a narrow tire would sink down with the same load and leave the ground in bad shape. In hauling hay, grain and manure a wide-tired wagon is preferable at all times. When a farmer has but one wagon, it will pay him to have two sets of wheels, as it takes but little time to change. Farmers in this section usually have two wagons: one with narrow, and one with wide tires; the narrow tires are used for road purposes, and the wide tires can be used on the road equally as well, provided all wagons have wide tires. As most of the road wagons are narrow-tired, in the spring season when the roads are soft, they plow up the roads with deep furrows and make it harder for a wide tire. If all wagons were wide-tired we would have much better roads, and I think the day is not far distant when wide-tired wagons will be used exclusively.

Stark County, Ohio.

FROM THE E. D. CLAPP WAGON COMPANY.

The difference in the cost between the wide-tires and the regular width is at the rate of $1.20 per ¼ inch. The advantage claimed for wide tires is that in soft ground they do not cut down like narrow tires which, of course, makes a difference in the draft of the wagon. We should think the narrow-tired wagon would run easier in the mud and a wide-tired one would run easier in the sand. We do not think broad tires are used to any extent on the roads unless the laws of the city or county where they are run compel it.

Auburn, N. Y.

FROM BRADLEY & CO.

As we make light work exclusively, the subject of the width of tire does not come up in our business. To give you an idea of what the people of Syracuse think on this subject, we would say that there is an ordinance making it a misdemeanor subject to fine to draw heavy wagons over our paved streets with narrow tires. All wagons here used for delivering building stone, brick, coal, ice, etc., have at least four-inch tires.

Syracuse, N. Y.

FROM THE CHAMPION WAGON COMPANY.

WE find it a very difficult matter to answer your favor of recent date, in regard to width of tires. While we may have an opinion, yet it is based entirely on theory and may be very wide of the mark, and there is such a diversity of opinion among our customers, that it is a difficult matter to draw conclusions from our experience with the trade. The average width of tire for a lumber wagon is one and one-half inch. Our price for wagons is based on tire of this width. For tires wider than this, we charge at the rate of $5 00 per inch, for all in excess of one and one-half inch for four wheels. Our experience has been that most farmers use wide tires, because they do not cut up their meadows as badly as narrow tires. In many localities, users of wagons are forced to use broad tires by the street commissioners, who will not allow heavy loads with narrow tires to be used on the highways. On good roads, the narrow-tired wagon is of lighter draught, as the wheels are not so heavy, and on muddy roads the draught is also in favor of the narrow tire, for the reason that the mud will pile up in front of the wide tires, while the narrow tires will cut through it. On meadow land, there is no question but that the wide tire has the lighter draft for reasons that are palpable.

Owego, N. Y.

FROM THE WEBER WAGON CO.

The difference in cost between the narrow and broad tires on a three or 3½-inch cast skein farm wagon, would be about $5.00. The advantages claimed for broad tires are that they will not sink into the ground as deeply as the narrow tires where it is soft or marshy; then, when running over meadows, they will not cut up the soil as much as the narrow-tired wagons. The draft on soft or marshy ground is much lighter than with the narrow tire for the reason that it will not sink into the ground as deeply as the latter. The broad-tired wagon is the better of the two for either sandy or muddy roads. The only objection to it on black ground, is that most of the wagons which are used have narrow-tires and the ruts being correspondingly narrow, the broad tires are apt to wedge and draw heavier. If the broad tires were used generally, there is no question but what the roads would be better and the ruts not so deep.

Chicago, Ill.

FROM B. A. GARLINGER.

Our customers prefer wide tires, because they are charged only one-half toll on our turnpikes. An additional advantage in favor of wide tires in hauling through the fields is that wide tires will not cut up the ground as much as narrow tires. I know of but one place where they would fail, and that would be on a mud road in very wet weather; there the narrow tires would have a slight advantage. I do not think it would pay here to have two sets of wheels.

Hagerstown, Md.

FROM W. H. WILCOX.

For farmers wide tires are especially preferable, because they do not cut up the meadows like narrow tires; on soft or muddy ground or roads, a load draws easier as it does not cut down so deeply. They are preferable under all circumstances, except on hard, stony roads. I do not think it would pay a farmer to have two sets of wheels. Farmers are using wide-tired wagons very extensively in this section now, and I think it will be only a few years before the narrow tire will go out of use almost entirely.

St. Charles, Ill.

FROM J. B. RUNKLES.

Here are several reasons why we prefer the wide-tired wagons: Half toll on our pikes; they will not turn over on hillsides so easily as the narrow-tired; they will not plow up the ground so deeply. We do not want the narrow-tired wagon at any price.

WATER PIPES FOR 40 RODS.

E. D. G., Ashburnham, Mass.—I wish to bring water to my dwelling through a half-inch lead pipe from a distance of 40 rods, during which there is a fall of 18 feet. Is there any other kind of pipe equally good, but costing less? How deep in the ground should the pipe be laid, if the water run constantly in cold weather? Will water running through a half-inch pipe in frozen ground freeze if the stream is only one-eighth of an inch in diameter? Will pretty sharp angles in the pipe greatly affect the velocity of the flow? Is there any way of testing the purity of the water?

ANSWERED BY HENRY STEWART.

Lead pipe is objectionable for the conveyance of water, because of the injurious effect of the water upon the metal. All water contains more or less carbonic acid, and this acid acts on the lead all the more strongly as the purity of the water is greater. When the water contains lime—that is, when it is "hard" water—in time a coating of the lime is deposited in the pipe and protects the lead from this action. The rustless iron pipe, the inner and outer surfaces of which are changed by a chemical process into insoluble magnetic oxide of iron, is the only really safe pipe to use for conveying water for domestic use or for animals. This pipe, however, is rigid, and cannot be bent so easily as lead pipe, but it may be curved to a considerable extent when desired, or angle unions may be used to change the course to a right angle or less, as the case may be; 600 feet of this pipe or nearly 40 rods in length have been laid by the writer in a semi-circle around a hill without using these angular unions, the pipes bending sufficiently for the purpose. The cost is much less than that of lead pipe, and being free from rust, it is indestructible. A half-inch pipe is too small to carry water 40 rods, as the flow is so much retarded by friction and adhesion of the water. If the pipe be protected by a covering of straw a few inches deep before the trench is filled in, there will be no danger of freezing although the ground may be frozen around the pipe, if it be laid two to three feet deep. The greatest trouble in a pipe laid nearer the surface is in the hot weather, when the ground being warmed expands the free air in the pipe—the pipe always contains more or less air as the water will not fill it because the flow is always retarded more or less in all small pipes—and this expansion of air at any vertical bend of the pipe, which cannot be avoided without very accurate laying or an exact plane, will reduce the flow or stop it unless the flow is occasionally re-enforced by forcing in water under pressure to drive out the air. This accumulation of air in pipes gives a great deal of trouble, the cause of which is not suspected, when the pipes are subjected to an increased temperature in the summer by being laid near the surface. A high head, of course, by affording more pressure and a larger flow will prevent this, if the vertical bends are not much more than the diameter of the pipe. Sharp turns have a considerably retarding effect upon the flow and would be sufficient to stop it in a half-inch pipe 600 feet long. A chemical analysis is required to test the purity of water, especially for the presence of lead in it. The solubility of lead is so great, when exposed to the action of a current of spring water, as to render it certain that the water would be made unsafe in a short time. I would suggest that a one-inch rustless iron pipe should be used, and laid as evenly as possible in a carefully graded trench not less than two feet deep with a covering of leaves, straw, sawdust or of narrow boards, so as to leave an air space around the pipe. There will then be no difficulty in the conveyance of the water, and no injurious effect or even any taste of the iron. The pipe is frequently mentioned in the business columns.

GRAPES ON LIGHT BLACK DRIFT SOILS; A STRAWBERRY BED; RHUBARB WINE.

P. T. N., Weston, Neb.—1. My 80-acre farm of creek-bottom land has two feet of black soil underlaid with 50 feet of yellow clay. It produces good crops of corn and small grains, but grape-vines set out two years ago have made only a poor growth. Would it be well to use gravel on the land? The ground has been made rich with manure. 2. How shall I prepare land for strawberries to be set out next spring? 3. How can I make wine out of rhubarb?

ANSWERED BY PROF. J. L. BUDD.

1. On the black drift soils east of the Missouri divide there are patches of black, muck bottom land on which it is difficult to grow the grape or any other garden fruit. But even the bottom lands of the Missouri Valley and the creek valleys of Kansas and Nebraska have enough potash and other essentials of healthy plant growth. From past observation I suspect the main trouble with these vines comes from *too shallow planting*. To illustrate: A large farmer on the Missouri bottom assured me that he had planted Concord vines repeatedly, but that they had dwindled away, and that he did not believe the vine could be profitably grown on such soil. I requested him to try once more by planting the vines 18 *inches deep*, filling in the soil gradually as they made growth. In the Spring of 1884, he put out 100 vines in this way, and he is now proud of his little vineyard. If planted shallow on such light porous soil, the roots are injured by the deep freezing during their first stages of growth. But on such soil, it is not best to apply stable manure, at least not while the vines are young. 2. The ground should be plowed in the fall, the action of frost during the winter pulverizes and mellows the soil, and lessens the danger of the plants being destroyed by cut-worms. On such soil, no manure is needed. 3. The juice from the rhubarb stems is managed in a small way precisely as we manage the juice of the grape, currant, gooseberry, etc., for home-made wines. The best variety for this use is the Linnæus, but at best it is a poor substitute for well-made wine from the grape or from about any one of our garden fruits.

CRYSTALLIZED AND GLACED FRUITS.

Several Subscribers.—What is the process employed by California packers in preserving fruits, etc.?

ANS.—The process employed in preserving fruits in a crystallized or glaced form is a French process, having been employed in that country for many years. The theory is to extract the juice from the fruit and replace it with sugar sirup, which hardens and preserves the fruit in its natural shape. The fruit should all be of one size and of a uniform degree of ripeness, such as is best for canning. Peaches, pears, and similar fruits are pared and cut in halves; plums, cherries, etc., are pitted. After being properly prepared, the fruit is put in a basket or bucket with a perforated bottom, and immersed in boiling water to dilute and extract the juice. This is the most important part of the process, and requires great skill. If the fruit be left too long, it is over-cooked and becomes soft; if not long enough the juice is not sufficiently extracted, and this prevents perfect absorption of the sugar. After the fruit cools, it may again be assorted as to softness. The sirup is made of white sugar and water. The softer the fruit, the heavier the sirup required. The fruit is placed in earthen pans, covered with sirup, and left about a week. This is a critical stage, as fermentation will soon take place, and when this has reached a certain stage the fruit and sirup are heated to the boiling-point, which checks the fermentation. This is repeated, as often as may be necessary, for about six weeks. The fruit is then taken out of the sirup, washed in clean water and either glaced or crystallized, as desired. It is dipped in thick sugar sirup, and hardened quickly in the open air for glacing, or left to harden slowly if to be crystallized. The fruit is now ready for packing, and is said to keep in any climate. The business should not be attempted by inexperienced persons except on a small scale.

COLORING BUTTER.

T. M., Randolph, Dak.—In coloring butter for shipment where there are several churnings in the tub, how can butter color be used so that the butter will be all quite uniform in shade?

ANSWERED BY E. L. BASS, SECRETARY VERMONT DAIRYMEN'S ASSOCIATION.

I do not approve of packing more than one churning in a tub. The packages should be adapted to the size of the dairy so that one or more may be filled at each churning. Much

care and good judgment should be used in coloring, first to secure the exact shade desired, and then to keep it uniform throughout the season, but not throughout the year. Do not try to make June butter in December. To do this the changes which are taking place in the dairy and the changes in feed also must be kept in mind, while a given quantity of butter color of known strength is being applied to a given quantity of cream. In short, use common sense.

ODOR FROM THE MANUFACTURE OF SUPERPHOSPHATE.

C. A. M., Cortland, N. Y.—Is the manufacture of superphosphate for fertilizer, as at present conducted, offensive to the sense of smell?

ANS.—There *need be* nothing offensive in the manufacture of superphosphate. But in general, the bones used, and the acid, are somewhat too odoriferous for very close acquaintanceship. Frequently the "sludge acid," a refuse of the petroleum refineries, is used instead of the fresh acid; this waste acid being cheap, but it has a disagreeable odor. When the fertilizer is made of rock phosphate and pure acid there is nothing disagreeable about it. If the manufactory were 40 rods only from a dwelling there would be at times, when the wind favored it, a disagreeable odor that would be annoying to some persons, but in no way injurious to health.

Miscellaneous.

Y. A. S., College Springs, Iowa.—The plant sent is Daucus carota—Wild Carrot. It is a vile weed, biennial, and spreads with great rapidity. Thorough cultivation is the only way to subdue it.

J. H. S., Amite City, Iowa.—Grass No. 1 is Paspalum virgatum. We do not know of its cultivation. It is, however, relished by grass-eating animals, and if cut and dried before the seeds harden it is said to make a nutritious hay. No. 2 is Tripsacum dactyloides—Sesame Grass. Of little value as food.

A. P. S., Belford, Mass.—What is the best remedy for the asparagus pest, samples of which are inclosed?

ANS.—In the box sent we find the eggs, larvæ and perfect insects of the asparagus beetle. Paris-green or London-purple will probably prove efficacious.

M. P. C., Capoosa Works, Pa.—Where can I buy the pamphlet, "Food Products," by Thos. Taylor, containing descriptions, etc., of 12 edible mushrooms. It was "noticed" in a late RURAL?

ANS.—Send stamp to Dr. Thomas Taylor, Department of Agriculture, Washington, D. C.

D. A. Y., Riverhead, L. I.—My potatoes on my Contest Plot, were struck with the blight about three weeks ago, and now the leaves are dead; but the stalks are still green. Is it permissible to dig them now, or shall I wait until the stalks are dead? They are rotting somewhat.

ANS.—They can be dug at any time.

L. S., Prescott, W. T.—What is the best and cheapest fence for keeping rabbits out of an orchard?

ANS.—Any fence, in the R. N.-Y.'s estimation, that would keep out rabbits would cost too much. The best suggestion we can offer is to use wire netting about the trees. This can be done at a small cost, and will prove an effectual defence.

I. F., Danville, Ill.—What is the best way to winter grape-vines? Some say: Bury them in the ground, and cover them lightly.

ANS.—For your climate (middle Illinois) we should prefer merely to lay the canes down, holding them by stones, blocks, sods or something of the kind, and then cover them lightly with leaves, evergreen boughs or coarse litter of any kind.

DISCUSSION.

THE ROT OF POTATOES.

DR. HENRY STEWART, MACON COUNTY, N. C.—The "rot" of potatoes, so-called, has always been a matter of disquiet in regard to the possible injury that might occur from the consumption of the diseased tubers as food. I well remember the first remarkable origin of this question, and its great and special importance at the time. It was in 1847-8, when this disease ruined the staple food of the Irish people and caused a famine so disastrous as to have become one of the standing finger-posts of history. It was followed by an epidemic which destroyed a vast number of its victims, and which, with the actual starvation, mostly helped to reduce the population of the unhappy island from eight millions to less than five. The question then arose, was this disease—then called the Irish fever—a result of the consumption of the diseased tubers. This subject was discussed in medical circles and became very interesting to the physicians and medical students who volunteered in large numbers to assist in the crowded hospitals hastily erected for the accommodation of the victims of the epidemic. I was one of the students in the largest hospitals in London, who thus volunteered, and spent several weeks in the west of Ireland, where the epidemic was the most virulent. I mention the circumstances because I believe it was the first time that the question arose and I know of no special injury of the kind occurring since, although several practical tests have been made in feeding the diseased tubers to swine and other animals.

The diseased tubers were cooked and eaten by the physicians, and a good deal of other investigation was made, all of which resulted in a unanimous opinion that the fever which prevailed was the effect of the low condition of vitality among the half-starved, and in many cases completely starved people, whose food was either wholly destroyed or rendered innutritious by the disorganization of the starch tissues of the tubers, by the so-called disease, the character of which was then unknown. Scarcely a sound potato could be found and the blackened tubers, only partly escaped, were commonly eaten, not only in Ireland but also in England and Scotland, out of dire necessity, and yet, excepting among the impoverished Irish, there was no outbreak of disease. The cooking of the potatoes wholly destroys whatever might have been injurious, or might have been supposed to be so, and the effect of the disease in the tubers was simply the partial destruction of their nutritious substance. So far as I have since been able to learn through occasional reports on the same subject, in various publications made from time to time, and from my own experience in feeding diseased potatoes, I have never had any reason to doubt the accuracy of the belief resulting from the very careful study of the question under the circumstances mentioned.

Since then the rot of potatoes has been a subject of scientific study by the most skillful investigators, chiefly by Professor Smith of England, and (especially so) by Prof. De Bary of the University of Strasbourg, who discovered the manner of the hibernation of the fungus and the character and life history of the resting spores, and who set at rest all doubts and conflicting opinions about the biology and peculiar nature of the disease. The result of De Bary's investigations were published in the Report of the Royal Agricultural Society in 1875, and, so far as I know, nothing has been added to what was then made known. The blackening of the tubers is due to the growth of the spores, or fruit and seed, of the fungus, just as the black mass of smut appears in the ears of corn, or of wheat; and while these spores may be, and undoubtedly are, when eaten in large quantities, poisonous and productive of disease in animals, producing gangrene of the extremities, as was the case in Kansas two or three years ago, yet cooking completely disorganizes them and destroys their vitality and power of injury. Consequently diseased potatoes may be eaten with impunity by persons when they are cooked, and when fed to animals in the same condition, are wholly innocuous, the nutritive quality only being deteriorated to the extent of the destruction of the starch and cellular tissues of the tubers.

Possibly some lingering doubt may remain in the minds of some persons through the supposed analogous case of the poisonous mushrooms, whose virulent character is not destroyed by cooking; but there is no analogy between the two cases. The poison of the inedible mushrooms is inherent in their substance, and consists of a peculiar alkaloid of a similar character to that of the wild parsnip, so-called, or cow-bane, (Archemora rigida) or the poison hemlock (Conium maculatum) and is not destroyed by cooking, while the organism of the smut or potato fungus (Phytopthora infestans) is wholly destroyed and rendered harmless. Indeed thousands of animals eat smutty corn and fodder with impunity, and pigs will eat raw diseased potatoes without harm, as I have found by several tests. Quite possibly any harm that might occur to animals through the eating of the rotten potatoes may be due to disturbance of the digestive organs rather than to actual poisoning, and in consequence of the excessive quantity of innutritious matter; just as fatal diseases of animals are caused by similar results from the excessive use even of food that in moderate quantities would have been healthful. Therefore I think all doubt whatever may be discharged from the minds of persons interested in the question.

But the term "germs of rot" is used in this question, and this term calls for some remark. The germs are the resting spores of the fungus and these only; and these are the brownish-black substance which discolors the tubers, before the diseased parts decay and form the fetid pulp which is the result of the rot. The substance of the tuber may dry up and become dead, and yet contain the germs of the "rot." A potato that is not discolored and is free from the usual decayed spots is quite free from the disease, although when stored in pits or in a cellar, the sound potatoes may become infected by contact with diseased ones. The germs are apparent in the tubers and where these are free from dark spots or patches they are healthy and consequently healthful. A word may be spared here for the remark that if the diseased potatoes are separated from the sound ones and these are kept in a dry place and sprinkled with air-slaked lime, any germs of the rot that may adhere to them will be destroyed by the lime and all infection prevented. This easy method will secure from injury potatoes not already diseased, and will stop the progress of the disease unless the decay has made considerable progress, so that no apprehension need be felt in regard to the germs of the rot in this way.

The second question lately asked in the RURAL is partly answered above, and may be more fully answered by the statement that so far no special injury or disease to persons has been known to occur. If any injury should result from the use of diseased potatoes it would most probably appear in diarrhœa or cutaneous eruptions, as sore mouth and gangrene of the extremities, in animals to which the raw diseased potatoes may be fed. The life of the germs or resting spores continues at least for a year, but how much longer is not known. It is probable that the germs may remain in the soil many years, being of an oily character and resistant to decay, like the smut spores. The fact that potatoes are grown for several years without any appearance of the disease and may then be affected in a wet, warm season, which is favorable to the germination of the spores, indicates that the spores may remain in a dormant condition for several or many years and then germinate when the favorable moisture and warmth occur.

The danger to public health through the distribution and use of diseased potatoes is scarcely worth attention. No disease that has been attributed to it has been experienced since the Irish epidemic referred to. As no one eats raw potatoes, and cooked ones are entirely safe, it is simply a question of domestic economy in regard to the waste resulting from the decay, and this is settled by the aversion of consumers to purchase damaged tubers. The loss will be to the growers who may reduce this to a minimum by digging the potatoes as soon as may be, carefully sorting out the sound ones, drying them thoroughly, and storing them in airy bins or barrels ventilated by means of holes in the sides, and dusting them with air-slaked lime. The unsound ones should be dried, dusted with lime and kept on a floor in an airy shed and used, cooked, for feeding to pigs, for which they are worth as much as sound ones, less the waste of destroyed tissue which is very small in those potatoes which are not badly diseased. Cooked potatoes are worth twice as much as raw ones for feeding, and will return 25 cents per bushel to the feeder, in the pork. I might say, in conclusion, that my crop is rotted to a small extent and that I am digging them and treating them as above mentioned, storing them in a dry shed on a board floor raised from the ground, liming them, and covering with straw the heaps, made quite shallow so as to air them freely. I expect to have no further loss. I am feeding the badly rotted ones to pigs and the others to cows, uncooked to test the questions here raised. The only rot in my crop is in a piece of highly-manured wet land.

COST OF FARM LIVING.

H. V., CRANFORD, N. J.—The article by J. N. Muncey, on page 508, in relation to cost of living on a farm, buying groceries, etc., treats of a subject of great importance to farmers. I am under the impression, from my observation, that very few farmers keep accurate accounts, or know what their supplies cost them for any given period. Did they do this, and give the farm credit for the cash value of what they consume from it, they might find that the farm paid better than they think. Farmers do not realize the value of these things that seem to come to them so freely, as do those who pay cash for them. There is no earthly reason why farmers should not combine for the purchase of needed supplies. On the contrary, there is every reason why they should. Combination is the power which is stirring the manufacturing, mercantile and financial world to its foundations. The class which does not combine will get left. As Mr. M. suggests, the dealers will object to this. One of them has had the brazen effrontery to do so in the RURAL. I used to be an advocate of home-trade, patronizing home merchants, and keeping the money in the home town. I was in the small-fruit business. I had strawberries to sell; the grocer would pay me just what he could buy strawberries for in the city. To be sure the latter were picked green, were shipped hundreds of miles, and were very poor specimens. Then he was mad, because I proposed to sell them direct to customers, and get what they were worth. This experience repeated a few times cured me of the notion that I must spend my money at home to "build up the town." Then when the Grange to which I belonged, sent to the city, and bought a large quantity of supplies at wholesale prices (which many of the members would not have done if the dealers had not been charging from 50 to 150 per cent. profit), some of the dealers were furious; and one of them raved and swore like a madman. Haven't the farmers the same right to combine as other people? Apparently not. There are many things that can be bought to advantage by a combination of farmers, and then divided, which it would not be feasible for one farmer to undertake to purchase. The Grange has been a great educator in this direction, and if all farmers were united in this way, instead of a minority of them, there would be a strife among dealers to secure their trade. Before the Grange agitation, a man could not buy goods at wholesale rates, unless he were a dealer; now any man with the cash can do so. There is a difference of opinion as to the advisability of buying sugar by the barrel. The margin between the wholesale and retail prices is slight. Many claim that with a large quantity on hand, it will be used more freely than necessary, and that any possible saving will thus be offset. An immense saving can be made on coal, but there were formerly many railroads which would not ship a carload of coal for any one but the regular dealers. The inter-State Commission may settle this. Kerosene oil is a very disagreeable thing to be bringing from the store in a can, slopping all over the wagon, robes, blankets, clothes, etc., which is quite a strong argument in favor of buying it by the barrel. Some think that tea and coffee will lose their strength if any great quantity be purchased at once; but they will not lose their strength any faster under the good housewives' care than they will in the average country store, besides being kept a great deal cleaner. If the farmer does not feel like buying his goods at wholesale, he can often make quite a saving by buying in larger quantities of the home grocer. My grocer charges 16 cents per gallon for the best oil. He will sell five gallons for 14 cents per gallon. Soap, lamp chimneys, etc., may be bought for quite a discount by the dozen. These may seem like small matters, but I think the secret of so many farmers' failures is their carelessness in small matters. But the greatest saving on the farm can be made in the purchase of implements, machinery, etc. There are immense profits made on many of these. I am glad this subject has been started, and I hope to see it thoroughly discussed.

CHINCH BUG DISEASES.

J. R. H., WELLSVILLE, KANSAS.—The seventeen-year locust must be a very healthy insect until after it has sung its song and deposited its eggs, then "some contagious disease appears to carry the pests off by the million." Our common grasshopper and its cousin the grasshopper of the West are very healthy insects until in the fall after they have deposited their eggs; then "some contagious disease appears to carry them off by the million." The chinch bugs—aye there is the rub—the chinch bugs are exceedingly healthy insects until late in the spring after they have deposited their eggs then "some contagious disease appears to carry them off by the million," then if it should remain warm and dry the young bugs will hatch out and be the healthiest little creatures you ever saw; but should the weather be cool and wet, they will be attacked by some contagious disease like that which attacks young chickens after they have been out in a cool, hard rain.

Last spring "the oldest inhabitant" remarked that he had never seen more chinch bugs come through the winter than he did last. They swarmed in the wheat and oat fields to deposit their eggs, which they laid "by the million." This has been a very wet season, there being hard rains every few days all through the spring. I watched the chinch bugs closely in the oat field. After a hard rain I could see great numbers of very young bugs and eggs washed from the oats into the depressions. In that condition the young bugs died and the eggs did not hatch. I suppose the wise ones would say they died of some contagious disease. I am out of

patience with this disease theory. It is a humbug pure and simple. The old bugs die a natural death; the young bugs are killed by the wet.

REMEDY FOR A KICKING COW.

J. B. K., PORTLAND, OREGON.—The article on page 459 of the RURAL, entitled the "Kicking Cow," and the title-page illustrations of that terror of the milking yard remind me that I have a remedy for treating the vicious brute. I have used it for a dozen years with perfect success. I have never seen it in print. It is very simple, easy of application, does no injury whatever to the animal and is perfectly effective. I have never known a failure: Take a small rope or cord about the size of a clothes-line; make a loop in one end; hold the loop end in one hand; drop the other end over the cow's back; pick it up and pass it through the loop; then slip it back just behind the hips, bringing it underneath just forward of and close to the udder, adjusting it so that the loop is near the back-bone. Now draw the rope through the loop tightly and fasten it, the more tightly the better if the animal is very vicious. On the first application, she will jump and try to kick and perhaps bellow; but let her kick, she will soon get tired of doing so. Now you can sit down and milk without the least danger. You can hardly provoke her to kick. If she should still try to kick, tighten the rope and continue to do this till she gives it up. Three applications in succession will cure the worst case I ever saw. Treat her kindly and gently all the time without the least excitement.

BLUEBERRIES.

P. C., MILFORD, N. H —Where there are no blueberries perhaps it may pay to try to cultivate them; but I know of one bush set out over 20 years ago that never had a crop until this year. It has not been cultivated for years, but it is in a cultivated field. This year there were between six and eight quarts on it. Here the blueberry is abundant and the women and children get the most of their money picking berries. The price this season runs from 14 cents per quart down to five cents. Where people do not own pastures they pick and take two-thirds; the owner has one-third. Our family of four—three children and their mother; two of the children less than 10 years of age—picked over $50 worth this season, and on account of the rains there are hundreds of bushels not picked. I saw 27 bushels put on the train on August 3d and some days from 100 to 150 bushels are shipped on the different trains. We are 54 miles from Boston and there is no transfer. The expressage is 25 cents per bushel on an average. Crates are returned. The best way here to cultivate them is every two or three years to mow and burn the vines. The berries will then be larger and it will be easier to get around to pick them.

CATTLE ON A VERMONT FARM.

E. A. F., HANCOCK, VT.—My farm comprises about 300 acres. It is the same on which my father settled in 1806—when this section was an entire wilderness. It is mostly cleared land now. The wood-land is mostly spruce and maple. I have one of the finest mountain pastures in the State. My cash crop is pasture. I have summered 105 head of stock this season; not so many as usual though feed is very good. The average number of stock I winter is eight cows, a team, 30 sheep and a few head of young stock.

What Others Say

PITHS AND SUGGESTIONS.

TAKE a Cooley can or any other can in general use in creameries, says George Parr in the Farmers' Review, fill one with warm milk just drawn from the cow with the animal heat in it, submerge it in ice-cold water, and fill another can and allow the animal heat to escape, say 30 minutes before submerging it, let both cans stand for 24 hours. On the majority of the cans that he has seen in general use, the lids are not constructed to be submerged, but this makes no difference. Cover one tightly, so that there is no ventilation, and allow the other can to remain uncovered until the milk becomes cold before putting the cover on and let them stand in ice-cold water up to the rim for 24 hours. When the cream is removed, if there is not a disagreeable taste and smell to the cream taken from the can that was not ventilated, then the professors and hundreds of others are wrong, and Mr. Hiram Smith is right in his assertion that aeration before submersion is not necessary..............................

THE short potato crop in the East will be more than counterbalanced by the unusually large yield in the West......................

JOHN GOULD says, in the Weekly Press, that a cow will consume easily 100 pounds of the best lawn mowings in 24 hours and maintain her flow of milk. Dry these 100 pounds of clippings into hay and it weighs from 12 to 14 pounds. Put the same cow upon this dry food, the same in original amount that she found to her satisfaction. How long will the same cow thrive and give full pails of milk on 12 pounds of dry hay? Give her 24 pounds of this hay and she will do better, and yet more satisfactorily upon 36 pounds, the product of three days' rations in its succulent stage. Now, can we afford to feed in the winter on hay that at least represents twice the food needed when this hay was grass?...........

KEEP it in mind, readers. "The labor on the part of the farmer is *increased* as the grade of the fertilizer purchased and used *decreases*"..................................

THE RURAL NEW-YORKER is bitterly disappointed at the results of its potato experiments this season—but discouraged? No. We did our best, and there is a satisfaction in that.......................................

THE results of the Women's Potato Contest will unquestionably prove interesting, suggestive and instructive..........................

AS TO harvesting and haying machinery, it seems to Pres. W. I. Chamberlain, as he expresses it in the Ohio Farmer, that no farm that has much grain and much heavy clover, Timothy and Hungarian, can afford to be without the best makes of the following implements: twine-binder, mower, hay-tedder, horse-rake and hay-loader, or rather pitcher. His team of 1,200-pound horses handles a twine binder with ease, poking along and kicking flies as if the draft were no consideration. The ground was level, tile-drained and firm. If soft or hilly, the draft would be heavier. It is a delight to sit on the high seat and simply drive and hear the machine click, click, click, as it kicks off the compact bundles, saving all the wheat. It cuts an acre an hour with a rather slow-walking team. It goes in at his barn doors for storage without folding, and takes up not much room with the tongue taken off. The back-aching labor of cradling, raking and binding has forever gone......................................

THE REV. T. DE WITT TALMAGE says a great many good things, but he also says some very foolish ones. In a recent sermon he tragically declared that "the Almighty will smite this people if they do not stop inventing machinery to take work from poor people," and he hoped that not another tool would be invented for 500 years! Mr. Talmage is like the cow that gives a three-gallon pail of milk and then kicks it over. The Ohio Farmer advises him to go to China, where they employ no machinery at all, but do everything by hand. The Flowery Kingdom would just suit him. They allow no modern innovations there. Even horses are rarely seen, and men and women are the beasts of burden as well as hewers of wood and drawers of water..............................

MR. M. J. LAWRENCE, of the Ohio Farmer, when a young man, was sent to Japan and China by one of the leading sewing machine companies, to introduce its machine. He selected the largest tailoring establishment at Hong Kong, set up the machine, operated it, and explained its advantages through an interpreter. He tried particularly to impress the fact upon the mind of the almond-eyed proprietor that with this machine one man would do as much work as nine men could do by hand. "Yes," the proprietor readily admitted, "but what would the other eight men do?" That was his knock-down argument. He would not buy a machine, and none of them could be sold in the kingdom. But unfortunately for Mr. Talmage's theory, the Chinese people are among the poorest and most wretched on earth. The absence of all modern machinery does not make them richer or happier. The multiplication of machinery and devices for lessening labor and decreasing cost of production is an absolute blessing to laboring men..............................

"THE RURAL NEW-YORKER recently quoted from the Massachusetts Ploughman an article on bunching asparagus, by W. J. Green, of the Ohio Experiment Station. That article was written expressly for the Ohio Farmer, and if the Ploughman published it without credit the RURAL is not to blame. The Farmer always gives due credit, and insists upon being treated likewise. The official statements of the experiment stations are always published as such, and credit is given to the various bulletins issued. These are public property of course. But the articles over the signatures of the experimenters are paid for; they are our property, and if used by contemporaries they ought to acknowledge the source."

The above is taken from the Ohio Farmer. It was credited to the Ploughman because it appeared in that journal as if written expressly for it. The R. N.-Y. has never knowingly copied an article without giving due credit to the publication quoted from. Our position is that any editor that will appropriate such matter will appropriate anything else, if he can do it with safety. In other words, an editor that will print without credit original articles written for other periodicals is simply a thief, and the editor knows it too. The only pity is that his readers for the most part are kept in ignorance of the fact...

PROF. B. D. HALSTED finds that the common asparagus is heliotropic, *i. e.* follows the sun in its daily course. In early morning the shoots are nearly upright, but when the sun is two hours above the horizon the same stems lean unmistakably to the eastward. At noon the stems are leaning somewhat to the southward and at evening they point westward. The curving is most prominent with average-sized stems which have escaped the gardener's knife, and are between one and two feet in hight....

Horsford's Acid Phosphate.
For the Tired Brain from over-exertion. Try it.—*Adv.*

ABSTRACTS.

—C. L. ALLEN in the American Garden: "The finest show of flowers I have ever seen in the garden resulted from sowing a paper of single dahlia seeds in a hot-bed in April, transferring the plants to the border in June. During August, and until frost, the plants were a mass of bloom, all colors, from the purest white to the darkest maroon, pure yellow, with some striped and variegated forms of surpassing loveliness; about fifty plants in all, not one poor one, the whole costing 25 cents."

—J. C. VAUGHAN in American Garden: "Rose, Madam Jamain (American Beauty). Why in the name of honest dealing should not the name American Beauty be dropped forever, instead of perpetuating the disgrace which certain florists of this country brought upon us by introducing this old sort under a new name."

—MIRROR AND FARMER: "The possibility of cows pouring out such abundant quantities of rich milk as our best herds are now capable of has only lately come to be recognized. Truly, through human art, the cow is a transformed and to a large extent a man-made creature in this matter of milk production.

Being so far an artificial production, it is only by art that the improved milch cow can be perpetuated. Therefore the high-class dairy cow pre-supposes and is based upon specialized skill in her human keepers. Dairying is an art requiring great intelligence and much acquired knowledge.

—HUSBANDMAN: "A farmer is a capitalist and laborer, and therefore wants labor and capital both justly treated in the administration of laws."

—FARMERS' REVIEW: "If Chicago wins the World's Fair of 1892, let arrangements be made for the holding of a national (or international) live stock exhibition which shall throw in the shade anything of like nature ever held in other countries."

—POPULAR SCIENCE NEWS: "A curious experiment in osmosis.—Take two eggs of equal size. Carefully dissolve the shell of one with dilute hydrochloric acid, and immerse it in pure water. In the course of a day or two enough water will pass through the outside membrane to cause it to nearly double its volume, as may be shown by comparison with the second egg, which is used as a standard."

—"NOTWITHSTANDING the wails of the pessimists, mankind are steadily improving in bodily strength and vigor. Even the immense consumption of patent medicines fails to stop the improvement—a fact which goes to prove the general absence of any medicinal qualities whatever in these preparations."

—NEW ENGLAND FARMER: "'I believe that a young man with business ability, industry and a capital of two thousand dollars will be much surer of success in any one of several branches of farming, if he has a liking for the business, than in a venture in any other business.' This is the opinion of Hon. W. R. Sessions, Secretary of the Massachusetts Board of Agriculture, a man who is a practical farmer, who has had a wide experience and who has excellent judgment. Such testimony is very valuable."

THINGS NOT TO BE SORRY FOR.

—N. Y. HERALD: "You will not be sorry for hearing before judging;
For thinking before speaking;
For holding an angry tongue;
For closing the ear to a talebearer;
For disbelieving ill reports;
For being kind to the distressed;
For being patient toward everything;
For doing good toward all men;
For asking pardon for all wrong;
For being courteous to all."

—PHILADELPHIA WEEKLY PRESS: "When the weather is wet, as it has been this summer, tomatoes make too much branch and too little fruit. To get the latter, run a spade in the ground about them to cut the roots. The check advances the fruiting."

—"The purely-bred horse of the desert has good feet and legs, good heart and lungs, courage and docility. Such qualities are not bad for grafting on any stock."

—VERMONT WATCHMAN: "Is it not plain that the American farmer, and especially the New England farmer, needs to be a good deal of a man? He *is* a good deal of a man. When we see how comfortably many of them manage to live, and how much "ahead of the world" a fair proportion of them are able to get, there cannot be any doubt that the high personal qualities of hundreds of our New England farmers place them well up in the scale of absolute manhood. If the farming occupation is despised in the cities, it must be only by those who do not realize what it is in these days to be a successful farmer."

—"BUT THERE ARE TOO FEW of whom this can be said, and too many among us are laboring under discouragements that kill out spirit and energy. They are doing a business which they do not sufficiently well understand to make it profitable. These are like the small store-keepers and manufacturers in the cities. The world seems to have got tired of them. There is no longer place for mediocrity in business—even the business of farming. This is what many think and hundreds say."

—ORCHARD AND GARDEN: "We believe with the R. N. Y. that bananas and pineapples possess such distinctive flavors and qualities from other fruit that a person who wants one will not take the other in its place."

Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

That Tired Feeling, so oppressive, overpowering and difficult to throw off, may be the warning of wearing out or breaking down of the system. It is entirely overcome by taking Hood's Sarsaparilla, which gives great mental nerve, bodily and digestive strength.

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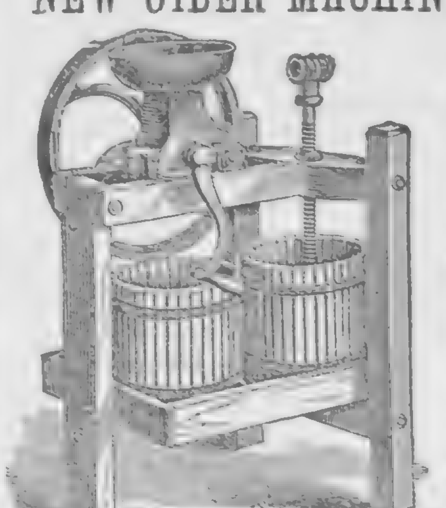

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No. 34 PARK ROW, New York.

SATURDAY, AUGUST 31, 1889

As the Report of the Special Commission on Diseases of Swine would take up two columns, and as we cannot see that it would be either instructive or interesting to our readers, it is omitted. The R. N.-Y.'s columns are somewhat too valuable to be given up to absolutely worthless reports.

HERE is an idea, friends. It comes from a Maine subscriber:

"If any of the RURAL'S subscribers wish a perfect corn-cutter, let them cut away the handle of a hoe so as to leave about 18 inches of it, and they will have the best implement known. I ridiculed this idea; but one blow with it completely converted me. It is play to cut corn with it, and the work can be done very rapidly."

GRAPES are smaller than ever before at this time in the season, though the bunches average as large as usual. The vines have made an unusually strong growth, which may account for the smallness of the berries. Moore's Early, Colerain, Early Victor and Cottage are the first to ripen. Many varieties are rotting. The Eaton bears the largest berries which, as well as the vine, are free from rot and mildew. It is a showy, very desirable grape. The Colerain again shows itself worthy of all the R. N.-Y. has said in its favor.

FARMERS are sometimes urged to buy "sore" mares that have worked hard before trucks or horse-cars, and to use them for breeding purposes. This seems all right in theory; but of late the R. N.-Y. has received complaints to the effect that many of these mares fail to breed. Whether it is the rough treatment to which they have been subjected in the city, or whether it is over-feeding on grain that caused the trouble we cannot say. We would like to have those who have tried these city mares for breeders, tell us what they have found them capable of.

"I know that I am advocating the unpopular side of this question, but have had the best evidence before me for years that my practice of pasturing meadows does them no injury, and is of great benefit to the dairy." —C. E. RICE, page 574.

THE R. N. Y. wants to have a little hand in making suggestions as to the National Flower as well as its contemporaries. It proposes first, the Moccason Flower (Cypripedium) or Lady's Slipper; and, second, the Cardinal Flower (Lobelia). Of the first, we have C. arietinum, parviflorum, acaule, spectabile, pubescens and candidum, all natives of our own country, some of which are among its most striking and oddly-beautiful flowers. Of the second we have, among a dozen species, the everywhere popular Cardinal Flower, Lobelia cardinalis, found in the moist grounds of nearly every State in the Union.

NEWS comes from the Northwest that the Northern Dakota and Northern Pacific elevator companies have effected a business deal whereby the competition for the grain of North Dakota will be discontinued, and farmers will have to accept such rates as the elevator companies may choose to offer. What is the moral difference between the conduct of such a combination of plunderers and that of a band of highway robbers? Of course, there's a vast legal difference. The successful robber detected among respectable men, is disgraced and punished; whereas the successful plunderer, though known to all men, is respected and petted. There are many crimes—black ones, too—not yet included in the statute laws.

THE horse and mule markets in this city open very satisfactorily this season. This is one of the best markets in the world for fine horses. Buyers are constantly on the outlook for fast driving horses, matched pairs and stylish coachers, and there is usually little trouble about prices for really good animals. Horses are brought here from all parts of the country, and orders are frequently received from Mexico and other foreign countries. Just at present good, matched pairs bring the highest prices. Many of these horses are picked up on farms by buyers who have had an eye on them from colthood. The outlook for the horse market in this vicinity was never better for good stock and never poorer for poor stock.

THERE have been 50 failures among wool dealers in the last eight months and a considerable number of manufacturers of woolen goods have also either closed their works or gone into bankruptcy This great depression in the wool business is uniformly attributed to the present high tariff on the raw staple, and a combined effort is to be made to secure, at the next session of Congress, a great reduction or the entire abolition of import duties on wool. The National Association of Wool Manufacturers has called an extraordinary meeting of that body at Boston on September 17, for the purpose of taking vigorous action in the matter. Isn't it time for the wool-growers of the country also to take prompt and vigorous measures to counteract a growing agitation which seriously threatens their interests? Forewarned should be forearmed.

THE Southern Interstate Farmers' Association which closed its annual session at Montgomery, Alabama, last Wednesday, recommended the absolute discontinuance of jute bagging whenever a substitute can be obtained, and passed a resolution urging the non-use, when possible, of every article which has been placed or shall hereafter be placed under a trust for the purpose of excluding competition. There is no anti-trust law in Alabama; why didn't the assembled farmers advocate the passage of one? The greed of trusts and kindred organizations will never be successfully checked by the passage of mere "resolutions." When the price of any article in common use is raised beyond a certain point, its consumption will inevitably diminish by an unchangeable economic law; and mere resolutions are hardly likely to affect the course or extent of this diminution.

AN observing Michigan subscriber writes that he has learned the following things during the past year.

"I have become convinced of what I have long believed, that, while our Michigan is a wonderful country for grass, the idea of a permanent meadow or pasture is for Americans a delusion and a snare. We have not the warm, moist, almost humid climate of England. I am satisfied the pasture must go. It is the easiest thing in the world to sow grass seed too deeply. I have lived with grasses a good deal the last year, and have noticed many cases of failure of seeds sown in drills, when the same seed succeeded well if sown broadcast and left to cover itself. Clover with oats has again succeeded with us, and the tedder is the best man in the hay field. This last I have known some years. I have encountered land this year that may be worked up too fine for its own good, and have learned that White Clover when not wanted is one of our worst weeds."

THE game laws in many of the States should be overhauled and changed. As at present constructed, they benefit the hunter and the city "sportsman" more than any other class of citizens. This should not be so. The game found on the farms or on lands adjacent to farms ought to belong to farmers or country people. The game laws should have for their prime object the preservation of game for the benefit of those who are most clearly entitled to it. All game laws should recognize the fact that the owner of the land upon which the game is found should have first right to whatever profit or pleasure the game may bring. Many a farmer's boy has manfully refrained from setting his snares for quail or partridge because such action was "against the law," only to see a crowd of "pot-hunters" come marching on the farm the day "the law is off," to conduct their murderous fusilade. The R. N.-Y. wants game laws that will give the farmer first right to the game raised on his land.

WE are informed by a reliable authority that the cruel practice of spaying cows and heifers has been followed to such extent in the Far West as to quite seriously diminish the number of calves. In fact, it appears that so much of this work has been done that the cattle supply from the plains will be not a little influenced thereby in the next two or three years. Men who have watched the Western markets for years inform us that the prospects are unusually bright for better prices for beef cattle. Very heavy shipments are now being made to Europe and there is every reason to believe that this business will continue. In fact, the prospects for beef growers in sections where the dressed beef people come to buy rather than to sell are good. The prospect for hogs is not so encouraging just at present. The supply of hogs at the West seems to be above the average, and if the corn crop turns out to be no better than is now expected, there will be a rush to market the hogs for which there will be no corn. This will surely result in unsatisfactory prices.

THE R. N.-Y. WHEAT CROSSES AND HYBRIDS.

THE R. N.-Y. has very little that is new or interesting to report in regard to its wheat crosses and hybrids. As its readers well know, one of its endeavors has been, by using rye pollen year after year upon the progeny of wheat and rye hybrids, starting with wheat as the mother, to produce a plant which should be rye to all appearances; in other words, to get back to rye through wheat. This trial has come to an end through necessity or through causes "over which we had no control," viz., absolute barrenness of the latest progeny. Several plants were produced with a parentage seven-eighths rye. These the first year bore a few kernels which were planted. The next year, many of the best heads were again treated to rye pollen, but neither these nor the heads not so treated bore any grains. We need not detail our trials further than to say that we are satisfied that any endeavors to originate a hybrid which shall be more than three-quarters rye will prove ineffectual.

For the rest, it may be said that we are endeavoring to fix a number of varieties three-quarters rye, one-quarter wheat, by parentage, with a view to their introduction.

THE POTATO CROP.

A STUDY of the potato reports on page 576, will confirm the R. N.-Y.'s prediction of last week. The Eastern crop is seriously damaged and will be cut short at least one-third, while the Western crop, taken as a whole, is an average one. One feature of the situation is quite significant: The rot seems to be worst in the districts largely given up to potato growing. As a rule, the best crop condition is found this year in localities where the home demand nearly equals the supply. It is true that potatoes may "dig out" better than our correspondents expect. The R. N.-Y. finds its potatoes in better condition than it had reason to hope for three weeks ago. Still, the early death of the vines will cut the crop short and help fill the market with small, half-formed tubers. The crop will be short. Prices ought to be high; who will reap the advantage—farmers or middlemen?

Where does the bulk of the potato crop come from? Is it a sectional crop? It is generally understood that wheat, corn and beef belong to the West. How about potatoes? The question is of unusual interest this year as the rot is confined principally to the Eastern States. The figures we have to present are taken from the Department of Agriculture's report of 1888. It is the crop of 1887 that is given. The Eastern States are Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey and Pennsylvania. The Western States are Ohio, Indiana, Illinois, Michigan, Iowa, Missouri, Kansas and Nebraska. The Northwest includes Wisconsin, Dakota, and Minnesota; the Far West, California, Colorado, Oregon, Utah, Washington, Nevada, etc. The total crop of 1887 was 134,103,000 bushels divided as follows.

	BUSHELS.	PER CENT. OF WHOLE CROP.
Eastern States.....	49,861,000	36
Western "	40,846,000	30
Northwest "	18,427,000	13
Far West.....	10,253,000	9
All others.....	14,819,000	12

Most of our readers will be surprised at this showing, we think. How about the demand for potatoes—where are most of them to be sold? It is evident that growers must look to the towns and cities for their best market. Below we give the population of the cities and towns. Remember that this is the *buying* population—the consumers who cannot grow their own produce. We have simply divided the country into two principal sections on a line drawn just west of Baltimore.

Eastern States	7,514,000
Western States	4,632,000

Thus we see that while not one-half the crop is produced east of Baltimore, nearly 65 per cent. of the urban population of the country is located in that section. With these figures for a basis and assuming the Eastern crop to be 65 per cent. of an average, an interesting problem can be worked out.

"Most of us are anxious to turn in the stock where the meadows look fine for feed, but it would be a better plan, if we would only do so, to give the meadows a good top-dressing after mowing, with either barnyard manure or some commercial fertilizer, instead of feeding them off."—C. F. OLMSTED, page 574.

BREVITIES.

OUR horses like cabbage.

THE magazine reviews the present week will be especially interesting to the ladies.

READ Dr. Stewart's views regarding rotten potatoes, how best to preserve the crop, etc., on page 578.

LIMA Beans and melons sell well. Tomatoes sell better than was expected. It pays to have a variety of crops.

WHAT varieties of potatoes will stand the rot best with you? Let us know when you report on the R. N.-Y. No. 2.

THE R. N.-Y. has received seven copies of a recent experiment station bulletin. Is this the way to make up a circulation?

Of all insipid fruit, we will choose Clapp's Favorite as being the most insipid as it this season ripens at the Rural Grounds. No doubt the drenching rains are responsible.

Magnolia cordata is now (August 20) in full bloom, although it bore its usual number of flowers in late May. We prize this tree for its symmetry and ample foliage more than for its flowers.

WE planted our late fodder corn in drills so that the stalks stand about six inches apart. It is now two feet high. Our neighbor, over the fence, planted a few days later. His stalks stand 15 to the foot. The crop is hardly four inches high.

In the country about the Rural Grounds all the potato vines are dead and have been so for a week or more. Potato beetles deprived of this preferred food, are wandering everywhere in search of a substitute. Tomato vines are alive with them.

A perfect season this is and has been for the Great-panicled Hydrangea. It can not stand drought. The panicles are small and the leaves droop. It may be well to remind our readers that cuttings from the new wood take root very readily, and these little plants will not fail to bloom next year and they will bear larger panicles than older plants.

WHAT seemed like a genuine ensilage "boom" was started at the Ensilage Convention at Cleveland last spring. The R. N.-Y. is now informed that not much over one-half the silos that were contemplated will be built. The reasons given are various. This has been an excellent season for hay, a poor year for corn. As the silo depends upon the corn crop and is to remedy a failure in hay, it will be seen that the past season has not been entirely suited to the ensilage system.

At this time (August 20) we may mention the following among our little collection of Tea and Hybrid Tea Roses as blooming most freely. Now is *just* the time when beautiful roses in one's garden, if not worth their weight in gold, are, at least, most highly prized. Marie Van Houtte, Apolline, Perle, Etoile de Lyon, Comtesse de Frigneuse, (a most charming yellow) Caroline Custer, Canary, Madame Hoste, Madam Welche. The new hybrid between Rosa rugosa and Sombreuil, named Georges Bruant, has made a fair growth. Two strong pot-plants were ordered early in the season. Neither has bloomed nor formed a bud up to this time.

A WELL-DRAINED firm seed-bed as level as it may be, with a mellow surface, is the first essential of successful wheat-culture. If the land dishes in any part so that water will stand for several hours after hard rains, the wheat in those places will be injured or killed. Drill in from one to one and three-quarters bushel of clean seed to the acre according to the fertility of the land and the tillering habit of the wheat. Drill it one and a-half inch deep. The R. N.-Y. from its own trials, does not approve of rolling wheat land after it has been sown, if the field has been properly fitted. Whether it will pay or not to mulch the field with fine manure after the ground is frozen, will depend upon circumstances which each farmer must consider for himself, as, for instance, the cost of the manure, the fertility of the land, its liability to heave; etc.

Dairy Husbandry.

THE NEW BUTTER EXTRACTOR.

L. S. HARDIN.

Recent improvements in butter-making; the latest of all gets the butter directly from the fresh milk; much like the centrifugal separator in appearance; how the butter comes; a temperature of from 52 to 65 only needed; extracts nearly all the butter in strictly prime condition; a complete revolution in butter-making; will the fresh-milk butter keep?

Those of us who have kept abreast with dairy improvements during the past 10 or 15 years have become somewhat accustomed to startling innovations. The crocks and pans of our grandmothers first gave way to the large pan that held a herd's milking; then came innumerable devices for cooling the milk with water. Deep setting then made its appearance without the use of ice, and proved a failure. Then cold water and subsequently the submerged practice came to the front as a success. Next in order, the centrifuge made its appearance to supersede all other methods. All of these systems had but one object in view, and that was to obtain the cream, and the improved methods were really but slight improvements on the original crock and can; for where they left off the art of butter-making had but just begun. To get the butter requires about as much skill with the new as with the old process. When the first announcement came that a new candidate for dairy honors was in the field, no one thought much of it until it was known that the claim was to produce pure, first-class butter directly from fresh milk. This was so squarely in the face of all known principles of butter-making that no one credited the claim. Therefore when I was called upon to be the first man to examine and write up this machine, it was with much skepticism that I entered into the "assignment," as news paper men call it.

The machine in outward appearance resembles the ordinary separator so closely that no one would suspect it to be more than an improvement on that implement, and perhaps, correctly speaking, that is all it is; but it is a very remarkable improvement, about as great a one as the modern iron-clad is in advance of Fulton's first steamboat. The milk enters the butter extractor just as it enters the separator and the skim-milk leaves it in the same manner; but instead of a tube at the side for the cream to come from, there is quite a large opening at the bottom of the churn from which the granular butter makes its escape. I say "granular," though by the slight movement of a lever or screw the butter can be made to come quite solid. It begins to make its appearance so soon as the machine gets under full headway. Its revolving speed is about six thousand revolutions a minute, and it has a capacity of 500 gallons an hour. The very intelligent gentlemen in charge say it has five times the creaming capacity of the ordinary separator; that is, it could turn out five times as much cream if the inner wall were removed so that the machine would produce only cream. It could do this while running at the same speed as the separator. This is owing to an improvement in the form of the drum.

The secret of the butter attachment is this: The cream is first separated from the milk and then it finds an additional wall to climb in the center of the drum, and as it reaches the top of that wall, its weight causes it to fall into an inner compartment but it is not yet butter, though it looks like it; there is too much serum or milk in it, and this has been where others have stopped in the attempt to get pure butter. In order to accomplish further separation, a small instrument, like a bird-cage, without top or bottom and without any power to turn it except its own momentum, is placed in the center of the drum and gives just enough agitation to this thick cream to let the last particle of milk out from between the globules of butter fat. These globules then coalesce and form granules just as the butter does in the churn when stopped at the right time in modern practice.

One point struck me as very strange, and I am sorry that the inventor of this machine, Mr. Johnson, had left for Copenhagen before I could get an explanation from him. The ordinary separator in order to work to advantage, must have the milk heated up to among the nineties, a degree fatal to all butter making; but this machine actually does its work with the milk all the time not above 65 degrees. It is claimed that it can work with milk as low as 52 degrees. The only explanation I could get was that all was owing to the improved form of the drum. The claims are that it secures more butter from the milk than any other method, leaving but 99-100 of one per cent. of fat in the skim-milk. This skim-milk is perfectly sweet and in the best condition for drinking or feeding. The butter is as fine as any that ever came under my observation, and is prized equally highly by all with whom I have talked, who have witnessed the machine's work, and they number many of the celebrated dairymen of the country.

It is hard seriously to contemplate the tremendous revolution this machine is certain to accomplish in the dairy. If it did only half what I have seen it do, I would still look to see it drive all other methods out of practice. According to my figuring, done in the rough, of course, it required about 22 pounds of city milk to make a pound of butter, and the butter, as I said before, was as fine as the most masterly artist in butter-making could produce. This it does every time, if the milk is good. Here we see the butter-maker's occupation "gone," for there is no setting of the milk, no curing and tempering and churning of the cream, and hardly any working for the butter, as it appears in perfect granules, is sprinkled with water and most of the milk is washed out of it, leaving it ready to be salted and put in the tub. The person who could not make a fine article of butter with this machine, would have a genius for failure, because he would really have nothing to do with it except to accept the article as it came from the machine.

The objection to sweet-milk butter founded on the fear that it will not keep is to be met by practice, though it is claimed that the granular butter can be washed in sour milk, and that thus the virtue claimed for its keeping principle can be secured. I never was a believer in the sour theory; for I believe that a thing which has never begun to decay will keep better than one that has. I know nothing of the company that has the extractor in hand; but understand that it has already a large number of orders for machines and will soon begin their manufacture.

DAIRY CONFERENCES IN CLINTON COUNTY, N. Y.—I.

Number, location and capacity of the creameries; methods of cream-raising in use; handling the milk, cream and butter; kind of cows; a test for butter; good advice from Col. F. D. Curtis.

Up the Saranac River, 16 miles west of Plattsburgh, 900 feet above the level of Lake Champlain, close to the foot-hills, within sight of the gray walls of Clinton prison, and in the shadow of the Adirondack and Lion Mountains, is a creamery at which the milk from 400 cows owned by 60 patrons, is each morning centrifuged in a Danish Weston separator, milk being delivered but once a day—in the morning.

The creamery is one of six, which with a cheese factory, located at Peru, are owned and operated by Mr. A. D. Boomhower, and all of them are in Clinton County. The creameries are located at Saranac, Plattsburgh, Mooer's, Mooer's Forks, Ellenburgh Center, and Cherubusco Village. The average number of cows for each creamery is about 400. At four of the creameries, or "butter factories," as they are called there, the milk is bought of the patrons, by Mr. Boomhower, at an average price of 80 cents per 100 pounds; at the other two and at the cheese factory the milk is made up for the patrons. The Danish Weston Centrifuge is used at all the creameries except at the one at Ellenburgh Center, where the Burrell & Whitman ice vat system is employed and where, at the time the conference was held—August 8—the best results were being obtained; that is, the largest percentage of butter to that of milk creamed. No doubt this result was due to the better pasture the cows had, and not to any superior advantage the process possesses over the centrifuge, as it is well known that all conditions being equal, the machine will extract more butter fat from a given number of pounds of milk than will any other cream-raising device; but there are many excellent butter-makers and experts who will tell one that butter made from centrifugal cream is not of as good quality, nor will it keep as well as will butter made from cream raised by the Cooley or Stoddard process. They will tell you that it is of too "salvy" a nature with less grain; or, rather, that the machine seems to break the grain, thus leaving the butter in a sticky, salvy condition.

At the Saranac creamery there are now being delivered 7,500 pounds of milk each morning; the maximum, during the "flush of feed," in June, was 9,500 pounds; the ratio on August 7th, was one pound of butter to 24 pounds of milk. No grain ration is now fed by any patron. The pasture is mostly upland, the grasses being wild or mountain. Much of the pasture land has never been plowed or seeded, and is partially covered with a second growth of white birch, poplar, spruce and pine, the original forest having found its way to the charcoal kilns, whence it went into the forges years ago. The water is excellent, being from cold spring brooks, and the cows are salted, usually twice a week, in the stables.

The milk is separated at a temperature of 80 to 85 degrees, and the cream cooled down to 58 degrees as soon as possible. All milk is "pooled;" therefore all the cream is delivered from the separator into one vat—a large one—in which ice is put to keep the temperature of the cream while being ripened at the desired degree, which is not above 60 degrees. The time occupied in ripening is 24 hours, when it is churned by steam power in a Blanchard box churn of 400 gallons capacity, revolved at 50 revolutions per minute. When put into the churn, the cream is at 58 degrees to 59 degrees; the temperature of the butter when the separation occurs is 62 degrees to 64 degrees. Butter is worked on an old-fashioned hand lever worker, and salted with Warsaw salt—one ounce to the pound. It is packed in three, five, 10, 24, 32 and 62-pound packages, as preferred by customers. Nearly one-half of the product is sold to the hotels in the Adirondacks, at an average price of 21 cents; the remainder is packed in 62-pound Welch, spruce tubs, and put in cold-storage in the creamery buildings. There are about 2,500 packages or 155,000 pounds now in store at the six creameries, which will be shipped, it is expected, about the first of November. The cows are mostly natives with a small number of low grades, mostly Ayrshire and Short-horns.

The first special churning done at this creamery was of cream from the dairy of native cows belonging to Mr. Solomon Brelia, one of the patrons, and included 200 pounds of milk, drawn from the cows Saturday night and Sunday morning, mixed at the creamery and centrifuged Sunday morning at ten o'clock. It was put into a tin can, and cooled down to a temperature of 40 degrees where it was kept till 7 A. M. Tuesday, when it was taken out, and warmed up to 65 degrees; at 11 o'clock it was cooled to 60 degrees, put into a Stoddard Churn, which was revolved by hand power at a speed of 60 revolutions. Separation occurred in 25 minutes; buttermilk was drawn off and the butter washed in ice water in the churn until no milk was visible in the water drawn off. Before the butter-milk was drawn off, a small handful of salt was put in the churn, to facilitate separation. When taken from the churn, the butter was in the granular state, the granules being about as large as kernels of wheat. It was salted on the creamery worker, with Warsaw salt—one ounce to the pound—and worked till quite dry. When finished it was pronounced by Mr. W. H. Gilbert, of Richland, under whose supervision the work had been done, as of very good quality. Product 8¼ pounds of butter; ratio, one pound of butter to 24.24 pounds of milk. After dinner, the few ladies and gentlemen in attendance repaired to a large hall near by, where Mr. Gilbert explained the objects of the conferences and told how to raise cream, get the most there is in the milk, set and ripen it; work, salt and pack the butter, preserve and market it and to get the best price for it. Col. F. D. Curtis, of Kirby Homestead, talked to them in his pleasant, familiar way, telling them how to feed, what to feed, when to feed, and the breed of cows to feed to make dairying profitable. The cows must be good ones, of whatever breed they may be; there are good cows amongst the natives, and there are very poor ones, just as there are amongst the "bloods." Not all the Jersey, Guernsey, Holstein, Short-horn or Ayrshire cows are good butter cows. There are *poor* cows in all breeds. Don't keep a cow, no matter of what breed she may be, or how much she cost you, that will not earn a profit. Hunt them out with the scales, and, when you find one that is sponging her living sell or shoot her. Milk only cows that will pay for their board and give you a surplus. Provide warm barns and stables. Seed pastures with milk-producing grasses; rid them of noxious weeds. Give the cows access to salt and plenty of pure water every day. Feed a well-balanced grain ration—cotton-seed meal, wheat bran, linseed meal, pea-meal and ground oats are the best feeds for milk production because they are foods that produce bone and muscle. Build silos; study the science of breeding and feeding. Do not allow your cows to go on strike four or five months of the year. Change largely to winter dairying. Three-fourths of the butter made is made during the months of June, July and August. Results, an over-supply, glutted markets, and low prices; make only butter of the *best* quality, which always commands the *best* prices. Three-fourths of the butter made and thrown on the market is fit only for grease. Don't make that kind of butter. It is just as easy to make good butter as to make poor butter; but to do it you must have clean utensils; sweet, and neat dairy rooms and storage; stables kept free from filth and odors; clean and healthy cows, which must be fed and milked regularly by careful, intelligent help. With such cows and appliances and the adoption of modern methods, you will succeed as a dairyman, making the business both pleasant and profitable; without them you will fail. C. W. J.

Miscellaneous.

CORRESPONDENTS' VIEWS.

Intensive versus Extensive Farming.—The year 1889 has demonstrated more than it has been shown ever before (in the Cotton Belt, at least,) the folly of *extensive* farming and the benefits to be derived from the *intensive* system. Every patch of cotton, within my own observation, that has been fertilized, no matter how poor the land, looks well, though, owing to a six weeks' drought at planting time, we did not get a stand of cotton till June 10, two months later than usual. Since then we have had 45 days on which the ground has been too wet to put earth either to cotton or corn. As a consequence, there are hundreds of acres of both that are given up to grass and weeds, and are a standing monument of the folly of pursuing the "extensive" system. No cotton raiser should plant a greater number of acres than he can cultivate well regardless of seasons. If he will manure what he does plant, he will make far more, one year with another, than by farming on the "extensive" plan. Having less land in cotton, we can plant more in feed crops, keep fatter stock, and more of them, thereby increasing our supply of fertilizers, enabling us to plant a little more every year on the "intensive" plan. G. H. F.

Denmark, Mississippi.

Preparing Corn Ground.—There are many ways of preparing the ground for corn, and each doubtless has points in its favor according to the soil to be planted and the latitude of the locality. But here in northern Illinois we have a method of preparing sod for corn, which is growing in favor, though not generally known and adopted. The sod should not be pastured in the spring as a good growth of grass is one of the chief elements of success. Then from the 10th to the 20th of May the sod should be plowed five or six inches deep with some plow that will cover well the grass and weeds and turn the sod over flat, or at least without kinking and breaking it too much so that it can be harrowed well with a smoothing harrow and a mellow seed-bed be prepared without disturbing the sod and tearing up the grass. We then plant two kernels to a hill about 18 inches apart, in rows one way with a two-horse planter: rows three feet 10 inches apart. A cultivator can be used without tearing up the sod and the corn will respond grandly. We do not plant till the first of June when all danger of cut-worms is past. I have a piece planted the 3d of June, which at the present writing I believe is fully equal to any planted a month before on equally rich land. Many who saw me preparing the ground shook their heads and talked of failure, offering to help me out by giving me some extra early kind of seed corn. But I planted our common field varieties and I begin now to hear words of praise for my nice corn from those same individuals. Our soils are black loose loam on creek bottoms and yellow clay on the ridges. This is a limestone country. There may be nothing worth trying or novel in this for many of your readers, yet it may be useful to some. The most perfect field of corn I ever saw was raised in this way but they went through it once with hoes and twice with a cultivator. W. S. S.

Joe Davies County, Ill.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

PILLOW-SHAMS, according to the opinion of most men, are a nuisance and a humbug, yet unquestionably, if one wishes a

regularly-used bed to look always smooth, they must be used. True, a very pretty effect is produced by using a colored spread and a round bolster during the day, the bolster being covered with the same material as the bed-spread, gathered into a frill at either end, and there tied with bows of ribbon. The handsomest of these covers are made of figured draping silk or embroidered satin sheeting, but they are very pretty in figured art muslins, such as are sold for curtains. According to the English mode, the bed-spread is bordered with a frill nine inches deep. Again, the bolster may be covered with colored silesia or sateen—pink, orange and pale green are the prettiest colors—and then the outer covering may be made of fine dotted swiss, frilled at the ends, and tied with ribbon of the same color as the lining. The bed-spread should be of swiss, bordered by a nine-inch frill, and lined with the colored silesia.

* *

STILL, to many people, nothing is so desirable as pure white for bed-covering; in such a case fine muslin shams and a heavy Marseilles spread are prettiest. We care little for lace bed sets; unless of exceedingly good and consequently expensive lace they are very vulgar; often they are much out of place. Similarly, bureau covers and mats of lace and ribbon are pretty enough, yet out of place for moderate purses. It is not only their original cost that is objectionable, but their perishable quality, for once soiled, there is no possibility of renewing them without ripping them apart, at least. Fine linen, open-hemmed and embroidered in washing silk, makes the prettiest and most durable covers for washstand and bureau. The fringed linen covers are very pretty, but the fringe never looks so well after washing as before, no matter how carefully it is laundried. The same may be said of carver's napkins, tray cloths, or beaufet scarves. These three articles last named are very pretty and artistic when the white cloth is embroided in some bold designs with white rope linen, or a mingling of white and gold. The same style may be used for table runners or over-cloths, to be laid on the white damask of the dining-table. An over-cloth of fine white butcher's linen, embroidered in gold or pale green, with a fancy pot containing a low-growing fern in the center, will make a very plain dining-table a thing of beauty.

MAKING COLLECTIONS.

OLIVE E. DANA.

I THINK it is one of the best and happiest recreations that any young person could have—a hobby and a habit in every way safe, wholesome, and delightful—this of making "collections." I was reading the other day in a bit of informal reminiscence, how a popular author, of growing repute, who speaks through his books and from his editorial chair to I don't know how many thousands of young people, treasures still his specimens: a hundred or more birds' eggs, with many nests taken after the birds had left them; an album containing hundreds of postage-stamps, a tray of shells, and minerals, cards, and old coins, gathered all of them in his boyhood.

If I were a boy, I should want almost as many. I should want the birds' eggs, and the minerals, and the coins; and still another collection of woods. A girl might have such collections also, in addition to her herbarium. Who wouldn't rather have such a one, than the most elaborate piece of fancy-work? How much more strength and pleasure would go to the making of it; yes, would *come* with the making of it! And what happy memories would make it doubly precious!

But there is another sort of collection that I wonder young people don't oftener try to get, and that is a collection of books. Perhaps it is the very abundance of books, and the easy access to school and town libraries that make many people so indifferent to the charm of ownership. But the joy of possessing even a few loved volumes has only to be experienced to be appreciated, and is enough of itself to make one long for more, and, once begun, the little library grows as if by magic. One mistake which young people often make, and which helps to discourage effort in this direction, is that of thinking that, as in reading, one must start with certain "standard" works, whether he likes or enjoys them or not. One might adopt and adapt Carlyle's advice to a young student, and say: "BUY the first book you honestly desire to own or read." That will lead on to others, and books so chosen are likely to be valued.

I would not at first, unless my means were very ample, make any pretense of "departments," though I would have, if possible, a variety. And I wouldn't care for so-called "classics," unless I happened to really want them. I am not sure but I should begin with books of and about the present, and perhaps go back from that to the past and come down, after the usual fashion. And I think I should let some of the living writers who know so well how to do it, re-tell to me, with the light of to-day upon them, the old stories of history and mythology, invention and biography.

I should, if my means were small, look for cheap editions, with, however, good print, *always*, and usually serviceable bindings. The publications of John B. Alden, of New York, are excellent, various, and marvelously cheap. I should study his catalogues, and those of Wanamaker of Philadelphia. And I would look for shop-worn copies of desirable works at the book-stores, where space is often given to such bargains. I should be willing to do without other indulgences, I am sure, for the sake of adding to my store, and it would soon be understood, at holiday time, that books are more acceptable than anything else as gifts.

Carlyle advises us to begin with "history, and especially the history of one's native country." And I think I should like among my books, after I had secured a few "must-haves" in the way of reference, etc., and maybe a volume or two of poems, some works of American history and biography,—for biography tells history, we all know, in the most graphic and readable way.

Both are combined in some of the volumes of the "Riverside Library for Young People," published by Houghton, Mifflin, & Co., of Boston, at 75 cents per volume. Two of the series are especially to be commended: Mr. Horace E. Scudder's "Life of George Washington," and "The American Revolution" by John Fiske. And there are other biographers that help to tell the story of our country, and make good reading, also:—the lives of Benjamin Franklin, of John Adams, of Lincoln, Grant and Garfield, of Clay and Sumner and Daniel Webster; and I should want sketches of authors, too. Mrs. Bolton's "Famous American Authors" is one of the best of such books; and still another pleasant volume is Mr. Riding's "Boyhood of Living Authors." I would not reject altogether "paper covers." I have some which have done excellent service for years. I know of more than one such series in which valuable works are issued. There are some excellent ones in the "Riverside Paper Series," representing really famous authors as well as popular ones. One of Mr. Aldrich's stories comes in this series; one of Hawthorne's most famous and powerful works; one also by Prof. Hardy, with more to follow. Roberts Brothers had an inviting list in paper covers last year, which is probably continued; and the Lippincotts issue some very desirable things in cheap compact form. One would not buy many, of course, in unsubstantial binding, but a few, well chosen and carefully kept, are not amiss.

WHAT AILS THE BABY?

MRS. G. H. ROWELL.

"DO you think my little darling is sick?" said Mrs. Watson, as she seated herself in a camp chair, on Mrs. Williams's porch. "He cries all the time; I do not get one minute's rest in the whole 24 hours; the doctor says he is well enough, and it is only a habit he has got into. I give him soothing sirup, but he does not sleep over five minutes at a time. I do believe he will wear me out," and the poor woman drew a weary sigh, as the little eight-months-old babe set up a stentorian yell.

"He has strong lungs, any way," said Mrs. Irving, "let me take him a few minutes and rest your arms. I wonder if the little fellow is thirsty," and she carried him into the dining-room, to get a glass of water, followed by his mother, exclaiming:

"Oh, Mrs. Irving, do not give him water, it will give him the colic, sure."

"Not give him water! Why babies ought to have water, I always give it to mine. I believe that is what makes him fret. Just let me give him a drink, and if he has the colic I will come and take care of him. Look here, see how he craves the pure cold water," and the little fellow greedily clasped the goblet, and drank freely. "That is plenty for once; I hope baby's mamma will not think that water will hurt him again; it is better than a dozen bottles of soothing sirup; that makes him feverish. I think babies often suffer for the want of water, their little throats get parched and dry, and when they are teething they have fever in their mouths, and they need water."

She sat down with the little one on her lap. Mrs. Watson wiped the perspiration from her face, exclaiming:

"What a warm day! I do suffer so much from the heat this summer! The baby is so hot all the time. I declare he is going to sleep with you! What a wonder!

"It seems as if you had a good deal of clothing on him for such a hot day," and she raised the embroidered dress skirt, and then a ruffled cambric skirt, an embroidered flannel one, and a foot blanket! She actually screamed with astonishment.

"Why, Mrs. Watson, I do not wonder the baby cries! You or I would cry and fret if we were bundled up in this way such weather as this. Poor baby! How he must suffer with the heat! And he ought to be in short clothes, so he could kick and have the free use of his feet and legs. I do not wonder he cries. I should in his place."

"I hate to put him in short dresses; babies look so sweet in long robes. I supposed little ones ought to be dressed warmly."

"Of course, in cool weather; but I should not want to roast them, and such a weight of clothes must be burdensome too." said Mrs. Irwin, as she adjusted the carriage pillows and laid the little fellow down on his side; his mother looking on.

"Oh please, Mrs. Irving, lay him on his back, I always lay him straight."

"What for? It is not a natural position to rest in. Babies always rest better lying on their sides, as well as other people;" said Mrs. Irving. "He will not need anything over him, it is so warm!" Sending back the bright Afghan to his mother.

"Why, you have such queer notions about taking care of babies, I hardly know what to think; it is all so new to me."

"I have had a good deal of practice in raising little ones, and I have been quite successful too, and I think the best way is to keep them comfortable and happy; give them what they need, and what nature craves. I should take off this child's petticoats, and get him into short clothes immediately. Give him cold water to drink when he is fretful, and do not give him medicine to keep him quiet, I do not believe in dosing little ones."

"I must go, but if baby has the colic remember your promise;" said Mrs. Watson as she started the carriage off the porch.

"I will, but if I do not come till then it will be quite a spell before I return your call. He is resting very quietly, you see."

GOLDEN GRAINS.

THE SUNDAY SCHOOL TIMES says that the Christian life is, in all its details, a life of duty. Every act must be measured by the standard of duty. We must, or we must not. If we have habits which we do not feel it our duty to give up, then they must be habits which we ought to feel it our duty to keep up. What it is not your duty to do, it is your duty not to do.....

GOOD HOUSEKEEPING reminds its readers of the fact that secrets are poor property; if you circulate them, you lose the interest of your investment.....

INGERSOLL says that the source of vanity is from without—of pride, from within. Vanity is a vane that turns, a willow that bends with every breeze—pride is the oak that defies the storm. One is cloud—the other rock. One is weakness, the other strength.....

MANY a mother, by the usefulness of her life, fills her children with a desire to be like her, and this desire makes them in their turn unselfish. There are obscure men and women who hardly in their lives utter a word of preaching, yet by their example, they do more to make people around them gentle, truthful and Christ-like, than any 10 who preach but do not practice. It is not those who talk about goodness, but those who are good, that are the light of the world.....

GLADSTONE says that "Darwinism has not been proved to be anything more than a misty idea—the indefinitely shaped outcome of extravagant and idle theorizing." Ruskin speaks of it as a "dim comet wagging its useless tail of phosphorescent nothing across the steadfast stars."....

NOR did such a "hater of ill-grounded old opinions" as Carlyle see anything reasonable in the theory.....

"A good sort of a man is this Darwin, and well meaning, but with very little intellect. Ah, it is a sad, a terrible thing to see nigh a whole generation of men and women, professing to be cultivated, looking round in a purblind fashion, and finding no God in the universe. I suppose it is a reaction from the reign of cant and hollow pretence, professing to believe what, in fact, they do not believe. And this is what we have got to. All things from frog-spawn; the gospel of dirt the order of the day! The older I grow—and I now stand upon the brink of eternity—the more comes back to me the sentence in the Catechism which I learned when a child, and the fuller and deeper its meaning becomes, 'What is the chief end of man?—To glorify God, and enjoy Him forever.' No gospel of dirt, teaching that men have descended from frogs through monkeys, can ever set that aside."..

Contentment abides with truth. And you will generally suffer for wishing to appear other than you are, whether it be the richer, or more learned. The mask soon becomes an instrument of torture .....

MR. MOODY has received from William Mackinson, Scotch shipbuilder, a model of Solomon's Temple made of cedar, overlaid with gold, with many of the smaller articles of solid gold. It is one fifty-fifth the size of the original, having the court, tabernacle, altar, laver, ark, holy of holies, mercy seat, and cherubim in proportion to each other....

ISN'T the Church too often looked upon as an ark of safety rather than as a life boat to rescue the perishing? Stanford says: Only the waters in the ship can sink the ship; but while kept outside, all the heaving deep waters thundering over three-fifths of the globe can work no shipwreck So, while kept outside the Church, the floods of ungodly influence can only help to float it on its voyage of glory, or to lift it to its Ararat of rest.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

"What good to think and then allow
Our gathered thoughts to slumber,
And have our heads, like old cock lofts,
A store for useless lumber?
What signifies philosophy
If we the while abuse it?
Far better have good common sense,
And know well how to use it."

A FEW OBSERVATIONS ON "TABLE MANNERS."

I HAVE often noticed that sometimes parents who are themselves well-bred and naturally refined will allow their children to grow up without some of the most ordinary, the very simplest table manners.

One instance last winter in particular I recall in which the mother, an old schoolmate, a quiet, unpretending woman belonging to an old family, had always moved in good society and was surrounded by all the grace and culture which wealth can bring.

Her daughter, a strong, healthy girl of 15, had without any exception the least idea of the table manners generally in vogue even among the poorer classes, in this enlightened day. As an elderly gentleman, who had noticed the bright, happy girl, fresh from an exciting game of lawn tennis, remarked: "With the right training she will develop into a fine, intelligent woman." In the afternoon Maud had freely given us her opinion for woman's position in the professions like most modern girls, and had declared her intention to study law. But at the dinner-table that evening Mr. Morgan's illusions were dispelled, for a more gross, coarse manner than she displayed I have never seen. The child was strong and healthy, had an excellent appetite, which could have been readily forgiven, save for her method of gratifying it.

Meat, vegetables, fruit, sauce, jelly, sweetbreads, everything through the entire list did she crave, together with bread and butter ad libitum, which, freely translated, means without a limit—she buttered her whole slice of bread unbroken. Everything within her reach she captured.

"How do you like my friend, Mr. Morgan?" laughingly asked the young lady of the house, as they strolled out to the tennis court.

His well-bred, kindly face lighted up with a polite smile, which hovered dangerously between disgust and respect for the guest within her gates.

"Do you wish to know?" he said at last. "My dear Mrs. Moore, your friend has a sweet, intelligent face and will make a grand success of life, but, pardon me, her manners were—" the good breeding of his fathers for generations triumphed, and only a shake of his head finished the sentence.

And I sadly acquiesced, knowing she had

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria.
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria

fallen too low in his good opinion ever to rise, despite her future achievements, unless her manners were very materially improved.

This have I actually seen, and now let me give you a pen-picture of another family—a family of almost ideal manners. Mrs. White has five children, a mature son and daughter, one son 16 and two girls of 12 and 14. None of her children were allowed to eat at the family table until they were 10 years old. Before that they ate at their own table in the nursery, presided over by the nurse and often the mother or elder sister would join them. Here they were taught simple, easy manners, and sometimes papa himself would look in a moment at them during their early dinner hour. They were always told that when they were 10 years old they could eat at papa's table down in the dining-room, and I believe in cases of good behavior they were allowed to eat with papa at dinner on Sundays from their eighth year. They were taught to take their places quietly; bow their heads while the blessing was being asked; the use of their napkins and forks; to use the spoon only when necessary: the knife never save for carving, or spreading butter; to sit quietly; to understand that mamma's "No" was final, and never to pout at or dispute her decision on any coveted dish; never to drop anything, but in case of an accident to say: "Excuse me," and to pick up the silver or food which had fallen, never to say, as one little child did at a ceremonious dinner: "I dropped my cake mamma, and it is dirty."

If the household pets are allowed in the dining-room, never permit the children to feed or caress them during a meal, but have a rug or a special corner where they may lie. They will soon learn this and both dogs and masters will thus learn a useful lesson in manners and obedience.

One of the maxims of our house is that good manners are not to be put on with the dainty "best" dress in honor of some guest, and then carlessly laid aside until on the next occasion when required the dress will be found to need a few stitches, a fresh braid or clean ruche—in a few hurried moments the garment may be repaired. Here the comparison ceases, for good-breeding should become an essential part of a person's individual character, never to be brought out only on great occasions. If all the members of the family would endeavor to be as truly polite, as kind, as thoughtful to each other at the table, as they would wish to appear before strangers even the most unruly dinner group would gradually come nearer to making the meal that ideal we all are striving for—a quiet, restful repast—where all down to the little golden-haired "girlie" bring their best thoughts, feelings and aspirations. And the trials and vexations of the day if not half effaced, are not mentioned. Such were the dear, old gatherings at the close of the day, in my mother's home in those far-off years. Those who made them such are scattered now, father and mother having gone to that "other home" and brother and sisters out in the world. And thinking of that dear old home I often remember that favorite hour and the lessons our mother taught us there. Perhaps a weary, over-burdened mother is now almost despairing over her several little ones because her rules are so often broken or forgotten, and there seems no improvement.

Let me help as well as criticise. In the room which was once my nursery there still hangs as a guide an old, simple and concise proverb, painted on heavy cardboard, which has been the rule, the inspiration of my two children since their childhood, first in table manners, and in their older days in all the trials of life. It is taken from the Greek, written several hundred years before Christ.

"Trying will do anything in this world." Here is another idea I learned the other day. A novel plan which may help many a mother, —which should help I ought to say. The motive is taken from Longfellow's beautiful poem entitled "St Augustine." It consisted of the first verse only.

> "St. Augustine! Well hast thou said,
> That of our vices we can frame a ladder,
> If we will but tread beneath our feet
> Each deed of shame."

In my friend's large, pleasant, cool nursery on her black-board which is a constant source of enjoyment to her children, there were drawn with crayon three ladders, one for each child. There are only seven rounds or "steps" to each ladder, when completed, one for each day in the week. At the end of the day if the fault or "sin" had been conquered, a "step" was added, but if the fault had been committed, the round was omitted from the ladder, the space being left vacant as though broken. I should have said that over each ladder was written the name of the special fault which the child wished to correct. The name was changed occasionally. This time it was "Table Manners."

Every Sunday, Mr. Herbert, with happy, careless Ted, grave, sweet little Madge and little Comfort, (the baby), made their way to the room where the children showed papa their "ladders," sometimes with bright sparkling eyes and occasionally with tear-stained faces and mamma was close at hand to give her counsel. I remember one occasion when conscientious, little Madge as she clung to her fathers hand, said with a sob: "Papa, I tried and tried 'most every day." "Papa" tossed her up in his arms, kissed her and told her to keep on trying, and remember that papa always loved her whether she succeeded or not, "But Madge does try," the little thing repeated. "Mamma says I'm like you. I try to do my best—and Ted forgets sometimes," in a half whisper. Papa carried the children down into the library, where he read them a chapter and told them stories of that beautiful "Child."

I would especially caution mothers not to take their children visiting until they reach a suitable age, unless they have early cultivated good manners. Many a family has been annoyed by the children of a guest, who have never been taught self-restraint or self-government, and who by their loud boisterous ways remind one vividly of a half-starved animal and often completely spoil an otherwise enjoyable meal.

Do not think that I dislike hale, hearty children. An enormous appetite is no disgrace, but rather a blessing to its owner, but it may be quietly and properly appeased. Until children reach that suitable age, I would advise all mothers to let them remain at home while they should themselves visit their friends unaccompanied. If this is not possible they should give up the coveted "outing" rather than inflict the petty faults and grievances of their children on friends or relatives—it matters not which.

Only our virtues, not our vices, do we elderly people strive to carry to a friend's home, and why should not our children be early instructed in "good manners," not the least valuable of which are "table manners?" I have said nothing of technical "etiquette," having confined my remarks to ordinary, simple, good breeding for the dining-room.

REBECCA NEWCOME.

BOARDING AGENTS.

SOME time ago I saw in a paper (I think it was the RURAL) among other suggestions for bringing a revenue to farmers' wives, the keeping of traveling agents for pay recommended. The writer's experience must have been very different from mine, or else different kind of men travel in our locality.

Often a peddler of tinware will be allowed to stop over-night, or to dinner, who seems to expect to pay for the entertainment of himself and horse out of his goods. Very many of them get their bill for half or a third what they would have to pay at the nearest hotel; then the man puts about three prices on his goods, which are apt to be of the poorest quality, and will hardly keep their color until he gets out of sight, and that is his way of making an honest living. He is generally paid by the day and his employers allow him a certain sum for his expenses, but he contrives in this way to keep the lion's share of it.

A friend of mine once kept a vender of pictures and maps over-night. After breakfast he asked what was to be paid, and the farmer told him that if he had anything in his collections that his wife would like, he might settle it with her. But anything she wished for, was so extravagantly high-priced that the farmer's wife said to him that she might better give him his bill entirely, than pay the difference between that and his goods. "O thank you very much; much obliged, I am sure," said the greedy peddler and at once departed to seek new subjects to prey upon

A year or two ago a couple of agents came into a certain neighborhood, canvassing for Bibles. They put up with a farmer whose wife was doing her own work, and had quite a family to care for; they engaged to board and lodge with her while they went through that part of the town, and told her to put a good price on her work. That ought to have put her on her guard; but it did not, and after getting all the subscribers they could, they took her husband's order also for a large Bible, at a war price too, and they were to deduct two dollars from the price of the Bible when it was delivered, and pay their bill at the same time. However, another man delivered the Bibles they had got subscribers for, and the lady was out her board bill and had to pay full price for her Bible, as, of course, rascal number three did not know anything about that little arrangement which the others had made. If that was not highway robbery it was something worse.

Among the traveling agents there are stock and poultry buyers, who will insist on paying for their dinners. Many such are farmers, and know how it is themselves; but a farmer's wife who expects to get pocket-money by keeping agents of any kind is building on the sand. A hook on the screen door is her best protection against all such gentry.

AUNT RACHEL.

COLDSLAW.

BEAT the yelks of two eggs, add a table-spoonful of cream, a small tea-spoonful of made mustard, a tea-spoonful of sugar, pepper and salt to the maker's taste. Put a-half tea-cupful of vinegar over the fire to heat, thicken with a small tea-spoonful of corn-starch, and when it boils remove from the fire and add the above ingredients. Cut the cabbage very fine and pour the mixture over.

COOK.

LAMB CUTLETS.

TRIM the pieces free from fat, and flatten out, if necessary. Beat two eggs, add a little cracker dust, season with salt and pepper, dip in the pieces of lamb and fry slowly in beef drippings until thoroughly done.

MRS. J. G.

HOW TOMATO CATSUP IS MADE AT THE RURAL GROUNDS.

ONE bushel of tomatoes, washed, drained, and cut in half. Put over the fire in a large kettle. Add three large cupfuls of salt, two even table-spoonfuls of Cayenne pepper, two ounces of whole allspice, two ounces of whole cloves, four ounces of grated nutmeg, two ounces of stick cinnamon. Boil slowly two hours. Cool and press through a fine sieve, carefully rubbing through the pulp. Put back to boil slowly for three hours. Care must be given it that it may not burn. Bottle, cork and seal, and stand in a cool place. The proportions here given make an excellent catsup, but as we usually make about 60 pint bottles, we vary the ingredients, adding more or less spice. To some, we have added onions and to other bottles Worcestershire sauce. We have just made some that is strong with garlic, and as the head of the house is especially fond of this flavor, he pronounces it "the best ever made," and declares that of all the ingredients added to tomatoes in catsup-making garlic ranks first. Bottle while boiling hot.

Miscellaneous Advertising.

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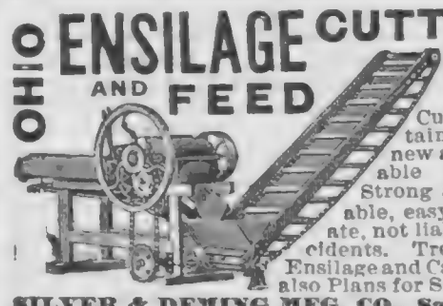

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Prepared only by THOS. BEECHAM, St. Helens, Lancashire, England.

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WILL MAIL BEECHAM'S PILLS ON RECEIPT OF PRICE, 25 CENTS A BOX.

News of the Week.

HOME NEWS.

SATURDAY, August 24, 1889.

THERE is extreme distress among the coal-miners in Spring Valley, Northern Illinois. For refusing to accept the starvation wages offered by the "bosses," they were locked out on April 30, and have been compulsorily idle ever since. Several deaths of women and children have occurred from sheer starvation, while the miserable fare which all have had has been a prolific cause of disease and death. Several times large numbers have been saved from absolute starvation by the charity of neighboring towns, and notably of Chicago. Women are now scattered in bands seeking help through the surrounding country..... Mahone has been nominated by acclamation as the Republican candidate for Governor of Virginia. There appears to be much less discord than usual among Virginia Republicans, and from this and the character of the man in the saddle a very lively campaign is a foregone conclusion.....After much bother, the United States Commissioners to the Chippewa Indians have succeeded in their negotiations for the purchase of 3,000,000 acres of good farming land in Minnesota. This, too, will soon be thrown open to settlement... The Oklahomites, in Territorial Convention assembled at Guthrie last Wednesday, earnestly memorialized Congress for speedy legislation for the protection of the people. No laws now exist for making or probating wills; for caring for sick, insane or blind; for constructing or maintaining public works; for levying any taxes whatever; or for punishing any crimes except those against the United States..... That perennial pest, L. Gardner of Chicago, who lately swindled the public out of $30,000 by a bogus lottery scheme, has just been arrested at Dixon, Wy. T., for fraudulent use of the mails.. .....A professor in the California University, claims to have discovered a method of tanning leather that makes it impervious to water and so pliable as to be almost indestructible.....President Harrison has been enthusiastically received on his Western trip. He is now safe at his old home in Indianapolis.....It is getting to be a pretty general opinion that one of the best selections the President made for his Cabinet was "Uncle Jerry Rusk." Besides managing his Department in first-rate style, he has been popular with all his colleagues and the general public from the first, and his popularity has been steadily increasing without a break..... The latest reports from Hayti indicate that Legitime has almost reached the end of his rope, and must soon surrender to Hippolyte or "go." News from the Black Bepublic is so contradictory, however, that one has to guess at the truth. The French and English are contending for paramount influence; what are the United States doing?.....Before 7:30 o'clock yesterday morning four murderers were hanged together in the Tombs Prison in this city—a pretty good showing for a place in which criminals openly boasted, a few years ago, that hanging for murder was played out. There would have been a fifth were it not that Governor Hill respited him for 60 days at the last moment, although one of our best judges, on the same day, decided that there were no grounds for a new trial.... The location for the World's Great Fair in 1892, is still an exciting question. New York, Washington and Chicago are still the most prominent claimants in about this order, with St. Louis a good fourth. Committees to carry on the agitation and raise the necessary funds have been appointed in all four places, that of New York, of course, transcending all the others combined in the prominence and wealth of its members. To make the show what it ought to be will cost from $10,000,000 to $15,000,000. Washington will want the whole amount or thereabouts out of the National Treasury, Chicago and the other claimants would want at least half of the sum from the same source, New York proposes to contribute the whole herself. Congressional sanction is indispensable to an International Exposition, inasmuch as notification must be sent to foreign nations through the General Government, whose duty it will be to solicit foreign co-operation. The South strongly favors Washington; the West is divided between Chicago, St. Louis and New York, with New York as the second choice of the sticklers for the two other places; the Middle and Eastern States support New York. On the whole, New York is likely to get the show if sufficient money shall be promptly raised to distance all competitors..... .... The Knoxville, Cumberland Gap and Louisville Railroad is a new road. Last Thursday the first train to go over it started from Knoxville with a select excursion party consisting of the City Council, Board of Public Works, representatives of the Chamber of Commerce, and the flower of the business and professional men of Knoxville, in two passenger cars. At Flat Gap, 22 miles from Knoxville, at 10:30 A. M., the train went through a defective trestle and of 65 persons on board 41 were injured. Three are dead and others are likely to die. Help didn't come till 4:30 P. M., and the sufferings of the exposed and helpless wounded were heart-rending..... Henry George threatens to conduct a single-tax campaign all over the country..... There's a strong movement on foot in the South to make January 19, the birthday of Gen. Robert E. Lee, a public holiday. The lower house of the Georgia legislature has passed a bill to that effect without a dissenting vote, and the Senate will undoubtedly take similar action. Some of the papers propose that Congress should make it a National holiday. While Northern papers are generous in their acknowledgments of the many personal virtues of Gen. Lee, they scout the idea of a National holiday in commemoration of him, and find numerous objections to a sectional one. Such a celebration of the birthday of Lee, say they, would inevitably be a celebration of the Lost Cause..... The Fourth Annual Minneapolis Exposition was formally opened Monday, and promises to be a Western—that is—a great success..... .....Monday a ramshackle, flimsy, tenement house on Seventh Avenue in this city, in which 75 persons were kenneled, proved a death-trap for 10 of them. It "mysteriously" caught fire in the kitchen of a fellow who was on the eve of bankruptcy, and had a big insurance on his place.....The debts of Sherman Brothers, grain thieves of Buffalo, amount to $355,000; their assests to possibly $7,000.....A Chicago organ of the Knights of Labor gives the membership now at 600,000 against 300,000 a year ago and 600,000 three years ago. The "deserters" have mostly joined other labor organizations, chiefly the Federation of Labor.....New York City has just placed a heavy loan, to run from 18 to 30 years, at three per cent., and so lively was the bidding that premiums ranging up to 2½ per cent. were obtained. Plenty of capital must be waiting for an assured investment even at a low rate of interest.....At Rockland, Ill., there's a flourishing white community under the complete control of George Schweinforth, who is proclaiming himself not only Christ but God. Religious fanaticism in this country is not a monopoly of the Southern blacks ..... Two more Canadian sealers have been seized by the Rush in Behring Sea and sent to Sitka with a comical prize crew of one man on board of each. They'll no doubt follow the Black Diamond to British Columbia instead. Two others were boarded, searched and permitted to go. This whole business, as at present conducted, appears provokingly farcical. The lease of the Alaska Commercial Company giving it a monopoly of seal fishing in Alaskan waters expires next year. Most of the stock is said to be held in Germany.. . . ..Wednesday the largest tobacco auction sale ever made in this country or the world, was made at Louisville, Ky. Amount 1,002 hogsheads, or 1,500,000 pounds, worth over $100,000.....There's a growing agitation for a great State Park in the Adirondack wilderness. This it is said is the only means of preventing the speedy destruction of the great forests that cover the sources of the Hudson River, by the insatiable greed of corporations..... Under a late ruling of the Interior Department dishonorably discharged soldiers in the late war may secure pensions. Many old pensioners object to being thus placed on the same footing as thieves, cowards, cut-throats, deserters and bounty-jumpers. The new rule, however, will greatly help to reduce that bothersome surplus.... The Dominion Government is urged to do something to prevent the large exodus of Canadian female help to this country. Besides the large number of Canadian women and girls in New England factories, it is said 47,957 are in domestic service in Massachusetts alone.....It is estimated that the capital nominally invested in the various concerns in this country dependent on electricity for their business, from the Western Union Telegraph Company down to the humblest maker of electric appliances, amounts to over $600,000,000. This means that we now pay an annual tax of between $35,000,000 and $40,000,000 for a convenience which was not in existence half a century ago.....Miss Huntington, the pretty and ambitious adopted daughter of Collis P., the great Pacific Railroad $75,000,000 mogul, is reported to be engaged to Prince Francis of Hartzfeldt Weldenberg, an impecunious German noble of a fine old spendthrift family. It is said that he expects 4,000,000 francs from Huntington's hoards to pay off his debts; besides enough to live on generously for the rest of his life..The Agricultural Department, Washington, D. C., was closed Monday out of respect for the memory of Ex-Commissioner Watts who died the other day at Carlisle, Pa. He was one of the best abused men in the country during his term in office; still he had lived an honorable, useful and respected life ever since, just as he had done before his appointment ..... The late forest fires in Montana, extinguished by heavy rains during the week, are reported to have swept over from 8,000 to 10,000 square miles. The September fires in the Michigan pineries in 1881, ravaged only 2,000 square miles; but 15,000 people were rendered homeless and 200 lost their lives. The human suffering in Montana must have been much less, as the region was very sparsely inhabited; but the national loss of timber must have been greater.....Besides the large number of Chinese who illegally make their way into this country from Canada and Mexico every year, many come in by means of fraudulent habeas corpus writs at various ports. Records show that 168 entered San Francisco alone in this way since January 1, in spite of the Scott Chinese Exclusion Law.....John L. having been taken down to Mississippi, tried there, convicted and sentenced to one year's imprisonment, was released on $1,000 bail on appeal to the Supreme Court, which doesn't sit till next February. The Big Slugger at once returned to New York and Boston, and with a lot of other athletic notabilities will soon start "on the road" to "coin money." Kilrain was arrested in Baltimore, released on bail, and has started South for trial..... The Morris Park, the finest race-course in the world, was opened in Westchester County just on the north of New York City limits, last Tuesday. It belongs to John A. Morris, the chief owner of the great New Orleans lottery swindle, and cost $1,500,000, and $250,000 more are to be spent in perfecting all the arrangements. The land alone cost $300,000, and there's a dispute with this city as to the ownership of a small strip of it. The New York Jockey-Club has leased it at a rental based on five per cent. on the capital invested. For the the opening meeting, which began Tuesday, $86,000 were put up in purses. The grand stand, stables and other structures are the finest connected with any such an institution in any part of the world.....The Terry-Nagle-Field tragedy still agitates California and interests the rest of the country. The killing occurred in San Joaquin County of which Stockton is the county-seat, and Nagle was locked up there after the trouble. Terry has more friends in that section than anywhere else, and, like himself, most of them are of a reckless class. It was feared that some of the turbulent element might attack the jail, so the imprisoned deputy-marshal was spirited away, in the gray of the morning, to San Francisco, on a writ of habeas corpus issued by Judge Sawyer of the United States Circuit Court, holding United States Court there, together with Justices Field and Swain. The case was thus taken from the jurisdiction of the State to that of the United States Courts on the ground that Nagle was a United States officer who merely did the duty officially confided to him in protecting Justice Field, member of the United States Supreme Court, the highest Judicial Court in the world. Whether the case will come before the State or the United States Court will not be decided for some time, as the matter will doubtless be taken for final settlement to the Supreme Court at Washington. In any case Nagle is certain to get off scott-free according to the demands of public opinion everywhere. In her frenzy for revenge Sarah Althea Hill-Terry obtained from a partisan addlepate judge a warrant for the arrest of Justice Field on the ridiculous ground that he was a member of a conspiracy to kill her husband. He was at once released on bail by Judge Sawyer. Terry appears to have had property worth about $100,000, which, it is thought, he left to his wife. If so, his son will contest the will on the ground of undue influence. He attributes his father's death to the constant goading of Sarah Althea..... Wails, groans and execrations still come from the afflicted Conemaugh sufferers. The $300,000 with which Governor Beaver was to clear up the valley are expended, and the cellars of over 100 houses in Johnstown are not cleared out, and it is expected that nearly 100 corpses together with other disease-engendering matter are buried there. Several dead bodies are still found every day or two. Over $1,500,000 still remain to be distributed. The interest on the contributions would average over $25,000 a week; who gets it? Houses have been built from the charitable funds by contract labor at Pittsburg and Chicago and put up by imported labor in Johnstown, while resident workmen have been undergoing pauperization from lack of work and consequent necessity of depending on public charity. Even the clearing up of the valley and several other public works have been done principally by imported labor. Pittsburg and Philadelphia merchants have been enriched by the wholesale purchase of goods, while local dealers have been starving because the Commissioners would buy nothing of them, nor would they distribute any of the hoarded charity of the world among those for whom it was intended, so as to enable the latter to patronize local dealers and help to revive trade. A trifling saving was doubtless made by this course, but the best way of disposing of the charity would have been to help the people to help themselves. A large staff of clerks, etc., has been kept at big salaries, and any amount of figuring and tabulating has been done, but little real work. The official nincompoops have mistaken bookkeeping for benevolence.....

There is no use in Dodging.

There's no use in dodging, you can't avoid a plump issue; especially one that comes so straight at you as this.

We say—Compound Oxygen is remedial and revitalizing; now observe what our patients say of us:

ST. PAUL, MINN., March 20, 1888.
"For giving the system permanent vitality and the elimination of disease I believe Compound Oxygen to be far in advance of all medicine or treatment. H. H. COOK.

WEATHERSFORD, TEXAS, April 1, 1888.
"You have my heartfelt gratitude for the good your Compound Oxygen has done me."
MRS. FRANKIE EDWARDS.

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"Compound Oxygen has done wonders for me. Where there is life it will act like a charm." PROF. J. S. HENRY.
Brown's University.

PROVIDENCE, R. I., March 21, 1888.
"Unquestionably Compound Oxygen is a marvelous remedy. Innocent looking, mysterious in its action, but certainly effective."
P. F. JERNEGAN.
MATTHEWS, N. C.

"My health is now better than it has been in five years. I have about one week's supply of Compound Oxygen, and think I am about well. I owe a debt of lasting gratitude to you." REV. J. A. LEE.

HUMANSVILLE, Mo., Feb. 14, 1888.
"Compound Oxygen has been of incalculable benefit to me. I don't like to do without it." H. A. MOORE, Editor of *Dawn*.

We publish a brochure of 200 pages, regarding the effects of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, August 24, 1889.

IN the British Isles during the last month, the greatest public interest has been centered in the fate of a worthless woman—a Mrs. Maybrick. She is an American, who married a Liverpool business-man, proved grossly unfaithful to her marriage vows and poisoned her husband to be able all the better to enjoy her paramour. She was tried for murder the other day, and was defended by Sir Charles Russell, the best pleader in the United Kingdom. With no hesitation the jury found her guilty, and the Judge—one of the ablest in England—fully agreeing in the justice of the verdict, sentenced her to be hanged on August 29. While the vast majority of the people fully agreed with the judge and jury as to her criminality, a very respectable minority believed, not that she was innocent, but that her guilt had not been proved beyond doubt. It was shown by a number of respectable professional men on the witness stand that her dead husband used to take arsenic as a medicine; that the amount found in his stomach would not necessarily have caused death, and that the symptoms during his sickness might be those of an ordinary disease. The case was exhaustively and excitedly tried in the newspapers and debated everywhere; reams upon reams of petitions poured in upon the Home Secretary asking for a commutation of sentence or a full pardon. The long-haired men and the short-haired women and all sorts of enthusiasts and cranks, together with a large assortment of professional and business men and others, joined in the clamor against the verdict. Excitement grew to white heat across the Atlantic and the submarine cables became hot with the electric transmission of every phase of the case to this country. Home Secretary Mathews, himself a distinguished lawyer, after careful consultation with trial Judge Stephens and other eminent lawyers, as well as with notable doctors, finally decided, last Wednesday, to recommend Her Majesty, the Queen, to commute the death penalty to imprisonment for life, not because there was any moral doubt of the woman's guilt, but because there was some doubt that it had been legally proved. The public received the announcement of this issue to one of the most notable criminal cases of modern times, with general satisfaction..... Other transactions in the United Kingdom of late have not much interest for Americans. In Parliament the Irish question, in one or other of its multitudinous phases, has occupied more time than any other—nearly as much as all others combined, indeed; so that the sittings must be extended beyond the usual date to complete the votes on indispensable appropriations; while much needed legislation for the rest of the country has to go to the wall..... Agitation has suffered no diminution in Ireland. William O'Brien, the chronic prisoner for patriotism, is again on trial for holding, in County Cork, a Nationalist meeting which had been "proclaimed" under the Crimes Act, and with him is James Gilhooly, his fellow member in Parliament from the County. ... .Strikes are of course, still perennial in the coal districts in the north and in the iron districts in the center of England, and there's a strike of 10,000 dock laborers in London, besides many minor ones in different parts of the country ..... The Government, although now in possession of the most powerful fleet the world has ever seen, is pushing on the construction of new war vessels as fast as possible. Fifty were added to the fleet last year; and the national dockyards are alive day and night with the work of repairs and construction. Moreover, all the new steamers that carry the British flag to all maritime parts of the globe are liable to pass into the government's control, when needed, to be used either as fast cruisers or for transport service. New coast defences are being constructed and old ones strengthened. Although conscription has few or no advocates, still much care is taken to keep the army in effective condition both as to numbers and discipline, arms and other equipments. Though Englishmen are chronic grumblers, still, on the whole, they see no reason to doubt that their country is the best, bravest, richest, most civilized and most powerful on the globe.....

Miscellaneous Advertising.

SEND 10 Cts. in P. O stamps to **E. & O. WARD,** Produce Commission Merchants, for circular about **Shipping Produce** Also recipe for **Preserving Eggs,** Established 1845.
No. 279 Washington St., New York City.

FARMER WANTED for a large Stock-Farm. One who has had experience in stock raising and feeding, and managing a large number of men; buying and selling cattle, and capable of taking general management and working farm economically. Address
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TREES Root Grafts—*Everything!* No larger stock in U. S. No better. No cheaper. PIKE CO. NURSERIES, Louisiana, Mo.

600 ACRES. 13 GREENHOUSES.
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We offer for the **Fall** trade a large and fine stock of every description of **FRUIT and Ornamental TREES, Shrubs, Roses, Vines, SMALL FRUITS, Hedge Plants, Fruit Tree Seedlings** and **Forest Tree Seedlings.** Priced Catalogue **Fall** of 1889, mailed free. *Established* 1852.
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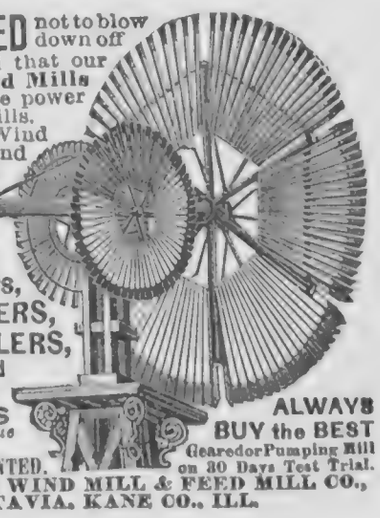

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Good AGENTS WANTED.
ALWAYS BUY the BEST
Geared or Pumping Mill on 30 Days Test Trial.
CHALLENGE WIND MILL & FEED MILL CO., BATAVIA, KANE CO., ILL.

AGRICULTURAL NEWS.

SATURDAY, August 24, 1889.

THE Argentine Republic has addressed a formal invitation to the United States Government to take part in the second International Cattle Show of the Argentine Agricultural Society to be held at Buenos Ayres next April, under the auspices of the Government. The show opens April 20, and closes May 11. Prizes of $2,500 each will be given for various essays on practical subjects connected with Argentine agriculture. Arrangements will be made for exhibiting the principal breeds of cattle, sheep and swine, and agricultural products and implements. The competition in live stock and machinery is to be international, while that in agricultural products is to be exclusively national..... It is estimated that the National Cordage Company, the prime mover in the Twine Trust, will have a surplus of 25,000 tons of binder twine to carry over. This is good news to farmers. Perhaps there will not be such a scarcity another year.....An English farmer not long since was prosecuted by the health authorities on the ground that his silo was a nuisance. The higher courts to which he appealed decided in his favor..... ... The total receipts of live stock at New York and Jersey City last week were 17,105 beeves, 83 milch cows, 6,000 calves, 46,290 sheep and lambs, and 31,636 hogs. The exports from this port were 4,280 beeves, 69 sheep, and 9,440 quarters of beef. From Boston 2,643 beeves and 4,535 quarters of beef. From Baltimore and Philadelphia 2,301 beeves and 1,860 quarters of beef. From Montreal 2,861 beeves and 3,575 sheep. Prime steers are now worth in this market about $1.50 per hundred pounds less than they were one year ago..... Secretary Woodward says a pair of oxen will be exhibited at the State Fair at Albany, which tip the scales at nearly four tons. The fruit and flower show will be on Friday and Saturday, and is expected to be very fine. A butter factory will be in operation on Monday, and the new Swedish butter extractor will be in operation during the week. The railroads have given very liberal rates, and a fine exhibition and large attendance is confidently anticipated.....Delaware has a law for the protection of peach orchards from the yellows. It is unlawful to keep growing any peach, almond, or nectarine tree infected with this disease.....At present, 34 States observe what is known as Arbor Day. Nebraska started the movement 17 years ago, and it has proved a source of great benefit to her.... The Le Conte Pear formerly supposed to be free from blight, is reported to be badly affected in Georgia and Texas..... Kalamazoo, Mich., expects to realize $1,000,000 for celery this year. The crop is grown mostly by Hollanders, and few have more than two or three acres each.....The Grangers of Colorado combined to purchase their binding twine, the past season, of a manufacturer who was not a member of the Twine Trust. The secretary of the State Grange says that the twine has given good satisfaction, being of excellent quality, and cost several hundred dollars less than it would have cost in the Denver market.....Several cows which had died very mysteriously at Jersey City, were found upon investigation to have been poisoned by refuse from some chemical works..... California wheat-growers are doing a wholesale business in wheat harvesting. They have harnessed the traction engine to the combined harvester, and one of them cutting a 40-foot swath, will harvest 80 acres per day, ready for market. The engine is a straw-burner, and is said to consume not more than 30 per cent. of the chaff blown out of the thrasher. The drive-wheels are eight feet high, and the other parts are proportionately large. The header of this mammoth outfit is jointed in the center, and has two reels and two sickles, so that it can accommodate itself to inequalities of the ground. The power is furnished by a 50-horse power boiler. The traction engine runs the header, while the separator is run by a small, separate engine. The traction engine is also used for plowing, and can draw six six-horse gang plows, day and night, thus doing the work of 72 horses. Another advantage the engine possesses over horses is that it eats nothing when idle. Is it possible for the small farmers of the East to successfully compete against such odds?..... The Society of American Florists has been in session at Buffalo during the week. The Massachusetts Horticultural Society invited the Society to hold its 1890 meeting in Boston, and the invitation was unanimously accepted. Robert Craig of Philadelphia read a paper entitled Elevating Our Business, in which he agreed that the specialist achieved the highest success. A resolution was adopted favoring Dr. F. M. Hexamer of New York for Commissioner of Agriculture and Horticulture for the World's Fair of 1892, and John Thorpe of Pearl River, N. Y. to represent floriculture. The Society also petitions Congress to establish a floral school. Why not? Then why not the poultry-men petition for a poultry school; the fruit-growers for a pomological school; the sheep-breeders for a school of instruction in sheep-husbandry, etc.? Why not?..... The Farmers' Alliance Exchange of Florida has taken steps toward making Jacksonville the home market for Florida cotton. It has for many years been marketed at Savannah, and other points. The first bale of short-staple upland ever auctioned at Jacksonville was sold Wednesday. The bale weighed 579 pounds, and the cotton was of fine quality. The bale was placed in a wagon and driven through the principal streets preceded by a band of music, after which it was sold for 17 cents per pound. The Clyde S eamship Line will bring it to New York free.....Axtell tried at Chicago on Wednesday to lower his record of 2:14¾. He failed to make as good time as his previous record, making the mile in 2:15¼.....The farmers of Warren, Hunterdon and Sussex Counties, N. J., had a reunion on Wednesday.....

FIVE HARVEST EXCURSIONS.

THE Burlington Route, C., B. & Q. R. R., will sell, on Tuesday, August 6th and 20th, September 10th and 24th, and October 8th, Harvest Excursion Tickets at *Half Rates* to points in the Farming Regions of the West, Southwest and Northwest. Limit 30 days. For circular giving details concerning Tickets, rates, time of trains, etc., and for descriptive land folder, call on your ticket agent, or address P. S. EUSTIS, Gen'l Pass. and Ticket Agent, Chicago, Ill.—*Adv.*

Crops & Markets.

SATURDAY, August 24, 1889.

THE WEATHER during the last week has been much more favorable for harvesting and thrashing, although it has been rather cool for corn. There have been some local rains, but these have been needed where they have been heaviest. The Northwest had begun to suffer from drought in some parts, and the rains were very welcome.

WHEAT is thrashing out better than was expected, although much of it is rather damp. The demand for wheat continues good for all the interior mills, consequently the receipts at commercial centers are light. Brazil has imposed a heavy duty on all flour imported into that country, but wheat comes in free. English capitalists have invested large sums of money in the erection of flour-mills on condition that flour should be subjected to the maximum duty. This law has just gone into effect. Wheat is admitted free, and several cargoes of over 100,000 bushels each have already been contracted for. This will be good for the grain markets, but bad for the mills which have been shipping flour to that market for many years. The Argentine Republic is also under the same conditions. The Portuguese Government has also imposed a heavy duty on all foreign grain, and before it can be received, it must be shown that the consignee intends mixing each bushel with two of native growth. Protection of home industries seems to be contagious.

CORN is improving, but will require considerable warm weather to mature a good crop. The receipts of old corn are considerably increased; prices have changed but little.

OATS and other grains have been dull, and but a moderate trade is reported. Oats are a heavy crop, and the price is not likely to rule very high. There is no demand for barley yet. Large quantities of Timothy seed are offered, and the price is likely to rule low.

CHEESE has developed a stronger tone, and the market is steady. At Utica, July cheese is reported about cleaned out. Sales were reported at eight to nine cents. Little Falls sold the bulk of the offerings at eight to 8¼ cents. The Northern markets ruled somewhat higher, ruling at 8½ cents, taken mostly by Montreal buyers.

BUTTER is dull at present, excepting for the best grades which are in demand at outside quotations.

HOPS, from present appearances, will fall much below what was expected. The yards in central and northern New York have suffered considerably from mildew and blight. It is estimated that the crop will be shortened from one-fifth to one-third. Picking is progressing rapidly, and some sales are reported at 21 to 25 cents, although some buyers have been endeavoring to contract for 15 cents. Several counties in Canada report great loss to the hop crop from rust and blight. Many yards are totally destroyed. Reports from Washington indicate a good yield on that coast. The acreage is said to be 33 per cent. greater than last year, and the yield is expected to be 10 per cent. less per acre, so that the aggregate yield will be greater. The hops are said to be of good quality.

FRUITS are in large supply in this market, but the best qualities sell readily at outside figures. Several car-loads of California fruit are sold daily at auction, consisting of Orange, Honey, Strawberry Cling and Late Crawford Peaches; Tokay, Muscat, Black Prince, and Rose of Peru Grapes; Bartlett Pears; Golden Drop and Gross Prunes, etc.

PEACHES are quite plentiful and show quite a range in prices. Some parts of New Jersey report the peach crop very badly injured, probably not over half a crop. Good apples are scarce and sell at good prices. Good pears and plums command outside quotations, but poor grades go very slowly. There is a demand for the best quality of grapes at high prices, but others are slow of sale.

MANY of the muskmelons offered are in poor condition, and go very slowly. Prime ones are in demand. More care should be exercised in packing all kinds of fruit. They should be carefully graded, as it does not pay to ship poor fruit to this market.

VEGETABLES are in a fairly good supply. Potatoes are a trifle lower; sweets are very plentiful, and the demand is not large. Cabbages are large and fine and prices continue low. Tomatoes are lower, and receipts are very heavy. Corn maintains a good price. Onions are far in excess of the demand. Lima Beans are lower.

POULTRY is becoming more plentiful, and, with the exception of turkeys and geese, is somewhat lower. It will pay better to ship poultry alive, putting them in coops as directed in previous issues of the R. N.-Y. Send nothing but fat ones, and don't think you can crowd in a few poor ones and get equally good prices. It will pay you better to bury them at home.

EGGS are advancing slowly in price. Strictly fresh eggs, and this does not mean eggs that have been held for several weeks, will bring outside quotations.

HAY is in fair supply, and prices for a prime article are well maintained. The quotations are for old hay; new is selling for 55 cents to 85 cents.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, August 24, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	8¾	9	.....
Strict Ordinary	9 3-16	9 7-16	.....
Good Ordinary	10⅛	10⅜	.....
Strict Good Ordinary	10 9-16	10 13-16	.....
Low Middling	11 1-16	11 5-16	.....
Strict Low Middling	11 5-16	11 9-16	.....
Middling	11⅛	11¾	.....
Good Middling	12	12¼	.....
Strict Good Middling	12¼	12⅝	.....
Middling Fair	12 11-16	12 15-16	.....
Fair	13 5-16	13 9-16	.....

STAINED.

Good Ordinary	8⅝	Low Middling	10 3-16
Strict Good Ord	9¼	Middling	11

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

POULTRY.—Chickens, spring, per lb, 9@11c LIVE Fowls, near-by, per ℔, 10@10½c: fowls' Western, per ℔, 10@10½c; roosters, per ℔, 6@6½c; turkeys, per ℔ 10@12c; ducks, western, per pair, 50@0.70 geese, western, per pair, $1 15@$1 40.

POULTRY.—DRESSED—Turkeys, mixed, per lb. 12@13c; Fowls, western, choice, 11@11½c; do common to good, 10½@11: Ducks, spring, good, 10@16; Squabs, white, per dozen, $2 50@——; do dark, do, $1 50@——; Chickens, spring, 10@18c; Fowls, near-by, 12@13c.

GAME.—Plover, per doz, $1 25@$2 00; Snipe do, do, $2 00@$2 25, Woodcock, per pair, $2 25.

HOPS.—State, 1888, best, 16@17c; do, prime, 15@16c; do, low grades, 10@12c; do do, 1887, 5@8c; do do do California, common to prime, 12@13c; choice, 14@15c.

HAY AND STRAW.—Choice Timothy, 95@$1 00; do good do, 85@—c; do medium, 70@80c; shipping, 65@70c; do, Clover, mixed, 60@70c. Straw.—No. 1, rye, 70@75c; short do 50@55; oat, 40@45c.

BEANS.—Marrows, new, $2 40@$——; new mediums choice, $2 30@2 35; pea, $2 30@$2 35, red kidney, $3 50; white kidneys, choice, 3.00@——; foreign, mediums, 1 35@1 55; California Lima, $3 60@$——; green peas, $1 40@$——.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 7¼@7¾c, and farmers' grades at 5@6c. Pecans, 5@7c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Jersey, per bbl., $1 25@$1 75; Long Island, do, $1 75@$2 00; Sweets, do, $1 00@$4 00; Cabbage, new, per 100, $1 50@$2 50; Cucumbers, per 3,000, $1 25@$1 50; Egg Plant, per bbl, $2 00@$3 00: Tomatoes, per crate, 35@40c; Corn, per 100, $1 00@$1 75. Onions—Orange Co. Red, 50c@$1 25; Potato, per bbl, $1 25@$1 50; Jersey White, $1 75@ 2 00; State, Yellow, $1 50@$——; Lima Beans, per bag, $1 25@$1 50.

FRUITS.—FRESH.—Apples, per bbl, $1 50@$3 00 Peaches, per crate, $0 50@$1 25; do, per basket, 30c@$1 50; Huckleberries, per qt, 4@6c. Muskmelons, per bbl, 50c@$2 50; Watermelons, per 100, $5 00@$25 00; Plums, per bbl, $2 00@$5 00. Grapes, best, per lb, 10@20c; do poor, 3 6.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5¾@6c; do new, common to prime, 4½@5⅝c; sliced, new, 3@3¾c; quarters, 3@4¼c; chopped, 2¾@3¼c; cores and skins, 1½@2c. Cherries, new, 8@11½c. Raspberries, new, 19@20c. Blackberries, 3@4c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 12@14c; do do, unpeeled, 6@6½c; Georgia, do, peeled, new; 12@14c; do do do, 7@8c; do do, sundried, 3@9½c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 11 75@12 50, short clear, $12 25@12 75; Extra Prime mess, $10 25@$10 75 prime do, $10 75@$11 and family mess, $12 @12 50. BEEF—India Mess, in tierces, $12 00@14 Extra Mess, in barrels, $6 75@—— Packet, $7 50@$8 00 per bbl, and $11@$12 00 in tierces; Plate, $7 50@8 00; Family at $11—@$14 HAMS—$16 00@$16 25, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 7@——c; Pickled Hams, 10¾@11c; pickled Shoulders, 4½@5c; Smoked shoulders 5¾c; do Hams, 11½@11¾c. Dressed Hogs.—City, heavy to light, 5½@6⅜c. Pigs, 6¾c. LARD. City steam, $6 20; September, $6 43; October, $6 38; November, $6 25, December, $6 20; South America, 7.35c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, PA.—PROVISIONS.—Potatoes, Maryland Rose, per bbl, $1 50@$1 75. Provisions were steady. BEEF.—City family, per bbl, $8 00; do, packets, $8@8 50; smoked beef, 12@14c; beef hams, $16 PORK.—Mess, $13 50@$14 50; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 12@14c; do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6½@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8¼c; bellies, in pickle, 8@8¼c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6½@7.

CHICAGO.—MESS PORK.—$9 65@9 70 LARD.—$6 02@$6 05 per 100 lbs; Short Rib sides (loose), $4 95@5; dry salted shoulders, boxed, $4 75; short clear sides, boxed, $5 37@$5 50.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 19@19½. Elgin, best, 19c; Western, best 18@——; do prime, 15@16½c; do good, 13½@14: do poor, 11@12. State, Dairy, half-firkins, tubs, best, 17@——c; do do prime, 15@16; do do fine, 13½@14½; Welsh tubs, fine, 15@16c; do do, good, 13½@14; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 13@14; do fine, 11½@12½; Western dairy, fine, 12@12½c; do fair, 10½@11c; do poor, 9@10c; do factory, fresh, best, 12@——, do prime, 10½@11; do good, 9@9½; do poor, 8@—c.

CHEESE.—State factory, fancy, 8¾@8⅞c; do do fine, —@——c; do do, prime, 7¾@8⅜c; do do, fair to good, 7¾@—c; Ohio, flat, prime, 6@7c; do good, —@—c; do, good, —@—; Skims, light, 5@6c; do medium, 2@3; do full, 1@2c.

EGGS.—Near-by, fresh, 18@18½c; Canadian, 17½@18c; Southern, 16½@17c; Western, best, 17@18c.

PHILADELPHIA.—BUTTER dull. Pennsylvania creamery extra, at 17@18c; Pennsylvania Prints, extra, 28@27c; B.C. and N.Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were firm; Pennsylvania firsts 19@——c; Western firsts, 17@18c; Cheese dull—steady; demand fair; New York full cream, at 8½c; Ohio flats, choice, 7¾@7½c; do, fair to prime, 14@14½c.

CHICAGO, ILL.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Fancy creamery, 15½@18c; choice Western, 15@15½c. choice dairy, 12@15c; common to fair, 9@10c. Eggs firm at 14@15c.

GRAIN MARKETS.

WHEAT.—Ungraded Winter Red, at 60@86¼c, No. 3 Red, 77c elevator, steamer; No. 2 Red, 83c elevator; No. 2 Red 88c elevator; No. 2 Red, 85¼c elevator, 85@86¼c afloat (according to quality), 87⅞c free on board; No 2 August, 84⅞@85c: do September, 84⅛@84 5-16; do October, 84⅝@84 13-16; do November, 85¾c; do December, 86¾@87 1-16c: do January, 88¼c; do May, 91⅝@91⅞c. RYE.—In light supply and held firm; Western quoted 52@52¾c; State, nominal, none offering. CORN.—Sales—Ungraded Mixed at 43½@44½c; No. 2 Mixed at 44@44¼c, elevator, 44@44⅜c, afloat; No, 2 August, 44c; do September, 43¾@43⅞c: do October, 43 13-16@43 15-16c; do November, 43⅞@44c do December, 43⅞@44c. OATS.—Sales—No. 3, 26c; do White, 27@27½c; No. 2, 27¼@28c elevator, 28¼c delivered; do White, 20@32c, new and old; No. 1 White, 37c; Mixed Western, 25@29c; White do, 20@38½c; No. 2 August, do September, 25 5-16@26⅜c; do October; do November; do May, 29½@29⅝c.

LIVE STOCK MARKETS.

New-York, Saturday August 24, 1889

BEEVES.—Ordinary to choice native steers sold at $3 40@$4 75 per 100 ℔, bulls at $1 70@$2 25. Texans and Colorados are quoted at $3@3 60, and are generally of inferior quality. Sales.—Indiana Steers, 1219 ℔ average, at $4 10 per 100 ℔; Kansas Steers, 1487 ℔, at $4 75; Bulls, 1010 ℔, at $2 15; Chicago Steers, 1338 ℔, at $4 20.

CALVES.—Grassers and Buttermilks brought 2¼@3c; Fed, Mixed and Western, 3¼@4¾c; Fair to Prime Veals, 5@6½c: a few selected; 6¾@6¾c; and Fancy do, 7c. Sales.—Buttermilks and Grassers, 218 ℔ average, at $5 50 per 100 ℔; Mixed Calves, 297 ℔, at $3 50; Veals, 201 ℔, at $5; 168 ℔, at $5 50; do. (Fancy), 180 ℔, at $7.

SHEEP AND LAMBS.—Poorest to Best Sheep sold at 3½@5c per lb; Common to Choice Lambs at 5@6¾c, and about a carload of Extra States, in small lots, at $6 85@$7 per 100 ℔. Sales.—State Sheep, 105 ℔ average, at $4 50 per 100 ℔: do, 84 ℔, at $4 50 do, 101 ℔, at $4 62½; do, 117 ℔, at $5 Canada Lambs, 79 ℔, at $6 75; State do, 66 ℔, $6 25; Pennsylvania do, 57 ℔, at $5 80; Bucks, 83 and 120 ℔, at 2¾@3c per ℔; Ohio Lambs, 74 ℔, at 6½c per ℔; Canada Lambs, 74½ ℔, at 6¼c; Ohio Sheep, 106 ℔, at $4 75; Pennsylvania do, 120 ℔, at $4 25; Pennsylvania Lambs, 68 ℔, at $6 25; Kentucky Sheep, 116 ℔, at $4 25; Kentucky Lambs, 68 ℔, at $5 75; Ewes, 113 ℔, at $4; Missouri Sheep, 110 lb, at $4 75; Western do, 90 lb, at $4 50; West Virginia do, 75 lb, at $4; West Virginia Lambs, 52 lb, at $5; Indiana Lambs, 75 lb, at $6 50.

HOGS.—Market quoted weak at $4 50@$4 85.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING AUGUST 24, 1889.

I. D. C.—W. R. M.—R. B.—J. M. C.—L. O. H.—F. A. C.—S. S. K.—G. R. W.—F. L. K.—H. S.—C. H. E.—H. D.—A. C. C.—W. F. B—T. H. J.—W. S. Mr—F. F. & S.—F A. L. R.—M. C. & S., thank you.—C. E. T.—F. E. B.—H S. E. T.—W. A. W.—E. A. F.—Mary Ingram, a first-rate report.—T. H. B.—E. W.—K. B. J.—H A. C.—E. S. B.—W. P. C.—T. H. H.—Mary E. Warren, good.—P. M. A. & S.—T. H. B.

Miscellaneous Advertising.

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Various.

A TRAVELER'S NOTES.

Regretable diversity in methods of farming among neighbors; the sharks swallowing the minnows in other vocations; is the same to be the rule in farming? Are bonanza farms and farming syndicates and trusts to supersede small farms? Certain alleged advantages of such a revolution.

While traveling through one of the best farming sections of America it occurred to me that there is altogether too great a diversity in the methods adopted by adjoining farmers. For example, one farmer uses a harvesting machine; another the antique but largely-used reaper; while a third gets along very well with the old-fashioned cradle. Now, a smart man with a good, four-horse team and a binder could do twice as much work as the three combined. In gathering hay I noticed the same thing. One farmer used a Eureka Mower, another a Buckeye and a third was struggling with a scythe. Neither of the mowing machines was in good working order. A good workman with a good team, with a Eureka or broad-cut Buckeye, could do more work than the three combined. Each farmer struggles along with old-fashioned machines or implements, usually in very bad order, because he needs them only for a few days. It does seem hard for a farmer to carry, say, $500 worth of haying and harvesting tools eleven months in the year when he only needs them for one month, or it may be for only a few days. Are not this diversity of method and want of co-operation among the principal reasons why "farmin' don't pay?" All other industries are managed on the co-operative plan. The small shops have long since been swallowed up by mammoth establishments. The smaller manufacturers and merchants are swallowed up by the larger ones, and the larger ones are in turn controlled by a trust. It is evident that this process increases the profits of the few, and in some cases it is a benefit to the smaller merchant or manufacturer who is employed at a good salary by the combination or trust. However much we may deplore the loss of individuality and personal independence, we must admit that trusts and combinations decrease the cost of production and increase the profits of the producers. These combinations, with the aid of improved machinery, are enabled to produce very much more than formerly with far less manual labor. This increases the profits of the producer, but lessens the demand for labor and injures the market for the farmer's produce by decreasing the number of consumers.

The only thing for the farmers to do is to combine. The stock and fixtures required to work 10 farms of 100 acres each, would proportionately cost three or four times as much as the stock and fixtures of a farm of 1,000 acres. By the use of traction engines, and thrashers, sulky plows, harvesters, and other improved inplements, an enormous saving in labor and cost of production is effected. The land in the East is divided into small farms and it would no doubt be better to keep them as they are if it were possible: but it is a question whether the competition from the large farms of the West is not becoming too great to permit the owner of small farms to make a living on them. One way to overcome the intense competition and reduce the cost of production, is for the owners, say, of a dozen or twenty farms to form a combination; throw down their division fences; make the fields very large, say, 100 acres in each; buy a traction engine, two or more harvesters, and a variety of other new implements; employ cheap foreign labor and the dividends which each farmer would receive would be vastly greater than his individual profits now are. I believe it is only a question of time when we shall see, instead of the thousands of small farms scattered over the country, a comparatively few large farms, and the owners of these farms will be thoroughly organized and able to command very much higher prices for their produce, than is possible under the present system.

H. P. S.

A VIEW OF TRUSTS.

ALL the signs of the times point to an early decadence of the system of trusts which have so unsettled the natural course of trade in this and other countries. This is only what might reasonably have been expected. The individuals composing them are so avaricious and unscrupulous that they do not hesitate at the extremest measures, and thus overreach all bounds, and hasten their own downfall. The Copper Trust exemplified this. Had it been content with moderate profits, it might still be exacting unjust and unnatural prices from those who were forced to use its goods. Another factor which enters largly into the general distrust of these combinations, especially among capitalists, is the nature of their association. To say nothing of the fact that their supposed capitalization is largely water, the method of combination makes investments in their securities very uncertain at the best. It is emphatically a trust; each rogue entering into the agreement must trust to the honesty of the other rogues not to rob him. From the peculiar manner in which they are associated, the individuals holding the stock of the concern are nothing more nor less than partners, as the trust has no legal existence, and is therefore not a corporation. They are, therefore, individually liable for any and all liabilities of the concern. This fact causes investors to hesitate about placing themselves in positions where they are liable to suffer the consequences of acts which they have no voice in controlling.

But the most potent factor in the overthrow of these iniquitous combinations rests with the people who are consumers of the products controlled. If they refuse to buy, or if their purchases be curtailed to a large degree, the sinews of war are taken from the enemy, and the length of time before its ultimate downfall is measured only by the surplus capital at command. Several trusts are now suffering from this condition of affairs. The Jute Bagging Trust tried to rob the cotton growers, but they rebelled and found other means of covering their crop. The Twine Trust endeavored to extort an unjust price from farmers for what they had come to consider a necessity, but every means was adopted to avoid its purchase, and it is now reported that the trust has a surplus of 25,000 tons of binding twine to carry over. The Sugar Trust also has a heavy load to carry. The demand for sugar from consumers has been very much smaller than ordinarily, and stocks of refined sugars have been constantly accumulating. Prices of raw sugars are tending downward, and the future supply is likely to be heavy. People in some instances are using raw sugar, thus leaving the refiners out of the account completely. It seems to be almost or quite impossible to secure legislation to control these combinations, but if the people who purchase their products refuse to buy, it is difficult to see how they can continue to exist for any considerable length of time.

FRANK HADLEY.

Literary.

MAGAZINE REVIEWS.

THERE ARE yet to be found, here and there in the world, some antiquated specimens of humanity who think, or pretend to think, that woman is an inferior creature; that she is mentally as well as physically the inferior of man; that she is out of place anywhere except as a house-keeper, wife and mother, which means in many cases, a slave to a man. Any one with such views should read The Home-Maker for August. Here we have a magazine for women, edited by women, its contributors nearly all women, and yet in the quality of its matter, in its arrangement, and in its general make-up, it will compare favorably with the best. "Cheap Living in Cities" by Catherine Owen, deals with economical methods of making various kinds of bread, which are of interest to many besides city-dwellers. "Cool Housekeeping for Hot Weather" has a refreshing sound, and the article gives many hints for accomplishing that desirable object. The vexed question of a Sunday dinner is very satisfactorily settled. A "symposium" on "Life Insurance" has been running for some months. It gives both sides of the question. Choice recipes for various dishes are given. There is a department for "Our Young People," "Our Baby," "Household Health," "Fashions," etc, The literary department is well filled. "The Twistifications of Molly Malloy" is a very clever dialect story. "In Wonderland, No. IV." deals with bees in California. "Another old New York Homestead" describes the Van Cortlandt Manor-House, and gives sketches of some of the distinguished people who have graced its spacious halls since its erection in 1681 on the banks of the Croton River. "In the Wilderness" tells how a city couple forced to find a quiet place to rest and recuperate, made a barren chamber in a farm-house into a veritable "cosy corner" at very slight expense. A feature of this magazine which pleases the busy reviewer is that its leaves are cut, so that he may plunge at once into its contents. Single number 20 cents. The Home-Maker Company, New York.

DRESS REFORM is coming to occupy a very prominent position in the feminine literature of the day. Magazines devoted especially to this subject are becoming more and more common. One of the most prominent of the reformers, possibly on account of her original and, according to some opinions, somewhat peculiar views, is Mrs. Annie Jenness Miller. The "leglettes" or divided skirts advocated by her, have given rise to a great deal of discussion. She conducts a magazine devoted to the dissemination of her views on the questions of healthful, convenient and appropriate garments for women, as well as to many other subjects closely associated with the physical well-being of the sex. This magazine is very appropriately called Dress. The July-August number, which is the first of volume III., contains a very valuable paper on "Physical Culture," relating to the important subjects of breathing and ventilation. Pure air is a necessity, and anything that hinders its free access to the apartments, or to every part of the lungs, is detrimental to health. Tight lacing is very injurious, and is a predisposing cause of pulmonary complaints. "Diet in Relation to Beauty and Health," is very ably discussed. "Poor Baby" is a very sensible article upon the proper treatment, both physical and mental, of that much-abused and long-suffering, but still ever-present member of society. There are "Fashions in Flowers," "Midsummer Fashions," "The Influence of Dress," and much other information which will be helpful to those who wish to dress healthfully, and yet fashionably. The frontispiece is a fine engraving of Mabel Jenness, one of the editors. Single numbers 40 cents. The Jenness-Miller Publishing Co., New York.

A VERY suggestive story which appears in the Pansy this month shows how true it is that "men are but children of a larger growth." Jamie Stuart gives his little sister "a piece of his mind" because she gave all her pennies to foreign missions, when it was so very plain that she ought to support home missions by buying peanuts of the grocer who had devoted all profits on the peanuts he sold for a time to buying a wheel-chair for a poor lame boy. The gentle little sister wanted to please him, so she bought two cents' worth of peanuts, and gave her other eight cents to the chair fund. But Jamie was still cross, for his interest in home missions all centered in the fact that Delia generally gave most of her peanuts to him. How many older ones have just about as deep-seated and real an interest in home missions as this. The two charming serials by Pansy and Margaret Sidney are continued, and another pretty and practical story is "Dimple's Dinner Party," to which, instead of inviting five little girls once, she invited one very poor little girl five times. D. Lothrop Company, Boston.

THE current number of The Writer is a woman's number, every signed article having been contributed by women. "Women in Journalism" by Mary Twombly, has some very good advice for aspiring women writers. "About Style," and "When to Write," also give very many helpful hints to young writers. There are several short articles dealing with different subjects of interest to authors; queries and answers, hints, etc. The Writer, Boston, Mass.

Miscellaneous Advertising.

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CATALOGUES, ETC., RECEIVED.

THE INDIANS.—The report of the Commissioner of Indian affairs for 1888 is sent by the Secretary of the Interior. What is to be done with our Indians? All who are interested in this problem will find "food for thought" in this ponderous volume. The commissioner, John H. Oberly, evidently believes that the Indian is capable of receiving our civilization. He quotes from Parton's Life of Jefferson the passage referring to the efforts made to civilize Indians at the William and Mary College nearly 100 years ago.

"Indians cannot receive our civilization. If the college had any success with an Indian youth, he was no sooner tamed than he sickened and died. The rest may have assumed the white man's habit while they lived at Williamsburgh, but the very day they rejoined their tribe they threw off their college clothes, resumed their old costumes and weapons, and ran whooping into the forest, irreclaimable savages."

Then Mr. Oberly goes on to try to show that matters are so different now, that the Indian cannot much longer resist civilization. It is to be hoped that this is so. Civilization implies work. There seems no good reason why the Government should support a lot of lazy Indians while the negroes at the South are obliged to support themselves by labor. The reports from the various Indian agents are quite interesting. The agents at Parker, Arizona, must have an interesting community to look after. Nearly all the Indians, he says dress in "citizen's dress" which consists of "an undershirt and a pair of overalls.' "These people know nothing of religion, all they are desirous of is something to eat when meal-time comes." It must be said, however, that many of the agents state that their Indians are becoming quiet, industrious and tractable, and ready to learn, realizing that their only hope for the future lies in civilization. All agree that if liquor could be kept from the Indians the task of civilizing them would be greatly helped. "Bad liquor and bad morals are twins."

After examining this report the R. N.-Y. is inclined to have faith in the future of the Indian. The writer has seen the lazy, worthless "redskins" of the West at their homes. There is little chance for them, but their children may make good citizens. Secretary Teller told the whole story when he said:—"The Indian question will never be settled until you make the Indian blister his hands. No people ever emerged from barbarism that did not emerge through labor." Let those who are to handle the Indians thoroughly understand that, and civilization for the Indian is possible.

GRASSES AND THEIR CULTIVATION.—This is the title of Bulletin No. 7 issued by P. H. Mell of the Alabama Experiment Station, Montgomery, Ala. There is little that is new in this bulletin. It is probably just as well that this is so as the bulletin is intended to interest and instruct a class of farmers who need a Primer before they can be expected to read in a First Reader. Here is one thought that the R. N.-Y. likes:

"There is a wide difference in the quantity of hay that should be fed to cattle. Some farmers give a fixed amount of all kinds of dried grass, hit or miss, in so far as the nutritive ingredients contained in the hay are concerned. Stock are thus sometimes scantily fed, because incorrectly cured hay may not contain enough food to satisfy them. In this day of scientific experimentation, the quantity of food measured to stock should be governed by the percentage of nutritive values the chemical analysis proves the food stuff to contain."

Is hay, hay? The R. N.-Y. has for a long time studied this question. It has been pretty well settled that milk is not milk, that cream is not cream, and that potatoes are not potatoes; that is, it is settled beyond dispute that one sample of milk or cream may be more useful in producing butter than another sample. Potatoes grown on dry, sandy soil may be of a very different flavor or texture from those grown on clay or naturally damp soils. Does the same thing hold true of hay? Take Timothy for example; are there certain soils, manures and climates so favorable to the growth of this plant that a ton of hay grown under these conditions will be more valuable for feeding than a ton grown under less favorable conditions? In other words—is hay, hay? This is a question the R. N.-Y. proposes to discuss. If there is any way of producing a superior quality of hay, we all want to know how it is done.

EXPERIMENTS IN PIG FEEDING.—Bulletin No. 19 of the Kentucky Station. Among the objects sought to be obtained by means of these experiments were the relative merits of shelled corn and corn meal, the value of corn-and-cob meal and the length of time that these foods could be profitably fed. As a result shelled corn is considered better for fattening than corn-meal, 63 days seem the limit of profitable fattening, and cotton-seed meal could not be profitably fed to pigs. The bulletin is not to be compared, for interest or attractiveness, with those on the same subject from New York, Kansas or Wisconsin.

THE EXPERIMENT STATIONS.—Miscellaneous Bulletin No. 1 from the Department of Agriculture gives the proceedings of the second annual convention of the association of agricultural colleges and experiment stations. Those who propose to keep track of the experiment stations will want to read this volume.

COTTON-SEED HULLS AND MEAL AS FOOD FOR LIVE STOCK.—The R. N.-Y. has called attention to the value of cotton-seed hulls in reviewing the bulletins of the Arkansas and the Texas Stations. The subject is continued in Bulletin No. 3 of the Tennessee Station. The station authorities have not conducted any feeding experiments of their own; they merely seek to bring to the attention of farmers a synopsis of what has been learned regarding the value of this food. Here we have a description of the hulls:

"The process of separating the kernels of the cotton seed from the hulls, in the oil mills, consists essentially in crushing and cutting the seeds and dividing the two portions by a system of screens and shakers. At first sight it would seem to be a physical impossibility for an animal to consume any appreciable quantity of the hulls thus produced. They consist of fragments of seed coats one-sixteenth to one-fourth inch in diameter, of dark brown color, very tough and leathery and entangled in a mass of cotton fibers, which still adhere to the outside of the hulls and which the ginning process fails to entirely remove. It is apparently the most dry and tasteless form of animal food which could be found. It is a matter of difficulty to reduce it to anything like a suitable form for analysis. In the mortar it forms an elastic felt, while it is scarcely amenable to any grinding process. Taken into the mouth, it is harsh and dry. Mastication promotes an abundant secretion of saliva as would be only natural with any similar material. It has very little taste and that apparently due to the small particles of the kernel remaining with the hulls. Altogether they possess apparently few inviting features as a food. In spite of this, it is said that animals which have never seen the hulls or meal before, soon acquire an eager appetite for them, and after a few days prefer such a diet to one composed of hay and corn. Probably this is due to the meal rather than the hulls which, as already noted, are well-nigh tasteless."

This is said concerning the effect of this food on the animal:

"From the large amount of fiber on the hulls the danger of bailing up or producing stoppages of the bowels might be anticipated. But we have been unable to learn of a single such case, nor is there even a tendency toward constipation. On the contrary, the effect upon the bowels is loosening which with an excess of meal may develop into "scouring." This is the well known result of excessive feeding of cotton-seed meal in connection with other materials. The hulls and meal seem to be particularly adapted therefore to being fed together, the effects of each counteracting the other."

The investigations conducted by the station indicate that the practice of feeding these hulls with meal as an exclusive diet is a sound one. The food produces a good quality of milk, beef or mutton, and also produces manure of a superior quality and texture.

These experiments are interesting and should be continued. While the R. N.-Y. believes that the most economical way of utilizing these hulls is in burning them for the ashes, it is still glad to see the matter pushed to a definite conclusion.

THE PARIS CONGRESS.—It appears that a "Congress of Agriculturists" was held at Paris last month. Farmers and others interested in agriculture were present from various countries. It was thought best to hold the meeting in connection with the great exposition where all products of the earth were assembled. The R. N.-Y. has received a partial report of the meeting. Most of the subjects discussed related to French agriculture almost entirely. A great deal of time was taken up in a discussion of methods for increasing the value of the grape industry. The Congress recommended offering a prize of $20,000 for the discovery of a Franco-American hybrid vine capable of resisting phylloxera, thriving in marly soils and yielding fruit of good quality."

One of the most thoughtful debates was that concerning the causes of the French crisis. France is a country of very small holdings or farms. Such a division is favorable to the production of grapes, poultry, dairy products and vegetables, but not for grain. The cheap wheat supplies from America, India, Russia and Africa, have a very marked effect upon French agriculture. After much debate the Congress proposed the following remedies for agricultural depression:

1. A judicious selection of seeds and manures, and the establishment of fields for demonstration and experiment. 2. The cultivation of cereals only in districts where they yield a profit. 3. To diminish, by co-operation the profits of middlemen. 4. Protection of each kind of agricultural produce by a duty on imports. 5. The abolition of internal duties. 6. A reduction in the charges of land transfer so as to encourage transactions in land.

As compared with the United States, France is a small and compact country. In discussing these recommendations this fact must be considered. As to the first point, few will deny the value of suitable seeds and manure. Many a farmer keeps himself poor, even in this country, by the use of varieties of plants that are not suited to his locality. Many use their manures so that part of the value is wasted. Those who use chemicals often lose half the money spent by injudicious selection of materials. The second point brings up an old matter for consideration. It is safe to say that in this country many bushels of wheat are grown at a loss, or at least, with no profit, though farmers think they get a certain value from wheat as a "seeding crop." What would be the effect upon our agriculture if wheat-growing should be given entirely to the States at the West where the soil is still strong enough and the farms still large enough to warrant the use of all needed machinery? Would Eastern farmers be better off? What crops could they substitute for wheat? Ten years ago these questions might have been asked concerning corn. The development of the silo, however, has changed that, and now, an acre of corn out of the "corn belt" can be made into silage with considerable profit. The R. N.-Y. is glad to see that even in France the people are disposed to investigate the profits of the middlemen. The "middleman" evidently is found everywhere. He should get his fair share of the money handled and no more.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

FIXTURES ON LAND.

L. S. M, Cedar County, Iowa.—What are "fixtures" on land? Several disputes have occurred of late in this neighborhood with regard to this matter, some insisting that certain kinds of property were "fixtures" and could not therefore be legally removed from a farm on the transfer of said farm to other parties: while others maintained that they were chattels and therefore legally removable. The RURAL'S answers to legal questions of general interest are so full and lucid, that by agreement, at least one dispute here has been left to its decision.

ANS.—As a rule, legally speaking, real property or real estate embraces not only land, but all improvements of a permanent character placed upon it. The term "land" includes not only the ground or soil, but everything attached to it, above or below, whether by the action of nature, as, trees, herbage, stones, mines and water; or by the hand of man, as, houses, fences, etc. In general, whatever the owner of a farm fastens to the ground or to a building, or uses constantly with it as an appurtenance to it, is a "fixture," and passes with the land. Whatever a hirer or tenant, however, buys or makes to use with the farm and fastens to the ground or building in such a way that he can remove it without injury to the object to which it is fastened, may be taken away Manure made from the products of the farm is a fixture, and passes with the land, or remains the property of the landlord on the removal of the tenant. In New Jersey, however, it is held to be personal property, and does not pass with the real estate as a part of it. In North Carolina a tenant may at any time before leaving a farm, in the absence of a covenant to the contrary, remove all the manure made on a farm. Manure made in a livery-stable or from products obtained away from the farm is personal property. A tenant has no right to remove shrubbery or flowers planted by him on a lawn or garden. In Massachusetts tenants are allowed to remove pig-sties, poultry-houses, green-houses and other fixed additions they may have made to the farm, provided their removal does not injure the property of the landlord. In all cases the tenant must remove all removable fixtures before the term of his lease expires, otherwise they revert immediately to the landlord.

Growing trees are fixtures of course; and if the owner of a farm should sell the standing timber and then sell the farm to a bona fide purchaser who has had no notice of the sale of the trees, the new owner of the farm is entitled to them, and the purchaser must look to the seller for damages. Trees that have been blown or cut down and have been left where they fell are "fixtures;" but not those that have been cut into lumber, logs or fuel. If a person should erect a building voluntarily on the land of another without any contract as to its final ownership, it becomes a part of the land, and he has no right to remove it. If, however, he erects the building upon the land of another with his consent, and upon agreement and understanding that he shall have the privilege of removing it, it remains his property. When a farm is sold, the grass or corn not cut and the potatoes not dug go with it. While ripe crops are in one sense considered real estate, however, in another sense they are not, for creditors may attach them as personal property and harvest them.

It is very hard to determine precisely what is a "fixture" and what a "chattel," and the courts in different States and sometimes even in the same State have decided differently in similar cases. Doors, windows, blinds and shutters, gas-pipes, cisterns, sinks and like improvements, put in by the landlord, are "fixtures;" but fire-frames, sinks, cisterns, gas fixtures and pipes and similar improvements, put in temporarily by a tenant, are chattels which can be removed if no injury is thereby done to the premises. As a rule, a tenant has also a right to remove pig-sties, poultry-houses, green-houses, and other similar buildings, erected for temporary purposes, provided he does not make or leave a cellar or other excavation. Where possible it would be safer to have a written agreement with the landlord with regard to such buildings. If a man leases land for a nursery, the young trees he sets out are personal property, and he may take them up and carry them away *before* he surrenders possession. A furnace in a cellar, even if it is a portable one, according to some decisions, goes with the land; but a kitchen range set up in the usual way, is personal property. Bean poles that have been used, whether stuck in the ground or lying in a heap, are "fixtures," but new poles are "chattels." The principle that underlies the numberless, sometimes apparently different decisions, is well stated as follows:

"Things personal in their nature, but fitted and prepared to be used as real estate and essential to its beneficial enjoyment, having been fixed to the realty or used with it, become part of the land and pass with it by the deed of conveyance, although they might be removed without substantial injury to the premises."

The above principles apply to mortgages as well as to sales of land, and to subsequent improvements as well as to those made before the mortgage was executed. In deeding land there is no occasion to mention fixed or permanent improvements, for doing so adds nothing to the value of the title. It is customary to do so, however, because most buyers feel safer if they have everything "in black and white," although such improvements, unless expressly reserved, go with the land, being considered part of it as a matter of course.

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—Chicago Mail.

FOOD which tramps don't relish: Cold shoulder.—*Prairie Farmer.*

THERE may be no blood in the turnip, but there is sugar in the beet, and that is something.—*Tid Bits.*

THE trouble with the Statue of Liberty is that she has only one Jersey to her back.—*Salem Standard.*

STREET LOAFER: "Hello, boy! what's new in the paper to-day!" Smart Newsboy: "The date."—*Burlington Free Press.*

IT seems absurd to speak of a blind man's favorite color, and yet every body has heard of blind man's buff.—*Philadelphia Call.*

A SUGGESTION TO OLD MAIDS: Little Allie has just had a birthday. Being asked how old she was, she replied: "I'se just next to what I was."—*Nebraska Farmer.*

TEACHER (to class in geography): "If I should dig a hole through the earth where would I come out?" Small Boy: "Out of the hole."—*New York World.*

"THE strangest kind of a table is the onion," said Noodle. "The onion isn't a table," retorted Squibbs. "Yes, it is, too. It's a vegetable."—*Munsey's Weekly.*

BEING asked what sect is the most numerous, Prof. Natbitt, now on his outing, says the insect is by far the most numerous, and adds that he belongs to it himself.—*Farm Life.*

AN editor in reply to a young writer who wished to know which magazine would give him the highest position quickest, advised "a powder magazine, especially if you contribute a fiery article."—*Rockingham Register.*

MISTRESS: "Here is a three-minute-and-a-half glass, Bridget; you may boil the eggs with it." Bridget (five minutes later): "The eggs is done, mum, but Oi hev me doubts about the glass."—*Lawrence American.*

THIS is the order which a little girl brought into a druggist's store the other day. It was writen on a dirty piece of note-paper as follows: "Mister Druggist: Please send ipecac enough to through up a four-year-old-girl."—*Western Rural.*

NAMING THE BABY—New Yorker: "I congratulate you on the latest acquisition to your family. Boy or girl?" Nebraskan: "Girl." New-Yorker: "What's her name to be?" Nebraskan: "Well she howls so much nights, we thought we'd call her Cyclonia."—*Freeport News.*

HE was a farmer's boy and very little. His father was pulling off his stockings one evening, preparatory to going to bed, when his mother asked, "Freddy, what is father doing?" Freddy had witnessed the process of treating ripened corn and replied: "He's huskin' his feet."—*Worcester Chronicle.*

PUNS on names are generally tabooed, but here are two worth repeating. A noted Washington wag and beau of thirty years ago signed his name "A. More." Mrs John Washington had invited him to a formal dinner party at Mount Vernon. The company all arrived, except Mr. More, but knowing his queer ways, the hostess did not wait for him. After she was seated some time, a huge envelop was handed her, in which she found an enormous leaf of a sycamore tree. The interpretation was: "Sick—A. More."—*Colorado Farmer.*

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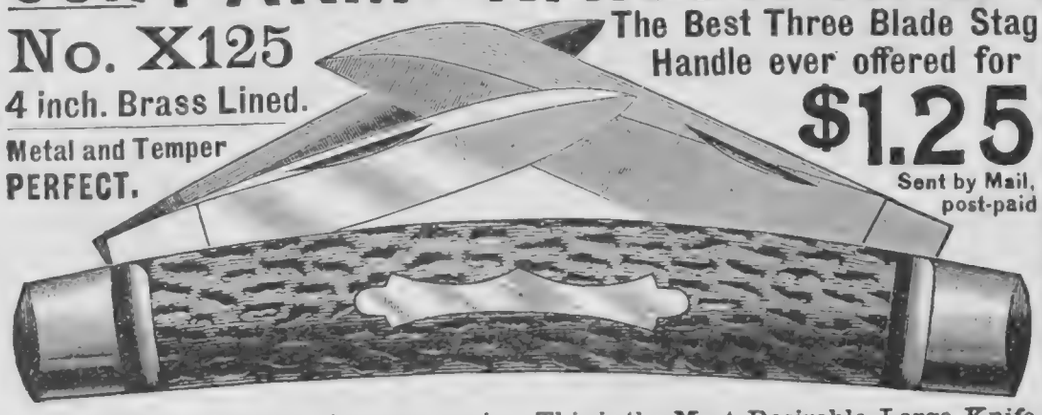

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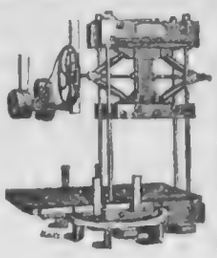

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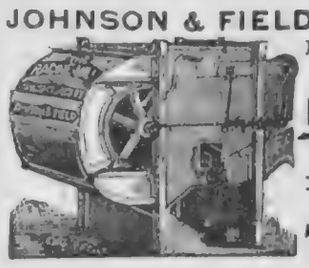

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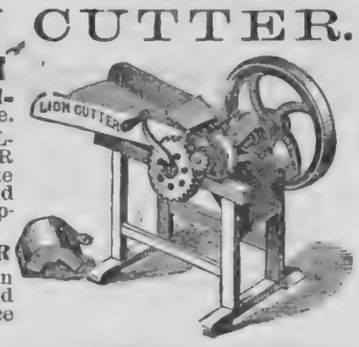

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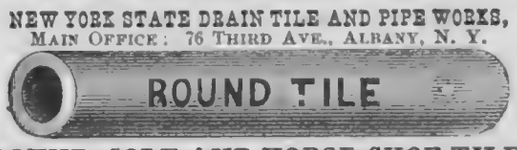

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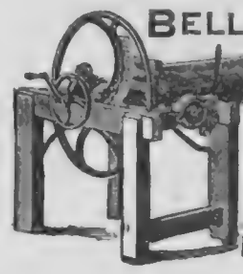

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

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Rural Topics.

TESTING FERTILIZERS FOR WHEAT.

THE time has arrived when we must consider what fertilizer we will use on our wheat. If we have tried, in seasons past, different kinds and found one that gives satisfaction, we should use that again; but many farmers who use a drill for putting in their wheat and fertilizer, neglect to test the fertilizer by the simple plan of shutting it off in one or two places while drilling, so as to show exactly what the fertilizer does for the wheat and the succeeding grass and clover. Without this precaution, if the crop is a good one, all the credit is given to the fertilizer, and if it is a poor one it gets all the blame. No crop should be fertilized or manured without leaving a few rows or a small area unfertilized for comparison.

The engraving (see Figure 224) shows a part of one of my wheat fields where the fertilizer was shut off, the strip being just the width of the drill. The fertilizer used—raw and dissolved bone, equal weights, mixed and applied at the rate of 310 pounds per acre—in this case certainly paid well, as the crop without it would not have paid for the cutting; in fact, as nearly as I could judge, there were no sound grains at all in the unfertilized strip. This test surprised me very much, as I thought the condition of the soil was such as to give a fair crop of wheat without any fertilizer. The effect on the grass and clover is on a par with that on the wheat. A farmer, who has spent many thousands of dollars for fertilizers for wheat, was looking at this field and, of course, noticed the poor strip and asked what was the matter with it. I explained, and asked him if he did not always shut off the fertilizer at least once in drilling his wheat. He replied that he did not, but that he generally could see the effect of the fertilizer where the drill put it in unevenly. I thought that a poor way to test fertilizers, and have no doubt that he has lost the price of many tons of fertilizer by not adopting this simple expedient.

My other field of wheat followed a crop of cow-peas which were pastured and then plowed under. The same mixed fertilizer was used and, strange to say, it was very difficult to find the strips where no fertilizer had been applied they would not have been noticed at all were it not that on the unfertilized strips the heads of wheat stood up straight, while on the rest of the field they were inclined to hang down. This made a shade of difference in the color of the strips; the heads were the same in other respects. Now, if I had not tested the fertilizer I should have given it all the credit on both fields, whereas, in fact, the cow-peas should be credited with most of the good crop on one of them.

Moral: When you are putting in your wheat, spend 10 minutes in testing your fertilizer.

A. L. CROSBY.

Catonsville, Md.

Pomological.

A WALK AMONG THE PEARS.

MANNING'S ELIZABETH has a fair setting of fruit now ripe of about half the usual size.

CATHARINE: tree thrifty; crop moderate. One fatal fault of this variety is that the fruit is so hard to pick when ripe that the stems are broken off and it costs all the fruit is worth to pick it, as a rule.

BOUSSOCK was thought, a few years back, to be valuable. Now the fruit cracks and the tree is unproductive, though a fair grower. The leaves blight. One tree is enough to start with.

BARTLETT, the great pear, is the one to plant if one has but one tree. There has been more money in it for us than in any other we have tried.

BUFFUM: tree, a strong, upright grower, fruit too small. Not usually profitable, although productive.

SHELDON has never borne fruit here that held to the tree long enough to get ripe. This is its only fault: but it is a bad one.

CLAIRGEAU is a beautiful variety on the right soil; but it is not certain; the leaves drop when the tree is in wet or low ground.

OSWEGO is worthless here, though fine on some land.

DUCHESSE, fruit large; quality uncertain. Probably a large proportion of the blossoms do not get fertilized, as the stamens are too short. It is best on the quince.

ROSTIEZER is an amateur fruit; quality high.

WASHINGTON is of slow growth. The leaves are apt to drop. It wants rich land, and is suitable for an amateur.

KIRTLAND is usually hardy. The wet weather has been too much for it this year. The fruit is all cracked.

CLAPP'S FAVORITE is a profitable and good variety in every way except that the fruit must be picked early or it will rot at the core.

SECKEL, the standard of high quality, is generally hardy in all respects; but the leaves have been dropping badly this year. It is not profitable here. It will only pay where the fruit will attain the size of a Guinea egg. In all other sections one had better plant some other kind.

ANJOU, like the Bartlett, is the best of its season. In fact, I think Clapp's Favorite, Bartlett and Anjou are all worth planting for market in this section. It may be the Vicar ought to be included.

URBANISTE is nearly good enough to enter the list.

LOUISE BONNE DE JERSEY is almost good: the leaves are apt to fall too soon.

KEIFFER has been much talked about, condemned and praised. It is a good grower and heavy bearer and appears to be hardy. The

PHOTOGRAPH OF A WHEAT FIELD, SHOWING THE EFFECT OF FERTILIZERS. Fig. 224.

fruit is beautiful and sells well. It may be profitable, if people will keep on buying, at a good price, about as poor a pear for eating, cooking or canning as the country can furnish.

FLEMISH BEAUTY blights and cracks and is worthless.

D'ALENCON bears and keeps well. Indeed it usually keeps until March; but it is not very desirable.

DIEL blights in the leaf, and the fruit cracks: not valuable.

HOWELL can not compete with the Bartlett.

OSBAND'S SUMMER is a very good early pear, hardy in all respects.

PARSONAGE looks like the Bartlett. A slight astringency spoils this fruit for the table; but improves it for canning. I agree with the late Mr. Charles Downing that "this is a superior pear for canning." Hardy in all respects.

LUCRATIVE is a great bearer and very sweet; but it does not pay for market.

There was a prospect of a pear crop with us this year; but there are disappointments in pear-growing as well as in other pursuits. The earliest-blooming varieties set a fair crop of fruit; then we had several days of wet weather, and most of the blooms had passed the period of fertilization. The late blooms also set well, especially on the Vicar, and they are full enough yet, although fungus attacked the fruit when it was about the size of a pea, and wherever it struck, the pears turned black and dropped as also did the apples. This disease was especially destructive to the Greening Apple. There was a great set of apples and the weather was the finest when the trees were in bloom; but there isn't very much left except on the Smith's Cider, which promises to bear a good crop. No doubt this disease can be kept in check by spraying. Probably light showers may also help. That spraying the trees is beneficial, is, I think, established by experiment. I. J. BLACKWELL.

Mercer County, N. J.

Field Crops.

ALSIKE CLOVER

WHAT THEY THINK OF IT IN WESTERN NEW YORK.

COMPARED WITH TIMOTHY AND OTHER GRASSES.

FROM F. P. ROOT.

ALSIKE CLOVER has been quite extensively grown here in Western New York for many years past, and is, I think, growing in favor with the most progressive class of farmers; not that it is preferred to the common Medium Red Clover for fertilizing and renovating the soil; nor that it is preferred for pasturage or hay making; but it is liked because it is more sure to catch in seeding, and because it is the best substitute that we have yet found for Red Clover. It produces a fair amount of pasturage as well as a good addition to a hay crop, when sown with Timothy. During the past few years of extreme drought in the early part of the season, Red Clover sown on wheat, barley, or oats, has often failed of a catch and at the same time the Alsike has seldom failed; on the contrary, it has produced a fair return when common Red Clover has failed. As a renovator of exhausted soils I do not think it compares favorably with Red Clover. It has not the tap-root to penetrate the subsoil to bring to the surface the elements of plant food, and hence it does not gather nitrogen to feed the succeeding crops as the other clovers do, and yet as it is a leguminous plant, I look upon it as a better fertilizer, when plowed under, than Timothy or the other grasses commonly grown. The chief advantages in sowing Alsike, are its greater safety in seeding, and less liability to be winter-killed by the action of frosts, and also its staying in the land for a succession of years. It gives a crop of seed from the first growth and yields a larger crop per acre than other clovers, producing often seven or eight bushels per acre. It makes as good hay as the other varieties and is less liable to fall down, as it grows shorter and thicker on the ground. I have seldom sown it independently of other seed, but have mixed one bushel of Timothy seed, one of Medium Red Clover and half a bushel of Alsike. The last being a much smaller seed, will, with that mixture, produce more plants than the large clover when all grow and stand, and in droughty seasons will fairly seed the land when others fail.

In the spring of 1887 a field on my farm was seeded with the above mixture. The early season was very dry, (there being no rainfall from early in May till near the first of August). I regarded the seeding as nearly a failure, but of necessity it was mowed during the season of 1888, but a light crop of hay was harvested. In the season of 1889 it was mowed again, producing a good crop of excellent hay, Alsike Clover and Timothy, but no Red Clover could be seen in it. My soil is a dry, calcareous clay and clay loam, on which, in former years, the Red Clover grew abundantly and there were seldom any failures in seeding; but in later years failures, or at least partial failures, have been frequent, and it seems necessary to have something to fill the ground which would otherwise be but thinly seeded. So beneficial do I regard Alsike that I have not failed to mix in some of it with the usual quantity of Red Clover to be sown on my wheat fields. A full seeding of clover affords the surest guarantee of successful grain growing to the farmer.

Monroe County, N. Y.

FROM L. F. ALLEN.

I have cultivated Alsike for the past six or eight years, and esteem it more valuable than either of the Red Clovers for either hay or pasturage. It branches from near the root like a currant bush, with slender stems, grows a foot to 18 inches high on good soils. It bears a pink-colored flower full of seed in its first bloom, unlike the common red variety, which bears its seed only in its second growth after cutting for hay. Instead of a tap-root running deep in the soil, and apt to be drawn out by heavy frosts in winter and spring, it has a fibrous, spreading root, and stays in the ground for several years afterwards, not "running out" as the Red Clovers are apt to do. It makes a fragrant hay when properly cut and cured, and all classes of my stock prefer it to any other of the grasses. The flowers are among the best for honey-making, and bees seek it wherever they can find it. It blooms a few days later than the Red Clovers, and comports better with Timothy grass in season for haymaking. The seed is only about half the size of the red kinds, and but about half the quantity is required per acre. My rule of sowing is usually two quarts; while of the red kinds I use four quarts. Either of them, when laid down for hay, should be mixed with six to eight quarts of Timothy to the acre. For pasture I prefer it—as my cattle also do—to the Red Clovers. It is considerably grown in this vicinity, and largely grown in the Central New York counties; also to some extent in the adjoining province of Ontario, Canada. Its price at the seed stores ranges from six to eight dollars per bushel of 60 pounds, according to its yield in the previous year, in the succeeding spring markets. The soil where I grow it is a good clay loam. I do not know how it will thrive in a sandy or gravelly soil.

Niagara County, N. Y.

FROM HENRY IVES.

Alsike is better suited for sowing with Timothy, making a thick, fine bottom, ripening only a little earlier and the Timothy aiding to keep it upright, as it lodges badly when grown alone. The fact that its roots spread in the surface soil saves it from being killed by frosts on heavy lands. It will last many years in the land and it makes a better horse feed than Red Clover. It does well on all open soils from the flint hard-scrabble to the light muck, but not well on heavy clays. It is not sown to one-fourth the extent about here that the common early Red Clover is, for that is grown principally to improve our soil, for which purpose it is considered the best of all green crops.

Genesee County, N. Y.

POTATO NOTES.

THICK PLANTING OF POTATOES.

I HAVE been watching the RURAL'S reports about raising potatoes by the Trench System ever since it began to report, and last winter I noticed in one article that all the potatoes grew in the trenches—there were scarcely any between—and that set me to thinking whether it was necessary to have a wall of earth two feet thick between the rows. Why not have potatoes all through the soil? Then I thought that if we could have a row every foot, the tops would be so close together that they would smother the weeds and keep them down the same as wheat or oats do. So, finally, I concluded to try the plan and took a piece of sandy loam that had been manured the year before, and plowed and harrowed it as soon as it was in good order. Then I made a furrow near one side with the shovel-plow and dropped pieces of potatoes about every foot; then with the shovel-plow I made another furrow so close to the first as to cover the potatoes in the latter. Then I dropped pieces in the second furrow, and so on, till we got the plot planted. After the vines came up and were four or five inches high, with the garden rake I raked the ground down smoothly, and that was all that was done to the crop till we dug them when they were ripe. I dug a few and found out how they would yield, and then went to the village and got several witnesses to come to see some dug. We measured just one rod square and dug from it four bushels and something over a peck, making 680 bushels per acre.

I think that is pretty good, without using any manure and without any tending except the raking The potatoes kept the weeds down and the ground is clean. I saw a while ago a statement in the RURAL to the effect that a man, somewhere in the East, tried close planting, but I have not seen how he succeeded. I would like to hear from him.

I have also a piece of corn planted on the same plan, but can't tell yet how it will pan out. It looks nice and is clean without any work since it was planted, but I am a little afraid it is too thick to ear well. S. M.

Harlan, Indiana.

REPORTS ON R. N.-Y. NO. 2.

The sample tuber of the R. N.-Y. No. 2 potato was cut in 14 pieces, and planted in the garden. One piece did not sprout and one that sprouted was killed by a worm, so I had 12 left which grew nicely and gave me 12 pounds of nice potatoes, 45 tubers in all: nine under-sized, 36 of good size, the largest weighing nine ounces; one was rotten. J. C. E.

Bainbridge, Pa.

The Rural New-Yorker No. 2 potato sent me last fall, was planted May 7. On August 17, as the tops were dead, I dug the tubers. I made two hills, putting one-half the potatoes in each, and from those two hills I got four pounds and two ounces of smooth, handsome tubers entirely free from rot. There were 15 in all, only four of which would be called "small potatoes," and those four together weighed one-half pound. The largest of all weighed nine ounces, and the smallest a trifle over one. They were planted in quite wet land and in a piece near them the potatoes are rotting badly. J. W. C.

Southampton, Mass.

I planted the R. N.-Y. No. 2 potato about April 15th. The potato was the size of a hen's egg and had 10 eyes. I cut it into pieces of one eye each. These I planted in a poor, clay soil (without fertilizer) 12 inches apart, four inches deep in a trench, making one row 10 feet long. All the working they got was two hoeings. The last time I drew the earth slightly to them. The plants were a long time coming up, but grew very fast after they had started. They grew about three feet high, having purple blossoms and short-jointed stems. I dug them on August 16th and the yield was remarkable. There were 68 potatoes, which weighed 19½ pounds. They were almost all of one size. The largest weighed 10 ounces and there were but six smaller than a hen's egg. They are certainly a fine lot of potatoes and I am much pleased with them. Several who have seen them pronounce them very fine. G. R. W.

Lyndon, Ky.

Farm Economy.

POTATO PLOWS

How they Work in Various Soils.

Are they Ahead of the Potato Fork?

OTHER POTATO INFORMATION.

THE R. N.-Y. has had considerable to say in past seasons about the work of potato diggers Most of what was said referred to the expensive machines which are beyond the reach of the smaller growers. We now give notes from farmers who use "potato plows" of various designs. These tools are made and sold under different patents, though they all work on essentially the same principle. The potatoes are thrown out of the ground by means of a contrivance like two plows, one right and the other left, placed together so as to throw the earth in both directions. Above these plows are fastened long bars, The earth is to fall through the bars while the potatoes are supposed to roll off to the ground. In addition to giving their experience with the plows, our correspondents have been asked to tell us what varieties of potatoes are most popular with them, how the crop pays as compared with former seasons, and what can be done to make the business more profitable.

FROM JOHN DRESHER.

I have used and sold a potato digger manufactured at Hamilton, Ohio. The diggers have all been laid aside. The people prefer digging by hand. Among varieties the Ohio Junior and the New Queen are my choice for early potatoes; the Empire State and the Bell for late. We have had such dry seasons for the last two or three years that we didn't have much of a crop. The potatoes are mostly sold in Chicago in the fall of the year. It does not pay to raise them as well as formerly, the price is so low. We are having a large yield this year and expect the price to be low. I can't suggest anything to make the business more profitable, for when there is a large crop potatoes are low with us here.

St. Joseph County, Mich.

FROM H B. CLOTHIER.

I use the Knox Potato Digger manufactured at Gowanda, New York. I think it digs as clean as a man would ordinarily dig by hand, and it will dig from three to five acres according to the condition of the ground. I should think it costs to dig with this digger from one-half to two-thirds as much as by hand. For early potatoes I prefer Clarke's and Beauty of Hebron; for late sorts the Late Rose and White Star. I have also raised the Early Sunrise one year as an early potato and liked it very much. I think about 150 bushels is the average yield hereabouts. We sell them from the field when it is possible to get a fair price, as it saves handling. They are sold mostly to commission merchants in Bradford, Pennsylvania, and Buffalo, New York. I do not think the business is as profitable as formerly, because of extra expense for fertilizers and help, and also in keeping the crop free from bugs. I would suggest that machinery be used as much as possible. The ground should be well fitted and fertilized. I should plant with a planter and cultivate with horses.

Chatauqua County, N. Y.

FROM ISAAC K MORRIS.

I have not raised potatoes extensively—not more than from one to ten acres in any one year. I use the plow made at Hamilton. By harrowing the ground, I can get about all as clean as by hand digging. The plow is worked by two horses, and can throw the potatoes out as fast as the horses can walk. I would not exchange it for any machine I ever saw or used. I would not try to get along without it if I had but one acre of potatoes. I think the cost of digging is reduced from 50 to 75 per cent. The Burbank has been a favorite in our market—Cincinnati. The Early Rose has been profitable with me. The average yield is about 100 bushels per acre. We sell in Cincinnati or ship to other places. I do not see but what potato culture pays as well as formerly. My suggestion is to use plenty of fertilizers or manure in the ground where potatoes are planted.

Butler Co., Ohio.

FROM FRED. HARRIS.

I sent for a potato digger made somewhere East. It was so highly recommended that I thought I would try one; but it was not the one for our country. When our fall is wet and weeds and grass are heavy we use the mower to cut the growth, and rake it off. Then we can run our potato plow without clogging, throwing a wide furrow both ways, and as fast as a team can go. After picking up all in sight, we harrow, getting out all the crop as clean as by hand digging. We cannot get along without a plow. As compared with hand digging, plow digging is one-fifth better and it leaves the tubers in better condition for market. The variety mostly raised here is the Shaker Russet, but other varieties, such as the Peerless, Early Rose, Early Ohio, Mammoth Pearl, and Burbank are also grown. Our yield varies according to the season. Taking the seasons for a number of years, we average about 100 bushels to the acre. We usually sell in the fall in New Orleans and the South; but for the past two years our market has

not been what it was formerly, and we are not doing so well. Our Russet was the best field potato and the best yielder, but was not wanted in other markets. The dry weather early in the spring injured our crop to some extent, and too much rain after it came up was not much better. The crop will not be quite up to the average in our vicinity. Corn is doing well. Wheat is not quite as well as last year, having been injured by rust. Not much of it will weigh 60 pounds.

Ohio County, Indiana. F. H.

FROM M. C. NEWMAN.

I use a potato digger or plow manufactured at Rising Sun, Indiana. With careful hands to pick up the tubers and harrowing once, we can get them as clean as by hand digging. I have known 90 barrels headed up ready for shipment in half a day. A two-horse team and driver with four or five hands to pick them up will go over as much ground as a man and team will mark in a day. I don't intend to get along without the plow. I have never estimated the actual cost of digging by hand or with the plow; but I would put the cost of the latter's work at one-half that of the former, and when one wants his potatoes dug he can do so with the plow, and have done with the job. The most popular potatoes here are the Early Ohio and Early and Late Rose. An average yield is 100 bushels per acre. Most of the potatoes grown on the Ohio River bottoms are shipped to New Orleans; those grown in the interior, to Covington and Cincinnati at digging time. The crop pays as well now as formerly, where the grower can market it himself. I can only suggest to plant the best varieties on the best land with all the well rotted barn-yard manure one can give them, and to cultivate well.

Boone County, Ky.

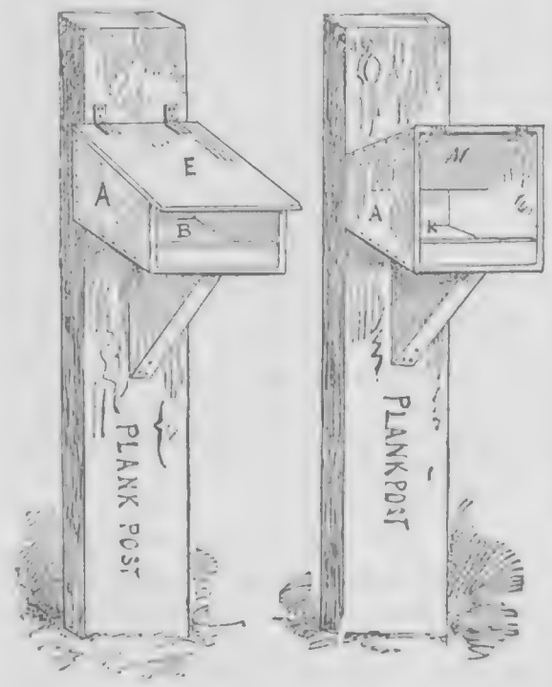
FROM D. S. SMITH.

I grow four to five acres of potatoes. I used the Common Sense Potato Digger one year. If the ground is clean and dry it does good work and saves labor. I can suggest no improvement except that for this soil it should be made of soft center steel and case-hardened like our best plows. For an early variety the Early Ohio, and for medium and late the Empire State are the most popular varieties hereabouts at present.

Greene County, Iowa.

SALT BOXES FOR FARM STOCK.

It is just as necessary for the thrift of farm animals that they should have salt, as that their food should be clean and wholesome; futhermore, the salt should be so placed that it may be obtained by them whenever nature craves it, and they should not be obliged to wait until the attendant deals it out to them, and as this is usually done it would be at irregular periods and in irregular quantities. It is to suggest a good means of properly "salting" stock that the designs of salt boxes shown at Fig. 227, are given. They are cheap



SALT BOXES. Fig. 227.

and simple affairs, but well adapted for the purpose intended. The object is to have a box holding a quart or more salt on the bottom, so arranged that when placed out-of-doors it will be accessible to stock and yet protected from rain.

The one at the left, Fig. 227, is nearly a foot square and eight inches deep at the back, and six inches in front, which is only partly inclosed. The lid E projects one inch in front. The whole arrangement is firmly attached to a post or building. The salt is placed at B in sight of the stock which soon learn to push up the hinged cover with their noses, and help themselves whenever they so desire. The one at the right is a little different, as the door is attached at the top, and is simply pressed against when salt is needed. It is best to fasten the door back as shown, for a few days until the animals know what the box contains, and then it can be allowed to swing in position. Any one using these or similar boxes will be surprised at the frequency with which stock visit them, and the sight will, I trust, educate the farmer to be more liberal with salt in the future. L. D. S.

Barrington, N. Y.

SKIPPING SEED PLANTERS.

T. H. HOSKINS, M. D.

GREAT ingenuity has been displayed in the invention of seed planters, and some of them seem to be, at least theoretically, perfect. Among these I have used in the garden the Planet Jr., and in the field the Eclipse for corn and beans, and the Aspinwall for potatoes. Going over the fields early in July, I was compelled to notice by far too many skips of seed or of fertilizer in both the horse machines. Where there was a long skip of fertilizer or seed, I am disposed to believe that in some, and perhaps in all cases, the fault was in the man rather than in the machine; that is, the man had neglected to fill the hoppers. But the man in charge was a careful one, besides being very handy and ingenious, understanding and working farm machines as well as any hand I have employed. The land planted (some 40 acres in all), was part fallow and part turned sod, all well plowed and worked fine with the Cutaway and Thomas Harrows. There were of course some broken sods; and the surface, in places, was somewhat stony; but, on the whole, much better than the average New England farm in both particulars.

I do not think that the Eclipse Planter ever fails to drop the seed regularly, and with a good degree of evenness, if the seed is free from sticks and dirt. All my seed was carefully hand-picked, and the "skips" were, strictly-speaking, not skips, but perhaps an even worse fault—the pushing along of the planted seed, making bare places with the seed bunched together at the end. This is caused by the coverer picking up a piece of soil, or a stone or stick, and pushing it along until the accumulating obstacles cause it to rise and go over. As said above, the land was much smoother and freer from these hindrances than the average.

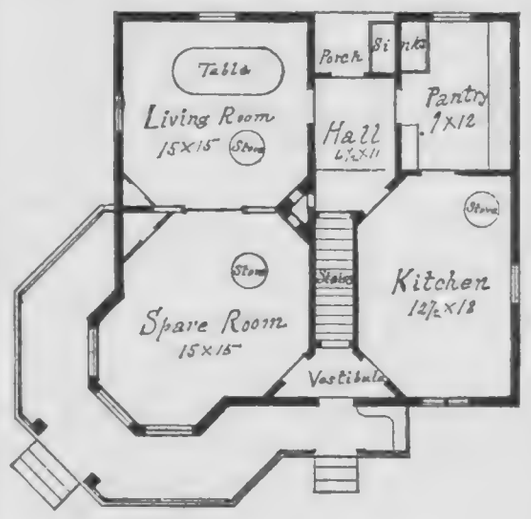
The fertilizer used was Stockbridge, the mechanical condition of which is certainly good; yet it was plainly to be seen along the bean rows where the full quantity was not distributed, the crop showing exactly the increase and decrease, with the absolute skips, where no fertilizer escaped. Now soft lumps are found in the best fertilizers. In a sample sent me from a new fertilizer factory at the copper mines in Capelton, Quebec, (where acid from the power copper ore is used in connection with apatite in making a very good and cheap superphosphate), the lumpiness frequently obstructed the machine, this being the only detect in the fertilizer, and one easily remedied. I mention this to show that the trouble with the fertilizer feed in the Eclipse Planter is that the pipe conveying the fertilizer becomes obstructed, when there are lumps in it.

As to the Aspinwall Planter, there are no signs of lack of uniformity in the distribution of the fertilizer, the color and growth of the crop being very uniform; but there are a great many skips, mostly short, but in all equaling at least 10 per cent of the whole field. That the fault is in the machine is proved by the fact that about a-quarter of the field was planted by hand, before I got the machine. The wheel that picks up the sets is a most ingenious affair, and I followed alongside, watching it for some time when it first started, without noticing a skip; yet the crop shows distinctly that some were made, and generally, when made, the skip indicated a succession of misses,—from two to 10 or more,—before it began to plant again. If this can be helped, this planter will do perfect work, and anyway I should use it. But I don't like the waste of fertilizer, running out without seed.

Architecture.

HOUSE FOR A FARMER.

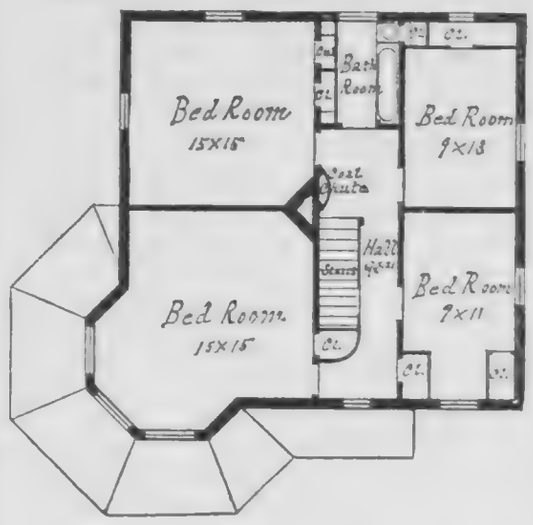
BECAUSE farmers do not often patronize architects, few of their building plans are really adapted to a farmer's needs. The building shown at Fig. 225 and 226 combines cheapness with beauty and the conveniences of modern life. As it is nearly square and has only one chimney and no expensive front hall and stairs it ought to be built almost anywhere, at from a $1,000 to $1,500, according to the finish. The kitchen and pantry are of good size; the back hall gives ample room for a farmer's necessary changes of coats, hats, etc.; while the porch and its sink afford a convenient place for men to wash and await meals without being in the women's way. By entering the cellar from the hall the expense and increased danger from frost of an outside cellar-way are saved. As shown by the dotted line, the ceiling of the hall next the kitchen is only seven feet in night, so as to permit the



LOWER FLOOR. Fig. 225.

kitchen stove-pipe to enter the chimney above it. The vestibule in front is large enough for a hat-rack and umbrella stand and is lighted by a glass door. The stair door might also have a circle of glass in it, and should open on top of the first step so as to indicate its character to a stranger. Where nut coal can be cheaply procured the chimney proper may commence seven feet six inches from the first floor and the coal be conducted by a chute from a bin in the attic into the base of the chimney, beneath the flue, where if the inner shell has openings, and the outer, small doors, it is always convenient for each stove The kitchen side of the house can generally be backed against a hill-side where a light, temporary bridge affords easy means of filling the bin.

Upstairs, Fig 226, all the bed-rooms have clos-



UPPER FLOOR. Fig. 226.

ets; there is one in the hall for extra bedding and the bath-room is convenient for towels, soap, etc. The attic stairs start about two feet from the floor. The hall, bath-room and two smaller bed-rooms are heated by registers in the kitchen ceiling. The family and spare bed-rooms have access to the chimney. If stoves are closed when not in use, the pipes from all may enter one flue. Two tanks or cisterns in the attic, filled by pipes placed in the angles of the double roof, can supply water for the bath-room. A pipe entering the chimney and returning to one of the tanks would give a choice of cold or warm water. The kitchen, hall, etc., of this house could be built first, and the more costly front portion could be added afterward. C. T. S.

Swanton, Md.

Dairy Husbandry.

DAIRY CONFERENCES IN CLINTON COUNTY, NEW YORK.

II.

Three conferences; number and kind of cows; their feed; treatment of the cream; handling and sale of butter; large quantities held back for future sale.

AT WEST BEEKMANTOWN.

THE conference at this place was held at the creamery of Mr. Thomas McGaulley, at which the milk from 400 cows and 60 patrons is daily made into butter. The cream was taken from the large vat into which it ran from the separator, after having ripened 27 hours, at a temperature of 60 degrees; the machine is a 25-inch Danish Weston, run at a speed of 2,700 revolutions. The cream was churned in a Blanchard 200-gallon box churn. The butter was washed in the churn, placed on a "Mason's Improved Center-drip" revolving worker, salted with Ashton salt at the rate of 1¼ ounce to the pound and packed in 62-pound packages. The cream was churned at 60 degrees; the temperature of the butter was 64 degrees. It was washed in the churn with water at 45 degrees. Pounds of milk creamed 6,682; pounds of butter produced 293½; ratio, one pound of butter to 22.76 pounds of milk. Quality very good. The cows are pastured on common upland pasture on which grow native grasses. No grain ration is fed. There is plenty of spring brook water in the pastures. The animals are salted at least once a week, and the milking is done at 5 A. M. and 6 P. M. The milk is delivered at the creamery only once a day—in the morning. The cream is ripened in a large vat at a temperature of 60 degrees regulated with ice, which is put into the cream, the work being done by the creamery man.

The afternoon churning was of cream from the herd of Mr E. A. Rea, of East Beekmantown; 267 pounds of milk were creamed in a Cooley Creamer. It was the product of six cows, one of which was a pure Jersey, two Jersey grades, a Holstein grade, and two natives. The milk was set 24 hours, at a temperature of 40 degrees. The cream ripened in 24 hours, at a temperature of 62 degrees to 64 degrees. It was churned in a Stoddard Churn at 60 degrees, by hand, at 60 revolutions per minute. Time of churning one hour. The butter was washed in the churn and worked on the creamery worker, salted with Syracuse salt one ounce to the pound. Product 11⅓ pounds; ratio, one of butter to 23 21 of milk. The cows have common upland native grass pasture, plenty of running water and they are salted every day. The butter is mostly sold in Plattsburgh, to private customers, at 23 cents per pound. The water used at this creamery is from a well, showing a temperature of 45 degrees; it is pumped into a large vat on the second story of the building, where is also located a steam-box where the butter packages are steamed, then soaked. The packages used are Welch tubs of ash and spruce, holding 62 pounds each. The butter is sold as fast as possible, mostly to hotels in the Adirondacks, at prices averaging 23 cents per pound, delivered on the trains.

The conference was held in the school-house, which was more than filled by an interested audience. Messrs. Gilbert and Curtis did the talking, or rather instructing. After the adjournment, an agricultural society to be called the "Plattsburg and Beekmantown Agricultural Society," was started by the appointment of a secretary and committee of five from each town. These are to meet and perfect the organization. It is hoped that much good will be the outcome of this conference.

AT MOOER'S.

At this creamery, which is one of Mr. Boomhower's, the milk is bought by him. At Saranac and Ellenburgh, and at the Peru cheese-factory it is made up for the patrons. There are 60 patrons and 450 cows. Three hundred packages containing 62 pounds of butter each, are in cold storage at the creamery. Very good butter is produced. The cream is raised by a 15-inch Danish Weston machine; ratio now one to 23: 7,200 pounds of milk are now received daily: maximum receipts 9,200 pounds. Average price for milk, 80 cents per 100 pounds. But one churning was done—the afternoon's. The cream was from the dairy of H. J. Hill, one of the patrons of the creamery; 184 pounds of milk from Monday night's and Tuesday morning's milkings were set in Fairlamb cans, in spring water at a temperature of 50 degrees. The milk was skimmed Wednesday morning, and on Wednesday evening the cream was mixed and left in a Fairlamb can, placed on the house piazza at a temperature of 65 degrees, where it was left to ripen till Thursday morning, when it was drawn four miles to the creamery, cooled down to 60 degrees, and churned in two churnings at 2 and 3 P. M. in a Stoddard Churn, driven by hand power. Temperature of cream 64 degrees, of butter 66; average time 23 minutes; product 8½ pounds of butter; ratio, one of butter to 21 64 pounds of milk. The herd consists of two Ayrshire and Short-horn crosses, one Holstein grade, and eight Short-horn grades. The cream was from the milk of the eight Short-horn grades only. The pasture is both low and upland, consisting of June Grass, Timothy and White Clover. The grain ration fed was eight quarts of wheat middlings in two feeds, per

cow, night and morning, with a small ration of hay. There was plenty of pure water in the pasture. Salt was given every other day, mixed with the grain ration. The churning was done by direction of Mr. Gilbert, and the butter was washed, salted and worked by him. A small audience assembled in an adjacent room and listened to instructions from Messrs. Curtis and Gilbert, and some remarks from Prof. Cooke, of the Vermont Experiment Station, which were very instructive and entertaining. The excellent "hay weather," and the desire of the farmers to improve it, were the causes for the small number of dairymen present.

AT ELLENBURGH CENTRE.

At this conference, held on Friday afternoon, the 19th, no churning was done. A late train delayed matters so that the instructors did not reach the creamery in time to do much. There was a good attendance, the large school-house hall being filled. The creamery is one of Mr. Boomhower's, and one of the best. Cream is raised by the Burrell & Whitman Ice-vat System, the vats having a capacity of 3,000 pounds each. The milk is from 86 patrons having 500 cows; 9,000 pounds are now daily delivered. Maximum receipts, 11,200 pounds; ratio at present one to 22.59. Milk is delivered twice a day. There are 500 packages, of 62 pounds each, of butter now in cold storage at the creamery. The milk is strained into the Burrell & Whitman ice-vats, and cooled to 46 degrees. It is skimmed after 24 hours' setting; the cream is allowed to ripen for 24 hours at a temperature of 60 degrees, and churned at 60 degrees in a 400 gallon Blanchard Box Churn. Some butter is sold to private customers and to the Adirondack hotels. The conference was a good one, and much attention was given by the audience. A nice dinner, spread in an upper room of the creamery building, and music by a brass band were two excellent features of the occasion. On the whole, the conferences were successful, and Clinton County may well be thankful for the quota which the State Dairy Association apportioned her. C. W. JENNINGS.

HOW THE GOVERNMENT CAN HELP THE BUTTER MAKERS.

J. W. NEWTON.

Good suggestions: work for the National Department of State through the U. S. consuls abroad; specimens of valuable information already given by them; need of a national association to battle effectually against "oleo."

There seems to be but one way to relieve the glutted condition of the butter market, and that is to export the surplus stock. This is being done to some extent, but not enough to cause any stiffening of prices. What is needed is a foreign market that will take large quantities of butter at a paying price, and afford a steady demand for good American butter. Now, why cannot the government, through the consuls, make an investigation of the various foreign markets and place the results before the farmers in consular reports? China has been suggested as a market for dairy products, and could a beginning be made it might lead to important results. The Department of State did a most excellent work in preparing and publishing the Report on Cattle and Dairy Farming. I find in that work many statements that bear on the subject we are considering. The Mexican consuls report as follows:

Chihuahua: "But little butter and cheese are made. Butter is worth 62½ cents per pound, and a very ordinary article of cheese 15 cents per pound." This is partly explained by the high duty.

Monterey: "Nearly all the butter used is oleomargarine imported from the United States, of a very inferior quality, which retails at 60 cents a pound in Monterey. In conclusion I would state that, if some enterprising dairyman would start the ball by bringing to market pure, rich milk and fresh, palatable butter, it would create a taste among the people for these luxuries, and a crying demand, before much time, for goodly quantities of both."

Tamaulipas; "Butter is not made to any extent.'

Our Consul in the Argentine Republic reports: "It may seem paradoxical, yet it is true that while the Argentine Republic contains about 12,000,000 horned cattle, it produces neither milk, butter, nor cheese... Such a thing as a dairy farm is unknown; such a thing as butter-making, in the true sense of the word, is a myth.....Butter, if it is used at all, has, until very recently, been brought from Italy. Of late years an unsalted butter, the work of Spanish Basques settled near Buenos Ayres, has been finding its way to market, but it is nothing more than coagulated cream, while the cheese comes mostly from England or Germany."

Brazil: "The fact that most of the butter used in a city like this (Rio de Janeiro) is the modern adulteration, imported in tin cans, is one of the many proofs that might be adduced of the backward condition of the dairy industry in this country."

These are samples of the reports from the countries south of the United State.

In Japan no butter or cheese is made. "There are no words in the Japanese language for beef, butter, and cheese, except these recently framed from the English for convenience sake, and in use only at the treaty ports. In China the consul at Canton says: "Butter is unknown in this part of China, except as imported from Europe and America for foreigners' use." The consul at Hankow could not "learn that butter or cheese is ever made, in this part of the Empire, at least."

It will thus be seen that there are millions of people who know little or nothing of butter and cheese, and it would seem that among some of them an outlet might be found for American dairy products. Oleo hangs like a dead weight upon the butter-makers of the United States, and there is good reason to believe that the exportation of oleo has had much to do with ruining the foreign market for American butter, which has existed in Europe. It would be well for the Department of State to ascertain how far this is the case, also the laws of different countries concerning adulterated and imitation goods, and also to learn how far these laws are enforced and what effect they have had upon the manufacture, sale, and consumption of such goods, and to publish such information for the use of American dairymen. It would be well, too, for Secretary Rusk to have the laws of the different States concerning oleo compiled and published, together with the United States law and the decisions of the courts in regard to the manufacture and sale of the stuff.

Another suggestion is that a National Dairymen's Association be formed. The State associations are doing most excellent work, but a national association is needed to fight oleo. It must be fought resolutely in every possible way. The government can aid the farmers in the ways I have indicated, and by seeing that the law is strictly enforced. We need a pamphlet showing the present legal status of oleo, to be used in the legislatures of the New England and other States; we need an association with a strong executive committee to push the battle wherever earnest work is needed, whether at Washington or in the State legislatures.

Stowe, Vt.

Farm Topics.

SOME COGITATIONS.

"Seems kind o' queer," lamented Mr. Bobcommon; "but I can't get hands to come and work for me like Cap. Jackson can. When his hay or grain is ready to harvest, or he is "rushed" with his corn, he drives into town and gets all the strong, young fellers he wants without any trouble. I offer the same wages and just as good feed, yet I have the hardest kind o' work to get any o' them stout young fellers to come out and help me. Can you tell me the reason for this?"

"Yes. Captain Jackson has two pretty daughters, and every summer he makes it a point to have two or three of their attractive city cousins or friends to come out and visit them, and rusticate with him. He has provided a nice croquet ground and lawn tennis lay-out, besides hammocks, swings, etc. The girls are always ready for a game after supper, and, bless you! the boys would almost work for the Captain for nothing to get to play with them. He has the pick of all the young fellows in the town, and every one that goes to work for him, I notice, takes a change of clean, light clothing along. At noon the girls are "not at home," and the boys eat, rest a short time and go to work. At night the Captain gives them time to bathe and trig themselves up a little before supper, and it is astonishing how clean and spruce they appear when they come in. The Captain is a jolly fellow and he's constantly poking fun at some of them during supper, after which he swings himself in a hammock while he watches them play. And don't they have a jolly time, though! Why I know young chaps who engage themselves to the Captain for harvest and haying nearly a year in advance. The old fellow is a schemer. His daughters and their friends do the greater part of the housework, almost without being aware of it, and at the same time give him advantages in the labor market that are not to be sneezed at."

A great light flashed upon Mr. Bobcommon's intellect and he walked off scratching his head with a whetstone and thinking at the rate of 40 miles an hour.

Some men who till the soil are constantly regarding themselves as martyrs to circumstances. They hate farming, but are obliged to stick to it to provide themselves and their families with food and clothing. They are always on the alert for a chance to quit "slaving," as they term it, and get at something else. Unobserved I sat down on a clod and waited for a plowman to return. He came trudging along with his head down, and I wondered whether he was watching for grubs or meditating on some important matter connected with his internal arrangements.

"Hello! Whoa! What were you thinking about so intently?"

"Why I was trying to make up my mind whether I'd better take Hank Jones's bet of $5 that the Chicago base ball club wouldn't win the pennant this year! They're a little behind now, but are playing pretty well, and I've a big notion to take him up. What do you think about it? How I wish I was as good a player as Anson You can bet your boots I'd not be here niggering!"

His wagons and other implements stood in a corner of the yard seasoning. His stable and—but we've all seen his surroundings.

On another farm I hid behind a hedge and awaited the return of another plowman. He was seated upon a sulky plow, held a tight rein and was looking at his horses and smiling complacently.

"Whoa! What were you grinning at?

"I was thinking what a fine stroke I made when I sold my hogs last Saturday. They dropped a cent Monday and are likely to stay down for some time. I had been watching the market closely for some weeks and nabbed it on the rise. If a man keeps his eyes open and strikes at the right moment he can astonish the natives every time. That lot had just reached their best point, and I made a good thing on them. I'll have another bunch ready in about six weeks—just in time to catch the market as it comes up again. Yes, this is my old clover field and the soil rolls up nicely. It averaged 27 bushels of wheat this year, and I ought to raise some splendid corn on it next. Like farming? Wouldn't trade it for any other business under the sun!" This is one of those farmers who are not looking about for a good "opening."

I passed a pasture in which were two groups, one of colts and another of cattle, huddled together the better to keep off flies. The field was as bare as a board and both of these groups were sizzling under the boiling sun. Some men say that it does no harm to horses and cattle to let them take the fierce glare of the sun through the long summer days. A mile farther on is another pasture with a small grove in one corner. All the animals in this one are gathered in the little grove and apparently enjoying the umbrageous shelter quite as much as human beings might, thus proving the advocates of shelterless pastures to be humbugs and base deceivers. I still think that the catalpa is one of the best trees in the world for pasture groves. Its growth is rapid, and its broad leaves make a shade so dense that neither weeds nor brush can exist beneath it. Another important point in its favor is the fact that no stock will eat it—at least no stock that I ever saw would. Both cattle and horses love to tear down and devour ash and Soft Maple, but they have no appetite for catalpa. Plant a little grove of catalpas about the center of your farm, so that the pasture will abut upon it when changed from one field to another. Place the trees about 4x6 feet apart, cultivate like corn a couple of years, and after that the trees will take care of themselves. With a few rods of movable fence, you can connect the grove with the pasture in a jiffy, and your flocks and herds will peacefully lie down therein and call you blessed.

Christian County, Ill. FRED GRUNDY.

Everywhere.

RURAL SPECIAL REPORTS.

Colorado.

GREELEY, Weld County, August 21.—There is really no such thing as potato rot in this part of the State. The crop will be cut a little short for want of water, but at least four-fifths of an average crop is expected.

C. F. M.

Connecticut.

FRANKLIN, New London County, August 15.—Potatoes are rotting very badly. Some farmers report an almost total failure. But few have been dug yet, but judging from the reports of farmers in this vicinity, I think there will be *less* than half an average crop.

G. H. G.

Illinois.

ROCK ISLAND, Rock County, August 16.—The condition of the potato crop in this neighborhood is good; there is no rot except on very low ground. I think there will be more than an average crop. Potatoes are selling at 30 cents per bushel and not very ready sale at that. Quality good. H. D.

QUINCY, Adams County, August 20.—There was probably nearly an average crop of early potatoes grown in this vicinity this season. Very few late potatoes were planted. We had fight enough with the bugs over the early ones to satisfy us fully. The rot has appeared in this neighborhood, but to what extent the crop will be affected by it cannot now be estimated, as but a small part has yet been dug. O. H. P. A.

Iowa.

SIOUX CITY, Woodbury County, August 18.—I have heard of no rotting of potatoes anywhere in this county. Their quality is unsurpassed, but the quantity will not be up to the average on account of dry weather. Oats were somewhat shortened on that account, but corn now looks as if it would yield an average crop, though I was informed yesterday that much in the bottom was drying up. Potatoes here are only bringing from 20 to 30 cents per bushel. J. N. S.

Michigan.

WHITE PIGEON, St. Joseph County, August 20.—Potatoes hardly ever rot in this country. I have lived here 36 years and have never seen a field of potatoes affected with wet rot; for the land is too dry and sandy. There is some prairie land here, but it is not much used for potatoes. We have a dry rot, however, which is bad in some years. Before the present year we had three years of terribly dry weather. This year, except during a long, dry spell in the spring, we had rain enough up to the second week of July; since then we have had only a light shower and things are drying up. The weather is hot by day and cool by night. Last year was the worst the farmers have ever seen. It was the driest, being worse than the two before it. For the last three years thousands of bushels of corn have been shipped in and sold to the farmers, and last year a good deal of baled hay was shipped in, taking money away from the farmers. Potatoes have been a light crop for three years past. What with the potato beetles and dry weather and low prices the farmers got discouraged and did not plant more than half the usual area this spring. The crop looked first-rate this summer; the tops were the largest I have seen for several years and there is prospect of a large crop if we have rain enough. The tops look nice and green. Wheat, rye and oats were good this year. Corn will be a fair crop if we have no early frosts. A good many beans are planted. The R. N.-Y. No. 2 did not come up well, but I will try it again next year on a larger scale. I never could raise a large crop from small seeds. The kind that does the best for me is the Empire State, as it stands more dry weather than any other sort I have tried so far. I hope the RURAL will keep us well posted in regard to prices for potatoes. We have no home market unless we draw 20 miles to Elkhart. Potatoes are mostly sold to commission-men who ship them wherever they can find a market. Our best market is in Eastern Ohio or York State. I like the RURAL first-rate. I wish I could place it in the hands of every farmer in the United States. [Thank you. Eds.] T. T.

BENTON HARBOR, Berrien County, August 17.—I have heard of not more than one or two cases where there is any rotting of potatoes; the acreage is perhaps about four-fifths as large as usual. In some places on low land perhaps one-fourth have been drowned out by the spring rains. In our immediate neighborhood, where on high land, the crop will be a good deal better than an average, perhaps enough better to fully make up for the shortage. The lands here are principally sandy with sandy or gravelly subsoil and our tubers seldom suffer from rot. Up towards Hartford, that is, northeast of us 18 miles, the crop looks poor. I was up there last week and I saw only one piece of potatoes that would yield over 100 bushels per acre. Out in the direction of Royalton on the bottom lands, I hear a good proportion are drowned out—fully one-fourth to one-third. I lose about one acre out of eight, owing to the wet in June. The rest look very well; about 2½ acres promise a very heavy yield, the remainder a fair crop. Corn looks

poor, being fully two or three weeks late. Strawberries paid well. Blackberries and raspberries sold very low, leaving the grower, after paying expenses, from 10 cents to 25 cents per 16-quart case and in a few instances they did not pay expenses. As these are what most farmers here make their money on, the outlook is bad for this winter. We have now had three very poor seasons. For my part I expect to make but very little this year, but I can go into a machine shop for the winter and make up for the shortage a little, as I worked at that business before I began on the farm.

R. B.

SOUTH HAVEN, Van Buren County, August 18.—Potatoes are 85 to 90 per cent. of a crop. Some rot is reported on low ground caused by excessive rains. Bugs are not so bad as in some years. F. D. N.

Minnesota.

MENTOR, Polk County, Aug. 20.—To the young man who is striving to make a living, and build up a home in the Red River Valley, this country offers a good many inducements. As the Red Lake Indian Reservation is about to be thrown open to settlement, there will be considerable land that can be had free from the government. For those who would like more of the benefits and improvements of civilization, there are numerous opportunities to rent farms that are all plowed up and have good buildings, fences, etc.. The owner usually takes a fourth or a third of the crops, and the renter takes the remainder, and furnishes seed, tools, etc. It would probably be a quicker way of making a good home to rent for a while, as the immediate use of the land (from 160 to 300 acres) helps a man to make a living, and to pay for what he buys as he goes along. As a general thing, this country is a good one for raising wheat, oats, barley, potatoes or any other hardy produce, but for fruit and any tender vegetables, it is not a success. The best way of getting such is to buy them, if we have the money; if not, we generally do without. I came to this country with the idea of overcoming some of the disadvantages of the weather, but have not made much progress in the seven years of my residence. F. A. H.

MINNESOTA CITY, Winona County, August 20.—Potatoes are not rotting in this country. There will not be a half crop owing to their ripening prematurely on account of the dry weather. There never was a better prospect two months ago. Small grains are excellent. Corn is now doing finely and will be a very good crop if frosts hold off.

E. B. D.

FERGUS FALLS, Otter Tail County, August 19.—Potatoes around here are fair; there is very little rotting, and fewer potato bugs than in past years. Some damage has been done by centipedes and cut-worms. Farmers around here do not raise any more potatoes than enough for home consumption. N. N.

New York.

CENTER LISLE, Broome County, August 20.—The blight has ruined the potato crop in this section. The vines are all dead. Late-planted potatoes are hardly worth digging and those planted early were frozen in June and injured so that there will be from this class hardly a quarter of a crop. Those planted in May will be about half matured and are rotting. Upon the whole, we cannot expect more than one-fourth of a crop. C. M. L.

CANANDAGUA, Ontario County, August 18.—Late potatoes in this neighborhood are first-class; early potatoes are rotting somewhat, but there are no complaints that late ones are doing so. The vines look vigorous and good and there is a fair prospect of a large crop. In some parts too much wet drowned the crop at planting time. E. P. W.

AVOCA, Steuben County, August 19.—Early potatoes are rotting very badly in gardens—at least 50 per cent. are rotten. In the fields on low ground they have blighted, and are rotting badly; but on higher ground they are all right. We will have, I should think, if the weather is favorable for the next six weeks, 60 per cent. of an average crop. They have not blighted so much during the last week. Apples are a complete failure. C. H. E.

North Carolina.

S. WASHINGTON, Fender County, August 19—Since my last report, on June 25, we have had constant rains and almost all crops have been cut off fifty per cent. and farmers are looking blue now. No potato rot here yet. Melons all killed out by wet weather and all vine crops and all peaches are rotting badly, and will be almost a total loss. There are no apples. Hogs are dying with cholera in this section. The cotton crop is almost a total failure. Some farmers who bought guanos for cotton and who have no cotton to settle bills with, will be ruined. D. J. MC M.

Ohio.

XENIA, Greene County, August 20.—What does the RURAL know about winter oats? Will they do as well as our spring oats? [Your climate will prove too severe for them. EDS.] Our wheat crop is fair both in quality and quantity. I think the yield is about three-quarters of our average. Oats very fine. Potatoes, early planting, good. Rural No. 2 a failure. The beetles and dry weather were too much for it. Hay was good and harvested in good condition. We have had but very little rain for the last four weeks, consequently the corn crop must be light. We have no pasture to speak of at this time.

D. D. M.

Pennsylvania.

BROAD FORD, Fayette County, August 19.—All harvesting and haying are about done. There was a very good wheat crop—30 per cent. better than last year. The oats were the best since the war, and grass and hay were very nearly double an average. I think hay will average nearly three tons to the acre in this neighborhood. Corn is good on high, dry ground that was planted early and ridged up, but most of it could not be worked enough and will not be more than three-fourths of a crop. Potatoes are also very good where they were ridged up early; but they are badly rotted where the land was not ridged. Level culture was a sad failure here with both corn and potatoes. Theoretical farming does not always do the best if it does look nice in print, and agricultural writers should be quite sure they are absolutely right before they ridicule every one who does not follow their teaching. There is a fair crop of apples. Some plums, but very few peaches. B. R.

INDUSTRY, Beaver County, August 25.—There is an immense crop of hay this year mostly put up in good order. Wheat and oats are good. Corn is late, but may mature if frost stays off late. Potatoes give a good yield, but are rotting badly. Apples scarce. Peaches a failure. Small fruits from very poor to extra good according to location and variety. The Crescent and Kentucky Strawberries did well; so did the Snyder Blackberry. It is a heavy cropper of medium size and very good quality and sells well in the home market. The summer has been quite wet all the way through. E. E.

SARVERSVILLE, Butler County, August 19.—Crops in this and the adjoining counties, so far as I know, have been better than for many years. There is an abundance of hay, and notwithstanding the wet weather more than half of it has been put up in excellent order, though some was spoiled a little and some a good deal. The price is low, or rather we look for it to be so, for no new hay has been put on the market yet. Wheat was got up in good shape. Oats not all in yet. I fear much will be wasted—an excellent crop. Pastures have kept green and juicy all summer, consequently cattle and young horses and colts are in fine condition. This is a great place for Clydesdale horses, there being a great market for them. Fall colts sell at from $65 to $85 each; yearlings do not bring much more, and two-year-olds sell from $100 to $140; three-year-olds from $120 to $160. Corn looks reasonably well, but potatoes promise a poor yield on account of wet weather and blight.

M. N. G.

MARTINDALE, Lancaster County, August 20.—The condition of potatoes in our neighborhood is good. There is a slight appearance of rotting, but it is not serious. The crop is being dug. The weather is favorable and the yield is about an average, and perhaps better than last year's S. W. S.

Wisconsin.

FAYETTEVILLE, Walworth County, August 17.—We are having another very dry season. Hay is a fair average crop. Wheat very poor. Thrashermen report from four to 11 bushels per acre. Oats a fair crop. Barley less than the average. Corn the poorest crop I have ever seen at this time of the year; it can't possibly be half a crop unless frost holds off very late. A good many pieces will not yield the seed used to plant them. Almost every night is cold. Flea-beetles are going to ruin the potatoes. Tomatoes are rotting as soon as they begin to turn red. Everything looks discouraging for farmers. E. R. B.

WAUNAKEE, Dane County, August 17.—The Colorado beetles, early, or rather late frosts, and the present dry weather have hurt the yield of potatoes in this section; but the quality of the crop is better than it has been for years. There is no rot in this vicinity. We shall be likely to get two-thirds of an average yield. E. C. D.

THE FARMERS' CLUB.

ANSWERS TO CORRESPONDENTS

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

BUNCHES OR TUMORS ON A HEIFER'S LEG.

C. B., Chemung, N. Y.—About two years ago a sore was produced on one of the fore legs of my four-year-old cow by a bruise made by a knot in the stable floor. On the place a large tumor or bunch grew and discharged matter freely. After a while tumors appeared on other parts of the leg, broke and discharged a thick pus. Since then they have continued to come and are now on all four feet and on the breast. They are mostly in groups of four to seven and range from the size of a hickory nut to that of a hen's egg. Some that had been opened with a knife discharged bloody matter. After doing so some disappeared, but others took their places. The animal is in good flesh and health, fattens more readily than most other cattle and is quite frisky. What is the trouble?

ANSWERED BY DR. F. L. KILBORNE.

The bunches are probably constitutional with this heifer, and it may require a long course of internal treatment in connection with the local treatment to remove them. Or they may be of such a nature that they will resist ordinary treatment or disappear at one point only to reappear at another. The simplest course would be to fatten the heifer for the butcher. But if you desire to treat her, try the removal of the bunches either by dissecting them off and then thoroughly cauterizing the surface with a stick of nitrate of silver, or by tying a strong cord tightly around the neck of each, to be tightened daily until they slough off. If an open sore remains, cauterize with the nitrate of silver as advised above. Internally give one ounce each of bicarbonate of soda and Glauber salts twice daily for 10 days or two weeks. Then give Fowler's solution of arsenic for a week, beginning with one-ounce doses night and morning and gradually increasing the dose to two ounces by the end of the week. Watch the patient while giving the arsenic, and if indigestion or diarrhœa occur, stop the medicine. If found desirable, repeat the above course two or three times, alternating the salts with the arsenic.

BLOODY MILK FROM INFLAMMATION OF THE UDDER IN COWS.

J. H. W., Medina, Mich.—A few nights ago while milking one of my cows, I noticed that she seemed restless, and that the teats were unusually warm. The next morning she gave bloody milk from one teat, and only a small quantity at that, while the others were almost entirely dried up. One side of the udder was caked very hard; the other side not at all. She had been giving 12 quarts at a milking. The udder is inflamed to such a degree that she moves the hind legs with difficulty. Last night another cow came up with the same difficulty. I had another sick the same way last year. They have been giving milk several months; are from six to 12 years old; grade Short-horns, and deep milkers. Pasture, bottom land. Some say that "buckeyes," to which they have access, are the cause, but the nuts are scarcely half grown. I have done nothing for them except to give them salts and apply soft soap to the udders. What is the trouble?

ANS.—The inflammation is probably the result of injury. If due to feeding on any injurious plant or tree, the whole udder would probably be similarly affected. Your treatment has been good. If the cases become severe, aconite, in 25 drop doses, two or three times daily, may be added, and a belladonna ointment may be applied to the udder after bathing it with the hot water or the sott soap, rubbing or kneading it for 15 to 20 minutes each time. Also milk three or four times daily.

STIFLE LAMENESS IN A HORSE.—DISLOCATION OF THE PATELLA.

J. M. W., Eugene, Oregon.—About fifteen months ago, my three-year-old mare became suddenly lame in her left hind leg which appeared to be paralyzed. She would go along dragging the front of the hoof on the ground. The first time it occurred she remained lame for half a day; then was all right again. Since then she has been troubled three times in the same way, but these attacks were not so severe as the first. There is no swelling or any sign of injury to the leg.

ANS.—The periods of lameness in your mare are due to dislocation of the patella or knee-cap at the stifle, the relaxation of the ligaments allowing the bone to slip outward where it may be felt at the outer angle of the joint. When thus dislocated, the patella may sometimes be thrown into place by starting the horse under the whip, the sudden effort made to bring the limb forward jerking the bone into place. The safest method, however, is to draw the limb forward with a rope around the fetlock, and passed through a collar around the neck. While an assistant draws the limb forward with the rope, you press on the outside of the knee-cap with the hand, until it slips into position. An active blister applied over the whole joint will tend to strenghen the ligaments so that the bone cannot slip out of place.

SMALL FRUITS FOR MINNESOTA.

J. J. W., Walkerville, Mont.—Will you kindly inform me through your correspondents' column what are the best and hardiest market varieties of the following small fruits for Minnesota near St. Paul: strawberries, currants, gooseberries, blackberries; and will the canes stand the cold winters there without protection?

ANSWERED BY PROF. J. L. BUDD, AMES, IA.

All the leading varieties of the strawberry with good foliage do well near Minneapolis, with proper winter protection. The Crescent fertilized by the Countess is largely grown there by small fruit growers. Windsor Chief, May King, Jessie, Bubach, and many other good sorts have been favorably reported upon in that region. All the currants do well there. Probably Red Dutch, Victoria, Long-bunched Holland, White Grape and Fay take the lead with the larger growers. Of gooseberries Downing, Houghton, and American Seedling are favorably reported. Of blackberries Ancient Briton, Snyder, Stone's Hardy and the Windom Dewberry take the lead. In Iowa as well as in Minnesota it pays best to lay down the canes in the fall.

HOW TO GET RID OF COCKROACHES.

J. C., Great Kills, N. Y.—How can roaches be destroyed?

ANS.—A friend says he has completely rid his house of roaches by a conscientious use of California Buhach, and as his house was completely overrun by the creatures he considers it quite a test case. He purchased the fresh Buhach from a wholesale grocer, and every evening before going to bed puffed it with a small pair of bellows thoroughly through the rooms in which the roaches abounded, particularly in the kitchen and pantries. He pursued this course every night for a week, after which a cockroach was a very rare thing. Every one who has tried this method fairly, reports the same result. There are other methods, but this is so completely satisfactory that they are not worth trial.

YOUNG PIGS DYING.

J. H. L., Emporium, Pa.—I have a sow that gave birth to eight pigs and seemed to do well, but did not eat for two days, and appeared lame. The pigs throve well, but now when a week old they are dying. They seem weak and scour. I have fed them on house slops with milk and chop. They appear hungry. The sow is in good flesh. What is the matter?

ANS.—The described condition of the young pigs may be due to any one of several causes, viz.—feverish milk, owing to disease of the sow; unwholesome or unsuitable food; a close, fowl pen; or to a specific disease, as hog cholera or swine-plague. Treatment of such cases is unsatisfactory. The condition is one to be prevented rather than treated.

Miscellaneous.

Several Subscribers.—The Occident Creamery, mentioned in a recent RURAL, is made by the Moseley & Pritchard Manufacturing Co., Clinton, Iowa.

V. L., Caledonia, N. Y.—A friend has an 11-month old Jersey heifer which has never had a bull, but she has a large bag full of milk.

ANS.—Our advice would be *not* to milk the heifer. By regular milking probably a considerable flow of milk could be developed; but

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies.

with a heifer so young it would check her growth and development so as to impair her future usefulness.

M. P. C. Scranton, Pa.—Of the different varieties of asparagus planted in the Rural Grounds two years ago, which are the most desirable?

ANS.—For one reason or another, the plants started with vigorous growth unequally. This was probably due to the size and age of the roots, the way they were packed and had been kept, etc., etc. Another season will be required before we can make any serviceable report.

"Subscriber" Bluff Point, N. Y.—In competition for a prize for the best yield of potatoes on an acre would it be a "square deal" to raise a crop of early potatoes, and before digging them, plant another crop of late potatoes? It would all be on the same acre!

ANS.—It would depend upon the conditions of the offer. If the R. N.-Y. offered such a prize, it would consider that but one crop would be fair, and it would make this point one of the conditions.

F. A. C., Glendale, N. Y.—1. Will ashes soften bones so that they can be readily pulverized fine enough to be used as a fertilizer? 2. Are old bones that have laid out for several years as good as any? 3. Would it be advisable to take up and transplant runners from spring-set strawberry plants.

ANS.—1. Yes, but it takes a long time, and the method is deemed impracticable. 2. Yes, in so far as phosphoric acid is concerned. They lose some nitrogen. 3. Yes.

DISCUSSION.

HOTEL SWILL AS FOOD FOR SWINE.

HENRY STEWART, MACON COUNTY, N. C.—No doubt my friend Col. Curtis, who knows more about swine and a good many other things than most people, is right in his remarks about the unwholesomeness of hotel swill for feeding swine. But it is evident that the basis of his objections are not quite pertinent to the subject. Chemistry is not always to be depended upon, as when the New York Experiment Station, some years ago, referred to "putrid" brewers' grains as containing all the requisite elements for feeding dairy cows, and so gave rise to groundless objections to the use of this valuable food in a proper condition, that is when fresh and sweet, or preserved in silos as was the custom in the best dairy districts in New York State, long before silos for fodder were ever thought of in America. So the objections raised against hotel waste because it is sometimes fed improperly, are equally groundless, as also those raised against it when fed in excess. All kinds of food in a putrid state, or if given in excess, are detrimental, but it should go without saying that no kind of food should be used in this condition or to excess.

Moreover, the swine fed at the places referred to are not always kept in a healthful condition. I have seen them belly-deep in ordure and a sickening mass of decaying food and half-liquid mud. It is simply a case of using good food in a bad way. A farmer who could procure a supply of this valuable food containing bread, scraps of meat, vegetables, potato and apple parings with the waste soup all combined, and in a fresh, wholesome condition, would be able to make the very best meat, and if the pigs were provided—as all pigs should be—with dry, clean pens and allowed a run in a pasture lot, they would be in no danger from disease. It is not the food, but the wrong manner of using it that is to be objected to.

J. E. S., WEST CONCORD, N. H.—Since reading what has been said in the RURAL about feeding hotel swill to swine, I have been talking with some parties here who feed this product. This is what they say:

PINE GROVE FARM.

Swill for this farm is gathered in old lard or pork barrels set in a common express wagon. The hotel and saloon swill is taken between five and six o'clock, p. m. every day, and the street swill four times a week, in the forenoon. He pays $100 a year to one hotel, and the same to one saloon; for the street swill he pays nothing. All swill is fed uncooked and without grain to all kinds of swine, excepting those that are fattening; to these scalded corn-meal is given in addition to the swill. The surplus is stored in the swill-house, and none over two days old is fed in summer.

For a hog one year old or more a common barn shovelful of swill is considered enough for a feed with all the drink required: all that is eaten at once is fed twice a day, and on this feed superior exhibition animals are raised as well as hogs for pork. Hogs that have had nothing but swill are all ready for slaughter. Experience, says the owner, is indispensable to success in feeding swill and of the ordinary grain-fed hogs seven-tenths would die if full-fed on this waste. The pigs from sows used to it, are equal in growth to any grain-fed pigs and suffer no greater mortality The hogs are sometimes sick from eating this refuse. This is caused by the carelessness and and inexperience of the help in feeding. Fish and lobster refuse should always be removed from the swill, and all sour and moldy substances should be put into the compost heap. All sick animals are removed to new pens, supplied with fresh earth; their diet is restricted to water with a little green stuff. The pork is of prime quality and in active demand. The profits of this feeding depend on the location, the distance one is obliged to haul the swill and what has to be paid for it.

In the present case the owner thinks fully 50 per cent. is profit, besides the manure. The hotel and saloon each make from one and a half to two barrels a day. The swill saves all grain until fattening-off time, and the owner would quit the business if obliged to use grain. The herd is made up of thoroughbred Chester-Whites, Poland-Chinas, Small Yorkshires, and a breed styled the Hampshires, with excellent grades of each of the above strains. All his hogs show a surprising uniformity and superior development that are rarely seen, even in herds fed highly on grain. Cholera he regards as the result of over-feeding, filth and crowding, and he thinks that more swine are made sick or injured by overfeeding than by starving. In support of this opinion, he shows his herd of 150 swill-fed hogs with no sickness among them. All were quiet as I passed there at noon and the hogs were lying lazily about the yards. There was no rushing pellmell to the troughs and squealing like bedlam. Surely swill-feeding is a success here.

N. H. INSANE ASYLUM FARM.

Here the swill is collected from the main buildings twice each day—at 9 A. M. and 2 P. M.—and drawn to the barn in a plank cart. It is there thinned to a slop and fed to the hogs—all they will eat up clean. No grain except shorts is fed to brood sows when suckling. Corn-meal is fed to fattening animals. As the swill is fed fresh no storage room except the gathering cart is required. No attempt has been made to raise and fatten hogs on swill alone; the swill is considered perfectly safe as feed, and no more losses are experienced than would naturally be expected in a herd of 125 head of hogs confined in a barn cellar. Recently 16 two-year-olds that averaged, live weight, 465 pounds, were sold.

The profit of swill feeding is in utilizing what would otherwise be wasted, and in saving nearly all grain in making pork. The manager can make no approximate estimate of the cost of a pound of pork, or of the value of swill as compared with corn. He thinks that hogs would pay for their feed and care by their work on the manure pile and by their own droppings, even if the pork were worthless.

Last spring out of nearly 75 farrowed, only a few small pigs were lost, and these were fed on the ordinary swill, when weaned.

"THE SINGLE TAX."

A. C. C., FARMINGTON, MINN.—In Mr. Chamberlain's first article in regard to legislation needed concerning monopolies, he gave a brief review of "Henry George's plan." Doubtless Mr. C. intended to make a plain and true statement, but in fact he did neither. He says it consists of removing all tax from all other property of every sort and putting it all on land values in form of *rent* paid to the State."

This statement, together with the italicised word *rent*, would be apt to cause one to think that Henry George intended to have the State assume the function of a landlord and lease or rent the land to the user; for how else can you pay tax in the form of *rent?* But, in fact, Henry George's plan is to abolish all taxes except that on land values, irrespective of improvements.

This tax would be paid as now in the form of a *tax*. The justice of this method lies in the fact that economic rent (or that value that attaches itself to land on account of the growth of the community) belongs to the community; while personal property and improvements on land, being produced by the labor of an individual, belong to the indivdual. Thus the Henry George plan would not allow the community to take what belongs to the individual, nor allow the individual to take or retain what belongs to the community, or, in other words, to the State. So in reality, it would not be what Mr. C. says, but the opposite—raising public revenue by taking rent (economic rent) in the form of a tax. In the same article, Mr. C says, (the R. N.-Y saw fit to publish it in italics on another page(:

"The world does not owe every man a living.] It does, however, I think, owe him a fair and equal chance to earn one if he can and will." All "single-tax" men will agree with Mr. C. so far. That sentiment has the right ring in it—"fair and equal." But to Mr. C. it is simply a "glittering generality." Or does he see what justice is, but yield the point for fear of opposition? For see what follows in his article: "That is, it owes him the *possibility* (italics mine) of needed access to nature's materials and forces, etc." Now see: in the first place Mr. C. declares for an "*equal*" (italics mine) opportunity and then drops from the "sublime to the ridiculous"by making it only a possibility of needed access, etc. Wouldn't it have been fully as well, if he saw no way to guarantee an equal opportunity, to have crossed out that paragraph altogether? But there is a way. There is always a way to justice. Tax men in proportion to their opportunities for producing wealth—or, in other words, equalize opportunities by making the holder pay into a common fund a sum in proportion to the value of his opportunity. Mr. C. says, further, that "since property is the result of labor wisely expended on material, and since land is material, philosophy seems to show that property may rest in improved land."

Philosophy may "seem" to show, but it does not show it. What it shows is that property may rest in improvements of land. In fact, all property is an improvement of land, for all wealth is the result of labor on land; Mr. C. says history seems to show that individual ownership of land is the best incentive to human progress and to the highest and best civilization. But every-day observation shows that it produces an aristocracy that does no work, yet enjoys every comfort and luxury that labor works up from land; while labor that produces it all has barely enough to keep from starving; and is known as the "pauper labor of Europe."

Mr. C. lays down what he considers the just principles of taxation, and assumes them as granted. No! no! Mr. C., they are not just, neither are they granted. Over 60,000 men and women in these United States have signed a petition slip containing a single name and address, asking Congress to investigate the single-tax idea. No! no! not granted by any means; all over the world to some extent and in English-speaking countries in particular, is the single-tax idea being discussed; and earnest men and women are working for it with a religious zeal that distinguishes the lover of justice.

WHEAT EXPERIMENTS; SEEDLING APPLES, ETC.

J. D., FOSTER'S, OHIO.—According to promise, I write to the RURAL about my wheat experiment. The wheat was drilled on corn ground, and on account of wet weather the corn did not mature till very late. Then, just as I commenced to drill, a cyclone blew down the shocks and about 160 rods of fence, which put me back several days. It was about the fifth of October when I had finished. As soon as the ground froze hard enough to bear a wagon, I scattered about half a load of straw thinly over it as far as it would go, and along with it different kinds of manure. The wheat looked well early in the spring, but we had very dry weather until too late for the rain to be of any benefit to the wheat. All the early-sown wheat made a fair crop, but the late-sown is all a failure. Still the manured wheat was better than what was not manured, and the mulched was about as good as the manured. I finished plowing the ground on August 7th, and am going to drill about 200 pounds of fertilizer to the acre, sow wheat and grass this fall, and clover in the spring. I had about 11 acres of oat and wheat stubble, five of which were manured with stable manure, and the other six with fertilizer at the rate of about 175 pounds per acre. The fertilizer was a mixture of bone and tobacco stems ground, at the rate of 800 pounds of bone and 1,200 of tobacco stems to the ton. The wheat was drilled on September 18 and 19, and grass seed sown at the same time. It made a good crop, though as I have not thrashed it yet, I cannot give the yield per acre. The Timothy is very fine and promises a large crop for next harvest. I could see very little difference between the effects of the manure and those of the fertilizer. Soon after commencing to drill, I forgot to fill up the fertilizer box. The fertilizer ran out at the lower end of the field, so that the width of one drill was left without any fertilizer. The wheat on that strip was not half so good as that on either side of it, and I can yet point out the place by the difference in the Timothy. One of my neighbors is going to use ashes, mixed with acidulated bone from the Bowker Company's factory. Should there be an extra yield, I will let the RURAL know.

Several years ago, at the RURAL'S suggestion, I planted seeds from apples and pears. Five trees grew from the seeds of a Rambo Apple, only two of which survived the cold of a very cold winter shortly afterwards. One of the two is an early sweet apple; the other resembles the Maiden's Blush, but I think it is a better apple. It is just beginning to ripen now, and is loaded with fruit, so that I have had to prop the branches to keep them from breaking. The crop was very full last year also, but not quite so full as this; but the apples were much larger. The tree in growth resembles a Rambo. I showed it last spring to a man who had worked several years in a nursery. He pronounced it a Rambo.

ARTIFICIAL HEAT FOR CHICKS.

P. H. JACOBS, HAMMONTON, N. J.—The experience of "L.," given in the RURAL of August 24, in attempting to raise chickens by artificial heat, is rather discouraging; but the difficulty was due to the mistakes of "L.," and not to the system. He forgets that the domesticated fowl, unlike its wild progenitor, can do well without nuts or acorns, though in his case no harm was done. He attempted to raise chicks in winter with the *warmth under them*, (which he did not learn from the old hen,) by placing them on a loft, with a stove in the room below. The experience given shows that "L." verified what he has been warned against several times in the RURAL, but his letter will have the effect of cooling the ardor of those who may be favorably inclined to the artificial method. With facilities within my reach for observing the hatching and raising of thousands of broilers annually, I will state that artificial hatching is as safe and certain, (and more so when large numbers are considered) as the natural mode, but we place the warmth *over* the chicks and also keep the room warm as well. Had "L." given his chicks a warm room on the ground, with an opportunity to go out-of-doors on clear, nice days, with a warm, snug brooder at night, he would probably have succeeded. He fed them rabbit meat, and "still they died," so he says. Certainly, for very young chicks can endure but a limited feeding of meat. He thinks artificial incubation, "out of nature," and was so informed by those high in poultry *lore* (probably not in *experience*) and he noticed that the young chicks hovered over the register, which plainly indicated that they preferred to hover near the warmth, as they would have done in a brooder. To raise chicks properly let the heat be over them, and let it be high enough to prevent crowding. A young chick is really as naked as a young baby, and must be kept warm. Its food must not be too indigestible, or bowel disease will result. A novice may not succeed at first, but it is as easy to raise young chicks in brooders as it is to do most other things that are properly understood.

A TARIFF ON POTATOES.

C. C. W., GRAND BAY ALA.—Yes; give us a tariff on bananas. If protection is such a good thing, give us a plenty of it and then I hope the farmers all over the country will go in for a tariff on potatoes, and so prevent our markets from being glutted with the product of foreign "pauper labor" and assure to home producers a living price for their tubers. Of course, it will enhance the cost to every consumer by the amount of the import duty, but don't the consumers have to pay all tariff taxation anyhow?

R. N.-Y.—There is already an import duty of 15 cents per bushel on foreign potatoes. They can be grown so cheaply, however, in Canada, especially in Prince Edward's Island and the other maritime provinces, that even after the payment of this tax, they can compete successfully in our sea-board markets with the home-grown product in ordinary seasons, and be sold for less in seasons of scarcity and consequent high prices. In such seasons large imports of potatoes are made from Scotland, England, Ireland, and the European Continent, especially from Holland and Germany, and the cost of production is comparatively so small, and the ocean freight so low, that they find a profitable market here even after paying duty. When, a few years ago, the potato crop was unusually short, European potatoes were quoted in the Chicago market, and a few shipments were made even as far west as St. Louis. If the foreign crop be large this year, therefore, it is likely that any deficiency that may exist in the Eastern States will be supplied from Canada and Europe rather than from the Western States, and foreign imports are pretty sure to keep down the prices of the domestic product.

THE CRANDALL CURRANT.

FRANK FORD & SONS, RAVENNA OHIO.—In the editorial notice which appeared in the R. N.-Y. in reference to the Crandall Currant, the Editor says: "We do not see any reason for assuming that this is a hybrid." It is possible that it is not; but there are several reasons for our belief that there

are strong grounds for such an assumption. It is a seedling, (grown from seed of the currant the RURAL refers to, of very choice selection), and it is far more productive than any thing before known. Although to the casual observer the leaf is similar to that of its mother parent, it is not of the same shape, and partakes much of the texture as well as color of the English Red Currant. We have been unable to germinate any of the seeds from the Crandall as yet, and when the fruit is cooked they almost entirely disappear, showing that they are imperfect, indicating its hybrid character. All who have eaten of the Crandall, including the United States Pomologist H. E. Van Deman, say that it is more acid, larger and more productive than any of the varieties of Ribes aureum they have ever known. We do not say that it is a hybrid, but the above, together with the fact that the parent seed grew near Red Cherry Currants, are very strong "reasons for assuming that it is a hybrid."

R. N.-Y.—We noticed a difference between the leaves as stated, but not more than is liable to occur between any seedlings, as it seems to us. So far as quality is concerned, we could not tell one from the other eating the berries alternately of the Crandall and the variety alluded to as growing at the Rural Grounds.

BUTTER-MAKING.

W. E. R., DOVER, N. H.—The weather for the past few weeks has been bad for butter making. We use shallow pans, and have not been able to get all the cream, and have to churn oftener. When a creamer is used there may not be so much trouble in hot weather; but from what I can find out, I am in doubt as to which is the better way, all things considered. If the creamers are so much better than pans, as the makers claim, why is it that so many large butter-makers use pans? About a year ago, the RURAL gave the methods used by six large dairymen whose butter was sold in New York. I think every one of them used pans. Not long ago I had a talk with a man who has a Cooley Creamer, but who was not then using it. He could not tell me that he had obtained any more butter by means of the creamer; but he said he had secured more cream; but it was thinner than that raised in the pans. I took a can about the size of a Cooley can, and put it in an ice-chest of water the temperature of which I kept at 40 degrees. The can was not submerged or covered. The cream rose very slowly and I did not get as much as from pans. Can the RURAL or any of the readers give us any information on this subject? If, all things considered, the creamer is better than pans, I want one; but at present I am in doubt, and as I get more for my butter than many who use creamers get for theirs, I shall continue to use pans.

DOES THE WORLD OWE ALL AN OPPORTUNITY TO EARN A LIVING?

C. W. W., NORWALK, O.—I have seen, in one of Henry George's pamphlets, the statement that "the reason why the poor have so little is because the rich have so much." I never could believe this doctrine, and I think it as incendiary as it is untrue. I should be sorry to say it myself. The condition of things revealed in the RURAL's Eye-opener, page 535, is terrible. That people, able and anxious to work for their living, should be unable to find an opportunity to do so, and that in such numbers as to make profitable the establishment of bogus employment agencies to rob these unfortunates of the little they have, is a condition of things to which the people should not submit for a day without making it their main business to seek and apply an effective remedy. They should never rest until this condition of things has ceased to exist, and it prevails in the country as well as in the cities. That the world should deny a man an opportunity to earn his living, and then condemn him for idleness, and despise him for poverty, is every whit as bad as murder.

CHURNS AGAIN!

J. M. C., HOPKINTON, N. H.—In the R. N.-Y. of August 3, I replied to some objections of P. C., of Milford, N. H., against the Blanchard Churn on the score of its inadaptibility to the granulation of butter. P. C. now desires to know how to manage the cream that adheres to the floats and the inside of the cover. When thick cream is thinned down to a proper consistency, there will be no trouble about its adhering to the floats of any churn. Thick cream gathered from the open pan, whether large or small, is not fit in that condition for churning in any churn, whether it has floats or not. If one desires to have the butter come in a granular form or in such condition as to admit of proper washing for the removal of all objectionable substances, the cream should be about the consistency of that raised by the Cooley process, in order to perfect the granulation and prevent adhesion to the floats or other parts of the inside of the churn.

J. H. G., QUEENS COUNTY, L. I.—I recently took dinner at one of the best hotels in New England. The fruits were bananas and oranges. In sight of the dining tables were hills literally covered with blueberries and blackberries rotting on the bushes because they would not bring enough to pay for the picking. With blueberries at eight cents per quart and bananas at 15 cents per dozen, the hotel proprietor took the bananas. Is not this evidence of the onesidedness of the American system of "protection." The poor, miserable, pale-faced children who work in the factories are "protected" and their wages are presumably made higher by a tariff, while the money which, on the same principle, should go to the farmers' sons and daughters is sent to the slave owners of the tropics.

G. R. W., LYNDON, KY.—Prof. Maynard certainly has not the Eldorado Grape, which is one of Ricketts's Hybrids. The R. N.-Y. is right: it is as early as Moore's Diamond and its equal in flavor. The vine is a good, strong grower with healthy foliage. The fruit is of a yellowish, transparent color and of a rich, pleasant flavor. It suits my taste exactly. It should be grown by every one who likes a good grape.

What Others Say.

PITHS AND REMINDERS.

HOARD'S DAIRYMAN's advice to every dairyman in Wisconsin, Minnesota and Northern Iowa, where the corn crop is very backward, is to build a silo. Unless the frost holds off until well into the fall, it will be quite difficult to secure a crop of corn. The real practical question will be how to save the largest money value in the corn. A crop of soft, half-ripe corn is of no account to put in the crib and if carried along until it can be cut and husked, the frost will have destroyed more than half the feeding value of the stalks. Just as soon as the ears have reached the glazed period, it is at the top notch of combined value of stalk and ear for feed. Why not cut it then and put it in the silo and thus save all the feed value it has, and save the expense of husking.....

IF you have more of such food than you have cattle to consume it, slip out and buy a lot of thrifty yearling steers and heifers or thritty sheep and put them on that silage. The sheep will be ready for very fair mutton by spring. Good silage, Mr. Hoard says, is the finest feed in the world to make winter mutton. There are lots of turns that can be made to make late corn of some account and thus not lose your summer's work. But the first thing is to save the feed and put it where it can be made use of at any time, and the silo is the only safe plan.....

THERE must be more butter made in January and only half as much as now in June and July. The market taste is now for fresh, newly-made butter. Packed stock is not wanted. Why will people persist in laying down summer butter to sell four months hence, only to scatter poor butter all through the season?.....

THE NEW YORK TRIBUNE says that lard softened with kerosene until it will just flow in summer heat makes as good oil for mowers, etc., as that sold by dealers at 100 per cent. profit—much better than some of it.....

W. BRAZELTON tells in Hoard's Dairyman how he kills the horns on his calves. He says get a stick of caustic potash, then when the calf is, say, 10 days old, take it by both ears, stand straddle of it, then let an assistant have a little water, wet the place where the horn would come, then after wrapping a rag around one end of the caustic, rub the other end on the horn spot. It being wet will dissolve enough of the caustic to cause a dry scab to form. If thoroughly rubbed for, say, a minute, one operation is all-sufficient. Mr. Brazelton's calves six months old thus treated have not a sign of a horn.....

THE AMERICAN FARMER urges upon its farmer readers the importance of carrying a small life insurance policy. Thousands have died when their little farms were only half paid for, and in cases where the husband had his life insured the widow was enabled to lift the mortgage and retain the farm for herself and children. Otherwise she was left destitute and thrown upon the charities of a not too charitable world. It costs but a trifle to take out and maintain a small policy, say $1,000, and the husband and father who does not do so is sadly neglecting his duty to his family.....

For Seasickness
Use Horsford's Acid Phosphate.
DR. W. W. BLACKMAN, Brooklyn, N. Y., says: "I am very much pleased with it in seasickness. Several cases have been brought to my attention where it afforded prompt and entire relief."—*Adv.*

WORD FOR WORD.

——BREEDER'S GAZETTE: "For 40 years and more American molders of the races of swine have been breeding out the bristles, and it is much to their credit that this by-product of swine husbandry is no longer secured from their hogs in sufficient quantities to meet the trade demands. It does not pay to raise hogs for their bristles. In this instance at least it is not well to encourage 'home production."

——PHIL. WEEKLY PRESS: "Whatever may be said against the silage practice, this one point is a hard one to get over, the fact that the silo is a practical insurance against bad weather in the storing of crops. Hay, and fodder as well, must be made while the sun shines, but there is always an opportunity to put the crop into the silo."

——WHEN Mr. Adams put his clover into the silo he covered it with a layer, two and one-half feet in thickness, of freshly cut Prickly Comfrey. This covering, weighing when put in over two and a half tons, subsequently settled down five feet with the clover, and until the layer of comfrey itself was only eight inches in thickness. Mr. Adams is quite pleased with the success of his experiment and says that a recent examination of the silo discloses the fact that clover is in a perfect state of preservation up to the covering, there not being a particle of mold even where the clover came in contact with the comfrey. The broad leaves of the comfrey in wilting became so compact and are so thoroughly interlaced and woven together that it would seem to make a most excellent covering for silos. Of course, this is but a single trial and must not be accepted as conclusive, but the fact so far as we have been able to go seems to indicate that the future covering for silos should consist of some green material instead of a light and porous protection."

——KANSAS CITY LIVE-STOCK INDICATOR: "Prof. Sanborn has been endeavoring for several years to secure justice for the Missouri Agricultural College, and because of his efforts in that direction, he has been set upon by those interested and made to appear as the guilty party."

——PUCK: "The dogs we are warned to look out for always seem big enough and ugly enough to look out for themselves."

"WHEN a woman is unsuccessful in scaring a hen out of the garden, it is probably because her shoes are only half-souled."

"HEALTH makes wealth—and there is more demand for the finished article than the raw material."

——LONDON GARDEN: "There are about 5,000 roses planted in beds in the garden of the Trocadero, at the Paris Exposition. The summer being hot, few flowers appeared.

——N. Y. HERALD: "Flowers express the tenderest emotions of the heart, a generous pity for suffering. They are the eloquent messengers of faith, love and hope.

The man who has butchered his wife in cold blood and is condemned to die therefore is not a fit subject for such gifts.

Crime should be faced with the frown of a righteous indignation. To send the murderer a wreath of roses indicates a maudlin sentiment and total misapprehension of the true relation of things."

——HOARD'S DAIRYMAN: "For a test we once kept several cans of milk submerged in ice-water for 72 hours, and then made a good sweet cheese of it, the milk and cream having, seemingly, become emulsified in the cheese vat, as completely as when set. Hard cream raised through open setting, unless melted or strained, will not be incorporated in the cheese. But submerged cream, not having had access to air, does not go in clots."

——"IF we mistake not, it has been shown that the corn-stalks wasted in Missouri every year, would, if siloed, feed more cattle than the State contains. So the waste would go on, unless the silo comes in to arrest the destruction."

——DR. COLLIER: "None are to-day more hopeful than they who have thus far failed of financial success in the sorghum-sugar industry, and simply because none know so well as they that their failure resulted, not from any inevitable condition, but wholly from preventible causes which in many cases even ordinary foresight would have obviated."

——"THE cost of cultivation of the sorghum is practically identical with that of corn, but if a quarter more labor were given to it, the improved character of the crop would justify the additional expense. The grain of sorghum may be prepared for market or for feeding at an expense no greater than attends the cost of harvesting corn. The average of seven extended estimates as to the yield of sorghum, and one of these estimates included returns from 21 States, gives an average yield of 29½ bushels of seed per acre. We may, then, safely conclude that inasmuch as it pays to grow corn in this country for the seed alone, so too will the seed of sorghum pay all the expense in the cultivation and harvesting of the crop. Indeed, there is abundant testimony to prove that such is the case."

——MESSENGER OF PEACE: "A certain man named Smith came to a farmer named Jones, wishing to buy a pair of oxen, and said: 'Those red oxen of yours suit me, and I will give you $120 for them.' Jones replied: 'That is $30 more than they are worth.' Smith looked wonderstruck at this remark. The farmer said: 'I know the value of those oxen better than you do. One of them is a little 'breachy,' and the other one cannot bear the heat so well as some oxen, and yet there are many good qualities in them. But, all things considered, $90 are all they are worth, and you may have them for that price.' Smith gladly took the oxen and said to a man on his way home: 'It beats all what a difference there is in the religion of men. Now, there is old James Clark, my near neighbor; I have heard him make many a long prayer. If he had owned those beautiful oxen he would have asked me $130 or more for them, and he would have called them a great bargain at that, and he would not have said a word about one of them being inclined to be breachy, and the other not very tough in hot weather. I do not know anything about religion myself, but one thing I know as well as I know where the sun shines on a bright day, and that is, there is a mighty big difference between Jones's religion and Clark's religion.'"

Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

Is Your Blood Pure? If not, if you have boils, pimples, "humors," or indications of scrofula or salt rheum, you should take Hood's Sarsaparilla, which is the best blood purifier known. It effects wonderful cures where other preparations utterly fail. Be sure to get Hood's.

NOTHING ON EARTH WILL MAKE HENS LAY LIKE SHERIDAN'S CONDITION POWDER
Highly concentrated. Dose small. In quantity costs less than one-tenth cent a day per hen. Prevents and cures all diseases. If you can't get it, we send by mail post-paid, One pack. 25c. Five $1. 2 1-4 lb. can $1.30; 5 cans $5. Express paid. Testimonials free. Send stamps or cash. Farmers' Poultry Guide (price 25c.) free with $1.00 orders or more. L. S. JOHNSON & CO., Boston, Mass.

ENSILAGE MACHINERY DEPOT.
A full and complete line, from the hand-machine up to the largest, of the **Smalley Cutters,** the **fastest cutting, strongest, most durable** and **best** ever built, including **Carriers,** both straight and angle, of any length required, and **Extras** and **Repairs** of all kinds, constantly on hand. Having the **exclusive** control and sale of these Cutters and all the appliances for the same, for all of the New England States and a large portion of the entire East, together with the right to sell in nearly all the Southern States, application for illustrated, descriptive and free pamphlet, showing **"why ensilage pays;"** and for free catalogue of both **Tread** and **Lever-powers, Threshers, Wood Saw-machines, Feed-mills** and **Fanning-mills,** should be made to the undersigned, proprietor of the old and reliable Empire Agricultural Works, over 30 years under the same management. **Agents wanted,** and **special prices given** for introducing in new localities. Address
MINARD HARDER, Cobleskill, N. Y.

FINE SCISSORS BY MAIL
We will mail you post age paid, on receipt of 75c. A PAIR OF LADIES' SCISSORS 75c.

This engraving is one-third the size of a 6 inch Scissor. In ordering, state whether you want 5, 5½ or 6 inches. You can rely on the quality being the finest Silver Steel. ALLING & LODGE, Madison, Ind.

KELLY GRINDING DUPLEX MILL. SEND FOR CATALOGUE
SPRINGFIELD ENGINE & THRESHER CO., SPRINGFIELD, O.

THE
RURAL NEW-YORKER.
A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, SEPTEMBER 7, 1889.

THE R. N.-Y. WOMEN'S POTATO CONTEST.

THE reports of those engaged in this contest must be received at this office on or before October 1st.

THE potato vines to which we applied the Bordeaux Mixture "blighted" as early as any others. We attribute the "blight," in *our* case, first, to the flea-beetle and, second, to the wet season which induced rot.

THE R. N.-Y., as usual, planted a hill or so of all the novelties in water and muskmelons. The melons were late in setting, owing doubtless to the wet weather, and up to this time few have ripened and those that have done so were of inferior quality. The R. N.-Y.'s experiments this season—and we have never been more pains-taking with the work—have been disappointing and unsatisfactory in one way or another.

THE R. N.-Y. sent out small tubers of the "No. 2" potato last spring. Some of our friends were displeased because the tubers were not larger. The R. N.-Y. did its best to send samples. On page 590 are some reports of the yields obtained from these little tubers. One man man got 19½ pounds from his sample. When you see the price at which the potato will be sold next year, you will see what he made by his attention to a "little thing."

"No crop should be fertilized or manured without leaving a few rows or a small area unfertilized for comparison."—A. L. CROSBY, first page.

ATTORNEY-GENERAL HOGG, of Texas, declares that any combination of farmers to prevent competition in the purchase of merchandise is a violation of the Anti-Trust Law lately passed in that State. The question arose with regard to the action of the Farmers' Alliance in boycotting jute-bagging, that body urging the planters of Texas and other Southern States to use cotton-bagging exclusively, so as to punish the jute-bagging syndicate for its extortion. The Alliance, however was fully aware of the scope of the law, and the members propose individually to fight the abomination. Few of them are likely to patronize ginners who buy any kind of bagging except what they want.

WHAT Jerseyman says, on page 602, about a walking record for horses is worth considering. The most valuable farm pace is a walk. The R. N.-Y. pointed out the fact, some weeks ago, that all the freight that passes over our great railroads must first be transported by horse power. Improvements in the speed of this horse work have not kept pace with the wonderful developments of railroad transportation. Draft horse breeding is now a regularly established business in this country. Before long there will be as much money invested in it as there is in the business of breeding trotters. The R. N.-Y. sees no reason why the draft stallion with the best walking record before a load, should not command attention proportionate to the trotting stallion that heads the list of speeders. There is something in this idea. Breeders of draft horses should start the record.

A FRENCH seed grower and dealer in produce writes to the R. N.-Y. as follows:

"As American apples sell very well in England, and the crop in France is very short this season, I would like to try them here and buy apples from American dealers. But I do not know any fruit merchants in your country, and I would be obliged to you if you could give me information about this trade and the addresses of the best shippers. At the same time, I would like to know where I could buy cider apples at the lowest prices, and the names of the principal merchants."

The R. N.-Y. has sent instructions and addresses, and it is to be hoped that the correspondence may lead to a new market for American apples. It is doubtful if there will be much of a surplus this year for export, but years of plenty are to follow, and we need all the markets that can be found.

PROF. BYRON D. HALSTED assumes, and perhaps correctly, that the rot in potatoes is due to a fungus. We have this to say about it: This year, as last, those vines died first which were first and most seriously attacked and injured by the flea beetle. We know of several fields about us that were not infested with the flea-beetle. There was no rot in these fields. The R. N.-Y. has tried about 50 different kinds of potatoes the past season, all growing within a few feet of one another. In every case, so far as our careful attention to the matter offers a guide, it would appear that those varieties which were most injured by the flea-beetle have rotted most; those which were the least harmed by the flea-beetle were injured least. Has Prof. Halsted considered the potato rot from this standpoint? The question we raise is whether the fungus is the cause of the rot or a consequence of the injury sustained by the vines in consequence of the perforated leaves and the continuous wet weather which gave very favorable conditions for the fungous growth. We are fairly confident that just precisely the same cause which killed the potato vines *this* season, aggravated by continuous rain, killed them last year.

A COMMISSIONER appointed by the legislature of Vermont to ascertain the acreage of abandoned farm lands in the State, reports that 200,000 acres formerly cultivated have been abandoned by the owners. As a rule, the abandoned farms are scattered in different parts of the State; but the Commissioner finds that many of them are so close together as to make colonization by communities possible, and he proposes that inducements should be offered to Swedes to become occupants of the deserted farms. The proposition meets with general approval, and next spring an attempt is to be made to establish an experimental colony of 50 Swedish families. Should this prove successful, the plan will be followed till all the abandoned tracts are once more occupied. In all parts of the State the people are drifting from the farms into the towns or to other parts of the country, chiefly the West. The deserted farm buildings and fences are fast falling into decay and the once cultivated fields are growing up in timber. Many farms can be bought for less than the "improvements" on them originally cost. Is it likely that where the hardy, frugal, industrious Vermonter failed to make a living, the hardy, frugal, industrious Swede will succeed?

"Agricultural writers should be quite sure they are right before they ridicule every one who does not follow their teaching."—B. R., page 593.

$25.

TWENTY-FIVE dollars are offered by the R. N.-Y. as follows: Fifteen dollars for the largest and best shaped R. N.-Y. No. 2; $10 for the second-best. Description and weight should be sent in before November next. Those only who may be entitled to one or the other of the above prizes, *as judged by their own reports*, will be asked to forward the specimens to this office.

CONSTITUTIONALITY OF THE DRESSED-MEAT LAWS.

ATTORNEY-GENERAL CLAPP of Minnesota, will make an appeal to the State Supreme Court from the decisions recently rendered by two Circuit Courts against the constitutionality of the "dressed meat" law. He maintains that the presentation of the cases did not fairly cover the points of the law. In both instance the cases were made up to suit the views and interests of the dressed meat syndicate, and were presented before courts of its own selection. The decisions were rendered upon application for a writ of habeas corpus, and, as is usual in such cases, the Judges decided off-hand, without hearing the arguments of counsel and without the mature deliberation required by the importance of the question involved. It is contended that a law against the sale of imported dressed meat for sanitary reasons, is just as much within the police powers of the State as laws against the sale of imported liquor or oleomargarine, and such laws have been repeatedly declared constitutional by the State and United States Courts. The constitutionality of the "dressed-meat" laws is a matter of great importance to the stock-growers not only of Minnesota and the other States in which similar laws have been passed; but also to those of several other States in which the passage of "anti-dressed meat" laws was defeated chiefly on the ground that such laws would be unconstitutional. Of course, it pays the wealthy dressed-meat syndicate to contest every case to the bitter end; and the State should support its own laws by carrying a test case to the court of last resort—the Supreme Court of the United States.

"I still think that the catalpa" (C. speciosa by preference. EDS.) *"is one of the best trees in the world for pasture groves. Its growth is rapid and its broad leaves make a shade so dense that neither weeds nor brush can exist beneath it. Stock will not eat it."*—F. GRUNDY, page 592.

A FARMERS' TRUST.

"THE Farmers' Federation of the Mississippi Valley," has called a convention of the "wheat-growers of the Mississippi Valley" to meet at St. Louis on October 23, for the purpose of forming a gigantic syndicate, or trust, for the purpose of putting and keeping up the prices of wheat, corn, cotton, cattle and other agricultural products. Meanwhile the promoters strongly urge the farmers of the Northwestern States and Territories to hold their wheat off the markets till after the meeting of the St. Louis convention, "unless such prices shall be offered as will justify a reasonable profit above the cost of production, or $1 per bushel." The "federation," it tells us, is a joint-stock company, with a capital stock of $20,000,000, only $5,000,000 of which can be put on the market and sold. Farmers and local shippers can obtain this stock at the rate of 10 cents on the dollar, and the "federation" will not begin active business until $2,000,000 out of the $5,000,000 have been taken up. Consignments of grain, cattle and other produce are to be made by farmers to salaried agents of the syndicate, who will charge the usual commissions, but the profits will be divided *pro rata* among the patrons. It proposes to make a reduction of 90 per cent. in the number of middlemen and thus save a vast sum annually in commissions. An equal proportion of the retail men are also to be "wiped out." The chief evils to be remedied are the unprofitable prices of cattle and wheat, due to glutting the markets and exorbitant charges in handling; the excessive number of middlemen of all sorts, who eat up the profits that should belong to the producers, and the extortionate charges of the owners of elevators and stock-yards. Lower rates of freight by rail and water will, it is expected, be also secured, and the welfare of the farmer be advanced by securing lower charges and better prices for all his products. A good deal can be learned and something can be hoped for from all such projects. In the present case, doubtless not the least forcible objection would be that a "federation" or "trust" with a membership of several millions, having a multiplicity of products and often conflicting interests must be a very unwieldy and unmanageable organization.

A SERIOUS MATTER.

THE ORANGE JUDD FARMER is asked by one of its readers why it gives so much attention to Northern Montana. We need not publish the reply made to the inquiry, further than to say it is essentially evasive and untrue. The reason why it is full of Montana advertisements and Montana glorification editorials, is that the company owning the paper is personally interested, in a pecuniary way, in the sale of Montana lands. It is true also that these *editorials* which are assumed by the reader to be a candid, unbiased record of the information gleaned by the editor as he travels about the Territory, and of the opinions formed in consequence of his careful and thorough investigations, are really *advertisements*, pure and simple, according to contracts entered into with certain Montana agencies.

If the Orange Judd Farmer were the only farm journal engaged in this bad business, we might not think it worth while to call public attention to it in this conspicuous way. As it is, we deem it our duty, and it would seem to be the duty of all journals that have the good of their readers at heart, to publish the fact that this Montana boom is instigated, in a great measure, by a syndicate of agricultural editors acting in concert with railroad officials. The R. N.-Y. knows nothing of Montana, having declined polite invitations, first, to join this little editorial visiting band which was, a year or so ago, so liberally treated by the Montana railroad officials, and, later, the proposition to become pecuniarily interested in the enterprise which promised "immense returns for a small outlay in money." It may be all that is claimed for it. Chinook may in a few years rival the most favored Eastern cities. Our view is that those editors who have invested money in such lands and who are praising everything appertaining to them with scarcely any qualification, while their readers are left in utter ignorance of the incentive, are prostituting their high calling to the level of the most unprincipled monopolies, trusts or other combinations conceived and carried on chiefly from motives of greed, with little, if any, consideration for the real welfare of those who, through this editorial puffery, are directly or indirectly induced to leave their present safe homes to endure the hardships and uncertainties of pioneer life.

"The R. N.-Y. No. 2 potato planted was the size of a hen's egg. I cut it into 10 pieces of one eye, each and planted in a poor soil without fertilizer, 12 inches apart. etc. The yield was remarkable. There were 68 potatoes which weighed 19½ pounds," etc.—See page 590.

BREVITIES.

RED apples are wanted by the fruit sellers in New York.

YOUNG Leghorn roosters are the greatest nuisances that a poultryman can have in his flock.

NEXT week one of our correspondents will gives some reasons for throwing stones at a horse!

IT seems that wood bending is a regular business and one in which there is less competition than any other wood industry.

NO person should ever drive a horse who does not know how to harness or unharness. The women folks are included in this.

THE development of the dressed beef industry has made it possible for farmers to obtain bones for fertilizing purposes in larger quantities than before the business started.

IF the sugar trust people do not behave themselves, there will be a big boom in bee keeping in this country. Farmers will fight the trust by supplying a share of their sweets in honey.

ONE of the lambs used in a feeding experiment at Cornell University died from the effects of a stone in its bladder. The R. N.-Y. feels confident that many of our domestic animals, horses more particularly, suffer from this trouble.

SOME of the farmers near the Rural Grounds "make work" in picking up potatoes. Some pick into bags and load the bags into the wagon. Others throw the tubers into the wagon and pick them over while unloading. The R. N.-Y. will have light boxes—just large enough to fit into the wagon box two abreast. These are easily handled and can be quickly emptied.

Miscellaneous.

CORRESPONDENTS' VIEWS.

THE PLAGUE OF WEEDS.—The alarmingly rapid increase of all noxious weeds, when allowed to grow unmolested, should be sufficient inducement for those interested to use every available means for their destruction, though it may seem practically impossible to effect this when we consider the little effort put forth in this direction by a large proportion of the farming public. However, there are honorable exceptions where the highways, fence-corners, yards and inclosures connected with many farms present a clean and neat appearance; but on neighboring farms perhaps can be seen weeds of nearly all varieties luxuriantly growing unmolested, their seeds allowed to ripen and to be scattered broadcast, to produce ten times the number of pests another year. During my daily drive to the post-office half a mile distant, on either side of the highway, after passing the limits of my own farm, can be seen weeds of the following varieties growing in profusion: milkweed, teasel, wild carrots, nettles, Canada Thistles, golden rod, burdock, mullein, catnip, ragweed, yellow dock, sweet clover, broad and narrow-leaved plantain. All these force themselves on one's attention while the highway laws make it the duty of the overseers to cut the pests at least twice during the season where the owners of the lands adjoining neglect to do so. But this duty is in many instances entirely neglected; the seeds are allowed to ripen and to be distributed by the passing carriage wheels during a period of muddy roads from one locality to another. It is evident that this feature of the highway law should be rigidly enforced. Indeed, the New York Central R. R Company, to its credit be it said, is doing more for the suppression of noxious weeds on its grounds than many others who should consider it a work of vital importance, are doing on theirs; for the road people for several years past have regularly cut them (where the line passes through my farm) at least twice during the season. Not only are these older and well known *standard* varieties slowly but surely gaining a permanent foot-hold in all parts of our land, but others with new names, and equally objectionable characters, are persistently making their way to the front, seeming to defy the efforts of the painstaking farmer to destroy them. One of the most notable, and one that causes much speculation and anxiety among the farmers of Western New York, is the new and alarmingly prolific weed-pest generally known by the name of "Long John," resembling somewhat the common "chick-weed," though growing taller with blossoms of a light yellow color. Many careful and thoroughly wide-awake farmers are surprised at finding it intruding itself in their wheat fields, meadows and pastures. I am creditably informed that neither butter nor cheese of a palatable flavor can be made from cows pastured where this pest abounds. Thus we are admonished of the direful results of allowing these troublesome strangers, together with those of older acquaintance, to find a resting place among us, and with united effort we can possibly keep them in subjection, if we cannot entirely eradicate them. IRVING D. COOK.

Genesee County, N. Y.

SETTING IRON FENCE POSTS.—Iron fence posts are objected to because they cannot be set as easily as wooden ones. They are liable to be pushed over by the stock, since they present a small surface to the earth to receive support, as compared with wooden posts. Manufacturers have devised various contrivances to overcome this, but the result has been that the post is made so expensive as to render it impracticable. The iron post has so many advantages that I endeavored to discover some cheap method of setting it which would likewise make it firm in the ground. A hole six or eight inches in diameter was bored the required depth. The post was set therein and the hole filled with small stones pounded in carefully; a very small quantity of earth was mixed with the stones to make them "compact" more readily. A wagon-load of these small stones, which may be taken from the field or the bed of the creek at this season, will fill a large number of holes. It is much better to have the posts provided with a knob or something of this kind at the lower end to prevent them from being drawn up easily. While I have not given this method a lengthy test, yet I feel it will continue satisfactory. Another objection urged against iron posts is their expensiveness. An instance occurs to me where a farmer bought a lot of second-hand gas-pipes at a low price. These were cut into proper lengths for posts and given a coat of paint. They made most excellent posts and will last twice as long as wooden ones. What we need is that some manufacturer should invent a practical iron post—something that is cheap and has the stability of wood together with that lightness and neatness which can be found only in the iron or steel post. R. L. D.

Green County, O.

WASTE LAND.—While spending a few weeks' vacation recently in Western New York, I could not help observing the large amount of valuable land that was actually nothing but weeds and briars, and yet many farmers were complaining of the very small incomes received from their farms. I was told that money loaned at five per cent. would pay them better than if invested in land at $100 an acre. Well, of course, in order to make land pay a good profit at that price, every available foot of it must be utilized. It is not an uncommon thing on farms of 160 acres, to find three and four miles of fence. Here is the point: I found that on many of the farms, briars, bushes and weeds had been left to grow and spread for years until, by actual measurement, I found a space a rod wide devoted to a fence-row, where not more than two feet ought to be occupied. Now supposing that on a farm having four miles of fence, half a rod more ground is given to the fence-row than is necessary. Here are four acres out of the 160 that are actually useless—yes, worse than useless, as they are sure to produce weed-seeds to stock the adjoining fields. Here, then, are $400 lying idle, which, at five per cent. interest would produce an income of $20 a year; or 2 2-9 per cent. of the income from the cost of the entire farm. Now there isn't a farmer in Western New York who would think for a moment of allowing $400 or any other amount to lie idle without a cent of interest; and yet this is just what many of them are doing by allowing so much of their land to go to waste. Is it any wonder they complain because "farming don't pay?" J. T.

EARLY PLANTING OF COTTON.—This year has further demonstrated the fact that we put off planting cotton till too late a date. It has been customary in this section to plant at any time from the first to the 20th of April, while some advocate planting the first week in May. I planted some this year myself on May 21; but as very little cotton came up till June 10, it did not make much difference when it was planted. There were in this section a few patches of cotton that were planted in March—something I have never seen before. They got a good stand, and although the whole spring was cool and backward and corn was bitten down by frost, the cotton was not injured, and it is the finest in this section to-day. Seven years ago we had a cold spell in May; people worked in the field with their overcoats on; corn was bitten down by frost; cotton shed all its leaves, leaving just the naked stalk sticking up out of the ground entirely denuded of its foliage, still the stand was not seriously injured. People had to plow and hoe the naked stalks until the weather turned warm, when the crop grew right off as if nothing had been the matter. This year and two years ago I failed to get a stand owing to a droughty April and I have resolved to profit by experience (which I have paid very dearly for) and hereafter, if I can prepare my ground in time, I shall plant in March or in the first week in April. I also advocate the early planting of both sorghum and Peruvian potatoes. I have tried them for years (both early and late) and pronounce early planting the great desideratum. G. H. F.

Denmark, Mississippi.

EXPERIENCE WITH SQUASHES.—I have always had very good luck with squashes, generally keeping some until the Fourth of July and some years until October. Last year was an exception. On account of the freeze in October they did not keep until April, although I had over 60 very nice specimens of the Orange variety, which are extra early, (thanks to the RURAL for them) until this freeze so early in the fall. Before the present year I never planted until June 20 to 22; but this year I planted June 1, and to get around the maggot, I sifted a half inch of coal ashes on each hill when planting, and so far they have been perfectly healthy. The maggot has been the only drawback to early planting and if coal ashes will stop its work, we shall get larger squashes, for they will have a longer time to mature. I always plant five seeds in a hill, and when the vines are coming up they must be kept covered with plaster. I look to them after every shower—not once a week as some do, but every day. I keep the ground mellow. I plow twice before planting, and after they have been kept clean, just before the vines begin to run, I plow the whole surface between the hills and give level culture and that discourages the weeds. I have 100 hills planted 4x6 feet apart. After the bugs have left, I thin out to two plants, and now, July 15, the vines nearly cover the ground. Cucumbers for pickles I plant in drills, six to 10 plants to the foot, after they are thinned. I keep them covered with plaster when they are starting or while young. P. C.

Milford, N. H.

ALSIKE CLOVER.—This year again proves the hardiness and the capacity of this plant for remaining in the ground during the winter and early spring, two features of much value to the farmer. Although Alsike hay is not as heavy when cured as Timothy or Red Clover, yet it is readily eaten by all kinds of stock. A good stand of this clover seems to insure a crop of it for years. As an illustration, an Alsike field was cut for seed four years ago, plowed and planted to corn the following year, then to barley, with rye in the fall and then seeded with Timothy and Red Clover, equal parts, without any Alsike. This year the Alsike is thick and heavy enough to warrant my saving it for seed. A yield of from five to eight bushels per acre pays very well as the hay makes good sheep feed after it has been thrashed.

One winter I kept a flock of ewes almost entirely on this thrashed hay with a small daily allowance of grain. It must be remembered that there is generally considerable well-cured Red Clover and Timothy in the hay. Besides the hay and seed produced, if the farmer will only keep a few colonies of bees, he will be repaid many times for all the seed sown, in the delicious honey. C. C.

JOYS OF THE FARMER.—New Jersey farmers have another enemy to contend with this season by way of variety. A green aphis has attacked their muskmelons in countless numbers. The pests infest the young and tender ends of the growing vines, causing the leaves to curl, and impairing the growth just as the Black Aphis injures the young growth of the cherry trees. As they are on the under side of the leaves they are thoroughly protected by the curl so that they cannot be reached by the ordinary application of insecticides. The only way it seems possible to reach them would be to dip the ends of the vines in some killing liquid, which, to be effective, would probably kill the vines too; besides, owing to the labor, it would be impractical and ineffectual as the pests are suckers. An army of parasites or a dose of dry weather would probably be the best remedy; but the damage being done already, Nature will probably take her own course, and we will go melon-hungry. Potatoes—well, they are going and gone in many instances—another legacy from the wet season. Verily the farmer's vocation is a happy one. Is it any wonder he is envied?

E. W.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

THIS summer the low-cut bodices with turn-down lace collars are very much worn. In some cases they are really too low to be lady-like on the street; the prettiest style is where the basque has no collar but the turn-down of lace, just the least bit open in a point in front.

* * *

MOIRE ribbons with a picot edge are now out of date; the coming ribbon is moiré with a broad satin edge. Do you know how moiré or watered ribbon is made? We saw the process recently; the ribbon is woven a plain gros-grain; then, in the finishing, it passes over pieces of wood set up like a banjo bridge and cut into an irregular surface. It is pressed upon these so tightly as it passes along that the ribbon is deeply marked. It then passes between rollers heated by gas, which, while flattening it, make the marking permanent. In making the picot edge a slender thread of flexible whalebone runs down either side of the ribbon, alternately catching in a certain number of threads of the filling, and then dropping them for a space. The piece of bone is about a yard long, slipping out of the ribbon as it lengthens.

* * *

NOW is the time to think about Christmas presents. They should be decided on months beforehand: whenever the purse allows it, some expenditure may be made. When fancy-work is selected, it should be begun early, so that there will be no hurry at the last. It is not at all a bad idea to make a list of the articles required or thought of, and somehow, things seem to cost so much less when they are bought by degrees than when everything is spent at once. Those round Japanese baskets make pretty and inexpensive gifts; the small ones are handy to stand on a bureau, and the larger ones as scrap-baskets or receptacles for odds and ends. They should be gilded in any color, and trimmed with ribbon bows.

* * *

A VERY pretty and very cheap wall decoration consists of a Japanese paper banner slanting diagonally; across the top five tiny paper lanterns are hung, while several little fans are laid across the bottom.

AFTER-THOUGHTS.

OLIVE E. DANA.

WE are often willing to do anything for each other save to exercise continually that willing forbearance, that generous thoughtfulness, that quiet, self-forgetful, burden-bearing love, which, *in exercise*, is the best gift we can render. We are often ready to make great sacrifices when we cannot bear patiently or in silence some petty misunderstanding of our mood or motive, and will not yield our will or way without complaint.

Ah! the little thorns! How they prick and sting and pain us! They wear away the good purposes, and waste the strength, and chill the love, and dim the trust; and they put frowning faces and sharp words in the place of our coveted serenity. They torture the nerves and rasp the temper, and put the soul in tumult. The little thorns—how do they grow so fast and thick? And do we not all of us help plant and tend them?

It seems to me that one of the worst things about our little fretfulnesses and despondencies is the way they are perpetuated and reproduced in others. We pass them on by the very expression of them, and without meaning to. And have we not noticed, sometimes how the complaint or repining did not spend itself in the utterance? Even the one that listened—willingly or unwillingly—and tried to give only the soft answer, yet very likely, afterward, could neither get rid of it nor away from it. And very likely she was more easily upset by the next small grievance that came to *her*. Haven't we seen a petulance passed on so from member to member of a household, changing in each from fretfulness to depression, from repining to hasty speech, from unwonted gloom to unusual nervous irritability, according to the disposition or temperament of each, as it went the rounds? And how much better it would have been if it had not been passed on at all! "Woe unto the world because of offences! for it must needs be that offences come; but woe to that man by whom the offence cometh." That is one warning we need to remember. And there is another we might oftener recall about the forgiveness without which, often repeated, there can be little real forbearance—"not until seven times, but until 70 times seven."

That is a pleasant and a suggestive passage in "Mary Clemmer's Memorial of Alice and Phoebe Cary,"—when she says:—

"Nothing could have been more absolutely harmonious than the daily abiding intercourse of these sisters. This was not because they always thought alike, nor because they never in any way crossed each other, nor was it based on their devoted affection and perfect faith in each other alone. People may believe in each other, and love each other dearly, and yet live in a constant state of friction. It was chiefly because each cherished a most conscientious consideration for the peculiarities of the other and because in the minutest particular they treated each other with absolute politeness. There is such an expression used as 'society manner.' These sisters had no manner for society more charming in the slightest particular than they had for each other. No pun ever came into Phoebe's head too bright to be flashed over Alice, and Alice had no gentleness for strangers which she withheld from Phoebe. The perfect gentlewomen which they were in the parlor, they were always, under every circumstance . . . . Each obeyed one inflexible law. Whatever she felt or endured, because of it she was not to inflict any suffering upon her sister; no, not even if that sister had inadvertently been the cause of it. If she was out of sorts, she went into her own room, shut her door and had it out by herself. Whatever shape her Apollyon might take, she fought with him, and slew him alone. When she appeared outside it might strike one that a new line of pain had for the moment lit upon her face; that was the only sign of the foe routed. The bright

sally, the quiet smile, the perfection of gentle breeding were all there, undimmed and indestructible."

Perhaps it is with the graces of gentleness and patience, forbearance and serenity as it is with many other things—we simply are not willing to pay the price we must pay to win them. Or perhaps we do not see quite clearly what that price is. Surely they are to be sought and cultivated, if many of us ever possess them. As is said of the Quakers, in that delightful book, "A Quaker Girl of Nantucket," "They are serene from principle and then from habit;" so it must be with any tranquil patience we attain to. There is much implied in that line from the last chapter of the Book of Proverbs, where is painted as nowhere else, the ideal woman: "In her tongue is the *law* of kindness."

LETTERS TO A COUSIN.

MY DEAR COUSIN: You will pardon, I know, my little delay in writing to you, for I have been entertaining an old friend and reading a new book, and between the two, I have not had a moment to spare for you, dear. Possibly, I might have stolen away from my friend (this is whispered very softly), but I really could not tear myself away from the book. Even now, thoughts about the book are uppermost in my mind and I think I must beg your kind indulgence while I talk about it for 10 minutes. It is "Looking Backward" by Edward Bellamy, that has interested me so deeply. I may not be the first one to speak of this book to you—I am very sure I shall not be the last. Like that much-talked-of book "Robert Elsmere," it treats of the universal brotherhood of mankind. The author very ingeniously dates his narrative in the year 2,000, and gives a retrospective glance over the faults and vices of the nineteenth century. In the twentieth century it appears that the United States Government has taken unto itself the full control and management of all the industries of the country, and in return it guarantees to every man and woman (*and woman*, mark ye that!) an education, employment and a competency for life; to each one the same amount—even as a father divideth his property equally amongst his children. The school education begins at the age of six and ends at 21. On this subject the author says: "No single thing is so important to every man as to have for neighbors intelligent companionable persons. There is nothing, therefore, which the nation can do for him that will enhance so much his own happiness as to educate his neighbors. When it fails to do so the value of his own education is reduced by half, and many of the tastes he has cultivated are made positive sources of pain." "To put the matter in a nutshell, there are three main grounds on which our educational system rests: First, the right of every man to the completest education the Nation can give him on his own account, as necessary to his enjoyment of himself; second, the right of his fellow-citizens to have him educated as necessary to their enjoyment of his society; third, the right of the unborn to be guaranteed an intelligent and refined parentage." These thoughts are ideal thoughts, cousin, but who can say that they shall never be realized.

Of employment he says: "All men who do their best do the same. A man's endowments, however God-like, merely fix the measure of his duty. The man of great endowments who does not do all he might, though he may do more than a man of small endowments who does his best, is deemed a less deserving worker than the latter, and dies a debtor to his fellows. The Creator sets men's tastes for them by the faculties He gives them; we simply exact their fulfillment." Dearest, did you ever hear anything more clear-cut and logical than that? Arguments, such as these are very beautiful. Pray, wait one moment before you denounce the ideas as altogether impracticable.

After leaving school, each person works for the government three years at whatever work he is appointed to. At the end of that term, he is allowed to choose his own vocation; if at the end of five years, he feels that he has mistaken his calling, he is allowed a second choice; this last he must abide by until the age of 45, when the government retires him from the service. Rather young to be laid on the shelf, you will say. But that is not the idea. Being released from government duties, each person may work for his own pleasure—not to lay up gold, for there is no money in circulation—but to advance in knowledge and understanding, "ever onward and upward," or to dabble in art and make poetry to his heart's content if so disposed; for, having honorably discharged his duties to Uncle Sam, his income is steady and secure year in and year out. There are no drones in this grand industrial government, all are actual producers and therefore the real wealth of the country is vastly increased.

Of course, you will have to read the book for yourself to understand "how all these things can be." The plans are all very finely made, and could they be fulfilled, peace and prosperity to all would seem assured.

According to the book, all civilized countries have adopted this new form of government, so that one may travel all over the world on his credit cards. Here is a bit of a criticism on authors by a 20th century woman: "Ah Dickens! you" (speaking to a 19th century man, who has been brought to consciousness after 43 years' sleep) "admired him then! That is where we moderns agree with you. Judged by our standards, he overtops all the writers of his age, not because his literary genius was highest, but because his great heart beat for the poor; because he made the cause of the victims of society his own, and devoted his pen to exposing its cruelties and shames. No man of his times did so much as he to turn men's minds to the wrong and wretchedness of the old order of things, and to open their eyes to the necessity of the great change that was coming, although he himself did not clearly forsee it." I know you will think I am the most sanguine person in the world, to even have faith enough in a scheme of this kind to write to you so earnestly about it; but if the subject does not arouse your sympathy I may at least hope that it will amuse you.

I was very much amused myself with this passage: "There is actually nothing that the people take more interest in than the perfection of the catering and cooking done for them, and I admit that we are a little vain of the success that has been attained by this branch of the service." "*Actually nothing that the people take more interest in than the perfection of the catering and cooking done for them.*" Ah, me! Is this advancement onward and upward? No subject then, even when we shall have reached the millennium, will be of greater importance than cooking! Let us proceed with our canning and pickling and preserving, and see who can make the "beautifulest jell that never was," in order that our children's children may with one accord pronounce us great. This is the only little slip I can find in the book that goes to show that human nature will be exactly the same then as now. You have doubtless received letters ere this that were all on one subject, (love letters for instance) and I trust you have not found this one more tedious than some of them.

Very affectionately your cousin,

DOCIA DYKENS.

GOLDEN GRAINS.

BERTIE: "Pa, is that new Mr. Hanks an ice dealer?"

Pa: "Yes, Bertie, how did you know?"

Bertie: "I didn't know, only I thought he was, for when the minister prayed for hot weather yesterday he said 'Amen!' awfully loud."..... .....

RUSKINS says: "Though you may have known clever men who were indolent, you never knew a great man who was so; and when I hear a young man spoken of as giving promise of great genius, the first question I ask about him is always: Does he work?".....

THE pious man and atheist always talk of religion. The one speaks of what he loves, the other of what he fears, says Montesquieu.

"SEEING we have such hope we use great plainness of speech." Ministers of Christ have plain truths to declare to plain people, and should declare them with such plainness that those who hear them shall be left without excuse in case they disobey. There should be such simplicity of language that a child can understand it, and such earnestness of soul that all who hear the word may feel its power.....

SAYS Mr. Spurgeon: "The reformation banished an unknown tongue from the reading-desk; we need another to banish it from the pulpit. The language of half our pulpits ought to be bound hand and foot, and with a millstone about its neck cast into the sea; it is poisoning the 'wells of English undefiled,' and, worse still, it is alienating the working-classes from public worship."....

BUILD a full, firm fence of faith
All about to-day;
Fill it in with useful works,
And within it stay.
Look not through the sheltering bars,
Anxious for to-morrow;
God will help whatever comes,
Be it joy or sorrow.

THE INDEPENDENT says that life, in the union of an individual, personal and immortal spirit with an animal and mortal body, is an insolvable problem. The severance of this union that takes place at death, is a problem of equal mystery. We cannot penetrate to the interior depths of either, and must hence content ourselves with our own ignorance....

THE fact that the good or evil which one does while living may long survive him in the results thereof, and thus make him a blessing or a curse to the world after he has personally left it, ought to operate upon every man as a powerful motive. It is a great and startling fact attached to the economy of our present existence, and immensely augments our responsibility.....

EVERY man, says Dr. Hanaford, has an "inalienable right" to a supply of 25 cubic feet of pure air each minute, that his blood may be reasonably purified, while the man, or monster who voluntarily so contaminates it by tobacco smoke that it is unfit for his legitimate use, is a usurper, a practical tyrant, and should be treated as such. No man has any better right to rob me of the pure air which the Creator has granted me than he has to steal my pocket-book, since the air is one of the necessaries of health and life .....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

EXTRACTS FROM SUNDAY-EVENING TALKS AT THE RURAL GROUNDS.

IN the fourth chapter of Proverbs, the 18th verse, I find these lines: "The path of the just is as a shining light that shineth more and more unto the perfect day."

What I have to say is perhaps my own creed in part. The path of the just, I understand to be the experience or life of a good man. This was written before Christ came, and when the term Christian was unknown: faithful followers of God were then spoken of as just, righteous or upright in all their ways. If I use the term Christian instead of just man, it will be because the term is more familiar to us, and suggests the same idea more fully to our minds. The Christian life, then, is compared to an increasing glory of light. On a cloudless morning, if awake while it is yet dark, and watching for the morning, we would see how the light shines more and more to the perfect day. It is so dark just before dawn on a moonless night that to one uncertain of the time daybreak seems hours away, but a faint light or rather a little lessening of the darkness soon becomes perceptible; then it deepens to a gleam in the East, spreads toward the zenith, and slowly begins to bring out the objects around the watcher; but this early light often brings with it a sense of chill and desolation. The glory of the stars pales, and there is no joy in the heavens or on the earth; but the light soon deepens; the sky begins to flush with lovely color, and as the watcher begins to feel the glow of the new day, the sun's rays strike the earth and bring out a joyous sense of life in every living thing. In an hour it is perfect day, and the sun is doing his mighty work in silent faithfulness.

There are 365 mornings in a year; there may be 90 years in a life-time, and no two of all the 32,850 mornings dawn in just the same guise; but there is never a morning when the deep darkness suddenly becomes brilliant noon with no transition time.

So with the Christian life in the history of the church and in the lives of individuals. Perhaps our Christian life here is only the hour of the dawn, and the whole perfect day lies beyond in the country where we are told, "there is no night there."

If the Christian life were like the blazing of a torch when once lighted, the light could never increase and could not touch and quicken other lives more than a torch can hasten the circulation of the sap in tree and plant. It could not store up, by its shining, food and fuel and clothing in the earth and on the earth for the needs of the creatures it shone upon. If our lives are but torches, what increase of power have we to look forward to? The Bible is called a lamp, but the soul it illumines is compared to the shining light that shines more and more unto the perfect day.

The heaven promised the Christian has glories, Paul tells us, which "eye hath not seen nor ear heard, neither have entered into the heart of man the things God hath prepared for them that love him;" and a little further on, in the same letter, he says: "But the natural man receiveth not the things of God;" showing that we are to be changed and fitted to enjoy the promised heaven.

To become purified and strengthened in every faculty must be in itself a great and never-failing joy; and to be placed where the ear, attuned to harmony, will hear rarer music than we can imagine; where the sense of beauty, intensified and deepened, will see fairer sights, and the mind can follow unbroken chains of living thought—all this will be a part of the perfect day, and all this will be reached by transitions from our feeblest beginnings here, through every intermediate step.

Christ described the Kingdom of God "as if a man should cast seed into the ground and it should spring up and grow he knoweth not how—first the blade, then the ear, then the full corn in the ear." Paul spoke of "babes in Christ whom he fed with milk and not with meat, because they were not able to bear it."

If, then, we *grow* in grace instead of becoming full-grown and perfect at once, what is our guide? For growth means constant change, and change means new experiences and many uncertainties. Is our conscience, our sense of right and wrong, a safe guide? It is certainly a guide we must follow, for we sin wilfully when we refuse to do what we believe is our duty, but we may sin and yet follow faithfully our conscience. Look at the life of Paul. He first appears in Bible history standing by and consenting while Stephen, a Christian (the first Christian martyr) is stoned to death. Then we hear of him through his own confession as zealously persecuting this new sect. He says: "Beyond measure I persecuted the Church of God and wasted it." And in his defense before King Agrippa when imprisoned himself for Christ's cause: "I thought verily with myself that I ought to do many things contrary to the name of Jesus of Nazereth." But when it was revealed to him that Jesus was the promised Messiah, the son of God, he did not cling to his old belief because conscience had guided him then, but he gave his conscience a new command, whereupon he says: "I was not disobedient unto the heavenly vision." Conscience then *holds* us to our purposes; reason must be our guide.

Were the intricate, delicate web of the brain and its reasoning made only for those who disregard the voice of conscience? No, and God who wove the minute and marvelously sensitive filaments of the brain, will illumine its powers. James in his letter to the early Christian Jews wrote: "If any of you lack wisdom, let him ask of God that giveth to all men liberally and upbraideth not, and it shall be given him."

This gift of wisdom comes slowly, not in one great flash of dazzling light; but surely, and as we need it, if we "ask in faith, nothing wavering." Conscience, then, we must obey, but we will find our sense of right changing, growing better and truer if we remember that the conscience must be given new commands with every new ray of light that comes into our souls as we come nearer and nearer to the perfect day. We must look to a thousand sources for helps for our reason—our own past experience, the experience of friends, the experience that has been written out for us in good books now and in the past, especially the experiences given in the Bible carefully preserved for us and inspired by God's truth. But wherever we look for helps we must ask God to illumine the reason he has given us that we may follow a conscience leading us in the right way, toward the yielding in our lives, of the fruits of God's Spirit, which are these: "Love, joy, peace, long-suffering, gentleness, goodness, faith, meekness and temperance."

Do your housework quietly—it is less tiresome—and remember that the quiet worker accomplishes the most.

A FEW WORDS ABOUT VISITING.

DORA HARVEY VROOMAN.

WHEN I was a very young girl, just "coming out," an old Quaker lady, a friend of the family, said to me:

"Let me give thee a little advice. When I was a girl my mother used to say to me, 'Annie, thee must never be the first to go to a

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria
When she was a Child, she cried for Castoria
When she became Miss, she clung to Castoria
When she had Children she gave them Castoria

party or company, and neither must thee ever be the last to leave.' "

"But," said I, "If you are supposed to come at half past eight, should you not be there on time?"

"It will do no harm to be on time, but do not be ahead of time, as so many people are on such occasions. Let the older folk come early if they like, but do not thee do it. And again, continued she, "if thee says thee are going, go. At a gathering of any kind it will not matter so much as it will if thee are spending an afternoon. If thee are invited to tea, accept the invitation or refuse it as thee sees fit; but if thee *does* accept it, *go* and in plenty ot time before tea."

This latter piece of advice I have found in my experience to be excellent, and it is because of this very thing that I write on this theme at all. Let us instance a case: We may have a caller; the afternoon passes quickly, and before we realize it. we find it waning. We invite our guest to stay to tea.

"Oh! no, indeed, I cannot," she exclaims, "Mamma will be expecting me home"—but she does not go. She talks a little longer, then again exclaims "Oh! dear, I really *must* be going!"—but she continues talking and still does not go. Meanwhile "Bridget" (if one is fortunate enough to "afford" a maid) is getting tea. Perhaps we had instructed her in the morning as to what we would have. But if our guest had accepted our invitation, we would have altered our bill-of-fare somewhat. Or if we do not keep a maid we are detained from getting tea, and "Jack" will soon be coming!

At last she jumps up saying laughingly: "I really ought to be half-way home by this time" —puts on her hat, fusses with her gloves, then says, "By the way, I have something important to tell you, and to think I almost forgot it!" Then she discloses some wonderful (?) story that is being gossiped about, gets as far as the door, kisses us good-bye—but, instead of actually going, she stands on the step, still giggling about nothing, never realizing that we are worried or anxious. Then the gate latch clicks. "Jack" has come! She greets him and he cries: "What! going? You will surely stay to tea?"—She demurs a little, but finally returns to the parlor. You rush off to the kitchen. If you have a "Bridget" perhaps you'll find she has put on a crumpled table-cloth, which you had meant for the wash, so you must either make the best of it, or take everything off the table and re-set it. But if you are your own "Bridget!" Words almost fail me, for—I know whereof I speak. The fire is either out or very low. You add a few chips or blocks of wood to hurry the kettle up. You poke it a wee bit, and get down on your knees in front of the grate, and blow to make it draw. But it won't! You blow again. Suddenly without a moment's warning, a great puff of smoke followed by some long tongues of flame bursts out into your face. You narrowly escape being burned, the tips of your bangs are singed, and you are covered with white ashes from the top of your head down. You are half suffocated in the bargain. Then you turn your attention to arranging the table; while the tears, caused half by smoke and half by nervousness. are trickling down your cheeks. At last tea is ready! You summon "Jack," and your caller. Amid all your flurry and worry, you have heard their voices and every now and then a merry peal of laughter. They come at your bidding. Your visitor looks cool and collected, while a bright smile plays around the corner of her mouth. "Jack" looks at the dainty supper; then at your flushed face and exclaims:

"Why what's the matter little girl—are you sick?"

You don't thank him a bit for his sympathy, for this only calls your visitor's attention to your looks But men *never* know anything! You try to silence him by a fierce glance, and attempt to make some agreeable reply. But he—the big, good-hearted fellow—can't understand, and insists on knowing if you really are ill—wants to get something or do something for you. If you are of an especially nervous nature 10 to one you'll cry. Then your nose will look redder than ever, and your caller will look cooler and sweeter than ever. (That is always the way!) You'll murmur something about a headache, which won't be a falsehood either, for in all probability you will feel as if a dozen blacksmiths were at work inside of your cranium, trying to finish up a contract immediately. You don't eat much—"Jack" knows something is wrong, but can't tell what, so he doesn't eat much either. After tea you chat a little, then your visitor really does go. Perhaps you and "Jack" must take her home or to the cars. It will be safe to say that you don't much regret her going, and it will also be safe to add that you won't yearn for her coming again in a hurry.

Now if she had accepted your invitation to tea, you would have excused yourself for a few moments, gone and instructed "Bridget," or in the absence of the latter, you would have attended to the fire, put the kettle on so that it might boil by the time you were ready for it. Then, just before it was time for "Jack" to come, your guest might have come into the dining-room while you arranged the table. But, when she was going every instant, how could you do anything? When "Jack" did come, in the latter case, tea would be ready. You would all sit down together and have a merry chat. You would be in your normal condition, and would doubtless say to "Jack" when your visitor had gone:

"Don't you think Miss Blank a pleasant girl? We've had such a delightful time, that I hope she'll soon come again."

Of course, all I've been saying applies only to people in moderate circumstances, yet this very practice is often disagreeable even in wealthier circles. It is said of M'me de Stael that even she, though eloquent and refined to the highest degree, failed just here. She never knew when to stop talking, or when to go. It is related of her that while traveling through the continent she one day at breakfast announced to a lady where she was visiting, her intention of leaving that day. Her carriage was ordered, but she had started a new theme and talked incessantly till luncheon. Then, of course, she was invited to remain and lunch with them. She did so. After luncheon she still kept on talking till it was almost dinner time. Her host and hostess could do nothing less than press her to stay and dine also. This she did and the conversation begun at the dinner table lasted till it was too late for her to go that night. She was invited to remain over-night. She consented, and her carriage, which had stood at the gate all day long, was dismissed.

You may be bright, witty, and entertaining, but perhaps you entertain yourself more than others. *Listen* sometimes as well as talk.

Another word or two about visiting before I stop: If you go to spend any length of time —a few days or a week—among friends or relatves in moderate circumstances, where the mother or daughter must assist with household duties, do not sit with idly folded hands, but assist where you can. You can attend to your own room, wipe the dishes, dust up the parlor or dining-room, etc. In this way the work will be done sooner and you will all have more time for social intercourse and enjoyment A visitor always makes more or less work, and unless your hostess is able to afford to keep a servant, or servants, to do this work, she, herself must do it.

To be sure the *honor* of your visit, as I once heard a young girl say, may recompense her; but it seems to me that I would simply make a formal call (if I went at all) when I felt myself so much superior. But any girl with common sense, or, as the old-fashioned people say, "mother wit," will soon learn what she may or may not do. Now, assisting in one thing, and prying about and being officious is another thing all together.

It is well, perhaps, for children to visit, as it throws them in contact with other people, and "smoothes down the corners," but I would advise mothers to let it be short, unless there is an older person along to take care of them—But I am wandering from my theme!

This uncertain, wavering way that so many of our girls and women have about wasting time, is what goes a great way towards making society such a hollow pretense of friendship. I do not see (though no doubt I'm a heathen), why I should call or go anywhere where I do not care to go. There's one thing about me, however, that may always be depended upon at any rate: *I never ask anyone to come and see me unless I want him or her to do so.* People so often say: "Come and see me," while all the time they hope you won't do it. I was visiting a friend a short time ago when another lady called. She stayed only a litle while. When she was going my hostess said: "I'm sorry you can't stay any longer, but come soon again."

When the lady had gone I said: "Why I thought you didn't like Mrs. X—?"

"Well, I don't!" she replied. "In fact, I detest her, but I had to invite her to come again for decency's sake."

I didn't see it exactly. At any rate I determined to cut my visit short. I was having a very delightful time, but after that speech I could not help feeling that perhaps I was being pressed to stay for "decency's sake." I haven't gone there since, though I've received several invitations, and shall not go very often, for the knowledge that this lady, whom I had always cared for as a friend, was so deceitful in one instance prompted me to fear that she might be so in my case. It does really seem at times as if—

"This world is all a fleeting show,
For man's illusion given.
The smiles of joy, the tears of woe,
Deceitful shine, deceitful flow—
There's nothing true but Heaven."

Put in order the room you have been sitting in, before retiring for the night.

HINTS FROM CORRESPONDENTS.

WE have kept our hams perfectly through the warm weather by packing early in the spring in clean, sweet hay and keeping in a cool, dry place. A. G.

ALTHOUGH I am the dish-washer of the household, I have kept my hands presentable by rubbing them with lemon juice and oatmeal. MISS K. G. H.

OUR currant shrub is a perfect success this year. The juice was prepared the same as for jelly, except that it was boiled only 10 minutes. Bottle and cork when hot. Use small bottles. When wanted, use one-third of the juice to two parts of ice-water. We have found this a refreshing drink. MRS E. C.

WE think that steamed quinces served with powdered sugar and cream are excellent either as dessert at dinner or as a tea dish. MRS. I. B.

Velvet ribbon will be much used for trimming dressess this winter.

FRIED TOMATOES.

PEEL and cut in half-inch slices, salt and pepper, dip in wheat flour then in beaten egg and fry in hot drippings.

BAKED TOMATOES

SELECT firm good sized fruit. Cut a round piece from the top of each and with a spoon remove two-thirds of the inside. Fill the cavities with dry bread crumbs (very fine) seasoned with butter, pepper and salt and minced parsley and onion, if liked. Arrange in a tin, add a lump of butter and a little hot water and cook in a moderate oven for three-quarters of an hour, basting frequently. Cook the pulp taken from the tomatoes 10 or 15 minutes, remove from the fire and when cool press through a sieve. Season with butter, pepper and salt and thicken with a little corn-starch. Just before taking the tomatoes from the oven, pour a little of the gravy over the dressing in each. When taken from the oven arrange on a flat dish and pour the sauce over. Serve at once. MRS. ECONOMY.

PUMPKIN PIE.

STEAM the pumpkin until tender and when cool press through a colander. To a pint of the pumpkin add a spoonful of butter, a teacupful of sugar a, little salt and cinnamon to taste, a pint and a half of milk and a teaspoonful of corn-starch worked smooth in a little milk. Bake with an under crust. As the thickening property of pumpkin varies, some judgment must be used in adding the milk MRS. K. I.

Miscellaneous Advertising.

The Aged

Who need help in their many infirmities, especially those afflicted with rheumatism, find great relief in

AYER'S Sarsaparilla.

"One year ago I was taken ill with inflammatory rheumatism, being confined to my house six months. I came out of the sickness very much debilitated, with no appetite, and my system disordered in every way. I commenced using Ayer's Sarsaparilla and began to improve at once, gaining in strength and soon recovering my usual health. I cannot say too much in praise of this well-known medicine." — Mrs. L. A. Stark, Nashua, N. H.

Ask your druggist for

Ayer's Sarsaparilla,

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

Price $1; six, $5. Worth $5 a bottle.

BEECHAM'S PILLS
ACT LIKE MAGIC
ON A WEAK STOMACH.
25cts. a Box
OF ALL DRUGGISTS.

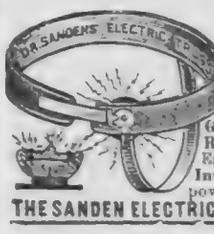
Baby Portraits.

A Portfolio of beautiful baby pictures from life, printed on fine plate paper by patent photo process, sent free to Mother of any Baby born within a year. Every Mother wants these pictures; send at once. Give Baby's name and age.
WELLS, RICHARDSON & CO.,
BURLINGTON, VT.

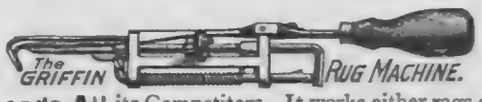
GOLD MEDAL, PARIS, 1878.

W. BAKER & CO.'S
Breakfast Cocoa
Is absolutely pure and it is soluble.
No Chemicals
are used in its preparation. It has *more than three times the strength* of Cocoa mixed with Starch, Arrowroot or Sugar, and is therefore far more economical, *costing less than one cent a cup.* It is delicious, nourishing, strengthening, EASILY DIGESTED, and admirably adapted for invalids as well as persons in health.
Sold by Grocers everywhere.
W. BAKER & CO., Dorchester, Mass.

EPPS'S
GRATEFUL—COMFORTING.
COCOA



RUPTURE
Can be CURED by DR. SANDEN'S Electric TRUSS
Warranted BEST Truss made, to CURE all Curable cases or Refund Money. Only Genuine Electric Truss in World. Perfect Retainer, Gives instant relief, speedy cure Ease and Comfort day and night. This New Invention combines science, durability and power. Price $3 & $5. Illus. pamphlet free.
THE SANDEN ELECTRIC CO. Broadway & 12th St., NEW YORK



Leads All its Competitors. It works either rags or yarn, is Simple, Durable, and **Easy to Operate.** Price, by mail, **Plain, $1; Nickel Plated, $1.50. Satisfaction Guaranteed** or money refunded. Send for Circulars. Agents Wanted.
C. W. GRIFFIN & CO., Franklin Falls, N.H.

"What! Corns and Bunions all gone?"
"Yes. I am happy to say, through the merits of **Hanson's Magic Corn Salve,** I can now walk with ease."

HANSON'S
MAGIC CORN SALVE.

If your druggist does not keep it, do not let him convince you that some imitation is just as good. Send by mail to **W. T. HANSON & CO., Schenectady, N. Y.** Every box is warranted to cure or money refunded.
PRICE 15 and 25 CENTS.

South-Down, Oxford-Down Merino, Cotswold and Shropshire-Down
SHEEP & LAMBS
of Superior Breeding at MODERATE PRICES. All Stock sold fully guaranteed of the Best Quality. Write for special prices at once.
W. ATLEE BURPEE & CO.,
Philadelphia, Pa.

A SOLID STEEL FENCE!

15 Cts. per Foot, material 3 feet wide.
Adapted for **Residences, Churches, Cemeteries, Farms, Gardens, &c.**
All needing Fences, Gates, Arbors, Window Guards, Trellises, etc., write for our illus. price list, mailed free.
THE NEWEST THING AND THE BEST.
Central Expanded Metal Co. Pittsburgh. | I. W. Expanded Metal Co. Chicago.
St. Louis Expanded Metal Co., St. Louis.

News of the Week.

HOME NEWS.

SATURDAY, August 31, 1889.

DELEGATES to the Congress of the Americas will meet in Washington on October 2. They will be the guests of the Nation, and before proceeding to business they will make a tour of the North and West to inspect their character and resources. This will probably last from October 3 to November 15. When winter sets in they will travel through the South. All the governments on this continent will, it is expected, be represented, and great hopes are entertained of good results from this friendly conference of all American interests..... An effort is being made to obtain a fit jury for the trial of the six men accused of murdering Dr. Cronin at Chicago. There is great danger that a Clan-na-Gael supporter may contrive to get in, to hang the jury instead of the murderers. The trial is likely to attract as much attention as that of the Anarchists two years ago. Two desperate attempts have already been made to assassinate witnesses against the accused. Nothing will be left undone by the desperate friends of the murderers to insure a miscarriage of justice. .... During the year ending June 30, 1889, out of the Federal Army of 22,000 men, there were 2,842 desertions, which cost the Government $600,000. This enormous rate of desertion in the best paid army in the world, is attributed to the neglect, abuse and cheating practiced on the enlisted men by the officers. Their faults are, no doubt, exaggerated, but the desertions still remain..... The poor whites are following the example of the negroes in abandoning the Carolinas. The Memphis and Charlestown Railroad has made arrangements to carry 400 white families from both States to Arkansas, and 8,000 negroes from both States to the Yazoo Delta in Mississippi; 3,000 more negroes have already gone on the same line; while other lines have also done a heavy business in transporting Carolina negroes to the West in spite of the efforts of planters to keep them at home..... ... A trust of paramont interest to farmers has just been completed—one to put and keep up the price of diamonds: a Diamond Trust.. The woolen men still continue to fail: the last to do so is J. M. Mackintosh of Milton, Mass., liabilities $100,000..... In spite of the discontent of the veterans at the refusal of the railroads to grant a one-cent-per-mile rate, the annual meeting of the Grand Army, at Milwaukee, Wis., is quite respectable in numbers. Tuesday over 35,000 men were in line at the grand parade, and 200,000 enthusiastic spectators made the welkin ring. Gen. Sherman, Mrs. John A. Logan and Pension Commissioner Tanner, appeared to be the hottest favorites. A large number of posts had formally resolved not to be represented on account of the obduracy of the railroads. The Commissioner says he is in doubt whether to ask for $110,000,000 or $115,000,000 for pensions for next year, a rise of about $30,000,000.. On Thursday his administration was most enthusiastically indorsed by the veterans, and his policy applauded to the echo..... .. ... Gen. Russell A. Alger, of Michigan, has been elected Commander-in-Chief for the ensuing year..... .... Jack Dempsey, the "Nonpareil," middleweight champion slugger of America, was "knocked out" in the thirty-second round by George La Blanche, the "Marine," in a glove fight in the rooms of the California Athletic Club, at San Francisco, last Tuesday night. Jack weighed 151 pounds; and George, 161; the odds were 100 to 35 in favor of the former before the battle. He defeated the "Marine" some time ago, and will have another fight with him soon. This is his first defeat in nearly 50 contests.....The Inman steamer City of Paris, has smashed all previous trans-Atlantic records—her own among them—by making the passage from Queenstown to Sandy Hook in five days, 19 hours and 34 minutes—four hours less than her former unprecedented record.....In analyzing congregational generosity Rev. James Brownlee finds that among the Baptists 36 cents is the annual contribution per head; the Methodists, 74 cents; Episcopalians, $1.37; Presbyterians, $3.17, and the Dutch, $5.21..... The most disastrous cloud-burst that ever occurred in North Carolina, happened near Rockingham, Richmond County, last Sunday night. It instantly swelled the Pedee River, and the mad torrent, far beyond its banks, swept crops, cattle, fences, houses, mills, etc., before it, doing a world of damage and causing several deaths. Eight cloud-bursts have occurred in the State Since May 1.....The charge against Justice Field, in connection with the Terry matter, has been finally dismissed by the California State authorities at the suggestion of the Governor. All the prosecuting lawyers have also withdrawn from the deputy-marshal Nagle case; but the question whether his action in shooting Terry is to come under Federal or State jurisdiction will be soon argued before the United States District Court at San Francisco..... A window and table glass trust is the latest, under the name of the United Glass Company. For 10 years the glassware business here is said to have been in poor shape. The object of the trust is, of course, "to save expense, cheapen the price and make a profit." There's some doubt whether the Western manufacturers will join.....The formation of the Crockery Trust is deferred "till next year."....."Down in Marion County, Ala., the other night a masked band of regulators took to the woods three proselyting Mormon Elders who had refused to obey a warning to leave, and having hung them up by their thumbs, flogged them unmercifully. Some married women they had perverted were warned to return home, under penalty of like flagelation. Lynch law is the common antidote for the poison of Mormonism in the South, where it finds more victims among the ignorant "white trash" than in any other part of the country.....

Jubilation.

MISERY adds to misery, sometimes, in our endeavor to escape it. Presently we are confronted by disheartening accumulation: we know not where to turn, and courage is almost gone.

But a beneficient providence opens the way, at sadly rare intervals, and then—Jubilation.

Here are a few notes of it:

LITTLE ROCK, Ark., March 30, 1888.
"I am happy to inform you that I am of the opinion that your Compound Oxygen saved my life." MRS. J. P. BAILEY.

BUNKER HILL, Ind., March 14, 1888.
"I feel that I cannot say too much in praise of the Compound Oxygen Treatment."
MRS FLORENCE BLUE.

OSWEGO, N. Y., Oct. 30, 1885.
"Compound Oxygen has greatly benefited me. Under God it has given me new life."
REV. JOHN C BREAKER.

MANCHESTER, Me., Feb. 22, 1888.
"Both myself and family believe that I owe present existence to your Treatment."
M. A. CUMMINGS.

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, August 31, 1889.

AFTER Axtell, the three-year-old trotter, had made a mile in 2:14 at Washington Park, Chicago, on August 23, breaking the record of trotters of that age, Col. Conley is reported to have offered $100,000 for the colt to Mr. C. W. Williams, his breeder and owner; but the offer was declined. The rumor of such an offer, even if it was never made, or if made by collusion, simply as a friendly puff, is a big advertisement for the owner and the trotting tracks where the phenomenon may hereafter appear..... .....Last Sunday, Henry Shaw, the philanthropist and best friend of St. Louis, died at his home in St. Louis at the age of 89. An Englishman by birth, born in 1800, he came to this country in 1819, settled in St. Louis, then a petty place, in the hardware trade in a small way. In 20 years he amassed a fortune large enough to induce him to retire from business. After traveling the world over, he devoted his attention to the study and cultivation of plants and flowers, and set out the now world-famous botanical garden known as the Shaw's Garden. Some time ago he gave to St. Louis the splendid Tower Grove Park, and he has also bequeathed to it Shaw's Garden and most of the $2,500,000 he has left behind him..... To a letter of inquiry from Governor Wolfley, of Arizona, Acting Commissioner Stone of the General Land Office, has replied that while the act of June 2, 1862, makes a grant of public lands to such of the several States as may establish colleges for the benefit of agriculture and the mechanic arts, it is his opinion that it does not apply to Territories before their admission into the Union as States .. ....The great Granger's Inter-State Picnic Exhibition opened at Williams Grove, Pa., on Monday. The exhibition is superior in all respects to that of any previous year and the attendance so far has been very large—larger than ever before. Should the weather continue favorable, it will be the largest meeting of Grangers ever held in this country..... The Brooklyn Kennel Club and Poultry Association's show will be held from September 9 to 11. Over $1,000, besides medals and diplomas, will be given as premiums for dogs and poultry. Information will be furnished by T. Farrer Rockham, Superintendent, East Orange, New Jersey..... Mr. John W. Akin, of Scipio, New York, importer of Percherons and French Coach horses, had six valuable pure-bred Percheron stallions injured on a barbed wire fence, during a recent terrific thunder storm in the night: 21 stallions went through a six-wire fence in three places, breaking off 31 solid posts and tearing off 20 rods of wire. All except one of the injured horses are doing quite well. Mr. Akin arrived at "Elmwood" with his latest importation of French Coach stallions, August 28.... The North Dakota Millers' Association has decided to place an agent in London to dispose of flour direct to the bakers of Great Britain. It is thought this will have a strong tendency to strengthen the home wheat market, and, besides, will result in the building of a number of new mills ..... Ten thousand tons of wheat were burned in San Franciso on Monday, and Texas fever is reported to have broken out with the utmost virulence among the herds in the West. Such visitations are rank calamities so long as the sons and daughters of men live upon bread and meat.....Twenty-five million dollars' worth of hides were imported into this country last year duty free. A vigorous effort is to be made during the coming session of Congress for the restoration of the tariff duty repealed in 1872. Opponents of the measure stigmatize it as "a bait to catch the cattlemen's votes."..... ..... There is a suggestion that wool-growers, though their attorneys, commission-men and other friends, should step in and run the forthcoming woolen manufacturers' conference at Boston. Wouldn't this reverse the usual order of things—turn the tables on the manufacturers? .. ..

Crops & Markets.

SATURDAY, August 31, 1889.

ONCE a year representatives from all European countries hold a Grain Congress in Vienna, Austria, in August. Estimates are then made of the grain crops of the world for the current year, the figures being based on the most reliable attainable data. The results reached have a good deal of influence on the prices of cereals—for the next few months at any rate. Last Monday a brief abstract of these results was cabled to this country. The figures, to say the least, are startling. It appears that the European grain crop was 15 per cent. short. The grain crop in Russia, Austria, Hungary and Roumania will not exceed 160,000,000 bushels this year.

Advices from the West say that all the important surplus corn areas, such as Nebraska, Iowa, Missouri, Kansas, Illinois, Indiana and Ohio, have, for the first time during the present growing season, enjoyed a period of uniformly seasonable temperature for nearly 14 days. The results are perceptible; first, in the very large and free movement of old corn, a good movement of oats and a fair movement of wheat, secondly, the weather has been all that could be desired for thrashing the oat crop and finishing up of the harvest of the spring wheat, and, last but not least, exceedingly favorable for helping out the backward corn crop. The danger line, so far as an early frost is concerned, is thought to be over. Complaints are made of low prices for oats, and corn is dropping in price every day. At interior points of production from Nebraska to Illinois, oats to-day will hardly average 16 cents a bushel. Indications are that, as a rule, farmers will not hold their crops for higher prices this year as much as they have been doing of late.

The latest San Francisco estimates of the California vintage indicate that it will not exceed 12,000,000 gallons this year. This is a reduction of 8,000,000 gallons from early estimates of this year's vintage. This is due partly to damage by sunburn and mildew, but more especially to the fact that the drying of wine grapes will absorb probably 2,000,000 gallons, while 4,000,000 will go into the still. It is also estimated that the State will produce 1,000,000 gallons of brandy this year, brandy to a large extent superseding wine.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, August 31, 1889.

NEW YORK MARKETS.

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

POULTRY.—Chickens, spring, per lb, 11@12c; LIVE Fowls, near-by, per lb, 11@11½c; fowls' Western, per lb, 10½@11c; roosters, per lb, 6½@7c; turkeys, per lb 11@12c; ducks, western, per pair, 55@0.75 geese, western, per pair, $1 15@$1 40.

POULTRY.—DRESSED—Turkeys, mixed, per lb. 13@16c; Fowls, western, choice, 11@11½c; do common to good, 10½@11; Ducks, spring, good, 10@16; Squabs, white, per dozen, $2 50@$2 75; do dark, do, $1 50@$1 75; Chickens, spring, 10@17c; Fowls, near-by, 12@13c.

GAME.—Plover, per doz, $1 25@$2 00; Snipe do, do, $2 00@$2 25, Woodcock, per pair, $2 25.

HOPS.—State, 1888, best, 16@17c; do, prime, 15@16c; do, low grades, 10@12c; do do. 1887, 5@8c; do do do California, common to prime, 12@13c; choice, 14@15c.

HAY AND STRAW.—Choice Timothy, 95@$1 00; do good do, 85@—c; do medium, 70@80c; shipping, 65@70c; do, Clover, mixed, 60@70c. Straw.—No. 1, rye, 70@75c; short do 50@55; oat, 40@45c.

BEANS.—Marrows, new, $2 40@$—; new mediums choice, $2 30@2 35; pea, $2 30@$2 35; red kidney, $3 50; white kidneys, choice, 3.00@—; foreign, mediums, 1 35@1 55; California Lima, $3 60@$—; green peas, $1 40@$—.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 7¼@7¾c, and farmers' grades at 5@6c. Pecans, 5@7c.

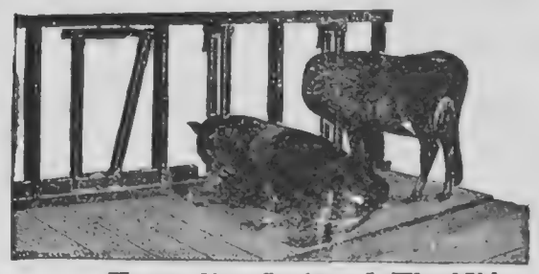
FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Jersey, per bbl., $1 25@$1 50; Long Island, do, $1 50@$1 75; Sweets, do, $2 00@$3 25; Cabbage, new, per 100, $1 50@$2 50; Cucumbers, per 8,000, $1 25@$1 50; Egg Plant, per bbl, $2 00@$3 00; Tomatoes, per crate, 35@40c; Corn, per 100, $1 00@$1 75. Onions—Orange Co. Red, 35c@$1 40; Potato, per bbl, $1 25@$1 50; Jersey White, $1 75@$2 00; State, Yellow, $1 50@$—; Lima Beans, per bag, $1 25@$2 00.

FRUITS.—FRESH.—Apples, per bbl, $1 50@$3 00 Peaches, per crate, $0 30@$1 50; do, per basket, 30c@$1 50; Huckleberries, per qt, 4@6c. Muskmelons, per bbl, 50c@$2 50; Watermelons, per 100, $5 00@$25 00;

Miscellaneous Advertising.

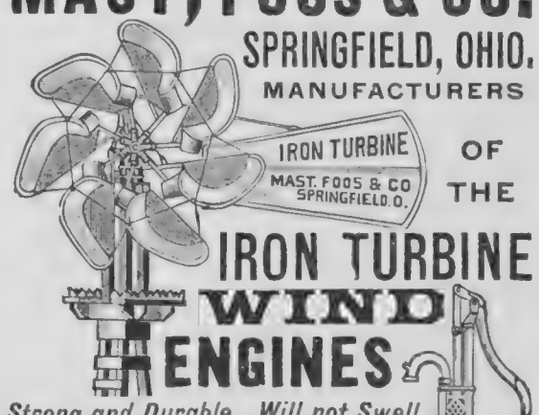
SEND 10 Cts. in P. O stamps to **E & O. WARD,** Produce Commission Merchants, for circular about **Shipping Produce** Also recipe for **Preserving Eggs.** Established 1845.
No. 270 Washington St., New York City.



Ease, Comfort and Thrift!
THE BEST CATTLE FASTENING
Smith's Self-Adjusting Swing Stanchion!
The only practical *SWING STANCHION* invented. Thousands in use. Illustrated Circular free.
F. G. PARSONS & CO., Addison, Steuben Co., N. Y

TO LET—GREENHOUSES.—Four Greenhouses, Hot Beds and lot of ground. Seven miles from Philadelphia.
WM. PARRY, Parry, N. J.

OHIO NORMAL UNIVERSITY,
ADA, OHIO.
Thorough, practical, economical. Thirteen departments sustained; 31 experienced teachers employed. Students can enter at any time, and find classes suited to their state of advancement. No vacation, except holiday week. Extensive and well-selected library. Good board, well-furnished room, and tuition, 10 weeks for $28; 40 weeks, $100; 49 weeks, $118. Room and board in private families Text books can be rented at minimum rates. Second Fall terms begins October 22, 1889. Catalogue free.
H. S. LEHR, A.M., President.

MAST, FOOS & CO.
SPRINGFIELD, OHIO.
MANUFACTURERS OF THE


IRON TURBINE WIND ENGINES
Strong and Durable. Will not Swell, Shrink, Warp or Rattle in the Wind.
BUCKEYE FORCE PUMP
A CHILD CAN USE THEM.
Works easy, and throws a constant stream. Has Porcelain Lined and Brass Cylinders. Is easily set. Is the Cheapest and Best Force Pump in the World for Deep or Shallow Wells. Never freezes in winter. Also manufacturers of the
BUCKEYE LAWN MOWERS, Buckeye Wrought Iron FENCING, Cresting, etc. Write for Circulars and Prices.

Pennsylvania Agricultural Works, York, Pa.
Farquhar's Standard Engines and Saw Mills.

Send for Catalogue. Portable, Stationary, Traction and Automatic Engines a specialty. Warranted equal or superior to any made.
Address A. B. FARQUHAR & SON, York, Pa.

IDEAL

IMPROVED Made of best material by skilled workmen, built on correct principles and fully warranted; 17 YEARS' EXPERIENCE. Sent on trial. Write for Circular and Price.
Stover Mf'g Co. Freeport, Ill.

PILES. Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository Sufferers will learn of a simple remedy FREE by addressing
TUTTLE & CO., 78 Nassau Street, New York City

HUNTSVILLE WHOLESALE NURSERIES.
The largest nursery of Fruit Trees in the world. EXCLUSIVELY WHOLESALE. To Nurserymen, Dealers, and Market Orchardists IMMENSE STOCKS of Pears, Plums, Cherries, Peaches, Apricots, Nectarines, Almonds and Quinces. **Varieties suitable to all latitudes.** SPECIALTIES: Lawson, Kieffer, Le Conte, Early Harvest and Seckel Pears; Russian Pears, including Bessemianka, Gakovska, and No. 1401; Russian Apricots and Cherries; De Soto, Wolf, P. Simoni, Kelsey, Botan and Blood Plums; Peen To and Honey Peaches and their improved seedlings. Other new and famous sorts. **Quick transit, in through cars, free of freight charges,** *to St. Louis, Mo., Cincinnati, O., Rochester, N. Y., Philadelphia, Pa., Dallas, Tex., Jacksonville, Fla.* We can refer to customers in every State and Territory. Prices very low. Price List free. Address **W. F. HEIKES, Manager, Huntsville, Alabama.**

SMALLEY GOODS—Including ENSILAGE AND FODDER CUTTERS, SWEEP AND TREAD HORSE POWERS, DRAG & CIRCULAR SAW MACHINES, FARM ENGINES & PLOWS, are positively ahead of all others in the country, and so **warranted.** Shipped to any responsible farmer in the U. S. or Canada, subject to **30 days' trial,** and to return at **our expense** if not proving just as warranted. We are prepared to build Carriers any length, guaranteed to run at any desired angle to suit silos, and claim Smalley Carriers positively superior to all others. Our 1889 "Why it Pays Pamphlet" should be read by every intelligent farmer interested in dairying or stock raising. It contains the very latest information relative to economical stock feeding. Will be mailed free to responsible farmers only, upon application, providing *mention is made of paper* in which this advertisement was noticed.
SMALLEY MFG. CO.
MANITOWOC, WIS.
The SMALLEY CUTTER, with Improved Bucket Carrier. SMALLEY TREAD POWER WITH GOVERNOR.

Plums, per bbl. $2 00@$5 00. Grapes, best, per lb 10@20c; do poor, 3 6.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 5¾@6c; do new, common to prime, 4½@5⅝c; sliced, new, 3@3¾c; quarters, 3@4¼c; chopped, 2¾@3¼c; cores and skins, 1½@2c. Cherries, new, 8@11½c. Raspberries, new, 19@20c. Blackberries, 3@4c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 12@14c; do do, unpeeled, 6@6½c; Georgia, do, peeled, new; 12@14c do do do 7@8c do do sundried, 3@9½c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 11 37½@11 87½ short clear, 12 00@13 50; Extra Prime mess, $10 00@10 50 prime do, $10 75@$11 and family mess, $12 @12 50. BEEF—India Mess, in tierces, $12 50@14; Extra Mess, in barrels, $6 00@6 50 Packet, $7 25@$8 00 per bbl, and $11@$12 00 in tierces; Plate, $7 50@8 00; Family at $11—@$14. HAMS—$16 00@$16 25, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 7@——c; Pickled Hams, 10¾@11c; pickled Shoulders, 4⅞@5c; Smoked shoulders 5¾c; do Hams, 11½@11¾c. Dressed Hogs.—City, heavy to light, 5⅝@6⅜c. Pigs, 7c. LARD.—City steam, $6 05; September, $6 37; October, $6 34; November, $6 21, December, $6 20 South America, 7.35c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes, Maryland Rose, per bbl, $1 50@$1 75. Provisions were steady. BEEF.—City family, per bbl, $8 00; do, packets, $8@8 50; smoked beef, 12@14c; beef hams, $16 PORK.—Mess, $13 50@$14 50; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 12@14c; do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6½@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6½@7.

CHICAGO.—MESS PORK.—$10 10@10 12½. LARD—$6 02@$6 05 per 100 lbs; Short Rib sides (loose), $6 95; dry salted shoulders, boxed, $4 75; short clear sides, boxed, $5 37@$5 50.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 19@19½. Elgin, best, 19c; Western, best 18@18½; do prime, 15@17c; do good, 13½@14; do poor, 11@12. State, Dairy, half-firkins, tubs, best, 16@17c; do do prime, 15@16; do do fine, 13½@14½; Welsh tubs, fine, 15@16c; do do, good, 13½@14; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western imitation Creamery, best, 13@14; do fine, 11½@12½; Western dairy, fine, 12@12½c; do fair, 10½@11c; do poor, 9@10c; do factory, fresh, best, 12@——, do prime, 10½@11; do good, 9@9½; do poor, 8@—c.

CHEESE.—State factory, fancy, 8½@8¼c; do do fine, 8@8¼c; do do, prime, 7¾@8c; do do, fair to good, 7¾@—c; Ohio, flat, prime, 6@7c; do good, —@—c; do, good, —@—; Skims, light, 5@6c; do medium, 2@3; do full, 1@2c.

EGGS.—Near-by, fresh, 19@19½c; Canadian, 18¼@19c; Southern, 16½@17c; Western, best, 17@18c.

PHILADELPHIA.—BUTTER dull. Pennsylvania creamery extra, at 17@18c; Pennsylvania Prints, extra, 23@27c; B.C. and N.Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were nrm; Pennsylvania firsts 19@——c; Western firsts, 17@18c; Cheese dull—steady; demand fair; New York full cream, at 8½c. Ohio flats, choice, 7¼@7½c; do, fair to prime, 14@14½c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Fancy creamery, 15½@18c; choice Western, 15@15½c. choice dairy, 12@15c, common to fair, 9@10c. Eggs firm at 14@15c.

GRAIN MARKETS.

WHEAT.—Ungraded Winter Red, at 78@86¾c, No. 3 Red, 76@76½c elevator, steamer, No. 2 Red, 81½c; elevator; No. 2 Red, 83c elevator; No. 2 Red, 85¼c elevator, 85@86¼c afloat (according to quality), 84⅞c free on board; No. 2 August, 85@85½c; do September, 84¼c @84 5-16; do October, 84⅝@84 13-16; do November, 85¼c; do December, 86¾@87 1-16c; do January, 88½c; do May, 91⅝@91⅞c. RYE.—In light supply and held firm; Western quoted 51½@53c; State, nominal, none offering. CORN.—Sales—Ungraded Mixed at 42@44½c; No. 2 Mixed, 43¼@43¾c, elevator, 43¾@44¼c, afloat; No. 2 August, 42¼c; do September, 42¼@42⅝c; do October, 42 11-16@42¾c; do November, 43@——c; do December, 42⅞@43⅜c. OATS.—Sales—No. 3, 25c; do White, 26@26½c; No. 2, 25⅞@26½c elevator, 28¼c delivered; do White, 20@32c, new and old; No. 1 White, 37c; Mixed Western; 25@29c; White do, 20@38½c; No. 2 August, 29@29½; do September, 25⅝@26c; do October; do November; do May, 29½@29⅝c.

LIVE STOCK MARKETS.

New-York, Saturday August 31 1889

BEEVES.—Ordinary to choice native steers sold at $3 40@$4 75 per 100 lb, bulls at $1 70@$2 25. Texans and Colorados are quoted at $3@3 60, and are generally of inferior quality. Sales.—Indiana Steers, 1219 lb average, at $4 10 per 100 lb; Kansas Steers, 1487 lb, at $4 75; Bulls, 1010 lb, at $2 15; Chicago Steers, 1338 lb, at $4 20.

CALVES.—Grassers and Buttermilks brought 2@2¾c; Fed, Mixed and Western, 4@4½c; Fair to Prime Veals, 5@7½c; a few selected; 6⅝@6¾c; and Fancy do, 7c. Sales.—Buttermilks and Grassers, 215 lb average, at $5 30 per 100 lb; Mixed Calves, 297 lb, at $3 40; Veals, 236 lb, at $5; 168 lb, at $5 50; do. (Fancy), 180 lb at $7.

SHEEP AND LAMBS.—Common to Prime Sheep sold at 4@5c per lb, Ordinary to Choice Lambs, at 5@7c; Culls at 4c; Dressed Mutton selling fairly at 7@9c; and Dressed Lambs were firmer for prime stock, with sales at 8@11c for inferior to choice. Sales—Kentucky Lambs (culls), 60 lb average, at $5 per 100 lb; Pennsylvania do, 62½ lb, at $6 12½; State do, 70 lb, at $6 40; Pennsylvania Lambs, 57½ lb, at $5 75; Michigan do, 70 lb, at $6 70; State Sheep, 96 lb, at $4 87½; State Lambs, 72 lb, at $6 50.

MILCH COWS.—$30@$45 per head.

HOGS.—Firm for light hogs and pigs, but dull for heavy. Reported sales were at $4 30@$4 85, and a few light pigs brought $5@$5 50. State Hogs, 253 lbs average, at $4 80; do, 214 lbs, at $4 50; do, 200 lbs, at $4 75. State Hogs, 254 lbs, at $4 50; Pigs, 103 lbs, at $5 50.

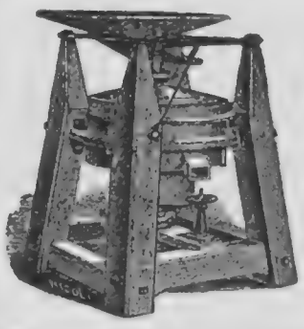
COMMUNICATIONS RECEIVED FOR THE WEEK ENDING AUGUST 31, 1889.

H. A. C.—A. H. McM.—T. T. L.—G. R. W.—M. C. H.—A. C.—P. T.—H. C.—P. D. K.—R, P. G., thank you.—E. B.—I. T.—T. H. H.—A. L. R.—J. H. L., thank you.—E. B. G.—D. E. G.—L. H. M.—G. C.——A. M. S.—C. H. C.—A. J. M.—E. C. D.—C. G. R.—E. M. C.—J. H. F.—A. L. S.—T. C. J.—S. W.—P. B. C.—W. B. P.—J. M. D.—J. H.—E. C. B.—F. K. S.—W. G. W.—H. L. W.—P. H. R.—P. C.—T. D. C.—F. E. B.—B. T. G.—J. R.—O. W.—E. B. G.—G. F. L.—W. M. B.—J. H. B.—O. K. L.—C. N. T.—P. W.—J. C. O.—J. E. P.—H. S.—M. M.—J. C. O.—Mrs. E. P. F.

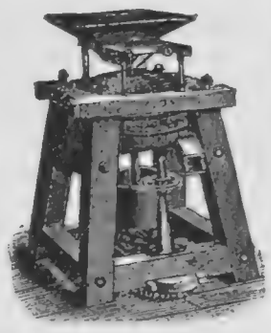
Miscellaneous Advertising.

DOUBLE Breech-Loader $6.75. RIFLES $2.00 PISTOLS 75c **GUNS** WATCHES, CLOCKS, Etc. All kinds cheaper than elsewhere. Before you buy, send stamp for Catalogue. Address POWELL & CLEMENT, 180 Main Street, Cincinnati, Ohio.

FARM MILLS
OF FRENCH BUHR,
Twenty-eight Sizes and Styles.
FACTORY ESTABLISHED 1851
WARRANTED



MILLS for grinding ear corn, shelled corn, corn and oats, buckwheat and rye. A BOY CAN OPERATE and keep in order. A complete mill and sheller for less than $100. REDUCED PRICES for Fall of 1889. OVER 20 000 IN USE. Received Highest Awards at St. Louis, Cincinnati, New Orleans and Indianapolis fairs and Expositions. Send for Book No. 18—interesting and valuable. Mention paper, and address
Nordyke & Marmon Co., Indianapolis, Ind.



The Syracuse Nurseries!
Old and Reliable,
Are growing the Largest and most Complete Assortment of Nursery Stock in America. In BUDDED APPLES and STANDARD PEARS they acknowledge no competition—quality considered. Nurserymen and Dealers will consult their own interests by getting prices on this Superb Stock before buying. Special inducements to buyers in large quantities.
SMITHS, POWELL & LAMB, SYRACUSE, N.Y.

BUCKEYE GRAIN & FERTILIZER DRILL
With the Celebrated GLASS FERTILIZER DISTRIBUTOR.
Greatest Improvement of the Age.
CENTER GEAR.
Ratchets in Ground Wheel.
New LEVER for shifting the HOES.
One-half the hoes forward and the other half back. This combined Drill has no equal on the market and can not fail to be appreciated by any farmer who sees it.

ESTABLISHED 1854.
Also manufacturers of Lubin Pulverizers, Buckeye Riding and Walking Cultivators, Buckeye Seeders, Buckeye Cider Mills and Hay Rakes.
BRANCH HOUSES: Philadelphia, Pa.; Peoria, Ills.; St. Paul, Minn.; Kansas Cy. Mo.; San Francisco, Cal.
Send for Circular to either of the above firms or to
P. P. MAST & CO., SPRINGFIELD, OHIO.

IT IS A CONCEDED FACT that there is no better place in the United States for Nurserymen to sort up, Dealers to pack, or Planters to order, than at the PAINESVILLE NURSERIES. A full line of
BULBS, SHRUBS, ROSES AND PLANTS,
FRUIT AND ORNAMENTAL TREES,
Remarkably fine and complete stocks of
PEARS, PLUMS, PEACHES, CHERRIES,
APPLES, QUINCES, APRICOTS, MULBERRIES,
GRAPEVINES, SMALL FRUITS, ETC., ETC.

Introducers of the CRAWFORD STRAWBERRY.
SEND FOR FREE CATALOGUE AND PRICE LISTS. Correspondence solicited.
THIRTY-FIFTH YEAR. 700 ACRES. 24 GREENHOUSES.

Address THE STORRS & HARRISON CO., Painesville, Lake Co Ohio.

EVERY FARMER HIS OWN MILLER DO YOUR OWN
Shelling and Grinding at home, saving tolls and teaming to and from the Grist Mill. This work can be done rainy, windy days when out-door work is suspended on the farm. The same Mill will cut corn stalks, saw wood, run churn, grindstone, pump water, etc. We make the HALLADAY Geared Wind Mill in 11 sizes, 1½ to 40 horse power, and GUARANTEE they have no equal for Power, Durability and Storm Defying qualities.

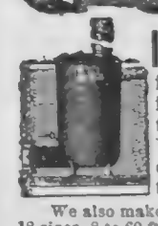
IXL 2-HOLE Corn Sheller
Adapted to run by hand, horse, steam or wind power. Not cheaply made but strong, durable and effective in its working yet light running. It is constructed similar to the large Power Shellers and is the best 2 Hole Sheller on the market.

HORSE POWERS and JACKS, both single and double Geared, made heavy and strong.

THE IXL STALK CUTTER
made in 5 Sizes, with Safety Fly-Wheel, Safety Lever, and all late improvements.

THE IXL IRON FEED MILL
3 sizes, both Belt and Geared Mills. Can be run by any power and especially adapted to Wind Power. Will grind any kind of grain and is the lightest running and most effective Feed Grinder made.

SAW TABLES
Both Swinging and Sliding Tables. We make a Saw Table especially adapted to sawing long poles. Special care is taken to make these machines strong and durable.



IXL TANK HEATER for warming water in Stock Tanks. Made of the best quality of iron cast in one piece, no sheet iron to rust or solder to melt and cause leak. Will burn any kind of fuel. It is very effective and takes less care to operate than any other Heater made.

We also make the HALLADAY PUMPING WIND MILLS. 18 sizes, 8 to 60 ft; diameter and 1 man to 40 horse power. The U. S. SOLID WHEEL WIND MILL, 7 sizes, Iron and Brass Pumps in great variety. Tanks, all kinds and sizes, and the Standard Hay Tools, consisting of Anti-Friction, Swivel, Reversible and Rod Hay Carriers, Harpoon and Grapple Horse Hay Forks, Pulleys, Floor Hooks, etc. All goods fully guaranteed. Send for Catalogue and Prices. Reliable Agents wanted in all unassigned Territory.
U. S. WIND ENGINE & PUMP CO.
BATAVIA, ILLINOIS, U. S. A.
BRANCH HOUSES:—Kansas City, Mo., Omaha, Neb., Fort Worth, Tex., Boston, Mass.

THE LADIES' HOME JOURNAL
Is the handsomest magazine printed and has a larger circulation than any other periodical in America—nearly HALF A MILLION (500,000) paid in advance yearly subscribers. The Autumn issues will be special editions—GRAND HOLIDAY NUMBERS—mailed to any address from now to Jan. 1890, for only 25 Cents, silver or stamps.
Some of the special strong features for the autumn are, a story by
Mrs. A. D. T. Whitney, treating of one of those ambitious suburban neighborhoods, built up on Queen Anne pretentions and imitations which also run through the social life. "Ascutney St." aping "Katahdin St.," which in turn tries to stretch up after "Shasta St."
Maud Howe is writing for us a story of social life that will prove a strong attraction. It is the story of a young American girl who goes to London and makes a great social success. It is first of all a love story, but unfortunately, the heroine first falls in love with a man who is not free to marry her, but later finds a better and truer lover, to whom she finally gives her hand.
Illustrated stories by
Josiah Allen's Wife, *Kate Upson Clark,*
Mary J. Holmes, *Kate Tannett Woods,*
Margaret E. Sangster, *Robert J. Burdette,*
Susan Coolidge, *Katherine B. Foote.*
Full page illustrated poems by *Will Carleton.*
Florence Howe Hall will contribute a series of papers on "Inelegancies and Affectations of Speech," "The Secret of Entertaining Company Agreeably."
Literary page—by MRS. A. R. RAMSEY and EDWARD W. BOK.
Fashions—by MRS. J. W BISHOP. Practical Housekeeping. Flowers and House Plants—by EBEN E. REXFORD.
Artistic Needlework—beautifully illustrated. Talks with Mothers—by eminent physicians.
For 25 cents we will mail you the October, November and December numbers, also a complete premium catalogue in which you can select from hundreds of useful articles. Premiums for clubs of trial subscribers at 25 cents each.
CURTIS PUBLISHING CO., Philadelphia, Pa.

Literary.

UNCLE BOB AND HIS CHILDREN.

SOMETIMES I feel like laughing at Uncle Bob, to see the way he manages or mismanages his children. Sometimes I think he is a goose, and then again, when I see how much he loves them and they him, and how most of them trust him, I think he can't be far wrong. I don't live very far from Uncle Bob, and I *have* to see and hear some things, whether I want to or not. I will not undertake to tell how many children he's got, but there must be somewhere from seven to 12. Most of them have pet names that fit about as well as if an elephant were nicknamed a snipe. There's something a little crooked and queer about the oldest boy. He's different from Uncle Bob and Aunt Bob and all the rest of the family. He has a voice like a fog-horn—I guess, although, living in Colorado, I never heard a fog-horn: but I've read up about it in the cyclopedia. Anyway, Uncle Bob calls this youngster "Sweet Note."

It is one of Uncle Bob's ideas to give each one of his children something. Perhaps he'll give one a colt, and another a calf, and another so many hills of beans. The other day I saw him give one of the little girls 55 cents for some cabbages he had sold from her row.

"How's this?" said one of the hectoring hired men. "How's this? Here you are taking money for cabbages you never planted, or irrigated, or plowed or hoed."

"Well," said the little thing, "I know I didn't; but I brought the young plants to Pa and he set them out and gave me any row I'd a mind to choose, and I chose the best of them all, and they are mine and I've got the money—and so!"

The little thing has the money up in her box stowed away, and when somebody's birthday comes, or Christmas, or a circus, or she wants a ribbon for her Sunday hat, Little Cabbages, (I've forgotten her nickname) will out with her money and spend it with great delight, and, most likely, for somebody else or for some article of clothing, and she'll do the business as circumspectly as many a woman. One day I spoke to Uncle Bob about it, and asked him if he wasn't afraid the youngsters would mis-spend the money?

"Bless your soul!" said he, "no. People have to be educated to handle money as well as to handle a hoe, or a horse or a sewing-machine."

Most of the children make Uncle Bob their banker. I heard one of the neighbor's boys saying to one of Uncle Bob's boys:

"Catch me putting my money into father's hands! He'd never let me have it when I wanted it." It isn't so with Uncle Bob.

But Uncle Bob had a picnic with Sweet Note, that I guess rather discouraged him for a while. The boy wanted a certain black filly that was just coming three years old. She was a proud stepper and swift. The boy was, like most other farmers' boys, capable of recognizing the best animal on the place. Said Uncle Bob, after long consideration: "Coal Dust is yours on these terms: I must be the judge of what work she shall do, and at what age you shall ride her, and how much. She shall never be sold except by my permission. If she is sold the purchase money shall be placed in the bank there to accumulate for you until you are 21."

All this was agreed to; but, O my! what a change the ownership of that mare made in the boy. He was so proud of his new possession that he got braggy. Then he grew almost insolent to his father when the latter cautioned him not to ride her very far.

"Look here, Pa," said he, "Do you think, for a minute, that I'd ride Coal Dust to death because she happened to be mine?"

"Not intentionally, but you might not use judgment and might very easly spoil her."

By and bye the boy got his heart set on a bicycle, and made offers to swap the mare for one. He carried the matter so high that Uncle Bob bought the mare at a small valuation which the boy put upon her—say, about half her true value. When the boy was tired of his toy you should have heard him beg But the father was firm, and I take notice he isn't giving the boy any more spirited fillies. Lots of folks can't stand prosperity. I remember one spring I was helping Uncle Bob to plant potatoes, when up marches a boy about 10 years old and says he: "Pa, how many potatoes may I plant and have for my own, if I'll get the seed?"

"All you'll find seed for," says the old man.

No more was said. After sundown off posts that small boy to the trash-pile where somebody had dumped some sprouted potatoes. He pulled one sack out of the edge of the river. Then he cut the potatoes as steadily as a judge. He gave me five cents to help him after chore time, in the dark. He dropped the potatoes and marked them and gave them a most all-sufficient hoeing. I believe he got five dollars, more or less, out of that happy thought. Pretty soon he says to his father, with his eye on a fine grade Holstein heifer—

"What's she worth, Pa?"

"O! about five dollars;" said Uncle Bob.

"May I have her for five dollars?"

"Yes."

"All right," said the boy. "Keep the four dollars you've got of mine, and I'll pay the rest some time."

Then he went to picking up bottles and old iron out of the trash and soon he had the other dollar. You should have seen that youngster skip when he had her paid for.

"Perhaps I'll have quite a herd by the time I'm of age," said the boy.

In four months' time Uncle Bob offered the boy $10 for his heifer, and the boy just laughed at him. Take it all in all, I do believe Uncle Bob and Aunt Bob have an amazing faculty for interesting their children on the farm. The other day I heard that two of the children were forming a partnership and going into the hen business. O. H.

MAGAZINE REVIEWS.

HARPER'S MAGAZINE for September has a long article by Theodore Child on American Artists at the Paris Exhibition. The fact is noted that in 1889 America boasts an élite of artists whose names are cited in company with the most illustrious, and who can hold their own brilliantly among the great masters. The number of oil-paintings exhibited in the United States section is 335; black and white drawings, water-colors, etc., 127; wood-engravings 103; representing 252 artists. The most eminent of all the American artists resident in Europe, James Mc Neil Whistler, exhibits his pictures in the English department. Reproductions are given of many of the most famous paintings, and many others are very vividly described. James Lane Allen gives "Kentucky Fairs" a very realistic pen-picture of a local institution peculiar to that State. The first fair was held in 1816, and was instituted by a distinguished soldier and honored gentleman with a taste for agriculture and fine cattle, who announced that on a certain day in July he would hold on his farm a "Grand Cattle Show and Fair free for everybody." This was a typical English cattle-show, and had little semblance to a fair. This was near Lexington. The following year another show of cattle was held similar to the first, and here was formed the first State Agricultural Society of Kentucky, which was the second in the United States. After holding two or three annual meetings this society disappeared, and but little if anything was done for the next 20 years, when again revived, prizes were offered for essays helpful to the farmer, and some eminent citizen, generally the Governor, delivered an address. Previous to this time, no ladies had attended the fairs, and it was thought a bold thing when a woman and her friend came under the escort of a gentleman to witness the showing of her own fat cattle. From this time the character of the fair changed, until it became a great holiday week with all its attendant mirth and gaiety, its courtesy and genuine Southern hospitality. Since the war the fair has changed greatly, and is now more a horse-show than a cattle-show. "The Oldest and Smallest Sect in the World," by Rev. Dr. Hurst, describes a small religious community now numbering about 150 souls, which has existed for nearly 3,000 years in the small city of Nablus in northern Palestine. Theodore Child contributes a richly illustrated article on "Holy Moscow," in which he describes many notable sights and curious customs, both holy and unholy. "London Mock Parliaments" describes the Society of Codgers, a semi-political debating club. The article has numerous illustrations. Then there is a very improbable story, "Joe Gilfillan;" and "The Religious Monument in France;" an instalment of "A Little Journey in the World;" "Editor's Drawer, etc." "Jupiter Lights," a very interesting serial by Miss Woolson, is concluded in this number. Harper Brothers, New York.

Various.

A JERSEYMAN'S JOTTINGS.

LAST week Axtell, the famous young trotting stallion, trotted a mile in 2:14, thus reducing his previous record by three-fourths of a second. The result was telegraphed all over the country and it was a very slow daily paper that did not print at least half a column about it. I doubt if the free advertising obtained by this telegraphing and publishing could be *bought* for $50,000. Who gets the benefit of it? Well, the gamblers who "back time" against Axtell or, *vice versa*, the crowds of people who go to see the horse trot, and the owners of Axtell or of other horses in his line of breeding, who are after big service fees. It's a great business, this trotting horse raising. I don't care to go into it: I am too slow; my horses would get ahead of me. The influence of the business is bad. Some farmers think they see a quick cut to fortune in breeding fast colts. It has always occurred to me that a man in order to raise trotters has to give up farming proper and become a regular horse jockey. If a man wants to do that, all right; but don't let him try to be a *farmer* and a fast horse breeder in the same year. Either the horse will rush the farm work so fast that it will fly all apart, or the work will so hamper the horse that he will be good for nothing.

Horse Racing is the favorite sport of thousands of Americans. What is there so demoralizing about it? The dullest man cannot help admiring the courage and almost human intelligence displayed by the first-class trotting or running horse. In the performance of the animal itself, there is everything to admire and nothing to condemn. Where then does the harm come in? Why are thoughtful religious people so universally opposed to horse racing? The railroad upon which I travel when I go to the city runs to one of the fashionable race-courses. Every night I come home from the city I pass through a crowd of men returning from the races. A look at the crowd will satisfy anybody there that is some thing absolutely soul-destroying at the race track. What faces! Greed, craft, despair, heartless exultation are all there. It is the most desperate, absolutely demoralizing crowd that one can imagine. The professional gambler with his cold, cruel face, walks with the totally depraved "tough." We feel instinctively that they are both armed ready to commit murder on the smallest provocation. Here is the boy learning lessons in vice and crime, that he never can rub out of his mind. Here is the trusted clerk desperate and haggard. He has lost the money he took without permission from his employer.

It is only a matter of days and hours now before his crime must be made known, and his good name blasted forever. And so the crowd rushes by to the ferry, some are cursing frightfully, others shout with glee, others rush past with the silence of desperation. Whenever I pass that crowd the utter wretchedness and cursedness of the whole thing come so strongly upon me that I feel that if I had a son who had been drawn into that fearful whirlpool, I should be tempted to pray that he might die before he reached the end of his course. I am not speaking of the rich people who enjoy the sport safely, never losing enough to render them desperate. They perhaps feel that they may safely enjoy the races, though I cannot understood how any fountain that pours out such a stream as that I have often spoken of, can help soiling all who come near it. Racing without gambling seems impossible. Those who take up the handling or driving of trotters must expect two things:—1. The money they obtain is essentially gambler's money. The trotter creates no property. He merely facilitates the passage of money, in the form of bets, from one man to another. 2. The racing horse practically creates a place for gamblers and other vicious characters to ply their demoralizing games.

Some farmers may like to be in such a business. For my part, I prefer something a little more in the line with my ideas of religion, even if it is a little slower.

A walking record is something I would like to see worked up. I would like to go to see the horse that can break the walking record. Why not do away with trotting at our fairs and encourage fast walking matches instead. The farmer's pace is the walk. If one horse can be so bred or trained that he can walk a mile in one minute less time than another horse can, that increased speed is worth money. Some of the breeders of heavy draft horses ought to start this matter. I can't think of any way in which they can obtain so much fame and business. The trotting and running horse folks have everything their own way in the matter of records. For one good farmer that is interested in knowing that Axtell trotted in 2:14, there would be five glad to know that Bob and Frank hauled 3,000 pounds a mile in 10 minutes at a fair walk. The breeders of Shire horses claim that their animals are superior walkers. Let them come to the front with walking records—with or without loads. Let the thing be persistently followed up and they would soon see a great interest taken in it, and the result would be in every way healthful. Our fair managers ought to take this matter in hand. It is well worth pushing.

A corn-cutter.—The RURAL prints a note from a man who made a cutter out of a hoe. I have tried it and like it well. A sickle is a poor thing to cut corn with; you can't strike or cut in the right direction. Most of the cutters sold have the same fault. This idea of the hoe ought to give manufacturers a hint about a new tool for this work. The hoe must be ground sharp; by the way, as far as that goes, hoes should be sharp all the time anyway.

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RUBBER ROOFING.—Circulars from the Indiana Paint and Roofing Company, 42 West Broadway, New York. Anybody can make a roof of this material and it will last. It is just the thing for barns, sheds, poultry-buildings, etc., etc. The "slate paint" made by the same house will stop leaks in any roof. It will pay you to send for this circular. Surely you have some roof-space on your farm that will look and act better for a coating of this material.

GARDINER'S IRON FARM AND ROAD WAGON.—Circular from the Gardiner Iron Wagon & Manufacturing Company, Mullica Hill, New Jersey. This circular gives 28 reasons why this wagon is the "best in the world." It is a "low-down wagon on high wheels;" that is one feature that commends itself to farmers. The circular is well worth examining.

THE GARRET FENCE MACHINE, manufactured by S. H. Garrett, Mansfield, Ohio. This machine is simple and durable. Write for particulars.

JAMES M. THORBURN & CO., 15 JOHN STREET, N. Y.—An illustrated catalogue of bulbs and flowering roots, such as hyacinths, tulips, anemones, crown imperials, arums, crocuses, cyclamens, gladioluses, grape hyacinths, ixias, lilies, narcissuses, snowdrops, ranunculuses, scillas—comprehensive, well-selected lists of all. Among hardy seeds for autumn sowing, we have an excellent assortment of the best species and varieties.

THE EFFECT OF DIFFERENT RATIONS ON FATTENING LAMBS.—Bulletin No. 8 from Cornell University, Ithaca, N. Y. In this pamphlet, Professors Roberts and Wing give the results of a continuation of their experiments with feeding for fat and for lean. There is not much that is new in this story. The lambs were coarse-wool grades, Shropshire or South Down. They were better suited for experiment purposes than for profitable feeding.

THE RATION FED.

One lot was fed what may be called a carbonaceous ration. The lambs were given all the Timothy hay and whole corn they would readily eat, and in addition about a half pound of roots each per day. Turnips were fed as long as the supply lasted; after that mangels were used.

Another lot was fed a nitrogenous ration, although it was not so excessively rich in nitrogen as that used by some experimenters in trials of this kind. The grain ration was made up of two parts wheat bran and one part cotton-seed meal. A pound per day per lamb of this mixture was fed at first; afterward it was somewhat increased or diminished, as the needs of the case required, the object being to feed about all that would be readily eaten. This lot also received clover hay, instead of Timothy, and roots.

Still another lot was fed an intermediate ration. The grain part was composed of three parts corn and one part each of wheat bran and cotton-seed meal. It was eaten in about the same quantity as the second lot. Timothy hay was used for this lot and roots were fed as in each of the others.

A fourth lot were fed the same as the third, except that they received no roots at all.

The bulletin presents an elaborate statement of the cost of food, gain in flesh and the weight of different parts of the body. This is not given here for the reason that the result is practically the same as that arrived at in the previous experiments which we have given in detail. The experimenters conclude, as the pith of all their feeding experiments:

"That corn, as an exclusive grain ration, does not give the best results, either in amount, quality or economy of production, when fed to growing or fattening animals.

That the amount of water drank (especially in the case of our lambs) is a pretty certain indication of the rate of gain.

That the production of wool is very greatly dependent upon the nitrogen in the ration."

The bulletin concludes with the following remarkable statement:

"Since a large portion of the arable land in the State of New York is now cultivated at a possible loss or at a very small profit, and since the reason for this is largely want of plant food in the soil; therefore, the value of the voidings of animals and the character of the plants raised on the farm, must necessarily receive our most careful consideration."

A table is introduced to show the manurial value of the different rations when fed to sheep. It is claimed that the "nitrogenous ration"—the one in which bran and cotton-seed meal are used—is three times as valuable for manure as the "carbonaceous ration" where corn is the only grain used.

KANSAS CROPS AND WEATHER.—The statement of the State Board of Agriculture for July is interesting—not by reason of its treatment of the subjects with which it is supposed to deal, but because of other matters. We don't care much now how the crops looked last July, and the weather at that time is also of little importance just at present. Secretary Mohler has contributed a sensible article on agricultural statistics, that gives this bulletin considerable value. It seems that some Kansas farmers refuse to give agricultural statistics, as they say their figures will only be used to the detriment of farmers. In fact, it seems to be pretty generally believed by a large class of farmers that all the figures or crop information they give is seized upon by speculators and crop gamblers to manipulate prices in their own interests. Secretary Mohler argues against this view and gives reasons why reliable statistics will benefit Kansas. He says:

"Grain gamblers connected with the boards of trade in our large cities have men in their employ traveling continually during the growing season, in every part of the country, gathering the facts in regard to the acreage and yield of wheat and corn per acre, and other crops; and it is surprising how near they get at the exact facts long in advance of the time the assessors' returns reach this office. These men are experts at the business, and do their work thoroughly. These grain speculators are not, therefore, in any way dependent upon the returns made by the assessors to this Board for carrying on their gambling operations, but are wholly independent of them. Now if the people had no means of collecting these statistics, compiling and giving them to the public, there is no telling what these unscrupulous men would do. The farmers would then be at their mercy. They could withhold the truth from them and practice their art with direful effect upon the farming world. The farmers would be in darkness and the grain gamblers in the light. Ignorance can never cope with intelligence in any kind of warfare."

He always gives this advice, which will apply to 36 other States besides Kansas:—In selecting assessors the best man in the township should be taken for the work—one not only competent but pains-taking, and ambitious to do his work well. Better work is badly needed, and assessors at their annual meeting for fixing a basis of valuation, should discuss this matter and pass a resolution pledging themselves to do thorough and complete work, including, of course, agricultural statistical work, and the county clerk of each county in the State should urge upon the assessors the importance of such work.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

LEGAL FRAUDS IN SALES.

T. M. S., Armstrong County, Pa.—A sold B a horse blind in one eye, the supposition being that the animal was sound in all respects. A said nothing about the horse's eye-sight, and B did not notice the defect. Can B, after discovering it, compel A to take the animal back or, on his refusal to do so, recover damages?

ANS.—No. B was not legally bound to disclose the fact that the horse was blind; he had only to refrain from doing anything to conceal the defect or to prevent the purchaser from discovering it. It has even been held that one who buys a horse that is blind even in both eyes, after having had an opportunity for examination, is not protected by a general warranty of soundness; but, on the other hand, if the defect is one that cannot be discovered by reasonable diligence and care, the law requires the seller, if he is aware of it, to point it out. The ancient adage "*Caveat emptor*"—Let the buyer beware,"—is applicable in all such cases. The law affords every reasonable protection against fraud in dealing, but it does not go to the romantic length of giving an indemnity against the consequences of ignorance, folly or carelessness, where ordinary and accessible means of information have been neglected. If the parties meet on equal terms and have the same means of information, and if nothing is done to divert attention or conceal defects, there can be no fraud in law; for though the goods may be defective, the vendor is under no legal obligation to point out defects which any one may see if he will look for them, and though the seller may say the goods are better and more valuable than they really are, even then the buyer is supposed to rely on his own skill and judgment. If he has a full and fair opportunity to do so, he must look out for himself, or suffer the consequence of his own imprudence. If the vendor, however, covers up or conceals defects, or if he misleads the buyer or puts him off his guard in order that he may not discover them, or even if he fails to point out defects,—such as the habits or non-corporeal characteristics of an animal, for example—which the buyer has no means of discovering for himself, he is guilty of a fraud in law, which renders the sale voidable. This rule relates to a multitude of matters of every-day occurrence.

THE SALE OF HOME-PRODUCED WINE AND CIDER.

H. B. H., Yates County, N. Y.—Has the producer of native wines and cider, made by himself, or his employes, from the grapes or apples of his own production, the right to sell the same by the barrel or gallon, without a license?

ANS.—Section 3,246 of the United States Revised Statutes provides that no special tax shall be imposed on vintners who sell wine of their own growth at the place where it was made, or at the general business office of the manufacturer. No United States license, therefore, is needed to sell under the circumstances mentioned by our correspondent. But an excise license is needed under the New York State law in order to sell wine in quantities of less than five gallons, or to sell it in any quantity to be consumed on the premises. No license, however, is required for the sale of home-produced cider.

COMPENSATION FOR SERVICES TO A DECEASED PARENT.

I. M., Herkimer County, N. Y.—If a parent dies without making a will, and one of the heirs performs all the necessary services during his parent's sickness, can he recover the value of such services out of his dead parent's estate over and above the share of it coming to him legally?

ANS.—When an adult child resides with and performs services for a parent, an understanding between them for recompense may be shown. Where the parent was sick and infirm for a long time and where the child's services were indispensable or very important, a mutual understanding that the child should be paid is often inferred from the circumstances, and compensation is allowed out of the deceased parent's estate upon the usual footing of creditors.

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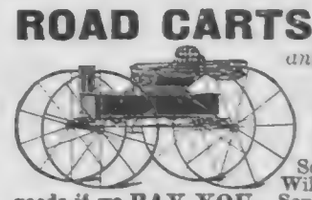
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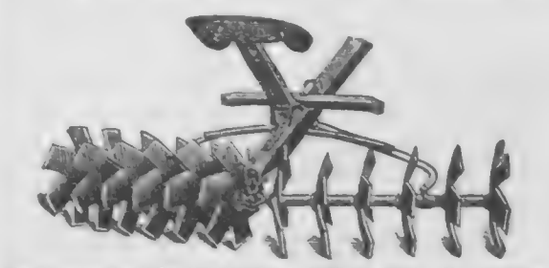
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The statement causes mirth—
It must have been in early time—
For now he wants the earth.
—Baltimore Examiner.

THERE is one crop that never fails. It belongs to the chicken.—*Toronto Empire.*

People who are fond of eggs take more interest in the hen's than in the poet's lay.—*Boston Courier.*

THE man who wants to get ahead of time when going for a train should use the spur of the moment.—*Boston Courier.*

YOU may salt, you may season the cucumber if you will, but the old gripe prerogatives will cling to it still.—*Bradford Republican.*

"I TOLD you, dear," said the cannibal's wife, "not to eat that man. He was too green, and now you've got the morbus again."—*West Haven Budget.*

AUGUSTUS: "Do you object to 'the weed,' Bella?" Country Cousin: "No; but pap does. He's at 'em with a hoe, early and late."—*Agricultural Epitomist.*

A FASHIONABLE dressmaker has received an order for a gown with "one of them vestibule-trains that are talked of so much in the papers."—*Town Topics.*

"I WAS badly bitten by flies in every country in Europe except Belgium." "Have they none there?" "I don't know. I didn't go there."—*Harper's Bazar.*

DENVER has a paper called the Frog, but the publisher will have toad-mit that the prospects of his frog jumping into a large circulation are rather discouraging.—*Norristown Herald.*

A GOOD REASON.—Mamma: "Howard, are you going to take part in the tree-planting at school on Arbor Day?" Howard (emphatically): "No, I hain't; there's enough switches growin' round our school now."—*Puck.*

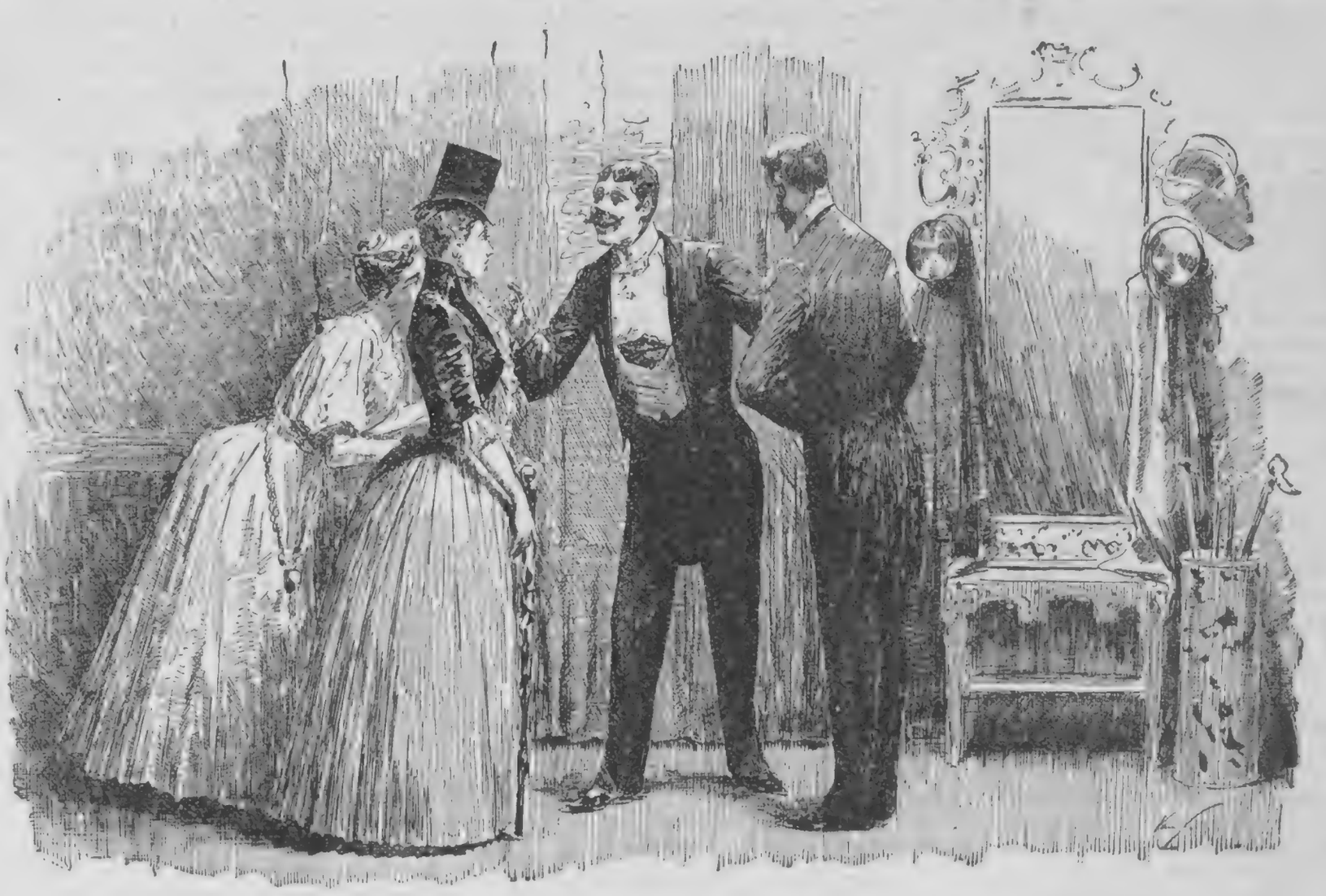
JUST as the spring-poet timidly opened the sanctum, the telegraph-editor, who was filling in a dispatch, said to the chief: "Shall I put a big head on it?" Then the building shook as the spring-poet hastened down-stairs.—*Burlington Free Press.*

ONE day Ray and Ernest were playing together, and as they occasionally quarreled, their mother said: "If you are naughty again, I shall separate you." In a little while Ernest called: "Mamma, please come and separate Ray, he's naughty."—*Youth's Companion.*

THE darkey's heart is light and glad; no longer he is feeling sad. The watermelon now is here; the canteloupe is on its ear; the peanut lifts its voice on high, so why should colored folks still sigh? The white ones, too, are full of glee, for you can bet they love all three.—*The American.*

"WHAT is wonderful about you?" asked the visitor to the museum. "Can you crush a cart-wheel between your thumb and forefinger or make your chest big enough to hold the crown jewels of England?" "No. I'm the clergyman who hasn't preached a sermon on 'Robert Elsmere.'"—*New York Sun.*

"ARE you the girl who was to come to our house as a nurse?" asked a fashionable lady of the healthy-looking girl who had just entered the room. "I am ma'am." "I have examined your references, and I find them satisfactory. You may begin next week." "But, if ye plaze, ma'am, I'd like to ask yez wan question." "What is it?" "Is it a baby or a poog dog that I'm to look afther?"—*Merchant Traveler.*



REHEARSING FOR CHARADES.

FREDDY: "Now, Charlie, you must propose to Angeline (*in her sixth season*), and, Angie, you must refuse him. It shall be 'Paradise Lost.' See?"

CHARLES (thoughtlessly): "They'll never guess it in the world."

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Horticultural.

The Newer Varieties of the Blackberry.

HOW THEY ARE REGARDED BY PROMINENT AUTHORITIES.

Communications from President T. T. Lyon, M. Crawford, E. Williams, P. M. Augur, et al.

Varieties Growing at the Rural Grounds, With

PHOTOGRAPHIC ILLUSTRATIONS.

FROM PRESIDENT T. T. LYON.

EARLY KING BLACKBERRY.—I have not yet been able to make a satisfactory test of this variety.

THE MINNEWASKI proves hardy enough to withstand our lake-shore climate, and promises well as to productiveness; but another season, at least, will be requisite properly to determine its status in this most essential particular.

ERIE is claimed by many growers to be identical with the Lawton. There surely is occasion for such assumption; but, with me, the Erie has decidedly more of the trailing or spreading habit of the dewberry, although it is a very vigorous, sturdy grower, and possesses even stronger and more prehensile spines. The fruit also is more rounded and regular, and less elongated. With me another year is needed to test its value thoroughly, although my experience so far is decidedly in its favor.

SNYDER lacks productiveness as compared with the Kittatinny, Early Wilson or Lawton, and the fruit, although of high quality, is decidedly lacking in size. Its popularity is mainly due to its great hardiness.

TAYLOR, after a good many years' trial, has proven, with me, quite as hardy as Snyder. It is a more spreading grower, with peculiar, yellowish-green canes. It requires a season or two longer than Snyder to come fully into bearing; but when it "gets fairly down to business," it is even superior to the former in productiveness; while the fruit is larger, more elongated, later, and quite as high in quality.

WILSON JUNIOR is, in all respects, very much like its alleged parent—the Early Wilson—although there are slight differences. The former, with me, ripens two or three days in advance of its parent.

THE LUCRETIA DEWBERRY is very productive, and although scarcely as hardy, when fully exposed, as many of the blackberries, its trailing habit usually so far protects it, in winter, that it rarely suffers from low temperature. The fruit corresponds, in size, with the largest blackberries; while it ripens very nearly with the earliest blackcaps, which circumstance doubtless renders it all the more desirable. The fruit is borne so near the ground that a mulch is needed to keep it clean, quite as much as in the case of strawberries. Everything considered, I regard it rather as a fruit for home or family use than as desirable for the market.

WACHUSETT is a variety I have tried to make something of for a number of years; but it has, with me, proved utterly worthless, and I have consigned it to the rejected list, along with numerous other thornless varieties. Thorns and fruit, in my experience so far, seem almost, if not quite, inseparably connected.

AGAWAM has been in my collection nearly or quite 15 years, and I regard it as of very decided value. The fruit is of fine size and excellent flavor; and the plant a strong grower, and sufficiently hardy for the lake shore; although, doubtless, somewhat less hardy than Snyder or Taylor.

EARLY HARVEST was unfortunate in its introduction to the public. My first trial of it was with plants received direct from the introducer. These proved very tender, killing to the snow-line each winter. Not suspecting their genuineness, under the circumstances, I have frequently and strongly condemned it as valueless at the North. More recently this proved to have been the Brunton. The genuine Early Harvest has been grown largely, for several years, at Benton Harbor, 20 miles south of this place, and has proved to be not only hardy, but one of the most profitable varieties grown in that region. My own experience with the genuine, is as yet quite limited.

South Haven, Mich.

FROM SECRETARY M. CRAWFORD.

Early King, Minnewaski and Wachusett have not fruited here. The Wilson Junior and Early Harvest are by far too tender for this climate.

AGAWAM is the most satisfactory variety I ever raised. It is perfectly hardy here, quite early, wonderfully productive, of good quality, a little larger than the Snyder and smaller than the Taylor. The genuine is hard to get.

SNYDER is usually hardy, and with high culture and close pruning the size is medium. It ripens between the Agawam and Taylor. The quality is only moderately good and its habit of turning red after being picked, detracts from its value.

TAYLOR is nearly as hardy as the Snyder, fully as productive, later in ripening, of larger size and far better quality.

ERIE originated in this county in a neglected vineyard belonging to L. B. Pierce, the well-known horticultural writer. It is one of 50 or more that came up at the foot of the posts where the robins carried the berries from a patch of the Lawton that grew near by. After a time the posts rotted off at the ground and fell over, carrying the vines down with them. This gave the blackberries an opportunity which they promptly improved. This variety occupied about a rod of ground, which Mr. Pierce assured me yielded from 30 to 35 quarts at a picking three times a week; and it bears a long time. On the strength of this report I paid $50 for the entire stock, and a few weeks later, I sold it to a party in New Jersey for $100. He grew it one year, and divided the stock into ten equal shares, which he offered to nursery-men at $500 each, reserving one for himself. Each purchaser increased his stock as much as possible the next year, after which it was put upon the market. It is very much like the Lawton, but I do not think it is that variety. It has all the desirable qualities, except hardiness, and will doubtless be a satisfactory variety where the climate is mild enough for it.

THE LUCRETIA is a very desirable variety, if one can put up with its habit of running all over the ground like a water-melon vine. It is rarely winter-killed, either because it is so hardy or from its habit of lying on the ground where it is covered with snow much of the time. The berry is even larger than the Lawton, and of pretty good quality. Hardiness is the important point with blackberries in this climate. Without this, all other good qualities go for nothing. The following are hardy in the order named, and are all that I *know* to be reliable: Agawam, Stone's Hardy, Snyder and Taylor.

Summit County, O.

FROM CONNECTICUT STATE POMOLOGIST, P. M. AUGUR.

EARLY HARVEST is very early, choice and good; not large. It is too tender to be trusted north of New York City. Snyder and Taylor are prolific and hardy, of good quality, and can be depended on.

MINNEWASKI is large, productive, hardy and good.

ERIE I regard as distinct from the Lawton, and better. The canes are hardy with us. It is not quite as productive as Snyder, but the fruit is much better, being large, jet-black, with a mild blackberry flavor. It is our favorite for home use.

WILSON JUNIOR, like the old Wilson, is not reliable with us; the fruit is large, fine and excellent.

THE LUCRETIA DEWBERRY, for those who want a trailing berry, is what it purports to be—hardy and productive. For one variety and under all circumstances I would select

MINNEWASKI BLACKBERRY. From Nature. See page 606. Fig. 228.

the Snyder; for two, the Snyder and Erie; but I prize the Minnewaski nearly as highly.

Middlesex County, Conn.

FROM SECRETARY E. WILLIAMS.

EARLY CLUSTER.—Of this I have a few plants which have always proven hardy and productive. It is also early, but how it compares in this respect with others I cannot say. The berries are about the size of Snyder as I have seen them elsewhere, and the quality is good when I pick them myself and I think this will apply to all others.

THE ERIE, to all intents and purposes, differs very little from the New Rochelle, save in earliness. It is, I think, a week or 10 days earlier than the Rochelle and fully as deceptive in appearing ripe before it really is.

MINNEWASKI has not yet fruited with me.

THE SNYDER is hardy and immensely productive. Its small size is the chief objection to it; but a gentleman near Morristown, who has several kinds considers it the best of all, if grown on very rich ground and severely pruned. With this treatment he gets it of a very satisfactory size, much larger than I have seen it elsewhere.

THE KITTATINNY is the best of all I have tried or seen; it is large, productive and excellent in quality; but if I eat the berries I must pick them myself. From a couple of stray plants a few days ago I picked a quart that were delicious, reminding me of old times. These plants stood in grass and had not been pruned nor had they received the least bit of attention; but it will not do to say of any blackberry I know of that it is ripe when black. The Dorchester comes nearer filling the bill in this particular than any I have seen. As ordinarily picked I invariably pass this fruit till canned or cooked, as hard, sour blackberries, even if smothered in cream and sugar, are repugnant to my taste. If we could get a blackberry that was really sweet and good when black, it would be a desirable acquisition, and my affection for this fruit would be stronger.

Montclair, N. J.

FROM E. C. BRINSER.

THE EARLY HARVEST is the earliest of blackberries. It is very productive, of rather small size but of good quality and fine appearance and it sells very well when customers get to know it.

WILSON JUNIOR seems to me to be a failure as the vine is a very poor grower and not hardy enough. The fruit is large and abundant if the vine doesn't freeze back; but it is of poor quality. I have little faith in it.

ERIE is much better in growth and quality of berry and has done fairly well on year-old plants.

SNYDER is very productive and of good quality; but it bears so heavily that the fruit is of rather small size compared to the Kittatinny or Erie.

Schuylkill County, Pa.

FROM T. H. HOSKINS, M. D.

I have only the Snyder and Sable Queen, both of which do well. The latter is the larger and better of the two. Hard winters kill them both to the snow-line unless laid down.

Newport, Vt.

FROM MRS. A. L. JACK.

I intended to speak a good word for the Lucretia for it has done well with us this year, though we did not let it go at its own sweet will, but trained it on two wires along the row. The berries were plentiful and black. We picked them, but, sad to relate, there was an after-taste of bitterness in the mouth as one feels after eating horehound drops, and they will not sell the second time, though large and plump. "Leave them till they are fully ripe," some say; we have tried it, but they are treacherous, and we do not know when they *are* at that stage. If one happens to get as far advanced as to be eatable only the mangled remains can be discovered, for the birds find them first. No, the Lucretia is not all it was boomed to be.

Quebec, Canada.

FROM PETER COLBY.

On account of plenty of wet weather, our blackberries—the Wachusett—are very large and the bushes are loaded. They can be picked more easily than others on account of the very few thorns they have and these are straight, so that they do not cling to the clothing, and the vines are perfectly hardy, as we live in sight of Wachusett Mountain where this variety originated. We think the berries sweeter than others and will have over 20 bushels on our piece. I shall try the Agawam another year, but I dread the thorns.

We ship to Boston. Prices this year so far eight and 10 cents per quart. We make a clear profit of $2.00 and $2.70 per bushel. Does this pay? Yes, better than anything else we can raise. We want three or four quarts per day for home use and it is about as easy to raise one-quarter or one-half an acre and ship the surplus, and so get our pay for cultivating them.

Stafford County, N. H.

Notes from the Rural Grounds.

THE NEWER BLACKBERRIES.

With photographic illustrations of Minnewaski, Erie, Early King, Bagnard and Gaynor.

EARLY KING.—Several plants were received from J. T. Lovett of Little Silver, N J., and planted April 21, 1888. It is said to be from Missouri, and the claim is made that it is remarkably hardy having endured 36 degrees below zero; that it ripens earlier than Early Harvest; that it is larger and of delicious sweetness. It began to ripen here one week *after* Early Harvest, which is the earliest blackberry we have ever tried. The berries are of better quality though not so regular as those of Lawton. They are better in quality than Early Harvest—not so good as Kittatinny. The canes are more thorny than those of Kittatinny. The berries, as shown at Fig. 230, as photographed from nature, are of medium size. It is rather earlier than Lucretia. Conclusions should not be drawn from a single year's trial. The canes have made a vigorous growth.

ERIE BLACKBERRY. From Nature. Fig. 229

MINNEWASKI.—The first plants were received from J. T. Lovett in April of 1887, as Mr. A. J. Caywood, the originator, declined to furnish them, as he objected to any trial of this variety by the R. N.-Y. It was first illustrated in the R. N.-Y. (from specimens sent to the office by Mr. Caywood) December 19, 1885, page 869.

It ripens with the Kittatinny; the berries and drupelets average somewhat larger. The quality is not quite so sweet. The canes and spines are similar. Nothing further can be said of its hardiness except that the canes have never been injured, though the winters have been mild since the plants were set. We regard the Minnewaski for this locality as only second to Kittatinny with a probability that it is a hardier variety. The illustration, from nature, is shown on the first page.

BAGNARD.—Received from E. F. Richman, Muscatine, Iowa, March 14, 1887. He writes as follows:

"It originated on the farm of L. Bagnard near Muscatine, and is undoubtedly from the seed of Snyder. This is a trying climate. So far the Bagnard has shown no signs of injury from cold though growing in an exposed situation."

It ripens here nearly with Kittatinny. The berries are not so large though larger than those of Taylor. Quality not so good as Minnewaski. The plants are very prolific and thus far perfectly hardy. Fig. 232 shows a single berry of the average size.

BANGOR.—Received from Chase Bros., Rochester, N. Y., April 1886. Excessively productive. The bushes are at this time (Sept. 1st) a mass of berries of small size but few of which are ripening. The quality is insipid. It is impossible for any blackberry to mature such an immense quantity of fruit. The canes are hardy.

ERIE.—It is claimed by the introducer for this variety that it is earlier than Wilson Jr. and combines more points of excellence than any other blackberry known. Several well-known authorities state that it is the Lawton. It seems to the writer that the canes are hardier and that the berries while about the same in length are thicker in diameter. It ripens this season with Kittatinny. Fig. 229 shows a photo-engraving of an average cluster of berries.

TOPSY.—It ripens with Kittatinny. The canes are so beset with thorns that this variety is not desirable even though it possessed distinctive merits which it does not, in so far as has been observed.

AGAWAM. This was illustrated and described in the R N-Y. of August 24.

BONANZA.—The berries are not quite as large as those of Kittatinny with which it ripens. Quality not quite so good.

GAYNOR.—From Morris, Stone and Wellington, Welland, Ont., Canada, spring of 1886. The quality is much that of Kittatinny, though the berries do not average so large. Very prolific and hardy. See Fig. 231.

FAIRFAX DEWBERRY.—C. A. Uber, Falls Church, Va. Not so prolific as Lucretia; berries smaller.

EARLY HARVEST is the earliest of the blackberries tried here. It is tender to the extent that it bears a full crop not oftener than once in four years. The berries are rather small, the drupelets are small but of such uniform size that every berry is almost a facsimile of every other berry. Firm and handsome, but rather insipid.

LUCRETIA DEWBERRY.—This has been allowed a place here ever since May of 1885. The berries are large—larger than those of Lawton—of fair quality, ripening before the Kittatinny. If allowed to run over the ground naturally, one has to stoop low to pick them. The difficulty is increased by the thorny, entangled vines. If obliged to depend upon the Lucretia for our blackberries or go without, we should prefer the latter.

CUT-LEAVED, EVERGREEN OR PARSLEY-LEAVED BLACKBERRY.—This was received from J. M. Ogle, Puyallup, Washington Territory, in the spring of 1886. The next year it was extensively advertised as a marvel of productiveness, etc. It is not quite hardy here, but this season it bears a full crop. The leaves are glossy and fernlike. The numerous thorns of the slender, pliant stems incline sharply downward, as sharp and rigid as needles. The berries are a glossy, jet black, sweet, small to medium in size—the drupelets large with large seeds. It is of interest as a curiosity, not without some value either for ornament or, one year in five, for its fruit. It is a variety of the European blackberry—Rubus fruticosus.

An excellent illustration of the spray and fruit appeared in the R. N.-Y. of February 6, 1886.

SMALL FRUIT REPORT.

As I was reading the reports of different varieties of strawberries sent in from different points, I felt amused at their conflicting nature and thought I might as well add mine, which will, no doubt, be just as conflicting. Our season was one of incessant rains and floods. The extremely wet weather brought out the berries to their utmost size: but, as a natural consequence, they are lacking in quality. I have land in two tracts not a mile apart, and the nature of the soil differs so greatly that strawberries at home in the one soil nearly fail in the other. The one is a loose loam, while the other is a very solid, tenacious loam. In the former the Sharpless and other varieties of the same nature are at home.

STRAWBERRIES.

JESSIE has fruited with me twice. It is a good grower; foliage clean; fruit of high quality, firm, of large size, early and of even color and the vine is as productive as most sorts. This year, however, it was severely damaged by the great floods of rain in the early season, but it improved wonderfully from the middle to the latter part of the season.

BUBACH is, I believe, all that is claimed for it. None is better in foliage. The fruit is of immense size; but only moderately firm; it colors evenly, but is medium in quality to my taste. The vine is very productive.

MONMOUTH is the earliest large berry I have yet tested. It is a few days earlier than the Crescent or May King. It averaged as large in size as Cumberland and yielded twice as much. It is of good shape and quality, very firm and a very strong grower.

MAY KING has done remarkably well. The fruit if properly grown is of fair size and of such fine flavor that I shall continue to grow it. It is a little pale in color, but so very firm and good that purchasers who know it like it very much. It is my favorite eating berry in the patch on account of its peculiar flavor.

GANDY'S PRIZE is the latest variety I have. It is a strong and healthy grower. The fruit is of fine form and large size, firm and of good quality, but with me the vine is not as productive as I desire, but as the fruit ripens so late in the season it is valuable on that account.

MANCHESTER is very productive and valuable for preserving, but so subject to rust and blight that I must drop it.

BURT I have not fruited, but find it a wonderful grower.

CUMBERLAND, which is one of our standbyes, has partially failed with me this year. I think the wet weather is the cause.

CRESCENT I will drop from my list after two years' trial. The fruit is too small and sour.

SHARPLESS is more to me (or has been till now) than any other variety. It bears so well and the fruit is of such size and quality that it sells for more money than any other kind. If I were forced to grow but one variety, it would be the Sharpless, but I am glad we have good varieties that are earlier. Of Mammoth Seedling, Crimson Cluster, Belmont, Jewell and Charles Downing I need say nothing except that I shall drop them.

RASPBERRIES.

Of raspberries we had a fair crop.

SOUHEGAN is the earliest, but the fruit is not so large or good as Gregg. I find its fruit about gone when the Gregg comes in. I have now planted the Ohio to fill the gap.

GREGG is late, but when the climate is not too cold it is more profitable than other sorts on account of its size, quality, firmness and productiveness.

HILBORN is a few days later than Souhegan, but of a larger size, a stronger grower and more productive. It has a finer appearance than any berry I know.

NEMAHA is the strongest grower of all the black-caps I know. The fruit is even larger than the Gregg, and about the same in other respects. It is said to be entirely hardy. Should this prove true it will be very valuable.

CUTHBERT is the leading red here.

HANSELL is early but not so large or so good.

SHAFFER'S is a rank grower and very productive; fruit large and very good, but too soft for shipment. E. C. BRINSER.

Dauphin County, Pa.

Farm Topics.

THOUGHTS AND FIGURES ON HAYING.

PROFESSOR I. P. ROBERTS.

IN this locality it has required careful planning, prompt execution, and first-class implements to secure the hay crop in good order. Failures and successes may now be noted that we may be wiser in the future. Those who cut their clover hay *very* early, had little difficulty in curing it. We cut one small field on June 10, and to-day—August 5—are cutting a heavy second crop—1.68 ton per acre. This method of cutting the first crop *very* early, before the clover has lodged, and the second one in August, before the cool, damp nights come on, I propose to follow in the future, now that the land is fertile enough to bring the plants on rapidly. Field No. 2 was badly lodged, and was cut when a little over-ripe, as it rained about every day when it was in the right condition; but hay-caps, energy and two continuous days of fair weather enabled us to bring it to the barn in good condition. I should have cut this field June 5th to 10th. Better a little over or under ripe than spoiled hay. Field No. 3—Timothy, with a little clover—contained 3.85 acres, and was cut with a Eureka Mower in two hours and 10 minutes; raked in one hour and 30 minutes, and bunched by one man in 10 hours. The time of loading—two pitchers—was 18 minutes; the time of unloading, 10 minutes per load. Four men were in the barn—two to mow away, one to handle the sling and one the team. There were 11 loads of well-cured hay, weighing 12 tons 190 pounds. This Timothy was cut July 9th and hauled the 11th and 12th. The rain caught a few shocks, but most of them were covered with hay-caps.

HAY FIELD——DR.

Man, team and machine, two hours and 10 minutes, at 50 cents per hour....	$1 09
Raking, one hour and 30 minutes, at 20 cents per hour.....	30
Bunching, 10 hours, at 15 cents per hour	1 50
Pitching 11 loads, three men, 18 minutes, 10 hours.....	1.50
Unloading, four men, 10 minutes, 11 loads, at 15 cents per hour..	1.10
Second raking, one hour and 30 minutes, at 20 cents per hour.....	30
Extra time for pitching rakings.....	15
Capping.....	25
Five hours extra work on uncapped hay	75
Teams, 10 hours, including time to and from field, etc.....	2.00
Four hours consumed by teamster to and from field.....	60
Add 10 per cent. loss for sundry lost time between loads, changing to other work.....	95
Total.....	$10.49
Cost per ton.....	.87

I believe the large field of Timothy was secured at a less cost per ton, as the field was much longer and there was no rain to hinder.

The hay referred to above from the small field was bunched when quite green, and went into the barn with that "silky" feel which good judges of hay prize so much. I would quite as soon have a shower on hay as a few hours too much sun. Since seeing my neighbors operate a hay-loader and tedder this wet season, I am strengthened in my opinion that there is little place on a well-managed small farm for either; and I am very doubtful whether they are a financial success, except under unusual conditions.

Seeing the difficulties and the frequently increased cost of gathering the grain and hay (too often poor on account of the heavy rainfall), I am led to the following conclusions: If farming is to be profitable, there must be a large yield per acre. To get this large yield, there must be grown, not only the better varieties, but the best for the conditions present. The Lord never planted cat-tails on a dry hill-side, but I have known farmers to try to raise celery in gravelly sand. The plant, to do its best, must have an abundance of food and water, but not too much. We, as farmers, are here to regulate these things. And the Lord said: "I give you dominion." The crop must not only be raised, but also secured at the minimum of cost per ton or bushel. Machinery and tools must be as simple as possible, strong, durable, and, above all, effectual. There are good potato-diggers and ditching-machines; yet 99 per cent. of all the ditches and potatoes are dug by hand-labor, simply because, under most conditions, a dollar is more effective when expended for hand-labor than for machinery. The mower and binder must, under good conditions, cut an acre and a half per hour. This implies a team able to draw them continuously at their most effective speed, and, above all, a man—dominion!

It will be noticed above that I have charged $5 a day for sharp knives, a sharp man and a good team; yet the expense was only 28 cents per acre, because the means used were well-adapted to the purpose, and, hence, effective.

Three-fourths of a ton of hay and daisies; 16 bushels of wheat and cheat; 28 bushels of oats and a ton of Canada Thistles per acre; $80 for a horse; $1 50 for a sheep (I saw yearlings sell in Buffalo last spring for 50 cents); 165 pounds of butter per cow—these are the averages. Who takes the hindmost?

34 bushels of wheat, and straw.....	$40.00
Rent, labor and plant food.	20.00
Profit, 100 per cent.	
Three tons of hay (one or two cuttings),	$30.00
Rent, plant food and labor.....	15.00
Profit, 100 per cent.	
75 bushels oats and straw.....	$36.00
Rent, plant food and labor.....	18.00
Profit, 100 per cent.	
Grade French, or Clyde.....	$200 00
Cost.....	80.00
Profit, 150 per cent.	
750 pounds milk, or 300 pounds butter,	$75.00 to $100.00
Calf and skimmed milk.	
Profit, ——. Profit, ——.	
100 early lambs.....	$600.00
Profit, ——! Profit, ——! Profit, ——!	
100 yearlings in Buffalo.....	$50.00
Loss! *Loss!* Loss! LOSS!	

Somewhere, my reader, in the above array of figures, you will find your own case. Look in the palm of your callous, nut-brown hand and see if in those well-marked lines you see an L or a P.

Cornell University, Ithaca, N. Y.

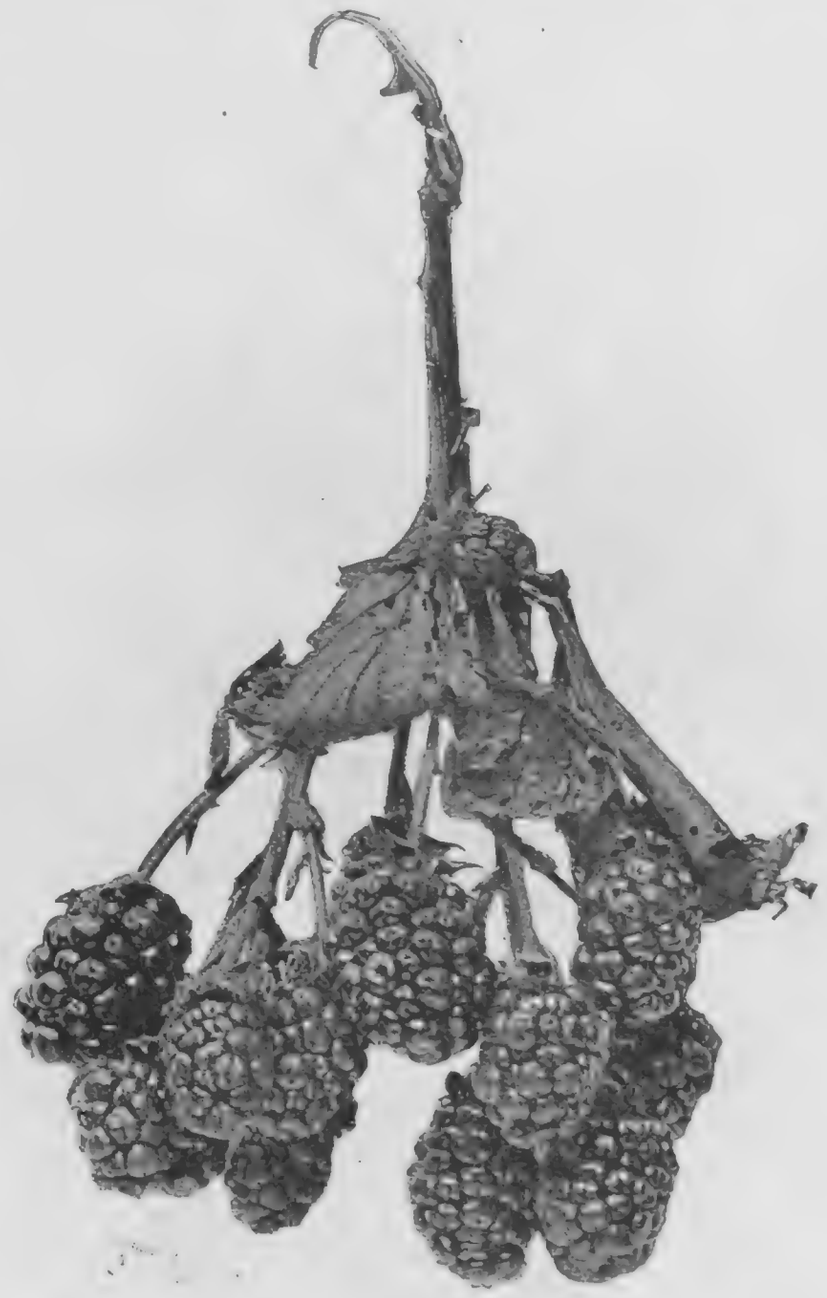
WHY MANY FARMERS DO NOT SUCCEED.

IN many sections of the country we meet with a great many farmers who are always complaining about hard times. They practice what they believe to be the strictest economy; they work hard enough, but the money does not pour in upon them in a very large stream. Really it does not run into their pockets in any stream at all; it just reaches them in far-between meager drops. A few other farmers owning no more or better land, and who work no harder have money enough. Why is it that one has golden eagles jingling in his pocket and the other only silver dollars?

The answer is apparent enough to any one who spends any thought upon the subject. It is expressed in the single word "*management.*" When a man owning a farm begins to groan about "hard times," and complain that he has no money, it would be the best thing for him to do to stop and ask himself: Why do I get no money? Why are the times hard? Nearly all sorts of farm produce bring good prices. Bear in mind the fact that you cannot get something for nothing. If you have nothing to sell, how do you expect; how can you hope to receive any money? Look the matter fairly in the face. You have a hundred acres of land; you raise two or three acres of wheat, half a dozen acres of oats, some corn, say three or four acres; you cut the grass from 20 acres of meadow; you keep a work team and a carriage horse, a dozen cows, three or four hogs and a few poultry. You eat the wheat, feed the grain and hay to the horses and cows, hogs and poultry; you eat the hogs and eggs and all you have is what is left from the dividends of the cheese and butter factories after having paid one man for hauling the milk, another for making the cheese or butter and other incidental expenses, such as cartage to the railroads, freights, drayage, commissions, etc. All you have sold from your farm has been the milk, and the income from that has been whittled down and down until the price that reaches you only a little more than pays taxes and a few other expenses which are absolutely necessary, and if you or your family wish to take a little recreation by attending the State fair or spending a few days in the city there is no balance in bank to foot the bill.

Well, who is to be blamed? Haven't you obtained all you have earned? Cannot you make a review of your old "run-in-the-rut" way of farming, and do something that will pay better? Can't you raise some crops that will give you a better margin of profit than corn and oats? Suppose that you leave out a part of the oats and corn and raise more products of the garden—say onions, cabbage, squash, or some other, crop that can be sold for $100 to $200 in cash. And then after you have got the cash, make it worth more to you than it has been in the past. Not having had the ready cash, I know how you have managed. You have been accustomed to go to your country store, buy whatever was necessary, have it charged, pay enormous profits, and your money has been of but little use. The better way is to send away to some wholesale dealer and buy enough at a time to last six months or a year, and you will be surprised at the saving of money accomplished. I have practiced this sort of economy for several years and I know how it works. Of course, there are some articles that I do not send away for, because I can buy them at home almost as cheap; but upon the groceries, dress goods, clothing and articles for use in the house, I think I save at least 25 per cent., and one-fourth of the store bill very often makes quite a difference in the spending money for a family's pleasure. Try it, good reader. Raise more products of the farm that will sell for cash, and then make your money buy more of what you want.

C. T. LEONARD.



EARLY KING BLACKBERRY. From Nature. See page 606. Fig. 230

Dairy Husbandry.

CLOVER AND CORN-FODDER VERSUS TIMOTHY.

PROFESSOR J. W. SANBORN.

Stover as yet a woeful waste in the West; its great value for feed; clover and stover from a given area far more valuable for feed than the Timothy therefrom; grasses, however, indispensable in a rotation; small cost of their production and handling; places of grass, clover and corn in a six years' rotation; beneficial effects of growing all; planting, harvesting, and feeding fodder corn; corn our most productive fodder crop; a combination of clover and stover excellent for beef or butter production; ensilage not yet the best means of utilizing corn for feed; clover, corn and Timothy excellent on a dairy farm.

THE following question is submitted: "Should a dairyman use Timothy as a part of his rotation? Will he not do better to so change his rotation as to have corn-fodder and clover in the place of Timothy?"

At present corn-fodder in the West is practically a waste product of corn-growing, and as such is made but of little use considering its great nutritive value. This, in view of the present developments of the West, has degenerated into a vital wrong, for the nutrition in an acre of corn-fodder is equal to or really exceeds the nutrition in the corn it bears. It needs no argument to show that a process that is half waste in crop growing opens a field for economy in a period distinguished by the wealth derived from former wastes. I have been radically opposed to any system of farming that results in such a waste, and so I organized, on the Missouri College farm, a system of rotation of crops that saved everything grown, but it was especially aimed to conserve the wasted corn-fodder or stover—let us call it stover. In this rotation clover held a conspicuous place and Timothy a smaller one than is usual. I do not, however, hold that the Timothy should be dropped out entirely, nor do I believe that it can be dropped out without loss, over most of this country.

I am a believer of the most pronounced type in a rotation which is in harmony with certain natural laws. I cannot see how the grasses can be dropped out of a rotation without injurious effects. The binding influences of grass roots, their influence in decreasing the leaching of the soil through the great amount of water evaporated through their leaves, the decrease of the washing of the surface soil, the accumulation of nitrogen in the soil, or at least the proven conservation of the nitrogen of the soil, the favorable influence of the great mass of roots left in the soil, and the fact that it affords the cheapest source, as I believe, of animal food when grown upon a favorable soil, would make the limited use of grass as a crop to me indispensable on the farm under ordinary conditions.

Touching the cost of Timothy or hay as compared with hoed crops, it must be borne in mind that grasses require the minimum of labor, now so troublesome a problem on the farm. The seed is cheap, and once seeded, a field is seeded for a few years, while the har-

vesting of grass—which alone is left—is phenomenally cheap compared with the cost of harvesting other crops. Again, Timothy yields more nearly as much as do the tillage crops than is generally supposed. A soil fitted for grass with available fertility enough to give good hoed or grain crops, would easily yield three tons of Timothy, or at least it does with me. The trouble is that we grow corn and grain and take the cream off of the soil, and then follow with grass. Three tons of hay would give 5,400 pounds of dry matter per acre. To furnish this amount of dry matter in green fodder-corn would require 13½ tons. Without collecting the data reported, I judge that 16 tons per acre are more than the average yield of the country. Now 16 tons of fodder-corn would give but 6,400 pounds of dry matter. Furthermore, the hay will be more completely eaten in the barn and will be more cheaply handled.

I do not wish to prove that grass should hold sway in dairy farming, for in my own practice Timothy occupies two years only in a six years' rotation, but I insists that its physical and chemical effects on the soil and its economy of growth should make it a welcome crop in a rotation and indeed retain for it an honored place. The reasons above assigned in a general way would appear stronger when reviewed in the light of critical detailed data drawn from the close work of investigators.

Having said this much in defense of Timothy, I will express my favorable opinion of corn-fodder and clover; in fact, I use in practice one year of clover and one year of corn-fodder for every two years of Timothy in the six years of rotation. I will get, it is my belief and within my knowledge, more nutrition in the two years of corn and clover than in the two years of Timothy, yet these increased amounts will be greater than they would have been had Timothy not been grown, and, on the other hand, the Timothy crop will be heavier than it would have been had not clover and corn been raised.

I take it for granted that the questioner makes a distinction between corn-fodder and fodder corn, and that in the use of the former term, stover, the husked corn plant, is meant, although fodder-corn is more often advocated for the dairy.

I am inclined to think—indeed I have to some extent practiced it—that I should plant my corn just a little—but not much—thicker than in ordinary field practice, and then harvest and feed it with the nearly perfected ears on it, allowing hogs to follow the cows and use any undigested corn that may have passed through the cows. This saves the great cost of harvesting and grinding corn, and in my opinion involves little waste.

By the phrase, "feed it with the nearly perfected ears on it," I do not by any means desire to convey the idea that I would harvest it before it had matured. I hold firmly to harvesting only after the plant food ceases to enter from the ground. When the crop has been planted more thickly than in the field-corn system, the ears will not be the full, large, hard ears that occur in field corn, and a larger proportion of the nutrition of the crop will be in the stalks than in the ears, than would occur in the field corn system; yet ears would be there approximating the matured state of field corn. The nutrition thus grown on two acres—one in clover and one in corn—would be, as said, greater than that from Timothy; but each in its way would perform in the rotation valuable functions that are indispensable to good farming.

Touching the intimation that an acre each of clover and corn would produce more butter than two acres of Timothy, I take it that no proof need be adduced. All highly tilled farms very rarely fail to give two crops of clover, and a greater yield per acre than of Timothy; while corn is well understood to be our most productive crop. The particular significance of these two crops when considered together is their remarkable efficiency when fed together. This is true not only when they are fed to steers, as I have frequently shown, but it is true for the dairy cow. Corn either in the ear or the fodder, is a good butter maker, and palatable, provided that it is saved in fine condition.

If we measure the problem by the popular fancy for the standard of Wolff, we find that

100 pounds of clover give of protein.			12	26 lbs.
100 "	stover	" " "	15	47 "
100 "	Timothy.....	12.32		"
		12.32		27.73

The analysis of stover is from the Missouri College Farm. So far as we may attach any importance to the great ado made over protein in foods, it will be seen that the combinations are most fortunate and that the two most important cattle foods of the country—grasses excluded—seem made for each other. With these two foods alone, coupled with good pasture, it would be possible to economically maintain good, productive dairies. In my list of old experiments in New Hampshire, it will be found that a substitution of Timothy—where the very nicest grade was grown—for clover and stover, did not result in a gain of milk and butter yield. When stover is cut and crushed (I have used a Lynn crusher) it will practically be all eaten. A shredder was being put on the market in New Hampshire some years ago, that shredded the fodder up somewhat like excelsior, and left it in a most admirable condition for consumption,—better than I have ever seen it. What became of the enterprise I do not know. There is a machine now made in Illinois that husks the corn and crushes and elevates the fodder into a shed or loft.

The time has come when the enormous and wretched waste of corn fodder now going on will largely cease. The country is now getting ready for its use. No food will be found so available and cheap, to supply the needed protein and to bring it into economical use, as clover.

Bulletins 7 and 8 issued by me, will show that I do not find ensilage the best means of utilizing corn fodder, although I do not pretend to prophesy as to what improvements in the silo may yet accomplish. At points in the East where land is high and chemical fertilizers economically available, and where the dairy is made a specialty, especially where the soil is not favorable to grass, possibly Timothy would not become as necessary as here. In that case, we should be met with the fact that clover will not thrive in short rotations, and that some crop would have to intervene between the corn and clover. Some more profitable market crop might be used to extend the rotation. Market demands, soil and location would have to determine the problem. But even then it would not be a dairy crop.

Columbia, Mo.

GAYNOR BLACKBERRY From Nature. See page 606. Fig. 231.

Sheep Husbandry.

CARE OF YOUNG LAMBS.

EVERY year there are a number of lambs in our flock that must either be raised by hand or allowed to perish for lack of nourishment. This arises from a variety of causes; sometimes a ewe will disown her lamb from its birth, or, if she has twins, she will devote herself to one of them and refuse to have anything to do with the other; while another ewe, perhaps, will appear to be very fond of her offspring, but, unfortunately, will not be able to give it a drop of milk; so that rather than see the lamb perish we feed it with milk from a bottle, allowing it to stay with its mother for awhile to see if she will not eventually be able to raise it. We never take one away from its mother when it can possibly be helped, for its natural food is much more wholesome than any substitute.

When a ewe can raise her lamb but refuses to do so, a great variety of influences may be brought to bear upon her. Sometimes if she is confined to a stall away from the rest of the flock, she will make friends with her lamb for the sake of its company. One spring, I remember, we tied a ewe with a rope in order to prevent her from running away from her lamb entirely. For weeks afterward she went about the grass lot with several yards of rope trailing after her, and at intervals somebody had to go out and take hold of the rope to make her stand still. The lamb soon came to understand this, and when he saw us coming would run to his mother, though he well knew that at any other time she would butt him over and over on the grass. The unnatural mother finally became reconciled, and the rope was removed.

Often where there are twins, the stronger will push the weaker one aside until it almost dies of starvation; then if the feeble lamb be fed for awhile it will gain strength and be able to stand up for its rights. One can always distinguish a lamb that is insufficiently nourished by its drawn-up, miserable appearance, and its plaintive cry; and frequently its life can be saved by feeding it for a few days until its mother's milk is more abundant. In such cases, it should remain with its mother, and the bottle should be carried out to it several times a day. Last week I noticed a beautiful little lamb in this condition, and, after it had been fed for several days, it grew so gentle that, as I passed by it while it was lying down in the yard, I held out the bottle which was intended for another little fellow, when, without rising to its feet, it seized the rubber and began drawing away. If a young lamb objects to the taste of the milk, it should be slightly sweetened for a few times, as that seems to make it more palatable.

Some years ago, when we began to take charge of the motherless lambs, we killed one or two from over-feeding; their appetites are insatiable and are no guide whatever. Now we have found that for a very young lamb, a scant half-pint at intervals of about two and one-half hours is sufficient.

They should be fed the first thing in the morning and the last thing at night. As they grow older, the intervals between meals should be lengthened, and the quantity of milk increased, until, when they are one month old, they can take one pint four times a day; and when two months old, they can drink one and one-half pint three times a day. Lambs can live on a much smaller quantity than this, but if they are stinted, their appetite prompts them to graze too freely before their digestive organs are developed, so they fill their stomachs full of grass, and, being unable to assimilate it, their bodies assume that distended, unnatural appearance so common to pet lambs, while their growth and true development are checked. Until lambs are a month or six weeks old, the milk should be warmed, and, if any indications of scours appear, it should be boiled for a few times. Boiled milk should not be given them constantly, however, for it has a tendency to produce the opposite effect, which habit will surely prove fatal if allowed to prevail for any length of time. A small quantity of white sugar or molasses put in the milk will have a laxative effect, and, in extreme cases, a tea-spoonful of castor-oil administered in milk once or twice daily will generally prove a corrective.

So well have we learned to manage the lambs, that now the pets are often considered the handsomest and the healthiest lambs in the flock; and last fall a buyer came and selected one to keep, saying he was the finest sheep he ever saw.

By this time so many of the lambs have been raised as pets that the whole flock has become gentle, for, seeing the pets come and eat from our hands, emboldens them to come too. This makes them more easily managed, for when it is necessary to change the flock from one field to another, we call the pets, and the rest of the flock follow them. Last spring we concluded it was too much trouble to fix the bottle every time the lambs had to be fed, so we taught them to drink milk from a shallow pan, as the milk-man teaches his calves to do, but, unfortunately we never could get them to drink the milk unless a certain person's hand was in it, and that was very inconvenient, for when the favorite individual was absent, the lambs refused a substitute, and would bleat most piteously for half a day at a time. This year we went back to the old method, and now any one can feed them, for the bottle and rubber are always the same.

When the weather was very cold and the lambs were young, they were kept in a big box in a corner of the kitchen; now they are out in the garden on a pile of straw in the sunshine. A FARMER'S DAUGHTER.

Logan County, Kentucky.

Everywhere.

RURAL SEPCIAL REPORTS.

Canada.

VICTORIA SQUARE, Ont. August 21.—The potato crop in this neighborhood is poor owing to continued wet weather after planting. A number planted the second time. No appearance of rot so far. The crop will probably be about half an average one. W. S.

Connecticut.

WESTON, Fairfield County, August 19.—The potato crop is rotting badly. Some of my neighbors say they will not have enough for their own consumption. I should say there will not be more than one-half an average crop. Of course, there is nothing accurate about this, as they may continue rotting. Enough has not been dug to demonstrate to what extent they are rotting. The general opinion is they are doing badly. C. E.

Delaware.

KENTON, Kent County, August 19.—I have talked with my neighbors on the probable yield of potatoes: they say they have an average crop and that there is no rotting except on low land. I dug some of mine 10 days ago and found them in good condition. Farmers do not grow potatoes very extensively here, they go in more for grains, peaches, etc.

R. P. M.

Illinois.

CORINTH, Williamson County, August 26.—The potato crop in our neighborhood is very good. I do not hear any complaints of rot as yet. Irish potatoes are not grown much here except for home use; most of the people use sweet potatoes altogether. Corn is an immense crop this year. Apples are a good crop, markets glutted; peaches half a crop. Small fruits plentiful. Wheat is the best crop in years. The chinch bugs gave Southern Illinois a rest this year. J. K. M.

Iowa.

SENEY, Plymouth County, August 19.—Potatoes are in splendid condition. They never rot here. No bugs this year. We shall have a 25-per-cent. better crop than usual. Not many potatoes are shipped from here. Prices range from nothing to $1.25 per bushel. J. P. V.

WATERLOO, Black Hawk County, August 26.—Potatoes are a good crop in good condition, though cut a little short on account of the dry weather. Good crops in general. S. S.

Michigan.

HARRISVILLE, Alcona County, August 26.—The crops here are just immense. Not a failure in any single farm crop. Fall wheat is a little shrunken, but the machine shows a yield from 22 bushels the lowest to over 37 bushels per acre. Spring wheat is not harvested but is plump and heavy. Oats are the best I ever saw, especially early sown, yielding, so far as tested, 12 to 15 and over bushels per 100 sheaves, and there are plenty of fields that turn 500 machine-bound sheaves per acre. Potatoes never looked better. No signs of rot. We have had just enough rain and at the right time. I am testing Rural No. 2 potatoes with four other varieties, viz. Early Rose, White Star, Beauty of Hebron and White Elephant. Present appearances are against the Rural No. 2, but we can't decide till they are dug. I took 10 eyes of each and planted in a trench of 60 feet, in fine garden soil. The trench was dug eight inches deep, a compost of muck and hen manure was placed in the bottom, then two inches of fine soil were raked over it; each eye was placed carefully and then two inches of soil were raked over, then a good dusting of wood ashes and more soil finished the job. All grew but one eye of Beauty of Hebron. I will send statement of yield when dug. I saw in a RURAL some time since that you would copy into the RURAL any good photograph relating to rural affairs. We have a picture of my wife feeding a flock of prize Legborns; also one of our two pet deer, doe and fawn; also a thrashing machine at my barn with teams, 14 men, etc. Three or four years ago 12 of us farmers formed a company and bought a $600 thrashing machine direct from the manufacturer, thereby saving $90 agency fees. One cent per bushel for fine and two cents for coarse grain have covered expenses for thrashing, only when some breakage occurred. [R. N.-Y.—Send the photographs by all means.] W. A.

BIG RAPIDS, Mecosta County, August 26.—The dry weather will reduce the early potato crop in size and quantity to one-half or two-thirds of a full crop; late potatoes are suffering from a like cause and present prospects are about the same; the vines are dying. We have seen no rot. We had a heavy crop of hay and good oats; wheat is a small yield, averaging 12 to 14 bushels per acre. Corn is suffering from the dry weather and an early frost. H. A. B.

HOWELL, Livingston County, August 28.—I hear no complaint in this section of country about potatoes rotting. It has been so dry all summer, and is still. They are about one-half of an average crop. C. P. J.

THE FARMERS' CLUB

ANSWERS TO CORRESPONDENTS

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

MILK FOR POULTRY.

B. L. T., Bergen County, N. J.—Is milk a good food for poultry? I see it frequently recommended by farm writers; but an old poultryman, who has raised thousands of chickens, says it is bad for young chicks. What are the facts?

FROM ORSON WINANS.

As to the value of milk and butter-milk for poultry, I have found them very beneficial when fed in moderate quantities; but I would not advise too liberal use of the latter, as it would be likely to produce diarrhea in chicks, and even adult birds if allowed to gorge themselves with it. Both contain a considerable percentage of bone-forming elements, and supply a good substitute for a meat ration, where the birds are not supplied with the latter.

Oak Hill, N. Y.

FROM SAMUEL WILSON.

I have always considered sour milk injurious to all kinds of poultry excepting ducks, unless it was made into curds. When made into curds it is the best feed for young chickens and turkeys. If fed otherwise, it will scour them and have a bad effect. It seems to be different with ducks. They will thrive and do well much better if fed sour milk or buttermilk than they will without.

Mechanicsville, Pa.

BAGNARD BLACKBERRY. From Nature. See page 606. Fig. 232.

FROM C. S. COOPER.

I have found milk unprofitable for young chicks. I discarded its use several years ago. It invariably was too loosening to the bowels in its free use. I have lost whole clutches thereby. For old fowls I have found a limited quantity not injurious. I never fed the mature birds to excess, so that I am not prepared to state as a fact that it is injurious.

Schraalenburgh, N. J.

FROM PHILANDER WILLIAMS.

My experience in feeding sweet or sour milk to chickens is that at first it does not seem to agree with them; but after they have become accustomed to it, it is good. Beef scraps act in the same way: at first the food makes them scour, but after they have had it awhile they do well.

Taunton, Mass.

FROM JAMES RANKIN.

Milk given in a liquid form is not good for either chicks or ducklings as they are so fond of it that they will stand and gorge themselves with it until it runs out of their bills. But when it is used as a mixture with their ration it is the best food extant. I cannot give enough of it.

South Easton, Mass.

FROM P. H. JACOBS.

For fowls I find milk, butter-milk and curds excellent if renewed daily, but for chicks fresh milk only should be used. Milk soon undergoes decomposition, and if kept where chicks have free access to it, or if the vessel containing it is not cleaned daily it will cause bowel disease in chicks. Like everything else, it should be given in a proper condition, and not remain for days in vessels unused by the chicks. The best results are obtained when the milk or butter-milk is used as a mixture in food that is to be cooked or scalded. The residuum of all food should be removed when the meal is finished.

Hammonton, N. J.

FROM O. K. LANE.

Too much is many times expected of milk for poultry as with roots for stock. The domestic fowl is not like the woodcock—it cannot subsist upon suction alone. It must have grain, at least once a day—at night. If there is any one thing on the farm that demands a varied diet more than another, it's the poultry. Consider the easy digestibility of milk in the mammalia. The same in young chicks. A chick when two weeks old, and a colt or calf when four weeks old, are about of the same age, and neither has use for heavy grain. Curd from clabbered milk with an occasional boiled egg is good; for young chicks as well as fowls have a distaste for sloppy feed. Never give food and drink mixed. I'm talking about fresh clabber or fresh butter-milk, not something taken from the swill barrel that's a month old, so acid that it eats the tin from the dipper. To expect chicks and adult fowls to thrive on this alone from June until January, would be folly. Both milk and roots are a light diet; but both are worth more than is shown by their analyses in feeding values, as both aid digestion, and tone the system. Both are appetizers that counteract fever, etc. Curd slightly seasoned is best for young chicks.

Indianola, Ill.

BUTTER FROM CENTRIFUGAL CREAM.

L. B. S., East Springfield, N. Y.—Can the best quality of butter—as good as the well-known Darlington or Philadelphia butter—be made of cream raised with a centrifugal separator?

ANSWERED BY T. D. CURTIS.

I know of no reason why "the best quality of butter—as good as the well-known Darlington or Philadelphia butter"—cannot "be made of cream raised with a centrifugal separator." There is nothing about the mechanical operation to in any way injure the cream or depreciate the fat in it. The quality of the butter does not depend in the least on the mode of separating cream from the milk, but on its quality and condition when churned. The quality depends on three things: 1, the breed or characteristics of the individual cow; 2, the feed—including air and water, which are really elements of nourishment and production; and, 3, on the manner of handling the milk and preparing the cream for the churn. There is nothing that I know of which will change the idiosyncrasies of the individual cow. There is not only the peculiarity of the breed, common in a general sense to all cows belonging to it, but the peculiarity of the individual, which is a part of its individuality, and cannot be altered by any sort of feed or treatment. The food is that from which the cow elaborates the milk, and it determines its quality and flavor so far as not varied by the individuality of the cow. As surely as we do not gather figs from thistles or grapes from thorns, we do not get the best of milk from the poorest of food, no matter what kind of cow-machine we may use in its manufacture. The cow must be right, and the food of the proper kinds, in due proportions, in order to get the most and best milk for butter, or other purposes. The cow and the food being right, the milking done in a cleanly and expeditious manner, and the milk subsequently kept free from taints, odors, the germs of microscopic life, and all uncleanness, the centrifugal separator—if also clean and sweet—can do it no harm. The cream may be afterward injured by improper handling, but this will be no fault of the machine, which will deliver it all right, although any injury done to the cream or butter from improper handling may be attributed to the machine. Such errors are much too common, and should be carefully guarded against. But if the cream is properly ripened and prepared for the churn, there is no good reason why the perfection attained up to the delivery of the cream by the separator may not be continued into the butter, and a perfect article, humanly speaking, may not be the result. But it may be overchurned, it may not be properly freed from butter-milk or caseous matter, it may be imperfectly salted, poor salt may be used, it may be over-worked, it may not be properly packed or prepared for market, and it may be injured by exposure after it is made. All these points depend on the dairyman, and not on any mode of cream separation. And then, when made in the perfection of the art, it may not suit the taste of the customer! Tastes vary—they are educated and whimsical. Butters, like cows and men, have their individuality. No two cows, no two herds, no combination of herds, will turn out butter exactly alike. An article superior to the Darlington in all its details of production and manufacure, might not please the palate of one of the Darlington customers. Some actual imperfection in their butter, to which their patrons have become accustomed, may be the one thing essential to please their palates! A well-authenticated case showed that the presence of a large amount of butter-milk in the butter was indispensable to please the customers. Yet this is not a characteristic of perfect or of even good butter. It is a sad defect that would soon bring ruin to the butter, and its effects, even with those who prefer it, can be avoided only by delivering the butter daily in small quantities that will be at once entirely consumed. So it is, many men with many tastes as well as many minds, and what is perfection to the palate of one may not be so to that of another. The judge as well as the quality of the butter has to be taken into consideration, and people are not always reasonable about this. A case in point will illustrate, although it pertained to cheese, instead of butter. I was called upon at a State fair to pass upon some cheese, in accordance with a standard and scale furnished by the society. A noted manufacturer got no premium and complained. I showed him the defect in his cheese. He said I ought to have taken into consideration the fact that he made it soft and weak for home consumption! So butter may be loaded with butter-milk—just what the maker's patrons want in it—but an expert, judging of butter for the general market, would have to condemn it for this very reason. But, to conclude, there is nothing about the centrifugal separator or its work, when properly done, that need to injure cream, or the butter made from it. The quality depends on other things outside and independent of the mode of separating the cream from the milk.

BLACK-ROT IN TOMATOES: FIRE-BLIGHT IN PEAS.

F. K. P., Delevan, Wis.—1. What is the best remedy for black spots or rot on the blossom ends of tomatoes? 2. What can be done to prevent fire-blight in the pear?

This I believe to be due to sun-stroke causing a sap ferment or poisoning of the sap, owing to weakness or imperfection in its constituent elements. The prime cause, I think, must be a lack of perfect sap elements in the soil. This supposed first cause may be aggravated by planting blighty varieties in extra blighty soil or location and by wrong management. What we want is some simple preventive or corrective of this blighting predisposition.

On August 28th last, after a season of severe suffering from blight (undoubtedly communicated from large old, constantly blighting Hoopes Apple trees in an adjoining village lot), in a fit of desperation I painted the trunks of every young apple or crab on the place with thin white-lead and linseed-oil paint—say 50 in all: eight large trees 35 years planted were not painted. This season several of the eight old trees were somewhat blighted about as they had been last year, and the neighbor's old Hoopes trees were blighted very badly; but the painted young trees have nearly all escaped. I don't believe there is over five per cent. of last year's blight among them and what little there has been was mostly directly under the large old blighting trees. The first fire-blight I saw among the young trees was on a young fall-transplanted, unpainted tree. The blighted limbs were cut off and the trunk was painted on June 15, with some thick brown paint which was also applied to young thrifty Russian pears with good results. Linseed-oil alone may be as good; but up to date—August 5—I detect no harm from the paint on the trunks, though, of course, it is yet too soon to come to a final verdict. Harm may develop later; but I feel more and more sure that fire-blight is preventible.

ANSWERED BY B. T. GALLOWAY.

1. Recent investigations of the black-spot or black-rot of the tomato lead us to believe that this disease is due to the presence of a minute microscopic fungus, which, as a rule, attacks the flower end of the fruit, and by its growth within the tissues of the latter produces the effects with which all are familiar. The black, velvet-like substance which covers the diseased parts is made up of thousands of spores or reproductive bodies, which are borne on short, dark-brown stalks. The spores germinate readily, and if a few of them are placed in the skin of a healthy tomato the disease soon manifests itself at that point. In regard to treatment, very little can be said, as, so far as I am aware, no experiments have been made having a bearing on this question. There is no doubt, however, that the fungus lives over-winter in the rotted fruit, and for this reason the latter, together with the old vines, should be burned after the first heavy frost.

2. It has been pretty thoroughly settled that the so-called fire blight of the pear is due to a living organism, a germ or bacterium, which, developing in the sap, produces the effects with which we are familiar. Ten years ago Prof. T. J. Burrill noticed the connection of bacteria with blight, and since that time his observations and experiments, which have been verified by other scientific investigators, clearly demonstrate that a certain bacterium is the true cause of the trouble. The results of F. K. P.'s experiments in the treatment of this disease are interesting, as they would lead us to believe that it is possible to protect the trees against the attacks of the germs. It is hardly probable that the treatment described would be practicable on a large scale, as in order to render the tree germ-proof by this method, it must be literally enveloped in a coating of oil or paint. The question here arises as to whether there are not some parts of the tree more vulnerable than the rest, through which the germs gain entrance, and, it this is the case, whether we can not by rendering these parts germ-proof save the whole tree? As a matter of fact, it has been shown by careful observation that the two most vulnerable points for the attack of the blight germs are the flowers and the tips of the young branches. If these could in some cheap, practical and efficient manner, be protected, it might be possible to hold the disease in check. As an experiment having a bearing on this question, I would suggest that next spring F. K. P. should select a half-dozen pear trees which are subject to blight and treat four of them as described below, leaving two for checks:

About the time the flowers are opening, spray with a solution made by dissolving three ounces of carbonate of copper in one quart of ammonia diluted with water to 22 gallons. With a good pump and nozzle a large tree can be thoroughly sprayed in a very few minutes. Care must be taken, however, to reach all parts of the tree. Repeat the sprayings—say every 10 days—until five applications have been made, and if the remedy has any value for the case in hand this ought to prove it.

CREAM NOT RISING.

S. S. K., Ellensburgh, Washington Ter. Why does my cream not rise? The temperature of my spring is 50 degrees. Just below it is a place in which the milk cans are placed just as soon as the milk in them has been strained. The cover is removed enough to let in the air. If the milk is left there three days and then skimmed, and it is then left standing another night quite a mess of cream rises. I have read of cream rising in 12 hours; what is the matter with mine? My cans are 18 inches high and eight in diameter. Is the temperature too high or too low?

ANSWERED BY HENRY STEWART.

The difficulty is unquestionably in the temperature, which has much to do with the separation of the cream from milk. When it is considered that at 32 degrees water is solid and at 33 degrees it is liquid and this great difference in condition is due to only one degree of temperature, every person who has to do with milk and cream should realize the effect of temperature and the absolute necessity of using a thermometer. Cold and heat are relative, and appear very different to the sense of feeling from what they really are under varying circumstances. When the heat of the air is 90 degrees, water at 60 feels very cold, and quite as much so as water at 40 degrees with the air at 60 degrees, so that your "really cold water" may be really no colder than 60 degrees which is the best temperature for setting milk in shallow pans; while for the deep pails you are using 45 degrees is the right temperature. Even very cold springs are rarely as cold as 50 degrees in the summer, and while deep pails may be used in water of this temperature the cream will not be fully separated before 24 hours, while with water at 45 degrees 12 hours will be sufficient and even six hours at 35 or 40 degrees.

A thermometer should be used to test the temperature (one will cost 25 cents only) and if, as appears probable, the temperature of the spring is not less than 55 or 60 degrees, the milk should be set in the common stone-ware jars used for the purpose, which are about eight inches deep and seven inches wide, as these take up less room than the tin pans used for shallow setting; or tin pails not more than seven or eight inches deep and holding about six quarts may be used. There will then be no trouble in getting the cream.

LIMING LAND.

A. J., Lincoln Park, N. J.—I want to seed down a piece of ground with grass along with rye. It needs a coat of lime, as there is a good deal of sorrel in it. After plowing the ground and applying a good coat of manure and cultivating, would it do to put on a good coat of lime, and harrow it in? Would the lime interfere with the action of the manure?

ANS.—Lime is not necessarily antagonistic to sorrel: because sorrel is acid and lime alkaline. It by no means follows that lime will kill out the sorrel. Sorrel will grow luxuriantly about lime-kilns, and especially on land where piles of timber have been burned in clearing, and yet the ashes contain 30 to 60 per cent. of lime. But sorrel, as well as other weeds, may be run out by enriching the land, so that the crops will smother the weeds. It is quite common in localities where lime is used regularly to manure the land, plow it, and then apply the lime, harrowing it in. The action of the lime is not at all injurious, but rather beneficial, as it tends to decompose the manure, and develop nitrogen compounds in the soil, and so largely favors the growth of the grain crop and the grass and clover which succeed it. This practice is quite common in parts of New Jersey and Pennsylvania, where the most successful and thrifty farmers are to be found.

Miscellaneous.

M. B P., Henderson, N. C.—I send the RURAL the leaves and a twig of a bush that grows here in the woods and fields and by the road-sides; what is its name?

ANS.—It is the Wild Papaw (Asimina triloba.) The fruit is very good to eat. But it contains too many large seeds in proportion to its amount of pulp to render it of much value for market purposes. In home use, however, it is desirable and a pleasant change.

G. R. W., Lyndon, Ky.—What is the origin and parentage of the Amber Queen Grape and also of Norwood and Arnold's Hybrids, 1, 2, 5, 8 and 16?

ANS.—We do not remember the originator. It is said to be a cross between Marion and Black Hamburg. Norwood is a Labrusca. Arnold's No. 1 Clinton and Black Hamburg; No. 2 Clinton and Black St. Peters; No. 5 Clinton and Golden Chasselas; No. 8 Clinton and Black St. Peters; No. 16 Clinton and Black St. Peters.

W. R. U., Bake Oven, Oregon.—What are the principles on which the various sheep-shearing machines are constructed?

ANS.—We do not know that these machines are made in this country. We have heard of their use in Australia and presume they are manufactured in England. The principle employed is that of a horse clipper run by a machine similar to that used by dentists, by foot or steam power. It is said that the machines are not fully successful yet and that they cannot be used on Merino Sheep.

A. A. M., Walworth, N. Y.—Would it be advisable to mix plaster in equal parts with hen manure and ashes? The ashes are unleached and the hen droppings have been accumulating for several years. What amount of the mixture should be drilled in with wheat this fall?

ANS.—Our way would be to sow the hen manure and ashes separately and harrow, not drill in. The amount is a question for our inquirer to decide. We know nothing of the present condition or fertility of the land. You need scarcely be afraid of using too much of the ashes. All the way from two to five barrels of the hen manure may be used.

DISCUSSION.

COUNTRY SCHOOLS.

FRANK HADLEY, UNION COUNTY, N. J.—An article on the Country School, page 550, while containing some excellent suggestions, is decidedly Utopian in other respects. The first three questions suggested may apply truthfully to many, if not to most, of the primary grades of our city and village schools, but I am of the opinion that they are uncalled for as applied to what are commonly known as country schools, *i. e.* to those outside the cities and villages. The average duration of the public schools of the United States, according to the report of the Commissioner of Education for 1887, is 27 weeks per year. As the city and village schools generally approximate 40 weeks per year, it will readily be seen that some of the country schools fall far below this average, while few of them exceed it to any extent. As children are usually confined in the country schools only about five hours daily, for five days per week, I think there is little danger of their "making haste" too rapidly, or of "drawing too heavily upon the nervous force of childhood." In all my experience in country schools as pupil, teacher and looker-on, I have observed more injuries to children during the hours of recreation than ever were suffered mentally by too close confinement or application. The suggestions contained in the last two questions are valuable. Anything that will lead the child to closer habits of observation, to a more careful study of the myriad forms of animal, vegetable and insect life with which he is so constantly surrounded, will lead to a higher appreciation of the beauties of Nature, and a greater love for rural life. The country-dweller is constantly surrounded by so many interesting objects that it is too bad that his interest should not be awakened to their beauties when a child at school. The pupil in the country school should learn the names, uses and distinguishing characteristics of the common plants he daily sees. Then he should be taught to observe how others resemble these and thus to group similar ones together. Do not frighten the wits out of the child by telling him that he must study botany; when he studies plants he is studying botany pure and simple, but he doesn't know it. The main object is to get him interested, to arouse the spirit of investigation. He should learn of the birds and animals he daily sees, the insects by which he is surrounded. He should learn their habits and mode of life, should know which are the friends and which the foes of the farmers; should be taught to protect those which are beneficial. These and many other kindred subjects should have a place in our country schools. Then the practical application of the common branches taught should be enforced. I have seen scholars well advanced in ordinary branches, who could not acertain the number of cords in a pile of wood of given dimensions; who could not find the cost of plastering a room of certain size and shape, or tell how much carpet was necessary to cover the floor. Many who can conjugate, decline, parse, and give all the rules and definitions in an ordinary grammar, could not write an ordinary letter correctly. These and many other practical things should be taught. When the people demand them they will be, but there will be some tremendous shaking among the dry bones of educators first.

THE RURAL'S NEW CUTS—WESTERN PRACTICES.

J. M. D., MINNESOTA CITY, MINN.—The RURAL for August 24, with its new super-calendered paper and consequently improved photo-engravings, came to-day and I have been comparing it with old, back numbers. How much we owe to photography and the new methods of cheaply reproducing photographic pictures! To comprehend and appreciate our present blessings fully, one has to compare the pictures of the Jerseys and the blackberries in this week's issue with the pictures of stock and fruit to be found in old numbers of MOORE'S RURAL. The reader who would pass by that "group of grade Jerseys" as an ordinary picture of a lot of cows, is incapable of getting what he should from a good paper. The words, "From a photograph" under the picture, are not needed to distinguish it from an ordinary engraving.

The RURAL'S idea of having its readers send photographs of useful implements, etc., is a most excellent one. Hundreds will be interested in the promised picture of Mr. Terry's tools and machinery. This morning, as one of our men started for market with 95 bushels of barley, I longed for a camera so that I might show the RURAL readers how it was done. In this section where the roads are not so good or so wide as in Ohio, it would be impracticable to use Mr. Terry's three-horse wagon; so, as the next best plan, we use four horses and a rather heavy wagon with low, wide-tired wheels. This plan saves the labor of one man and one wagon. We are three miles from the station, and make four trips a day. Forty-five sacks of grain make a rather high load; but with fairly good roads there is no trouble. We bind the load with ropes extending from the braces under the footboard, back over the load and down to the rear axle. Four horses accustomed to pulling together make a powerful team, and are easily handled. We always use four on the binder even when three would pull it easily enough; for the reason that the lead team can pull the machine around at the corners of the field so much more easily than could those on the tongue. For the lead team we use a light set of whiffletrees with large harness snaps for hooks—these never come unhooked without help. The leaders' lines should extend directly back to the driver without passing through any rings on the bridles or harness of the tongue team; in this way they will be free, so that the driver may use them to slap the leaders if they are inclined to be lazy. If a gentle slap with the line is not enough to keep a leader up to his work, fill the tool-box full of small stones and use one occasionally, always calling the horse sharply by his name just before the stone hits him. Of course, no RURAL reader will misunderstand me and think that I would use cobble stones; a stone larger than a hickory-nut would be too large to throw at a horse. A horse that would need touching up oftener than once or twice a day should not be used on the lead. Don't attempt to use a whip long enough to reach the leaders, especially on a binder; it would take too much time to disentangle it from whiffletree-hooks, reel, packer shaft, etc.

PASTURING MEADOWS.

H. L. W., NEWBERN, VIRGINIA.—In regard to pasturing meadows after mowing, I am inclined to the opinion that, as a rule, it is a bad practice. If it were done in moderation—not closely—say from November 15th to December 15th, it would not be so very objectionable; but it is customary here to stack the hay on the meadows, and feed it out to cattle on the land all through the winter till late in spring. As a consequence, the grass is cropped till the earth is bare, and the soil, especially if clay, is tramped as solid as a brickyard. It is easy to see that all the droppings and waste from the cattle will not compensate for the injury done. Meadows composed of Timothy or clover and Timothy, suffer the most injury. Timothy makes comparatively little aftermath—scarcely any when cut late, and needs all it makes for its protection. Sprouting from a bulb very near the surface, it is easily destroyed, if that is bitten off or crushed from tramping. Orchard Grass makes an abundant aftermath, which can be grazed closely without sustaining any serious damage. Blue Grass makes a sod so close and firm that poaching does not injure it to any extent. Sandy soils are often benefited by feeding on them, the firming given in this way being just what they need, nor are they injured in wet weather as other soils are. On the whole, I should not advise the pasturing of Timothy or clover meadows at all, unless in the case of the latter, there might be chances of the after-growth smothering out the plants, as I have known occasionally to happen; but Orchard, Blue and grasses of a similar character might be cropped till the coming of very cold or wet weather.

BLIGHTED HOPES—BLIGHTED VINES.

"A DESPONDENT CONTESTANT," BOONVILLE, N. Y.—Alas! How often do our anticipations exceed our realizations? Last spring how joyfully we planted our prize potato patch, taking extra pains with it, firmly believing at the time that in the fall that wonderful patch would walk off with one of the first prizes, besides supplying all the city markets too, thus making us millionaires before 1890 could be ushered in. Alas for human calculations! Little did we think we'd

ever have to toil after we had once pocketed the proceeds of that potato patch! Oh! how those potatoes did grow at first! How with honest pride we'd exhibit those massive vines to all our friends! How threatingly we did look when the first bug appeared, and how we captured his many relatives and friends as they made their appearance; giving them a liberal supply of kerosene and adding a lighted match, we would watch them breathe their last. Finally the vines became so large that we used Paris-green by means of a force-pump. Then it began to rain, rain, rain, until those potatoes were nearly drowned, and to accentuate the climax, the rust settled on them too. I guess the potatoes died an early death, for decomposition has set in in the remains very badly. When I read Fred Grundy's piece a short time ago, I pitied him and his wife; but now I feel that we can extend a sympathizing hand to them, and say we know just how it is, for we've been there, too.

KILLING WOODCHUCKS, ETC.

D. E. G., NORTH LEVERETT, MASS.—In a late RURAL I saw the caption "How to get rid of woodchucks." Here is the way in which some get rid of them here. Put in the woodchuck's hole a quarter-pound charge of dynamite, with cap and long fuse attached, and stop up all the openings, just leaving the end of the fuse outside of the one in which the dynamite charge was placed. Then touch off the fuse and the animal will never trouble you again. If dynamite is not at hand, fill a small bottle with common blasting powder, insert the fuse through the neck of the bottle, and fasten it there with a convenient stopper. Use and fire in the same way as the dynamite charge. Another way is to burn a quantity of brimstone, mixed with dry sawdust, inside of the woodchuck's hole, stopping up all the openings, and thus choking the pest to death.

Next year try black pepper for striped squash bugs. Winter apples are all falling off here.

"THE COST OF LIVING."

E. H. C., MATTSVILLE, IND.—Here are some items from our book account for the years 1887 and 1888. The items represent the money paid out during each year for the various articles.

	1887.	1888.
Sugar	$12.25	$13.75
Coffee	6.47	4.48
Baking Powder	2.95	2.10
Tea	1.00	.75
Flour	16.00	17.10
Total	$38.67	$38.18

The farm furnishes the finest White Clover honey in abundance, also maple and sorghum sirups, as well as hops, milk, etc., all of which are in unlimited quantity, so far as home consumption is concerned, and, of course, affects our grocery bill. We have a family of four, including two children, and there is one hired man on an average about all the year, making five in all.

MORE SILO CROPS.

J. A. B., NEWBERG, OHIO.—I never have put in a silo anything but corn, except rye. This was a failure. I tried clover this year; but did not get good results, because I broke my cutter when only a few loads had been cut. Before I could get repairs done the clover was too ripe and what little I had cut, not being weighted, was moldy. That clover or millet will make good silage I have not the least doubt, because others have tried them in this section and have had good results.

"W.," TYRONE, PA.—Have those who tried baling fresh-mowed grass stored their bales at once in a silo, or in an out-door stack compressed by screws as seems to be much practiced in England for keeping silage? Obviously this is necessary to keep the air and germs of mold from entering the bales. The advantages of this baling in the field would—if it can be made a practical success—be so very great that a complete trial should be made by those who have the opportunity before the idea be relinquished.

C. H S, STERLING, ILL.—In the RURAL of September 15, 1888, speaking of the gooseberry, mention is made of a foreign variety received from H. Summer in 1884. Is not this the one I (C. H. Sumner) sent to the RURAL from Polo, Illinois, with the statement that it had been imported from Ireland? The description tallies exactly with my plant, which I am still having tested.

R. N.-Y.—Yes it is the same.

J. H. B., BRITISH COLUMBIA.—Will some one conversant with the subject tell us in the columns of the RURAL NEW-YORKER the best season of the year to trim (thin out the tops) of fruit trees—apples, pears, plums cherries—and give such general directions as shall be of benefit to those who know little or nothing about it.

What Others Say

MULTUM IN PARVO.

It may be seen by our advertising columns that the promising novelty, the Idaho Pear, is now, for the first time, offered for sale. The R. N.-Y. was the first journal to describe and illustrate this remarkable fruit—remarkable in form, quality and fewness of seeds. We hope it will be tried in every part of the country .....

SINCE the "Short's Method" of determining fat in milk was published, the Vermont Experiment Station has made many trials with it and in the main the results have agreed fairly well with the ordinary laboratory method. The only change it has found necessary to make in the method of using it, was to heat considerably longer than the instructions call for. It seems necessary, however, to call the attention of those who intend to make use of this method to the liability of getting tubes which are not properly made and hence worse than useless. The Station has bought sets of tubes from three large firms whose names are each considered a guarantee of good work and only one of the firms sent reliable tubes. This was a wholly unexpected danger and one that, unless immediately avoided, must quickly bring the Short's Method into disrepute. There is reason to believe that each of the firms that sent out incorrect tubes has since made a new supply of correct ones, but it is probable that there are already in the hands of farmers and creamery-men a large number of worthless tubes that it is desirable should be found out and thrown away. The Vermont Station will test free of charge any tubes that are sent in by express prepaid and will return the same as soon as tested.....

PUT in a few currant and gooseberry cuttings.....

CULTIVATE the asparagus bed and destroy all the weeds.....

PLANTING DECIDUOUS TREES IN SEPTEMBER.—Joseph Meehan says, in Garden and Forest, that August is undoubtedly one of the best months in the year for transplanting evergreen trees, and, he adds that deciduous trees can be planted to advantage much earlier than they usually are in autumn. There is no need of waiting for the fall of the leaf. If transplanted in September such trees would not only do well, but, in very many cases, they would do better than if removed later. A transplanted tree bears some analogy to a cutting. The propagator, in a green-house, knows, when he puts in a cutting, that the sand in which he inserts it should be warmer than the air, and so he gives bottom heat. When a deciduous tree is transplanted in September, the earth and the air are in much the same relative condition as is desired for the green-house cuttings. The warm ground forces out fibers at once, and when cold weather sets in the tree is well established, having an abundance of roots to help it through the winter. This is not a matter of conjecture, but something that Mr. Meehan has tested many times. If any reader, for experiment's sake, will transplant a small tree in early September, and dig it up again in October, the number of new fibers which have been formed will probably surprise him. If trees are planted before the leaves have fallen, these should be pulled or cut off.....

IT is true says Judge T. C. Jones, in the Ohio Farmer, that we are passing through a long period of depression in prices, but, it must be observed that this depression affects the products of nearly all other industries, and the income of all sorts of investments. And it is believed that this depression is not more severely felt by agriculturists than by people engaged in other branches of business. Indeed, the small farmers, a class which, more than any other, aims to produce what they consume, are obviously less affected by depressions and fluctuations in prices than any other class. .....

LET us suppose an intelligent and industrious man with a capital of $1,000 to $8,000 to be seeking to invest it in some business in a town or city that will, with proper attention, yield a profit sufficient to support his family. Would it be an easy matter for him in these times to find such a business and a location where a comfortable living would be assured? On the contrary, is it not true that failures in those vocations of "business" and trade, even where there has been no bad management, no neglect of proper attention, and no extravagance in expenditure, are quite common, while among the class of farmers that Judge Jones alludes to such failures are exceedingly rare?.....

IN doing legitimate business it must be remembered that only a very small number succeed in accumulating wealth; the great majority of even the industrious and frugal class acquire no more than a comfortable maintenance with a good education for their children, and it may be confidently asserted that the farmers of our country more generally possess this competence with the inestimable blessings of frugality, morality, and godly living, than is found to be the case with people engaged in any other industry or business.

THE PHILADELPHIA WEEKLY PRESS knows of a farm where two teams of horses do the work, driven by men who get the same amount of wages per month. Not long ago one of the drivers was ill for a few days and the "boss" took his place behind the plow. Much to his surprise and enlightenment he found that even with persistent nagging the team he was working could make but two "bouts," while the other team made three at their natural gait and without any urging. Here was 50 per cent. more work done in the same time with greater apparent ease. The wear and tear seemed to be the same in both cases. The horses were all fed alike, and were in equally good condition. The team the boss drove was good, but the other was a good deal better. It didn't take very long to settle in that farmer's mind which team was the more profitable for him. This is a true story, and its counterpart could be proven on many another farm .....

IT is encouraging to note that people are waking up to the fact that our civilization demands fast-walking as well as fast-trotting horses. A good many fair associations that never thought of doing so before are offering premiums this season for fast walking horses. This is a move in the right direction. There is utility in a rapid walk. All horses need not trot, but all must walk. As the Arabs say: "The walk is the gallop of always."

THE R. N.-Y. secured, through Robert Douglas & Son, of Illinois, six or eight Russian Mulberry trees, and it was therefore enabled to offer an early report to its readers that this mulberry is quite inferior as to its fruit. Several firms were then booming the Russian Mulberry so that the R. N.-Y. came in for its usual share of reproach on such occasions. It pays to be right in one's condemnations—in the long run.....

THE MAINE FARMER says that Dr. T. H. Hoskins of Vermont, although somewhat advanced in years, has the pluck that would honor even a young man. He has purchased a $2,400 farm and proposes to pay the purchase money, with interest, from the farm in five years; *and he'll do it.* He has 12 acres of potatoes, two of corn and 20 of beans, all nicely taken care of by two men with two horses. As his home farm gives him a living and much more, he seems to be doing this to show to others what can be done when a man knows how and has the courage to go at it. All honor to so worthy an example.....

To the above Dr. Hoskins replies:

"OUR Maine friend is right when he says that personal gain is not our first object in this experiment, though we shall not be sorry to make a little money out of it. What we chiefly seek to do is to prove by actual demonstration that these cheap farms in Vermont are worth a great deal more than they are selling for. If we succeed in this, we hope it will be an encouragement to many others, and indirectly a benefit to the whole State."..

IT would seem from the Maine Station experiments, and from others as well, that there is little profit in grinding corn for pigs.....

THE NATIONAL STOCKMAN and Farmer says that any one reading the glowing crop reports in the sensational metropolitan press, would suppose that Nature was piling up wealth around the farmer in such a way as almost to choke him. It instances a Canadian exchange, descanting on the fine harvest promise of the Dominion, which says in flaming headlines that "rivers of gold are pouring into the pockets of farmers." This kind of stuff makes people of common-sense tired. Somehow these "rivers of gold" get down to wonderfully small rills before they reach the aforesaid pockets. Farmers are of course glad and thankful to have good crops, but in these days they find no occasion for indulging in extravaganzas of gush over this or anything just now falling in their way.....

MANAGER BROWN of the California State Board of Trade has in use a most excellent method for the preservation of the color and beauty of green fruits, says the Pacific Rural Press. Liverpool salt is dissolved in clear water until the brine is strong enough to float the fruit. Let this stand over-night, and then strain through a cloth until the liquid is perfectly clear. Place the fruit to be preserved in thoroughly clean, wide-mouthed jars; fill to the brim with the brine and then close tightly. While this method for a long time perfectly preserves the bloom and color of the fruit, it, of course, unfits it for eating. Twigs with the fruit and foliage attached, when preserved in this way, are exceedingly attractive for exhibition purposes.....

DIRECT.

——T. B. TERRY'S LECTURE: "Make the motto PUSH to hang over your barn door. What's the use of living if you can't improve a little?"

——"THE farmer is very apt to blame the middlemen, the tariff, and what not for his failures, when he need not go beyond his own door to find the fault. Governor Hoard of Wisconsin interviewed 100 farmers concerning their success or lack of success, in 1886, and not one of the many failures was laid at the door of the farmer himself."

——FARM, STOCK AND HOME: "We believe that the happiest angel in Heaven is the one whose business it is to record man's kindness to the dumb animals."

"How exasperating it is for a farmer to be told by the monopolistic thief who has robbed him: 'You must raise bigger crops and economize.'"

——HARPER'S WEEKLY:

"CITY BOARDER: 'Bridget, is this last night's milk?'

BIDDY O'GALWAY: 'It's the cow's, sir.'

CITY BOARDER: 'Ah, indeed! Well, it is sour. How did that happen?'

BIDDY O'GALWAY: 'An' what ilse would yer be expectin', sir? There's the poor bastes standin' in the bilen sun the whole live long day, an' aten sorrel an' green apples. Sure, I'm wonderin' they don't give bonny-clabber or buttermilk.'"

Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

Dyspepsia's Victims are numbered by thousands Do not continue in misery, but give Hood's Sarsaparilla a trial. The many remarkable cures it has effected warrant us in urging it upon your attention if you suffer from indigestion, sick-headache, biliousness or other stomach disorders. Be sure to get Hood's.

NOTHING ON EARTH WILL MAKE HENS LAY LIKE SHERIDAN'S CONDITION POWDER

Highly concentrated. Dose small. In quantity costs less than one-tenth cent a day per hen. Prevents and cures all diseases. If you can't get it, we send by mail post-paid, One pack. 25c. Five $1. 2 1-4 lb. can $1.20; 6 cans $5. Express paid. Testimonials free. Send stamps or cash. Farmers' Poultry Guide (price 25c. free with $1.00 orders or more. I. S. JOHNSON & CO., Boston, Mass.

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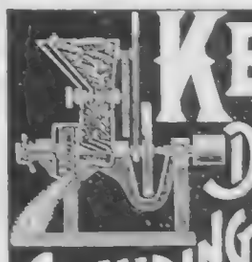

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A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, New York.

SATURDAY, SEPTEMBER 14, 1889.

WE would be glad to receive a seed-ball or so of the R. N.-Y. Potato No. 2 from any of our readers with whom the variety fruits.

Now that it has been found that Paris-green sprayed upon the trees will kill the coddling moth, people having but little land or small gardens, will be encouraged to plant apples worked on Paradise stock. Trees so worked are well suited to just such locations. Every part of these little trees may readily be sprayed by a hand pump and spraying nozzle, insuring large, fair fruit.

BUT for the rust to which the Kittatinny is especially liable, the R. N.-Y. would to-day, as in years past, select it as its first choice among blackberries. The only other objection to it is that it often sustains injury during severe winters. In so far as can be judged at present, the Minnewaski is a hardier variety not subject to rust. Acting upon this assumption, it would be our first choice. The Snyder and Taylor are about the hardiest kinds known, but they will not sell in any market that is supplied with larger berries.

TO SHOW the serious damage that the potato crop has sustained, even in sections where loss was deemed practically impossible, the R. N.-Y. prints the following note just received. Whoever before heard of potato blight in Colorado?

"LONGMONT, Weld County, Colorado, August 31. Since my report of August 17, on the potato crop, the prospects have materially changed for the worse. Many fields are blighting and the outlook at present is not good for more than one-half an average crop, so general is the complaint of the evil. This is the leading potato county in the State. C. C C."

"The nutriment in an acre of corn-fodder is equal to or really exceeds the nutrition in the corn it bears."—PROF. SANBORN, page 607.

THE soil of most of New England seems to be admirably adapted to the growth of Timothy. At all the local New England fairs are seen samples of this grass so long as to astonish visitors from abroad. Bunches of Timothy six feet eight inches high, taken from a Bristol County, Massachusetts, meadow will be exhibited at Western fairs this year. This grass was taken from new land from which the wood and bushes were cut in the winter of 1888. If Western folks expect the Yankees to be astonished at their great corn and vegetables, they should at least respect New England hay.

MR. N. HALLOCK, of Creedmoor, N. Y., tells us that he saved the seed from the blossom end and stem end of two varieties of tomatoes and planted them separately—giving six plants to each. He found that the plants raised from the seed of the flower end ripened about three days earlier than those from the stem end. This is an important item. Certain it is that the portion of the tomato furthest from the stem (flower end as it may be called) ripens before the flesh *about* the stem, and it seems not unreasonable that the seed earliest matured should produce the earliest fruit. At any rate the question is worthy of further investigation.

IN the printed reports of the Tomato Exhibition recently held at the warehouse of J. M. Thorburn & Co., the origin of the "Station" Tomato is credited to Cornell University instead of to the Geneva Experiment Station. Mr. E. S. Goff crossed the Alpha (as we remember) upon the Tree Tomato some six years ago. One of the results of this cross is an upright, bush variety which bears fruit nearly as smooth as the Alpha and as early to ripen as most of the kinds popular at the present time. This is the tomato now known as the "Station." Mr. N. Hallock of Creedmoor, N. Y., has a strain of this tomato which seems to be quite well fixed. But at the Rural Grounds, plants grown from seeds kindly sent to us by Prof. Goff, sport indefinitely both as to habit and fruit.

AFTER all, the bankrupt Pennsylvania Agricultural Society has managed to make arrangements for holding a State Fair in connection with the York County Agricultural Society's Fair at York, Pa. Upwards of $3,000 will be added in premiums and $1,000 for races above what was originally intended by the York Society. Nearly the whole of this amount, however, has been contributed by York as an inducement to the State Society to lend its name and influence to the enterprise. Some discontent is expressed at its intention to charge a 50 cent entrance fee instead of the customary popular 25 cent fee. It is to be hoped that exhibitors and visitors will lend a helping hand to the crippled society, and liberally reward the liberality of York.

THE scientists tell us that the spores or germs of the potato rot remain in the tubers for a considerable time. In fact, it is claimed that the disease is frequently brought into a field in the potatoes used for seed. The spores remain in the seed pieces until the conditions favorable for their development are supplied. Then the disease spreads. If this be so, the selection of next season's seed will prove a very important matter. In order to insure ourselves from the introduction of rot in our seed potatoes we must obtain seed from districts where rot has not appeared. The R. N.-Y. proposes to try to investigate this matter with a view to disclosing the sections where rot has been least damaging and also to learn how far this idea of danger of rot in seed potatoes may be safely carried.

TO PREVENT rot and mildew should the grape racemes be bagged before the buds open, while in bloom or after the berries have set? To answer this question about 100 bags were used—one-third for each class. Most of the racemes bagged *before* bloom did not set any berries. Several—the Eaton among them—formed and matured perfect bunches. Most of those bagged while in bloom formed imperfect bunches. Most of those bagged after the berries were the size of early, small peas matured berries which were neither more nor less rotted than those left exposed. It is a delicate matter to bag the racemes while in bud or flower and is, in fact, impracticable. As might have been anticipated, bagged buds produce or fail to produce berries as the pistils and anthers are perfect or imperfect.

ONE of the most difficult problems to be solved by the Census Bureau is the best way to secure statistics of mortgage indebtedness for the coming enumeration. If the face of the recorded mortgage showed the amount of the indebtedness, the work would be comparatively easy; but the face indicates only the original debt, and to learn how much has been paid on each mortgage, the mortgagors or mortgagees must be written to or interviewed, and when this has been done the desired information is sometimes refused. It is of much interest and considerable importance that this form of indebtedness should be ascertained; but to do so appears an almost impracticable task. The matter affects farmers, of course, more than any other class, and they should help the enumerators in the work. Several experts from the Pension Office are now conducting experiments in the matter in different parts of the country; but the difficulties in the way of gathering correct information are so unsurmountable that the results must, at the best, be largely approximate.

THIS has been a good year for Kansas farmers; crops, as a rule, have been good and prices promise to rule high. This success should not make farmers reckless. There is danger that it may do so. After a good season it always pays to be conservative. This is on the principle that saving is just as important as earning. On another page of this issue, Prof. Shelton puts the matter in a very forcible way. The excellent wheat crop that has just been harvested has turned the minds of many Kansas farmers. They want to put in more wheat than ever next year and neglect other crops and farm interests. This idea is wrong. Keep out of it. Diversified farming is surest in the end. And this fact applies with equal truth to farmers in other sections of the country. Whenever prices range high for a certain product, there is, among a certain class of farmers, a rush to raise an extra amount of that product the next year. The consequence always is that the market is glutted, prices are lowered and good prices are only obtained for the products that the farmer has neglected. Is not this true?

THE CROP FOR STABLE MANURE.

ONE of the most interesting questions that the R. N.-Y. has for discussion is the best place in an organized crop rotation for the application of stable manure. We find that good farmers differ in their opinions as to the best crop for utilizing stable manure, particularly those farmers who use more or less chemical fertilizers. Many are very strongly in favor of the corn crop, arguing that the corn plant is the greediest plant known to agriculture and the least likely to be injured by rank or coarse manures. Other farmers haul manure on the rye or wheat during the winter, arguing that the grass that is to follow the grain will find the best use for a manure that is supposed to continue its effects for a number of years. Still others have special plans for the use of stable manure. The R. N.-Y. has collected quite a mass of information from farmers in all parts of the country where pains are taken to save stable manure. The rotations employed on various farms, the crops that are used as specialties, how and when the manure is applied, and in fact, dozens of important matters connected with successful manuring will be brought out. This promises to be one of the most important "symposiums" that the R. N.-Y. has ever published.

PROBABLE REPEAL OF TAXES ON TOBACCO AND FRUIT BRANDY.

THERE is a growing movement for the repeal of the internal revenue taxes on tobacco and fruit brandy, during the next session of Congress. In order to reduce the surplus revenue without materially lowering the tariff, the Republicans, as a party, are likely to favor the abolition of some of the internal revenue taxes, and the repeal of those on tobacco and fruit brandy appears to be less objectionable than of those on whisky and sugar, from which most of the internal revenue is derived. It is proposed to begin the work for repeal with the election of the Speaker of the House of Representatives. The Republicans favoring the measure are not to vote for any candidate who will not agree to give a fair parliamentary recognition, in the committees and on the floor of the House, to those who favor the abolition of these taxes. Should all the candidates yield to the demands, each member will be free to vote for any one of them according to his choice. Democrats from the tobacco-growing districts are equally earnest in favor of the repeal of the objectionable taxes, and there is little doubt that they will heartily unite with the Republican advocates of repeal. For years tobacco growers all over the country have been strongly urging the abolition of the tobacco tax, and fruit-growers in those sections where the making of fruit brandy is an important industry, have been equally persistent with regard to the repeal of the tax on that product. There is now a probability amounting almost to a certainty, that by vigorous efforts during the ensuing year, they will so increase the number and strengthen the influence of their friends as to secure the measure for which they have so long struggled.

INTEREST ON RAILROAD INVESTMENTS.

A GOOD deal is being made by railroad men out of recent statistics with regard to the average rates of interest paid on railroad investments. The statistician of the Interstate Commerce Commission puts the general rate of interest on all railroad capital at 3.06 per cent., the lowest being 2 03 per cent. on common stock, and the highest 4.24 on bonded debt. The figures given by Poor, the great authority on railroad statistics, are an average of 1.77 per cent. on all kinds of stock, the highest being 4.35 on bonds. "How can railroad charges be extortionate or in any way unfair," exclaim railroad men, "while the interest paid to stockholders on their investments is so pitiful?" How much of the aggregate stock on which interest is paid, is "water," on which no interest should be paid? What is paid on the enormous mass of water, however, lessens by just so much the interest payable on cash.

Then again, how many railroads are built or run for the benefit of the mere stockholders? Isn't it a fact that a large proportion of them are "worked" mainly, if not entirely, for the benefit of their speculative directors and managers? Have Jay Gould and others of his kind, piled up their millions from the legitimate interest on their investments or from their tricky manipulations of the vast interests in their charge, in the financial markets, for their own private advantage? How can stockholders expect high interest on their investments in railroads a large part of whose capitalization is very dirty "water," and whose interests are manipulated by speculating managers for their own individual emolument? And why should the public be expected tamely to reimburse them for the shortage due to the unscrupulous greed, trickery and knavery of their own officers?

"Better a little under or over-ripe than spoiled hay." * * * * *"The Lord never planted cat-tails on a dry hill-side, but I have known farmers to try to raise celery in gravelly sand."*—PROF. ROBERTS, page 607.

BREVITIES.

TRY the Minnewaski Blackberry. Try the Erie.

ONE of the most appropriate and valuable trees for cemeteries is the European Weeping Beech.

JUST now the Minnewaski is giving us the largest and best blackberries of those bearing so late.

THE dry, hot weather of the last two weeks has improved the R. N.-Y's corn crop wonderfully.

"THERE, now, good little boy, you have done the work nicely. Run off and have a good play."

THERE is a demand for first-class butter at good prices, although the market is flooded with poor trash.

IS not fodder-corn cut at just the right time and well cured as good for old horses as Timothy hay?

PEAR trees lost their leaves 10 days ago. Now, many of them are making a second growth and bloom.

IF you would increase the size of the Snyder Blackberry, give it close pruning, plenty of room and high culture.

WERE it not for the California and tropical fruits, it is doubtful if the supply in this city would equal the demand.

"LARD Compound" was the inscription on some barrels which were being rolled into one of the large city bakeries. Next!

GOOD peaches are not plentiful, and sell readily at paying prices. Tomatoes are a drug on the market, and the price is low.

THE objections to the several kinds of white blackberries tried at the Rural Grounds are tenderness of cane and unproductiveness.

THE apple crop in the United Kingdom is poor, and the demand for "fruit of good size and quality" from this country will be good.

TRANSPLANTING potato plants did not prove a success with us. Doubtless part of the failure was due to the very unfavorable season.

THERE are still a good many farmers in this country who believe in cooking feed for stock. A dozen of such will describe their practice in next week's RURAL.

WHAT most of all is wanted among blackberries is a thornless variety as good as the best of the old kinds. The Wachusett comes the nearest to this, but it is not sufficiently productive.

THE potato rot seems to have been arrested in the vicinity of the R. G. The potatoes in some fields are a mass of rot and will not be dug. Those left in the soil, however, are rotting rather less than those which were harvested a week or so ago.

BROTHER FARMER, wouldn't it be better to bring that mower in out of the weather? And that reaper? Also that horse-rake? Likewise that lumber-wagon? Ditto that cultivator and harrow? We know the manufacturers are anxious to sell you more implements, but you should look out for your own interest as well as theirs, and no farmer can afford to house his tools under a tree.

FASHION and the "$3-shoe" men have injured the hide and leather trade. If the old style leg boots had not been driven out of form by lighter foot wear, we might still be searching the earth for hides as we were doing 60 years ago. Cut down the amount of leather needed to make a boot by one-half, and at the same time increase the supply of hides, and also the facilities for transporting them, and there can be but one result. The new process of tanning said to have been just discovered by a professor in the University of California will, it is reported, render leather at least five times more durable than it can be rendered by any process previously known. What will become of all the hides when this sort of leather shall be in general use?

Rural Topics.

JERSEYISMS.

YES, it is better to take your $500 or $600 and pay it toward a farm, than to hire a place on shares and use your money to buy cows and horses.

There is no better time of the year for cutting those briars and bushes beside the roads and fences than the present.

A seeding of six pecks of winter rye to the acre is better than the ordinary rule of a "bushel an acre." If you cannot afford that, then do not raise rye.

Did you know that you have some cows that give heavier milk than others, and that if you are butter-making, those are the cows to keep?

Never mind asking how much Farmer So-an-So is worth. You had much better inquire how he made his money and how good a farm he has. That is the test of his "worth."

When do you pay your hired man? It may depend on the man largely, but I like the old way of paying at the close of the season, instead of monthly.

You left your plow out there on the edge of the field last May, but what would you say if your wife left her churn out in the sun an hour or two too long?

Why, of course, you are going to the fair; are you not? If not, why? There is no reason for not going. Hitch up, and be sure to put in two seats, so you can all go.

As to those trees that you think of thinning out next winter, just look at 'em now and mark the decaying ones. You can tell better now than during winter.

Clean out the ditches before the fall rains come. Gather your seeds. Cart in some muck. Do not throw those seeded weeds in the pig-pen, but burn them.

Potatoes to dig; corn to cut and husk; roots to gather; apples to pick! Wake up, my dear fellow! No time to be dull with the year so bright!

When you pull those roots, hadn't you better pull that root of bitterness between you and your neighbor? But, say, what did you let it grow for?

It is not a good plan in the long run to change work frequently with your neighbors. It is very pleasant, but it tends to lounging and idleness.

Hurrah, hurrah, for the premiums! Here's to the girl that can best darn a stocking, and to the lad that shall raise the biggest squash! Are they your children?

You are acquainted with that man who speculates in a little of everything, and turns pennies by shaving notes. Are not you? Then cut his acquaintance forthwith.

Wheat shrinks one-tenth of its first weight inside of eight weeks after it is thrashed in the fall. [?—EDS.] *Ergo*, is it not better not to thrash till winter?

It may not be generally known that seed wheat sown after it is one year old never produces smut. I think this is also true of rye. Who knows?

Mustard may be cultivated with profit. It is sowed two quarts per acre, reaped, thrashed and sweated. The crop is about 25 bushels an acre. It sells at from $2 to $3.

Pay the same attention to the culture of your fruit-trees that you do to your corn potatoes and vegetables, and they will yield seven per cent. more.

If you must divide your farm into fields, have them square. A kit-a-corner field is not economical in any sense, and does not agree with good farming.

The farmer, or the farmer's hired man, who runs to the village every evening, and is not home till 11 o'clock, is cousin to the sluggard.

What? Keep your boy out of school till fall work is done? Don't do it. He is worth more to you in school than picking apples or husking corn. J. E. S.

Westfield, N. J.

BUCEPHALUS BROWN'S NOTIONS AND IDEAS.

DAIRYING is increasing so rapidly all over the country, and the yield per cow has so advanced that American dairymen must soon begin to look out for foreign markets for the butter, as well as their cheese. Here is the true field for the creameries, and they should push forward in that direction, rather than, as Hoard's Dairyman intimates, seek to crowd their goods into families, in competition with the better class of farm dairies. These things must, in the long run, regulate themselves; but much disturbance would be avoided, if more sound thought were given to the matter.

THE HUMAN CONSTITUTION in warm as well as cold countries, demands "respiratory food," and choice edible fats and oils, like butter and olive oil, will always rate as table luxuries, and command fancy prices like favorite wines. Here is a field that opens itself for a vast amount of skilled labor on the farm. Choice butter and cheese, like choice fruit, are products not possible except under trained and specially skillful hands. These are the openings for educated farming, and in them only educated farming will find a profitable success.

EDUCATED FARMING, however, suffers from the confounding of mere literary acquirements with genuine education. This is the reason why "book-farming" has had point as an opprobrious epithet. But a man may have large literary acquirements with very little true education, and, on the other hand, he may be thoroughly educated in many lines without possessing any true literary tastes.

FARMING, properly carried on, offers the best of fields for the all-around development of the human faculties and character. It is not a fenced-in business which few can hope to enter upon. It is open to all industrious men. The poorest boy, if he is strong, bright and energetic, can be the master of a good farm in America by the time he is 30 years old; and that is quite soon enough, for that is as soon as he is likely to know enough to run it. And in what other business are such results so easily acquired?

FAILURE IN FARMING, of which we hear so much, comes, in the great majority of cases, from entering the business without mental capital, quite as much as without money. The wise youth who chooses this line of life will apprentice himself to a good master, know his chosen branch thoroughly, and work as a subordinate until he has gained cash enough to start alone. In doing this he will learn as he goes along, not only how to work, but the amount of means he must have to do it successfully.

IT IS MUCH THE SAME with farmers' wives. Farming should be the favorite business of those women who demand the equality of the sexes in all things; for an educated farm girl will be qualified to be the equal partner of her husband in his business. Here man and wife can work together, each in a sphere of his or her own, of equal importance, and contributing equally to their mutual success I wish that I had the power to convince our young people of the merits of farming as the safest and surest basis for a satisfactory life work. Farming has its trials, and it is a great test of character; but it offers the most and the purest satisfaction that humanity can realize on this earth.

The Vineyard.

REMOVING THE BORDEAUX MIXTURE FROM GRAPES.

M. H. BECKWITH.

IN all that has been written concerning the spraying of grape vines with the Bordeaux Mixture it is claimed that the rains will remove all traces of it by the time the fruit matures. This is contrary to my experience with the grapes upon which the mixture was used the present season. There has been a large amount of rainfall since the final application of the Bordeaux Mixture to the vines in two vineyards where this Station has been testing the efficacy of various solutions for the disease known as the "black rot." The owner of one vineyard in Kent County, has applied the Bordeaux Mixture about every 10 days, under the direction of this station, while some of his neighbors have made only one, or, at most two, applications to their vines. The result is that the vines which have been repeatedly treated are free from the disease and have perfected a fair crop of fruit. Those of his neighbors have the fruit entirely destroyed by the disease. But in the meantime the grapes are more or less covered with the Bordeaux Mixture, rendering them unfit for market. The consequence was his neighbors were inclined to laugh and say to him: "You have saved your fruit; but what good is it to you as it is unmerchantable?"

The owner of the vineyard was of course very greatly discouraged by these remarks and wrote to the director of this station who at once visited the vineyard with the view of devising some method of removing the mixture from the fruit.

Upon trial it was found by adding a small amount of cider vinegar to the water in which the grapes were placed and allowed to remain a few minutes, and afterwards rinsing the fruit in water, the adhering mixture could be entirely removed. The method pursued in this case was to use one quart of strong cider vinegar to five gallons of water. The fruit was placed in wire baskets which would contain about 20 pounds. By using two baskets and placing the second in the vinegar and water when the first was removed, and allowing it to remain there while the first basket of fruit was rinsed twice in water and the grapes spread upon evaporator frames or other receptacles to dry, then the second basket of fruit would be ready for rinsing. Acetic acid could be used if desired instead of the vinegar. The fruit treated in the above manner was rendered perfectly wholesome and merchantable and the expense is light.

Delaware County, Agricultural Experiment Station, Newark, Del.

Pomological.

WYANT PLUM.

THIS fine native variety was favorably spoken of at the nurserymen's convention at Chicago, and a reader of the RURAL asks me to give something about its history and its claims to public attention.

It originated on the grounds of a Mr. Wyant near the small town of Janesville on Cedar River in Iowa, where it has not missed a crop in a number of years. That it is a full-blooded native of the Americana species I have no reason to doubt. In size it does not average larger than the De Soto, and it is much like it in shape and color, its superiority consists in its high quality for dessert or culinary use, and its being a perfect freestone.

Where perfectly ripe specimens are cut up and used with cream and sugar it is superior for table use to any native plum I have tested, and when canned it has very little if any of the usual astringency of our native sorts. In 20 years it has shown no defects in tree, foliage, or habits of regular bearing and it is not troubled with curculio to a greater extent than the De Soto.

At the East it may not do as well, but it is worthy of trial where there is a demand for our best native sorts. J. L. BUDD.

Ames, Iowa.

Farm Economy.

FRUIT EVAPORATING.

THE evaporating of fruit has become one of the new and leading industries of the northern tier of counties in Western New York. The business has grown, in six or eight years, from drying a few pounds of apples or berries to be traded at the store for groceries or dry goods, to a business requiring thousands of dollars to carry it on; in fact, in some towns a good apple crop brings in as much money as all other farm crops combined. The business is well distributed throughout the country, there being comparatively few large evaporators, but a large number of the capacity of from 20 to 100 bushels per day owned by the farmers themselves. The evaporators are of various kinds. In my own work I prefer what is known here as the Box Evaporator. This is simply a box 19 feet long, four feet wide and five feet high, standing on a substantial stone wall. In it are runways for the trays which are 3x4 feet, made of galvanized wire cloth. These are filled with prepared fruit and shoved in directly over the furnace, where they remain 15 minutes, and are replaced by more trays of fresh fruit, the first ones going on the next run above with less heat, and so on until they reach the top and are taken off dry. The fruit remains in the evaporator five hours and I dry 100 bushels per day.

In preparing apples for the evaporator, the machine that pares and cores the apple is generally run by hand, one man or boy paring about 50 bushels in ten hours. The apples drop from the machine on to a table, and bad spots and bits of skin that remain are trimmed off. Then they are taken to the bleacher to be bleached with sulphur smoke, and are then sliced ready to be spread on the trays for drying.

The raising and evaporating of raspberries are receiving a good deal of attention, many tons being evaporated each season. The process is the same as for apples, except as regards the preparation, the berries being ready for the evaporator as they come from the field.

I have just finished evaporating my crop of berries for this season, which was a light one on account of wet weather. B. A. T.

Wolcott, N. Y.

Miscellaneous.

NEW JERSEY NOTES.

The Erie and Lawton Blackberries as we have them, are alike; that is, if the Erie is a seedling, it is no improvement on the Lawton.

The Jersey Tomato is the earliest. The Volunteer is nearly as early as any, and the Beauty, except for earliness, I consider the best for all purposes.

We have one Hawthornden Apple tree. It is a slow grower; in other respects it is similar to the Maiden's Blush, except that the tree is a heavier bearer and the fruit larger. If this is a general characteristic, the Blush should be superseded.

The Northern Spy Potato yielded for us at the rate of 300 bushels per acre. It has two great faults: we have three distinct styles of potatoes from one potato planted, and the eyes are very deep on one of the types. If it is like the old Peachblow, it will always be sprouting.

The Smith's Cider Apple is the tree that bears this year. The Wealthy bears every year and the fruit will be ripe by September 1st. The Lawver is a pretty apple. Our specimen tree appears to say good things come singly. Our tree of Wealthy has for three years borne full crops each year. The Lawver is larger and has not borne a dozen apples yet.

A moist soil that will not stay wet and that seldom gets dry is the place for raising almost any crop suited to the climate. Such land is not abundant and usually sells for less than its value.

The Ott Pear has been very nice this year—about equal to Seckel in quality, and ripe before the Bartlett.

A combination of sheep, poultry and hogs will not keep away the coddling moth, unless the animals keep the ground entirely bare. We have in the chicken-yard a tree on which only one specimen was affected by the worm. Outside where all the stock run the fruit was not much better than was that where no stock went. The kerosene emulsion or the arsenites are effective if properly applied, and they also, I think, destroy the fungus that attacks the little apples and pears.

As a rule, more injury is done by dry weather than by wet. We had a shortage in the water supply for at least seven years out of 10. This year we have had a constant over-supply; but the damage does not compare with that suffered in the dry year of 1880. S. J. H.

CORRESPONDENTS' VIEWS.

FAILURES.—As a rule, people do not like to talk of their failures; much less do they like to have other people speak of them. But I sometimes think it almost as important to know about the failures as about the successes. A few years ago a member of our pomological society stated, in one of the meetings, that he had sold $125 worth of blackberries from a city lot or one-fifth of an acre. Though this had perhaps been often done before, the statement created quite a sensation, and many thought they could do as well and tried it. Had some one in the meeting told how *he had failed* to grow $125 worth, there would have been fewer plowing up their blackberry plantations now to try something more remunerative.

But I started out to write about squash and this is how I grew them—or failed to do so. A rich clover sod of two acres was well prepared, and marked as for corn. Every third hill of every third row was especially manured for the squash. The first row was planted with sweet corn, the next with beans, and the third, except the squash hills, with beans also, and so on. I had raised about 12 tons to the acre on a similar plan, though on somewhat richer ground, and thought to do about as well this year. The squash came up strong, with hardly a missing hill, and grew finely. But, alas! The striped bug made an attack by scores and hundreds. We tried all the known or ever-heard-of remedies, but to no avail. Then we set to killing them—a big job. Hardly had we vanquished them, when the big black stink bug—Anasa tristis—made his appearance. Remedies were again applied, but to no purpose. We killed them by the thousand, but their offensive smell and touch had already done their work and the squash vines withered like Jonah's gourd before the worm. This year we will not have a squash. I once knew how to grow squashes, but I give it up. Next! Please speak in time for next year. W. F. B.

Ann Arbor, Mich.

LARGE YIELDS OF CORN—HOW IT LOOKS ON THE GROUND.—We sometimes see reports

of 150 to 200 bushels per acre. Now let's see about how this corn looks in the field:

With rows four feet wide and hills 20 inches in the drill, three average ears to the hill will give about 185 bushels to the acre. With rows four feet wide, stalks or hills 12 inches in the drill, one ear to the stalk will give 102 bushels per acre, or two good average ears to the stalk will give about 204 bushels to the acre, or 21,624 ears to the acre, which, if shelled, will completely cover one acre of land; and if the variety be the large Southern Shoepeg, (which counts out about 13,000 grains to the bushel) and the grains lie touching each other, it will form a continuous row of grains 166 miles long, or if the corn rows be 2½ feet wide and the ears be laid lengthwise of the rows, every row on the acre will have a continuous line of ears touching each other all over the acre. A yield of 200 bushels on one acre of land will "bread" two families with a husband, wife and six children each, and furnish forage for one cow to each family; or will "bread" a family of five persons and furnish grain and forage for a pair of horses one year. If a South Carolina farmer beats the United States on the best acre of corn this year, our Board of Agriculture has arranged for a premium of $1,000, or $100 will be given for the best acre grown in this State whether the United States is beaten or not.

Anderson County, S. C. J. C. STRIBLING.

FARMING PAYS.—The successful farmer is the one that conducts his farming operations in a prompt, business-like manner. He is the one that never has an ailing animal from the lack of proper care, food and shelter. He is the man that works with his brains as well as his hands. But it is not only this class that makes farming pay, but farming pays the indolent, shiftless farmer better than any other business possibly could. Any other occupation pursued in the same manner would result in utter and complete failure. Although he may do little else but growl, yet he generally manages to make a living by farming, while in any other business he would from necessity become an object of charity.

Watkins, N. Y. C. C.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

WHAT is the proper time to marry? One forlorn maiden sighs: "Whenever you get the opportunity;" but this is looking at the matter in a very frivolous light. The Hospital Magazine says that the best time for the average civilized woman to marry is any time between 24 and 36 years of age. It is not said that no woman should marry earlier or later than either of these ages; but youth and health and vigor are ordinarily at their highest perfection between these two periods. Very early marriages are seldom desirable for girls, and that for many reasons. The brain is immature, the reason is feeble and the character is unformed. The considerations which would prompt a girl to marry at 17 would in many cases have very little weight with her at 24. At 17 she is a child, at 24 a woman. Where a girl has intelligent parents the seven years between 17 and 24 are the period when mind and body are most amenable to wise discipline, and best repay the thought and toil devoted to their development. Before 17 few girls have learned to understand what life is, what discipline is, what duty is. They cannot value what is best, either in the father's wisdom or in the mother's tenderness. When married at that childish period, they are like young recruits taken fresh from the farm and the workshop and hurried off to a long campaign without any period of preliminary drill and training, or like a schoolboy removed from school to a curacy without being sent to the university or to a theological hall. Who can help grieving over a child-wife, especially if she has children and a husband who is an experienced and possibly exacting boy-man? The ardor of his love soon cools; the visionary bliss of her poetical imagination vanishes like the summer mist; there is nothing left but disappointment and wonder that what promised to be so beautiful and long a day should have clouded over almost before sunrise.

Sensible people will agree to this. We know girls who married at 14 and 15; at 30 they are elderly women, too often broken down with illness caused by over-work and too early maturity. These very young marriages are usually among people of small means; they are most prevalent among factory or mill operatives, both here and abroad. Very often the young wife can't even make bread, and it is our fixed opinion that no girl who does not possess a sure income in her own right ought to marry until she is competent to cook a good meal and manage a house.

* * *

WE women certainly can do a good many things well, though the men do not always admit it. We don't always get credit for our cleverness; but a recent writer in the Boston Times gives quite a list of things easy enough to woman, but impossible to man. He says that the average woman can come to a conclusion without the slightest trouble of reasoning on it, and no sane man can do that.

Six of them can talk at once and get along first-rate, and no two men can do that.

She can safely stick 50 pins in her dress while he is getting one under his thumb nail.

She is cool as a cucumber in half a dozen tight dresses and skirts, while a man will sweat and fume and growl in one loose shirt.

She can talk as sweet as peaches and cream to the woman she hates, while two men would be punching each other's head before they had exchanged 10 words.

She can throw a stone with a curve that would be a fortune to a base-ball pitcher.

She can say "no" in such a low voice that it means "yes."

She can sharpen a lead-pencil if you give her plenty of time and plenty of pencils.

She can dance all night in a pair of shoes two sizes too small for her, and enjoy every minute of the time.

She can appreciate a kiss from her husband 75 years after the marriage ceremony is performed.

She can go to church and afterward tell you what every woman in the congregation had on, and in some rare instances can give you some faint idea of what the text was.

She can walk half the night with a colicky baby in her arms without once expressing the desire of murdering the infant.

She can do more in a minute than a man can do in an hour, and do it better.

SOME DAINTY FURNISHING.

THE problem of furnishing a big, bare, country parlor presents itself to many young house-keepers, and there is no doubt that a recent description in the Art Interchange will be of service to such. It combines artistic beauty with economy—not always an easy matter. The parlor furniture described cost, altogether, $50. It was a large room, with six windows. The fireplace was in the middle of the room, so that there were two awkward little passages between the chimney and the wall, which ended in two tall windows. In the center of the floor was a square of dark-blue Canton matting 18 by 22 inches, the remainder being painted ochre yellow. This cost $1 for paint and varnish, and $7 for the matting. The walls were tinted pale yellow, the dado and freize being broad bands of rich, dark-blue paper. The ingenious furnisher then bought a bamboo railing and lined it with blue make-believe India silk—really soft cambric—and put it up over the narrow passages that separated chimney from walls. From this she suspended on rings portières of Japanese silk, having a border of gold worked in conventional figures. They were bought at a bargain for $3, but reduced the awkward size of the room, giving it a graceful irregularity.

There were six tall, many-paned windows, trimmed, first, with plain shades, and then with curtains hung from rattan canes. The curtains hung in straight folds, the sticks being run into the stuff so that half a yard hung over and formed a lambrequin. They were made of straw-colored scrim at five cents a yard, but dainty designs painted on the lambrequin and border showed a wide band of morning-glories, daisies, running vines, Virginia Creeper and trumpet flowers outlined in gaily-colored silks. The center-table was a huge hogshead, its ample form covered with a full petticoat of rich yellow sateen that fell in charming folds on the blue matting. Its top most securely nailed on, held a student's lamp with two burners, the shades of which were both covered with yellow India silk, on which moths and butterflies were painted and outlined in Kensington embroidery.

The book-case was made of three dry-goods boxes, painted black, as least conspicuous (and a rough board will not ebonize); the sides, inside and out, were covered with folds of yellow sateen, tacked in place with gold tacks, and graduating in size, so that it formed a pretty and unique piece of furniture. On top of this book-case stood a huge jar. This had been a bottle-jar of dismal snuff-brown; the artist painted it dark blue, glazed it with varnish, and filled it with golden-rod and wood-lilies, and a background of cat-tails; and then she twined it with the luxuriant Virginia Creeper and trumpet flower whose bell-shaped, ruddy flowers are a delight to color-loving eyes. The great difficulty was in providing sofa and chairs. Thirty-three dollars accomplished this, securing a rattan sofa, two arm-chairs and two rocking-chairs, a little willow rocker at 75 cents, and a couple of stump chairs with rattan backs. The sofa was made a real resting place by covering it entirely with a mattress of cat-tail down. It required three layers of muslin and cat-tails, then a cover of muslin, and then one of light blue denim, through which mattress stitches were taken, fastening it securely to the sofa. The pillows on this sofa are of red, blue, yellow and sage-green linen. A similar cushion was put in each chair.

An upright piano, placed so as to cut off another corner, had a gray linen cover, worked in conventional designs in colored wash silk. In odd corners were three little corner cupboards and cabinets, worth 50 cents each, which were respectively stained in antique oak, in cherry, and enameled white, each with a little China silk curtain on a brass rod, pulled aside to show trifles of bric-a-brac. The fire-place was filled with a mass of gorgeous wild-flowers. On the tall, ungraceful mantel was a mirror its full length, frameless and not of very fine glass; but this did not show. On it, all around the edge, was painted a trailing vine of morning-glory and Virginia Creeper. Books were everywhere, and magazines, and the pretty colored prints that come with first-class art magazines were pinned with easy negligence on the wall, instead of framing. As the Art Interchange describes, it was a charming interior, and one that will suggest ideas to many busy fingers.

VERY HOMELY JOTTINGS.

OLIVE E. DANA.

SOME one told us lately that a good way to improve the looks of pies is to wet the upper surface all over with cold, sweet milk just before putting into the oven. The milk may be applied with a bit of clean cloth, a brush kept for such uses, or the tips of the fingers. I was delighted with the fine glaze the new way gave, and with the delicious brown hue the upper crust, so treated, took.

Cookies and hard ginger-bread get a fine gloss treated in the same way.

The flat, handleless covers of tin lard pails, which accumulate so rapidly, are very handy to hold pie-plates, with pies in them, just taken out of the oven. I keep a stock to serve as pie-holders, and they save soiling shelves and table-cloths.

I have been much troubled ere this with the crusts of custard and pumpkin-pies. They would sometimes break around the rim, when the crust was built up, and for no apparent reason. I tried a suggestion of Adelaide Cilly Waldren, in the "Cozy Corner" of "Good Housekeeping," with good success. She advises exposing the crust, adjusted to the plate and ready for filling, to a current of cold, dry air for some minutes. Try it!

If you haven't a fine, japanned cake box, and find that an earthern jar or any other tight receptacle makes the frosting melt, try a new paste-board one, of convenient size, and lined with fresh paper. In a cool, dry, dark place it serves very well for a short time. I have found, too, that an apple or two placed in the cake-box or jar seem to help keep the cake from drying. But ordinary sorts of cake, it seems to me are much better eaten at once or within two or three days at longest. It is better to bake less and oftener.

An excellent relish for breakfast or tea may be had from any cold corn left from dinner. Cut the corn from the cob, and put into a saucepan with milk enough to cover the corn and a little more for broth. Add a little butter, salt and pepper; let it come to a boil, and serve hot.

Another good relish for breakfast, dinner, or even tea, with cold meat, is made of either green or ripe tomatoes. Wipe the tomatoes caretully with, first, a wet and then a dry cloth and cut out all specks. Slice rather thinly, and put over the fire in a granite or porcelain stew-pan with equal parts of vinegar and water to cover them. Cook till nearly tender enough to eat, then drain, add vinegar to cover, a little butter, salt and pepper, and simmer again some minutes. May be used warm or cold, but is better quite cold.

Probably horses, especially while in the stable, suffer more than people do in fly-time. Some very serviceable though homely fly-blankets may be made of shirts, bags, or any other coarse, thin bagging. Take two similar bags, cut out the seam of each so as to leave a rather long piece, sew together very firmly the longest way, and hem the edges. We used for thread twine such as comes around grocery-parcels, and threaded it into a darning-needle. Sew straps of the strongest material at your command in the usual places, and see if you have not provided for stable use a grateful protection for the poor, worried horses.

GOLDEN GRAINS.

LYMAN ABBOTT says that if a man builds, Nature straightway sets to work to undo his building. Rust eats into the iron and decay into the wood, and little by little time ravages and destroys. But if a man plants, Nature proceeds to complete his unfinished work. He sows a seed, and behold wheat; he plants a cutting, and behold a tree. Such is the difference between working alone and working with God.....

IN preaching, said Beecher, never turn aside from a laugh any more than you would from a cry. If mirth comes up naturally, do not stifle it; strike that chord, and particularly if you want to make an audience weep. If I make them laugh, I do not thank anybody for the next move: I will make them cry. Did you ever see a woman carrying a pan of milk quite full, and it slops over on one side, that it did not immediately slop over on the other also? .....

WHERE is the use of the lips' red charm,
The heaven of hair, the pride of the brow,
And the blood that blues the inside arm,
Unless we turn, as the soul knows how,
The earthly gift to an end divine?
—*Robert Browning.*

THE CHRISTIAN INQUIRER says that many a man can show resignation in a great bereavement, whose daily life is in large part devoted to grumbling over the little ills of life.....

THE CHRISTIAN UNION says that he who has a well-defined purpose in life finds that all his time and all his energies are not too much to devote to that purpose. He who lacks such a purpose knows nothing of the true enjoyment of life. What are you living for? If you cannot answer that question, your life is a failure.....

"As we meet and touch each day,
The many travelers on our way,
Let every such brief contact be
A glorious, helpful ministry;
The contact of the soil and seed,
Each giving to the other's need,
Each helping on the other's best,
And blessing each as well as blest."
—*Coolidge.*

NOTHING under a thorough change will suffice, says Robert Southey; neither tears nor trouble of mind, neither good desires nor intentions, nor yet the relinquishment of some sins, nor the performance of some good works will avail anything, but a new "creature," a word that comprehends more in it than words can well express; and perhaps after all that can be said of it, never thoroughly to be understood by what a man hears from others, but by what he must feel within himself.....

THE LONDON DAILY NEWS tells this interesting anecdote in a sketch of the late Laura Bridgman: "When Carlyle impertinently asked, 'What great or noble thing has America ever done?' somebody replied, 'She has produced a girl, deaf, dumb, and blind from infancy, who, from her own earnings, has sent a barrel of flour to the starving subjects of Great Britian in Ireland.'".....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

"THIS life is not all sunshine,
Nor is it yet all showers,
But storms and calms alternate
As thorns among the flowers.
And while we seek the roses,
The thorns full oft we scan,
Still let us though they wound us,
Be happy as we can."

AROUND THE HOUSE.

ANNIE L. JACK.

"AND the rain descended." Steadily since the first few weeks of spring the rain has fallen, and hay, grain, fruit and

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria
When she was a Child, she cried for Castoria
When she became Miss, she clung to Castoria
When she had Children she gave them Castoria

everything else have suffered. We find the weeds grow faster than ever before "around the house" and friends from a distance look with eyes of sympathy upon our ruined hopes. The philosophy of thorough underdraining was never better exemplified, and we thought the man who could invent a *cheap* and successful hay-tedder would have made his fortune.

Beans have rusted before filling; peas and everything else that could mildew have suffered in that way. "The rain it raineth every day," and warm unhealthful days are a part of the routine. Well it is, if all the eggs are not in one basket, and by having a variety we may hope to save something. For instance, ducks without any trouble, thrive in this moist atmosphere when once they are half grown. How they revel in the puddles and find rich nourishment in a mysterious way among the mud that fills every furrow and ditch. So, though the apples spot, the grapes rot off, and corn has no ears, the ducks and sage and savory remain; we will not despair—some time the bow will come in the heavens again for the eternal promise remains.

But these enforced days of, not idleness but cessation from the routine of labor, make holidays out of the question in fine weather; for the work must go on night and day if ever there comes sunshine enough to dry the hay. One of our family suggests a rainy-day slate where the boys and girls can set down needful work to be done at such times, for one is apt to forget.

The RURAL very sensibly advocates holidays for farmers and their families, and I am often obliged to think how much they need some pleasant recreation amid the hurry; but how seldom they are able to take it. The necessity of making hay while the sun shines is apt to make "Jack" a dull boy, and he and "Jill" look with some envy on the summer residents who spend the season of flowers and sunshine without any need to labor by the sweat of their brow, and so Jack and Jill try to rise in the social scale, as they view it, and to seek an easier life by going "up the hill," only to find that there are thorns and tumbles on every path, and that a brief holiday means but little, and if the farmer's life is not without its cares, it is at least peaceful and wholesome. A friend who has just left me, looking over the past and thinking of my life in its varied aspects, said she could never think of anything but Whittier's line: "Health and quiet and loving words." How much to be thankful for does not this line mean? How what it speaks of out-weighs many wordly advantages and seems restful to every tired heart. "Come unto me and I will give you rest," is the promise given long ago, and amid all the hurry of country life, in hours of over-work, losses and anxieties, there are hours of peace, of quiet gladness, of repose to the tired body and spirit, that no other life affords.

"*Next to the weakness of making excuses is the weakness of accepting them.*"

A MAN'S REVERIES.

AN ancient philospher once said that if ideas were like hazel-nuts he could pound them into some people's heads with a hammer; but being otherwise, it became an impossibility to make one penetrate the heads of some people. The same condition still exists. When I invaded the sanctity of Domestic Economy in order to wage war against the vagaries of one of its contributors, I well understood the necessity of having my scalp tightly fastened on, and although I have been clawed a little, still "I bob up serenely."

Charity pays her respects to me in a seriocomical hysterical manner that completely gives her away. When Charity began writing for the RURAL nearly six years ago, her brothers were grown up; now Burt is still a boy—a remarkable slip in the cogs of the wheel of old Father Time. It is not every one who is favored to such a degree. I do not censure her for her aspirations and longings—only for her abuse of the columns of the RURAL. If she wants to prate to her neighbors, I don't care a picayune. A city man would not dare to create a nuisance because of the law, while a city girl would not make herself a nuisance by rushing into print with a long rigmarole like some of Charity's letters.

So Burt has been away to school?

Well, if his deportment at all corresponds with his sister's description—as, of course, it must—then the sooner that school is razed to its foundations and the professors and teachers are put at work on the roads, the better it will be for all concerned. The letter in which she tells us this puzzles me very much. I did take Burt to be real; but I am now constrained to think him imaginary, for it appears that he and his father are aware of and encourage Charity's peculiar system of amending their manners and morals. So Burt must be a common name for all country boors, and Charity expects to give a powerful impetus to the cause of culture by "whipping the devil around a stump," as it were. Then comes haunting doubt which suggests that, after all, her exhibitions of home life may be the results of a streak of harmless lunacy that runs through the family.

Geraldine Germane looks on the sentimental side of Charity's complaints and applauds. If she will take the trouble to think, even though she may not be used to it, she will probably fail to find any instance of reformation through the means Charity uses. Charity's own reveries furnish proof enough. Burt has been to school, and after six years or more of Charity's companionship, is still boorish and altogether unlovely. Six years of Charity's reveries in the RURAL and a longer intimate companionship have failed to improve or reform her father, according to her own evidence. The chances are decidedly against such vaporings having any good effect, and I think it is time to make a change. Whatever may be the consequence, I shall, in regard to such nuisances, act upon the advice of the Irishman at Donnybrook fair, "Wherever you see a head, hit it," and I will.

A MAN.

Are the flannel garments intended for the first cool weather in wearing order?

EXTRACT FROM A PRIVATE LETTER.

"I wish all the readers of the R. N.-Y. could have the chance to visit the old town of Marblehead, Mass., of which Mary Wager-Fisher has given such an interesting description. Having recently sniffed the salt breezes there and watched one of the yacht races for which the place is noted, I have taken special pleasure in her letters. It would be hard indeed to find a more attractive place for a mid-summer outing than the country all along the rock-bound coast of the Old Bay State.

One thing has surprised me, and that is, the apparent fertility of these so-called poor or worn-out lands. It is true that the rain-fall has been unusual this year, which may, in part, explain the luxuriant growth of every sort of garden product. The hay crop would have been of immense value only for the wet weather, which interrupted cutting and curing; yet, even as it is, the barns are overflowing. Such wide barns they are, too, and so many cattle are feeding on the beautiful hillsides, and such roomy old as well as new houses are seen on either side as one drives from one pretty village to another. It seems as if farming must pay fairly well in this section. Sleek horses, trim wagons, comfortable phaetons and carriages seem to be the rule, and well-dressed, healthy-looking men, women and children are seen driving over the excellent roads. Even the side-walks of the villages are well kept. And the country church has its never-failing and artistic decorations of the prevailing blossoms of the season. Really there seems no need to commiserate either the farmer or his family, or to "Go West" while the East offers so much comfort at the very door.

With my lines fallen in such pleasant places, I had leisure to observe the ways of the housekeepers hereabouts. One innovation I accept—in spite of a strong prejucice against it at first—that is, using a wet cloth instead of a broom for the weekly cleaning. For bed rooms and sitting-rooms it works like a charm and the work is not any harder than sweeping, while the dust is almost entirely avoided. Take a clean pail of water with a little salt to help keep the color; wring a soft cloth very dry frequently and wipe the floor or carpet or matting, and the effect is wonderful. There seems to be a permanent cleanness that never results from the use of a broom, while all the flying particles which usually cover furniture, pictures and all projections, are entirely avoided. Then think of the saving to delicate throats and lungs! Try it and see if fact will not conquer prejudice.

If there were time and space a tale might be told of the wonderful result of planting two rows of potatoes according to the trench method. Certainly I was surprised myself and the owners who did not advise the planting of the tubers at all, in consequence of frequent failures on the sterile soil, were quite willing to admit the success of the new way, while I regretted many times that we didn't plant the whole farm to potatoes, and we all might feel the same regret only for the rot which has begun already upon our small plot and upon our neighbors' larger ones. So we say again: "The trail of the serpent is over it all" and accept the inevitable as cheerfully as possible.

A. R. D.

WE do not think ground floors desirable as sleeping apartments. Neither do we think that night air should be allowed to blow directly over the sleeper. These are precautions against sickness that we would by no means confine to malarial districts, but are such as we follow whether we are by the sea or in the mountain.

CORN FRITTERS.

A PINT of grated corn—it should be tender—one beaten egg, half a tea-cupful of milk, salt, half a tea-spoonful of baking powder and about two-thirds of a tea-cupful of flour—a little more may be required. Beat together and fry in spoonfuls in a little hot beef drippings or butter. Very nice as a breakfast dish.

CHICKEN COOKED IN MILK

SELECT tender spring chickens. Dress and cut into suitable pieces for serving. Cook in milk and water—one quart of milk and one cup of water—until tender. Season, add a large lump of butter, a cup of cream and a little corn starch made smooth in a small quantity of milk for thickening. Serve on toast if liked.

FROZEN PUDDING.

ONE pint of cream, three pints of milk, five eggs, three cups of sugar, a pint of ripe peaches cut into small pieces. Put the milk into a dish set in a kettle of boiling water. When very hot, add sugar and yelks of eggs, beaten, then the whipped whites and stir until a thick custard. Turn out and when perfectly cold beat in the cream. Freeze until quite stiff, remove the dasher and stir in the fruit. Cover and serve in an hour.

MRS. ECONOMY.

TOMATO PRESERVES.

FIVE pounds of yellow egg tomatoes, five pounds of white sugar, juice of two or three lemons. Cover the fruit with the sugar, and let stand over-night. In the morning, drain the sirup from the fruit, boil, skim, put in the tomatoes and boil very slowly 20 minutes. Skim the fruit out into plates, boil the juice until quite thick, adding the lemon juice just before taking off. Put the tomatoes carefully into bottles, and cover with the hot sirup. Seal at once.

A. G.

Miscellaneous Advertising.

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Is incomplete without a bottle of
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It preserves the hair, keeps the scalp clean, and is everywhere the favorite dressing.

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Who (if your druggist does not keep them) will mail Beecham's Pills on receipt of price—*but inquire first.* (Please mention this paper.)

News of the Week.

HOME NEWS.

SATURDAY, September 7, 1889.

THE combined Farmers' Wheel and Farmers' Alliance of Missouri, in joint convention, favor the placing of a tariff on the luxuries, instead of the necessaries of life and a gradual reduction of the tariff, which shall ultimately lead to free trade. Missouri is, of course, strongly Democratic .....Canadians are still angrily indignant at the indifference of the Mother Country to the Behring Sea troubles, no reference to which occurred in the Queen's speech recently read on the prorogation of Parliament. A friendly conference of the maritime powers is likely to be held on the matter. Meanwhile the Rush and her sister cruiser are capturing an occasional Canadian poacher, taking the arms, salt and seal-skins out of her and either "paroling" her to go to Sitka or sending her there under a prize crew of one. In a few cases the vessels have gone there; in all the others they have either gone to British Columbia for fresh supplies and sometimes returned to the sealing ground, or straightway begun seal-catching as soon as out of sight of the "confounded Yankee." ..... Chicago is still trying to get fit men for the Cronin jury; but it appears a mighty hard task to find them. Germans and Irish are to be excluded, and so are all among the remaining remnant of the Windy City's population, who are intelligent enough to have formed a decided opinion on any subject bearing on the murder. Still it is hoped to secure 12 good men and true among "native Americans" to try the case intelligently and impartially..... ..It is now considered improbable that there will be an extra session of Congress..... ..... Loud complaints still come from the Conemaugh Valley about the dilatoriness and incapacity of the Flood Commissioners. There is little doubt that their action and the complaints to which it has given rise, will have a stunting effect on public charity in the case of any future great calamity ..... Legitime, having at last been driven from Port-au-Prince, Havti, went on board a French man-of-war from which he shipped on the American steamer Manhattan, and arrived here Thursday with his family, 22 trunks, several officers and three terriers, He goes to France to-day, and will remain their some time. Hippolyte entered Port-au-Prince peacefully and no vindictive executions have since occurred. The commanders of the United States and other foreign war vessels as well as the consuls interfered vigorously against any violence..... ..... Several fatal accidents have occurred within the week from contact of men with electric-lighting wires, notably in this city and Buffalo, and minor accidents from the same cause are frequent.. ..... Each of the constitutions of the five new States in one form or another recognizes the right of women to the suffrage. North Dakota, South Dakota, Idaho and Washington have each granted school suffrage to adults of that sex; Montana gives them the right to vote on local questions provided they are tax-payers, while Washington and South Dakota will submit the question of unrestricted woman suffrage to the voters. This action may help to add to the scant feminine population of those pioneer parts of the mighty Union..... ..... Race troubles have broken out in several parts of the South during the week. Near Algiers, across the Mississippi from New Orleans, shots were fired into a train-load of colored excursionists and a bad stampede followed. One "nigger" killed and several others more or less seriously injured. A "colored" church was also cremated by the whites, which is bitterly denounced by the New Orleans papers... .....At Shell Mound, Le Flore County, Miss., a serious conflict between whites and blacks was threatened. The latter were at first six to one; but did nothing. White militia and volunteers flocking from all the surrounding country soon reversed the disproportion, and at last accounts the chief black malcontents were surrounded. Four of them have been shot while resisting arrest and 40 other swamp fugitives since then...There is also much anxiety in Red River Valley, West Virginia, at the prospect of a race war due to trouble between a white store-keeper and a colored customer. With growing frequency, wherever such troubles arise, there is a tendency to take sides, not according to the merits of the case, but according to the race of the contestants. The negroes are becoming more enlightened and less dependent, and often more outspoken or "insolent," and the whites are as determined as ever that a "nigger" must be subordinate and obsequious. Of course, many individuals and even communities are exceptions to this rule, however..... A $100,000 bar of gold, the largest ever cast, was turned out at the Helena, Mon. Assay Office on Wednesday..... A big Coke Trust, to include 1,500 ovens, is in course of formation at the head-center of the coke trade about Connellsville, Pa.....There's little that is new about the great World's Fair. The Site Committee here is still hunting for the most suitable site; the Finance Committee appears languidly waiting till a choice is made; the other committees are partly in Europe, partly in the country and wholly inactive—as yet. Chicago is bustling about in quite a lively fashion puffing her own claims, belittling those of other places, trying to get every convention and caucus to indorse her, and steadily raising money. As she has lately taken within her limits many large farms and a wide sweep of prairie, there should be no difficulty about a suitable site. Washington is sleepily waiting for the meeting of Congress, and St. Louis and the other claimants are doing nothing except talking now and then..... The coal miners of Northern Illinois who have been locked out since April, and who were threatened a week ago with a permanent stoppage of work, are going to work again, a compromise having been made by all the mine-owners except W. L. Scott, the many-times-millionaire and Pennsylvania ex-Congressman, who still insists on keeping his men's noses pressed hard on the grindstone..... The late suppression of forest fires by heavy rains in Montana appears to have been only partial and temporary, as they are again raging with old-time impetuosity. The destruction of timber has been immense..... Drake Carter, the Toronto race-horse whose record of 5.24 for three miles, a few years ago, has never been beaten, fell and broke a leg while training a week ago, and had to be shot..... .... The westward march of civilization has been marked by the successive establishment and abandonment of new army posts. Fort Laramie, Wyoming; Fort Lyon, Colorado, and Fort Hayes, Kansas, were abandoned the other day.....The latest reports from the part of Sioux Reservation lately thrown open to settlement, say there's nothing of an Eldorado or Garden of Eden about it. One-third of it belongs to the "bad lands" and most of the rest is said to be a vast, rolling prairie with a rough sod covered with sage brush, cut here and there by sluggish streams that run in gulleys, which have the appearance of cracks in half-baked brick. Better "go slow" in selling the old homestead to take up a new one in the Land of the Sioux..... ..There is no prospect that the Cherokee Nation will, in the near future, consent to the sale of the Cherokee Strip. The other Indian tribes, who are far less civilized and much more influenced by white men, are willing enough to sell their surplus lands; but the Cherokees, who are about as civilized as their white neighbors, have a business-like desire to make all they can out of their possessions. Ex-speaker Carlisle, however, thinks Congress may summarily take the land at a fair figure during the next session, as the title to it is seriously in dispute .....The British law officers have just decided that the Jesuit Endowment Act, passed over a year ago by the legislature of Province of Quebec, and which has caused such a bitter rumpus between Protestants and Catholics in Canada, is constitutional. That legally settles the matter, as the year within which the Governor-General could constitutionally "disallow" or "veto" the act, has passed. The bitterness engendered by it will, however, rankle for years in Canadian politics....There are now over 14,000 Icelandic settlers in Manitoba and the Canadian Northwest and more are coming..... .....The Prohibitionists of Massachusetts have nominated a State ticket and declared war on the Republicans, because their party permitted the defeat of the prohibitory amendment to the constitution at the last election. The Democratic Party, however, was solidly against it; but rancor against a recusant friend is hotter than against an acknowledged foe..... Last Sunday Carlisle D. Graham, the Philadelphia cooper who has been riding in a barrel boat at intervals for nearly a year in Niagara River, just below the Falls, went over the center of the Horse-shoe Fall, on the Canadian side, early last Sunday morning. He was stayed and packed in the barrel-boat, to the bottom of which 100 pounds of railroad iron were fastened to keep it upright. The plunge was 159 feet, though some put it up to 200. He was released from the barrel in a semi-conscious condition, but is now all right and ready to do it again "for money." He's the first man that ever went over the Falls and lived to tell the tale ... . Dr. Samuel A. Allibone, author of "Dictionary of Authors," of late years Librarian of the great Lenox Library in this city, died last Monday at Lucerne, Switzerland..... ...The greatest horse race of the year, so far as the value of the stakes is concerned, occurred near here, at Sheepshead Bay, Long Island, last Wednesday. It was the Futurity race for two-year-old colts and fillies, won last year—the first of its establishment—by the Kentucky horse Proctor Knott, which has since grievously disappointed the great expectations then formed about him. Course, three quarters of a mile; time, 1.16 4-5; value of the stakes $61,000, with about $6,000 to the second and $2,500 to the third. The winner was the gelding Chaos, owned by Ex-Congressman W. L. Scott, the great millionaire iron king of Pennsylvania and coal-monger of Northern Illinois. The time was slow. Chaos stood 9 to 1 in the betting, five being ahead of him. Of late years the race-horse appears to be distancing the trotter in public interest. The three best two-year-olds of the year, with El Rio Rey at the forefront, were not entered for the race .... There appears to be a mistake about the educational facilities in the South. The New Orleans Times-Democrat shows that while the money for Southern schools is nearly all contributed by whites, the average payment for school purposes in the South is greater than in the New England or Middle States. For example: Pennsylvania pays 32 cents on the $100 for school purposes, while the South averages 50 cents per $100—Virginia paying 46 cents per $100: Florida, 59; Arkansas 60; West Virginia, 61; Missouri, 62: Mississippi, 65 Since the war $37,000,000 have been contributed for schools intended exclusively for colored people.....Dandy, Gen. Custer's famous charger, is dead..... ..... Dr. Brown-Sequard's "Elixir of life" craze is rapidly going to join the "blue-glass" craze, the "sun-bath "craze, and the numerous other kindred crazes that have beguiled man with the hope of repulsing Death for a while or baffling him altogether. Several thousand old and ailing men have received the hypodermic injections, and while in some cases temporary good effects were obtained, in most cases no very sensible results followed; while in some instances disease and, in a few, death ensued from blood poisoning. In view of the extreme care needed to obtain a strictly pure and health ul article, and the ignorance, unpreparedness and carelessness of many of the doctors eager to advertise themselves by administering the "cure-all," the wonder is that more "accidents" haven't occurred. With careful and skillful use, the thing may hereafter be of considerable use in medical practice; but the idea that it is of any great value appears to be dynamited. By the way, among all the "subjects" experimented on, not a single "woman" case is on record..... Within a fortnight lately $17,000,000 were scattered abroad from the National Treasury in the purchase of bonds, to help in handling and "moving" the crops.....From June 30 to September 1 the public debt had increased $7,094,003.76. The increase is attributed chiefly to the heavy drafts for pensions..... Labor Day was generally celebrated among the working classes from choice and other classes from necessity last Monday in the labor centers of most of the Northern States. The people, more than usual, rested themselves in country places instead of tiring themselves by useless parading. The day's rest was objected to as wasteful chiefly by those who think a month's rest essential for their own health.....

Nature's Simplicity.

When Nature does a simple thing she arouses wonder, because that which with us, is difficult or impossible, with her, is an achievement of ease.

The inference from this is to get near to Nature's heart. Act in harmony with her kindly mood.

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SUMTER, S. C.
"I have used the compound Oxygen Home Treatment from DRS. STARKEY & PALEN, as a revitalizer, and have experienced marked benefit from it." MR. N. G. OSTEEN.
Proprietor Watchman and Southern.

SUMTER, S. C., March 17, 1888.
Mr. N. G. Osteen adds in letter of later date:
"Your remedy is getting up quite a reputation in this vicinity from the good it has done Mr. Charles Witherspoon."

We publish a brochure of 200 pages, regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia: all chronic and nervous disorders. It will be sent, free of charge, to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 120 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, September 7, 1889.

The strike of London stock laborers still continues and has grown to enormous proportions. The loading and unloading of vessels in the Thames are conducted by the great dock companies, which own vast inclosed docks, like St. Catherine's; by the warfingers who load and unload on the stone embankments along the river sides, and by lighters which bring and carry cargoes from and to ships at anchor in the stream. The first does much the largest business, and the last much the smallest. All employ regular hands at so much a week, and many more "irregulars" at so much per hour. The latter in the docks, to the number of about 2,500, were the first to strike. They wanted 12 cents per hour, and at least four hours' work a day. Warfingermen and lighter-men soon joined them, and so did all the hands working along the river; then came the carters, coal-heavers and all other laboring people in any way connected with the river business. Soon factories could not get coal and had to stop; other kinds of workshops could not get supplies and had to shut down, and in a few days over 150,000 laboring men either went or were forced into idleness. Contributions poured in for their support; great sympathy was expressed for them by the public; they paraded and loitered, but kept wonderfully quiet. All perishable goods on vessels in the river were ruined. Cargoes of sugar couldn't be marketed and prices went up; a coal famine set in; 250 steamers and a vast number of sailing vessels lay compulsorily idle under heavy expenses; certain lines of business became hampered and then paralyzed, and enormous losses were incurred..... A large number of vessels went to Southampton and other ports to be loaded and unloaded. Dockmen at Liverpool, Glasgow and other ports, who threatened to strike, got their demands; labor unions in Belgium and elsewhere refused to allow workmen to go to fill the strikers' places, but contributed to the support of the latter, money having been sent from this country and as far off as Australia. Efforts to compromise the trouble failed Many ports in the United Kingdom and other countries are now suffering on account of the strike. Vessels and goods that ought to bring wealth and give employment are idle in the Thames. Over 150 stevedores are, on this account, idle here, and 70 in Boston, and in European ports the case is worse. The men openly declare that if their demands are now granted, they will increase them on the first opportunity. Many classes of workingmen all over the country have either threatened to strike for higher wages or done so, In most cases their demands have been either granted in full or compromised. It is the greatest European peaceable labor uprising on record. As large a one occurred in Germany some months ago, but it was attended with much rioting, destruction of property, blood-shed and death, the military and mobs coming into frequent collision. Some of the warfingers have "caved in," and over 2,000 of their men have gone back to work. Ship-owners, merchants and the general public urge a settlement of the trouble by granting the men's demands; but the dock millionaire owners are still obdurate. It is expected, however, that they will soon yield.....

AGRICULTURAL NEWS.

SATURDAY, September 7, 1889.

THE Senatorial Committee headed by Senator Vest, has been inquiring into the value of Chicago's meat products, and their transportation. There has been a steady decline in the prices of beef cattle for a number of years, without any decrease in prices of meats. An Elgin dealer said that dealers throughout the country bought Chicago dressed beef in preference to buying live stock. The freight tariff is higher on live stock than on dressed beef, hence small dealers buy the latter, and leave Chicago to control the live stock market. E. T. Jefferey, general manager of the Illinois Central Railroad, admitted that the prices charged for delivering live beef were greater than for dressed beef. A young man who had been in the employ of Nelson Morris for three years previous to last May, testified that his firm and three others formed a combination, and regulated the price of cut beef in seven States. Several prominent dressed beef shippers who had been summoned as witnesses did not obey the summons, among them Swift and Armour. Certain papers and lists that were called for were also not forthcoming. A resolution was adopted that the facts of the refusal of these parties to appear be reported to the chairman of the United States Senate at its next session. Armour says he would not appear because he knew he could not expect fair treatment from Senator Vest, who is opposed to the dressed beef business..... An association of orange dealers was formed in this city during the week, the object of which is declared to be to unite with the growers and so stop the shipping of oranges to irresponsible persons who undersell the other dealers. Representatives were present from all the principal Northern cities, and from Jacksonville, Florida. The Florida growers were reported to be anxious to have responsible dealers come down there and buy the crop. The movement is probably a step toward the selling of the orange crop at auction .....

Miscellaneous Advertising.

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GEO. W. E. DORSEY, President.
C. H. TONCRAY, Vice-President and Manager.

Buffalo's great international fair opened for the second season on Tuesday morning, with an immense crowd in attendance. It was Childrens' Day, all children being admitted free, and the grounds were packed with them. The exhibition is said to exceed that of last year, the live-stock show being the finest ever seen in this country. There are over 2,000 head of sheep on exhibition. The Northern Pacific Railroad Company has an exhibit of the productions along its lines. The fair remains open until the 13th inst..... The Massachusetts Horticultural Society will hold its next Annual Exhibition at Boston, September 17—20 ... .Several firms of seedsmen in different parts of the country have gone, or are going out of business. The business is evidently overdone.....A Chicago man is said to have a one-third interest in 5,000 tons of dried apples in store near Niagara Falls. They cost 2½ cents per pound, and are being held for 10 cents ..... London dealers report that American apples arriving there are of poor quality and in bad condition. At sales held September 3, Tompkins Kings brought 18 to 20 shillings, Greenings, 12 to 13 shillings, and Baldwins 12 to 14 shillings, for sound fruit..... Linseed oil crushers are receiving large quantities of Western seed.....The Ohio Association of Wool-growers objects to a lower tariff being fixed on wool by New England manufacturers..... Numerous cattle are dying of a strange disease in the vicinity of Carthage, Ill. The animals become stiff in the hindquarters, sink suddenly to the ground and die in great agony.....The Miami Company's elevator was burned on Monday morning with a lot of hay and 35,000 bushels of oats..... The prediction is made that in 10 years a Delaware peach will be as rare a thing in the market as it was 30 years ago. There are now no peaches grown about Delaware City; the peach belt has moved south on the peninsula. Within the past 10 years peaches have become a precarious crop. The yellows is responsible for this. The average crop which, a few years ago was more than 3,000,000 baskets, is now less than 1,000,000. The peach crop of the Delaware and Maryland Peninsula has for the past 20 years been worth more than $2,000,000 a year; the Delaware railroad in 22 years has shipped over 37,000,000 baskets of fruit, and fully half as much more has gone by other routes. Of such importance is this subject, that the United States Government has detailed a special agent to study peach culture in the hope that something may be done to stop the ravages of the disease. The yellows also prevails throughout New Jersey, Pennsylvania, Michigan and other peach-growing States....

FIVE HARVEST EXCURSIONS.

THE Burlington Route, C., B. & Q. R. R., will sell, on Tuesday, August 6th and 20th, September 10th and 24th, and October 8th, Harvest Excursion Tickets at *Half Rates* to points in the Farming Regions of the West, Southwest and Northwest. Limit 30 days. For circular giving details concerning Tickets, rates, time of trains, etc., and for descriptive land folder, call on your ticket agent, or address P. S. EUSTIS, Gen'l Pass. and Ticket Agent, Chicago, Ill.—*Adv.*

Crops & Markets.

SATURDAY, September 7, 1889.

THE weather throughout the most of the country has been dry during the past week which has been very favorable for thrashing and marketing grain. Winter wheat has turned out very well, although there is a great deal of wheat of poor quality. Spring wheat thrashing has but just commenced, but the crop seems to be turning out very satisfactorily. Oats are turning out well. Prices of all grains show little change except as they are fluctuated by local conditions. Grain seems to be moving quite rapidly, besides the local millers are taking large quantities, as the stocks of wheat and flour of many of them were very low. Reports from Chicago say that this week promises to go on record as the heaviest in the amount of grain shipped since there was a lake marine. Tuesday's list of 30 vessels with a capacity of 1,500,000 bushels is at the top. Wednesday 800,000 bushels were chartered. These great fleets carrying 1,000,000 bushels a day to lower lake ports have come in the usual order of traffic and without seriously affecting other lines. They show better than figures can do the capacity of the lake marine of to-day.

THE last two weeks have given the corn crop a big boost, and in some parts of the corn belt, it has been the first really good corn weather since the crop was planted. The condition has improved quite generally, but in spite of this, reports from some States show quite a decline from previous reports. The Illinois crop, according to the State Board of Agriculture, will be 70,000,000 bushels less than reported one month before. Iowa's yield will be from 10 to 15 per cent. less than previous estimates. The quality of the corn will probably vary considerably. The weather is reported very dry in some localities so that the ears may not fill out properly.

THE hop harvest is progressing rapidly, and the yield and quality vary greatly in different localities. Through Central and Northern New York some yards are entirely worthless, while others will yield a full crop. The latest estimates from this section give three-fourths of a crop as the probable yield. Several carloads of California hops were sold in this city during the week; they were of good quality and sold readily at good prices.

CHEESE has declined slightly in price at the different markets in Northern New York, still the sales have been quite large. Many factory-men are holding back for higher prices. Sales at Utica ranged from 7¼ to 8¼ cents, the bulk selling for about 7½ Little Falls sales average about the same. Canton sales were made at 8½ to 9¼ cents, the latter price being for sage cheese made on contract. The butter market is weak, and there is no call for anything but the best grades.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, September 7, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	8¾	9	.....
Strict Ordinary	9 3-16	9 7-16	.....
Good Ordinary	10⅛	10⅜	.....
Strict Good Ordinary	10 9-16	10 13-16	.....
Low Middling	11 1-16	11 5-16	.....
Strict Low Middling	11 5-16	11 9-16	.....
Middling	11½	11¾	.....
Good Middling	12	12¼	.....
Strict Good Middling	12¼	12½	.....
Middling Fair	12 11-16	12 15-16	.....
Fair	13 5-16	13 9-16	.....

STAINED.

Good Ordinary	8⅝	Low Middling	10 3-16
Strict Good Ord	9¼	Middling	11

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

POULTRY--Chickens, spring, per lb, 11½@12½c; LIVE FOWLS, near-by, per lb, 12@——c; fowls, Western, per lb, 12@——c; roosters, per lb, 6½@7c; turkeys, per lb 11@12c; ducks, western, per pair, 55@0.75c geese, western, per pair, $1 15@$1 40.

POULTRY.—DRESSED—Turkeys, mixed, per lb. 13@16c; Fowls, western, choice, 10½@11c; do common to good, 10@10½; Ducks, spring, good, 10@15; Squabs, white, per dozen, $2 50@$2 75; do dark, do, $1 50@$1 75; Chickens, spring, 10@17c; Fowls, near by, 12@13c.

GAME.—Plover, per doz, $1 25@$1 50: Snipe do, do, $1 25@$1 50, Woodcock, per pair, $1 25@$1 50; Grouse, do do, 75c; Partridges, do, $1 50.

HOPS.—State, 1888, best, 15@16c; do, prime, 13@14c; do, low grades, 9@11c; do do, 1887, 5@8c; do do do California, common to prime, 12@13c; choice, 14@15c.

HAY AND STRAW.—Choice Timothy, 95@$1 00; do good do, 85@90c; do medium, 70@80c; shipping, 65@70c; do, Clover, mixed, 60@70c. Straw.—No. 1, rye, 70@75c; short do 50@55; oat, 40@45c.

BEANS.—Marrows, new, $2 40@$2 45: new mediums choice, $2 20@2 25; pea, $2 20@$2 25, red kidney, $3 65; white kidneys, choice, 3.00@——; foreign, mediums, 1 35@1 55; California Lima, $3 60@$——; green peas, $1 40@$——.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 7¼@7¾c, and farmers' grades at 5@6c. Pecans, 5@6½c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes.—Jersey, per bbl., $1 25@$1 50; Long Island, do, $1 65@$1 90; Sweets, do, $1 75@$3 00; Cabbage, new, per 100, $1 50@$2 50; Cucumbers, per 1,000, $1 50@$2 00; Egg Plant, per bbl, $1 50@$2 00; Tomatoes, per crate, 25@30c; Corn, per 100, $1 00@$1 75. Onions—Orange Co. Red, 35c@$1 40; Potato, per bbl, $1 25@$1 50; Jersey White, $1 75@$2 00; State, Yellow, $1 50@$——; Lima Beans, per bag, $2 00@$2 50.

FRUITS.—FRESH.—Apples, per bbl, $1 50@$3 00 Peaches, per crate, $0 30@$1 50; do, per basket, 35c@$1 50; Huckleberries, per qt, 4@6c. Muskmelons, per bbl, 75c@$1 00; Watermelons, per 100, $6 00@$30 00; Plums, per bbl. $2 00@$6 00. Grapes, best, per lb 8@10c; do poor, 2@5c. Pears, per bbl, $1 25@$4 00; do per keg, $1 00@$2 50.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 6@6¼c; do new, common to prime, 4½@5¾c; sliced, new, 3@3½c; quarters, 3@4¼c: chopped, 2½@3¼c; cores and skins, 1½@2c. Cherries, new, 8@11½c. Raspberries, new, 20@23c. Blackberries, 5½c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 12@15c; do do, unpeeled, 6@6½c; Georgia, do, peeled, new; 10@14c do unpeeled 7@8c do do sundried, 3@9½c.

PROVISION MARKETS

NEW YORK.—PROVISIONS.—PORK.—New mess, 11 75@12 25, short clear, 12 00@13 50; Extra Prime mess, $10 50@10 75 prime do, $10 75@$11 and family mess, $12 @12 50. BEEF—India Mess. in tierces, $12 50@14: Extra Mess, in barrels, $6 00@6 50 Packet, $7 25@$8 00 per bbl, and $11@$12 00 in tierces; Plate, $7 50@$8 00; Family at $11—@$14. HAMS—$16 00@$16 25, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 7@——c; Pickled Hams, 10¾@11c; pickled Shoulders, 4¾@5c; Smoked shoulders 5¾c; do Hams, 11¼@11¾c. Dressed Hogs.—City, heavy to light, 5¼@6½c. Pigs, 6¾c. LARD.—City steam, $6 10; September, $6 45; October, $6 33; November, $6 20, December, $6 14; South America, 7.35c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes, Maryland Rose, per bbl, $1 50@$1 75. Provisions were steady. BEEF.—City family, per bbl, $8 00; do, packets, $8@8 50; smoked beef, 12@14c; beef hams, $16 PORK.—Mess, $13 50@$14 50; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 12@14c: do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6¼@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8¼c; bellies, in pickle, 8@5½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6½@7.

CHICAGO.—MESS PORK.—$10 10@10 12½. LARD—$6 02@$6 05 per 100 lbs; Short Rib sides (loose), $6 95; dry salted shoulders, boxed, $4 75; short clear sides, boxed, $5 37@$5 50.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 19@20. Elgin, best, 19c; Western, best 18@19; do prime, 16@17c; do good, 13½@14: do poor, 11@12. State, Dairy, half-firkins, tubs, best, 17@18c; do do prime, 15@16; do do fine, 13½@14½; Welsh tubs, fine, 16@17c; do do, good, 13½@14; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western imitation Creamery, best, 13@14; do fine, 11½@12½; Western dairy, fine, 12@12½c; do fair, 10½@11c; do poor, 9@10c; do factory, fresh, best, 12@——, do prime, 10½@11; do good, 9@9½; do poor, 8@—c.

CHEESE.—State factory, fancy, 8¼@8½c; do do fine, 8@8¼c; do do, prime, 7¾@8c; do do, fair to good, 7¾@—c; Ohio, flat, prime, 6@7c; do good, —@—c; do, good, —@—; Skims, light, 5@6c; do medium, 2@3; do full, 1@2c.

EGGS.—Near-by, fresh, 19@19½c; Canadian, 18¼@19c; Southern, 16½@17c; Western, best, 18½@19c.

PHILADELPHIA.—BUTTER dull. Pennsylvania creamery extra, at 17@18c; Pennsylvania Prints, extra, 23@27c; B.C. and N.Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were firm; Pennsylvania firsts 20@——c; Western firsts, 17@18c; Cheese dull—steady; demand fair; New York full cream, at 8½c; Ohio flats, choice, 7¼@7½c; do, fair to prime, 14@14½c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Fancy creamery, 15½@18c; choice Western, 15@15½c, choice dairy, 12@15c; common to fair, 9@10c. Eggs firm at 14@15c.

GRAIN MARKETS.

WHEAT.—Ungraded Winter Red, at 74@86⅞c, No 3 Red, 81⅝@81¾c elevator; steamer No. 3 Red, 77c elevator; steamer No. 2 Red, 81½c elevator; No. 2 Red, quoted at 84¼@85c elevator and store; 85@86¼c afloat, according to quality; No. 2 September, 84@84¼c; do October, 84 9-16@84⅞c; do November, 85¾@86c; do December, 86⅞@87 5-16c; do January, 88¼c; do May, 91¾@92½c. RYE—Demand is unimportant. Western quoted 49@51½c; State, 55c. CORN—Reports of snow in Missouri, and predictions of frost in Nebraska materially strengthened the general market. Ungraded Mixed at 42½@43c; No. 2 Mixed, 42⅝c elevator; 42¾@43¼ afloat; No. 2 White, 42⅝@43c elevator; Low Mixed, 42½c elevator; cost freight and insurance stock, 42⅜@42⅝c, according to quality; No. 2 September, 42@42¼c; do October, 41⅜@42 15-16c; do November, 42¾@43⅜c; do December, 42¾@43¼; do May, 44¼@44⅝c. OATS—Sales—No. 3, 25c, do White, 26c; No. 2, 25⅝@26c; do White, 27½@27⅝c; No. 1 White, 35c; Mixed Western, 24@28c; White, do, 27@38c. No. 2 September, 25¾@26c; do October, 25¾@26c; do November, 26⅜@26¾c; do December, 27@27¼c, do May, 28 15-16@29⅞c.

LIVE STOCK MARKETS.

New-York, Saturday, September 7, 1889.

BEEVES.—Texans and Colorados sold at $3@$3 15; poor Natives at $3 10@3 30; decent to fair do at $3 50@$4 25. good to prime at $4 30@$4 60, and about a carload of choice do at $4 70. Bulls sold at $1 90@$2 25, and a carload of Western cows at $1 90.

CALVES.—Sales—Buttermilk Calves, 200 lbs average, at $3 25 per 100 lbs; Mixed do, 203 lbs, at $4 75; Western do, 196 lbs, at $5 50; Buttermilk Calves, 137 lbs, at $3 15; Veals, 187 lbs, at 5 50; do, 175 lbs, at $6; do, 165 lbs, at $7; do, 146 lbs, at $7 50; do, 160 lbs, at $7 50; do, 169 lbs, at $8.

SHEEP AND LAMBS.—Reported transactions included the sale of Poorest to Best Sheep at $3 50@$5 20, and Ordinary to Choice Lambs at $5 37½@$7. Sales—Pennsylvania Sheep, 85 lbs average, at $4 50 per 100 lbs; Northern Canada do, 93 lbs, at $4 75; Pennsylvania Lambs, 62 lbs, at $5 75; Northern Canada do, 71 lbs, at $6 20; Michigan do, 61½ lbs at $6 87½; Canada do, 74½ lbs, at $6 80; State do, 63 lbs, at $6 50; do 79 lbs, at $7; State Sheep, 85 lbs, at $4; Kentucky Sheep, 92½ lbs, at $4 25; Western do, 82 lbs, at $4 50; Western Lambs, 68½ lbs, at $6 50. Indiana Sheep, 102 lbs, at $5.20; Indiana Lambs, 65 lbs, at $6 50; Kentucky Lambs, 67 lbs, at $6 25; Buffalo do, 78 lbs, at $6 87½; Pennsylvania Lambs, 64 lbs, at $6 45.

HOGS.—Steady, with sales of fair to good Hogs at $4 60@4 87½, and a bunch of State Pigs sold at $5 10.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SEPTEMBER 7, 1889.

H. W.—C. M. L.—F. W. W.—R. B., thank you.—F. D. N.—S. M.—J. N. S.—J. S.—C E. L.—E. R. B.—D. D. M.—G. C. B.—R. P. M.—V. L.—K. C R.—E. G. W., thank you.—G. H. G.—G. M. B.—H. W.—J. G. S.—L. G.—G. S. P.—N. T. P.—G. C. C.—A. C.—T. F. B.—W. F.—H. W. C.—H. W. B.—Ada Starr.—Mrs. D. S.—E. J. E.—D. A. S.—A. S.—E. P. P.—M. G. Z.—W. H. G.—A K. J.—E I. E.—Mrs. F. L. A.—N. H.—P. K.—C. E. F.—E. T. H.—M. J. A.—C. M. M.—J. L. H.—E. M.—A. B. S.—P. H. & Co.—G. R. K.—S. A. S.—C. F. E.—G. R.—C. W.—M. C.—E. W.—T. T. L.—P. M. A.—E. M. C.—J. W. P.—W. B.—A. J. C. L. S. S.—R L. K.—L. H.—D. M. W.—H. R. & S.—J. M. N.—H. M. K.—L. C. M—J. W. I.—A. H. L.—A. B S.—J. T.—E. B. G.—E. A B.—J. P.—D. C. L.—H. I.—C. T. E.—F. A. H—T B. T.—S. F.—G. H. W.—D. F—O. L. C.—H. A. W.—A. C. V.—C. S. R.—E. H. J.—F. P.—F. W. B.—I. P. R.—V. L.—D. C.—G. H. C.—J. L. B.—C. C.—J. McL. S.—A. M. L.—E. D.—C. T. L.—H. H.—L. H.—C. L.—E. T. V. A. S.—P. D C.

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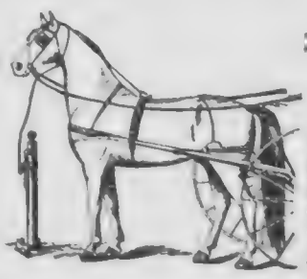

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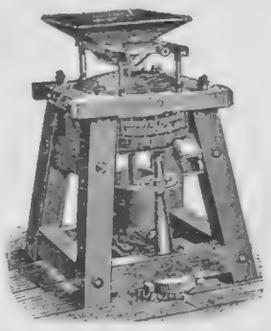

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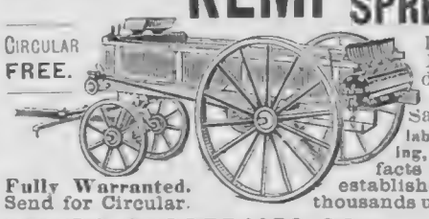

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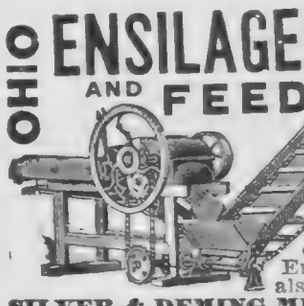

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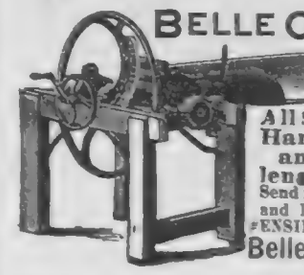

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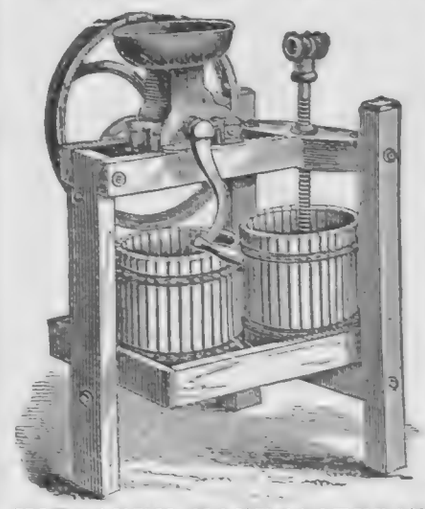

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Literary.

MAGAZINE REVIEWS.

LIPPINCOTT'S MAGAZINE for September contains a clear description of "The Australian Ballot System," which has created so much discussion in this country, and has served as a model for numerous ballot reform bills introduced in different State legislatures. Australia took the lead in reforming abuses existing in all the British colonies under the old system of *viva voce* voting. Francis S. Dutton, of the South Australia Legislature after several years of agitation, introduced a bill at the session of 1857-58, which, after some modifications, became a law. The system has spread all over Australia, and has extended to Europe and America. It has never been discarded by any community that has tried it. Briefly, its provisions are as follows: All nominations are received by a designated officer at a fixed time before each election, and the names of all candidates are posted and advertised at the public cost. The ballots are printed by the State or local government, are all alike, and contain the names of all candidates to be voted for, together with a space for the insertion of other names if the voter desires to bestow his franchise on other than the regular nominees. Opposite each name is a blank square where the voter can indicate his choice by making a cross. Specimen ballots on colored paper are posted up outside, and cards of instruction as to the marking are provided. The voting is done inside a room provided with small shelves placed in compartments formed by wooden or canvas partitions. These compartments and the ballot-box are within a guard-rail, and at least six feet distant from it. The voter passes the guard-rail, receives his ballot, and retires alone to a compartment, where he marks his ballot, folds it so that the marks cannot be seen, deposits it and leaves the inclosure. In the case of blind or disabled persons, or of illiterates, an election officer, or, better, two of different parties may assist the voter to prepare his ballot, the ballot being so indorsed. [In the case of the latter class, in this country of free schools and unlimited educational advantages, any man unable to read and write the English language should be deprived of the right of suffrage. Placing the ballot in the hands of such persons is one of the greatest menaces to a free government. EDS.] There are numerous advantages possessed by this system over the one to which we are accustomed in this country. The ballot is absolutely secret, and no one can know how the elector voted unless he himself chooses to reveal it. This strikes at the very foundation of the power of the "machine" in politics. It makes the elector independent of any influence that might be exercised over him by any person or corporation interested in the way he may vote. It will be likely to do away with bribery, for if a voter was paid for his vote, the buyer has no means of knowing whether the contract was fulfilled except as he trusts to the word of the voter, and this he will very likely hesitate to do. It also impresses upon the voter a sense of responsibility by compelling him to make a selection of candidates for himself when it is just as easy to vote for one as another. The system also renders it easier for an independent candidate to secure an equal chance at the polls. The government pays all election expenses, so that a poor man has an equal chance with a wealthy opponent. Once nominated, a candidate cannot be "traded off" or "sold out," and any one familiar with American politics, knows how much is implied in this. The best proof of the efficiency of the system to accomplish the desired reforms is found in the fact that it has steadily been extended, not only throughout Australia and New Zealand, but also through Scotland, Ireland and Wales, Canada and Belgium, while some features of the system have been introduced in several other European countries. In this country, Louisville, Kentucky, was the first to put the system in operation, the election last December being held under its provisions, and showing a wonderful improvement in purity and freedom. Massachusetts was the first to adopt the system for the whole State, and several other States have followed her example. The governors of New York and Connecticut have each vetoed measures passed by the legislatures. Similar bills have been introduced into the legislatures of more than half the other States. The adoption of this or some similar system seems to be only a question of time. Edgar Fawcett contributes the complete novel, a romance entitled "Solarion." The fourth and last of the "Recollections of George W. Childs" is given, and deals with "the treasures" of his library. It is needless to say these are rich and rare. Some of his closing words are worthy of being remembered. "The greatest pleasure in life is doing good to others..... Being generous grows on one just as being mean does." "The Log College and early Presbyterianism in Pennsylvania," gives an interesting account of one of the earliest institutions of learning in the colonies. J. B. Lippincott Company, Philadelphia.

SCRIBNER'S MAGAZINE for September has the last of the series of 12 railway papers by H. G. Prout, editor of the Railroad Gazette. Under the heading "Safety in Railroad Travel," he describes those appliances which tend to make traveling by this method the safest of all known, unless it be by the primitive one of walking. From the statistics given of the number of passengers killed and injured in a single year, a person may reasonably calculate on riding 51,000,000 miles before being killed, or 12,000,000 miles before being injured. In other words, he might travel 30 miles an hour for 194 years before being killed. The most important appliance is the brake. Stephenson's steam driver-brake was patented in 1833, and although it never came into general use, the same principle is applied on many engines in use at the present day. The automatic air-brake is used all over the world, the Westinghouse being described as representing the most approved type. Different kinds of brakes are illustrated and described. Next to brakes in importance are signals. These have been used in great variety, but within the past few years the semaphore signal has become the general standard in the United States. The system of interlocking switches is very clearly described and illustrated. The most important signals to the general public are those which protect grade crossings, as statistics show that there are more deaths here than among passengers carried. There are several methods of guarding these dangerous places, the most common being the well-known arm-gate. Some space is devoted to heating and lighting cars, to couplers, and other devices intended for the safety both of the passenger and the employé. Some illustrations of wrecks suggest that in spite of all precautions, accidents will sometimes happen. "Night Witchery" by W. Hamilton Gibson, tells of the sights, sounds and smells of a summer's night in woodland vales, in a witchery of words that betrays the alert and enthusiastic lover of Nature. Harold Frederic begins a serial story entitled "In the Valley." It opens with one of the last raids of the French and Indians into the Mohawk Valley. The first chapters promise a very interesting story. The series of articles on fishing is concluded by an account of an excursion up the Nepigon River, in Canada, a very attractive spot for the angler. Lieutenant W. W. Kimball, U. S. N., describes "The Small Arms of European Armies," and by the aid of numerous illustrations, gives a clear idea of the murderous weapons with which the Old World soldiery are equipped for the wholesale slaughter of their enemies. Andrew Lang contributes a eulogy of Alexander Dumas. "The Fitting School in American Education" forms the subject for a discussion of the different kinds of preparatory schools. "The Master of Ballantrae" by Robert Louis Stevenson, which has been running since November, will be concluded in the October issue. Charles Scribner's Sons, New York.

OUR readers will remember that in our review of the August St. Nicholas, we left Tom, one of the Professor's party who were spending the vacation among the Florida Keys, floundering in the water making an unsuccessful attempt to stop the progress of a huge shark which they had impaled upon the grains. A month is a rather long time to leave a boy in such a predicament, but we are glad to learn in the September number that he was finally rescued, and the shark which proved to be 10½ feet long was killed. The party continued their explorations, discovering all sorts of curious things, and having all manner of adventures, in one of which Tom had a very exciting experience with a curious marine animal called a "Portuguese man-o'-war." "W. Jenks's Express" is a very touching story of a 10-year-old boy whose father failed in business, and who started in the express business with the donkey-cart he had been given for a plaything, all to "help father and mother." He did help them very materially, but in an entirely different way from what he expected. "My Deer-Hunts in the Adirondacks" is a story of a boy's adventures with a party of campers in the Adirondack region when it was more of a wilderness than now. "The Story of Turk" is a pathetic tale of a noble St. Bernard dog which lost his life in protecting and guiding monks in that mountain fastness. "Modern Harbor Defenses" are described and illustrated by Lieutenant W. R Hamilton. "The Bunny Stories" tell of Deacon Bunny's purchase of a mule, and the mishaps which happened to the younger bunnies in consequence. "Helen Keller" is the story of a blind girl and tells of her education in the Perkins Institution for the Blind, in Boston. There are other interesting short stories, letters, etc. The Century Co., New York.

Indust'l Societies.

INTERSTATE GRANGE PIC-NIC EXHIBITION, WILLIAMS GROVE, PA.

(RURAL SPECIAL REPORT.)

A fine site and large attendance; an assemblage of farmers, pure and simple; a fine display of implements; the principal speakers.

THE sixteenth annual Interstate Picnic Exhibition opened at Williams Grove, Pa., Monday, August 26th, and continued during the week. It was attended by tens of thousands of farmers from all parts of the country. They came in all sorts of ways—some by trains, others in stages and wagons, and hundreds walked for miles to get to the grounds. It was a farmers' pic-nic, and not a gathering of people from cities and towns to see horse-racing and the like. The grangers came, not to speculate, but to talk over matters of interest, and to see, and learn and trade. This made it one of the most satisfactory exhibitions from a business standpoint, ever held in this country. Everybody seemed to accomplish what he went to the pic-nic to accomplish, and came away tired but well pleased.

Williams Grove is a wonderful place, and the Cumberland Valley Railroad Company has done well to secure a 15-year lease of the grounds. It is a low strip of land lying between a creek and a mill-run, and covered with primeval forest trees of enormous size. It is level, but not marshy or wet, and the dense shade made it very cool even during the past week. Those who remain over-night occupy the tents, which are arranged in a semi-circle around the lower part of the grounds, and adjoining the creek and mill-run.

The implements are displayed along avenues laid out among the trees, and the visitor may wander along these avenues and not see the same thing twice. On every hand we see familiar names and faces, and implements which are used by almost every farmer in the country. On the most prominent corner appeared the name of "Jones of Binghamton." Mr. George Jones was on hand to introduce the celebrated scales of the world-renowned firm and "pay the freight." The George Ertel Company were represented by Mr. Turner, who showed the working of their hay presses. He made a number of sales. Dederick's new steel press was also shown in operation. The Geiser Manufacturing Company had a great number of traction and portable engines on the ground. One of their traction engines was tested repeatedly by running it over a log at least two feet square. A gang of plows drawn by one of their engines attracted much attention. It was paraded around the grounds led by a band and followed by a great crowd of men and boys. Messrs. Hench and Dromgold were kept busy selling their new harrow, the chief merit of which is a ratchet attachment of the tooth to the frame, an arrangement which lengthens the life of the tooth for several years. The Johnston Harvester Company made a fine display in their new headquarters. Mr. Henderson of the Richardson Manufacturing Company, was kept busy showing and selling the new Worcester Buckeye Mowing-machine. Among the dozens of well-known exhibitors I noticed the names of P. P. Mast Company; Foos Manufacturing Company; Waldron and Sprout; Keystone Manufacturing Co.; Eureka Mower Co.; S. S. Messenger Co.; Vermont Farm Machine Co.; A. Blake Co.; Lister Bros., and many others equally well known. Among the novelties were the Crane Lime-spreader, an "umbrella" tent, a combination hay-tedder and rake; a new and cheap brooder and many other labor-saving devices and implements. The "Odorless Phosphate" was shown by the patentee, Mr. Jacob Reese. It is somewhat similar to what is known in England, as "basic slag." It is a phosphate made by treating the steel ore with a lime and extracting the phosphates from the ore. This forms a combination rich in phosphoric acid (21 per cent.) and lime (45 per cent.)

The Horticultural Building was filled with fruit. Mr. Wm. M. Benninger, the nurseryman of the State Grange, was on hand and did an immense business. Large audiences attended the meetings in the mammoth auditorium. Among the distinguished speakers were the Hon. J. H. Brigham, Worthy Master of the National Grange; Prof. A. J. De Voe, the celebrated meteorologist; Hon. W. A. Armstrong, Master of the New York State Grange; General James A. Beaver, Governor of the State: Wm. M. Benninger, the distinguished horticulturist; Dr. Willets, Assistant Secretary of Agriculture; Mortimer Whitehead, Lecturer of the National Grange, and many others who spoke on subjects relating to the Grange and Agriculture.

Miscellaneous Advertising.

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CATALOGUES, ETC., RECEIVED.

FERTILIZERS.—Bulletin No. 5 of the Mississippi Agricultural Experiment Station is devoted to a consideration of the various manures and fertilizing materials to be found in Mississippi. As might be expected, a good deal of space is given to the proper methods of utilizing cotton seed and its products, while stable manure and the various marls found in the State are carefully discussed. Some of our best farmers will not find much that is new in the pamphlet, but it serves the purpose for which it was intended admirably.

BAKING POWDER BULLETIN.—The U. S. Department of Agriculture has been making careful investigations of the various baking powders sold in America. We receive an "Advance Slip" announcing the bulletin which is to give the results of the investigations. This seems to be the first work of the Department of Agriculture editor. Twelve powders were analyzed. A mere statement of the chemical analyses will not help us much in determining what we want. We hope the complete bulletin will give some simple facts about the chemistry of baking powders, showing why and how they act. Then readers can tell why "available carbonic acid" is used as an index of value. We are informed that there is no cause for any general alarm lest the American people should suffer injury to health from the use of baking powders. The following quotation from the bulletin concerns what the R. N.-Y. considers the most important question concerning baking powders.

"Although the investigations show that even with the best of tartrate powders the residue remaining in one loaf of bread prepared with it was of the same character as Seidlitz Powder and in quantity exceeded that of an ordinary Seidlitz Powder by over 50 per cent.; still in this, as in most cases, the character of the residue in the proportion found can hardly be regarded as generally hurtful. An exception ought to be made in regard to the class of powders containing alum to which there is more serious objection; but even in regard to that class there seems to be some difference of opinion."

After this statement we may reasonably expect that some of the baking powder people will advertise their goods as a sure cure for biliousness.

It appears that the American people pay, yearly, some $25,000,000 for baking powders. The cost of these to the manufacturers is some $8,000,000. Can we save any portion of the $17,000,000 profit? We might mix our own baking powders and save part of it perhaps. This would probably be about as satisfactory as the home-mixing of fertilizers. By the way, there is no reason why the different makers of baking powders should not be compelled to print an analysis on every can just as fertilizer manufacturers are compelled to print an analysis on every bag. One good result of these investigations will be found in the fact that many people will study the chemistry of baking powders till they understand what is needed.

WHEAT GROWERS' CONVENTION.—Last week the R. N.-Y. referred to the proposed gathering of wheat growers, and spoke of some of the objects desired by those who will attend. At the request of several friends, we now publish the call for this meeting. This call is dated at Topeka, Kan., signed by Walter N. Allen, president, and J. P. Limeburner, secretary.

"WHEREAS, That by reason of new systems in business and the combinations against us, we are not, as an agricultural class, enjoying equal privileges with the manufacturing and commercial classes, and from the inequality of exchange have for the past 10 years been sorely oppressed by the low prices of farm products; and

WHEREAS, In consequence of the depressed condition of the wheat market and the conflicting reports of the world's supply of this cereal, be it therefore

Resolved, By the charter members and stockholders of the Farmers' Federation that a convention of wheat growers of the Mississippi Valley, be and is hereby called to meet at St. Louis, on Wednesday, the 23d of October, 1889, for the purpose of discussing measures for relief, and to form a wheat growers' association.

Resolved, That the apportionment of representatives of said convention be one delegate from each county in the respective States and Territories included in the Mississippi Valley. And that the primaries to appoint delegates to said convention be held at the county seats on Tuesday, the first day of October, 1889; and that we request that the proceedings of said primaries be immediately forwarded to this office, Topeka, Kansas.

Resolved, That any farmer in the United States or Territories who has grown 500 or more bushels of wheat the past year, and shall certify the fact to the president before the meeting of the said St. Louis convention, may be admitted as a delegate to said convention. Also, all editors of the agricultural press of the United States shall be entitled to seats in said convention.

Resolved, That we advise the farmers of the Northwestern States and Territories to hold their wheat off the market until after the meeting of the St. Louis convention of wheat growers, unless such prices be offered as will justify a reasonable profit over the cost of production, or $1 per bushel for wheat. Farmers assenting to this suggestion are requested to send their names to this office with statement of bushels of wheat on hand, grade, etc.

EXPERIMENT ORCHARD.—Bulletin No. 4 of the Maryland Experiment Station. This station seems determined to make a specialty of testing and comparing varieties of fruits, vegetables and forage plants. An experiment orchard containing apple, peach, cherry, apricot, pear, plum, nectarine and quince trees was set out last December. The object in planting this experiment orchard seems in every way admirable. It is proposed to test the standard varieties that are said to do well in various parts of the State, and to compare stock from Northern and Southern nurseries. For example, trees from nurseries in New York and Maryland have been set side by side and will be closely watched during their development. Again, efforts will be made to compare the effects of various fertilizers on fruit trees. Such an experiment ought to be valuable and we hope it will be faithfully carried out.

EXPERIMENTS WITH WHEAT.—Bulletin No. 7 of the Kansas Experiment Station. This is a valuable pamphlet. Prof. Shelton is an interesting writer; whatever he has to say is practical and business-like. Wheat is an important Kansas crop—a very profitable crop when grown in connection with other crops and as a part of a regular system. It is only when it is cultivated as a specialty that it becomes a friend of mortgages and hard times. Prof Shelton recognizes this fact. He says:

"Wheat-raising upon a large scale and carried on as a specialty deserves condemnation in Kansas, as elsewhere; but when the crop is grown as a part of a system in alternation with corn, oats, grass, and other crops, it is almost certainly a profitable one to the farmer. It is one of the few crops that give returns in actual cash, and this cash comes at a season when ordinarily there is little upon the farm that is salable. The indications now are, that Kansas farmers will "go into wheat" extensively again the coming fall, and invite the disasters which have before followed the special cultivation, on a large scale, of this cereal. One of the most discouraging facts to those who are striving for real and substantial progress in agriculture is the almost constant need of attacking old fallacies in practice, which it had been thought were safely disposed of years, perhaps generations before."

Prof. Shelton's experiments are carried on with the idea in view that wheat is to be used as an associate crop, not a special one. It is often claimed that wheat affords shelter and support for chinch bugs early in the season and that these pests pass to neighboring fields of oats or corn and seriously damage them. In reply to this, Prof. Shelton states that chinch bugs have never seriously damaged his crops in good years. Will it pay to pasture wheat in the fall? If it can be done without injury to the crop, it is evident that the farmer keeping a good herd of stock could turn his wheat fields to a profitable use. Prof. Shelton's experiments seem, on the whole, to indicate a loss from pasturing, but it is quite evident that he thinks well of the practice under some conditions. A number of experiments were conducted with a view to determine the best sorts of wheat for Kansas. Prof. Shelton says that the testing of varieties is the most unsatisfactory work that comes to the experimenter. He therefore cautions his readers against considering the facts in his table of results as anything more than suggestively useful. To sum the matter up, he says:

"The wheats that are really successful in Kansas, for a series of years, so far as my observation has extended, are reds, soft or hard, and all agree in the possession of the qualities, earliness, hardiness, and compactness of habit. The early-ripening sorts are liable to escape our too-fervent suns of late June and the ravages of the first brood of chinch-bugs; while their compact habit and abundant stooling furnish the dense, moist shade, which repels the mature "bugs" by which alone these varieties are likely to be damaged."

After some experience with manures and fertilizers on wheat, Prof. S. concludes that the better class of Kansas soils, when well farmed, during favorable seasons, require little in the way of artificial stimulation. The fertilizers he applied to his experiment plots did not pay a profit. Quite an interesting experiment with salt as a fertilizer is given. During recent years salt has been discovered in great abundance in various parts of Kansas. Since these discoveries great expectations have been raised regarding the influence of salt on Kansas crops. So much has been said on the subject—mainly by those who most desired that Kansas salt should increase Kansas crops—that farmers are in danger of losing sight of the true value of salt as a manure. Last year on the college farm at Manhattan, the use of salt gave a gain at the rate of nearly five bushels of grain and 800 pounds of straw per acre. This year the salted plots gave no increase of grain and but a slight increase of straw. This experience serves to emphasize what experimenters with salt for ages have taught. It is a special manure in the sense that it must be used on certain soils and in certain seasons to give best results. It is better in a dry than in a moist season and gives better results on a dry, porous soil than on a stiff clay. Many farmers have advocated salt as a useful agent in destroying chinch bugs and other insects Prof. S. states that, with him, the salted portions of the field suffered worse from chinch bugs than the unsalted portion. But the salt *did* make a brighter, cleaner straw—that effect was undoubted.

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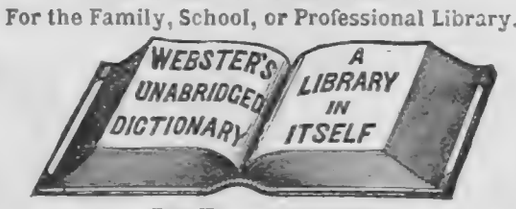

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THE FARMER.

THERE is a farmer who is Y's
Enough to take his E's,
And study nature with his I's
And think of what he C's.

He hears the chatter of the J's
As they each other T's,
And Z's that when the tree D K's
It makes a home for B's.

A pair of oxen he will U's,
With many haws and G's,
And their mistakes he will X Q's,
When plowing for his P's.

In raising crops he all X L's,
And therefore little O's,
And when he hoes his soil by spells,
He also soils his hose.

—*Agricultural Epitomist.*

AT a stand still—the Pea-nut business.—*New York News.*

ONE of our exchanges advertises for good, strong men to shift shade for lawn loungers.—*Bradford Republican.*

FOND MAMMA: "What are you drawing on your slate, pet?" Little Nell: "I was tryin' to draw my dolly; but I dess I'll tall it a tlothes-pin."—*New York Weekly.*

THE USES OF WORDS.—Lawyer's Clerk: "Will you take a chair, Miss?" Boston Girl: "No thank you, I wouldn't know what to do with it. But I'll sit down if I may."—*Life.*

A CERTAIN preacher discoursing upon Bunyan and his works, caused a titter among his hearers by exclaiming: "In these days, my brethren, we want more Bunyans."—*Pacific Rural Press.*

LANDLADY: "No, sir, we cannot admit you; we take only single gentlemen." Married applicant: "Well, ain't I a single gentleman? What d' ye take me for—a pair of Siamese twins?"—*Puck.*

THERE were 19,912 patents issued at Washington last year, and yet a woman still uses a dollar and a half pair of shears to pry open a can of peaches. Genius seems to be misplaced to a considerable extent.—*Norristown Herald.*

MRS. BROWN (at Mrs. Smith's tea): "Oh, dear! that dreadful Miss Smith is singing again. I wonder what started her?" Tom Brown (aged seven): "I dropped a nickel down her back when she wasn't looking."—*Michigan Farmer.*

NOTHING seems to be too mean for some men. There is an old fellow in Maine who is imposing on his hens in a most shameful manner. He has put an electric light in the henhouse, and the hens lay day and night.—*Burlington Free Press.*

ANXIOUS MOTHER: "I, wish Susan, that when you give baby a bath you would be careful to ascertain whether the water is at the proper temperature." Susan: "Oh, don't you worry about that, ma'am; I don't need no 'mometers. If the little one turns red, the water is too hot; if it turns blue, it's too cold, and that's all there is about it."—*Boston Commonwealth.*

STANDING ON HER DIGNITY.—Husband (alarmed): "Emily, there seems to be a smoke coming up through the floor. Run and tell the lady on the flat below. Something's afire in her part of the building! Quick! Quick!" Wife (cold and stately): "Cyrus, I'll never do it in the world. We've lived three months in this flat, and she has never called on me."—*Chicago Tribune.*

THE BUSY SEASON.

HIS MAJESTY: "Well, boys, I'm glad to see you. You've kept things nice and hot. I've just returned from the Seaside Resorts, U. S. A."

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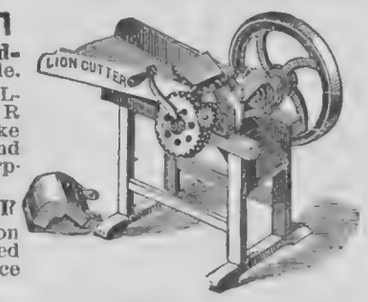
THE BEST Ensilage & Fodder Cutter made. Also GALE'S CYLINDER and LEVER CUTTER. We make besides, the old and popular self-sharpening FEED CUTTER



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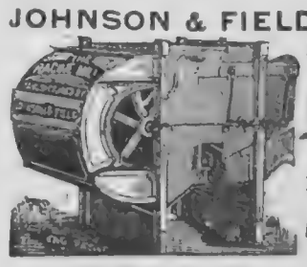

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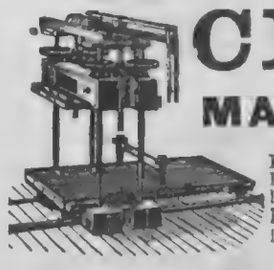

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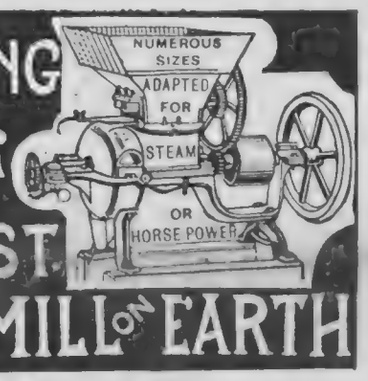

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SAFETY BOTTOM and other Practical Devices to prevent breakage should iron accidentally get into Mill. GRINDING PLATES reversible, self-sharpening, double the capacity of all others. Sold on trial. All Mills fully guaranteed. Simplest, lightest running, strongest, fastest grinding. Send for circulars.

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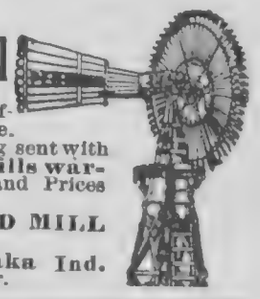

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BUCKEYE GRAIN & FERTILIZER DRILL

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With the Celebrated GLASS FERTILIZER DISTRIBUTOR. Greatest Improvement of the Age. *CENTER GEAR.* Ratchets in Ground Wheel. New LEVER for shifting the HOES. One-half the hoes forward and the other half back. This combined Drill has no equal on the market and can not fail to be appreciated by any farmer who sees it.

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P. P[illegible] & CO., SPRINGFIELD, OHIO.

Also manufacturers of Lubin Pulverizers, Buckeye Riding and Walking Cultivators, Buckeye Seeders, Buckeye Cider Mills and Hay Rakes.

Established 1852. JACKSON BROTHERS

NEW YORK STATE DRAIN TILE AND PIPE WORKS, MAIN OFFICE: 76 THIRD AVE., ALBANY, N. Y.

ROUND, SOLE AND HORSE-SHOE TILE. Over 13 inches long. By cargo or smallest quantity. Our new improved machinery makes superior round and sole tile, excelling anything offered heretofore. First Premium wherever exhibited. Price-list on application. Vitrified Glazed Pipe and Tile Machines.

HOOVER POTATO DIGGER.

HUDSON, O., Sept. 2, 1889.

I dug 100 bushels last week with my Hoover. No trouble to speak of. Ground in terrible condition—so hard—but the Digger goes right through.

T. B. TERRY.

See the HOOVER at the State Fair.

Sixteen-page circular free. Mention this paper.

HOOVER & PROUT, Avery, Ohio.

IT IS A [illegible] ACCEDED FACT that there is no better place in the United States for Nurserymen to sort up. Dealers to pack, or Planters to order [illegible] at the PAINESVILLE NURSERIES. A full line of

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Remarkably fine and complete stocks of

PEARS, PLUMS, PEACHES, CHERRIES, APPLES, QUINCES, APRICOTS, MULBERRIES, GRAPEVINES, SMALL FRUITS, ETC., ETC.

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THIRTY-FIFTH YEAR. 700 ACRES. 24 GREENHOUSES.

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SHERWIN BROS'. SAFETY HOLDBACKS

FOR CARRIAGE and CUTTER [illegible]. Self-unhitching—finest thing out. Sample Pair, with Straps, $1.25, prepaid. Agents wanted. Address

SHERWIN BROS., Brandon, Wis., or Lincoln, Neb.

LOW-DOWN WAGON on high wheels—only Practical, Common Sense Farm Wagon in the world. Send for 28 reasons why.

GARDINER IRON WAGON CO., Mullica Hill, N. J.

PILES. Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository. Sufferers will learn of a simple remedy FREE by addressing TUTTLE & Co., 78 Nassau Street, New York City

DR SETH ARNOLD'S COUGH KILLER CURES COUGHS AND COLDS. PREVENTS CONSUMPTION.

O. D. Cook, of Woonsocket, R. I., says: Dr. Seth Arnold's Cough Killer cured me of a very severe cough in a short time. I heartily recommend it for all it claims to do.

IT IS INVALUABLE to all who would preserve their health. 25c., 50c. and $1 per bottle.

ALL DEALERS Sell It.

Miscellaneous Advertising.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XLVIII. NO. 2069. NEW-YORK, SEPTEMBER 21, 1889.

PRICE, FIVE CENTS.
$2.00 PER YEAR.

[Entered According to Act of Congress, in the Year 1889 by the Rural New-Yorker, in the Office of the Librarian of Congress, at Washington, D. C.]

Horseman.

FRENCH COACH STALLION FRANCONI.

THE picture of this fine horse, shown at figure 235, is said by a good judge of such work, to be "the finest specimen of photo-printing" he has ever seen. We are sure our readers will agree with him that the picture is very life-like and clear—more natural and true to life than any human eye or hand could draw it. There is but one criticism that can possibly be made concerning this picture. The horse stands in such a position that his head, neck and shoulders seem heavier than they really are. Any horseman, however, can readily see that this is due to the position of the horse.

Franconi, 189, is owned by Messrs Smiths, Powell and Lamb. He is an imported horse foaled April 14, 1883. He is considered one of the finest specimens of the breed now in this country. He stands 16¼ hands high and weighs 1,400 pounds. He has the typical French Coach horse characteristics:

"Blocky, compact, with very fine head, neck, eyes, ears, with superior shoulders, short, well coupled back, excellent quarters, with well arched ribs, round full barrel, full chest, superior lung power, smooth, clean, hard limbs, the best of feet, with high, straight, firm knee action and splendid road gait."

There is no class of horses that sell so well in the New York City markets to-day as shapely and well-colored coach and carriage horses. There is always a demand for such animals, and the chances are that this demand will increase rather than diminish. It occurs to the R. N.-Y. that this is a profitable field for Eastern farmers to enter. The hilly Eastern farms from which the beef cattle have been driven by the trade in dressed-beef, cannot profitably produce heavy draft horses, and the trotter requires too much time for training. Why not coachers and carriage horses? The R. N.-Y. believes that it will be hard to find more profitable live stock for Eastern farms than grades out of good farm mares from such an animal as we have pictured. There are many reasons why French Coach horses should be selected for the production of salable grades. They are unquestionably very strongly bred and impart their prominent characteristics to their progeny. They are of fine size, usually well proportioned, with strong, cordy limbs, fine heads and necks, intelligent faces, good backs and loins and good, roomy chests, and the finest kind of action such as is desirable in a fine, showy coach horse They are also speedy enough to be desirable. They are hardy and seem to adapt themselves to any part of our country where they have been introduced, and while the best crosses are made on large coaching mares, when crossed on the common mares of the country, the get are of fine size and good action and make horses that readily sell at good paying prices both for the city carriage or coach and for the general purposes of the farmer. The grades are in demand, especially by parties supplying city trade. They are kind and gentle, require no especial training and they can be broken to drive quite as easily as Clydes. We believe the grade Coach colt will sell for more money and more readily than the grades of either Clydes or Percherons among the general public, though this might not be the case in a purely agricultural community. Breeders write us that they do not recall a single worthless colt of this breed, and they have been crossed on all kinds, styles and qualities of mares.

FRENCH COACH STALLION, FRANCONI, FROM NATURE. FIG. 235

THE SHETLAND PONY.

AWAY far beyond the north of Scotland, in the bleak, wind-swept Shetland Isles, is the home of the Shetland pony or Sheltie. It is the product of its environment, which necessarily makes it small and hardy. Of the 100 Shetland Islands, comprising about 450 square miles and scantily supporting a population of about 30,000, not more than one-fourth are inhabited. Their bold and precipitous coasts vary in hight from 500 to 1,200 feet. The rugged, rocky interior is not much higher, and is generally covered with scanty herbage or, more commonly, with a thick coating of moss, the only tolerably fertile soil being in a few valleys opening on the bays in the larger islands. A northern trend of the Gulf Stream temperers somewhat the extreme cold of the islands due to their far northern latitude, but for a large part of the year the weather is wet and wildly tempestuous and fogs are heavy and frequent. Like the usual products of an inclement climate and sparse means of subsistence, all the live stock of the group are very diminutive, and of them the Shelties are much the most important. Great numbers of these are bred on the heaths and niggardly pastures of the interior, their rough, shaggy coats and vigorous constitutions enabling them to withstand all the severities of the long, bleak, dark, cheerless winters on the scantiest fare. When the depth of snow on the uplands prevents them from picking up a meager subsistence from the withered pastures, they make their way down to the sea-shore and manage to make as good a livelihood on the kelp and sea-weed tossed upon the tempest-beaten beach. So large has been the demand for these diminutive ponies of late that much more attention than was formerly given to the matter, has been recently bestowed on breeding and rearing them; but the conditions of the climate and vegetation of their birth-place still keep them stunted and hardy. When captured and tamed, they require little feed or care. They are the smallest variety of the horse, their hight varying from 34 to 44 inches, few reaching the latter size. They are round, close-ribbed with small, well-shaped heads; ears small; eyes large, bright and intelligent; neck short and thick, set off by a long, coarse mane; shoulders long and muscular; loins broad and well formed; quarters moderately large; back gently curving; legs and feet well formed and of a splendid texture; tail long and abundant; color chiefly bay, brown or a rusty black, chestnut and grays being extremely rare.

The endurance of Shelties is great and their strength is vastly disproportioned to their size. Indeed they can easily carry a man upwards of 150 pounds in weight if he can only arrange his legs so as to keep them off the ground. They can be easily trained and are affectionate and very good-tempered. Their amiability and size well adapt them for the use of children, with whom they are prime favorites. For years large numbers have been imported into England for the use of her aristocratic little ones, and of late years considerable importations have been made into this country, where they have brought remunerative prices. The exported animal, however, nicely clipped, neatly trimmed and well fed, presents a vastly more handsome though less picturesque appearance than did, erstwhile, the same spare-boned animal with coarse, shaggy coat, long, tossing mane, and sweeping, bushy tail in its inclement northern home. Our illustration, however, reengraved from the London Live Stock Journal, represents a Sheltie in his natural condition, except that he has somewhat more flesh than his untamed brethren usually carry. See page 622.

Hygiene.

FARM SANITATION.

The earth-closet a great sanitary device; how to manage one; "terrible examples" of the evils of well-water pollution from privy and stable-yard; a modern Cassandra's predictions also disbelieved; wisdom swerves not for ridicule; a salutary warning.

I WAS frightened, yes, really, frightened to learn from the Rural's "Brevities" of February 9th, that the earth-closet had but just got its first practical test at the RURAL homestead. The difficulty with earth-closets is, that the labor required to make them do their work nicely is either forgotten or grudged on the average farm—often enough at a terrible cost. To popularize much needed reform by the general introduction of the earth closet, the latter must be made at least possible expense and labor. We have not used a vault in 25 years, depending altogether on earth during that part of the year in which earth can be had unfrozen. A door at the back of the privy admits a box on runners or wheels where the building itself must contain the earth used. We have one in use that is simplicity itself. It stands at a considerable distance from the house, behind a tree that is overrun with vines in summer and

hides it. The seat is 14 to 16 inches higher than usual from the *ground*—not from the floor of the privy—so as to make more space underneath. There is a horizontal hinged door, made to turn up at the back. Earth is thrown in as needed from the rear by means of a shovel which always stands there. Whenever needful the earth is scraped out clean with the hoe, and as it is odorless, just like clean soil, no one dreads the job at all.

It makes several loads of good top-dressing per year. During winter coal ashes and sawdust take the place of earth. I wish some one who knows would tell how gypsum (land-plaster) answers the purpose. Nice people object—and with good cause—to the dust that flies up when the earth or ashes, especially the latter, are thrown in from above. We never use wood ashes. To throw it in from the back is much the best plan. A "hopper" can be put on the back of the building and be kept full of the absorbent; the receiving box should be put on castors or home-made wooden wheels and made to pass under the hopper by turning a crank or pressing a lever, the motion of which at the same time discharges a quantity of earth or ashes into the box, reversing the motion to bring back the box. Other devices that I like much better, especially for children, are attached to the seat-cover, charged with earth from a box in the building, and dump themselves by being shut.

My attention was drawn to this subject many years ago by some English writer, and my ideas were made practical by what befell some dear friends. While calling at Hill-side Farm, I was horrified to note that several days' heavy rains had flooded the whole back yard with a coffee-colored liquid that came from the privy-vault, the hog-pens, stables and manure heap.

"For mercy's sake!" I exclaimed, "Don't use water from your well, and do drop all other work and drain your yard and move some of those outbuildings."

"Pooh!" said my friend, "so soon as the ground thaws, it will absorb this offensive liquid, and in the mean time, don't you see what nice bridges we have laid to walk upon? It would cost from $10 to $20 to do what you propose and use up ever so much of the men's time, besides."

"But this polluted water will soak into the well and give you typhoid fever," I persisted.

"I'll risk it," was the laughing answer.

But within four months typhoid—malignant typhus, the doctor said—attacked the whole family except one daughter who was away from home. My friend lost her most promising son, her mainstay, and besides losing that most precious life, the other evils that sickness brings we can imagine. She became so deeply indebted to her doctors who lived 12 miles away and charged from $20 to $30 per visit—as they do to this day—that she had to give up the dear old homestead. However, she said that a place on which eight such usually healthy persons as they were would sicken in so short a ime could not be a healthy one, and she did not regret its loss.

Only two years before, their nearest neighbor—a relative—was showing me their fine farm stock and well-filled hog-pens when I noticed that they had placed their well in a "sag," at a point where it must needs receive all the drainage from the barnyard that lay high, dry, and warm in a cozy southeast hollow on the slope of the hill. The home stood near the foot of this hill, sheltered by it from cold, northwest winds, open to sunshine—a real snuggery.

"Oh pray, pray, do dig a new well out there, or there, or there," said I pointing out various places out of the line of drainage from barnyard and privy. "You will surely be sick, now that your outbuildings are all located in that hollow above the well; so surely as water runs down hill there must be poisoning of the water in your well from those things above it."

"Nonsense!" was the answer; "this well is 75 feet deep and there is no chance for any uncleanliness to leach through that depth of soil. It's an impossibility."

When only a few weeks later, this iron-constitutioned farmer lay deadly ill, the doctor's bill alone amounted to much more than the cost of digging a new well would have been. But that was not all: in autumn of the same year their only son had just such an illness and the mother died a year later from spinal meningitis. The father, his constitution weakened from typhoid fever with which he had begun the programme, soon followed her.

The son, left alone, married and moved away, and what was once the cheeriest home in the State to visit, now stands empty and desolate, making my heart ache every time I drive past it on my way to the Post Office.

It has not been very easy for me to bear all the ridicule heaped upon me for refusing to drink or use for cooking water from an average well; but I run down the steep hill at the foot of which a jet of pure, soft water comes out of the sand-stone and carry up the water with a conscience void of offense. I imagine that I *know* of a certainty what broke up the homes and families of those friends of mine, and I will take no risks.

E. S. LINCOLN.

The Sw mcherd.

COOKING FEED.

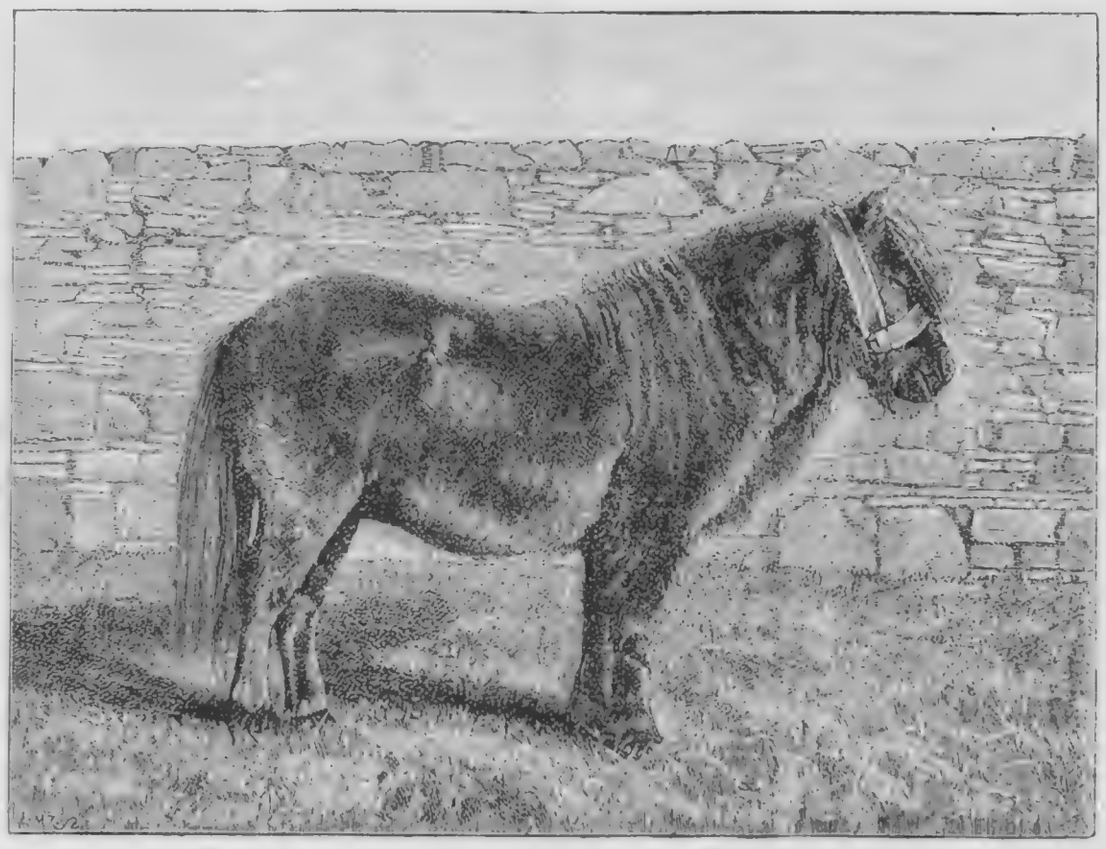
NOTES ABOUT THE PRACTICE

BY

FARMERS WHO FOLLOW IT.

IT PAYS FOR HOGS.

Some Doubt About Other Stock.



A SHETLAND PONY.

RE-ENGRAVED FROM THE LONDON LIVE-STOCK JOURNAL. SEE PAGE 621. FIG. 236.

OUR experiment stations have had considerable to say about the economy of cooking food for farm animals. Most of the experiments tried at these stations have given results unfavorable to cooking, and those who write for the farm papers generally use the figures gained by these experiments rather than the experiences of practical farmers. The R. N.-Y. has faithfully reported the conclusions of the experiment stations, all of which have stated that cooking feed will not pay. Now it proposes to give the other side. It is a fact that the business of the manufacturers of feed steamers and boilers is increasing all the time. Each year finds a greater number of farmers who cook and steam food for hogs and cattle. They are good business men, too, who understand the difference between loss and profit. It would seem that such men are well qualified to discuss the matter intelligently. The R. N.-Y. submitted the following questions to a number of these farmers. Their answers are given below:

1. Does it pay you to cook food for stock?

2. What kinds of animals do you feed?

3. What grains or fodder are most profitably cooked?

4. Have you ever made any experiments to show how well cooking pays you?

5. What is your daily practice of feeding?

6. How much stock must a farmer keep in order to have cooking pay him?

FROM ELI ROBERTS.

Cooking feed for stock does not pay for the trouble and expense except with hogs where they are confined on dry feed. I know they will do better on cooked feed once a day. My experience has been that hogs on dry feed (that is, corn and water without grass or swill of any kind) become costive and will not fatten unless they have a change of food. Here in Iowa corn is our main feed for hogs, and by feeding alternately cooked and raw feed we keep their digestive organs healthy. I have had a good deal of experience with hogs, in cooking feed. I keep from 200 to 400 head a year, but have never weighed my feed and pork when cooking feed; still I am satisfied that where hog raisers have not a variety of food, as in Iowa, it will pay to cook part of the feed. But I think where one has not so many hogs (say only 25 or 30) and can give them a variety of feed, such as mill feed or swill from the house, milk and dish-water, etc., or where the hogs get a little grass, it would not pay to cook any feed for them. A good clover field is worth more to hogs than any feed cooked in summer time. It doesn't pay to cook feed for other stock. For hogs only grain—corn, oats, barley, rye, etc.—can be profitably cooked. I have never made any scientific experiments in this matter. I cook my feed thoroughly and feed all the hogs will eat once a day. If I cook ground feed I feed it about as thick as it will run freely out of a bucket, and never feed it warmer than at a milk-warm temperature. I do not think it would pay to cook feed for less than 50 hogs. It is a good deal of trouble to fire up and cook feed every day and farmers are very apt to neglect it. I know of farmers who have bought steamers and never used them at all because doing so would cause too much trouble.

FROM W. E. PENDLETON.

I have read from time to time the long and startling array of figures against cooking food by the learned professors of agricultural colleges and directors of experiment stations, but still I keep on cooking feed, perfectly satisfied with the results without being able to bring the same amount of figures to explain the cause, partly from a lack of time and partly because, perhaps, I do not know enough. It certainly pays me to steam or cook feed from the fact that I can keep my hog stock for about one-half the outlay they would cost me did I attempt to feed them grain and roots without steaming, because my hogs will not eat roots raw and the grain costs too much to feed alone. Perhaps had I been able at first to get swill enough from private residences and hotels to feed my stock all winter, as I do in the summer season, I would never have been such an enthusiast for cooked feed as I am at present; but I could not, so I made my plans to raise roots, etc., to feed them in winter time, to save so much expense in grain; but after feeding grain and cut roots time after time, only to find the grain eaten clean up and the roots left in the trough, and hogs squealing for more feed, I set about to find a remedy, and I found it when I commenced to steam my grain and roots together. Then everything was eaten clean; the hogs were satisfied, and instead of shivering on cold days over cold feed, they got it warm and it did not take one-half the usual quantity to keep warmth in the animals, and it would, I am afraid take all the figures of all those learned professors and directors to cause me to change my mind and convince me that it does not pay me to cook my feed.

I cook it only for hogs, but still if I were keeping cattle, I would certainly connect one of the steam pipes with the water tank; but I hardly think I would attempt to steam food for cattle. My opinion, however, is in favor of hog stock as the most profitable stock to cook feed for. For the hogs one should cook every thing from early in the fall till late in the spring, then get them out-of-doors into the grass pasture, if one has such; if not, he should have yards out-of-doors, and feed sparingly of grain, but give plenty of soiling crops. Clover I think is the best, and peas are next. As for myself, I depend partly on grass feed and partly on fresh swill obtained mostly from summer residences every day.

In one sense I have made no experiments to determine how much the cooking pays, and yet in what is to me the main point I have. I do not have time to weigh the hogs; neither have I convenient means of weighing them to determine by long columns of figures the *pros* and *cons* of the matter; but, nevertheless, the hogs thrive, grow fat, are perfectly healthy and breed better. And, again, I say it does not cost me one-half so much to feed them when I use cooked feed, as it would if I fed a grain ration alone, nearly the whole of which I should have to buy.

My system of cooking I can easily explain: I have, first, a Purington steam generator burning either wood or coal. The first thing every morning the hog-man opens up the draft and gets a good fire going. After feeding all the hogs and pigs, he prepares a barrel of food holding about 50 gallons, turns on the steam and in from half an hour to an hour the feed is cooked, the time depending, of course, on the briskness of the fire. While the feed is being cooked the hog-man is preparing another barrel, cleaning out the pens, bedding down, etc. This work is repeated from three to five times every day, according to the number of hogs and pigs we have in hand. My ration now—and it has been the same since last fall—is steamed cabbage. We fill a barrel about one-third full of chopped cabbage, then put in a layer of grain—sometimes middlings, but mostly flour—and alternate layers are put in until the barrel is as full as it can be packed. We use from one to two bushels of grain to each barrel, the amount depending on whether the feed is for sows with pigs, shoats that I am fattening, or sows that are in farrow. The last are fed more lightly to prevent them from getting too fat. The cabbage will shrink about one-third when mixed and steamed in this way. The flour is bought from a cracker factory, and consists of fine flour sweepings which cost one dollar per barrel, and are the best feed for growing pigs I ever used. The cabbages would not have paid freight, cartage, and commission last fall and winter.

The hogs did not eat them well raw, but when steamed with a little grain they ate them and did wonderfully well on them. They paid me well for feed alone. Later on in the coming winter, I shall feed parsnips, turnips and small potatoes, mixed with grain and cut up fine. Pea-straw, hay and cured clover I fed twice each day. This I find sufficient with my line of stock, which consists of Yorkshire hogs. As to how much stock must be kept to make it pay to cook feed for them, in the Eastern States, where grain is expensive, it would pay all the way from the person who keeps one hog for his own pork barrel to the large pork producer or the large breeder of breeding stock, only, of course, each must regulate his apparatus for cooking according to the amount of stock kept. As to the needs of farmers of the great grain-producing States, I know nothing; but in this section, the piggery must be run in the least expensive way, and with some cooking apparatus the farmer who cooks his hog feed can use a great many unsalable vegetables and other things that would be otherwise wasted.

New London County, Conn.

FROM JOHN E. DAVIS & SON.

1. It pays us to cook feed for hogs which are the only stock we have cooked for. We find ground feed more profitable to cook than unground. The feed that gives as good results as any other, if not the best, is corn ground up cob and all, and thoroughly cooked. This well salted and with enough water added to make a slop, makes a feed on which any hog will get thrifty and improve.

The only experiment we have made is one in cooking. The feed swells and makes a larger quantity, and for fattening and feeding purposes this feed seems superior to any kind of dry feed we have ever fed.

We use a Purington Steamer, cook thoroughly two barrels of meal, containing about four bushels each, at a time. This is fed while warm, as warm feed is eaten with a much greater relish during the cold days of winter, than cold.

A good full feed twice a day keeps shoats in a good thriving condition; but fattening hogs should be fed oftener and get some dry feed to make their flesh more solid.

Ten or 12 brood sows or 30 or 40 shoats will pay for all the labor and expense of cooking feed, and we think that a given quantity of cooked feed will give better results than twice the amount fed dry. Cooked feed keeps brood sows in the thriftiest condition, loose and healthy.

After feeding cooked feed one month to our sows and shoats—in all numbering about 90—we considered they were enough better, than when fed on dry feed for the same time, to pay for the grinder and steamer, and the practice is paying us now as well as it did the first month.

Ames, Iowa.

FROM PAUL LANDMANN.

Cooked feed paid me well in the case of young hogs. I have never seen pigs grow faster than mine did on cooked pumpkins, potatoes mixed with bran, shorts or ground feed of any description. I honestly would not use any dry feed for my young stock during our long winters, nor would I use cold water. Cooked oats with potatoes or any roots make all my pigs feel happy in winter time. I do not use any warm food during the summer; but as soon as the ground is frozen I begin with warm slops. I save at least half of the feed in this way. I cook two barrels of mixed food in the morning and feed one in the morning and one in the evening as slop. The latter, if covered, will keep warm until evening. I have 15 brood sows and 20 shoats. My brood sows do very well. I have no complaint to make with regard to their losing their litters as they would do if fed on raw feed when corn only is fed to them during the winter.

Tyndall, Dakota.

FROM N. A. TOWNSEND.

I have not had as long an experience as some in feeding cooked feed, yet I believe there is no one branch of farming that pays so large a per cent. of profit as the steaming of food for growing animals. Since commenced steaming food for hogs—about four years ago—I find I can make them as heavy when they are from seven to nine months old, as I formerly did when they were from 12 to 15 months old, thereby making a saving of from 30 to 40 per cent. of the time of feeding, and lessening their liability to disease by the length of time saved in getting them to market, which is no small item here in the West where cholera, swine plague, worms and other diseases take our hogs off by the score.

I have never had any practical experience in cooking feed except for hogs; but my opinion is that it will pay as well for milch cows and calves as it will for hogs. I have never had any experience in cooking fodder except steaming a barrel of clover or Timothy as a relish or appetizer, which I believe answers the purpose of preventing disease better than anything in the way of medicines or cholera cures that I have ever tried, and I believe the feeding value of any kind of grain is largely increased by cooking, and certain kinds of vegetables that are almost worthless as food for hogs in their raw state, become excellent food when cooked, and make a decidedly healthier food than all one kind of feed fed raw.

I have never made any careful experiments to show the profits from cooking hog feed, but at one time I kept an account with my pigs to see whether it was profitable to raise them or not, and the results were very satisfactory. I had 44 pigs farrowed in May and June, which I sold on the first of November, that averaged 204 pounds each and which were raised at a cost of a fraction over 1¼ cent per pound. I bought my feed at the mill all ground; fed some bran and shorts, and also corn and oats ground together. I made a thin slop of some, and a thick mush of the rest. I did not charge the pigs with the slop from the house or the pasture, as other stock were running in the same pasture. I think this a very good showing, for if we can, by cooking or any other method, reduce the cost of raising any animal until it will make a good profit on the investment, it is just what we are all striving for—to get the largest amount of gain with the least possible cost.

The reason why farmers do not feed more cooked feed than they do is because of the time taken to cook it in the old way—with kettles—and the liability of burning thereby nearly destroying its value. Unless one stays with it and stirs it constantly, it is very liable to burn, and the cost of the time it takes to cook the feed in this way overbalances the increased value of the food cooked; but by cooking with a proper steamer, this is all obviated, as it does its own stirring and one can cook as much or as little as he pleases with no danger of burning.

I cook from one to three barrels at a time, the quantity depending on the amount of stock to be fed and the time of the year. I feed it slightly warm (not hot) three times a day. So far as my experience and observation go, it will pay to cook feed where there are three or four cows and 10 to 15 hogs, as a person can cook their feed and still do his usual share of work in the field. I know quite a number of farmers in this county who have been cooking their feed (or a portion of it), for the past two years, who claim that they save at least one-third of the feed besides having healthier stock and getting them to market heavier than when they fed all their feed in a raw state. It seems to me that the only question to be decided is what portion of the food needs cooking, for all with whom I have ever talked on this subject, claim that it pays to cook certain portions of their feed in order to secure a healthful change and also to get the best results.

Dallas Center, Iowa.

FROM J. F. COULTAS.

I have not used cooked feed for fattening purposes. I sell most of my hogs for breeding purposes, and have not had anything but culls to feed off. I use the steamer for cooking feed for brood sows. I use good bright clover hay cut with a feed-cutter, with either bran, shorts, corn-meal or ground rye and oats. I steam the hay and meal together, and find it a fine way to keep brood sows in a healthy condition through the winter.

Winchester, Ill.

FROM E. M. JENKINS.

I have been handling hogs for 15 years, and my experience has always been that for young hogs especially, it pays to feed cooked feed. I have not tested the matter by weighing the pigs and feed, but I think any intelligent breeder can see the difference very quickly. I begin to cook in the fall as soon as cold weather comes on, and continue to do so until the advent of warm weather and grass. And I always feed the stuff while it is warm. I think that the best feed consists of corn, oats and rye ground equal parts, mixed with bran, half and half. But for fattening purposes I simply cook the shelled corn, using the cobs for fuel, and once a week I give a feed of cooked bran with some oil-cake—say four quarts of dry cake to a barrel of cooked feed, and I always salt all feed. In my judgment, no matter how little or how much stock a man may have, it always pays well to fix up for feeding judiciously and for cooking feed, thus saving everything and avoiding all waste. Very little feed will be needed to keep up animal heat, as the feed, being warm, does that. One should feed three times a day and always give warm drinking water or at least take the chill off it.

Alexandria, Nebraska.

FROM S. B. PIKE.

It pays to cook feed. I do so for hogs, calves, and milch cows. I cook corn, oats, rye, barley, corn fodder, potatoes, and, in fact, all kinds of grains or roots. I find I can put on as much flesh with one bushel—32 quarts—of cooked corn as I can with 50 quarts of raw corn. I also tested cooking for a single cow, and having cooked four pounds of corn and oats ground together per day, got an increase of 16 per cent. in the milk, and of 19 per cent. in the cream or butter. The cow was fed and watered the same as usual in every way except that the grain was cooked. I also tested it on my driving horse, and found that he could do the same work on eight pounds of cooked corn and oats that he did on 12 pounds of raw, and he looked and felt better. I fed him the same number of pounds of hay in each case. For cooking I use a small feed steamer when I have to feed five hogs and upwards; and for a smaller number I cook sometimes on the stove, and sometimes with the steamer. I cook every day in summer as well as in winter, if I am feeding not less than one bushel per day, and if I am feeding less than that I cook every other day.

I can make it pay me to cook for one single cow or hog. In such a case I would cook on the kitchen stove; but I would run the steamer at a profit in cooking feed for five cows, or five hogs or four horses.

I claim that it pays me from 20 to 40 per cent. to cook roots, the profit depending on the kinds of stock I am feeding. One bushel of steamed potatoes I value more highly than I do one bushel of raw corn for young pigs or calves. I used not to have time to cook; but according to my experience during the last four years, if I have not the time, it would pay me to hire some one to do it for me for a lot of 20 or 25 hogs. I want my stock fed just at the same times each day. I usually feed night and morning as regularly as it can be done. One of my neighbors put 52 pounds of flesh and fat on a 250-pounds hog in 30 days on cooked corn, and 30 pounds on one fed on raw corn. In all my experience I have not known a single farmer who makes a success of his business who does not own that it pays him to cook grain for his hogs if he has once tried it. In cooking with my steamer all that is needed is to put in four or five pails of water and build the fire, and put the feed into the barrel or tank. I usually do it after feeding in the evening, and it is all ready to feed in the morning, and it pays me from 20 to 33 per cent. to do it.

Ingham County, Mich.

A MARIN COUNTY, CALIFORNIA, DAIRY. SEE PAGE 624. FIG. 237.

THE INTELLIGENCE OF THE HOG.

PORK RAISING IN THE SOUTH.

HENRY STEWART.

Great intelligence of hogs; fine opportunities for hogs in the South; superiority of their meat; folly of buying Western pork instead of raising enough at home; life of a Southern hog; a profitable experience in hog raising; a sensitive conscience; "pinters" given by the Northern "schoolmaster abroad" in the South.

THE man who thinks a hog is without intelligence makes a great mistake. Mr. Berghaus has given the readers of the RURAL a good lesson in this respect. There is an air of thoughtfulness about his drawings, in a late RURAL, which at once attracts the experienced pig breeder and feeder, and he truly represents a typical animal of this ill-used and misrepresented race. In its exhibitions of instinct and intelligent actual reasoning the hog comes next to the horse, and for cuteness quite surpasses even that noble animal. The trouble with pigs most commonly is that their owners are themselves deficient in intelligence and do not give their pigs a chance. All the difficulties in rearing pigs and bringing them to market seem to me to be incident to the restraints put upon them by their owners. For instance, when running at large on a range a sow never kills her young pigs, and always provides her brood with a warm, dry, safe and healthful nest. I should have liked to have contributed some "pork points" to those interesting experiences given by several contributors in the RURAL of August 7, in regard to the management of these animals in the South where the hog has a good deal of freedom and evinces intelligence of no mean order. But here, too, the hog has not a fair chance and is subjected to many drawbacks, in consequence of which he comes to undeserved grief and reproach. It is well known that the South buys most of its pork from the West where the hogs are spoiled by too much corn feeding and run to unhealthful and unwholesome fat—unhealthful for the pig and unwholesome and unprofitable for those who consume the meat, or rather grease. The common Southern hog is usually of the razor-back or slab-side variety. But the meat of these pigs is far better than that of the rotund, barrel-shaped Western hogs, without any head or neck to speak of and not enough muscle on their frames to carry around their load of fat. Southern farmers are now paying 12 to 15 cents per pound for Western bacon, while the very best of pork can be produced for two or three cents per pound, or even less, in such favorable localities as the mountain region, in an average of years. The pigs here live in the woods winter as well as summer. They choose an open place for their nests in some sheltered place, where they gather leaves and brush into a broad heap elevated a foot or more above the ground, and therefore dry and warm. They do not go into hollow trees or caves where a man would put them, if he could, for shelter; and in this they show more intelligence than their owners, for this sort of nest would soon become filthy or muddy, and would not dry as the leaf-bed does after the heavy rains. In these nests a sow will rear from eight to 13 pigs successfully. Let me give a little of my experience gained in pursuit of useful knowledge and in some tests in the direction of the actual cost of making pork in the South.

A sow and seven pigs were bought in the early spring for seven dollars, and were turned into a wood lot. They were given the waste milk and butter-milk for which there was no other use. The young pigs were given three bushels of corn, in default of sufficient mast to fatten them, and when slaughtered, made very nearly 800 pounds of pork, which was cured into bacon, and sold for 10 to 12 cents per pound; it could have been sold for 15 cents, but my conscience forbade the exaction of the full market price. The meat was of the class known as breakfast bacon, such

as is sold wrapped in paper and canvas at an actual price, to the customers, of about 25 cents a pound, wrappers included. The returns from these seven pigs made nearly $90, and the sow was left. She had eight pigs the next fall, and when these were weaned, she was turned into pork, and made $20, at a cost of less than $2 for corn for finishing. The chestnuts and acorns in the woods made nearly all the meat without any cost at all, and the corn was really unnecessary. The pork was quite half lean, very tender and sweet, but lank and thin, the hams being broad. and not more than four inches thick in the most fleshy part. This meat is of precisely the same kind as is sold in Europe at a high price as Westphalia hams and bacon, which is esteemed a delicacy for the flavor and sweetness contributed by the nuts and roots upon which these forest-fed pigs live. I have now the young pigs and a sow which I bought for $2 last winter, and as the mast will be abundant this season, they will get fat enough to eat without a grain of corn. They are now getting the waste milk of two cows and the small and half-rotten potatoes fed for experiments as to their safety. They will make considerably over 1,000 pounds of pork. If one will figure up the cost of all this pork, I think he will estimate that it is not quite two cents per pound, including some charge made for the waste milk and the man's time in carrying it to them, which is about 10 minutes daily.

Now there is no reason why nearly every Southern farmer could not do this. He has plenty of wood-land for a range; he has some waste milk or may have; he can grow peas and sweet potatoes; he has old fields with grass and weeds which the pigs will eat, and his sows are prolific and intelligent enough to save all their pigs, never eating or crushing them, and defending them with the ferocity of a tiger from all enemies. He has plenty of corn-meal screenings, and if he will not suffer the pigs to starve on pine roots when the mast is not in season, or when it is scarce, by having some food grown for them, he can grow all his pork and have some to sell without being able to put his finger on one single hard dollar he has laid out for it, instead of getting this provision from the stores at 12 or 15 cents a pound on credit, at two per cent. a month and paid in cotton or corn at 25 per cent. less than the market rates. These "pinters" might be useful to many Southern readers who might do as I have done; viz, talk to their neighbors about it and show them how they can save money by growing their own pork at a trifling cost, and utilizing neglected opportunities, not to speak of the advantage of affording some means for their pigs to exhibit the natural intelligence which they certainly possess. The Southern farmer is perhaps slow and a good deal behind his Northern and Western brethren in aptness and knowledge, but he can see a hard dollar when it is shown to him, although it may not be in the form of a light-weight silver coin.

Macon County, N. C.

Dairy Husbandry.

DAIRY NOTES FROM A DAIRY RANCH.

NO. III.

THE HERD, AND OUR WAY OF IMPROVING IT.

Starting and improving a dairy herd in Colorado; profitable sale of culls; milk and butter dairying; profits from a pure-bred bull; how and why Holsteins replaced Jerseys; advantages of thoroughbreds over scrubs; praise for Holsteins; care of a dairy herd.

TEN years ago it was a difficult matter to pick up 50 fairly well-broken milch cows in Colorado. Cattle running on the range then represented largely the cattle interest of the State, consequently milk and especially butter were at a premium. On the river bottoms were to be found now and then dairy ranches; also in the mountains. I bought out a dairyman and found myself in possession of 30 cows of no particular breed, whose recommendation was that with good care they would each give some milk five or six months of the year. With these to start out with, I commenced dairying. Whenever a cow that promised well could be found, I added her to my herd and sold all the butter I could make at 45 and 50 cents per pound three-fourths of the year, the price never falling below 23 cents. Having plenty of milk for the calves, I raised them all "by hand" and during the summer let the yearlings "rustle" for themselves on the public feeding ground after the manner of the Western cattleman.

For three years I managed in this way. At the end of that time I bought a ranch on the river and moved near town to take up the business of selling milk. To buy this ranch, I had to include in the purchase a small herd of very fair Jerseys, eight or 10 in all. Cattle sold readily then and my young range stock found a purchaser at $15 per head. I had 90 of these and half a dozen or so fat cows for the butcher at $30 each. The Jersey bull and several of the cows that came with the farm were registered in the Worcester herd book. Now that I was selling half of my milk I could raise only the choicest heifer calves. It was no uncommon thing for a man to kill the calf of a common cow, if he wanted the milk needed to feed it, provided he could not give the little thing away. But here I reaped the benefit of a blooded bull. The calves sired by him sold readily when less than a week old for $2 to $5 apiece, the heifers bringing the latter price. These were the grade calves from the "scrub" cows. Prices of beef cattle began to fall and it no longer paid to raise Jersey steers, they were not beefy enough. I decided to try the larger breed of Holsteins, and have something that would be worth raising for beef if it could be turned to no other profitable account.

I sold seven Jersey cows and heifers for $100 each, keeping the grades in my herd, which was already much improved by my method of culling and selecting. If a cow did not return appreciative thanks at the milk-pail for the care and food she had received, she was straightway fattened; so my 100 milch cows were much above the average. The Jersey bull showed a decided determination to fight, so he was last seen as dressed beef entering a bologna sausage establishment. The returns on him were very light.

I then bought two bulls and two heifers of the Holstein breed (yearlings) for $1,000. The calves of my common cows now sold readily as soon as dropped for $5 to $15. I still raised a few of the best, but this way of improving was too slow, and a car-load of high-grade two-year-old heifers, was shipped to me from Elgin, Illinois, at a cost not exceeding $40 per head. The first calf from this purchase was a bull and brought at six months old, $80; the other bulls sold for prices varying from $25 to $75 according to the markings of the creatures. I raised all of the heifers myself; the sweet skimmed milk from the Cooley Creamers making this an easy thing to do.

As my heifers came in I had cows to sell. and although beef creatures were low, good milch cows sold at from $50 to $75 each. As my old cows became fresh, I found purchasers for them and gradually found myself in possession of a Holstein herd; for among the changes, 20 thoroughbred, imported Holstein cows had been added to my stock. Now prices on dairy cattle began to decline, and I sold my registered bulls for the same price I had received two years before for high grades—$70 and $80 per head.

The grade heifers I had raised and expected to receive $75 per head for, sold by the car-load at $50 each. There was no loss about that; it had cost not one cent more to raise those heifers than it would have cost to have raised scrubs that would not have brought over $15 per head, with a chance that a purchaser could not be found at any price.

Now I had thoroughbred heifers to take all the milk I could spare and the high-grade calves were sold at the prices half-breeds brought at first. In the general dullness of the times, milk and butter commanded a slow market, in my immediate neighborhood. As my supply of milk for butter-making depended upon the whims of the milk trade, I could not agree to supply a certain amount of butter without risking to be over-burdened with dairy products, so I sold half of my imported cows. These cows had proved very excellent; each cow left in my possession a valuable calf to fill her place in a year or two Despite the falling off in prices, the cows sold for all they cost me. The bulls have more than paid their first cost by service outside of my herd.

It is hoped that this paper has shown that no man can afford to keep a herd of "scrubs" without constantly improving them. If an accurate debit and credit account had been kept, no doubt the increase of the Holsteins in the four years I have owned them would much more than pay the first cost of every cow bought. Nothing has been said of their superiority as milk and butter producers. One would hardly believe what might be said of them unless he had at some time been intimately acquainted with a fine herd. Given a good cow, it is the feed that makes the extra cow. Not only is plenty of good feed needed, but regularity in feeding, too. The time is coming when the stockman will not allow his young creatures to be stunted in their growth; when he will *crowd* them with good feed, the heifers especially, so that when they are cows they can bear heavier feeding than they otherwise could. C. H.

Greeley, Colorado.

IN A MARIN DAIRY.

MARIN COUNTY, California, is a very famous dairy region. The county lies north of San Francisco Bay, fronting the Pacific. It is beautifully diversified—consisting of valleys, ridges, canons, hills, forests, streams and some very wild country. Most of it is owned by the dairymen. The Redwood forests stretch well into the county, and the remains of old logging camps are found in many places. The hill-sides and glens are full of wild flowers and such fine shrubs as the California lilacs and azaleas. In the illustration, Fig. 237, page 623, the cattle sheds have been built partly around a tan-bark evergreen oak. In the background are a few Redwoods. The milk-maid, the cattle and the whole scene are very characteristic of California dairy life. In the course of a day's travel through the Swiss dairies of the coast one will see a dozen or more milking yards in just such situations, and early in the morning the milk-maids at their work. C. H. S.

Field Crops.

REPORTS ON RURAL NO.2 POTATO.

SENEY, Plymouth County, Iowa.—I dug my R.N.-Y. No.2's on September 6. I planted one small potato cut into four pieces, two in a hill. I put on about a double handful of fine bone and phosphate. It was quite late with me. I have 20 tubers, all of good size. They weigh 7½ pounds.

J. P. V.

FAIR GROVE, Greene County, Missouri.—I cut my small Rural No.2 Potato in two pieces and planted them on April 8, according to the trench system. Each piece yielded 14 potatoes—28 in all, 24 of which were merchantable; total weight eight pounds. The largest two weighed 11¼ ounces each; the remainder were uniform in size. They were dug on August 9. I am well pleased with the result and will give the variety another trial next year. T. S.

LITTLE FALLS, Passaic County, New Jersey.—I planted the R. N.-Y. Potato No. 2 on April 10, cut into five pieces; only two came up, the others rotting. I dug them on September 9, and got seven potatoes weighing three pounds and two ounces, the largest weighing a little over 14 ounces, and the smallest three ounces. They are of good shape and smooth. G. N. E.

NATURAL BRIDGE, Jefferson County, N. Y.—I planted the Rural No. 2 Potato on May 10, and dug my crop on September 4, after the vines had been dead two weeks or more, with the following results: 27 potatoes; weight eight pounds six ounces; 18 marketable tubers weighing seven pounds seven ounces. The largest tuber weighed 12 ounces, the largest two one pound six ounces. In planting I followed the RURAL'S trench method. I cut my sample into four pieces, with two eyes to a piece, with the exception of one piece which had but one eye. I planted the pieces about two feet apart. F. E. A.

OUAQUAGA, Broome County, N. Y.—No. 2 Potato sent me was a rather inferior sample, but was cut into five pieces and planted in as many hills. They all started vigorously and were hoed once when the frost cut them down. One hill never came up again. The vines began to die from blight on August 1, and I dug them on August 19. There were 23 sound tubers which weighed seven pounds. Of these five were small, but none was as small as the sample seed. Three good-sized potatoes were rotten, making the yield 26 tubers in all. The effect of the freeze reduced the size of the tubers materially. I am well pleased with them and will be able to plant a nice plot next season. M. J. W.

CORNWALL, Orange County, New York.—The R. N.-Y. No. 2 Potato was planted about May 1. I cut it into six pieces with one eye each. These I planted in the garden in a trench 12 inches apart and four inches deep. One piece had a sprout about 2½ inches long. This I planted so as to bring the top of the sprout nearly to the surface of the ground. It came up and was nearly two inches high before the others appeared. This was the strongest plant of the six the whole season. On September 9th, I dug the tubers; there were 33 in all, which weighed eight pounds nine ounces. The hill in which the sprout was planted turned out eight nice tubers which weighed three pounds seven ounces; the largest weighed 12½ ounces; one weighed 12 ounces and one 11½ ounces. They are a very fine lot of potatoes. Those who have seen them pronounce them first-rate. C. S.

PHELPS, Ontario County, N. Y.—The Rural New-Yorker No. 2 Potato, sent me last spring, was cut into four pieces with one eye each, and planted in the garden, where potatoes had been grown for years. The yield was nine pounds. There were in all 35 tubers—27 large and 8 small, the largest weighing 11 ounces. J. L.

ZANESVILLE, Muskingum County, Ohio.—I planted the R. N.-Y No. 2 Potato about April 15. It was the size of a hen's egg and had 10 eyes. I cut it into pieces of one eye each; all grew but one. I dug them on September 6, and the yield was remarkable. There were 28½ pounds, all good-sized tubers. The largest weighed one pound and seven ounces. There were seven that weighed over one pound each.. E. W.

BAYARD, Columbiana County, Ohio.—My R. N.-Y. No. 2 Potatoes died off before they had properly matured. From the one small tuber I got 18 marketable potatoes. I planted four acres of potatoes last spring. We had so much wet weather that I find a good many rotten. I have not dug yet, but on examination I find the Early and Late Rose the most affected. I think the rot will not affect what are sound. The Potentate is the least affected. The blight affected the Burbank; there may be half a crop, but I am not able to state positively.

I. S. T.

MANCHESTER, York County, Pa.—My small Rural No. 2 Potato I planted on May 2. It was cut into four pieces, and planted in a frame made of boards with sides about eight inches high, the box being 32x34 inches. The ground was deeply worked and enriched with hen manure and ashes, and occasionally a liberal sprinkling of tobacco dust was applied to kill the wire-worm. The crop was dug August 14; result, 11 pounds 10 ounces, all of large size except six small ones. The largest one weighs to-day—10 days after it was dug—18½ ounces; another weighs 17½ ounces and two others 16 ounces each. The rest are all large, smooth tubers. I think the result is very satisfactory. The frame or box was filled up with soil from time to time as the stems increased in size, so that the potatoes when dug were about six inches under the ground—a little in the order of the R. N.-Y.'s trench system.

E. B. G.

Miscellaneous.

CORRESPONDENTS' VIEWS.

TOWN INSURANCE.—Since the formation of a farmers' club in our town (Jan. 19, 1889) the subject of insurance has been strongly agitated, and as a result a mutual farmers' insurance company was organized on Feb. 22, to which property to the amount of over $225,000 has been offered for insurance. The by-laws prohibit taking risks within corporation limits of villages, or on property anywhere within 60 feet of other buildings unless all are covered by one policy. The policy costs $2 for any amount under $7,000 which is the highest amount that is allowed to be covered by one policy. There are no other charges unless a loss is incurred. Then each policy-holder is assessed a sufficient per cent. on the face of his policy to cover the loss. The term of insurance is five years. Insurance in these companies is the safest and by far the cheapest that can be obtained—safe because the capital stock is in sight and held by men known by all insured as every man insured becomes a stockholder and is liable for the face of his policy as soon as he is insured in this company: cheaper, for fires in the country are rare, and seldom large, for generally quite a distance separates the house and barns, or should, at least, for health as well as safety. Several towns around us have town insurance companies and in one instance where a company had been in operation 11 years the cost had been only one-tenth of one per cent. per

year, or less than one-third the amount of premium demanded by old-line insurance companies.

That cartoon in the RURAL of February 2nd, showed forcibly what constitutes the farmers' load, and the profits of insurance companies and middlemen are two heavy weights we are trying to shake off. We shall be successful in a measure and have bright hopes for the future. M. T. W.

Sandy Hill, N. Y.

THE TELL-TALE ACCOUNT.—One day when I was a boy, I chanced upon what seemed to me a very old account book. The hand that had written it had long since ceased from labor; but the man whose name stood at the head of the account I recognized as a miserable churl in the poor house. Tradition connected his name with a certain broad farm. It was called the Bounds' Place.

J BOUNDS.	DR.
July 5, 1805 To 2 Quarts Rum	.30
" 6, " To 1 Quart Rum	.15
" 8, " To 6 Drinks Rum	.20
" 9, " To 1 Quart Rum and 9 Drinks	.35

Thus the account went on from page to page like an accusing angel. At the moment of my discovery Jerusalem Bounds was in the poor-house, whither his able-bodied wife had followed, and their children had been bound out by the select-men and the old home was in the hands of strangers. Farmers who are at present engaged in pouring their farms down their craving throats are hereby reminded that such accounts as the above had better not be kept for their posterity.

O. H.

EARLY PLANTING OF CORN.—The year 1889 has been very peculiar throughout. Last winter was exceedingly mild—there was not an inch of snow all put together, while ice was never an inch thick the whole winter. March was dry; as a natural consequence farmers took advantage of it to plant corn, but not to the extent that they might and ought to have done. It is the only really good corn that we have in this section this year. It has long been a well-established fact (in this section) that March corn is our safest crop, coming in, as it does, ahead of the drought that we ordinarily have in July and August. It is planted so early that the bud-worms do not interfere with it. This is the only sure way with which I am acquainted to circumvent the little pests: either plant very early—say March for this section—or very late—say June 15th to 20th. In either case the crop will be safe from the bud-worm; cut-worms do no material damage to corn, as, though they may cut it off even with the ground, this neither kills it nor checks its growth. If it is impossible to plant corn either very early or very late, all that can be done is to plant enough for one's self and the bud-worms too. Strew it about the same as you would sorghum seed. I would much rather plant an extra half-bushel, or even a bushel of seed corn to the acre than to replant, as the replants rarely make anything, and it is impossible to cultivate corn well—as it should be cultivated—when it is of all sizes. Early corn has in the cotton belt the still further advantage that it can be laid by early, and is off one's hands before the busy part of the cotton season sets in. I have heard it said, and fully believe it myself, that the oftener corn is bitten down by frost the better will the final yield be. Our March corn this year will make 40 or 50 bushels per acre; April corn about half as much; May corn nothing. We have land lying idle that was well broken and harrowed with the intention of planting it in corn in June. It rained the whole month through, so we were deterred by flood after flood from either planting corn in June or working that which had been planted in May. Exactly the same misfortune befell us three years ago. Moral: Plant early; there is nothing to be lost by it, and there is a great deal to be gained. G. H. T.

Denmark, Miss.

Everywhere.

CLIMATE OF THE PUGET SOUND COUNTRY.

AS SOON as I can collect the data I propose to write up for the readers of the RURAL something of the horticulture and pomology of the Northwest; as climate is always one of the chief factors in the cultivation of the garden and orchard, I will speak of the climate at first. But as the topography of a country is one of the chief factors in controlling the climate, I will take this up before speaking of the great influences of the Japan Current, over the climate of the coast. Puget Sound is an arm of the ocean made up of narrow bays and inlets, and owes its existence to the glacial period wherein conditions somewhat similar to those now prevailing in Alaska, existed here, but perhaps upon a larger scale. The valley is about 100 miles wide between the Olympia Mountains, which are about 8,000 feet high, upon the west, and the Cascade Range upon the east, culminating at Mt. Rainier or Tacoma, 60 miles distant, a little south of east, in a peak, 14,444 feet high, the grand central point of glaciation, from which glaciers once crawled out into the ocean, plowing out the bays and inlets as they moved onward through the Straits of Juan de Fuca. The water of a great ocean like the Pacific is always a conservator of heat from the great center of heat, the sun. The heated waters of the tropics form rivers and cause currents that flow first northerly, then bend easterly as they impinge against the currents of cold water flowing southward from the north polar circle. This current in the Pacific is known as the Japan Current. As it expands and spreads out over the area of the north Pacific, it heats the air that comes in contact with it, and causes what is known as the warm or chinook wind, that constantly blows landward from the ocean. The influences of this warm and moist current of air are felt all over Washington, Idaho, Montana and Dakota, being gradually, as it passes eastward, overcome by continental currents or winds. The influences of the chinook are felt as a silent benediction and almost unobserved beneficence without the noise or tumult of ordinary winds.

The breaks in the continuity of the Olympia Mountains, usually snow-clad at all seasons of the year, caused by the mouth of the Columbia River upon the south, and the entrance of the Straits of Juan de Fuca upon the north, must always be taken into consideration in order to understand the climatic conditions of the Puget Sound country, for they exert a more or less profound influence upon local conditions. This will be understood when we consider that the air resting upon the surface of the land or water always assumes a more or less stratified condition, especially at night, while the day is often consumed in an effort to break up these strata of air. Cold air is heavier than warm air. This causes the warm air to rise. It will now be seen that the mouth of the Columbia and the Straits of Juan de Fuca act as conduits for the in-rush of ocean-heated air, but these are not the only factors to be taken into consideration. Puget Sound itself is a large body of ocean-heated water, much of which is changed twice every 24 hours as the tide comes in and goes out. The usual fluctuation is about six feet, but it is often much more. I have no immediate means of estimating the vast climatic influences exerted upon the surrounding country by this introduction of ocean-heated water between these ranges of mountains, upon such a stupendous scale, twice every 24 hours.

But it will readily be seen that these two ranges of mountains lifting their even, snow-clad summits into the air, coupled with the repeated withdrawal and re-introduction of ocean-heated water through these breaks in the Olympia Mountains, must bring a great inflow of heated air from the ocean, to say nothing now of the greater flood of warm air brought by the chinook over and above the summits of the mountains themselves. It will require fuller study and consideration of these factors before we can arrive at a proper estimate of all the climatic conditions that prevail here, but it may already be seen that it is neither a coast nor an ordinary inland climate, nor a valley nor a mountain climate, but that it partakes of some of the features of the four combined. The result is about the most equable climate upon the globe—neither too hot in summer nor too cold in winter, and when I come to speak of the pomology, it will be seen how the climate stimulates some of the finest bud and fruit development to be seen anywhere in the world. D. S. MARVIN.

RURAL SPECIAL REPORTS.

New York.

HORNELLSVILLE, Steuben County, August 26.—The acreage of potatoes here is about two-thirds of an average. During spring some rotted and never came up, the others have blighted badly and are now rotting. The crop will not be more than one-half of an average, and the rot may reduce it below that before digging. In hills examined, the rot on an average now affects about one potato in six or eight, and it has just begun. None will be dug before the last of September or the first of October. We are on sandy land, on the river bottom. In this town the potatoes are reported to be from one-half to two-thirds rotten. Oats and hay are about an average. J. E. P.

FRIENDSHIP, Allegany County, September 2.—The condition of potatoes is bad. They are rotting to a great extent. I do not think there will be half a crop. J. B. H.

Ohio.

CARYVILLE, Champaign County, September 5.—Much of the farming in this region is done by tenants, who, as a class, do not read much agricultural literature. The owners of the farms either own too much land or have "retired" and moved to some town, and care for the farm only for what they can get off it. Still we have a few first-class farmers, who by their industry and economy are prospering. The masses simply make a living and pay their expenses and have nothing left. This has been a poor season here—a season remarkable for its extremes. We had a mild winter, and an early, very dry and cold spring. About the middle of May wet weather set in and continued till about the 10th of July. This proved to be about the worst wet spell we have had in this region for many years, and consequently we have much poor and weedy corn, as well as poor potatoes, hay and wheat. The oat crop is rather good. The weather is now very hot and dry. Many farmers will commence sowing wheat this week. G. D.

Texas.

CIRCLEVILLE, Williamson County.—In all my life I've never seen so near a failure in potatoes. We had a very warm winter, and a great deal of rain. For weeks the fields could not be worked just at the time working them was most necessary. The early planted rotted very badly, and not more than one-fourth of a stand came up on an average, and yielded small potatoes. The second plot made a few scattering potatoes. The third did not make any. The R.-N.-Y. No. 2 was planted about March 15 in nine hills. It made fine tops, but died in July from drought. I got only two small tubers not very well matured. As a general thing, I think it would do well here. This has been a bad year for testing potatoes.

MRS. N. M.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

ABOUT SHEEP.

J. L. W., Worcester, N. Y.—1. Will it be best for me to buy, say, 25 sheep to commence with and breed up to the required number, or buy at the start what I could keep? 2. Should I buy store sheep of the mixed breeds around here, and breed up or buy the kind I want of some sheep raiser? 3. How many sheep will eat as much as one cow? 4. How many sheep can be safely kept together? 5. When should they be bought? 6. I want information about early lambs. 7. What is a good paper devoted to sheep husbandry? 8. Can the RURAL give any more useful hints on this subject?

ANS.—1. Better purchase all you want to begin with. 2. You had better purchase large fine-wool (not pure Merinos) Michigan ewes in the Buffalo market. Then purchase a well-bred South Down, or Shropshire, Hampshire or Dorset ram. If you aim to raise very early lambs perhaps the Dorsets will be the best. Save all of the good ewe lambs until your flock is bred to the size and character you want. Feed heavily enough in the winter to mature the lambs rapidly and keep the ewes fat. Shear the ewes in January and the lambs in March. Sell all ewes to the butcher before they go to grass except those that are superlatively good. During the summer increase the flock from new purchases at Buffalo. 3. Six to seven coarse-wools and eight to nine fine-wools are equal to a cow in the amount of food consumed. 4. Fine-wooled sheep may be kept in the fields in large flocks (200-300), coarse-wool flocks should not exceed 50. 5. Buy your sheep from June to September. 6. You would better address J. S. Woodward, Secretary of New York State Agricultural Society, Albany, if you desire the latest and most reliable information in regard to purchasing, breeding, feeding and selling sheep and early lambs. 7. American Sheep Breeder, Chicago, Ill. 8. In order to improve your pastures and get the most out of your sheep, you should purchase more animals than the pastures will carry during the late summer and fall months. Feed liberally as soon as the pastures begin to decline on bran, cotton-seed meal and oil-meal combined or separately. By this method more plant food is returned to the soil than is taken off. Weeds and brambles are all stripped of their foliage by the sheep and hence must die.

"GERMAN HARES."

A Subscriber, Brighton, O.—I inclose a circular advertising "German hares," and should like to know if the statements as given are facts. They are important if true, and if not deserve a place in the Eye-Opener.

ANS.—The statements referred to are that the German hares, known also as Scotch rabbits, and Belgian hares, are very prolific, are extremely hardy, etc; that they are eagerly sought for by epicures and restaurants in New York and other cities; that they weigh from 12 to 15 pounds, and readily bring from $1.00 to $1.25 each in the New York market. Then some delusive figures are given based on their fecundity, to show that two acres of land stocked with a few pairs of German hares will produce more clear cash per year than a 100-acre farm. The most important statement (to the advertiser) is the fact that he is prepared promptly to fill all orders for breeding stock at $5 per pair. A dealer in breeding poultry, dogs, pigeons, etc., on Cortlandt Street, this city, tells us that he has been selling these hares for a long time; that his regular price is $3 per pair, and that he has numerous letters from breeders of them offering them to him at $1 per pair. This doesn't look much like selling them readily for $1 to $1.25 each. We failed to find a dealer who had ever heard of any demand for them. One German had shot them in the "Old Country" when a boy, and said they were somewhat larger than our common rabbits, a large one sometimes weighing 10 pounds. He thought they might sell at Christmas, when there was usually a great demand for game, at $1 per pair, but he said that rabbits often sold for as low as 15 cents per pair. We have no confidence in any of the statements made, excepting perhaps that with regard to their fecundity. It is a very easy matter to figure out big profits on any such scheme, but the profits usually fail to materialize.

SEEDING FOR A PERMANENT PASTURE.

J. C. O., Somerset, Ky.—I want to make permanent pasture on land now thinly set in clover and Orchard Grass: soil, thin and sandy clay mostly underlaid by stiff, red clay subsoil. When should seed be sowed? What kinds and how much of each per acre? How much and what kinds of commercial fertilizer?

ANS.—In Kentucky one can seed down for permanent pasture at any time during September. As we understand it, our inquirer does not intend to break up his thin soil, consequently the grass seed should be harrowed in with a Thomas smoothing harow. The kind of seed best adapted to his soil would be a mixture, in about equal proportions, of Meadow Fescue, Pacey's Rye Grass, Rough-stalk, Red-top, Kentucky Blue Grass, Crested Dog's tail and Timothy, at the rate of one bushel to the acre. To this mixture a sprinkling of Sweet Vernal Grass and White Clover might be added. As to what commercial fertilizers ought to be put on, we think that one barrel of kainit and one of superphosphate to the acre, sown on and harrowed in at the time of seeding, would be helpful, and that kind of fertilizing, for the sake of obtaining potash cheaply, ought to be continued as a top-dressing every alternate year after the grass is well established. If our friend can obtain good hard-wood ashes cheap, it would be best to do so and to put on about one ton to the acre instead of the kainit.

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies.

CRACKED HEELS IN HORSES, ETC.

J. F. D. G., Gouverneur, N. Y.—1. What is a remedy for cracked heels on horses? 2. What is good for a horse that rubs and bites himself?

ANS.—1. If there is an offensive discharge with a strong odor—thrush—cut away all dead or diseased horn and then apply dry calomel, pressing it well into the crack, until the discharge ceases. Then keep the hoof coated once daily with the best pine tar until well grown out. If, however, there is a discharge like the pus or matter from an ordinary wound, wash out once daily with a solution of five parts of carbolic acid in 100 parts of water and apply a coating of tar after each dressing. For a simple crack in the hoof without discharge, apply a mild blister around the top of the hoof, especially above the crack, and keep the hoof coated with the tar as directed above. 2. A good dose of physic—six to eight drams of Barbadoes aloes, according to the size and condition of the animal, with an ounce of ginger, to be given in a ball or as a drench, and followed by a bran mash diet until freely purged. After being purged, a course of powders somewhat like the following can be given with advantage: one pound each of bicarbonate of soda, Glauber salts, and powdered gentian well mixed together. Dose—two table-spoonfuls twice daily on the feed.

STERILITY IN A BULL.

A. J. T., Homewood, Pa.—My three-year-old Jersey bull is not a sure calf-getter. Scarcely any of the 30 cows he has covered this season are with calf, though he has covered some four or five times. He is in fair order, being neither poor nor fat. He has been most of the time on grass pasture with the cows, though for a part of the time he has been staked out. Can anything be done for him?

ANS.—The bull is probably temporarily sterile because weakened by too much service. Judging from your history of the case, he has served the equivalent of 100 to 150 cows one service each, which is two or three times as many as a bull can usually profitably serve in a year. Keep the bull away from the cows, but give him plenty of exercise, preferably in a small field or yard by himself, or with cattle that will not come in heat. In addition to his corn fodder feed him some bran or oats twice daily. Allow him to serve one or not to exceed two cows per week, and allow only one good service to each cow. If he was a successful getter of calves last year, he will probably become fertile again after a little rest and attention, if his powers are not overtaxed, as has evidently been the case thus far during the season.

PUFFS ON YOUNG COLTS.

F. B. B., Ottawa, Mich.—Within a few days after the birth of my one-month-old colt soft bunches appeared on the outside of each front knee just below the joint. They were about as large as a hen's egg, and not tender, nor did they cause any lameness. A few days afterwards above these appeared swellings which were not quite so soft and which were tender too, if rubbed. The colt is strong and active. The stall floor was wet and slippery when the colt was born, and it had some difficulty in getting on its feet, wrenching its joints perhaps in doing so. 2. Splints also appear quite prominently low down on the legs, but do not cause lameness. What should be the treatment?

ANS.—Beyond bathing the swelling with cold water or with a mild stimulant, like arnica or camphorated spirits, we would not, without a personal examination, advise treatment at present, or as long as the colt is not lame. If the swellings do not show a tendency to disappear after a few weeks, try the application of the compound tincture of iodine, applying it once daily until the skin is slightly blistered. Later more active treatment may be demanded if the colt does not outgrow the trouble.

THE WEIGHT OF HAY IN A STACK.

H. S., Hot Springs, South Dakota.—How can I ascertain the amount of hay in a stack 40 feet long, 20 feet wide and nine feet high from the ground to the beginning of the slanting top and 14 from the apex of the sloping top to the ground?

ANS.—Hay dealers allow 512 cubic feet to the ton. This is considered accurate enough, although much depends upon the sort of hay in the stack and also the care with which it is made. Your stack contains 9,200 cubic feet. Dividing this by 512, we have a small fraction less than 18 tons; to be exact, 17.96 tons. The number of cubic feet in the stack can be found by multiplying 40 by 20 by nine feet. This gives the cubic area up to the slant. Then we have a mass 40 feet long, 20 feet wide and five feet high in the center, equal to a uniform thickness of 2½ feet. The first multiplication gives 7,200 and the second 2,000 or a total of 9,200 cubic feet.

COWS DRYING OFF.

C. B. C., Putnam, Conn.—Two of my cows have suddenly become "dry." They eat well and are apparently in good health in all respects. They are on the same pasture in which they have been all summer, and no change has been made in their feed. What is the cause, and a remedy?

ANS.—If there is no apparent cause for the "drying off," which could be accounted for by a dairyman, such as short grass, scarcity of good water, several months already in milk, injury or disease, we cannot suggest why they should have done so. Unless the cows have a previous good record, it would indicate that they were probably short milkers, and better subjects for the butcher than for the dairyman.

Miscellaneous.

J. H., Mechanicsville, N. Y.—Who makes ice plows?

ANS.—The Higganum Manufacturing Company, New York.

P. W. J., Pontiac, Mich.—What is the best apparatus for cooking feed for hogs?

ANS.—This inquiry is fully answered in this week's "symposium" on Cooking Feed. J. K. Purington of Des Moines, Iowa sells an excellent steamer.

J. J. T., Buffalo, N. Y.—I am going to plant 15 acres of winter wheat this month, and would like to try nitrate of soda or sulphate of ammonia. Can I use it with wood ashes, and bone dust, and shall I put on 200 pounds to the acre now or wait until spring before putting on the nitrate? I want to sow Timothy with the wheat.

ANS.—*Use the nitrate of soda not until spring.* The bone and ashes may be spread now. In the spring we should use equal quantities of nitrate of soda and sulphate of ammonia, rather than all of either.

J. H. L., Natrona, Pa.—My three-year-old pacing stallion had the distemper when a foal, and he has never got over the effects. Now when he drinks, some of the water comes down his nostrils, and when eating sometimes he coughs and appears to be choked; then some of his well-chewed food will come through his nostrils. Then he is all right for a while, eating and drinking without any trouble. What should be done?

ANS.—Rub the whole region of the throat once daily with the following liniment until the skin is quite well blistered: Equal parts sweet oil and strong aqua ammonia well shaken together. Repeat the blistering whenever the difficulty occurs.

Discussion.

TAP-ROOTS VS. TRANSPLANTING.

P. H. R., DOWNIEVILLE, CALIFORNIA.—In the RURAL of May 4 there is a discussion of a proposition to start an orchard by planting the seeds where the orchard trees ought to stand and grafting on the sprouts. I was much interested in the discussion, though I do not feel satisfied that what to me seems so large a subject was treated so lightly. I had proposed to adopt the same plan as S. B. H. I yet believe it by far the best way. I have about 30 acres of hillside facing the south, protected from frosts, and good enough to produce a fine body of oak timber. It is very dry. Sometimes rain does not fall on it for three or four months, yet I hope by pursuing the above plan to get trees in two or three years' time that will have roots long and strong enough to supply themselves with moisture without any aid except mulching. Can it be done? Well, not with nursery trees. Dr. Hoskins, speaking from an experience of forty years in orchard and nursery work, and backed by the experience of hundreds of others, says that trees suffer no permanent injury in transplanting. Forty years' active work and close observation ought to entitle one to be listened to deferentially, especially when such an one has much ability both natural and acquired. But able men sometimes get into grooves from which it is difficult to find exit; incorrect data and statements are accepted as true, and false conclusions are drawn, and thus is wasted much conscientious labor, and progress is retarded. It is well known that many things considered indispensable in the medical practice of 50 years ago, are now utterly condemned; and in many other callings long-cherished ideas retain their vitality because of our diffidence in attacking long established usages. Now, I have been carefully watching the growth and development of several species of young trees growing from seed, and have observed that the first thing a seed does is to start its strongest and longest root straight downward, and that the size and length of this are only limited by the space given it in which to expand. God, or Nature, makes no mistake in directing the inherent forces of matter, and would not make the tap-root the longest and strongest—a veritable underground tree—if it had not been, in the economy of tree growth, a necessity, I believe that God knows something of tree planting, and when I see these facts so definitely and constantly pointed out, it will take the evidence from hard-proved comparative experiments to shake my faith in a root system that stands in its original position and entirety. I know that a deep-rooted tree stands more firmly than one whose tap-root has been shortened; and I believe that it is far better prepared to stand drought or extreme cold. The tap-root once cut, will send out lateral branches, but never again go far downward; it is a cripple for life.

"The immense number of very aged and yet vigorous apple trees in existence which have certainly been transplanted," is offered in evidence to prove that repeated injuries to the roots cause "no permanent detriment." That such trees exist only serves to show that they will survive gross abuse—that they will live *in spite* of serious injury. That trees may suffer a suspension of vital action without loss of anything but time may be debatable; but will any one maintain that their vigor is not impaired or their chances for long life lessened by removal of their vital organs? One can easily understand that, from the nature of its surroundings, a forest tree can only live a relatively short life; but an apple tree need never die. As long as manurial values equal to the loss sustained by the soil in maturing the fruit are supplied to it, so long will it fulfill its mission and continue to expand. Nature never tires. "Pay as you go" when dealing with her, and you are making a limitless credit account in a safe bank.

It is patent that I am ignorant of many things which seem to be so trite to the RURAL correspondents as not to be worthy of mention. The "many practical difficulties" to be encountered in pursuing such a practice as proposed, do not seem tangible nor are they visible to me; neither do I know how one could get a hardy tree on which to graft if not from the seed of an iron-clad. I do not even know what is to be gained by having a long trunk. In fact, I believe that the waste of time in growing a long body is so unnecessary that I shall allow mine to branch as soon as they show a disposition to do so. I believe the proposed plan will insure a gain of two years in the early securing of fruit from the average tree; and that the standard of its vitality will be far above that of one whose growth is checked and the proper direction of whose development is destroyed. If my conclusions are as sound as my facts are suggestive, there is no danger of giving undue prominence to the discussion of this subject; nor of too great a crop of thinkers, investigators and experimenters in a field that offers so much opportunity and reward.

FUNGOUS DISEASES OF FRUIT TREES.

PROF. J. L. BUDD, AMES, IOWA.—I have read with much interest the article by Dr. Halsted in a late RURAL on the fungus of the pear, and the thought occurs that some general notes from a climatic standpoint on the fungous troubles of our orchard and small fruits may have some interest. As a probable result of the unusual extremes of the past few years in heat and moisture of air, rainfall, etc, in the prairie States, we have had an evident increase in tendency to rusts, smuts, mildews, and blights in the orchard and garden. Beyond reasonable doubt this increase of the fungi has had as much to do with our orchard losses of trees as the test winters which have been talked and written about. A few years ago the Early Richmond and English Morello Cherries, the Lombard Plum, the Ben Davis Apple, and the Flemish Beauty Pear, were considered hardy in central Iowa, but recently when the time came it was difficult to find a healthy leaf on them in August, their days became few and full of trouble. At this time the visitor can usually tell by the condition of the foliage the relative hardiness of the species and varieties on the college grounds. In the apple orchard the nearly hardy sorts, with more or less admixture of the west European types, are rarely perfect in leaf, and the fruit is more subject to scab than in the early days. On the other hand, the Duchess, Tetofsky, Whitney's No. 20, Wealthy, and dozens of other varieties of the east European race or their seedlings, have clean, perfect foliage and not a show of scab or crack of fruit. To-day we have gathered for the State Fair exhibit 90 varieites of Russian apples which do not show a trace of scab, while not a single variety of the west European race or their seedlings is free from this trouble.

In the cherry orchard every variety from the most trying portions of France, West Germany, and the coast provinces of Russia, is at this time destitute of leaves at the points of growth, and some of them are as bare as in winter on young and old wood. Yet the varieties obtained from points east of the Carpathians to the Volga show clean and perfect foliage to points of growth, except that now and then the terminal points show traces of a surface mildew like that on the lilac. In the plum orchard we have no variety left of the West European race or their seedlings. But our best native plums, such as De Soto, Wolff, Wyant, Hawkeye, Magnoketa, Forest Rose and Pottawatamie, show perfect foliage and fruit as do the thick-leaved sorts from central Russia. Simon's Plum and the Shense Apricot, coming from the dry and changeable climate of northwest China, have also perfect foliage and fruit.

In the way of pears we have nothing now left of the old standard sorts or of the Chinese pears and their crosses, which do well in New Jersey. But the Snow Pears of Northwestern China are perfect in foliage, tree and fruit, and I have hardly seen a trace of fungus on the thick leaves of the interior Russian varieties. On the other hand, the varieties from the coast provinces of Russia are now destitute of foliage. The peaches from Northwest China are here nearly hardy in tree and perfect in foliage; but nearly every specimen of fruit is scabbed on one side. On the other hand, the varieties from Bokhara in Asia are perfect in foliage and I have not seen or heard of a trace of scab on the fruit.

I give these general notes to show that in our trying climate the structure of the leaf and the epidermis of the bark and fruit has much to do with the tendency to rust, scab, etc., and that we cannot hope to do much in a general way in the successful use of fungicides. In the strawberry, raspberry, blackberry, currant, gooseberry and grape I notice the same tendency to leaf troubles in some varieties and comparative exemption in others.

COMPARATIVE PRICES OF BEEF CATTLE.

JUDGE T. C. JONES, DELAWARE, OHIO.—In a recent communication to the Ohio Farmer after speaking of the decline in price of Short-horn cattle, I said, referring to the general business of cattle-growing:—It is to be observed that the present severe depression in the market values of beef cattle and dairy products is not without a parallel in former years. During the depression in our agricultural products, beginning about the year 1840, the dressed carcasses of hogs sold as low as $2.50 to $3 per 100 pounds, while beef was still lower. In later years, say about 1859 or 1860, my recollection is that beef cattle and dairy cows were quite as cheap as they are at this time. The present depression, however, has one peculiar feature. It affects more seriously superior fat cattle of heavy weights than the inferior or lighter grades.

How do we account for this? It is true that since the discovery and universal use of petroleum and gas for illumination, the price of tallow has declined to a figure so low that its production is no longer profitable, and the taste of our people has changed so that butchers say that they find it difficult to sell well-fattened beef or mutton. This is an unaccountable condition of things, but it explains, I think, the reason why the present depression in prices as quoted in our leading markets (Chicago, Buffalo, etc.,) affects much more seriously the best cattle, the ripe and well matured stock, than the young and lean sort.

If this singular characteristic in the taste of our beef consumers is to continue, I regard it as the most discouraging feature of the present outlook. Heretofore the great argument in favor of good stock with liberal grazing and feeding has been that such cattle, however hard the markets for the light, lean and inferior sort, would always fetch prices that were fairly remunerative. But there is reason to believe that consum-

ers will not be slow to learn why it is that so much of the beef now in the market is hard, dry, and tasteless, and will demand meat full of rich juices, with high flavor, and will be willing to pay for it. But this quality is only found in cattle of good blood that are well fattened, and of suitable age; say in bullocks of half or three-quarter blood 30 to 36 months old, at which age fattened cattle should weigh 1,300 to 1,500 pounds with proper and not extravagant feeding and management.

Since the above was written, there has been a material advance in the market price of good heavy cattle as compared with the figures for inferior and light stock, caused, as I understand, by the expiration of a contract which a syndicate of exporters had made with ocean steamers for all their available space, by which this syndicate was able for a time to control the market value of export cattle.

BOGUS JELLIES.

T. GREINER, NIAGARA COUNTY, N. Y.—Yes, there is considerable demand for jellies at prices that would land in the poor-house any one fool-hardy enough to attempt meeting this demand by the manufacture of jellies from genuine fruit and good cane sugar. There is a demand for jellies that can be sold cheap, and neither grocer nor hotel-keeper nor boarding-house mistress will pay a cent more per quart for genuine fruit jelly than for the stuff made from alum, and gelatine or at best from apple refuse and the cheapest sugar, flavored with coal-tar extracts. Why should they? The cheap adulterated article answers the purpose just as well, and tickles the palates of the boarder just as much as the pure article. The consideration for the consumer's health does not count with the seller or dispenser. But such consideration should count with the authorities and law-makers. Now what's the use of talking about a prohibitory tariff on bananas and other foreign fruits, with the view of shutting off the perfectly legitimate foreign competition, so long as we allow a promising outlet for much of our surplus fruits to be entirely blocked by fraudulent illegitimate competition at home by the unrestricted, and, thus far, unopposed manufacture and sale of bogus jellies, the consumption of which can not be recommended on sanitary grounds. Here we have a case analogous to the adulteration of dairy products, only in an aggravated form. Our horticultural "oleomargarine is a mixture of nasty materials." It has driven the genuine horticultural product entirely out of the markets, and forbids its remunerative manufacture. Here, indeed, is cause for "protection." Against cheap bananas the grower of domestic fruit can in a measure protect himself, by the production of strictly first-class fruits, and by the adoption of improved modes of culture—cheapening production. Against the horrid mixtures called "fruit jellies" he is powerless, and prohibitory laws are called for. Demand for jellies? All the present demand at present prices does not justify the advice to the fruit-grower and to the house-wife to go to the trouble and the expense of making such goods. When the cheap refuse, coal-tar mixture, is done away with by the enactment of an anti-bogus jelly law, then, and not until then, it will be time to talk about the demand for fruit jellies.

FALL FEEDING OF MOWING LANDS.

P. C., MILFORD, N. H.—I never turn cattle into the mowing to feed in the fall. I would much rather cut the grass and feed the stock in the barn. I always plan to have plenty of fodder corn, and when the frost takes that then I feed barley and peas, which I sow about August 10, and I cut and feed that generally until snow comes. After the advent of freezing weather, I cut it and keep enough on hand in the barn so that it will thaw out before it is fed. There are farms near here that are pastured so closely in the fall that it is impossible for the grass to recover in the spring, and consequently the hay crop is lighter every year until the land has been seeded again. Any one can see such places in every town, and those who practice fall feeding will not readily believe the bad results of it; but, if you ask them how their grass is turning out, they will say that they have not much more than half a crop and that they don't see why it is, and if you hint to them that they pasture it too much, they will say that they think it is best to feed off some of the old stuff and mowing will be easier next year, and that it doesn't do any harm. If they think so and will use no judgment, when they can see the difference between their fields in the spring and those of their neighbor who does not fall-feed his mowing, then perhaps it is best not to advise them any more, for they will do just so again every fall while life lasts.

ISOTHERMAL LINES, NOT PARALLELS OF LATITUDE.

J. C. V., CHICAGO, ILL.—Referring to a recent note in the RURAL, by Mr. Gregory, in regard to the effect of latitude on the earliness of corn, I do not think the truth is fully stated. The question is not at all one of latitude, but one of similar degrees of heat or cold. These differ from parallels of latitude very greatly, and are governed by very many causes, such as variation of altitude, prevailing drought or rainfall, contiguous large bodies of water, etc.

To arrange for corn of one variety which will ripen a few days apart, one should study the isothermal lines.

For example, suppose corn to be planted at Madison, Wisconsin, and also at South Bend, Indiana; at these two places although 125 miles apart as to latitude, it would mature at the same season. Corn planted at the same time at Grand Haven, Michigan, on a latitude parallel with Madison, Wisconsin, would not mature until 10 days later than the same variety planted at Madison, owing to the prevalence of cool westerly winds from Lake Michigan. I think in no case could this difference in earliness of maturity be managed by following strictly the parallels of latitude, but it could be thoroughly and correctly done by planting according to parallels of similar heat or cold, that is isothermal lines.

H. A. W., CHAUTAUQUA COUNTY, N. Y.—An inquirer asks in the RURAL if it would pay to have two sets of wheels for farm wagons. If the wagon is to be used on the farm and also on the road, one should have two sets of wheels. The tires for the road wagon should be 1¾ inch, those for the farm wagon not less than six inches, and the wheels should not be over 3½ feet in diameter. There is little trouble in changing, if one is prepared with a handy jack. The wide-tired wagon can be used on the farm when it would be impossible to use the narrow-tired one to any advantage.

L. H., DANSVILLE, N. Y.—What Mr. Terry says, in speaking of shallow cultivation for potatoes on page 555 of the RURAL, prompts me to speak of my method. I have a wheel fastened to the rear of my cultivator so that the depth at which the rear teeth or those in front run can be as easily adjusted. If I wished to take either wheel off, I would remove the front one, as less damage would be done by the front teeth running deeply.

What Others Say.

FINALLY.

BUTTER AND CHEESE.—Professor Long, in a lecture before the Cirencester Chamber of Agriculture, England, as noted by Dr. Hoskins in the Vermont Watchman, said that a ton of butter takes from the soil 2.7 pounds of nitrogen, 1.58 pound of phosphoric acid, and one pound of potash, the total value of which he estimated at about 50 cents. No other product, probably, takes so small an amount of fertilizing material off from the farm. Cheese is much more exhaustive. The professor's estimate is that a ton of cheese takes from the soil 112 pounds of nitrogen, 1.58 pound of phosphoric acid and one pound of potash—valued at about $10. When the milk is sold off from the farm there go with it, in addition to what is in the cheese, 2.72 pounds of nitrogen, 1.84 pound of phosphoric acid, and 5.67 pounds of potash.....

IT is estimated by the past rate of increase of population that in 30 years hence or in 1920, the population of the U. S. will be 160,000,000. The R. N.-Y. wonders how farming will pay then.....

SULPHATE OF LIME (plaster) is recommended as better than lime to prevent potato rot.....

FARMERS of this state are cautioned by Director Collier to beware of wheat swindles.....

THE N. Y. TIMES says that it is a mistake to suppose that a plantation of young timber would not add to the selling value of a farm. People who come as recruits to farming from other business pursuits, are most apt to look at a thrifty grove of timber as of more value—as it really is—than any other equal area of land on a farm. Few men besides farmers ignore the value, as well as the beauty, of a grove or plot of woodland; and the majority of farmers are now discovering that a plantation coming on is a good thing to have on the farm. A row of trees along each side of the road, if nothing more can be provided for, will much enhance the value of the land, and it certainly adds to the beauty of the landscape, which is an element of value in the estimation of any reasonable purchaser....

J. H. HALE pronounces the Oldmixon the best eating peach that grows. He planted more largely of it than of any of the others, and expects to have not less than 5,000 baskets of this one variety. He finds that one orchard of this variety on light sandy soil is ripening its fruit 10 days ahead of other orchards, and these will all be out of the way before the others come on, and so prolong the season 10 days.....

SECRETARY OF AGRICULTURE RUSK favors Chicago for the World's Fair in 1892 and he gives several excellent reasons therefor. Utterly regardless of local interests, or the interests of any State, the R. N.-Y. wants the great fair to be held where it will best serve the interests of the entire country....

THE LONDON GARDEN calls our desire to increase the size of flowers a "crazy fashion." It mentions the petunia, marigold, pansy, hollyhock and balsam as among the flowers which have suffered most by this sort of "improvement."....

PROPAGATE strawberries by selecting the most vigorous runners is the good advice of C. L. JONES in Garden and Forest.....

IN putting up grape juice, catsups or anything of the kind which is to keep in an unfermented condition remember two things: Have the liquid boiling hot and fill the bottles full. Of course the cork displaces some of the liquid. Be sure the corks are sound and air-tight. When the liquid cools, it will contract leaving a small space between it and the cork. It is a safe precaution to dip the corks in some kind of wax.....

PROF. J. L. BUDD of Ames, Iowa, in reply to a question, states in the Farmer's Review that during the past 20 years he has watched the behavior of the peach when budded on young stocks of the Wild Goose—Miner and other Chickasaw varieties—and he has about reached the belief that in some respects they are preferable to peach roots. He says he has not known the borer to attack the peach wood when budded on these stocks above the crown. He has thought that the peach wood ripened up more perfectly on these stocks, and that for this reason the fruit buds would endure a lower winter temperature. He has believed that the peach would do well on this stock on soils where it would nearly fail on peach roots.....

ABSTRACTS.

——NEW YORK HERALD: "The surest way to please is to forget one's self and think only of others."

——"THE reason some men can't make both ends meet is because they are too busily engaged in making one end drink."

LAUGH, and the world laughs with you;
Weep, and you weep alone,

——C. L. ALLEN in American Garden: "As cut flowers for table decoration, the nasturtium has but few equals, and for garden display, five cents' worth of seed will produce a greater and more pleasing effect than $25 invested in bedding plants, besides a bountiful supply for pickles, than which there are none better."

——BOSTON COURIER: "Domestic skeletons are usually formed of the bones of contention."

——HENRY STEWART: "As a plant grows most vigorously when its roots have a firm hold upon the soil, so a farmer is most prosperous when he feels firmly attached to his farm and thinks of it as a life interest to him."

——N. Y. TIMES: "All grain bins should be made of such sizes as will hold an even number of bushels, and by having marks around the bins inside, the contents of a partly-filled bin may be known. Thus, if the floor of a bin is 50 inches long by 43 wide inside, every inch in depth equals one bushel. A bin 100 inches long by 43 wide holds two bushels in each inch of depth. Thus a bin may be made to measure itself by marking the depth in inches on the ends and sides and leveling the grain."

——AMERICAN FLORIST: "That the catalogue business is being overdone there can be little doubt, and in the present fierce competition it will soon be a case of the survival of the fittest. And we predict that the survivors will be those who have honest illustrations and descriptions in their catalogues, who eschew all bombast and exaggerations, and who conduct their business in a square, straightforward way, getting a fair price for a good article which will give satisfaction to the buyer."

——LIFE: "LOVER (*ardently*): 'I love the very ground you tread on.'

HEIRESS: 'I thought it was the farm you were after.'"

——FARM JOURNAL: "When it takes five quarts of milk to pay for one drink of whiskey it pays to drink milk and let the whiskey alone. It pays always to let whiskey alone."

——"IF an insect gets into the ear drown him in oil and then wash him out with warm water."

——N. Y. HERALD: "Good crops are the basis of our wealth and general well being, and the yield this year is so grand as to warrant a day of special thanksgiving. The shortage in the harvests abroad assures a good demand for our surplus cereals, and their export, together with the continued investment of foreign funds in manufactures here, should bring an influx of gold later on."

——N. Y. SUN: "If the great consolidated farmers' trust succeeds in controlling the cotton crop, the flag of monopoly will float defiantly over cotton States. It is amusing to see men denouncing monopoly and at the same time trying to get a monopoly; but such is the humor of human nature."

——ORANGE COUNTY FARMER: "We have fattened calves in from six to seven weeks' time, exclusively on sweet skim-milk, that weighed over 200 pounds, and made very nice veal at that. A little linseed-oil meal added, however, improves the milk for that purpose."

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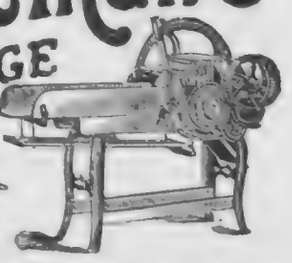

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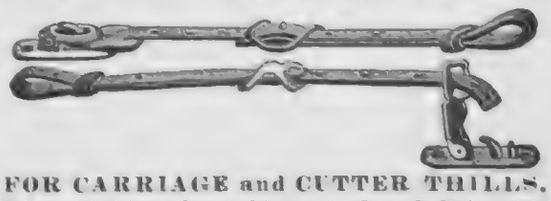

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THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, SEPTEMBER 21, 1889.

PROGRESS!

THIS week the RURAL NEW-YORKER, as regards the quality and weight of the paper upon which it is printed, and in its general make-up, will show its readers what it will be during the rest of the year, and, indeed, for the future, or, at least, until further improvements shall be made.

No back steps, friends. When the R. N.-Y. lowers its standard of excellence, its present editors will have stepped down and out.

A SUBSCRIBER in Indiana, in renewing his subscription, says: "The RURAL *is good enough to pay for*; if I knew of any higher compliment to pay, I would pay it." This compliment is entirely satisfactory to the R. N.-Y.

TRY the Berckmans Grape. It is much like the Delaware, but this season, while the latter has shed all its leaves and the berries can not ripen, the Berckmans has ripened perfectly. The vine is perfectly healthy, the bunches compact, of the color of Delaware, a little larger in size and of much the same quality.

THE next issue of the R. N.-Y. will be a notable one. It will be the regular Premium List Number. We shall offer superior inducements to our friends this year to help increase the RURAL'S circulation. Then we shall print the picture of Mr. Terry's farm implements. This picture will please everybody. We shall also have six short symposiums on important and interesting topics. On the whole, it will be a fine number to show your neighbors how far the R. N.-Y. is from being asleep.

THERE was a walking contest for horses at the Ohio State Fair last week. A track 124 rods long was used. The horses were hitched, one at a time, to an express wagon loaded with about 1,000 pounds of coal. The first prize was won by a mare which walked this distance, hauling the load, in four minutes and 10 seconds. This contest was, as we understand, organized and carried out by the Ohio Farmer. It is an excellent idea and we hope this walking contest will be introduced at all our fairs. "The best farm pace is a walk." Breeders of draft stallions are taking hold of this matter as our readers will see in a week or so.

THE R. N.-Y's. great expectations of the present season have, for the most part, been knocked to slivers, to speak in a way not quite elegant. But among the failures a success or so may be recorded. Our wheat and oat crops were among the largest ever raised at the R. N.-Y. Farm, while there is now little doubt that the corn yield (there are five acres) will be fully as large as that of the celebrated crop grown there eight years ago. One measured acre received fertilizer only; another fertilizer and farm manure; the rest farm manure. The outcome will be placed before our readers in due time. The variety is Chester County Mammoth.

ONE story told by the dressed-beef men is to the effect that their trade has been a benefit to the people because the public now use more of the better parts of the carcass. This, they say, accounts for the fact that prices for this sort of beef have not been reduced. This claim is absolute nonsense. The R. N.-Y. has consulted dozens of local butchers on this point. Prices for no kinds of meats have been reduced. No parts of the carcass are thrown away, and there is just as great a demand for the poorer cuts of beef as there ever was. Live cattle are lower in price than they were before the dressed-beef trade was developed, while the consumers are called upon to pay just as much as they ever did. Where does the difference in price go to? That is what the American people want to find out.

MINNESOTA expects a large influx of desirable agricultural settlers as soon as the 3,000,000 acres lately sold by the Chippewa Indians to the government are thrown open to settlement. The lands surrendered include Leech Lake, 94,449 acres; Lake Winnebagshish, 320,000 acres; Mille Lac, 61,014 acres; Fond du Lac, 100,121 acres; Grand Portage, 5,840 acres, Bort Fort, 107,509 acres, and about 2,250,000 acres in the Red Lake and White Earth Reservations. The total Indian population of the various reservations is about 6,300, of whom 4,670 are on the White Earth, Leech Lake and Red Lake Reservations. The Indians of these three reservations are the most industrious, and self-supporting, and their land is, on the whole, considered the best; that of the Leech Lake, Winnebagshish and Mille Lac Indians being much the worst, as it is subject to overflow owing to the recent erection of a great reservoir dam on the head-waters of the Mississippi. The land will be reserved entirely for homestead settlement, with the exception of town sites, but cannot be opened by the President's proclamation for many months to come.

$25.

TWENTY-FIVE dollars are offered by the R. N.-Y. as follows: Fifteen dollars for the largest and best shaped R. N.-Y. No. 2; $10 for the second-best. Description and weight should be sent in before November next. Those only who may be entitled to one or the other of the above prizes, *as judged by their own reports*, will be asked to forward the specimens to this office.

THE DOMINION AND THE UNION.

BY far too little is known in the United States with regard to Canadian affairs. While every trivial incident in the daily history of Europe is flashed under the Atlantic and finds its way into newspapers in every corner of this country, how many Americans, except perhaps those living along the border, ever read anything about their northern neighbors? Yet in race, institutions and interests, Americans and Canadians have far more in common than any other people on the globe, and should feel a warmer interest in each others' welfare. Isn't it time to start a new policy in this respect? Recent statistics of the trade and navigation of the Dominion during the fiscal year of 1888, show, beyond question, that the most profitable and natural market for the products of Dominion is in the Union. During that year Canada sold to the United States $42,512,065 worth of goods and to Great Britain $42,094,984 worth, showing an excess of half a million dollars in favor of this country. The imports from the United States were $48,481,848—$9,000,000 greater than those from Great Britain. The volume of trade with the Mother Country—imports and exports—was smaller in 1888 than in any other year since confederation, in 1857; while the transactions with this country were larger than in any preceding year except in 1882 and 1883. One-half the Canadian exports of lumber and other forest products are disposed of in the United States; so are over three-fourths of the minerals, two-thirds of the agricultural products, nearly one-half of the fish; 40 per cent. of the manufactured articles, and practically all the surplus miscellaneous articles. As the two neighbors are naturally the best customers of each other; why shouldn't they want to know more of each other, and take an interest in each other's prosperity?

THE AMERICAN BEEF SUPPLY.

THE forthcoming report of the Bureau of Animal Industy will contain a report of the investigations made of late years by the Department of Agriculture to ascertain the number of cattle in this country. For a number of years past beef growers have witnessed a steady decline in prices. What caused this decline and what are the prospects for future trade? These are questions of vital importance to stockmen, and they are the questions which the Department has endeavored to answer. The pith of the report is contained in the following summary:

"The future tendency of prices with cattle will probably be to advance on account of the improbability of increasing the stock of cattle as rapidly as the population is augmenting. But this advance will be slow and uncertain for a number of years. It will be at least three years before the stock of cattle has been reduced to the proportion, as compared to population which existed in 1878, and then the mean price of steers was but $4.25 per 100 pounds, or 82 cents less than in 1888. In other words, the prices of steers for several years in the future will depend more upon the prices of hogs, upon the value of the exports of cattle and beef products, and upon the proportion of steers marketed, than upon any changes likely to occur in the number of cattle per 1,000 of population which exist in the country."

This "proportion of cattle" to population is not a safe guide in making estimates of the amount of beef in the country. The beef obtained from a given number of cattle is considerably larger than it was a few years ago. This is due to the introduction of thoroughbred stock, resulting in grades that are marketed younger, weigh more and yield an increased proportion of edible meats. The Department finds that the prices paid for steers have always followed the prices of hogs and of corn up or down. We hope the Department's prophecy will prove true and that cattle growing will once more prove profitable.

TARE ON COTTON BAGGING.

A HIGHLY important convention of the Cotton Exchanges of the country was held in New Orleans last Wednesday. Delegates from all the principal cotton markets of the country were present, and the Commissioners of Agriculture from the Southern States and representatives of the Farmers' Alliance were admitted to seats on the floor. The chief subject of discussion was the difference in tare in various markets in the matter of cotton bale coverings. Great importance has of late been attached to this question by cotton-growers and dealers on account of the wide introduction of various substitutes for jute bagging. After numerous experiments with other materials, a coarse form of cotton-sheeting made from low grades of cotton has been generally selected as at once the cheapest and most effective. By the use of this, a profitable home market will be opened for staple of poor quality, which will have a tendency to enhance the prices of better grades in other markets, and many millions of dollars that have hitherto been sent abroad every year for raw or manufactured jute will be kept at home.

The tare on jute bagging has always been so excessive that it is estimated that in this item alone the Cotton States have been cheated out of $75,000,000 since the war. The new kind of bagging is much lighter than the old, and at least a proportionate reduction of tare should be allowed on bales on which it is used. This has not hitherto been allowed in most markets. After a lengthy discussion it was unanimously resolved that "after October 1, 1889, all cotton shall be sold by net weight, allowing 24 pounds off gross weight for tare on jute-bagging-covered bales, and 16 pounds off for tare on all cotton-covered bales; the cotton covering to be of standard weight—three-quarters of a pound to the yard." If the cotton-growers will follow the advice of the Farmers' Alliance by sending their cotton only to points where this tare is in operation, they will save millions for their section.

COOKING FEED.

THE "practical men" have their inning this week and it must be admitted that they make a good case in favor of cooking food for swine; and their experience does not necessarily cast any discredit on the results of experiments at our experiment stations. These experiments showed that there was not enough gain made in feeding cooked grain to pay for the cooking. This was the only point taken into consideration, and we are not informed that the stations used the most economical apparatus for cooking the food. Aside from the simple question as to whether a peck of raw corn-meal will make more pork than the same peck of meal made into "pudding," the men who discuss the question in this week's RURAL make three claims.

1. The warm food is more palatable and comfortable for the hogs, particularly in winter.

2. Cooking enlarges the list of substances that can be profitably fed to hogs. Without it one cannot obtain the full feeding value of turnips, cabbage, pumpkins and similar foods. It is also claimed that hotel swill will be made more valuable by cooking it with other substances.

3. Clover hay, thoroughly steamed and fed warm in winter provides an excellent substitute for pasturage that can be obtained in no other way.

By means of his feed steamer Mr. Pendleton is enabled to utilize his cabbages and cracker sweepings. He obtains his profit from the utilization of what would otherwise become a waste product. Mr. Coultas finds that his steamer adds considerable value to his clover hay. In fact, it seems to the R. N.-Y. that the chief value of this practice will be found in the utilization of other products than grain. Some years ago the writer fed chopped and steamed corn-stalks to a horse with very satisfactory results. The stalks were run through a cutter, placed in a barrel and steamed by pouring boiling water on them. An old horse ate them greedily. When the stalks were given him uncut he was unable to eat them. Would not bright, well-cured stalks treated in this way equal silage in feeding value? Cooking feed in one of the modern steamers is quite a different matter from the old plan of watching a big kettle.

I believe that the waste of time in growing a long body is so unnecessary that I shall allow my fruit trees to branch as soon as they show a disposition to do so.—P. H. R., page 626.

BREVITIES.

PROGRESS.

THERE is an extra crop of roots in the country this fall.

REPORTS of the R. N.-Y.'s Women's Potato contest are coming in freely.

BLIGHTED potatoes! That is the cry of many of our Eastern correspondents.

A GOOD deal of the progress of the world is due to the fact that we preach what we do not practice. There are really very few who do practice what they preach.

A SINGLE plant of another variety of dwarf Lima bean is before us. The pods are as large as those of the large pole Lima. Illustrations of each from nature will be presented in a week or so.

FARMERS in the hay districts of New Jersey are becoming more and more inclined to give up wheat. The grain hardly pays them, and many have come to believe that the crop is not needed in securing a good seeding of grass.

THE shorter the time between the picking of a vegetable and the eating of it the better the flavor. This applies most particularly to Lima Beans and sweet corn. It is much the same with an egg. Eat one five minutes after it is laid and see!

ANTICIPATING a dry season, a good many farmers planted fodder corn. The pastures have kept up so well that they have had little use for the green fodder. Now it should be cut and nicely cured. Thus treated it is as good as hay for the cows.

THE statement recently made by Prof. Halsted and Dr. Scribner, that potatoes from rot-infested fields or sections should not be used seems likely to lead to a very lively discussion. Readers of the R. N.-Y. will have the full benefit of it. We shall give the views not only of scientists who have studied the potato carefully and watched the development of the rot, but also of the veteran potato growers who have had practical experience with all sorts of seeds and seasons. If there is anything to be learned about the matter, the R. N.-Y. will have it.

Indust'l Societies.

THE FLORISTS AT BUFFALO.

[RURAL SPECIAL REPORT.]

"The florists of the future;" glass insurance; abolition of duty on foreign bulbs; exaggerated catalogue cuts; value of a new rose; officers elected; a "national experimental garden;" killing grubs in greenhouses, having a "good time."

THE fifth annual meeting of the Society of American Florists at Buffalo, was largely attended, and was very interesting. Members were present from all parts of the country and from Canada. The Mayor of Buffalo gave an address of welcome. President J. N. May delivered the usual address, discussing many questions of interest to florists. The young assistants, who are to be the florists of the future, should be thoroughly and systematically educated both by precept and example. To be a successful florist a young man should have a fair school education, and a natural taste and love for flowers. This, combined with a good business training and a strict application, will produce the desired result in most cases. The renaming of old varieties of plants, and selling them for novelties at high prices was very mildly denounced as objectionable. The work of the Florists' Hail Association was commended. June 1, last, there were over 1,200,000 feet of glass insured. The system seems to be very popular, especially in localities where hail-storms are of frequent occurrence.

The reports of the secretary and treasurer showed that the society is in a prosperous condition. Peter Henderson made a report as chairman of a committee, recommending an effort on the part of the society to secure the abolition of the duty of 20 per cent. on imported bulbs. The fact was brought out that tulip bulbs were being successfully grown in several States. A matter of considerable interest to all who are in the habit of dealing with firms who publish catalogues, was the recommendation of the committee on "Exaggeration of Cuts in Catalogues" that catalogue men be invited to submit their illustrations to the executive committee or a sub-committee with actual specimens of the objects illustrated, and if found to be true to nature, that a certificate to such effect be issued to each for use in his catalogue. This created a very animated discussion, and the matter was referred to the executive committee with power to act upon it as it saw fit.

W. C. Barry read a very carefully prepared paper on "Roses." During the discussion following, the belief was expressed that the value of a new rose was too often decided by its adaptability for forcing. Roses are needed fully as much for planting out. Mr. Hill expressed himself as pleased with Wootton. Boston was chosen as the place for the next meeting of the convention, after which the following officers were selected for the ensuing year:

President, J. M. Jordan, St. Louis; vice-president, M. H. Norton, Boston; secretary, Wm. J. Stewart, Boston; treasurer, M. A. Hunt, Terre Haute, Ind. John Thorpe read a paper favoring the idea of a national experiment garden, and an attempt will be made to get an appropriation from Congress for that purpose. A method of heating the soil for greenhouse benches to kill the grubs was given by Mr. Carmody. It can be done very rapidly by piling the soil on steam-pipes suitably arranged. The fact was stated that the season of blooming of many summer flowers could be prolonged by picking off all the blooms so as to prevent the plant from exhausting itself by perfecting seed. It was recommended to nip the points of dahlias, thus inducing free branching. A committee appointed for the purpose reported a plan for protecting the society from dishonest dealers.

William McMillan, superintendent of the Buffalo parks, read a paper on Landscape Gardening, which ridiculed the craze for the artificial and abnormal in gardening. On Friday morning the society visited Niagara Falls, on a special train, returning in time for an elegant repast in Music Hall. After this was disposed of, the society entered carriages and were driven through the streets and parks of Buffalo. The "National Flower Committee" declined to commit itself by naming any particular flower. The National Chrysanthemum Society was organized. The $100 prize offered by Peter Henderson for the best herbarium of native plants was awarded to G. W. Oliver, Washington, D. C. J. H. Butterfoos, Lambertville, N. J., had the second best, and it was so good that it was awarded a second prize of $50 by Mr. Henderson. There was a large display of cut flowers, heaters of various kinds, and other paraphernalia of the trade.

F. H. V.

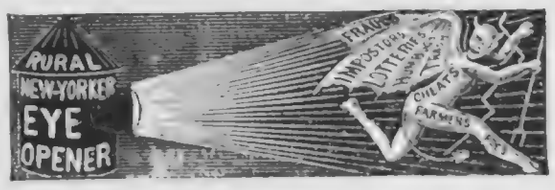
NEW ENGLAND FAIR.

(RURAL SPECIAL REPORT.)

THE 26th annual fair of the New England Agricultural Society was held at Worcester, Mass., on the 3rd, 4th, 5th and 6th of September. The weather was exceptionally fine, the attendance unprecedented and the exhibition all that could be desired. The cattle sheds were filled to overflowing. Nearly all the leading breeds were represented. A fine herd of the Dutch belted cattle was greatly admired. The Swiss also received a good deal of attention. The dairy contests were exciting and interesting. In the building devoted to dairy products, a "baby" De Laval separator was shown and its method of operation explained. It is just the thing for a small herd, say of eight or 10 cows. The tent devoted to the Patrons of Husbandry was visited by members of the order and a number of excellent speeches were made in it and attentively listened to. Domestic articles and fruits were exhibited in the Main building, but the aisles were too narrow to accommodate the crowd and a critical examination of the exhibit was impossible. Messrs. Stephen Hoyt's Sons showed some fine specimens of the Green Mountain Grape and of their new strawberry, the Yale. The vegetable tent was well filled. The show of potatoes and corn was unquestionably the finest ever made in New England. The implement buildings were next in order. They were under the charge of Mr. Curtis, the efficient manager of the Richardson Manufacturing Co. The exhibit was a good one. Such old and reliable firms as the Ames Plow Company; the Belcher & Taylor Company; the Vermont Farm Machine Company; Richardson Manufacturing Company; and the Higganum Manufacturing Company showed a full line of their well known implements. Among the novelties were Hill's milk aerator, a machine for forcing air through milk and removing all noxious odors. The Ruggles cultivator is a hand cultivator arranged on the principle of the disk-harrows. It is unquestionably a valuable implement.

The general management was good, but the presence of the fakirs who occupied a large portion of the available space and who attracted far more attention than the legitimate portion of the exhibit, was a deplorable feature. The facilities for getting visitors to and from the depot were miserably inadequate and horse and chariot racing attracted far too much attention. On the whole, however, it was a good fair and worthy of the enormous patronage it received.

J. H. G.



FRAUDS UPON FARMERS IN THE COUNTRY.

AT no time within the Eye-Opener's remembrance have swindlers preyed so heavily on farmers as they have been doing of late, judging by the exposures of their various misdoings in the public press in different parts of the country. Their modes of swindling are substantially the same that have proved successful for years, and which have been exposed over and over again in this department. The best way to keep our old readers in mind of the tricks of the tribe and put our new readers in mind of them, is to give them an occasional specimen of the numerous instances in which each kind of swindle has been successfully practiced. The swindle the success of which depends on the pretended desire of the operators to purchase a farm has been outrageously successful of late. The papers that come to the Eye-Opener's notice contain numerous accounts of such frauds, and he sees only comparatively few of all published, and a large number of cases never find their way to the papers. Hundreds of such swindles must therefore be perpetrated every year in the country at large, and the sums lost are generally quite heavy. As a rule with few exceptions, old men are the victims! There are three principal reasons for this: First, it is not until men gullible enough to be swindled in this way have grown old that they have laid by enough to make it an object to the rascals to go to the trouble of cheating them out of their hoards; second, old men are often more credulous, self-sufficient, and greedy than younger men, and, third, they are less able to take prompt and vigorous measures for recovering the property when lost, and punishing the swindlers, and hence are all the more likely to be selected as victims.

Among the dozen or more cases noticed by the Eye-Opener within the last month, the latest successful one is that of Joel S. Ordway, who lives at Loudon, near Concord, N. H. Joel is a well-to-do farmer, 80 years old, and for some time he has wanted to sell his farm. Last Monday, September 9, a nice-looking man called on him ostensibly to bargain for its purchase. After considerable talk, the glib-tongued stranger left, promising to call again. Early next forenoon he drove into Mr. Ordway's yard and prevailed on him to go to Concord where the old man was induced to draw $9,500 from the bank to prove to the prospective customer that he was a responsible man and able to support his title to the farm. The pair then started to drive back to the farm, but when about a mile from the place, they met the indispensable confederate—a young man who got into conversation with Mr. Ordway's companion. The inevitable game of cards was suggested, and the team was stopped, and Ordway's companion and the stranger began to play. The former soon lost $10,000 apparently, and asked Ordway to loan him the $9,500 to win the money back. Had he done so the brace of rascals would have straightway driven merrily off. He refused, however, whereupon one of the men held a revolver to his head while the other took the money. They then drove rapidly away, leaving the despoiled and disconsolate farmer alone on the highway. He walked to the village of Loudon, from which he was taken to Concord, where he told the police of his loss. By this time the swindlers and highwaymen had a good start. One is described as smooth-faced and about 30 years old, while the other had a light mustache and was not over 20. Of course, they'll attempt the same game again, though probably not for some time, if ever, in that neighborhood. In all such cases, plans are carefully laid beforehand. In this instance, the character of old man Ordway, the fact that he had a large cash deposit in the bank and the best place for the meeting of the confederates and the despoiling of their victim had all been ascertained and discussed in advance. Of course it's an old, old swindle, but, alas! old, old swindles always find fresh, new dupes.

A variation of the game was played, the other day, on W. W. Johnson, a wealthy farmer living two miles south of Hillsdale, Michigan. He was approached by a fine-looking man who wanted to buy his farm, with which he expressed himself highly pleased. The two men took a walk to view the property. On their way back to the house, they met an apparent stranger to both, who appeared to be intoxicated. He showed a large sum of money and engaged the would-be land buyer in a game of three-card monte, losing apparently $10,000 to him. It was then suggested that Mr. Johnson should take a hand, and seeing his "friend" so successful, he couldn't resist the temptation to do so. He went to Hillsdale, drew $2,000 from the bank and returned home. The game then proceeded, and in a short time Johnson's money was all in the common pile with that of the others. In the division, he took a package which he supposed contained money for the full amount of his stake and winnings, and the others departed. Too late, foolish Mr. Johnson found that the package contained sawdust. In a pile of clippings relating to similar frauds of recent date, the *modus operandi*, North and South, East and West is always substantially the same. How should such frauds be avoided? Well, in the sale of real estate it is always safest to deal through a responsible lawyer. If one is unwilling to do this, he should always consult his wife before taking any important step in the matter. Wherever the machinations of such rascals have been defeated, in three cases out of four, their discomfiture has been due to the wife's summary interposition.

Various.

FACTS FROM FARMERS.

FARM FIGURING.—If I were to state what I had found the most profitable during the past season's work, I should say that a few sums in mental arithmetic, worked out while in the field, had yielded the highest rate of interest, considering the capital invested. Every year I am led to realize more fully the importance of making estimates on the cost of producing and the probable income from different crops, not forgetting to make liberal allowances for loss by poor seasons, insects, etc., one of more of which are pretty sure to come. The contractor and builder first figures out carefully the cost of material and labor, then adds a certain per cent. for possible error or changes in price of material before accepting the contract for a building, or making a bid. With the small margin on farm products the farmer must figure carefully the cost from the light of past experience, and then raise the crops that promise the surest results and largest profits. I could point out many cases in my own experience during the past season, where a little calculation was the source of profit, where otherwise there would have been a loss, and what farmer cannot? I have found that I could save $25 by changing the crop I had planned to raise on a certain piece of ground, and it took but a few minutes to do the figuring. For that large, fine-looking cow that every one admired when looking at my herd, and of whose yield, when fresh, I used to boast, I have recently made an appointment at the slaughter-pen. I found her column on my milk record for the year, blank for too many months and her average correspondingly low. She did not pay for her keep. But I hear some one say it's a "heap of work" to weigh every cow's milk twice a day. Not so very much I say, but it's a "heap of work" to make a comfortable living nowadays if we do not do it, and many more small things that decide where the money comes from. But there are many who think such care causes too much trouble. Lay out your plans for the season's work only after careful calculation, but when changes of season warrant, do not hesitate to change your tactics to take advantage of an excessively dry or wet season. We ought to be able to state the exact amount of each product we raise in pounds or bushels, and the cost of producing it, till the money is in our hands. When this is done, there will be a new era in farming, compared to which the introduction of the silo is a small matter. Some of these little examples will show you results simply astounding, and I can see you carefully working them over again with pencil and paper, thinking surely you have made a mistake somewhere. I have worked some of the examples more than twice before I could be convinced, in my own mind, that I had made no mistake. Finding the result was correct often made me feel cheaper than to have found a mistake in adding or multiplying.

E. A. BISHOP.

Talladega County, Ala.

AN IDAHO NECTARINE.—I send by this day's mail a registered package from Boise County, Idaho. It contains a smooth-skinned peach for inspection. The tree resembles a peach in every respect. It is a seedling. The seed was from a peach tree in a neighbor's orchard. This neighbor's tree has never had any other than the rough-skinned peach of a fine rich color, and good flavor. There are no nectarine trees in the orchard or nearer than 25 miles. The peach or nectarine that I send is of only an average size, as there are others that are larger and some that are smaller. The skin is smooth and of a bright rich color and shines as though it had been polished. When ripe it is of a delicate green, splashed with peach red, the red often predominating. The flavor is rich and sweet and exceedingly inviting. The tree is six years old with foliage of a rich green color and very healthy. The tree spreads out and covers the ground like the Baldwin Apple tree. From all appearances it has a third more foliage than the peach trees near by. It is exceedingly hardy, having passed through our severe winter of 1887-8 when the mercury in the thermometer went down to 35 degrees below zero, Fahr. Other peach trees were killed while this one was not injured in any way, unless the fruit buds were injured, as this year is its first in fruit. The fruit on the tree will not be eatable before the middle of August. The one I send weighs 2½ ounces.

A. L. RINEARSON.

R. N.-Y.—This is a nectarine, in color and quality as above described. The nectarine is simply a peach with a glossy skin varying in hardiness and habit of tree, as all seedlings vary.

TWO POTATOES.—I sent Davenport's Early Thoroughbred and White Early Ohio

together with Early Polaris and other choice early varieties to a large seed house in England to test in 1887. The report came in that the White Early Ohio was a great yielder and the quality fine; the Davenport Thoroughbred a good yielder and the quality extra and better than that of most American potatoes sent to England. These two stood at the head. I have tested them for the last five years, and I find them superior in merit. They are from one to two weeks earlier than the Rose; their superior cooking and eating qualities are unanimously commended as well as their compact growth in the hill and their freedom from disease. Quite a number of our potato experts have tested them beside the Rose, and the reports are that in quality, hardiness, earliness and yield they far surpass that celebrated variety. They will be a great boon to market gardeners and I am confident whoever tests them once, will never give them up. O. H. A.

Charlotte, Vt.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

WHAT a relief it is to wear straight gowns without such a quantity of heavy drapery! Just notice the difference in weight between one of the older draped skirts, and one of the straight gowns now in vogue. The lighter gown is incomparably better, as far as health is concerned, apart from the convenience. Although it is said that the Directoire modes will soon be out of style, probably because they have been too popular, there is no doubt that comparatively plain straight skirts will still hold popular favor.

* * *

COLORS seem to vary but little. Green in all shades still seems likely to hold high rank among fashionable colors. Red will be popular too; the light terra-cottas have become vulgar, but some darker shades will be well worn, both in terra-cotta and mahogany. Other richer reds will be favored; a new terra-cotta tint is Eiffel red. Ashes of lilac is another new color—a soft, almost indescribable grayish tint with a suggestion of lavender. Another new color is Edison green, an electric shade copied from the light thrown on fountains. This is seen in small feathers and ostrich tips.

* * *

HARPER'S BAZAR gives some very useful suggestions for a sewing-room, which will bear repetition. Of course, we don't all possess a spare room which may be put to this purpose, but whenever it is possible a room devoted entirely to such work will be found a great comfort. For a plain, serviceable family sewing-room, the floor should be covered with linoleum; its cork lining makes it warm, and there is no fear that snips or threads will adhere. The furniture consists of a large folding cutting table, a dress form, a sewing machine, and several low chairs, a lapboard, and a large scrap basket. A three-leaved screen is suggested, to secure privacy during fitting. A great convenience for this room, suggested by the same authority is a sort of cabinet for such trifles as buttons, thread, tape, pins, etc. To make it, take one of the smooth boards on which dry goods are rolled. Procure three or four cigar boxes about two inches deep. Remove the lids from all but one. Screw these boxes lengthwise across the board, one above the other, leaving that with a lid on top. Leave enough space between them to comfortably insert the hand. Treat the whole arrangement to a coat of walnut stain, and put two screw eyes at the top to hang it up by. Across the bottom put four brass hooks, on which to hang trifles.

The proper pincushion for a home dressmaker is a crescent, ten inches long, and three inches wide at the broadest part. It must be covered with stout linen, and stuffed with bran. At either end is a tape string, so that it may be tied around the waist while in use. The sewing-room is not complete without a stock of "notions." Pins, both black and white, needles of all sizes, machine supplies, tape, hooks and eyes, and standard buttons should always be in stock, especially in a country house, where needs cannot be supplied at a moment's notice. It is a very good plan, when buying braid for a skirt, to buy two pieces instead of one, so there is no trouble about matching when the braid is to be removed.

OUT-DOOR STUDIES.

II.

STUDYING BY ANALYSIS.

WHEN one begins to know a few flowers by sight and name, one begins to ask *why* this is a ranunculus and that an epigæa; why an elm tree and a nettle should belong to the same order—in fact, we begin to think about the bare scientific skeleton which we cover with so much beauty. To understand analytical botany, we ought to begin with something we already know, just as we dissect or amplify our conjugations and declensions before attacking Virgil.

The artificial classification of plants introduced by Linnæus, is now out of date; we go by the simpler natural system. The lower orders of cryptogamous or flowerless plants—ferns, mosses, and lichens—we need not discuss now. Flowering plants are divided into two great classes—the *exogens* and *endogens*. The first class has a stem formed of *bark, pith* and *wood*; the leaves have netted veins, and the parts of the flowers are mostly in fours or fives. We will take an ordinary dog-rose as a representative exogen, or any tree, in fact. The endogens do not have bark or pith; the stems have the wood collected into bundles or threads; the leaves have parallel instead of netted veins, and the parts of the flowers are generally in threes. Any lily will do as a representative endogen.

Before attempting analysis, the student must, of course, learn the parts of the plant. We all know the five great divisions: root, stem, leaves, flower and fruit. The flower consists of the calyx, or outer cup, formed of sepals; the corolla, formed of the bright-hued petals; the stamens, consisting of filament and anther, the latter containing pollen, and the pistil, formed of ovary, containing embryo seeds, style, and stigma. We should roughly divide flowers into two great classes—simple and compound. Take the rose again, as a representative of simple flowers; each blossom is alone and independent. But what we call a daisy is a compound flower; that yellow center is really a mass of tiny blossoms, surrounded by a leafy basket which serves as calyx to the whole. Each little flower, or floret, is perfect by itself, while in some of the family, such as the daisy, the marginal florets have their corollas lengthened sideways, so as to give the rayed appearance to the flower. These compound flowers form the family of Compositæ.

Try to analyze something you are very familiar with—for example, a rose. You know it is an exogen, and a simple flower. Next thing you notice is that it has both calyx and corolla—a green calyx, which swells as it ripens, until it becomes an ornamental fruit; a row of green sepals around the corolla; five or more bright-hued petals, inserted with the stamens on the edge of a disk within the calyx tube; numerous stamens, and one to many pistils. These are the general characteristics of the large family known as the Rosaceæ, which includes raspberry, strawberry, pear and many other well-known fruits. Examine your rose more closely. You find that the calyx is tubular and urn-shaped the upper part spread into five divisions, making it appear as if those above were the real calyx, and as if they were on the top of a solitary ovary. Make a vertical section through this calyx, and you will find several ovaries concealed in this lower urn-shaped portion, while the pistil which looks like one style with several stigmas at the top, is really a consolidation of many styles; where they struggle through the narrow neck of the calyx. Other members of the rose family show the same style of flower, but the arrangement of fruit and seeds differs so strongly as to destroy all resemblance.

You will notice that the distinguishing traits are not the flower, as we ordinarily term it; that is not the showy petals. The less conspicuous parts of the plant denote its proper place. After deciding whether it is exogen or endogen, simple or compound, you examine closely for peculiarities of form. Take a rose-mallow. It has a green calyx, divided into five segments, which suggests a rose, and the petals offer some similarity. But in the mallow the stamens are united with the base of the petals, and rise in the center of the corolla, forming a tube in which the pistils are enclosed. You may notice this peculiarity, very clearly in the common Rose of Sharon so familiar in gardens. These plants I have mentioned are *polypetalous*; that is, they have both calyx and corolla, the latter of separate petals. The next great class is called *monopetalous*; calyx and corolla are both present, but the latter more or less united into one piece, as in the morning-glory. The third division is termed *apetalous*. These have no corolla and sometimes the calyx also is wanting. Willow catkins are an example.

After deciding to which of these divisions a flower belongs, it is comparatively easy to trace it with the aid of an analytical key. I say comparatively easy, for it requires an amazing power of memory to locate an unfamiliar flower off-hand. Especially is this true of the Compositæ; we should be quite accurate in calling them complicated as well as composite flowers. While the leaves help us to distinguish varieties, they are of comparatively little use in discerning orders or genera; for this we must look at flowers and seed. Much of our work must be done with magnifying-glass, but once begun, it is extremely fascinating, and can be pursued with less expenditure than any other science. COTTAGE MAID.

DOMESTIC NOTES.

THIS year all our fruit has been put up in one way, and that a very easy one. We make no pound-for-pound preserves, but can everything after this fashion. The fruit is peeled, or prepared in any way desired, and then packed into the bottles, with a sprinkling of sugar all the way through. The jars are then filled up with water, and stood in the wash-boiler, with enough cold water to reach three-fourths up the bottles. The bottles are stood on boards to prevent them touching the bottom of the kettle, and the lids are put on, but not fastened. The boiler is stood on the stove and brought to a boil; it is left on for 20 minutes after coming to a boil. This cooks the fruit thoroughly; very soft fruit will do with a little less. When the jars are lifted out, a little boiling water must be poured into them, so as to fill them up, and they must then be sealed immediately. This is a very satisfactory way to do strawberries, peaches and pears.

WE have been greatly tormented with water bugs (croton bugs), a pest that usually appears where the water is laid on. After trying many remedies we at last found the only effectual one in "Concentrated Red Seal Lye," which we scatter in and around the sink. It must be used with caution, for it is terribly caustic, burning away paint if allowed to touch it, nor must it be allowed to touch the hands, but it certainly drives away water bugs and roaches. After letting it lie in the sink over-night, we wash it away with quantities of hot water, thus serving a double purpose, for the lye is excellent for cleaning grease out of the escape pipe of the sink.

NEVER burn or destroy tissue paper which may come in the way of wrappings—it is excellent for polishing windows. Ammonia and water, applied with a sponge, followed by a polish with tissue paper, is our favorite way of window-cleaning. Ammonia should always be used in the water for cleaning glass or silver—it removes grease and gives a good polish. PATTY GARTON.

GOLDEN GRAINS.

THE CHRISTIAN UNION says that the truest hospitality sometimes consists in locking the door, and the truest friendship sometimes involves absolute unresponsiveness to an appeal that ought never to have been made. If you wish to serve your friend, help him to be self-supporting, but do not let him become dependent upon you. Sting him, if necessary, into the consciousness of his own weaknesses, even if it cost his good-will. The surrender of a friendship for such a reason may sometimes be the highest evidence of its purity and nobility.....

THE CONGREGATIONALIST says that it is the honey in the glass, and not the elegance of the glass, that draws the bees; and it is the power of the Gospel in the hearts and lives of its professors, and in the preaching of the pulpit and labors of the pastor, which gives the Word success.....

THEODORE PARKER, when uttering the Lord's Prayer, used to say: "Forgive us our trespasses as we should forgive those who trespass against us!" He also prayed: "Lead us from temptation," instead of "Lead us not into temptation."....

IT is not intellectual work that injures the brain, says the London "Hospital," but emotional excitement. Most men can stand the severest thought and study of which their brains are capable, and be none the worse for it; for neither thought nor study interferes with the recuperative influence of sleep. It is ambition, anxiety, and disappointment, the hopes and fears, the loves and hates, of our lives, that wear out our nervous system and endanger the balance of the brain.....

THE CHRISTIAN UNION says that truth is the foundation of life; it is the principle that gives life its stability. It is the foundation of success for the individual, the community, the State. So great is it in the estimation of earth's finest beings that death is a willing sacrifice for its preservation. So high a place does truth hold in the minds of men that a devotion to it commands respect from those who see errors where the advocate sees truth. For even truth is susceptible to various interpretations. Like all great principles, it is best understood by those whose mental vision is trained to scan the world's horizon. To the mind in the valley, who sees the world through the narrow opening between his native hills, its largest realms are shadowy regions where falsehood dwells.....

THERE is no special grace in truth that reveals itself in brutal statements of facts already too evident. Such remarks cannot lift men above the level of the earth. Nowhere is truth more valuable than in the social circle, where men and women send out an influence searching and far-reaching. But it is truth combined with charity and with love, with an ever-present consciousness of the many-sided-ness of life, and that one mind cannot grasp the inner consciousness of every human being that chance revolution of time throws within its orbit.....

TRUTH is the foundation of life, but not truth alone. To raise a structure fit for the indwelling of the divine, it must couple with it in construction grace, love, self-control, and the intuition that sees in every soul the possibility of suffering, of living, of devotion to a cause. Truth is mighty to uplift or to cast down. To see the truth is the one desire of every man and woman who seeks to reach the divine ideal of the race. But to speak it where only suffering can follow the hearing of it reveals a vulgar mind, living on a low plane spiritually, intellectually, socially. Truth for the upbuilding of man though he be crucified, but silence where its proclaiming means only pain!.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

FEATHER PUDDING.

ONE cup of sugar, three table-spoonfuls of melted butter, one cup of sweet milk, two beaten eggs, 13 ounces (about two cups and a-half) of flour and two large tea-spoonfuls of baking powder. Flavor with lemon. Bake 25 minutes in a moderate oven. Eat with butter and sugar creamed or a liquid sauce. Nice as a cake.

TAPIOCA PUDDING.

ONE cup of tapioca soaked over-night in a pint of new milk. In the morning scald a quart of milk, add the softened tapioca, sweeten and flavor as liked, and add three beaten eggs. Eat with sweetened cream.

MUFFINS.

ONE quart of warm milk, one-half cup of butter, one cup of home-made yeast, flour to make not a very stiff batter, a little salt and a little sugar if liked. When light bake in muffin rings.

CORN GEMS.

TWO cups of flour, two cups of milk, one cup of Indian meal, two or three eggs, two tea-spoonfuls of baking powder, butter the

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children she gave them Castoria

size of an egg, a table-spoonful of sugar and a little salt. Bake in well-greased, heated gem pans in a hot oven.

LEMON JELLY.

TO ONE package of gelatine add one pint of cold water, the juice of six lemons and the rind of one. Let stand one hour, then add one quart of boiling water and two pounds of lump or granulated sugar. Strain and set aside to harden.

TO PICKLE OYSTERS.

DRAIN the oysters from the liquor and put the liquid over the fire. When boiling put the oysters in—a few at a time—and let remain until the edges curl. Take out and wipe dry with a cloth. When cold put in an earthen or glass dish. Add to the liquid half the quantity of vinegar, boil, skim and strain, add whole cloves and allspice and when cold pour over the oysters. Pickle two days before they are wanted. Serve with thin slices of lemon.

CHOW-CHOW.

ONE peck of green tomatoes chopped fine. Mix a cup of salt thoroughly through the tomatoes and let stand over night. In the morning drain off all of the water. Add eight green and four red peppers chopped fine, a cup of white sugar, any spice you like, cover with vinegar and boil about 20 minutes. Drain and when cool add a pint of grated horse-radish, six minced onions, the white part of two bunches of celery minced, and a cup of mixed mustard. Mix well together, pack in a stone jar, cover with cold vinegar and tie up tightly.

TOMATO CATSUP.

ONE gallon of tomatoes, four table-spoonfuls of salt, three of whole black pepper, three of mustard, half a spoonful of cloves, the same of allspice, a pint of vinegar and three red peppers. Boil three hours, strain pressing through all pulp, bottle hot and cork tightly.

SNOW CAKE.

ONE tumblerful of flour, one-and a-half tumblerful of powdered sugar, whites of 10 eggs, one small tea-spoonful of cream-of-tartar. Beat the whites very light, sift the flour, sugar and cream-of-tartar together, and then stir gradually into the whites. Bake in a round pan—papered—25 or 35 minutes in a cool oven. In 10 minutes after baking, frost it with the white of an egg and three table-spoonfuls of sugar. Cover thickly with grated cocoanut.

MOLASSES LEMON PIE.

ONE cup of sugar, one and a-half cup of molasses, one-half cup of water, two beaten eggs, one large table-spoonful of flour and the grated rind and juice of a large lemon. Mix together. Line tins with a good crust, pour in the mixture with a crust and bake slowly until the mixture thickens and the crust is browned.

IMPERIAL CAKE.

ONE pound of butter, one pound of sugar, one pound of flour, one pound of raisins cut fine, one-half pound of citron cut into thin pieces, 10 eggs, one nutmeg, one wineglassful of fruit juice, one pound of blanched and cut almonds. Bake three hours.

CHILI SAUCE.

ONE dozen good-sized ripe tomatoes peeled, 10 green peppers without seeds, and four onions all chopped together. Then add four cups of sugar, eight tea-spoonfuls of salt, four tea-spoonfuls each of ground pepper, allspice and cloves, and 10 cups of vinegar. Put all together and cook until tender. Then put into fruit cans and screw down the tops.

PUFF PUDDING.

TWO-THIRDS of a cup of butter, a little over a pint of milk, a cup and a-half of flour, six eggs beaten separately. Boil the milk and butter together, pour on the flour, stir well and let stand until cool, add the beaten eggs, bake half an hour in a quick oven and serve with a sauce of butter and sugar.

TIP-TOP PUDDING.

ONE pint of bread crumbs, one quart of milk, yelks of four eggs, one cup of sugar, a piece of butter the size of an egg. Beat all together and bake in a moderate oven. When cool spread the pudding with jelly, then cover with a mixture of sugar and the beaten whites flavored with lemon. Bake a delicate brown.

APPLE CHARLOTTE.

PEEL and quarter some tart apples, boil five minutes, take from the water and chop fine. Have ready some dry bread crumbs, also some seeded raisins and prepared currants. Butter a pudding dish, put a layer of bread crumbs in, then the apples and fruit, and any spice liked, sugar and bits of butter. Thus alternate until the dish is full. Bread crumbs and bits of butter should be the last layer. Pour over the water that the apples were boiled in. Bake three-quarters of an hour. Serve with hard or liquid sauce.

CHOCOLATE MIXTURE TO PUT BETWEEN LAYERS OF CAKE.

BOIL one-half cup of sugar and one-half cup of milk together. Then add the beaten yelk of an egg and a cake of sweet chocolate (scraped) or one-half cake of the other.

MOLASSES CAKE.

ONE cup of molasses, two cups of sugar, one cup of butter, four eggs, four cups of flour, one cup of milk, two tea-spoonfuls of soda.

EXCELLENT MINCE PIE FILLING.

Two pounds of boiled beef chopped fine, one pound of suet made fine, five pounds of chopped tart apples, two pounds of raisins, two of currants, two of sugar, one cup of molasses, two oranges, juice and grated peel, two nutmegs, one ounce of cinnamon, one-half ounce of cloves, one-half ounce of mace. Mix and pack into jars and keep in a cold place. Add cider or fruit juice when using.

RUSK.

Two cups of sugar, one-half cup of butter, one cup of milk, one pint of bread sponge, three beaten eggs and flour to make like bread dough. When light make out into small biscuits. Let get light before baking.

CREAM CAKE.

THREE cups of sugar, piece of butter the size of two eggs, four eggs, one cup of milk, two tea-spoonfuls of cream-of-tartar and one of soda, three cups of flour. Bake in two tins.

CREAM FOR CAKE.

ONE pint of milk, two eggs, one cup of sugar, one-half cup of flour. Mix the sugar, eggs and flour together then pour over the milk. Put the dish containing the mixture into another dish containing hot water and stir until it thickens. Flavor to taste. When cold put between the cakes.

SNOW PUDDING.

ONE ounce of Cooper's gelatine, one pint of boiling water, one cup of sugar, juice of three lemons and the whites of three eggs. Beat the gelatine (after it is dissolved and cold) sugar and lemon juice together with an egg beater. Whip the whites of the eggs to a stiff froth, then add to the other ingredients and beat until stiff. Put into a mold to cool. For the soft custard: Take the yelks of the three eggs with one extra egg to one quart of milk. Heat the milk, sweeten to taste and carefully stir in the beaten yelks. Flavor as liked. Keep on the back of the range until the custard thickens. Serve the "snow" in saucers and pour the soft custard (cold) over it.

COCOANUT DROPS.

ONE pound of grated cocoanut, dried a little, one pound of powdered sugar, one-fourth pound of butter, one large handful of flour. Stir the sugar, butter and flour together, then add the cocoanut, make into little balls and dry in a cool oven.

LEMON CAKE.

THREE cups of sugar and one of butter beaten to a cream, then stir in the yelks of five eggs well beaten, dissolve a tea-spoonful of saleratus in a cup of milk, add then the whites of the eggs beaten stiff and sift in four cups of flour as lightly as possible. Last, add the juice and grated rind of a lemon.

COCOANUT CAKE.

ONE pound of sugar, one-half pound of butter, three-quarters of a pound of flour, six eggs to be stirred in without beating, one grated cocoanut, half a tea-spoonful of soda and one of cream-of-tartar. Put the cocoanut in last.

MRS. D. SNEDEKER.

WATER TOAST.

HAVE a shallow pan with one quart of boiling water and one tea-spoonful of salt. Dip each slice of dry toast quickly in the water, do not let it soak for an instant, then pile on a hot platter. Spread evenly with butter, serve very hot.

To use toast as a garnish for poached eggs, cut into large rounds with a cake-cutter before toasting, put one egg on each piece.

For small birds or for asparagus remove the crusts of the bread and cut it into oblong pieces.

For minces or fricassees cut into small squares or diamonds.

For a border cut, after toasting, into inch-and-a-half squares and then into halves diagonally by making triangles. Or cut the toast into long, pointed triangles.

CANNED CORN.

CUT the corn from the cob and for every six quarts of corn use one ounce of tartaric acid. Put the acid into hot water, stir well, then put in the corn and cook it until it is well heated through. If any scum rises remove it. Can while boiling hot. When it is wanted for the table it should be washed in three waters and put over the fire in cold water; when sufficiently cooked pour off the water and dress the corn with cream or butter and a tea-spoonful of sugar to each pint of corn.

A BAKED BIRD.

TO DRESS the bird, split it carefully down the back and the bird can be cleaned so perfectly, with care, that it need not be washed. Lay it in a pan with a little water with the breast down and allow it to simmer but not to boil for 15 minutes. Before putting the bird in the oven add a little salt to the water in the pan. Do not put salt on the bird, but sprinkle it with salt water. Keep the surface of the bird moist. Let the oven be very hot when it goes in and bake for 15 minutes.

CHICKEN CROQUETTES.

BOIL a chicken in water with a little salt and half a cup of rice added; save the stock, chop the chicken up fine. Take one table-spoonful of butter, one table-spoonful of flour, melt the butter, add the flour and rub it smooth. Add one table-spoonful of rich cream and one-half pint of stock; cook it until as thick as cream, stirring constantly. Season the chopped chicken with a salt-spoonful of grated nutmeg, a little Cayenne pepper and a little salt. Add to it a table-spoonful of the rice that was boiled with the chicken and the yelks of three eggs; mix this, and the prepared cream thoroughly together. Heat the mixture to the boiling point, add a little chopped parsley, turn into molds and when cold remove and dust with cracker crumbs, fry in a pan of fat as for doughnuts.

A. B.

Miscellaneous Advertising.

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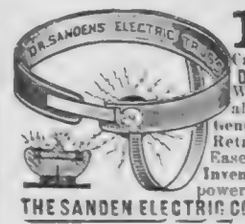

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News of the Week.

HOME NEWS.

SATURDAY, September 14, 1889.

EVEN the "Oldest Inhabitant" doesn't remember anything like the violence, duration and destruction of the cyclonic storm that has ravaged the Atlantic coast from Maine to North Carolina for most of the week. During the fine weather at the close of last week several monstrous waves swept in on the watering-places along the Long Island and New Jersey coast, endangering the lives of the bathers and seashore loungers and doing considerable damage to exposed property. At first these were attributed to tidal action, but, later, to a hurricane far out on the Atlantic. Monday the papers thought the ragged rim or the tail of a north-moving cyclone had struck the coast, and since then they have been sure that from Virginia to Rhode Island it has been well within its whirling border. Since Tuesday heavy rains have fallen continuously and the wind has varied between a gale of 23 and a hurricane of 64 miles an hour. It has been invariably from the east to the northeast, and has piled the Atlantic bodily to an unprecedented hight on the coast, besides sending huge waves still further on the land. Even the mild winds of little Lake Erie often bank the waters four feet above their usual hight at Buffalo, and the wind in the narrow pond of Lake Michigan piled the waters eight feet above their usual level along the Chicago front on December 4, 1885. What wonder therefore that a raging cyclone on the broad Atlantic should drive the waters to a still greater hight on the coast. The aggregate amount of damage done on land must be enormous, though as yet nothing approximating a correct estimate can be formed. The New Jersey shores have borne the brunt of the tempest. All the sea-coast watering-places from the mouth of the Delaware to Sandy Hook are scenes of disaster and ruin. Countless buildings have been demolished by the waves and bodily swept away, and hundreds of others have been partly wrecked and undermined. The shore is strewn with wreckage. Atlantic City has been surrounded with water and its 15,000 inhabitants and 10,000 belated visitors have suffered severely from fright and exposure. Between Long Branch and Sea Bright every cottage has been destroyed. Beach Harbor has been entirely cut off and Ocean City, Maryland, has been submerged and its inhabitants rescued with difficulty. Coney Island, Long Beach, Rockaway, and other summer resorts on the Long Island coast have suffered immensely. Besides the temporary injury done by old ocean, it has made disastrous permanent encroachments on the land. For centuries the waves have been steadily eating up the coast from Cape Fear to Montauk Point. Scientists place the average loss along the whole coast at 12 feet a year, and in many places the ravages of the present tempest are likely to exceed those of ordinary storms during 10 years. The losses of vessels and human lives must be apalling. Over 50 vessels are ashore at the mouth of the Delaware, and numerous other wrecks dot the beach from Virginia to Rhode Island. All in all, the eastern fringe of the Great Republic has suffered during the week in a way that will be remembered for years. The September tempest and rain of this week will be as memorable as the March tempest and snow of the "Blizzard Week" over a year ago.....
According to the jubilantly sanguine prosecuting attorney in the Cronin murder case in Chicago, nothing now can delay the hanging of the prisoners but the selection of a jury. A week's efforts to secure 12, however, have failed to secure one. English, Irish, German and Swedish nationalities are objected to by one side or the other in this order; so are Presbyterian, Catholic, Episcopal, Methodist and Baptist creeds; while all who have formed an opinion on the matter are at once ruled aside. It may be possible, but it is sure to be difficult, to obtain 12 good men and true able to hear, talk and see, who have not formed some sort of an opinion in the case. The present absurd manner of selecting a jury, if not the jury system itself, should be abolished.
.....The United States are cursed with one lawyer to every 900 of the population..
.....The National Women's Temperance Union will hold its annual Convention in Chicago on November 8.....
In the race trouble in Le Flore County, Miss., 100 more colored fugitives are reported to have been shot to death, and a body of white regulators are still on the tracks of the surviving malcontents. No white casualties are mentioned. There and elsewhere in the South it is madness for negro discontent to take to threats or arms. White men have all the means of speedy communication and transportation at their command and are always armed and ready to converge ruthlessly from all points at the first announcement of a "nigger 'ruction" at any place. All such dangers to the social, economic and political *regime* must be stamped out at the start, and the punishment must be always "exemplary." Time enough to inquire into its justice—if at all—after it has been inflicted.....
The Hon. Samuel Sullivan Cox, better known as "Sunset Cox" member of Congress from one of the districts of this city, died at his home here last Tuesday night at the age of 65. A genial humorist, a brilliant essayist, a successful author, an able and incorruptible statesman, with friends everywhere and an enemy nowhere, he has left a record of a bright, useful and unstained career, and a host of mourners in all ranks and conditions of life and in every section of the country.....There's a good deal of quiet talk among the great coal barons about the formation of a gigantic Coal Trust..... ..It is now reported on "excellent authority" that barrel-boatman Graham did not really "shoot Niagara." 'Tis all a fake, 'tis said. Bridge-jumper Steve Brodie, rum-mill-keeper of this city, also claims to have done it "on the quiet," in a rubber suit the other day; but his modest claim is denounced as an impudent fraud.....
The forced resignation of Corporal Tanner, Commissioner of Pensions, tendered to the President, after a world of pressure, at one o'clock Wednesday night, was accepted next day. The differences existing between the Commissioner and his superior officer, Secretary Noble, as to the policy to be pursued in the Pension Office, were insurmountable, and so the subordinate was "persuaded" to resign to prevent the other from doing so. Probably another office fully as lucrative, if not more so, though of less influence, will be found for him. Following an antediluvian practice, the conductors of all the opposition papers are now jumping on the prostrate form of the legless veteran.....The entire plant of Dick & Meyer's Sugar Refinery, in Brooklyn, was cremated the other day, causing the heaviest loss ever sustained by fire in the City of Churches. Loss on buildings and machinery, $1,500,000, and on stock, $500,000: total of $2,000,000.....The Western Stone Company, a building-stone "combine" embracing most of those largely interested in the business in the West, was incorporated at Chicago, under the laws of Illinois, the other day "to reduce expenses and put the business on a paying basis."
The meanest of all "combines"—that of the brick-makers and dealers at and about fire-swept Seattle, Washington Territory. A city ordinance provides that bricks or stones must supersede wood in the construction of houses within certain limits, and an execrable "combine" has been formed to double the price of bricks, thus handicapping, hampering and delaying the rebuilding of the burnt district.....
In his will, dated April 23, 1790, Benjamin Franklin left $5,000 to be used in such a way that after the lapse of a century the principal and interest should amount to a sum large enough to make a valuable public improvement. In 1816 John Scott added $4,000 to this sum. The fund now, amounts to about $110,000 and Philadelphia is about to erect a fine public bath with $100,000 of it, letting the other $10,000 accumulate for another century.....The Detroit City Council are accused of having made fortunes by levying a 10-per-cent. assessment on all persons awarded contracts by the city. The second Grand Jury in 17 years is investigating the matter. Three of the boodlers are reported ready to squeal.....Tremendous explosions of gas and furious activity of geysers in the Yellowstone Park, Wednesday, attributed by scientists to the great atmospheric disturbances attending the severe storm raging at the time along the Atlantic coast and elswhere.....
The Democrats at last are "getting together" right merrily. Kentucky, Ohio, Pennsylvania, and New Jersey have one after the other, strongly affirmed the Tariff Reform and Tax Reduction platform of 1888.....Last Monday California celebrated the 39th anniversary of her admittance into the Union shortly after her acquisition from Mexico. With a marvelous capacity for the production of gold, silver, quicksilver, big trees, grains, fruits and millionaires, no State in the Union is blessed with fairer opportunities or richer possibilities.....During the past week Baltimore has been having a glorious time of it celebrating, by a six-day festivity, the 75th anniversary of the defense of the city in 1814, during the second war with Great Britain. The President and most of his Cabinet were present on Monday, and there have been proud parades, fine feasting, and gala goings-on generally. The Star-Spangled Banner which waved on Fort McHenry and which inspired Key with the words of the immortal song during the British bombardment of the place on September 9, 1814, was considered too frail and precious by its owner, Mr. Appleton, of this city, to be lent for display on this occasion.....
John L. Sullivan announces that after his projected money-making circuit and his possible chain-gang experience in Mississippi, he will seek to "slug" his way into Congress from some Bostonian district....
.....The Douglass Axe Manufacturing Company of Boston, after a successful career of 50 years, has been bankrupted by the dishonesty of its treasurer, Denison D. Dana, who entered its services as a boy. He has a wife and six children, moved in the "best society," was a deacon in the Congregational Church, a Sunday-school teacher as well as a liberal contributor to charities and a model of all the graces and virtues, except that for years he had been a steady embezzler of the company's funds, his total stealings amounting to over $500,000. He has disappeared with a 25-year-old son and once more "sassiety" is shocked at the downfall of one of its "pets".....
Ex-Governor Henry C. Warmouth, owner of the finest sugar plantation in the Union, has been appointed Collector of Customs at New Orleans.....Owing to injuries during the Johnstown flood the Pennsylvania Canal has been abandoned, and straightway the coal barons raised the price of coal along the line of that water-way from $2.50 to $5 per ton.....
After a session of three months and an investigation of 3,500 contested votes, a Legislative Committee in W. Va., has decided that Judge Flemming, the Democratic candidate for Governor, had a majority of 214 over General Goff, his Republican competitor.....When Quaker Johns Hopkins founded the Baltimore University that bears his name, having full confidence in the honesty and ability of his protege, Robert Garrett, he made him president of the Baltimore and Ohio Railroad in which he had a paramount influence, and invested the capital of the university in the stocks of the road. Garrett died, leaving many millions to his children, and a badly hampered railroad to the public. His crazy son's mismanagement ruined the road so that it is dividend-paying no longer, and the university would have had to close were it not that liberal friends have come to its aid, temporarily at any rate. The salaries of the professors have been necessarily reduced, however, and makeshift retrenchments are the "order of the day." The Garretts are still enormously wealthy, however .....
Tuesday, September 10, while the people at Baltimore were vociferously commemorating the 75th anniversary of bombardment of Fort Mc Henry and the Battle of North Point, the people at Put-in-Bay, Ohio, were quietly celebrating the 76th anniversary of Perry's famous victory in the Battle of Lake Erie—one of the most notable events of the war of 1812-14.....The bustle has gone so largely out of fashion that Taylor's bustle factory at Bridgeport, Conn., where 600 girls were employed, has indefinitely shut down.....
The agitation for separate schools for Protestants and Catholics, which began in Manitoba, is spreading like wild-fire through Canada, and is likely to cause lively work during the next season of Parliament. The Ontario Government Commission of inquiry into the French schools of the province, objects to many of the text-books as unauthorized and containing Catholic teachings, and in some cases inimical to the Mother Country. It also objects to religious pictures, crucifixes, statuettes and images of saints and even altars in some of the schools. It merely recommends the gradual abolition of existing abuses and the steady conversion of the French into English schools .....

Every Reason for Confidence.

Below we give short extracts from the letters of patients, which contain some hearty testimony.

PROSPECT, CONN., July 2, 1888.
It is to Compound Oxygen, under God's blessing, that I owe my life.
MRS. GEO. SPRAGUE.

No. 4 Third St., E. ALBANY, N. Y., June 14, 1888.
If you want a warm recommendation from one who feels that Compound Oxygen has saved him from the grave, it will be given with the greatest pleasure.
R. S. STEVENS.

PEPPERWOOD, HUMBOLDT CO., CAL., May 28, 1888.
I consider Compound Oxygen a physician in itself. MRS. L. E. SPAULDING.

We publish a brochure regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent free of charge to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa.; 120 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, September 14, 1889.

THE great London strike, which has now lasted six weeks, is likely soon to be settled. Many more of the warfingers have yielded and thousands of the men have gone to work. The dock directors still hold out; but are willing to compromise. They say that for years the property has been paying no interest on the investment, and that compliance with the men's demands would entail an extra expense of $750,000 a year, which would be equal to a capitalized addition of $25,000,000 to the stock. They have always found fat jobs for their friends, however, and money for their own large salaries, besides making fortunes by speculating with the stock in the money market. Like many of the railroad magnates in this country, they have been mismanaging the vast property for their own advantage to the loss of the ordinary stock-holders, and now they want the government to pay the original cost of construction for it, thus making a big thing out of their own maladministration. They are willing to yield to the men's demands after November 1, provided they go to work at once; but the men refuse. The difference would be $50,000, and this sum is being raised by public subscription. All classes in the United Kingdom have generously contributed to the support of the strikers, and liberal sums have been sent from other places, especially from Australia. Workmen here have been liberal with sympathy and sentiment; but the strikers prefer money and meals.....
The other day a tremendous explosion and conflagration terrified the old city of Antwerp, Belgium. A huge cartridge factory and a number of petroleum sheds stood close together within the city limits not far from the river Scheldt, full of shipping. Hundreds of barrels of petroleum were stored in the latter, and about 35,000,000 cartridges, besides a great deal of powder, in the former. A mighty rush of flames from the sheds and a terrible explosion of powder in the factory occurred apparently simultaneously. The flames spread rapidly, and the explosions were deadly and continuous. Vast numbers of the cartridges were buried, and as the blazing oil made its way into the factory it penetrated the ground and caused fresh explosions. The disaster lasted several days and nights, causing a loss of about 35,000,000 francs. Troops surrounded the scene and local firemen, helped by those from Brussels, 45 miles away, and others, worked indefatigably. The shipping was saved by a high wall and hard labor, and none of the time-honored public buildings were damaged; but 135 persons were killed; 21 are missing, 100 were injured seriously and 200 slightly. The government is prosecuting the owner of the factory for "homicide by imprudence;" but he claims that the fire broke out in the petroleum sheds first and thence spread to his buildings.....
Charles III, Sovereign Prince of Monaco, in Italy, with a couple of dozen other titles, died Wednesday at the age of 72. The Grimaldi dynasty to which he belonged, is the oldest reigning family in Europe, having ruled in Monaco since the 10th century. Monaco, whose capital is Monte Carlo, consists of a small peninsula jutting into the Mediterranean, having an area of about six square miles, and a population of about 5,000. On the land side it is bounded by the French department of Alpes-Maritimes. The dead king was blind for most of his life. He had an army of 72 men with as many officers as the Opera-bouffe army of the Duchess of Gorolstein. Since 1865 he has drawn a large yearly revenue from his share in the gambling hell which has made his little principality notorious—the largest and most splendid in the world. Since '69 all taxes have been abolished, all outlays being paid out of the Prince's share in the profits of the great casino. The old man's son Prince Albert, aged 41, succeeds him...
.....Henry M. Stanley is reported to be making his way to Mombassa, somewhat north of Zanzibar, on the east coast of Africa, after conquering all the tribes between the upper Nile and the coast, and establishing among them the authority of the British East Africa Company.....
This company paid nearly all the expenses of his Emin Bey Relief Expedition, and no doubt he engaged to work in its interests. It is trying to do for East Africa what the old East India Company did for Hindostan—appropriate it, and make money out of it. The petty Sultan of Zanzibar the other day made over to it about 700 miles along the African coast, claimed by him and in course of appropriation by the Germans. This company now owns over 1,000 miles of the eastern coast and the land stretching back of it indefinitely. The Germans claim about 600 miles of coast further south, and then come the Portuguese claiming about 1,000 miles, and then again the English to the Cape of Good Hope. There is a bitter rivalry between the Germans and English, but Bismarck says the whole German interests in Africa are not worth the loss of England's cordial friendship. Africa is now the great prize grabbed at by all colonizing Europe.....
Several cholera cases are reported in Athens .....It is proposed to connect Glasgow and Edinburg by a canal at a cost of $35,000,000.....

Miscellaneous Advertising.

J. M. THORBURN & CO.,
15 JOHN STREET,
NEW YORK,
BEG TO ANNOUNCE THAT THEIR DESCRIPTIVE PRICED
CATALOGUE OF
BULBS
for Autumn planting is ready for mailing to applicants.
Lily of the Valley Pips. Bermuda Easter Lilies and Roman Hyacinths For Florists, a Specialty.

DR. SETH ARNOLD'S COUGH KILLER CURES COUGHS AND COLDS. PREVENTS CONSUMPTION.

A PROMINENT PHYSICIAN,
Dr. Edward C. Hughes, of Rockford, Ill., testifies that he cured his son of a severe case of whooping cough accompanied with spasms, after exhausting all his knowledge and skill with other remedies, by using Dr. Seth Arnold's Cough Killer 25c., 50c., and $1 per bottle.
All Dealers Sell it.

FARM FOR SALE.
970 acres, all under fence. New two-story house and large barn. Peach and apple orchard. Abundance of living water; plenty of timber land in pasture. The land all in cultivation and pasture; no hills or stony land. Well suited for stock or dairy farm. Three miles from railroad and 15 miles from the St. Louis Court House, 8 miles west of South St. Louis on Pike road. For further particulars, address
MRS. MARY TEN BROOK,
South St. Louis, Mo.

FOR SALE.
Superior Stock Farm
in Peach district of N. J. Convenient to New York. Trenton and Phila. 232 acres. No incumbrance. Easy terms. No agents. Address S. B. PURSELL, Bristol, Pa

COLLIE OR SHEPHERD PUPS
Fine Stock, from excellent drivers; age from six weeks to three months; prices reasonable. Address
R. F. HAUXHURST, Bayonne, N. J.

STRAWBERRY PLANTS FREE.
10,000 Best Varieties free by mail, postpaid. Write for particulars. W. H. HILLS, PLAISTOW, N. H

AGRICULTURAL NEWS.

SATURDAY, September 14, 1889.

THE SENATE COMMITTEE has been investigating the dressed-beef question at Kansas City during the week. The testimony of some of the witnesses makes some very interesting reading. Ex-Governor Glick testified first. He had been in the cattle-raising business for 30 years, during which the prices of cattle had fallen 30 to 40 per cent. He said the cause for this was the establishment in Kansas City of a great packing interest which had developed, first, a great competition among the sellers of cattle, and afterward a combination among packers which was so powerful that members could buy cattle at their own prices. The witness had shipped cattle to Kansas City and placed them on the market at the market price. The packers' buyers protested that the price was too high, and said that if he did not want to sell at their price, he could reship them to Chicago. He did this several times, and found each time that the Armour-Morris-Swift combination controlled that end of the route too. He was forced to sell at their price in the end. The witness asserted that the effect of the depreciation in prices had been to drive many of the cattle raisers of Kansas out of business altogether. The packers also controlled rates on the railroads to a certain extent, and had nearly ruined the butchers' business of Atchison. They would have done so altogether had not the latter city passed and enforced a city ordinance requiring the inspection of beef on the hoof. Before this went into effect the packer could buy his cattle in Atchison, ship them to Kansas City, work them into dressed beef, reship this to Atchison, and sell it cheaper than the local butchers could sell their home-slaughtered beef. The inspection ordinance had remedied this. An Atchison butcher corroborated this testimony. Ex-Governor Glick stated that there were no sanitary regulations at the Kansas City stock-yards, and that the stockmen of Kansas expected Congress to take the matter of Texas fever in hand. J. J. Roe, a stock-feeder of Saline County said that prices of cattle had depreciated three to four dollars per cwt. within the past four or five years, on account of lack of competition due to a combination between a select few of the packers who determine the price to be paid for cattle. He had taken a train-load of cattle to Chicago, received a bid for them in the morning, which he thought was too low and which he refused to take, and could not get another offer. He was forced to sell them in the evening at 15 cents per cwt. less than he was offered in the morning. There was no competition. The substance of the above testimony was given by a number of other stockmen. One witness said there was no use in taking their cattle to other markets as Chicago controlled them all, and that the combination controls the shipping facilities so that they cannot be sent to foreign markets. The witnesses agreed that unless something was done, the cattle business was doomed. One witness said that prices to the consumer had been the same as now as long as he could remember. A scalper, testified as to the manner in which the combination had forced him to stop buying cattle except on a small scale. A member of a packing firm was sworn, but it was almost impossible to get any information from him. He asserted that the dressed-beef business was going to the dogs, that there was too much competition, and that none of the packers was making any money. They stay in the business through "pride and the hope of better times." The witness was forced to admit that his customers had received threatening letters from one of the packers in the combine. His firm, of course, is not in the combination. S. B. Armour, head of the Armour Packing Company of Kansas City, testified that he had no agreement with the railroads, by which he got lower rates, that he was not a member of any combination, that the territory was not divided up among the packers, that competition was very brisk, but he refused to admit any knowledge of any combination in Chicago. Mr. Armour exhibited a balance-sheet showing that the cattle he had killed during 1887 had yielded him 33.6 cents per head profit. He asserted that the prices of all meats except the choice cuts had decreased. The Committee have so far failed to ascertain where these packers have made their millions, as they are doing business at a loss, or at best at a very small profit. Their stock formerly cost them nearly double present prices, so according to all known mathematical laws, they should have failed long ago.....

Farmers in the vicinity of Mifflintown, Pa., are reported to be making preparations to go into peach-growing on an extensive scale. About seven years ago several farmers planted peach trees quite extensively and were ridiculed for doing so. There are now in a small radius about 200,000 trees, many of them in bearing and the fruit is being shipped by the car-load. It is said to be better fruit than Delaware ever grew in its palmiest days. It is large, nicely shaped, finely flavored, firm in flesh and handsomely blushed, making a valuable and attractive fruit. The land best adapted to the growth of the peach has been considered nearly worthless, and could have been bought for a trifle. It can still be bought for $10 to $20 per acre, and many trees will be planted the coming fall and spring.....

.....November 1, a special orange train will begin running from Jacksonville to the Northern cities making the trip in 72 hours or less.....

Dairy Commissioners Thom and Ives of Minnesota and Wisconsin respectively, have decided to join in a call for a convention of Dairy Commissioners to meet at Cleveland, Ohio, November 6-8, for the purpose of discussing laws against adulteration.....

The New Orleans Cotton Exchange sent a circular letter to the Bremen Cotton Exchange on the subject of cotton bagging for cotton. The latter expressed itself as willing to give the new covering a fair trial, and would be glad to see it adopted if it answers the required purpose of covering and protecting the cotton. The Liverpool Exchange, being interested in jute, disapproves of the cotton bagging.....

A Pennsylvania grand jury brought a presentment against the County Fair Association for permitting gambling on the fair grounds.....A steer that was found to be suffering from tuberculosis was killed in a slaughter-house in this city the other day. The meat inspector sent its carcass to the offal dock.....

Crops & Markets.

SATURDAY, September, 14, 1889.

CONSUL-GENERAL MUELLER of Frankfort-on-the-Main reports that the imposition of a protective tariff has largely decreased the imports of bread-stuffs from the United States. The quality of wheat from other countries is inferior to the American article and it is consequently cheaper. Another factor which operates against the trade in American wheat is the indisposition on the part of German dealers to handle it on account of the constant fluctuations effected by the widespread spirit of speculation in this country. He says that a guaranty of permanent fair prices would surely be rewarded by the reintroduction of American grains to almost every grain market. The wheat fields of Russia and India owe much of their rapid development to a desire to shake off the insecurity attendant upon handling American wheat. Millions of dollars were spent in building railroads and assisting grain dealers in Russia and the East, many of which would have been spared had another spirit prevailed on our grain exchanges. One prominent German dealer says:

"American grain is the best. We like it, want it, and are ready to buy it just as we see our way safely toward getting it at prices affected by the regular laws of supply and demand. So long as it remains the object of speculation we shall keep our eyes on India and toward Russia. Our millers and bakers prefer American grain, generally speaking, to all others. It is for your people to say how soon it shall be used here in larger quantities."

There is food for thought in these statements. There is not an over-production of wheat or other grains in this or other countries the present season. Left to the natural laws of supply and demand all the available surplus in this country would find an outlet at satisfactory prices. With the horde of sharks and leeches who, under the guise of legitimate dealing, unsettle the business of the whole nation, and thrive and fatten on the ruin of others, it is impossible accurately to foretell prospective prices. The common gambler is an outlaw who is liable at any time to feel the heavy hand of the law, but these "operators," "brokers," call them what you will, who buy and sell more grain every month than is grown in the whole country in a year are at large. They are non-producers, utterly useless so far as mortal eye can see, yet they thrive, fatten and grow rich while thousands of hard-working, honest, energetic farmers are growing poorer, or at best only holding their own. It is our belief that these vampires have more to do with the proverbial hard times among farmers than any other one cause. What do YOU propose to do about it?

THE WHEAT MARKET is brisk. The stocks of wheat in the elevators have not been so small in years, and the demand for wheat is good. Through the winter wheat belt, reports indicate that large quantities of wheat have been marketed, but the local mills whose stocks both of wheat and flour were nearly exhausted, seem to have absorbed the most of it. Under these conditions prices for the future should be good.

THE severe storm of the past week has injured fruit to some extent, the high winds having blown apples, peaches, pears, etc. from the trees, and in many cases, uprooted the trees themselves. Corn and buckwheat have also been blown down badly, and beans are reported very much injured, to such an extent that holders of old stock are inclined to advance prices. Hundreds of tons of salt hay along the coast have been destroyed by the high water, and some damage has resulted from the same cause in the interior. The weather has had its effect also on the receipts of produce in this city. The supply is adequate for present needs, but the conditions are not favorable for perishable articles.

FRESH FRUITS are plenty such as they are, but choice grades are scarce. Red apples are scarce, and good fruit well packed will sell readily at outside figures. There are very few really good peaches, and those in the market are some of them very poor, and sell very slowly. Fine yellow fruit is wanted. Choice pears sell well, but lower grades are very irregular in price. Plums are firm; some fine Reine Claudes were held as high as $10 per barrel. Cape Cod cranberries have made their appearance and find a fair sale. Muskmelons are scarce and bring good prices.

VEGETABLES of nearly all kinds have advanced as the supply has decreased. Potatoes have advanced, and there is not a very large supply. There is the smallest stock of onions, and the lightest receipts for many months, and prices have advanced materially in consequence. Tomatoes have also been in much lighter supply, as the weather has been unfavorable for their ripening, and prices have advanced. Cabbages and cucumbers are also doing better.

POULTRY is in full supply, and dressed is dull and very low in price, except for turkeys, which are not plenty. Live fowls, turkeys, ducks and geese are in good demand if fat. It will not pay to send poor stock either alive or dressed.

EGGS are advancing steadily in price. There is a good demand for fresh eggs, but the large quantities of held stock tend to keep prices down somewhat.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, September 14, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	8 5/8	8 7/8	.....
Strict Ordinary	9 1-16	9 5-16	.....
Good Ordinary	10	10 1/4	.....
Strict Good Ordinary	10 7-16	10 11-16	.....
Low Middling	10 15-16	11 3-16	.....
Strict Low Middling	11 3-16	11 7-16	.....
Middling	11 3/8	11 5/8	.....
Good Middling	12 3/8	12 5/8	.....
Strict Good Middling	12 3/8	12 3/8	.....
Middling Fair	12 9-16	12 13-16	.....
Fair	13 3-16	13 7-16	.....

STAINED.

Good Ordinary	8 1/4	Low Middling	10 1-16
Strict Good Ord	9 1/8	Middling	10 3/8

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

POULTRY.—Chickens, spring, per lb, 11½@12c; LIVE FOWLS, near-by, per lb, 12@——c; fowls, Western, per lb, 12@——c; roosters, per lb, 7@7½c; turkeys, per lb 12@13c; ducks, western, per pair, 60@80c geese, western, per pair, $1 25@$1 40.

POULTRY.—DRESSED—Turkeys, mixed, per lb. 13@16c; Fowls, western, choice, 10@10½c; do common to good, 7@9c; Ducks, spring, good, 10@15; Squabs, white, per dozen, $2 50@$2 75; do dark, do, $1 50@$1 75; Chickens, spring, 10@16c; Fowls, near by, 11@12c.

GAME.—Plover, per doz, $1 35@$1 75; Snipe do, do $1 25@$1 75, Woodcock, per pair, $1 00@$1 25; Grouse, do do, 50@75c; Partridges, do, $1 25.

HOPS.—State, New, 15@17c; do, 1888, best, 14@15c; do, prime, 12@13c; do, low grades, 9@11c; do do, 1887, 5@8c; do do do, California, common to prime, 11@12c; choice, 12@14c.

HAY AND STRAW.—Old Hay—Timothy, best, 85@90c do good, 75@80c; do medium, 60@70c; shipping, 55@—c; New Hay—Timothy, best 75@80c; do good, 60@70c; do medium, 55@60c; shipping, 50@55c; clover, 45@50c; Straw—No. 1 Rye, —@80c; short do, 50@60c; oat do, 45@55.

BEANS.—Marrows, new, $2 50@$——; new mediums choice, $2 20@2 25; pea, $2 20@$2 25 red kidney, $3 65; white kidneys, choice, 3.00@——; foreign, mediums, 1 35@1 55; California Lima, $3 60@$——; green peas, $1 20@$1 30

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 7¾@8c, and farmers' grades at 6@6½c. Pecans, 5@6½c.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes, Jersey, per bbl, $1 00@$1 50 Long Island, do, $1 65@$1 75; Sweets, do, $1 75@$2 75 Cabbage, new, per 100, $2 00@$3 50; Cucumbers, per 1,000, $1 75@$2 25; Egg Plant, per bbl, $1 50@$2 00, Tomatoes, per crate, 30@50c; Corn, per 100, $1 00@$1 50, Onions—Orange Co. Red, $1 00@$2 25; Eastern White, $2 00@$3 00, Eastern Red, $2 00@ 2 50; State, Yellow, $1 50@$2 50; Lima Beans, per bag, $1 00@$1 75.

FRUITS.—FARM.—Apples, per bbl, $ 75@$3 00; Peaches, per basket, 40c@$1 75; Muskmelons, per bbl, $2 00@$4 00; Watermelons, per 100, $6 00@$30 00; Plums, per bbl, $2 00@$3 00. Grapes, best, per lb 8@10c; do poor, 2@5c. Pears, per bbl, $1 25@$5 50; do per keg, $1 00@$2 50. Cranberries, Cape Cod, per bbl, $6 00@$7 00; do per crate, $2 00@$2 25.

DOMESTIC DRIED.—Apples, evaporated, new, choice to fancy, 6@6½c; do new, common to prime, 4½@5¾c; sliced, new, 3@3¾c; quarters, 3@4¼c; chopped, 2¾@3¼c; cores and skins, 1½@2c. Cherries, new, 9@12c. Raspberries, new, 20@24c. Blackberries, 5½c. Huckleberries, 10@11c. Peaches—Delaware, evaporated, peeled, 13@16c; do do, unpeeled, 7@8c; Georgia po, peeled, new; 11@14c do unpeeled 7@8c do do sundried, 3@3½c.

PROVISION MARKETS.

NEW YORK.—PROVISIONS.—PORK.—New mess, 12 00@12 50, short clear, 12 00@13 50; Extra Prime mess, $10 25@$10 75 prime do, $10 75@$11 and family mess, $12@13 00. BEEF—India Mess, in tierces, $12 50@14; Extra Mess, in barrels, $7 00@7 50 Packet, $7 25@$8 00 per bbl, and $11@$12 00 in tierces; Plate $7 50@8 00; Family at $11@—@$14 HAMS $15 25@$15 75, Winter packing. CUT MEATS.—Quoted 12 lb average, Bellies, 7@——c; Pickled Hams, 10¾@11c; pickled Shoulders, 4⅞@5c; Smoked shoulders 7¾c; do Hams, 11½@11¾c. Dressed Hogs.—City, heavy to light, 5¼@6⅝c. Pigs, 6¾c. LARD.—City steam, $6 10; September, $6 30; October, $6 27; November, $6 17, December, $6 13; South America, 7.35c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, Pa.—PROVISIONS.—Potatoes, Maryland Rose, per bbl, $1 50@$1 75. Provisions were steady. BEEF.—City family, per bbl, $8 00; do, packets, $8@8 50; smoked beef, 12@14c; beef hams, $16 PORK.—Mess, $13 50@$14 50; do Prime Mess, new, $13 50; do, family, $15 00@15 50; Hams, smoked, per lb, 12@14c; do, S. P., cured in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked, —@8c; shoulders, in dry salt and fully cured, 6¼@6¾c do, do, smoked, 7c; Shoulders, pickle cured, 7@7¼c; do do smoked, 8@8½c; bellies, in pickle, 8@8½c; do breakfast bacon, 9½@10c. LARD.—Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6½@7.

CHICAGO.—MESS PORK.—$10 70@10 75. LARD—$5 95@$6 00 per 100 lbs; Short Rib sides (loose), $4 95; dry salted shoulders, boxed, $4 60; short clear sides, boxed, $5 25@$5 37.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 20@21. Elgin, best, 20c; Western, best 19@20, do prime, 17@19c; do good, 13½@14; do poor, 11@12. State, Dairy, half-firkins, tubs, best, 18@19c; do do prime, 16@17; do do fine, 13½@14½; Welsh tubs, fine, 16@17c; do do, good, 13½@14; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western imitation Creamery, best, 13@15; do fine, 11½@12½; Western dairy, fine, 12@12½c; do fair, 10½@11c; do poor, 9@10c; do factory, fresh, best, 12@——, do prime, 10½@11; do good, 9@9½; do poor, 8@—c.

CHEESE.—State factory, fancy, 9@——c; do do fine, 8@8¼c; do do, prime, 7¾@8½c; do do, fair to good, 8@8¼c; Ohio, flat, prime, 5@7½c; do good, —@—c; do, good, —@—; Skims, light, 5@6c; do medium, 2@3; do full, 1@2c.

EGGS.—Near-by, fresh, 19@19½c; Canadian, 18¼@19c; Southern, 16½@17c; Western, best, 18¾@19c.

PHILADELPHIA.—BUTTER dull. Pennsylvania creamery extra, at 17@18c; Pennsylvania Prints, extra, 23@27c; B.C. and N.Y. creamery, extra, 17c; Western factory 14@15c; packing butter, 11@12c. Eggs.—Were firm; Pennsylvania firsts 21@——c; Western firsts, 19@20c; Cheese dull—steady; demand fair; New York full cream, at 8½c; Ohio flats, choice, 7¼@7½c; do, fair to prime, 14@14½c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm; Fancy creamery, 15½@18c; choice Western, 15@15½c. choice dairy, 12@15c; common to fair, 9@10c. Eggs firm at 16c.

GRAIN MARKETS.

WHEAT.—Ungraded Winter Red, at 77½@86c, Steamer No. 3 Red, 77c elevator, No. 3 Red, 81c elevator; Steamer No. 2 Red, 81c elevator; No. 2 Red, 84¾@86½c afloat as to quality; do elevator and store quoted 83½@84½c; No. 2 September, 83½@84½c; do October, 83⅞@84¾c; do December, 86 3-16@87½c; do May, 91@91¾c. RYE—Has a light inquiry. Western quoted 48@50c; State, nominal, 55c bid. CORN—Sales—Ungraded Mixed, 42@43¼c; No. 2 Mixed, 42½@42¾c, elevator, 43½@43¾c. afloat; No. 3 White, 42¾c, elevator; Low Mixed, 42c, elevator; No. 2 September, 42¾@42⅝c; do October, 42 9-16@42¾c; do November, 42⅞@43 1-16c; do December, 43@43¼c; do May, 43¾@44c. OATS.—Sales—No. 3, 25¼c; No. 3 White, 27½@27½c; No. 2, 26⅛@26¼c elevator, 27½c delivered; No. 2 white, 28½c; No. 1 White, 35c; Mixed Western, 24¾@28c; White do, 27@38c; No. 2 September, 26 1-16@26½c; do October, 26@26⅛c; do November, 26¾c; do December, 27@57½c; do May, 29@29⅝c.

LIVE-STOCK MARKETS.

New-York, Saturday, September 14, 1889.

BEEVES.—Rangers sold at $3 90@$4 05, and coarse Colorado Steers at $2 70@$3 05; poorest to best native Steers at $3 40@$4 75; dry Cows and Heifers, at $1 75@$3 20; Oxen and Stags at $2 70@$4 30, and Bulls at $1 75@$2 30.

CALVES.—Grassers and Buttermilks ranged in price from 2½ to 3¼c; Fed, Mixed and Westerns, from 3¼ to 5c; ordinary to prime Veals, from 5¼ to 8c; and 1 Fancy Calf at 8½c.

SHEEP AND LAMBS.—Sheep ruled steady, and there is still a scarcity of strictly prime stock, but a great number could not be sold at the current prices. Lambs were in liberal supply. Sheep sold at 4@5¼c per lb; fair to choice Lambs at 5⅞@7¼c, "culls" at 4½c.

HOGS.—Market quoted steady at $4 30@$4 75.

Communications Received for the Week Ending September 14, 1889.

P. H. R.—C. H. C.—A. B. T.—C. S. A.—J. J. T.—M. B. H.—O. R. T.—W. T. R.—B. A. C.—I. I. B.—W. J. T. M. T.—T. S.—J. E. H.—J. H. C.—W. E. J.—; all perishable substances should be sent to Ed. R. N.-Y., River Edge, Bergen Co. N. J.—W. G. R.—N. M.—J. B.—W. B.—H. A. W.—A. H.—G. N. E.—M. J. W.—W. F.—C. F. E.—C. M. L.—H. A. W.—F. E. A.—I. O E.—G. H. G.—M. J. W.—J. P. V.—H. G.—L C. M.—E. L. B.—C. H. F.—J. M. S.—C S.—E. B. S.—J. P. A.—G. F. C.—F. E. V.—J. L.—F. E. E.—A. C. B.—O. K. L.—M. B R.—W. O. F. L. E. A.—R. C. F.—H. I.—E. A. F.—S. S.—G. M. B.—I. K. B.—J. H. L—S. L. A.—C. H. E.—J. P.—H. G. L.—L. M.—G. D.—D. C. L.—D. D. H.—E P. J.—J. S. R.—B. W.—A. J. C.

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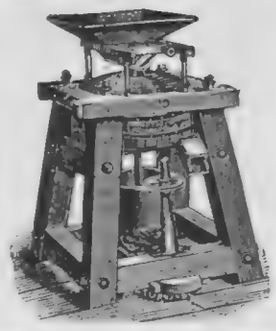

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Miscellaneous Advertising.

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Literary.

MAGAZINE REVIEWS.

THE LINCOLN HISTORY in the September Century records the occurrences during what was probably the greatest crisis of the Civil War, the re-nomination and re-election of the President. The Chicago Democratic Convention had declared the war a failure, and demanded that the Government should sue for terms of peace. Greeley and others of the same stripe, who were opposed to Lincoln, were debating the feasibility of making another nomination for President. The signal victories of the Union army and navy during the summer and autumn of 1864 changed all these gloomy forebodings, and assured the overwhelming victory of November 8. During all this exciting canvass, Mr. Lincoln's chief concern was for the safety of the country and the perpetuity of the Republic. Personal success and aggrandizement were not in his mind. In the same magnanimous spirit he received the plaudits and congratulations upon his re-election. "Telegraphing in Battle" describes the methods employed to communicate by wire during the war. In 1861, the value of the military telegraph was first demonstrated on the very route over which Morse's first message was sent. The article describes the principal lines, and gives graphic descriptions and numerous illustrations of the methods of building and repairing, of the perilous adventures and hair-breadth escapes of the devoted men engaged in the hazardous work. The article is by J. Emmet O'Brien, who was an operator in the field. In 1865, in March, he ran a line along with the troops in General Schofield's campaign in North Carolina, and lay for two days in Gum Swamp, transmitting dispatches. The next morning General Cox called at the post and wished "personally to thank the chief operator for the service rendered at the front." He was very much astonished at finding only a boy of 15, muddy and haggard, lying on the ground and too exhausted to care even if the President called. And yet these brave men who contributed so much to the success of our armies, have never received any recognition, except the commendation of all the higher officers. They, their widows or orphans receive no pensions, and they have good reason to feel that Republics are at least forgetful if not ungrateful. Mr. Kennan gives "The History of the Kara Political Prison." John A. Paine gives an article on "The Pharaoh of the Exodus and his Son" in the light of their monuments. Recent discoveries have thrown much light upon the history and reigns of these ancient monarchs, and this article, with its numerous illustrations, is a very interesting one for the student of ancient history. Another installment of "The Old Bascom Place" is given. This serial will be concluded in the next number. "Napoleon in Exile" is an account of that episode as described in unpublished letters by British officers. W. Hamilton Gibson, in "Winged Botanists," tells, in his inimitable style, of the fidelity of various butterflies to single orders of plants, proving themselves, oftentimes, invaluable aids to botanists in cases of doubtful plants. "Masaccio," one of the Italian Old Masters of the 15th Century, is a sketch of a celebrated artist. "An American Artist in Japan" describes and illustrates many curious things in that curious country. "Jufrow Van Steen" is a quaint story of an elopement in Holland in which the daughter of a country merchant was inadvertently assisted to elope with the son of a rich man, instead of being married to his father as had been planned. Of course, our sympathies are with the young couple. George W. Cable has a short story, "Attalie Brouillard." The Century Co., New York.

THE HOME-MAKER for September contains a very sensible editorial on "Going Back to School." There is little anxiety on account of the younglings of the flock, as where the deservedly popular kindergartens are not easily accessible, the mother can teach them at home, unless she is thoroughly conversant, not only with the instructors of the primary school, but also with the companions her children find there. Irreparable mischief may be done to a child's moral tone by evil associates at this impressible age. With older children, also, this is a most important consideration. The intellectual part of their natures should suffer neglect sooner than undergo improvement at the risk of lowering the moral standard. Parents should keep posted in regard to their childrens' studies and progress in their schools, and be able to understand to a certain extent what they are learning. This is good advice, and will apply to the country as well as the city school, in both of which the parents know too little of what is being done. Maria Blunt tells, in "After Antietam," of the devoted service of the Southern women in caring for their wounded soldiers in the face of almost insurmountable obstacles. Estelle Thomson in her very interesting Wonderland series tells of "Oranges in California Groves." The first orchard in that State was planted about 1800, near the old mission in San Gabriel Valley, and no other of any size was planted until 30 years later; while in 1870 a budded orange orchard was not known. A curious industry in connection with orange-growing is the supplying of bridal wreaths and brides' bouquets. Extensive orchards are cultivated exclusively for supplying this demand which is the same summer and winter. A fully grown orange tree will yield about 25 pounds of flowers annually, those from the sweet oranges bringing four cents, and from the bitter ones six cents per pound. "An Old Connecticut Homestead" describes the Smith House at Sharon, in which nine generations of that illustrious family have had their residence. The first of the family came to the State in 1636. "Cheap Living in Cities" deals with different ways of cooking meats, etc. "Creole Cookery" describes divers delectable dishes served in lower Louisiana. "Eastern Housekeeping in the Far West," is an account by Margaret Spencer of her experiences among the far away natives of New Mexico. There are articles about "Household Decoration," "Care of the Toilet," "Art," "Our Baby," "Household Health," "Fashions," "Window Gardening," etc. The Home-maker Company, New York.

Miscellaneous Advertising.

INFANTILE Skin & Scalp DISEASES cured by CUTICURA Remedies.

FOR CLEANSING, PURIFYING, AND BEAUTIFYing the skin of children and infants and curing torturing, disfiguring, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair, from infancy to old age, the CUTICURA REMEDIES are infallible.

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SUSAN COOLIDGE has written a splendid story for the girls, treating of the modern style of "Coming Out." It treats of a young girl with a fashionable mother, whose every desire and ambition was centered in the daughter's "coming out" into society.

ROBERT J. BURDETTE contributes a splendid article on "The Handy Man," humorous as ever, but sensible from beginning to end

FELICIA HOLT'S article on "Vacation Flirtations" is sensible and strong.

FLORENCE HOWE HALL contributes a splendid article on "Inelegancies and Affectations of Speech."

A sensible article on "Modern Divorces" deserves and should have a wide reading in these days of easy divorce.

MARY BARRETT BROWN writes an instructive as well as interesting article on "English Home Life."

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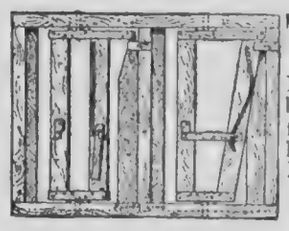

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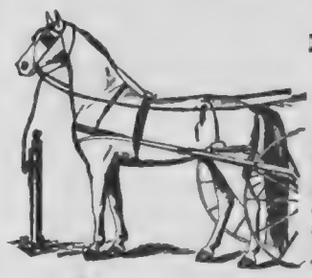

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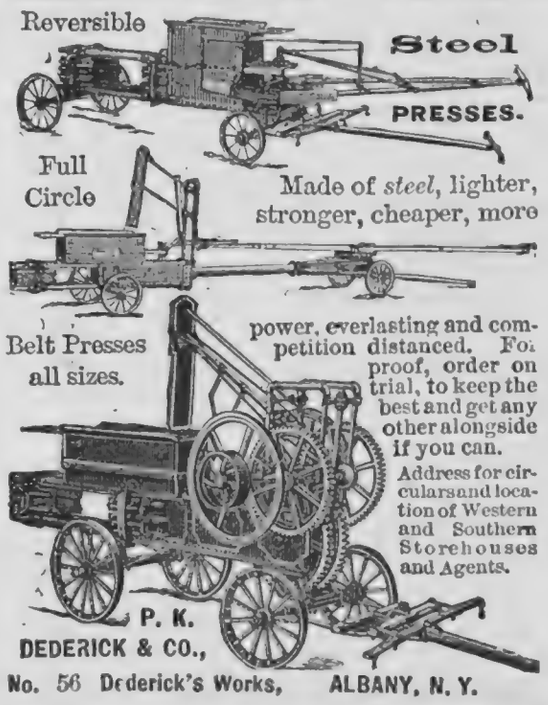

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CATALOGUES, ETC., RECEIVED.

HAY AND STRAW CROPS.—F. Williams & Co., hay and straw dealers of this city, have issued a hand-book containing estimates as to the amount of hay now in the country. They think there has never before been a time in this country when so much hay was ready to be placed on the market as there is at the present time. There is a scarcity of good grades of hay; in fact, the proportion of the whole amount that can justly be called "prime" has never been smaller. It therefore seems safe to conclude that prime hay will realize strong figures while "clover mixed" and "shipping" will find very slow sale. This is exactly what the R. N.-Y. has repeatedly said. The outlook for straw is given as follows:

"All kinds of straw have been secured in a poor state as a general thing, and prime lots will no doubt bring strong figures, but anything that is stained or dark-colored, will rule low."

Williams & Co. suggest that the following rules for the grading of hay should be observed:

No. 1, OR PRIME HAY—Shall be pure Timothy, properly cured, bright, natural color, sound and well baled.

No. 2, OR GOOD HAY—Shall be Timothy, not more than one-quarter (¼), mixed with "Red-top" and "Blue Grass" properly cured, bright color, sound and well baled.

No. 3, OR MEDIUM HAY—Shall include all Timothy not good enough for No. 2, proportionally mixed with Blue Grass, Red-top and clover, sound and well baled.

CLOVER MIXED HAY—Shall include all hay containing not over two-thirds (⅔) clover and one-third (⅓) Timothy, properly cured, sound and well baled.

SHIPPING HAY—Shall include all hay not good enough for other grades, and may be natural meadow free from wild or bog, and must not contain over one-third (⅓) clover, sound and well baled.

CLOVER HAY—Shall be medium grown, properly cured, good color, sound and well baled.

NO GRADE, OR REJECTED HAY—Shall include all hay badly cured, musty, stained, or in any way unsound.

PEAR BLIGHT AND APPLE POWDERY MILDEW.—Circular No. 8 from the section of Vegetable Pathology, Department of Agriculture, Washington. The papers of late have noted the fact that Prof. Galloway has discovered a sure preventive of the above-named diseases. We presume the authority for this report is found in this circular. Both of the diseases have been described in the RURAL. They are familiar to most nurserymen. The R. N.-Y merely gives the mixtures used for curing the diseases. For pear blight the Bordeaux Mixture was sprayed upon the trees. This mixture was made as follows:

"Six pounds of sulphate of copper were crushed and dissolved in 16 gallons of water; four pounds of fresh lime was then slaked in six gallons of water, using, of course, another vessel for the purpose. When the two solutions had cooled they were poured into a barrel and thoroughly stirred with a wooden paddle. For applying the mixture a Japy pump with Vermorel lance and nozzle was used." The first application was made on June 5 and was followed by four others at intervals of 10 days. The treatment was in all ways satisfactory, the trees retaining their leaves in excellent condition, while some not sprayed were almost ruined by blight.

For the powdery mildew the first preventive tried was a solution of sulphuret of potassium (liver of sulphur). This was not a success, as the solution was not thrown evenly and was too easily washed from the trees by a light rain. It was then decided to use a solution of ammoniacal carbonate of copper. This was prepared as follows:

"To facilitate the work of spraying, three barrels were placed in a road at the east end of the block, the first at the south side, the second in the middle, and the third at the north side. Everything being in readiness, the barrels having previously been filled with water (44 gallons), six ounces of carbonate of copper were weighed out and placed in an ordinary water-pail. A half gallon of ammonia was then slowly added, at the same time a complete mixture was effected by stirring with a wooden paddle. Two minutes' stirring was sufficient to completely dissolve the copper, and the solution, which is of a beautiful blue color, was then poured into the central barrel and mixed with the water by means of a long stick. A moment's stirring and the solution, which was now of a light blue color, was ready for use."

This treatment gave excellent satisfaction. These experiments were tried on a very large scale, hence Dr. Galloway's confidence.

SIDNEY TUTTLE & COMPANY, BLOOMINGTON, ILL.—Wholesale catalogue of trees, plants, shrubs, roses, bulbs etc.

GREEN'S NURSERY COMPANY, ROCHESTER, N. Y.—An illustrated circular of the Wilder Pear. This is an early pear of decided excellence.

HARNESS & BUGGIES.—Catalogue from the Wilbur H. Murray Manufacturing Company, Cincinnati, Ohio. These goods have been very extensively advertised of late and we know that a good many RURAL readers have bought them. No complaints have reached us. We judge therefore that the goods suit and that those who buy them get their money's worth. This is the desired end in all bargains.

JOHNSON & STOKES, PHILADELPHIA, PA.—An illustrated catalogue of seed wheats, grass seed, etc. Several kinds of new wheats are offered. The catalogue should be examined by all wheat growers

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

RENEWAL OF JUDGMENTS: SEARCH FOR LIENS AGAINST LAND-TITLES; A MORTGAGE AS ADDITIONAL SECURITY TO LAND-TITLE.

Subscriber, Mercer County, N. J.—1. Can judgments in New Jersey be renewed when the 20 years have expired, or are they outlawed? 2. Smith sold Brown a tract of land in 1868 and Brown sold it to Jones in 1884. In making search in the Supreme Court now, is it necessary to make one against Smith, and would not a search against Brown for 15 years, ending with 1884, be sufficient; the search against the present owner Jones, of course being for the 20 years last past? 3. I recently purchased a farm subject to mortgage. The mortgage is quite old and the property has changed hands seven times subject to it. I now wish to pay it off; but I want to keep it alive as it will give me a stronger title. Can I have it assigned to myself, and, if so, could I assign it again at any future time should I wish to raise money?

ANS.—1. Section 7 of the New Jersey Act for the limitation of actions provides that judgments in any court of record may be revived by *scire facias*, or an action of debt may be brought thereon within the 20 years next after the date of such judgment. 2. In the case of the real estate sold by Smith to Brown in 1868, and by Brown to Jones in 1884, a search of the Supreme Court records for judgments which might be a lien upon the property, should, as our friend suggests, be against Jones for the 20 years last past, and against Brown for the 15 years ending with 1884. Such a search would be sufficient to cover every contingency except that in which a judgment may have been rendered in favor of one who was insane or under the age of 20 years, in which case the time during which this disability continued, would not be included in the 20 years. 3. Frequently, as in our correspondent's case, it is an advantage to the purchaser of real estate to keep a mortgage alive as an additional security. Where this is the case, the purchaser is at liberty to have the mortgage assigned to him, and to hold it as a separate title. It may be assigned by him at any future time or dealt with by a satisfaction piece or otherwise like any other mortgage.

LIABILITY FOR INJURIES FROM DEFECTIVE HIGHWAY.

J. K. Mc L., Corinth, Ill.—While hauling logs last spring, one of the logs, owing to the bad condition of the public road, rolled off the wagon and fell on me, nearly killing me. Am I entitled to damages?

ANS.—That depends. A city or town is liable for damages for all injuries occasioned by its neglect to keep the streets, roads or bridges in proper repair, provided ordinary care to avoid injury, was used by the plaintiff; but the person suffering the injury must in no way contribute to it by his own act; for if he knows the road to be dangerous and can conveniently avoid such danger, he must do so. The aggrieved party, if entitled to receive anything, is entitled to receive compensation; 1, for loss of time and labor, the amount of course depending on his capacity for earning money, and the nature, extent and probable duration of his disability; 2, for the expense to which he has been and probably will be subject for care, nursing, and medical attendance; 3, for his physical sufferings; 4, for his mental sufferings, and the pleasures and enjoyments of which he has been and may be naturally deprived. In cases of aggravated wrong, juries are frequently permitted to give what is called exemplary, vindictive or punitive damages; that is, something beyond mere compensation, as a punishment to the wrong-doer.

A TENANT'S RIGHT TO CROPS.

Constant Reader, Bergen County, N. J.—I wish to sow some rye this fall, but I may vacate the farm on the expiration of my lease, in April 1890. Would I be legally entitled to harvest the crop after the expiration of my lease?

ANS.—No. A lease-holding tenant who plants a crop which he knows cannot mature until after the termination of his tenancy will lose the same. A tenant whose estate is of uncertain duration, however, as, for instance, a tenant at will, or from year to year, is entitled to the crops known as *fructus industriales* growing at the time of the termination of his tenancy. The different cereals would be of this class, while clovers, grasses or the fruits of trees would not. Such a tenant or his representative, after the termination of the tenancy, has a right to enter upon the land to cultivate the crop if it is a growing one, and cut and harvest it when fit, and if interfered with in the reasonable exercise of this privilege by the landlord or his representative or if the crop is injured by either, he may recover damages for the same. The person whose tenancy ends at a certain time, however, in accordance with terms of the lease or who by his own act has brought his lease to an end—as by abandoning the premises or failing to perform any stipulated condition—has no such right.

BOUNDARY FENCES.

J. A. S., Plainfield, Wis.—A and B own adjoining farms. A owns land between B's buildings and the public highway, but B owns land running to the highway and is obliged to have a roadway cut on the line between his and A's land. B having a good fence on his side of the road, is he legally obliged to keep in repair one half of the fence on the line between his and A's land on the opposite side of the roadway, said road being open to the highway?

ANS.—Yes. A boundary fence must be on the line; and B's fence is not on the line. Indeed it was obviously built away from the line for B's exclusive benefit and convenience Why should A, solely for B's benefit, be required to go to the expense of protecting his land from trespass, by building the half of the boundary fence which the law requires B to build and keep in good repair? Evidently neither in law nor equity is he obliged to do so. If B should place a gate across his private road where A's half of the boundary fence ends, there would be little danger of the trespass from animals wandering from the highway; but should injury occur on A's land from such trespass, owing to any defect in the gate, or through carelessness in closing it, B would be liable for damages therefor.

T. S., Seneca County, N. Y.—After a long illness, during which he had leased his large farm for a term of years, a man dies leaving a widow and four children. For three years the widow and the children received the net income of the property—one-third to the widow, and one-sixth to each child. On the death of one of the children, who was unmarried, what would be the shares of the widow and each of the children?

ANS.—One-twenty-fourth part of the estate should be added to the share of each of the survivors, giving the mother nine-twenty-fourths, and each of the three living children five-twenty-fourths of the income.

S. M. S., Clermont County, Ohio.—A made a verbal contract with B, in the presence of witnesses, for the lease of B's farm, possession to be taken in the following spring. When the time came, A refused to let B have the farm, and rented it to another. What remedy has A?

ANS.—None whatever. A verbal promise to rent a farm is good, provided there is a partial performance; but where there is no partial performance there is no remedy for a violation of the promise.

L. T., Matoon, Ill.—Where can I get copies of the Game and Fish laws of Illinois and Missouri?

ANS.—"Fur, Fin and Feather," a bimonthly, published at 14 Warren Street, this city, contains a compilation of the Game and Fishing Laws of all the States in the Union.

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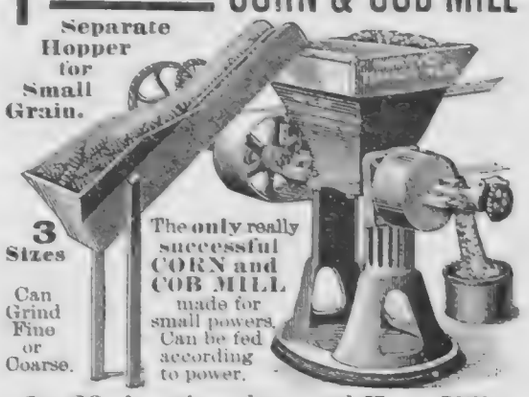

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A DRY spell—S-a h-a-r-a. Spellbound—The Dictionary.—*Puck.*

"I LIVE mostly within myself," said a conceited fellow. "I understand," replied his neighbor at the table, "you occupy a flat." —*Siftings.*

A CITY child, seeing a sunflower in the country for the first time, said she never knew those artistic pen-wipers grew in gardens before.—*Puck.*

"THERE is one paper that will destroy the polish of any one it may come in contact with." "Bless me, my good man, what is its name?" "Sand-paper, madam." —*Boston Bulletin.*

"WHAT a beautiful new boat!" exclaimed Miss Ethel at Long Branch as the yacht Psyche shot past the wharf. "Yes," replied her uncle; "but isn't that a funny way to spell fish?"—*Judge.*

WHEN General Grant was in Japan the Japanese Premier, desiring to compliment the General by telling him that he was born to command, tried in English with this result: "Sire, brave General, you vos made to order."—*Life.*

MOTHER. "To think that my little Ethel should have spoken so impertinently to papa to-day at dinner! She never hears me talk in that way to him." Ethel (stoutly)—"Well, you choosed him and I didn't."—*Harper's Bazar.*

FEMALE CUSTOMER: "Say, Mr. Schlausenheiser, these cookies have coriander seeds in them. I don't like coriander seeds." Baker: "Vell, mein grazious, you gan ead aroundt them auf you don't like um!"—*Harper's Weekly.*

HE (sentimentally): "How shall I ever leave thee, love?" She (practically): "Well if you go now you may go out of the door. But I hear father coming and if you don't go now you may go out of the window."—*Lawrence American.*

FRENCHMAN: "You should to Paree go, eef only to see zee beautiful picture of New York harbor painted by Missear Bartholdi. Eet is one grond compilationg." Omaha man: "I have seen New York Harbor itself." "Oui, but in zee picture you get zee grond view widout zee smell."—*Omaha World.*

PENELOPE PEACHBLOW: "How do you do, Mrs. Plantaganet?" MRS. PLANTAGANET: "You must excuse me, but I do not think we have ever met." PENELOPE PEACHBLOW: "Yes; last week at Mrs. Westerly's." MRS. PLANTAGANET (with increasing coolness): "You have the advantage of me." PENELOPE PEACHBLOW: "I think I have, Mrs. Plantaganet, in eyesight, memory, and manners. Good afternoon."—*Life.*

WHEN Florence was only a wee bit of a girl she loved to trot around out-of-doors in the early morning, and mamma was very particular that she should always wear rubbers. One morning, standing at the kitchen door, she made an alarming discovery. "Oh, mamma! mamma!" she called. "All vese cunning little chickens hasn't got on any rubbers. They will get a sneeze—O-oo dear!"—*Youth's Companion.*

AT the Thousand Islands, at dinner one day, Daniel W. Powers and his friends were discussing the merits of different species of game. One preferred canvas-back ducks, another woodcock, and still another thought a quail the most delicious article of food. The discussion and the dinner ended about the same time. "Well, Frank," said Dan, turning to the waiter at his elbow, who was as good a listener as he was a waiter, "what kind of game do you like best?" "Well, Massa Powers, to tell you the trufe almost any kind of game'll suit me, but what I likes best is an American Eagle served on a silver dollar." He got it.—*Rochester Budget.*

AND THE THERMOMETER AT ZERO.

GOLDSTEIN (to party who has just rescued his son): "S'help me gracious, mine frent, vould you mindt goin' under for dot other skate?"

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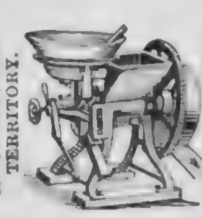

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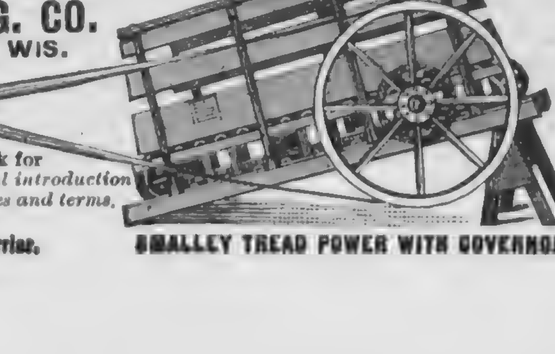

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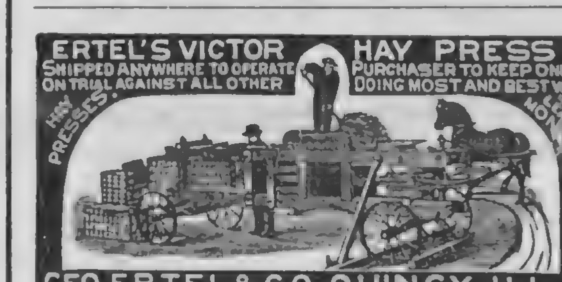

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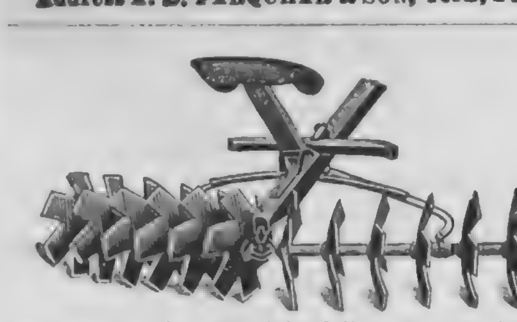

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII. NO. 2070. NEW YORK, SEPTEMBER 28, 1889. PRICE, FIVE CENTS. $2.00 PER YEAR.

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Farm Economy.

MR. TERRY'S FARM IMPLEMENTS.

SOME weeks ago the R. N.-Y. promised its readers a picture of the tools in use on Mr. Terry's 50-acre farm. This picture will be found below, at Fig. 239. We have been able to secure an excellent reproduction from the photograph sent us by Mr. Terry. It is an excellent picture—one that will cause a good deal of thought and discussion. It is an apt illustration of the wonderful possibilities of photo-engraving. The picture tells more than a book of printed matter ever could tell. The R. N.-Y. is happy to state that it is in position to make use of all the great resources of photo-printing. This picture is but the beginning of a series that will open an entirely new field for agricultural journalism. Mr. Terry describes the picture as follows:

"The picture does not show all the tools I have, but those I have used or shall use this year, and which I would buy again if starting anew. The location is in the road and in one corner of the lawn. Beginning in the road, to the right hand, you see first our big wagon, with three horses attached, and a load of potato boxes on it. This is a view of the rig just as it looked when I returned from the cars last fall, after taking up a load of potatoes. You will notice a folded canvas on the boxes, that will cover the entire wagon to keep off rain or sun; also the umbrella which has sheltered the writer while riding many a month. You will get a little idea of the size of this wagon when I tell you that there are 72 bushel boxes on it (not all I have by any means). There are bolster springs to go on when needed.

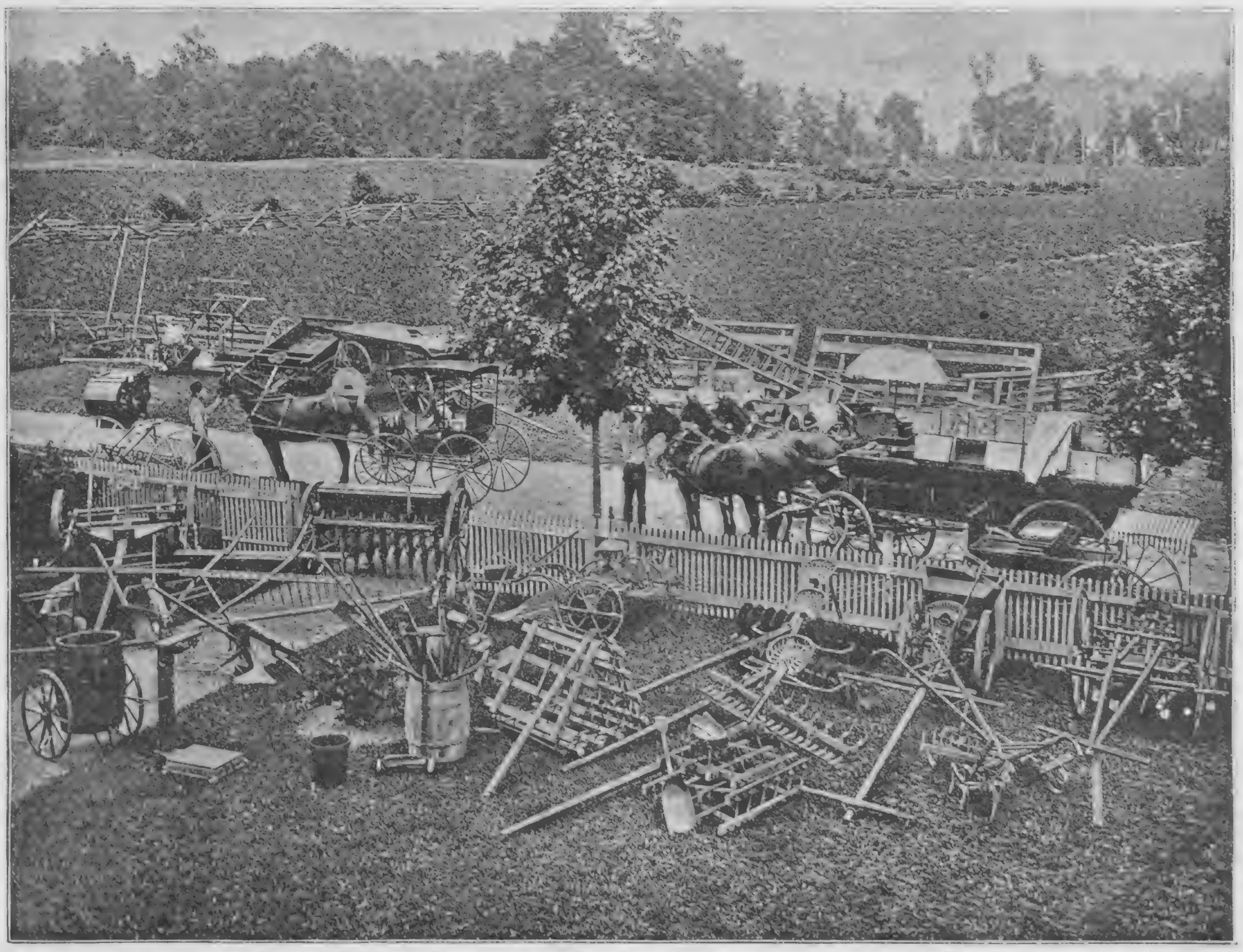
In front of the wagon is the buggy; back of it are two hay-racks, an extension ladder that will open to 35 feet, the wheel-barrow that takes manure out of the stables and the land roller, which is partly hidden. Next come a pleasure carriage, a smaller wagon, a grindstone, the Kemp manure-spreader, which I have used about eight years, the little Buckeye low-down binder, wagon and carriage poles, mill to clean the seed wheat and clover, and a horse-dump rake. I have many a time drawn 66 bushels of potatoes in bulk on the small wagon. The side-boards on both wagons are portable—they can be taken off or put on in a minute, while they make the wagon able to carry a large load without its being very high to load into. They are home-made and have been in quite constant use for many years.

In the gate-way may be seen my Empire drill. This seems to me to distribute the grain more evenly than any other implement I know of, and that is the important point. To the left of the carriage road is our old fast friend, the Eureka mower, and a pair of the largest size Oliver chilled plows. On the walk is Breed's weeder, a very light smoothing harrow, which we used twice this year after the potatoes were up. It cultivated two rows at once and hoed them perfectly at the same time, going over seven acres in five hours—a valuable little tool for clean, mellow soil. In front of it stands a Planet Jr. potato-digger sent here to be tried, which I did not intend to have in the picture, although it may prove worthy of its place. Before it are our scales, a pail from our earth-closet, which I may speak of at another time, and the barrel on wheels that takes the slops away from the kitchen. This latter I told about last year in the RURAL.

There is behind that barrel a pretty little flower bed filled with samples of small tools. In the rear of it stands the best potato-digger on earth, so far as I know. It is the Hoover. It is well made and will do the work perfectly, the only objections being the cost and power required.

Next come tillage tools. In the foreground are two Thomas harrows, next an Acme, followed by a Cutaway and plain disk. On top of one Thomas harrow stands our little Cahoon seed-sower, which has been used 20 years with great satisfaction. By the side of the disk harrow stands an Aspinwall Potato-planter—one of the most perfect tools I have. I have no grain-drill yet that puts in wheat as evenly as this does potatoes. Next comes the new Bicycle cultivator, for narrow rows. It is the only riding cultivator I ever saw that I could do satisfactory work with in the potato field. You see it is up to the times—it has not only a spring seat but a canopy top! In front of the sulky cultivator are two Planet Juniors, with narrow 1¼-inch teeth. On top of one you will notice a little harrow This is a home-made attachment to the cultivator for use in strawberries particularly. The teeth and teeth standards are taken off the cultivator and this attachment is bolted under side. It makes a prime little harrow-toothed cultivator that will not track. It moves the soil close to strawberries without covering any leaves or runners.

The picture of the horses is not fair to them at all. I do not think I would know them. After taking five negatives we gave up getting a fair picture of them with the



GROUP OF TOOLS USED ON T. B. TERRY'S FARM. From a Photograph. Fig. 239.

tools. You will notice the artist had to rub the tails off, mostly, in his negative. We were simply unable to keep four tails still at once in fly time. Those bushes in the fence corners in the back-ground do not belong to me. The winter tools, sleigh, sleds, etc., were not brought out.

You will notice I have two wagons, two hay racks, two plows, two Thomas harrows and two cutting harrows. At first glance this might seem extravagant for such a little farm; but I have two teams, and the ability to rush the work when the conditions are just right is frequently worth more to me than the interest on an extra tool for five years. I have a tool-house 22x56 feet, where these tools are always kept when not in actual use, so that they will last almost indefinitely.

With all this accumulation of tools I am able to grow good crops and do the labor connected therewith quickly and easily. The drudgery of 20 years ago is mostly done away with, particularly as I do not attempt to do half so many things as I used to, but rather a few things more thoroughly well. I ride and plant an acre of potatoes in two hours, all complete, and dig them in the same time. No more hoeing is needed to keep fields clean. I ride and spread a load of manure in two minutes and so on. Young friends must not be discouraged, however, if they cannot afford all these labor-saving devices. It has taken me just 20 years to get all these things together and pay for my farm and put on such buildings as I wanted.

Dairy Husbandry.

Farrow vs. Fresh

SHALL WE BREED DAIRY COWS EVERY YEAR OR ONCE IN TWO YEARS?

THE following discussion was brought out by this letter from a subscriber in Pennsylvania:

"I have a herd of 10 Jersey cows. I make butter and feed my skimmed milk to pigs. I do not care for the calves. Can I get more milk or butter by breeding my cows every year than I can by breeding them once in two years? It is my belief that, all things considered, the latter course will give the best results."

FROM SMITHS, POWELL & LAMB.

OUR belief is that more milk and butter will be obtained when cows have calves once a year, than when they breed only once in two years.

Syracuse, N. Y.

FROM C. M. WINSLOW.

I HAVE never experimented to learn this point, but I have found that where I have been unable to get a cow in calf and she has run many months farrow, I have not got as much from the average of the two years as I have from two years of the same cow when she has calved regularly. She is very apt not to do very much after the first year, and goes dry a long time, or gives but very little milk. The method by which I have received the largest returns from my cows is to have them calve in the fall, feed them well through the winter, etc., then when grass comes they get a new start and are dry in the hot, dry part of the season, when feed is short and butter is low-priced, and they calve again for another winter's work. This correspondent might divide his herd, weigh the milk of the whole and let half the herd calve every year, and the others calve in two years, and test his milk by the "Short method" for butter fat—and he could tell to a certainty just which way was the better.

Brandon, Vermont.

FROM M. H. C. GARDENER.

FOR my purpose of producing a large quantity of milk, I prefer to let a cow go dry at least six weeks once a year, but, unfortunately, some cows—and good ones too—go dry for a longer period. There are a very few farmers in this county who do not keep any bull, but milk a cow for all she is worth; that is, as long as she will give milk in paying quantity, and in the meantime she is fed heavily, so that when she is dried off she is ready for the butcher; but they have a special market for their fat stock; perhaps they run a butcher wagon themselves and so get all the money there is in the beast. But the average farmer could not do this, for the country butcher will give for a fat cow only about half what a new milker is worth, so the loss in changing cows is too great to run a dairy successfully on this plan. It occurs to me, therefore, that the proper way to run an average dairy is to let the cows come in once a year, so that each can get a needed rest by "drying off."

Orange County, N. Y.

FROM C. S. RICE.

A GOOD cow that is well fed, will yield nearly as much milk and butter when allowed to breed but once in two years as under the usual management, producing a calf yearly. Cows giving the same amount the first year will vary greatly in production when farrow. With the common dairy stock of the country, there is no question that yearly breeding is more profitable than the breeding in longer periods. With the improved milk and butter breeds, however, it would require careful and continued experiment to determine the relative profit of a dairy under the different methods of management proposed. From my own observation in a dairy of Holstein-Friesian grades that are persistent milkers, I think that a loss of 10 per cent. would result from the two-year course. A good cow well fed and carefully milked, will continue to yield a profit through 10 months of the year, and need go dry only four or five weeks; that is, during the time when the milk is not fit to be used. The same cow will go dry only a little longer at the end of the second year on the two years' plan; but for a long time the yield of milk will not be large and she will be in fair condition for beef. Yearly breeding and giving milk are normal conditions of the dairy cow. The greatest yield of milk is obtained during the first few months after calving and the yearly return of this period of maximum flow tends to the full development of milk production. On the other hand, with the two years' system the longer time of comparative idleness towards the close of the term and consequent tendency to flesh, are not favorable to such development. It is only a matter of opinion, but I am quite sure that continued restriction of breeding under the proposed two years' system will result in much less profit from the dairy than with the usual management.

Lewis County, N. Y.

FROM DAVID CARLL.

I HAVE kept 20 Jersey cows for butter for the past 10 years and find it best to have them "come in" every year. I like to have one or two calves in each month of the year. I think we can churn more quickly, and make better butter by having fresh cows each month. I have no doubt that more milk and butter can be got from a cow that comes in in the fall; but as we have a greater demand for butter in the summer, I prefer to have them calve at different times in the year. A good Jersey cow will milk within a month of calving, and I am quite sure will give more by calving each year than by going two years. The heifer calves should be worth a good deal more.

Suffolk County, L. I.

FROM J. MCLAIN SMITH.

I HAVE had no experience in this matter at all. The calf, with me, is so important that I breed my cows as soon as they come in, and usually the calves follow each other within the year. Whether a cow would give more milk, or make more butter, bred once in two years, I should say would depend on the cow. Some cows, if farrow, will milk for a long time nearly up to their maximum; others will go dry, or drop off to a very small yield, whether in calf or not.

Dayton, Ohio.

FROM H. S. WEEKS.

I AM unable to see how this correspondent can expect to get as much milk and butter from his cows by breeding them but once in two years as he would if they came in fresh every year. He says his cows are Jerseys, which would doubtless be quite persistent milkers throughout the two years; but, judging from my own experience, the aggregate amount of milk and butter will be considerably larger if they breed every year. The flow of milk from fresh cows for at least half the second year will be, as a rule, double what it would be if they were farrow, and there need necessarily be only a short interval during which no milk is given if they are bred yearly. Many of my own Jerseys milk the year round in spite of all efforts to dry them off, and the average time that the herd go dry does not exceed one month. He says he does not care for the calves; but it seems to me he is thus losing quite a respectable sum from the yearly income that might be derived from this source, for I find the demand for young Jersey stock very urgent, and if his cows are registered, the calves of both sexes ought to count materially in making his decision whether to breed oftener than once in two years.

Oconomowoc, Wis.

FROM F. D. DOUGLAS.

THE production and development of young, in the Animal Kingdom, is one of the incomprehensible mysteries of creative power. While we can not explain or indeed understand the origin of animal life, we may comprehend the laws by which its development is governed. In mammals the secretions which we call milk, are provided by Nature for the development of the young until they become self-sustaining, when the object of the secretions is accomplished, and they are naturally discontinued. While the laws which govern these processes are unchangeable, results may be greatly modified by artificial means, or, in other words, by changing the conditions under which they operate. Cows running wild upon the plains, dry off much sooner than those found in our best dairies. The cow, with us, is, to a great extent, an artificial animal. By the supply of properly constituted rations, good care, and breeding, her milk-producing powers have been developed; she produces much more milk at the outset, and her flow is much longer continued, than when in an undomesticated state, yet there is a limit to this, where Nature requires a return to original conditions, and there must be a reproduction of offspring to insure the best aggregate yield of milk.

Practically I find that where cows are kept in milk over 11 or 12 months, they are quite sure to convert more of their food into flesh, and less into milk than when bred to come in annually. The best of cows will often thus take on flesh and become dry before the close of the second year, though fed on the best milk-producing rations. A good dairy cow, with proper food and care, will continue to yield a large amount of milk during nearly the entire year when in calf every 12 months. Without these conditions of food and care, she will dry off as when in her natural state, or if, by reason of a superior milking development, there should chance to be a continued flow, it would be at the cost of debility in the mother and a weak and imperfect development in the calf. Under favorable treatment both the mother and progeny may be healthy and strong, though the former may continue to give a good flow of milk for 11 months out of the 12, and yield a much larger aggregate amount of milk in two years than when in calf but once during the time. By allowing our cows to remain in milk so long after calving, we get too far from those natural conditions which underlie a large and healthy production of milk, which maternity alone supplies.

Whiting, Vermont.

FROM A. P. ROWE.

I would by all means breed cows annually, and arrange so that they will drop their calves in late fall. In this way one would be able to make much more butter during the winter, when it always commands the best price, and when the cows are turned out on grass in the spring, or soiled, their yield of milk would increase very much, and they could be milked until within a few weeks of calving again in the fall. In this way, the receipts for the butter sold would be at least one-third more than if the cows were bred only "once in two years."

Fredericksburg, Va.

Here is a note about hens with clipped wings:

"White Leghorns with clipped wings are apt at moulting to droop and appear sick. The quills in the clipped wing are not shed as quickly as those in the other wing, and require to be gently extracted. At least this is the observation of a JERSEY-WOMAN."

Have any of our readers noticed this?

Rural Topics.

Linseed Lightens Labor.

WATCH WAGON WHEELS AND SAVE BY SOAKING.

"There has been much said about the economy of soaking wagon wheels in linseed oil. Does it really pay? What do farmers who have tried it say?

FROM A. L. CROSBY.

I have not used linseed oil for the purpose indicated by the RURAL, but have used crude petroleum and think it pays well. I have just finished oiling not only the rims, but the entire woodwork of a two-horse farm wagon. It is astonishing how much oil the rims will absorb in a hot, dry time. As fast as the brush is drawn over the surface the oil disappears, and when a piece of sappy wood is met with it takes up oil like a sponge. I think linseed oil better than petroleum, but the expense is too great to use it as freely as it ought to be used. It is no use advising farmers to pay 60 or 70 cents per gallon for linseed oil and soak the woodwork of their wagons and implements with it; when they see the oil going into the wood so rapidly they will stay their hands and say: "Behold, that is quite enough," long before the wood is filled. You can't do a first-class job when you are all the time trying to save in the materials: if you are repairing a fence and put in one nail where two are needed or try to make one rail serve for two; one load of manure instead of three, or a pint of oil where two quarts are required. If a farmer buy a barrel of crude petroleum and use it freely on his implements he will save its cost every year—provided he is what is called an "average" farmer whose tool shed is coextensive with his farm.

Crude petroleum is easily applied and is cheap; mine cost 8½ cents per gallon—and it will penetrate wood deeper than the heavier linseed oil; its uses on the farm are almost numberless. It can be used in the hen house to kill lice; on pigs and other animals for the same purpose; on dogs to kill fleas; on plow moldbards to keep them from rusting; on gate hinges to prevent wear and squeaking; on roofs to prevent decay; on siding to precede and save paint and on any kind of exposed wood-work. It is always ready for use and its cheapness will cause it to be used where a more expensive oil or a paint would not be. I believe if the rims of wagon wheels are kept filled with crude petroleum they will never decay and the tires will not need setting nearly so often.

Catonsville, Md.

FROM H. A. WHITTEMORE.

In 1884 I had my wagon repaired, (a wagon that had run 25 years.) New felloes were put on all the wheels and spokes in some. I took the felloes off three of the wheels, put them in a cauldron kettle containing raw linseed oil and brought it almost to a boiling point and kept them at that temperature in the oil four hours. When I took them out they seemed much harder than the felloes on the wheel not placed in the oil. I had the tire set upon all, used the wagon for four years and on the three wheels did not have to have the tire set during that time, while on the odd wheel I had to have it set every year. Were I to build a wagon for myself I would soak every part of the running gear in boiling oil for at least three or four hours. I had a light skeleton, weight 125 pounds, made. The felloes were soaked over-night in boiled linseed oil. This was run eight years before a tire was set, and that was because it was removed to put in a spoke that was broken, and some of the tires were run 13 years without setting.

Chautauqua County, N. Y.

FROM HENRY IVES.

The soaking of wagon rims in linseed oil is very beneficial, both preserving the tim-

ber and saving expense for re-setting the tire. To do it effectually the oil should be heated in an iron trough, keeping fire under it, while the wheel is suspended over it so as to be revolved slowly in the boiling oil; this should be done before the tire gets loose, then it prevents its loosening and is best done before the wheel is painted. Thus done it is a very economical practice.

Genesee County, N. Y.

FROM JAMES PERKINS.

I have for the last eight or 10 years adopted the practice of soaking my wagon wheels in hot linseed oil; the results have been most satisfactory. I have a wagon so treated six years ago which has been submitted to all sorts of roads and weather and the tires are as tight as the day they were put on.

Princeton, N. J.

FROM T. B. TERRY.

I had the rims of wagon wheels soaked in hot linseed oil until they would take no more, when the wagons were made, 10 to 20 years ago. Every spring we paint the rims. Tires have *never* become loose, and wheels are about as good as new to-day. I smile when I meet a farmer who is hammering at his tires or pouring on water to tighten them! I feel that I am 20 years ahead of him. But I have been there in times past.

Summit County, O.

FROM C. T. LEONARD.

I have a wagon that for 10 years has stood out-of-doors from May to November. During a hot day each summer it receives several heavy coats of boiled linseed oil; it is in a perfect state of preservation, every tire is tight and never received a nickel's worth of repair.

Ashtabula County, O.

FROM E. DAVENPORT.

I have tried setting tires with linseed oil and have not succeeded. First it is difficult to tighten the tire by using oil, and, again, the particles of sand that work in between the felloe and the tire are still there and immediately begin cutting and wearing the felloe, and again loosening the tire. I believe in paint as a preventive of loose tires but not in oil as a cure, at least in the soil I am accustomed to.

Ingham County, Mich.

FROM H. H. WING.

I have had no actual experience in soaking the rims of wagon wheels in oil, but I have had friends and neighbors who have had good results from the use of both linseed oil and crude petroleum in preserving the wood of the felloes and tightening the tires. As I have seen it practiced a tin vessel a little thicker than the wagon wheel and of the shape shown at Fig. 241, is used as a receptacle for the oil, and the wheel being supported on a jack is turned in the oil. In this way the felloes are treated rapidly and efficaciously and with no waste of material.

Cornell University.

The Poultry Yard.

Farm Rations For Poultry.

"The experts tell us that wheat is the best and cheapest food for egg production. It is my belief that most farmers feed corn to poultry with excellent results. I should like to hear from farmers as to the value of these two grains."

FROM A. L. CROSBY.

This inquiry came just as I had finished an experiment to find out how many eggs there were in a bushel of corn. In one of my hen-houses there were 22 hens and four half-grown chicks. They have no range except a small yard perfectly bare of vegetation. They have been laying without intermission since last November and about half of them sat once or twice in the spring. The experiment began August 17, and continued just 12 days; the hens were molting and the weather was warm. I had just broken six hens from sitting and during the 12 days shut up six more. Their feed was whole corn and skimmed milk—all they would eat—and a handful of grass and weeds each day. They ate exactly one bushel of corn, drank 18 gallons of milk—say 150 pounds—and laid 123 eggs. In the West skimmed milk is valued at 20 cents per 100 pounds: here I think it is worth more, say 25 cents; this would make the milk cost 37 cents for the 12 days. The eggs were worth a cent and a-half each, or $1.84; deducting 37 cents for the milk we have $1.47. Can we credit this all to the corn? I think not, but I do think that the corn should be credited with the larger part of it. I once kept an account for one year with 16 hens fed entirely on corn as their grain feed—no milk—and they paid a net profit of $1.25 each over the cost of the feed: this profit was almost entirely from eggs, as we raised but very few chickens that year.

I know that corn is a good egg-producing feed and also that, as the RURAL says, the experts all say that wheat is the best egg-producer and that corn is too fattening. My experiment to be complete, should have been continued 12 days longer and the hens should have had nothing but water to drink, but so many of them wanted to sit that it could hardly have been a fair test. Next winter I hope to find out how many eggs there are in 100 pounds of skimmed milk and also which is the better egg feed, corn or wheat. But I feel safe in recommending whole corn for hens, notwithstanding it is said to make them so fat that they won't lay. Some of my hens are as fat as they can get, and it does not prevent them from laying; neither does moulting, as one of the fattest hens has so few feathers on her that she looks bare, and yet she is one of the best layers. It will be found in the hen business as in all other kinds of stock growing that some well-established axioms have been allowed to stand on very slight foundations.

Catonsville, Md.

FROM MRS. L. C. MORSE.

My hens are fed on corn, whole and cracked, every day in the year—two rations in the winter and one in the summer. One gill per fowl as a ration. They have a common run in the summer and plenty of water the year round. The result is more or less eggs every day. The breed is Plymouth Rock with a Brahma and White Leghorn strain for variety. The chicks are fed the same as the hens from the time of hatching till they are guillotined, the cracked corn for them being, of course, finer than for the hens. I have fed wheat with good results, but "well-enough alone" is satisfactory.

Westfield, N. J.

FROM MRS. E. A. FASSETT.

Last winter we kept 50 hens. I like variety of feed. Wheat is good, but this is not a wheat-growing locality. If it were I don't think I should like wheat alone. I use injured wheat for common feed, but the greater the variety I have the better I feed, giving about as follows: Morning: a good feed of dry corn-meal dough warm, with occasionally a little red pepper; dinner: whatever scraps of boiled potatoes or anything else are left from the table. I give oats also and some sour milk to drink, and in winter plenty of good water with the chill taken off by adding a little warm water to the cold. Injured wheat warmed by putting it in a pan and setting in the oven is fed just before the fowls go to roost. With plenty of such feed we get plenty of eggs. We fattened our poultry—turkeys and chickens—last fall with inferior wheat; but just before we dressed them we fed corn-meal in the form of warm dough.

Hancock, Vermont.

FROM PORTER COLBY.

In our neighborhood wheat is not used very extensively as poultry food; but the few who do use it like it much. A grain firm in this place have sold two car-loads of what they call frosted wheat since January 1, 1889. Their price now is, by the ton, $1.25 per cwt; single cwt. $1.30. Some of this is used in adjoining towns. Corn used to be almost the sole feed for poultry about here; but now for eggs, we use about two-thirds bran and one-third scalded meal for the morning feed, and at night, two-thirds oats and one-third corn. Some use bran and middlings for the morning feed and some do not use more than one-fourth corn for feeding at night. There are two men in our town who keep from 500 to 1,000 fowls each; they buy their grain by the ton and feed some wheat.

Milford, N. H.

FROM O. K. LANE.

Wheat for laying hens, or any other fowls, is without an equal; but feeding it can be overdone, as fowls crave a varied diet. I have fed them wheat a few days; then they showed a preference for peas, or buckwheat. As eager as fowls are for fresh meat, they soon want a change to oats, corn, and wheat. So they leave the cabbage to taste the tomatoes; then curds. In eastern Illinois eggs sell for 10 cents per dozen and in winter for 15 cents; but it is too cold to ship them. Hence it doesn't pay to feed wheat. Eggs often sell for five cents per dozen. But few farmers pay any attention to their fowls.

Vermilion County, Ill.

FROM G. W. DREW.

Wheat is no doubt superior to corn for egg food, as corn alone is too fattening, but I think the majority here feed corn. Our aim is to feed no two meals alike in succession. We feed wheat, oats (scalded), barley, provender, wheat-bran, cracked corn, boiled vegetables, and corn (always at night,) with plenty of shells and bone. From this kind of feed we get the best results. Surprise a hen with kindness if you want her to lay.

Birmingham, Conn.

FROM C. S. VALENTINE.

Having lately changed my neighborhood, I cannot say much as to the facts of the case just here, but in that part of the country that I am most familiar with, viz, Western New York, farmers who feed wheat to their hens are about as scarce as hen's teeth. They consider it more expensive than corn, not seeming to realize that the same bulk will "go" nearly twice as far, and it is extremely difficult to convince them that the wheat is any better than the corn as an egg-producing food. Almost ten-tenths of them feed nothing but corn during fall, winter and spring, letting the hens pick their living throughout the summer. My own opinion is shown by my practice: I feed no corn except in the coldest weather, and then but once a day. I work in all the boiled small potatoes, turnips, etc., I can, mixing with them corn-meal, ground oats and bran, while ringing the changes on wheat, oats and buckwheat for the grain feed.

Cranford, N. J.

THE EATON GRAPE.

SOMEWHAT REDUCED IN SIZE. FROM NATURE. FIG. 240. SEE PAGE 641.

Farm Topics.

SOME CROP ROTATIONS.

WHERE THEY PUT STABLE MANURE.

ITS EFFECTS ON POTATOES.

FROM E. L. BASS.

As to crop rotation, I make my meadows give heavy crops of hay for about six years by giving them a good coat of manure when they are seeded down, and top-dressing them two or three times. I then plant the land to corn or potatoes for one year and manure lightly, relying more on artificial fertilizers, especially for potatoes, as I am confident that the application of stable manure tends to diminish the proportion of good, marketable tubers. The next year I sow barley and grass seed, using eight pounds of clover and 12 pounds of Timothy to the acre, and if the land is moist some Red-top also. I apply more manure the season when I stock down the land than I do the year previous, as I wish to reap the benefit of it principally on the grass crop.

West Randolph, Vt.

FROM V. A. SHANKLAND.

This county (Berrien,) pours into South Water Street, Chicago, a continuous stream of fruit, vegetables, etc., from the opening to the closing of navigation. In all the region about Benton Harbor and St. Joseph farm husbandry is "mixed." Grain, hay, stock, large and small fruits, garden truck etc., can be found, in almost endless variety, on nearly every large farm. For my own part I have 130 acres under this mixture:

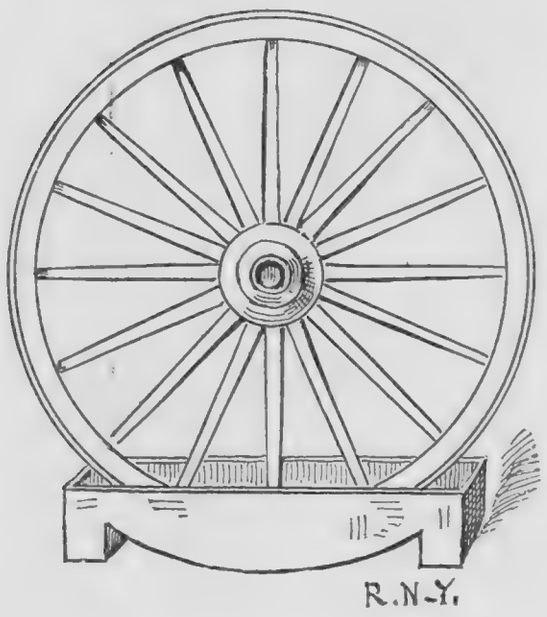


Fig. 241. SEE PAGE 639.

but make a specialty of seed wheat, potatoes and grade Jersey cows; and I would feel mortified should any neighbor—even a "RURAL" reader (or editor)—beat me badly on either of these specialties. This year I can report a potato field of 3½ acres, that will yield about 300 bushels of marketable potatoes to the acre. It was cultivated, but not hoed, and has not been manured for 10 years except that one-fourth of an acre of the present crop received one quart of mixed ashes and hen manure on each hill before the potatoes were up—an experiment that promises a good lesson. Success was mainly due to *marking out.*

My barnyard manure is permitted to rot, and is applied mostly about the fruit trees, and strawberry beds, and also to help the wheat, potatoes, tomatoes, etc. I spread it upon the surface after plowing and work it in with a spring-tooth harrow or a cultivator. I stick closely to a three-year rotation, as follows: 1. Grain—wheat, oats, buckwheat, seeded every time with Mammoth Clover and Timothy. 2. Hay—one cutting. All aftergrowth is plowed under in the fall. 3. Hoed crops—corn, potatoes, beans, tomatoes, etc., and then I go back to grain and clover. Under this system, in seven years my land has come up from a renting value of one dollar per acre to a renting value of seven dollars per acre. It is but fair to say that the RURAL has been a great help to me, not only in regard to my specialties, but in the whole field of my farm life and work.

Berrien County, Michigan.

FROM M. MORSE.

I have no regular crop rotation nor do I think I can have one without often deviating from it. Most of my crops are grown for the canning factories and I keep a large portion (nearly half) of my arable land under cultivation. I have been on my farm only nine years, and when I took it the total product was only five to six tons of poor hay. I had to depend wholly on commercial fertilizers at first, and even now more than half my crops are grown with them. I have used from $400 to $700 worth of them each year since I have been on the farm. I generally dress the land when I seed to grass, with stable manure, believing it may have a more lasting quality than fertilizers and the weed seeds in it will trouble me less. Much of my grass land has been seeded with fertilizer, about half a ton per acre, and annually dressed afterwards with 400 to 500 pounds per acre. The result has been as good as where stable manure has been used. When I have more manure than I need to seed down with, I spread it upon land intended for corn, but I do not use manure on potato land. I think the quality of potatoes grown upon green manure is not as good as when they are grown with fertilizer—I only think; I do not know. My first crop after grass is corn, and as corn occupies more than half the cultivated land, it is corn after corn, sometimes for two or three years. I grow no small grain, except winter rye, which I sometimes sow after the corn is harvested, and usually cut for green fodder or hay the next season and plant again to corn or some other crop, as cabbage or tomatoes or squash; in fact, whatever crop the land and market promise to give the best returns for. I am not very systematic, and my practice would not be good for many to follow. I am, and have been, for several years, giving considerable attention to fruit culture, as it suits my taste best.

Medway, Mass.

FROM J. TALCOTT.

I put my stable manure on sod ground in fall and winter for corn and potatoes, spreading as put on. We plow it under for corn and potatoes just before planting. Why? Because we think it the best way. The corn or potato crop gets the most benefit from it, when it is most needed, when the corn is filling out its ears and when the potatoes are setting their tubers. We plow a little deeper for the oat crop, thus getting the manure and inverted sod finely mixed for the crop and for seeding, because seeding with oats is generally practiced here. Sometimes the oat stubble is plowed under for winter wheat, and in that case a little fine manure is usually spread on the surface and dragged in for the benefit of the wheat crop, and also for grass seeding. I have known a fine crop of wheat grown on oat stubble where the manure was plowed in; in fact, the best crop of the season in this vicinity one year was grown in this way.

Rome, N. Y.

FROM A. B. SAUNDERS.

I use no crop rotation whatever. My main and sole object the year around is to gain and maintain a grass crop for grazing. If any crop is raised it is preparatory to seeding to grass, and it is not considered the highest object to which I am trying to attain. The main part of the stable manure is spread upon the young grass crop. This process is improving my upland, and as most stock is in good demand it is giving fair returns to the land in the form of manure as well as to the purse.

Guysville, Ohio.

FROM W. M. BENNINGER.

I have no regular rotation on my farm. I turn the poorer grass fields and put in corn and potatoes, manuring heavily with good stable manure. I get the best results from good stable manure. I raise very little winter grain and oats. Such crops don't pay

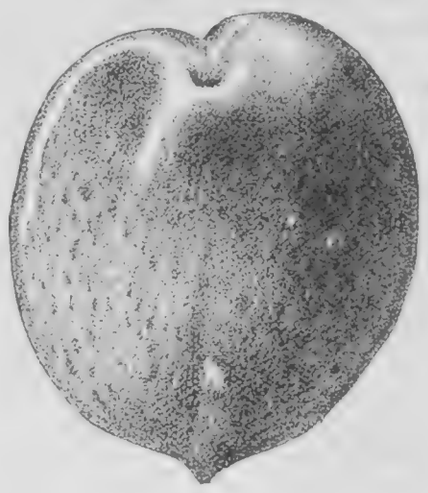


Fig. 242. SEE PAGE 641.

here. All I sell from my farm is milk, cream, butter, potatoes (mostly for seed) fruit, garden vegetables and stock. I have made it a rule not to sow or plant any crop unless I can manure it well with good stable manure, and I use stable manure on all crops. I make and treat my manure as follows: to bed my cows and all horned cattle, I buy dry sawdust at 15 cents a load from the school-slate-frame factories. The gutters in my stable are very tight so that the dry sawdust aborbs and retains all the liquid manure. This manure I put on the land as often during the season as I can. Afterwards the land is plowed and harrowed with a spring-tooth harrow and smoothed with a Thomas smoothing harrow. For potatoes I manure the land well in the fall on top and turn it under, and manure again in the spring on the top with the above described cow manure. I used some lime and wood ashes in the trenches when I planted my potatoes this spring, and on some I used commercial fertilizers. I can see no difference. The tubers are all about half rotten; otherwise the crop would be very heavy. In a favorable season I raise about 300 bushels to the acre.

Walnutport, Pa.

FROM F. W. BALL.

After potatoes I seed down with oats, then mow or pasture from one to three years. There is going to be a change. The rotation has been corn first; then potatoes, followed by wheat or oats—mostly wheat. I used stable manure on the potato crop. As it is our main money crop I wished to get as large a yield as possible and the manure left has been plenty for the oat crop following. I have had a good many scabby potatoes, however, every year, and charge the mishap to the manure, so I shall change the programme a little, using my stable manure hereafter as a top-dressing for grass; then I shall mow one year, and then plant to potatoes.

Erie County, N. Y.

FROM CHAS. CHAPMAN.

Believing that the rotation of crops on any farm should have for its object an increase of income each succeeding year for the farmer as well as the improvement of the soil and be also influenced by the nature of the soil and the climatic conditions peculiar to the section, I have practiced the following plan for years, and as yet have no reason for abandoning it:

All the barn-yard manure possible is drawn during the winter on a clover sod from one to three years old. It is drawn and spread during the winter because experience has proved that we get better results from treating it in this way, and the cost of drawing it is less during the winter. The field is plowed and planted to corn in the spring. The following spring it is sown to barley and in the fall to rye or wheat. If rye is sown, four quarts of Timothy seed are sown in the fall per acre, and in the spring four quarts of Red Clover and one quart of Alsike.

With wheat no grass seed is sown until spring. All stable manure left in the stables and what has accumulated during the summer is used as a top-dressing on the wheat and rye in the fall. These fields are mown for one or two years and pastured one year, when the rotation is repeated. This year it was necessary to mow the fields on which rye and wheat were grown. All straw and hay are fed on the farm excepting rye straw. The only change of late years has been the addition of more bran to the stock feed. The result of this system of rotation has been an increase in the amount of stock kept (mostly sheep), thus returning to the soil all the plant food taken from it and making an increase in the yield of the crops per acre. I have never raised potatoes largely, but from frequent trials I have found more decayed and scabby potatoes where stable manure was used.

Schuyler County, N. Y.

Field Crops.

STABLE MANURE and POTATO ROT

DOES MANURE INDUCE ROT?

VIEWS OF FARMERS.

"Some of our correspondents claim that in a season like the one just past, stable manure will induce rot in potatoes. That is, on soils at all inclined to be damp, the rot will be worst where there is most stable manure. Have you noticed this?"

FROM C. M. LUSK.

I have noticed the same thing. Several years ago potatoes rotted very badly here, and most of my potato ground ha been manured with coarse horse manure lowed under and the rot was worse there than where I did not manure. Still I obtained more sound potatoes per acre there than where there was no manure. My land is a sandy loam.

Broome County, N. Y.

FROM E. G. WALLIS.

My experience has been that potatoes have rotted worst where most manure was plowed under; and that the white potato rotted worse than the Blush, but the past season I think the white potato stands ahead. The Blush are very small.

Onondaga County, N. Y.

FROM J. H. TIBBETT.

I do not consider manure the direct cause of the potato rot; but I think it presents the conditions most favorable for its development. In this section we do not consider it safe to manure potato ground in a wet season like the past. From my observation I think the disease attacks the vines first and is carried through them to the tubers.

Saratoga County, N. Y.

FROM J. H. LAMPMAN.

I find a few more rotten potatoes where I put stable manure than where none was used; but it is clay ground and the variety is the Rural Blush; so I think the Blush would be more apt to rot than my Beauty of Hebron which are on sand. I will continue to use good old stable manure if I have it, well worked into the ground before planting, and then some special Potato Fertilizer in the hill or drill. My Rural Blush are a good crop with such treatment, although many rotted.

Greene County, N. Y.

FROM HENRY IVES.

A liberal application of manure before planting, has seemed to cause rot in years when the malady prevailed. But this may be only a secondary cause, for the rankest growth and yield, induced by such manuring, are sure to be the worst affected. This is more noticeable too when the manure is freshly applied, and before its strength is distributed equally through the soil. To remedy this, I find it is safer either to apply it to the corn crop of the year before, or at least to put it on the ground the fall before, so that its strength may get well incorporated with the soil.

Genesee County, N. Y.

FROM J. W. WICKHAM.

I have always used fertilizers with stable manure for potatoes; so I could not say if stable manure alone used heavily would cause rot. My experience is that the more heavily potatoes are manured, the more liable they are to rot. I believe that the rot in my potatoes this season came from the destruction of the vines by the Flea-beetle more than from the manure used.

Suffolk County, N. Y.

FROM BENJAMIN WEED.

I put about 20 loads of barn-yard manure to the acre on my potato ground this year. The tops died when the tubers were about half grown. I have discovered very little rot so far and the manure has not had any tendency to cause them to rot.

Wayne County, N. Y.

FROM C. H. EVERETT.

I do not think the RURAL's correspondent has got to the bottom of the matter when he says that stable manure will induce rot in potatoes on soil inclined to be wet. Some think, because their potatoes have rotted the worst where the manure was, that the manure was the cause of the rot. Whenever there is an unnaturally rapid growth of vine or tuber, whether it be due to the application of manure or to the condition of the soil or a favorable climate, rot is very likely to occur. In such a case something seems to be lacking in the potato. Some claim that the starch does not form as fast as the potato grows. I am much inclined to agree with them that the trouble is due to something of this sort. Give me the manure and I will take the chances of rot.

Steuben County, N. Y.

FROM E. G. BRICK.

I have never noticed that stable manure

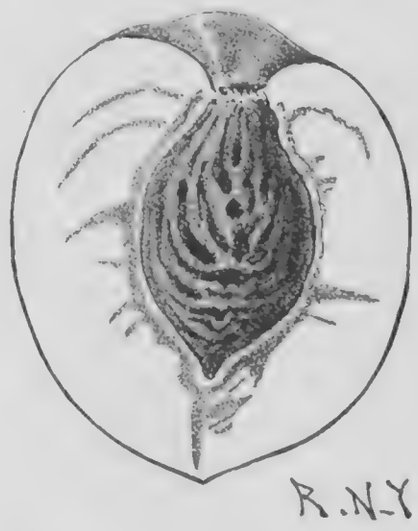


Fig. 243. SEE PAGE 641.

induced rot in white potatoes, and so cannot say anything positively.

Salem County, New Jersey.

FROM ELIAS P. JOHNSON.

On inquiry I do not find any potatoes planted directly on stable manure as was formerly done, the scab having put an entire stop to the practice. The worst rotted field about here was fitted for tobacco. A

very heavy coat of stable manure was put on the surface and thoroughly worked in with a wheel-harrow. No fertilizer was put on the hill. The general way here is to pulverize a fair coat of manure in the surface soil and use ashes and some of the potato fertilizers, or phosphates, in the hill. I do not know of any manure being plowed under lately. My own land is sandy. I use no manure; but plow a trench, drop about 25 bushels of ashes and 500 to 800 pounds of Buffalo potato fertilizer in the trench on each side of the potatoes and cover with a tobacco ridger. I have not had 10 bushels of rotten potatoes in 25 years. I raise only 50 bushels per year. There has not been much rotting about here in the last three weeks.

Windham County, Vermont.

FROM G. M. BENNETT.

Not having used any commercial fertilizer for potatoes this year, I cannot tell if it prevents rot, but I don't think stable manure causes it. My patch was first attacked by the Flea-beetle which perforated the leaves so badly that the bugs gave them up. Then came the blight and the wet weather caused the fungous growth and rot. Slipshod farmers have not suffered much for the reason that they had fewer potatoes to rot.

Fairfield County, Conn.

FROM G. H. GRIFFING.

My practice for several years has been to plant potatoes with commercial fertilizers exclusively, believing that stable manure induces rot. When I have planted early and used nothing but fertilizer, I have invariably had good crops, in seasons when my neighbors, who used barnyard manure freely, have lost by rot.

New London County, Conn.

FROM G. W. GOODRICH.

Potato growers in this locality are generally of the belief that barnyard manure will induce rot in potatoes, especially in a wet season; and when the vines begin to turn black from the effects of the blight, about the first of August as they did this year, a larger percentage of rotten potatoes will be found on fields where barnyard manure has been used than in adjoining fields, where fertilizers were used. My personal experience is that a complete fertilizer applied in the drill at the rate of 800 pounds per acre, will give a larger crop of potatoes, more free from scab, and less liable to rot, than a fair dressing of stable manure. The more stable manure is used for this crop the greater the chances for a crop of rotten potatoes.

Lackawanna County, Pa.

The Vineyard.

Notes from the Rural Grounds.

THE EATON GRAPE.

WHEN the R. N.-Y. from its own trials discovers that a novelty possesses marked merits, it can not rest until it has done all in its power to bring those merits to the notice of its readers. We have frequently alluded to the Eaton Grape. Our only specimen was received from the late John B. Moore of Concord, Mass., October 20, 1885. The vine has proven perfectly hardy, as vigorous as the Concord with larger leaves which are free from mildew, continuing healthy until destroyed by frost. This is its second year of fruiting and it must be considered that what is here said regarding the Eaton is merely the opinion formed from a comparatively brief trial. It has been a trying season for grapes in this locality. Rose-bugs existed in great numbers and so injured the blossoms that few bunches of any kind are perfect. The incessant rains have caused most varieties to rot and mildew that hitherto have yielded fair crops. There is not at this time a perfect bunch on our Concords. Delaware which usually thrives well here lost its leaves so early that not a bunch will ripen. The Eaton has ripened perfectly and its season seems to be a few days earlier than the Concord's. The berries hold well to the stems; they neither mildew nor crack more than the Concord though of the largest size—larger than shown at Fig. 240, which is a photographic illustration of an *average* bunch, grown, please bear in mind, during an unfavorable season. The writer has just picked a bunch that would weigh nearly twice as much.

The skin of the berry is just like that of Concord or Worden—neither firmer nor more tender. The pulp is less than that of Concord or Worden, and that is not so tough. The berry is for the most part juice—not of a high quality; not so sweet as that of Concord, but free, or nearly so, of the foxy flavor of that popular variety.

We would lay stress upon the following characteristics: Health and vigor of vine; size of berry; size of bunch. The berries cling firmly to their peduncles. The bunches and berries average larger than those of any hardy, healthy black grape ever grown here. It ripens *fully*, a few days (say three) before the Concord. Finally, we would commend a trial of this grape to all of our readers, since we have found by 15 years of experience that those grapes which thrive in this valley will thrive in almost any section of country where grapes are grown.

The history of the Eaton, in so far as it is known to the writer, is as follows: It was grown from Concord seed in the year 1869 by Calvin Eaton of Concord, N. H. It was purchased by John B. Moore & Son, of Concord, Mass., in 1882 and first offered to the public in 1885 or 1886. Bunches have been exhibited at the Massachusetts Horticultural Society and elsewhere weighing from 20 to 30 ounces.

The Eaton is a black grape, often measuring nearly an inch in diameter, with a dense blue bloom. The bloom is well shown in our illustration.

Pomological.

A NEW NECTARINE.

ON July 11, we received from J. L. Normand, of Hillside Nursery, Marksville, La., a seedling nectarine. It is said to be proof against injury by the curculio as it has been practically exempt for the last four years. It is said to be an excessively prolific variety and the fruit ripens all together and very evenly. The carrying qualities of this new seedling will be understood when it is said that the specimens were received at this office in perfect order. The quality is excellent. The illustrations (Fig. 242), with a cross-section at Fig. 243, shows the average size of the fruit entire and in half-section.

Everywhere.

A PLEASANT VOICE FROM CALIFORNIA.

SAN DIEGO, San Diego County.—I was just now looking over some relics of our old eastern home, when I came upon the familiar face of the RURAL NEW-YORKER. In a flash I was back again in the old times—so old—five years ago—10 years ago—when the RURAL used to come to us on the banks of Lake Erie; and the boys looked it over, and then went out on the lake for a sail. Now, all the boys, except one, have gone away beyond the lakes and oceans of this world. The links to the old times are very precious, and looking over the bright pages, they seemed to greet me with such whole-hearted remembrance and charming cordiality that I said: "I will venture to write to the RURAL again, as in the old times." So here, upon this western edge of our country, with the blue Pacific melting away into the southern sky, I will tell a little how every-day matters go with us pioneers on this Point, which has seemed so wondrously beautiful to me since I first stood on its hights and looked off.

Point Loma is about five miles long by two miles at the widest perhaps, lying north and south, with San Diego Bay on the east, and False Bay on the west. It is quite broken and precipitous in places, though the greater part consists of fine slopes and rolling land growing gradually narrower and higher, till it comes to a point 450 feet high at the southern extremity. Here stands the lighthouse, the property of Uncle Sam of course, and he also owns the Point for about two miles back, it having been donated to him by the city a long time ago. It is a rough piece of ground to be sure; but it is full of possibilities, and if I had as much money ahead as Uncle Sam has, I would make it "a thing of beauty," a pleasant place to look upon as well as to look off from. The view from this ridge of land is incomparable; everybody wants to visit the lighthouse, and the approaches to it should be better.

With a few exceptions, the whole Point is in a state of nature, or worse; for 40 or 50 years ago, everything that could be called a tree was cut off for wood by trading vessels, and now we have only a scrubby covering of bushes. The soil is good, very good; and everything grows well, if it can only be left alone; but the birds and rats and rabbits think it so good of us to raise new kinds of nice, tender things, and they take hold and eat, and we have to be forever on the alert, and have to console ourselves with the thought that the country is new, and that things will be better bye and bye. Sitting on our veranda, and looking off, it doesn't seem as though the country were new. Four hundred feet below we see the van of a great commerce,—ships and steamers gliding into the bay, and around to the city wharves five miles farther on; and the electric lights of San Diego give us moonlight every evening; but yet we are pioneers here all the same; and the country is new, and we have wild animals to fight, as they had in Western New York 60 or 70 years ago. Along this Point the wild-cat roams in all its native freedom and ferocity, and the coyote howls, not only at night, but at high noon when the clouds are lowering.

"Aren't you afraid of the wild-cats and coyotes?" asked the carpenter who had been camping over here, building our house.

"Oh, no," I said, bravely enough; and really I had not the least apprehension of trouble from that quarter; but the very first day that we had our hens here, a wild-cat jumped into the midst of them as they were eating near the door, and carried one off in triumph. I happened to be looking out of the window, and saw it, and making some kind of an exclamation, I rushed out, and my boy rushed after me. and followed the cat, but there was no fence around our place then, and the raider was soon lost in the bushes. It was too bad! We had just six nice hens, bought from somebody who had brought them all the way from Iowa, and we had refrained from eating them ourselves because we wanted the eggs, and those were the days of "the boom," when chickens were scarce, and we were going to raise more for ourselves; but now that cat had the hen for his supper, and the prospect was dark ahead. The gun was kept in readiness, but somehow the cats never appeared to the right person. Early one morning, as I opened the door, there stood two great wild-cats, in the drive-way a few rods off. I supposed they would run like a flash at sight of me, or slink away into the bushes, awed and abashed; but, instead of that, they just stood still in a complacent fawning attitude, like two strangers whose motives were likely to be misunderstood, and who were anxious to set themselves right. They twisted their heads around, and wagged their tails, as though they would like to come to a parley, and to establish some ground of mutual good fellowship; but I said: "S's' cat!" then threw a piece of board at them with my left hand, after which they reluctantly turned and went on down the road.

Then again, a little before dusk one night, as I went out to attend to my plants, there stood a great wild-cat. He had just come up the steep declivity leading down to the sea, and evidently wanted to make an explanation about something. He swung his long tail around for a flag of truce, and put on a most plausible expression of countenance, as much as to say: "We are old settlers around here—honorable gentlemen, who can always be depended upon. We would like to remove any unpleasant impression you may have received, and to be on calling terms with you, if you are to live among us. Those sneaking coyotes"—Here, I motioned him away, and threw a chip after him; when he went off on a leisurely, dignified trot, with an air all over him which said: "You are slighting one who would gladly benefit you." They have done us much mischief since, crowning all by eating up our cat and kitten; leaving us exposed to the ravages of the rats and mice. These last are fairly shut out of the house; but outside they cause the proprietor of the grounds many heart-sinkings. He is anxious to sit under the shadow of his own trees and vines, and to eat their fruit; but these rats are constantly gnawing off the choicest young trees and plants.

Oh! it is vain to seek for anything like Paradise in this world. Here, in this delightful climate—no burning heats, no biting cold, there are plenty of other things to distress and to make us look away with longing eyes to the world we have not seen.

P. V.

RURAL SPECIAL REPORTS.

Canada.

WHITBY, Ontario, September, 12.—The potato crop in this county is in good condition except where planted in low, rich land where considerable rot exists. The probable production will be about 70 per cent. of a full crop. The crop at Cape Breton is very much below the average, there not being nearly half a crop, and what there is, is rotting very badly. In New Brunswick and Prince Edward Island the crop is also short and much rot prevails.

J. K. G.

Illinois.

SHELBYVILLE, Shelby County, September 9.—The potato crop is better than an average, both late and early kinds. None are rotting as far as heard from in this section of the State. The Colorado Beetle made its appearance as soon as the plants were up, but the application of Paris-green once, and the continuous heavy rains throughout the growing season settled the pests. I have heard no complaints with regard to the Flea-beetle. I have dug my Rural No. 2 Potatoes, and got 18 fine, large tubers the product of the one small potato, which contained four eyes and was cut into four pieces, which were planted one eye in each hill, one foot apart after the RURAL trench system.

E. J. M.

Indiana.

PENDLETON, Madison County, September 10.—Stock of all kinds are in good condition. Horses, cattle, sheep, and hogs have been healthy and are generally fat. This may be accounted for by the abundant corn crop of last year, the mild winter, and the frequent rains of this season. Horses of common quality and size are low, heavy draft horses are worth from $100 to $150; stylish carriage horses bring about the same price. The prices of cattle are still away down. Local butchers pay two to 2½ cents per pound for choice young stock on the hoof. Heavy steers are worth three to 3½ cents. Fresh milch cows can be bought for $20 to $30 each; good sheep for three to 3½ cents, and hogs for four cents per pound live-weight. The weather is rather cool for corn, but favorable for seeding wheat. Our farmers prefer to drill their wheat in the first half of September.

S. W. H.

Iowa.

DES MOINES, Polk County, September 9.—Our great State fair is past—and it beat all previous records. The weather was fine and the people turned out well. The gate receipts were $10,000 or $12,000 more than last year. All the various departments were well represented. On Sunday Dr. Thomas, of Chicago, preached a very able sermon on the grounds, and on Wednesday Dr. Talmage, of Brooklyn, gave a very able lecture on Time. These divines and the great trotting colt Axtell were the leading attractions of our fair. Of course we had the usual number of side-shows, picked-pockets, gamblers and tricksters of all stripes on hand. Now that the fair is over, we need rain to revive our grass, furnish stock water and finish up our crops of late cabbage and turnips. We have had no frost yet; and our corn is past the danger line. We have a great abundance of watermelons, tomatoes and grapes. I see no reason to change my opinion, expressed in a former report, in regard to our potato crop. Our onion crop will be a short one as compared with that of last year.

F. S. W.

New York.

GENESEO, Livingston County, September 16.—The weather in the valley of the Genesee River has been remarkably fine during the past month. Corn, and even late planted beans are mostly beyond the danger point from frost and promise an average yield. The wheat crop is more than an average in yield and berry. Early potatoes are a failure from rot; late varieties on heavy soil, are affected in the same manner. Apples in part of the county are a failure; in other parts there will be from a-third to a-half a crop; winter varieties are falling prematurely. The hay crop is large, and so is the oat crop. Preparations have been made for putting in a large acreage of winter wheat and farmers are busy seeding. There is a lamentable neglect in the county among farmers in breeding standard, compact, fast-walking draft-horses, especially of the Percheron and Shire varieties. Among 40 varieties of peaches that suffered from a late freeze on my grounds, the following have borne heavily: Beatrice, Early Rivers, Morris White, Oldmixon Free, Mountain Rose, and Hill's Chili and several seedlings. Among 30 varieties of plums the following

have behaved best this season: Lombard, Orleans, Smith's, Victoria, Reine Claude de Bavay, Coe's Golden Drop, Prince Englebert. Grapes are, for the most part, a failure, except on very highly favored sites, and under the protection of trees. Late-blooming varieties escaped in part, where the earlier succumbed. Vines containing foreign blood have suffered from mildew more than in drier and warmer seasons.

R. T.

MELROSE, Rensselaer County, September 16.—Crops in this county have been better than for many years, with the exception of potatoes, which are not more than half of an average. They are bringing 50 cents per bushel. Hay brings 65 cents per 100 pounds; rye 50 cents per bushel, and oats about 35 cents per bushel. My Rural No. 2 Potato weighed two ounces, and four pieces were planted May 1st in as many hills in a trench, 15 inches apart in good garden soil. There was a great growth of vines, one stalk measuring two inches in circumference. There were no blossoms, nor were there signs of any. The tubers were dug August 25, and the result was 17 potatoes weighing 4½ pounds all of marketable size, the largest weighing 13 ounces; two others weighed 12 ounces apiece. They are very fine. All who see them call them beauties. A. H. S.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

ADULTERATION OF FOOD STUFFS.

Several Subscribers.—Are the ordinary stock foods—bran, meal, "feed," etc., etc.—as sold by millers or feed dealers adulterated to any extent? Are efforts being made at our experiment stations to detect such adulterations?

ANS.—These questions have been referred to the following directors of experiment stations:

FROM DR. PETER COLLIER.

Our attention has been called to the fact that wheat bran is often adulterated with less expensive food products, and one instance has come directly under our observation. In the early part of the present year a ton lot of wheat bran was ordered for station use, and on examination it was found to be one-third or more buckwheat bran. Ground oats sometimes have a portion of the meal removed and the feeding value of such oats is much lessened. There are tricks in most trades, but whether this is a common practice among millers and feed dealers or not, I do not know.

Geneva Experiment Station, N. Y.

FROM DR. H. P. ARMSBY.

I have made no special investigations as to the adulteration of cattle foods, but have seen no reason to suspect that, as ordinarily sold, they are adulterated to any material extent.

Pennsylvania Station.

FROM DR. E. H. JENKINS.

Our investigations have not shown any real adulteration of bran, meal, etc. We have sometimes found fragments of seeds in bran, resulting, probably, from the grinding of refuse wheat with the bran. Such adulteration can usually be detected by one who has some knowledge of the ap pearance of seeds.

Connecticut Station.

FROM PROF. W. W. COOK.

So far as we know from our examinations and analyses, no adulterated foods have been put on the market in this vicinity. I do not think we have analyzed any cattle food that did not run fully up to the average composition of its kind, and in nine-tenths of the cases they ran over.

Vermont Station.

FROM DR. G. H. COOK.

In regard to the adulteration of cattle food, the station laboratory has had more than 100 samples of the different kinds of cattle foods for sale in the several counties of the State. These have all been examined, and none has been found which appeared to have been adulterated for fraudulent purposes.

New Jersey Station.

FROM PROF. G. H. WHITCHER.

I do not think the grain we buy is in any way adulterated. Corn-meal of course is ground from Western corn in our local mills; bran comes up in its analyses to what would be expected from average analyses as published by Armsby, Jenkins, and others; middlings, cotton-seed and gluten meal are also usually all that we have reason to expect. Of course, we may occasionally get goods that are damp; but so far we are satisfied that no systematic adulteration is practiced. I know of no way of guarding against such adulteration except by having analyses made of samples of grain and feed and in such cases we cannot be sure of the materials used; we can only tell the amount of nutrients per 100 pounds, and by comparing this with a table of the average composition of similar grains and feed, a very good idea may be formed of the probable purity of the analyzed feed.

New Hampshire Experiment Station.

FROM DR. C. A. GOESSMAN.

The various articles of cattle feed—as brans, meal, oil-cakes (cotton and linseed), gluten meal, starch feed, dried brewers' grains, etc.—which have come under my notice here, I have found, on the whole, of a fair character. The examination of these and others of a similar individual character, by means of a careful chemical analysis and of a careful microscopical observation promises a fairly reliable basis for our conclusions regarding their genuine character, for it offers a desirable chance of comparing our results in both directions with those obtained in case of a sample of undisputed origin or source. The uncertainty of the correctness of our decisions increases more or less with the number of different materials used in the compounding of the particular cattle feed under consideration. It is for this reason that I have advised on various previous occasions to discourage the manufacture of compound feed-stuffs for the general market. The highest feeding effect of our home-raised fodder crops can only be secured by supplementing each with reference to its particular composition for the special object in view. The safest and most economical course to attain that end consists in selecting from among our commercial concentrated fodders articles of a well-known individual character one or more best adapted to answer our purpose. To make a judicious selection requires not only a fair knowledge of the chemical composition of the different fodder articles at our disposal, but also a fair information concerning the approximate rate of digestibility of the several essential food constituents contained in each of them. Most of our commercial concentrated individual feed-stuffs have been carefully studied in both directions, and reliable facts are in reach of every farmer. Nothing of that kind can be claimed in regard to the majority of compound feed-stuffs sold in our markets. The best interests of progressive agriculture require the adoption of an intelligent course of observation in stock feeding.

Massachusetts Station.

ELECTRICITY ON OUR STREET RAILROADS.

C. B. C., Plymouth County, Mass.—I send the R. N.-Y. this clipping from a local paper. Is there anything in this idea? To what extent is electricity taking the place of horses on street railways?

"President Whitney, of the West End Railroad of Boston, declares that before long he will have 4,000 horses for sale—stock no longer needed upon his street lines, being ousted by electricity as a motor. The public has heard a good deal, first and last, about the damage to horses caused by the introduction of electric railways; but it seems to me that this wholesale crowding out, so to speak, of horse flesh from the highways is more significant than all frightening or demoralizing that has taken place. Here, after all, is the real horse difficulty, as connected with the innovation of electric roads. Horse buyers and sellers, farriers and blacksmiths, veterinary surgeons, harness makers, hostlers and towboys, hay and grain dealers, and without doubt many other artificers and tradesmen, may have considerable to say under this view of the case, while the Anarchists and Socialistic brethren, not to mention the extreme "labor" elements, will see in it only a new cropping out of oppression, and denounce the whole thing as another substitution of mechanical for human employment to the detriment of the last named."

ANS.—The R. N.-Y. believes that the development of the different forms of electric motors will have a remarkable effect on American horse breeding. The single Boston company mentioned in this note owns 217 miles of track, and runs 1,584 cars, so that the estimate of 4,000 horses is not far wrong. These cars hereafter will all be run by electricity. The street-car horse is of small value for farming or general teaming. The reason of this is that he does not know how to "back." Few people have any idea of the importance of our street railways. In July 1880 there were in 26 cities alone, 189 street railways, using 18,645 cars and 80,154 horses and mules. These railroads carried 1,434,057,595 passengers during the year. These are the figures for the 26 cities in the United States which have over 100,000 inhabitants. The smaller cities and towns with their more simple systems of street railroads will add at least 20 per cent. to this total. Four years ago there were but 7½ miles of street railway on which electric motors were used. July first of this year there were 575 miles and to this may now be added the 217 miles of the West End Company. The fact is that the development of electricity as a motive power within the past two years, has been absolutely without a parallel in the history of the world. Electric cars pass the R. N.-Y. office every hour, running on the same tracks as cars drawn by horses. The cars move silently and steadily at a touch. They can be stopped almost instantly. It is only a question of time when 90 per cent. of the horses now used on street railways can be dispensed with. What is to follow? How many men are required to care for 100,000 mules and horses? How much grain and hay do they consume every year? Every year the street railways need 30,000 new horses. Cut off this demand and what difference will be made in the horse markets? These are questions that concern farmers. On the other hand, what compensating advantages will come with the substitution of electricity? The question is a great one—full of thoughtful suggestion. There is one thing that may be said about the street-car horse—he is generally a "misfit," a failure at the task he was specially bred for. He is too light for a dray or too slow for a sulky or too shabby for a carriage, and in the majority of cases his unfitness is due to a mistaken idea in breeding—the belief that a scrub can produce a first-rate animal. The destruction of the market for such animals may result in the abandonment of such breeding.

STRAWBERRY PLANTS.

J. B. H., Shoshone, Idaho.—Please give me instructions through your columns as to the culture of strawberries; which sets should be transplanted and how cared for in the winter season, etc.

ANS.—Strawberries will succeed on almost any fertile, well-drained land, excepting muck. The land should have been in hoed crops for at least one year previous, and should be free from weeds, and in good condition. The deeper it can be dug or plowed, the better. For garden culture, the rows should be about two feet apart; for field culture, about four. The plants should be set from one to two feet apart in the row depending upon the variety and the season of planting; the later the plants are set, the closer they should be. They may be set any time of the year when new plants can be obtained. Only young, vigorous plants should be set, preferably from a new bed which has not been exhausted by bearing fruit. The bed should be kept thoroughly clean, and when the ground becomes frozen, should be well covered with straw, coarse, strawy manure, or other mulch, which may be removed in the spring, or worked down around the plants. Plants set soon may be permitted to bear some fruit next year, but those set in spring should have the blossoms removed to secure best results in fruit.

STARCH FROM POTATOES.

T. W. P., Barron, Wis.—Will you or some of your New York correspondents kindly give me some information in regard to the manufacture of starch from potatoes? The price ordinarily paid for potatoes, cost of manufacture, price received for finished product, market for same, etc?

ANS.—Starch is made from potatoes in large quantities in Vermont, New Hampshire and Maine. The profits of the business depend upon the quality of the potatoes, which must be rich in starch. Tubers grown in a northern locality, and which cook dry and mealy, contain the largest amount of starch, and are the best for the purpose. The "price ordinarily paid" would probably be the ruling market price, but at 25 cents per bushel for potatoes, the business affords a fair profit at six cents per pound for the product. The price of starch varies so that no certain price can be given. A mill in Vermont which works up 1,000 bushels per week, cost $3,000. A large amount of water is required in the manufacture, and this also furnishes the cheapest power. Five to 10-horse power is required. Small potatoes can be utilized if they are ripe, although large ones are said to give starch of better quality.

ABOUT HOLLYHOCKS.

C. F. E., Easton, Md.—1. When is the proper time to divide hollyhocks? The plants are two years old and I wish to secure the same varieties next year. 2. Can the same hollyhock plants be made to bloom year after year by dividing the roots, or is there a serious loss of vigor after the second season?

ANS.—1. As soon as they are done blooming in summer, also when growth begins in early spring. 2. The propagation of hollyhocks by division is a clumsy and often unsatisfactory method. By far the healthiest stock is obtained from seed. In order to perpetuate precisely the same varieties they are increased from cuttings of the flower stalks in summer or from cuttings of starting clumps in early spring. To obtain the summer cuttings, take some of the smaller or lateral flower spikes when they are about half-grown, and cut them up into one-eye pieces about an inch long, cut off the leaf, shorten the leaf-stalk and insert the cuttings in small pots or boxes filled with sandy earth and keep close and shaded for a week or two till the eye starts to grow and roots push out, then treat as young plants. Spring cuttings or rather "slips" are started in much the same way.

GLUTEN MEAL.

G. C. C., Manville, R. I.—I inclose a sample of what is called "gluten meal"—selling price 12 cents per bushel. What is it? How and from what is it made, and what is its feeding value?

ANS.—"Gluten meal" is the refuse from the corn used in starch and glucose factories, and is a nutritious and healthful feeding substance. Only a portion of the starch is taken from the corn, the hull and germs being left with a part of the starch of the kernel. The hull contains all the fat of the grain, and the germ, or chit, contains most of the nitrogen. The Connecticut Experiment Station's analysis gives it a value of $1.17 per 100 pounds, considering the best corn to be worth $1.10, and wheat-bran $1.04; but it must not be fed to excess, and care should be taken to prevent it from souring. Some have considered it objectionable for feeding milch cows.

THE PEACH OR ELM-BARK BEETLE.

E. W. F., New Albany, Ind.—Inclosed find samples of insects that are working on some of our peach trees, in this section. They bore small holes in the trunk and limbs, and when numerous enough they kill the tree. One nurseryman's young stock has been attacked. What is the name of insect and how can we get rid of it?

ANS.—This is the Peach or Elm-bark Beetle—Phlœotribus liminaries, Harris. The pests bore into elm and peach trees, forming tunnels or burrows about the size of small knitting needles. The beetles come from these in August and September, and are dark brown in color, cylindrical and one-tenth of an inch long. They are rarely numerous enough to do harm. Washing the trees with soft soap in August would tend to drive them off.

THE PEAR-LEAF MINER.

T. B. S., Ohio.—Inclosed I send the leaves of a pear tree which have black specks upon them, and after a while the leaves fall off. Can anything be done to prevent this?

ANS.—The leaves sent are injured by a small insect which eats away the soft portion of the leaf, leaving the firm skin, or epidermis, as a tough, colorless layer. These insects are not considered a serious pest to the pear, and probably nothing need be done to destroy them. If, however, they are numerous it may be well to try some one of the several insecticides.

Miscellaneous.

J. L. H., Spring City, Tenn.—What early variety of potato would be likely to succeed in this latitude?

ANS.—We would ask our friend to examine the Potato Special of the R. N.-Y. which will be published before the new year.

T. H R., Perry, N. Y.—Please tell where in New York city a reliable commercial

bulletin is published and the subscription price for a bi-weekly.

ANS.—Commercial Enquirer, $2.00; Commercial News, $5.00; Commercial Gazette, $2.00; all weeklies. One of these should fill the bill.

S. A. L., Malcom, N. Y.—I inclose a spray from a vine, the seed of which came with the first or second of the RURAL'S seed distributions. It is nearly hardy, grows from 10 to 20 feet in a season, but, sometimes is killed back in the winter. Will you tell me what it is?

ANS.—The vine is Vitis heterophylla variegata. It is also called Ampelopsis by some botanists.

R. C. F., Sinclairsville, N. Y.—A neighbor of mine proposes to cut oats in the straw, with his corn in filling his silo; what will be the result? He proposes to save thrasher's and miller's bills?

ANS.—As we understand it, the oats are now ready to thrash. If this is so, we do not see what will be gained by putting them in the silo. They might be fed as they are, forked to stock like hay. Many farmers do this and save thrashing. Thus fed, if the straw is bright and well cured, the oats would make an excellent dry ration to go with the silage.

Discussion.

FEEDING HOTEL SWILL SLOPS.

H. A. W., JAMESTOWN, N. Y.—Several years ago a neighbor had 18 sows from which he intended to breed. They were White Suffolk and Chester-White grades. One seldom finds a finer, more symmetrical and thrifty herd, having been brought to five months old on sour milk, sweet apples and a clover-and-grass range. When cold weather set in, this farmer commenced feeding, in addition to milk and apples, meat scraps and swill obtained at a fat-rendering and swill-gathering plant. This many times emitted an odor so offensive that complaint was made that his swill cart was a nuisance, as it was driven along the road. These shoats continued to thrive and fatten on this feed during the cold winter weather. When the days began to grow warm in spring and the sows farrowed, the pigs invariably came weakly, and remained so until about a week or two old when they died off rapidly without any apparent disease, and soon the mothers sickened and died, until all but three of the entire herd—mothers and pigs—were dead. There was no perceptible disease marked by looseness of bowels or loss of appetite, etc., but in several cases the sows would sicken at the trough while eating and die inside of 24 hours. This same man had five shoats that he had fattened for the butchers on this kind of feed with the addition of a small quantity of ground oats, and after the death of his herd in this way became known, he could not sell them to any butcher; so he butchered them himself and sent the carcasses to New York where they were sold. Another neighbor living near this place had a herd of 42 as fine Byfields and Chester-Whites as a man could look upon. He kept two boys who gathered hotel and private swill slops every day. His hogs had a range of about four acres, and appeared to do well for about three months, after which, as soon as hot weather set in, they began to sicken and die. He lost 16 of his best when I saw them, and bought two four-months-old shoats (sows) for breeding. I advised cooking the food and feeding plenty of sulphur and salt. The death rate decreased from that time until the trouble was completely arrested after he had lost 20 of his best and heaviest hogs. He had also a large flock of fowls—ducks and turkeys—which were fed upon this swill with a mixture of a few screenings. These had, at first, looseness of the bowels; their wings drooped and after a day or two they died, being often found under the roost dead, having died during the night. One thing was remarkable—he told me that from the eggs set for hatching not one healthy chick or duck was ever raised after the hens and ducks began to feed upon this refuse. When he commenced cooking this food, he was aware of a change in the condition of his hogs and fowls. There are two men who gather swill in our town, and they never use it until it has been thoroughly cooked and never see any bad results when it is thus fed. It's a fact beyond contradiction that the more wholesome the food, the less disease can be carried with it, and the better will be the result and the more wholesome the meat for food. The hog, although a hog, is decidedly particular in regard to cleanliness as to food and keep. He wallows in the mud to protect himself from flies and vermin; but naturally he is adverse to filth and revels in wholesome food and cleanly quarters as well as in a change of diet.

PASTURING MEADOWS.

F. E. E., GENEVA, N. Y.—During a recent short trip in Canada the practice of pasturing fields, and especially the wheat fields newly seeded to clover, was very noticeable. Here were herds of cattle, sheep and swine, turned into the fields apparently as soon as well cleared of grain. In some cases the new growth was short and apparently grazed off perilously near the roots. The exceptions to this practice along the railroads on which I traveled were comparatively rare. The practice was particularly noticeable to a resident of New York where so much has been said in the agricultural press against it. After noting the custom, the discussion in the last RURAL on this subject becomes more interesting if possible. It is probable that for any particular reason, the best method of practice has been put into use by the solid common sense of the community, and that while our Canadian neighbors may have found this plan profitable, it may be the least desirable way to treat a freshly-seeded field in some portions of New York, as well stated in several papers in the RURAL'S discussion. The condition of the fields and the amount of herbage, as well as the length of time they are pastured, the moisture of the soil, etc., are the most important factors in the case. The good judgment of the farmer, reinforced by his knowledge of the best treatment of his fields, should determine when the conditions are likely to make it profitable for him to pasture his meadows or newly-seeded ground. Nearly two years ago at a farmers' institute, in Ithaca, after a full and free discussion, the sense of the institute was taken by votes, with a special reference to pasturing off by sheep. It was agreed by a large majority that where the pasturing is not too close, if the sheep or other animals are removed early enough to let a late growth start up for winter protection, no harm would result from the pasturing. This Canadian practice is likewise the practice of very many of our own best farmers, as recent issues of leading agricultural papers abundantly prove. That the interdependence of vital conditions and the practitioner's knowledge and judgment sometimes gets out of balance, and harm is done cannot be doubted. The numerous reported instances of injury of this kind, appear to me to have been responsible for the outcry against the practice. There are fields in New York which have been mown and on which the aftermath has been grazed off for more than a score of years in succession, which are (or were two years ago—the writer has no word from them since) yielding good crops of hay annually. Good judgment is used in feeding off the aftermath and occasionally each field gets a top-dressing of good manure. These notes are hardly needed in the RURAL'S symposium, to show that grazing the aftermath from our fields need not necessarily be a cause of decay or an indication of future short crops.

THE BORDEAUX MIXTURE AGAIN.

L. E. A., SMYRNA, DEL.—I have been experimenting with the Bordeaux Mixture on my grapes this season to prevent the rot. I made five applications—on May 21, June 3, June 24, July 3 and July 15. This has been a very wet season and I had to make the applications between showers. Sometimes rain fell before I could finish spraying. From what I have noticed this season, all applications ought to be made as near the first and middle of the month as possible. We had two periods of rot; the first was about June 3, the second July 10. The mixture should be put on in large quantities. The fruit and foliage should be covered after the grapes commence to rot. I have 1,400 vines and in the five applications I used 260 pounds of sulphate of copper. The formula was six pounds of sulphate and six pounds of lime to 22 gallons of water. A row of six Moore's Early vines not sprayed bore 2.7 pounds of fruit. The rows on either side of this unsprayed row bore, respectively, 96 pounds and 112 pounds of grapes and the fruit was poor on the row not sprayed. One-half of a row of Agawams was sprayed, the other half was not: the foliage on the half that was sprayed is as green as can be; that on the half not sprayed, is off, (September 6) and has been for two weeks. The fruit on the unsprayed half will not be ripe for some time; the fruit on the half that was sprayed was shipped August 31. To remove the mixture from the fruit after the latter is ripe, take one quart of vinegar to five gallons of water; let the fruit remain in this mixture about three minutes; take it out and rinse it in clear water. Then spread it in the sun to dry. Last year I did not use the Bordeaux Mixture and I shipped 240 pounds of grapes; this season I had 3,100 pounds. I do not consider mine a fair test, as the season has been so wet. In washing the fruit, I had a light iron frame made about the size of a cheese box; I covered it with fine wire netting and washed half a bushel of grapes at a time. I also sprayed my pear trees to kill the slug. The formula was: half a pound of white hellebore to 40 gallons of water. It was quite effective. I also used the same with good success on gooseberries to kill the worms.

WHAT IS THE INFLUENCE OF MUCH BARNYARD MANURE UPON POTATOES?

BYRON D. HALSTED, RUTGERS COLLEGE.—At the recent meeting of the Middlesex County (N. J.) Agricultural Board there was a good deal said upon the subject of the conditions favorable or otherwise to the potato rot—a trouble that has seriously injured the potato crop in the county, and therefore shortened the income of many farmers who rely upon this crop as their principal source of revenue. In the discussion the prevailing opinion seemed to be that a large amount of barnyard manure added to the soil just before planting was conducive to the rot. It is easy to see that this might be the case. The rot is due to the growth of a minute fungus that sends its small threads through the substances of the potato plant. It is a form of vegetation belonging to the same group as the mushroom, toadstool, puff-ball, etc., only very much smaller. However, the portion of the mushroom that is below ground consists of fine filaments, and in this it is not so very unlike the potato rot. It is well known that the conditions enjoyed by the mushroom are an abundance of decaying horse manure kept from becoming too wet by being mixed with sand or earth. While it is true that the potato rot plant does not feed upon the organic matter in the soil in the manner observed by the mushroom, it is easy to see that the conditions of heat and porosity of the soil, etc., may be such as to favor the inoculation of the tubers and the development of the fungus when it is once within the potato. It seems to me that now while we are in the midst of the harvest of the crop at the close of a season where rot has been prevalent, it would be well to have a short report from a large number of potato growers upon the soil conditions favoring the rot, with especial reference to the influence of manure upon the disease. It may be, from the fact that the potato tuber is subject to scab, wire-worms, etc., that it, above all other crops, is best adapted to a diet of commercial fertilizer. What is the experience of the potato growers among the RURAL readers during the present wet season?

LEAF-BLIGHT AND CRACKING OF THE PEAR.

E. A. S., WASHINGTON, D. C.—In addition to what is stated in Prof. Halsted's interesting article in a late RURAL, I would like to say that experiments made by special agents of the Department of Agriculture during the present season have fully established that this disease may be prevented even more readily than the black rot of the grape. A circular has recently been issued by Mr. B. T. Galloway, Chief of the Section of Vegetable Pathology, giving a full account of some experiments carried on under his direction at the nursery of Franklin Davis & Co., between Baltimore and this city:—50,000 young trees were treated with the Bordeaux Mixture, the first spraying being made June 5, this being followed by four others at intervals of 10 days. The labor was done by one man and the cost of the chemicals used was about two cents per tree. The results were that while large trees which were untreated lost nearly all their leaves from the disease, the seedlings, which are even more subject to it than full-grown trees, were in excellent condition at last report—August 11th. The results of the experiment are confirmed by another made by Col. Pearson at Vineland, N. J. Two 10-year-old Clairgeau trees, which had been attacked by the leaf-blight year after year, were sprayed six times during the season with the Bordeaux Mixture, and a third standing near the others was left unsprayed. On August 22nd, the two treated trees were in full foliage, while the untreated one had lost nearly every leaf, a photograph taken at that time showing scarcely more than a dozen. Prof. Halsted's encouraging words have thus been more than realized, and pear-growers may confidently expect to conquer this very troublesome and hitherto dangerous enemy.

THE MONTANA BOOM!

CHAS. A. GREEN, ROCHESTER, N. Y.—On my recent return from the Pacific coast, via the Northern Pacific Railroad, I passed entirely across Montana. To me, accustomed to the luxurious and leafy East, Montana looked like one vast desert. I considered it the least promising of all the States and Territories, yet I saw nothing except the land and towns along the railroad.

I noticed one large and one small grave near a forsaken home. A man, wife and child located bravely in this desolate spot, with hopes of prosperity. The wife, removed from friends and neighbors, schools and churches, became homesick and weary of life and died. The child soon followed her, and the father, heartbroken departed, no one knows whither.

How often this story is repeated throughout the great West. People who go there to settle know nothing of the country. They are not able to go and see it before moving. They stake all on the venture, taking a leap into the dark. I have known Eastern women so homesick in their new homes in the West, they would weep for hours daily until their grief preyed upon their health, and they became invalids. Many a man has been compelled to return East on account of his wife, who could not live there. It was simply die or get home, and they went home if they had money enough to get there, which is often lacking. If men desire to go West let them go before they get married.

[Let us hear from others who from actual experience can speak of Montana—others, besides the syndicate of editors of farm papers who have land for sale and are selling it through their columns both editorial and advertising. Let us hear from men who will tell us the truth. Eds. R. N.-Y.]

ROT IN POTATO "SEED."

D. C. L., CRANBURY, N. J.—We are told on page 612 of the RURAL, that the scientists believe that the spores or germs of the potato rot remain in the tubers for a considerable time. On Monday last I attended a meeting of the County Board of Agriculture at New Brunswick. We were addressed by Prof. Austin, of the New Jersey Experiment Station, on this very subject. He coincides with what was said in the RURAL. Now, it may be desirable to look up localities where rot has not appeared, in order to secure seed from such places for next year. Two years since I had eight acres planted to potatoes. About one acre of the eight, owing to excessive rains, rotted. The trouble was confined to the flats from which the water could not pass off in time. The potatoes rotted entirely on all such places; while on rising ground there was no rot whatever. I planted the potatoes from the latter the following year and had no rot, although I have lost 700 or 800 bushels by rot this year. The trouble is again confined to the lower parts of the field, as before, and there is very little, if any, rot on the higher parts. I expect to plant some of this year's seed next year, and I shall expect as favorable results as I obtained from the seed secured from the drier regions of that year's products, unless the conditions—as they have been this year—are favorable to rot from excess of moisture and high humidity. I would like to hear from others on this subject.

IN FAVOR OF CREAMERS.

C. H. E., AVOCA, N. Y.—Allow me to offer a few suggestions to W. E. R., Dover, N. H. A few years since a creamery was started here on the cream-gathering plan, and after making several tests with a view of selling cream, I gained some information that rather surprised me. I mixed the milk from all of the cows together, and took 100 pounds and set it in shallow pans—the old way—and let it sour before skimming, and 100 pounds were put in creamery cans which had tubes in the middle for the water to pass through, and they were set in water kept not above 50 degrees. The milk in the creamery gave the most cream, and one-fifth more butter than the other. My experiments proved to me that, as many have claimed of late, "cream is not cream;" for whereas most of the patrons claimed they could not make any more butter than the gauges called for, yet mine always overran from three to four pounds on 10 gauges of cream. I am now using the Channel cans and set them in a tank of water with ice, and make my own butter, as I could not afford to sell the cream by the gauge. After the milk has been set 12 hours, and a scum has formed, no more cream will rise if it is left ever so long, and there is much less work in taking care of milk in a creamery than in pans, and the cream is never over-ripe.

'WHENCE COMES THE COLOR OF BUTTER?"

O. K. L., INDIANOLA, ILL.—"Whence comes the color of butter?"—page 558 of the RURAL. Fowls fed on white corn will produce an egg with a pale-yellow yelk; if fed on yellow corn the yelks of their eggs, when boiled, have a deep orange tint. Again, I've taken fish from the head of the lake where the bottom is sandy, and such fish are of a light shade, while fish of the same species taken from the foot of the lake, where the bottom is of black mud, are very dark-colored. Some contend that the stomachs of animals are "perfect strainers," and that all coloring and foul matters pass off in the voidings, and that the flesh or milk. ètc., are pure. Not so. Chicken meat, beef, and milk taste of garlic; milk of ragweed, etc., when the animals which produce them have fed on these substances Some hog raisers feed refuse from starch factories, stinking ground corn, and bacon from hogs fed on such stuff will, when cooked, drive a black dog from home. If stench from feed is transmitted to milk and meat, why should not coloring material? I believe that milk and butter from cows drinking stagnant water are not healthful.

CAUSTICALLY IN FAVOR OF BUTTER COLORS.

F. H., CRANFORD, N. J.—W. P. W. on page 561, of the RURAL is evidently trying to make a point against butter color, but only succeeds in displaying his own ignorance. He says there is no demand anywhere for annatto-colored butter and cheese, and that the demand is wholly confined to the producers and sellers. Did any one ever hear of the demand for an article originating with the producer? According to all laws of trade, the demand must come from the consumers. The demand is for yellow butter; very few consumers will purchase any other; the dealer will not purchase what he cannot sell; the producer will produce what he can sell to the best advantage; he cannot sell white butter to advantage, hence he colors it. Farther than this, if he depend on the cow to color it, she will not do it uniformly with the varying feed of different seasons, and fancy butter must be of uniform color. Who is deceived? No one, and any one writing such bosh as does W. P. W. proclaims himself either a crank or an ignoramus.

ALLITERATIVE ARTICLE BORN OF BRAINS.

P. B. C., CATONSVILLE, MD.—Cows cost considerable but declare dividends; if they eat enormously and are fed faithfully they will give great gains. Handle heavy horses and invest intelligently. Juvenile jumpings and kickings kill with kindness. Land likes much manure, needs nitrogen and ofttimes oxygen. Pigs pay profitably; but, quite queerly, "runts" ruin results, but read the RURAL and success is sure; for tried truths are told usefully and understandingly, and various vagaries which want wisdom are explained excellently, yet it has yet to reach its zenith.

AN ADVERTISEMENT CORRECTED.

T. B. TERRY, HUDSON, O.—That is too bad for Hoover & Prout that you should say in their advertisement that "I dug 100 bushels last week." It was 1,000 bushels, and we had only been feeling of the job at odd spells. When we got warmed up to business, my son and I and three pickers dug and put in the barn 400 bushels in one day. The next day my son was gone to school, but we got in 350 bushels, thanks to machinery, clean culture, our potato boxes, system, etc., etc.,

W. O. F., GREENSBURG, INDIANA.—In a late RURAL we are told: "There have been 50 failures of wool dealers in the last six months. * * * The great depression in the wool business is uniformly attributed to the present high tariff on the raw staple and a combined effort is to be made, at the next session of Congress, for a great reduction, or the entire abolition of the import duties on wool. The National Association of Wool Manufacturers has called an extraordinary meeting of that body at Boston on September 17, for the purpose of taking vigorous action in the matter. Isn't it time for the wool-growers of the country also to take prompt and vigorous measures to counteract a growing agitation which seriously threatens their interests?"

There are 65,000,000 people in this country and some 43,000,000 sheep. Probably 100,000, all told, men, women and children are benefited by a tariff on wool; the other 64,900,000 would be benefited by the entire abolition of the duties on both the raw material and manufactured product. From this view of the matter is it not high time that the people generally—the farmers especially—should take vigorous action to have these duties repealed so as to give us free clothes and free wool?

R. N.-Y. At the usual basis of five to a family, 100,000 men, women and children would represent 20,000 families, or farms. The census of 1880 shows that sheep were kept, in that year, in 2,460 counties in this country. If there were only 20,000 farms on which sheep were kept the average was not five to a county—a manifestly absurd statement, when we realize that there were in 1880 4,008,907 farms in this country.

H. G. L., CHARLTON, MASS.—As my eye catches the comment upon the Kieffer Pear on page 589, I am almost fierce with rage. Such attempts as have been made to push the little, insignificant, hide-bound thing to the front tend greatly to chagrin dupes. Yes, the tree grows well enough, but such fruit is not worthy of decent comparison with good sorts.

E. B. T., AMENIA, N. Y.—I use milk freely in mixing feed for chicks and value it highly. I *never* give it as drink, as I beleive more than a little of it to be injuriou

What Others Say.

ECONOMY IN THE PURCHASE AND USE OF FERTILIZERS.

To the consumers of commercial fertilizers Prof. George H. Cook tells us, in a late bulletin, a knowledge of the sources of supply, the cost and chemical composition of unmixed fertilizing materials is important from two standpoints: 1. Economy in buying. 2. Rational use.

ECONOMY IN BUYING: Statistics secured by the New Jersey Station, and published in the annual report for 1888, showed that the average composition of mixed or complete fertilizers analyzed during that year was 2.77 per cent. nitrogen; 8.09 per cent. available phosphoric acid; 2.82 per cent. insoluble phosphoric acid, and 4.29 per cent. potash, and that the average selling price was $34.83 per ton; in other words, the nitrogen cost on an average 21 cents per pound; available phosphoric acid 10.2 cents, insoluble phosphoric acid 3.8 cents, and potash 5.4 cents. The same amount and kind of plant-food could have been bought that year at the factory, unmixed, and for cash, at an average price of $27.42 per ton. *The average charge for mixing, freighting and selling was therefore $7.41 per ton.* In Bulletin 98 of the Connecticut Experiment Station, containing the analysis and valuation of 11 samples of home-mixed fertilizers, it is shown "that at the *regular cash ton prices of the trade*, and including freight charges and cost of mixing, the average cost of home-mixed fertilizers was, *at the highest estimate*, $35.79, and the average valuation $38.83 per ton; that in no case was the valuation less than the cost of chemicals mixed; and further, that from such raw materials as are in their markets, without the aid of milling machinery, mixtures can be and *are* annually made on the farm, which are uniform in quality, fine and dry, and equal in all respects to the best ready-made fertilizers." This work of the Connecticut Station not only confirms the New Jersey Station's results as to the saving effected by buying unmixed materials, but also shows that the raw materials can be secured of such good mechanical condition as to render it entirely within the power of the farmer, with ordinary appliances, to make an excellent fertilizer.

RATIONAL USE.—While it is a fact that nitrogen, phosphoric acid and potash are in most cases the only chemical constituents necessary to add to any soil to prevent ultimate exhaustion by continual cropping, the knowledge of that fact becomes profitable largely in proportion as it is modified by the individual farmer so as to conform to his soil and his crops.

It happens too frequently that the increase in crop from the use of complete manures is produced by one or two only of the elements present. When, as is often the case, nitrogen is either inactive or produces an abnormal effect from the presence of insufficient quantities of phosphoric acid and potash, and immediate returns are unsatisfactory, future gains are also problematic, since nitrogen in readily available forms is easily movable in the soil, and eventually lost. Phosphoric acid and potash, on the other hand, if inactive for immediate crops, are retained in the soil, and serve for future crops.

~tatistics in regard to the composition and cost of complete manures in 1888 showed that the average cost of the nitrogen contained in them was just one-third of their total cost. In the use of fertilizing materials, and especially of this most expensive element, *nitrogen*, great care should be exercised; and the use of unmixed materials, for studying the various soils and crops, is particularly advised.

PROF. RILEY'S WORK IN THE PARIS EXPOSITION.—The London (England) Post speaking of our department in the Paris Exposition says that in the section of applied entomology, as might have been expected, since it is Professor Riley's specialty, the exhibit as a whole far excels anything else of the kind in the exhibition. There is a large and varied display of appliances for bee culture, and for the preparation and marketing of honey. In no other country of the world are so many persons engaged in honey producing, and nowhere else is so much honey produced at so low a cost. The many forms of hives, of honey extractors, foundation comb presses, and other contrivances for facilitating the management of bees and the marketing of their products, all show that our American cousins are foremost in the application of inventive genius to this branch of rural industry. No less than 18 different patented forms of bee-hives are shown, besides a comprehensive series of different honeys in the comb and in various sealed packages. One large case is devoted to these honeys, those from Lime Blossom, White Clover, Sage and Mangrove being particularly noticeable for their excellent quality. Wax extractors, bee smokers, various forms of honey confectionery, and even honey wine and honey vinegar are all to be seen here. It is estimated that in the United States there is a total of 3,000,000 colonies of bees, annually yielding 120,000,000 pounds of honey. The value of this annual product, at an average price of 15 cents per pound, would be £3,600,000 sterling. The estimated annual product ranges from £3,000,000 to £4,000,000 in value, and the annual production of wax is calculated to be worth £200,000.

WORTH NOTING.

LIVINGSTON'S GOLDEN QUEEN is the best yellow tomato as yet tried at the Rural Grounds. The tomatoes are large, generally smooth, firm and of mild quality. They ripen thoroughly and evenly in midseason. The vines are abundantly prolific.

HORSFORD'S PRELUDE is in all ways, except one, a valuable variety. The one objection is its size. The tomatoes ripen with the earliest. They are free from rot, round, bright-red in color and bear abundantly during the entire season. Those who value a very early tomato should try the Prelude.

THE IGNOTUM is about all that has been claimed for it—very large and firm. It is medium to ripen and bears a great quantity. It should be grown for two or three seasons longer from careful selections ere it be put on the market.....

SECRETARY E. WILLIAMS, of Montclair, N. J., has for years made a study of pears. In a late number of Garden and Forest he presents his views respecting a number of the later pears which, as the season of transplanting draws near, may serve to guide our readers. Belle Lucrative, he says, is a pear of medium size and excellent quality when well-grown. It is an abundant bearer, and, if allowed to do so, will overbear, to the detriment of the fruit, both in size and quality. The skin of the fruit is an unattractive green, and for this reason, among better looking pears, it is apt to be passed without notice; but its buttery, juicy flesh amply compensates for any lack of good looks. Golden Beurré is of medium size, and in appearance directly opposite of the preceding, while approaching it in quality. This immediately follows the Bartlett. ....

LOUISE BONNE has of late years developed the fault of shedding its leaves so early that the fruit is never fully grown.....

MR. WILLIAMS speaks of the Buffum as a pear of medium size, fair quality and one of the most healthy, vigorous growers in the whole list, and an abundant bearer every other year. Sometimes the fruit is rather under-sized from over-bearing, a tendency in all pears, and some years, too, it is less juicy than in others. It is then excellent for cooking. With approaching ripeness it assumes a yellow and handsome appearance..

BOSC is a long, slender-necked russet pear, of the highest excellence, sweet and rich. The tree is a poor, open grower while young, and the fruit is borne singly or in pairs generally, and very evenly distributed. It is most satisfactory when top-grafted. This was Mr. Downing's favorite pear, and his judgment on this point seems eminently sound.....

SHELDON, a round, russet pear of medium to large size, flesh granular, melting, sweet, juicy and aromatic, is a fruit of the highest excellence. The tree is a lusty grower and generally productive. It should be in the smallest collection.....

URBANISTE is another large pear, in quality equal to any named; skin, smooth, greenish-yellow; flesh, melting, buttery, rich and juicy. The tree is a fair grower, but is not popular among dealers and planters because, like the Tyson and some others, it is tardy in coming into fruit. The old adage about planting pears for one's heirs, is not regarded with favor by tree-planters now-a-days; they are in a hurry, and would like the trees to commence bearing at once. When one has old trees of undesirable kinds, a new head of Urbaniste could be grafted on and this excellent variety would soon come into fruit.....

WINTER NELIS is a small russet pear of excellent quality when well grown, but the tree generally loses its foliage early before the pears mature, and, therefore, they seldom reach perfection. The tree is a slow, slender grower, and should be top-grafted on some more vigorous kind.....

DANA'S HOVEY is among winter pears what the Seckel is among autumn varieties. The tree is a good, healthy grower, and produces fruit about the size of the Seckel, but better and more highly flavored. If it were only a little larger!.....

LAWRENCE is an American pear of great excellence. The tree is of moderate growth, very healthy and productive; the fruit of medium size, smooth, yellow at maturity when grown on young trees, but on old trees it is very apt to become cloudy or rusty. The skin is thick, flesh fine-grained, buttery, sweet and juicy, and it will keep till Christmas with ordinary care.

THE R. N.-Y. if it were again planting a pear orchard would select the following for home use in preference to any others of their season: Buffum, Sheldon, Anjou, Seckel and Dana's Hovey .....

MR. WILLIAMS regards the Kieffer as a valuable substitute for the quince, and, as it will produce fruit far more abundantly and cheaply, it is well worth planting for its excellence in taste and appearance when preserved .....

A. W. CHEEVER, of the New England Farmer, recalls several young men of his acquaintance who put their first money into horse flesh and pleasure carriages, but he does not recall any who have made a marked success in life who began in that way. The young man who makes himself indispensable to his employer doesn't have much time for riding over the country outside of service hours. The young man who complains that his work is monotonous or confining during the entire years of service is not the one to find himself in specially easy circumstances later in life.....

THE GREEN MOUNTAIN is probably the earliest hardy white grape of excellent quality known to-day.....

PROF. BUDD, of Ames, Iowa, speaks of a Russian Almond that is as hardy as an ironclad apple.....

DR. NILES and Dr. Bolton of the South Carolina Experiment Station have been investigating hog cholera without throwing any new light upon the subject. They remark that as in typhoid fever, and other diseases in man, all that should be attempted is to assist the natural forces of the animal in overcoming the disease. Any drug administered for any other purpose than this can do no good, and may do harm. The administration of all sorts of drugs recommended is enough of itself to kill the animal in many cases, and the practice cannot be too severely condemned. Some cases where the animal is particularly vigorous, or where the disease is of a mild type, recover of themselves, and it is probable that remedies which have gained popularity have done so by having been tried upon such cases, where the recovery would take place without any treatment. There are so few cases of recovery in some outbreaks, and the difficulties of treatment are so great that it is not advisable to try any remedies at all....

PROF. E. M. SHELTON says, in a late bulletin, that salt does not enter into the composition of plants as a necessary element: that is, plants may be grown and brought to perfection in soil which contains none or only a very small proportion of this mineral. If salt then is beneficial to a crop, it must be due to the fact that it acts upon the necessary elements of plant-growth by

which these are made more available to the plants. Some 10 years ago the R. N.-Y. experimented with different quantities of salt on wheat. In no case did it increase the yield. This, however, was within two miles of the ocean.....

HENRY STEWART reminds readers of the N. Y. Times that a mistake is often made in the use of hot water in cleaning dairy utensils. Hot water makes milk curd insoluble and hard and tough, so that when utensils are scalded before they are thoroughly cleaned from the remains of sour milk, the curd is solidified in the pores of the wood and becomes a permanent agent of mischief. Any alkali dissolves curd of milk, and after first well rinsing the utensils, and especially the churn, with cold water, a solution of common soda or saleratus (carbonate of potash) may be very usefully employed to complete the removal of all traces of the sour milk. Then another rinsing with cold water, followed by a scalding with boiling water and a finishing dashing of cold water, always pure, will complete the work. The washed utensils should then be placed under an open shed in the free air or in a clean, airy, dry dairy for use again.....

IN the American exhibit at the World's Exposition in Paris, is oil made from the germ of corn. Florida has a "strong alcoholic cordial made from oranges." There are 400 specimens of grass prepared by Mr. Vasey the United States Botanist.....

EARLY RED CLAWSON is advertised as the earliest variety of wheat in circulation...

JONES'S WINTER FIFE is advertised as being for the winter-wheat sections what Spring Fife is to the Northwest.....

GOLDEN CROSS is highly prized where it has been tried in Central New York.....

NOW FOR hardy bulbs. Prices are lower than ever before, and a bed of hyacinths and tulips, so refreshing and beautiful in early spring, may be secured at a small cost.....

THE AMERICAN FARMER advises its readers to raise everything they can to supply their table and family wants. When a farmer has to buy an article which he can produce on his farm, you can just put it down that that man has "missed his calling." With but few exceptions farmers can make themselves independent of "corners" on articles of food, and it should be the aim of every farmer to make his business self-sustaining to the best of his ability.....

PROF. A. J. COOK gives an experience, in Gleanings in Bee-culture, showing the carelessness with which many statistics are gathered. A report from the Department of Agriculture stated that the chinch bug had done serious damage in five counties in Michigan. Prof. Cook did not believe this was true, as in all his collecting he had never taken a chinch bug in the State. So he wrote to the Department and learned the names of the reporters, and immediately addressed a letter to each one as follows: "Do you know the chinch bug? Do you personally know that it has ever worked in your county? Why did you report ravages from this insect in your county to the Department of Agriculture?" Answers were received from three persons only. They reported that they did not know the insect, that they had no personal knowledge on the subject, and did not know that they had so reported. What are statistics worth if we are to have such reports?.....

BURYING GRAPE VINES IN WISCONSIN.—Bulletin No. 17 of the Wisconsin Station, issued in 1888, contained an excellent article on Wisconsin grape growing by Prof. W. A. Henry. After giving some strong arguments in favor of growing grapes in Wisconsin, Prof. Henry proceeds to give a list of the most suitable varieties, the portions of the State where the industry is most promising, and hints concerning the cultivation and care of the vines. The pictures given in this bulletin were of unusually good quality. The R. N.-Y. copies the one that is most timely at this season. It is engraved from a photograph taken in the vineyard of the Wisconsin Station, and shows just how the workmen proceed to prepare the vines for winter. This is what Prof. Henry has to say about it:

"BURYING THE VINES.—Here is another point greatly misunderstood by many. Our people have mostly immigrated from a milder climate than this and are not accustomed to burying plants to protect them from the rigors of winter. As well let cattle go unhoused in winter as grape vines unburied. Both may possibly survive, but at entirely too great a cost. Nor is the labor of properly protecting them great as will be shown further on. In order to make this matter plain, we present an illustration of a scene in our vineyard this fall when we were closing up the vineyard work See Figure 244. A trimmed vine temporarily tied to a post is shown on the left. Another trimmed vine is bent over, a man standing with his foot upon the top while an assistant throws a few spadefuls of earth upon it. The foot is then removed and both men continue the covering until the vine is buried just out of sight. The object of covering is not to keep the vine from frost, but rather to keep it frozen all winter. It is the alternate freezing and thawing, not steady cold that injures the vine. Bear this in mind and do not cover deep.

UNCOVERING THE VINES.—Before the buds start, but as late as possible, uncover the vines by gently lifting them out of the earth that encases them with a four-tined fork. The work is rapidly performed. It required a total of 15 hours' work for burying something like 168 vines, while only six hours were required for uncovering. The earth heaped up in covering the vines is leveled again with the first cultivation."

BURYING GRAPE VINES IN WISCONSIN. FIG. 244.

WORD FOR WORD.

—THE CENTURY MAGAZINE: "The wages of righteousness are earned by the job, not by the day."

"You may pull the ox out of the mire on the Sabbath day, but don't push him into the mire for the purpose of pulling him out."

"Blue blood should assert itself without the help of a placard."

"Life is a half-way house, and each guest should take contentedly the room to which he is assigned."

"The back-log without the small sticks will never heat the room."

——BREEDER'S GAZETTE: "No; the demand for Dr. Brown-Sequard's alleged "elixir of life" is not likely to affect the market for lusty buck lambs to an extent justifying sheep-owners in making any very extended preparations for furnishing on a grand scale the raw material for rejuvenating the lame, the halt, and the blind."

"BEYOND any question the hogs inoculated by Dr. Billings were cholera-proof."

——LIFE: "A cut-and-dried affair—A load of hay."

——ORCHARD AND GARDEN: "Pres. Lyon in the RURAL NEW-YORKER, pronounces the Erie and Lawton Blackberries *not* alike. The Editor of the R. N.-Y., considers the Erie a hardier variety. We have grown these varieties for some time and noted them carefully. While there is a similarity in habit of growth and also in fruit, a careful comparison will show them to be distinct. In season of ripening the Erie is much earlier than the Lawton, the canes are more vigorous in growth and very much hardier."

——ELI MINCH: "J. H. Hale of South Glastonbury, Conn., is reported in the RURAL NEW-YORKER to have the promise of a large peach crop which he claims to be the result of the use of 400 pounds annually of muriate of potash and a liberal use of bone dust. We find the same results in our case. We prefer kainit and bone, as the kainit contains so much salt which for the peach is a good restorative of unhealthy trees. This fact is emphasized in a marked manner by the unusual health and vigor of all peach trees that grow near the edge of salt marshes. Those nearest to the marshes are always the most vigorous."

——WEEKLY PRESS: "When a milk producer has been requested a few times by his dealer in the city to take some of that 'yellow stuff' off his milk before he ships it, he is very apt to do so. It seems to be a fact that a large amount of cream in milk is not, as a rule, appreciated by the city dealer or his customers. Certainly the farmer receives no extra compensation for it. This being the case, the Holstein or Ayrshire is a better cow for the milk producer than the Jersey, and is properly valued according to the amount she gives, and not for the number of cream spaces her milk shows."

——PROF. E. M. SHELTON, "Almost certainly the assessors' returns for another year will show a very large increase in the area of wheat sown the present fall in Kansas. All this seems to me a good deal unfortunate. Wheat is undoubtedly, taking the years together, a very profitable crop in Kansas when grown in connection with other crops, and as a part of a system. It is equally true that to cultivate it as a specialty is to certainly invite all the disasters that resulted from the excessive wheat-raising of 13 years ago."

——LONDON POST: "The meat industry is represented at the Paris Exposition by several firms, who show packed and cured meats of various kinds which have all been successfully conveyed across the ocean—some having even traveled a distance of over 5,000 miles—by means of refrigerator cars upon American railways, and by cold storage upon Transatlantic steamers.

The American meats are kept in a large and admirably-constructed refrigerator, made expressly for the United States Government by the well-known Chicago firm, Messrs. Wickes & Company. This refrigerator, which has no parallel in the Exhibition, has been much admired by visitors, and it is a pity that it is not illuminated from within, a defect which arises from some difficulties between the Exhibition authorities and the electric light companies, which the United States Commission has been unable to overcome. In this same refrigerator may be seen the American dairy exhibits of butter and cheese. These are necessarily small, but they form a most representative collection, and it is, indeed doubtful whether so fine a collection of butters has ever been brought together before. Amongst them are the products of three of the best known American dairy farms, all in New England. These farm-made butters command a high price in the United States throughout the year. Besides these exceptional butters, there is a collection of butters made on the factory system, all of good quality, and well kept after crossing the ocean. The American cheeses are less striking in quality than the butters, yet they are well made, rich in flavor, and well cured. Even more instructive, perhaps, than the exhibits themselves are the photographs, maps, and charts, illustrating the types of animals and the methods of husbandry, and of slaughtering of animals which are so characteristic in their extent and economy of labor."

Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

It is Economy to buy Hood's Sarsaparilla, because it is the only medicine of which can truly be said: "100 Doses, One Dollar." It possesses peculiar strength and curative power, and effects cures where other preparations fail. Try it, and you will realize its merit. Sold by all druggists. Be sure to get Hood's Sarsaparilla.

NOTHING ON EARTH WILL MAKE HENS LAY LIKE SHERIDAN'S CONDITION POWDER

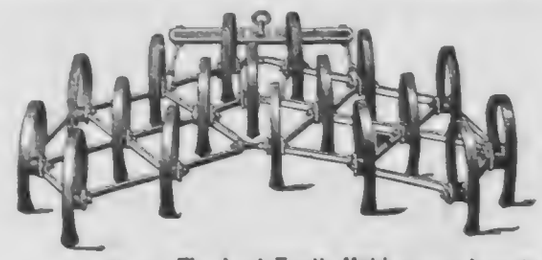
Highly concentrated. Dose small. In quantity costs less than one-tenth cent a day per hen. Prevents and cures all diseases. If you can't get it, we send by mail post-paid, One pack. 25c. Five $1. 2 1-4 lb. can $1.20; 6 cans $5. Express paid. Testimonials free. Send stamps or cash. Farmers' Poultry Guide (price 25c.) free with $1.00 orders or more. I. S. JOHNSON & CO., Boston, Mass.

HENCH & DROMGOLD'S

All Steel Frame Spring-tooth Harrow

A WONDERFUL IMPROVEMENT.

TEETH QUICKLY ADJUSTED BY ONLY LOOSENING ONE NUT.

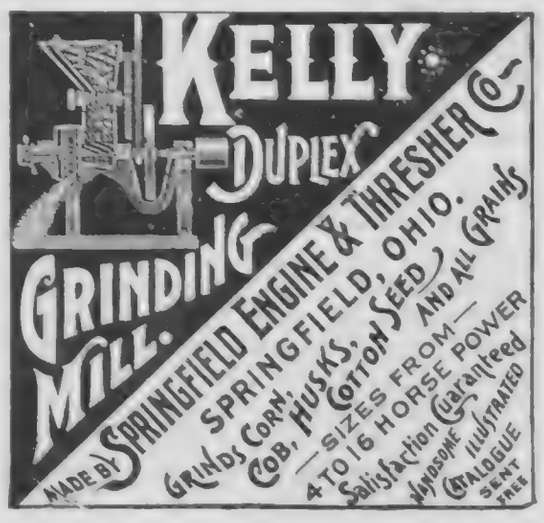


The best Tooth Holder ever invented.

The tooth is held in position by a Ratchet with which it can be adjusted so as to wear from 15 to 18 inches off the point of the tooth, which is four or five times as much wear or service as can be obtained from any other Spring-tooth Harrow in existence.

Agents wanted. Catalogues free.

HENCH & DROMGOLD, York, Pa.



THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, SEPTEMBER 28, 1889.

GREETING.

THE regular subscribers of the R. N.-Y. are both invited and requested to send in the names of any of their friends to whom they would care to have specimen copies of this journal mailed. Such lists of names may run all the way from one to 100. The specimens will be promptly forwarded all the same, and our best thanks will be due to those who favor us with such lists. It may be well to remind our later subscribers that the price of single copies of the R. N.-Y. is invariably $2 a year, while in clubs of five or over it is $1.50, the lowest wholesale price. Those who are willing to act as agents will find it easier to obtain subscriptions if those solicited to subscribe shall have previously improved the opportunity of examining specimen copies. The RURAL NEW-YORKER necessarily addresses itself to the more intelligent, progressive people of the country. It finds little comfort or profit in the ephemeral support of that class which is influenced more by a low price than by originality, enterprise and trustworthiness, in which respects, it will, perhaps, be generally conceded the R. N.-Y. is equaled by few other journals of its class.

THE Empire Co-operative Association, of 34 Reade Street, N. Y., has sued the RURAL NEW-YORKER for libel.

IS HAY, HAY? Is a ton of Timothy hay of the same value for feeding, regardless of the soil upon which it is grown?

READ what Dr. Halsted says about potato rot on page 643. We should be glad to hear from our readers on the subject. Read also the remarks of E. A. S. on the same page.

Last year I did not use the Bordeaux Mixture and I shipped 240 *pounds of grapes. This season I used it and had* 3,100 *pounds.* Read what L. E. A. says on this subject on page 643.

YES, let us hear from men who will tell us the truth about Montana—those whose eyes and judgment are not distorted by pecuniary interests. We caution our readers to beware of the flaming advertisements and laudatory editorials that are appearing in certain farm papers. *The editors* have land for sale! Read what C. A. Green says on page 643.

TRY an Eaton grape-vine, RURAL NEW-YORKER readers—if but one. Until the berries are dead-ripe, there is an acidity about them that may not please those who prefer very sweet grapes. When fully ripe, however, this acidity nearly disappears. The grapes being of the largest size without much pulp, give more juice than any other variety with which we are familiar.

THE R. N.-Y. has yet no less than 150 varieties of its hybrid and cross-bred wheats to plant. The soil is at present so soaked with water that planting would be inadvisable. Usually we aim to plant these wheats—'tis a tedious job—from the fifth to the 15th of September, beginning at the former and finishing at the latter date or thereabouts. As in years past, a single grain will be planted in the intersections of furrows made one foot apart each way.

MR. CROSBY'S remarks regarding corn and milk for poultry are suggestive. In sections where wheat is the most expensive grain why not feed, with corn, some substitute that will make the desired "perfect ration?" Mr. C. finds that milk provides what is needed. The chemists have made up certain rations for dairy cows, that practical dairymen have indorsed. Why not the same thing for poultry? The question is: If wheat is the best egg-producing food, will not a combination of substances, answering in chemical composition to the wheat, do as well as the grain? If this thing succeeds with a horse or cow, why not with a hen?

IN addition to the remarks on electricity found on page 642 we may give some comparative figures concerning the cost of various motive powers on our street railroads. When moved by horse power the cars average 60 miles per day, while the cable roads and the electric cars make 84 miles. The cost per day of a car drawn by horses is $5.91 or .098 of a cent per mile, the cost of a cable car is $7.47 per day or .089 of a cent per mile, while the cost of an electric car is $4.52 per day or .053 of a cent per mile. The original cost of the plant for an electric railroad is about twice that of a horse railroad; while it is shown that the cost, per mile, of running the electric cars is nearly half that of the horse cars.

A NEW YORK State subscriber proposes to conduct his business as follows:

"I am going to try a new departure, an account of which I never saw before: I shall label every bale of my hay, to show that it is all right. I believe that if farmers would sell their produce on a positive guarantee, they would get more money in the long run; for then the buyer would not be afraid to buy. I used to run a hay press myself and I know how some of the farmers cheat by their deception in pressing hay."

The R. N.-Y. feels sure that this plan will pay well. The conditions of the hay market are such this season that buyers will have the advantage. It is only the extra prime lots which customers can feel perfectly satisfied with, that will bring an extra price. The same principle of making oneself responsible for the article that one has to sell, is sure to pay in the long run.

"I believe in paint as a preventive of loose tires, but not in oil as a cure."—E. DAVENPORT, page 639.

IN the "Farrow vs. Fresh" discussion the authorities are practically unanimous in advising yearly calving. The R. N.-Y. is now experimenting in this matter with a Jersey cow.

The writer concludes from what little experience he has had that much depends upon the cow. Some animals after calving every year for a term of years will fall off in their milk-flow at the usual time, whether in calf or not. They may not entirely "dry up," but the milk-flow will be greatly diminished. Other cows will not fall off so much and will respond at once to an increase in feed. The R. N.-Y's. cow is of the latter class. She is now farrow. She has fallen off in her milk yield, but gives more than she did last year when in calf, and increases her yield when given extra feed. Still, she milks so closely up to the time of calving that the R. N.-Y. believes she will give more milk when "fresh" than when "farrow."

BY actual count, 153 persons have contributed articles or ideas to this one number of the R. N.-Y. There never yet was a farmers' institute held that presented such an array of "talent," and this is but one number out of 52, mind you. For the price of a year's subscription you get this number and 51 more just about as good as this is. There is one great point worth remembering. By means of our photo-engraving we are enabled to give our readers a peep directly into the houses, fields and barnyards of real farmers. You will not only hear what members of the Rural family have to say, but you will see the sort of houses they live in, the cattle and horses they like, the tools they use—in fact you will get a peep into their very lives. The R. N.-Y. is the only agricultural paper that can do this work. Are you surprised that our argument to would-be subscribers is: "Compare the R. N.-Y. with any other paper and then take the best?"

THE R. N.-Y. WOMEN'S POTATO CONTEST.

THE reports of those engaged in this contest must be received at this office on or before October 15th.

THE BOOBY PRIZE IN THE R.-N.-Y.'s WOMEN'S NATIONAL POTATO CONTEST.

THE wife of the Editor of the RURAL NEW-YORKER was one of the contestants, and the following is a summary of her report: One-fortieth of an acre of a thin, moist soil was selected. Plowed in August; 1,000 pounds of New York stable manure spread in September and spaded under; one barrel of unleached wood ashes (partly charcoal) spread in early March. Plot again spaded April 5; 40 pounds of Bowker's potato fertilizer sown before the trenches were dug. Trenches nine inches deep, a foot wide and three feet apart. Planted April 11 as follows:

Rural New-Yorker Seedling No. 2, 100 pieces; R. N.-Y. seedling No. 3, 50 pieces; R. N.-Y. No. 4, 100 pieces; Brownell's Winner 113 pieces, making 363 pieces in all.

The vines made a strong, healthy growth and the stems were in early July as large as any we have ever seen. The punctures of the Flea-beetle at this time began to blacken the leaves, and in a few days the vines were dead. An examination of several hills showed that most of the potatoes were a mass of decay. Here is the yield:

No. 2, 85 pounds; No. 3, five and one-quarter pounds; No. 4, 28½ pounds; Brownell's Winner, two pounds or 120¾ pounds in all, which is at the rate of 80½ bushels to the acre. This nearly total failure is attributed in great part to the fact that a moist plot was selected in anticipation of a dry season.

THE NEXT CENTURY.

FIFTY or 60 years ago statisticians gave figures indicating the future population of the United States. Most of the estimates were considered wild and visionary by ordinary people, yet the actual results have shown them to be surprisingly correct. If anything, the tendency of the computers was to put our population at less than it really proved to be. Just now, some of our ablest statisticians are making estimates as to our future population. The estimate that seems most generally considered worthy of attention is the following, made by Mr. M. C. Meigs, a man of ripe age, careful training and one who has had ample means for the investigation of statistical matters. Here is his estimate for the next 100 years.

YEAR.	TOTAL POPULATION.	AFRICAN DESCENT
1890	67,240,000	8,000,000
1900	89,738,000	10,144,000
1910	119,650,000	12,862,000
1920	159,890,000	16,309,000
1930	213,320,000	20,681,000
1940	284,697,000	26,223,000
1950	379,960,000	33,252,000
1960	507,090,000	42,163,000
1970	676,760,000	53,463,000
1980	903,200,000	67,790,000
1990	1,206,400,000	85,957,000

These figures are absolutely astounding, and yet we cannot believe they are very far out of the way. If these figures are at all reliable, many of the present readers of the R. N.-Y. will live to see the day when we can boast of a population of 200,000,000 souls. How will this vast population be distributed? Will the descendants of those who have left the hill farms of New England and New York State be forced back to the old home of their ancestors? Will the vast irrigating resources that are now projected among the Rocky Mountains, turn the Western deserts into food-producing districts? Will the vast forests of Washington and Montana be swept away by the farmer's axe as completely as are those of Michigan? Will the negroes be scattered about the country or shall we have half a dozen "black" States where negroes may show their ability or inability to govern themselves? The thought is a wonderful one. What new laws will be needed to handle this vast population? How will business be conducted? What proportion of our population will be found in towns and cities? What use will the farmers of the future make of the possibilities that the years may bring them? The R. N.-Y. has faith in the future. It believes that farmers and farming will develop so soundly and solidly that the agriculture of 100 years hence will be on a better basis than that found for it to-day.

"The rims of my wagon wheels were soaked in hot linseed oil, until they would take no more, when the wagons were made, 20 years ago. The tires have never become loose. I smile when I meet a farmer who is hammering at his tires to tighten them."—T. B. TERRY, page 639.

BREVITIES.

A "SYMPOSIUM" NUMBER!

MAKE a fire in the stove these cold days.

ARE you going to soak your wheels in oil after this discussion?

"RUNTS RUIN RESULTS"—page 644. Any job half done is a "runt."

THERE will be an immense demand for seed potatoes of popular varieties next spring.

UNDER what conditions does it pay a farmer to put a furnace or heater in his house?

A FULL discussion of the effects of the Dressed Beef business on Eastern farms next week.

THE new white grape Witt, is sweet and meaty though foxy. It is earlier than Concord by a few days.

THE Ulster Prolific is as satisfactory a red grape, all things considered, as any tried at the Rural Grounds.

THE R. N.-Y. invites a discussion of the points made by D. C. L., on page 643 regarding the rot in seed potatoes.

FARMERS seem to like manure on potatoes, but they want it first "strained through another crop" like corn, or applied in the fall and acted upon by frost.

IN case of danger from frost, it will pay you to work half the night cutting fodder corn. Cut and placed on the ground, even for a few hours before the frost, it can be saved.

SEVERAL writers agree with the R. N.-Y. that the potato vines succumbed to the "blight" because they were weakened by the attacks of the Flea-beetle early in the season.

THE writer neglected to fix his well a short time ago when a few hours' work would have made it solid. The recent storm has made a two-days' job of it. "A stitch in time!"

WE urgently advise our friends not to save seed potatoes that from blight, Flea-beetle or any other cause, failed to mature. The R. N.-Y. has a sad and telling story to relate on this subject.

THE new peach Good is again giving a favorable account of itself. It is said to be superior to any white-flesh peach of its season. It is what has long been needed for canning after Crawford's Late.

GATHER the seeds of the Rose of Sharon (Hibiscus Syriacus). The seed sprouts readily, the seedlings are thrifty and will bloom the second year. Seedlings in the size, doubleness and colorings vary indefinitely.

Ladies of the R. N.-Y. Potato Contest, send in your reports before October 15. *The time has been extended in compliance with requests. The prizes, amounting in value to about* $1,000, *will be awarded as soon thereafter as practicable.*

THUS far this season 16,000 barrels of apples have been sent from this country to Europe. This is just half of last year's shipment up to this date. Prices for apples in England are very high, but there is an American demand for about all the home product.

SOME of the fairs near the large cities make a mistake in supplying free admission tickets to all exhibitors. It's easy for a city man to buy a peck of potatoes and enter them, thus insuring a free admission. With such an arrangement in force too many entries are made simply to secure a free ticket.

NEXT week Judge T. C. Jones of Ohio, will begin a series of articles describing the history of beef-growing in the central West, with his views as to the best ways of meeting the changes that have been forced upon the industry by the dressed beef business. Few men are better qualified to discuss this question than Judge Jones.

Indust'l Societies.

THE LONG ISLAND LIVE STOCK ASSOCIATION.

(RURAL SPECIAL REPORT.)

THE second semi-annual exhibition of the Long Island Stock Association was held on the association's grounds near Huntington, L. I., from September 10 to 14. It rained every day during the week and the attendance was extremely small. The exhibition, however, was a good one and had the weather been favorable, it would have been a great success. The fruit and vegetable display was exceptionally fine. It filled several tents, and a portion of the main building.

Although the latter is fully 200 feet in length, yet it was completely filled with flowers, fancy-work and other articles of interest to the ladies. One side of it was devoted to bread and cake and other products of culinary art. On this side Mr. Burgess showed a hive of bees at work and a quantity of White Clover honey. In the fancy-goods department a bed-quilt made at sea by Captain Hallock attracted much attention and received honorable mention. Surely when a sea captain exhibits a hand-made bed-quilt and the ladies stock and poultry, the millennium must be close at hand.

Owing to the storm many of the implements were not unpacked, and the display in consequence seemed very meager. Mr. C. B. Vail of Huntington, made a fine display of carriages, including his famous buckboards and farm wagons. The show of stock and poultry—what there was of it—was good. It is said that the result of the fair will be a heavy debt for the association. It is to be hoped that the managers will not be discouraged, as the association had all the elements required to make a successful exhibition and another year will doubtless retrieve all the losses. J. H. G.

CROPS: AN OHIO FAIR.

(RURAL SPECIAL REPORT.)

Thrifty farmers in western New York; crops there and in western Pennsylvania and northern Ohio; the Huron County Fair; fine displays of cattle, swine, sheep and horses; dairy exhibit small, but good; fine potatoes and other vegetables; the inevitable "hoss trot;" general satisfaction.

IN passing along the shore of Chautauqua Lake even at a rapid rate, one can discover the thrift and enterprise of the average farmer in the tidy appearance and the fine surroundings of his home. The crops yet remaining in the fields—corn and potatoes—are looking reasonably well, better than could have been expected considering the late frost and excessive rainfall of early summer, and the comparatively dry weather since August 1. Meadows and aftermath are looking well; buckwheat has an average growth and is well filled. Fruit is exceedingly scarce: there isn't one-tenth enough for home consumption.

As we leave the lake region and come on to the slope towards Lake Erie, the grape-growing industry is the great object of remunerative interest. Immense vineyards stretch as far as the eye can reach, well laden with fruit of superior merit as regards size and quality. I heard an old grape-grower remark that he had never seen the sugar in the grape so abundant as this year, and that the growers hoped to receive better prices than they did last year for better grapes. It is expected that the shipments will exceed those of last season. The Worden is considered the best early grape; while Moore's and Talman come next; but for a general-purpose grape nothing exceeds the Concord. Apples are scarce; while pears are quite plentiful at from $1 to $1.50 per bushel.

Along through Western Pennsylvania and Northern Ohio rain is needed, though crops are not particularly suffering. Many are putting in their wheat or preparing for it. Most of the plowing is leaving the land very lumpy on account of it being so dry. About the usual area will be sown to wheat.

Huron County was well represented at its agricultural fair, which was held at Norwalk. The grounds are commodious and pleasantly situated in a beautiful grove. The display in all its various departments was good. In Short-horns and Herefords little improvement could be made. Of Jerseys and Guernseys there was only a small display, but those present were of good quality. Among swine, Berkshires and Chester-Whites were the favorites, and the exhibits were of superior quality. The sheep exceeded anything I have witnessed this year, cassimere Merinos and Shropshire Downs being the favorites. The poultry department was of excellent quality but not a large display. Of agricultural machinery, the display was varied and fine. As we entered the Dairy Hall we were forcibly struck with the meager display both of butter and cheese, but what was on exhibition was of unquestionable quality. The vegetables on display were exceedingly fine, especially the potatoes. Some specimens of the Pride of the Valley were commented on as superior to any variety raised in that section and certainly their appearance denoted productiveness and excellent quality. In the fine arts and domestic manufacture everything was in good taste and showed conclusively that the fair daughters of Huron County rank high among America's fair women as to skill and taste.

There were many fine horses upon the grounds, though the average farmer is behind the age in the farm team. The only excuse offered by him is that all good horses are picked up for the Eastern markets. The afternoons of the third and fourth days were mostly devoted to horse trotting and balloon ascensions. A number of fine horses were on the track, but no one showed a better gait than a 2.37½, a brown stallion "Happy King" winning the stallion race at that. The results of the fair were satisfactory to the managers and to the people. The representative of the RURAL NEW-YORKER on the ground was doing his utmost to convince the people that it is the reading, thinking man that makes the successful experimental farmer, and that success comes to the man who does his work in the most thorough manner and feeds his land most liberally that it may produce large returns.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

QUITE a pretty idea in decoration is to hang a gay Chinese or Japanese paper lantern from the center chandelier. It is far prettier than any of the absurd air-castles or fancy baskets one often sees suspended there, and it has the merit of utility too. When only a dim light is needed, instead of turning down the gas or lamps, the candle may be lighted in this lantern—it gives a pretty, mellow light, and is economical too.

* * *

THE newest fairy lamps are of China, three-sided; these sides show respectively the head of a cat, a dog and an owl. The eyes are of glass, and the light shines through them with a very realistic effect.

* * *

THE Art Interchange describes some very pretty lampshades. Upon a frame of wire a piece of muslin is sewed, fitting very closely. Upon this cover, rows of silk ruching are tacked; they are pinked at the edges, and put very closely together, entirely covering the muslin foundation. A box-plaited ruffle of gold lace is put around the top, standing upwards, and a band of ribbon tied in a bow at the side draws it securely together. Another shade made on this same model has the muslin foundation covered with two silk flounces in different shades of the same color, the lower one being the darker. A full ruche of silk or lace is put around the top. A parasol lamp shade described is of thin yellow silk, crimped in close folds, and smocked with orange silk. The smocking is done loosely, so that the frame is elastic; it is finished by a fall of black lace and three little black birds on one side.

* * *

CHARMING screen photograph frames are made of heavy cardboard covered with flowered French chintz. They may be made with either three or four leaves, the larger ones having spaces for two rows of pictures. The smaller ones are charmingly dainty when covered with flowered art silk. Some very dainty photograph frames are covered with white kid, having a painted design.

* * *

MANY of the new basques and jackets, too, have sleeves of a different material, usually made in a wrinkly leg-of-mutton shape. Braided cloth jackets have these sleeves in velvet of the same color. This is a very convenient fashion in making over-dresses where there is some scarcity of stuff. Suppose one has an old cloth dress in solid color, and a few yards of plaid or figured goods, or silk in harmonizing tint. We would make a plain round skirt—it might be shirred, or left in loose plaits. It should have a plain round waist with surplus folds of the contrasting stuff, and leg-of-mutton sleeves of the trimming. It would be finished by a belt and Empire sash of the contrasting stuff, the sash ends hanging at the side, being gathered at the end, and finished by a tassel or crocheted ball. The collar, if any, should be very narrow, and finished with a turn-over Empire frill. With a little oval toque, made of the goods, and trimmed to match, this would be a very pretty fall dress.

* * *

"FALL DRESS." Why do we say fall, instead of autumn? It is the fall of the leaf—yet this is a somewhat indescriptive term. We are so apt to take liberties with our language, in this free land, that some care is necessary, or we shall become a nation of slip-shod talkers. Apropos of seasons, how absurd it is to say one is "summering" here or "wintering" there—we may yet live to hear that our friends are springing in town and falling in the mountains—but we hope not.

THINGS THAT COST NOTHING.

OLIVE E. DANA.

MY title is a misnomer. I believe there are very few things which are of use and value that literally cost nothing. "From nothing, nothing comes," runs the old proberb, and the very appropriation of any gift or blessing implies energy, receptivity, or feeling.

There are things which literally cost nothing in dollars or cents, and the money-value of any article is its common appraisal. So I have adopted the old phrase because I do believe that many of the things that give savor and flavor to life and its duties are unpriced and too often unprized.

We slight our common mercies and deem that only rich or sweet or beautiful which is almost if not quite out of reach.

We complain of the narrowness of our lives, and their barren surroundings when, very likely, we ourselves set those limits far within their possible range of privilege and pleasure, and perhaps not only refuse to make our bit of arable land yield any other, sweeter growths, but even shut our eyes to the beauty that already is in daily sight.

But I am wandering from my subject. I meant to speak only of the capabilities that are in all our lives, I trust capabilities of enlargement and elevation of joy-getting and joy-giving. I wanted to speak of the riches of the things that "cost nothing,"—nothing save tact and patience and a willing hand, and a seeing eye, and a loving and trustful spirit. And if this last named possession seems to you who read this, as it does to me, the most desirable of earthly possessions, let me enlist your sympathy with mine still further by asserting that a right use of the things that cost nothing is one of the best possible helps (on the human side) to its attainment. I am digressing again, am I not?

Let me hasten, then, to specify. I might remind you, as I am tempted to do, that the best preservatives of health, the best aids to its recovery if lost, are the cheapest and simplest things, the elementals. I wonder how many times a week a really wise physician, either unconsciously or on purpose, reminds his patients of the wonderful healing potencies of sun and air, of pure water, of plain, wholesome abundant food, of exercise and cheerfulness? These are Nature's simples. The most and best of the things that cost nothing come from the same store-rooms.

But there are other things of which no physician is likely to remind us, yet which contribute very largely to that health of mind to which the best physical conditions are tributary—without which the latter, if they can exist at all, seem of comparatively little value. These are the little habitudes of household and personal adornment, to begin with: the neatly spread table; the tastefully tidy room; the vase of flowers for tea-time; the freshened toilet after dinner;

Miscellaneous Advertising.

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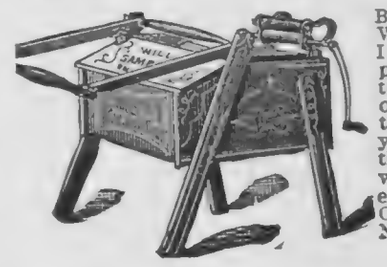

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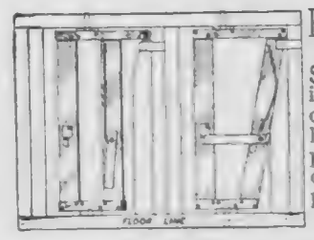

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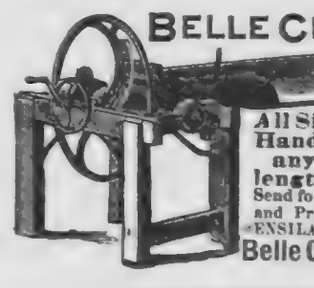

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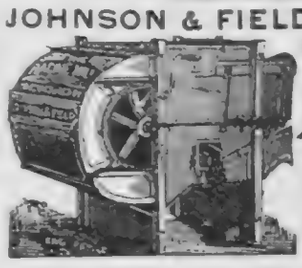

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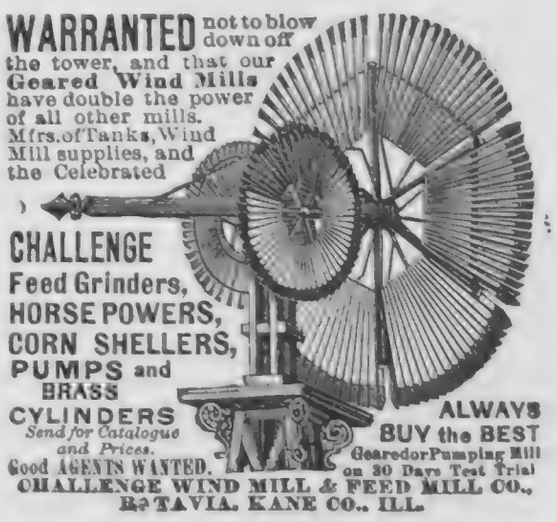

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the bit of afternoon leisure that so breaks up the day; the time for cheerful chat at the meal's close, and the evening reading, these all cost little, surely, save tact and provision, the right arrangement of the day's tasks, and the best disposal of one's odd minutes. But they count wonderfully on the side of household cheer and contentment, they aid wonderfully in preserving the housewife's strength and serenity.

The cheerful look, the willing step, the habit of forbearance, the meekness of silence when any speech would only irritate. I would count these, too, among the things that cost nothing, if I were not convinced that these imply or involve a habitual self-control, a heart peacefulness, a deep-rooted cheerfulness, which it may take a lifetime to acquire. They are certainly unpurchasable by money or industry, skill or learning.

As I hinted just now, the things that cost nothing may help to win for us those better things that are among the "must-haves," as we think of life and its issues.

The treasured scrap of poetry or prose that held some helpful thought; the moments of thoughtful quiet, wherein, perhaps, both soul and body were refreshed for life's struggle; the neighborly call that blessed both her that gave and her that received it, and thoughtfulness for others that afforded a respite from one's own caretaking, are not these, for the most of us, available helps?

It seems to be too often a part of woman's work to make something out of nothing. We take upon ourselves such tasks to our own loss, and needlessly, oftentimes, in the realm of material and practical things.

But there is a field where such a talent may find fitting exercise. If any of us find ourselves endowed with this good gift, let us make good use of it.

GOLDEN GRAINS.

THE OBSERVER thinks that men who have no spirituality ought not to have any office in the churches. But there is need in many offices of a happy combination of spiritual life and financial ability. It believes that such a combination exists and that, where the proper steps are taken for the selection of officers, we can have such men in charge. If any church has chosen its officers solely on the ground of financial wealth, thus ignoring the spiritual qualifications, that church has, to its mind, taken a long step toward idolatry.....

DR. CUYLER says that Christ gives peace by healing the diseases of the soul. Instead of the wretched device of attempting to satisfy restless and unholy cravings, He expels them and brings in the new sources of joy. The world's false peace begins in delusion, goes on in sin, and ends in perdition. Christ's peace begins in pardoning grace, goes on in quiet trust, and ends in glory.....

LYMAN ABBOTT says that the results of reading are best preserved by communicating them to others. It is of little use to read to one's self, and never speak of what one reads.....

DO NOT permit yourself to make a positive statement even about a small matter unless you are quite sure; for if you do you will find the habit growing upon you, and by and by you will begin to make loose replies to questions of great importance. Don't be too certain.....

IF you have talents, industry will improve them; if moderate abilities, industry will supply the deficiencies. Nothing is denied to well directed labor; nothing is ever to be obtained without it.....

LET every dawn of morning be to you as the beginning of life, and every setting sun be to you as its close. Then let every one of these short lines leave its sure record of some kind thing done for others, some goodly strength or knowledge gained for yourselves. So from day to day, from strength to strength, you shall build up, indeed, by art, by thought, and by just will, an ecclesia of England, of which it shall not be said: "See what manner of stones are here," but "See what manner of men."....

NEXT to the comforts of religion are those of friendship and society, therefore to be friendless (as to this life) is almost to be comfortless; and to those who have had friends, but have lost them, the calamity is the more grievous. If our friends are put far from us by scattering providences, nay, if by death our acquaintances are removed into darkness, we have reason to look upon it as a sore affliction, but must acknowledge and submit to the hand of God in it.....

THEY asked Lokman from whom he learned good manners. He replied: "From the ill-mannered; whatever in their behavior appeared to me disagreeable, that I refrained from doing myself."....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

"How true it is no spoken word can give
Form to the best of thoughts which in us live."

IN SEASON.

"COME out! 'Tis now September,
The hunter's moon begun;
And through the wheat and stubble,
Is heard the frequent gun
The leaves are paling yellow,
Or kindling into red
And the ripe and golden barley,
Is hanging down its head."

SEPTEMBER is with us! She was welcomed by the hunter, for now he can shoulder his gun, call his dogs, and direct his steps towards the fields and woods without fear of molestation. But the hunter is not alone in welcoming September—the lover of the oyster is on hand to do his share in greeting and welcoming back a month with an "*r*" in it!

The oyster is one of the most easily digested foods known. When an invalid is too weak and ill to eat or digest any ordinary food, he can almost always digest a few oysters. But if he should be too weak to eat even a few of these bivalves, he may relish some of the juice—either pure or with milk, cooked or raw—and this often awakens an appetite for other food. [Authorities tell us that the easy digestibility of the oyster is confined exclusively to the raw article. Cooking effects a change which renders the bivalve quite hard to digest.—ED.]

The oyster seems to have some mysterious effect on the lining membrane of the throat, stomach, and all digestive organs. I have known cases where people have had quinsy sore-throats and have been unable to take any nutriment at all for days, yet they have swallowed raw oysters without any difficulty—thus gaining nutriment and also soothing and cooling the throat.

Dr. Kitchener, who wrote the "Cook's Oracle," says, in his book: "Shell fish have long held a high rank in the catalogue of easily digested foods; of these, the oyster certainly deserves the best character."

It is said that the oyster, with the exception of the egg which some claim may be cooked in over 600 ways, may be cooked in a greater variety of ways than any other diet; but, unlike the egg, it is eaten raw. Almost all oyster lovers relish it in this form; but it seems to me it is an acquired rather than a natural taste. Of course, to eat it raw we must have it immediately it is opened.

In an old book published in England in 1817, entitled "Aspicius Redivivus," we find the following: "Nothing appears to common people more indifferent than the manner of opening oysters, or the time of eating them after they are opened. Nothing, however, is more important in the enlightened eyes of the experienced oyster-eater. Those who wish to enjoy this delicious bivalve in its utmost perfection must eat it the moment it is opened with its own gravy in its under shell. If not eaten while absolutely alive, the full flavor and spirit are lost."

Thus we see that oysters on the half shell were appreciated then as well as now. Still that is not surprising when we remember that the epicures among the ancient Greeks had slaves to stand by their tables and open oysters while they ate them.

Just here I might add that the New-Yorkers have a sort of a reverence for the oyster, and look upon it as do the Philadelphians upon terrapin; the Baltimorians upon the soft shell crab and the Washingtonians upon the canvas-back.

I might talk on the theme of oysters *ad infinitum*—and yet not say anything particularly interesting to farmers. They will not be likely to care for their oysters gotten up into all sorts of fancy dishes—I'm sure I don't—so I will confine myself to a few ways of preparing them—simple, yet toothsome.

PLAIN STEW.

Strain the juice from the oysters into the pail in which you wish to cook them: add about the same quantity of sweet, fresh milk. Place over a hot fire. When this liquor comes to a boil add the oysters. Let them remain only long enough to get heated through. Add a generous lump of butter, and pepper and salt to suit the taste.

OYSTER OMELET.

Put half a dozen plump, large oysters in their own juice, into a stew pan on a clear fire, take them off at the first boil, drain them, cut them in halves and spread over the omelet (made in the usual manner) when it is ready to turn. If the oysters are large and solid the half dozen will suffice for two ordinary omelets. As some of our readers may be new beginners and know nothing of cooking, I might add the "*omelette au naturel*," as the French say for the plain omelet, is made as follows: Three eggs, two tablespoonfuls of cream (milk will do of course) one-half salt-spoon of salt, one ounce of butter. Beat the eggs, cream and salt lightly together until froth begins to rise, but no longer; pass them through the sieve, if there should be any hard bits of yelk. Have your pan (iron) hot and well greased with butter. Pour into this pan and as soon as at all firm turn—etc.

OYSTER PATTIES.

Take about 100 fresh, opened oysters; put them in a saucepan over a quick fire, and let them boil, skimming well of course. Then strain them dry, keeping the liquid in which you have boiled them. Take about three table-spoonfuls of fresh butter and the same quantity of flour; mix well; put over the fire and let it simmer until of a nice color. Then add the liquid in which you cooked the oysters, and about two pints of sweet cream (or milk if you cannot get cream.) Season well with salt, pepper, a little nutmeg, and a very little Cayenne pepper. Then let it boil about 20 minutes; strain; add the oysters and finish with a little butter. Then take the material meant for crust (there are a number of ways of making this, and most housewives prefer some certain method—but if any should wish a special recipe I can furnish it) and roll out to the thickness of a quarter of an inch, and in a square shape; cut out the patties with a tin cutter, round or oval, as wished, place them on a cake pan, which must not be too thin, and must be wetted with water. Take one egg well whipped, and a few drops of milk. With a brush color the tops, without touching the sides; then, with a smaller tin cutter (half the size of the first), mark the patties, but not too deeply, in the center, and slip in an oven hot enough to roast chicken. When cooked, take out the centers with a small, pointed knife. Fill, and then use the centers as covers.

PLAIN FRY. Select large, firm, fresh oysters. Beat an egg and into this dip the oysters, then into some cracker dust, or finely rolled bread crumbs. Fry in *hot* butter. Season to suit the taste. Let them fry until they are a golden brown. All surplus grease may be done away with if the oysters are laid on a sheet of clean manilla paper for a moment or two before serving.

"No dainty yet prepared on earth's broad range
Can match thee fresh from out thy pearly cloister;
Thy name? We'll breathe it—Shakespere's line to change—
Unrivaled dainty! sure, thy name is *Oyster*!"

Apropos of oysters, let me tell the RURAL readers that they number a rhymster among them. A mother was reading something about oysters the other evening, when some one declared that reading of them made his mouth water. The mother then promised that on the morrow the family should have some. When the morrow dawned one of the children called from her bed: "Say, I've made up some 'poetry!'" On being pressed to let the others hear it, she blushingly gave the following:

What is that frothing, steaming mess,
Yon chubby little boy stirs?
I surely think that I can guess,
It is—it *must* be—oysters

The family all laughed and the little miss scarcely knew whether to feel offended or flattered—still I think she won't care when she sees it in print, and probably you may hear from her again.

DORA HARVEY VROOMAN.

BLACK Armour silk is liked.

FRINGES are to the fore.

GRAY felt hats trimmed with black are to be worn.

BONNETS or toques made of the dress goods—whatever the color—will be embroidered and trimmed with black.

BLACK dresses will be fashionable this winter and will be worn by both young and elderly ladies.

THIS is the way that Harper's Bazar would trim a gray felt sailor hat: The band around the crown is of black velvet with two folds of white crape above it. On the left is a large rosette of white crape and a white bird with spread wings.

A CAUSE.

IN the RURAL of August 31, I read with much feeling "A Few Observations on Table Manners." The writer either ha been educated wrongly; had grown up selfish; was averse to the society of children or was an old maid. The young lady of 15 was, without question, an only child of a thoughtless, indulgent, unobserving mother, who believed that custom and society in later life would correct habits so long neglected that they had become a part of her nature. The error here lay in the careless training of an indulgent mother, and business-absorbed father. I hold that when the child is old enough to speak, it is old enough to understand and reason, and what *nurse* can convey to the tender mind, the clear, concise ideas that the loving, faithful mother can? Mrs. White's children not allowed to come to the table until 10 years of age! Sad, indeed! The tender child banished from the mother's presence during the most important part of its young life—meal time.

Is a person who is interested in her charges only to the extent of her wages, and who knows naught of motherly instincts and feelings, capable of guiding and directing the manners of a child? Not half of the nurse-girls can read and write, and that they, with their stunted and starved minds, to say nothing of worse failings, should be given the entire charge of young children, (as is often the case) certainly shows criminal negligence on the part of the parents.

True, there are exceptions, but I speak of the masses. We pick up Bridget just from the Emerald Isle, who cannot speak a word without a brogue, and commit the infant to her charge—she to mold the impressionable mind and to cultivate refinement! Take the child from the nursery when old enough to sit alone in its little high-chair, and place it by your side at the table, and then in gentleness but with firmness begin its education "in table manners." You will be astonished at the advancement made through observation alone.

The best bred families I ever saw were those who received their training in the very lap of infancy. I visited a family where the child of two and a-half years of age occupied her place at the table with as much grace and ease as any of the guests; never speaking unless spoken to; always asking with a "Please give me" etc., and when through she would sit quietly till all were through, when she would say, "Papa, please excuse me," and when answered would bow to the guests and go to her play quietly. This child never asked for a dish until it was passed and when helped would say: "Thank you!" If you wish your children mannerly you must set the example. Your manners must, however, be such as are not taken off and put on upon occasion. They must be with you every day, every meal, every hour. Never ask or give without a "please;" never accept without a recognition of the favor. But talk about a child not being allowed to come to table until 10 years old! Why not say 20 as well. Begin its training when it is not older than two years of age; and with a gentle, loving hand guide it, and you will be astonished at the progress made. Have a bib and a table tray, and go gently to work. Away with all interference. Keep cool under all circumstances; have complete control of yourself and before you can credit it, you will have a little lady or gentleman at your table and you will have been the molder. What do you know of the actions, talk, examples; what of the

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

food prepared and given; in fact, what do you know of the physical and moral training of the little being that God has placed into your keeping if you leave it to the care of the hireling nurse? I know there are exceptions, but when I speak of the masses of German, Irish, and negro nurses, I speak advisedly when I say that they are wholly unfit for their duties.

Household pets! In what can they equal, or approach, the child treasure—God's greatest gift? Everything sinks into insignificance beside that, though I have seen a mother consign her child to the nursery and the nurse while she came to the dinner-table and placed her poodle dog on a chair at her side. Insist by example and teaching that good manners are the commodities of every-day life. I say, emphatically, have your children so obedient at home that it will be the delight of your friends to have them accompany you when you visit them. A thorough mother will first study her child (she will not study the nurse until afterwards). And then, if compelled to employ a nurse, she can judge correctly what is required. Then, with constant oversight and frequent presence, there will be few fruitless after regrets. HENRY OLD COMER.

THE "Mail & Express" says that it is very difficult to tell the truth under "fashionable" circumstances.

TIMELY.

HAVE you ever tried musk-melon sauce? It is rich and delicious. Remove the seeds and skins and cut in small, square pieces. Cover with sweet cream, add a little sugar, and serve at once.

WATCH the little ones as the nights grow cool and take care that they do not begin to "curl up in bed." Does not the habit of sleeping "all in a heap" cause round shoulders and sunken chests? Will some writer for our splendid "Domestic Economy Department," give us a few ideas on this subject?

BAKED TRANSCENDENTS.

CHOOSE those of the same size with stems. Wash, remove the "blossoms," stand with stems up. Pour a little boiling water into the dish, and sprinkle on them a few spoonfuls of sugar. Bake in a rather quick oven. Nice for dinner with meat dishes.

TRY some dried ones, this year, too. Quarter and core them. With a darning-needle string them on white cord, and hang near the kitchen fire. They make good pies, having a pleasant, peculiar flavor.

Will some one, please, tell me how to make jelly from these little apples? I have tried, but without success. I should like the information soon. MRS. LEVI H. NILES.

EUGENIA CAKE.

ONE egg, one cup of sugar and one-fourth cup of butter beaten together, one-half cup of milk, two cups of flour, one tea-spoonful of baking powder and a little cinnamon.

SOFT GINGERBREAD.

ONE cup of molasses, one cup of sugar, three-fourths cup of shortening, one cup of sour milk, two tea-spoonfuls of soda, two tea-cupfuls of flour (a little more may be required). MRS. GULLEY.

GINGER CAKE.

ONE-HALF cup of brown sugar, one-half cup of New Orleans molasses, one-half cup (scant) of butter, one-half cup of milk, one egg, one and three-fourth cup of flour, one tea-spoonful of baking powder. If you use sour milk, use a very scant tea-spoonful of soda. MRS. A. W. FARWELL.

CREAMED SALMON.

MAKE a cream of one pint of boiling milk into which pour two table-spoonfuls of corn-starch dissolved in one-half tea-cupful of milk. Add a table-spoonful of butter and pepper and salt to taste. Butter a baking dish, line it with bread crumbs, cover with a portion of the cream, then a layer of salmon, which has had the bones and skin removed, then another of bread-crumbs, cream, etc., finishing with crumbs. Bake from 15 to 20 minutes in a hot oven.

MISS J. COLLINGWOOD.

BUTTER SPONGE CAKE.

TWO CUPS of sugar, one-half cup of butter, three eggs, one cup of milk, three cups of flour, one and a-half tea-spoonful of baking powde.. AUNT ANNA.

BOILED FROSTING.

ONE cup of sugar and four table-spoonfuls of water. Mix and boil until it hairs, stirring constantly. Beat the white of one egg stiff, add and stir until cold. Flavor with vanilla, rose or orange.

CREAM FOR FILLING CAKE.

ONE-HALF pint of milk, one egg, one heaping tea-spoonful of corn starch dissolved in cold milk, two table-spoonfuls of sugar. Flavor.

CHOCOLATE FILLING.

THREE squares of melted chocolate, one-half cup of sugar, mix smooth and add milk until of the right thickness to spread. Boil until smooth. Stir until cool. Flavor and spread. MOLLIE W.

SNOW CAKE.

ONE cup of sugar, one-half cup of butter, one-half cup of sweet milk, whites of three eggs, one and a-half cup of flour, one tea-spoonful of baking powder. Flavor with lemon.

YELLOW SPICE CAKE.

THE same rule, substituting yelks for the whites and spices for the lemon. Use one tea-spoonful of cinnamon and one-half tea-spoonful each of nutmeg and cloves. For a chocolate cake stir in one and a half square of Baker's chocolate melted.

A. E. F.

FRUIT SPICE CAKE.

ONE and two-thirds cup of molasses, one cup of shortening, one cup of sugar one whole egg and the yelks of three, one cup of sour milk, one tea-spoonful each of allspice and nutmeg, four cups of sifted flour, one tea-spoonful of soda. Add as much or as little fruit as you like. Flavor with lemon. Two large loaves.

MRS. G. C. MINOE.

CARAMEL FROSTING.

TWO CUPS of sugar, two-thirds of a cup of sweet milk, butter half the size of an egg. Boil together in a double dish for 15 minutes. After taking from the fire stir until it grains. If too hard to spread, warm it a little. Flavor with vanilla. Use on plain cake. D. H. B. C.

TABLE TALK advises keeping out of the frying-pan and trusting to the broiler.

Miscellaneous Advertising.

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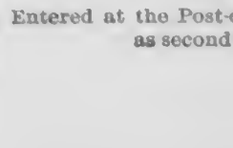

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Entered at the Post-office at New York City, N. Y. as second class mail matter.

OUR markets and news departments have been crowded out of the paper this week by a volume of advertising received too late to be used on the cover. The storm of the past week has greatly interfered with the New York markets, and there is little to report in the way of changes. Poultry is plenty, eggs are going up in price, grain is a little firmer, butter steady with large receipts, fruits in good demand. Cattle and sheep hold their prices well while hogs are barely steady. The storm has seriously injured grapes and other fruits near New York. Potatoes are being pushed to market. The price promises to be higher later in the season.

He Wants Results.

"I will not accept your bodiless theories," exclaims the materialist "I require something tangible; if you make an assertion then support it with acceptable evidence." Very well, then; how is this for evidence?

Here are names you may find on the back of our notes of Compound Oxygen at any time:

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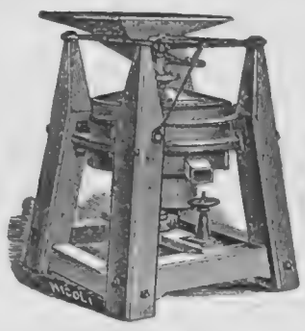
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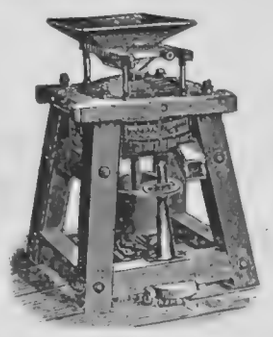

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The largest herd of Registered Jersey Cattle in Virginia, and awarded the HERD PRIZE at the State Fair for 10 consecutive years A long list of prizes awarded our exhibit at the Ohio Valley Exposition, Wheeling, W. Va., 1885 and 1886. Many prizes at the Atlanta Exposition held in October, 1887; also at the Virginia Exposition, 1888, and the HERD PRIZE there, with great competition. Choice Jersey Calves and Yearlings of both sexes now for sale from same herd Also Guernsey Cattle of Imported Stock, and a prize herd of Devon Cattle, Berkshire and Jersey Red Swine, Shropshire and Southdown Sheep. Address
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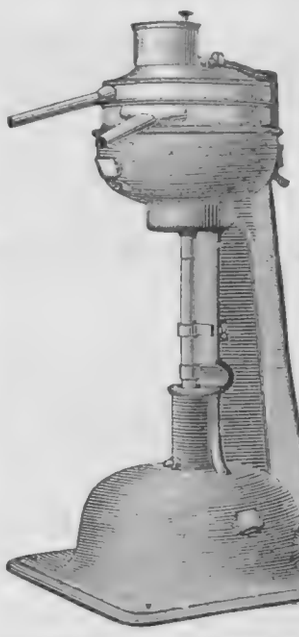
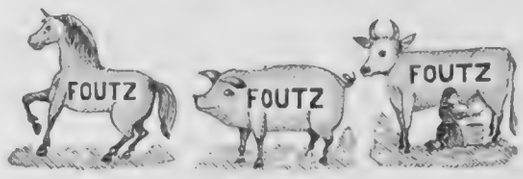
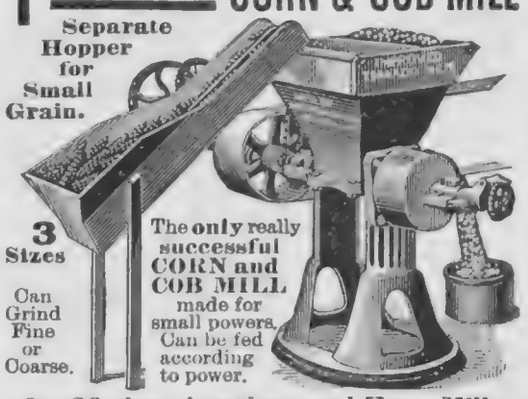

The De Laval Cream Separators.
Hand Power, $125. $150 $200. Belt Power, $285, $350. Steam Turbine, $425.
See Bulletin No. 7 of the New Hampshire Agricultural Experiment Station, reporting test of different creaming systems, just issued, from which we quote Prof. Whitcher's conclusion:
"The figures are so plain that comment is unnecessary, and so far as one test conducted by competent and careful men can be relied upon we may place the Separator first, the Open pans second, the Moseley and Stoddard third, and the Cooley last, in point of efficiency."
Address, for any desired information,
The De Laval Separator Co.,
General Offices: 74 Cortlandt Street, N. Y.

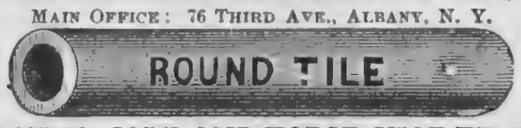
$3 BLACK HAWK Corn Sheller & Separator.
Always in order; never chokes; shells clean; used by boys or men. Always throws out cob. Rapidly finding its way to every corn-growing country around the world. Buy from dealer or send me $3.50 for sample, express prepaid. Sole manufacturer and patentee,
A. H. PATCH, Clarksville, Tenn.

FOUTZ'S HORSE & CATTLE POWDERS.


Will cure or prevent Colic, Botts and almost every disease to which Horses and Cattle are subject. DAVID E. FOUTZ, Proprietor, BALTIMORE, MD

$60 Salary. $40 Expenses in Advance allowed each month. Steady employment at home or traveling. No soliciting. Duties, delivering and making collections No Postal Cards. Address with stamp, HAFER & CO., Piqua, O

TORNADO SELF-FEED CORN & COB MILL
Separate Hopper for Small Grain.

3 Sizes
Can Grind Fine or Coarse.
The only really successful CORN and COB MILL made for small powers. Can be fed according to power.
Our 26 sizes American and Hero Mills—too well known to need remarks here. **22,000** NOW IN USE. Sent on trial.
Send for handsome Descriptive Catalogue and special prices of our Corn and Cob Mills, Hero Mills and Horse Powers, Feed Cutters, Wood Saws, etc.
APPLETON MFG. CO. 19 & 21 So. Canal St. CHICAGO, ILL.

Established 1852. **JACKSON BROTHERS**
NEW YORK STATE DRAIN TILE AND PIPE WORKS,
MAIN OFFICE: 76 THIRD AVE., ALBANY, N. Y.


ROUND, SOLE AND HORSE-SHOE TILE, Over 13 inches long. By cargo or smallest quantity. Our new improved machinery makes superior round and sole tile, excelling anything offered heretofore. First Premium wherever exhibited. Price-list on application. Vitrified Glazed Pipe and Tile Machines.

STEAM! STEAM!
Quality Higher, Price Lower.
For Strictly Cash, Complete Fixtures except Stack.
2-Horse Eureka Boiler and Engine, $135
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Other sizes at low prices.
Before you buy get our prices
B. W. PAYNE & SONS,
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H. S. MILLER & CO.,
—MANUFACTURERS OF—
Pure Animal Bone
FERTILIZERS!
For all Crops and Soils. Factory and Principal Office on Passaic River, Newark, N. J. Baltimore Office, 202 & 206 Buchanan's Wharf, foot of Frederick St. Write for "Farmer's Manual," mailed Free.

FERINITE A Mahogany Finish. Can be applied by any one. Two coats on common wood produce a beautiful finish—more attractive than natural wood. Durable economical. Send for circular and sample of Wood finished with Ferinite to SEELEY BROTHERS, 32 Burling Slip, New York. 117 High Street, Boston.

CANADA UNLEACHED HARD-WOOD **ASHES**
Shipped on short notice by rail in car-load lots, at close figures. We have imported ashes for 25 years and guarantee ours to be of the best quality. Before ordering secure our prices and other information.
CHAS. ALLISON & CO.,
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FLORIDA THE CHANCE For Farmers and Fruit Growers!! We have concluded to offer a portion of our specially selected lands, the best in Marion County, in lots of ten acres or more, from $5 to $25 per acre. The land for growing Oranges and other fruits. Also all vegetables and crops grown in Florida. This land is rapidly being settled by people from Ohio, Illinois Iowa, Indiana, New York, Holland, etc. Three Mills, Three Railroads, and only sixteen miles from the county seat (Ocala). High, healthy country. No malaria. Correspondence solicited. Inclose stamp. We refer to the Merchants' National Bank of Ocala, Fla. Address
PERINE & PORTER,
South Lake Weir, Florida.

IMPORTANT TO GROWERS
Having Onions for market. Send address to
S. H. & E. H. FROST,
100 Park Place, N. Y.,
Produce Commission Merchants. Established 1865.

CAST IRON Submerged Stove for warming water in tanks for stock. Patented July 24, 1888. Works in water two feet deep or less, burns two-foot wood; weighs 165 pounds. No solder to melt or sheet iron to burn out. Good for 20 years. Save this address and write for circulars price or agency. Manufactured by
A. McGOWEN,
Independence, Iowa

DO YOU KEEP POULTRY?
IF SO, THEN
SEND AT ONCE
TO
F. B. MALLORY, Flemington, N. J.,
and receive by return mail an Expensive Book (Free for the Next 10 Days) containing *Valuable Information for the Poultry Raiser and Farmer.*

VIRGINIA ESTATE.—Known as "SYLVAN HILL,"—one of the best farms in the State; 2,400 acres, 400 of which are rich bottoms. Will cut three tons Timothy hay to the acre; sells for $20 per ton; farm fenced; barns and stabling for 200 head of cattle. Mansion, costing $10,000, in excellent repair. Railroad station and post-office on farm. Sold to close an estate. Price very low; long time on deferred payments. W. G. STEVENS, Halifax C. H., Va.

JERSEY COW FOR SALE.
The fine Jersey, Edie of Melville, No. 28433. In calf by Rockland Prince No. 21077. Making now 7 pounds of butter per week, without fine feed.
O. J. CHATFIELD, 307 W. 37th St., New York,

HOME STUDY. Book keeping, Business Forms, Penmanship, Arithmetic, Shorthand, etc., thoroughly taught by MAIL Circulars free
BRYANT & STRATTON'S, 415 Main St., Buffalo, N.Y.

LOW-DOWN WAGON on high wheels—only Practical, Common Sense Farm Wagon in the world. Send for 28 reasons why.
GARDINER IRON WAGON CO.,
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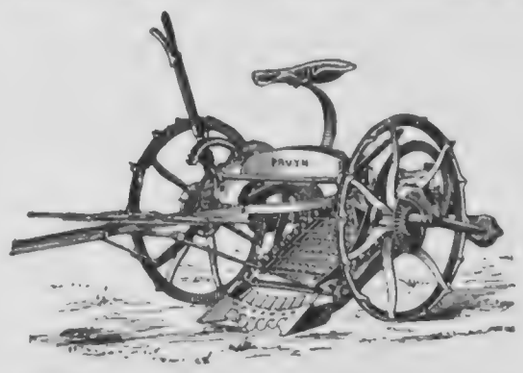
FOR SALE.
Superior Stock Farm
in Peach district of N. J. Convenient to New York, Trenton and Phila. 232 acres. No incumbrance. Easy terms. No agents. Address S. B. PURSELL, Bristol, Pa.

THE PRUYN POTATO DIGGER.


"Get the Best."
See this work before buying.
Send for Circulars to the
PRUYN POTATO DIGGER CO.,
HOOSICK FALLS, NEW YORK.
Please mention RURAL NEW YORKER when writing.

DUTCH BULBS FOR FALL PLANTING
We import, from the best sources in Holland, a large assortment of Bulbs of finest quality which we offer at reasonable prices. Catalogues and price-lists free to all applicants.
D. LANDRETH & SON,
21 & 23 South Sixth St., Philadelphia, Pa.

BONE MEAL for Poultry, Granulated Bone and Crushed Oyster Shells Calcite Ground Flint and Beef Scraps. Send for new price-list
YORK CHEMICAL WORKS, York, Pa.

REGULAR PREMIUM LIST.

LAST year the RURAL NEW-YORKER adopted a new Premium plan. A few standard articles known to be first-class in all respects were described and illustrated, while rates were given to show how easily agents could obtain them. It was intended that these articles should simply serve as representatives, giving an idea of the rates that would be offered on other articles not named in the printed list. This plan worked so well that it is proposed to continue it this year. We, therefore, give rates on a few articles, and announce our willingness to give similar terms on

ANY AMERICAN ARTICLE.

THE RURAL NEW-YORKER goes to a class of practical, business people who do not care for the cheap "novelties" so generally offered as premiums by farm papers. We find that our readers know what they want in the way of tools or household articles. It is never necessary for us to select premiums for them. It is our business to make such terms that the reader or agent will find a paying business in making up a club of subscribers. And this is just exactly what the **Rural New-Yorker** can do—to better advantage, perhaps, than any other farm journal in the land.

REMEMBER THAT WE WILL SUPPLY ANYTHING; IT MAKES NO DIFFERENCE WHAT IT MAY BE.

The few articles that are described in the following pages are standard. There is nothing cheap or shoddy there. We prefer to handle reliable goods made by responsible parties. The **Rural New-Yorker**

NEVER SELLS THESE ARTICLES,

And does not care to make anything from handling them. We are simply in the market for new subscribers. If you can obtain these subscribers you can have all the profit other papers would make on the articles.

Special Clubbing Combinations

Are also offered in connection with the **Rural New-Yorker.** It will pay all who desire to take more than one paper to secure our terms before ordering. As in years past, our clubbing specialties will be the **Rural New-Yorker** in connection with either of the following weekly papers:

CHICAGO INTER-OCEAN, NEW YORK WORLD, DETROIT FREE PRESS

We can also give the lowest possible clubbing rates on the **Rural New-Yorker** combined with any other paper or collection of papers.

NOTES.

☞ The price of the **Rural New-Yorker** from now until January 1, 1891, is $2.00 for single subscriptions. Club rates and agents' commissions made known on application.

☞ We make a very liberal short-term offer.

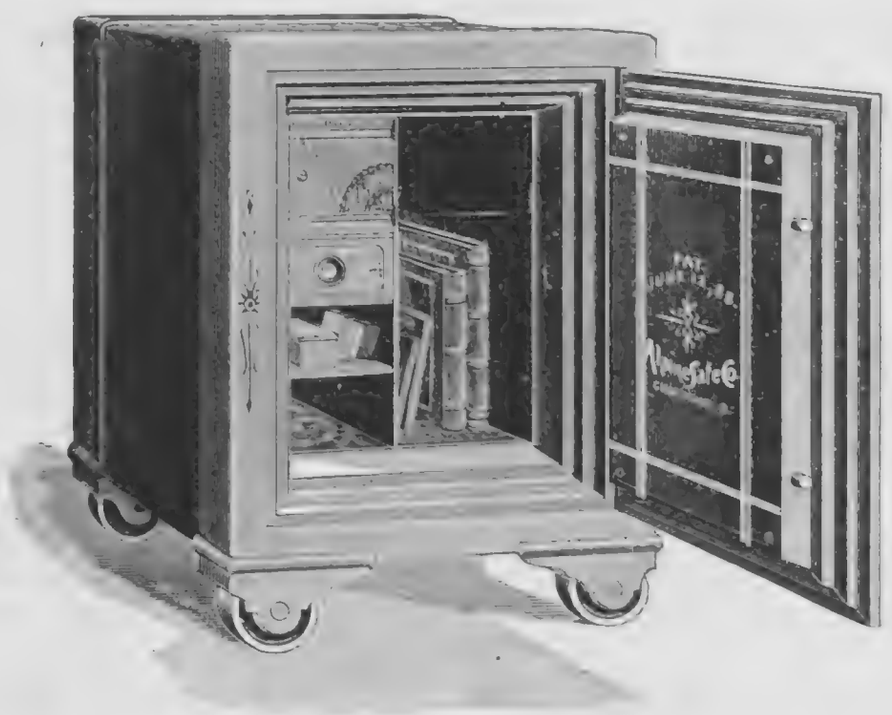
☞ Send for sample copies, posters, circulars, etc., etc.

☞ We will pay the highest wages for reliable agents.

☞ Money sent by letter generally reaches us safely. Still, unless registered, we will not assume any risks.

☞ Premiums are sent at the expense of the agent, unless otherwise noted, either by mail or express as desired. When goods are to be sent by mail, money for postage must accompany the order.

The Alpine Safe.
Given for 30 Subscribers.



THIS is a fire-proof safe with non-pickable combination locks. This is a first-rate premium for a store-keeper or agent who can take subscriptions in connection with his regular business and thus obtain a good safe at little or no cost. Any farmer who keeps valuable papers or securities at home will find this safe very useful. It is well in these days to be prepared for thieves or tramps. Such gentry will be baffled by one of these safes, which will hold your property as securely as though it were deposited in the county bank. The safe we offer is, outside measure, 28 inches high, 18 inches wide and 18 inches deep. It weighs 500 pounds, is well made and is a highly ornamental piece of furniture. Made by the Alpine Safe Co., Cincinnati, Ohio.

Cream Tester and Test Churn Combined.
Given for One New Subscription, Postage Paid.

THIS is a tool that every dairyman should have. We have offered it before so that our readers know what it is. It is simple enough to suit anybody; it is accurate enough to save you a great many dollars during the course of the year. How? It will enable you to pick out your best cows, because it will show you how one cow in your herd compares with another. Very likely you have been feeding good hay and grain to cows that are unable to make suitable returns. Stop such business. Discharge the poor cows. This tester is the detective that will establish their crime beyond a doubt. *For only one subscriber.* Made by Wyman L. Edson, Union Center, N. Y.

Success in Market Gardening.
Given for One New Subscriber.

This book is written by one of the largest and most successful market gardeners in the country, Mr. W. W. Rawson, of Boston, Mass. It is a book every one of our readers should have.

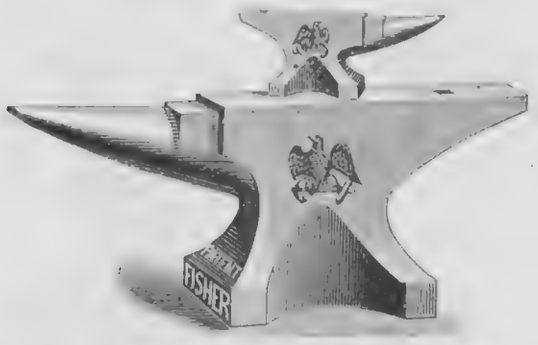
Webster's [Practical] Dictionary.
Given for One New Subscriber.

This is a complete little library in itself. It is of handy size and shape, and it contains just the words needed in every-day conversation or reading. Every child in the country ought to have one of these little dictionaries as a part of its school-book outfit. A teacher can do no kinder act for his pupils than to encourage them in the habit of consulting a dictionary whenever they have the least doubt as to the proper spelling or real meaning of a word met with in conversation or reading. This habit may be considered as being the most important part of the foundation of a thorough education. This little dictionary will lead to a thoroughness and carefulness that will be felt all through life. As will be noticed in another column, we offer Webster's Unabridged Dictionary at a rate that should make it very easy for school districts to supply their schools with this invaluable volume

Enterprise Sausage Stuffer and Lard Press.
Given for Three Subscribers.

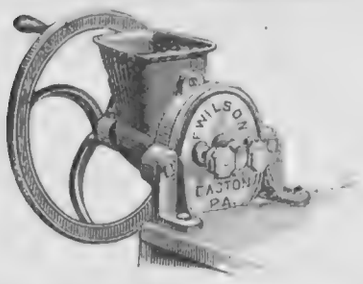
THIS is a machine which should be in every farmer's family. Send to the Enterprise Manufacturing Company, Philadelphia, Pa., for further particulars.

The "Eagle" Anvil.
Given for 10 Subscribers.



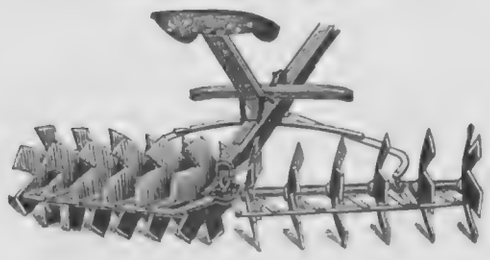
THIS is described as "something for farmers to hammer on," and there is no doubt about its ability to stand a vast amount of pounding. We believe this the best anvil made. It will prove a splendid addition to the farm work-shop. You can't get a better one. Made by Fisher & Morris, Trenton, N. J.

Frank Wilson Bone Mill.
Given for Six Subscribers.



JUDGING from the way our agents call for this premium, it looks as though we shall have to offer it as long as we do business. We never heard of one that did not prove very satisfactory. We never heard of a poultry man who once began to grind bones and shells who ever gave up the practice. Have you a mill? You ought to have one. Here is your chance to get one. The mill is made by Wilson Bros., Easton, Pa.

Clark's Cutaway Harrow and Seeder.
Given for 25 Subscribers.



DURING the past season the R. N.-Y. has given this implement a very careful test on different kinds of soil. We regard it as a very valuable labor-saving device. We shall use it in seeding our potato ground this fall, without using the plow at all. This, we find, is quite a common practice with those who use a Cutaway. The seeding attachment works very well indeed—in fact, this implement "saves work" as few others do. For 25 subscribers, it is a great bargain. Made by the Higganum Manufacturing Co., New York.

Lewis Combination Force-Pump.
Given for Five Subscribers.

THIS pump can be used as a fire-extinguisher, an insect exterminator or as a veterinary syringe. The R. N.-Y. has used it for the two latter purposes; fortunately we have had no occasion to extinguish any serious fire. This pump is very well suited to the use of those who desire to spray a few fruit trees with the arsenical mixtures, because it is light and easily handled and worked. At the same time it is powerful enough to do the necessary work. It is next to impossible in these days to produce perfect fruit without making use of spraying appliances. That is why the R. N.-Y. wants its readers to provide themselves with pumps. The Lewis pump is made by P. C. Lewis, Catskill, N. Y.

Carter's Hand Printer.
Given for Three Subscribers.

THIS is a self-gauging printer that does the work as well as any. It is used by having the butter rolled up and pressing the print through it, the surplus butter going out at a small hole at the side.

There is a very large class of customers who demand printed butter. As they are prepared to pay for the printing, it is policy for the good dairyman to select the tools that will serve his purpose best in this part of dairying. The printer we offer is made by John S. Carter, Syracuse, N. Y.

O. K. Churn.
Given for Nine Subscribers.

THIS is a barrel churn, working end over end, bringing the butter by concussion. This is the true principle of butter-making, as by this method it is easier to be sure that the butter comes in true granular form. The "O. K." is made of heavy white-oak staves, and is put together in the most substantial manner. The castings are made of malleable iron, tinned, and are thus strong and neat and will not rust or stain. The fact of the matter is that the "O. K." is one of the strongest and simplest churns on the market. It will make just as much and just as good butter as any churn on the market, and at the terms on which we offer it, it is a splendid bargain. The churn we offer is No. 2, capacity 15 gallons, price $9.00. We can furnish any other size on the same terms, viz., one dollar in retail value of the churn for each subscription. Made by John S. Carter, Syracuse, N. Y.

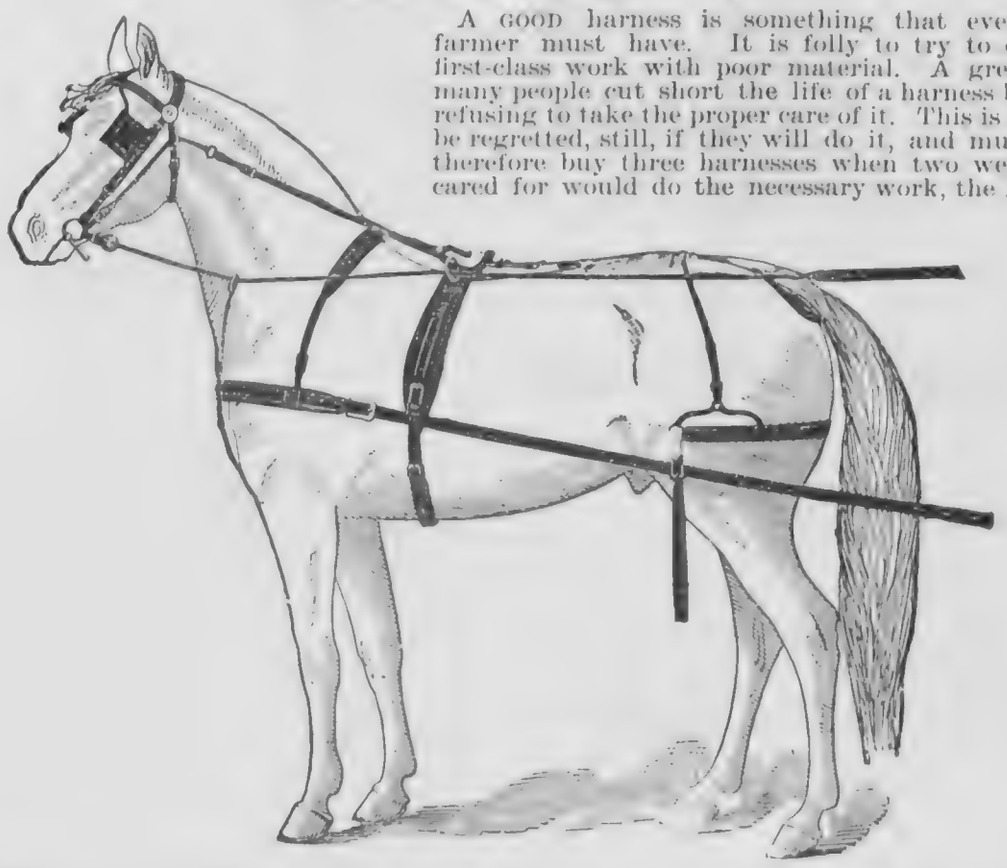
Sand's Patent Triple Motion White Mountain Freezer.
Given for Two Subscribers.

THE writer was taught when a boy to believe two things about ice-cream. 1. It was very unhealthy food. 2. It was far too expensive for ordinary people. These statements were believed until the writer grew up and had to do with a farm of his own. He now knows there is a good deal of nonsense about them. The same elements that make up the ice-cream are eaten every day in the year in other foods. Almost every dairyman nowadays has his own ice, and he can spare a little milk and cream now and then. In fact, the R. N.-Y. believes that the dairyman who does not provide ice-cream for his family, at least once a week, does not live up to his privileges. The R. N.-Y. has tried about every kind of freezer made, but has never found anything to equal the "White Mountain." It is a perfect implement. There should be one in your family and you never will have a better chance to put one there. *Only two subscribers!* The White Mountain Freezer Co., Nashua, N. H.

Montour Range.
Given for Thirty-Eight Subscribers.

WE want the attention of all housewives who are trying to do good kitchen work with an old, broken-down stove. You are wasting force, wasting fuel and wasting health. With a Montour Range your kitchen will seem like a new place. To the husband, father or sweetheart of the above-mentioned lady we may offer a little free advice: You, sir, will never fully realize what life is capable of producing until you bestir yourself, secure the necessary club of subscribers and present this premium to your lady. The Montour is one of the best ranges made. It is fitted with either wood, hard or soft coal grates. It economizes fuel, and is very handsome. Made by the Danville Stove and Manufacturing Co., Danville, Pa.

The Murray Harness.
Given for 18 Subscribers.

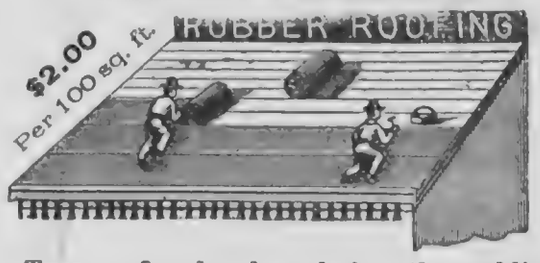


A GOOD harness is something that every farmer must have. It is folly to try to do first-class work with poor material. A great many people cut short the life of a harness by refusing to take the proper care of it. This is to be regretted, still, if they will do it, and must therefore buy three harnesses when two well-cared for would do the necessary work, the R. N.-Y. would like to save them all it can by providing a good harness at cheap rates. The "Murray" harness is a good one, well-made, strong and handsome. For 18 subscribers it is a first-rate premium. We can offer a cheaper harness made by the same house, for fewer subscribers, but this one we believe to be cheaper in the end. We can also quote figures on double harness, saddles and other horse furnishings. These articles are made by the Wilbur H. Murray Manufacturing Co., Cincinnati, Ohio.

The Perfection Coaster
Given for Four Subscribers.

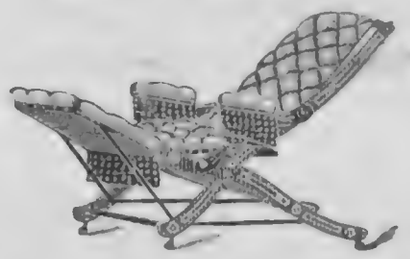
THE great value of this coaster lies in its perfect steering device, which is so easily managed that a boy or girl may safely coast on a steep hillside. Country children who live in sections where hills are found, know the keen pleasure of a good coast. The sleds commonly used are unsatisfactory. The only way to steer them is to drag one foot behind. This wears out the boot and forces a very uncomfortable position. The "Perfection" Coaster is steered by means of a lever. It attains the highest possible speed and is perfectly safe. This coaster is better than a toboggan because it can be used on any hill-side, while the toboggan requires a special track. All the Rural boys and girls both old and young will want one of these coasters. Made by S. L. Allen & Company, Philadelphia, Pa.

Rubber Roofing Outfit.
Given for Eight Subscribers



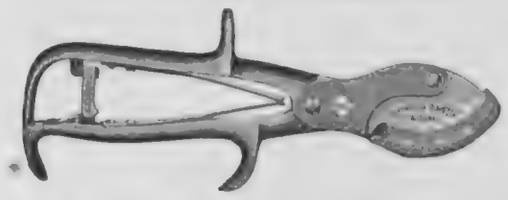
THIS roofing has been before the public for years. Many of our friends have used it and find it an excellent substitute for shingles or slate. We are sure there is a space of roof on your premises that needs just this covering. The outfit we offer consists of 325 square feet of the roofing with the necessary nails, caps and paint. Made by the Indiana Paint and Roofing Company, New York.

Luburg Adjustable Chair.
Given for 13 Subscribers.



THE R. N.-Y. has offered this chair as a premium almost every year it has made up a premium list. As each succeeding year finds more and more agents working to secure it, we reasonably conclude that it is one of the most attractive premiums that we can offer. The R. N.-Y. would like to have each one of its subscribers secure one of these chairs. This would make a very satisfactory showing on our subscription list, and would add greatly to the comfort and contentment of our subscribers. The R. N.-Y. uses this chair every day in the year, and can most heartily recommend it to all who desire a comfortable reclining place. Made by the Luburg Manufacturing Company, Philadelphia, Pa.

Pruning Shears,
Given For One New Subscription.



EVERY person who undertakes to grow fruit will want a pair of these shears. You can go to the store and pay $1.00 for a pair or you can get your neighbor to take the RURAL and thus get a pair for nothing. These shears are like the RURAL—"all right!" They are made by Seymour Smith & Son, Oakville, Conn.

Moody System of Dress-making.
Given for One Subscriber.

Our lady readers will be greatly interested in this premium. It consists of an illustrated system of dress-cutting and a book on dress-making by Prof. D. W. Moody. Experts speak in the highest terms of this system and all who appreciate well-fitting clothes will thank us for supplying this premium at such a reasonable rate. Sent for one subscription, postage paid.

Eclipse Vine and Plant Sprinkler.
Given For Three Subscribers.

This is considered the best device on the market for sprinkling potato vines with a water mixture of Paris-green. It has a sifter attachment so that plaster or ashes can be used if desired. This ought to make a first-rate premium, considering the fact that farmers have more and more trouble each year in fighting insects. This is a very useful premium. It is made by F. A. Tyler, Rome, N. Y.

Farm and Family Scales.

THE farmer who undertakes to do business without a pair of scales works at a sad disadvantage. The science of successful marketing is based upon accurate weighing. The calculating farmer uses the scales. He weighs his milk and thus detects his robber cows with the aid of a cream tester. He weighs small quantities of his fertilizers and weighs the crops that come from them. When he sells an article by weight he weighs it before it goes to market. He works on business principles—the result is success. The careless farmer "guesses" at weights, results and quantities. The R. N.-Y. is so well convinced of the great importance of scales on the farm that it has made special arrangments to supply the celebrated Jones scales as premiums. They are made of all sizes. We call special attention to the following sizes:

PLATFORM BARN SCALES.—The large cut shows the shape. It will weigh from four ounces to 400 pounds. It is well made and reliable in every way. We offer this for 20 subscribers.

"RURAL NEW-YORKER" SCALES.—These scales weigh from one-fourth of an ounce to 25 pounds. Nothing could be nicer for weighing milk or similar products. Every one has the name, "RURAL NEW-YORKER" stamped upon it. Given for three subscribers.

Universal or Family Scales

THE R. N.-Y. has used a pair of these scales for many years. They are used in making the weighings for our experiments and are always reliable. They weigh from one-half an ounce to 240 pounds. Given for six subscribers. These scales aremade by Jones of Binghamton, and *"he pays the freight!"*

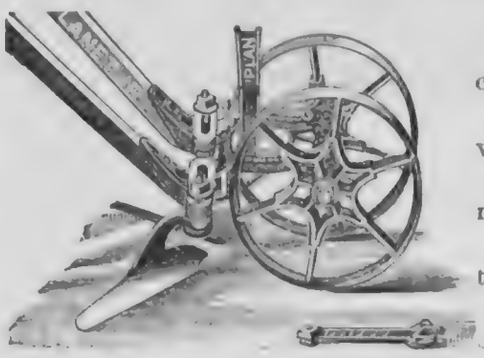
"Grand Rapids" Carpet Sweeper.

Given for Three Subscribers.

THE Grand Rapids Sweeper possesses all the qualities of a broom and dust-pan combined, its brush being so constructed as to be perfectly self-adjusting under the slightest pressure. Lightly running, it will take up anything that a broom will, from any kind of carpet, while if pressure be given to it as with a broom, to remove dirt embedded in the carpet—still running easily—it will work wonders, being more effective than any broom. It is adapted for the lightest as well as the heaviest sweepings. Recently improved with new reversible bail and spring dump for discharging the dirt, and everlasting, pure bristle brush, it is more effective than ever. Its case is unique in shape, made of rich woods and handsomely hand-decorated, which, with the contrast afforded by the color of the rubber band encircling it, makes it the handsomest as well as the best of carpet sweepers. It sells for $3, and is manufactured by the Bissell Carpet Sweeper Company, Grand Rapids, Mich. Eastern branch, 103 Chambers street, New York.

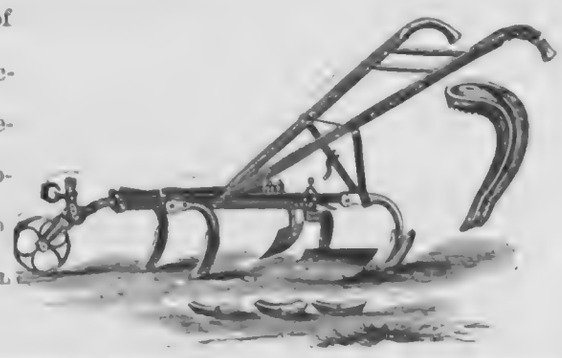
"Planet Jr." Tools.

If there are any farmers who need to be told what these tools are, we can only say that we feel sorry for them. They are behind the times. We offer two of the tools this year, though we can supply, if necessary, any implement made by the "Planet Jr." Company.



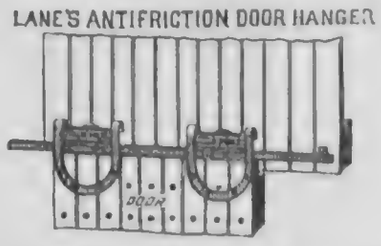
THE PLAIN DOUBLE WHEEL HOE may be seen in the cut. It is a strong yet light implement, made of the very best materials, and with all the latest improvements. You know what it is. It is only a question as to whether you want it or not. It costs $4.50. We offer it for five subscribers.

"PLANET JR." HORSE HOE.—This is the best of the cultivators. It is light, strong and effective in every way. Why use the old horse-killing tools when this one is so easily obtainable? Price, $11. Given for eleven subscribers. All these tools are made by S. L. Allen & Co., Philadelphia, Pa.



Lane's Patent Door-Hanger.

Given for One Subscriber.

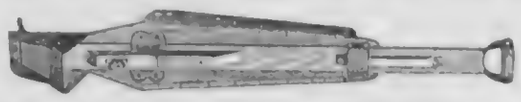


This is for the farmers who want an easy-running door on the barn. We consider this the best door hanger on the market. It runs without friction and does not screech and groan as rusty wheels generally do. The hangers are made in three sizes, to run five, 10 and 15 feet respectively. We offer No. 1. The hangers will run on any ordinary iron track, but if desired, a patent steel track can be supplied. The hangers are made by Lane Brothers, Poughkeepsie, N. Y.

Macomber's Corn Planter.

Given for Two Subscribers.

This is one of the greatest labor-saving machines of the age. It is slow, tedious, backaching work to drop corn by hand in the old-fashioned way. Thousands of these planters



have been sold, and the demand for them increases every year. They sell for $3.50, and are made by S. M. Macomber, Adams, Grand Isle Co., Vt.

Farm, School and Church Bells.

Given for Two, Eight and 25 Subscribers.

Everybody knows how useful a good farm bell is. It is worth its price to hear it give notice of a good meal. In case of fire or of a visitation from tramps the neighborhood can be easily alarmed by a brisk ringing of the bell. We will duplicate the offer of last year, viz., give a bell costing $5 for two subscribers. This bell weighs 50 pounds and is 17 inches in diameter.

Many of our friends, last year, desired larger bells. To accommodate them we have made arrangements to supply the bells, numbers 24 and 26, which are suitable for churches and schools. The No. 24 bell weighs 150 pounds or 225 pounds with mountings. It costs $25, but we are able to offer it for 20 subscribers. The No. 26 weighs 220 pounds or 325 pounds with mountings. It costs $40, but we can offer it for 25 subscribers. These bells are first class in every respect. They are made of an alloy of cast steel and crystal metal. They are of fine, clear tone, convey-

ing sound from three to four miles. They are warranted for two years. Think of the chance we offer school districts or church societies to provide themselves with these excellent bells! Twenty public-spirited men in any district or church society can form a club for the RURAL and thus secure a bell for the church or schoolhouse. Send to Bell & Co., Hillsboro, Ohio, for descriptive circular and catalogue.

Waterman's Ideal Fountain Pen.

Given for Two Subscribers.

A farmer or any one else who fails to use every labor saving device of merit makes a mistake. If you spend five minutes every day for a year getting out your inkstand and looking up your pen, you lose in a year, nearly three working days, to say nothing of loss in worry and ill nature over dry ink-stands and broken or rusted pen-points. The Ideal Fountain Pen is a labor-saving implement just as much as is a harvesting machine or a sulky plow, and every one who has writing to do should have one. It is a pen for every-day use at the desk, or can be carried in the pocket and used when occasion requires. It is a first-class gold pen attached to a hard-rubber pen-holder, carrying ink sufficient for from 12 to 16 hours' continuous writing. The entire pen is plainly shown in the cut. The handle or ink holder is made in two pieces, the point section and the barrel, which are secured together by a screw joint, at which place it is opened for filling with ink. The pen (a first-class gold pen) is held in the point section by the feed bar, which also carries the ink from the reservoir to the pen only so fast as used up in the writing. The fourth piece is merely a cap which covers the pen when not in use, to protect it from injury in the pocket, and also to prevent the ink from drying up, and when removed from over the pen, it is put on as shown in cut, to lengthen the holder for use in writing. We have used this pen for four years, and can fully recommend it to every one as the best pen we have ever seen. One year we handled hundreds, giving it as a premium for two subscribers. It is again offered for two subscriptions, and every one of our friends should secure one. We do not wish our readers to confound this with the cheap fountain pen, or with the old stylographic pen, as it is fully equal to any gold pen made, and is worth a basketful of the cheap, poor trash, and we guarantee it to fit to your hand, or you can change till you get one that does fit. This is a pen that every clerk, school teacher, canvasser or farmer needs. It is made by L. E. Waterman, No. 155 Broadway, N. Y. The prices range from $2.75 to $7. Send for circular as above, see what the pen is, and then go to work and secure one. We know you will never regret it.

The Nos. 1, 2, and 3, are most suitable for ladies' use; we will send either number for two subscribers. The No. 4 is the medium size and is well adapted for ordinary use. We will send one for two subscribers. The larger sizes, No. 5, 6 and 7, will be sent for three, four and five subscribers respectively. If you desire the pen sent by registered mail send 10c. for fee. Farmers, Clergymen, Boys, Girls, School-teachers, Everybody, here is a chance you cannot afford to neglect. No more useful or appropriate present can be found for Christmas, New Year's or birthday, and you can earn one with a little effort. Send to L. E. Waterman, 155 Broadway, N. Y., for circulars.

The Enterprise Meat Chopper.

Given for Three and Four Subscribers.

THIS is another article that we have offered for a number of years—always with very satisfactory results. It is a first-rate article, and we can safely repeat what was said last year concerning it:

A lady, who has achieved quite a reputation as a writer, recently said: "I shall always regret the years I spent trying to keep house without an Enterprise Chopper. It is an indispensable household utensil. No housekeeper who knows its value would be without it for many times the price asked for it." This is by no means an exceptional statement. During the past four years we have used a large number of these choppers as premiums and have yet to hear the first word of complaint against them. Tens of thousands of these choppers have been sold and are in use. They will last a lifetime. We want every housekeeper who reads the RURAL to have one. We would prefer to have you send us the required number of subscribers, but if you cannot do it conveniently, buy one of the nearest hardware dealer. The Enterprise cuts the meat like a pair of shears and does not mash or grind it. The meat is left in as good condition as when prepared with the old-style chopping knife and bowl. We would certainly never think of using any other chopper in our family.

The No. 10, shown in the cut, weighs eight pounds, chops two pounds per minute, and sells

for $3. The No 12 is the same as the No. 10, except that it has legs instead of clamps; price, $2.50. The No. 22 chops three pounds per minute; price, $4.00.

These choppers are made by the Enterprise M'f'g Co., Cor. Third and Dauphin Streets, Philadelphia, Pa.

BOOKS! BOOKS!

As in former years, the R. N.-Y. offers to furnish any book that is published or sold in America. Single books, sets of books or complete libraries will be furnished as desired. Our experience is that most of our agents have some special book in mind. Tell us what your favorite is and we will quote rates on it. Here are a few of our specialties. Similar rates can be obtained for other books.

Willard's Practical Dairy Husbandry.

THIS is still the standard work on dairying in spite of the volumes that have been published since it first appeared. This is a new edition with over 300 illustrations. Price $3.00, given for only three subscribers.

Willard's Practical Butter Book.

THIS is a complete treatise on butter-making on the farm and at factories. Price $1.00, given for one subscriber.

Randall's Practical Shepherd.

THIS is another standard old volume, very complete and reliable. It has been out of print for some years. Price $2.00, given for two subscribers.

Lewis's Practical Poultry Book.

THIS contains full information regarding breeds, breeding, rearing and general management of poultry. It also tells all about caponizing. Price $1.50, given for two subscribers.

How to Hunt and Trap.

IF it be possible for one to learn how to catch or kill wild animals without actual experience in the field, this book will provide the desired information. Price $1.50, given for two subscribers.

Andersonville Violets.

THIS story, published two years ago in the RURAL, has had a large sale in book form. Price $1.00, given for one subscriber.

Works of Charles Dickens.

WE can supply a complete set of Dickens in 15 volumes for only two subscribers. The merit of this set lies in its low price. The paper, printing and binding are not at all what we should expect in a high-priced set. The books can be read easily and with good care will wear well. This is a wonderful bargain at the price, but remember we do not say the books are printed or bound in the finest style of the art.

The Waverley Novels. A Complete Set of 25 Volumes for only two Subscribers.

THESE books are similar to the volumes of Dickens's works described above. All that was said of them can be said of the Waverley Novels.

Miss Alcott's Works.

THESE books cost $1 each. We will send any one of them for one subscription and 10 cents postage.

Uncle Tom's Cabin.

THIS work is always popular. We have more calls for it than for any other volume. Given for one subscription.

"Allegro."

THIS is called an "Italian Music Card Game." It is an instructive game, having for its object an awakening of interest in the study of note reading, the most important part of music. It is entertaining too and thus appeals to children. Given for one subscription. Made by the "Allegro" Card Company, Philadelphia, Pa.

Books That Have Helped Me."

THE star of empire is ever tending Westward. The marvelous growth of Kansas, Nebraska and Dakota, the development of Colorado, Wyoming, Montana, Idaho and the great mineral region between the "Rockies" and the Pacific Coast with its varied climate and productions, afford ample room for millions of industrious people. Circulars and pamphlets gotten up by land speculators, town lot syndicates and railroads are often misleading. If you want reliable information about the great West, you must get it through reputable and responsible papers. Such you will find the Omaha Bee, now in its nineteenth year. Sample copies mailed free. Direct letter or postal card: THE WEEKLY BEE, Omaha, Nebraska.—*Adv.*

Humorous.

The RURAL NEW-YORKER *is prepared to offer very liberal terms to good, responsible* PERMANENT *agents. Correspondence solicited.*

A POULTRY authority says that "chickens should have an ample range." It depends upon the number of chickens. A little chicken will broil pretty well over a very small stove.—*New York Herald.*

"I WOULD like to ask you a question," said a gentleman to a fellow who was spreading himself over four seats in a crowded railway car. "What is it?" "What brand of nerve food do you use?"—*Epoch.*

JACK: "Charley, why don't you propose to the Widow Green's daughter? She's rich and is regarded as the pearl of her sex." Charley: "I know it, my boy, but I dislike the mother of Pearl."—*Jeweler's Weekly.*

MISS PLANTAGANET DE VERE: "That man's attentions to me are most offensive, and he has the reputation of being a fortune hunter. Do you suppose it is papa's wealth that allures him?" Miss Dolly Flicker (thoughtfully): "Why what else *can* it be?"—*Life.*

FIVE HARVEST EXCURSIONS.

THE Burlington Route, C., B. & Q. R. R., will sell, on Tuesday, August 6th and 20th, September 10th and 24th, and October 8th, Harvest Excursion Tickets at *Half Rates* to points in the Farming Regions of the West, Southwest and Northwest. Limit 30 days. For circular giving details concerning Tickets, rates, time of trains, etc., and for descriptive land folder, call on your ticket agent, or address P. S. EUSTIS, Gen'l Pass. and Ticket Agent, Chicago, Ill.—*Adv.*

Miscellaneous Advertising.

DR SETH ARNOLD'S COUGH KILLER CURES COUGHS AND COLDS. PREVENTS CONSUMPTION.

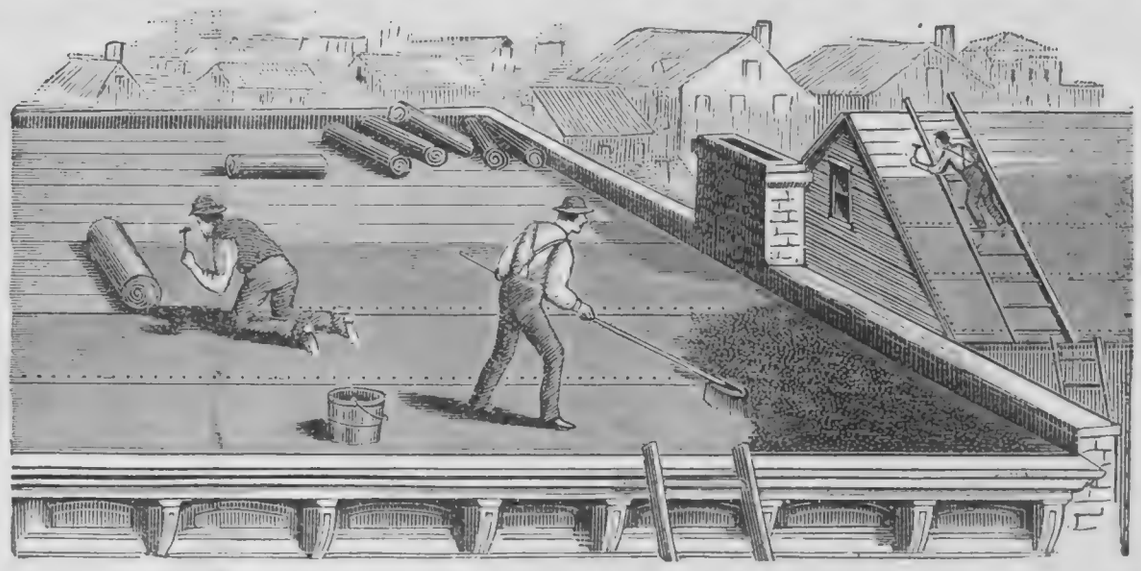
I WAS GIVEN UP to die with consumption by a prominent physician. Was advised by friends to try Seth Arnold's Cough Killer, and much to the astonishment of all it cured me and I am now a well, hearty man. Thomas D. Paine, Jeweler, Woonsocket, R. I. **25c., 50c. and $1 per bottle.** **ALL DEALERS SELL IT.**

AN ELECANT COUNTRY HOME FOR SALE AT A BARGAIN.

Located within an hour's ride of New York City. House has 10 rooms with all improvements: barn 34x20. Two acres of land. Great variety of small fruit, shrubs, etc. Fine location for greenhouses. Price, only $4,500. Terms easy. *Must be sold.* J. H GRIFFITH, Care Rural New-Yorker, N. Y. City.

IF YOU WANT ANY ROOFING

SAMPLE FREE
If you state size of roof.



Hen House or Shed. Complete Roof for **$2.00 Per 100 Sq. Ft.**

For Church, Dwelling, Factory, Barn, Silo and all Out-buildings, be sure and order

GENUINE RUBBER ROOFING.

It is half the price of shingles, iron or tin; easily applied on steep or flat surface or over old shingles, and is durable, fire-proof—ornamental and water-proof.

Send for Book circular.
Free if mention RURAL NEW-YORKER.

INDIANA PAINT AND ROOFING CO., NEW YORK.

QUEEN BEAVER

WITH PATENT HEATING ATTACHMENT.

Wonderful things can be said of man's handiwork within the last half century. The Locomotive has taken the place of the Horse, the Reaper succeeds the Sickle, and the Flail makes way for the Threshing Machine. The ocean "Grey Hounds"—giants in strength and palaces of luxury and comfort—cross from the New to the Old World within the secular days Thoughts are flashed from Continent to Continent, distancing the Sun in his flight, and Edison now says the time is not far distant when a whisper may be heard around the world.

But it is not our purpose to write a dissertation upon this subject. Instead, we wish to call the attention of all good people to an attachment used upon our ranges. While this device cannot take rank among the marvelous, yet it is of wonderful utility and economy. By it we utilize the heat of oven, when not wanted for cooking, to heat upper or adjoining rooms. The arrangement suggests economy.

The cut shows heat pipe leading from the heating attachment, affixed to back of oven of one of our ranges the "Queen Beaver." In the bottom of oven door there is placed a draft slide, through which air is admitted into the oven. Becoming heated, it is passed through an opening in the upper part of back of oven, through an elbow, in which there is an ingeniously devised check damper, into pipe, and then conveyed into upper rooms.

This range has large oven, pedal oven door, opener, Duplex grate, and, in fact, every modern appliance and is made in such a variety of styles and sizes, as to meet the wants of all.

Our line of stoves embraces everything that may be desired in Wood and Coal Cooks, Ranges and Heaters. Our Parlor Heaters are beautiful conceptions.

THE DANVILLE STOVE & M'F'G CO.,
CHICAGO: 120, 122 & 124 So. Clinton Street. DANVILLE, PA.

The TORNADO Feed, Ensilage and Stalk Cutter

AND SLITTER for cutting hay, straw, sheaf oats and cornstalks. The latest and best. For cutting ENSILAGE, it has no equal. It SPLITS and CUTS cornstalks (with or without the ear), at one and the same operation, leaving no sharp corners or edges on the cut pieces to cause sore gums in the mouths of the cattle.

Leading Points of Excellence in the Tornado: Speed, capacity, strength, durability, ease of management, new safety fly-wheel, novel cutting device, improved knife blades, simplicity of construction, positive self-acting feed rollers, independent adjustable and reversible cutter bar, patent automatic stripper bar to prevent choking.

SECTION OF CUTTING CYLINDER.

Send for catalogue giving full information and prices.

W. R. HARRISON & CO., Manufacturers, Canton, Ohio.

WHITMAN'S HAY, STRAW, WOOL AND COTTON PRESSES.

WHITMAN AG'L. CO., GENERAL MANUFACTURERS. ST. LOUIS, MO.

EVERY LADY WANTS A SILK DRESS

This is your opportunity. **A new departure.** SILKS direct from the manufacturers to **you.** Our reduced prices bring the best goods within reach of all. We are the only manufacturers in the U. S. selling **direct to consumers.** You take no risk. We warrant every piece of goods as represented, or money refunded. See our references. We are the oldest Silk Manufacturers in the U.S. Established in 1838, with over 50 years' experience. We guarantee the

CHAFFEE DRESS SILKS,

for richness of color, superior finish and wearing qualities, to **be unexcelled by any make of Black Silks in the world.** We offer these Dress Silks in Gros Grains, Satins, Surahs, Faille Francaise and Aida Cloths, in Blacks only.

Send us a 2c.-stamp (to pay postage) and we will forward you samples of all our styles free with prices, and you can see for yourselves.

O. S. CHAFFEE & SON,
Mansfield Centre, Conn.

Refer, by permission, to First National Bank, Windham National Bank, Dime Savings Bank, Willimantic Savings Institute, of Willimantic, Conn.

RECOLLECT we send to all parts of the U.S. With each Dress Pattern we present the buyer with **1000** Yards Sewing Silk, and enough Silk Braid to bind bottom of dress.

THE GOODS are delivered to you all carrying charges **PREPAID**

ISLAND HOME STOCK FARM.

Savage & Farnum, Importers and Breeders of Percheron and French Coach Horses, Island Home Stock Farm, Grosse Isle, Wayne County, Mich. We offer a very large stud of horses to select from, we guarantee our stock, make prices reasonable, and sell on easy terms. Visitors always welcome. Large catalogue free. Address **Savage & Farnum,** DETROIT, MICH. **Percheron Horses.** *French Coach Horses.*

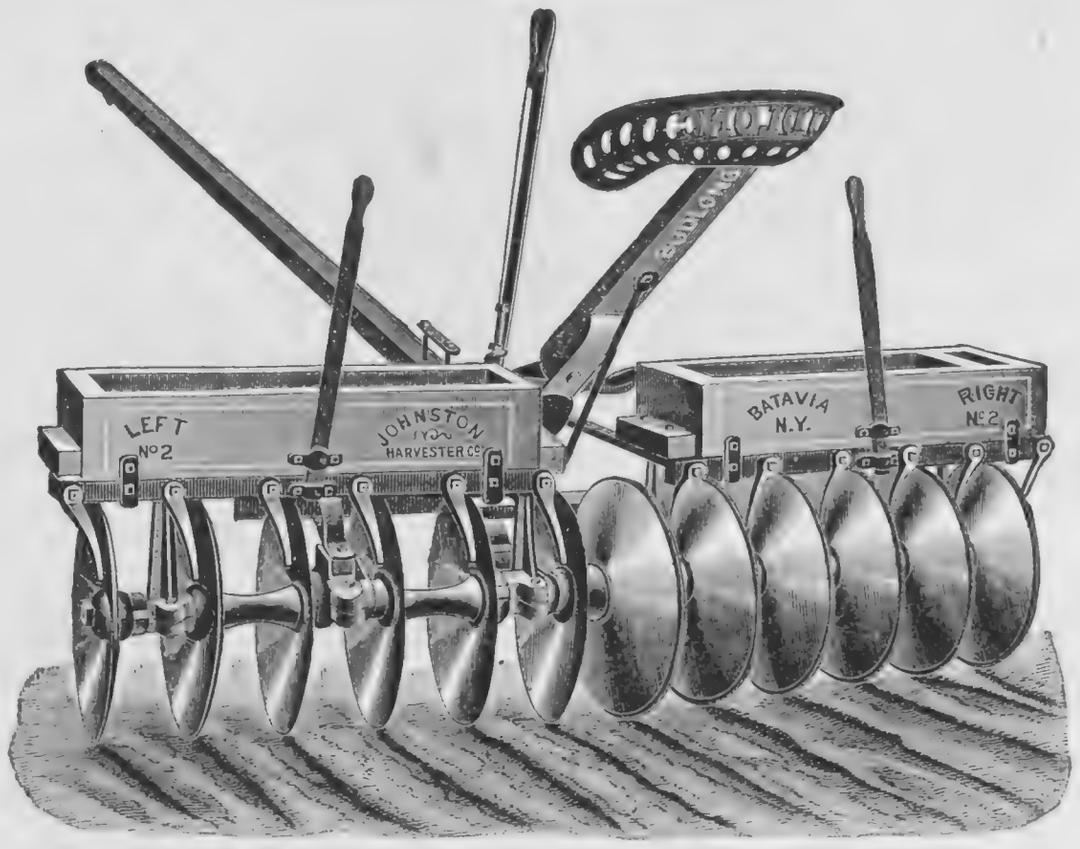
THE PERKINS' Wind Mill

is the Strongest and Best Self-Regulating Wind Mill made. Full instructions for erecting sent with the first mill. **All Wind Mills warranted.** For Circulars and Prices address **THE PERKINS' WIND MILL AND AX CO.,** Agents Wanted. Mishawaka Ind. Mention Rural New-Yorker.

ROSSIE IRON ORE PAINT.

Is made from Red Oxide Ore—is the best and most durable Paint for Tin, Iron and Shingle Roofs, Barns, Farm Utensils, etc.; *will not crack or peel,* will protect roofs from sparks. Samples free. Ask prices of **ROSSIE IRON ORE PAINT CO.,** Ogdensburg, N. Y.

Continental Steel Frame Binders, Mowers and Reapers.
Continental Rotary Disk Pulverizers and Cultivators.



The Best is the Cheapest.

THE JOHNSTON HARVESTER CO.,
Send for Catalogues. **BATAVIA, N. Y.**

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LISTER'S

Agricultural Chemical Works,

SOLE MANUFACTURERS AND PROPRIETORS OF ALL BRANDS OF

Lister Brothers' Animal Bone Fertilizers

Principal Office and Works at Newark, N. J.

The following well-known and very popular Brands of Fertilizers are offered to the Trade:

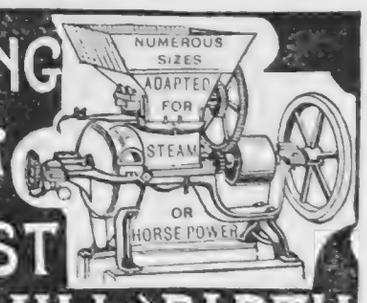
Standard Phosphate, Ammoniated Dissolved Bone, Harvest Queen, Potato Fertilizer, —LISTER'S— **Corn Fertilizer, Celebrated Ground Bone, Tobacco Fertilizer.**

These Fertilizers are Guaranteed to be Made from Animal Bones, and not from Phosphate Rock.

J. W. Sullivan, Agent, Monrovia, Md.: LIBERTYTOWN, Frederick County, Md., April 4th, 1889
I have been using "Lister's Standard" on my wheat land for the last eight or ten years. Previous to tha time I used *good fertilizer*. I have for many years kept an accurate account of my yearly yield of wheat Since I commenced using the "Standard," I find by careful calculation that my yield of wheat has increased fully 50 per cent. I regard "Lister's Standard" as the most reliable fertilizer I have ever tried, and, of course, will use no other so long as it is procurable at a reasonable price. Yours &c., D. W. HAMMOND.

LISTER'S AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.
All inquiries in regard to Chemical Fertilizers and their uses will receive prompt attention. Address office,
201 & 203 O'Donnell's Wharf, Baltimore, Md.

THE SCIENTIFIC GRINDING MILL



GRINDS EAR CORN with or without Shucks on and all small Grains, **in fact everything which can possibly be utilized for feed.**
SAFETY BOTTOM and other Practical Devices to prevent breakage should iron accidentally get into Mill.
GRINDING PLATES reversible, self-sharpening, double the capacity of all others. Sold on trial. All Mills fully guaranteed. Simplest, lightest running, strongest, fastest grinding. Send for circulars.
THE BEST MILL ON EARTH
THE FOOS MANUF'G. CO. SPRINGFIELD, O.

The Best WASHER

We will guarantee the "LOVELL" WASHER to do better work and do it easier and in less time than any other machine in the world. Warranted five years, and if it don't wash the clothes clean without rubbing, we will refund the money.
AGENTS WANTED in every county. We can show proof that agents are making from $75 to $150 per month. Farmers make $200 to $500 during the winter. Ladies have great success selling this Washer. Retail price, only $5. Sample to those desiring an agency $2. Also the Celebrated KEYSTONE WRINGERS at manufacturers' lowest prices. We invite the strictest investigation. Send your address on a postal card for further particulars.
LOVELL WASHER CO., Erie, Pa.

ONLY 10 Cts. will bring you that great Farm paper, **OUR COUNTRY HOME, for 3 Months.** Every country home should subscribe for this grand farm monthly. Every number is filled with articles from the best farm writers in the land. Ladies will find many hints for the home. **Every Subscriber** can enjoy the advantages of our **Purchasing Department.** We buy for our subscribers any article of merchandise they may wish, no matter what. This department alone will save you many times the cost of our paper. Send **10** cents at once for **3 months subscription** and see for yourself. Address **Pubs. Our Country Home, 88 Fulton St. N.Y**
EXTRA.—We want to know what papers bring us the most subscribers, and if you will mention this paper when you write, it will pay you, as we will send the 1st, 10th, 20th, 50th and 100th persons who mention this paper a full set of the **Works of Charles Dickens**, 12 large volumes, absolutely free.

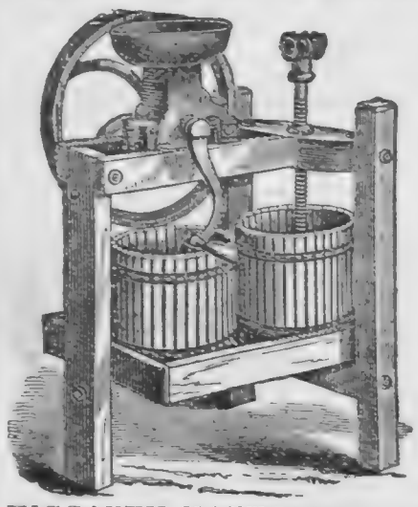
ASPINWALL POTATO PLANTER

Better than Ever.
Absolute Guarantee given to do PERFECT AND RAPID WORK.
PLANTS CORN DISTRIBUTES FERTILIZERS
Write for illustrated circular. *Mention this paper.*
ASPINWALL MANUFACTURING CO.
THREE RIVERS, MICHIGAN.

Stoddard Creamery
WITH SURFACE SKIMMER.
Superior to all Others.
Send for Free Catalogue of Butter-Making Goods for Private Dairies and Factories.
MOSELEY & STODDARD MANUFACT'G CO., Rutland, Vt.

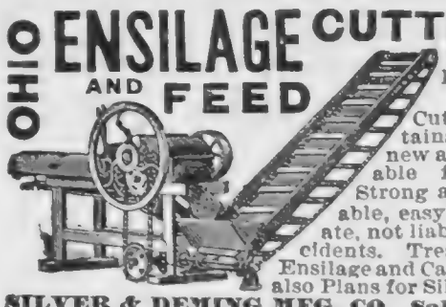
PISO'S REMEDY FOR CATARRH.
Best. Easiest to use. Cheapest. Relief is immediate. A cure is certain. For Cold in the Head it has no equal.
CATARRH
It is an Ointment, of which a small particle is applied to the nostrils. Price, 50c. Sold by Druggists or sent by mail. Address, E. T. HAZELTINE, Warren, Pa.

NEW CIDER MACHINERY.



Send for new Illustrated List of Cider Machinery. Three new patterns and seven sizes from small family size to large 8-barrel press. Please mention RURAL N.-Y. when writing
HIGGANUM MANUFACTURING CORP.,
HIGGANUM, CONN.
WAREHOUSE: 38 So. Market Street, Boston, Mass.

OHIO ENSILAGE AND FEED CUTTERS



Our Improved 1889 Cutter contains many new and valuable features. Strong and durable, easy to operate, not liable to accidents. Treatise on Ensilage and Catalogue, also Plans for Silo, Free.
SILVER & DEMING MFG. CO., Salem, O.
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—FOR—
Heating Water, Slaughtering, Cooking Feed, Creameries, Laundry and Bath Use, Canning Factories, Cheese Factories, Greenhouses, Henneries, &c.

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CHURNS and other Dairy Supplies at unheard of prices. Circulars for stamp. **W. L. EDSON,** Union Center, N.Y.

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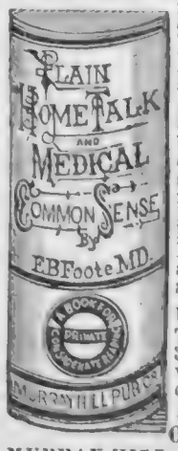

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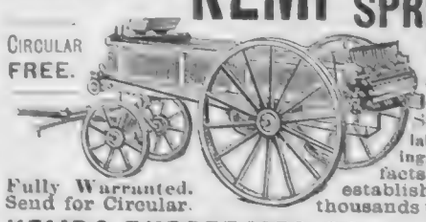

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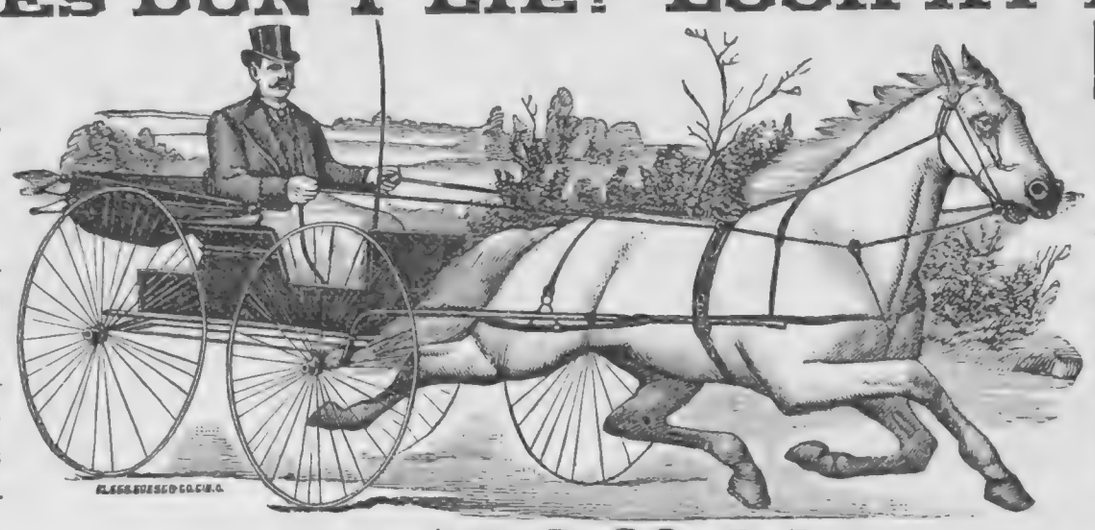

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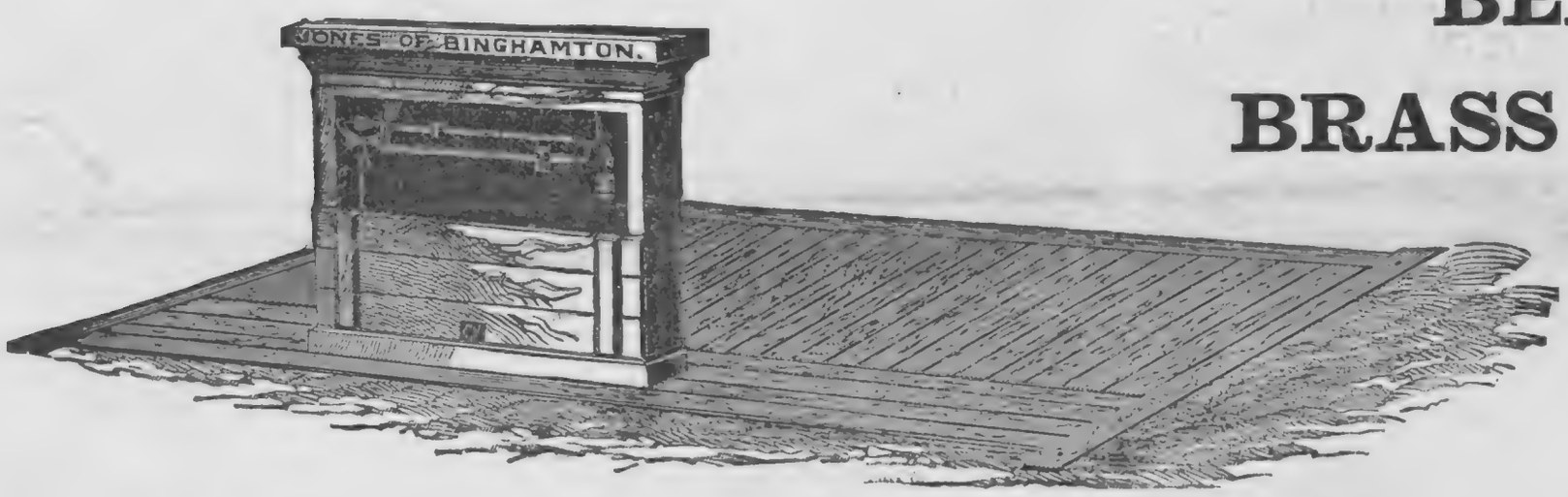

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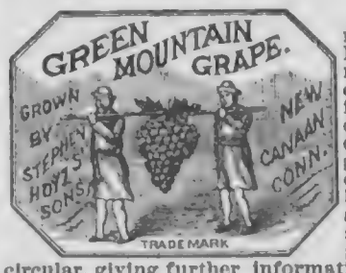

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

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The Herdsman.

A GROUP OF NEVADA CATTLE.

THE picture shown at Figure 246 is a copy of a photograph taken on the farm of Mr. Samuel Davis of Carson, Nevada. The big bull in the foreground is a Holstein—"Saratoga" 3,300, and the little girl is the eight-year-old daughter of Mr. Davis. The picture was made, originally, to illustrate the gentle character of these animals. We are very glad to print it, because many Eastern people seem to have an idea that the wild Texas steer is the true type of all Western cattle. The dairy animal is by nature a docile creature, and kind treatment of stock will give satisfactory results in any part of any country. We do not see that the "dehorner" has much of any business inside Mr. Davis's yard.

THE PAST HISTORY AND FUTURE PROSPECTS OF THE BEEF-PRODUCING INDUSTRY IN OHIO.

JUDGE T. C. JONES.

Beef cattle raising and marketing in Ohio over half a century ago; character of the farms; impecuniosity of the farmers; quality of the cattle; early drives to the Baltimore and Philadelphia markets, profits of the farmers; prices to stock-growers; mode of feeding; the great extent of the trade; railroad transportation supersedes driving; soil exhaustion.

THE writer has been familiar with the condition of the cattle-growing industry, and the general practice of the farmers engaged in it, in the rich valleys of this State for more than half a century. Indeed my recollection of the practice of cattle growers, and the quality of their stock in the Scioto Valley covers a period of more than three score years. In those early days our people were comparatively poor; they had very little capital except what was invested in their lands. In that portion of the State known as the Virginia Military District, embracing all the lands between the Scioto and the Miami Rivers, there were many large estates, holdings of 500 to 2,000 acres being quite common. In other districts the farms were generally small, averaging but little, if any, more than 100 acres each. But the occupiers of these small estates constituted then, as they do at this day, the great majority of our cattle-growers. Then, as now, every farmer must have a few cattle. The work ox was then almost as essentiai on every farm as the dairy cow, which has always been regarded as a necessity in every family.

The quality of our cattle, descended, as they were, from good animals imported from Europe, mostly from Great Britain, was pretty good. In breeding, attention was given to the maintenance of useful rather than fancy properties. The calves of the cows that were good milkers, and of good form, and thrifty feeders were generally reserved for breeding, while the offspring of the poor milkers and the "raw-boned" sort were drafted for slaughter. Attention was also given to the disposition of the breeding stock. The restless and the vicious were regarded as not only dangerous but unprofitable. But the great defect in the character of Ohio stock in the first third of the present century was the absence of uniformity in essential characteristics. No attention was given to breeding for uniformity of type, and the ancestors of our stock being imported for the most part before systematic improvement in breeding had been established in Europe, we had no cattle that were thoroughbred, none, that is, that had been bred to a uniform type in useful properties. Our cattle were of all colors—red, black, brindle, spotted (pied), line-backed, etc. Some had long horns, but the great majority were middle-horned, while the hornless sorts were not uncommon, though we had no polled breed, nor was it supposed in those days of practical experience that the absence of horns was any special advantage.

In the early history of our agriculture the great want of the inhabitants was money. The farmer could not realize cash for his products, because they could not be sent to market. As early as the year 1805, George Renick, of Chilicothe, started a lot of 68 head of fat cattle for the Baltimore market, driving them by way of Moorfield, Hardy County, Virginia, where 21 of them were sold for $20.95 per head; one was given to Mr. Renick's father, then living near Moorfield, and the remaining 46 head were sold at Baltimore, the profit on them, after deducting all expenses, being $31.77 per head.

Mr. Harness Renick from whom I have this account, states that there is no entry in his father's books showing the first cost of these cattle; but they were doubtless good in quality for the period, and fully ripe in condition. Mr. George Renick who, besides being a large land holder, was engaged in the mercantile business of Chilicothe, was the first to conceive the idea of sending to the cash markets of the Atlantic the products of the rich soil of the Scioto Valley by this method, the profits of which were highly satisfactory during all the years of the early history of our agriculture. But the prices realized to the breeders of these cattle were generally very low, as shown by the following furnished by Mr. Harness Renick from his father's book:

1818,—76 head of cattle were purchased at an average price of $20.75 per head. Twenty-six head on hand put down as worth $25 each.

1822,—325 head, net cost $15.45 per head—90 of these were Kentucky stock, which cost, including expenses, $9.71 per head.

1823,—300 head, cost per head $12.75.

1824,—303 head, cost per head $9.40.

1825,—212 head, cost per head $13.68. Twenty-seven of these were bought of Governor Worthington.

These cattle were well matured, generally from four to five years old. The sales at Baltimore and Philadelphia during these years show a profit of from $19.95 per head, clear of expenses, to $31.91.

Beef cattle were somewhat higher in 1828 to 1830; but prices continued low until the great expansion in the currency caused by the large issues of the State Banks in 1836. This expansion of the currency was followed by a general suspension of specie payments in 1837. This derangement in the currency with changes in duties on foreign imports, caused the most severe depression in prices of agricultural products ever experienced in our history. Still the method of marketing our crops by driving fat cattle to market, "with hogs to follow," inaugurated by George Renick in 1805, continued until superseded by the railway transportation in 1850 to 1852. During the last 10 or 12 years of its existence the volume of this business was enormous. In our rich valleys corn was the great staple crop, and excepting the limited amount consumed by

A GROUP OF NEVADA CATTLE. From an Indistinct Photograph. Fig. 246.

the distilleries, the important consumers were the feeders of hogs and cattle. I remember making inquiry in regard to the number of cattle fed in a single year in the county of Pickaway, and was surprised to find that it amounted to no less than 14,000 head. The bullocks probably averaged from 1,400 to 1,500 pounds per head, and were fed in lots of 100 bullocks with,say,200 light hogs to follow.

The method was to arrange two feed lots in a dry, sheltered locality, with a proper and convenient supply of water. The corn was hauled from the shock on a low wagon with a long rack by two yokes of oxen. The pigs meantime occupied the other lot, from which they would be removed before a fresh load would be distributed. By this method it is believed that very little corn was wasted. The undigested grain was picked up by the hogs and found to be more readily assimilated by them than the dry corn. The quality of the beef produced under this system was excellent; being fully matured and fat, it was rich in juices and of superior flavor. But in one sense the practice was expensive. The cattle were well grazed and were allowed from 75 to 100 bushels of corn each with the fodder during the last season's feeding, say, from October to March or April, having been "half fed;" that is, consuming 40 to 50 bushels of corn each the previous winter. This was the method in the corn-growing valleys, to which the cattle were driven from the grazing districts in this State and from Kentucky, and, after 1830, to some extent from Illinois.

Soon after the construction of railways the price of grain advanced, and farmers began to grow more wheat and to devote less land to corn and grass, until at this date even on our richest lands, as compared with the old practice, but a small moiety of the crops are fed out on the farm. The opulent proprietors of many of the large estates in our corn-producing districts are in the habit of leasing their lands to tenants for one half the crop of grain to be delivered at the warehouses at the neighboring stations on the railway or the canal. To compensate for this enormous drain upon the fertility of the soil some farmers are expending large sums of money for commercial fertilizers, in the vain hope that the infinitesimal doses will compensate for the wholesale removal they are annually making of grain and hay, and straw, etc., etc.

Delaware County, Ohio.

(To be Continued.)

HOLSTEIN BULL VERNON.

THIS bull, whose picture is shown at Figure 247, is owned by our corespondent J. W. Ingham, of Pennsylvania. We have had considerable to say in times past about the peculiar merits of Holstein cattle. Mr. Ingham gives the following reasons for selecting this breed for his purpose:

"I desire cattle that have been bred especially for dairy purposes and which are large enough to furnish beef, when beef is desirable. These cattle are as thoroughbred as any stock in the world. They have been bred a thousand years for the dairy, and the breeders in aiming for the highest excellence in milk production, did not neglect size, and comeliness. If a cow is a machine for making milk out of grass, hay, bran, etc., then the larger machine is capable of performing the most work. A large engine requires more fuel and water to make steam than a small one, but it furnishes enough more power to pay for the extra fuel and water. In my opinion an average Holstein-Friesian cow will furnish as much butter as an average Jersey cow on the same amount of feed, and on a larger amount of feed will do still better."

Farm Topics.

The Dressed Beef Trade.

WHAT ARE YOU GOING TO DO ABOUT IT?

"1. *Has the trade in Chicago dressed beef made itself felt in the farming interests of your section?*

2. *To what extent has it affected the raising and fattening of beef cattle?*

3. *Has it changed the business of local butchers to any extent?*

4. *Is the change an advantage or disadvantage to farmers, and to what extent?*

5. *What can you suggest as a means of fairly regulating the matter?*"

HOLSTEIN BULL, VERNON. FIG. 247.

FROM M. H. C. GARDNER.

All farmers, especially those in the East, should be interested in the subject of refrigerator meat, or, more properly, Chicago dressed beef, obtained from Western cattle fattened on cheap ranges, at a cost that would be ruinous to an Eastern farmer, taken to the immense abattoirs and dressed, placed in refrigerator cars and shipped to the Eastern States by the railroad companies, which by reason of large contracts with the dressed beef men, charge a very low figure for freights. This meat comes to a building erected on purpose for the business on a switch in some town that is central to a large local territory, and is then distributed to the meat markets 10 to 20 miles around. This subject I say, is what has spread consternation, and made low prices rule for beef among the farmers of the East. A few years ago there were farmers who, in addition to their dairy business, fattened a few steers, perhaps two or three yoke of oxen during the fall and winter for early spring beef; but times have changed and the advent of Chicago beef precludes any possibility of fattening any meat for profit any more. Butchers in large places, like Middletown, used to scour the country for miles around for steer and good cow beef, veals, lambs, sheep, etc., and pay a fair price for them; but this is all changed. They will not now even look at, or even talk to you about a fat cow, for in a few minutes or hours at most, they can get direct from the refrigerator just such meat and as much of it as they want, and they prefer to do it because there is no profit in dressing a fat animal for the by-products, and tallow and hides rule in price very low.

A few months ago this very subject of Chicago beef came up and was discussed at our farmers' club—the Westtown Farm and Garden Club—and it made the farmers feel glum as they discussed it, and no radical remedy was suggested that could be available. Leg'slation was spoken of; but past experience shows that it is a hard matter to legislate against powerful corporations. They can get what favorable laws they want, for, as the late James Fisk of Erie Railroad notoriety, said, when he wanted a particular law or bill passed for the benefit of his road, he went up to Albany and bought it. This kind of legislation puts farmers in the back-ground; so the club seemed to think that there was no outlet or remedy and that we would have to "grin and bear it."

Farmers here sell milk exclusively and it is a serious question what to do with the stock that is turned off fat. It is considered a good sale to get $25 or $30 for a cow that perhaps was bought and proved to be a poor milker, for which $45 or $50 were paid perhaps a year or two before. The country butcher will drive up to the farmer's door on his semi-weekly trips with Chicago beef in his wagon, which we must buy or go without beef altogether, and in the meantime we may have one or two fat cows to dispose of. He may perhaps buy one, now and then, but at a ruinously low figure. So I must candidly admit that I cannot see a very brilliant future for the dairy farmer in the way of getting rid of his fat stock at a paying figure.

Orange County, N. Y.

FROM F. E. VAN EPS.

1. It has. The change is manifested in the low price of fat cattle.

2. Very few beef cattle are being raised in this section. Many who were in the habit of buying cattle in the fall and winter to feed for beef have given it up entirely, the price of fat cattle being so low as not to pay the cost of feed.

3. No; except to lessen their work and increase their profits.

4. A disadvantage. Many are keeping cows and furnishing cream for the creamery; others cannot do this, not having summer feed, and they are therefore at a loss how to make the manure that is needed on the farm.

5. I give it up.

Ontario Co., N. Y.

FROM J. H. PORTER.

The trade in Chicago dressed beef has hurt the farming interest here to some extent, as it has made less demand for home-grown beef. For the past few years it has been more profitable to sell calves in the fall. All the good steer calves have been bought up and shipped to Chicago and from there they go out on the plains—some as far as Colorado. Some farmers here go to Buffalo and buy a carload apiece of steers in the fall, feed them through the winter and take them back and sell them in the spring, but it hasn't paid for the last few years; sometimes they have to sell them at about the same price they paid for them.

3. It has changed the business of butchers to some extent. They used to come out through the country and buy up all the cattle; now they scarcely come at all.

4. The change is a decided disadvantage to the small farmer who has but a few fat cattle to sell.

5. I don't know how the business can be regulated unless a tax can be imposed on all beef brought into the State or unless a stop can be put to the importation of any dressed beef at all.

North East, Pa.

FROM W. B. PRATT.

Western dressed beef is rarely seen in small inland village markets, but its free use in larger places along railroad lines makes it govern the price of home-grown animals. There are fewer buyers searching through inland districts for supplies for local markets than formerly, and the interest felt in growing and feeding cattle is much smaller. Consumers doubtless get cheaper beef, and in that way realize something from the public or cheap lands of the West in which they have a common interest with all the other people. The consumers out-number the producers and should therefore be first considered.

The way to "fairly regulate" whatever is bad in the matter would seem to rest with the people to install an administra-

tion that will not set the pernicious example of voting some men's earnings into other men's pockets on a pretense of "protecting industries;" when the real object is to protect individual or corporate greed, and which will treat all combinations to control production and prices as conspiracies against the public weal to be roughly handled without mittens. All interference with the free, easy and natural operation of supply and demand, save for purposes of raising public revenue, whether by combinations inside or outside of congressional halls, start because somebody scents something to be made out of them, not *for*, but *from* the great producing crowd in which the farmers have most prominence.

Prattsburgh, N. Y.

FROM A. L. CROSBY.

1. Yes.

2. It, and the discriminations of the railroads have made the raising and fattening of beef cattle in this section a very uncertain business. If the railroads favor the live meat interests in the fall, farmers will buy cattle to feed during the winter expecting to get fair prices in the spring; but when spring comes the railroads may have changed their rates in favor of the dead meat trade, and farmers will get low and ruinous prices for their cattle. But, apart from the action of the railroads, the immense quantity of dead meat shipped here has injuriously affected the beef interests of farmers.

3. Yes; many of them sell nothing but Chicago dressed beef.

4. A great disadvantage, as, though the farmer may buy his fresh beef cheaper—and this is not a very large item in most farmers' accounts—he can make little or no profit in feeding his crops to beef cattle.

5. Break up the trusts. "How can that be done?" By farmers' votes. "When?" As soon as the farmer will learn to vote for principles, not parties; when he will ask, not whether the candidate for office is a member of his party, but whether he is honest and whether he will use his influence to enact laws that will give the farmer as good a chance as any other citizen to make a fair profit on his labor.

"Will that time ever come?" It surely will, but things must get to their worst, they haven't touched bottom yet.

Catonsville, Md.

FROM A. G. STURTEVANT.

In this section neither the local butchers nor the stock growers as yet have felt any bad results from the Chicago dressed beef trade, owing to the universal prejudice of the people against it. The sale of it has been tried and discontinued. In the city of Wilmington it is sold to some extent. What effect it may have locally I cannot say. If a State has the interest of its farming public at heart as all candidates for offices would have us believe, it can easily protect its farmers by passing a law that all beef should be inspected on foot within the State before killing. This would be effective.

Dover, Del.

R. N.-Y.—It is rather doubtful whether such a law would be constitutional. In States in which such laws have been passed, whenever their constitutionality has come before the courts the decision has always been adverse.

FROM C. M. LUSK.

Broome County does not raise very many cattle for beef. It is principally a dairy section and turns off only dry cows and working oxen when fat. The trade in Chicago dressed beef has made itself felt among us, as we are unable to sell our beef stock, there being no buyers. Up to two or three years ago, the butchers from the city of Binghamton came out in the country to buy beeves to supply their markets, and country butchers also bought home cattle. Now, almost all buy Chicago dressed beef, and we have no market for our fat cattle. It has made a great difference with the business of local butchers. As they buy Western dressed beef, we have no sale for our fat cattle. We used to supply them entirely. The change is a disadvantage to the farmers and cannot be otherwise. The number of slaughter-houses in Broome County is very limited, whereas two or three years ago almost every market had its slaughter-house, and men out buying.

The butchers claim that they can buy in just such quantities as they desire, from a side upwards, and can have it every day without the anxiety of looking after it, and that the beef is of a better and more even grade, and that their customers prefer it at an advance over the price of home-raised beef. This being the case, I can suggest no remedy. If it be a fact that the meat is superior and that people prefer it to home beef, I cannot see how the trade can be stopped. I live 20 miles from the city of Binghamton. Years ago men were here from Binghamton, Philadelphia and other places to buy our fat cattle, and for the last three or four years there has been a continual falling off of buyers; now a buyer of fat cattle is a curiosity. In all probability they can buy Western cattle and Western beef to a better advantage. It is hard on us to compete with the Great West in beef, pork, butter and grain, as it has an advantage over us in the cost of production, and it costs me as much to get a tub of butter or anything else to the city of New York as it costs men to get their produce there from Buffalo, and the freight is nearly as much as that from Chicago. Therefore I can "suggest no means to regulate the matter."

Broome County, N. Y.

FROM SIMON EMERICK.

The Chicago dressed beef trade has made itself felt in this section. The change is manifested by lower prices of beef to the consumer and consequently lower prices for live cattle. It has affected the raising and fattening of beef cattle in this way: whereas the business formerly paid a small profit, now it would not pay expenses. This can be said especially of stall-feeding and preparing cattle for the spring market, consequently this industry has been almost entirely abandoned in this part of the country. Only a few local butchers have retired from the business even in the city of Dayton, where there is an estimated population of 60,000. Some of them buy the dressed beef, while the far greater number purchase their supplies on foot as formerly, but, as I have intimated, at lower prices. Of course the effect proves detrimental to the farmer's interest, and to this extent it cuts off a demand for one of the products of the farm and with it one of the sources of the supply of stable manure.

It would, obviously be a difficult matter to suggest any means by which this outgrowth of steam transportation by rail can be fairly regulated in the interest of the farmer. Whatever may be said of the merits or demerits of protection to home industries, the principle cannot be applied in this case, as the people of the United States occupy one common country, and therefore should enjoy equal privileges and facilities in interstate commerce trade. Dakota wheat has certainly proved detrimental to the farmer's interest here in Ohio; yet it would be absurd even to talk about preventing its introduction here. If dressed beef can be shipped from Chicago to Liverpool, England, in prime condition for human food, it assuredly can be shipped from Chicago into Ohio in as good order, and therefore would be a legitimate article of commerce. Of course, our legislature has the power and the undoubted right to prevent the sale of adulterated and unwholesome food in our State; but the exercise of this power would not necessarily exclude Chicago dressed beef. However much we may inveigh against the monopolistic character of the St. Louis and Chicago capitalists who have rendered the cattle industry so unprofitable to the farmers of Ohio and other States, still the fact remains that they have cheapened the price of beef to the consumers. This latter class are more numerous than the farmers, and they naturally point to the results as the effect of legitimate competition. We are evidently passing through a transition period in American agriculture—a period of over-production, and consequent low prices for the staple products of the farm; and one of the most perplexing questions that confronts the farmer to-day is, how long will this period continue. I am fully convinced that an end will come, for there has never yet been a permanent over-supply of the products of the soil.

Alexandersville, Ohio.

FROM F. P. ROOT.

1. It has in a large degree, and has nearly destroyed the beef-fattening interest of Western New York. The early interests of agriculture in this section of the State depended chiefly on grain growing; other branches of farming, such as dairying, stock-raising, vegetable and fruit-growing, received only incidental attention; but this specialty of grain-growing had the same effect upon our lands that has been experienced in all countries when special cropping has been followed—that of exhaustion of fertility and failure of crops.

To restore the wasted fertility of our soils we were obliged to resort to mixed husbandry involving several interests aside from the exhaustive business of grain growing, and one of the most profitable branches pursued, leading to the enriching of the soil, was that of beef-making. The fattening cattle consumed on the farm all the coarse grain, hay, straw, etc., and much purchased feed was also brought on the farm to be consumed there, making a large amount of manure of the richest quality to be applied to the land, and at the same time affording a fair profit in the sale of beef cattle, which the local markets were always ready to take at paying prices. A few years ago our local butchers began to deal in Western dressed meat, and the prices of home-grown beef began to decline. At the same time the local retail trade has been but little reduced—nothing in comparison to the decline in the prices of live stock, which have fallen off about 30 to 40 per cent. from those current five or six years ago. The present range of prices has destroyed the beef-making business; for our farmers cannot bear the sacrifice which the prevailing prices involve.

2. A reduction of at least 50 per cent. during the past year, and during the coming winter few or no beeves will be fattened as in former years. One farmer near me, who has in past years stall-fed from 50 to 100 steers each succeeding winter, now feeds none. Others have also discontinued the business.

3. Certainly; local markets are largely supplied by Chicago dressed beef. It deprives the farmer of one of the chief sources of enriching his farm by the manufacture of manures which otherwise are not available, and without which our farms must depreciate in productiveness and value. The agriculture of England has doubled in value during the past 60 years, mainly through their system of beef fattening, which has furnished manures for enriching the land, and our agriculture has been greatly improved through the same source during the past decade, and would continue to improve under a system of stock feeding, but this can be done now only at a great disadvantage. It is not easy to suggest any means by which our present condition can be relieved. We are hedged in on every side by a relentless monopoly which in every case "takes all the traffic will bear," and there seems only a chance for the "survival of the fittest." The Chicago butchers are controlling the beef markets of this country and of Europe, and in order to be able to undersell others in dressed beef they have monopolized the cattle trade of the West and so reduced the price of beef as to destroy production at the East, and while the Western plains shall supply their wants, I can see no remedy short of such legislation as will make monopoly and control of prices of food a crime, or until our farmers are so organized as to follow the example of the laboring class—order a strike and lay by until reasonable prices are granted. It is claimed that it makes no difference whether the Western beef cattle are sent East on foot, or whether they are butchered in Chicago and sent through as dressed beef; the supply is the same in either case. This is an error in its application to markets. When fat cattle were sent forward by the drover he had regard for the Eastern market so that it was not oversupplied, and then there was a reasonable competition between dealers; but when the Chicago butchers came to control both ends of the market, buying and selling at their own figures, the only result is to depress markets, and take from the producers "all the traffic will bear."

Monroe County, N. Y.

FROM J. E. SHEPARD.

Chicago dressed beef has completely revolutionized the raising of beef stock as a business hereabouts. Beef is now only a secondary object. Steers and oxen are worked and then fattened; cows and heifers take their turn in the dairy and then go for what they will bring.

Dairying, horse-raising and other branches of farming are now occupying the time and attention of the once successful beef producer. To prove that the result has not been for the bad, in this State, there is a largely increased valuation of live-stock which indicates that beef raising was not the best paying business for New Hampshire farmers. Western beef has made our local butchers independent of any beef produced in this region, a fact they are not slow to take advantage of. They can go to the refrigerator and buy a whole carcass, a side, a quarter or any cut they wish, and they prefer so to do rather than to kill for themselves. As a result the farmer with fat cattle must sell at a price lower than the Chicago beef. To get a price equal to that for Western beef, the stock must be extra choice. The farmer must sell for what the buyer will give or keep the animals. The ready dressed beef has induced a lively competition among the retailers and the effect is lower prices to the consumers. This has resulted indirectly as a benefit to our farmers, who have of necessity given up beef raising and gone into other branches of farming. The business ability of our farmers is increasing with the change; for statistics show that the value of live stock has greatly increased in the last few years in our State. The law of supply and demand, aided by a law requiring the rigid inspection of all live animals before slaughter and of all dressed meat where received at distributing points, seems to me the only fair means of regulating this traffic.

West Concord, N. H.

FACTS FROM FARMERS.

SPRAYED FRUIT TREES.—That great advantage is derived from spraying fruit trees with London-purple is no longer a question but an established fact, which is proved by the testimony of all the leading agriculturists and entomologists not only in this country, but through the whole civilized world. Some of the more intelligent among fruit growers have not been slow to take advantage of the benefits it yields; but there are still millions who, either from carelessness or a natural tendency to disbelieve in anything new till its virtues have been thoroughly tested by their neighbors, have as yet not tried it, thus letting some competitors get ahead of them in their own particular profession. For years the agricultural press has been a warm advocate of this operation. By destroying insect pests the life of the tree is often prolonged in full vigor thus enabling it to feed its fruits and bring them to perfection. The fruits from sprayed trees are not only more sightly (an important, if not the chief point in a marketing sense), but they are much larger and more numerous. Any expense for necessary outfit, would be repaid the first season ten times over by the increase in value and quantity of the fruit. Spraying is not only an absolute necessity to the professional fruit grower, but the small producer or farmer whose few trees are expected to supply only his own household, and who in many cases, from neglect, fails to obtain fruit fit for anybody but the hogs, would be benefited in pocket as well as by making his now unsightly, leafless trees a pleasure to the eye and more in accordance with the rest of his well cultivated farm. H. E. B.

Fort Hamilton, N. Y.

THE BEST WAY I HAVE EVER FOUND to kill Liveforever is to dig a hole about four or five feet in diameter and five or six feet deep (the deeper the better) to put it in; leave two feet on top. Then fill up with the soil thrown out. Be sure to dig it before plowing. I found a stalk of Liveforever in the hay last spring; I put it in a plant dish and it grew nicely. Such a hole is a splendid place into which to throw weeds that are nearly ripe, broken glass and all waste from the kitchen. It will give an opportunity for a clean back yard. Of course, in some soils it would be hard to dig such a hole W. H. D.

Middlebury, Vermont.

AS THE TIME FOR HUSKING CORN has arrived, I send the RURAL my method of saving corn husks for bed mattresses and ticks. Do not loosen the husks from the ear, but press it close to the base and break it off. The rough, coarse husks will be left on the stalk and all the finer sort on the ear. Throw the ears in a pile and when enough are broken off husk them, sort out the "silks," and you will have a very superior article. L. H.

Dansville, N. Y.

Dairy Husbandry.

DAIRY NOTES FROM A DAIRY RANCH.

No. V.

RAISING CALVES, TESTING COWS, AND HANDLING BULLS.

As I have better uses for my new milk than to raise calves upon it, all of my calves are hand-fed. If the mother is a young cow the calf is never allowed to suck, for if it does it will be all the harder to break the

dam into being milked; and it often injures her as a milker, because in her restlessness and anxiety about the calf she learns to hold up her milk. With an older cow it does not matter so much. In either case the calf is fed its mother's milk until it is fit for use, which is generally conceded to be at the fifth milking. After this, the youngster is fed skim-milk, sweet and warm, three times a day, care being taken not to spoil the appetite for the next meal by any degree of over-feeding. Every day or two, common table salt, in small doses, is mixed with the milk. This is thought to help greatly in keeping the calves hearty and well. Should they get "off their feed" or "scour," they are made to swallow one or more raw eggs per day, as the exigencies of the case may require. Regularity in time of feeding and uniformity in the quantity of feed are very important. Calves so fed can be made fat enough for veal. I disposed of four grade Holstein calves for veal that averaged in weight 175 pounds each when three months old. They grew to this size on the feed that was given all the calves, with no special effort to fatten them. A box of wheat bran always stands where the calves can lick at it and learn to eat it, and they early show a desire to pick a little hay. Every milker can guess pretty nearly as to the quantity of milk his cows give, but in the quality of the fluid there can be no guess-work.

It is essential to test the value of each cow as a butter-maker to operate a dairy of more than one cow successfully. Some cows make twice the amount of butter from the same amount of milk that others do; some make white butter—often it is white and hard—others make very yellow butter, and too often it is as soft as it is yellow. Years ago I owned an imported Guernsey cow that made butter as yellow as a carrot and so soft that it spoiled the "gilt-edged" properties of my butter all one summer, and it was only by accident that I discovered where the trouble lay. I remember another, a grade Jersey, that made the finest-colored butter and the hardest I ever saw, and the addition of her milk to my dairy of six cows made a very noticeable improvement in the quality of the butter; firmness and high color of butter are two desirable qualities that are not always combined in the butter from one cow.

In breaking my bulls to be handled, I have so far been very fortunate and have had no dangerous animals. When about a year old a ring is put through the cartilage of the nose. The animal is never allowed its liberty, but it is picketed near the barn, during the day, its feed being carried to it. Or it is led by the ring to water and about the place with as little trouble as a well-broken horse. The Holstein bull that has stood at the head of my herd for four years, has always been managed in that way and he never has shown any disposition to quarrel with his keepers. One thing about him worthy of mention is the ease with which he is kept. No attempt has been made to keep him in other than a good growing condition; but at four years of age he turned the scales at 2,000 pounds. O. H.

Greely, Colorado.

Horticultural.

NOTES ON FUNGI.

ANTHRACNOSE OF THE BEAN.

Its victims; its effects; mode of spreading; structure; classification; proof against the Bordeaux Mixture.

THE disease commonly called bean-rust is only too well known to gardeners, but they are not so well aware that the same disease attacks the melon and is even more disastrous to it than to the bean. In the latter case it rarely attacks anything but the pod, although it does occur on the leaf and stem, but it not only attacks and destroys the melons themselves, but by destroying the leaves may prevent the perfect maturing of the fruit even were the fungus entirely absent from the latter.

The appearance of the diseased beans is too well known to need much description. The pods become more or less covered with dark-brown spots which are often surrounded by a reddish-brown border, while the center is covered with a whitish or flesh-colored powder. On the melon rind we see large, sunken, discolored areas which, as in the case of the bean, are covered with a fine, flesh-colored powder. Underneath these spots the tissue of the bean and melon are shrunken and discolored. On the melon leaves appear large, or smaller dead areas, over which are scattered tiny heaps of the same powder which are so small that they are barely visible to the naked eye.

The cause of all this trouble is a fungus growing within the tissues of the diseased plant. It is as much a plant itself as the one on which it feeds, but is built on a much simpler plan. It is composed simply of long, slender, branching filaments which wind through the tissues of the host plant, and come to the surface in certain places. Where they do this, celled spores or reproductive bodies are cut off from the ends. These spores falling on a healthy bean or melon will grow out into another filament which will bore its way into the plant and there by continued growth produce another diseased spot. It is popularly supposed that the spotting of bean pods is caused by wet weather or by a damp situation. It is really produced by the spores of the fungus and will not occur unless these are present; but these spores cannot germinate without moisture, hence a dry, airy locality is the best and surest preventive of the disease. A gardener once wrote me that a single wet night would sometimes develop spots on hitherto healthy pods. I was inclined to doubt the statement until I placed an apparently healthy pod one night in a moist chamber, and found several spots on it the following morning.

Some reader may be interested in a fuller account of the structure of the fungus. As has been stated, it is composed of slender branching filaments; where these filaments approach the surface they branch repeatedly; the ends of the branches stand upright, side by side, and the spores are borne on the tips. It is these spore masses that form the flesh-colored powder already mentioned. The spore-bearing branches themselves are colorless and short, but scattered over them are a few longer, brown filaments, appearing like brown hairs. Whether they are really a part of the fungus causing the disease has never been absolutely proven, and it is quite possible we may have here a case of one fungus attacking another. However, Cavara, an Italian author, has considered them of sufficient importance to change the classification of the fungus. The fungus has hitherto been classified as a Glœospori n. Fungi of this genus are very destructive and very hard to eradicate. It is a Glœosporium that causes the well-known cane-rust of raspberries and blackberries, better known as Anthracnose of the raspberry and blackberry. Another attacks the grape, and while not so destructive as black-rot, is even harder to treat. Still another causes the sycamore blight, and where there are no sycamore trees it attacks the oak. If, however, the new classification be adopted, as it probably will be, the fungus must be known as Colletotrichium Lindemuthianum, the first part of the name meaning glutinous hairs.

Some experiments made this year by Col. Pearson on melon vines indicate that the Bordeaux Mixture, usually so effective against fungi of all sorts, has no effect whatever on this disease. Mr. B. T. Galloway has visited his place during the summer and seen the disease developing on melons covered with the mixture. This was also true of the Anthracnose of grapes, where the same treatment had prevented black-rot; and various reports which have come in during the summer go to confirm the idea that this disease belongs to a class very resistant to fungicides.

E. A. SOUTHWORTH.

The Vineyard.

THE WOODRUFF RED GRAPE.

SECRETARY CAMPBELL'S OPINION.

I SEND the RURAL by mail a sample of a few berries of the Woodruff Red Grape, from a young vine in its first bearing, hoping the editor may not find it quite as inferior as he has heretofore seemed to regard it. I have several times expressed, in the RURAL NEW-YORKER, a favorable opinion of this grape for general use; and I have seen no reason to change my opinion. I have always thought it a little strange that the RURAL considered this grape so poor as to be unworthy a place in its grounds, especially as it has received commendation from such men as Lyon and Garfield and Crawford and Miller and many others, and I have thought it must be either that the editor had not the variety true; or that there must have been some unfortunate circumstance of soil or season that prevented its normal development. I know that taste is a matter not to be disputed about; but so many do like this grape, and it has so many valuable characteristics to recommend it, I cannot help the belief that if the RURAL had left its vine to stand for further trial, the editor would have regarded it more favorably, under perhaps more favorable circumstances. It is more vigorous in growth, and certainly as hardy and healthy as the Colerain; has larger berries and cluster, and so far as tested here has been more productive.

I quite agree with the RURAL as to the probable value of the Colerain. It has a vigorous, healthy vine, with pure Labrusca foliage, and is probably as hardy as any of the Concord seedlings of its class. It ripens early, is handsome in appearance, and very good; and I hope to see its originator duly rewarded for the production of a grape apparently so worthy and so good. There is, in my judgment, no good point possessed by the Colerain, that the Woodruff has not, except it may be in flavor. The color of the Woodruff is also in its favor, as there now seems to be a lack of good, red, market grapes earlier than the Catawba, and I really think the Woodruff the most promising *red* grape that I have ever seen or tasted, for general planting, as the Concord and Worden, and such popular varieties are planted. And as the great mass of the public, who buy, and eat grapes, will regard it as good enough, and entirely satisfactory, its other good qualities must make it one of the most valuable and popular grapes, even if its quality does not come up to the highest standard of excellence required by the most fastidious tastes. I have written more than I intended when I began; but I do not like to appear in the position before RURAL readers, of recommending a grape beyond its merits; or in opposition to the views or opinions of the editor. [Readers of the R. N.-Y. will no doubt accept the opinions of Secretary Campbell regarding grapes before they would those of the R. N.-Y. And that is just as it should be. Eds.]

The past season has been a disappointment to grape-growers in this region and, I think, generally throughout the State. Although the early promise was good, excessive rains and very cool weather at the time of blooming seemed to prevent fertilization and the clusters were either destroyed or produced loose, uneven and very imperfect fruit. Even the hardiest kinds, such as Moore's Early and Concord, produced but little, and the berries were small, and the clusters loose and inferior. The latter part of the season was more favorable, and we have the somewhat singular experience of the early and late varieties ripening very nearly together, the peculiar season seeming to retard the early, and hasten the maturity of the late ones. Another noticeable circumstance is that all varieties with the short filaments and reflexed stamens failed to a much greater extent than those with the long filaments and erect stamens, or what we call perfect blossoms. This includes several of Rogers's Hybrids, Brighton, Moyer and some others, which failed almost entirely, the blossoms falling off and setting little, if any, fruit.

Delaware, Ohio.

R. N.-Y.—The berries sent were, in the R. N.-Y.'s estimation, much the same as those grown at the Rural Grounds and sent to this office from time to time, except that the foxy flavor is less pronounced. Our objection to them is the tough pulp from which it is difficult to separate the seed.

JOHN BURR'S LATEST GRAPES.

THE R. N.-Y. has received a box of grapes from John Burr of Leavenworth, Kansas, containing a number of his seedlings. No. 13 is a blue-black grape, of medium size with a dense blue bloom. Skin thin but quite firm; pulp, rather tough; seeds large. The quality is sweet and pure. No. 11 is a large, green grape tinted with purple. Skin about like that of Concord. Seeds large. Pulp rather tough. It is sweet, but not of high flavor. No. 15 (Paragon) is a black grape, juicy, sweet, of fair quality. No. 14 is a green grape of medium size and fair quality. Seeds rather large, skin strong. No. 16 is much like No. 14, though more juicy and sweeter. Skin firm. Minnehaha is rather larger than Delaware; green without bloom, translucent, almost transparent. Pulp tender, juicy. Skin firm. The bunches are long and double-shouldered. Eclipse is a green grape of medium size, firm skin and fair quality. No. 9 is a red grape of excellent quality. Juicy, sweet; pulp tender; skin firm. The bunches were injured in transit and many of the berries decayed. Standard is a blue-black grape of medium size. The bunches are shouldered, rapidly tapering to a single berry. Skin thin and firm, juicy, pulp about like Concord. It is not of high quality.

Mr. Burr has labored perseveringly through many years in the vineyard and many of his varieties are prized in various parts of the country.

The following note from Mr. Burr should be read in connection with our necessarily imperfect report of the quality of the grapes sent, size of bunches, etc.

LEAVENWORTH, Kansas, September 6.

Editor R. N.-Y.—I sent you yesterday by United States Express a small basket of grapes. They are not good specimens as our season has not been at all favorable for the development of good quality. An early warm April and part of May caused an early strong growth. About the middle of May when the vines were mostly in full bloom, cold rains set in lasting 10 or 12 days, with two frosts, which retarded and chilled the blossom so much as to destroy their vitality to such an extent that most of the clusters are not half filled with fruit. The Standard is full and is one of the most reliable; it has not failed of a full crop of perfect fruit since it first commenced bearing eight or nine years since; vine hardy, healthy, very vigorous and enormously productive, quite free from rot, mildew or cracking of the berries which remain perfect on the vine throughout the season. The Ideal is a seedling of the Delaware. The vine is very strong and vigorous, hardy, healthy, and enormously productive; the very small cane with the two clusters will show something of its character. Every branch shows fruit and a good-sized cane usually gives clusters one-third larger than either of these two. None of my grapes are as good as usual owing to almost continuous rain and a cool summer. The Paragon shows clusters not over one-half the size they were two years since. It is a very healthy, hardy and vigorous grower and very productive. The Eclipse is generally about the size of a well grown Concord. The two clusters sent are no criterion of its ordinary size, and it is now past its prime. It is an uncommon grape; the vine is one of the strongest growers I have, with the largest leaf, and it is quite hardy and healthy. I hardly need speak of the others sent, as the clusters are not full enough to enable one to judge what they are or should be except for variety.

VINEYARD HINTS.

L. D. SNOOK.

IT is conceded by all that without a sufficient amount or number of roots we cannot produce a vigorous growth of vine or fruit, and the Concord is considered one of the most rampant growers, with a wealth of roots and hardiness that far eclipse the Delaware and other delicate varieties; hence in examining a large vineyard not long since, I was surprised at the rank growth of Delaware vines and the amount of fruit they were carrying, which the proprietor—Mr. John J. Smith of Dundee, N. Y.—fully attributed to his method of grafting the Delaware on Concord roots, and his method has the merit of originality and success, hence I send it to the RURAL for publication.

One-year-old Concord roots are taken from the nursery row, or rather bed, and instead of being set in the vineyard in the position in which they grew, are laid down flat in a trench of the proper depth, and two buds of the previous year's growth are allowed to remain above ground, as in Fig. 248, in which *a* is the cutting and *b* a portion of the first year's growth, and *c* the surface of the ground. The Concord vine is allowed to grow one year in the vineyard and presents an appearance quite like that shown at Fig. 249, in which one can see that several more bunches of roots have been thrown out at the covered buds. This cut also

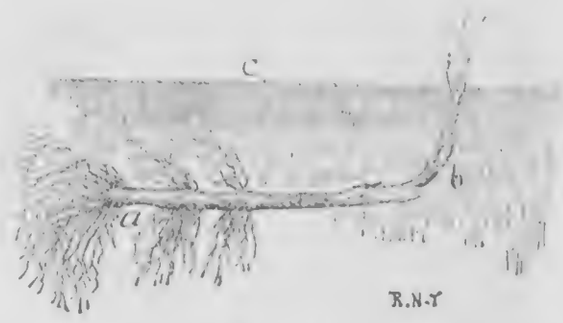


Fig. 248.

shows the graft or cion in position at *g*, two buds being left above ground. In this sec-

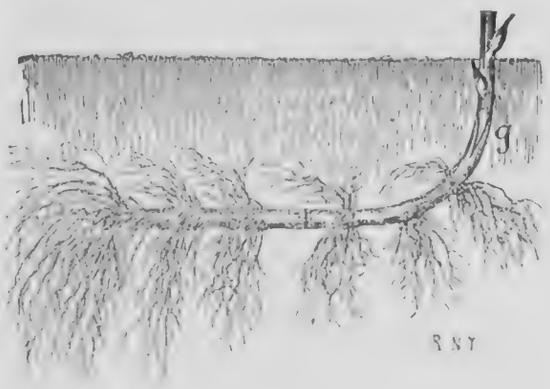


Fig. 249.

tion grafting is done from April 1 to May 10, and if carefully done 90 per cent. will live. Those failing to unite, of course, send up a Concord shoot. By this plan any delicate or feeble-growing variety can be placed on strong-growing roots that are already firmly established in the soil.

Mr. Smith was one of the first if not the pioneer in dispensing with wooden braces at the end of the vineyard trellises, using wire instead. To the last post at the surface of the ground is firmly secured a wire, as shown in Fig. 250. This is attached to its

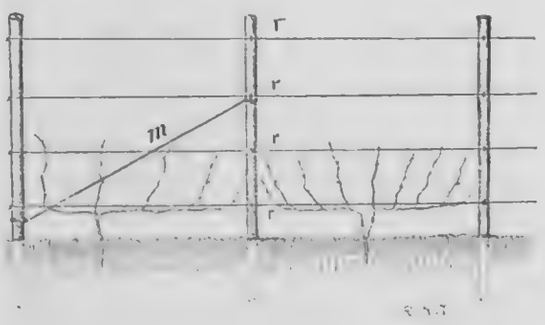


Fig. 250.

nearest neighbor at some point near the top and this is usually done ere any of the main wires *r r r r* are placed in position. It is plain that the second post is the one that bears the strain. This plan is cheap, neat and highly satisfactory. For the brace one should use wire several sizes larger than for the trellises.

Yates County, N. Y.

Everywhere.

RURAL SPECIAL REPORTS.

Delaware.

DOVER, Kent County, September 14.—The wet season still continues, much to the detriment of crops and farm work. Peaches are about all gone. The favored few who had them, realized fine prices. The crop being limited to a very small section, very few growers are the gainers. From Wyoming Station the peach center of the State, if not of the world, growers and dealers could not ship more than three to 10 carloads per day during the season, against 30 or 40 when anything like a fair crop is produced. Corn is not a good crop. About half of the corn-growing section of the State will not produce enough for the use of the growers until another season, and the heavy storm of the past three days has about ruined corn-fodder. What corn was cut is about all down, wet and moldy, and what is standing has been completely whipped to shreds. This will entail a serious loss of feed; for no where else is the full value of corn-fodder so highly appreciated as in the South, as nearly all stock is wintered on it, and certainly where the old Southern plan of saving it is still practiced nothing of the crop goes to waste. The corn is topped, the tops being thrown in convenient piles to cure, then bound in bundles set up around a hill, then the tops are tied and the shocks are left standing to cure. The blades below the ear are then pulled and stuck in the hill so that by going between two rows one can take up the fodder of four, when properly cured. This process makes feed which the finest hay cannot equal, and hands used to the work do it with great rapidity. After husking, the stalks should be cut and fed in the yards dry; stock will winter well on them without any other feed, and nothing except the heavy stalk is left uneaten and this is soon tramped into manure. Early potatoes were a good crop, and the condition of late ones indicate a fair one. Apples are mostly on the ground and will be of no value except for cider. No fruit has been dried except a little for home use. A great share of the wheat crop is still on the growers' hands; much of it was damaged before it was thrashed. Grapes were a failure. Pears were a fair crop. Factories are putting up tomatoes. At present $6 per ton is the price paid for them. The present outlook is not very encouraging for farmers. Market quotations: wheat, 70 cents; corn, 40 cents; oats, 30 cents; butter, 20 cents to 25 cents; eggs, 18 cents; potatoes, white, 40 cents; sweet, 50 cents to 60 cents. A. G. S.

Michigan.

LANSING, Ingham County, September 10.—The present is a very unfavorable season. The fact that it was cold and wet early, and hot and dry later makes the corn crop very backward. This is another point in favor of the silo. This year, unless we get rain very soon and have a very late fall. the corn crop will be worth very little for husking; but with a silo we can save it so that it will be of great value. The silo men ought to be very happy this year. A. J. C.

New Hampshire.

SOUTH SUTTON, Merrimack County, September 16.—I am a real farmer; not a person who merely makes pretensions, and if there is any farm work I cannot do, it is simply from lack of strength—I weigh only 106 pounds. I have done in the hay field this year all but the mowing and pitching; I spread, rake, (with and without the horse) load, and take away the hay. Now I do all the work, except that some help is given by father whose health is very poor, and mother, and I also hire by days' work "some." I would rather do it than have a great lazy, bragging man around, most of whose work I would have to do besides waiting on him. Since father's health failed I have done more out-of-doors work, and I am not dependent. Some change must come soon for farmers in this section or they will fail in many places. I never saw stock so low; good seven feet well matched oxen, beef, or work, are only $100, and no sale at that. Beef is very low; good round steak, 11 cents per pound down to seven cents; Western beef side, seven cents. Butter is very low. I have a dairy of six cows and at present prices they can't pay their keep, so that we hold on to them only to keep the farm up. I can buy Western meal and corn cheaper than I can raise it, at the high price of help. I have been much interested in the "pictures of cattle and horses" in the RURAL. We have a horse which I think is more than common. She is in the hands of my brother-in-law at Newport, N. H. He had her photograph taken in July. She was foaled in June 1854. Her sire was Flying Morgan, son of Justin Morgan. Would the RURAL like to have me write a short sketch of what she has done, and send her picture as a type of the true farm horse for New Hampshire? She is no trotter. She has done a mile inside of three minutes only; but after she was 25 she traveled in 20 minutes five miles with a common light buggy and one person. I drove her from pasture alone, with no grain 25 miles in two hours and 20 minutes with a light buggy and two persons, and to-day she can go a 10-mile gait for a time. She is perfectly sound after these long years of hard work and hard driving. This is the kind of horse we want and need here—not the little trotter or heavy draft horse. Our horse, her daughter, is 21 years old and as smooth as a colt; but not as good as old Fanny. Give me the true Morgan horses every time. Horses are one of my pet hobbies, and dear old Fanny is in part the cause; for I tended and drove her in my "teens" and she taught me to know a good horse, for neither she nor I like the dust.

MISS H. B. C.

[R. N.-Y. Send us the picture by all means. We shall be glad to use it.]

New York.

NEW YORK CITY, Sept. 17.—To the diligent observer of natural phenomena, to the student in any branch of natural history, there is nothing so delightful as the witnessing of an event of rare occurrence, or the finding of a new species, or of a locality before unknown, either in the mineral or vegetable kingdom. I had the pleasure but a short time since of visiting a little mountain lake situated about seven miles back of West Point, New York. Even its name, Popelopen, is suggestive of the early history of one of the most beautiful sections of the Hudson River Highlands. Whether the name is derived from some tribe of Indians, or perhaps from a chief, I know not; or whether it is descriptive in a measure, does not matter. Though at an elevation of not less than 500 feet above the Hudson, the mountains rise on every side to a hight sufficient to afford it a most beautiful setting. I am fairly well acquainted with mountain lakes, and ponds; but this is certainly the gem of all those I have yet seen—a miniature Lake George, following its prototype with pure water and great depth, and with deeply indented bays and lovely islands. Securing a boat, with my companion, we made the circuit of the lake; and upon reaching the head of a little bay, we found growing upon the rocky hillside and in some instances reaching down to the water itself, a large and luxuriant plantation of rhododendrons. This was surprise number one—I had previously explored, as I thought, every nook and corner of the Highlands either for mineral or botanical specimens, and was no stranger to its wealth in either direction. But here, not over a mile from where I had been before, did I find this far northern outpost of this most beautiful evergreen. My friend said: "You seem to be so enthusiastic, I will give you another surprise before the day closes." On our way down from the lake to the river, and when we had reached the outskirts of the little village of Highland Falls and the dwelling of Anthony Miller, Sr., my friend made his promise good. Here I was shown a little grove of English walnuts, growing as sturdily and seemingly as much at home as the native oaks and walnuts, their near neighbors. These trees had been planted about 12 years ago, are now about 20 feet high, and measure from 10 to 12 inches in diameter. The leaves run rather thicker than those of the American walnut and their growth is more luxuriant. The trees have been bearing for three or four years, and are full of well developed nuts this season. I think it not necessary to draw any moral. In one instance a plant needing a favorable location is here found occupying a cold hillside and growing, not in a sickly manner, but with every evidence of staying power. In the other instance, a tree whose fruit is imported to the extent of thousands of dollars' worth yearly, is found growing not in a hot-house, or partly sheltered, but in an exposed position, and holding its own with the native tree. A. S. C.

JOHNSON'S, Orange County.—The terms "Orange County Butter" and "Goshen Butter" were very familiar in the market reports of thirty years ago and more; but the present generation that is growing up to be farmers will have to be told what these terms mean when they occasionally hear them spoken; for within the boundaries of this formerly great butter-making region there is scarcely a tub of butter made to-day. This whole territory is given up to the production of milk for the New York market. As the country is bisected by three or four trunk lines of railroads, and many short branches, and the temptation to abandon butter-making and send milk to market is irresistible, so, with the exception of what little milk goes to creameries, all goes to New York City. M. H. C. G.

Wisconsin.

BARRON, Barron County, September 10.—Crops in this portion of Wisconsin are very good, but prices are ruling low. Potatoes are an enormous crop and will probably sell for not more than 10 or 15 cents per bushel. T. W. P.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

BERRY CULTURE.

J. S. R., Harrisburg, Pa.—I expect next spring to move on a small farm in Ohio and try to make a living on raising fruits and berries. 1. I shall plant one acre each of strawberries, raspberries and blackberries. About how many bushels of berries will each acre yield by giving time and attention to their cultivation? 2. How early in spring should the plants be set out; and of what age should the plants be; and will they bear anything the first season? 3. Where can I get a book on berry culture and at what price?

ANSWERED BY M. CRAWFORD.

1. Strawberries yield from 75 to 300 bushels per acre. In exceptional cases, over 400 have been obtained. Raspberries and blackberries yield from 50 to 100 with a possible 150 2. As early as the ground can be worked, using plants of the previous season's growth. No fruit may be expected the first year. Strawberries will give a full crop the second year, while the others will not yield over half a crop and often not more than one-fourth. 3. The RURAL NEW-YORKER, Popular Gardening and American Garden will give the best information obtainable on fruit culture. It has become so that the person who will grow from one to two or three acres of each of the fruits named—just what can be well grown and sold in the vicinity—will make all there is to be made in the business. It is no longer safe for any one in Ohio to plant a large area with the expectation of shipping to a distant market. All markets are coming to be supplied by growers in the vicinity except with early berries from the South. There will always be a chance for the one who will raise choice fruit and get it to market in the best manner. The strawberry responds so readily to extra culture that it is not very hard to raise 300 bushels or more per acre, while black-caps that yield from 50 to 75 with no culture can hardly be made to produce over 150 with the best possible chance. Red raspberries are not appreciated in Ohio as they are in the East, and one should be cautious about planting too many until he knows his market. When one is obliged to buy raspberry tips he should procure them very early and set them out temporarily a few inches apart. After they are six inches high they may be planted permanently, rejecting all that are too weak. In this way the plantation will be uniform, and all vacancies will be avoided. In many parts of Southern and Southeastern Ohio there is no profit in raising blackberries as the wild ones are so abundant. The great secret of success in raising small fruits is to stir the soil frequently without going deep enough to injure the roots.

MR. J. M. SMITH'S METHODS OF STRAWBERRY CULTURE.

N. H. O., Wayne County, Michigan.—Will Mr. J. M. Smith of Wisconsin tell us what treatment he gives strawberry plants after September 1?

ANSWERED BY J. M. SMITH.

I set my strawberry plants in the spring, putting them two feet apart each way. After setting them I set out early onions, lettuce, or sow radish seed, dwarf peas, or beans between the rows and thus take off one crop before the runners really get fairly started. As soon as they begin to take root, we go through the beds and train the runners around the parent plant like the spokes in a wheel, each parent plant standing for the hub. In this way I get an even stand of plants, and get them fairly distributed over the ground. We do nothing more during the remainder of the summer and fall, except to keep the ground clean and in the best of order for the young plants to do their best.

The plants occupy the ground so closely, that we are compelled to do the work entirely by hand and our hoes. After the ground becomes frozen, which is generally by the last of November or early in December, we haul marsh hay and spread it upon the beds in quantities sufficient to entirely hide the leaves from view. After freezing and thawing in the spring have ceased, we take off the cover and stack it for another winter's use, put a coat of wood ashes upon the beds, keep them clean, and then expect and generally get a very large crop of very fine fruit. As soon as we are done picking, we turn the beds under and set them with either cabbage or celery for a fall crop. This, of course, makes it necessary to set new beds every year, and it costs more per acre to grow the fruit, but the crop is so much larger, and the fruit is so much nicer, that I have found it far more profitable than any other way that I have ever tried.

A MIXTURE OF GRASSES FOR PERMANENT PASTURE ON A LIGHT SOIL.

C. C. P., Hempstead, L. I.—Several of us living near here are getting ready to seed the pastures; what is a good formula for a mixed grass seed, suitable for a permanent

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies.

pasture on the light soil of this locality. The ordinary Timothy and clover run out too soon, and I have read in the RURAL that besides holding longer in the soil, a mixed grass seed yields a heavier crop.

ANS.—The soil around Hempstead (Long Island, N. Y.) requires a special mixture of grasses, and the following has succeeded very well in that locality, viz: six pounds of Timothy; six pounds of Meadow Foxtail; six pounds of Tall Oat Grass; six pounds of Meadow Fescue; 12 pounds of Orchard Grass and five pounds of Medium Red Clover. As almost all plants are sociable and produce more herbage when grown in company, a suitable mixture of grasses yields more pasture than any one kind grown alone. But while this is true, it is equally true that this increased produce calls for proportionately adequate manuring and thorough tillage before the land is seeded. Consequently a light annual top-dressing should be given, the best season for this being the late fall when the pasturing is over. An excellent top-dressing would be 250 pounds of superphosphate, 150 pounds of potash salts and 100 pounds of nitrate of soda. The increased yield will abundantly repay the cost of it.

FERTILIZER FOR FRUIT TREES.

H. E., Hamburg, Conn.—1. I have a small peach orchard of about 50 trees which were set five years ago last spring when they were two years old. Two years ago this fall I gave them a dressing of bone flour and kainit. They have given me a good crop of fruit this fall and I wish to give them another dressing. What will be a suitable amount, per tree, of the above named and in what proportions? 2. Would a coarser grade of bone costing less answer as well? 3. I have in the same orchard a few plum trees of the same age; would the same treatment be suitable for them? 4. I wish to remove some asparagus roots in my garden this fall, what will be the best time to do so?

ANS.—1. Ten to 15 pounds of fine ground bone, and four to five pounds of high-grade muriate of potash per tree are not too much annually per peach tree of bearing size. The muriate is better and cheaper than the kainit. 2. As peach trees at best are short-lived, it is best to use the fine bone and obtain prompt returns, as it will be some years before the coarse bone is likely to give full value. 3. Much the same fertilizer will answer for the plums except that possibly not so much potash is required. 4. Asparagus may be transplanted in Connecticut at almost any time in October or November.

FEED FOR PIGS.

I. K. B., Princess Anne, Va.—What proportion of the following feeds should be given, and what is the best way to prepare them for young pigs? Corn, corn-meal, cotton-seed meal, wheat shorts, sweet and Irish potatoes. I have no milk so have to do the best I can without. How much cotton-seed meal can I feed to fattening hogs, with corn or corn-meal? All my hogs have a large range, though the pasture is not very good.

ANSWERED BY HENRY STEWART.

Cotton-seed meal is not a healthful food for pigs. In every case in which I have used it for this purpose it has been injurious even in small quantities. It is too nitrogenous for them. In the absence of milk, an excellent food can be made up of potatoes boiled and mashed with the water into a thin paste and mixed with a sufficient quantity of corn-meal and bran, so that when it is cool it can be lifted with a shovel. This mixture is not only extremely nutritious but it is a well balanced and healthful food, for growing, as well as fattening pigs. The proportions I have used are as follows: One bushel of cleanly-washed potatoes; five pounds of corn-meal and 10 pounds of bran. For nursing sows I have given this mixed food boiled with water to the consistency of a gruel, adding a little salt to each feed.

KEEPING GRAPES.

Mrs. H. C. A., Lansing, Mich.—How can grapes be packed for winter use? I tried packing in newspapers—a layer of grapes then paper, then grapes till the box was filled. In a few weeks all were spoiled. Last year I used cotton-batting with no better success.

ANSWERED BY E. WILLIAMS.

I cannot tell how to do this till I succeed in doing it satisfactorily myself. In the first place, much depends on the kind of grape; few of our native grapes have much keeping qualities: Catawbas and Isabellas are probably among the best. Catawbas, with perhaps Dianas, are to be had in our city markets in winter in fair condition. I succeeded tolerably well in keeping the Isabella for a few weeks or months years ago; but all attempts of late years with the present varieties by using warranted methods have utterly failed. A cool, dry cellar or a fruit house has, I think, more of the elements of success than the mode of packing; but with ordinary appliances I have yet to learn the art of keeping any of my grapes much beyond the first of November.

PUMPING FROM A DISTANCE.

E. T., Chappaqua, N. Y.—I have a well 20 feet deep in which it is 10 feet to the water. It is 160 feet of level ground to the house. Can the water be pumped to the latter? If so, what size pipe and what kind of pump should be used?

ANS.—There will be no difficulty in pumping water from a well under these circumstances. One inch rustless iron pipe with the unions or joints cemented with white lead so as to be air-tight and any good suction pump will answer the purpose. In laying the pipe it should be put below the reach of frost and should incline downwards about one foot from the well to the pump; a check-valve should be put in the bottom of the pipe in the well so as to keep the pipe always full of water and prevent it from filling with air in case of any leakage through the pump valve.

Miscellaneous.

R. A. W., Genesee, N. Y.—Where can a trio of pure, well-bred Dorking chicks, both Silver-gray and White be obtained at a reasonable rate?

ANS.—From Henry Hales, Ridgewood, N. J.

J. E. N., Genesee, N. Y.—The plant sent for name is the Swamp Rose Mallow—Hibiscus moscheutos. Though it is usually found wild on the banks or meadows of brackish water, it thrives better in garden soil, even in high, dry situations.

J. McC. Jr., Salem, N. Y.—Are the Redcap fowls any better than Leghorns for broilers?

ANS.—The R. N.-Y. cannot answer from its own experience for the reason we have never killed any of the birds. Our eggs were purchased of W. Atlee Burpee & Co., Philadelphia, Pa.

"*Subscriber.*"—What American breeder raises the Black Orpington fowls?

ANS.—The Orpington is a new breed just "come out" in England. Birds are offered for sale in advertisements in English papers by George Weaver, Rumford, Essex at the rate of eight guineas for trios delivered in New York. They were originally bred by W. Cook, of Orpington House, Kent, England. We do not know of any American dealer who handles them.

J. A. T. & Sons, Argenta, Ark.—Omitting manure, what is the best fertilizer for asparagus and when and how should it be applied? Where can rubber bands for tying bunches be obtained.

ANS.—We suggest raw bone flour and unleached ashes. You may apply it now or in the spring. The R. N.-Y. decidedly prefers spring. Apply all the way from 500 to 2,000 pounds of bone to the acre according to your aims and means. Of ashes, from 10 to 50 bushels. As to rubber bands inquire of any stationer.

J. H. C., Tabernacle, N. C.—1. What is a good early variety of wheat suitable for this section? 2. What is the best fertilizer for wheat, and where can it be obtained, and how much will it cost per ton?

ANS.—1. The R. N.-Y. prefers not to recommend any particular kind of wheat for localities in which it has had no experience. The safest way for our friend would be to try a small quantity of the several varieties now most popular, such as Fultz, Clawson, Landreth, Golden Cross, Red Clawson, Diehl-Mediterranean, etc. Johnson & Stokes of Philadelphia, Pa., and Henderson & Co. of New York publish catalogues with lists of wheat. 2. We cannot tell you what would be the best fertilizer for your land; that is, the most economical. In the absence of such information we would advise you to buy a high grade of complete fertilizer manufactured by various companies especially for wheat. The cost will be about $40 per ton.

Discussion.

ABOUT THE MONTANA BOOM.

W. O. F., GREENSBURG, INDIANA.—I am one of those who have been reading the fascinating descriptions of the Milk River Region of Montana, which are now appearing in some of the agricultural papers from the pens of their editors who have been making tours through that region. I am also one of those who are looking to the West as a place for a future home. To me, the RURAL'S late editorial on this subject, was very timely. I very much doubt whether all they write about that wonderful land, and its perfect climate, gives a true picture of it, the whole year round. From most of the descriptions it would seem to be a veritable Eden, and though so far north, they say that its winter climate is so tempered by the chinook winds as to be less rigorous than our own here in Indiana. But I have recently encountered a statement in the World Almanac for this year, which seems very contradictory to all the above mentioned writing. In a chapter entitled "Climate and Rainfall in the United States," compiled for that publication by the Chief Signal Officer, I find the following: "Observations were made at three points: Fort Assiniboin and Poplar River both on Milk River, and Fort Custer in the southern part of the Territory. The mean annual temperature at Fort Assiniboin was 40.8 degrees; at Poplar River 37.6 degrees, and Fort Custer 44.2 degrees. The lowest temperature reported from any part of the Territory was 63 degrees below zero." This is 10 degrees lower than was reported from any other section of the United States. Montana is a very large Territory and has a great diversity of plains and mountains and valleys, but it does seem to me that it would hardly be safe to get anywhere in the neighborhood of a place where the thermometer presumes such freaks as reported of it here. Let all the truth be told and then justice will be done to all parties concerned. Editors who accept courtesies and perhaps pay from railroad companies and town-site syndicates and in return make their editorial columns advertising mediums to boom the property of their patrons, are corrupt in morals and are betraying a high trust.

CORN FOR EGGS.

FRED GRUNDY, CHRISTIAN COUNTY, ILL.—I am aware that experts and poultry fanciers tell us that wheat is the best food for the production of eggs; but so far as my observation extends not one farmer in a hundred feeds wheat to his fowls. Quite often the screenings are fed to young chickens; but good wheat is generally considered too valuable for poultry food. This town is quite a poultry market, thousands of chickens and millions of eggs being sold here yearly to a party who has erected a large establishment for the handling of these products, and who keeps several men busy dressing and packing during the entire fall and winter months. Much of the produce is shipped direct from here to Boston, Mass. It is safe to say that more than nine-tenths of all the poultry raised hereabout are fed and fattened on corn and oats, with the seeds, insects, etc., they pick up about the yards and fields. The Plymouth Rock is the leading breed and such fowls bring the best prices. On a diet of corn, oats and yard pickings they lay a full average number of eggs per year. Early-hatched hens lay well in the fall, and, if warmly housed, most of the winter, and rest and molt in the summer. Some of our women poultry-keepers are quite expert in inducing their hens to lay during the winter. I have tried several different kinds of food for my own hens, and find that they lay as well on a diet of mixed corn and oats and what they pick up about the yard, as on anything. When allowed the run of the place they will eat only enough to keep them in good trim, even when the food lies before them in heaps. When yarded, however, I find it necessary to feed them only a limited quantity or they quickly become too fat and lazy to lay.

MORE ABOUT ROT IN POTATO "SEED."

"FARMER," BRIDGEWATER, MASS.—I should like those scientific men who do their farming on paper and who claim that our only hope of avoiding potato rot is to get the "seed" from localities where the tubers have not rotted, to note that which follows and which I stand ready to make oath to: It being a part of my business to grow choice strains of potatoes for seed, not only have I for years planted my own stock annually, but I have also received stocks yearly from Nova Scotia and the Islands where rot is seldom known, and many of my neighbors will plant only foreign stock. Now after years of trial and observation and hard facts, the rot is universal here and shows no partiality; hence experience teaches me that talk is cheap and facts cannot be disputed. No remedy has yet been discovered; no theory has been advanced with regard to rot, that is worthy of consideration by a practical farmer. The only way in which a fair crop of sound potatoes is secured in this section is by planting so early that the tops will mature and die a natural death on or before August 10th, the time the blight usually strikes. Of those raised under those conditions we are sure, but good potatoes cannot be obtained from late potatoes, and the fact that the blight arrived 15 days earlier this year, shows, of course, the above plan is not certain to guarantee success.

SULPHUR FOR POTATO SCAB; FERTILIZERS FOR POTATOES.

C. H. F., FORESTVILLE, N. Y.—I have tried the RURAL'S "sulphur remedy" for the potato scab and found it to be exactly as recommended—a success. I made a test plot by planting every other hill with a teaspoonful of sulphur sifted in planting time. The potatoes in the sulphured hills came out perfectly clean, while those in the other hills were badly scabbed. Fertilizers have been experimented with to some extent in this locality this season. Most of the experiments show the value of commercial fertilizers in a decided way.

Here are a few of the tests: A piece of buckwheat was sown with a standard fertilizer at the rate of 250 pounds per acre. In the center of the plot the fertilizer was shut off from the drill once through. At harvest time the unfertilized strip could be plainly distinguished for some distance. It was not worth harvesting while the buckwheat on either side was a splendid crop. Another man seeded a plot with oats, using fertilizers, shutting off the drill as above. The consequence was that on the unfertilized strip the oats were only half a crop and the seed did not catch, while that on the fertilized part was good. I have experimented some with fertilizer in my garden, and find that it surpasses all other kinds of manures in any shape.

POTATO DIGGERS.

F. A. B., RISING CITY.—I am interested in the reports of potato diggers in the RURAL of September 7, but can't fully agree with some of the writers in stating that they can get about all the potatoes by harrowing the ground. I use the Hamilton, O. digger and consider it the best that we have, and there are several other kinds used in this section, one costing $100. The trouble with the Hamilton digger is that it buries potatoes on each side and if the tubers are deep so that we have to run the plow deep to get under them, it buries lots of them in the furrow behind the plow. One year I ran the plow through the rows the second time and got a bushel every 25 rods. I think that if we could have some kind of a shaker attached just behind the rods, we would get more of the potatoes on the surface. Will not some of the Colorado subscribers of the RURAL tell us how they dig their potatoes, as I understand that they have such an arrangement to be attached to their potato plow. Potatoes in this section are good and there are lots of them. There is no sale for them as yet even at 15 cents per bushel. About every farmer has from 10 to 40 and some as high as 100 acres.

H. V., UNION COUNTY, N. J.—The Vermont Dairyman's Home, figured on page 537, has indeed a solid, home-like appearance; but there are several features the RURAL does not mention, which have such a familiar look that I cannot forbear calling attention to them. The most prominent is the fence. I suppose we must call it that for courtesy. It looks like the inclosure one might expect to find around a log-cabin in the wilderness, rather than around a typical Vermont homestead. Then the shrubbery within the fence! How many times have we seen farms where the owner not only indulged his taste for similar ornamentation in the grounds surrounding the house, but has extended the growth to all the fences on the farm, making a beautiful screen to hide the otherwise unsightly fence! In the illustration, the cattle have evidently been brought into the front yard to have their pictures taken, but it reminds me of cases where the cows or horses or other stock have been turned loose among the flower-beds "for a minute, just to get a bite." Unfortunately, dumb animals fail to discriminate and are just as likely—if not a little more so—to take a bite from the choicest shrub, or plant their feet in the middle of the flower-bed which the overworked housewife has tended with patient care. This is likely to cause a flow of language more eloquent than elegant, and to ause feelings which never should be occa-

sioned. The illustration is truly an "accurate" one in many respects, but, I must confess, to me there are several features which are far from what I consider "homelike."

S. R. Mc., West Salem, Wis.—The Jerseyman's article on horse-racing expresses just my views. The other day I was at our fair. About 20 race-horses were stabled on the grounds. I passed through and viewed these noble animals. Each horse was cared for by at least two men or boys. Their owners and backers were making bets, drinking whisky, smoking and cursing. I was invited to bet on any horse. The crowd who followed the race-course had all the marks of full-bred penitentiary stock, just what Jerseyman saw at the races. I then went out among the working stock and found them hitched to posts in open sheds fighting flies. There was no one to rub and curry them; their hides were marked with scars that were made by ill-fitting harnesses; they drew heavy loads, plowed and dragged and made it possible for their fine-boned swift brothers to get their living without much work. The race-horses got $800 in premiums and the hard-working, honest draft horses got just $8. They were hitched to a stone-boat loaded with two tons of stone. They pulled the load. The crowd who followed the draft horses were farmers and lumbermen, natives and foreign-born—a hard lot.

What Others Say

Work for the Agricultural Department and Agricultural Papers.—An advance slip from the Department of Agriculture gives results of an investigation regarding the composition of baking powders which "has been conducted under the direction of the chemist of the U. S. Department of Agriculture, Dr. H. W. Wiley."

If the department can legitimately make such investigations says the Farmers' Review, why was not flour examined instead of baking powder? The latter article has been sold under chemical analyses for years. The public had no fears in using it. They asked for no further information regarding its composition. Private experiment had satisfied each family as to which brand to use. The Government was not expected to investigate the subject, and now that the Agricultural Department has seen fit to do so, intense surprise has been aroused among the farmers, and rightly so.

Farmers and honest dairymen would be thankful, continues our esteemed contemporary, were the Department of Agriculture to investigate the vile combinations offered for sale under the name of cheese, expose the adulterations of such fraudulent productions, and incidentally assist the sale of pure dairy products. If baking powders are a character of goods which may be properly investigated and advertised by the Department of Agriculture, which presumably works for the interests of farmers, the latter would much rather have them substitute for baking powder investigations those of coffee, tea, sugar, mixed paints, vinegar, fertilizers, alleged woolen goods, and a hundred other articles vastly more important to them than baking powders and most probably much more impure.

The R. N.-Y. quite agrees with the spirit of the article above quoted and the Farmers' Review does good service in thus forcibly condemning such apparently needless work.

Turning from the shortcomings of the Department of Agriculture, the R. N.-Y. would feel pleased if the Review would heartily join it in condemning a culpable piece of business in which certain farm journals are engaged. The publishers, owners, proprietors or editors, as the case may be, of these papers are pecuniarily interested in booming certain Montana lands. They praise them up to the skies editorially, while their advertising columns are liberally given up to Montana advertisements. Now all this is being done while the readers of those journals are kept in ignorance of the fact that the editors or proprietors are cracking up the lands in which they own a share and for which they are stiving to obtain the highest price.

Against Poor Butter.—One of the most disagreeable experiences of farm life, says Henry Stewart in the New York Times, is to grow crops, rear cows, feed them, make butter, and be forced to sell it for a few cents per pound when the best market prices are as much as 25 cents per pound. In many places the quotations for farmers' butter are as low as six to 10 cents, while the best dairy and creamery brings 25 cents. This takes all the pleasure out of the work and makes it most disagreeable drudgery. A well-known dairyman, whose butter sells for 50 cents a pound, writing on this subject, says that he knows of many farmers' wives who from the milk of two, three, or five or six cows make butter that is better than the best creamery butter ever sent to market. But in every case these women are educated and intelligent, and read and study as well as practice the excellent methods which their mothers taught them, with the help of all the new improvements which have eased and simplified their work.

The best of butter may be made in any kind of churn. A jar even can be used; the old-fashioned up-and-down churn has made as good butter as the very best now made; but yet a modern improved churn is easier to use and more conveniently kept clean, and a clean churn is indispensable for making good butter. Churn regularly, not now fast and then slow, and do not leave the churn for an hour or two and then go back and finish it. The best butter is made in about 25 or 30 minutes. Look in the churn, if you do not understand the changing sounds of the splashing, and when the butter is in grains as large as wheat and peas, stop work; pour off the butter-milk and put clean cold water, with a little salt in it, into the churn and wash the butter until it is quite free from butter-milk.

Never touch the butter with the hands. Use a paddle made of an oaken shingle to lift it by or one of the ladles sold at the stores. Put the butter in a clean wooden dish, well rinsed with cold water; spreading it out as flat as possible, gashing it with a ladle, and sprinkle one ounce of the finest dairy salt to the pound of butter over it. If the butter lies loosely in the dish you need do no more, but if it is necessary, the salt should be mixed with the butter roughly, and the dish put away for 12 hours for the salt to melt slowly and mix with the butter. At the end of this time the butter is worked over by turning it with the paddle and squeezing it, taking care to avoid breaking the grain by plastering it, and when the salt is well worked in and the water well worked out, the butter should be made into neat rolls or small cakes, and put in a clean dish in a cool place where there is no dust. Then take a sample of the butter to a family in the village or a boarding-house, and try to get an order for a regular supply every week for the whole year, and get a fresh cow when it is needed to keep up the supply regularly every week. As one customer is found look for another; but, as soon as you can, get away from the store where the butter is exchanged for soap and dry goods and is put on a box of codfish near the stove until it is traded off or packed with a lot more of the same kind and is sent off and sold at 10 cents a pound for cooking and making pastry at the cheap hotels and boarding-houses in the cities.

"RAYS."

The pig crop, says the Breeder's Gazette, seems quite commensurate with the promised yield of corn, and in the face of prospectively large feeding operations the cholera question becomes once more an important consideration. That Dr. Billings has made material progress in the line of extending relief to infected herds seems reasonably certain, and as this is the first tangible assistance yet tendered by science to a long-suffering and much-humbugged swine-rearing public it is to be hoped that this matter of inoculation will be made the subject of most thorough investigation, as suggested by the late Government Commission. In herds where the disease has already made its appearance inoculation should most certainly be given a thorough trial.....

Make a note to try next year the Ignotum and New Jersey Tomatoes. The Prelude is the best very early tomato. Golden Queen is the best yellow. The Shah is one of the so-called potato-leaf tomatoes. The color is yellow and it is no smoother than the Mikado.....

The Ohio Farmer heard a horseman say, not long since, that more men had lost money in trying to raise fast horses than ever made money by either raising or owning them. This may be true. They lost money by attempting too much—not by breeding to good stock with sure, solid improvement in view.....

Sander's Horse Breeding says that very fast horses are not produced with certainty even by the most experienced breeders, with the best breeding stock to work upon, and the best trainers to develop them. This business affords enjoyment and recreation to gentlemen of wealth and leisure, with whom profit is a secondary consideration, and in such hands the breeding of horses for speed alone should be left. This is safe advice.....

The North-West says that any community which raises good draft horses will be found prosperous and progressive. When a half dozen or ten good teams are put upon the market and bring into the neighborhood from three to five thousand dollars, it helps everybody in it and drives the wolf from many a door.....

The Boston Transcript is of the opinion that the overhead check-rein for the horse is refined and steady torture, not for the strain backward of the neck, but because the animal cannot see the ground on which he is stepping. The swaying of his head from side to side is evidence of his trying to find relief.....

In referring to the practice of docking horses' tails, the Hartford Times says that the mutilation of a horse by chopping off his tail is no less a mutilation in reality than the cutting off of his ears, or taking out one of his eyes. In either case it is not only an atrocious act of cruelty to the horse, inflicting needless pain, but produces disfigurement. It is not only in bad taste, it is essentially barbarous. It belongs properly with the customs of tribes that flatten their heads, bore holes through their lips or noses, for the purpose of wearing a billet of wood suspended from such localities by a cord, and otherwise disfigure the features made by nature. In Massachusetts it is an offence punishable by fine and imprisonment thus to mutilate a horse, and it should be in every State ....

DIRECT.

——O. C. Farmer: "If such an elixir as that of Dr. Brown Sequard were among the possibilities and it would prolong life to the age of a hundred years, it is questionable if it would be a blessing. The very men whom we least need would be the first to try a barrel of it."

——Mr. Anderson at American Florists' Association: "About all the Hybrid Perpetuals that are really fall-blooming are Paul Neyron and Mrs. John Laing, no others being hardly worthy of being so called."

——Post-Express: Passenger: "Say captain, I'd like an egg for breakfast."

Captain: "When the ship lays to I'll try and get you one."

Passenger: "Oh, thanks. But if she doesn't?"

Captain: "Then you'll have to wait till I get the lay of the land."

——Garden and Forest: "Colonel Pearson writes that the copper sulphate mixture has again proved itself preventive of both rot and mildew even in this exceptionally wet summer. The grape-crop about Vineland is, however, almost a total failure, even where the clusters were bagged, and bagged early."

——The American Florist: "Mr. Craig tells us in his essay that catalogue cuts have been sent back to the engraver to have the flowers made larger and more of them on the plant, and we are convinced that catalogue cuts are frequently made simply from a description—that is the engraver is told to make a cut like one already in existence, 'changing it so that it will look different, but make the flowers larger and more of them, as this novelty is an improvement on that sort.'"

——Life: "The summer hotel is the doctor's fast friend. One of the conspicuous risks that poor people are spared is the hazard of travel-for-the-health. Many an ill-timed intimacy with an undertaker might have been indefinitely postponed if only the contracting party had been too poor to stir from home"

——Puck: "How has it come about that nearly 327,000 veterans and over 93,000 widows and children of veterans are to-day drawing pensions? It has come about through the pension agents. The business of these men began toward the end of the war. They were useful middlemen between the disabled veterans and the pension office. But the deserving veterans—nine-tenths of them—got pensions long ago."

——Garden and Forest: "The pea-weevil (*Bruchus pisi*) and the bean-weevil (*Bruchus fabæ*) can be destroyed by putting the peas or beans into a pail and covering them with water; if the water is warmed to about blood-heat all the better, but this is not necessary as cold water will answer. If the seed remain in the water from eight to 12 hours every weevil will be destroyed, as the cavity containing the insect is soon filled by the water absorbed by the seed and the weevil is drowned. This simple remedy, which is recommended by Professor J. W. Clark, of the Agricultural College of Missouri, is not only effective, but does no injury to the seed, and if the seed is not soaked until the day before planting, it will germinate more readily than before."

——New England Farmer: "Farmers cannot raise hogs to compete with cotton-seed oil, any more than they can make butter to compete with oleo."

——American Farmer: "No farmer can get to the head of the procession by hanging to the tail of a scrub cow."

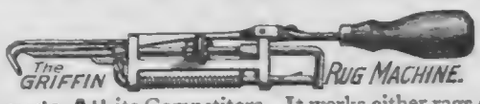
——M. A. Cragin, in New England Farmer: "The rich man can afford two things—he can afford to do without silage, and he can afford to burn green wood. But the poor man can afford to do neither."

Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

Do You Feel all tired out, nervous, irritable and without appetite? Hood's Sarsaparilla will overcome that tired feeling, tone your nervous system, purify your blood, sharpen your appetite, cure indigestion and sick-headache, and make you cheerful and happy. Be sure to get Hood's Sarsaparilla.

BY ONE MAN. Write for descriptive catalogue containing testimonials from **hundreds of people who have sawed from 4 to 9 cords daily.** 25,000 now successfully used. Agency can be had where there is a vacancy. **A NEW INVENTION** for filing saws sent **free** with each **machine,** by the use of this tool everybody can file their own saws now and do it better than the greatest expert can without it. Adapted to all cross-cut saws. Every one who owns a saw should have one. Ask your dealers or write **FOLDING SAWING MACHINE CO., 308 to 311 South Canal Street, Chicago, Ill.**



Leads All its Competitors. It works either rags or yarn, is Simple, Durable, and **Easy to Operate** Price, by mail, **Plain, $1; Nickel Plated, $1.50. Satisfaction Guaranteed** or money refunded. Send for Circulars. Agents Wanted. **C.W. CRIFFIN & CO., Franklin Falls, N.H.**

Newtown Double Geared, Level Tread Horse Powers, AND THRESHERS AND CLEANERS ARE THE BEST.

We also manufacture Self-Dump Rakes, Corn Shellers, Farm Rollers, etc. Send for Circulars and Price Lists. A. BLAKER & CO., Newtown, Bucks Co., Pa

THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, OCTOBER 5, 1889.

PERSONAL.

"PRINT THE R. N.-Y., on a poorer grade of paper; give up your artists and use second-hand illustrations which can be bought for a song. Pay less for contributions. Then put down the price to a dollar, and you'll double its circulation."

Such has been the advice tendered us at various times by acquaintances and friends. Though thankful at all times for suggestions and advice, we have never been able to accept the above as worthy of serious consideration. To do so is and always has been discordant with our progressive aims and hopes. We have never felt quite contented unless we could feel at the end of every year that the R. N.-Y. has been better than ever before and more worthy of the support of a discriminating patronage.

Cherishing such views, encouragement from prominent men who cannot afford to bestow superlative praise indiscriminately, is peculiarly gratifying. The following lines are an extract from a note just received from W. Atlee Burpee, of Philadelphia, Pa.:

"The typographical appearance of the R. N.-Y. is grand and the paper excellent. * * * * I am glad that you have determined to stick to your plan of giving a high-grade paper. The RURAL already is head and shoulders above any competitor, and to maintain this rank rather than cater for the cheap trade is certainly a wise policy. Do you know that the 'Something-for-Nothing' policy of these cheap publications has almost destroyed their usefulness even as advertising mediums? You have a broad field if you can only maintain health and strength to work it with the same energy."

ASK any questions you choose, readers of the R. N.-Y. We or some of our many and widely-distributed correspondents will answer them as best we or they may. The Farmers' Club and its Discussions have grown to be one of the most useful and interesting departments of this journal.

MR. E. F. STEVENS, of Dickey County, Dakota, has the following to say, in a recent letter:

"I planted our field potatoes somewhat after the R. N.-Y.s trench system: result, I have potatoes to sell to my neighbors who planted theirs in the old way and hilled them up. Hurrah for the RURAL! I am about $30 or $40 ahead this year by taking it."

This note is printed for the benefit of those Western farmers who object to the R. N.-Y. because it is "printed too far East to do them any good."

"EDITORS who accept courtesies and perhaps pay from railroad companies and town-site syndicates, and, in return, make their editorial columns advertising mediums to boom the property of their patrons, are corrupt in morals and are betraying a high trust."

So says a correspondent on page 662, writing of the Montana boom. Chas. A. Dana says:

"Never print a paid advertisement as news matter. Let every advertisement appear as an advertisement—no sailing under false colors."

"THE RURAL NEW-YORKER is published too far East; it is not suited to Western farming!" This remark is often heard by our agents at the West. What do farmers who say this think of the following note?

"I did not believe a few weeks ago, when I sent for a sample of the RURAL NEW-YORKER, that I would care to take any Eastern paper; but I find that I cannot do without the RURAL, and so I inclose $2 for a year's subscription. I find everything in it worth recording, even in those lines that are foreign to my own special interests."

Rockford, Ill. J. B. U.

IT is very evident that the question of selling potatoes from fields where the rot has appeared is to prove quite an important one for farmers and seedsmen. The R. N.-Y. has given the statements of the purely scientific people, which are to the effect that it is unsafe to plant potatoes from fields where the rot has appeared. Practical farmers do not generally believe this; see for instance what "Farmer" says on page 662 Now, if the scientific side of the story be taken without question, it will be seen that potato sellers who have seed for sale, which was grown in localities where the rot has not prevailed, could rightly claim superiority for their seed potatoes and would be justified in demanding an extra price for them. Before farmers buy their seed, therefore, the R. N.-Y. wants this subject understood, and we shall print, within a few weeks, the best information that can be obtained regarding this matter, which we deem of considerable importance.

A FARMER in New Jersey rests in jail rather than pay a fine imposed upon him for selling milk which fell below the legal standard. The farmer claims that the milk came directly from his cow and that nothing has been added to it. If this be true, which is the culprit—the man or the cow? The New Jersey law requires that milk shall contain at least 12 per cent. of solids. This looks reasonable enough; it would seem that a cow giving milk with less than 12 per cent. of solids is not worth keeping, yet there should be no foolishness or carelessness about the official examination of the milk. The proportion of solids in milk from a given cow will vary considerably. A cow at the Wisconsin Station gave but 11 1-2 per cent. of solids in the first pint of milk drawn from her; while the last pint contained 19 1-2 per cent. Fright, change of feeding, a chill and other conditions may affect the cow so that a sample of her milk would give an entirely untruthful record of her usual performance; so that we see that carelessness in the enforcement of a milk law may do injustice.

SCIENTISTS are now discussing the desirability of a law which will create a very delicate legal difference. Some bee-keepers claim that their bees have been killed in their search for honey on fruit trees that have been sprayed with the Paris-green and water mixture for the coddling moth. It would seem as though a man ought to have a perfect right to use poisons on his own land to save his fruit from the ravages of insects. He merely uses the best known means of protecting his property. And it also seems fair that the bees should have a chance to gather the honey. Honey is a desirable article of food and its extraction takes absolutely nothing from the value of the tree or fruit. It would be a waste product if the bees did not utilize it. Now the scientists say that the only danger to the bee lies in spraying before the blossoms fall. After this point of growth, there is nothing left for the bee—it must work on other flowers. The coddling moth, however, so they tell us, can be killed after the bee has been satisfied, so the scientists would have a law, if need be, making it an offense punishable with fine and imprisonment to put poisons on one's trees before the blossoms fall. It can be readily seen that such a law would cause some very curious and delicate legal business. It must be said, in justification of those who desire some legal protection in this matter, that several cases are reported where bee-keepers have been nearly ruined by the early spraying of apple orchards.

THE Wisconsin farmers' institutes will open this year at Phillips, Price County, November, 19. These institutes are conducted in an eminently business-like way; in fact, it is probable that the Wisconsin farmers get more "institute talk" in the course of a year than do the farmers of any other State. Does all this talking do them any good? Well, the farmers claim that it does and they ought to know their business at least. There will be 60 institutes this year in two sets, both in session at the same time, so that a large territory may be covered. There will be five sessions during each institute, and a general programme has been arranged so that the same topics may be discussed at each institute. The following outline is given. The R. N.-Y. prints it because it may be useful for managers of other institutes.

First Session (for gentlemen only).—Stable management of cattle; principles of breeding in domestic animals; care of breeding animals; horse-breeding on the farm.

Second Session (all invited).—Clover, grasses and pasturage; corn culture; potato culture, grain raising; feeding questions—silage or otherwise.

Third Session (evening).—Educational topics.

Fourth Session.—Sheep husbandry, wool and mutton, early lamb-raising; swine-breeding and pork-raising; how shall we produce cheap beef?

Fifth Session.—Dairying; butter-making, cheese-making; gardening; fruit-culture; road-making, draining, noxious weeds.

Whatever is said regarding the value of such institute work to the farmer (the R. N.-Y. believes such work can be made of great value), the business management shown in conducting the Wisconsin institutes is most commendable.

$25.

TWENTY-FIVE dollars are offered by the R. N.-Y. as follows: Fifteen dollars for the largest and best shaped R. N.-Y. No. 2; $10 for the second-best. Description and weight should be sent in before November next. Those only who may be entitled to one or the other of the above prizes, *as judged by their own reports*, will be asked to forward the specimens to this office.

DEATH OF DR. G. H. COOK.

LAST Sunday George H. Cook, LL. D., Ph. D., State Geologist and Vice-President of Rutgers College, died unexpectedly at New Brunswick, New Jersey, of heart failure, at the age of 72. He was born at Hanover, N. J., in 1817; became a civil engineer in 1836, and graduated at the Troy Polytechnic Institute in 1839. He afterwards became a teacher in the Institute and was made "Senior Professor" or President in 1842. Later he became Professor of Mathematics and Natural Geology in the Albany Academy, and Principal of it in 1852, accepting the chair of chemistry and natural philosophy in Rutgers College two years later. Next year he became Assistant Geologist of New Jersey, and held the position for three years. Owing to his efforts the office of State Geologist, which had been for years in abeyance, was reorganized in 1864, and he was appointed its head. His work in this capacity was varied and of great importance. In the same year the State Scientific College was attached to Rutgers, and Dr. Cook, while relinquishing none of his other duties, became Vice-President of the college. He was the organizer of the State Board of Agriculture and was for a long time its secretary. In 1886 he became Chief Director of the New Jersey State Weather Service. He was also member of the State Board of Health and held many minor offices in the State, besides being an active worker in other directions. He was a member of the American Association for the Advancement of Science, and the author of many papers and addresses, some of which have appeared in the R. N.-Y. He received the degree of Doctor of Philosophy from the University of New York, and the degree of Doctor of Laws from Union College. A wife, one son and one daughter survive him. His life was active, useful and honorable, and his death is widely regretted.

WHAT ARE YOU GOING TO DO ABOUT IT?

ABOUT WHAT? Western dressed beef! We are speaking more particularly to our Eastern friends now, although Western farmers find very little to admire in the present state of affairs. Our correspondents tell their story forcibly and well. There is little that we can add concerning the effect of the trade in sections where the meat is to be sold. When we add that the rulers of this business are as greedy in buying as they are in selling, it is evident that Western farmers are but little better off than their Eastern brothers. Eastern farms are not going to grow up to brush pastures because of this trade. There are sorts of live stock that can be grown here at a profit and which will make the needed manure—sheep and early lambs, coach and carriage horses, hogs, "fed for lean," sold at special markets, first-class dairy cows, and, best of all, poultry. There never will come a time when the farms east of the Alleghanies will be beaten at the production of such stock. No, the R. N.-Y. has little fear for the future of agriculture in any part of this country. In "Snow-Bound" Whittier speaks of the schoolmaster:

"Born the wild Northern hills among,
From which his sturdy father wrung,
By rugged toil, a living scant,
Not competence, and yet not want."

That same rugged farm to-day planted in seed potatoes might produce a crop the value of which would fairly startle the old farmer. We merely speak of this as an illustration of the fact that there is a special product for every section. The man who is most successful in discovering this specialty is the man who succeeds. Agriculture is safe in spite of the dressed beef business. The germ of the matter is that a few keen, grasping business men have so manipulated an important business that no outside party coming in contact with the business is particularly helped, while all besides themselves are in some way injured. This is wrong. It is about this state of affairs that we ask—"What are you going to do about it?"

"I have tried the Rural's 'sulphur remedy' for the potato scab and found it to be exactly as recommended—a success. I made a test plot by planting every other hill with a tea-spoonful of sulphur sifted in at planting time. The potatoes in the sulphured hills came out perfectly clean, while those in the other hills were badly scabbed.—C. H. F., page 662.

BREVITIES.

A LIVELY dairy symposium next week.

THERE is to be a poultry show in this city on February 19 to 25, 1890.

FEED a few tomatoes to the cow if you want to see her enjoy a meal.

COME, Mr. Alfred Rose, let's have your apology now. Better late than never.

BE kind enough to weigh a potato just under what you term marketable size and let us know the weight.

THERE is a lively demand for nuts in this market. The sale of native nuts seems to increase from year to year.

WESTERN dairymen are talking about using the new "Butter Extractor" for the purpose of determining the value of different samples of milk brought to a factory.

"Break up the trusts. 'How can that be done?' By Farmers' votes. 'When?' As soon as the farmer will learn to vote for principles, not parties."—A. L. CROSBY, page 659.

"I AM a yearly subscriber for the R. N.-Y. and received the last number and lost it in an hour. I wouldn't take a dollar for it. Will the RURAL be kind enough to send me another copy? W. B. L.
Rochelle, Illinois.

Indust'l Societies.

CONNECTICUT STATE FAIR.

(RURAL SPECIAL REPORT.)

Very fine Grange exhibits; a good display of agricultural implements; a large cattle exhibit; on the whole it was the society's best fair.

THE 20th Annual Agricultural and Industrial exhibition of the Connecticut Agricultural Society was held in the Park and Town Hall in Meriden from the 17th to the 20th of September. The exhibition was the best ever given by the society, and it merited a much larger patronage than it received. As usual, the exhibition of the various Granges in the main building was one of the chief attractions.

The following Granges made exhibits in the building and the adjoining tent: Meriden, Cheshire, Mattabessett, (Middletown), Newington, Westfield, Berlin, North Haven, Middlefield, Wallingford, Percival and Northford.

The exhibition of Meriden Grange, No. 29, was made in the end of the implement tent. The feature of the display was a "Train of Plenty." It was a freight train with engine, cars and caboose complete. The cars, nine in number, were made of agricultural products. They were loaded with onions, beets, apples, watermelons, potatoes, etc. The locomotive was covered with seeds to give it the color of the original metal; the cab was made of corn-stalks and the tender was filled with ears of corn in imitation of fire-wood. The train was arranged on a semi-circular track 70 feet in length. In the center of this semi-circle were tables loaded with fruit and an arch of evergreens bearing the arms of the State designed of bunches of grapes and a column of flowers surmounted by a gray eagle. Altogether it was one of the most beautiful and striking exhibitions of farm products I have ever seen. Wallingford Grange showed a life-size figure of a milkmaid carrying a pail and milking stool and a very life-like figure of a cow. The milkmaid was made of pumpkins and various kinds of fodder. The cow was covered with oats and had a big squash for a bell. These figures attracted more attention than any other single exhibit.

North Haven Grange exhibited a windmill and clock made of flowers and seeds. Berlin Grange showed a model of a farm-house, barn and other outbuildings, with fields of grain, potatoes, etc. Westfield Grange had its table filled with 70 varieties of potatoes. Percival Grange showed a model of a plow about 10 feet long, made of fruits and vegetables. On the whole the Grange exhibits were highly creditable to the Granges of the State and were worth going many miles to see.

The implement tent adjoining the main building, was filled with a great variety of implements and carriages. Mr. Gale was on hand as usual and kept busy describing the various implements made by the Belcher & Taylor Company. Mr. W. A. Burr showed the Keystone implements and the E. W. Ross fodder cutters; also the Ideal feed mill and other kinds of farm machinery. The Shipman engine attracted much attention and favorable comment. The pomological exhibit in the hall in the upper part of the main building was well filled with fruits and vegetables. Mr. T H. Loomis showed some very remarkable specimens of the Eaton Grape. Mr. P. M. Augur, T. S. Gold and other well known fruit growers were on hand.

The cattle show was one of the best ever seen in New England. Between 500 and 600 head were on exhibition. The sheep and swine exhibits were large and interesting. The poultry tent was well filled; over 150 coops were shown. The industrial exhibition in the Town Hall was liberally patronized. The lower part of the hall was filled with the products of the local manufacturers, chiefly silverware and organs. The gallery was devoted to fancy-work, bed quilts, spreads, rugs and the like. The Pneumatic Symphony (self-playing) organs were the leading novelty in this department. These instruments would play a tune automatically, or the air could be played automatically, and an accompaniment played on the keyboard as on an ordinary organ. As the result of good management, the Connecticut State Fair grows better and better every year, but it needs the hearty support of the farmers of the State, and above all, it needs the hearty co-operation of the railroad company. The usual custom is for railroads to make the round trip to and from the fair grounds at the single fare rate. There is no good reason why the N. Y. N. H. & H. railroad should not do the same. J. H. G.

Field Crops.

RURAL POTATO REPORTS.

I RECEIVED my Rural New-Yorker Potato No. 2 about the middle of April. It was about the size of an English walnut and weighed just 1¼ ounce. Now the question was to get the largest return from the small amount of seed for seed next year. I carefully cut each eye out and laid them on a dish; then I cut all of the largest eyes in halves, making, in all, 13 sets. Some of them were no larger than a grain of wheat. I now took a piece of old onion ground very rich from former manurings, dug a trench 14 feet long six inches deep and 12 inches wide on the bottom according to the RURAL NEW-YORKER'S trench system. In the bottom of the trench I placed two inches of well rotted stable manure and incorporated it well with the soil.

On this I planted the sets and covered them two inches with soil. I then sowed over the surface of the trench at the rate of 500 pounds to the acre of fish guano and worked it well in with a rake. When the young plants made their appearance the leaves were about the size of a radish in the seed leaf. They looked as if they would be a failure for the want of nourishment from the small sets. I kept the soil stirred around them and watered them every few days until they got a start. After that they took care of themselves as well as any potato I ever planted with two to four ounce sets. The season being dry, they were thoroughly soaked with water twice during the growing season. On August 27 they were dug in the presence of three witnesses. The stalks were over 2½ feet tall and from one to 1¼ inch in diameter. The yield was 67 pounds of good marketable potatoes. The largest hill from one set was eight pounds nine ounces. In this hill grew the two largest potatoes. The yield per acre, allowing the rows to have been three feet apart, the usual distance of planting, and the sets one foot apart in the rows, would have been 1,220 bushels to the acre! When we take into consideration the size of the sets and the amount of stock seed—1¼ ounce—I think it safe to say the yield has never been beaten in field culture.

H. A. MARCH.

Skaggit County, Washington.

R. N.-Y.—This correspondent wrote us last spring just after receiving his little potato, that he had always supposed "the RURAL had more sense than to send out such a little potato by mail."

LAST spring I planted 10 pounds of Rural New-Yorker No. 2 Potatoes, cut to one eye, on 63 linear feet of land. No fertilizer of any kind was used and they were hoed but once. Last week I harvested from the plot five bushels and 59 pounds of the handsomest tubers I ever saw. There were but 9¼ pounds too small for market, and I offer a prize of $100 to any man who can find a deformed potato in the lot. One perfect tuber weighs 18 ounces. I showed one peck last week at the Wisconsin State Fair and the Rural No. 2 took the first premium for "Best Late Potatoes" against nearly 50 exhibitors of other varieties. Why should not the RURAL raise 700 bushels when mine yield at the rate of nearly 1,100 bushels per acre? D. B. H.

Delavan, Wis.

I PURCHASED last spring one pound of Rural No. 2 Potato and sprouted them in a hot-bed, setting the plants in a furrow on the edge of a field from which green rye had just been cut. They grew pretty well from the first; the bugs seemed to have no chance with them. They were dug about August 20, and carefully weighed. There were 18½ pounds of them, about 12 pounds of which were unmarketable. The heaviest hill weighed four pounds 4½ ounces. They are showing signs of rot. Potatoes in this section have rotted badly. C. M. T.

Stelton, N. J.

I PLANTED the R. N.-Y. No. 2 Potato about April 1. It was a diminutive, dried-up, wilted thing about the size of a hulled walnut and had a hole the size of a small peanut eaten in it by a grub worm. I cut it into nine pieces, one eye to the piece, and planted them in the garden in a trench, using dissolved bone phosphate at the rate of 200 pounds to the acre, as a fertilizer. The soil is a clay loam. The pieces were planted about 12 inches apart and only four of them grew. They had two hoeings and were dug August 10, and the four hills weighed nine pounds seven ounces, nearly all of a marketable size: one hill weighed two pounds 13 ounces, six potatoes being in the hill, the smallest one the size of a large hen's egg. The largest potato weighed 13¼ ounces. They are a fine lot of potatoes and I am well pleased with them and shall plant all of them next season.

Charlestown, Ind. J. D. K.

THE No. 2 Potato received last spring was about the size of a hulled walnut and from it I cut five eyes and planted them across the end of a beet bed in my garden, giving them about the ordinary attention. Owing to the cold spring they were very late in starting, but finally grew into fine, thrifty vines. About three weeks ago I dug them and got 64 tubers, weighing 11 pounds. There were several small ones and some as fine as I ever saw. They are beautiful potatoes and in every way a success.

Franklin, Ind. T. W. W.

THE Rural No. 2 Potato received was a little off shape. There were only four eyes. I planted them in good ground and dug them last week. I had 25 marketable potatoes; the largest one weighs 14½ ounces and the next largest 12½ ounces. I experimented with three other kinds of potatoes alongside of the Rural No. 2 and they are called first-class. They yielded well, but were over half rotten when I dug them and what I put away sound after I had dug them have rotted badly, but Rural No. 2 did not rot in the hill alongside of them and have not rotted since, and I am well pleased with them. I. S. P.

Stuyvesant, N. Y.

I CUT my Rural No. 2 Potatoes (I had two; a subscriber gave me his) into very small pieces. Most of the eyes were cut in two pieces, making 33 pieces in all. I planted them in a box and covered them about two inches deep, and placed them in a work-shop till they were up about three inches. I then dumped them out on the ground and picked out the sets. I planted them with a garden trowel, in a single row, in good garden soil, which had received no manure for years. I hoed them a little. Two of the sets refused to grow, which left me 31 hills. From these I have 51 pounds of potatoes. The largest one weighs 14 ounces, but is not smooth. The next largest 13 ounces, and the next 12 ounces. The last two are smooth. The largest 10 weigh six pounds and 14 ounces. With the exception of four or five hills, the potatoes are very fine. I would not sell the lot for $5. S. J. E.

Canton, Ill.

MY RURAL NO. 2 potato I planted about April 15 in a clay soil where a strawberry bed had been several years. No fertilizers were used. The potato was cut into nine pieces with one eye each, eight of which grew. The vines were very small all summer and did not seem to thrive very well, but I dug them September 6 and found 40 nice, smooth potatoes, which weighed 13 pounds; 31 were of good marketable size, nine being smaller than a hen's egg and weighing half a pound.

Potatoes are a good crop here, and are worth only 25 cents per bushel now. Late ones are not yielding quite as well as expected. Have not heard of their rotting any yet. D. W.

Wolcottville, Ind.

I PLANTED the Rural New-Yorker No. 2 about April 15th. It was not as big as an ordinary sized hen's egg, and only had six eyes. I cut it into six pieces and planted them 10 inches apart in a drill three inches deep. I did not use any fertilizer; but the ground was watered three times with liquid manure. They were dug the first week in September and yielded 12 pounds. There were 25 potatoes; two were about the size of marbles and the rest were of good size, the largest weighing one pound; while three or four would go about three-quarters of a pound. The largest potato is a little coarse, but is not knobby. Taking the size of the sets into consideration, it is the heaviest yield I ever saw.

W. MC A.

Port Hammond, British Columbia.

THE Rural New-Yorker No. 2 sent me last fall weighed just 1⅛ ounce. On May 7, I cut it into seven parts, planting them—one eye to a piece—in a trench and covering them four inches deep, each eye about 12 inches apart. The condition of the land was no more than an average of the whole field, which was fairly good. I used two pounds of Bradley's fertilizer and two ounces of sulphur and no other dressing for this potato. I harvested the tubers September 7, and got 47 potatoes, all weighing 10½ pounds, or 168 ounces. The largest weighed 13 ounces; 40 of them were of good size suitable for table use; seven others were smaller; all were white and clean. There was no rot or scab. I have tried some of them boiled and baked and find them fully equal to the Snowflake or Early Mayflower the two finest varieties ever raised in New Hampshire. S. S. L.

Meredith, N. H.

THE potato I received last spring was about the size of a very small hen's egg. I cut it into 12 pieces, one eye to a piece, and planted them in new prairie soil about one foot apart. All the working they got was a little forking of earth to them with a manure fork twice. I dug them September 11 and got for my labor 48 tubers free from rot, weighing 10 pounds; six were small, 42 of fair size, the largest weighing one pound. Thanks for the potato. G. K.

Bradshaw, Neb.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

SYDNEY SMITH says: "Never teach false morality. How exquisitely absurd to teach a girl that beauty is of no value, dress of no use! Beauty is of value, her whole prospects and happiness in life may depend upon a new gown or a becoming bonnet; if she has five grains of common sense she will find this out. The great thing is to teach her their proper value, and that there must be something better under her bonnet than a pretty face, for real happiness in life." The wise prebend spoke with his usual common sense when he made this declaration. There is no doubt that we women are always first judged by our looks, and we strongly influence others by these external qualities. But not only mere prettiness must be taken into account. Good temper, good sense, and social tact, combined with a talent for tasteful clothes, will cause a plain girl to outshine a pretty one, if the latter possesses no striking qualities beyond her prettiness. Very often the most attractive girls we know possess little actual prettiness, but somehow they give the impression of beauty. Personal beauty is God given, and we must recognize its powerful influence, while remembering the less evanescent graces that should accompany it.

* * *

TALKING of prettiness, we recently read an interview with a so-called beauty doctor, a woman whose business it is to preserve or improve the good looks of her patrons. Judging from her words, we all ought to be good looking; of course, she does not promise to make irregular features straight, or alter radical defects, but she gives many suggestions for improvement. Her three essentials are fresh air, exercise, and abundant soap and water. Many women do not believe in the use of soap upon the face, but eminent medical authorities say that skin disorders are often caused by impurities which the use of soap would prevent. Once a day the face should be washed with abundance of good soap. It is a good plan to wash the face first with warm water—then rinse with cold; this hardens the skin, and lessens the risk of roughening on exposure to cold. This "beauty doctor" speaks in terms of reprobation of those women who boast that water is never used to cleanse their faces, and rightly too. Surface dirt may be removed by such unguents as glycerine, vaseline, or the like, but we certainly cannot consider such people clean.

* * *

WE have often spoken of cleanly women whose cleanliness does not extend to their hair, and this is a very frequent fault. Unquestionably, the hair should be properly washed every 10 days or two weeks at the farthest, although it is a tedious and troublesome process. When allowed to go without washing for any length of time it is not only unclean: it loses its natural gloss, which can never be replaced by the greasy

luster succeeding it. It should be well washed with some good soap, rubbed thoroughly into the scalp, and then as thoroughly rinsed; a drop of ammonia in the water will be found an improvement. It must be well rubbed with towels, the bang, if worn, adjusted in its proper place, and the hair dried, either in the sun, or in the vicinity of a fire. If very dry a little vaseline may be rubbed into the roots, but not on the hair itself. Borax, though often used in washing the hair, is not advisable, rendering it too dry and brittle. Some women think that the proper way to dry the hair is to rub it gently between the bare palms of one's hands, but this is a very tedious process. Certainly it is always a convenience if one can get a second person to dry one's hair, and to wash it, but this is not always possible. As for hair revivers, it is well to leave most of them alone, but sometimes simple remedies will promote growth or prevent it from falling out. For one of these, which has often done good service, take five cents' worth ofbitter apple, and put it to steep in half a pint of rum. Let it steep for three or four days, then rub the liquor into the scalp daily with a bit of flannel. It seems to invigorate the scalp and promote the growth of hair; it is certainly a harmless remedy.

WASTED ENERGY.

J. H. G.

THE most approved cannons (the Italian model of 1879) convert but 17 per cent. of the total energy of the powder into work. An ordinary steam engine under the most favorable conditions converts into work less than 10 per cent. of the power represented by the coal. Man considered as a machine is vastly superior to the results of his handiwork: for when he applies his labor to a definite object he converts 22 per cent. of his energy into work. But while he is superior to a machine in the results of his labor when directly applied to a definite object, he is vastly inferior to it, in that by far the greater part of his labor is wasted altogether. This waste of energy is to me one of the most lamentable things in the world. I am conscious of it and so are you. We read the works of great authors, Homer, Virgil, Dante, Shakespeare, Milton, and what is the result? We have simply wasted our energy in ascending a literary hight which the pressing duties of life will not permit us to maintain; we study music, wasting energy which would make us successful in almost any sphere in acquiring the rudiments of an art which is virtually valueless both to ourselves and the world. A man gets a mania for politics and goes into it. He gets the nomination for some office; he wastes energy enough to plant a whole farm only to learn that his opponent is more popular than himself. One or two such experiences will usually shut off the waste of energy in that direction, and so on *ad infinitum*. We are ever striving to appear what we are not, and cannot be. I have often thought what a blessing to mankind an instrument would be which would accurately measure us—physically, mentally, and spiritually. How much misdirected effort, ungratified ambition—unrealized heart longings it would save us.

In the absence of any way by which we can determine how to so exert ourselves as to obtain the best results, it may not be unprofitable for us to consider for a few moments some of the sources of waste energy.

One of the most prolific causes of waste energy lies in our system of education. We spend the best part of our lives in fitting ourselves for a sphere into which we are destined never to enter. It is a rule rather than an exception that men, and women too, have less education or what passes for education at 30 years of age than at 20. Almost all the instruction obtained in early life is forgotten as we come to life's more urgent realities. In other words, we spend the best part of our lives in fitting ourselves for what we are not and cannot be. We cultivate the unreal and sacrifice the real. Let us take up one of the commonest mistakes of life as well as the most radical source of waste energy—the waste of waiting for opportunities. The desire to say some great thing has prevented the utterance of many a wholesome word, and anxiety to accomplish some wonderful work has crushed in the bud many an humble deed of exceeding grace and sweetness. We wait for something to turn up instead of turning something up.

"Every claim of duty, the employment of each minute, the daily vexations or troubles we are called upon to bear, momentary decisions that must be made, the casual interview, the contest with sin or sorrow in that every-day dress, all these, and many others as small and as constant, are the real opportunities of life. These we are continually embracing or neglecting, and out of them we are forming a character that is fast consolidating into the shape we give it, for good or for evil. Those who are waiting for important crises, overlook the great fact, and drift aimlessly along the current that seems to them so placid as to require no effort, but which is bearing down with fatal swiftness all those who do not energetically breast its waves and resist its power.

There are doubtless, in the lives of all, great crises, large opportunities, marked epochs. But he who waits for them will be ill prepared to meet them when they come. The strength to pass through them nobly and worthily, must have accumulated, little by little, in the patient and resolute struggle of every day life. He who fails here will surely fail in greater things. If we neglect our little opportunities, we shall lack the power to embrace the larger ones. Chances are lying open to us every moment of our lives. We need not wait for them, they are waiting for us to embrace them. If we watch through a single day we shall doubtless discover hundreds of opportunities of both doing and receiving good, that we have perhaps hitherto passed by in indifference, and by diligent assiduity in seeking for and embracing these, we shall be prepared to encounter the fiercer storms of life that await us, or to take advantage of the future that may open for our good."

Sydney Smith says: "Let every man be occupied in the highest employment of which his nature is capable, and die with a consciousness that he has done his best."

"Blest work; if ever thou wert cursed of God what must his blessing be." You are waiting for opportunities—wait no longer—there is work to be done—work to be done here—in church service, in Sunday school, in society—for society is but the aggregate of individual effort. The success or the failure of society is but the aggregate failure of its individual members. We must accept society as evidence of individual characters and work for it accordingly. Above all remember that any criticism of a society of which you are a member is but another way of finding fault with yourself.

"Let us then be up and doing with a heart for any fate.
Still achieving still pursuing, learn to labor and to wait."

"If thou can'st plan a noble deed,
And never flag till it succeed.
Though in the strife thy heart should bleed,
Whatever obstacles control,
Thine hour will come; go on true soul,
Thou'lt win the prize, thou'lt reach the goal."

ONE OF GRANDMOTHER'S TALKS.

MRS. S. H. ROWELL.

I DECLARE, it does seem real good to get back home once more! No, I do not enjoy city life! I do not believe I drew a real, good long breath all the while I was in Judge Gibson's house! It was so close, and smoky, and smelled so strong of gas and soot that I don't wonder folks are sickly, and the children are feeble and puny. It is more of a wonder that people there raise as many babies as they do, than that so many die! What on earth people huddle into cities for, is more than I can tell! They die of starvation, and want of breath by hundreds in the hot weather, and freeze to death in cold weather. There are lots of homes in the country where folks could find work enough to do, and have pure air to breathe, and trees and grass and posies. Oh, dear! it is strange how people will leave pleasant homes to go to live in a city!

I suppose Alice Gibson does enjoy it. She has a nice house, and fine furniture, and a grand turnout when she goes to ride, but she is not a happy woman, she is pale and looks so tired all the time, and her children are poor sickly sufferers. She took me up to the grand cemetery one day for a ride. She has more children there than she has in her elegant house; and she will have more of them to carry there, for I never did see such a weakly set as the Gibson children are, in all my life! As true as I am alive, I never heard a good hearty laugh from one of them all the four weeks I was there. They crept around the house like so many mice; they are all crooked and go stooping about, as though every step hurt them, I don't believe one of the children are real glad they are alive; they don't have any fun, but all they care for is to eat cake and candies, I should suppose their mother would know better than to give them such stuff. It spoils their appetites, and gives them the toothache. A good dish of bread and milk would be so much more wholesome for them than pound cake and bon bons; I never thought Alice would make such a woman, but you cannot tell how girls will turn out. She was a real smart business girl, and if she had married a poor man, she would have been a happier person than she is now. Yes, and she would have been a better woman too, for she would have had something to live for and to do in the world, and she would have brought her children up to be useful and do something with their lives. Ah well! I gave the Judge and Alice a piece of my mind before I came away, about the way they were raising their young ones; and the Judge looked as if I was wild, when I told them what I thought, but he said, perhaps I was right about it, that he knew there was a mistake somewhere, for their children were all invalids, and he never could understand why it was so, for both he, and Alice, were healthy, when they were young. Yes, but you were raised on good plain food, and allowed a chance to run in the dirt and grow up strong and active. Very true, very true, he said, and they will find it so in the end.

GOLDEN GRAINS.

SMILES reminds us that energy enables a man to force his way through irksome drudgery and dry details, and carries him onward and upward in every station of life.....

Not once or twice in our rough island story
The path of Duty was the way to glory.
—*Tennyson.*

HORACE says that he who idles away the time for which he is paid, does himself greater injury than he does his employer, for he is erecting an insurmountable barrier between himself and progress.—N. W. Penhurst. Life has given nothing to mortals without great toil.....

DR. JOHN HALL says we should keep clear of personalities in general conversation. Talk of things, objects, thoughts. The smallest minds occupy themselves with personalities. Personalities must sometimes be talked, because we have to learn and find out men's characteristics for legitimate objects; but it is to be with confidential persons. Do not needlessly report ill of others. There are times when we are compelled to say: "I do not think Bouncer is a true and honest man;" but when there is no need to express an opinion, let poor Bouncer swagger away. Others will take his measure, no doubt, and save you the trouble of analyzing him and instructing them. And as far as possible dwell on the good side of human beings. There are family boards where a constant process of depreciating, assigning motives and cutting up of character goes forward. They are not pleasant places. One who is healthy does not wish to dine at a dissecting table. There is evil enough in man, God knows; but it is not the mission of every young man or woman to detail and report it all. Keep the atmosphere as pure as possible, and fragrant with gentleness and charity.

We would do well to heed some of the maxims of the Talmud. It says that we should love our wife like ourself and honor her more than ourself. Who lives unmarried, lives without joy, without comfort; without blessing. He who forsakes the love of his youth, God's altar weeps for him. It is woman alone through whom God's blessings are vouchsafed to a house. She teaches the children, speeds the husband to the place of worship, welcomes him when he returns, keeps the house godly and pure, and God's blessing rests upon all these things. He who marries for money, his children shall be a curse to him.....

He who hath a virtuous wife hath a greater treasure than costly pearls. She openeth her mouth with wisdom, and her tongue is the law of kindness.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

"AT HOME" ON THE FARM.

ANNIE L. JACK.

"COME, stir the fire, and close the shutters fast, let fall the curtains, wheel the sofa round"—for autumn has come—and once more we gather around the hearth fire and think over the summer past with its many pleasures, and its disappointments as well. Crowded into the housekeeper's daily routine are many things at this season of the year—and happy is that pantry when the stores are all safe for winter use, for I was lately told the sad experience of a young girl who put up the summer fruits while her mother was absent in Europe. An enterprising younger brother on the lookout for jam made the discovery that the jars were "fizzing" and that the floor was covered with the fermenting fruit. Poor little housekeeper! She will give a good deal more care next time to the security of her winter's supply.

Just now "around the house" we are troubled with apple thieves, and it is a pity some law could not be put in force to punish such offenders just as people who steal apples from a fruit store in the city are punished. Where's the difference? Speaking of this, we were lately both amused and annoyed by petty theft in a new direction. The Provincial Experimental Farm at Ottawa sent me to be tested some new varieties of grain, which I gave to one of the boys who is chiefly interested in grain farming. At the season of ripening we found on several occasions some of the city people who summer here trampling the grain, and carrying away sheaves of the oats and barley for their parlor decoration and Christmas work, without as much as saying: "By your leave." My boy, who is a bit of a philosopher, wondered how it would do to pilfer the same value in any of their stores and trample on the goods—and thought it unfair that the rule wouldn't work both ways.

It has been a poor season for bees here, the wet weather making their food scarce. I was surprised to be told that so much spurious honey is manufactured, glucose entering largely into the composition. The bees give liberal weight in the pound sections, for, when full, they are sure to be over weight. In many country places beehives are an article that thieves delight to honor, and it is not at all uncommon to find one's apiary a hive or two short some autumn morning just as now and then the hen roosts are visited. But the other day (a Sunday too) an innocent craft came up the river, a simple row boat with four occupants, and in open daylight took away a bag full of sweet corn from a field quite near a house. The fact that the owner went to church while the public thus poached on his grain, was rather a poser as to rewards and punishments.

The RURAL'S Sunday evening talks to us are fresh, original and delightful; we enjoy them very much. In most country places there is a great lack of a good social element, both for week days and Sundays. If one does not want to join with those who live only for present pleasure, there is little chance of social life in a scattered community, and the Sunday evening talks would be a good institution to bring people together, and develop the best that is in them—often to mutual advantage.

IN every work that he began.....he did it with all his heart and prospered.—2 Chron., XXXI., 21.

ODDS AND ENDS.

ONE of the newest fads is making bed spreads, bureau covers, etc., of heavy butcher's linen. A very pretty spread may be made with a border of daisies in white and yellow. In the center have a cluster of long-stemmed daisies, with fluffy grasses and oats or wheat mingled with them. The edges are fringed out and knotted. If one prefers there may be a double row of drawn-work above the fringe—through these run in and out narrow pale-blue ribbon. Forget-me-nots also make a pretty design for a spread. Use wash floss for the embroidery.

* * *

IN late years it has become very fashionable to devote much time and thought to

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

the decoration of the beds. The old-fashioned white Marseilles spread is rarely ever seen now—that is, in "Fashion's Kiddy Circle"—while those of silk damask, cretonne, embroidered linen and other fabrics take its place. Pretty and inexpensive spreads may be made of wide Swiss muslin, with polka dots, lined with some soft, pretty silesia, and trimmed all around with a fall of soft lace. A bow or two to correspond with the lining will also add a finishing touch. Madras cloth also makes nice spreads.

Some of the beds gotten up in these styles look beautiful, but to my country-loving mind there is nothing so pretty as a pure-white spread, and neat hem-stitched pillow slips.

* * *

IF you haven't much spare closet room make a shoe box for each bed-room. Shoes lying about make a room, otherwise neat, look very untidy. A soap box makes a nice receptacle for this very purpose. Make a box-plaited flounce all around the box. Cushion the top with cotton-batting, or hair if you can get it, and upholster with cretonne. You may add castors to the bottom so that it may be easily moved. This also makes a nice seat to use while putting on one's shoes and stockings. Line the inside of the box either with silesia, muslin or paper.

* * *

I MADE a call the other day, where I saw the following fad: it may not be new to some of you, but it was to me. The lady had two pillows covered with some beautiful Persian-looking material in her parlor. They were thrown carelessly on the floor, one on top of the other—to be used in lounging about. They looked very pretty and I think for a bed-room or a sitting-room they would be very handy indeed.

* * *

WINDOW draperies and door-hangings are made nowadays mostly of light fabrics such as Madras, Chinese cretonne, etc. Some of them are very pretty, indeed. We, however, prefer heavy materials for the doors, though lighter ones do very nicely for the windows. The heavy ones at the windows are apt to make the rooms seem gloomy.

* * *

DON'T forget to fix some boxes or pots of plants for your windows during the winter. Something fresh and green within, while all outside is dull and bleak, brightens up the home wonderfully. A pretty fernery (made as described in the RURAL some time ago) would be just the thing for the sitting room. Ferns require very little attention. They are used to the shade, so do not droop for the sun as some plants do. All that is necessary is to keep them moist; they require considerable watering.

DORA HARVEY VROOMAN.

THEODORE WORES in The Century says that an utter absence of sham, a perfect freedom from all affectation, constitutes one of the most admirable qualities of the Japanese. They show no false or veneered front to the world, and their lives and actions are free and natural. The beauty of their homes lies more in the interior finish than in a showy outside, and the most beautiful rooms are generally those facing a garden in the rear. Even in their dress they are consistent, for the lining of their gowns is often of a more expensive and finer material than the outer stuff. A Japanese friend once confided to him that although there was much that he admired in the appointment of American homes, all this furnishing and decoration confused him. He did not know if he was right, he ventured to say, but it seemed to him that there was too much of everything; in fact, they seemed to him more like curio shops than living rooms. In this respect the difference between the Japanese and ourselves lies in the fact that whatever one may find in their houses, beautiful as it may be, is for use as well as for ornament. Its beauty, in a great degree, lies in its utility, whereas with us half of the objects that decorate our crowded rooms serve no useful purpose.

AGREEMENT.

MY father has taken the RURAL for several years and we are all greatly interested in its pages. When it came this evening I could not resist the temptation of writing to say that I entirely agree with "A Man" in his views of Charity Sweetheart. In fact I have never believed that Charity was a real girl, but a myth. I have always believed that somebody else wrote under that name the letters purporting to come from a farmer's daughter for the purpose of showing up the ways of *some* farmers and their sons, for I cannot understand how any girl could write for publication about her home affairs, her father and brother, as she has. However, myth or reality, her letters are queer mixtures. In my opinion, a good, honest farmer's son is way ahead of the town-polished young man.

A TRUE COUNTRY GIRL.

A LADY writer in Mail and Express counsels most wisely when she advises young girls to be careful about their conduct towards the young men that they meet. She says: "I will take it for granted that you are pretty, and perhaps a little gay and thoughtless as well. If I have pictured you correctly, remember that to be thoughtless counteracts being pretty. You know the proverb—'As a jewel of gold in a swine's snout, so is a fair woman without discretion.' And no modern proverb vender or mender said a truer thing. Do be discreet; do not think that young men are the only delightful people in the world, or act as if you thought so. Keep them at a proper distance; no man likes or respects a girl who runs after him, defers to his opinion, lets him say rude things to her, and take little liberties of speeech or action. Again, don't go out driving or walking or sailing alone with any young man. Perhaps you will tell me that girls all do it. Not well-bred girls, my dear; if you have no real chaperone, take another girl with you. Half the scandals and tragedies of women begin in their carelessness about this very thing. And over all, do be most particular about young men with whom you associate. Avoid 'fast' men as you would lepers. Men who are dissipated are inherently low; no matter how rich, how handsome, how highly placed in what is called society, such men are no associates for a pure young girl. You do not know anything about their real lives and characters, and they know you do not; they take advantage of your natural and lovely innocence, and admire it, though they know themselves they are not fit to touch the hem of your dress even. I must say something about your clothes. Don't be too fine; simplicity and exquisite fresh neatness are more attractive in a girl's costume than any extravagance of fashion or costliness of material; but even the plainest dress may be made flaunting by its immodest style. Again, be just as careful with what young women you are friendly as I would have you to be about young men. A girl is always judged by her friends; keep civilly aloof from the 'fast,' the slangy, the giggling girls you will too surely meet. Choose your company more carefully than your dress, for your friends are the true index of your moral and mental status. Nothing can ever retrieve the mistakes you make now in these respects; you are now 'making history'—the history of your life. God never made among all the exquisite things of creation a more lovely, enchanting, exquisite, admirable creature than a fresh, pure, charming young girl, full of unselfish thought for others, gentle, gracious and spotless. Not the milk-white and stately June lilies are so radiant in their stainless candor as such a girl; no tropic blossom vies with her health-colored face beaming with the light of the sweet soul within her; she is the flower and crown of humanity."

MINNIE'S WEDDING FRUIT CAKE.

ONE pound, good weight, of sugar, 10 eggs, one pound, good weight, of flour, one pound of butter, three pounds of raisins, three pounds of currants, one pound of citron; mace, cinnamon, cloves and allspice two and a-half tea-spoonfuls each, one-half cup of molasses. Bake slowly.

APPLE COTTAGE PUDDING.

BUTTER a pudding dish and cover the bottom an inch in depth with sliced, tart apples. Select those that cook quickly. Stir together one cup of sugar, one-half cup of butter, one egg, one cup of sweet milk three cups of prepared flour, or plain flour with two tea-spoonfuls of baking powder sifted through it. Pour this over the apples and bake. Eat with the following sauce: Three cups of boiling water, one cup of sugar, three table-spoonfuls (level) of corn starch dissolved in a little cold water, butter the size of an egg and the juice and rind of a lemon.

PUFF PUDDING.

ONE quart of milk, four eggs, a little salt and 14 large table-spoonfuls of prepared flour. You can substitute flour with two heaping tea-spoonfuls of baking powder for the prepared article. Beat the eggs thoroughly, add the milk then the flour. Bake in a quick oven. The mixture should not be over an inch and a-half in depth in the pan when put into the oven. It will be very light when taken from the oven but will fall at once. This is as it should be. Eat with the above sauce or sweetened and flavored cream.

APPLE CRUMB PUDDING.

PUT a layer of bread-crumbs in the bottom of a buttered pudding dish, then a layer of sliced tart apples sprinkled with sugar, then crumbs and apple until the dish is almost full. The crumbs should be last. Cover and cook an hour. Eat with the sauce used in "Apple Cottage Pudding," or sweetened cream.

MISS LIZZIE VOORHIS.

CREAM PUFFS.

HAVE one-half pint of water boiling. Put in two-thirds of a cup of butter and while it is boiling put in one and a-half cup of flour. Let cool a little, add five eggs well beaten. Beat all together well. Drop a table-spoonful at a time on a hot tin and bake quickly. The filling, a rich corn-starch with eggs. Flavor.

SPONGE CAKE WITHOUT BAKING POWDER.

TAKE the weight of 10 eggs unbroken, the same weight in sugar, the weight of five eggs in flour. Beat the yelks of the eggs very light, then add the sugar and beat five minutes, add the whites of the eggs beaten stiff and stir in the flour gradually, thoroughly. Flavor with essence of lemon. This makes three good-sized loaves. Bake half an hour in a moderate oven. The oven door must not be opened till the cake is nearly done or it will be likely to fall.

CORN MUFFINS.

ONE quart of Indian meal, three beaten eggs, one table-spoonful of lard, one tea-spoonful of soda, one tea-spoonful of salt. Mix with butter-milk.

CORN STARCH CAKE.

THE beaten whites of six eggs, two cups of sugar, three-fourths of a cup of butter, one cup of milk, one cup of corn starch, two cups of flour, two tea-spoonfuls of baking powder. Flavor with vanilla.

ANGEL'S FOOD.

SOAK well a half box of gelatine in one-half pint of milk. Heat three pints of milk, add a cup of sugar, beaten yelks of three eggs then add the soaked gelatine and the whites beaten stiff. Flavor and turn into a mold.

A GOOD COUGH MIXTURE.

ONE ounce each of hops, horehound and wild cherry bark. Put in three pints of water and steep to one quart, then add one-half pound of brown sugar, one-half pint of Jamaica Rum, one gill of tar. Let stand until cold. Strain and bottle.

MRS. J. B. MCCHAIN.

Miscellaneous Advertising.

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Of delicate constitution, no better medicine can be recommended than

AYER'S Sarsaparilla.

It is highly concentrated, economical, safe, and pleasant to to take.

"This is to certify that after having been sick for twelve years with kidney disease and general debility, and having been treated by several physicians without relief, I am now better in every respect, and think I am nearly well, having taken seven bottles of Ayer's Sarsaparilla."—Maria Ludwigson, Albert Lea, Minnesota.

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Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

Price, $1; six, $5. Worth $5 a bottle.

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W. R & CO'S IMPROVED BUTTER COLOR

IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the buttermilk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere. More of it Used than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & CO., Burlington, Vt.

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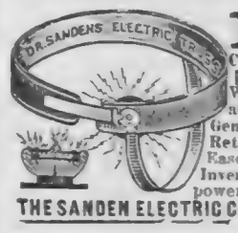

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of Superior Breeding at MODERATE PRICES. All Stock sold fully guaranteed of the Best Quality. Write for special prices at once.

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FOR A DISORDERED LIVER try BEECHAM'S PILLS.

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34 PARK ROW, NEW YORK.

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Agents will be supplied with canvassing outfit on application.

Entered at the Post-office at New York City, N. Y., as second class mail matter.

News of the Week.

HOME NEWS.

SATURDAY, September 28, 1889.

A STOCK company, it is said, has been formed in Todd County, Kentucky, and Montgomery County, Tennessee, for the purpose of holding fairs. Every one connected with it is reported to be colored, and "no white folks need apply."..... The Detroit International Fair and Exposition was opened Tuesday by Governor Luce. The grounds cover 70 acres and the buildings fully 25. Every foot of space is occupied with exhibits from all parts of the United States and many parts of Canada.....Elizabeth S. McClellan, mother of the late Gen. George B. McClellan, died at Philadelphia the other day, aged 90..... ..E. Burd Grubb, the new Republican candidate for Governor of New Jersey, owns the finest lot of Game cocks in the State, so that there'll be no scarcity of splendid roosters to celebrate his triumph—should he secure one..... A bronze statue of General Grant, nine feet high, upon a polished granite pedestal of equal hight. was unveiled at Fort Leavenworth, Kansas, the other day, amid the rejoicings of the citizens of Leavenworth, who took a general holiday. This is the first notable public monument to the Hero of Appomatox..... ....Postmaster-General Wanamaker has caused the arrest of Dr. W. E. Reid, a medium of Grand Rapids, Michigan, for sending Spiritualistic messages for money through the post-office, on the ground that he was using the U. S. mails for fraudulent purposes. The Spiritualists throughout the country have raised a large fund for the defense of the accused, on the plea that his arrest is an outrage on the religious belief of a large body of citizens.. Reports from Iowa and Kansas say that large numbers of thrifty but bibulous Germans are leaving both States on account of the enforcement of the Prohibition laws. The "exodusters" are generally making their way to that paradise of the "wets," Texas. The same cause, it is alleged, has greatly checked Teutonic immigration..... .....The other day the Tennessee Coal and Iron Railroad Company, as the lowest bidder, leased the convicts of the Tennessee Penitentiary for six years for $100,000 per annum, in spite of the general outcry against this relic of slavery and semi-barbarism.....Two members of the Common Council of fire-swept Spokane Falls and one of its policemen have been arrested charged with misappropriating the funds and supplies contributed for the relief of the sufferers. What with fussy and frivolous incompetence at Johnstown, and disgraceful official "boodlerism" at Spokane Falls, on whom can public charity rely for the relief of the victims of any great disaster?..... The International American Congress will be organized in Washington on October 2, and the members, as guests of the nation, will leave that city on October 3, for a tour of inspection through the North and West, returning on November 12. During the winter they will also visit the South. Considerable anxiety is expressed in several European countries as to the possible effects of this convention of representatives of all the independent States of this Western Hemisphere. It is hoped here and feared abroad that it may lead to a great increase of trade between this country and those south of it, which would cause a corresponding diminution of trade with Europe, which at present almost monopolizes the trade with Mexico, the West Indies and South America. There is some idea of forming a "customs union" or "zollverein," establishing a liberal measure of reciprocity between all the States on this side of the Atlantic. This would place all American countries, in their trade relations with each other, on much the same level on which the various States in our Union now stand, so that each in dealing with any other would have a great advantage over all "outsiders."..... .....The City Directory of Johnstown, Pa., which has just been issued, gives the death roll as 3,500, which is believed to be a close estimate. That worthnothing, do-nothing Flood Commission still clings fast to $1,600,000 of the charitable contributions for the relief of the sufferers, many of whom have died or emigrated since the disaster; while many more have worked so far ahead as to be in little need of a helping hand now ....Ex-Commissioner of Pensions, Corporal Tanner, is still without an office, and his old office is still without a head. Col. Warner, of Kansas, late Commander-in-chief of the G. A. R., has refused it on account of unshake-off-able private business, and it is hard to get a good man who will at once suit the pension-paying public and the pension-drawing veterans..... Last Thursday, at the Presbyterian church at Richfield Springs, N. Y., Emmons, eldest son of James Gillespie Blaine, and Anita Mc Cormick, one of the three children of Cyrus Mc Cormick of reaper-and-mower fame, were married in presence of a large assembly of distinguished guests from all sections of the country. She is about 23, of medium hight, slender, fair. with dark hair and $3,000,000 in her own right. He is about 32, with hair already silvered and much like what his father used to be at the same age. He started in law, but is now railroading.....The Wyoming Constitutional Convention has fixed a limit for the tax levy for State purposes at four mills on the dollar, except in cases of schools, public charities and payment on State debts. County taxes are limited to 12 mills, and cities and towns to eight mills. Public moneys must be deposited in national banks, and the interest goes to the State..... The California speculation in earthly Edens has almost entirely collapsed. High-priced building lots in multitudinous paper towns are fast relapsing into their normal condition of grass or wheat fields and the real estate boom has "bust."..... Like the Republicans of Virginia, the Republicans of Mississippi have pitched upon a Confederate Brigadier as their candidate for Governor. But while Mahone has a fighting chance, Chalmers hasn't a ghost of one; though there's little doubt that his mere candidacy will send many "niggers" to ghost-land, in the original home of the "shot-gun policy."..... The cruiser Baltimore, designed and built under the last Administration and launched and fitted out under the present, is declared to be the fastest war-ship afloat in the world. In her trial trip she made about 25 miles an hour.....August Boorfried, a Minnesota stone-mason, says he has discovered a process by which granite, marble or even cobblestones may be liquified and run into molds..... The New York Committee in charge of the matter have selected, as the site for the World's Fair, Morningside Park, comprising about 425 acres, Bloomingdale Asylum grounds, comprising about 84 acres, and as much of the upper part of Central Park as may be needed. These are all close together and nearly in the center of the city. A small minority of the committee and a considerable minority of the people are strongly opposed to the "ruination" of Central Park by appropriating any part of it for the purpose. The only thing in which the great New York dailies agree is in bitterly blackguarding each other; hence while some are blithely supporting the committee's recommendations, others are fiercly combatting them as far as the Park is concerned. The conflict of opinion has a dilatory effect on the Finance Committee and a let-her-rip effect on many of the public who, in disgust, are losing all interest in the whole question. Great things are promised all the time, but promises will never secure the show. Chicago is working hard and skillfully. She is thoroughly canvassing the entire country and especially the West. She has no difficulty about a site, as the prairie farms within her illimitable borders would readily accommodate a dozen such shows. She has raised about $5,000,000 in promises and engages to raise double that amount in cash. If she doesn't get the show, she'll have deserved it. St. Louis, stimulated by the Windy City's breezy energy, has secured a pledged guarantee fund of over $6,000,000, and the results of her efforts "greatly exceed the most sanguine expectations of the managers." Washington is quietly "laying pipes" and confidently waiting for the assembling of Congress. She sees a big chance for herself in the keen rivalry between her opponents..... Quebec, second in importance only to Montreal among Canadian cities, with its 65,000 population, is divided into the Upper and Lower Town. The former embraces the Citadel, nearly all the fine residences and numerous religious institutions; and the latter—a long, narrow strip between the River St Lawrence and the 330-feet-high bluffs—contains most of the large business houses, warehouses and workshops abutting on the wharves. Champlain Street is a narrow lane running directly under the highest part of Citadel Cliff at the end of Cape Diamond. A week ago last Thursday, about 8 P. M., after three days of constant rain succeeding a long dry spell, a vast slice of the bluff, about 300 feet long and 80 feet broad, broke off, and came crashing down on seven houses inhabited by about 30 families, chiefly working people. Some of the rocks weighed upwards of 20 tons, and the fallen débris, consisting of moss, stones and soil, formed a solid mass 300 feet long, from 35 to 80 feet broad and 15 to 25 feet high. During incredible labor for nearly a week 52 dead or dying people were taken out of the ruins and many more were more or less seriously injured. Another widening and deepening fissure in the bluff has induced the authorities to recommend the abandonment of 900 houses—chiefly along the precipice in the Upper Town—at least for the present, as a precautionary measure. Two similar disasters, in '41 and '53, were less fatal, but gave warning which, of course. has been neglected..... General D. H. (Daniel Harvey) Hill, the celebrated Confederate leader, died at Charlotte, N. C., last Tuesday, at the age of 68. Born in North Carolina in 1821: graduated from the United States Military Academy at West Point in 1842; served bravely in nearly every important battle of the Mexican war; resigned his commission in 1849 and became Professor of Mathematics in Washington College, Lexington, Va., and after five years there took a similar position in Davidson College, N. C., and then became superintendent of the North Carolina Military Institute at Charlotte. Entered the Civil War as colonel and after much skillful and brave fighting came out as Lieutenant-General. For years after the war he edited the monthly magazine "The Land We Love"; was elected President of the University of Arkansas in 1877, and later became President of the Military and Agricultural College of Georgia..... Cornell University has just opened the new year with 1,400 students, in all. The increase is proportionately greatest among the lady students.....The Hebrew New Year—the 5,650 Rosh Hashannah—was celebrated all the world over last Thursday by the Israelites with general rejoicing. This is the oldest surviving celebration, founded by Moses, in commemoration of the delivery of the law on Mount Sinai.....

Altogether Tangible.

So long as one is not asked to concentrate faith upon illusion there ought to be no backwardness in getting into a receptive mood at least. Note the encouragement in the following:

BARNWELL, S. C.

"The Compound Oxygen Treatment did more to effect a cure than all other so-called remedies combined."

G. DUNCAN BALLINGER.

SUMTER, S. C., March 13, 1888.

"My wife had been suffering from severe neuralgia for weeks, and was relieved from the beginning by Compound Oxygen."

REV. J. S. BEASLEY.

MIFFLINTOWN, PA., March 29, 1888.

"I have now used the Compound Oxygen three weeks. I am very much improved in every way, and believe that by the blessing of God your valuable remedy will restore me fully." REV. E. E. BERRY.

LITTLE ROCK, ARK., March 30, 1888.

"I am happy to inform you that I am of the opinion that your Compound Oxygen saved my life." MR. J. P. BAILEY.

We publish a brochure regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent free of charge to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa.; 120 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, September 28, 1889.

WILLIAM WILKIE COLLINS, the celebrated novelist, died at his home in London, last Monday, aged 65.....Eliza Cook, the English song-writer and poetess, author, among other once popular songs, of "I'm Afloat," the "Old Arm Chair" "The Old Farm Gate" and "I Miss Thee My Mother," died last Wednesday, at Wimbledon, near London, at the age of 72.....In the Republic of Guatemala, in Central America, with an area of 40,777 square miles and a population of about 1,500,000, the value per acre of the agricultural land has more than doubled within the past two years, and the area under tillage has increased in about the same ratio. The value of the coffee crop next year is expected to reach $11, 500,000: maize, wheat and other cereals as well as cotton, sugar-cane and tobacco are also extensively produced. Only quite recently have the crude agricultural implements of the first colonists been superseded by modern machinery.....

AGRICULTURAL NEWS.

SATURDAY, September 28, 1889.

THE third annual Corn Palace Carnival opened at Sioux City, Iowa, on Monday with a large attendance.....The State Inspector of New Jersey on Monday killed 32 head of cattle at Millstone, Somerset County, that were afflicted with pleuro-pneumonia. The disease has also broken out among the cattle in Chester, Montgomery and Berks Counties, Pennsylvania. Hog cholera is raging in Kent County, Maryland, and more than 200 hogs have already been lost. An outbreak is also reported from Queen Anne County..... The State Farmers' Alliance of Florida has been in session at Jacksonville, Florida, during the past week. The principal objects of the meeting are to make Jacksonville a wholesale market for cotton, the building of a cotton ware-house, and the starting of fruit and vegetable canning factories. A company is also organized to build a cotton factory. Florida raises annually 20,000 bales of Sea Island cotton, and 80,000 bales of upland, which is now marketed principally in Savanah and Brunswick, Ga..... The steamer Denmark recently brought over 162 Norman horses.....The Mexican Government has issued a decree increasing the duty on goats.....One of the largest fig orchards in the United States is about to be set out in Pomona Valley, California. It will consist of 11,000 white Adriatic fig trees and 5,000 Smyrna fig trees, planted 80 to the acre.....The New York Poultry and Pigeon Association has been organized as a stock company, and will hold an exhibition at the American Institute, this city, February 19 to 25, 1890. Arrangements will be perfected for a successful exhibition, and the holding of it in this city will go far to insure this. T. F. Rackham, secretary, East Orange. N. J.... Much of the wheat throughout Western Europe is not fit for milling purposes without an admixture of foreign wheat..... The new crop of raisins from California has reached this market. The Lion brand of loose Muscatels were the first to arrive.. .....The unfavorable weather has had a disastrous effect upon the sweet corn growers and canners in Maine, the crop in some localities being nearly a failure. Most of the canning factories are already closed, and the pack is very light. Prices are likely to be high, and remnants of last year's crop are in demand.....A Jersey farmer living near Moorestown was recently convicted of selling milk containing less than 12 per cent. of solids, and sentenced to pay a fine of $57. This he refused to pay, and he was imprisoned for 20 days. He says he never watered his milk, but took it to the creamery just as it came from the cows, and that if it contained less than the required amount of solids, the law was wrong. There are a number of farmers who will stand by him, and he threatens to make it warm for some one when he is released..... Severe frosts occurred early in the week throughout Northern New England and New York, and in several of the Western States. Owing to the backward season much damage resulted to late corn and buckwheat, and vegetables and grapes. Other crops were mostly out of reach of harm.....The farmers in Mississippi are as determined as ever not to use jute bagging. In some counties the Alliance threatens to expel any member using jute bagging, and has passed resolutions to that effect. The supply of cotton bagging is short in some sections, and it will be late in the season before a full supply can be procured, but the farmers are determined to withhold the crop until cotton bagging can be obtained..... In the United States Circuit Court at St. Paul on Monday, Judge Nelson delivered an exhaustive opinion holding the Minnesota Meat Inspection Law unconstitutional and void. He holds that it is in violation of the commercial clause of the constitution which provides that Congress shall have control of commerce between the States, and also of the clause which provides that the citizens of each State shall be entitled to all the privileges and immunities of the citizens of the several States. This decision practically settles the validity of the inspection laws, as there is no court, excepting the United States Supreme Court, that has authority to reverse this decision, and it becomes the law until it is reversed. In case of an appeal, the case could not be heard in the Supreme Court in from three to five years. Those desirous of fighting Chicago dressed beef will have to adopt some different tactics in the future..... This has been a very unfortunate season for nearly all of the agricultural exhibitions commonly called fairs. The Clerk of the Weather seems to have had a grudge against some of them, and deluged them with rain to such an extent that in some cases they came very near being failures. The entries in nearly all cases were large, and with good weather success would have been assured. The New Era Exposition at St. Joseph, Missouri, was very unfortunate in having the main building destroyed by fire in the midst of the exhibition.....The steamship England of the National Line recently took across 1,250 steers, averaging 1,400 pounds each, being the largest single shipment of live cattle ever carried out of any American port. The cargo also included 4,000 bales of hay and 4,000 bags of corn for feeding the cattle en route. This line stopped carrying passengers some time since, and engaged their vessels exclusively in the cattle carrying trade.....Complaints are made that farmers in Maryland are shipping their cholera-infected hogs to Baltimore regardless of consequences.....

Miscellaneous Advertising.

SEND 10 Cts. in P. O stamps to E & O. WARD, Produce Commission Merchants, for circular about Shipping Produce Also recipe for Preserving Eggs. Established 1845. No. 279 Washington St., New York City

PEACH TREES!

A fine lot of the Best Varieties, including "GOOD," the new late white variety. The Paragon Chestnut, and a general assortment of Nursery Stock.

H. M. ENGLE & SON, Marietta, Pa.

$60 Salary. $40 Expenses in Advance allowed each month. Steady employment at home or traveling. No soliciting. Duties, delivering and making collections No Postal Cards. Address with stamp, HAFER & CO., Piqua, O.

LOW-DOWN WAGON on high wheels—only Practical, Common Sense Farm Wagon in the world. Send for 28 reasons why GARDINER IRON WAGON CO., Mullica Hill, N. J.

FOR SALE. Superior Stock Farm In Peach district of N. J. Convenient to New York, Trenton and Phila. 232 acres. No incumbrance. Easy terms. No agents. Address S. B. PURSELL, Bristol, Pa.

FARM FOR SALE.

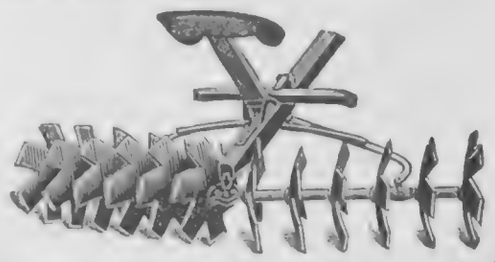
970 acres, all under fence. New two-story house and large barn. Peach and apple orchard. Abundance of living water; plenty of timber land in pasture. The land all in cultivation and pasture; no hills or stony land. Well suited for stock or dairy farm. Three miles from railroad and 15 miles from the St. Louis Court House, 8 miles west of South St. Louis on Pike road. For further particulars, address MRS. MARY TEN BROOK, South St. Louis, Mo.

Ease, Comfort and Thrift!

THE BEST CATTLE FASTENING

Smith's Self-Adjusting Swing Stanchion!

The only practical *SWING STANCHION* invented. Thousands in use. Illustrated Circular free. F. G. PARSONS & CO., Addison, Steuben Co., N. Y



For preparing the ground for fall seeding, the Clark's Cutaway Harrow will more than pay for itself in one season. No use for the plow on stubble land. Take it and try it and you will buy it. Send for new circular.

Higganum M'f'g Corp., Sole Man'f'rs, HIGGANUM, CONN.

Crops & Markets.

SATURDAY, September, 28, 1889.

DESPITE the floods and frosts of spring and summer, the crops of the country at large will average good. While particular crops in certain sections are partial or total failures, in others they are above the average, so that could the supply be equitably distributed, there would be an abundant supply, with a generous surplus for export. Excessive rains in many parts of the country have prevented a free marketing of produce, but prices are generally good, and the season promises to prove a fairly prosperous one.

CORN has been injured by frost to some extent, but the crop will average better than it promised two months ago. There has been little change in other grains.

HOPS are dull at present as buyers are waiting for lower prices before buying heavily. Small lots of new are arriving but sell slowly. There is little probability of prices being lower.

BUTTER shows a wide range in prices. We don't believe there was such a difference in the quality of the milk from which these different grades were made as is indicated by the finished product. Isn't it a shame to use milk that, if properly manipulated, would make 25-cent butter in such a way that the product is worth only 10 cents? The best grades of butter are not in sufficient quantity to supply the demand, consequently prices are advancing while the lower grades show no improvement and, in some cases must be sold at lower prices.

HAY is coming forward in large quantities, and the prices of all grades have declined considerably. The future price is somewhat problematical, but from the amount of hay secured in poor condition, we think it safe to say that prime hay will bring good prices, probably higher than it is now quoted.

FRUITS of all kinds are in moderate supply for best grades. Fancy red apples sell as high as $4.50 per barrel. They must be carefully assorted and nicely packed. Fancy pears sell high. Peaches are getting scarce, and choice are in demand at good prices. Cranberries are active and higher, Choice grapes sell readily at good prices, but there are plenty of poor grades that go very slowly. Dried and evaporated fruits of all kinds are higher, and firm.

VEGETABLES of all kinds are in fair supply. Potatoes maintain their price well, and the supply is not large. The rot seems to have done its worst, and there seems little prospect of further material loss from this cause. While potatoes in some of the Western States are reported a very heavy crop, and worth only from 15 to 25 cents per bushel, with little sale, they are worth here from $1.50 to $2.50 per barrel. Sweets are but a trifle higher. Onions meet with slow sale, and reds are lower. Cabbages are somewhat higher. Tomatoes are of poor quality, but the supply is so small that prices are well maintained. Beets, turnips, carrots, parsnips, corn, egg plant, peppers, radishes, salsify and squash are plentiful and help to make up any deficiences that may exist. Choice celery and cauliflower are not very plenty, and are wanted.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, September 28, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans, and Gulf.	Texas
Ordinary	8⅜	8⅝	.....
Strict Ordinary	8 13-16	9 1-16	.....
Good Ordinary	9⅜	10	.....
Strict Good Ordinary	10 3-16	10 7-16	.....
Low Middling	10 11 16	10 15-16	.....
Strict Low Middling	10 15-16	11 3-16	.....
Middling	11 ⅛	11 9⅛	.....
Good Middling	11⅝	11⅞	.....
Strict Good Middling	11⅞	12⅛	.....
Middling Fair	12 5-16	12 9 16	.....
Fair	12 15-16	13 3-16	.....

STAINED.

Good Ordinary	8¼	Low Middling	9 13-16
Strict Good Ordinary	8⅝	Middling	10⅝

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

POULTRY.—Chickens—Spring, per lb, 11½@12c. Live Fowls near-by, per lb, 12@——c; do Western, per lb. 12@——c; roosters, per lb, 7@7½c; Turkeys, per lb, 12@13c; Ducks, Western, per pair, 60@80c; Geese, Western, per pair, $1 25@$1 40.

POULTRY.—DRESSED—Turkeys, mixed, per lb. 13@16c; Fowls, western, choice, 10@10½c; do common to good, 7@9c; Ducks, spring, good, 10@15; Squabs, white, per dozen, $3 25@$3 50; do dark, do, $1 50@$1 75; Chickens, spring, 12@18c; Fowls, near by, 11@12c.

GAME.—Plover, per doz, $1 35@$1 75; Snipe do, do, $1 25@$1 75, Woodcock, per pair, $1 00@$1 25; Grouse, do do, 50@75c; Partridges, do, $1 25.

HOPS.—State, New, 11@13c; do, 1888, best, 12@13c; do, prime, 10@11c; do, low grades, 7@9c; do do, 1887, 3@5c; do do do, California new, best, 13c; prime, 10c.

HAY AND STRAW.—Old Hay—Timothy, best, 85@90c, do good, 75@80c; do medium, 65@70c; shipping, 55@——c; New Hay—Timothy, best 75@80c; do good, 60@70c, do medium, 55@60c; shipping, 50@55c; clover, 55@60c; Straw—No. 1 Rye, —@80c; short do, 50@60c; oat do, 45@55.

BEANS.—Marrows, New, $2 50@——; New Mediums choice, $2 20@2 25; Pea, $2 20@$2 25; Red Kidney, $3 65; White Kidney, choice, $3 00@——; Foreign Mediums, $1 85@$1 55; California Lima, $3 60@$——; Green Peas, $1 20@$1 30.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 7½@8c, and farmers' grades at 6@6½c. Pecans, 5@6½c.

SEEDS.—Clover is hard to sell; exporters quiet. New prime, future deliveries offered at 7, and choice, 7⅜c, with fancy at 7½c. Timothy quoted at $1 50@$1 60.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes—Jersey, per bbl, $1 50@$1 90, Long Island do, $2 00@$2 25; Sweets do, $2 00@$2 50. Cabbage, new, per 100, $3 50@$4 00. Cucumbers per 1 000, $1 75@$2 25. Egg Plant, per bbl, $1 50@$2 00. Tomatoes, per crate, 30@50c Corn, per 100, $1 00@$1 50. Onions.—Orange Co; Red, $1 00@$2 75 Eastern White, $2 00@$3 50; Eastern Red, $2 50 $3 10; State, Yellow, $1 50@$2 50. Lima Beans per bag, $1 00@$2 00.

FRUITS FRESH. Apples, per bbl, $1 00@$4 50 Pears, per bbl, $2 00@$8 00; do per keg, $1 25@$4 00; Plums, per crate, $1 00@$1 25. Peaches, per basket; $0 50@$2 00. Grapes, best per lb, 8@9c; do, good, do, 6@7c. Cranberries, C. C, per bbl, $6 00@$7 50; do do, per crate, $2 25@$2 50. Quinces, per bbl, $2 00@$4 00.

PROVISION MARKETS.

NEW YORK.—PROVISIONS—PORK.—New Mess, $12 00@$12 50; Short, Clear, $12 00@$13 50; Extra Prime Mess, $10 25@$10 75; Prime do, $10 75@$11 00, and Family $12 00@$13 00. BEEF—India Mess, in tierces, $12 50@$14 00; Extra Mess in barrels, $7 00@$7 50; Packet, $7 25@$8 00 per bbl, annd $11 00@$12 00 in tierces; Plate, $7 50@$8 00; Family at $11 00@$14 00. HAMS.—$15 25@$15 75 winter packing. CUT MEATS. Quoted 12 lbs, average, Bellies, 7a——c; Pickled Hams, Hams, 10¾@11c; pickled Shoulders 4¾@5c Smoked shoulders 5¾c; do Hams, 11½@11¾c. Dressed Hogs.—City, heavy to light, 5¼@6⅝c. Pigs, 6¾c. LARD. City steam, $6 10; September, $6 30; October, $6 27; November, $6 17, December, $6 13; South America, 7.35c.

BOSTON.—PROVISIONS firm and steady New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime new, $13 00@$13 25. LARD, $8 50@$9 50.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 25½@26. Elgin, best, 25c; Western, best 25@25½; do prime, 20@23c; do good, 15@18; do poor, 12@14; State, Dairy, half-firkins, tubs, best, 23@24c; do do prime, 20@22; do do fine, 16@18; Welsh tubs, fine, 19@21c; do do, good, 15@17; firkins, best, —@——c; do prime, —@—c; do fine,—@—c. Western Imitation Creamery, best, 16@18; do fine, 12@15; Western dairy, fine, 12@13c; do fair, 10½@11c; do poor, 9@10c; do factory, fresh, best, 12@——, do prime, 10@11; do good, 9@9½; do poor, 7@8c.

CHEESE.—State factory, fancy, 9@10c; do do fine, 8½@9c; do do, prime, 7¾@8⅛c; do do, fair to good, 8@8¼c; Ohio, flat, prime, 7½@8½c; do good, @—c; do, good, —@—; Skims, light, 5@6c; do medium, 2@3; do full, 1@2c.

EGGS.—Near-by, fresh, 22½@23c; Canadian, 21½@22½c; Southern, 19@20c; Western, best, 21½@22½c.

PHILADELPHIA.—BUTTER scarce Pennsylvania creamery extra, at 24@25c; Pennsylvania Prints, extra 28@30c; B.C. and N.Y. creamery, extra, 24c; Western factory 15@16c; packing butter, 11@12c. Eggs.—Were firm; Pennsylvania firsts, 21@22c; Western firsts, 19 20c; Cheese dull—steady; demand fair; New York full cream, at 8½c. Ohio flats, choice, 7¼@7½c; do, fair to prime, 14@14½c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm Fancy creamery, 24@25c; choice Western, 17@19c, choice dairy, 20@22c, common to fair, 9@10c. Eggs firm at 16c.

GRAIN MARKETS.

WHEAT.—No. 1 Hard Spring, 95½@95¾c. f. o. b.; No. 1 Northern, c. f. and i. to Buffalo, private terms; Ungraded Red, 75¼@88½c; Steamer No. 3 Red, 76¾c, elevator; No. 3 Red, 82½c, elevator; No. 2 Red, 86@86¾c, afloat; do elevator, quoted 85½@85¾c; No. 2 September, 85¾c; do October, 86¼@85⅞c; do November, 86⅜@87c; do December, 87⅜@88½c; do January, 89c; do May, 92@95¾c. RYE.—Has a light demand Western, 48@50c; State, 55@56c, CORN.—Sales—Rejected, 40¾c; Ungraded Mixed, 40@41¼c; No. 2 Mixed, 40¾@41¼c. elevator, 41@41¼c, afloat; No. 2 White, 41¾c, afloat; No 2 September, 40¾c; do October 40 15-16@41c; do November, 41⅜@41 7-16c; do December, 41⅝@41¾c; do May, 42½c. OATS.—Cash grades ruled steady, but trading was quite moderate. Sales—No. 3 25@25¼c; No 3 White, 27@27¼c; No. 2 26@26½c, No. 2 White, 28¼c; No. 1 White, 33c; Mixed Western, 24½@28c; White do, 27@36c; No. 2 September, 26½c; do October, 25 15-16@26c; do November, 26 5-16@26⅝c; do December, 26 11-16@26¾c; do May, 28 11-16@28¾c.

LIVE-STOCK MARKETS.

New-York, Saturday, September 28, 1889.

BEEVES.—Texans sold at $2 90@$3 15. Poorest to Best Native Steers sold at $3 20@$4 80, with most of the sales at $3 50@$4 50 A few old Oxen and Stags brought $3 50@$4 35; Bulls, $2@2 75; and "old Bandboxes" sold at $1 50 per 100 lb, which means a trifle more than $12 per head

Latest cable advices indicate that the European market is unchanged.

CALVES.—Prime Veals about held their own. Grassers and Buttermilks sold at 2½@3c per lb, Westerns at 3@5c, Fed Calves at 3½@5c, Common to Choice Veals at 5½@9c.

SHEEP AND LAMBS.—Three carloads of Texas Sheep sold at $4 15@4 37½ (few at $4 50), Ordinary to Prime Native, do at $4@$5 25, and 248 head of Choice do at $5 45@$5 50; Common to Very Choice Lambs at $5 75@$7 37½, and a deck load of State Lambs, averaging 80 lb, was sold at $7 50. "Culls" went as low as $5.

HOGS.—Feeling steady and fair to prime hogs may be quoted at $4 50@$5 per 100 lb.

Communications Received for the Week Ending September 28, 1889.

H. M. E.—B. J. C.—C. S.—A. McD.—A. B. A.—H. L. H. C. S. P. E. C. G.—G. W. D.—E. F.—A. G. C., thank you.—P. A. S.—M. A. G.—R. B. W., thank you.—L. A. K.—M. M. C.—F. W.—M. W.—E. L.—J. P. L. M., thank you.—C. A. G.—L. C. B.—C. H. T.—E. B. P.—L. B. D.—L. M. W.—T. W. W.—C. M. T.—T. C. J.—F. A. B.—Mrs. H. H.—N. G.—G. W. D.—J. E.—G. K.—S. S.—F. G.—S. P. L.—I. W. I.—J. H. P.—G. W. G.—M. H. C. G.—A. L. B.—S. A. L.—M. A. J. G.—H. K. F.—S. A. B.—W. D. L.—P. H. J.—J. W. B.—H. S.—G. W. S.—W. B. P.—F. P. R.—M. H.—C. M. L.—J. S.—A. L. C.—W. H. R.—G. F. P.—W. O. F.—M. C.—I. H.—G. N. M.—F. P. Q.—D. W. G.—A. E. H.—W. R. G.—T. C. C.—C. H. C., thank you.—W. M.—C. E. S.—M. A. G.—E. M. K.—M. A. S.—J. Mc. C.—R. W.—J. B. N.—R. S.—F. P. Q.—T. C. C.—A. W. B.—W. S. G.—E. A. H.—I. J. B.—J. B. P.—J. A. T. & S.—H. O. L.—E. E. H.—F. B. S.—A. E. H.—J. W.—J. H. C.—F. G., thank you.—M. R.—R. E. H.—J. B. P.—J. A. T.—E. H.—D. J. Y.—J. W.—B. F. C.—A. J. J.—C. M. L.—E. M. K.—G. D.—M. B.—C. K.—B. B. C.—P. B. R. P. B.—H. A. S.—C. C. D.—E. McM.—M. A. T.—H. B.—M. A. G.—C. E. S.—I. M.—C. H. C.—P. B.—B. B. C.—F. B. S.—M. B.—C. K.—H. A. S.—A. E. H.—M. H. B.—L. J.—S. T. R.—A. B.—M. A. S. W.—E. F. A.—C. E. D.—B. W. M.—W. H. C.—M. E. C.—J. E. K.—R. T. B.—H. A. M.—W. E. McM.—S. P. F.—M. A. C.—W. E. J.—T. J. H.—A. V. H. M. J.—D. T.—H. H.—L. E. D.—E. F.—J. P. L. M.—D. D.—W. H. S.—I. A.—N. J. N.—E. B.—H. A. O.—F. G.—L. W. P.—B. F. C.—L. H.—H. B. C.—S. E.—C. S. M.—H. A. M.—G. S. P.—J. B. A.—G. P. L.—C. W. K.—J. H.—C. R. M.—F. C. W. McA.—C. F. E.—W. H. S.—D. P. M.—N. P. S. P. H. R.—L. F. A.—D. M. D.—C. P. G. C. L. J.—J. W. N.—E. M. H.—W. B. C.—J. W. B.—C. N. D.—T. S.—E. C. B.—E. A. K.—S. N. L.—J. G.—I. D. C.—F. G.—A. C. P.—A. C. C.—S. F. W.—D. M.

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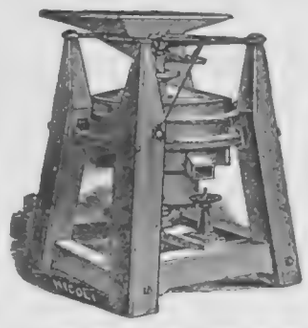

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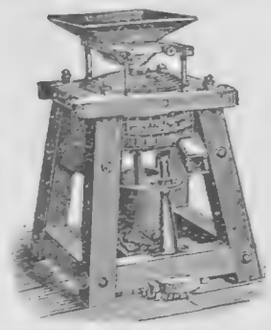

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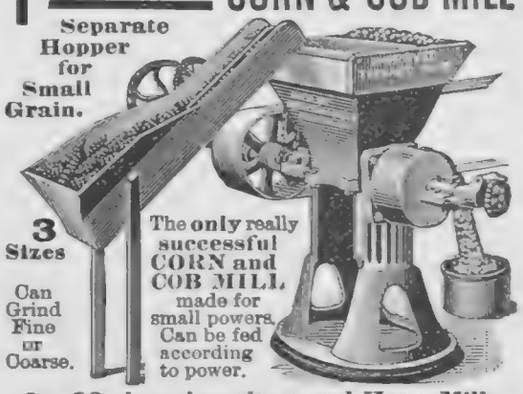

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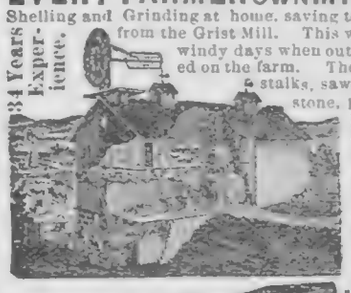

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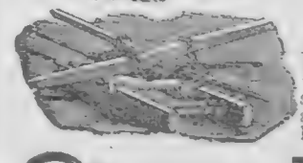

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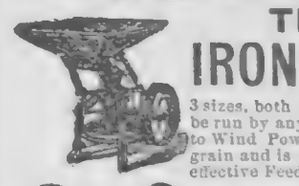

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Various.

RURAL RUMINATIONS.

ONE of the RURAL'S correspondents spoke recently of doing considerable figuring while at work. I have been ruminating, while at work during the summer, on various matters which have been served up to RURAL readers from week to week. There is much in the RURAL from week to week to provoke discussion, and much that is worthy of careful thought, but I shall notice only those things which have suggested themselves most strongly to my mind. Some of them may be slightly out of season, but that is the fault of the season, and not mine.

THE FARM NOT ALL THAT FANCY PAINTS IT.—The truth of the old adage is exemplified in the letter of your English correspondent on page 365. To him, "distance lends enchantment to the view." Thousands of farmers may admire the flight of rhetoric, but the actual facts are not all his fancy painted them, and facts are stubborn things. Instead of the substantial brick or neatly painted frame house, in too many cases is to be seen the weather-beaten "wood-colored" one with its smoke-begrimed chimney, and desolate air. The open windows are too often open in sections of seven by nine or eight by 10 inches in size, except when closed by some of the family's discarded garments, hats, or dilapidated bedding. Some seasons past, in many of our cooling streams, the cows would need mighty short legs to find water knee-deep, while during the present one, if they ventured near many of the gentle rills, they would in all probability have been drowned. The yellow wheat if it has smiled at all, has greeted a leaden sky. The corn in many fields must wave its banners unseen, for they are hidden by the weeds. As for owning the farm and having no rent to pay, thousands of farmers are paying more in taxes and interest each year than their farms would rent for. There are thousands of farmers in this country who would be supremely happy could they realize as a fact, the conditions painted in such attractive colors by this correspondent's fancy. I am impelled to notice this point at length, for the reason that so many fail to see the advantages surrounding them in their present situation, and dwell upon the disadvantages, until it seems to their distorted imaginations that any other location is better than their present one. This accounts in large part for the constant migration among the agriculturists of this country. This is to be deprecated. There undoubtedly are cases where a change is beneficial, but I venture the assertion that where one betters his condition, a dozen fail to do so, if indeed they do not do worse.

DODGING THE QUESTION.—This is what some of the correspondents do when treating of questions in the "symposiums," and other discussions. On page 401 a subscriber asks if a bull from stock which has been soiled for several years will be a good one for his purpose under different conditions. Only one of the breeders trying to answer his question, gives any light on the desired point. They all wander off into a rambling discussion of the subject in general, instead of coming out boldly and telling just what they really know of the subject, which is —nothing. In the discussion between Prof. Porter on the one hand, and several college gentlemen on the other, as to the utility of agricultural colleges, each side showed a disposition to ignore the existence of those colleges whose history would not bear out its own arguments. Facts are what we want, and I have much more confidence in the teaching of a writer who occasionally says: "I don't know," than I have in those of one who is forever and eternally dodging the question and telling us what he thinks, what should be the result, etc., etc.

A SHOCKING SUGGESTION.—I always have had a great regard for the writings of Prof. A. J. Cook, but his suggestion, on page 461, to cut the shade trees from the pastures gave my confidence in him a severe shock. I should consider such an action a cruelty to animals. I don't believe flies will attack animals any more in the shade of trees than they will in the hot sun, and I know from many years' observation that cattle prefer the former. The course proposed by the Prof. as the best, *i. e.* to keep the stock in the barn during hot weather, is a good one and will help to redeem Prof. C. from the charge of cruelty. I have known of instances where sheep and cattle went long distances from the pasture to a cool barn basement, as soon as the heat grew oppressive, and remained there until evening, when they would return to the pasture and feed comfortably until another morning. Animals show by their actions when they are comfortable and contented, and it is not only merciful to render them so as far as possible, but it is a matter of dollars and cents. I would take the testimony of a cow's actions in regard to her comfort, rather than all the say-sos of all the professors you could crowd into a 10-acre lot. R. U. MINANT.

Literary.

MAGAZINE REVIEWS.

LEND A HAND contains a considerable information about the Industrial Aid Society of Boston, which endeavors to supply employers with suitable help free of expense. The society has been very successful in supplying help adapted to situations offered. "A State School of Citizenship" is offered as a remedy for the Parochial School difficulty. A list of books "which boys and girls will read, and which it is well they should read," is given. "Something New" tells of the Temperance Education Society which was incorporated in Chicago last June. It has adopted the methods employed by shrewd business men in advertising their business by means of cards in the street-cars of the city. These are carefully prepared, the statements being taken from official returns that cannot be challenged, and are "non-partisan, non-political and non-sectarian." The object is to get facts before the public that will not be brought to their notice in any other way. They are facts that are designed to set people to thinking. Here are a few samples:

"One million six hundred and seventy-five thousand barrels of beer consumed in Chicago in 1888."

"At five cents a glass, 320 glasses to each barrel, $26,800,000, Chicago's beer bill."

"$26,800,000

IS	MIGHT BE
SPENT FOR	SPENT FOR
BEER,	11,166
1,675,000	HOMES,
BARRELS,	AT $2,400 EACH,

BY WORKINGMEN."

These cards are printed in an attractive manner, and are changed monthly. This is certainly a commendable movement, and it is hoped that the idea will spread. The secretary of the society will be glad to correspond with those in other cities who may be interested in similar work, and he may be addressed at 158 South Clark Street, Chicago. There are suggestions as to "Methods of Promoting Good Citizenship, reports of Ten Times One Clubs, charitable organizations, etc." J. Stilman Smith & Co., Boston.

THE PANSY tells about a poor boy, Jamie by name, who was small, and not very strong, and found it difficult to find work to help his poor mother. He did pretty well picking and selling berries during the summer. One day, near the close of the berry season, he had seen a notice: "Boy Wanted" in a shop window, with directions to call between the hours of eight and 10 next day. He had agreed to pick some berries for one of his customers that morning, and he wanted to apply for the place. He talked it over with his mother the evening before. Of course, he must get the berries, because he had promised. He would have to hurry and would not have time to go home to change his clothes after delivering his berries, and he knew he would be "too late to get the place." Several other boys were there before him, and each upon being shown into a room alone, behaved himself in such an unseemly manner, and took such unwarrantable liberties with the furniture, etc., that he was soon dismissed. Then our little hero appeared in his torn and dirty clothes, and upon being questioned as to the reason of his being so late told the story with which we are familiar. He was shown into the same room, and busied himself with arranging what the other boys had disarranged. "I've got the place, mother!" he shouted half an hour later. A mirror in the room had been so arranged that it revealed to the gentleman in another room every action of the boys who supposed themselves unobserved. He very rightly concluded that a boy who couldn't be trusted alone in a room for five minutes, wouldn't suit him. We know our little hero could be trusted. There are many more stories which will interest the little ones, and whose tendency is beneficial. D. Lothrop Company, Boston.

THE WRITER for September contains an article on "Letter Writing to Cultivate Style," which is very valuable. The idea is that in writing letters to friends one will express his thoughts naturally and simply, and thus unconsciously acquire an easy, unconventional style that is the ideal of good writing. "Newspaper Makers and Newspaper Grumblers" contains a great deal of truth that will apply to all classes of periodicals. Newspapers are made for the million, and when the grumbler finds one that just fills the bill it will need to be made to order, or, perhaps, he will make one himself. Some plain directions are given for "Home-Made Book Shelves." "The People and the Post-Office" by the ex-postmaster of a flourishing Western city, gives much valuable advice about different methods of remitting money, mailing packages, etc. There are many other notes, hints, etc., useful to literary workers. The Writer, Boston, Mass.

BOOK REVIEWS.

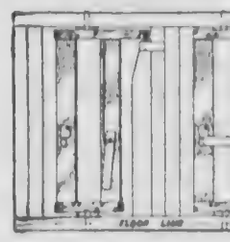
A NAMELESS WRESTLER, by Josephine W. Bates, is a novel with a strong, and decidedly original plot. It affords a genuine surprise to find a work of fiction so different from the common run of paper-covered literature. The characters sometimes give one the impression of being over-drawn, but this only brings them out in a stronger light. The scene is laid in Portland, Oregon, in its earliest history, and the adjacent mines of the Rockies; and the grand scenery, wild life and peculiar people of that wonderful region are described by a master hand. Paper covers 50 cents.

JULIAN KARSLAKE'S SECRET, by Mrs. John Hodder Needell. The hero is a young English curate of considerable fortune and unexceptional personal worth who wooed the daughter of an impecunious literary recluse, and was successful in his suit only because she was constrained to sacrifice herself for the good of the family, whose dire necessities the wealthy suitor insisted on supplying. His "secret," jealously guarded from even his wife, was a vow made to his dying mother to shield his younger brother who became a reckless renegade. His own happiness was nearly wrecked by his conscientious adherence to his pledge, but everything was finally explained, and all were happy. The author has succeeded in exemplifying moral heroism to a degree hardly to be expected in real life. Paper covers; 25 cents. J. B. Lippincott Company, Philadelphia.

ALREADY the publishers are preparing their Christmas books. Lee & Shepard have put forth a beautifully illustrated short poem by Kate Tannatt Woods, "The Wooing of Grandmother Grey." It is printed on very heavy supercalendered paper, and bound in bronze cloth with gilt lettering. A pretty holiday, or any day, souvenir for the dear grandmother. Eight by 10½ inches, price $2.00.

We are in receipt of the second of the Blue and the Gray series, by Oliver Optic—"Within the Enemy's Lines," the first of which was: "Taken by the Enemy." "Within the Enemy's Lines" deals chiefly with a young "middy's" fortunes on board a privateer during the Civil War, and, of course, will please the boys. Size 5½ by eight inches, about 300 pages; price $1.50. Lee & Shepard, Boston.

Miscellaneous Advertising.



I have no hesitation in recommending Dr. Seth Arnold's Cough Killer for coughs and colds. A few doses cured me. It is a

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writes *G. L. Walker, a prominent citizen of Pawtucket, R. I.* **25c., 50c. and $1 per bottle.**

ALL DEALERS SELL IT.

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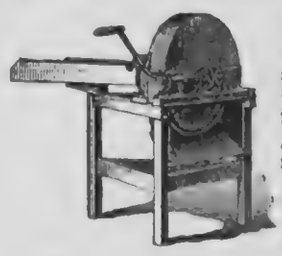
Perfect Swinging Cow Stanchion. Self-locking by entrance of cow's head. Free delivery at principal points. Send for circular. Mention this paper. **Scott & Locke, Orford, N. H.**



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LANDRETH'S LAWN GRASS SEED

Is a mixture of the finest varieties of perennial grass seeds, producing a most beautiful and permanent sod in a short time. The lawns and grass plots in and around Philadelphia afford ample evidence of the superior quality of the *Landreth's Lawn Grass Seed.*

All Varieties of Grass and Clover Seeds carefully selected, thoroughly re-cleaned, and freed from all imperfections.

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Lawson, Kieffer, Le Conte Pears: **Spaulding** and **Japan** Plums Apples, Cherries, Quinces, and Nut-bearing trees. Strawberries, Raspberries, Blackberries and **Grapes** in large supply—all worthy old & promising new varieties. Catalogue free. Wm. Parry, Parry, N. J.

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We import, from the best sources in Holland, a large assortment of Bulbs of finest quality which we offer at reasonable prices. Catalogues and price-lists free to all applicants.

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379 VARIETIES FRUIT TREES Vines, Plants, etc.

Apple, Pear, Peach, Cherry, Plum, Quince, Strawberry, Raspberry, Blackberry, Currants, Grapes, Gooseberries, &c. Send for catalogue. **J. S. COLLINS, Moorestown, N. J.**

CATALOGUES, ETC., RECEIVED.

THE FARM AND THE DAIRY.—By Prof. J. P. Sheldon, published by George Bell & Sons, York Street, Covent Garden, London, England. Our readers know Prof. Sheldon. He is a careful, observing man, who does not speculate or theorize, but writes from practical experience. We may therefore safely expect to find in this little book a concise and interesting account of the dairy matters found useful on an English dairy farm. It is quite likely that the expert dairyman who has fully mastered the details of his business, may not be able to find anything very new in the book; still for the young dairymen and particularly for the beginners, this volume will prove very valuable. The whole subject, from the selection of the farm to the sale of the product, is clearly described.

MISSISSIPPI STOCK FEEDING.—Bulletin No. 10 from the Mississippi Station, "How to feed stock in the cheapest manner" is the problem discussed in this pamphlet. The cheapest method for Mississippi might not be the cheapest for Maine; still there are a good many farmers in both States who will indorse the first sentence in this pamphlet. "The silo system has practically solved this problem." They use the common wooden silo in Mississippi and in addition they use a very primitive affair which is described as follows:

"It was made by simply piling up the silage in as round and compact a heap as possible and covering with dirt about 12 inches thick, dug from all around the base of the pile, the excavation acting as a drain. This cheap silo was built of "chicken corn." It was cut October 10, just as the seeds were turning black or brown. The stalks were put in whole and piled straight. The heap was then dressed off and smoothed up by setting the stalks on end and around it. About eight tons were put into the heap and the whole covered with earth. Then a thin layer of stalks was spread over the heap to shed water. It was opened January 19th. As might be expected, for three or four inches down, it was discolored, but all below that was green and sweet. Cattle ate it readily and there was no trouble in getting them to eat that which was discolored. When the heap was opened, 10 or 12 head of cattle that had never seen silage before happened to be near by and ate it greedily. The chicken corn was cut with corn knives and carried to the heap. Putting on the covering of dirt was very little expense, as it could be thrown rapidly with a spade from the surrounding ground on to the pile. Seventy-five cents per ton covered all expenses of cutting, hauling, etc. Care was taken to have no openings into the heap and no cavities in the pile, as the air should not come in contact with the silage. As the pile settled, the dirt adjusted itself."

The other silos were made much like those already described in the RURAL. The experiment brings out little that is new regarding the making or feeding of the silage. Corn gives the best satisfaction, though sorghum gives the largest yield. Drilled corn yielded at the rate of about 12 tons per acre; while broadcasted corn yielded about 10½ tons. Chicken corn (Sorghum vulgare) is considered a pest by many Southern farmers. It grows luxuriantly and is hard to kill out. In fact it has been regarded as a weed rather than a valuable plant. Seeds of the "chicken corn" were used at the Mississippi Station in a feeding test against ordinary corn. The test proved nothing, the only figures taken being the weights of working animals before and after a term of feeding. The animals fed on the "chicken corn" lost a few pounds more than those raised on common corn. Analyses of the "chicken corn" show that it contains more protein and less fat and carbohydrates than common corn. Its surplus of protein should make it a superior grain for working animals. It may be that this neglected plant may prove more valuable than other plants now cultivated.

SILOS AND ENSILAGE—SILAGE *vs.* FIELD BEETS AS FOOD FOR COWS.—Bulletin No. 10 from the Ohio Station. There is hardly enough in this discussion of the ensilage question to warrant its publication. The agricultural papers have brought the matter to a point where a history of the process and quotations from the papers seem behind the age. It is safe to say that every farmer who will read this bulletin has already studied most of the facts in other publications. We are glad to see that horses were fed on silage. For two months the horses were given one feed of 20 pounds per day, in the place of the usual amount of hay. The result was highly satisfactory in every way.

The station has done an excellent thing in seeking to compare silage with mangels. The work seems to have been very carefully done. The following extract from the bulletin will be read with interest by the farmers who have grown roots for years and are now urged to try silage.

We were able to produce 14 to 19 tons of ensilage corn per acre upon rich bottom land. On the same land we expect to raise about as many tons of roots. The corn probably yields a somewhat larger quantity of dry matter per acre than the beets, unless some way can be devised for utilizing the tops also of the root crop. There is some loss of the dry matter of the corn in the silo; we have not yet succeeded in inducing our stock to consume all silage given them, and our one experiment indicates that the dry matter of corn silage is somewhat less effective as a food for milk production than that of roots. So far, therefore, as we are able to judge at present, we can produce about the same quantity of potential cattle food from an acre of land in the form of corn silage as in that of roots. We are not yet sure, however, that the cost of production will be the same. Roots, as well as ensilage corn, are expensive crops to handle. Both require land that is either naturally very rich, or that has been artificially enriched, in order to produce profitable crops. Our experience leads us to believe that roots will require relatively heavier manuring than corn, in order to maintain the yield. In other words, the root crop is an extremely exhaustive one on the soil. In respect to the relative labor cost of the two crops, we are yet in doubt. By judicious management we believe that the labor cost of producing the root crop may be brought down nearly or quite to the cost of producing a corn crop for ensilage by the time all the necessary expenses of cultivation, harvesting and housing are counted, but we are not yet prepared to offer any demonstrated facts in support of our theory.

The results of this experiment point to two conclusions, which we believe will be confirmed by further experiment. These are:

1. The dry matter of corn silage and of roots is at least equal in value to the dry matter of the better grades of stock feed in ordinary use when fed in properly adjusted rations.

2. Corn silage is slightly superior to roots as a flesh or fat producer, and roots are slightly better than corn silage for milk production."

EXPERIMENTS WITH SMALL FRUITS. EARLY AND LATE PICKING OF APPLES.—Bulletin No. 11 from the Ohio Station. The station reports on small fruits will be interesting to fruit-growers generally. They are quite complete. Quite an interesting experiment in picking apples at different dates is recorded. Five varieties of apples were used. One hundred apples of each variety were picked September 26, and October 6, 13 and 20. Estimates were made as to the number of sound apples left 58, 175 and also 256 days from picking. The conclusion reached is as follows:

"Early picking of apples improves their keeping qualities, but no difference is manifest for nearly six months after picking. If kept for a longer period than six months the early-picked apples show a decided gain over those picked late. The greater part of the loss in weight, caused by drying, occurs within six months after picking. The early picked apples lose slightly more in weight than those that are picked late."

SPRAYINGS WITH THE ARSENITES.—This is the title of Bulletin, No. 53 of the Michigan Station. This is the substance of a paper read by Prof. A. J. Cook, at the late meeting of the Society for the promotion of Agricultural Science. Prof. C. finds that the arsenites can be used to protect against the plum curculio, but the difficulty is to keep the mixture on the tree. In case of frequent rains, the jarring method will be cheaper and more effective. He also thinks the time will come when we must plant plum trees in our apple orchards to protect the apples from the curculio. In such an arrangement, the apples will be sprayed to kill the coddling moth, while the plums will be sprayed or jarred as the season demands. In very rainy seasons, the jarring will be used. Prof. C. also refers to the danger incurred in spraying too early before the blossoms fall. Poisons will kill bees about as readily as they will kill curculio or coddling larvæ. Prof. C. would even suggest laws to prevent the killing of bees by spraying poisons before the blossoms fall. As regards the injurious action of various poisons on foliage, Prof. C. concludes that London-purple is more injurious than Paris-green—a fact which the R. N.-Y. discovered eight years ago—while white arsenic is more harmful than either. Peach foliage he finds most susceptible to injury and cherry the least. It also appears that London-purple and white arsenic, used just before a rain, are more harmful than when used during a drought. On the peach, Paris-green only should be used and never stronger than one pound to 200 gallons of water. The injury done to the foliage is not usually shown until the second day and is frequently delayed until the fifth or even the 10th day. Some experiments were made to determine the danger to stock in spraying the trees with the arsenites. A large tree with thick foliage was well sprayed. As soon as the dripping stopped, the grass under the tree was cut close to the ground, and carefully analyzed. The analysis revealed 2.2 grains of arsenic. A poisonous dose of this substance is one grain for a dog, two for a man, 10 for a cow and 20 for a horse. Little danger there. Another tree was sprayed and the grass under it cut and fed to a horse without any injurious effect.

APPLYING FERTILIZERS.—In the Georgia Crop Report for September the "School of Chemical Fertilizers" by Prof. George Ville is continued. This is a sample:

"Q. After plowing the soil to required depth, what is the best way of using chemical fertilizers?

A. Harrow until a smooth surface is made; spread the fertilizer broad-cast and harrow until well mixed with the loose soil. One of the peculiar advantages the chemical fertilizer has over the barnyard manure, is the use of it broadcast in early spring over cereals that have gone through a hard winter. Eighty-eight to 176 pounds of sulphate of ammonia, or 132 to 176 pounds of nitrate of soda, mixed with 220 pounds of plaster, spread broad-cast in March, will show a great change in wheat in two or three days—used in this way chemical fertilizers act like magic. But some precautions must be observed. Later than the middle of March might be dangerous. Used in April or May, it makes extraordinary growth of straw, but the grain is malformed and inferior in quality. When the fall is wet and grain is sowed late from want of time, fertilizers can be used broadcast after all the grain is well up. Barnyard manure cannot be used in this way."

THE DISPOSAL OF THE DEAD.—This is the title of a paper read by Dr. John M. Peacocke of Brooklyn, before the Kings County Medical Society. It is now issued in pamphlet form. The R. N.-Y. has never before read so clear and intelligent a discussion of this important subject. From the earliest times the proper disposal of the dead has been regarded as a very important matter. Originally, the dead were laid in woods or in fact wherever they could be exposed to the elements or become a prey to wild beasts. As men began to multiply on the face of the earth these rude and inhuman forms gave place to interment, embalmment, entombment and incineration; and until within a recent date no new methods of caring for the dead have been proposed. In rural districts where land is plentiful, and it is not necessary to erect dwelling places or sink wells close to graveyards, the ordinary burial or interment has always been regarded as the best method. In the large cities, however, the time has come when such burials are no longer safe or desirable. Dr. Peacocke's remarks apply more particularly to the dead of New York and Brooklyn; but they may be applied with equal truth to the dead of all large towns and cities. When we consider that only 96 years ago the population of New York city was only 35,000 souls and that paupers were actually buried in what is now the City Hall Park, it is easy to realize that 50 years hence the present city cemeteries will be found in the very center of a teeming population, which will be forced, in time, to build their dwellings upon the graves which can only be termed "beds of pestilence."

But what is to take the place of interment? The time is evidently coming when it will be impossible to bury the dead within 15 miles of the center of population in New York or Brooklyn. What then? Scientific men offer two methods: incineration or "cremation," and desiccation or perfect drying of the remains. Before the Christian era, cremation was in quite general use. As Christianity spread, cremation became gradually obsolete and the dead were "consigned to the slow and loathsome process of putrefaction in the grave or tomb." Cremation was not revived until 1868, when the subject was introduced at the International Medical Congress at Florence as a sanitary measure of great importance. Europe has now 24 crematories, while there are 10 in this country. The chief impediment that obstructs the advance of cremation is the sentimental objection. There is something horrible to the minds of many in the thought that the remains of our dear ones are to be burned. On this point Dr. Peacocke quotes Prof. Groes as follows:

"If people could see the human body after the process of decomposition sets in, they would not want to be buried, they would be in favor of cremation, and would look upon burning the human body as a beautiful act in comparison with burying it. There is something eminently repulsive to me about the idea of lying a few feet under the ground for a century or perhaps two centuries, going through the process of decomposition."

As to the best method of disposing of the dead, we are told that in Peru animals that drop by the wayside will be found at the end of months entire, not corrupted, but dried. The writer has noticed something of this sort on the plains of Colorado and Wyoming. The dry, pure air of these regions drives the greater part of the moisture of the body away while the form is retained, in a dried and shrunken form it is true, but still retained. Now "desiccation" is but the providing, by artificial means, of the conditions that go to preserve bodies in these dry countries. As it seems very evident that before many years "desiccation" will be advocated as a means of relieving our city church-yards, the R. N.-Y. gives Dr. Peacocke's account of the process as now conducted.

"The corpse is placed in a chamber constructed with pipes so arranged as to bring fresh, dry air into them and conduct it through the casket, and by forced draughts through a central furnace, where all the gases and fluids taken from the body are consumed. The air-current is sufficiently rapid to make an entire change in the space every two seconds. When desiccation begins, the chamber containing the body is hermetically sealed, except as respects the inlet and outlet passages for air, which are closed when the process is completed. The desiccating method has for its basis the fact that in all animal tissue water is present in greater or less proportion, forming about two-thirds of the weight of the whole body. A man weighing 165 pounds, if completely dried, would therefore lose about 110 pounds from the evaporation of water. An opportunity was lately afforded me of inspecting and examining the body of a man undergoing the process of desiccation. The remains lay in a glass-covered metallic case, having been placed therein about nine months ago, and at that time weighed 160 or 170 pounds. Judging by the dried-up appearance of the body, I presume that to-day it does not weigh over 60 pounds. The muscles of the trunk, and especially of the extremities, are shrunken and hard. The integument is dry and feels leathery to the touch. The countenance looks natural. There is no discoloration of the cuticle and no evidence of any decomposition. A current of ordinary air is admitted to the casket at one end, it freely circulates around the body, and escapes through a tube, placed at the other end, into a chimny or furnace through which all the volatile products pass before mingling with the atmosphere."

Miscellaneous Advertising.

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Magnifying 500 times in volume. For examining Insects, Trichina, Liquids, Flowers, Minerals, etc. Every instrument warranted. Sent, postage paid, to any address on receipt of $1 00, or six for $5 00. Agents wanted. Sells at sight. Send for circular. UNION NOVELTY WORKS, 10 East 14th St. (Room 21) N. Y.

"What! Corns and Bunions all gone?"
"Yes I am happy to say, through the merits of **Hanson's Magic Corn Salve,** I can now walk with ease."

HANSON'S

MAGIC CORN SALVE.

If your druggist does not keep it, do not let him convince you that some imitation is just as good. Send by mail to W. T. HANSON & CO., Schenectady, N. Y. Every box is warranted to cure or money refunded.

PRICE 15 and 25 CENTS.

Humorous.

The RURAL NEW-YORKER *is prepared to offer very liberal terms to good, responsible* PERMANENT *agents. Correspondence solicited.*

COLD FACTS.

THE girl for whom you risk your life
By plunging in the water,
Is sure to be another's wife,
And not a rich man's daughter.

- Life

THE only thing which beats a good wife is a bad husband.—*Life.*

THE cucumber does its best fighting after it is down.—*Rockingham Register.*

YOU cannot always tell the amount of gas in a poem by its meter.—*Baltimore American.*

"GET out of here," said the hen to the China egg; "you don't belong to my set."—*Michigan Farmer.*

"EAT with judgment," says a learned physician. Most people, however, eat with their jaws.—*Boston Post.*

PRINTERS' types are not quarrelsome as a general thing, but we have seen a quadrangle.—*Pittsburg Chronicle.*

A HAWK may get the rooster after breakfast, but before breakfast the rooster always takes a crow.—*Washington Critic.*

THE man who cannot sing should not be made to sing. He will only distress the balance of the congregation.—*New Orleans Picayune.*

"WHAT time does the next train leave?" "Where are you going?" "None of your business, you inquisitive thing."—*Western Agriculturist.*

A LAWN TIE—"Deuce."—*Puck.*

To the small boy who has to wear his father's made-over apparel life seems one dreary ex-pants.—*Puck.*

"SO YOU had your clothes made by Worth? Did you get a good fit?" "No; my husband always has the fit when the bills come in."—*Holland City News.*

"IT'S good for Columbus that he is out of the way. If he had to locate the show of '92 it would be a tougher job than discovering America."—*Portland Transcript.*

THE LIMIT REACHED AT LAST: Elevated Guard: "Please step forward, there!" Faint Voice (from the distance): "I can't! They won't let us on the engine!"—*Puck.*

SHE: "Do you love me still?" He: "Yes dear." And then she thought, and then he thought, and she wondered if he saw it and he wondered if she saw it.—*New Hampshire Patriot.*

C: "WANAMAKER says that the New York post-office is unhealthy, that foul odors exude from the basement." D: "Maybe they keep the dead letters down in the cellar."—*Siftings.*

TEACHER: "Tommy, what is half of eight?" Pupil: "Sideways or top?" Teacher: "What do you mean?" Pupil: "Well, half from the top of 8 is 0 and half sideways is 3."—*Time.*

MISS ST. LOUIS: "Let me tell you what my brother Robert has done. He's very proud of his great feat—" Miss Chicago (interrupting): "Oh, great feet are nothing to be proud of."—*Time.*

"SONNY, how can I get to the railway station from here?" "Have you got a carriage?" "No, my little lad." "Oh, then you'll have to walk." Disappears whistling a very popular melody.—*Life.*

A WISH GRANTED: She: "Oh, my tooth aches just dreadfully! I don't see why we cannot be born without teeth." He: "I think, my dear, if you look up some authority on that point you will find that most of us are."—*Omaha World.*

MCQUILLEN: "Say, Curt, you've got a splendid arm. I don't know when I saw one with better muscular development. Gymnasium work?" Curtis: "No. You see, I've carried a Waterbury watch for three years and always wound it myself."—*Philadelphia Call.*

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Miscellaneous Advertising.

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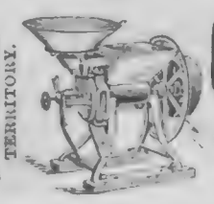

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XLVIII. NO. 2072. NEW YORK, OCTOBER 12, 1889. PRICE, FIVE CENTS. $2.00 PER YEAR.

Entered According to Act of Congress in the Year 1889, by the Rural New-Yorker, in the Office of the Librarian of Congress, at Washington, D. C.

Floricultural.

Notes from the Rural Grounds.

PROGRESS OF THE R. N.-Y.'S HYBRID ROSES.

TO hybridize other roses upon Rosa rugosa was undertaken five years ago, more as a matter of curiosity than in the hopes that anything of real value would ever come out of it should the attempt be successful. The R. N.-Y. could not learn through inquiry of those who had made roses a study, that this cross had ever been attempted or, at any rate, if attempted, that any seedlings worthy of introduction had ever been produced. One year after our first crosses, Mad. Georges Bruant was announced—a cross between R. rugosa and the Tea Sombreuil. Little is known of this Tea-rugosa as yet. It has the wrinkled leaflets of Rugosa, showing that it is, without any question, a true hybrid, and bears, as we are told, a semi-double flower nearly white in color. Two plants, in pots, were ordered last spring, one from Ellwanger & Barry, the other from Robert Scott & Son. They have made a fairly vigorous growth. Neither has bloomed. Whether it is hardy in this latitude is not, probably, known as yet.

Our first cross, as has been repeatedly stated, was with Harrison's Yellow upon R. rugosa. Of something like a hundred seedlings as the result, but nine survived. Three of these are much alike both in foliage and in flower. It has always seemed a strange thing to the writer that these three roses should bear flowers almost the exact color of Jacqueminot, having for parents a yellow male and a light-pink female. Of the three, the illustration is photographed from the one that promises to be most valuable. The plant is wonderfully vigorous and bears more flowers during June and July than any other rose ever cultivated here; the stems were, in truth, wreaths of roses. The earlier blooms resemble those of Jacqueminot in size and fragrance as well as in color. Later in the season they grow smaller and less double. In this respect it has disappointed us. It seemed as if the bush would bloom itself to death. Probably the real worth of this rose, as, indeed, of the others, will not be known until it has been propagated, either by layers or budded on other stock. We are told that Rugosa cuttings do not strike freely, and it is thought that these seedlings will probably resemble the mother plant in this respect. The illustration shows the leaflets perfectly, and the unfolding bud was selected as a fair average specimen.

THE RURAL NEW-YORKER'S ROSA RUGOSA HYBRIDS.

A BUD JUST UNFOLDING. FIG. 252.

Farm Economy.

HOME-MIXED FERTILIZERS.

ON page 551 of the present volume, the R. N.-Y. gave an account of the samples of home-mixed fertilizers analyzed by the Connecticut Experiment Station. This subject is one in which Eastern farmers are becoming greatly interested. In order that its readers might know more about the value of these home-mixed fertilizers, the R. N.-Y. wrote to a number of the farmers who provided the samples for the Connecticut Station. The following replies open the discussion of the subject:

FROM GEORGE F. PLATT.

By experiments which I have tried I have learned somewhat of the needs of my farm, but yet I do not suppose I have found the best combination of fertilizers. Applications of dissolved bone-black, which supplies little beside phosphoric acid, give me a large increase in grain crops. I have often used this alone for rye. Muriate and sulphate of potash do not seem to be required on my farm except possibly in small quantities. This seems to have been proved by the fact that extra applications of 200 pounds per acre in addition to the usual fertilizers, when applied to potatoes, do not give any increase in yield. This has been tried repeatedly with both the muriate and sulphate. A series of experiments with potatoes under the charge of the experiment station have been carried out on my farm this year. The experiment consists of a dozen plots, each fertilized alike with phosphoric acid and nitrogen, but with varying quantities of potash—from none to a very heavy application. The crop has not been harvested yet; but it will not probably prove much, for blight and rot have sadly interfered with the crop. There was no apparent difference in the growth of vines on the different plots.

I have used Formula 2,239, in the Connecticut Station Report for 1888, for three years on potatoes with excellent results, using 1,000 pounds per acre with no other fertilizer. I have tried other standard brands of fertilizers in comparison with this and found the home mixture the best. I have not the analysis of what the station bulletin of this year calls my corn mixture at hand: but owing to a mistake in mixing, it contains more than double the amount of potash it should have for corn. The analysis gives it a very high valuation, but judging from the corn now maturing, something is wrong in its composition. I have, however, a fine crop of turnips growing on a field fertilized with this corn mixture and ashes. I have found the following formula a good one for corn:

Tankage	500	pounds.
Ground bone	500	"
Dissolved bone-black	500	"
Muriate potash	250	"
Sulphate ammonia	250	"
	2,000	"

I buy my materials early in spring and do the mixing on the barn floor on stormy days. The tools I use are shovels and a screen. The cost of mixing I place at $1 per ton. This is low, but there is little indoor work for my men at that season. There are at least five of our prominent farmers in this town who mix their own fertilizers. No two of them use the same formula, but all are pleased with home mixtures and will probably continue to mix in the future.

New Haven County, Conn.

FROM DENNIS FENN.

The study of the Connecticut Station Report led me to mix my own fertilizers, for the reason that in the early history of our station fully one-half of the goods analyzed were above cost; but as competition became stronger, so much money was not made, and the valuation began to drop off until mostly all were below cost, and I concluded that we were paying too much for what we got, so I began to investigate and concluded that my land did not need as much nitrogen as some others, while it was more deficient in phosphoric acid and potash, and I based my calculation of ingredients on that theory. The most of my cultivated land is a sandy loam and for that reason I use a good proportion of organic nitrogen. Cold, clay land, in my opinion, requires something more warming and stimulating in its effect. My experiments were mostly on corn and potatoes, but as I grow some seeds I saw practical results in those.

As to tools, they are very simple. A shovel and garden rake are all that I need. Until this season I ran the stuff through a small mill that I had for crushing tomatoes, which helped in breaking the lumps. The labor was performed at odd times and on rainy days, when we could not do anything else, so that I make little account of labor. I think the practical results so far are in favor of home-mixing. One reason is, that I now use a good deal of fine ground bone in place of dissolved bone-black, which most of the manufacturers use, and which, I think, is taken out with the first crop, while the other remains in the soil for succeeding crops and as the mechanical condition is such as to carry out the first crop there is still some left for future use. If manufacturers used ground bone the price would be necessarily proportionately higher, while by its use we would get an article of higher value, more lasting in its effect and one costing no more at any time, and sometimes less, thereby saving money and value as well. In my judgment, intelligent farmers are going to take this matter

into their hands, as it is evident that they have paid the manufacturers a good deal of money for mixing, when they could have done it themselves. The enormous expenses of printing, advertising, rents, agents' commissions and salaries, all have to be paid for by the farmer, and he cannot well afford to do it at present prices for his products.

New Haven County, Conn.

FROM N. S. PLATT.

I used Baker's corn manure on corn one year and got a bountiful crop with all the manure broadcasted. I did the same next year and got only a fair crop, the season not being very favorable. I concluded that nitrogen was not needed, and so put but little in my mixture for corn this year; but the season being wet and cool, I now think I made a mistake. The stalks did not attain the size they should have done, though the ears are well shaped and well filled out. I used Baker's Peach-tree manure in growing peach trees in the nursery two years in succession, getting nicer trees than with stable manure. In handling the fertilizers I used an old shovel, as the acid injures a good one. I mixed the ingredients on a tight barn floor. They were dry and mixed easily, three turnings being enough; cost of mixing less than $1 per ton. My peach-tree mixture in results equals Baker's and costs less. I have not compared mine with other mixtures as to results, but by analysis I got the same ingredients at less cost.

Dairy Husbandry.

Wisconsin Butter Winners

How They Won Prizes.

HISTORY OF THEIR BUTTER.

FOOD! COW! TOOLS!

AT the meeting of the Wisconsin Dairymens' Association last February, a number of prizes were offered for best specimens of butter. Immediately after the meeting the R. N.-Y. sent to the winners of these prizes the following list of questions, the design being to secure all the facts possible regarding the history of this prize butter:

1. *What breed of cows?*
2. *How were the cows fed and handled?*
2. *How was the cream cared for?*
4. *How was the butter churned, worked, colored and packed?*

The following answers were received in due time. We have held them until now before publishing them because they refer to winter butter. It is now time to prepare for making winter butter and it seems more timely to give these facts now rather than at the end of the season, when pastures will soon change the whole system:

FROM E. J. FEAR, WINNER OF FIRST PRIZE FOR DAIRY BUTTER.

My cattle are the common native breed, crossed with the Short-horn. They were fed on clover hay and silage corn-fodder that was cut and shocked in the fall; this I haul to the barn and run it through a Smalley feed-cutter, cutting it into five-eighths inch lengths. The cows were also fed a few roots night and morning, and plenty of good, pure water warmed to about 70 degrees. They were kept in a good warm stable in the basement of the barn, and during the cold weather were only out of the stable long enough to drink and allow the stable to be cleaned. The cream was raised by the Fairbank system, kept in a warm room till slightly acid, then churned at a temperature of 62 degrees. It was churned in a rectangular churn, worked with a ladle, salted with Higgins's salt at the rate of one ounce to the pound in the churn. It was colored with Hansen's Danish butter-color, and packed in eight-pound pails. Most of my butter is put up in half-pound prints and shipped in 30-pound cases. For the last three years I have sold most of it in this way, to one of our leading merchants in Augusta, as fast as I could make it. During the warmest weather I put it up in 30 and 60-pound tubs or eight-pound pails. In fact, everthing is done in accordance with the latest methods, my aim being to make as good an article as can be made.

Augusta.

FROM C. P. GOODRICH, WINNER OF SECOND PRIZE FOR DAIRY BUTTER.

Of my cows two-thirds are grade Jerseys, the rest common cows. They were fed on well-cured, early-cut clover and millet hay, and cut, dry corn-fodder. The grain ration, fed at two meals, was 10 to 15 pounds each day, one-half in weight being wheat bran, one-fourth ground oats, and one-fourth corn-meal. The cows were kept in the stable nearly all the time, but let out twice a day to drink warm water from a tank. The cream was raised in broad, shallow pans, each large enough to hold one milking of the entire herd. The temperature was kept at as near 60° as possible, and the cream stood 36 to 48 hours before skimming. It was stirred up so as to mix in each skimming, and was kept at 60°, the last batch not being put in when the churning was done. This was done once in two days. By that time the cream was sufficiently ripened, being slightly acid. Before churning the temperature of the cream was raised to 64 degrees by putting warm water into it. It was churned in a revolving square box churn in 25 minutes. The churn was stopped when the butter was in pellets the size of peas or corn. The butter-milk was then drawn off and the butter washed quickly twice with clear water. It was then taken upon a clean butter-worker and one ounce to the pound of Warsaw high-grade salt was mixed in when the butter was in as moist a condition as possible. After lying on the worker three hours to allow the salt to dissolve, it was worked just enough to distribute the salt evenly and then packed in eight-pound bail boxes which were lined, bottom, sides and top, with parchment paper. This paper prevents the brine from leaking out and also prevents the flavor of the wood from affecting the butter, for these boxes are usually made of elm which sometimes has a bad flavor. The butter was colored with Hansen's Danish butter-color to just the shade of good June butter.

Fort Atkinson.

FROM MISS LEAH ALLEN, WINNER OF FIRST PRIZE FOR BUTTER MADE BY A YOUNG WOMAN UNDER 20 YEARS OF AGE.

Some of our cows are grade Jerseys and the rest common native cows. Papa thinks the care of cows is more important than the breed. They are fed once a day with corn unhusked, stalks and ears together. Each cow has six quarts of meal made from oats and barley and one peck of vegetables, beets and carrots per day. She also has all the good clover hay she wants. This is cut while in early blossom and carefully cured so as to retain the leaves and blossoms. The cows have fresh water, not warmed artificially, but pumped from a deep well. Their stables are warm and are kept clean. The cows are also kept clean and well bedded. They are never exposed to inclement weather, but on pleasant days they are turned out in a well-littered yard for exercise and a good sun-bath.

The milk is set in deep creamery cans and cooled in water and skimmed when 24 hours old. The cream is kept in a tin cream can, each additional skimming being well stirred in. The whole is kept cool until the day before churning when it is set in a warmer apartment and a starter of sour cream is well stirred in.

The butter is churned in a barrel churn. It is well washed with brine and salted while in the granular form; then, after standing about one hour, it is massed by a few slow revolutions of the churn. Then it is immediately packed without any working. We use Hansen's Danish butter-color.

I am in my 14th year. I do not often make butter all alone, but help mamma and always do some part—different parts at different times.

Beaver Dam.

FROM MRS. C. W. FERGUSON, BEST EXHIBIT OF HALF-POUND PRINTS.

I have grade Short-horns and feed good hay and meal with a little bran. I use the Cooley process. The cream is churned in a revolving barrel churn, salted with Higgins's salt, and colored with Wells, Richardson & Co.'s butter-color. I never use a butter-worker. I leave off churning when the butter is in the granular state. I wash it with water at a temperature of about 45 degrees and change the water about four times; then I let it drain a few moments and salt it at the rate of about one ounce per pound. I then mix the salt with the butter and let it dissolve. Then I revolve the churn until the butter comes into balls—sometimes small and sometimes large. Then I either pack it or stamp it without any more working.

Augusta.

FROM NELSON CORNWALL, BEST BUTTER IN PRINTS.

My cows are the common scrubs; but I have been using a thoroughbred Jersey sire for the last year. The cows are kept in a basement barn and I let them out in the middle of the day when it is warm. When it is very cold I keep them in the stable. I feed them corn-fodder in the morning and at noon, and at night I give them good clover hay, and they get corn and oats ground together morning and evening. I have a heater in my cattle tank and warm the water to about 70 or 80 degrees every day. I calculate that one great point in keeping cows is to give them warm water to drink. Then they will give more milk, and it will take less feed to keep them. In regard to the cream, I use what they call the shot-gun cans which are 20 inches deep and eight inches across—same size as the Cooley can. I keep the cream in a cool place till I get enough to churn; then I put the cream in the cans and set it in warm water on the stove the night before I churn and warm it up to 75 or 80 degrees. But before I do this, I put in for a starter about a pint of butter-milk saved from the previous churning, and then I set the cream in a warm room, where it will be ready for churning in the morning. I churn as soon as the cream begins to thicken. I use the barrel churn and churn at 62 degrees. When the butter is about the size of mustard seed I stop and make two or three quarts of weak brine and put that in, and then revolve the churn a few times and let it stand three or four minutes and then draw off the butter-milk; then I get two pails of water and put in a handful of salt and temper it to 50 degrees, and put it in the churn and revolve a few times. I next let it stand for a few minutes, then draw off the water and repeat this operation. I then put in salt (after all the water has been drawn off), about one ounce to the pound, and mix it up in the churn. Next, I revolve the churn a few times, let the butter stand a few minutes in the salt, then revolve the churn until the butter is in a solid mass. I then pack it or print it, as may be, out of the churn. I use no butter-worker, as I think working it spoils the grain. I use Wells, Richardson & Co.'s coloring and the best dairy salt.

Augusta.

FROM JAMES SHIEL—BEST BUTTER FROM JERSEY COWS.

I keep Jersey cows. I feed meal and bran and corn-fodder in a dry state, and clover hay. If I had silage it would be better. I use the Cooley cans and submerge them in water and then turn the cream into a large earthenware jar and keep it till it turns; then I put it into a large, revolving barrel churn and churn until the butter comes into a granular form. Then I put brine in and revolve the churn a few times, and then the butter will be like small shot. Then I draw off the butter-milk and put in water and revolve the churn, and then draw off the water and repeat till the water is clear. Then the butter is fit to be salted. I shake the salt over the butter in the churn and revolve once and salt again. The butter is like shot all this time. Then I revolve the churn over and over till the butter is in one big ball ready for packing. It is packed in tubs. If the butter is to be printed it will have to be worked somewhat with a butter-worker in order to form the prints in good shape. The less working the butter gets, the better.

Augusta.

PHOTOGRAPHS OF BUTTER.

(*See page* 675.)

A GREAT deal has been said by dairy workers about the proper time for stopping the churn. A great deal of this information has been lost, for the reason that it is difficult to *tell* a person just how a thing should look. One glance from an observing eye is worth half an hour's mere talk. The R. N.-Y. conceived the idea of having samples of butter photographed just as taken from the churn—one "just right" or just as good dairymen would prefer to have it, and the other showing the effects of over-churning. Mr. F. E. Benedict of the Victor New York Creamery, who is considered one of the best dairymen in the State, kindly secured the photographs which are shown at Figures 253 and 254. Mr. B. writes as follows regarding the pictures:

"The picture showing large lumps—see Figure 254—represents the over-churned sample, such as a person will find among the majority of farmers. The other sample with particles like shot—see Figure 253—shows the condition in which butter would be when properly handled. The object of having the butter in this condition is that it may be in such a shape that the butter-milk may be washed out instead of having to be worked out, as would have to be done when the butter is churned into large lumps. Cream that is properly ripened and churned at about 60 degrees can be brought to the proper granular condition with a little care in watching the churn. Then by washing the butter-milk *all* out, and working just enough to thoroughly distribute the salt, the butter should be in the best possible condition for immediate use or for keeping."

Sheep Husbandry.

FEEDING FOR WOOL.

A few Opinions as to the Best Ration for the Production of a Heavy Fleece.

FROM F. O. HOGMIRE.

I have never fed for a large production of wool. My experience is that a sheep kept fat through the winter will shear from one to two pounds more wool than a poor one. There is no question that bean pods will produce as much wool as anything else. They keep the sheep healthy, and take the place of grain when grain is high.

Genesee County, N. Y.

FROM FRANK STORK.

I consider good clover hay and corn fodder and oats the best feed for the production of wool. My half-blood two-year-old ewes averaged nine and a-half pounds of wool and raised lambs. I let mine run in a woods pasture, and stable them every night in winter, and also on stormy days.

Richland Center, Wis.

FROM L. B. PEET.

While the sheep-breeders of Vermont are quite at one in their judgment as to the best kind of hay and grain to produce a healthful growth of wool and carcass, no accurate experiments have, to my knowledge, been conducted to demonstrate the exact effects of different foods fed in varied rations. This subject has already enlisted the attention of Prof. Cooke—the director of our experiment station—and he proposes to request several sheep-breeders of the State to conduct feed experiments under his supervision bearing upon this very subject. We shall await results with interest. At present no grain ration is thought to surpass oats and bran, especially for lambs or young sheep. As a rule, little corn is fed to Spanish Merino sheep in Vermont. This grain, however, is a profitable food for fattening well-matured rams for the Western trade. When fed heavily to breeding ewes, it is thought by some to produce barrenness. Beans, peas and, indeed, all kinds of grain are fed by Vermont shepherds; but largely for change, or variety, to please our sheep—we like to see them happy—but oats and bran form the staple grain ration. As the term "horse-hay" implies Herd's-grass, not less does sheep-hay imply clover. This, with mixed grasses, cut the last of June and well cured, is not simply desirable, but seemingly indispensable to the best development of the frame of the sheep, as also to the rapid growth of the wool.

Addison County, Vermont.

FROM HENRY STEWART.

The term "feeding for wool" by no means represents any unreasonable proposition. A sheep having a carcass of 100 pounds live weight may have a fleece of 20 or 25 pounds of wool, including, of course, with the wool, the yolk and oil which ac-

company it and form an indispensable part of the fleece; for these fatty and soapy substances are necessary to the preservation of the fleece and give to it its ability to protect the animal from the inclemencies of the weather, for which purpose it is given by nature to the sheep. An exceedingly heavy draft is thus made upon the vitality and the vital functions of the sheep for the supply of the material for the growth of the wool; and this draft is so heavy and exacting upon the vitality and energy of the animal, that it has been found to interfere largely with the ability of a ram to serve the ewes successfully when the flock has been sheared in the breeding season. This fact is well know to shepherds who thus shear their sheep, and my own personal experience of fall shearing three years ago has given full confirmation to the general knowledge, for of a flock of 80 ewes sheared in September just as the breeding season began, more than half were barren in the spring and of the rest of them many had lambs so weak that most of them died. This result may have been due to the unusually cold, wet season, but if so, it proves that the shearing and its effect upon the vitality of the sheep, heavily drawn upon to renew the growth of wool, were too much tax to enable the flock to withstand the rigor of the season, which otherwise would have caused no special inconvenience.

All this being thus, it follows that if the shepherd must feed for flesh and healthful growth, or for fat to make his sheep fit for market, he must quite as much feed for wool, or he will lose the chief profit from the flock.

The long, lustrous wool of the English breeds which have been bred and reared for this special product, is an emphatic instance of the results of "feeding for wool". These sheep are more highly fed than any others in the world. Turnips, mangels, oil-cakes, corn, certain mixtures of meals and condiments which are known as "special foods," with rich grass, clover, mustard, rape, and other pasture crops are all provided for them, and a fleece of surpassing length, strength, luster and fineness of staple is thus produced. And again it will occur to the experienced shepherd that when sheep are suddenly deprived of sufficient food, or an excessive drain is made upon their vitality by any hardships or neglect, the wool will stop growing or become so weak and thin that the fiber will be pinched and shrunken, and the wool will break under the card and so become useless for the purposes of the manufacturer of woolen goods. Under a microscope which shows so distinctly every portion of a fiber of wool, one may see the evidences of good feeding in the fullness of the strand, its even imbrication, its regular thickness and bright, smooth surface while the effects of irregular and poor feeding are shown in the visible "breaks," the pinched and shrunken places in the fiber, the uneven surface, and its "deadness," all of which impair the strength and lessen the adherence of the felting quality of the wool, which is necessary to fit it for manufacture. That wool is not always wool, is proved by the carefulness with which it is examined and separated and classed by the professional wool-sorters, under whose skillful scrutiny the fleeces must pass before they are submitted to any process of manufacture. And this work of sorting is to a very great extent simply the separation of the wool of ill-fed sheep from that of those which have been well nourished. Doubtless these facts will be new to many shepherds or feeders of sheep, who are apt to think that wool is wool, and the wool-buyer who comes around, of whom it is said—and most truly, too—that he can distinguish a good fleece from a bad one without taking off his gloves, is merely an agent for bantering and beating down the owner whose fleeces are offered for sale, and who is disgruntled when he discovers that the fleeces of the well-fed flock of his neighbor have brought four or five cents a pound more than those of his own straw-fed sheep. Food is the basis of all animal products, and food makes wool as it makes milk and meat and fat; therefore he who desires to have wool, and good wool, and to make profit from his flock, must make "feeding for wool" a special study and regular practice.

Studious readers have recently been interested in the results of experiments made by Professors Henry, Roberts and Sanborn, at the different experiment stations in regard to feeding for lean meat, and although the reults were all known and proved by old experiments made years ago, yet they have been most interesting and useful to those who have not known of the valuable contents of standard agricultural literature. In these experiments it was shown how the lean meat of an animal, the muscular fiber of the muscles and the tissue of the vital organs, were developed and increased by the use of nitrogenous foods. All this, of course, went without saying to the expert physiologist who knows that "out of nothing nothing comes," and that one cannot produce nitrogenous flesh without using nitrogenous food. Now all this is of the closest connection and analogy with the subject of feeding for wool. Let us consider well the following table:

PHOTOGRAPH OF BUTTER CHURNED "JUST ENOUGH" FIG 253.

	COMPOSITION OF				
	CARBON.	HYDROGEN	NITROGEN,	OXYGEN	ASH.
PER CENT.					
Dry Flesh..	51 83	7.57	15 01	21.37	4.23
" blood..	57.96	7 25	15·07	21 30	4 42
" wool...	50.65	7 03	15.71	21 11	2.30
" hair...	51.53	6.69	15 98	21.84	0.72

If the figures are added it will be found that there is a deficiency in those relating to wool and hair of 3.50 and 3.25 per cent. respectively, and this deficiency is the quantity of sulphur contained in those substances. Wool, then, or hair, which is identical with wool in composition, differs only from flesh and blood in the amount of sulphur which it contains; and this being the case "feeding for wool" as a special art and practice of the shepherd, is as indispensable to the product of the fleece as the feeding for flesh is to the production of meat, and nitrogenous food is as necessary to the welfare of the flock as it is to the growth of the herds.

But wool cannot be grown without its accompanying yolk and a sufficient quantity of fat or grease to keep it soft and pliable, and to prevent it from "cotting" or felting upon the sheep's back. Rain causes dry wool to mat and felt in masses, to the destruction of the fleece and the injury of the skin, so that the character of the yolk must be taken into account. This yolk is not fat but a true soap, a mixture of alkali (potash) with various fatty acids; and contains about 30 per cent. of potash salts, (carbonate, chloride and sulphate), with nearly 60 per cent. of the fats; and the resulting soap is soluble in water. The yolk would then be quickly washed out of the fleeces were it not that it is protected by the grease of the wool which causes the fleece to shed off the water.

This is a beautiful (because useful, and every natural provision for the useful is beautiful in its adaptation and fitness) provision of nature for the welfare of the sheep and the profit of the growing wool; and his business (a part of the dominion over nature given to man) is to provide the necessary aliment for the flock that will secure these results.

What then should "feeding for wool" consist of? First, the food should consist of such general nutritive elements as will sustain the sheep in the most perfect health, and then such elements should be added as will furnish the excess of nitrogen, sulphur and fat, that will contribute to the quantity and quality of the fleece.

PHOTOGRAPH OF BUTTER CHURNED TOO MUCH. FIG. 254.

By general consent of shepherds and the result of a long experience, clover, either green as pasture or dry as hay furnishes the best staple nutriment, as it contains a large proportion of nitrogenous matter, while clover, wheat or rye bran makes an excellent additional food containing the necessary nitrogen, with fat and potash. Pea straw is an especially useful winter food: it is rich in potash and nitrogen and is much liked by the sheep; and, as a rule, the appetite of animals is a guide to what is good for them. Corn, while it contains all the elements required, the fat especially is for some reason not healthful for the sheep and the experience brings up a point of the greatest importance in this consideration. Food must be healthfully digested and assimilated, or it is injurious instead of being useful. Dry fodder and hard grain are fed in the winter and it is the winter feeding that is the most to be considered. Summer grazing on young grass or clover, both Red and White, is all that is required for the most healthful growth of the sheep and its fleece, having in it every needed element in the most digestible form and being sufficiently active upon all the animal functions to assimilate the digested food and to excrete all the waste. But in winter feeding on dry, hard food, the excreting organs are not acted upon sufficiently and much trouble ensues to the careless or unskillful shepherd. Consequently some provision must be made to avoid this trouble, and the use of some succulent food is indispensable to the thrift of a flock. Mangels, ruta-bagas or turnips supply this laxative and succulent food in the most acceptable form and should always be provided. The effect upon the wool is especially notable. Roots aid in healthful digestion and have an exceedingly favorable effect upon the bowels and kidneys, ridding the system through these channels of the wastes which otherwise would be retained or be forced to pass off through the skin and lungs, thus causing serious interference with the functions of these organs, and without a healthy skin, healthy wool is impossible. Beyond a doubt, the general absence of roots for winter feeding is the cause of the common troubles incident to the keeping of sheep through the winter. Nor will it do to use medicines to avoid the troubles so arising. If the sheep require a certain quantity of sulphur or potash to supply their needs, we cannot give these in their common form: they must exist in the food, and pass into the blood as aliment.

In my own experience I have found frequent changes of food very useful, with clover hay for winter feeding as the staple. I have used a mixture of coarsely cracked corn, oats, rye and buckwheat, one pint per head, given twice a day, in a broad, shallow trough so that the sheep cannot swallow it too fast; a V-shaped trough is objectionable in this respect. A quart of cut roots sprinkled with bran, per head, given once a day; sheaf-oats fed in a rack in place of the mixed grain; pea-straw, or oat-straw, and corn fodder (the leaves only), and when the weather permitted a run in a corn stubble or a meadow of which the aftermath had been left for this purpose, have been desirable. An ample supply of fresh water from a well only, has always been a particular part of the regimen. Salt of course is a regular part of the feeding, and for safety (for excess in this is injurious) it is best provided in the form of lumps of rock-salt placed where free access can always be had. Whether ensilage can supply the use or advantage of roots I cannot say, not having tried it, but I would rather use the roots, which are unquestionably excellent and always the same.

Macon County, N. C.

FROM COL. F. D. CURTIS.

In order to get a good fleece the sheep must be kept in vigorous condition. Many farmers suppose that fat is the same as vigor. Not so. It is one thing to feed for vigor, and quite another to feed for fat. In order to obtain vigor we must sustain and build the muscles and furnish food to make activity. To produce fat requires food to fill up the tissues and to store up material for heat and life, or existence. This condition is attained by rest, quiet and the consumption of starchy and oily foods—the carbohydrates—while vigor comes from the use of the albuminoids or the feeding of bran, oats, linseed-meal and foods abounding in muscle material and the phosphates. Wool is produced more by foods of this nature than by the heat and fat-forming kinds. We, must, then feed the fleece and at the same time feed the body which is to produce it. If the body from which the wool is to come is made feverish there will be a failure, and if the foods be too stimulating the sheep will shed what wool it may have. A moderate amount of oily foods is required to furnish the oil the wool should have, and it is for this reason that farmers many times imagine that there is nothing like corn for sheep, as it is so full of oil and starch. Corn is not the best food. A little corn in winter is all right; but in summer I would not feed it for wool-growing. The foods which will conduce the most to

bodily growth will make the most wool. This is so for several reasons. First: to have a good fleece the blood must be cool and well nourished; that is to say, it must not be thin and lacking in nutritive elements. These elements must be complete for feeding all parts of the body, including the skin and its inner coats. A dry, impoverished skin will never support a good fleece. It must be soft and full of secretory life. When corn or rye or barley or other heat and fat-forming foods are fed, the skin is made dry and the wool is liable to become loose. I have known sheep fed highly on corn to shed their fleeces in midwinter. I conclude, then, that foods, naturally so disposed to produce fever are not the best for promoting the growth of wool. Second: to produce plenty of wool the body must be in the most healthy condition as regards its digestive functions, and all its physical wants must be fully supplied. Poor sheep always have light fleeces, but it does not necessarily follow that fat sheep will have large fleeces. It is true that the fleeces of fat sheep will exceed those of thin ones; but it is equally true that in the end the effort to produce large amounts of both fat and wool may be overdone. A full-growing and vigorous condition in the sheep is the best. The wool thus grown will be of the best quality and this is an important item. I have obtained the best results in wool-growing by feeding a mixture of wheat bran, four parts; linseed meal, one part, and oats one part. In winter I have added as much corn as oats; but this was with an idea of improving the condition of the sheep, that is, making more fat. With sheep in good condition, I would leave corn out. This mixture, in proper proportions, is always safe for ewes or lambs. It is a complete food. When clover hay is fed, a quart, twice a day, is a liberal ration for ewes, and half of this quantity for lambs. When Timothy hay—(the curse of sheep) is fed, more of the grain ration should be given. Sheep will do well on good straw with this grain mixture. Good oat straw is equal to Timothy hay, especially if the hay is coarse and ripe.

Sheep abominate filth and bad smells. Everything must be clean when they eat, and the food must be fresh at each meal. Two full feeds are enough in a day. They should have access to water all the time and also to salt. As soon as cold, or even chilly weather sets in, they should not be allowed to get wet. When they are wet or chilled the wool does not grow: the whole vitality of the animal is required to overcome the chill. Such exposure will spoil the fleece as it will cause breaks or weak places in it. The sheep is an every-day animal. It dislikes changes and excitement, and such disturbances all conduce to the production of shorter wool and a weaker fiber.

Saratoga County, N. Y.

Rural Topics.

SOME MORE CROP ROTATIONS.

FROM T. B. TERRY.

Our rotation is clover, potatoes and wheat. Then clover with a little Timothy is sown on the wheat again. A few years ago the rotation practiced was:

1. Clover and Timothy.
2. Clover and Timothy.
3. Wheat.
4. Potatoes.
5. Early potatoes.
6. Wheat, seeded to clover and Timothy.

The clover sod and good tillage brought as large crops of wheat as could stand up, without manure or fertilizer. Then all the manure was put on for potatoes. What the potatoes left and thorough tillage insured another large crop of wheat. This rotation was followed for some time with paying results. Clover was sown on wheat, and plowed under for the following potatoes, and rye on potato stubble and plowed under for next crop. But I consider the short rotation now practiced (three years) as best. In one respect it is necessary, as we cannot now keep land in clover two years in succession on account of the clover-root beetle. Nor do I now want to. The clover yields the largest crop of hay the first year. At the end of that year it has made the largest growth of roots possible; then is the time to end it and grow a large crop of something else, if one wants to make the most money possible. Again it is no longer safe for us to put fresh manure on land for potatoes, and I want to put it out before it rots. So we want the clover sod to grow the potatoes now instead of wheat. Also, it isn't best to grow potatoes (or any other crop) two years in succession on the same ground. With our old rotation we only had to get off potatoes in time for wheat sowing from half the wheat ground, as half came after clover.

This was a great help. But I decided to do the best way and take the straight three years' rotation, although it gives us a hard pull to get the potatoes dug and stored in good season for wheat sowing. We put in the cellar yesterday 300 bushels of potatoes, making 1,200 now in, and there are some dreary days ahead yet, before we can ride our Cutaway harrow at our ease. I am writing this before breakfast, little by little each morning, as working hours are precious just now; so please excuse any lack of connection.

Now with my new rotation the rub was where to put the stable manure. I took the risk last year and put it fresh on the clover sod for potatoes. I paid dearly for the job. We had to pick over by hand 1,500 bushels of potatoes and take out some 200 of the worst scabby ones. On a field without stable manure the potatoes were nice and smooth. I am done with that kind of business. But one of the strange things is that neighbors on each side put fresh manure on potato land and it did not produce scab. Did my cement floors and covered manure shed have anything to do with this?

This spring I put the stable manure, early, on to six acres of newly seeded clover, where I had wheat last year. It was carefully done with the spreader. Then the young clover was cut about the middle of May and left to dry up. The next growth made an enormous crop and we let it ripen. It is full of seed. I expected the manure would cause much trouble raking up with the clover (I cut seed with Eureka mower and rake with a horse rake, thinking it about as good a way as any); but I hardly saw a trace of it. There was a large amount of straw in it when I put it on; but it seems to have decayed, giving the surface of the field a darker, richer look than it had in the spring. It would not have answered probably to have cut this lot for hay; but while handling the clover so as to dodge the midge and get a crop of seed, I got my stable manure nicely rotted on the surface, and I think without any loss to speak of. I am rapidly getting my eyes open as to the value of manure, or even straw, on the surface as a mulch aside from the amount of fertility it actually has in it; but I cannot stop now to give my experiences.

Now, unless I am greatly mistaken, that field thus treated will give me a heavy crop of potatoes next season. The clover haulm after hulling will be spread back. The seed clover is stacked in the field. If I could have a four-year rotation and put in ensilage corn one year, then I could put my stable manure on clover sod for corn, to be followed by rye to be plowed under in the spring for potatoes. I should like this, but cannot figure how I could feed out the silage to a dairy and do any better than we are now doing. It would necessitate another family, as we are crowded now to take care of everything on time on our little farm.

My potatoes this year were manured with clover only, in the shape of a heavy sod (I mean just what I say—not a Timothy sod with a little clover in it) and second crop and haulm from seed plowed under. The potatoes are smooth and free from scab, and the yield exceedingly satisfactory, although no stable manure has been applied since the last crop of potatoes was grown. If I could let all clover and straw go back to the land directly, I would need no stable manure; but I need to use a part of it to feed out and for the comfort of stock, and I guard the resulting manure with zealous care to get it returned without unnecessary loss to the fields. But it must go on in some way so as not to make my potatoes scabby.

Summit County, O.

FROM FRED GRUNDY.

The crop rotation most generally employed by the best farmers in this section is corn, oats, winter wheat and grass. The corn is husked, and if the field is inclosed by a fence, the stalks are pastured whenever the ground is dry, or frozen hard. In the spring the stalks are cut with a stalk-cutter drawn by two horses, the land is plowed very shallow and the oats sown. Some farmers who from lack of fence are unable to pasture the stalks, cut, or break them down immediately after the corn is husked, and plow the land for oats, turning the stalks under. This enables them to get their oats in as early the following spring as a harrow can be drawn over the ground.

Immediately after the oats are harvested the land is again plowed and allowed to lie until about the first of September, when it is pulverized with common harrows, Disks, Cutaways, or heavy pole or railroad iron drags, whichever will do the best job. Some seasons the soil is loose and as mellow as ashes at this time, and the clods will crumble at a touch; in others it as hard as a road and the clods are like stones. A good shower at the right time makes everything lovely. The wheat is drilled in and Timothy is sown broadcast afterwards. Clover is added, if desired, the following spring. One or two crops of grass are cut for hay, or it is pastured a year or two, then plowed and put in winter wheat, or corn, whichever the owner thinks will pay best at that particular time. Most of the farmers in this section aim to employ the above described rotation as nearly as the seasons will permit. The general sentiment is that it will average the best results—yield the greatest quantity of paying produce in a series of years.

Christian County, Ill.

FACTS FROM FARMERS.

BUYING SEED POTATOES.—Why is it that a majority of farmers in the Western States, especially in Illinois, import their seed potatoes from some Eastern or Northern State; mostly from New York or Michigan, when we, here in Illinois, can and do raise just as good potatoes as are produced in any other State in the Union? I know to a certainty that millions of dollars go out annually from Illinois alone for seed potatoes. This money might be saved to the farmers of the State if they would only take a little pains to select the best of their own tubers for seed and keep them through the winter where they will not sprout much. I am certain from my own experience that sprouting injures their vitality. I believe that my potato crop has been injured both in quantity and quality by planting imported seed. I have now on my farm, grown this season, as fine Beauty of Hebron Potatoes as one could desire from seed grown year after year for the last six years on the same land by selecting good potatoes of medium size and keeping them where they did not sprout much. My advice is that farmers should raise their own seed potatoes and plant them and keep their money at home.

Wheat is making from 15 to 25 bushels per acre, and some extra pieces go as high as 35 to 40. Oats make 35 to 60 bushels per acre. Corn on upland is a good average crop. Potatoes never were any better in yield or quality. Hay was a heavy crop but bad in quality. There was too much rain to allow it to cure well, and a large amount was damaged more or less.

Shelbyville, Ill. E. J. M.

WATER IN THE SPADING FORK.—The second year of a transplanted tree's life, if the first year has been very dry, is a critical time. My pear orchard of about 800 trees planted a year ago last spring, came through the summer all right, with a loss of only two trees, though no rain fell during the season to wet the roots. The orchard was plowed early last spring; a strip of only about a foot and a-half being left along the rows. But the extreme drought of April and part of May began to tell badly on the trees. I set a man at work with a spading fork, fining the soil four to six inches in depth, three feet in diameter. It cost me about three dollars, but I think I never spent money better. An improvement could be seen in the trees within 48 hours, and not half a dozen have died during the summer. Of about 100 trees set in a nursery row at the same time as the orchard, but neglected last spring, about one-half have been lost. W. F. B.

Ann Arbor, Mich.

The Poultry Yard.

CONFINEMENT OF POULTRY.

P. H. JACOBS.

THE domestic fowl, like all birds, thrives best when at liberty. Of all things it detests most being confined in a building. Some breeds have been bred to a form and disposition partially favorable to confinement in yards, where they can enjoy the open air, but no breed will willingly remain indoors if it can be avoided. At night, however, seclusion is desirable, and the hens will also seek a secluded place for lay ing, but during the day the light and open air add more to the thrift of fowls than anything else.

The difficulty of confinement within the building is easily met during the summer, or when the weather is favorable, but when the cold is severe the poultryman finds it a serious obstacle; as the fowls cannot exercise to advantage, they get out of laying condition, and become injured if exposed. As the winter is approaching all arrangements of poultry houses must be made in advance at this season, so as to be prepared in time for the change.

No poultry houses can be constructed that will be suitable for all seasons, and it is a fact that no design of a poultry house nas been accepted as the best. A visit to large poultry establishments will show that opinions differ, and it is seldom that any two poultry establishments have buildings of the same design. In fact, it is not often that two buildings on the same poultry farm are alike. The "best poultry house" is still an unsolved problem. The cause is that houses built for winter use are too confining. No matter how comfortable they may be, the hens must be fastened within, or they will prefer the cold outside during the day. For this reason the cheapest kind of poultry houses have sometimes given satisfaction where better houses have failed.

But in the cold periods of winter the hens must not be exposed to the open air, if the wind is in certain directions, or they will have frosted combs, become subject to colds or roup, and fall off in egg production. If, however, some kind of covered run, or open shed, be provided, facing the south, forming a wind-brake, the hens will do well, provided they have litter in which to work. This is the secret of success with the farmer's fowls. They are not so much exposed, as a rule, as may be supposed, for the wagon shed, barn sheds, or any covered location, will be appropriated by them, where they enjoy the open air without being exposed too much. If they were cooped up in walls as closely as are some of the pure breeds they would perish, for the more active the fowl the greater its repugnance to confinement. A fowl loves a warm place at night, free from draughts, and it will seek the most sheltered and protected spot, even in the poultry house, at night, but during the day it prefers the lightest and warmest that admits of the nearest approach to the open air. To turn them into the yard is no substitute, as they should be so situated as to be able to scratch and work all day without being affected by winds or rains.

Leghorns, and other active breeds, if kept within the poultry house, no matter how ample the floor room, will soon become addicted to feather-pulling, egg eating, etc. They will also worry, and fail to lay. They are naturally busy, but they prefer to work in the full light. Brahmas will be found more contented, but they, too, will thrive better when they can be given a protected location outside. The poultry house should really be used for laying and roosting only, and not for confining the fowls during the day, in winter.

CHICKS AS GARDEN ASSISTANTS.

FRED. GRUNDY.

WHEN hoeing or raking in the garden I am constantly turning up numerous worms, grubs, bugs and beetles of various sizes, kinds and color, and if I stopped to slay each and every one of them I should make very little progress. If I passed them gently by they would continue to gnaw, uproot and destroy my favorite vegetables, wax fat and keep my wrath at a boiling point.

How to compass their destruction expeditiously and cheaply was a problem I pondered much. But I have solved it at last, and now not a bug, grub or worm that my hoe or rake uncovers has time to be astonished before, presto! he finds himself amid the rocks and broken crockery in the interior of a healthy chick, where he is soon reduced to pulp.

I never want less than five fair-sized chicks nor more than a dozen small ones with me. If there are not enough they get full too quickly and retire. If there are too many, they get in the way and some of them meet with accidental destruction. It is amusing in the extreme to see half a dozen or so of them dancing about on either side watching the progress of my implement, and when a choice morsel is exposed pitching over each other in their eagerness to get it. Occasionally one becomes too fresh and gets knocked over, but they soon learn about how near it is safe to venture. One lot I had in the early spring always followed along be-

hind, but the little mob I have now keep constantly circling around me. All were hatched in an incubator and reared in a brooder, and are sold as soon as they weigh 2½ to three pounds. Those hatched by hen power must be taken from the hen as soon as hatched and reared in a brooder or they are no good as grub gobblers. They are afraid to leave their mal and you don't want her along to work ruination.

I have done a good deal of hoeing and raking in the garden and among the strawberries, etc., this season, and of all the thousands of grubs and worms I turned up I am satisfied not half a dozen escaped the vigilant eyes and nimble beaks of my chicks. They have also kept the lawn, flower beds and garden entirely free from grasshoppers, while there are thousands among the clover not 300 yards away. About 20 are enough to have around, and as soon as they begin to scratch hard they should be sold or shut out and another lot of small ones brought in.

Christian County, Ill.

Everywhere.

RURAL SPECIAL REPORTS.

Canada.

STAMFORD, Ontario, September 16.—In this township the early potato crop was an entire failure. The bulk of the crop was cut with frost on May 29, and the wet weather following prevented the farmers from planting in a seasonable time. The late crop is poor, thin and stinted, and cannot exceed one-third of an average. What potatoes we have are sound, but small, and they are now past growth, for they have perished from drought. What I have said of the potato crop in the township may be said of that in the county. Corn is also almost an entire failure, and so are apples, plums, peaches, grapes, oats and barley. Peas are just medium and wheat an average for the county—about 15 bushels per acre. Hay we have in great abundance. Rain is falling just now and a fine growth of early-sown wheat may be expected.

G. G.

Illinois.

TISKILWA, Bureau County, September 18.—While the potato crop is generally good in this section, there are many small ones in some fields and some entire failures; but there is no rot, except a little dry rot. We have had too much dry weather especially for late kinds, and many did not plant very early, which was bad. Polaris and Queen are among the very best earlies, but Ohio and Ohio Jr. have done splendidly and I find very few small ones among them. Minister was planted too late to do specially well. I am well pleased with the Rural No.2. There isn't one misshapen tuber in the whole lot. They are white and solid; form about perfect; eyes shallow; quality fine, dry and floury and of good flavor; vine, good and stocky and where moisture held out the yield has been fine. Among the new earlies doing well is Burpee's No.37, and 1889, and Mrs. Foraker, and two or three Polaris seedlings. We have had no trouble with Colorado beetles; the pests disappeared after summer had set in. There were myriads of them early in spring, but May and June were very wet and cold and the unfavorable weather seemed to exterminate them. A new insect appeared on some of my potatoes last year. The weather was very wet—the soil rich. I first noticed that the leaves were completely perforated and eaten up, only the stems were left; all the mischief was done in a few days. The insect was apparently without wings and of a dull lead or gray color, slimmer than the Colorado beetle, but nearly as long, and of about two-thirds the size. I had seen none before, nor have I seen any since. After all, the Ohio is the great favorite potato being of fine size and early, yielding few small ones and being such a fine keeper. Potentate ran it hard in all respects, but is not so early.

J. W. B.

Kansas.

PARSONS, Labette County, September 25.—The thermometer this morning stands at 44 degrees, being the lowest point reached this season. The country, except as regards corn-stalks, is entirely green. Corn will soon be ready for gathering, and when this is done the farm work for the season will be over, excepting the care of the stock and other trifling jobs. The season has been nearly all that could be desired. Small fruits and vegetables have been such great crops that the demand for apples has been and continues to be light, and though the crop is poor, the price is low, being 40 cents per bushel for choice, and 15 cents at evaporators. Grain was a large crop. Prices are as follows: Wheat, 55 cents; corn, 20 cents; oats, 18 cents; potatoes, 40 cents; butter, 12½ cents; eggs, 12½ cents; coal, 10 cents; steam coal, $1.00 per ton by car load.

J. B.

Michigan.

HART, Oceana County, September 23.—Crops of all kinds have been unusually good, except apples. Other fruits are abundant, especially peaches and plums, for which our county is especially noted.

I. H. F.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

FIGHTING THE CURCULIO.

J. P. A., Tallahassee, Fla.—I have seven or eight peach trees scattered about my place, which every spring bloom abundantly and set fruit, but hitherto the crop has amounted to little or nothing on account of the curculio. Jarring the trees has been tried without any perceptible result. Last spring I changed my tactics. In some of the trees I suspended rags soaked in coal tar among the branches. Around the trunks of others I wrapped bandages covered with the same material. On others I sifted thoroughly peroxide of silicate, repeating the operation several times during the season, and in two cases I combined all these methods. The result was satisfactory beyond my highest anticipation. The trees all bore full crops of luscious fruit, the first they had ever produced. Of course I was pleased, but still not altogether happy, for I had hoped to be able to tell from the result which of my methods was most efficacious. Judging from the result, they all seemed to be about equally good, and several questions I had hoped might be partially solved, as far at least as might be by a single experiment, were left in doubt; for instance:—does the odor of the tar repel the insects from the trees? Do the insects crawl up the trunks of the trees? Will the insecticide kill the insects on the leaves before they puncture the fruit? And, finally comes the depressing query whether all my precautions may not have been without effect after all, and may not the result have been caused by some other influences beyond my knowledge, especially as this was an exceptionally good peach year in all this section? What does the R. N.-Y. think about these questions? I ought to have said that the earliest kind, the Peen-to, were destroyed as usual. Perhaps I did not begin soon enough with them; but the medium and later kinds soon began to show that the ravages were stayed. A word in regard to peroxide of silicate: Is it certain that there is arsenic in this preparation? There certainly are salts of copper, as I ascertained by stirring some up with water with a knife blade. This was soon covered with a coating of pure copper. I found the powder injurious to beans and tomato vines, but having no effect on cabbages, while the cabbage worm and lice were quickly destroyed by its application. I think it a valuable insecticide, but one which should be sparingly used on tender vegetation.

ANSWERED BY PROF. A. J. COOK.

I think it quite probable that this inquirer would have had a crop of peaches even if he had done nothing at all. I have never tried coal tar, but I have tried crude carbolic acid in precisely the same manner, and with no advantage at all; indeed I saw the curculios laying their eggs close by the ill-smelling cloths. The curculio is a good flier, and so wrapping the trunk could not keep the "Little Turks" away. I have often wrapped the trunks of plum trees with cotton drenched with turpentine, kerosene, carbolic acid, etc., etc., but with no advantage at all. The third substance I believe contains a little arsenic with a great deal of plaster. No doubt this would do good. The experiments of Professors C. M. Weed, S. A. Forbes and myself show conclusively that the arsenites are effective if kept on the fruit. But why buy these substances? Why not purchase Paris-green and plaster, do one's own mixing, know what we are using and save money? It seems great folly to purchase "Slug-Shot," "Silicates" or "Zoektein," when we can as easily and much more cheaply buy the poison and dilutant, and do our own compounding.

PLANTING AN ORCHARD.

J. K. C., South Whitney, Ind.—I am going to set out an orchard of 100 apple, 25 plum and 25 pear trees. The ground where I intend to plant them is now in small clover. I expect to plant this fall. How far apart should the trees be planted, and how should the soil be prepared?

ANSWERED BY PRES. T. T. LYON.

It will be difficult properly to prepare a plot of ground for planting under the proposed conditions, since, if plowed under at once, the clover will not have decayed sufficiently to admit of cross or replowing in season for tree planting this fall. I deem it preferable to turn the clover under as soon as practicable, leave it in that condition through the coming winter, and re-plow and plant next spring. Nothing is said respecting the purpose of such planting. If a market orchard be desired, the product to be sold at wholesale, I would suggest a single variety of apple—probably Baldwin—and one variety of pear—the Bartlett—as adequate for the purpose. If a succession be desired to supply a local market, I would name Red Astrachan, Maiden's Blush, St. Lawrence, Jonathan, Baldwin, Stark, and, perhaps, Golden Russet; and for pears, Clapp's Favorite, Bartlett, Sheldon, Howell, and Anjou. If, instead, a family orchard be desired, with succession, a good selection of apples will be: Primate, Red Astrachan (for cooking), Jefferis, Sweet Bough, Lowell, Dyer, Shiawassee, Jonathan, Hubbardston, Rhode Island Greening, Baldwin, and Golden Russet. Pears: Summer Doyenné, Tyson, Rostiezer, Belle Lucrative, Sheldon, Seckel, Anjou, and (for winter) Lawrence, and Dana's Hovey.

TOUGH PORK.

H. C. A., Lansing, Mich.—What is the cause and what a preventive of toughness in pork? I never keep mine till it is more than one year old. The hogs are fed almost entirely on milk and corn. Even the fat is tough, and the lean fibers are hard to cut when boiled even till they fall apart. I have been on the farm two years and this has been the case both years.

ANS.—Milk certainly does make tough, hard, dry pork. Our friend's trouble is probably due to the excess of nitrogen in the milk, and its almost entire use as in the case mentioned. But if the young pigs only are fed on the milk, and when put up to fatten they are fed on corn, or corn and potatoes cooked together, the meat will be tender and juicy. An excess of nitrogenous food tends to make lean, which is fibrous and hard unless it is largely mixed with fat interspersed through the fibers, forming meat that is known as "marbled." The art of feeding for meat is based on the use of a judicious mixture of carbonaceous and nitrogenous matters in due proportion. It is well known that no meat is more tender or juicy than an old animal properly fattened. Such meat is supposed to be made by several months' feeding on good pasture and grain, and is generally thought to be young, and is always tender; but the cause of this is that the mature, dry, tough, fibrous muscles become filled up with fat, making the meat tender and juicy. Hence the use of carbonaceous food, as corn, oil meals, etc., is necessary in the finishing of any animal used for meat.

HOW TO MAKE A LAWN.

B. M. C., Point Comfort, Va.—What is the best way of making a lawn on land that has been under corn for several years? The house is to be built next spring, and is intended as a summer home here on tide-water. Would it be well to commence to make the lawn this fall, or wouldn't it be better to wait till the house is completed?

ANS.—We should begin the lawn at once by grading, plowing and harrowing now. If the soil is not fertile, plow under at the rate of 75 tons of old stable manure to the acre. Leave it thus until early spring. Then use a Cutaway or other similar harrow, finishing with a smoothing harrow or by hand-raking. Sow as early in the spring as possible at the rate of not less than *five* bushels of Red-top to the acre. First sow half of it and rake the entire surface again so as to incorporate the seed with the surface soil. Then sow the rest crosswise and again rake. Finish by rolling it as soon as the soil is dry enough not to stick to the roller. You may use Blue-grass instead of Red-top if you prefer, or half of each. We should sow no other variety. Do not sow White Clover. A further dressing of, say, 1,000 pounds to the acre of raw-bone flour and from 25 to 50 bushels to the acre of unleached wood ashes would be desirable if a first-rate lawn is the object.

MAKING CHARCOAL.

L. M., Augusta, Ga.—Where some friends of mine live there are no pine trees, and they have tried to make charcoal from oak without success. How can it be done?

ANS.—Charcoal may be made from any kind of wood, although some kinds make better charcoal than others. As a rule, the softer woods—those having the least mineral matter and being therefore less dense—make the best coal. Willow wood is used for the charcoal used by gunpowder-makers, because, having very little mineral matter, it is more completely consumed and leaves very little ash. But in this case perhaps the coal is not well burned. To make good charcoal from oak, long, slow burning is necessary. The pit should be well aired at first to get the whole of the wood fired, and then the draft holes should be closed, except so much as to keep the fire from breaking out. If the oak wood is split small and closely packed the coal will be better. But, at the best, oak coal will not burn as well as pine or chestnut coal will, needing a greater draft to maintain combustion.

BERRIES.

W. H. S., Fillmore, N. Y.—1. What is the best time for setting out berry bushes? 2. Which are the hardiest and best varieties for family use? 3. Would a snow-drift on strawberry bushes be a benefit or would it be likely to smother the plants? 4. Is it too late now to set out strawberry plants?

ANS.—1. Early spring for strawberries; also in August. For raspberries and blackberries fall or spring. 2. Strawberries: Cumberland, Chas. Downing, Parker Earle, Prince and Sharpless. Raspberries: Turner, Cuthbert, Springfield. Blackberries: Agawam, Kittatinny 3. Snow gives a first-rate protection on well-drained land. 4. It is rather late. Wait until spring.

Miscellaneous.

D. C. A., Cattaraugus, N. Y.—Do pears do well grafted on the apple?

ANS.—No. They are short-lived. The R. N.-Y. has tried it and speaks from experience.

C. R. W., Westfield, N. J.—How can I get seeds from the "Seed Store" at Washington?

ANS.—Write to one of the Senators from your State, or the Congressman from your district, or to the Commissioner of Agriculture, Washington, D. C.

F. P. Q., New York City.—What is the origin of the Chili Squash, and where can pure seed be obtained?

ANS.—It first appeared in J. M. Thorburn & Company's catalogue in 1869—we are not sure, but think the original stock was first grown by W. S. Carpenter of Westchester County, N. Y. Pure seed can be had from any of our well known New York City seedsmen.

W. L. B. (address mislaid).—1. Where can I procure nitrate of soda and what is the cost of the same per cwt? 2. How should grape and strawberry seeds be planted?

ANS.—1. Of any of the fertilizer manufacturing firms. See advertisements in the RURAL. The cost is about $6 per bag of 200 pounds. 2. You may plant the seeds either in the open ground or in pots or boxes in the house. Grape seeds planted *now* in drills will sprout next spring. Plant the strawberry seeds just as you would tomato seeds.

Discussion.

THE FERTILIZATION OF STRAWBERRIES.

J. A. F., TERRE HAUTE, IND.—It was with pleasure I noted two recent articles in the R. N.-Y., (see page 385, and also Prof. Budd's remarks on page 429), taking the same view as to the fertilization of the strawberry as set forth by myself in these columns last season. It required some courage to suggest that the world might

be mistaken as to this point, and it is agreeable to get some support. The more I reflect on this subject the more fully I am convinced that not only is it a fallacy to suppose that a bisexual influences the fruit of a pistillate as to size, shape or quality, but also that it affects it at all—practically I mean. As to the former point it is purely a theory, no facts to prove it having been brought forward to my knowledge. I do recall some experiments made at some experiment station and reported with illustrations, but instead of proving the theory, they showed variations no greater than can be observed any day in any bed of berries. As to the mere fertilization of pistillates from outside plants, the question cannot be so summarily dismissed; but there are both facts and arguments to disprove the assumption. The Editor of the RURAL says that "actual tests have been made and it has been found that purely pistillate flowers, if protected from pollen, do not form berries." If the strength of this statement lies in the word "purely," then its truth may be admitted; but if it allows that such varieties as Crescent and Manchester are properly called pistillates, then there is proof on the other side. In my former article I mentioned the fact of a good crop having been grown from one of these so protected, and of another grown in a field a-quarter mile distant from other berries, and now Mr. Proctor tells of his growing a fine crop of Jersey Queens 600 yards away from other sorts. A failure of a crop of pistillates when isolated does not prove the need of a bisexual, for it may have resulted from some other cause. I have had failures from perfect-flowering plants and they could not be attributed to a lack of pollen. On the other hand, the production of a crop when isolated, is positive proof that a bisexual is not needed.

The facts so far seem to be on our side and when we reason on the matter, the same conclusion is reached. First, I suppose it can be said that there is no such thing as a "purely" pistillate strawberry—at any rate those leading varieties that are called pistillate are not purely such, but contain some stamens and apparently enough to fertilize their own pistils. Then the difficulties that lie in the way of having the pollen from one blossom transferred to another that is one, two or five yards away, are so great that the claim that it has been done cannot be easily credited. The crossing of plants of all kinds in this way is much over-rated. This statement should be emphasized—this cross-fertilization is not at all what it is generally supposed to be. There is one plant that is an exception—Indian corn, and this is always cited. But this is wrongfully done, for it is an exception among plants. Its pollen is very abundant and it is placed high where the wind can waft it far and near. Can another plant be found that compares with this in these respects? Vine crops are somewhat readily "mixed," but I have known watermelons grown in proximity without "mixing". You will find beans, peas and other vegetable seeds that have been grown side by side for a score of years, yet they are saved by the housewife in purity. Now all these are capable of being crossed, but, as a fact, seldom are and this is because of the difficulty of depositing pollen of one flower on another some feet or yards away. This difficulty is as great in case of the strawberry as in case of most other plants, lying as it does low down with the blossoms obstructed by leaves, so that the wind cannot readily carry the pollen to them. I have failed to see bees or insects in sufficient numbers to accomplish it. Here we have been talking of fertilization as it may occur so as to affect the production of seeds, and it follows that if the difficulties are great in this respect they are equally great as regards the fruit.

But, supposing the seeds have been affected, it does not follow that the fruit has been. If it is a common law to affect the fruit it would be observable in other fruits as well—it would be observable to every one—and it is not. Such things have been reported, it is true; but, if they were facts—which is doubtful—it is also true that they were exceptional cases, representing not one, perhaps, in 10,000 instances. Now, we are required to believe, not only that such crossing may occur one time in 1,000, but that every one of the 500 blossoms on a square yard shall have the due proportion of foreign pollen deposited on it, each one thereby forming a berry—a feat of Nature so remarkable that I cannot credit it.

A CANADIAN ON "PROTECTION."

T. S., PELEE ISLAND, CANADA.—In discussing the question of protection a friend in the R. N.-Y. of September 7, wants the United States potato-growers protected from the foreign "pauper-labor"-grown potatoes of Canada, by an increase of the tariff upon them so as to exclude them from the markets of the States. We "Kanucks" spurn with indignation the imputation that our potatoes are grown by "pauper labor." The potato and other agricultural products of Canada are grown by the labor of the actual owners of the soil to a greater extent, perhaps, than in any other country in the world. If we can raise cheaper and better products of the soil than can be raised in the States, and compete with the latter in their own markets, after being made to pay a tax of 15 cents a bushel upon potatoes, it must be because our soil and climate are better adapted to their growth, or because our farmers are more industrious, economical and self-sacrificing than the same class in the States—and both these reasons are no doubt true.

The people and the press of the States are constantly boasting of their wealth and the poverty of Canada, and it does seem ridiculous that they should be afraid of the competition of Canada in anything and wish to put up the bar of the tariff to keep Canadian products out of their markets. Why should such a great country, with its vast area and variety of soil and climate, its immense thrifty population, with their splendid equipment of improved agricultural implements, its numerous markets and great facilities for transportation, and its thousands of imported foreign laborers—yes, *foreign, pauper laborers*—be afraid of the competition of the poor Canadians in the products of their soil and frigid climate? While they thus keep the poor Canadians out of a convenient market for their surplus potatoes, barley, etc., they also increase the price of the necessaries of life to their own poor consumers.

Another friend tells us in the R. N.-Y. about dining at a hotel where oranges and bananas were on the table to the exclusion of "blueberries" that were growing plentifully upon the hills about, and he forthwith wants bananas taxed to raise the price of blueberries so that they would be worth gathering, and he would thus compel people to eat blueberries which they do not want, instead of bananas which they do want. The advocates of a high tariff upon foreign fruits not only want to deprive the consumers of their choice of the kinds of fruit they like unless they pay a bonus to the "blueberry" and strawberry raisers; but they also wish to cut the poor natives of the tropics off from a market for their fruit, and to keep them in still greater poverty and ignorance in order that they themselves may make greater profits and go on adding to the comforts and luxuries which they now have. Every one wants his particular product protected from competition so that he may increase the price to the consumer and make greater profits. This is a call upon the government to keep up the price of the products of the more well-to-do and comparatively small class, the producers, at the expense of more numerous and poorer class, the consumers.

R. N.-Y. Isn't a protective tariff in force in the Dominion as well as in the Union? Isn't the tax levied by Canada on goods imported from the United States about as heavy as that levied here on imported Canadian goods? There are honest advocates of free trade or reciprocity among the minority in both countries, however, and doubtless our friend objects as strongly to the Canadian as he does to the "American" tariff.

CHICAGO DRESSED BEEF.

J. W. N., STOWE, VERMONT.—The raising and fattening of cattle for beef is a thing of the past in this section. A few years ago the cattle-buyers or drovers came around as regularly as the seasons, bringing thousands of dollars into this State, and taking away car-load after car-load of fat cattle. Others would come and buy up store cattle, calves, yearlings, and old or farrow cows. These were taken to New Hampshire and Massachusetts and fattened. But this is all gone by. It is almost impossible to sell any kind of neat stock excepting what little is used by the country butchers for which the farmers get three to 3¼ cents per pound live weight. A few head of fat cattle go from this State to Boston nearly every week; but probably where one car-load of fat cattle is carried out of the State an equivalent of three car-loads, in the form of dressed beef, is brought in. The dressed beef goes into the large towns; small places do not receive it. Consequently the business of the local butchers in small towns is not affected to any great extent. The result is that farmers are forced into dairying, and this is one of the causes of the over-production of butter. The farmer must raise crops. The only crops we can market are potatoes, beans and a little hay. Hence we must feed what we raise to cattle. But the beef industry being destroyed and butter being so low, a large part of the farmers' income is cut off. It is not possible for men engaged in dairying to turn to sheep-raising without great loss, and few can make a profitable business raising horses

To regulate the matter fairly, the railroads should be made to charge more equitable rates. A carcass of dressed beef, I am told, can be sent from Chicago to Boston for one dollar, while it costs eight dollars to ship a yoke of oxen alive from Northern Vermont to the same city. But this is only a step. The dressed-beef trade needs regulating wherever its baleful influences extend, and it is only one of many similar evils. The future prosperity of agriculture in this country seems to demand of the farmers three things: first, improved methods of farming; second, business methods in buying and selling; third, wise use of political power. If things go on as they have been going for two or three years back it is only a question of time when the tillers of the soil will be far on the way towards serfdom. It is the old story of greed and selfishness, of the few growing richer and the many poorer. But the farmers of this country are possessed of great intelligence, vast political power, and a large amount of wealth. The pressure that trusts, middlemen, and speculators of all kinds are putting upon them is forcing them to use their power for self-protection. They are learning the value of combination and co-operation, and the power they can wield in the government. It is along these lines that the regulation of the Chicago dressed-beef trade and all other systems of organized legal robbery must proceed. There is a wise and a right way to meet these evils, and this way will no doubt be found.

A PREVENTIVE FOR THE CAULIFLOWER MAGGOT.

H. A. M., SKAGIT COUNTY, WASHINGTON.—I think I have found a preventive for the cauliflower maggot. I have tried everything that I have seen recommended for killing the pest and have never found anything that would kill it without injuring the plants to a greater or less extent. The only sure way with us has been to get down on our knees and dig the rascals out and kill them. I read in the RURAL last year that the Editor had used sulphur in the trenches to keep the wire-worms from causing scab in potatoes in the great wager trial. I thought that if it would repel the wire worm, it might have a similar repulsive effect on the maggot fly. The experiment was worth trying anyway. On May 10, I set 10 rows of cauliflowers, putting a little over 100 in a row. This was when the fly was doing its very worst. After taking the plants from the cold-frame where they were grown, we puddled them in the usual way but added half a pound of sulphur to the puddle. Then after the plants had been set, a boy went through each row with an insect-powder gun charged with sulphur, and blew half a teaspoonful around each plant. The two outside rows, one on each side, were planted without sulphur in the puddle or on the surface around the plants. The result was that these two rows were nearly destroyed; while not a plant of the eight that had been treated with sulphur was killed by the maggots. In fact, I never found a single fly or egg around the plants. I have so much faith in the sulphur preventive that I have ordered 25 pounds and intend to use it on everything the fly works upon—onions, radishes, turnips, cabbages and cauliflowers. I hope some of the readers of the RURAL will give it a trial next season and report. The damage done by this maggot pest is becoming so serious that if we can't find something to head it off we shall certainly have to quit raising cabbages and cauliflowers in this part of the country, for the pests did just as much injury for me on a new piece of ground that had never before been cultivated as they did on old ground that had been in cauliflowers for two years.

A BIT OF EXPERIENCE.

MRS. C. M. G., LA GRANGE, IND.—In planting my contest plot, the first two rows were planted with freshly cut seed on the evening of May 1. Not being able to complete the planting the next day, the basket containing the seed was allowed to stand uncovered in the hot sun and drying wind until noon on the third, when on going to finish the planting, the seed-pieces were found to be very much wilted and dry. Some of the worst were thrown away and the remainder were planted, leaving 1½ row, for which fresh seed was cut. The first, second, half of the tenth and the eleventh rows soon came up, looking strong and healthy; while the third, fourth, fifth, sixth, seventh, eighth, ninth and part of the tenth rows which were planted with the wilted seed were fully a week later in coming up and fully one-half never came up at all. During a rainy spell when the plants were about a foot high, the missing hills were filled in by digging down and taking off sprouts from the good hills and setting them, two to three in a hill, about all the good hills in the plot having from one to three sprouts taken from them. All these grew and seemed to do well, but were of course away behind the others in growth. When dug, the two rows planted before the seed became wilted were weighed separately and found to average 81 pounds to the row; while the average weight per row of the remaining nine rows, including the eleventh and half of the tenth which were also planted with freshly-cut seed, was a fraction less than 64 pounds, so I concluded that it does not pay to expose seed to sun and wind.

THE WEATHER SAGE OF NEW JERSEY PROGNOSTICATES.

A. J. DE VOE., HACKENSACK, N. J.—In reading over the different articles furnished by correspondents of the RURAL NEW-YORKER on various subjects regarding their crops, I noticed one on potatoes, and the writer closes with this remark; "This nearly total failure is attributed, in great part, to the fact that a moist plot was selected in anticipation of a dry season. Last spring it was the general impression that, owing to our wet spring, we would have a dry summer, and a great deal of labor and seed was thrown away for lack of knowledge regarding the future state of the weather." This is not only true in regard to potatoes, but with regard to many other crops, and now that summer is past, many are predicting a dry fall, and an open winter; but the rains will continue to fall, and winter will set in very early, and if some of our farmers do not hurry, their potatoes will be snowed under. There is no class of people who are so directly interested in the weather as the farmers. And they ought to be willing to pay for information regarding the future state of the weather, and then turn the information to practical account by planting their crops in such a way that they would harmonize with the weather. The weather is controlled by natural laws, and when men understand these laws they will know just what sort of weather to look for.

SOAKING WHEELS IN OIL.

F. GRUNDY, CHRISTIAN COUNTY, ILL.—The plan of soaking the rims of wagon wheels in linseed oil once a year is a good one. It should be done during a dry spell, when the wood is perfectly dry. The wheels are suspended over a galvanized iron tank containing the oil, and slowly turned a few times every 15 or 20 minutes. They should be soaked four or five hours to do a good job. It may be done in connection with such other work as will permit one to give a moment's attention to the wheels as needed. Some men think that the oil should be kept boiling-hot, but that seems wholly unnecessary. The wheels will soon take in all they will contain if the oil is hot to start with. They should be placed under shelter to dry a few days before they are used. It is a waste of time and money to *paint* the rims of wagon wheels used in this country, because the mud, snow and slush take the paint off again in a very short time, but a good soaking in oil is really beneficial and pays.

SOUTHERN EGG RATIONS.

C. C. W., GRAND BAY, ALA.—Regarding the practice of feeding wheat to poultry; this is not a wheat-growing section and consequently wheat is never used as poultry food; in fact, very little attention is paid to feeding poultry in any way except it may be for two or three months in winter, and then the feed is mostly corn. I have found oats to be much better than corn for egg-production in this warm climate, except in winter; then I use both corn and oats. Have any of the "experts" ever tried rice, in the rough or unhulled, for this purpose? I have never heard of any comparative tests with rice; but I have often heard farmers say that rice will make hens lay better than anything else; but as it is generally worth 90 cents to $1 per bushel very little is fed out to poultry; all they get is from the fields, and at thrashing time. With the present modes of preserving eggs for winter months, in seasons of plenty,

fail to see how it will pay to use expensive feeds for egg-production in the winter.

ANOTHER TELL-TALE ACCOUNT.

C. N. D., SOUTH WESTMINSTER, MASS.—The "Tell-Tale Account" of J. Bounds, in a late RURAL, reminds me of a like account left by a revered ancestor, which reveals the customs of the New England farmers 100 years ago. No wonder they had a "hard struggle" I inclose a copy.

FEBRUARY—1787.

—— Dr.	£.	s.	d.
For 2 qts. rum and ¼ of a mug flip	2		0
For a gallon of rum	3		0
For 2 qts. E. I. 1 qt. W. I. rum	2		10
For 2 qts. rum, ½ a mug flip	1		11
For ½ a mug of flip			4
For 2 mugs of tod			6
For 10 oz. loaf sugar			7
For fish			10
For a butter of tod			3

J. H. G., QUEENS COUNTY, N. Y.—H. G. L., of Charlton, Mass. page 644 should not let his angry passions rise so hastily. The Keiffer Pear as grown in many localities, is anything else but a "little insignificant hide-bound thing." He should see it as raised by William Parry, J. S. Collins and other new Jersey fruit-growers. It is, with them, one of the largest, handsomest and most prolific, and therefore the most profitable of market pears. A good orchard of Keiffer Pears will bring in more money, more clear profit, than an orchard of twice the size planted with any other variety. A Keiffer raised in a section where the sun shines most of the time, is a beautiful fruit, having excellent cooking qualities; and when properly ripened, it is a good eating pear. If H. G. L., will visit Mt. Holly (New Jersey) Fair, he will learn some things worth knowing about the Keiffer and other pears.

G. W. H., READING, PA.—In the RURAL of September 28, Mr. Green's notes on Montana are correct. On September 9th I reached home from a trip to California, Oregon and Washington, returning by way of the Northern Pacific Railroad. Neither is all gold that glitters in Washington, and especially as regards the climate of Puget Sound and other places. I have also been to Los Angeles and San Diego in Southern California where one can see what excitement in land-booming has done—how the human mind can be led away by specious misrepresentations. Three years ago I went South and this year I went West and, all the merits and demerits of both sections summed up, I think I would prefer the South for my future home.

J. E. P., WADING RIVER, N. Y.— I notice, in a back RURAL, a request that farmers should give their experience in breeding from "sore" mares purchased in towns and cities or taken to pasture until they have become sound. I have had considerable experience with "sore" mares for breeding purposes, and only once out of many times have I succeeded in raising a colt, and that was a small and deformed one. Farmers intending to buy "sore" mares for breeding purposes had better save their money.

C. F. E., EASTON, MARYLAND.—My experience is that stable manure damages a potato crop in any season and ruins it in a wet season when rot prevails. The more manure, the worse the disease. A high-grade fertilizer rich in potash, and plenty of it, will give fine, smooth potatoes in abundance two years out of three. Stable manure will do it rarely if ever.

What Others Say

THE MONTANA BOOM.

FRIENDLY AND VICIOUS COMMENTS AND CRITICISMS OF THE R. N.-Y.'S OPPOSITION TO THE BOOMING SCHEME AS CONDUCTED.

THE NEW ENGLAND FARMER of a late date has the following:

"Some Western agricultural journals are advertising Montana, editorially and otherwise, and the RURAL NEW-YORKER thinks they are doing an unfair thing by their readers in encouraging persons to leave safe homes for the hardships and uncertainties of pioneer life. The RURAL claims to know nothing of that far Western State, having declined an invitation to join the editorial party that visited it last year. The agricultural editor of the Farmer did make the trip; and though he did not care to join with some of the other editors in investments there and would not urge New England boys and girls to exchange a good situation and agreeable neighbors for the wild and lonely life of an unbroken prairie, yet we cannot blame Western editors for the course they have taken. They believe in the West as thoroughly and as fully as the RURAL and the New England Farmer believe in the East.

Mr Orange Judd was formerly an Eastern man, but he is now a Western man and expects his children and his children's children will choose that section for their permanent home. Such persons are anxious to see their country growing up and improving, just as Eastern people who intend to remain East desire to keep population and wealth in a healthy state of growth here. These Western editors and railroad men are no more selfish or unscrupulous than are the same classes here in the East. They believe in the West and are doing their best to bring it up to their ideal, and that ideal is not a low one either. We prefer New England and are doing what we can for it."

The Editor of our friendly contemporary unwittingly misrepresents the R. N.-Y's. views in regard to Montana and the West in general, while it does not fairly set forth its objections to the method employed in advertising the Montana lands which are offered for sale. The R. N.-Y., as a journal, is just as much interested in the West as in the East; in the South as in the North. It *"believes" in the West as thoroughly as it believes in the East.* It is published for the entire country and not for any section. It is not the booming of Montana lands that the R. N.-Y. objects to. It is in favor of booming them for all they are worth. It is to the *manner* of booming them that objection is made. If these lands are owned by the editors of certain farm papers, the readers of those papers should *know it*, that they may accept with due caution the advice so freely and forcibly set before them. With the exception of the Farm Journal, none of them have done this. Mr. Atkinson in the issue of his paper dated July 1889, said:

"The Farm Journal is personally and pecuniarily interested in the success of this town (Chinook). We have invested some money there because we thought the investment might prove remunerative..... When therefore, we commend Chinook, among other places to our readers, they will please make allowance for the fact that we may be influenced," etc., etc. This is the only acknowledgment of the kind we have seen. It is very well as far as it goes. But to be just and in accordance with the impartial and honorable spirit which should guide every editor in his editorial utterances, the fact of his ownership in such lands should be *kept before* his readers with *every* advertisement or commendation of the lands for sale that appears, so that those who read the one shall read the other as well. Nearly all of the papers whose editors are booming Montana are just about as far from Chinook as they are from Boston or New York, and might reasonably be expected to help the interests of the one section as well as those of the other. The simple fact is they have put their heads together to make a heap of money by praising without stint certain Montana lands, while the readers are left to assume that this praise is as disinterested as that given to any thoroughly praiseworthy project or enterprise.

"COME WEST, YOUNG MAN."

THIS is the title of a vicious editorial in the Orange Judd Farmer of September 22. It contains more falsehoods and those of a meaner character than any other article we have ever read of the same length. Here are its important parts:

"If the verdant young man of the RURAL NEW-YORKER would arouse himself enough to leave his New Jersey acre, and 'sand lot' on Long Island, yclept an 'Experimental Farm,' and come West a few weeks or even days to look over the country beyond the Mississippi and Missouri Rivers, to say nothing of the grand country east of them, it would be a wonderful eye-opener and mind-opener, and he would go back a much wiser man. He would learn that there is more good farming land even west of these rivers, between Canada and Mexico, land superior to New York, New Jersey, Long Island and New England, than he ever dreamed of in his cooped-up strip of worn-out Atlantic sand; that there is, right on the sides of and among the Rocky Mountains, vastly more of the best land in America than can be found in the whole States of New York, Pennsylvania, New Jersey and Long Island, (*sic*). He would no longer think or talk of the 'wild and wooly West,' or depend upon discharged employees of Western agricultural papers for false information, or charge Western editors with publishing 'untruths' about the value of the newer regions. He would have a higher regard for those agricultural editors of the West, and Eastern ones too, who, after having been enterprising enough to go and *see* the West, advise investing in Western lands rather than in the worn-out soil of New Jersey and the sand banks of Long Island.

It was the cream of the enterprising men of the East who came West—those who had spirit and vigor enough to strike out into new fields and develop the country—to 'leave their former safe homes and endure the hardships and uncertainties of pioneer life.' The non-progressive, slow-coach, ease-loving residue stayed behind and are trying to amuse themselves with carping at their more enterprising fellows.

Let the 'RURAL' man get out of his glass house, suspend his seed, his potato and other gift enterprises for a month, and come West. What he receives for advertising quack medicines, corn salves, pills, etc., will meet all expenses of a trip to the Pacific, to learn something of the country. He would find whether or not there are 'safe homes' and desirable ones, too. Better come and *see* the West, Young Man!"

The man who is responsible for the above conglomeration of sneaking falsehoods is one of the leading spirits of the Chinook-Montana boom syndicate. We heartily wish Montana all the prosperity to which its climate, soil and resources may entitle it. We merely feel called upon to warn people not to accept the advice or representations of a-half dozen editors who are unscrupulous enough to seek to fill their pockets at the cost of editorial integrity and disinterestedness. Let them visit Montana before relinquishing their present homes, wherever they may be, and investigate the matter for themselves or, if this be impracticable, let them remain just where they are.

BOILED DOWN AND SEASONED.

YES, as Mr. Crosby stated in the R. N.-Y., last week, it will be found in all kinds of stock-growing that some well-established axioms have been allowed to stand on very slight foundations.....

IF Mr. Alfred Rose is an honest man, we wonder how he feels now, having stated positively, something less or more than a hundred times, that the R. N.-Y. appropriated one of his varieties of potatoes and called it R. N.-Y. No.2. An apology dear Mr. R se, is quite in order.....

T. B. TERRY says, in the Ohio Farmer, that potatoes must be kept in the dark. T is is the only proper way. He says the whitest, choicest potatoes will be injured in a short time in any cellar where one can see to walk around. They will look yellowish when cooked and their fine quality is gone. If you cannot make one room of your cellar absolutely dark, see that your home supply is kept in tight boxes or barrels and well covered.....

PROF. A. J. COOK found tobacco water effective against the Flea-beetle on potato vines. He used one pound of tobacco dust to two gallons of hot water.....

ABSTRACTS.

——GEORGE HOUGHTON IN THE CHRISTIAN UNION: "The man who is most likely to get his salary raised is the one who already makes his present salary more than just enough. He's worth more for that very reason. He's forging ahead."

——"Mere cutting down expenses doesn't mean economy. It may mean extravagance of the worst sort."

——"Yes, I'm a little old-fashioned in that respect. I can't help thinking that every trade should be a fair exchange of values. Otherwise it's a trick instead of a trade."

——"The sons of Adam have always, so far as I know, wanted the world to take them at their own valuation, and pay them every Saturday night; according to my experience and observation, the world has always declined to do that."

——"The only way to make a live paper is to inspire it with a live issue of some sort—or any sort. That's its breath of life."

——"They say the patient waiter is no loser. That depends on whether he has anything in his apple-cart to lose or gain, or whether he wears a white apron in a restaurant. It also depends on whether it is a sit-down or stand up waiting. Phillips as a sit-down waiter is a perfect pryramid of Cheops, but gray hair and nicotine are all he seems to have accumulated."

——"You haven't time? Well, just sit down and fold your hands for an hour or two, until you have!"

——"'I care not who makes the incubators of the country,' cackled the hen, 'so long as I furnish the raw material.'"

——MUNSEY'S WEEKLY: "St. Peter: 'Havn't I heard your name before?'

Western Boomer: 'Of course you have! Everybody has heard of the founder of Hustlerville, Dakota!'

St. Peter, 'You can come in, Mr. Boomer, but you mustn't write any pamphlets about this place. You're liable to make statements that the attractions won't warrant.'"

——WHITTIER: "In months of sun, so live that months of rain shall still be happy."

——"WHEN a man's head is turned he never looks to the right."

——CECIL: "The shortest way to do many things is to do only one thing at once."

——CENTURY: "It is a maxim with physicians that the incurable and the easily relievable maladies are those which have most remedies assigned to them."

——DR. COLLIER IN THE HUSBANDMAN: "What would our farmers think to pay five cents a pound for nails when the same brand may be bought of another tradesman for three cents; or 12 cents a pound for sugar when another grocer will sell him the same for seven cents, and yet that is just what they are doing in the purchase of commercial fertilizers."

——NEW YORK HERALD: "It has been suggested that one day in the year be set apart for the killing of sparrows. It might be well to take another for sparrers."

——NOT A FAVORITE DISH.—PARISHIONER (to old clergyman with a bundle of old sermons): "What ye got there, Dominie?"

O. C.: "Preserved tongue."—*Binghamton Republican.*

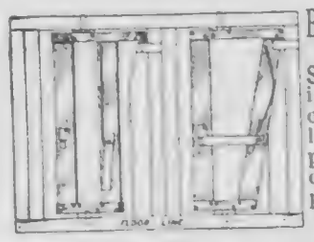
——IT WAS FUNNY.—Burglar: "What are you laughing at, you fool? Do you see this gun?"

Awakened farmer: "I was laughing to see you hunt in the dark for the money I can't find in broad daylight."

Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

All Run Down from the weakening effects of warm weather, by hard work or from a long illness, you should take Hood's Sarsaparilla, which will purify your blood, expel scrofula and all impurities, regulate the liver and other organs, cure headache, give strength and create an appetite. Be sure to get Hood's.



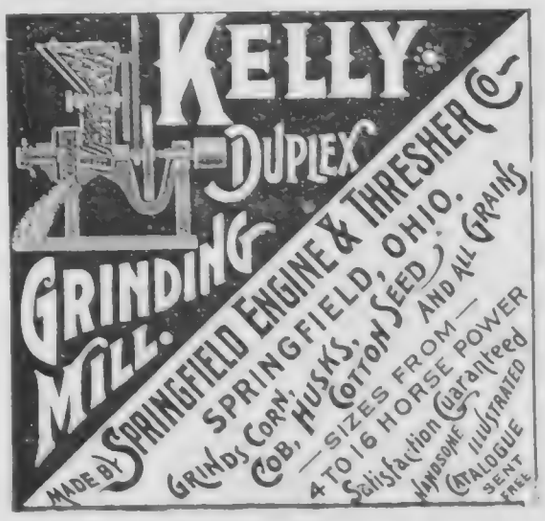
BOON to DAIRYMEN
Perfect Swinging Cow Stanchion. Self-locking by entrance of cow's head. Free delivery at principal points. Send for circular. Mention this paper. **Scott & Locke, Orford, N. H.**

TORNADO SELF-FEED CORN & COB MILL

Our **26 sizes American and Hero Mills**—too well known to need remarks here. **22,000** NOW IN USE. **Sent on trial.**

Send for handsome Descriptive Catalogue and special prices of our Corn and Cob Mills, Hero Mills and Horse Powers, Feed Cutters, Wood Saws, etc.

APPLETON MFG. CO. 19 & 21 So. Canal St. CHICAGO, ILL.



THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, OCTOBER 12, 1889.

NOTICE.

THE RURAL NEW-YORKER is invariably discontinued at the end of the term subscribed for. Any copies sent to non-subscribers are sent without charge as specimens merely.

THERE is not one farm about the Rural Grounds, known to the writer, that has produced over half a crop of the later kinds of potatoes. The very early kinds were cut short but yielded more than half a crop. The blight, to use a convenient word, is not only general but universal.

THERE are many quail, woodcock, rabbits and squirrels in the vicinity of the Rural Grounds. The law-abiding farmer will not kill them out of season. The "pot-hunter" kills them at all times, especially just *before* the law is "up." Rarely is he ever convicted. Better have no laws at all than those which are made in the interests of the lawless.

THERE is every prospect for a mild "boom" in drainage all through the districts that have suffered from too much water this season. As we have said before now, many farmers expected a dry season, so that potatoes were planted on naturally damp soils. The result is now an old story. These farmers now generally believe that had these damp spots been well drained the chances for saving the crop would have been much greater. And this season has also demonstrated the folly of placing tiles too far apart. The cases where such spots as we speak of have been too well drained are hardly worth speaking about.

HAY dealers in the city inform us that it is highly probable that a good market for silage could be created if the product could be properly baled or crated. There has been considerable talk about the best way of packing or baling green hay or silage, but no practical demonstration of the success of such business has yet been made. The best that has yet been done is the baling of the stalks and leaves of corn as they come from a husking machine that has recently been perfected. This fodder is said to be in excellent condition for feeding and if it could be steamed it would be almost as good as silage. The R. N.-Y. has held that the ordinary silage as used by most dairymen, cannot be baled or crated successfully. To make a marketable article there must be a special treatment of the silage and so far as the R. N.-Y. has studied the matter, such treatment is best secured in the system devised by Mr. Colcord, which we have frequently described in these columns.

THE R. N.-Y. has frequently read, in English papers, of the value of cabbage as a food for dairy cows. Most American authorities condemn this food because they say it will give an unpleasant flavor to the milk. We have a big crop of cabbage this year with but little sale for it. We decided to try a little feeding experiment. The R. N.-Y.'s milk and butter is sampled by people who are always on the watch for disagreeable tastes and odors. Without saying a word to them, the writer began feeding a big cabbage every night to the family cow. It was cut into six pieces with a hatchet and put in the cow's feed box to be eaten during milking. This feeding has been followed every day since then. The cow is ravenously fond of cabbage, the flow of milk has increased, and the "folks in the house" have been praising the quality of our milk and butter. Possibly one can get about as much weight of green food from an acre of cabbage as from an acre of corn fodder. Of course, there may be ways of feeding cabbage that will injure the milk, but they have not been found in our trials. It may also be stated that we have fed cabbages to two horses with excellent results. The horses are very fond of them, and there has been no trouble from colic.

THE R. N.-Y. WOMEN'S POTATO CONTEST.

THE reports of those engaged in this contest must be received at this office on or before October 15th.

$10.

THE R. N.-Y. offers a prize of 10 dollars for the best column of "Notes on a Back Number." Contestants may select any number of the R. N.-Y. for 1889. They are to write short notes in approval or criticism of the various topics discussed in that number. The articles must not be over one column in length. The prize is to be given to the column showing the most sense, and in which the greatest number of topics are discussed. It is proposed to publish all the essays in the form of a "Discussion" symposium.

POOR CITY MEN AS FARMERS.

THERE are hundreds of men in New York City, men with families to support, who are positively unable to earn enough money to pay their living expenses. We speak of honest, sober, hard-working and intelligent men, who love their families and are prepared to do their utmost to earn a living. Inability to handle money in the most economical manner possible, lack of ready capital, natural disadvantages that disqualify one from pushing up into the highest rank of service; whatever the reason may be, the fact remains that every large city can show its share of such citizens. What are such men to do? When one of them reaches the point of life when his senses plainly indicate that his powers are beginning to fail, he becomes desperate. The R. N.-Y. has received a letter from such a man which well illustrates one very important side of the question. This man, has come into possession of a little place of 12 acres—four acres cleared—on Long Island. There is a family of seven, old and young, depending on him for support. At his city work he cannot make "both ends meet." Now he asks: "Can I make a living for my family by working my little farm?" He has read some of the books that recite the great fortunes made by florists, gardeners or poultrymen on a few acres. Like many another city man he says: "If they can do that, I can!" So he asks the R. N.-Y. to tell him honestly what his chances are in the country. To obtain a fair answer, we have placed the questions before some of the most practical farmers on Long Island—men who have for years studied the profits and the losses of agriculture on just such land as our questioner owns. Their answers will, as we believe, open the way for one of the most thoughtful discussions that the R. N.-Y. has ever undertaken. Surely the question of properly balancing our city and country population is of the greatest importance.

HOW ABOUT SORGHUM SUGAR?

THERE is nothing in recent agricultural experiments in this country which has given rise to so many confident hopes to be followed by vexatious and often costly disappointments as the numerous attempts at the profitable manufacture of sugar from sorghum. It was only a few years ago when we were assured by the "best authorities" that it could be done on almost every farm on which a good crop of corn could be grown, in most of the States. A multitude of experiments were made; the manufacturers of rollers and evaporators did a fine business; reports of successes came from all sides. Are those rollers and evaporators keeping company with useless churns and other worthless patent devices about the farm buildings now, or have they been sold or bartered as old metal? How is it the successes haven't been repeated? Even where the business was encouraged by State and National bounties it is either dead, dying or languishing. Kept up by State and National support and encouraged by a particularly favorable climate, it is yet "promising" in Kansas. There the "diffusion process," from which so much has been expected, and the patent process which promised so much have been tried together; but Secretary Rusk, who has just returned from an inspection of the mills, declares that he cannot say that the industry is as yet on a profitable basis. Three or four of the chemists who are drawing comfortable salaries are, however, "still hopeful of favorable results;" but the Secretary frankly says that unless improvements are made in the business, he is "very doubtful about the profit of making sugar from sorghum cane." Well, the improvements may be made, or new processes may be discovered, or the price of sugar may go high enough either through the extortion of the Sugar Trust or the withdrawal of European bounties on beet sugar and consequent curtailment of its manufacture, or several other things may happen to make sorghum-sugar making a profitable business; but who can yet see any indications of so desirable an event?

AN AMERICAN DAIRY CONTEST.

FOR a number of years the R. N.-Y. has urged the managers of dairy exhibitions to adopt the English plan of "working dairies." These "dairies" are simply public competitions in which butter-makers, working under uniform conditions as regards cream and tools, strive to produce the best samples of butter. We expected that the managers of the Wisconsin farmers' institutes would start the matter in this country, but the managers of the Bay State Fair are first to organize and push such a contest. At the fair to be held in Boston next week there will be three such competitions: 1, between butter-makers using cream raised by cold, deep setting; 2, between those using cream from a separator; 3, a sweepstakes prize for the winners of the first and second premiums in the first two classes. In England these contests are designed for women alone; at the Bay State Fair both men and women will compete. The following points regarding the manipulation of the cream are to be observed by the judges:

Straining cream into churn	4
Intelligent use of the thermometer	6
Ventilation of churn	8
Speed and management of churn	6
Judgment in stopping the churn	20
Time in churning	8
Straining the butter-milk	4
Washing butter in churn	10
Cleanliness in handling	8
Using the butter-worker	8
Making up butter, or packing	8
Grain or texture of butter	10
	100

Each candidate is required to pay an entrance fee of $5, which will be refunded on the completion of the work. In connection with the contests, short talks on dairy matters will be given by some of the best dairymen in New England. We shall watch the result of these contests with considerable interest. It will be noticed in the rules that 52 out of 100 points are given to the operations that affect the texture or granulation of the butter. This shows how very important this matter is—it is the operation most generally neglected by poor dairy people. The R. N.-Y. wishes to say in this connection that a great many people seem to believe that it is impossible to make sticky or salvy butter in a churn that contains no floats or paddles. This is a great mistake. Over-churning in any of the revolving or swinging churns will surely produce a sticky, pasty mass of butter.

TELLING RESULTS OF THE R. N.-Y'S. FERTILIZER EXPERIMENTS.

THE R. N.-Y. considers itself fortunate in having quite an area of very poor soil on which to experiment with fertilizers. It is because the land is already fertile or at least well provided with one or more of the food constituents supplied by so-called "complete" fertilizers, that the experiments made by farmers for a season or so prove little or nothing or are altogether contradictory. For about 14 years the R. N.-Y. has made trials with different quantities of fertilizers to find out how large an amount could be *profitably* used. Those made at the R. N.-Y. farm on Long Island, which is in a high condition of fertility in every part, gave no further information than that 200 pounds per acre would give as large a crop as when 2,000 pounds were used. In order to get the desired information it would be necessary to carry on the same trials for many years, the same as Dr. Lawes has done at Rothamsted.

Not so on the impoverished soil of the RURAL's experiment plots in New Jersey. Here the answers come at once, and the testimony is direct and convincing. The soil wants nitrogen, potash and phosphoric acid and it *must have* them or paying crops cannot be raised. We have shown this as the results of six seasons of the same trials. And it has been further shown that the potato crop will be profitably increased by the application of as high as 1,700 pounds of high-grade potato fertilizer to the acre, while in some cases the increase has paid the additional cost of 2,200 pounds.

Our report for the past season is not quite ready. But two plots have been harvested and weighed. Here is the result in round numbers per acre:

FIRST SERIES.

Plot 1.		Natural soil	161	bush.
" 2.	440	lbs. fertilizers	190	"
" 3.	880	" "	212	"
" 4.	1320	" "	278	"
" 5.	1760	" "	330	"
" 6.	2200	" "	308	"

SECOND SERIES.

Plot 7.		Natural soil	154	bush.
" 8.	440	lbs. fertilizer	187	"
" 9.	880	" "	216	"
" 10.	1320	" "	246	"
" 11.	1760	" "	297	"
" 12.	2200	" "	330	"

It will be seen that, with one exception, the yield increases as the fertilizer increases. In the first series, 2,200 pounds of fertilizer give 22 bushels less than 1,760 pounds of fertilizer; while, in the second series, the larger amount gives 22 bushels increase.

The above tables show, in a general way, just what is shown by all previous experiments upon this or similarly poor soil in the same or a neighboring field.

BREVITIES.

"DOMESTIC FRUITS AT AUCTION." Read what is said on this subject. See page 685.

A HEN that will not scratch and a cow that is not greedy for her food are the animals that are better dead than alive.

POTATO diggers like the R. N.-Y. No. 2 Potato because the tubers are "all in a bunch." A skillful man can throw all the tubers out at one forking.

AT Suffolk County Fair, Riverhead, L. I. a first premium was awarded to E. E. Mosier, of Riverhead, for the Rural No. 2 Potato. About a dozen specimens were shown. They were remarkably uniform in size and shape.

THE RURAL NEW-YORKER is much improved in appearance with its new dress and changed "make-up." I am pleased to note this evidence of deserved prosperity. The R. N.-Y. stands in the front rank of agricultural journals of the world.

Ionia County, Michigan. C. F. HUNTSMAN.

WE can not find space for all the reports kindly sent to us of the R. N.-Y. No. 2. Of one thing our readers may feel assured: we shall print the bad as well as the good reports without any discrimination. The R. N.-Y. is interested only in showing up this potato *as it is*. Up to this time, our opinion of it is that it is the most valuable late potato (where it succeeds) known.

THE picture of Mr. Terry's tools has excited a good deal of interest. We hope to follow it with pictures of the tools used on a Massachusetts farm, and also the tools used on farms in Alabama, Dakota and Colorado. A Western lady suggests that we ought to show the tools used by Mrs. Terry in her kitchen. This is a good suggestion, and we hope to be able to carry it out.

I FIRST became acquainted with the RURAL NEW-YORKER by sending my address for a five weeks' trial trip. At that time I was taking three farm, one political and two religious papers. As my time expired, I dropped two of the farm papers and substituted the RURAL in their place, and feel much pleased with the change. I receive the bulletins from the experiment stations of N. Y., and would rather pay for them than not receive them, but I like the RURAL the best. ALBERT ROBINSON.

Erie County, N. Y.

Field Crops.

RURAL POTATO REPORTS.

THE small tuber received from the RURAL was cut to 10 eyes, and planted April 3d, one eye in a hill, one foot apart in the row in a light soil with clay subsoil without fertilizer of any kind. The row was cultivated twice with horse and hoed twice. The crop was dug September 6th, yielding 19 pounds and 14 ounces, of fine, smooth tubers, free from any blemish—64 tubers in all, 57 being of marketable size and seven small. The largest weighed 14 ounces, and the next largest, 12 ounces. The smallest tuber counted as marketable weighs three ounces. J. E.

Keokuk, Iowa.

I HAVE dug my No. 2 Potatoes grown from the one sent me last winter. I did not prize it very highly at that time. It was very small and did not appear to be of much value; but it has proven itself very different. I planted it about May 6. with little hope of obtaining anything; but, to my surprise, I had 9½ pounds of tubers, one weighing one pound, and another weighing nine ounces. There were 35 in all. and 32 of them were marketable. The original potato I cut in six pieces, with one eye on each. One was cut off by a worm and one hill was destroyed by moles, so that I had a pretty fair yield after all. I think at the rate that little fellow yielded my big one-pounder must produce a barrel. J. S. W.

Freehold, N. J.

THE R. N.-Y. Potato No. 2 received last spring was about two-thirds the size of a hen's egg. It was cut into eight one-eye pieces, and planted May 2. The pieces all grew. The hills were three feet apart each way. The soil was heavy clay loam enriched with Stockbridge potato fertilizer at the rate of 1,600 pounds to the acre. On July 25, the vines began to show rust or blight, and by August 5, they were nearly all dead. I dug them August 20; yield 6¾ pounds; the best was one-half pound. All were sound. On an experimental plot of eight varieties, the R. N.-Y. No. 2 gave the smallest yield, but it was the only variety that did not rot more or less. Had not the blight come, the result would, quite likely, have been very different. I. O. E.

Oneida County, N. Y.

I PLANTED the R. N.-Y. No. 2 Potato April 18. There were seven eyes and the pieces were cut to one eye. They were planted in a trench in rotted chips from the woodyard, one foot apart; five grew and were frozen down once and were cultivated twice, once with the garden rake and once with the hoe, and when they were ready to bloom I threw a wheelbarrow load of chips and horse manure around them. The Flea-beetles worked at them whenever the weather would let them; but it was very wet until the second week in August when we got some hot, dry days that finished up both early and late potatoes. I had never before seen so many beetles and they are working on the late vegetables yet. Well, I dug my No. 2 on August 19; the largest stalk yielded three tubers weighing 11 ounces each, making 33 ounces. There were 28 in all, three small ones; in all 19½ pounds. Not one rotted, nor was there a spot on them, and we think they are going to beat the Blush. Potatoes are rotting badly except the Stray Beauty. Is it not strange that all three of the largest No. 2 should grow on one stalk and weigh just alike and all look alike? I cannot make up my mind to cook any of them, for I want them all for seed.

Moore's Hill, Ind. MRS. R. A. C.

Miscellaneous.

HONEY DEW.

Sometimes due to exudations from nectar glands in plants; but far oftener to the action of insects: exudations from plant-lice and from insect-made plant wounds; instances of the operation of different causes.

The term honey dew originated in the belief that at certain times and under certain unknown conditions, a dew as sweet as honey, would collect upon plants during the night, and there are many who still hold to this erroneous idea. The causes that produce the so-called honey dew are many and sometimes there seems to be no explanation for its appearance, unless we accept the old notion as correct, but it will not do to say that it must be dew because we do not see what else it can be; that would be very unscientific. It has been learned that some plants have nectar glands in their leaves, which exude a sweet liquid upon their surfaces, but insects are by far the most common cause of such appearances.

I took my insect net and collecting case a few days ago and started for a little walk in the fields to see what I could catch. After sweeping my net for a short time among the tall grass and weeds along the border of a field, I sat down under a willow tree to examine my catch. The sun was shining brightly and there were no clouds overhead, but as soon as I had seated myself on the grass, I felt what seemed to be drops of rain falling on the backs of my hands. I had had similar experiences before and at once surmised that there were plant-lice on the limbs overhead. A glance among the branches was enough to confirm this opinion, as the lice were present in great numbers on every part of the tree, and everything below was receiving a gentle shower of nectar.

The sweet liquid from the little nectaries or honey tubes on the backs of these insects, sometimes falls in such abundance as to cover everything beneath with a heavy coating of white sugar, as it evaporates. I have a sprig of spruce in my collection, that is so heavily loaded with sugar produced in this manner that the weight of the sugar would be at least three or four times that of the twig after the sugar is removed, and the sugar itself is as sweet as any that you could buy at a confectioner's store.

Some who supposed that the aphides were the only cause of honey dew have found sweet substances upon trees where it was certain that there were no lice that could cause them, and have concluded that after all there is such a thing as a real honey dew. One warm day, last spring, before the buds began to expand, I came across a Bur-Oak that was swarming with a minute black four-winged fly belonging to the order of insects known as Hymenoptera. There were from one or two to a half-dozen or more of these little flies upon every bud that I could see. All were busily at work ovipositing in the embryo leaves, which was done by first inserting a long ovipositor which might be likened to a sting of a honey bee.

A week later I again visited this tree to see if the little flies were still at work puncturing the buds and laying eggs. Instead of finding the flies, I found that all of the buds and the small twigs of the tree appeared as if they had been dipped in something that had covered them with a sticky varnish, which I found, upon tasting, was sweet. This substance was most abundant upon the buds from which it had run down over the twigs and small branches. At this time the leaves were not yet out, and there were no lice to be seen on the tree and, if I had not happened to be present a week before, when the buds were being wounded by the myriad lances of this little gall-fly which is as yet unknown to science, but which I have described in MS under the name Neuroterus verna, I could not have explained the presence of the sweet material. I know of other gall insects that produce sweet exudations from the oaks, and also of a small worm that gnaws into the young growing acorns, causing the same result. It is probable that there are causes still unknown that produce sweet substances on leaves and twigs of trees, but it is not probable that there is such a thing as a real honey dew. C. P. GILLETTE.

CORRESPONDENTS' VIEWS.

FODDER CORN AND OTHER TOPICS.—Following the RURAL'S advice last spring, I bought one bushel of Thoroughbred White Flint Corn. My neighbors laughed at me for paying such a price—$2 per bushel—but the laugh is on my side now, as I have four acres of as fine corn as one could wish, averaging 10 feet in hight. I planted it mainly for the fodder, thinking that if it matured I would come out so much ahead, and although it was planted late—May 30—if we have no severe frosts, I think it will get ripe. It is planted in drills, the rows being four feet apart, and two kernels in a place, 18 inches apart. It was planted with the Evans two-horse corn-planter, planting two rows at a time. This machine I consider the greatest labor-saver I ever saw, and I own, I think, nearly all the machinery that can be used on a farm of 150 acres, excepting a potato planter and digger, which I have not as yet had any use for. [We want a picture of these tools to go with Mr. Terry's group. R. N.-Y.] A man living near here has for a number of years used the following method of handling his corn. After it is cut he allows it to wilt in the field three or four days, according to the weather; then he hauls it to the barn immediately, storing it in the mow as one would hay, except that he uses about a pailful of salt to a load. I saw it last year about two months after it was put in, and it was in prime condition, being apparently as sweet and bright as when put in. He says he has no difficulty about its heating, and as he has done it a number of years, I suppose he is well satisfied with the plan. This year, however, he has a silo. Now what I want to know is this: Can any of our brother farmers or experiment stations give me any more light on the subject? As this is a fact, I do not see that we have need of a silo. When I saw the corn it was stored in a floor bay, and there was no weight or covering whatever on it, and I think there had not been any. I climbed up on top of it and put my arm in as far as I could and pulled out a stalk. I could see no sign of excessive heat; in fact, it was in first-class condition, beating all the silage I have ever seen, being sweet, which is more than I can say for the silage. G. W. S.

Andover, Mass.

R. N.-Y.—We will try to get all the information we can in this matter. We intended to handle our own stalks this fall in much the same way as that employed by your neighbor, but the rains have been so constant and severe that the stalks could not be dried out sufficiently. We feel sure that with careful packing and the use of enough salt, stalks can be packed in the mows before being completely dried and thus make the best of fodder. We hope some of our friends will tell us why such dried stalks cut and steamed are not as good as the ordinary silage!

RAPID MARKETING OF PRODUCE.—That some more rapid and economical method of handling all perishable fruits and vegetables in our large wholesale markets is needed is self-evident. The old methods answered well enough at the time of their first inception, but the world moves, and improvements are the order of the day on every hand. By the present system, fruits and other produce are sent to commission men to be disposed of to the best advantage. Buyers go from one to the other, jewing down the price, and buying, of course, where they can make the best terms. This tends to lower prices. This class of goods has been sold at auction for many years in Europe and other parts of the world, and efforts are being made to introduce this system here. Imported and California fruits have been so handled in New York and some other cities, but not until recently. Arrangements for handling the Florida orange crop have been contemplated, and a meeting was recently held at Vineland, the principal fruit-shipping center of Southern New Jersey, to devise means for selling the fruits and vegetables of that section at auction. The advantages of this system are rapid handling, prompt sales and settlements, competition among the buyers instead of among the sellers, and a clean sweep of everything offered, at some price. It also necessitates a combination of shippers, and the consignment of goods to a limited number of auction rooms. This would make buyers of many who are now simply receivers, and would tend to drive some of them out of business. Very naturally they are opposed to the change, but it is quite likely that the system will have a more extended trial in the near future. I shall watch the outcome with interest.

OBSERVER.

LAW AGAINST "OLEO."—The only way I know of to get pure lard is to buy dry salt side meat or pork and try out the fat. Is there any provision of the oleomargarine law that requires the boarding-house or hotel keepers to inform their patrons whether the so called butter on their tables, *is* butter or oleomargarine or, in other words, is there any law to prevent the hotel-keepers from buying oleomargarine in bulk and furnishing the same to their guests as pure butter? Would such a law be of any benefit to the dairymen? C. C. W.

Grand Bay, Ala.

R. N.-Y. There is such a law in some of the States—in New York among others—but it is badly enforced. The law requires that where "oleo" is used, a notice stating the fact must be conspicuously displayed where the guests can see it. There is no doubt whatever that "oleo" is used in a large number of restaurants and hotels, but we have yet to see a single case in which the required notice is displayed. If the law were properly enforced, it would of course be a benefit to farmers.

WE ARE TOLD that we should seek only such things as are commendable. With this idea in mind when I visited the New Jersey State Fair, I spent most of my time in the cattle sheds and fruit and vegetable tent. The show of cattle was very creditable; indeed it was worthy of a much more appreciative patronage than it received. The fruit and vegetable exhibit was tastefully arranged, and contained many specimens of considerable merit, considering the fact that this is an "off" year for fruit in this State. A very fine display of potatoes was made by one of your old subscribers, Mr. N. W. Pursell of Elizabeth. A basket of the Rural No. 2 attracted much attention. J. H. G.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

THIS is the season of fall openings in the dry-goods districts, and gorgeous are the shopping streets of New York. Most noticeable among the costly and beautiful fabrics are the brocaded silks, both for trimming and for elaborate gowns. One which suggested itself as an old lady's evening gown was of pale steel-gray satin. Looking as if lightly strewn upon it, were large sprays of maple leaves in darker gray and black. The sprays were about two feet long, the leaves more than natural size and they really looked more like the work of the brush rather than the loom.

Another design, more lovely still, was a white corded silk, strewn with garlands of pink morning-glory and its leaves in natural colors. Another, with ground of cardinal red satin, had golden sumach leaves scattered over it. A black satin was brocaded with bunches of scarlet gladiolus, the spikes being natural size. Yet another black was brocaded with aloe plants, the thick, shiny leaves with a spike of flowers in the center, all in one color, deep golden yellow. The gorgeousness of these fabrics may be imagined. Other lovely brocades showed designs in deeper shades of the ground color; the patterns are almost invariably floral. Among the new silks shown are some of the old fabrics revived, such as taffeta and peau de soie or paduasoy, as our grandmothers called it. A noticeable house dress was of scarlet paduasoy, having a plain accordeon-plaited skirt; the round waist had a short little shoulder cape in accordeon plaits, full sleeves, and a little garnishing in black lace and velvet. Capes reaching to the waist are quite fashionable this autumn for young ladies; in cloth there are the Directoire capes, very close-fitting, consisting of four or five capes, one above the other. Sometimes the edges are finished with braid, but they are noticeable for their simplicity; some beautiful capes are of surah or India silk in accordeon plaits, gathered into a square or pointed yoke, such as have been worn by children, but they are so pretty that their elder sisters now adopt them.

* * *

SUCH hats and bonnets! The little bonnets get smaller, and the big hats larger—probably the milliner's bill, too. There is not a great difference in shape, so far, from last winter; the bonnets are a little rounder in the crown, but narrow towards the front, the trimming being chiefly on the top. Very pretty little bonnets and turbans of chamois leather are seen; a little bonnet with a chamois crown, trimmed with green velvet and green ostrich tips was really charming. A great many birds are seen on hats and bonnets; sometimes one really large bird, or three or four small ones. We hope none of our readers will turn her hat into a mausoleum for departed songsters; it is certainly time this senseless and cruel fashion was abolished. We don't think women are entirely to blame, for they buy these poor little bird corpses thoughtlessly, simply because they see them in the shops, and admire them. But

> "Evil is wrought by want of thought,
> As well as want of heart."

A woman who would shudder at the thought of killing a snake will buy a poor

little dead bird for her winter hat, thereby encouraging the men who slaughter them and put them on the market. Let our sisters of the RURAL—a pretty large constituency—determine that they will have nothing to do with such cruelty, and, following the lead of the Audubon Society, pledge themselves not to wear birds' wings or breasts, excepting only ostrich plumes and feathers obtained from birds legitimately sacrificed for food. Considering how many handsome made feathers are from the denizens of the barn-yard, dyed and made up, this gives a wide range of choice.

* * *

IF there is one thing more bewildering than the millinery and dress goods at the fall openings it is the upholstery. Such curtains and cushions and rugs and drapery! New and highly artistic, (occasionally very ugly too), are the Bagdad portières. They are made of a coarse woolen canvas, and consist of stripes about six inches broad, fastened together with a peculiar stitch something like herring-bone. The joining is done with coarse worsted, the stripes being laid flat, without any seam. Each strip is coarsely embroidered with the worsted, in odd patterns something like cross-stitch. The strips are of different colors, deep blue, Indian red, orange, brown, black and so on. They are really of Persian manufacture, and do certainly look Oriental, but a good many of them are ugly enough for a night-mare. They cost about six or seven dollars a pair. Some very rich-looking portiéres for 15 dollars a pair are of heavy self-colored velours, the same on either side, in shades of blue or terra-cotta. Just above the bottom is a border about two feet deep, formed of drab cord laid in diamond-shaped lattice-work, edged with tassels. A row of tassels finishes the top. These curtains are very much handsomer than the chenille or Turcoman, now so common.

DAILY TRIALS.

B. H. G.

IT is not the successes, the grand achievements that make up the every-day existence in most lives—these are but landmarks along the way, to which we point as rare occurrences—but the little trials and disappointments: these come every day along with the struggle to overcome self—the occasional victory. When we are tired, how trials multiply. There are so many things to be done at the same time, especially in a woman's life. At such times as these, how the impatient words crowd up to our lips, struggling to get out at the little portal we must guard so carefully. It seems on such occasions that the children never wanted so many lunches spread or so many toys hunted up, and that the men might wait until a more convenient season to have their buttons fastened on, or even do it themselves.

Perhaps a great many of our "daily trials" might be escaped, or at least avoided in a great measure, by good management. It may be, in many cases, that we do not make our calculations so as to get our work out of the way for such emergencies. Probably many of us calculate only on time for what must be done, leaving no time for what may come; whereas by a little fore-thought or good management we could get the duties that are sure to come out of the way, and leave room for the unexpected.

I think it is well each day to do as much of the next day's work as we can without over-exerting ourselves. There are a great many duties properly classed with the mornings, that can be done to advantage during the afternoon before, such as washing and preparing vegetables for the dinner; also making the pie or pudding, if it is to be served cold, instead of leaving the work for the hurried morning hours. Of course, this cannot always be done, for many afternoons are filled with unexpected events.

I often find I can sew more easily in the morning. I can run the machine with less fatigue, and by getting my morning work partly done in the afternoon before, I have time to sew in the forenoon, and if there are interruptions—unexpected calls or company to dinner—my sewing can lie by until another time, which my house-work could not do. There are other trials entirely beyond our control—sickness, accidents, uncongenial companionship, etc. In many cases in married life the wife has to assume, along with her other burdens, the care of her husband's parents. Perhaps they were utter strangers to her prior to her wedding day, and she has to bear with all their little fault-findings about her manner of housekeeping, hearing them say many times a-day: "That is not the way so-and-so did." She may have to nurse them through sickness, or endure their constant childish conversation. That, later in life, when the children are grown, and housekeeping has become a habit, would not be so trying, but with one or two babies to look after, to one unaccustomed to the care of these tender plants, sometimes the burden seems more than can be borne, and she is ready to cry like Elijah, as he lay under the Juniper tree, after his long journey: "Now, O Lord, take away my life."

Happy is she! who when the querulous voice is stilled, the coffin-lid closed over the aged, time-worn frame, can look back to what has been, in many cases, unrewarded service, and say: "I have done my best." And yet it is sad that the first years of a woman's married life should be given as a sacrificial offering to strangers, as they too often are.

As fire refines gold, so these trials of our every-day life, if met with the proper spirit, tone and refine the character, strengthening and drawing out whatever is pure and noble in our nature, burning away the dross; and the one who floats along on life's sea, with never a ripple of disappointment to ruffle its surface, has no bulwark of self-control to hide behind; no safe harbor of self-reliance to tarry in while the fierce storms of sorrow or disaster sweep over the soul.

To me there is something beautiful in overcoming trials, in meeting them patiently day by day, in conquering them instead of being vanquished by them; and although I may not possess these rare attributes myself, I admire them in others, whom in my feeble way I would try to emulate.

MOISTURE IN HOUSES.

IT is stated that the sudden changes of the weather recently from cold to warm and damp, observes the Philadelphia Times, has caused thousands of dollars' damage to wall paper and other articles in houses. Of course it has, and it is so simply because many people do not study the plainest common sense principles in airing their houses.

One evening lately people went to bed with a hunt for extra blankets because of the sudden and severe chill in the atmosphere. When they rose in the morning their bedrooms, parlors, dining-rooms, etc., were yet chilly from the cold of the previous day, while the outside atmosphere had suddenly become not only warm, but hot and oppressive with dampness.

Inconsiderate people opened their windows and doors because the weather was warm, forgetting that the excessive moisture in the atmosphere would rush in with the warm air and swiftly deposit itself on the cold walls, furniture, etc., and penetrate wall papers, curtains, bedding, and everything within reach that presented a surface colder than the air that carried it into the house.

Of course the moisture loosened and discolored paper, made curtains as limp as a washrag, made beds damp and musty, and generally spoiled everything that water could spoil; but all could have been avoided by following the plain, common-sense rule of not opening houses suddenly to suddenly changed atmosphere, carrying an excessive quantity of moisture.

A pitcher filled with cold water and placed in a room in summer will "sweat"—at least, that is what it is commonly called. The pitcher does not sweat, because it is not porous and cannot sweat; but the cold water inside of it chills the outer surface, and, as soon as the outer surface of the pitcher becomes cooler than the atmosphere in the room, the moisture of the air will be precipitated upon the pitcher in drops.

This simple illustration should teach all housewives to avoid suddenly opening rooms in a house when the outside atmosphere is warmer than the temperature of the rooms and full of moisture. In all such cases the wall paper, furniture, etc., being cooler than the outside air, will speedily have the moisture of the atmosphere precipitated upon them, and it will require days to restore the house to the dry condition that is essential to health.

There are no arbitrary freaks in the laws which govern the atmosphere surrounding us, and there is nothing abstruse in mastering them. Warm, damp air will ever precipitate its moisture in houses or elsewhere whenever it comes in contact with anything chilled by a cooler atmosphere, and that is the whole story. The only thing to be added is that, when people have thus ignorantly or negligently allowed their houses to become damp, they should light fires and dry them as promptly as possible.

MATRIMONIAL INTERFERENCE.

MRS. S. H. POWELL.

BEFORE railroads were introduced into Vermont, produce was conveyed to market by large teams and merchandise was freighted back to the country by the same conveyances. There were two men near the center of the State, who had for many years monopolized the business, and accumulated a considerable fortune by transporting goods to and from Boston. They had strong, large, covered wagons, and drove six horses each. One of the men was married; the other was a jolly bachelor, who made friends all along the route by his generosity and genial humor. One day they were *en route* for Montpelier, and had just crossed the Connecticut River into the Green Mountain State. It was a very warm day, and late in the afternoon. The men were walking by the side of their teams, which were slowly toiling up a steep hill. Suddenly terrible screams were heard, and cries of "Help! Murder!" issued from a shanty a short distance from the main road. Osgood was behind and called to Kenney to stop.

"Oh, come along!" the latter answered; "it's none of our business," but as the cries continued, the bachelor could not pass on; so seizing his loaded whip, he rushed up the hill into the house where he saw a man beating a poor woman with a heavy club. Her hair was streaming down her back, and her faded dress was torn, the blood streaming down her face. Quick as thought, Osgood raised his heavy whip, and brought the ruffian to the ground. "Quit that you brute!" he exclaimed. The woman caught up the long iron shovel, and started for her rescuer. "Get out of here!" she screamed. "What right have you to interfere between a man and his wife, I'd like to know?" and she plied her shovel vigorously to his back, and followed him as he beat a hasty retreat down the hill. "I'll teach you to come between a man and wife again." Osgood started his horses in a hurry; but he learned a life-long lesson, emphasized by Kenney's jokes—never to interfere in a connubial quarrel again.

TIME TO GO FISHING.

GRANDMOTHER.

THE Bishop of Vermont was, as a boy and young man, very fond of catching trout in the little brooks that meander through his native town. After he was consecrated bishop of the diocese, he was spending a few days in the place of his nativity, and had a great desire once more to indulge in his boyhood's pastime; but, alas! the brooks were mostly dried up, and the fish were getting very scarce. Some one told him that a Mr. White was a lucky fisherman, and knew where to find the trout; so one day he went into his saloon, and told that he was a native of the town, and was very anxious once more to try his luck at fishing, and had been directed to come to him, and ask him if he would kindly either go with him or direct him where he should go, so as to be sure of catching a good string of trout. White thought a moment: "To-day is Friday, I cannot leave to-morrow, anyway, as it is a busy day, but I will go with you Sunday, if you would like." "Thank you," replied the Bishop, "but I have an appointment to preach at Grace Church on Sunday:" Oh, stammered White, "why did you not tell me who you were; but trout do bite Sunday, the best of any day in the whole week." "Perhaps so, but it will not be convenient for me to go then."

"I see, you are after different kind of fish, Sir." The Bishop bowed himself out.

GOLDEN GRAINS.

TIMOTHY TITCOMB, in his "Lessons in Life," says: "I have found moods to be poor tests of character. Having cut through the crusts of a most forbidding mood, produced by bodily derangement, or constant and pressing labor of the brain, I have often found a heart full of all the sweetest, and richest traits of humanity."

IT is the intensification and the dominant influence of moods that are to be guarded against or destroyed.....

THERE is a calm consciousness in every soul, however harshly Nature may have dealt with the body which it inhabits, that it is itself invulnerable—that whatever may be the condition of the body, the soul cannot be injured by physical forms or forces.

THE soil of a social circle is usually open, and whatever falls into it produces after its kind, whether it be good nature or ill nature, purity or impurity, faith or skepticism, love or hate.....

BLESSINGS on the man who sows the seeds of a happy nature and a noble character broad-cast wherever his feet wander, who has a smile alike for joy and sorrow, a tender word always for a child, a compassionate utterance for suffering, courtesy for friends and for strangers, encouragement for the despairing, an open heart for all—love for all—good words for all..... .....

K'EN are the pangs
Advancement often brings. To be secure
Be humble. To be happy be content.
—*Hurdis.*

GOING into a village at night, with the lights gleaming on each side of the street, in some houses they will be in the basement and nowhere else.—Beecher.....

INTIMATE contact with the nature of a good woman, in the relation of marriage, is just as necessary to the completeness of manhood, as the details of an architectural design are to the homely conveniences around which they are made to cluster.—J. G. Holland.....

TO EXPECT a man to be as much of a man without a wife as with one, is just as reasonable as to expect a half-finished house to be as beautiful as a finished one.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

"Make a little fence of trust
Around to-day;
Fill the space with loving work
And therein stay.
Look not through the sheltering bars
Upon to-morrow;
God will help thee bear what comes
Of joy or sorrow."

ABOUT WOMEN.

MISS GRACE HOWARD, eldest daughter of Joe Howard, the well-known newspaper correspondent, is engaged in mission work among the Indians at Crow Creek, Dak. The Indians have named her "the good-hearted woman," because of her many charitable deeds.

* * *

ALICE BARBER, who has done some very clever illustrating for our magazines, has been added to the faculty of the Philadelphia School of Design for Women.

* * *

MRS. ANNIE JENNESS-MILLER will make an extended tour through the New England States this fall in the interest of dress reform—the art of comfortable and artistic dressing.

* * *

The lines we give below were written by Joseph Whitton, Editor of "Table Talk," a Philadelphia publication. The subject was Mrs. Hettie M. Ogle, a heroine of the Conemaugh. When the terrible flood swept down upon the city of Johnstown, she, with her daughter, bravely stuck to her post, thereby saving many lives—though she sacrificed her own. As the shadow of death fell upon her she dashed off her last message which ran as follows:

"Johnstown, Pa., May 31,—3 P. M.
To the Cambria Iron Co., Philadelphia.
We cannot reach your office. Water immense. Washing out Lincoln Bridge. The

Miscellaneous Advertising.

When baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

house full; we are on the second floor. Water still coming up and threatening ruin. This is my last message.—Mrs. H. M. Ogle, Manager."

Astride the loosed waters rose the valley's doom.

And there close at her post a woman sat
To wire such words as might forearm the valley
'Gainst its dread doom.

"Fly for your life!" she heard the warning 'mid
The rumble of the coming flood, and answered:
"No, not yet!"

"Fly for your life!" 'Not yet! Not yet! Until
I've wired each station on its guard, my life
Is tied with duty."

"Fly for your life!" "Not yet; one message more,
It is my last, and then—" And then the roar
Of rushing waters —

She lies with those she sought to save Her name—
Her name is History's now, and through the ages
With a reverential tongue 'twill speak·
"Here was a heroine!"

* * *

The Washington Post says "Everything that a woman may do while maintaining her self-respect is "woman's work." If a woman be physically strong, and without other ties or obligations, let her be brakeman on a railroad train, or pilot an ocean steamer, if she will. She may follow any profession or trade. That one woman is making money as a carpenter, and another as a blacksmith, settles the questions of suitability in these occupations. In all her work, however, let her preserve the woman's characteristics. Let her set an example to men in their rough-and-tumble greediness by gentler and more honest business methods. Leave braggadocio, cheating and swindling to men. Let smoothness, courtesy and sincerity characterize the business methods of woman." And we agree with its sentiments. Women can never become men, any more than men can become women; nor do they desire to. They are, however, equal. The woman who is able to do the same work as a man, no matter what, and do it as well, should receive *equal* wages as well as equal respect. A woman who earns her own living need lose nothing of her womanly dignity—may be just as gentle, refined, and lovable as her more fortunate sisters who can stay at home without a care, as regards their support. "Woman's Work" is doing bravely and faithfully whatever falls to her lot to do.

D. H. V. O.

SCHOOL time. Let your children be regular in their attendance. Take an interest in their studies; visit their school; invite their teacher to visit you.

A BUTTER FOUNDATION.

ELLA GUERNSEY.

"LOOKS well, doesn't it?" said our land-lady, as we drove "home," over the country road leading from the village post-office to the Noah's Ark we were so delightfully summering in, "Cherryvale," an old brown homestead, presided over by practical, motherly, energetic Mrs. Page.

"Yes," continued Mrs. Page, "the Darrow house is the sightliest one in these parts, bein' new, an' Kizzy Darrow, the main-spring of the family, is rale tasty 'bout plannin' an' ornamentin' things surroundin' her. Kizzy's gettin' along in years, but she's managed to get things comfortable, an' the Meadow Sweet Dairy in smooth runnin' order, besides buildin' this house last summer, the foundation bein'—butter.

"I s'pose you never heerd before of houses bein' built on a butter foundation?"

"Not a very firm foundation, that," I replied, taking another view of the pretty new cottage, and the comfortable vine-shaded piazzas, shaded by apple and elm trees, and situated on a green hillside.

"It's just this 'firm:' every cent that house cost has been paid for with the butter money earned by Kizzy Darrow. Dan Darrow, a few years ago, with his wife Tabithy, was jest on the eve of givin' up tryin' to make a livin' farmin', though they owned these 100 acres of good land. They didn't prosper in any undertakin', ontil Kizzy, the summer she was 18, began to get noted as a maker of beautiful, solid, sweet butter from an extra good little cow.

One day as the 'chicken peddler,' stopped for dinner when drivin' his produce to market, an' praised the butter wonderfully, sayin': 'Sech butter as that in the city, would bring extra price, an' a lady paid me for butter that was not the equal of this, 50 cents the year 'round. She was terribly afeard o' gittin' oleomargarine, an' willin' to pay extra for real, country butter.'

Kizzy was tickled, as she'd had so little to encourage her, both parents bein' of the hold-back an' discouragin' order, an' then she fell to wonderin' if she couldn't sell butter for a good price. Butter don't bring much in these parts. When the 'chicken peddler' came ag'in Kizzy was all eagerness to get his opinion of the project of buying another good cow, and making butter for the city market. And then she wanted to find out whether he'd help her or not. Tim Cramer thought a bit, then walked to the spring-house, and looked around the place a little, before he passed his opinion, bein' one of these look-before-you-leap fellers.

'I'd advise you to do it,' he said, 'if you're willin' to keep your butter up to the mark. I'm a bit petikeler about engagin' to supply a family with a prime artikel onless I feel purty sure that I can carry it to 'em at the expected time, in good shape. Of course I can help you get your butter sold, an' I'm willin' to do it, if you'll have ready for me good, firm, sweet butter, neat-lookin', an', mind you, I won't carry to a customer white, spongy, sour stuff that'll disgrace you an' me both. No matter if the weather is hot, an' the cream foams, and' the butter's hard to gather, or it's too cold for it to come, 'thout gittin' scalded to death, or whether you feel tired, an' don't want to take as much pains as usual with it, you'll keep all inferior stuff at home. You have a good pasture, and the best spring of cold, runnin' water in all this country, an' you're strong: If you're willin' to work, through all sorts of weather, get that cow. I'll find a market for you.'

Cows were cheaper than usual, and Kizzy bought two, though I, for one, thought the girl had undertaken too much, knowin' she couldn't look for help from her father in payin' for 'em. I was afeared she wasn't countin' the cost of the feed. She'd have to buy bran, shorts, meal and other stuff, as good milkers must be well fed, an' I knew the Darrow crops hadn't harvested very well since I'd known 'em. Harvests are not apt to be abundant if the sowin' an' tendin' hain't looked after at the proper time. I felt it my duty to go over to the Darrow's, an' tell the young, inexperienced girl jest how it was, an' I went, gittin' there jest as the chicken peddler was on his way home one afternoon, from the city. Kizzy was settin' at the big oak dining-table, her curly hair tucked up in a stout crochet hair-net, with a very clean, long-sleeved, high-necked gingham apron over her dress, countin' over some silver coin.

Tim laughed, when he saw me, then asked—'What do you think of our business woman?'

He said there was no trouble in engagin' Kizzy's butter, at 50 cents per pound summer an' winter, cash in hand. A lady who had a fashionable boarding-house was glad to get it. Kizzy held up for me to see a couple of little molds; then Tim said one of the boarders was terribly taken with that butter, an' bein' an old man, had a great deal to say about the clover meadows, an' runnin' spring at home, so he'd gone an' selected two little molds for individual butter plates, one marked with a strawberry leaf; the other with three clover leaves.

He thought it would pay Kizzy to take extra pains in moldin' her butter, as nice-lookin' articles never failed to sell, bein' sure to be chosen when an awkward-lookin' pat, though tastin' as well, would be overlooked. He also said that fine dairies in good workin' order, havin' every conveience to make the very best butter from good milk, sent to market excellent butter, an' a fair article could be sold the greater part of the year for 30 cents per pound; but women at home, if they went about it in the right way, could yet hold their own, but the day was certainly gone by when farmers' daughters or wives, could slap up an uneven ball of poorly salted butter, with blue milk oozin' from it, an' sell it to folks that had learned to judge butter.

Kizzy's black eyes jest flashed an' I saw, as I heerd her plan with Tim how to buy an' feed, an' sell, that they'd gone a leetle mite beyond me, as I'd learned something myself.

Tabithy Darrow waked up a bit, an' began to lend a helpin' hand to Kizzy, while her doting father jest fell in with all the improvements Kizzy suggested.

The summer was a scorchin' one, dryin' up the pasture, causin' an extra amount of dry feed to be bought. There were weeks when Kizzy had real trials an' pull-backs, as milk can, in hot weather, cause butter-makers a sight of extra work, onless they have every help to keep it of the right temperature. As Tim had said there were weeks when it was hard work to get the butter in the proper shape, but she never once failed to have the number of pounds really engaged ready for him, when he came by.

Everybody laughed a little when old Darrow, who'd all his life slouched around, began to straighten up, an' talked so brisk about 'our' dairy, but the Darrow fortune began to improve.

As the years wore on, more cows were bought, Kizzy came to be an extra good judge of a good butter cow. A good farm hand was hired, and the land was cultivated in a style new to the farmers around here. Every inch of it was bearin' somethin' to feed those cows, as Kizzy said she didn't want to buy so much feed for'em.

Kizzy adopted from the Orphan's Home a little boy who seems to think he is in clover, an' looks up to her as if she were his own dear elder sister, an' he's grown to be a real help to her. I'm knowin' to the buildin' of the Darrow house, an' am free to say I think it was laid upon a good foundation, if t'was—butter.

'Whoa. Dobbin! this horse allus wants to go on to the barn, knowin' as well as I do that there's oats an' corn waitin' for him. Here we are at home, an' there's more company.

PRESERVED GINGER.

As you pare the roots of the green ginger throw into cold water. Boil until tender, changing the water three or four times. Make a sirup of water and sugar, a cup of water and a pound of sugar to each pound of ginger. Skim carefully. Wipe the ginger dry and when the sirup is cold drop it in. Let stand over-night. Re-heat the sirup, skim and when cool pour over the ginger. In two days repeat this with the difference of pouring the sirup when hot over the ginger. Cover tightly. May be used in 10 days.

PICKLED PEACHES.

Seven pounds of fruit, four pounds of white sugar, a pint of strong vinegar, cinnamon and cloves. Peel the fruit and cook carefully until tender—they must not go in pieces. Skim out the fruit into bottles, boil and skim the sirup and pour over the fruit. The spice should be tied up in a cloth. Bottle tightly. MRS. J. A. C.

Miscellaneous Advertising.

VERY OFTEN

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AGENTS LOOK HERE

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News of the Week.

HOME NEWS.

SATURDAY, October 5, 1889.

THE Maryland White Lead Company, one of the largest "outsiders," has just been taken in by the National Lead Trust, and so the work of monopolization goes briskly on in spite of all prognostications, "resolutions" and laws to the contrary.....The Mississippi steamer Corona which left New Orleans at 7.30 last Wednesday evening for the Ouachita River, with a full cargo and a large passenger list, exploded her boilers nearly opposite Port Hudson at 11.45, next morning, causing the loss of the steamer and 40 lives. The vessel was worth $20,000 and she sank in a few seconds.....News has been just received that the ocean steamer Earnmoor, bound from Baltimore to Rio Janeiro, foundered in the Gulf on September 5, during that terrible hurricane, which raged on the West Indies several days before it reached our coast. Nineteen of the passengers and crew were lost and seven escaped..... A wealthy company has just been organized to supply New York City with gas fuel made from a combination of anthracite coal and asphaltum under several new patents. Anything to antagonize the coal monopolists would be welcome even at the cost of tearing up the streets for gas mains once more..... E. C. Baker, representing Victoria, B. C. in the Dominion Parliament, has resigned his seat owing to his inability to secure redress for those of his constituents whose vessels have been seized by the United States cruisers in Behring Sea. He was a staunch supporter of Sir John Macdonald; but neither the Premier nor the British Government was willing to risk trouble with the United States to placate the bellicose temper of British Columbia. Of course, Baker will seek a re-election as an indorsement of his course, somewhat on the same principle on which Senators Conkling and Me-Too Platt acted in resigning from the U. S. Senate ages ago.....Of the eight poaching sealers captured and sent to Sitka by the commander of the U. S. revenue cutter Rush, only one—owned by Americans—went there: all the others went to Victoria, where their crews are now mad at the ruin of their enterprise, as the crews get most of their pay from a share in the profits of the cruise. The Rush, on her way home to San Francisco, is expected to touch at Victoria, and the exasperated men threaten to capture and sink her. The militia are under arms to prevent a breach of the peace and a violation of international rights. Judge Sawyer, of the U. S. Circuit Court at San Francisco, has just rendered a decision which covers all the captures made by the Rush as well as all previous captures made by other U. S. vessels under similar conditions. It justifies the seizure and confiscation of all the vessels with their contents. Under this ruling, the escaped vessels may be seized wherever found and sold as the legitimate prizes of the Revenue Service..... In the World's Fair embroglio New York is still confining her efforts to squabbling about the site; but promises to come to an agreement and start a big subscription list next week; Chicago has increased her subscription to $8,000,000 so as to overtop St. Louis; St. Louis, according to immemorial custom, is doing nothing particularly brilliant; but a good deal of quiet work, and Washington is still waiting; but her annex, Baltimore, is doing some lively hustling for her.....Connecticut will vote on a Prohibitory constitutional amendment Monday..... In the elections in the four new States last Wednesday North and South Dakota and Washington, all went Republican and Montana is in doubt; though there's a strong pobability that it has gone Democratic. South Dakota certainly and North Dakota perhaps favor Prohibition; the two others have certainly gone "wet."..... Gen. B. M. Prentiss, who with his entire command, was captured at the Battle of Shiloh, has been appointed post-master at Bethany, Pa. His splendid qualities as a soldier offset his shortcoming in being a Democrat.....A prominent figure in Western politics has just "stepped down and out" in the person of Ex-Governor John A. Martin, of Kansas. Born in Brownsville Pa., March 10, 1839; became local editor of the Brownsville Clipper in 1854; moved to Kansas in 1857. In 1861 was made lieutentant-colonel of the 8th Kansas Regiment, and Provost-Marshal at Leavenworth in 1862; held same office at Nashville, Tenn. in 1863, and then got command of a brigade. In 1864 was made brevet brigadier-general. In 1866 was elected Commander-in-Chief of the G. A. R. in Kansas, and Governor in 1884 and 1886 on the Republican ticket.....The faculty of the University of Pennsylvania favors opening the doors for the co-education of women. The sister is stepping hard on the heels of the brother and will soon be striding abreast of him.....The International American Congress has met at Washington and started to inspect the resources of the country.....Engineer Robillard, of Minneapolis, is the latest to claim the discovery of "perpetual motion"—right after the collapse, too, of Brown-Sequard's "elixir of life."..... Col. Wiley I. Scribner, Recorder of Cook County, Ill., died suddenly on September 28, from rupture of an artery caused by hearty laughter at a newspaper joke—on another fellow.....It appears that the "baby" bonds of Louisiana—bonds which the courts declared illegal and ordered to be destroyed in 1879—were not destroyed as supposed. On the contrary, many, if not all of them, were fraudulently issued while Major E. A. Burke, Director-General of the New Orleans International Exposition, was Comptroller of the State—from 1880 to 1887. The fraud is known to be at least $1,200,000, and may be greater. Interest on many of them has been paid for years. The endowment bonds of the Agricultural and Mechanical College are also involved. Burke, now in England, says that he will shoulder all responsibility, and return at once to set things straight. There's a report that nine indictments have already been found against him; and 16 more are expected..... There's talk of starting a monstrous American brewery syndicate with a capital of $100,000,000 to combat that big British brewery syndicate. After having unloaded his beer works at a splendid profit on John Bull, is brother Jonathan going to fleece him of his expected profits? Or will it not rather be another battle between foreigners on American soil—this time between the Teuton and the Saxon? It will, however, be probably rather hard to get up a syndicate with a capital of $100,000,000, even when the enormous profits on beer are the allurement.....The convention held at Topeka, Kansas, in support of the movement to provide a deep-water harbor on the Gulf Coast to accommodate Western and Southwestern commerce, is of very large size: about 1,000 delegates have assembled. It is estimated that $10,000,000 will be required to provide a suitable harbor. Statistics show that while the sum expended by the Government for public improvement in the States east of the Mississippi from 1789 to 1886 amounts to $11.88 per head, estimating the population in 1886 at 60,000,000, in the States and Territories west of that river the total appropriation has only been $2.83 per capita. The West therefore demands that this discrepancy shall be "evened up" before any further appropriations are made for the East. A large proportion of the money for the East, was paid by the East, however, before any "West" existed; still with its enormous surplus revenue the whole country can afford to be generous for improvements as well as for pensions..... The Colorado Mining Exchange, in its desire to push its silver on the market, is to bring a suit against the Government to test the constitutionality of the law restricting the coinage of silver.....New England has hitherto been the strongest opponent of reciprocity with Canada; but from evidence given the other day at Boston before the Senate Committee investigating the trade relations of the two countries, it would appear that there is now a strong current of public opinion in the other direction. A good deal of forcible evidence was given by prominent representative men in favor of a liberal measure of reciprocity as likely to be quite advantageous to both countries.... A good deal of effort is being made to prove that Daniel Draughbaugh was the real inventor of the telephone. It is said the Bell Telephone monopoly is quietly pushing the case. At the commencement of the original litigation, years ago, the Bell people are said to have secured a majority of the Draughbaugh stock to provide against an adverse decision. The Bell patent expires in 1893, and then scores of rival telephones now barred out by the monopoly, will enter the field. If, however, Draughbaugh should be declared the real inventor, the Court would grant a monopoly to his patent for 17 years, and the Bell people controlling a majority of the stock, would be enabled to continue their extortionate monopoly till 1910.....Joseph Pulitzer of the New York World, has just founded 60 permanent collegiate scholarships for the poor boys of the public schools of this city. Twelve boys who have completed the grammar school course will be selected each year, and to each of them is to be given a scholarship of $250 a year for five years, thus making the cost to the donor, when all the scholarships shall have been assigned, $15,000 a year. Joseph was a poor boy himself once, and has made excellent use of the education he got with difficulty...

Speaks for Itself.

HON. P. H. JACOBS, the well-known chemist, editor of the Poultry Keeper, Farmers' Magazine, and Agricultural Department of the Philadelphia Record, says:

"I have examined carefully the Compound Oxygen manufactured by DRS. STARKEY & PALEN; also their mode of *treatment* by *inhalation*, and have noted the great benefit to those who have used it among personal friends. That it will give to the exhausted system renewed and permanent vitality, is beyond doubt."

We are in a position to indorse the above by many instances. We subjoin the sentiment of some of our patients who have been released from the clutch of that relentless ill, nervous prostration.

BUNKER HILL, IND., March 14, 1888.
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"I was induced by a friend to try your Compound Oxygen Treatment. The result was marvelous. I certainly feel that it has prolonged my life."
MRS. E. H. HENDERSON.

We publish a brochure of 200 pages regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent free of charge to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa.; 120 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, October 5, 1889.

THERE'S a small war scare in Europe; but it is probably a bogus affair. Several influential official or semi-official newspapers are notorious for originating these roorbacks, chiefly to aid the Ministry of their respective countries to accomplish some important stroke of domestic or foreign policy—they seek to scare either their own countrymen or foreign nations into making desired concessions. The German Cologne Gazette, Bismarck's frequent "organ," is the worst of these, and when it pipes all the others whistle. Lately it has been shrilly piping danger from an alleged great concentration of Russian troops on the northeastern Austrian frontier, and the extension of the Russian railroad system towards that part, combined with the intimate relations of Republican France and autocratic Russia. Bismarck, however, wants extra appropriations of nearly 300,000,000 marks from the Reichstag for the manufacture of cannon for smokeless powder, the construction of more iron-clads, the strengthening of fortifications and other war purposes, and fear of foreign war has a wonderful effect in loosening the purse-strings of the people: hence the present piping of the semi-official organ. War in Europe is possible at any moment, and probable ere long; but just now the general aspect of affairs is more peaceful or rather less war-like than usual..... One of the "greatest works of the age" is being quickly but energetically carried on in England—the construction of the great ship canal between Liverpool and Manchester, which will make the most important manufacturing city in the British Empire a port of entry, and render it a formidable maritime rival of the "Queen of the Mersey." The distance is 31 miles and the work was started by the Ship Canal Company on January 1, 1888. Already 25,000,000 cubic feet of the total 44,000,000 cubic feet of needed excavating has been done, and the work continues at the rate of 1,000,000 cubic feet a month. It is expected that the canal will be open for business in 3½ years at the longest..... It is wonderful how anxious all the Spanish newspapers and many others in Europe are that the South American Republics represented at the International American Congress will not allow themselves to become satellites of the United States..... In Great Britain children under 10 are legally forbidden to work and those from 10 to 12 must not work more than half time... Two Sundays ago the Republican form of government in France successfully passed through a serious crisis by securing a majority in the general elections for members of the Assembly or Chamber of Deputies, corresponding to our House of Representatives. Acting on the principle that all is fair in politics as in love and war, the Government had previously secured the self-banishment of General Boulanger, its most formidable opponent, by accusing him of grave political and financial offenses, and constituting the Senate, always bitterly hostile to him, a special court to try or rather condemn him. Owing to the exile of himself and his two most skillful and energetic supports, Rochefort and Dillon, in London, his campaign sadly lacked the impetus which his personal presence would have imparted to it, and the wisdom and reach which his able lieutenants on the spot would have given it. There were only 131 Boulangist candidates in the field—about one-fifth of the members of the Chamber of Deputies. The Conservatives, however, embracing the Imperialists or Bonapartists, and the Monarchists or Orleanists, acted with the Boulangists, giving their support to the Boulangist candidates wherever they were the strongest, and receiving the support of the Boulangists wherever their own candidates were most likely to win. The influence of the administration, from President Carnot down to the lowest public employee in the country, was energetically on the side of the Government. Lukewarm, indifferent and hostile mayors and other officials, high and low, had been previously removed or whipped into active support, and owing to such shrewd, energetic but unscrupulous precautions controlling, directing, stimulating and encouraging public opinion in favor of the powers that now be, the Republicans on the first ballot, secured 224 members against 159 of the Opposition in the 568 electoral divisions of the country. In France a clear majority is needed for the election of a member of the Assembly, whereas a plurality will suffice here. As there were more than two candidates in a large number of cases, none secured a majority in 177 electoral divisions, and in these another set of elections will be held to-morrow, when all factions of the Republicans and all parties among their opponents are likely to unite on one candidate for each side, which will necessitate a majority for one or the other. From present indications it looks as if the Republicans would have 325 against 250 held by their opponents, seven representatives from the French Colonies being included in this classification. Anyhow the Government is very sure of a fair working majority..... Of late the English Government has been trying to loosen the alliance between the Parnellites and Gladstonians by offering to found a Catholic University as a bribe to the former. This has long been a cherished object with the Irish people and especially with the priests and bishops, and great pressure has been brought to bear on the Members of Parliament to abate their hostility to the Conservative policy in other matters in return for the concession. Some of them have been inclined to do so; others have been ready to take all they can get without entering into any contract; while the bulk of them have refused to listen to any compromise tending to defer or defeat a full measure of Home Rule. The Protestant extremists of all three Kingdoms and of the Principality of Wales, among the very strongest supporters of the Government, are bitterly and loudly opposed to any concession to the "Scarlet Woman," and have been threatening all sorts of disasters to the Government should it make any. The latter, seeing that its offer gave rise to hardly a breeze of favor among its foes, while it gave birth to a hurricane of disfavor among its friends, has begun to crawfish, and now declares that it never had any intention to give a governmental endowment to the University, and so the matter is likely to lie dormant, for the present, at any rate..... Intriguing Natalie, the recalcitrant divorced wife of good-for-nothing Milan, abdicated King of Servia, is once more causing trouble. She, a Russian subject, is all for a predominance of Russian influence in Servia; he, a German, goes in for Austrian influence there. After a world of intrigue she has just returned from Russia on a visit, with the object of getting control once more of her 14-year-old son, now puppet king of the country. Her ex-husband furiously objects to her presence there, though he is himself away, and there's an almighty hubbub. Neither of the principals is worth an honest thought personally, but being used by powerful rulers for their own purposes, their disgraceful family squabbles may lead to terribly bloody battles among nations.....Reform associations in England are raising a rumpus against the British pension list, military, naval and civil, which now amounts to nearly $40,000 000 a year. The British civil pension list is quite large; while we have none here. The naval and military lists include pensions for service in the multitude of wars Great Britain has waged in every quarter of the globe since Trafalgar and Waterloo. For our two little wars and one big one the next Congress will have to provide $110,000,000 for pensions..... All the great European nations are eagerly experimenting with smokeless and noiseless gun-powder, each having its own kind. Its chief merits are that it does not attract attention and form a mark for hostile fire, and that it doesn't obscure the vision so that troops in line can fire faster and more accurately than with smoke-making powder. Its chief fault is that when troops are in line of battle firing with the excessive rapidity made possible by modern fire-arms, the effects of the concentrated fumes are so overpowering as to cause asphyxiation. It is admirable on the skirmish line, or among small, detached bodies, but of doubtful benefit among fast-firing, closely serried ranks.....

Miscellaneous Advertising.

SEND 10 Cts. in P O stamps to **E. & O. WARD,** Produce Commission Merchants for circular about **Shipping Produce** Also recipe for **Preserving Eggs.** Established 1845.
No. 279 Washington St., New York City

SHERWIN BROS'.
SAFETY HOLDBACKS

FOR CARRIAGE and CUTTER THILLS.
Self-unhitching—finest thing out. Sample Pair, with Straps, $1.25, prepaid. Agents wanted. Address
SHERWIN BROS.,
Brandon, Wis., or Lincoln, Neb.

JERSEY BULL CALF.—Dam made 16 lbs. 4 oz. on poor pasture and ordinary feed; sire's dam a g. daughter of Pedro. About three months old. Price, f. o. b., registered $25. Address
R. F. SHANNON, Box 1071, Pittsburg, Pa.

FARMS FOR SALE in Daviess Co., Ind.; banner of the Union. Write for free information. **W. W. Marmaduke,** Washington, Ind.

PEACH TREES.
Fine one-year-old and J. B. for distant shipment Clean, healthy trees, from Natural seed; the new and leading sorts. Russian Apricot, Small Fruit, Plants, Osage Orange. General Nursery Stock at low rates **JOSIAH A. ROBERTS,**
Malvern Nurseries. **Malvern, Pa.**

1888. POMONA NURSERIES. 1889
DER TRADE 1 MARK FUL
WONDERFUL PEACH
Lawson, Kieffer, Le Conte Pears: **Spaulding** and **Japan** Plums Apples, Cherries, Quinces, and Nut-bearing trees, Strawberries, Raspberries, Blackberries and **Grapes** in large supply—all worthy old & promising new varieties. Catalogue free. Wm. Parry, Parry, N. J.

$60 Salary. **$40 Expenses in Advance** allowed each month. Steady employment at home or traveling. No soliciting. Duties, delivering and making collections No Postal Cards. Address with stamp, HAFER & CO., Piqua, O

LOW-DOWN WAGON on high wheels—**only Practical, Common Sense** Farm Wagon in the world. Send for 28 reasons why.
GARDINER IRON WAGON CO.,
Mullica Hill, N. J.

HOME STUDY. Book-keeping, Business Forms, Penmanship, Arithmetic, Shorthand, etc., thoroughly taught by MAIL Circulars free
BRYANT & STRATTON'S, 415 Main St., Buffalo, N.Y.

SALESMEN WANTED AT ONCE.—A few good men to sell our goods by sample to the wholesale and retail trade. We are the largest manufacturers in our line in the world. Liberal salary paid. **Permanent position. Money advanced** for wages, advertising, etc. For full terms address, Centennial Mfg. Co., Chicago, Ill., or Cincinnati, O.

AGRICULTURAL NEWS.

SATURDAY, October 5, 1889.

A VERY destructive rain-storm, accompanied by hailstones of large size visited Philadelphia and vicinity on Tuesday evening. Great damage was done to greenhouses, many of them having every pane of glass broken, and many valuable plants injured. Some damage also resulted from lightning. Crops are generally secured, or the damage would have been much greater. .....A Philadelphia milkman is in trouble for selling milk containing 28 per cent. of water..... The Whitman Agricultural Co., of St. Louis, received the Grand Prize and Object of Art on their Hay and Straw Press after a three days' trial at the Paris Exposition. Besides the Grand Awarding Jury, the trial was witnessed by the President of the French Republic, and representatives of nearly all the European governments. Presses from French, English, Austrian and German manufacturers were in competition. The Whitman press was also awarded the Grand Gold Medal at the International trial at Turin, Italy this season. American implements seem to be in the front rank..... A lot of new California Lima beans were received at this market on Wednesday. This is remarkably early. They were of excellent quality.....The bean crop of this country is unusually short this year, but prices are not likely to be extremely high, as foreign beans have grown into favor within the past two or three years, and large quantities of them of very good quality are now being imported..... The barns of a farmer near Asbury, N. J., burned recently, with all their contents, causing a loss of several thousand dollars. Cause: a boy, a lighted match, and a wisp of hay projecting from a knot hole; a dangerous combination..... Floral Hall on the fair ground at Attica, N. Y., was destroyed by fire.....Some of the West India Islands which usually get their supplies of flour from this market are sending orders for wheat, proposing to do some grinding on their own account.... ....The Farmers' Review reports that the potato crop of '89 will probably exceed in quantity any previous crop in the United States. The yield is estimated at 233,700,000 bushels, an excess over last year of over 17,000,000 bushels. This is indeed "good news if true," for the general belief has been that the crop would prove a very small one..... At the Paris Exposition Walter A. Wood has on exhibition a straw-band binder. The machine is an experimental one. Mr. Wood says that he had on exhibition at Vienna in 1873, a machine for binding grain with wire which was not so near perfection as his straw-binder now is, and yet he placed the wire-binder on the market within three years. He has great faith in the ultimate success of his straw-binder. If this machine be perfected, it will effect a saving of millions of dollars annually to the farmers of this country for binding material..... Prof. Riley who has been at the Paris Exposition in the interest of the Department of Agriculture for the past five months, has returned to Washington. Prof. Riley thinks many of the criticisms upon the American exhibit have been unjust, although the display did not do the country full justice. Still, he thinks it reflects credit upon the country. It was surpassed by the exhibits of but three countries, France naturally being first, with Belgium and England second and third respectively. The agricultural exhibit from the United States received commendation from all sides, and was regarded as the most characteristic of all the A nerican displays.....

Crops & Markets.

DOMESTIC FRUITS AT AUCTION.

SATURDAY, October 5, 1889.

THE FIRST auction sale of Eastern fruit was held by E. L. Goodsell at his auction rooms 103 Park Place, on Tuesday afternoon, and consisted of one car-load of Concord Grapes shipped by the Chautauqua Grape Growers' Association. The fruit arrived the same day, each basket being stamped with the association's brand and also with the grower's name; it was packed in 10-pound baskets, and evenly graded. Each grower's fruit was placed in a separate lot, and samples of each were exhibited. In this way, if any grower had packed inferior fruit, or graded it imperfectly, his negligence would result in his own injury only. The grapes were offered in lots of 40 baskets, the highest bidder having the privilege of choosing from any lot that number, or taking the whole lot. Then the balance were offered in the same way, and so on until all were sold. The first lot sold for 30 cents per basket, one lot sold for 25 cents, the bulk of them selling for 26 with some at 27 and 28, the car-load averaging about 27 cents per basket. About 15 minutes were consumed in the sale, every basket was sold, and within 24 hours the check for settlement was on its way to the shippers. At the time of this sale; commission merchants were selling the same grade of fruit for 25 cents per basket in lots to suit the purchaser, and many of them were carrying stocks that could not all be sold, and would be thrown on the market next day at, in many cases, greatly reduced prices. It will be seen that in the matter of quick sales and prompt returns, the auction system is greatly to the interest of the grower.

THE AUCTION system of disposing of perishable fruits was adopted by several firms in London and Liverpool, about 20 years ago, in deference to the growers who were dissatisfied with the system of selling and with the returns they were receiving. An ignominious failure was predicted, and the idea was denounced as impossible. Suffice it to say, the results have proved far otherwise, and the system is the established way of selling perishable fruits. Three years ago the California fruit-growers did not believe in this system, but to-day the by-laws of the two large Unions of growers and shippers say that the fruit must be sold at auction.

THE ADVANTAGES of this system over the old method of consignments to commission merchants are many. One of the most important is the immediate and total sale of fruit upon its arrival, before it has any chance to deteriorate; losses of this kind of course must be borne by the producer. Everything is sold and returns are made at once. In selling through the commission houses, 50 fruit-growers may ship to as many different commission men. The jobbers in search of fruit go from one to another beating down the price, and these 50 commission men are virtually competing with each other to make sales. This cannot fail to depreciate prices. Under the auction system, these 50 growers will combine and ship their fruit together to one house. Railroad facilities are such that the time of arrival is definitely known, and the sale can be advertised, together with an exact catalogue of the goods to be offered. The jobbers meet and instead of going from one place to another in search of the commission man who will give them the lowest prices, are forced to become competitors, and the highest bidder secures the fruit. A comparison of the two systems shows the advantage of the one over the other in this direction.

WILL IT SUCCEED? We think it will. There is powerful opposition from the commission men. As one of them remarked: "We shall fight it to the last ditch, because if it prove successful, it will take away our bread and butter." The system is firmly established in England; California fruits are sold in this way in all the Eastern cities; Florida orange-growers are moving to have their fruit sold in the same manner. There is no apparent reason why the system should not be extended to include all perishable fruits and vegetables, and why it should not be successful. Of course, the system is not yet perfect, but, as time reveals weak points, they will be remedied. The greatest obstacles to be overcome are at the producers' end of the line. The producers must combine, and ship all their products to the auction house. This gives them control of the goods and the jobbers must come to them. Another very important requisite is that all products must be evenly graded, and packages must be of uniform size. This necessitates organization and co-operation on the part of shippers and producers. One noticeable feature of the auction sales of fruits in this city is the fact that the finest and most carefully packed fruits are the most sought after and invite the sharpest competition. Some dealers say they prefer to buy of commission-men, because they can find with them any kind of produce they wish to buy, but the ultimate object is to apply the system to all kinds of produce that are now sold in the markets. The commission-men many times turn retailers themselves to dispose of lots they do not wish to carry over, thus becoming competitors of the regular dealers, and tending to still further depreciate prices. This the auction system will not do. As the auction house acts as an agent of the shipper, a vast number of middlemen are dispensed with, and this, of course, must result in a considerable saving of fees. The modern method of selling goods is by sample. The wholesale grocer does not equip his salesman with barrels of sugar, boxes of teas, and bags of coffees; he furnishes him samples of the goods offered which represent his stock, thus enabling him to transact a large amount of business in a small space of time. This is precisely what the fruit auctioneer does; he shows samples of each lot and variety offered, from which sales are made, and the fruit is transferred direct from the cars to the purchasers' stores, avoiding unnecessary handling and enabling the auctioneer to make large sales with great rapidity.

MR. GOODSELL, who is the pioneer in the auction trade in this city, has every facility for conducting the business, and is very enthusiastic as to its ultimate success. He says that with shippers combined, and the business reduced to a system, he could handle every package of produce coming to this city. Since July 1, he has sold over $200,000 worth of California fruits, and the interest in these sales is on the increase. His idea is to develop the business to include all kinds of produce, having hourly sales of different lines of goods, beginning at three o'clock, a. m., and continuing throughout the day.

WHEAT does not show the advance in price that circumstances would seem to warrant. There is a heavy demand from local mills all through the interior, and stocks of flour are small; this coupled with the demand from many foreign markets should make a stronger price, but the gamblers unsettle everything connected with the market so that it is impossible to make any predictions. Left to the legitimate law of supply and demand, good grades of wheat would be higher.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, October 5, 1889.

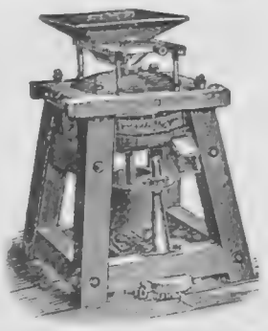
NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

FARM MILLS
OF FRENCH BUHR,
Twenty-eight Sizes and Styles.
FACTORY ESTABLISHED 1851
WARRANTED

MILLS for grinding ear corn, shelled corn, corn and oats, buckwheat and rye. A BOY CAN OPERATE and keep in order. A complete mill and sheller for less than $100. REDUCED PRICES **for Fall of 1889.** OVER 20,000 IN USE. Received **Highest Awards** at St. Louis, Cincinnati, New Orleans and Indianapolis fairs and Expositions. Send for Book No. 18—interesting and valuable. Mention paper, and address

Nordyke & Marmon Co., Indianapolis, Ind.



	New Orleans. Uplands.	New Orleans. and Gulf.	Texas
Ordinary	8	8¼	.....
Strict Ordinary	8 7-16	8 11-16	.....
Good Ordinary	9⅜	9⅝	.....
Strict Good Ordinary	9 13-16	10 1-16	.....
Low Middling	10 5-16	10 9-16	.....
Strict Low Middling	10 9-16	10 13-16	.....
Middling	10¾	11	.....
Good Middling	11¼	11½	.....
Strict Good Middling	11½	11¾	.....
Middling Fair	11 15-16	12 3-16	.....
Fair	12 9-16	12 13-16	.....

STAINED.

Good Ordinary	7⅞	Low Middling	9 13-16
Strict Good Ordinary	8⅛	Middling	10⅝

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas, 52@58c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

POULTRY.—Chickens—Spring, per lb, 11½@12c. Live Fowls near-by, per lb, 12@12½c; do Western, per lb, 12@12½c; roosters, per lb, 7@7½c; Turkeys, per lb, 10@12c; Ducks, Western, per pair, 60@75c; Geese, Western, per pair, $1 40@$1 75.

POULTRY.—DRESSED—Turkeys, mixed, per lb, 10@16c; Fowls western, choice, 12@12½c; do common to good, 7@9c; Ducks, spring, good, 10@17; Squabs, white, per dozen, $3 25@$3 50; do dark, do, $1 50@$1 75; Chickens, spring, 11@17c; Fowls, near by, 11@12c.

GAME.—Plover, per doz, $1 35@$1 75; Snipe do, do, $1 25@$1 75, Woodcock, per pair, $1 00@$1 25; Grouse, do do, 80@90c; Partridges, do, $80@$1 25, Duck, Mallard, 40@60c; do, Teal, 35@40c.

HOPS.—State, New, 11@13c; do, 1888, best, 12@13c; do, prime, 10@11c; do, low grades, 7@9c; do do, 1887, 3@5c; do do do, California, new, best, 13c; prime, 10c.

HAY AND STRAW. Old Hay—Timothy, best, 85@90c, do good, 75@80c; do medium, 60@70c; shipping, 55@—c; New Hay—Timothy, best 75@80c; do good, 60@70c, do medium, 55@60c; shipping, 50@55c; clover, 45@50c; Straw—No. 1 Rye, —@80c; short do, 50@60c; oat do, 45@55.

BEANS.—Marrows, New, $2 50@——; New Mediums, choice, $2 15@2 20; Pea, $2 20@$2 25; Red Kidney, $3 75; White Kidney, choice, $2 60@2 70, Foreign Mediums, $1 35@$1 55, California Lima, $3 60@$——; Green Peas, $1 20@$1 30.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 7¾@8c, and farmers' grades at 6@6½c. Pecans, 5@6½c.

SEEDS.—Clover is hard to sell; exporters quiet. New prime, future deliveries offered at 7, and choice, 7⅛c, with fancy at 7½c. Timothy quoted at $1 50@$1 60.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes—Jersey, per bbl, $1 65@$1 75; Long Island do, $2 00@$2 25; Sweets do, $2 00@$2 50. Cabbage, new per 100, $3 50@$4 50. Egg Plant, per bbl, $1 50@$2 00. Tomatoes, per crate, 30@75c Corn, per 100, $1 00@$1 50. Onions.—Orange Co. Red, $1 00@$2 50; Eastern White, $2 00@$3 50; Eastern Red, $2 50@$2 75; State, Yellow, $1 50@$2 00. Lima Beans, per bag, $2 50@$3 00.

FRUITS.—FRESH.—Apples, per bbl, $1 00@$4 50 Pears, per bbl, $2 00@$8 00; do per keg, $1 25@$4 00; Plums, per crate, $1 00@$1 25. Peaches, per basket; $0 60@$2 00. Grapes best per lb, 3@4c; do, good, do, 2@3c. Cranberries, C. C, per bbl, $6 00@$8 00; do do, per crate, $2 25@$2 75. Quinces, per bbl, $2 00@$5 00. Lemons, per box, $3 50@$7 00.

DOMESTIC DRIED Apples—Evaporated, old, 4½@6½c; do choice, new, 8½@—c; prime, 7½@8c; sliced, new, 4@5c; do old, 3@3¾c; Chopped, 2¾@—c, Cores and skins, —@—c. Cherries new, 10@12c; do, old, 8@10c. Raspberries new 22@25c; Blackberries, 5½@5¾c Peaches, Delaware evaporated, peeled, 15@18c, do do, unpeeled, 8@10c; Georgia, evaporated, peeled, new, 12@14c; do do do, unpeeled, 7½@10c; do do, sundried, 9@10c. Huckleberries, new, 11@12c. Plums, new, 6@9½c.

PROVISION MARKETS.

NEW YORK.—PROVISIONS.—PORK.—New Mess, $12 25@$12 75; Short, Clear, $12 00@$13 50; Extra Prime Mess, $10 25@$10 75; Prime do, $10 75@$11 00, and Family $2 00@$13 00. BEEF—India Mess, in tierces, $12 50@$14 00; Extra Mess, in barrels, $7 00@$7 50; Packet, $7 25@$8 00 per bbl, and $11 00@$12 00 in tierces; Plate, $7 50@$8 00; Family at $11 00@$14 00. HAMS.—$15 25@$15 75, winter packing. CUT MEATS.—Quoted 12 lbs, average, Bellies, 7@——c; Pickled Hams, Hams, 10¾@11c; pickled Shoulders, 4⅞@5c Smoked Shoulders 5¾c; do Hams, 11½@11¾c. Dressed Hogs.—City, heavy to light, 6 7-16@6⅝c. Pigs, 7c. LARD.—City steam, $6 20; October, $6 50; November, $6 32; December, $6 25; South America, 7 25c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, PA.—PROVISIONS.—Potatoes, Maryland Bose, per bbl $1 50@$1 75. Provisions were steady. BEEF.—City family, per bbl, $8 00; do packets, $8 00@$8 50; Smoked Beef 12@14c; Beef Hams $16. PORK.—Mess, $13 50@$14 50; do Prime Mess, new, $13. 50; do family, $15 00@$15 50; Hams, smoked, per lb, 12@14c; do, S. P., cured, in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked——@8c, Shoulders, in dry salt and fully cured, 6¼@6¾c; do do, smoked, 7c; Shoulders, pickle cured, 7@¼c; do do smoked, 8@8½c; Bellies, in pickle, 8@8½c; do breakfast Bacon, 9½@10c. LARD. Steady; City refined, 8c; do steam, 7@7¼c; butchers' loose, 6½@7c.

CHICAGO.—MESS PORK.—$10 70@10 75. LARD—$5 95@$6 00 per 100 lbs; Short Rib sides (loose), $4 95; dry salted shoulders, boxed, $4 60; short clear sides, boxed, $5 25@$5 37.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 25½@26; Elgin, best, 26¼c; Western, best 25@25½; do prime, 20@23c; do good, 15@18; do poor, 12@14; State, Dairy, half-firkins, tubs, best, 24@25c; do do prime, 20@23; do do fine, 16@18; Welsh tubs, fine, 19@21c; do do, good, 15@17; firkins, best, —@——c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 16@18; do fine, 12@15; Western dairy, fine, 12@14c; do fair, 10½@11c; do poor, 9@10c; do factory, fresh, best, 12@13c, do prime, 11@11½; do good, 9@10; do poor, 7@9c.

CHEESE.—State factory, fancy, 10¾c; do do fine, 9¼@10½c; do do, prime, 9@10c; do do, fair to good, 8¾@9½c; Ohio, flat, prime, 9½@9¾c; do good, —@—c; do, good, —@—; Skims, light, 7@8c; do medium, 2@3; do full, 1@2c.

EGGS.—Near-by, fresh, 24@25c; Canadian, 23½@24c; Southern, 22@23c; Western, best, 23½@24c; limed, 19c; ice house, 16@19c.

PHILADELPHIA.—BUTTER scarce Pennsylvania creamery extra, at 24@25c; Pennsylvania Prints, extra, 28@30c; S.C. and N.Y. creamery extra, 24c; Western factory 15@16c, packing butter, 11@12c. EGGS.—Were firm; Pennsylvania firsts, 23@—c; Western firsts, 19@20c; Cheese dull—steady; demand fair; New York full cream, at 8¼c. Ohio flats, choice, 7¼@7½c; do, fair to prime, 14@14½c.

CHICAGO, Ill.—BUTTER.—On the Produce Exchange to-day the butter market was generally firm. Fancy creamery, 24@25c, choice Western, 17@19c, choice dairy, 20@22c; common to fair, 9@10c. Eggs firm at 17@17½c.

GRAIN MARKETS.

WHEAT—Ungraded Winter Red, 77@89c; No. 2 Red 82c, elevator; Steamer No 3 Red, 76½c elevator; Steamer No 2 Red, 82c elevator; No. 2 Red, 85¾@95½c afloat do in elevator quoted 85⅝@86c; No. 2 October, 85⅞@86¼c do November, 86 15-16@87¾c do December, 88@89c, do January, 89½@90c, do February, 90¼c; do May, 92⅝ 93⅝c. Liverpool Stocks—October 1, 1889—Wheat, centals, 2,071,000 corn, centals, 3 3,000: flour, sacks, 108 000. October 1, 1888—Wheat, centals 2,392,000; corn centals, 890,000 flour, sacks, 5,800. RYE.—Firm and in moderate demand. Sales 51½@51¾c: State quoted 55@56c. CORN Sales, Ungraded Mixed, 38½@41c; No. 2 Mixed, 39¼@39¾c elevator 39½@40¾c afloat; No. 2 White, 39¼@39½c elevator, 41c delivered; No 2 Mixed, c. f. and f., 40¼@40¾c, No. 2 October, 39½@39¾; do November, 40@40⅝c; do December, 40⅞@41¼c do May, 42@42 5-16c. OATS. Sales No. 3 25½c; No 3 White, 26@26½c; No. 2, 26@26½c No. 2 White, 28½@28⅝c No. 1 White 35c Mixed Western, 24½@28c; White do, 27@35c; No. 2 October, 26 1-16@26⅛c; do November, 26⅜c; do December, 26¾@26⅞c do May, 28¾c.

LIVE-STOCK MARKETS.

New-York, Saturday, October 5, 1889.

BEEVES.—Dressed Beef at 5½@7¼c. per lb for poor to choice native sides, and at 4½@5c. for Texas do.

CALVES.—Sales slow. Poor to good Veals sold at from 5c. to 7½c. per lb; a deck-load of rather common Western Calves at 3@3½c., and Grassers at 2@2¾c. Dressed Veals sold at 9@13c. per lb; dressed Grassers and Buttermilks at 4@6c.

SHEEP AND LAMBS.—Poor to prime Sheep sold at 3½@5¼c per lb; common to prime Lambs at 5@6¾c, with a deck-load up to 7c per lb. Dressed Mutton had a fair call at 8@9½c. per lb; dressed Lambs at 9@11c.

HOGS.—Common and ordinary heavy Hogs would go down to $4 50@$4 60.

Communications Received for the Week Ending October 5, 1889.

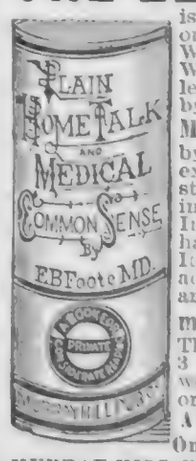
J. K G.—E. B C—F K—J H. T.—M. A. H.—C. H. W. L. M.—C. B.—H. H F.—J. R. G.—E. B. P.—L. B D.—C. W. L.—M. M. B.—W H. G.—S. J. M—S. H. R—S. H. C. R. A. C.—W E J. K. L. D.—E. C. D.—G. W. T.—N. A. J.—E. B.—G. W D.—E. S.—P. O.—J. W. B.—M. McK.—J. H. V.—E M D—C. E. S.—A. J. H.—A. M C.—B J. E. J. N P.—A. B. C.—M. B. S.—A. A. R.—R. M. C.—R. E. C., good.—W. J. P—J. L.—G. C. A—M. J. L.—P. H. B.—M. E. McM.—S. M.—A. M W.—G. M. H.—A. B.—B. C. G.—A. W. C.—M. W. H—E. F. L., thank you.—J. H E.—H. P.—J. A T.—J. F. P. E W.—K. E. H.—P. M. S.—J. W D.—P. M.—C. L. H. M. W.—M. M. A.—B. W. H.—L. S.—W. W. H.—J J. M.—A. C. L.—S. M. F.—H. M.—E. N. N. A E.—J. H. W.—H. W.—W. J. W.—J. A. F.—N. D. McN.—T. W.—M. A T.—M. B B. M. B—T. H. H.—W. D. H.—A. R. W.—K E. L. E. D. R. N. L—D T B—S. E. T.—S. C. P.—E. C.—E. C. C.—E. H.—H. A M—A. A.—E. T. H.—M. W.—R. W. H.—C. R. K.—F. S.—S. G H.—R H. A.—F. B—S. S. T.—L E. H.—J. C. B.—M McM—J. F. M.—M. M E—Ladburg, thank you, F. B. K.—G. D. S.—J. N F—J. B.—E. T. R.—G. V. B.—I M, thank you.—H. C. G—M. A. S. W—D. C. A.—P. D—E. T H.—C. H. S.—M.—E. M.—J. W B.—A. I. G.—B B C—D. L. B.—S. W. Y.—M. B.—E H.—I. B.—S. E O.—G. S. B—E G H.—L C. S—M. E. H.—A. N. W.—C. M. G.—I F C.—H. A. H.—A. V. M.—E. H. F.—M. G.—L B. W.—H. T.—E. S B.—E H.—H. M E.—G. W. S.—G. A. H.—P. H. J.—W. W. C.—G. H. W.—W. B.—C. C. B.—S F B.—E. A. T.—N. S T.—G. R.—J. M L.—G M. S—C. W. G—J. M.—J C P.—I. C., letter sent to Platisburgh—F. D C.—T. H. H.—J C.—L. A McC.—A. A K—A. G—R. W G. O. P—W. B. G.—J. A. L.—F. E. S.—W. A.—McA. K.—C. T. S.—H. B.—A. H.—C. S. P.—D. B. P.—J E.—D. L B.—J. W. R.—J. L—E. B. Z—S. M.—H B. E. H.—J. V. L.—W. W. L T. H. B. G D.—A. M. W.—T. G. Z.—F. C. L.—F. M.—P. C.—E. S. G—C A. G.—T. H. H—J. H. H.—V. D. S.—W. A. B.

Miscellaneous Advertising.

LINSEED OIL MEAL
For Feeding all Domestic Animals.
Use, with your other feed, at least
One-Third Linseed Oil Meal.
Write us for prices and other particulars, and mention the RURAL NEW-YORKER.
DEROIT LINSEED OIL COMPANY
Detroit, Mich.

JONES, HE PAYS THE FREIGHT.
5-TON WAGON SCALES, $60.
BEAM BOX
BRASS TARE BEAM.
Freight Paid.
Warranted for 5 Years.

Agents Wanted. Send for Terms.
FARMERS'
Barn and Warehouse Scales.
JONES OF BINGHAMTON, Binghamton, N. Y.

THE ELIXIR OF LIFE


is not in magic potions, "specifics" or electric cap-trap, but only in WISDOM—THE SCIENCE OF HEALTH. Wise men study nature, shun disease learn to maintain vigor and regain it by reading the most complete book of
Medical, Social, Sexual Science,
by an eminent physician of 35 years experience. The "old, original, standard" work, endorsed by all, imitated by many, equalled by none. Inspired by wish to aid humanity, it has providentially saved thousands. Its essays on marriage, parentage, adaptation, marital failures, etc., are of inestimable value to all now
married or who ever expect to be
The last edition has 1,000 pages, 3 colored charts of vital organs, 200 wood cuts, 21 chromos showing origin of life—development of man. APPENDIX has over 200 Recipes. Only $1.50 by Mail; Circulars Free.
MURRAY HILL BOOK CO., 129 E. 28th St., N. Y.
LIBERAL DISCOUNTS TO AGENTS.

Literary.

MAGAZINE REVIEWS.

"A PECULIAR PEOPLE" in Harper's for October is descriptive of the Dunkers or German Baptists living at Ephrata, about 15 miles from Lancaster, Pennsylvania. In many ways they resemble the Quakers or Friends. Their style of living, manners and customs are very primitive. Their dress is very quaint and old-fashioned; they offer no resistance to injuries, and refuse to take oaths in courts of law. Their religious customs and ceremonies are equally curious. They aim to imitate the early Christians as far as possible. The buildings are now nearly in ruins, and only a few stragglers are left of a once prosperous and happy community. A favorite theme with orators and authors nowadays is the possibilities and probabilities of the future as to wonderful inventions and discoveries, especially those connected with the electrical field. Edward Bellamy tells of a mythical railroad journey undertaken with some reluctance because of his inability to read on the cars. He was very agreeably surprised to find all the popular books and magazines phonograped and accessible even with his eyes shut; they could be begun at any chapter or page and any part could be skipped. Before recovering from this agreeable surprise he was startled by hearing the name of his station announced in such clear, deliberate tones as no trainman had ever thought of using. Going to a hotel to spend the night he enjoyed a refreshing sleep until awakened by the voice of what he judged to be a very charming young woman who said: "My dear sir, you may possibly be interested in knowing that it now wants just a-quarter of three." Upon lighting the gas, he failed to find anything excepting an innocent-looking clock which soon announced the hour of three in the same thrilling tones to which he had before listened. Sleep was no longer possible with such pleasant company. At breakfast his morning paper was rehearsed in his ear by a wonderful mechanism. His friend whom he came to visit took him to a clock factory where were clocks of all kinds of beliefs: then to a book-store filled with all kinds of phonographic books. He found himself surrounded with all sorts of new-fangled contrivances on every hand. The author has given us a very readable and ingenious story. "Aunt Dorothy's Funeral" is a Virginia plantation story of *ante bellum* days, but the title is somewhat misleading, for instead of "ole missus" furnishing a subject for a funeral, she recovered and had a thanksgiving service instead, with a sermon from the text she had selected for her funeral discourse. A betrothal was also announced at this time much to her satisfaction. "The Fair of Nijnii-Novgorod" is described by Theodore Child; "Hierapolis and its White Terrace," by Tristram Ellis; and "The Building of the Church of St. Denis" by Charles Eliot Norton. There is an article on "Recent Progress in Surgery;" a description of a "Corner of Scotland Worth Knowing;" a story, "Captain Brook's Prejudice," and much other interesting matter, with numerous illustrations and a few poems. Harper & Brothers, New York.

THE CENTURY MAGAZINE completes its 19th year with the October issue. The number is a specially interesting one. Mr. Kennan's article deals with the "East-Siberian Silver Mines," and gives a clear idea of the wretched surroundings of the convicts who are obliged to labor in these mines. He is of the opinion, however, that life here is preferable to solitary confinement in the ill-ventilated and filthy prison kameras. The Lincoln History deals with "Blair's Mexican Project—The Hampton Roads Conference—The XIIIth Amendment." An article of special interest to artists is "Fra Filippo Lippi," one of the Italian Old Masters, by W. J. Stillman, with an engraving and explanatory notes by T. Cole. "Moliere and Shakespeare" by C. Coquelin, with an engraving of Moliere as a frontispiece, is a comparison of these two great authors. "Base-Ball—For the Spectator," gives a history of the "great American game," with an explanation of the leading rules of the game which will enable one not versed in the art to have a fair understanding of it. "Three Jewish Kings" is a richly illustrated article by Edward L. Wilson and will be of particular interest to those who are students of the International Sunday-School Lessons. A story which will be appreciated by newspaper workers is "The Longworth Mystery" by "The City Editor." It is written by Young E. Allison, one of the new Southern writers. Maurice Thompson contributes "Ben and Judas," master and slave, a Southern dialect story, which is very readable, despite the unpopularity of dialect stories, and abounds in humorous situations. The third and last part of "The Old Bascom Place" is given. "Maria Mitchell's Reminiscences of the Herschels" is of peculiar interest in view of the recent death of that talented woman, and famed astronomer. The article is illustrated by fine portraits of Miss Mitchell and her observatory at Lynn, Massachusetts. Anna C. Brackett also has an "Open Letter" on Miss Mitchell. There are several brief illustrated articles on manual training from different standpoints. "War Diary of a Union Woman in the South," edited by G. W. Cable, is a thrilling narrative of a Northern woman in Louisiana and adjacent States during those perilous times. There are several short poems, interesting "Open Letters," etc. The Century Co., New York.

ST. NICHOLAS abounds in short stories from numerous writers on a variety of topics. "Almost a Tragedy" by Celia Thaxter is a story of a cat and parrot which lived in a kitchen and were the best of friends. The parrot's inquisitiveness led her to investigate a huge pan of dough which had been set to rise, and which proved a veritable quicksand into which the poor bird sank until nothing, but her head was visible. The sagacious cat by summoning the servant saved her from an ignominious death. William Dudley Foulke tells about "My Dog." It had always been his ambition to own a genuine St. Bernard, and at last when crossing the pass he purchased one from the Hospice. It proved a veritable white elephant, both on his travels, and after reaching America. Finally after a world of trouble, the dog, which had been the dream of his life, and which had cost him in hard cash in the neighborhood of $500, was sacrificed for a paltry $75, a goodly share of which was absorbed by a dealer in commissions, etc. Julian Ralph tells "Where Salmon are Plentiful," and fortifies his fish story by an engraving made from an indisputable photograph of a salmon brook in British Columbia. The water is represented as literally alive with the finny tribe. Our party of boys who have been spending the summer vacation "Among the Florida Keys," end it with this number, with a largely increased knowledge of Natural History. F. S. Dellenbaugh under what he calls "The First Americans," describes the Pueblos found in Arizona and New Mexico. What warrant he has for giving them this title he fails to tell us. "The Making of a Great Steel Gun" describes the manufacture of a huge cannon from the making of the steel from iron, until the gun is finished ready for its deadly work. Dora Miller's "Wonder Ball" contains suggestions of holiday times. There are charming bits of verse, numerous and interesting illustrations, and many other features which tend to make this an attractive number to the young folks. The Century Company, New York.

BOOK REVIEWS.

"SPEAKING PIECES for Little Scholars and Older Pupils," by Ellen O. Peck, is Lee & Shepard's latest addition to this useful class of literature. It is divided into two parts, the first for the little people, the second for the older boys and girls; and consists of short selections for school entertainments, Easter and holiday occasions, anniversaries and the like, together with dialogues and charades. Boards, five by seven inches; 177 pages; price 50 cents.

AN ambitious new juvenile book having a Munchausen flavor is "Little Baron Trump and His Wonderful Dog Bulger." It portrays his birth in the very mushy land of the Melodious Sneezers; tells how when he was about two months old his mother, taken unawares by a fit of sneezing, dropped him into the soft mud, in which he disappeared, and from which the almost human Bulger rescued him; pictures the marvelous growth of his brain, and follows him and his dog through hair-breadth escapes and thrilling adventures among the Wind-Eaters, the Slow-Movers, the Man-Hoppers, the Round-Bodies, etc. It does not profess to be a story with a moral, yet it instils reverence for parents and affection for dumb animals. Seven by nine inches; 287 pages, cloth, illustrated, $2. Lee & Shepard.

EVERY-DAY BUSINESS is a small book filled with valuable information about common business affairs which every one should know. Many farmers are deficient in a knowledge of the simplest rudiments of business, and trust too much to the honesty of lawyers and others. This is a very poor practice, and one that many times proves very expensive. This little volume gives plain directions about letter-writing; bills, receipts and accounts; post-office business; telegrams; express business; United States money; different kinds of banks, bank paper, checks, notes, drafts, etc.; mortgages, taxes, insurance, etc. Five by seven inches; 158 pages; boards, 35 cents. Lee & Shepard, Boston.

BENJAMIN FRANKLIN is the title of the latest addition to the American Statesmen series. The author is John T. Morse, Jr., and he has given us a very well-written and exhaustive biography of this illustrious American, who was at once a patriot, a philosopher and a statesman. Five by 7½ inches; 428 pages; cloth, gilt top; $1.25. Houghton, Mifflin & Co., Boston.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

RAILROAD FENCES IN CONNECTICUT.

J. G., Plainville, Conn.—Who should erect the fences on both sides of the railroad tracks and to whom do they belong? If an animal should break through, or through the defective state of the fence stray upon the line from adjoining land, and be killed, can the owner recover compensation?

ANS.—In Connecticut every railroad company is required to construct and maintain good and sufficient fences on both sides of its line, except at such places as in the opinion of the railroad commissioners, the erection and maintenance of the same shall be inexpedient or unnecessary, under penalty prescribed by the statute. Such fences must be erected by all companies within 12 months after they have entered upon and taken possession of the lands through which the railroads pass. Such fences belong to the railroad if on its own land. Some owners of land adjoining railroads, however, have received compensation for fencing along the line of their land, and where this has been the case, the obligation to fence is permanently binding upon them and upon all who may come into possession of the land. All such holders are required by law to build and maintain a lawful fence on said line or as near thereto as they conveniently can; and if they neglect to do so within 60 days after they have been notified to do so by the railroad company, such railroad company may build the fences and recover the expense thereof in an action for debt against the person neglecting to build or maintain such fence or fences. Where the duty of building the fences rests on a railroad company, if cattle or any other domestic animals break through a fence on account of its insufficient or defective character and are killed or injured on the track, the company is responsible for damages; but if they broke through or jumped over a sufficient fence in proper repair, the company would not be responsible. When the duty of building the fences rests with the land-owner, of course, he cannot recover compensation for cattle or other animals that may have been trespassing on the railroad through his own fault.

Miscellaneous Advertising.

DR SETH ARNOLD'S COUGH KILLER CURES COUGHS AND COLDS. PREVENTS CONSUMPTION

Dr. T. B. MYERS, of David City, Neb., writes: Dr. Seth Arnold's Cough Killer is the best remedy for whooping cough and measles I ever saw

SOLD BY ALL DEALERS.

Price, 25c., 50c. and $1 per bottle.

Trees, Seeds and Plants.

TREES ROSES GRAPES

We offer the largest and most complete general stock in the U. S., of **Fruit & Ornamental Trees, Shrubs, Evergreens, Roses, Pæonies, Hardy Plants, Grape Vines, Small Fruits,** etc., including many **Novelties.** Catalogues giving information indispensable to planters, sent to all regular customers **Free**; to others: No. 1, Fruits, 10c.; No. 2, Ornamental Trees, &c., illustrated, 15c.; No. 3, Strawberries, No. 4, Wholesale, No. 5, Roses, *Free.*

ELLWANGER & BARRY,
MOUNT HOPE NURSERIES, | ROCHESTER, New York.

THE CREAM OF PEACHES.

WONDERFUL: large, very late, exquisitely beautiful, delicious—the only large, late, handsome, yellow, freestone Peach. LOVETT'S WHITE is likewise the only large, late, handsome *white* freestone. Both are sure and heavy bearers. The most profitable for market, invaluable for the home garden, unsurpassed for canning. Descriptive Circular free. Colored plates 6cts.

Nearly every variety of hardy Fruit and Ornamental Tree or Plant, old or new, worthy of culture, at half the prices of most traveling agents and many nurseries. An immense stock of Peach and other Fruit Trees. *Headquarters for Gandy (latest), Monmouth (earliest), Strawberries, Erie* and *Early King Blackberries, Carlough Apple, Spaulding and Abundance Plums, Meech Quince, Nut-bearing Trees, &c.*

Lovett's Catalogue for Fall 1889, giving illustrations, plain practical instructions for culture and management, with honest descriptions (telling defects as well as merits) and exceedingly low prices, free to applicants.

Plants by mail a specialty.

J. T. LOVETT CO., *Little Silver, N. J.*

LANDRETH'S LAWN GRASS SEED

Is a mixture of the finest varieties of perennial grass seeds, producing a most beautiful and permanent sod in a short time. The lawns and grass plots in and around Philadelphia afford ample evidence of the superior quality of the *Landreth's Lawn Grass Seed.*

All Varieties of Grass and Clover Seeds carefully selected, thoroughly re-cleaned, and freed from all imperfections.

LANDRETH'S LAWN FERTILIZER.

A most excellent top-dressing for lawns and grass-plots, producing a rich and vigorous growth. Sold in packages from five pounds to the ton.

D. LANDRETH & SONS,
21 & 23 South Sixth Street Branch Store, Delaware Avenue and Arch Street, Philadelphia, Pa

TREES Root Grafts—*Everything!* No larger stock in U. S. No better. No cheaper. PIKE CO. NURSERIES Louisiana, Mo.

THE IDAHO PEAR.

What Others Say About It:

Compared with Keiffer it is far superior in quality. AMERICAN GARDEN.

Quality best. PATRICK BARRY.

It is not so sweet as the Bartlett, but higher flavored—more vinous. THE RURAL NEW-YORKER.

Trees now for the first time offered for sale:

Single Tree by mail, post paid, $2.50; Three for $6.00.

Send for illustrated prospectus containing a finer list of testimonials than any new fruit that has ever been introduced.

THE IDAHO PEAR Co.,
LEWISTON, IDAHO.

Various,

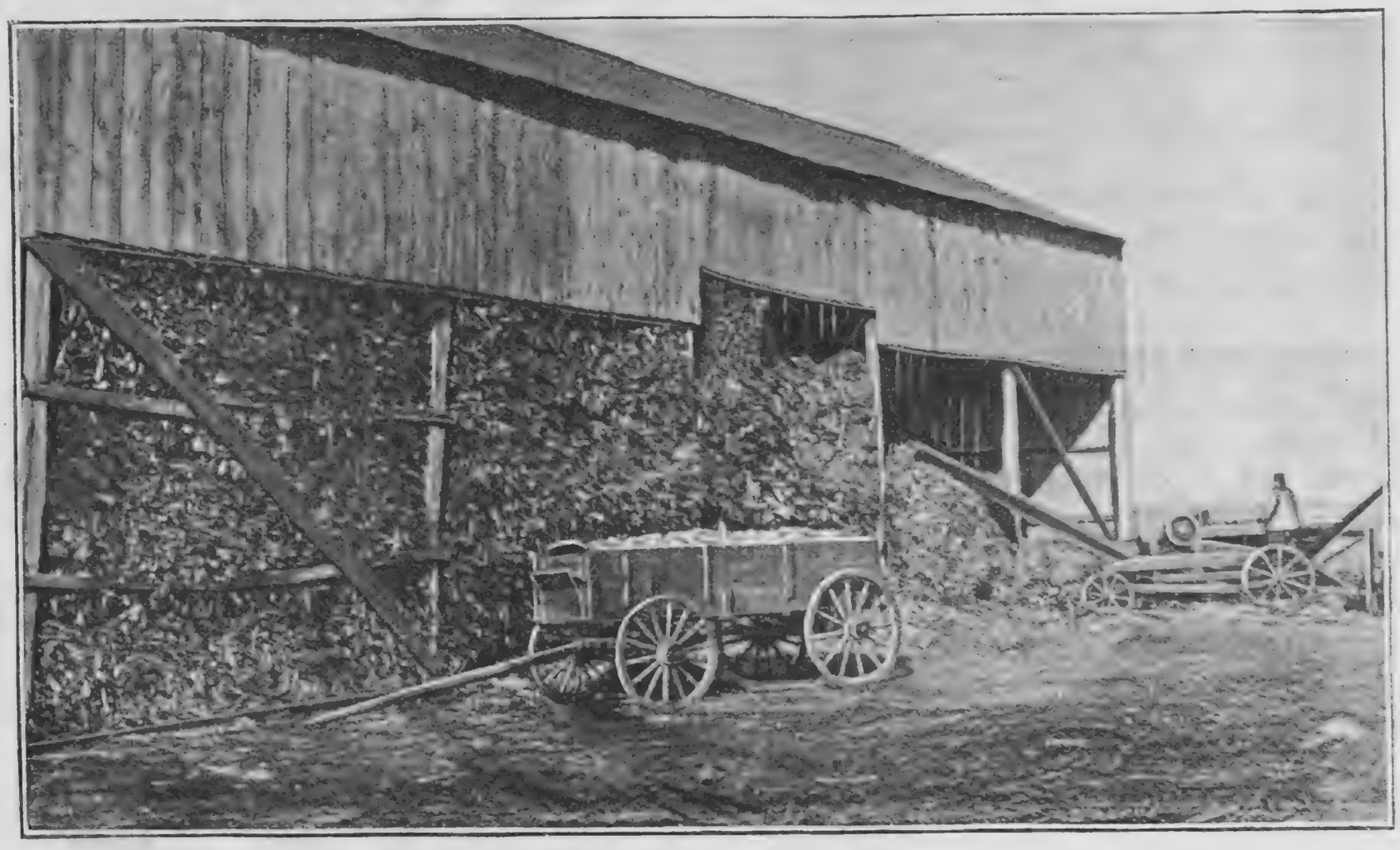
A JERSEYMAN'S JOTTINGS.

I MAKE my city-farmer neighbors quite useful in the way of experiment work. They don't believe in the slow ways we Jerseymen have inherited. They are after all the new machines and methods. I watch their trials and often gain a good point from their experience. The latest thing in this line relates to a new churn. For a great many years our folks have used the old-style dash churn. I have read a great deal about the advantages of a churn without any dash but our folks were used to the dash churn and would not listen to any argument against it. That is the spirit that has made New Jersey famous. My neighbor bought a fine cow last year. As a part of the bargain he got a stone churn with a wooden dash. That is the only kind of churn used in our neighborhood, and all the dairy-wives to whom my neighbor's wife went for information, were sure that the new-style churns were poor things. Your city farmer is a great reader of the agricultural papers. Of course my neighbor read all about the new churns and wanted to try them, but everybody told his wife the dash churn could not be beaten and so he had to give up his experiment. At last his hour came. Somebody dropped that stone churn on the door-step and broke it. If it had been made of wood we should never have had our experiment. Now the point was to get a new churn. "Frank's Wonder Machine" was first tried. This promised to take all the butter out of sweet milk and leave the residue about as good as it was before. No pans, skimmers or cream pails would be needed.

This machine did make butter in about five minutes from whole milk. The butter did not suit, however; it was soft and very light-colored. The "wonder machine" did not seem to make as much butter as was obtained in the old way. Then my neighbor bought a toy called "Daul's Butter Machine." This was an arrangement of cogs and wheels that shook a Mason's jar filled with cream to and fro. It made butter, after a fashion, but it gave such a clatter and bang that it nearly made the folks sick. Then some economist wrote an article for the paper telling how the ice-cream freezer was used as a churn. According to his statement a churn was never needed in a family that boasted an ice-cream freezer. So our friends tried that. After turning the handle nearly two hours a sticky, light-colored mass formed that had to pass muster as butter. Then the wife made a demand for another dash churn—a wooden one this time—but the man of the house was determined to try a churn without any dash or float. So he bought a Rectangular Churn.

It was about the most awkward-looking thing I ever saw—just a large box fitted on standards so it will turn over "cornerways." I went over to see the thing work. We poured the cream into it—adding a little milk to make the mixture thin—fitted on the cover and started the handle. I never heard quite such a splashing as the cream made inside that churn. There are so many corners and angles about it that the beating about was something tremendous. The work was very easy. I can fit a treadle on the handle so that a person can sit and read and make the churn go with the foot. I do not hesitate to say that my examination of the Rectangular Churn convinces me that our folks have all been wrong in sticking to the dash. I am satisfied that this new churn makes more butter—that is, you save more of it—with less work than our old churns ever did. The cost of the new churn is considerably more than that of the old one, but you will probably more than get the difference back before the churn gives out. How the Rectangular compares with other barrel or box churns I do not know. I should think it would give the cream more of a shaking up than any of the others owing to its special shape. This very shape makes it very easy to clean. I don't much like the way the cover is made to fasten on. It strikes me the fastenings will soon wear out and cause the churn to leak. There is danger too of using the little cork plugs. They should be larger and fastened to the churn by strings or little chains. It would be a good thing also to have a little glass door or window in the churn so that the churner could watch the cream and know better when to stop. There seems to be a different sound inside the churn when the butter begins "to come." I suppose that a man with good ears can study this difference in sound so that he can make it his guide in stopping the churn. A deaf man, however, cannot detect this difference and the consequence is that he must keep taking off the cover or run the risk of overchurning.

JERSEYMAN.



A WESTERN BARN FILLED WITH CRUSHED CORN-FODDER. FIG. 255.

CATALOGUES, ETC., RECEIVED.

PATCH'S CORN-SHELLER.—Catalogue from A. S. Patch, Clarksville, Tenn. This pamphlet contains letters from those who have used the "Black Hawk" Sheller. If we may believe what they say this sheller is a wonderful affair.

THE ART OF DRESSING.—This is the subject of a little volume sent out by O. S. Chaffee & Son, Mansfield Center, Conn., and with the information will be sent samples of the black silks and satins which this well-established firm has for sale at reasonable prices. Our lady readers who desire to dress with good taste and judgment, will want to see these samples.

THE PRUYN POTATO-DIGGER.—Catalogue from the Pruyn Potato-Digger Company, Hoosick Falls, N. Y. One great point of superiority claimed for this digger is its light draft. It raises but little earth and gets rid of it easier than other large diggers. In fact, there are many things about the Pruyn Digger that commend it to the thoughtful consideration of farmers. Send for this circular and see what the digger looks like.

FIRE-ARMS, CUTLERY, ETC.—Catalogue from Powell & Clement, Cincinnati, Ohio. We find in this catalogue a fine list of guns, pistols, knives and sporting goods. It is hard to conceive of anything in this line that is not described here.

A NEW CORN PRODUCT.—The R. N.-Y. has had considerable to say about the great waste of labor spent in husking the country's corn crop. Another point that has been dwelt upon is the waste of the corn fodder—the stalks of the corn plant. Now comes a machine, the Keystone Corn-Husker and Fodder-Cutter, that promises to go a long ways toward putting a stop to these wastes. By its means we may expect to make hand-husking of corn about as profitless as hand-thrashing of grain. The stalks are so cut and crushed that the product may be baled and sold to be used as fodder or as an absorbent. We show, at Figure 255, a scene on the farm of Gale Brothers, of Galesburg, Ill. The building is a shed, 22 feet high, 30 feet wide and 80 feet long, and is filled with the fodder as it came from the husking machine—which is shown at the right of the picture. The wagon at the center is filled with husked corn. The fodder, as packed in the shed, occupies about one-fourth the space needed before it was cut up. Last year the Messrs. Gale put up the fodder from 123 acres of corn, and this year expect to put up 400 acres. After the fodder had heated in the pile part was baled with two strands of wire, the same as hay in a Dederick Hay Press. The R. N.-Y. believes that this baled product will find its way to the markets in due time and by its sale open a new source of revenue for corn farmers. The subject is an interesting one. Those who wish to investigate it further should send to the Keystone Manufacturing Company of Sterling, Ill., for an illustrated catalogue.

Indust'l Societies.

DUTCHESS COUNTY AGRICULTURAL SOCIETY'S SHOW.

(RURAL SPECIAL REPORT.)

THE 48th Annual Fair and Cattle Show of the Dutchess County Agricultural Society was held at the Hudson River Driving Park, Poughkeepsie, from the 24th to the 27th of September. A new main building and a number of new cattle sheds have materially increased the attractiveness of the fair. The larger part of the room in the main building, however, was taken up by local merchants, leaving comparatively little room for fruits and vegetables. Implements were shown in tents adjoining the main building. Adriance, Platt & Co. showed their new harvesting machine in operation. It is certainly a wonderful improvement on older and more cumbersome reapers and harvesters, and will, doubtless, have a very large sale. The cattle sheds were well filled. The well-known herd of Guernseys owned by Vice-President Morton attracted much attention. J. B. Dutcher & Son showed some very fine Holstein-Friesians. The sheep and swine pens had but few visitors, although many fine specimens of the newer breeds were shown. The poultry building was dark and crowded, the ventilation was bad, and altogether it was an unattractive place even to the poultry fancier.

On the whole, the Dutchess County Fair comes far short of the place claimed for it by its managers. It lacks very much of being the largest and best county fair in the State. In fact, if the horse racing, balloon ascensions and side-shows were done away, there would be but little left save an exhibit of local merchants for advertising purposes. Notwithstanding the bad weather, the attendance was very large and there is no reason why the fair, with judicious management, should not attract a much greater number of implement dealers, fruit growers and other exhibitors who make a fair of interest and value to the agriculturist.

J. H. G.

Miscellaneous Advertising.

BEAUTY of Skin & Scalp RESTORED by the CUTICURA Remedies.

NOTHING IS KNOWN TO SCIENCE AT ALL COMparable to the CUTICURA REMEDIES in their marvelous properties of cleansing, purifying and beautifying the skin, and in curing torturing, disfiguring, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c; RESOLVENT, $1.; SOAP, 25c. Prepared by the POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

Dull Aches, Pains and Weaknesses instantly relieved by the CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster. 25c.

FLORIDA THE CHANCE For Farmers and Fruit Growers!!

We have concluded to offer a portion of our specially selected lands, the best in Marion County, in lots of ten acres or more, from $5 to $25 per acre. The land for growing Oranges and other fruits. Also all vegetables and crops grown in Florida. This land is rapidly being settled by people from Ohio, Illinois Iowa, Indiana, New York, Holland, etc. Three Mills, Three Railroads, and only sixteen miles from the county seat (Ocala). High, healthy country. No malaria. **Correspondence solicited.** Inclose stamp. We refer to the Merchants' National Bank of Ocala, Fla. Address

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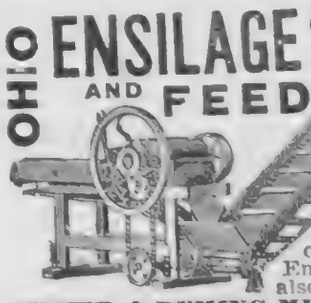

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"I WISH," said lazy little Paul,
"Oh! how I wish that I,
Instead of climbing this stone wall,
Straight over it could fly."

But when old "Brindle's" crumpled horns
Had tossed him from the ground,
And o'er the wall upon some thorns
A resting place he found,

His views completely altered seemed,
And, trying not to cry,
He gasped: "I'm sure I never dreamed
How horrid 'tis to fly!"
—*Elizabeth L. Gould in Wide-Awake.*

A CUT AND DRIED AFFAIR.—A load of hay.—*Life.*

HE: "Does not the sea always make you sad, Miss Peachblow?" She: "No, only sick."—*Life.*

THE World's Fair should certainly go West. They will find husbands out there.—*New Orleans Picayune.*

TOO EXPENSIVE.—JACK: "Edith will you have me?" The Heiress: "Thanks, Jack, I can't afford you."—*Life.*

A PHILADELPHIA bootblack meets the russet shoe fad half way with a sign: "Boots blacked yellow."—*Boston Gazette.*

THAT the moon is made of green cheese is a mere idle fancy; but that the honeymoon is made of taffy is a fact.—*Terre Haute Express.*

ASTRONOMERS have discovered another big lot of spots on the face of the sun. It is evident that the sun needs a complexion lotion.—*Philadelphia Press.*

CABBY: "Where are you going, sir?" Bjackson: "None of your business. Just drive there, and stop asking impertinent questions."—*Harper's Bazar.*

WE have heard of men engraving the Lord's prayer on a five-cent piece, but a New York poet has excelled this feat. He has written a poem "On a Lock of Washington's Hair."—*Toledo Reporter.*

SOMEBODY has libeled Philadelphia by saying that the grass could be heard growing in her streets. We wish it to be understood, once for all, that everything is quiet down there—even the grass.—*Puck.*

WIFE (looking in stationer's window): "What is this—reproduction of Egyptian hieroglyphics?" Husband: "No, that is a specimen of work done by the winner in a high speed typewriting contest."—*Cayuga Independent.*

'CONDUCTOR, what was that?" asked a nervous old lady as the wheels of the coach made a little more jar than usual. "We went over a few frogs just then," he replied. "Most likely squashed the poor things too," she said, with a tremor in her voice.—*Detroit Free Press.*

"I SEE," remarked Mr. Phunnyman again, "that the great powers are making a meal of Africa." "In what way?" "Why, they have swallowed nearly all of her territory but the Sahara, and Turkey wants to gobble that." "Wants the Sahara, what for?" "Dessert."—*Philadelphia Press.*

FIRST BOOMER: "You fellows have no git up at all. Why don't you have photographs of your town taken like we did? Are you ashamed of it?" Rival Boomer: "Naw, that ain't the reason at all. I want you to understand young fellah, that our town don't stand still long enough to be photographed."—*Terre Haute Express.*

THE QUARREL.

SHE: "Clifford, I didn't mean to wound your young heart. I spoke too hastily!"

HE (sotto voce and hastily): "Brace up, Clifford, and let her see you are a man!"

Miscellaneous Advertising.

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300,000 Apple and Peach Trees—all suitable for transplanting into orchard No finer stock in this country. Send for circular giving full information. Address STEPHEN HOYT'S SONS, New Canaan, Conn.

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TREES AND PLANTS
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Savage & Farnum, Importers and Breeders of Percheron and French Coach Horses, Island Home Stock Farm, Grosse Isle, Wayne County, Mich. We offer a very large stud of horses to select from, we guarantee our stock, make prices reasonable, and sell on easy terms. Visitors always welcome. Large catalogue free. Address Savage & Farnum, DETROIT, MICH.
Percheron Horses.
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Wind Mill

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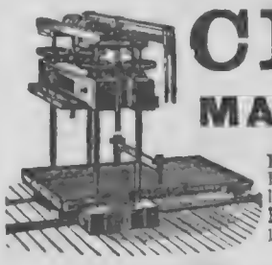
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Knuckle Joint and Screw Presses. Graters. Elevators, Pumps, etc. Send for catalogue.
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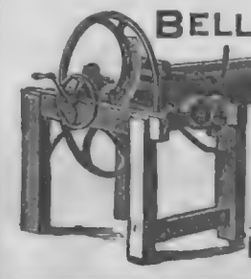
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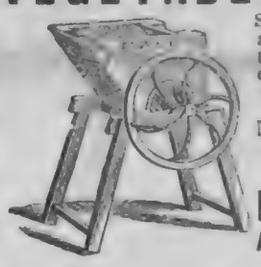
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Lowest in Price, Easily Worked, Most Rapid & Durable in Use.
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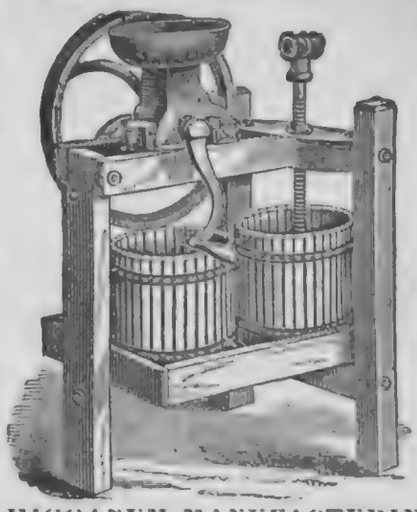
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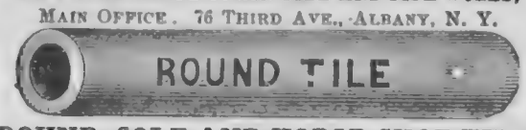

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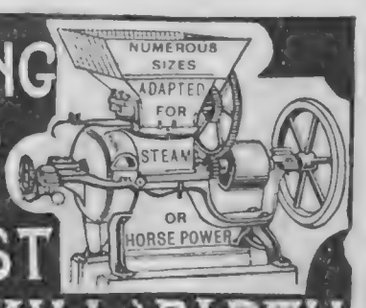

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$3 BLACK HAWK Corn Sheller & Separator.
Always in order: never chokes; shells clean: used by boys or men. Always throws out cob Rapidly finding its way to every corn-growing country around the world. Buy from dealer or send me $3.50 for sample, express prepaid. Sole manufacturer and patentee,
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Pure Animal Bone
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For all Crops and Soils. Factory and Principal Office on Passaic River, Newark, N. J. Baltimore Office, 202 & 204 Buchanan's Wharf, foot of Frederick St. Write for "Farmer's Manual," mailed Free.

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For Fruit, Grass and Grain. Quantity and quality guaranteed By rail in car lots. Send for PRICE, PAMPHLET and SAMPLE.
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HAY AND STRAW PRESS.

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WINDMILLS,
Force Pumps, Handy Carts Ear Corn Slicers.
Send for book giving full information free.
ENTERPRISE CO., Sandwich, Ill.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII. NO. 2073. NEW YORK, OCTOBER 19, 1889. PRICE, FIVE CENTS. $2.00 PER YEAR.

Entered According to Act of Congress in the Year 1889, by the Rural New-Yorker, in the Office of the Librarian of Congress, at Washington, D. C.]

KUMERLE'S DWARF LIMA. From Nature. The Open Pod Shows the Natural Size. Fig. 256. See page 697.

Horticultural.

BEANS!

(AIR: "Three Blind Mice.")

THREE LIMA BEANS!

THREE LIMA BEANS!

THREE LIMA BEANS!

See How They'll Run!

They'll Make Lots of Fun!

And Money By The Ton!

They'll All Run After the Farmer's Cash,

And Into His Wallet They'll Cut a Gash;

Will They Prove Worth Keeping, or Only Trash?

THREE LIMA BEANS!

Henderson's Happy Hit!

Thorburn's Thick Treasure!

Burpee's Big Bean!

DWARFS vs. POLES

FROM H. M. ENGLE.

BUSH BEANS are preferable for early cropping and the saving of poles. Pole beans will yield larger crops. Farmers in this vicinity plant pole beans with corn and they yield fair crops with the least possible labor and expense. They are generally planted after corn is up four to six inches.

Lancaster County, Pa.

FROM FRED GRUNDY.

FOR string or snap beans I prefer the dwarf varieties because they are somewhat earlier than the running sorts, take up but little space in the garden and are out of the way in time for a second crop. Two plantings, eight or 10 days apart, are made. We do not try to extend the season further by successive plantings. There is no Lima equal to the old large Lima. Most of the so-called "improvements" are in the wrong direction. When grown on poles the beans are off the ground where they keep clean and ripen perfectly. A sprinkle of rain will stain or rot every bean that touches the soil. If only the end of the pod touches the ground the beans are quickly spoiled by a shower when they begin to ripen.

Christian County, Ill.

FROM ISAAC HICKS.

WE think the German wax beans and the other varieties of wax beans are the best for family use. They should be planted at intervals so as to afford a succession through the season. I want no pole beans until the Limas are in season. These are as yet unequaled and will repay all the care and trouble of furnishing poles: at any rate they do with us on Long Island. For quality and because they require much less labor and space we prefer the wax podded bush beans. Henderson's Dwarf Sieva Bean is productive and as good as the pole Carolina or Sieva, and earlier than the Lima and desirable on that account, and also for economy of space. One year's trial with it is satisfactory, and I shall continue to plant it. I do not grow any of the Kumerle Limas and can give no opinion with regard to it except by seeing it in another place. It did not seem equal to the Lima and with the lover of good rich beans I do not believe either kind will supersede this.

Queens County, N. Y.

FROM A. B. COLEMAN.

I DO not deem dwarf or bush beans more desirable than pole beans except in earliness, and perhaps because they can be grown with less expense and labor. I am partial to pole beans. They are more prolific, of better quality, and will bear until frost kills the vines if properly cultivated. Bush beans soon become tough and unfit for the table unless shelled, while pole beans are ever-bearing. In localities where it is expensive and inconvenient to obtain poles or other suitable material for "sticking" pole-beans, it would doubtless be desirable to grow bush beans alone and plant in succession. There are many varieties of pole beans which can be grown successfully in corn fields, where they are allowed to run on the corn plants. This is the cheapest way to grow them. I have not yet grown Henderson's Dwarf Lima, and cannot speak of it from personal experience. Two of my neighbors tried it this year, one of whom succeeded very well with it, and he thinks it a desirable novelty. It is, however, no better in quality than the old Sieva and not so prolific. Except as a matter of convenience, I prefer pole beans.

Caldwell County, Kentucky.

FROM N. HALLOCK.

I PREFER the dwarf bean, for it occupies less space and is easily cultivated. With it, too, there is no expense for poles, which are unsightly in a well-kept garden, and as there is no pole bean that is superior to our best bush beans, I have given up raising pole beans for family use.

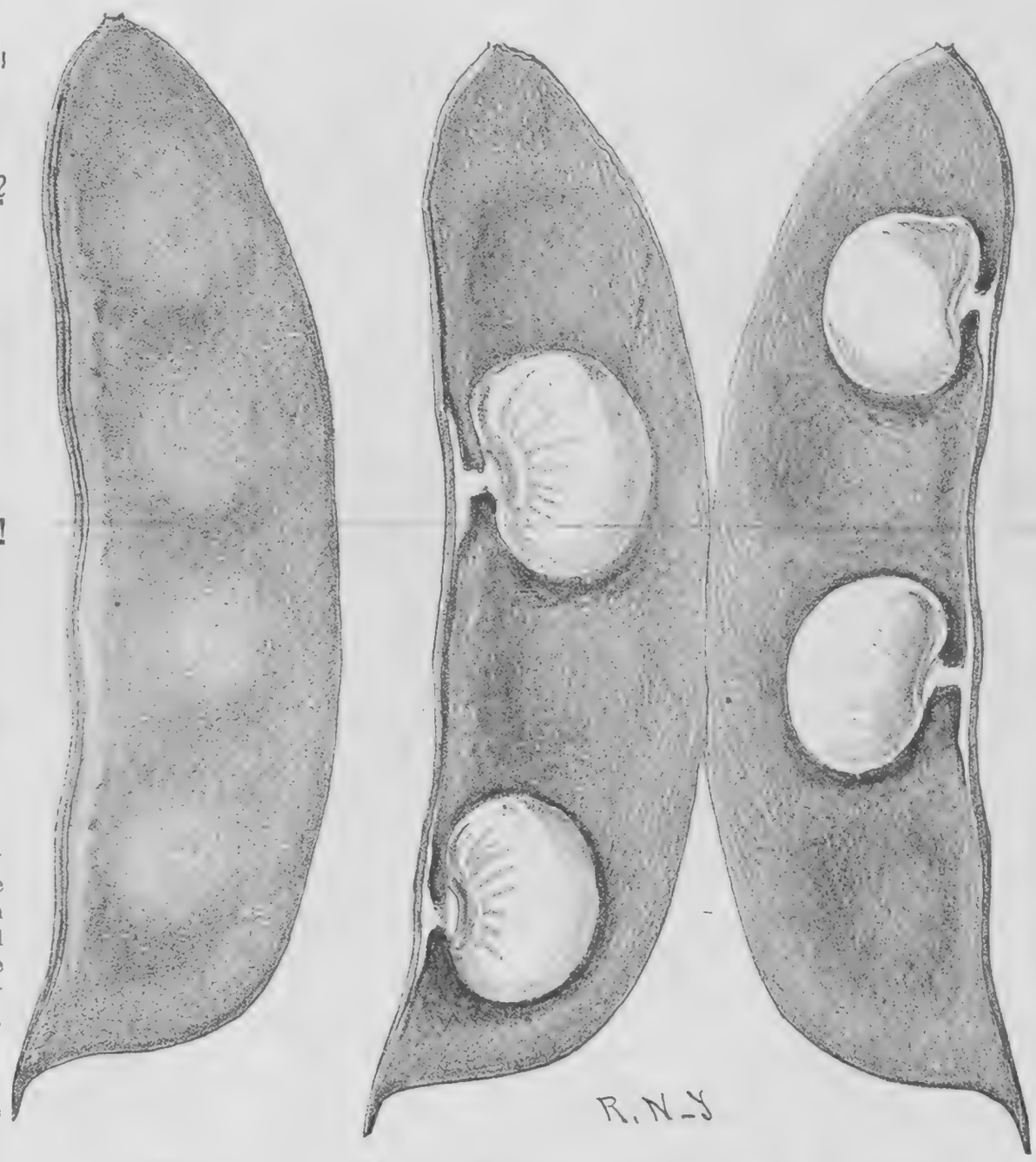
My preference does not extend to Henderson's Bush Lima, as it lacks the quality that gives the Lima its popularity. Many of our snap beans are as good to shell and cook green as the bush Lima. A friend who planted $5 worth, when asked his experience with it, said: "I do not value it." The other I have not seen growing.

Queens County, L. I.

FROM D. LANDRETH & SONS.

We do not know Kumerle's Lima. We have known the bean advertised as Henderson's Dwarf Lima. We never considered it worthy of a boom. It is a dwarf Carolina or a dwarf Sieva and not a Lima at all. We prefer bush beans to running beans, as they require less outlay in preparation. Few pole beans, however, are suitable for transforming into dwarfs, for the weight of the pods on long foot-stalks will always have a tendency to extend them down to the ground where many will be destroyed by contact.

Philadelphia, Pa.



BURPEE'S BUSH LIMA. FROM NATURE. NATURAL SIZE. FIG. 259.

THE DWARF LIMA BEANS.

WILLIAM FALCONER.

I HAVE been much interested in these little strangers and watched their progress this summer attentively. We have two kinds, namely, Henderson's, and Kumerle's (Thorburn & Co.). I have grown them both in good, level, sheltered ground and in rows three feet apart and side by side. Both were sown on the 17th of May, and every seed germinated and gave me a good fruitful plant, and to-day—September 9th—I have taken an average plant of each kind from the middle of the rows for examination. Now that the fall is approaching I have discovered a new use for Dwarf Lima Beans. Tall Limas are very tender and the first frost injures them; anyhow, if we can manage to save them into October we find the supply of young beans is short, for the vines do not pod well after the first of September. But the dwarfs are at our mercy, not we at theirs. We can put in June and July sowings on warm, sunny land just as we do snap beans the end of August and first of September, and cover them over with frames and sashes, and in this way have fresh, green Limas as long as we can keep frost out of the frames, which, here on Long Island, may be well into November. This alone will render the Dwarf Limas, to me at any rate, a welcome and, after this year, an indispensable addition to our list of vegetables.

HENDERSON'S DWARF LIMA belongs to the section of Limas usually called Sievas and is a positively dwarf variety and without the least inclination to "run." The plants are very bushy, low and stocky and their main stem does not rise over a foot above the ground, but it is freely branched and these shoots together with the flower-spikes raise the hight to some 16 or 20 inches. The plants have kept green and healthy all summer long, and since they first came into bloom they have remained continuously in flower and are still so, and this is a little better than the late Sievas have done. The flower-spikes are terminal, very long—often 12 or 14 inches—and in several cases have borne 20 pods to a spike; but the average number of pods matured is seven. The pods are about three inches long and contain two, three or four seeds in each, but mostly three. The beans are plump, of good form and average Sieva size, and of most excellent quality when cooked. The plant now before me is 16 inches high and 36 inches across, very bushy and has 19 flower sprays. It has 79 well developed bean pods; 38 of these are dry ripe, five fit for use, and 36 unripe or too young for use. This would indicate 43 pods as an average early crop; the 36 unripe pods are the result of a second spurt. This whole lot of beans, pods and all, ripe and unripe, weighs just 63 ounces.

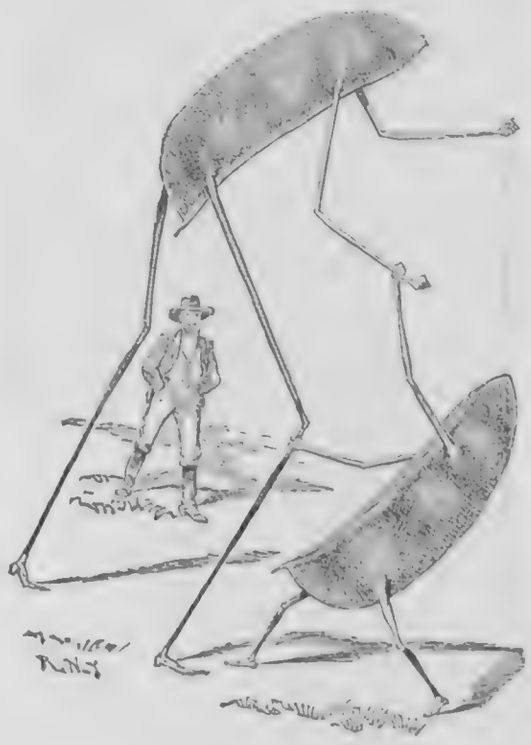
Sown May 17, we gathered our first beans July 26, just at the same time as we did ordinary Sievas sown at the same time, and 10 days ahead of large Limas sown on the same day.

KUMERLE'S DWARF LIMA belongs to the large-seeded or ordinary Limas and is a fixed dwarf variety. The plants have fine, healthy foliage. In habit they hug the ground rather than rise up a little in bushy form. Each plant makes four or five leading branches which at first are short-jointed. The flower spikes are axillary, short-stemmed and terminated by a few close-together flowers. The pods are short, unusually thick and knobby, displaying the seeds inside by prominent knobs; and one, two or three of these pods, but mostly one or two are borne, terminating each spike, and they contain two, three, or four beans each; but mostly three. The beans are very chubby and pressed so closely up against each other in the pods as to indent each other. Cut across lengthwise they measure seven-eighths of an inch (less than an average large Lima) and almost half an inch (more than a common Lima) in thickness. The quality when cooked is not as good, in my opinion, as is Dreer's Lima. The plant now before me has five branches, two of them spreading out three feet long, and the other three only 20 inches. While it was setting its crop of fruit this plant was no more than 20 inches long (I cannot well say "high," for it doesn't rise up); the extra length of the two branches has been a sport of a few weeks. At the same time there is no inclination to climb in any of the plants. It has borne 25 pods, all well filled and seven of them are now dry ripe; and all together—beans and pods—they weigh just eight ounces. It is still full of flowers, especially on the new growth; but shows little inclination to continue to set fresh pods; indeed, it is much more of a one-crop nature than are the large Limas of any variety. In point of earliness it is about the same as the common Limas; they all differ a little according to season and circumstances. Judging by its behavior this year, I should think if one depended on this dwarf Lima for beans, he would have to make successive sowings, the last as late as the end of June.

DWARF VS. POLE BEANS.

C. L. ALLEN.

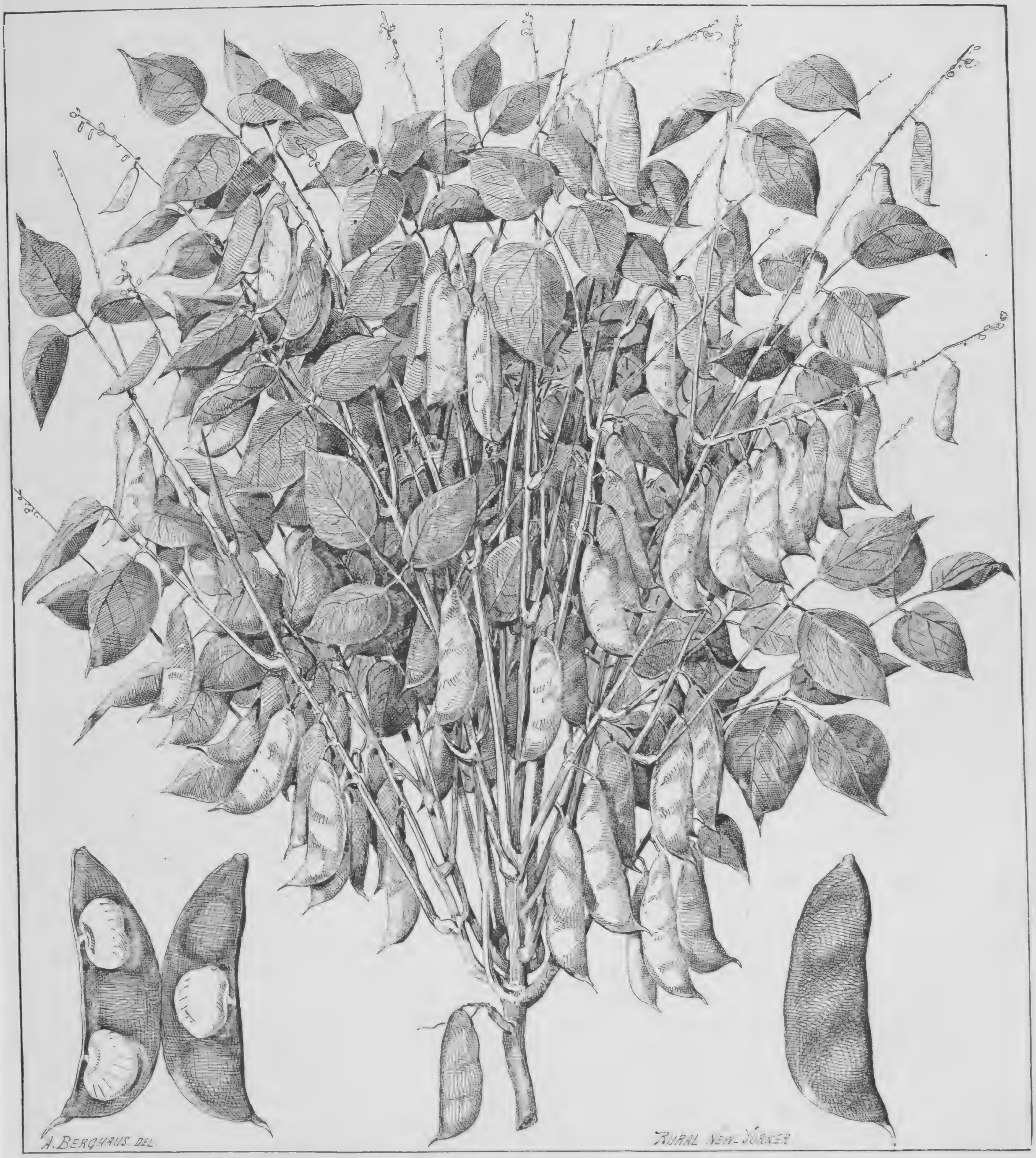
HOW can the best quality and greatest quantity of beans be produced at the least cost? My preference for general use is decidedly in favor of the dwarf or bush varieties, because they can be produced at least expense. Of course the desire to have a variety has much to do with one's preference. For instance, if the Lima be desired, there is no alternative—poles must be used. The bush Lima, (Henderson's) is a Lima only in name and botanical classification—a pseudo-Lima. As for the flavor that we expect in the Lima, it does not possess it. While it is very prolific, and of fair quality, it is late, and wanting in that



THE BATTLE OF THE BEANS. FIG. 257.

delicious, nutty flavor and richness that has made the Lima so noted. [Mr. Allen is mistaken. It is at least 10 days earlier

than the pole Lima. Eds.] The best comparison between the two classes is to be found in the well-known Horticultural, or Speckled Cranberry. Of this kind there are both pole and dwarf varieties. Of the latter there are several forms, differing considerably in quantity. As an illustration, take a plot of ground 20 feet square and fill it with the dwarf variety; plant in succession, say, at four different times, the first as early as it will answer; then at intervals of about three weeks, and there will be an abundant supply for a family of eight persons, both of snap and shelled beans the entire season. If the pole variety were planted, but one crop would be secured, and that not more than half the quantity that would be yielded by the former class, while the expense for poles and the trouble of setting them make the cost of growing the latter more than double that of growing the bush sorts. As a rule, the bush varieties are much the earlier, and I have seen two crops of many varieties grown the same season; that is, a variety was planted at the usual time, and in July it ripened its seed, which was gathered, sown and produced a crop of snap-beans in early October. I prefer the dwarf varieties mainly because they can be better produced in succession, yield better, and can be produced at less cost than the others. As for quality, the only pole bean I know that is equal to the Dwarf Horticultural, is the pole Lima, for which there is no substitute. The flavor of the Horticultural, both as a snap and shelled bean, comes next. It is better than the bush or dwarf Lima and equally productive; hence my choice.



HENDERSON'S DWARF LIMA. From Nature. The Open Pod Shows the Natural Size. Fig. 258.

THE ORIGIN OF HENDERSON'S DWARF LIMA.

In regard to the Bush Lima Bean we

(*Continued on Page 697.*)

Everywhere.

THE CLOVER SEED CROP.

REPORTS OF OTHER CROPS.

Illinois.

Woosung, Ogle County, September 28.—he present indications for clover seed, as compared with previous years, are far above the average, the acreage being exceedingly large. As the past two weeks have been generally favorable, the process of hulling has made fair progress. Seed has been yielding from 1½ to three bushels per acre. Quality good. Our other staple crops (corn, oats and rye) have also yielded above the average. The acreage of corn and oats is above the average, while the acreage of rye is somewhat below. Oats are yielding from 40 to 60 bushels per acre: quality rather light. Rye yielded from 20 to 30 bushels per acre; quality fair. With the exceptions of a few late-planted fields, corn was not injured by recent frosts. It promises to be good both in quantity and quality. R. W. G.

Dixon, Lee County, September 28.—The crop of clover seed is the best I ever saw. The hulling season has commenced; 16 machines are running. The manufacturers can't supply them fast enough. The Birdsell Huller is most in demand. In one day and a-half a machine hulled 97 bushels on my farm from 26 acres; I have 10 acres more to hull. We hulled 40 bushels in five hours on September 27. The seed is of very good quality. As nearly as I can learn about 16 counties in Northern Illinois have had a good crop. The dry weather was in its favor. Prices are very low; $3.50 to $3.75 per bushel. I understand that clover is good

in parts of Kansas. As to wheat, the yield was poor—from six to 14 bushels per acre, averaging nine bushels. It is selling for 70 cents. Oats were a very good crop, averaging 50 bushels per acre. Price 16 cents per bushel. Rye was a poor crop, averaging 14 bushels per acre; quality poor. Price 37 cents Corn is king. Early-planted is pretty good; late-planted was hurt by our August drought, and the frosts on September 2 and 19. Price 28 cents. Potatoes have made a good yield and are of good quality and I have scarcely heard of any rot. Price 20 cents. The Anglo-Swiss Milk Condensing Factory at Dixon, has so far been quite satisfactory to farmers. September 8 was its first pay day. It has been running 60 days, with only one condenser; with 1,000 cows they have 12 of them and are still adding more buildings. J. W. D.

ALDEN, McHenry County, October 5.—There is a prospect of a fair yield of clover. Hulling has not commenced. This is the first crop in several years. Oats a good yield, but light. Barley very poor. Wheat a complete failure. Corn about the usual crop; a frost in the middle of September spoiled it for fodder. Hogs $3.50 100 pounds. A. M. L.

Indiana.

FORT WAYNE, Allen County, October 2.—Counting 100 as an average crop of clover seed, the present crop is 50:

		price	$3.50	to	$4.00	per	bushel.
Corn,	75,	"	.33	"	.38	"	"
Wheat,	100,	"	.75	"	.80	"	"
Oats,	100,	"	.20	"	.25	"	"
Potatoes,	100,	"	.25	"	.35	"	"
Apples,	80,	"	.25	"	.50	"	"

We had wet and cold weather from May 12 to June 15, by reason of which corn was injured very much on clay soil. My statement is for northeastern Indiana, and in the southern portion of the State corn is a full average. F. P. R.

LAGRANGE, Lagrange County, October 2.—Clover seed is reported by thrashers to be turning out very well—possibly 20 per cent. better than last year's crop; much of the crop is yet unthrashed. Wheat is turning out 25 per cent. better than it did last year, except in some fields that were sown late or poorly fitted. Farmers are about done seeding and wheat is looking fine. Corn promises a fair average yield and was fairly out of the way of the killing frost which we had here on September 21 and 22; but very little was cut up, so most of the fodder has been greatly damaged. Oats were a very large crop; much more than the usual acreage was sown and the yield has been all of 40 per cent. above the average. Potatoes also were above the average, about 30 per cent. and are very fine. Apples are below the average in yield; there are only a few peaches. Pears a large crop. Strawberries were a failure; other berries and fruits were large crops. Garden truck all very good except late stuff which has been cut short by the dry weather. C. M. G.

SOUTH WHITLEY, Whitley County, October 3.—The clover seed crop in this locality was exceedingly good in quantity and quality. Wheat is looking first-rate. Corn crop about an average. G. F. M.

GOSHEN, Elkhart County, October 2.—Clover has been damaged considerably by the weevil, but is an average crop. We have had abundant harvests of all staple crops. E. S.

SOUTH BEND, St. Joseph County, September 30.—Clover seed as compared with previous years, is more than an average crop Corn is good. Potatoes are better. Wheat which was sowed late does not look very well. J. E.

NORTH WEBSTER, Kosciusko County, September 30.—Clover seed is not half a crop compared with the yield in former years. Corn is a fair crop with some. It was caught by early frosts. Early-sown wheat is looking well and plenty of farmers are still sowing wheat on corn ground. Potatoes the best crop raised here for several years, and there is no rot. Oats good. All kinds of fruit ditto. J. W. R.

LIGONIER, Noble County, October 1.—Clover seed in this section is good. There is about the usual acreage; yield from two to four bushels per acre; quality first-rate, and the seed is nearly all hulled. Weather cool and dry. Corn not more than two-thirds of a crop on that account. Wheat seeding is still unfinished and what is up grows slowly and gives poor promise. A full acreage has been sown. Potatoes plentiful and of good quality, having been planted largely upon low ground on account of the lesson learned from former dry seasons. W. W. L.

HARLAN, Allen County, October 1.—Clover seed is not as well filled as it has been in some years; but the acreage is large so that the crop will be more than an average one in this county. Hay is a large crop. Potatoes a full crop. Oats a large one. Wheat an average one. Corn a half crop. Buckwheat poor except Japanese which is good. The weather has been very dry here ever since June. Some farmers have not sowed their wheat yet, and but little wheat that has been sown has come up yet. This report will answer for several counties hereabouts. S. M.

HAW PATCH, Lagrange County, October 1.—The season has been good, except that it has been rather dry for corn. Clover seed (Mammoth) four to seven bushels to the acre—an extra large yield. Medium Clover two to four bushels. Corn will average about 40 bushels. Wheat averages 24 bushels, and oats 40 bushels. F. C. L.

BOURBON, Marshall County, October 5.—The present crop of clover seed compared with those of former years, is very poor. Wheat above an average crop. Corn an average. Potatoes a large crop, bringing 25 cents per bushel. Wheat in the ground is looking fine. S. B. T.

COLUMBIA CITY, Whitley County.—The clover crop is an average of those of other years here. Wheat is not looking well; the weather is too dry. Corn is a fair crop; some is not matured yet on account of frost and dry weather. W. A. S.

Kansas.

VIDETTE, Shawnee County, September 30.—From June 17 up to date the rainfall has been 15⅛ inches, the greatest fall at any one time being 2⅞ inches; minimum one-eighth inch. Temperature: maximum 98; minimum 36 degrees, mean 66 degrees. This has been the coolest season in this locality during my observations, for 20 years. Wheat is thrashing 30 bushels per acre; quality fine. Oats were killed by rust. Corn is perfect where it was thoroughly cultivated and the ground was not too wet. Potatoes are rotting badly. Garden truck is fine. Chinch bugs have entirely disappeared. The acreage of wheat sown is larger than usual. Wheat is bringing 65 cents; oats, 15 cents; corn, 20 cents; potatoes, 40 cents per bushel. All kinds of fruit abundant. J. E. N.

Michigan.

FLINT, Genesee County, September 30.—Clover seed will be below the average, owing to the weather being so very dry; we have had no rain in two months. Wheat is very good, averaging about 18 bushels to the acre; but it is below the average in quality, being more or less shrunken. Oats about the same as wheat. Corn a light crop. Potatoes below the average, but of good quality; no rot. Apples below the average. A. G.

LANSING, Ingham County. September 30. From my observation, I judge that clover seed, as compared with last year, has a larger acreage and the crop is very much better: growth not large, but very well filled. The late cutting of hay prevented some pieces from filling well; but it is mostly well ripened and well filled. Early potatoes very fine and plentiful; late crop somewhat shortened by drought: very dry here, winter wheat will make no root or top, unless rains come soon; apples not plenty, selling at $1. 25 to $1.50; corn below an average and much fodder was frozen one week ago. Oats and hay very good indeed. Wheat very poor and badly shrunken owing to the "green aphis:" Pasturage very poor; in fact, there is none, and I am feeding my herd of 40 cows as regularly and as much as in midwinter. Even with this care they have shrunken in milk more than one-third. A. A. K.

FARMINGTON, Oakland County, September 27.—The acreage of clover seed is about 120 per cent. of an average, but the yield will be light. We have had no rain to speak of since July 3, and the heads are not well filled and many seeds are shrunken. Potatoes are a very poor crop—only 35 to 40 per cent. of an average. The excessive rain just at planting made a very poor stand, and kept many from cultivating till the ground was like a meadow. The same remarks are applicable to corn, which will be about 50 per cent. of an average crop. Oats were rusty and not very well filled, yielding from 22 to 30 bushels per acre. Wheat was the poorest I have ever seen. It nearly all would rank as "rejected" or "no grade." The Longberry Kentucky Red was the best variety grown on our heavy rolling land. I had 11 acres of it and sold the entire crop for seed at one dollar a bushel; it was the only good piece in our vicinity. There is a very large crop of apples in this and adjoining counties, and the price has ruled firm at from $1, early, to $1.75 to $2 a barrel. Most farmers have sold their crops to the many buyers from New York, Chicago and other places who have canvassed the county. W. B. G.

BIRMINGHAM, Oakland County, September 28.—There will be a light crop of clover seed as compared with the crops of the last and previous years. The corn crop is very light, not half of a full crop. Potatoes very light also. Wheat not as large a yield as last year. Grass light, also barley and peas. Oats good—better than last season. Peaches and grapes not half a crop. Pears and plums a fair average. Apples a fair average crop, which is a surprise to all, as this is our "off" year for apples. Small fruits not an average crop. All small fruits were injured by late spring frosts. No fall feed. The entire season has been cool and very dry since the middle of June. O. P.

ROLLIN, Lenawee County, October 3.—Clover seed appears to be a large yield, but fewer acres were grown, some having been cut for hay and some pastured. Corn 80 per cent. of an average crop, mostly mature; wheat 12 bushels to the acre; average 55 pounds to the bushel. Oats a fair crop. Buckwheat good. Potatoes fair; some are beginning to rot. Hay a large crop. Apples extra good in quantity and quality. J. O. B.

GRASS LAKE, Jackson County, October 3.—There will not be 10 per cent. of a full crop of clover seed. Apples a good crop, or 75 per cent. Corn, 80 per cent. Buckwheat a full crop. Potatoes 75 per cent. Wheat 50 per cent. Beans are good. Oats are two-thirds of an average crop. WM. H. C.

ALLEGAN, Allegan County, September 30.—The yield of clover seed will be, I think, three times greater than for the last four years. A prominent dealer here thinks the present crop the largest ever produced in this county. Corn two-thirds of a crop. Potatoes splendid in quality and quantity. New seedings of wheat about an average. Pastures ditto. Apple crop below an average. Peach crop nearly a failure this year. E. H.

PLAINWELL, Allegan County, September 28.—Clover above an average, but not much has been thrashed. Some yields are: 17 acres, 73 bushels; 14 acres, 50 bushels; 20 acres, 55 bushels. Corn half a crop. Wheat, oats and potatoes above an average. Apples below. Late frosts and cut-worms, dry weather in July and August, also cool weather in August cut the corn short. J. C.

CHINA, Manistee County, October 2.—The season is very dry: but crops are better than was expected in the spring. Wheat is generally good. Corn is somewhat late and frosted, but there is a good growth of fodder. Hay was very heavy and well secured in good order. Potatoes good. Oats ditto. Prices are generally low except for butter which is in demand at 20 cents cash for No. 1. Apples about an average crop and selling at $1 per barrel hand-picked. There will be very little late feed unless we get rain very soon. T. D. E.

COLDWATER, Branch County, October 7.—The prospects are a little better for clover seed than they have been for the last two years; but on the night of September 21 we had a very hard frost that lessened the yield on a good many pieces. Hay was an average crop, but could not be secured in good condition owing to the wet weather. Wheat was light and of poor quality, being badly shrunken (and in some cases musty) as compared with the crops for the last few years. Oats were a good crop. Potatoes will be more than an average for this section. Apples are a fair crop and are selling at remunerative prices, bringing at present $1.65 and $1.90 per barrel; but, as usual, the speculator has the lion's share, for a good many contracted their orchards at $1 and $1.25 per barrel early in the fall. A. J. P.

MAPLE RAPIDS, Gratiot County.—Oats and hay are good crops. Potatoes quite good. Corn not more than half a crop. Wheat went from 10 to 27 bushels to the acre, but some is badly shrunken. Clover seed is below the average. Wheat on summer-fallow looks well; but the weather is too dry for it to do well on stubble ground. It has never been so dry here at this time of the year. G. C.

Nebraska.

DAVENPORT, Thayer County, October 3.—The weather in this part of the State has been fair during the past month or six weeks. Thrashing is nearly all done. Small grains are of good quality and yield. Flax made from eight to 15 bushels per acre and sold at $1 per bushel right from the machine. Winter wheat made from 25 to 40 bushels per acre, and owing to our good wheat crop the acreage sown this fall has been trebled as compared with last year's area. The crop has been nearly all sowed, having been mostly put in with pressed drills, and is coming up nicely. A. M. M.

New York.

GENESEO, Livingston County, September 30.—In this section clover has been a heavy crop, and an unusual amount of second cutting has been secured. From my limited knowledge, I should judge there will be plenty of clover seed thrashed out. As regards other crops, oats have turned out more straw than grain, the yield of the latter ranging from 25 to 40 bushels per acre. Wheat a fair crop. Potatoes almost a failure owing to wet season and rot. Corn poor. This is a great section for beans grown on the Genesee flats. Owing to late floods, almost every one, excepting on uplands, had to plant his beans twice and some three times over. A considerable number, however, after losing their first planting did not attempt a second one. During the first flood I believe there were some 200 or 300 acres of beans on the flats under water. Frosts are holding off, so there will be more of a crop than there would otherwise have been, but it will be probably less than one-half the usual aggregate. A. M. W.

HONEOYE FALLS, Monroe County, September 28.—No clover seed is raised in this section. Hay very heavy. Wheat and barley good. Oats and beans light. Corn half a crop. Potatoes less than one-third and apples one-fourth of an average. J. L. P.

NUNDA, Livingston County, September 29.—Clover seed is a much better crop than last season. Wheat yielded well and is of good quality. Oats are an exceedingly large crop, one piece of my own giving 75 bushels to the acre. Barley a light crop. Hay abundant and of fine quality. Beans rather a small amount, owing to wet weather. Potatoes a fair crop. There is not much decay among them and they are likely to bring high prices. Fruit almost a total failure. J. M.

JOHNSON'S CREEK, Niagara County, September 30.—No clover seed is raised here, nor has been for several years, all having been destroyed by the weevil: it does not blossom. Potatoes a light crop—ruined by blight about August 20; not rotting much. Apples a failure, quality very poor; much injury was supposed to be done by the heavy frost of May 29. Corn a light crop, a large growth of stalks, but no ears. Wheat, barley and oats below an average. Grapes an entire failure. G. R.

MENDON CENTER, Monroe County, October 3.—No clover seed has been raised in this vicinity for several years. It does not fill, owing, it is supposed, to insects at the roots. New seeding is first-class. Fall feed fine. Early-sowed wheat is looking well. Potatoes are less than half a crop and rotted badly on heavy land. Corn is generally light though there are some very good pieces on dry, rich land. Apples scarce and of poor quality. Wheat a fair crop. Oats: straw heavy; yield light. Few fields go over 50 bushels to the acre. Hay a fair crop. G. L. Q.

GASPORT, Niagara County, September 30.—Small or Medium Clover seed is raised in this part of the county and a very little of the large and some Alsike seed. Last year quite a good deal of seed of all kinds of clover was raised. The weevil has worked in the clover heads very badly and clover has not had any bloom, and the bumble bees are disappearing. Our main crop here is fruit which is poor and farmers feel the want of money. A. J. S.

Ohio.

TIFFIN, Seneca County, September 30.—The seed of English Clover is a medium crop, and that of the common Red Clover is

a very poor one. There are thousands of acres in this county that will not be cut. The prospect for the clover crop this season had been, as to the stand, the best that I can recollect, but the clover mite or the clover weevil has eaten it. The wheat crop is quite fair in yield and quality. The oat crop is fair. Corn and potatoes are about half crops. The latter are scabby and worm-eaten. I will have to feed two-thirds of my crop to the hogs on account of being so badly worm-eaten. Fruits of all kinds are very scarce and very inferior in quality. P. H. B.

FOSTORIA, Seneca County, October 4.—Clover seed is very poor this year, for we had too much rain at the time of cutting. Other crops are first-class. Wheat is coming up nicely. Corn is not very heavy. Prices are low. Good Timothy hay $8. Clover $5. A. A.

FAYETTE, Fulton County, October 5.—Clover seed has not been all hulled yet, but it has been a big crop so far, big clover yielding eight or nine bushels to the acre. Wheat will be a slim crop next year, the soil being too dry for it to come up and too dry for many to plow. Potatoes are a big crop, yet in some places buyers are offering a big price for them to ship. Apples are as plentiful as usual and large quantities are being shipped. Corn won't be an average crop owing to the cold, wet weather after planting. Cabbages will be almost a failure: too dry for them to head. G. F.

MARSHALLVILLE, Wayne County, September 30.—In this section I think there will not be more than 10 per cent. of a full crop of clover seed. It has been destroyed by what is commonly called the clover-seed midge; three-fourths of it will not be cut. Wheat and hay were full crops; oats about 80 per cent. of a full crop; corn 60 per cent. It has been injured by the white grub in the worst way I ever saw. Potatoes 60 per cent. of a full crop; they have rotted considerably; apples and peaches 20 per cent. There was a large crop of berries. E. B. Z.

LYONS, Fulton County, September 28.—Clover seed is a good crop, worth $4 to $4.25 per bushel. T. R.

ASHLAND, Ashland County, Oct. 5.—Clover seed will be one-third of a crop in this county. "Big Clover" will be only a full half crop as compared with former years. The midge is the cause of the failure. Wheat is a full crop and of good quality. The RURAL'S Diehl-Mediterranean with me was good, yield being 30 bushels per acre of first-class milling wheat. A large area has been sown to wheat again. Oats were a full crop and of good quality. Potatoes will average about one-third of a crop compared with last year's yield; blight is the cause of the shortage. Apples scarce. Peaches were a fair crop of good quality. Garden truck abundant. D. S.

LODI, Medina County, September 30.—I do not think there is one-fourth of a crop of clover seed in this vicinity as compared with previous years. The only seed we have is from a few pieces that were cut and left as a mulch in the middle of May. On these the crop is good. Potatoes not more than half an average crop. Wheat was above the average and of very fine quality. Oats and corn are average crops. I. W.

EMERY, Fulton County, September 30.—Clover, both Mammoth and common Red, never yielded better. Wheat never looked worse; many have not sown on account of the dry weather. Corn and potatoes are immense crops. W. P.

Pennsylvania.

WILLIAMSPORT, Lycoming County, October 2.—Next to no clover seed is raised in this county; in fact, very little is produced in this section of our State. All our seed is shipped here by dealers. Our staple crops have suffered very much this season from too much rain. They looked very fine up to June 1st when we were visited by one of the most destructive floods ever known, which swept all our bottom farms and country. The writer owns a very fine bottom farm one mile from the city, but the crops were all destroyed by the flood. Outside of the flooded district crops are only fair—not up to the average. Corn does pretty well. Oats are light. Potatoes a poor crop and there is considerable complaint of rot. Buckwheat is good. Wheat was a medium crop. The hay crop was good where the flood did not hurt it too much. Apples are not plentiful. Seeding this season is a little backward, owing to wet weather. We have had too much rain for farmers to get along well with their work, especially harvesting buckwheat and digging potatoes. What wheat was sown about the first to the 15th of September looks fine. Much more buckwheat was sown in this valley this year than usual owing to so many crops being destroyed in June, and all or nearly all report a good yield. D. M. K.

SPRING MILLS, Centre County, October 1.—There is no clover seed whatever in this county. It was destroyed by the midge. Indeed there has been no clover-seed crop of any account for the last 10 years. All the seed sowed for the last five years has been shipped in from the West. Wheat was about one-third less than an average. We had too much wet weather, and a frost on the 29th of May did some damage. The corn crop is an average one in this section. Most of it is out of danger of frost. Most farmers will commence to husk and crib about the second week in October. The oat crop is large in quantity, but not good in quality for it is too light. It was killed by rust and smut; the season was too wet for it. The barley crop is good. Not very much was sown this season on account of failures during the last two years. The grass crop was heavier than it had been for many years; but we had a poor season for curing it. Hundreds of tons of hay were spoiled by rain in our county. If the crop had not been so heavy that farmers could make some after harvest, there would not be enough for feed next winter. The potato crop is not more than half an average. Rot is playing havoc with all that are raised. Some farmers have lost nearly all by rotting. A good many tubers are still in the ground as the owners think they will not rot in the ground, while some will not dig theirs as the crop wouldn't pay for the trouble and expense. The grain that was sown early this fall looks promising. We commence to sow the last week in August and sow till the last of September. Some have not finished yet, but it is too cold now to get a good set for the winter. R. D. M.

ELIZABETHTOWN, Lancaster County, October 5.—An unusually wet season has caused an extra rank growth of stalks and weeds. Corn is one of the best crops ever raised here and is selling at 40 cents per bushel out of the field. Seeding of grain is about finished. Wheat averages 20 bushels to the acre. It has fallen in price, in four weeks, from 82 to 78 cents per bushel. Tobacco, one of the main crops raised throughout this county, is an average crop. Creameries, first established 10 years ago here, have increased until one is to be found every few miles throughout the surrounding country, and they have raised the price of butter, which sells here at present at 25 cents per pound retail. Our farmers usually buy a large lot of cattle about this time, feeding them throughout the winter, thus making a large amount of manure, and bringing their farms up to a good standard. Very little corn, hay or straw is sold and spring finds our farmers with fat cattle often weighing 2,000 pounds apiece, which command an extra price in the New York markets. Several thousand are sent away every spring. Real estate is selling very slowly, and land has fallen fully one-third from its price eight years ago. The grape crop throughout this section was a failure this year owing to the continued wet weather; but many varieties stood the test very well, showing that some of the newer varieties will resist the effects of a wet season better than some of the older sorts. Concord was almost a total failure, while Pocklington, Woodruff Red, Elvira, Delaware and Amber Queen were perfection. I have tried Duchess a number of times, but will discard it entirely; I have barely been able to have a single sound bunch of grapes of this kind. Eaton promises to be one of the main grapes of the future, while Concord cannot be produced as good as it was 10 years ago. H. V. C.

MENNO, Mifflin County, October 3.—The indication for clover seed is poor. Very little will be cut; some have only one bushel to the acre. I don't think there will be more than enough for seed. Potatoes are rather a poor crop and are still rotting. Corn is good—a little over an average crop. Wheat will likely average 16 to 18 bushels per acre. Oats are an average crop. There are very few apples. The wheat that was sown first is doing as well as I have ever seen. People have finished seeding, with a few exceptions. The last sowing is not growing fast. D. A. H.

HARRISBURG, Dauphin County, October 1.—Clover seed is not usually raised here, as it pays better to pasture for milk for the local markets. All farm crops have been good in spite of an unusually wet season. Corn extra fine. Potatoes rotted more or less as the ground was low or high. Oats not well filled and partly damaged by rain. Prices of produce are tending upward: Potatoes, 60 cents; butter 22@25 cents; eggs, 23@25 cents at the market. J. L.

WAYNESBORO, Greene County, September 30.—Clover seed will not be half of an average crop in center and south Cumberland Valley. C. W. G.

MIDDLEBURGH, Synder County, September 30.—Taking 100 as a standard, clover seed will be about 10. The season was too wet, causing a rank growth of other grasses. A great deal of seed is raised in this section when the season is favorable; but there will hardly be enough for home use this year. Wheat is very good: about 94 or 96 per cent. of a full crop. It was harvested in good condition. Oats are about 60 per cent. of an average and are in bad shape; most of the crop was sprouted before sheltered, and the grain is damaged for seeding. Potatoes were a good crop, 100 per cent., till the blight or rot struck them; about 40 per cent. were saved. G. S. S.

GREENSBURGH, Greene County, September 30.—The indications for clover seed this year are much better than for two or three years past. We expect a full crop in this vicinity. Potatoes are a very poor crop. Wheat and oats are very good. Apples are a very short crop. Grapes also a very poor crop. Corn is a medium crop. J. M. L.

JAMESTOWN, Mercer County, September 30.—The Medium Clover seed crop is a complete failure in northwestern Pennsylvania this year, and was nearly so last owing to the midge. But very little Mammoth Clover is raised in this county. Wheat is more than an average crop. Oats about 25 per cent. above an average. Potatoes less than half the usual yield. Apples and peaches nearly a failure. L. A. Mc C.

CHAMBERSBURG, Franklin County, October 1.—Clover seed about an average. Potatoes about one-half an average on account of rotting badly. Corn 20 per cent. above the average crop. Wheat 10 per cent. above. Apples about one-quarter of an average crop. Oats about an average. Grass and hay 20 per cent. above the average. Small fruits were about an average. Some hogs are dying from cholera. T. G. Z.

LOUISTOWN, Mifflin County, October 1.—Clover seed will not be more than 40 per cent. of an average crop. Wheat looks good, an average acreage. Potatoes scarce, blight cut them short and rot destroyed whole crops. Corn good. Fruit scarce. V. D. S.

SANDY LAKE, Mercer County, October 3.—In this section clover seed is nearly a failure. As compared with other years, oats are lighter, wheat heavier, hay rather heavier; corn about half crop, many pieces being nearly destroyed by worms; potatoes half crop and rotting somewhat. A large per cent. are too small for market. Buckwheat lighter. A. M. C.

HUMMELSTOWN, Dauphin County, October 8.—The clover seed crop will be about half that of previous years. Wheat a full crop. Corn will be over an average. Oats two-thirds. Potatoes a full crop. F. C. C.

LIVERPOOL, Perry County, October 7.—Clover seed is a poor crop in this neighborhood on account of the extremely wet season. Hay and oats were exceedingly good crops. Wheat and corn were good. Potatoes were not an average crop; the mildew killed them before they matured. They are also rotting to a great extent. W. T. C.

Wisconsin.

MILWAUKEE, Milwaukee County, October 3.—The Rural New-Yorker No. 2 Potato I cut to eight single eyes; yield, eight pounds eight ounces; the heaviest weighs one ounce less than a pound. One hill had four small potatoes not marketable; the other six hills had two good-sized ones each, and one hill had three. The potato is admired by everybody. The most remarkable features to me are the very small number of flat eyes and its shape. Of course I cannot speak of their cooking qualities. Barley is a good crop; oats and rye average ones; corn below an average, but ripe. Potatoes are fair and of the best quality I ever had in the 39 years I am here. Empire State and White Elephant are one-third rotten. They are on low ground; the rest are free of rot. The Beauty of Hebron excels. R. B.

APPLETON, Outagamie County, October 1.—The season here has been favorable for most kinds of crops. Winter wheat was sown quite freely last fall and it is a good crop, yielding, in some fields, as high as 30 and 35 bushels to the acre. Spring wheat is a fair crop; so also are barley and rye. Oats were never better. On my farm we thrashed 1,000 bushels from 20 acres, and they will over-run 10 bushels in 100 by weight. As high as 80 bushels to the acre have been thrashed this year. It was thought that corn would be a poor crop, but the frost has held off and where the corn was well worked we shall have good, sound corn and a fair yield. Potatoes are good and there are no signs of rot. There is plenty of hay and other fodder for stock. We have had neither too much nor too little rain and sunshine. We have plenty of apples and grapes, and small fruits were plentiful in their season. A good many cows are kept here and cheese factories are numerous—four or five in every township. The factory in our neighborhood (Freedom) took first prize for Cheddar cheese at the Wisconsin State Fair this year. Some cattle are raised for the local butchers, and a few sheep are kept on almost every farm. I do not know how well farming pays with us, but I do know that our farmers live, and build good houses and large barns. Prices of farm produce are about as follows: wheat, 75 cents; oats, 20 cents; barley, 50 cents; rye, 50 cents; potatoes, 25 cents; cheese, seven to nine cents; butter, 20 cents now. We have had no serious freezing weather yet. E. N.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

SUBSTITUTE FOR ROOTS FOR LAMBS, ETC.

D. C. A., Cattaraugus, N. Y.—1. Can I raise winter lambs without roots? 2. What is the best and cheapest method for getting rid of ticks?

ANS.—1. While roots are exceedingly useful for feeding sheep in the winter, they may be dispensed with by judiciously substituting other food, that has similar nutritious and alimentary properties. Roots are chiefly valuable for their succulence and laxative effect, thus helping in the digestion of other food. Silage has these same elements of value, and if by preparing hay and selecting grain wisely the quality of silage can be approached, its effects may be approximated very closely. Sweet clover hay cut and wetted and mixed with ground oats and linseed-cake meal, in due proportion, will afford a fair substitute for roots. For a ewe with a lamb three pounds of hay cut and wetted, and one pound of mixed ground oats and linseed meal in equal proportions, with a tea-spoonful of salt added, would make one day's ration. If any dry grain is given, let it be oats, or oats and peas together, and not corn. 2. To get rid of ticks use Thymo-cresol made by T. W. Lawford & Co., Baltimore, Md., and follow directions given on the packages.

FERTILIZER FOR APPLE TREES.

W. B. G., Farmington, Mich.—What kind of commercial fertilizer would be advisable for an apple orchard, and how much should be applied to each tree 25 years old?

ANS.—We should use raw bone, at the rate of 500 or 600 pounds to the acre, and unleached ashes all the way from 10 bushels to 40 bushels, according to the supply and price. In the absence of ashes, use muriate

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies.

of potash at the rate of from 200 to 400 pounds to the acre.

WASPS.

C. R. W., Westfield, New Jersey.—Are hornets of any use to the farmer?

ANS.—All wasps (hornets) are useful. They kill and eat such insects as house flies, carrot slugs, coddling larvæ, etc. As wasps do no harm at all, not even stinging if not molested, there is no reason for killing them, unless their nests are so located that one cannot help disturbing the insects.

Miscellaneous.

J. P., Lima, Pa.—Is there any cheap and durable contrivance for protecting young plants from the sun?

ANS.—We do not know of any.

A. W. C., Basking Ridge, N. J.—Would the RURAL recommend the use of stable manure on a six-year-old peach orchard on which some peach fertilizer was applied last spring? I am thinking of applying about three bushels to each tree, spread broadcast, before winter, as far as the limbs reach. If the RURAL does not recommend stable manure, what fertilizer would it recommend? Wood ashes cannot be obtained in sufficient quantity.

ANS.—We should use muriate of potash and raw bone liberally instead of the manure. We speak not from experience, but according to the advice of those who have had experience.

Discussion.

SUGGESTED BY MR. TERRY'S TOOLS.

S. B. H., CRAWFORDSVILLE. IND.—The RURAL gives a fine display of Mr. Terry's farm tools, and no doubt this will have a stimulating effect on many farmers to provide themselves with more implements. It will not have much of an effect on me, for I feel the need and importance of an ample supply of implements on the farm. There is not a week during which I do not feel the need of more tools than I have. Tools are of great value on the farm as they afford a great deal of help. Many of the RURAL readers no doubt have had to shell, or help to shell the corn at night to be taken to the mill the next day or the next time a grist had to be taken there. The hard cobs were used to rub off the grains, or the spade was laid on the edge of the tub, and the sheller sat on that and rasped the corn off on the spade. Now we have the hand-power corn-sheller, and need not give ourselves any concern about preparing a grist of corn. If it has been forgotten until one is about to drive out of the yard, only a few minutes are needed to get the grist ready. Forty years ago one of the greatest of the minor chores on the farm was sausage-making, or rather the chopping of the meat on a heavy wooden block set on legs, the choppers moving around it. The work of cutting the sausage-meat from five or six hogs extended away into the night, and the floor was covered with a mass of grease around the block. Now with an American or Enterprise Meat-chopper, a boy 12 years old will do the work better and in less time than three men could do it 40 years ago.

Since the mowing machine has come into use a new terror awaits the boy who has to turn the grind-stone, and his work is so unsatisfactory that one wants a man to turn it; but it is hardly less tiresome to the man who holds the sickle than it is to the one who does the turning. When one gets towards the end, the weight of the sickle becomes very tiresome and the result is that the work is not as well done as it ought, and one does not do it as often as it should be done; then the sickle is continually choking; or one sees that the horses are worked too hard, the grinding of the sickle is the least of the evils that beset him, and he reluctantly goes to grinding again; or perhaps for the lack of a hand to help him to grind he keeps on mowing, worrying himself and exhausting his team. Now with a "New Dutton Grinder," one needs no one to help him. The little implement can be carried to the field and the sickle can be kept sharp while the horses are resting. The machine makes the same bevel on all the sections; while on the grind-stone that cannot be done, or if it can one is tempted to make a short bevel to get a sharp-cutting edge with as little grinding as he can get along with. The little machine does a good job from beginning to end, and with so much less worry and work that when its worth becomes generally known, it will go with every mower. These implements I have tested. There are a great many others just as useful in their way, which have been tested by others, who might help some of us by giving their experience with them through the RURAL NEW-YORKER.

DRESSED BEEF NOT FEARED HERE.

G. D., CARYSVILLE, OHIO.—No Chicago dressed beef is handled in this section now. Some parties made an attempt to handle it here some time ago, but the concern proved short-lived, having lasted only about eight weeks; then it collapsed for the want of patronage: people here did not care to use the beef. While the concern lasted it affected the local butchers to a great extent by the reduction of the retail prices of beef. It retailed its beef at about 1½ cent less per pound, on an average, than the prices at which the local butchers had been selling; but they followed suit and reduced their retail prices and sold their beef at figures for the Chicago dressed beef, and as people preferred home-slaughtered beef they purchased that—hence the concern collapsed. It certainly is a serious disadvantage to the farmers wherever the dressed beef is handled, and to the farmers throughout the country in general, for the local butchers in order to maintain their trade must meet the prices of the Chicago dressed beef, and therefore must either handle this beef or buy their stock at a much lower figure from the farmer, who would thereby be the loser.

I do not think, however, that the Chicago dressed beef trade is entirely responsible for the present depression in the prices of beef cattle. It is true that cattle can be slaughtered and dressed in large numbers in those large slaughter-houses where all the best appliances for such work are at hand, much cheaper than the work can be done by other parties with fewer and poorer conveniences and on a less extensive scale, and the cost of shipping the dressed beef to the place of consumption is certainly less than that of shipping the live animals and then slaughtering them and preparing them for market. It seems to me that the chief cause of the present depression in the prices of our cattle lies in the fact that cattle in vast numbers can be raised on our Western plains and grazing lands, with comparatively little trouble and expense. Beef cattle can be raised there and sent here to market for less than the raising of them here would cost us if we count our labor in the cost of production. It would therefore be folly for us to compete here with the stockmen of the Western plains in the production of beef cattle. It is from those Western sources chiefly that the members of the Chicago dressed beef syndicate procure their supply of cattle. They slaughter, dress, and ship the beef to the place of consumption at a minimum cost and sell it in our Eastern markets at a figure for which we could not possibly raise it ourselves and realize a fair profit.

AGAINST PLANTING TREES EARLY IN THE FALL.

C. K. M., PEKIN, ILL.—I notice in the RURAL NEW-YORKER of September 14th an article by Joseph Meehan on the early fall planting of deciduous trees. An article similar to this has been going the rounds of the agricultural papers for the last three or four years, which has no doubt caused an immense amount of loss both to nurserymen and planters. While Mr. Meehan's advice may be good for some localities, it is certainly very bad for this section where the conditions are different. If 100 fruit trees of ordinary varieties were taken up and transplanted according to Mr. Meehan's directions on September 14th in this locality, I am confident that not one would be found alive by spring. Actual tests made to-day (September 30) show the earth to be 30 degrees colder than the air—soil 54 degrees; air 84 degrees at noon—and this difference will continue, with some variations, all through October. This is not a matter of conjecture, but something I and others have tested to our sorrow. In the autumn of 1886 I bought eight apple trees from an agent to fill out vacancies in my orchard; a neighbor also bought eight for the same purpose and another neighbor bought 26. The trees came to hand early in October; the leaves had been stripped off by hand, but the trees were thrifty and well rooted. They were planted as soon as received and the weather following was as usual—clear and warm with drying winds during the day and cold frosty nights. The following spring my trees were all dead except two of the Wealthy variety; while my neighbors lost every one of theirs. The same agent sold over $1,000 worth of stock in this locality, all of which, so far as I have heard, went the same way. Apple trees of my own growing which were planted in the latter part of November after the leaves had fallen, all lived and did well. When those planted early were taken up in spring the roots were alive, but had formed no fibers nor had they even callused where they had been cut off. Only last spring one of my neighbors told me of the loss of $18 worth of stock planted in the fall of 1888, and this is but one out of hundreds of cases, all the losses arising from planting too early, before the trees had matured their growth.

ELECTRICITY SUPPLANTING HORSES.

J. A. F., TERRE HAUTE, IND.—If in the article in a late RURAL in regard to electric railways and the throwing on the market of so many horses, and the prospective cutting off of the demand for them for street cars, the total number of horses in the United States had been stated, it would be at once seen that there were no grounds for alarm. The statement was that the horses used in 1880 on street railways in the larger cities numbered about 80,000 and that the smaller cities might increase the number 20 per cent., making about 100,000 in all. Well, according to the census of 1880, the total number of horses and mules then in the country was 12,270,296, so that if all the horses and mules in use on street railways were dispensed with, it would be a loss of less than one per cent. If we take into consideration that the change will be gradual it can be seen that the effect on the market will be exceedingly small. That the throwing out of use of these horses for street-car purposes will have no serious effect, can be clearly shown by the following calculation: Supposing that the mortality of horses, which doubtless varies a little, should increase by just one death yearly in each township in the United States, would the consequent loss be perceptible? Well, if every horse now employed on street railways should be displaced in five years from this date, it would have less effect than the increased mortality mentioned. The horses employed being 100,000, the displacement in each of the five years would be 20,000. There are 2,690 counties in the United States, and supposing the counties averaged 10 townships each, it will be seen that the increased mortality would be 26,090 or 6,090 above the loss from the street-cars. The yearly mortality among 12,000,000 horses cannot well be less than one million and the addition of 20,000 to this could make no noticeable difference. The calculation shows what a great country we live in. Reference was made to the number of men that would be thrown out of employment. A similar calculation in regard to them would show similar results.

PLAN OF BUILDING.

C. T. SWEET, SWANTON, MD.—In the RURAL of September 7, page 591, I gave a short account of a house which I thought would prove cheap and comfortable for farmers. The following letter from a man in Pennsylvania is a sample of several I have received.

"In the RURAL NEW-YORKER of September 7, is a plan of a farm house which I like very much. Can you furnish detailed working plans and lumber bill for the same, and if so, at what price? For my own use I should have a cellar under only half of the building (the kitchen side), as I propose having a small ice-house with a milk-room, etc., convenient to the kitchen. I think I should have the house warmed with a hot-water heater; but, of course, I would want the necessary chimneys. There should be tanks in the attic, of course, to furnish water for the range and heater. It should be plainly finished and there should be no 'gimcracks,' for I would want to keep the cost down as near to $1,000 as possible for building."

I am not an architect, but a machinist. My plan was to secure several parties to cooperate with me in getting plans and specifications from some reliable architect for such a house as I indicated. Where several parties would share the cost of such plans the expense to each one would be very light. It would be a bit of practical cooperation that might prove useful and economical to those who want such a house.

R. N.-Y. If any of our readers want to secure plans on this basis they can communicate with Mr. Sweet or with the R. N.-Y., as they prefer.

EXHAUSTION FROM MOULTING.

P. H. J., HAMMONTON, N. J.—In the RURAL of September 28, I find the following item:

"Here is a note about hens with clipped wings: 'White Leghorns with clipped wings are apt at moulting to droop and appear sick. The quills in the clipped wings are not shed as quickly as those in the other wing, and require to be gently extracted. At least this is the observation of a Jersey-woman.'

Have any of our readers noticed this?

EDS."

The lady has evidently attributed the drooping to clipping the wings when it is really due to general debility from moulting. Whether the wing feathers are clipped or not, they will be dropped only when the proper stage of progress arrives. It is beneficial sometimes to pull out nearly all the feathers. Moulting is a trying ordeal with some hens; but the majority of the losses occur from failure to feed food rich in nitrogen, as the rapid growth of new feathers demands nearly all the elements that enter into the composition of flesh and bone. Moulting is more trying with Leghorns than with Asiatics. One of the foods for moulting hens is half a table-spoonful of linseed meal, three times a week, in the soft food.

DRESSED BEEF.

L. F. ALLEN, BUFFALO, N. Y.—The Chicago dressed beef trade has not yet been sufficiently developed for me to give an opinon on its advantage or disadvantage to the people where the meat is sold. Our local butchers are opposed to the business on the ground that it is cutting off the supply of beef cattle from the neighboring farmers who formerly supplied them. If continued by the Chicago men, it will be a damage to our farmers who breed good beef cattle. Besides that, the dressed beef may be more or less diseased without the consumers being able to discover it while purchasing. As a rule, I am opposed to it; but without further experience I cannot give a definite or conclusive opinion.

THE TAYLOR BLACKBERRY.

D. L. B., NUNDA, N. Y.—In a late R. N.-Y., in speaking of different varieties of blackberries, I think the Taylor does not get the credit it deserves. It is spoken of as rather small for market; while with me it is nearly as large as the Kittatinny and of much better quality, besides being at least one-third more prolific. It is also hardy—much more so than the Kittatinny growing beside it, and is free from rust. I think so highly of it that I have set out a new patch this year and discarded the Kittatinny. I have tried the Early Harvest and Snyder and discarded them as worthless here.

E. C. B., MIDDLETOWN, PA.—The past season has brought me a bit of experience that I am not able to understand. Perhaps the RURAL NEW-YORKER or some of its able correspondents may help me out. It is as follows: My Sharpless Strawberries produced berries of a different type. In form they were like the Charles Downing, but larger, and the seeds were more prominent. They were also a little earlier than the Downing, and four to six days earlier than the Sharpless. Their flavor differed from that of any variety I know; but resembled that of the Sharpless more nearly than any other. In some spots they were abundant; in others there were only a few; while in some places there were none. The beds of the first and second crops were the same in this respect. Nothing strange was noticed I believe or at least only a trifle in the two-year-old bed a year ago. In the same field alongside of these berries were Manchester, Crescent, May King, Cumberland, Jessie, Bubach, etc. I am at a loss to know if they had become "mixed," or if hybridization in fruit could have taken place. I never discovered any difference in the foliage.

R. N.-Y. We should say they are mixed kinds.

A. M. LAGRANGE, ALBANY COUNTY, N. Y.—The following is a copy of the label that I put on every bale of my hay. This is one of the ways in which I try to "make farming pay."

"This hay was raised on upland, chestnut timber soil; gravel, sand-loam and clay-loam land. The chaff is taken out as much as possible. Produced by A. M. LaGrange."

What Others Say.

THE HICKORY, says Prof. Sargent in Gar-

den and Forest, is purely an American tree. The eight species which are known all belong to the southern half of the North American continent, with the headquarters of the genus, as represented by the greatest number of species in any one locality, in the valley of the Red River, in Arkansas, with one species pushing far south along the Mexican Sierra Madre. No other country or region of the earth can boast of an indigenous hickory-tree, although it is quite within the bounds of possibility that one, and perhaps several species may still be found in the unexplored mountain districts of Central China.

There is no wood at once so tough and strong and true. It is the hickory-wood in its handle which has carried the American axe round the world, driving, wherever it is known, all other axes out of the maket; and it has made possible those light carriages, which in turn have made possible the American trotting horse, one of the marvels of these modern times, and probably the best example of what can be accomplished, by careful breeding and persistent selection, in the development of domestic animals for a special purpose. No other tree is known whose wood is tough enough and strong enough to stand the strain imposed upon the American trotting-sulky and without the modern sulky and its heavier forerunner, neither breeding nor training could have produced that race of horses which many Americans look upon with joy and admiration.

The area of the region in which the hickory grows to perfection is really small in comparison with the demand for it; and when no substitute can be found for a particular wood it must in time be exterminated however abundant the natural supply, unless measures are taken to increase and perpetuate it artificially. And it would appear that of all our trees the hickory is the one which should be planted wherever suitable land can be spared for it; and it should be protected and cherished, in view of the ever-increasing demands the world is making and must continue to make on this tree

SPIRIT OF THE PRESS.

PROF. SANBORN, as he expresses himself in the American Agriculturist, does not believe in seeds running out. If the conditions surrounding seeds grow more unfavorable, the crop will decrease and the seeds will give evidence of decreasing vitality. If the conditions grow more favorable one may look for the seed to increase in potency and yield. The change in the locality of a seed must be, so far as climate is concerned, from the less to the more favorable climate and never the reverse. In the one case improvement will occur, and in the other the reverse. Likewise, the oft-repeated advice to change seed with our neighbors will hinge on the same principles before enunciated. Change of seed of the same variety from farm to farm will work well for one party to the exchange, and poorly for the other. Prof. Sanborn would expect to receive advantage by sowing a wheat grown on a farm richer than his own, and where the wheat actually yielded more than that of his own farm, on the same principle that a breed of steers bred or fed into greater productiveness, like the Short-horn over the scrub, would have greater powers of growth. On the other hand, if he took wheat from a poor farm where it had been fed down to a low limit of yield, he would expect, like a stunted race of men, this effect to be for a while manifest.....

DR. HEATH affirms, in our neighbor above quoted, that potatoes fertilized by sea-weed produce a large crop of tubers free from grub-eaten spots. The sea-weed is rich in protein, containing from 20 to 25 per cent. It is from this fact that pigs and fowls greedily devour fresh sea-weed, and especially the rock-weed in it, which is very rich in protein.....

DR. HEATH says that if the farmers generally of the south side of Long Island knew the remarkable fertilizing properties of sea-weed, as do most of the European seaside farmers, they would save half of the expense they now are compelled to incur for manures. A load of sea-weed is worth as much as a load of New York manure, and it is conceded that New York City manure is super-excellent, because of the high feeding of city horses.....

GLADIOLI blooming at this late date are as rare as they are beautiful. The R. N.-Y., taking Mr. C. L. Allen's advice, made its last planting two weeks later than usual and the reward is a charming display now when nearly every sort of flower has bloomed and passed away.....

LAST YEAR a correspondent of Green's Fruit Grower gathered a lot of dry maple leaves, put a few in the bottom of barrels, then a layer of apples, and then a layer of leaves, and so on until the barrels were full. He then covered them with leaves and they kept nicely and were sold in the spring for $2.50 per barrel, while he could get but $1 in the fall. He sold some in May to a dealer and he helped pick them over. The dealer said he never saw apples keep so well in his life. Some of the barrels didn't have a dozen specked apples.....

WILLIAM FALCONER tells the American Florist of a new chrysanthemum, soon to be introduced, of the style of the celebrated Mrs. Alpheus Hardy, except that it is pink instead of white. It comes from Japan and is in the hands of Peter Henderson & Co...

ACCORDING to the London Garden a double Lilium auratum has been sent to England from Japan.....

A "BULLY" ARRANGEMENT.—John M. Eddy, of Saratoga Springs, N. Y., the New England Homestead says, has a method of breaking bulls that is both practical and economical. He takes the animal at any age and puts on the same harness that he would use on a horse, turning the collar the opposite side up, and hitches him into a two-wheeled cart in some large field where there are no trees. He then gets in for a ride, letting Mr. Bull go where he wants to. When the bull begins to tire he continues to drive him until he is thoroughly conquered. After the first trial he has no difficulty in working him. But he always keeps a rope attached to the ring in the nose so that the animal cannot run away. Mr. Eddy has a four-year-old Holstein bull that has drawn all the manure on the farm the last year, and now does all the work, such as drawing corn-fodder for 21 cows every day and earth for the stable. He says that considerable care should be taken not to overload the animal for the first few weeks, for if once balky he will make trouble.....

COLMAN'S RURAL WORLD shows a disposition to be very fair in its consideration of Montana. It says that there may be a spell or two of very severe cold weather during the winter, but those who live there say the air is so dry they do not feel the cold weather as much as they do elsewhere when the thermometer is at zero. It concludes its remarks as follows: "It is only those who want homes and who are not able to buy them that should go. Every citizen is entitled to 160 acres by simply settling upon it and complying with the Homestead Laws."....

TO BE in debt is to be in danger, says a thoughtful editorial in the Times, and as life is uncertain and a mortgaged farm is a poor inheritance for one's family in case of death, every mortgage should be secured by a life insurance for an equal amount, so that in case of death the debt could be paid off. This security is as indispensable as a fire insurance and quite as cheap, and if it is once provided for it would almost certainly be secured for life, affording a safety fund which would make unnecessary that close economy needed to lay up savings as a provision for the future which cramps the family and stints them of many enjoyments which go to make farm life pleasant and profitable.....

WHAT is the comparison between a pair of horses that will draw a plow at the rate of two miles an hour and another that will do the same work at four miles? Henry Stewart argues that to plow an acre is worth at least $2. The plowing of 40 acres is worth $80. The slow team earns $40 while the fast team earns $80. This difference is equal to the interest on $800 at five per cent. So that the farmer who keeps a slow team might profitably pay $400 for a fast-walking pair of horses more than the ordinary market value of the horses, or $600 or $800 for the better animals and yet make a profit.....

MR. HENRY M. FLAGLER, the Secretary of the great Standard Oil Trust, says of himself, according to Harper's Weekly, that he made his start by the exercise of the most rigid self-denial, and that he was distinctly a mean man until he had made his first million. A man, he says, ought to be stingy until he has accumulated money, in order to be able afterward to be as generous as he likes.....

JACOB BIGGLE says, in the Farm Journal, that he has observed that a place kept in nice order will sell for a greater price than one allowed to run down. One hundred dollars a year for ten years spent in keeping things fixed up, will add more than one thousand dollars to the price of a farm that is offered in the market for sale; and more than this if taste and skill be brought to bear in the adornment of buildings and door-yard. Fifty dollars invested in beautiful trees and shrubs for the lawn may add several hundred to the value of the farm. He has seen such results brought about many times, and in his own experience he does not need to regret the money spent in this way.....

IT is well to remind our readers that rhubarb may still be planted. Cover over the sets with straw or leaves until early spring. Six plants in good soil will supply a family of six.....

MAGNOLIA CORDATA has given an abundant bloom this fall. During early September more flowers were borne than in June. The tree is 20 feet high and 14 years old from the nursery. It bears fruit very sparingly.

ONE of the showiest trees at this time is the Umbrella Magnolia. It bears its rose-colored oblong fruit in abundance, while its great leaves are among the last to wither and fall from the effects of frost.....

WORD FOR WORD.

——HOARD'S DAIRYMAN: "The good lady who made the premium butter of 50 years ago, who raised the cream in six-quart pans, who skimmed the cream from sour milk, who guessed at the temperature and the salt, who churned in the good old way, is still on deck and is making good butter and taking premiums at the present day, *when the conditions favor her.*"

——"HAVE we not often noticed at dairy fairs that Mrs. Smith, who was awarded the first prize for butter, when called upon to describe her mode of manufacture, has astonished all the best butter-makers and caused them to wonder how it was possible for any one to follow the rules given and produce a fine article of butter?"

——WE need not hunt very long for the key to the situation. A uniform quality and maximum quantity, require uniform conditions. What will make good butter to-day will do it to-morrow, and every day in the year."

——NEW ENGLAND HOMESTEAD: "The credit system causes the financial death of thousands of farmers. In no line of business is it abused to a greater extent than in the fertilizer trade. The manufacture and sale of fertilizers is a business requiring immense capital, especially where sales are made on credit and consumers have to bear the burden of this credit. The Homestead contends that in the purchase of fertilizers, and, indeed, of farm implements and supplies generally, it is cheaper for farmers to borrow money on their notes or mortgages and buy for cash than to pay long prices for goods bought on credit. In the latter case they have to pay from 10 to 40 per cent. interest on the money which represents the real cash value of the goods purchased. But where they pay cash, even if they use borrowed money to do it with, the expense is only from five to 10 per cent. according to charges for money in various sections of the country."

——GOODALL'S SUN:

LITTLE MORE SIDE HER.

"A fellow gathered apples
One September afternoon,
And thinking of his loved one, said:—
'I may be side her soon.'

But the apples might have answered.
'Don't you brag so, like a loon,
We're as good as any lover:
For we may be cider soon.'"

——WASHINGTON CAPITAL: "When it comes to cutting down cabbage the cook's word is slaw."

——DETROIT COMMERCIAL:

"If a stranger comes among you,
And you find him kind and true,
Why not mention it to others?
They may learn to like him too."

——FARM JOURNAL: "Sheaf oats, cut short and made into a 'cut feed,' with one quart of rye meal and two quarts of bran, make a splendid feed for the average farm horse."

——"It is hard on a cow's nerves to keep her brush still while being milked and the flies and mosquitoes are bad. Can you keep right on milking if two or three mosquitoes are singing in your face?"

——LONDON LIVE-STOCK JOURNAL: "The conversion of old horses into extract of meat need not have created such a very great sensation as it did when it came out in a case brought up by the Society for the Prevention of Cruelty to Animals. The process, says a correspondent, has been carried on for a long time in many ways. In the days before the Margarine Act, many a one had his breakfast toast buttered with prime 'Dorset' churned from the bones of some old horse that may have dragged him to business many a time, and yet he never thought anything about it. Horses are too good to go to the dogs nowadays, at least too profitable. Barrels of horse-grease are frequently shipped from this country to Germany."

"'ALMOST persuaded' harvest is past!
'Almost persuaded,' doom comes at last
'Almost' can not avail
'Almost' is but to fail!
Sad, sad, that bitter wail—
'Almost—*but lost!*'"

——INDUSTRIALIST: "'BOOM' IS DYING.—In the majority of cases 'boom' has proved disastrous, and has earned for itself a definition by which it might properly be regarded as a contraction or corruption of boomerang. Certain it is that the term possesses the chief characteristic of that instrument. Lexicographers of the future will define 'boom' as an abnormal, unhealthful growth, which, on subsiding or disappearing, leaves the object of its attack in a paralytic state. 'Boom' is distasteful, obnoxious."

——DAVID DUDLEY FIELD: "It takes longer and it is harder to punish a criminal in this country than in any other civilized country in the world."

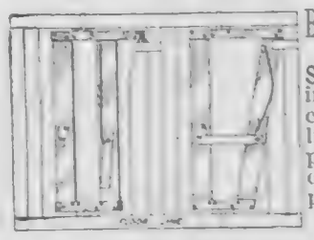
Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

Dyspepsia's Victims are numbered by thousands Do not continue in misery, but give Hood's Sarsaparilla a trial. The many remarkable cures it has effected warrant us in urging it upon your attention if you suffer from indigestion, sick-headache, biliousness or other stomach disorders Be sure to get Hood's.

NOTHING ON EARTH WILL MAKE HENS LAY LIKE SHERIDAN'S CONDITION POWDER

Highly concentrated. Dose small. In quantity costs less than one-tenth cent a day per hen. Prevents and cures all diseases. If you can't get it, we send by mail post-paid, One pack. 25c. Five $1. 2 1-4 lb. can $1.20; 5 cans $5. Express paid. Testimonials free. Send stamps or cash. Farmers' Poultry Guide (price 25c.) free with $1.00 orders or more. L. S. JOHNSON & CO., Boston, Mass.



BOON to DAIRYMEN
Perfect Swinging Cow Stanchion. Self-locking by entrance of cow's head. Free delivery at principal points. Send for circular. Mention this paper. Scott & Locke, Orford, N. H.

TORNADO SELF-FEED CORN & COB MILL

Our 26 sizes American and Hero Mills—too well known to need remarks here. 22,000 NOW IN USE. Sent on trial.
Send for handsome Descriptive Catalogue and special prices of our Corn and Cob Mills, Hero Mills and Horse Powers, Feed Cutters, Wood Saws, etc.
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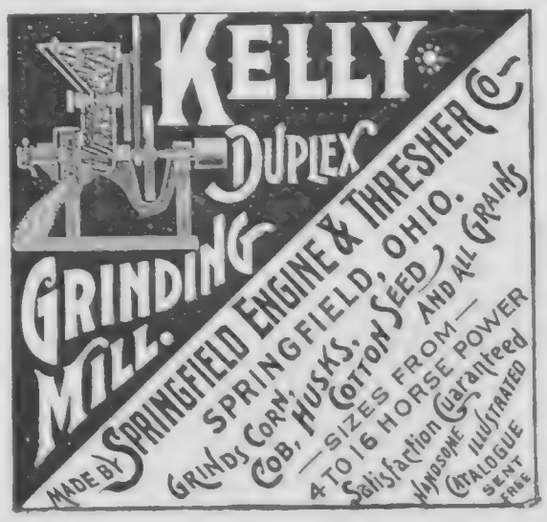

THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, OCTOBER 19, 1889.

THREE DWARF LIMAS.

"I'LL give two thousand dollars," said Peter Henderson a year ago, "for a prolific bush Lima that shall bear beans (pods and seeds) as large as those of the pole Lima." It occurred to the writer that he would make successive plantings of the Henderson's Dwarf Sieva and cross them with pole Limas. This was done, but it was found impossible to effect a cross, simply because the pistils were so tightly coiled and surrounded by the stamems as to make separation impossible until too late—that is, until the pollen of the anthers was mature. Strangely enough, at this very time, the Kumerle, a dwarf Dreer's Lima, was being offered for sale, while a little later a dwarf large Lima was announced. True it is that successes, like misfortunes, "never come singly."

"THREE blind mice,
Three blind mice;
See how they run,
See how they run."
etc, etc.

The head-lines on the first page, "Three Lima Beans," etc, will be seen to be a parody on the above well-known "round" song.

THE last planting of our Kumerle Dwarf Lima is now, after two or three frosts, well filled with beans. The pods are large and well filled. The objection made to the new dwarf Limas—that the beans rest on the ground and are covered with soil—does not amount to much. What is the objection to throwing them into a pail or tub of water?

CONSIDERABLE space is given this week to a consideration of bush and pole beans in general and of pole and dwarf Limas in particular. The R. N.-Y. has not tried Burpee's Dwarf Lima, as it is not as yet in the market. But we have tried both Henderson's and Kumerle's. Our opinion is that these beans have come to stay. The Henderson will be valuable for its earliness—the Kumerle as a dwarf Dreer's Lima, and the Burpee for a Large Dwarf Lima. Thousands of people, those especially who have a limited garden area, do not raise pole Limas because of the trouble and expense of procuring and setting the poles. These dwarf varieties require no more space than any of the bush beans, while the pole botheration is entirely avoided.

A COMPANY with a capital of $300,000, has been organized to build an extensive new stock-yard at Philadelphia. Its promoters are Western men who wish to ship cattle on the hoof to that point and there dress the meat wholly for export, working up all the "waste" products, on the spot, into glue, tallow, bone-black and fertilizing material. It is claimed that the beef killed at the seaboard for shipment abroad will be given preference in foreign markets over Western dressed beef as fresher and more wholesome, and that the company has made very favorable terms with the Baltimore and Ohio Railroad to enable it to compete with the Chicago and Kansas City syndicates. If the meat be all exported, the new enterprise will not have much effect on the prices of Eastern stock; while, as a competitor with the Big Four, it will have a tendency to raise the price of cattle in those sections of the West—chiefly Colorado—from which it will obtain its supplies.

ONE of the largest loan and trust companies doing business in Kansas has collapsed, and another has decided to go into the hands of a receiver and stop business. Both made loans chiefly on farm mortgages, using Eastern capital, and the headquarters of both are in Boston. The business of late has been a losing one. The Western agents looked more carefully to their own interests than to those of their distant employers They made loans very recklessly, it is charged, as their commissions depended on the amount of business they did, not on the security of their investments. It is claimed that in many cases they lent money, not on the intrinsic value of the farms, but on their prospective value under favorable contingencies, or on their fictitious value due to transient "booms." The visionary values were never realized; the fictitious values collapsed with the booms that created them, and heavy losses were incurred. Many farms were found to be worth much less than the amount loaned on them; the owners abandoned them, and the mortgagees were left despondent. It is asserted that other associations of the kind operating in Kansas and other Western States, can escape the same fate only by prompt and prudent action.

A CHECK ON A GIANT MONOPOLY.

THE most powerful, offensive and dangerous monopoly in the country has just received a judicial check. For a long time the Standard Oil monopoly has claimed the entire use of all lands leased for gas and oil rights only, in Ohio. Under this practice immense tracts have been retained in the grasp of the giant octopus to the detriment of public improvement and private enterprise. The Judge of the Court of Common Pleas of the State has just decided that this is all wrong—that the leasing of land for gas and oil rights does not prevent the owner from acting as he pleases with regard to the surface rights. With its customary shrewd unscrupulousness, the monopoly first secured the leases at comparatively low figures on the supposition that the "royalty," or subterranean rights alone were conveyed, and then it put in a claim for the whole. Of course this decision doesn't finally settle the matter; for the "Standard" is sure to appeal. It hires its lawyers by the year, so that further litigation will cost it little or nothing; while an appeal will be an expensive matter to its opponents, and is certain to have a deterring effect not only on the parties to the present case, but also on intending litigants. How many poor sufferers are withheld from asserting their just rights against railroads and other powerful corporations by the certainty that winning the first decision is only the commencement of protracted and expensive litigation, which is sure to harass and likely to impoverish them before the final arbitrament of the case, however just their claims.

Hence, as a rule, people are willing to compromise for a part of their rights or to forego them altogether rather than risk costly and interminable litigation with tricky and unscrupulous corporations. Moreover, by protracting litigation these bodies are for years enabled to retain their unjust holdings, or their opponents are kept out of what justly belongs to them. In the present case the people who own the land, in spite of the decision in their favor are hardly likely to invest heavily in its improvement until the court of final resort shall have passed on the matter. Combination is the only means of successfully combatting such organizations, and the land-owners here should combine to defray expenses and push the case.

OUR TRADE WITH OUR SOUTHERN NEIGHBORS.

THE Pan-American Congress is, very justly, attracting a great deal of attention just now as likely to lead to closer friendly connections and broader commercial relations between all the independent States on this side of the Atlantic. A few figures illustrating the condition of our trade with our southern neighbors are therefore in order. Reports of the Bureau of Statistics show that in 1860 the exports of the United States to all the countries represented amounted to $33,251,672. In 1888 our aggregate exports were valued at $695,954,507 and of this amount our exports to these countries were valued at $52,792,216—an increase of 52 per cent. in 28 years. In 1860 the British exports to the same countries amounted to $68,271,831, and in 1887 they were valued at $115,012,635—an increase of 68 per cent. in 27 years. Thus Great Britain's increase of exports during the period under review was nearly as great as the total amount of our exports to those regions in 1888.

On the other side of the account, statistics show that in 1860 the imports into the United States from those countries were valued at $73,342,817, and in 1888 they had increased to $158,656.819 out of an aggregate of $723,957,114. In 1860 the imports of Great Britain from the same regions amounted to $68,062,797, and in 1887 they had only increased to $68,619,217. From these comparative figures it would seem that our southern neighbors could afford to cultivate closer relations with this country which buys $158,000,000 worth of their products, than with Great Britain which buys only $68,000,000 worth of them. Why this unequal balance of trade? Well, the vast increase in our imports is due to increased consumption of coffee, sugar, and other tropical commodities by a population that has doubled since 1860. On the other hand, Great Britain, with only a little more than half our population, has had no such marvelous increase in the number of its inhabitants, and does not need nearly so much of the same class of goods, which are the chief exportable products of those countries. But why do not our southern friends buy more of our products? Is it because they can get manufactured goods cheaper elsewhere; and if so, is the fact due to the higher price of American labor, as claimed by the "protectionists;" or to the enhancement of our wares by the tariff, as claimed by the "free-traders?"

WOOL-GROWERS AND WOOL MANUFACTURERS.

REPRESENTATIVES of the National Association of Woolen Manufacturers met in this city the other day to discuss the tariff on wool and woolen goods. Some weeks ago a preliminary meeting of the Executive Committee of the association convened for the same purpose, in Boston. It has been an "open secret" that the original object of both meetings was to take prompt measures for urging upon Congress the total repeal of import duties on coarse carpet wools, and the repeal or a great reduction of the duties on all the higher classes of the staple. The "free-trade" and "tariff-for-revenue-only" papers were crowded with articles on the insanity of a tariff on raw materials and especially on wool. In nearly every case, representative wool manufacturers were quoted as authorities for the most startling figures and the most bitter denunciations against the tax on such foreign products. It looked as if the long-expected, but much-deferred battle between those doubtful allies, the wool-growers and wool-manufacturers, was about to begin. The National Wool Growers' Association had uttered no doubtful note of warning—it had emphatically declared in favor of a genuine "protective tariff" on wool as the only means of saving from ruin a highly important agricultural industry of the country, and it had clearly intimated that if tariff protection should be removed from the farmer's wool in favor of the manufacturer's pocket, it would be expedient to remove tariff protection from the manufacturer's woolens in favor of the farmer and the rest of the people. The manufacturers appear to have paid good heed to this warning. In the resolutions they passed, no demand was made for lower duties on wool as a raw material, the fixing of the duties on it being left wholly to Congress. The resolutions, however, complain that in its revision of the tariff in 1883, Congress reduced the duties on manufactured woolen goods so far beyond the reduction it made on the duties on wool, as to destroy the compensatory character of the former, and they demand of Congress a revision of the tariff, in which there shall be placed on manufactured woolen products a duty fully sufficient to compensate for whatever rates of duty public policy may require to be placed on the raw material. It is very evident that so far the wool-growers have had the upper hand, and it will be their own fault if they lose the advantage.

CLOVER SEED.

THE statistics regarding this crop show some curious features. The value of the crop has slowly grown from year to year until it is now entitled to a place among the cereals. Here is a record of the crop for the past 30 years. For the sake of comparison we give also the production of "all other grass seeds" for the same years. The figures represent the number of bushels:

	CLOVER SEEDS.	OTHER GRASS SEEDS.
1850....	468,978	416,831
1860....	956.188	900,040
1870....	639,657	583,188
1880....	1,922,982	1,317,701

The estimate for the present year is over 2,500,000 bushels.

A curious fact is brought out from a study of the crop production by States. In 1850 the States of Virginia, Pennsylvania, Ohio, New York and New Jersey produced 80 per cent. of the entire crop, with Pennsylvania far in the lead. In 1860 Michigan, Ohio, Pennsylvania, New York and Indiana produced 80 per cent. with Pennsylvania but a few thousand bushels ahead of Ohio. In 1870 the same States produced 85 per cent., Pennsylvania still ahead. In 1880 the States of Illinois, Indiana, Michigan, New York, Pennsylvania, Ohio, and Wisconsin produced nearly 90 per cent. of the crop, with Ohio in the lead, closely followed by Michigan. At the present time Michigan leads and the crop is becoming more and more popular in that State. Clover seed seems to follow wheat—towards the north and west. The southern counties of Michigan are giving place in the production of this staple to the more northern counties where farms have been cleared out of the pine forests. In fact, it is believed by many that clover seed will prove one of the most profitable crops for these "stump farms," where "wheat, clover, sheep and wool" are to bring the cash. Several of our correspondents refer to the work of the clover midge.

The damage done by this insect is almost beyond the belief of those who have never lived in clover-seed-growing districts. Many barns in New York and Pennsylvania contain absolutely useless tools for preparing the seed. About the only remedy that seems to give any satisfaction is that mentioned by our correspondent J. W. on page 693. As explained in the RURAL'S Hay Special, this remedy consists in running the mower through the field about the middle of May, leaving the product on the ground as a mulch. A vigorous crop of blossoms will develop after this. This comes between two broods of the midge and thus escapes attack.

BREVITIES.

CHRYSANTHEMUMS and late-blooming gladioli should cheer the garden now.

LET'S all move to that Canadian country (see page 697) where there are no potato beetles!

MR. FALCONER has discovered a new use for dwarf Limas. Read his article on page 690. Mr. Falconer writes from actual experience and always with caution and accuracy.

WE shall be interested to know how the Canada thistles come out of that Canadian silo described on page 697. He says he can make cheaper silage with this than with corn. "There may be a great future for the much-abused thistle."

PROFITABLE use has just been discovered for another waste Southern product—an excellent quality of fine or coarse paper can be made from rice straw hitherto considered worthless; 4,000 tons of it have been shipped from Savannah to New York as paper stock. Whatever planters may get for it will be clear profit. Doubtless paper-mills will soon be established in the neighborhood of rice plantations.

MR. J. W. KERR, of Caroline County, Md., sends us four Japan chestnuts, the product of two burrs, which average five inches in their larger and four inches in their smaller circumference. In quality they are coarser in flesh and not so sweet as are our American chestnuts, but better than the average Japan seedlings. The nuts are much larger than those of the Paragon, but the quality is inferior. Mr. Kerr says: "How young the Japan seedlings do go to their work!"

Horticultural.

BEANS.

(*Continued from Page* 691.)

would say that our attention was first drawn to this novelty in the summer of '87 by Messrs. T. W. Wood & Sons, seedsmen, Richmond, Va., who had had a small supply of it for two or three years. We purchased the entire stock from them in the fall of '87 and had the stock grown in '88 in at least six different localities: Genesee County, New York; Rockland County, N. Y.; Monmouth County, New Jersey; Hudson County, N. J.; Virginia and Georgia. This wide distribution of the stock seed proved conclusively that it is a variety which will do well in any section where the pole Limas will. From Messrs. Wood & Sons we learned that they had obtained the stock of this variety from an old trucker in the vicinity of Lynchburg, Va., who had grown it for a number of years for the Lynchburg market; he stated that he had procured it originally from a negro who claimed to have found a single plant growing by the roadside in the mountains of Virginia. The darky's story, however, is rather unlikely, as in all probability it originated as a "sport" from the Carolina or Sieva. PETER HENDERSON & CO.

THE ORIGIN OF BURPEE'S BUSH LIMA.

BURPEE'S BUSH LIMA originated 50 miles from here with one of our customers, a progressive Chester County (Pa.), trucker. In 1883 his crop of large Lima pole beans was destroyed by the cut-worms, and as he was going over the field to pull up the poles he discovered a perfectly formed bush only six inches high. Upon examination he found that the plant had been cut off about half an inch above the soil, and that it had bent over and re-rooted, resulting in this bush. He is disposed to give credit for what proved eventually to be his good fortune, to the cut-worm. However this may be, the fact remains that this little bush showed no tendency to run, was carefully guarded and matured three small pods, each containing one large bean. These three beans were carefully planted in the spring of 1884. One of them produced the usual Lima pole bean vine, while the other two retained the perfect bush character of their parent, but, being more vigorous, bore large pods, containing beans fully equal in size to the large Lima pole bean. Since 1884 he has been carefully cultivating and developing the bush variety, rigidly discarding any plants showing a tendency to throw out runners, until now (Sept. 14) his entire field presents as perfect a type of dwarf bush beans as even the long-established dwarf German wax beans. Last winter we purchased the right to the exclusive control of this bean and the originator gave us a few beans to plant in our trial grounds, where they can be seen in comparison with Kumerle's Dwarf, and Henderson's Bush Lima.

I send the RURAL fresh leaves of each of these, from which alone it can see the distinct character of ours, as well as in the pods and beans. Although the last to be introduced, I think ours probably was the first of the dwarf Limas originated. Henderson's is a dwarf form of the small Sieva, and Kumerle's is a dwarf type of Dreer's Lima. I have just now been comparing the different Limas in our trial grounds, and find that the pods of our bush Lima average fully as large as the pods of the King of the Garden Pole Lima. Some time since while going over his crop with the originator, I spoke particularly of the wonderfully prolific character of the dwarf bushy plants. He said: "Yes! I counted 52 mature pods on one plant when harvesting my last crop." This led me to examine more closely, and the first plant I selected bore 58 pods and was still full of blossoms. The plants send out numerous stiff, upright branches almost from the very ground. The editor will notice the thickness of the main stem and branches, also the unusual size, dark-green color and thick, leathery substance of the leaves, indicating their strong constitution and vigorous growth. W. ATLEE BURPEE.

[The plant of the above variety sent to this office bore 26 pods of which the one illustrated is as large as any. Most of the pods had three beans, a few two and several four. EDS.]

ORIGIN OF KUMERLE'S DWARF LIMA.

FROM James M. Thorburn & Co., the introducers of the Kumerle, we learn that for a number of years a dwarf form has been noticed among Dreer's Pole Lima, in various parts of the country, and from these selections have been made resulting in the dwarf variety now introduced as Kumerle, of which there is, as yet, a very small supply. A single bush sent to this office bore 47 pods, most of which contained three beans, some four and occasionally only two. The beans were fully as large as those of Dreer's Lima. The illustration, which is a faithful portrait of this plant, shows the average size of mature pods and seeds.

The R. N.-Y. raised about one dozen plants of the Kumerle. We find it a true Dreer's Lima. The bushes are very prolific and vigorous without the least sign of running to vine.

HENDERSON'S SIEVA was planted the same time as pole Limas at the Rural Grounds and matured about 10 days earlier. The bushes bore all the way from 25 to 50 pods averaging nearly three beans each. A few pods contained four. The leaves are smaller, of a much darker color and firmer texture. The upper side is glossy. The bushes averaged 18 inches high, the flowers smaller and the racemes twice as long. The illustration shows one of the plants, as well as the pod and seeds.

The Garden.

THE VEGETABLE GARDEN.

WM. FALCONER.

THE SEASON.—The weather recently has been raw, cold and wet, and the land is wet and in poor condition for fall-growing vegetables. But we have not yet (October 3d) had any frost.

LIMA BEANS.—Lots yet but they are getting old as we had no bright, warm weather in late summer to set and fill up a succession of pods. I am gathering the well-filled but not over-ripe beans for use in winter.

SNAP BEANS are yielding well, and I am now picking Mohawk and Valentine that were sown August 8. The same kinds sown August 16 are in bloom and beginning to pod. I have just placed frames and sashes over them, and in this way and by banking around the frames with earth or manure, and covering over the sashes with straw mats at night, I expect to pick snap beans until into November.

RABBITS are now very destructive to young snap beans; they eat the tops. A dusting of lime, or plaster and Paris-green scattered on the beans when they are moist will save them.

FIELD MICE now take to the bean frames and work much damage. To hunt them up and kill them is the only remedy.

CELERY is growing superbly. I never had finer late celery than I have now, and that too from seed sown May 24. All celery for use before New Year should now be banked up fully, and even our latest celery should be "handled" so as to have it in close-together heads, and, in rigorous districts, to save it from frost. While a few degrees of frost may not visibly hurt celery, it certainly does it no good, therefore protect it from frost by banking it up with earth. North of New York prepare for laying it past for winter about the end of this month; south of New York from the fifth to the 15th of November is the usual time for this work.

THE WHITE PLUME CELERY.—At Buffalo some weeks ago, a gardener from Ohio was telling Peter Henderson and myself that he finds no difficulty in keeping over this celery until April; in fact he finds that it keeps just as well as any other kind. Well, perhaps it does. I'm not as smart as he is by a couple of months. I never yet had a white or a yellow self-blanching celery of any sort that kept in paying condition into March.

PEAS.—These look well. I am now picking very good Daniel O'Rourke Peas from August-16 sowing; in fact this, one of the poorest peas in quality, is the best late pea I have. Blue Beauty is good but now a week later than O'Rourke; in early summer there would be only a couple or three days' difference between them.

SPINACH isn't growing as well as I would like. So much wet weather kills many of the germinating seedlings and rots off older plants, and now the never-failing leaf-miner maggot comes to prey upon and spot the leaves. The young spinach we now are picking was sown August 24th. For wintering in frames we sowed two weeks later.

NEW ZEALAND SPINACH is most esteemed for hot summer weather when common spinach can be had only with difficulty, but it also comes in splendidly in cold, raw summers too. We never had it finer than it has been this year. And as it is tender I have covered a patch of it with frames for further use.

LETTUCES.—We hope to cut from out doors for a month yet, but are prepared for emergency by having plenty in frames. We plant our winter lettuces in the permanent frames in our regular frame ground. Lettuces for use in October—December occupy the least sunny frames, because having made their growth early they need little more than keeping over, hence there's no call for the best places for them; those for use in December—March are planted in the warmest and sunniest frames, because this is the wintriest season, and the plants grow but little, and as they are apt to be much covered up, the warm position saves in covering, and permits of more drying and ventilating than could be done in less favored parts. From March onward we get our supply from hot-beds which generally are the frames emptied in December and January. Don't coddle lettuces, but keep them uncovered in favorable weather. Young seedlings and half-grown stock will stand several degrees of frost without hurt, but full-hearted lettuces should be protected from frost, heavy rains, sleet or snow. Young lettuces for filling into frames from now till January should be kept in a cold-frame and pricked off two or three inches apart.

PARSLEY.—Lift a lot of roots and plant them in an old cracker or soap box in light soil, or take a nail keg and bore a lot of half-inch to one-inch holes thickly all over its sides, and into these holes, with just the top of the crown sticking out, stick some parsley roots, filling up with soil as you go along, and you will have a really nice parsley patch in your cellar all winter.

CORN sown later than July 19, is not going to ripen up fit for using.

CARROTS sown August 6, will make nice roots, but anything sown later than that will not amount to much. Full-grown carrots have lost their leaves more than usual.

BEETS.—On light soil the August sowings are not going to amount to anything, but on rich land sowings made August 6 promise well. Eclipse is a more vigorous grower than the Egyptian and I like it better, for it bulbs up quicker. I do not expect to gather the winter crops for a month yet.

Farm Topics.

CANADIAN NOTES.

FARMERS in Ontario, especially in the Ottawa district, have full barns this season. Grain is good, and the straw crop is simply enormous. Oats and wheat stood level with the tops of the fences as long as they could stand, and then went down under their heavy loads of grain. A wet harvest has injured a considerable percentage, but the crop as a whole is most satisfactory. The potato crop is the best we have had for some years. But for the demand east, west and south, they would still be selling, as they did the latter half of August, as low down as 35 cents per sack of 90 pounds. Within the past two weeks shipments east and west have created a demand, and prices have run up to 60 and 70 cents, and are likely to go still higher. By the way, I have just heard that in the county of Bonaventure, P. Q., the *habitants* have never yet seen a potato bug in their fields. It would be a capital place in which to buy seed. The plants bear abundance of seed-balls, and the vitality of the potato has not been sapped by annual attacks of the bug and the use of arsenical poisons. We could not raise potatoes here at all without Paris-green, and plenty of it.

Silo building and fodder-corn are the questions that are agitating the minds of the more enterprising of our farmers here at present. My cheap wooden silos, capacity 100 tons and 92 tons respectively, costing only $100 and $150 complete, have been inspected by a great many growers of fodder-corn, and all who have seen them have declared their intention to build silos for themselves. Into one of my silos I have put 75 tons of green oats, peas, barley, vetches, thistles, mustard, lamb's-quarters and other weeds that had grown on a heavily fertilized and exceedingly dirty field. It is a regular vegetable hash, and if it cures well, as I expect it will, my cattle and horses will not want for variety in their food next winter. I am watching with considerable interest an experiment in siloing thistles. My neighbor sowed about an acre of rich garden soil with spring wheat. One particular ridge of that acre sent up such a mass of Canadian thistles as I had never seen before. Interspersed through it were a few strong plants of wheat. The ridge had been under squash vines the previous season, and the rough leaf and vine had caught and held every thistle down passing that way and the result was the magnificent crop of thistles. Rather than let them go to seed I obtained permission of my neighbor to cut that ridge out of his grain and put it in my silo. The thistles were a perfect mass of sweet-scented, purple bloom when I cut them making three heavy wagon loads, and they are now in my silo, cut in the regular fashion, their power for mischief destroyed forever. If they should prove to be good feed for stock, I can make cheaper silage by growing the Canadian thistle than I can with corn. They will produce two heavy crops in a season; nothing to pay for seed or cultivation, proof against excessive rains, spring frosts, bugs, cut-worms, crows, cold spells, smut and every other ill that corn is heir to. There may be a great future for the much-abused thistle—though at present I prefer to take my chances on corn.

Last season our corn was killed by frost on the 7th of September; this year's corn is still green and growing rapidly. After trying a great many kinds the last two seasons I have come to the conclusion that Angel of Midnight, a hardy yellow corn that ripens in this latitude, is the best for my soil. I cannot get the quantity of feed per acre that I can from red-cob ensilage; but the quality is far superior. This season's crop bears cobs averaging from 12 to 14 inches long, and the grain has a rich, creamy flavor that makes it very enticing food. I noticed in last year's silage the yellow corn seemed to ripen in the silo during the process of curing.

For information of Southern readers of the RURAL, who are under the impression that we live in a winter climate the year round, I may say that our market gardeners have been peddling tomatoes round Ottawa for the last six weeks at 25 cents per bushel—and choice varieties at that. The markets are fairly glutted with all kinds of garden truck. Melons hardly pay for carrying them five miles. We don't care for the competition from the South, for no one will buy the big, coarse, Georgia melon, that comes in here early in the season, once our own finer-flavored melons appear on the market. The banana has invaded us though, and tons of it are sold here now. Four or five years ago if an Ottawa fruit-dealer disposed of a few bunches in a season he thought he was doing well; now everybody buys them and they do not interfere with the sales of local fruits in the slightest degree. A. H.

Ottawa, Ontario.

Miscellaneous.

CORRESPONDENTS' VIEWS.

CORN AND HOME-MIXED FERTILIZERS.—My experience in raising corn this year with only a small amount of chemicals in the hill—65 pounds of dissolved bone black; 20 pounds of muriate of potash and 15 pounds of sulphate of ammonia—is such that for another year I want 10 times as much. With these chemicals I put two cwt. of plaster, about two cwt. of ground bone and six cwt. of black loam thoroughly mixed and sifted. With a large spoonful in a hill on sod without any manure on the land for 12 years, the corn is good, but on old ground, which received about 30 loads of manure per acre with a spoonful of this in the hill, the corn was over five feet high by July 12. Who says our experiment station does not pay when it gives us such experience as this? The whole cost of this half ton was $4.88. I do not say it is any better than any other fertilizer, but look at the cost. The articles given by the station cost $2.13. I put in the plaster and bone extra, and think I was well paid. Beans planted

with this mixture were very fine, being full of pods. The 2½ acres are rowed both ways, 3½ feet apart and planted with corn, beans and potatoes. As a result of my past experience, next year I shall plant potatoes in drills, for then it is much easier to put on the Paris-green. P. C.

WASTE OF MANURE.—In passing over the country I often see barns and pig-pens built on high ground just above some deep hollow into which drifts all the wash from the manure thrown out of the barn-yards and pig-pens and accumulating around them. I have in my mind now a certain place the owner of which I visited and tried to get him to subscribe for the R. N.-Y. He said he could not afford it; he had no time to read it. On looking around I found his barn, pig-pens and feeding yards located as described above. In the hollow below flowed a stream from a spring across which a dam was thrown so as to make a watering place for stock, and to catch the wash from all those places where his manure accumulates. In my opinion such men never will feel able to take a first-class agricultural paper or have time to read one.

GOOSEBERRIES.—The Triumph has fruited with me three years very satisfactorily. It is more prolific than the Industry and has not mildewed, and it has been so far the best I have ever seen.

APPLES.—I have fruited the Yellow Transparent and Wealthy Apples and they merit all that is claimed for them, except the claim for their early ripening. The first is later than the Harvest and the Wealthy is ripe in the last of August and first of September. I. HICKS.

Queens County, N. Y.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

OUR correspondent who writes of the healthfulness of housework is right; the daily domestic tasks do give a healthful series of calisthenics. The only thing lacking is abundance of fresh air, and this we are apt to overlook. Of course all chamber-work must be done, save in the most inclement weather, with wide-open windows—but frequently the need of ventilation is overlooked during other work. Still, a broom and a bread-pan would be a highly desirable prescription for many a woman suffering from some of the mysterious nerve ailments which seem to afflict so many.

* * *

ONE reason why housework seems such dispiriting drudgery to many women is because they make its most sordid and material side always uppermost, chief object of their words and thoughts. If necessity compels them to live frugally they make narrow, grinding cares conspicuous in every way. Now, one can't always ignore a narrow or empty purse, nor is poverty a thing to be ashamed of, but there is no reason in making the unhappiness of poverty everywhere conspicuous. If we are compelled to make shifts and expedients in household affairs—most of us are—let us take it cheerfully, and not thrust the expedient before every one. There is plenty to make life worth living, even if we do wear cotton gowns and walk over rag carpets.

* * *

THIS seems wandering far from the original subject. But we so often notice that the women who seem to suffer physically from their housework look upon it from the first as drudgery and nothing else. After all, good temper and cheerfulness lighten much of the hardest toil.

* * *

LAST week one of our correspondents made some very sensible suggestions relative to lightening the daily tasks. We believe fully in making preparations this day for the next day's toil, so long as too much is not attempted. A little bit of thoughtfulness the night before will ease many a busy day. One of our neighbors always prepares for sweeping day the night before, by moving the bric-a-brac and most of the furniture out of the parlor, so that sweeping may begin without unnecessary delay. Even in the ordinary living room, a good deal of clearing out may be done the night before, and this usually takes longer than the sweeping.

* * *

ANOTHER way of saving time is always to decide, the night before, of what the meals are to consist the next day. What is more perplexing than to decide on the dinner at two hours' notice, especially in the country, where deficiencies cannot be remedied at a moment's notice? It is far better to know beforehand, and decide on every detail of the bill of fare.

That question of the daily bill of fare is most perplexing: it is not so hard to decide on the dinner a day ahead, or for a week at a time, but think what an endless vista of dinners one must look forward to. Really, a housekeeper's lot is not always a happy one.

Breakfast is not always an easy meal to arrange; it is difficult to provide a change where hearty food is desired. In too many cases, breakfast consists almost entirely of fried meats and vegetables, fried pork, fried sausage, and, crowning horror, fried beefsteak. Of course, where an early breakfast must be hastily cooked it is impossible to get up a fire for broiling, but still frying should not be the only method of cooking. In addition, there should always be some cereal, rolled oats, crushed wheat, oatflake, or something of the kind. There is no excuse for omitting this on a farm, where milk should be plentiful. But no rigid rules can ever be laid down for the bill of fare; it must be left to the tastes and fancies of each family individually.

THE HEALTHFULNESS OF HOUSEWORK.

OLIVE E. DANA.

THE out-door haunts, which have been so alluring, are growing cheerless and chilly. Vacation is done, and all life's activities are calling with new authority. Summer pleasures and pastimes are fast being forgotten, or are laid away safely in memory to brighten dark days or tide over dull hours. The little boats lie with idle oars, and the fishes fear no longer the angler's skill. Only the crack of the hunter's rifle rings through the forest stillness.

Those who have found muscle-making exercise in woodland tramps and up-river rows, are very likely, if their work is of brain and nerve rather than of hand and limb, glad to seek some healthy play of muscle at the healthlift or gymnasium. Happy are they whose vocation calls for both hand-work and head-work in healthful balance. Happy are they whose tasks do not leave one set of muscles entirely unused, while on another, perhaps, the tension is exhausting.

The house-keeper has no such discrepancy to complain of; her work calls all the faculties into healthful action. It stretches every muscle, yet the frequent change of attitude and motion forbid undue strain on any. I think the healthfulness of housework is too little regarded. Because one may have too much of it, because it is not wisely planned, because surroundings are physically harmful, or because one gets, for any reason, too little fresh air and social intercourse, it does not follow, as a logical conclusion, that the work itself was injurious. For the very opposite is true. Somehow neither women nor physicians seem always to take sufficiently into the account the beneficent influences, tonic and sedative, of a regular course of housework; the strength it gives to flabby muscles; the tone it imparts to jaded nerves; the alertness, both of mind and body, which it demands and secures. And writers, treating of health and exercise, and health by exercise, give this very cursory motive usually, or very likely none at all.

It is true that Mr. Higginson, in his "Out-Door Papers," had occasion to speak of "those bracing calisthenics," "bread-making in well-ventilated kitchens, and sweeping in many-windowed rooms." But what woman who does her own work doesn't know that these two employments, important as they are, include but a tithe of "the motions" one must "go through with" in even one forenoon's work?

Though one complain ever so bitterly of "drudgery," she can but confess that, like most other tasks miscalled by that name, it is the most wholesome of work. And however monotonous she may call it, and lacking in variety, she will own in wiser moments, that the lack was all her own,—of heart or hopefulness or wisdom, of out-door air or neighborly interests, of broader out-look or intelligence, or of some other God-created element—and by no means the fault of the housewife.

And it is something, surely, when the November rains are falling and the wild winds blowing, and by-and-by the white snows are drifting and the mercury is at zero, to feel that one's "constitutional," if she needs one, or calls it by that name, may be taken between dining-room and kitchen, between pantry and cooking-stove, to know that by the time the morning's baking is finished, and the chamber work is done and the parlor and sitting-room set in order, and the plants showered, and the piazza-floor swept, and the outer kitchen made tidy, she will have had the benefit of such a series of calisthenics as no schoolroom exercise can offer, or the gymnasium itself afford, and will beside, so far as she is able, have made the home wherein she reigns "a thing of beauty and a joy" for 24 hours longer.

AT THE FAIR.

J. H. G.

THE agricultural press indulges in about the same amount of scolding year after year because of the presence of fakirs and horse-racing on the fair grounds. The fact, however, is that in the vicinity of New York at least, the fairs which attract the greatest number and variety of fakirs and side-shows, and which have the best trotting, are the ones which are patronized most liberally by the farmers. The average farmer sees horses and cattle, and pumpkins and corn all the year round, and he usually goes to the fair for a change. He wants to meet old friends and acquaintances and have a little fun.

The manager of the most successful local fair within 100 miles from New York, said that so long as the fair was a "moral" one it was in financial trouble, and finally, failed altogether; but since it had been run in a business-like way the value of its property had been increased from an insignificant sum to something like a quarter of a million dollars. He added: "Farmers do not want to see pumpkins and squashes; they see them every day. What they want is excitement and fun." It is lamentable, but evidently too true that the mere exhibit of farm products will not attract any considerable number of farmers—within a wide radius of New York at any rate.

AUTUMN FLOWERS.

G. S.

THERE is perhaps no place where the semi-aquatic wild flowers grow to greater perfection and beauty than in the low plains on the east end of Long Island. As a matter of course, the numerous varieties of golden rod (Solidago) predominate, and this common, but not the less beautiful because it is common, flower forms an appropriate and gilded frame for the more brilliant and rarer flowers of the meadows. I have in mind a low, marshy place—evidently an old pond bed—almost entirely filled with the magnificent Cardinal Flower—Lobelia cardinalis. It forms a circle of the most brilliant red, while the surrounding meadow is yellow and white with the golden rod, wild carrots, etc. While I am passionately fond of wild flowers, the pleasure is greatly marred by the difficulty and uncertainty of their identification, and in this I am not alone. A book nicely illustrated and written in a popular style upon the wild flowers of the Atlantic seaboard would have an enormous sale.

The writings of Burroughs, Thoreau and others have increased the interest in the woodland and the meadow; but amateurs who have no time to study botany as a science, are so embarassed at their ignorance as to lose very much of their pleasure. There is an opportunity for remunerative missionary work in this field and it is to be hoped that some of our botanists will take up the subject.

GOLDEN GRAINS.

IF there be one thing upon the earth that mankind love and admire better than another, said General Garfield, it is a brave man; it is the man who dares to look the devil in the face and tell him that he is a devil.....

ALL that God blesses is our good,
And unblest good is ill;
And all is right that seems most wrong,
If it be His dear will.

—*F. W. Faber.*

BOOKS, says Addison, are the legacies that a great genius leaves to mankind, which are delivered down from generation to generation, as presents to the posterity of those who are yet unborn.....

PLATO said that there is nothing so delightful as the hearing and speaking of the truth. For the reason there is no conversation so agreeable as that of the man of integrity who hears without any intention to betray, and speaks without any intention to deceive.....

SIDNEY SMITH says find fault, when you must find fault, in private, if possible: and some time after the offense, rather than at the time. The blamed are less inclined to resist, when they are blamed without witnesses; both parties are calmer, and the accused party is struck with the forbearance of the accuser, who has seen the fault, and watched for a private and proper time for mentioning it.....

ROBERTSON says we should forget mistakes or organize victory from them.....

PHILLIPS BROOKS thinks that no man or woman of the humblest sort can really be strong, gentle, pure and good without the world being better for it, without somebody being helped and comforted by the very existence of that goodness.....

WE must not hope to be mowers,
And gather the ripe gold ears,
Until we have first been sowers,
And watered the soil with our tears.

—*Alice Cary.*

ELIHU BURRITT said there is no power of love so hard to get and keep as a kind voice, a voice that shall speak at all times the thoughts of a kind heart. Watch it day by day, as a pearl of great price, for it will be worth more to you in days to come than the best pearl hid in the sea. A kind voice is to the heart what light is to the eye. It is a light that sings as well as shines. Train it to sweet tones and it will keep in tone through life.....

PROF. THOMPSON says to the man who feels that there is no position, that there are no circumstances in which he may not by effort and patience, by faith and prayer, fulfill the purposes of the Creator regarding him—to such a man the question: Is life worth living? is irrelevant, for it has been answered beforehand, and answered in the affirmative.....

THE BOSTON BUDGET says a Boston Sunday School teacher was endeavoring to impress upon the minds of her pupils the necessity of good behavior. "You must be very careful how you act," said she, "for if you act badly you will be punished, while if you act well you will be rewarded. Now, my dears, can any one tell me what he will get if he acts well?" A bright little fellow whose father was an actor, immediately replied: "Det talled before de turtain, I dess."

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

"No iron so hard but rust will fret it,
No perch so high but climbing will get it,
Nothing so lost but seeking will find it,
No night so dark but there's daylight behind it."

THE INFLUENCE OF FATHERS.

MARY WAGER-FISHER.

IN a certain way, the father seems to stand as an ideal model for the boy more than the mother does for the girl, so that the old adage: "Like father, like son," has a peculiar significance. I am often reminded of this by hearing my own laddie say that he likes a thing done in this or that way because it is "papa's way," or because "papa does so," or "thinks so," and

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

nothing fires his spirit of emulation more than to hold up the father's gratification as an incentive. There is no end to the verbiage that has been written and spoken concerning the influence of mothers, and what it may accomplish. But if, by some hocus-pocus of evolution or conversion, all fathers could instantly be made into the kind of men they wish their sons to be, what more could be desired for the human race? That fathers do not realize the formative character of their example, or, realizing it, fail to turn it to the best account, is very evident. If they did, one would see no fathers who smoke or chew, or use vulgar or profane speech, who equivocate, or cheat, are untidy in their dress or surroundings, cruel to their horses or cows, unkind, given to outbreaks of anger, selfish or lazy, or ill-mannered.

But as affairs are now managed, or arrange themselves, a great majority of fathers leave the training of the children not only physically but morally, to the mothers, as though the inculcation of morals and manners, were a peculiarly feminine business, and as if women were in a way the guardians of the social and moral forces of society, and so long as women are honest, good and true, it would matter so much the less what men are—the virtue in the world would, in spite of them, be housed and cared for, and transmitted to posterity! It sometimes happens that boys left fatherless, are trained into admirable men by the mother alone, in which case she is generally regarded as having performed a difficult task with great success; when, in point of fact, the achievement might have been attended with far more difficulty if the father had lived. Almost any father, after he has been long enough dead, becomes a kind of saint or hero to his young children, and nothing is easier or more natural for the mother than to make the most of this idealized character. But with the father alive and as un-ideal as possible—slovenly, ill-tempered, disobliging, selfish, thoughtless, boorish in manners,—what headway can a mother hope to make in training her sons to be gentlemen? She might as well try to make water run up hill. If the father smokes, or chews, or swears, or "slangs," why should not the boy? Or if he eats like a pig, appears at table dirty and unkempt, flings his wearing apparel down for some one else to hang up, speaks with crossness and impatience, is there any reason in the world why the children should not imitate him in these things? To *honor* the father is a Biblical command that even the civil law insists upon; but those whom children *honor* they must perforce emulate, and to expect that the boy will be polite and considerate of others, when the father is the reverse, is to expect thorn bushes to bear peaches.

That women exert great influence, goes without saying; but that their particular influence can counteract the evil example of men, is an absurdity. The old doctrine that Cæsar's wife must be without reproach, although Cæsar himself may be a villain, has borne no end of bitter fruit. If a man has intelligence and conscience, he can not marry and take on himself the responsibility of fatherhood, without feeling the necessity of making of himself, so far as it is possible, a model which his sons will do well to imitate, for if ever a man's vices and faults appear to him in an uncomfortable light, it is when the eyes of his little children are turned upon him. No "eye of God" was ever more alert or penetrating than the eyes of children, and every man who has a son growing up at his knee should never, through inertia or carelessness allow himself to forget that he stands to the boy as a model of what the child himself aims to become—"just like father."

If fathers and mothers are better in fact than childless people, as is commonly accepted, it is solely owing to the restraining and developing power of the presence of children. For the "children's sake" there is much done and left undone. They stimulate to thrift, industry, honesty, respectability, education, wealth, influence, generosity, and sometimes to less desirable results when the parents are bad. But if parents realize their influence, they must by necessity, if not hardened in sin, keep keener watch over their speech and actions when children are about than when the home is childless. And if men will reflect upon the influences they imbibed in their own childhood they cannot but see how much they gained or lost through the good, bad, or negative character of their father. A good father is as priceless a possession to any child as a good mother, and the child which has both has the best inheritance the world has to bequeath.

SURE cure for indigestion—stop eating!

BROOM—woman's badge of neatness.

AUTOGRAPH QUILTS.

THIS is a day of autograph hunters. The epidemic assumes various forms. One lady of my acquaintance has an album of several hundred postal cards from people whom she admits she never saw, and never expects to see. Another rage is the quilt autograph. Few people at present have the temerity to aspire to the crazy-quilt. For my part I have not yet been able to decide whether I like such things or not, for I have seen so many that were originally intended to be things of beauty, witched and bewitched into what really appeared more the productions of the weakened brain of some poor æsthetic lunatic. In fact I never see a crazy-quilt without a vivid childhood remembrance of a kaleidoscopic view I once had after falling from a high swing. Autograph quilts containing a block from each State and Territory in the Union are also much in vogue.

My idea of an autograph quilt is entirely different, and as it is original with myself I will give it. I am saving a piece of each dress and apron of my children's clothes from their babyhood up. Upon each piece I sew a bit of paper with the date and age of the child at the time it wore the garment. After I shall have ceased collecting I shall make each a quilt of the pieces from the dress of each particular child and then with indelible ink mark each block with the age of the child at the time the garment from which it was taken was worn and also with the name of the garment. What think you of my idea? Try it, mothers. It will be something the children can always keep, and something they will prize above gold, long after dear mother has crossed the Mystic River into the great beyond. I love to piece quilts and expect to be just old-fashioned in that way all my life. During our warm summer weather we have had sewing classes in which we have taught our young girls how to sew, and piece quilts, and we find it one of the best ways of teaching little girls how to use a needle, and really an economical way too, for every household has more or less pieces to spare, and the quilts are always valuable.

MRS. F. A. WARNER.

A CHAT ABOUT HOUSEHOLD MATTERS.

IT is very much the fashion of fault-finders to criticise what they call "frying" beef, pork, or meat of any description. But is it not true that there is a right and a wrong way of doing everything? And a good cook can fry beefsteak and make it as palatable as a roughly broiled one. To broil meat satisfactorily requires good coals and plenty of them and in the ordinary wood fires kept by most farmers in the kitchen, how many times in a year will there be a bed of coals in shape at the right time to enable the cook to broil beefsteak that will be wholesome? If cooked over a blaze it is apt to be smoky. One thing perhaps that every one may not have noticed is, that beef, whether broiled or *fried*, should be eaten at once, and the slanders that have been bestowed on beefsteak fried, are often due to the fact that it has stood so long after being cooked that it has become tough, before being put on the table.

To fry properly, chop or pound the steak well; if there is much fat trim it off and fry out the grease to be used in cooking the rest of the meat, or put a little butter in the spider; have it hot and put in the steak and cook fast, turning often and being careful not to burn it. Salt it when just done, not before, or the juice will run out leaving the meat tough. Have the platter hot, and when the meat is done lay it on the plate and spread some butter over it; cover closely and send it to the table as soon as possible. Some cooks have the salt and butter melted together and pour it over the meat while it is all hot. Cooked in this way, meat that would be called unfit to eat if fried in the ordinary way, will be more palatable than that which has been broiled unless uncommonly favorable conditions have accompanied each stage of the broiling. There often seems to be a kind of fashionable affectation in the custom of decrying ways which prevail among different cooks. Any one who can eat with relish the half-cooked, demoralized-looking beefsteaks often encountered at hotel tables, ought not to be finical about eating steak that has been properly fried.

This year we have thought it to be quite an improvement that our men and boys, during the season of binding grain and cutting up corn should wear long stocking legs over their sleeves. The feet are cut off and the legs drawn up over the sleeves, above the elbows, and kept in place with safety pins. The juicy weeds stain and soil the sleeves so much that they are hard to wash and the look of the material is spoiled.

At this season the flies in almost everybody's pantry and kitchen are an intolerable nuisance; their presence seems almost unavoidable. The use of fly-paper is sickening, with flies dropping everywhere, so that we almost welcome Jack Frost who helps us out. I am told by a handy housekeeper who has tried it, that a mixture of equal parts of castor-oil and melted resin spread on old writing paper makes a very effective kind of sticky fly-paper which one can afford to have and use, and that it helps to abate the nuisance.

AUNT RACHEL.

CARE OF THE HANDS.

MISS K. G. H., says she keeps her hands presentable by using lemon juice and oatmeal. Will she please tell how it is done? H. D. S.

ANS.—Rub the hands thoroughly (after washing) with a piece of lemon, particularly after doing work that has left the hands in a bad condition. Then rub with a mixture of oatmeal and water. I do this sometimes two or three times every day and always the last thing at night. Follow at night with a few drops of glycerine lotion. Wear gloves when practicable. K. G. H.

JELLY FROM TRANSCENDENT APPLES.

IN answer to Mrs. Levi H. Niles, I would say that I make jelly from Transcendents in the same way as from crab apples. Core the apples and stew until soft, then strain through a bag. Boil 10 minutes, allowing one pound of sugar to each pint of juice. It is very nice indeed.

LAURA WOODBURY.

EXTRACTS FROM PRIVATE LETTER.

OUR men folks have to-day completed the filling of a large silo—a new experience, or rather a new departure in farming for us. In the house we have found the filling of it a serious thing, not on account of the extra hands, but because while the work has lasted we women could not have the use of a horse for any purpose and have therefore felt rather confined. The green corn has been run through a feed-cutter, and the tread-power used required two heavy horses. The two teams required to draw the loads of corn from the field exhausted the supply of horses that we could drive. Perhaps this is not interesting to you, but it is an incident of farm life.

MRS. B. C. D.

Miscellaneous Advertising.

The Aged

Who need help in their many infirmities, especially those afflicted with rheumatism, find great relief in

AYER'S Sarsaparilla.

"One year ago I was taken ill with inflammatory rheumatism, being confined to my house six months. I came out of the sickness very much debilitated, with no appetite, and my system disordered in every way. I commenced using Ayer's Sarsaparilla and began to improve at once, gaining in strength and soon recovering my usual health. I cannot say too much in praise of this well-known medicine."—Mrs. L. A. Stark, Nashua, N. H.

Ask your druggist for

Ayer's Sarsaparilla,

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass

Price $1; six, $5. Worth $5 a bottle.

BEECHAM'S PILLS
ACT LIKE MAGIC
ON A WEAK STOMACH.
25cts. a Box
OF ALL DRUGGISTS.

W.R&CO'S IMPROVED BUTTER COLOR

IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color and will not color the butter milk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere.
More of It Used than of all other makes combined
Send for our valuable circulars. WELLS, RICHARDSON & Co., Burlington, Vt.

GOLD MEDAL, PARIS, 1878.

W. BAKER & CO.'S Breakfast Cocoa

Is absolutely pure and it is soluble.

No Chemicals

are used in its preparation. It has *more than three times the strength* of Cocoa mixed with Starch, Arrowroot or Sugar, and is therefore far more economical, *costing less than one cent a cup.* It is delicious, nourishing, strengthening, EASILY DIGESTED, and admirably adapted for invalids as well as persons in health.

Sold by Grocers everywhere.

W. BAKER & CO., Dorchester, Mass.

EPPS'S
GRATEFUL—COMFORTING.
COCOA

9 Cords IN 10 HOURS

Runs Easy. NO BACKACHE. Folded

BY ONE MAN. Write for descriptive catalogue containing testimonials from hundreds of people who have sawed from 4 to 9 cords daily. 25,000 now successfully used. Agency can be had where there is a vacancy. A NEW INVENTION for filing saws sent free with each machine, by the use of this tool everybody can file their own saws now and do it better than the greatest expert can without it. Adapted to all cross-cut saws. Every one who owns a saw should have one. Ask your dealers or write FOLDING SAWING MACHINE CO., 308 to 311 South Canal Street, Chicago, Ill.

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News of the Week.

HOME NEWS.

SATURDAY, October 12, 1889.

THE steel cruiser Dolphin, built by John Roach, was objected to as "structurally weak" by the last Administration, and the worry about her acceptance by the Government is said to have caused her builder's death. She has just returned from a cruise round the world, after making 58,000 miles in all sorts of weather, and she hasn't sprung a joint or showed a sign of weakness anywhere.....At a secret meeting of the old French colony at Montreal on Tuesday, it was decided to invite Gen. Boulanger to take up his residence among his compatriots in Canada until France should recall him to rule or fight..... Southern progress of late has been unprecedented. In the last two weeks about 17 or 18 new furnace projects have been reported there and contracts have already been made for building about one-half of them, while a dozen or more are being organized and will shortly be made public. The sales of mineral and timber lands for last week in large tracts have aggregated probably half a million acres, while negotiations are pending for still larger bodies, including 300,000 or 400,000 acres of timber land in Mississippi and several hundred thousand acres in East Tennessee, the purchase of the latter by a $6,000,000 company having been virtually closed..... Yellow Jack has appeared at Key West, Fla.; but owing to the lateness of the season and the precautions taken, there is little cause for apprehension that it will spread much there, and hardly any that it will extend elsewhere.....Delegates to the International Maritime Conference are arriving in Washington, the delegate from China having put in first appearance. Twenty-three of the most important countries in the world, controlling 90 per cent. of the world's tonnage, will be represented by 50 delegates. The maritime regulations adopted by the body will certainly soon prevail all over the globe.....President Corbin, of the Reading Railroad, is said to be interesting foreign capital for the formation of an Anthracite Coal Trust..... Down to October 1, 3,111 miles of railroad had been built in the United States in 1889.....The Haytian Constitutional Assembly is in session and will doubtless soon elect Hyppolite to the Presidency..... Washington was made gay during the week by the presence and parading of 15,000 Knights Templar whose rich but rather fantastic costumes, plumes and armor made a gala show. Of the 85,000 members of this mainly social, partly charitable and quasi semi-military Christian Order, the, most picturesque adjunct of Masonry, 80,000 are Americans. The next triennial conclave will be held at Denver, Colorado. .....The delegates to the Pan-American Congress have been inspecting Massachusetts factories and workshops by day during the week and have been right cordially entertained by wealthy representatives of the Old Bay State at night. The double tasks, especially those by night, are likely to prove too much for some of 'em. Of course, as the Congress has no power, it can make no treaty—all the members can do is to make reports and recommendations to their respective governments. There is some complaint in Canada because the Dominion was not asked to send a representative to the Congress; but owing to Canada's dependence on Great Britain, our Government could not, without disrespect to the latter, hold any formal political relations with the Dominion Government. Independent American Governments alone are represented.....Loaded with honors and decorated with orders "our own" Edison has returned home more American if possible than before his triumphant trip to Europe..... Congressman Randall of Pennsylvania, is again very ill.....In the new States the Australian method of balloting proved highly satisfactory. In Connecticut even a modification of it receives much praise. It has been tried with uniform success in many municipal elections in widely-separated parts of the country. The better it is known, the better it is liked as a protection to the voter against intimidation and to the public against bribery..... In 1880 there were 142 cotton-mills in the South, now there are 389, and the capacity of the new mills averages much more than that of the old. The average dividends are not less than nine per cent. This prosperity is attributed chiefly to the proximity of the factories and the raw material..... Last Monday a Prohibitory Constitutional Amendment was defeated in Connecticut by a majority of 27,000. The fact that cider was put in the same diabolical category as rum made thousands of farmers who would have otherwise voted for it, vote against it, to prevent loss on their apple crops..... The present allowance of seamen in the Navy is 7,500, of whom a large proportion are foreigners. To man the new war-ships Secretary Tracy will ask Congress to extend the limit to 10,000. To provide the Navy with native sailors 750 apprentice boys are now allowed, and it is proposed to enlarge the limit to 1,000. When grown up, the ex-apprentices nearly always exchange to merchant vessels where the service is less strict and the pay higher. Moreover, while in the Navy no sailor can ever become a commissioned officer, the cabin boy may become captain in the merchant marine. Before go-ahead American sailors can be induced patriotically to man the American Navy, the unrepublican exclusiveness which gives a monopoly of all the higher officers to the Naval Academy at Annapolis must be relaxed or abolished.....A convention of colored religious associations lately in session at Indianapolis has very modestly demanded of Congress an appropriation of $100,000,000 to promote negro colonization in the West. There's a growing movement to get rid of the negroes in the South, which is checked only by the necessity for negro labor, white labor being unavailable. In the West there's an increasing tendency to object to negro immigration, even in Kansas.. County Judge Day, at Auburn, N. Y., has just decided that the new law substituting death by electricity instead of by hanging as the penalty for capital crimes in this State, is constitutional. He has no judicial knowledge that the punishment is cruel or unusual, as claimed by the lawyers who argued against the sentence in the case of Kemmler, the condemned wife-murderer. Of course, the case will be appealed to the General Term and then to the Court of Appeals, as the Westinghouse Electric Company, which is fighting the law, doesn't care for the expense.....The Dominion Government will issue no more licenses to mutual insurance companies conducted on the assessment plan, and the licenses already granted to many American and Canadian companies will not be renewed at their expiration at the end of the year. The stock companies are bitterly opposed to such organizations, and it appears that the licenses were issued through a misinterpretation of the law. What a hubbub such a step would create in this country where such associations are multitudinous!.....Jay Gould holds $20,400,000 of the $80,000,000 stock of the Western Union Telegraph Company. Here is its prosperous showing for the last three years:

	1889.	1888.	1887.
Gross revenue.....	$20,788,194	$19,711,164	$17,191,909
Operat'g expenses.	14,565,152	14,640,592	13,154,628
Net earnings...	$6,218,041	$5,070,571	$4,037,281
Total surplus.....	$8,611,401	$7,498,548	$7,009,185
Miles of pole.....	178,754	171,375	156,814
Miles of wire.....	247,697	616,248	524,641
Messages sent.....	54,108,326	51,463,955	47,894,530

The cost per message was 22.4 cents, against 23.2 cents of the previous fiscal year. The above amount of net earnings would pay over 7½ per cent. per annum on a capitalization of $80,000,000; but as nearly half that amount is "water," the interest on the cash capitalization would be about 14 per cent.—a pretty good showing for Jay's management..... Gen. Chalmers, Republican candidate for Governor of Mississippi, and Judge Frazee, the nominee for Attorney-General, have resigned their candidacy. They never had a shadow of a chance, could hire no halls to orate, and numerous threats from the white chivalry warned them that if they persisted in the canvass shooting would soon begin.....Old Jason Mitchell was tarred and feathered by 25 "prominent citizens" of Taylorsville, Neb. He offered no resistance, but has already collected $2,500 damages.....The second Piedmont Exposition was formally opened at Atlanta, Ga., Monday..... No Pension Commissioner has been appointed yet, much to the discontent of a multitude of bellicose editors who would much sooner have a man than a vacancy to abuse.....In April last Commissioner Tanner decided that $4 per month should be the lowest pension. The rating of thousands was thus raised without any legal authority. The ruling has just been rescinded by the Assistant Secretary of the Interior Bussey, who all along strongly antagonized the liberal Corporal.....The electric lighting wires are still steadily killing folks that come in contact with them, utterly regardless of the arguments against "electrocution." Four such "electrocutions" have been put on record this week.. .....The shipyards on the lakes are unusually busy, having 35 new steamers on the stocks. Steel is superseding iron faster than iron superseded wood.....A Carpet Trust, composed of at least 75 to 80 per cent. of the carpet manufacturers of the country, is said to be in course of formation. German and other foreign capitalists are reported to be ready to put $25,000,000 into it. .....Louisiana's Attorney General publicly charges ex-State Treasurer Burke with having deliberately issued or failed to destroy State securities to the amount of $400,000. A large amount of the missing "baby bonds" has been found.....The pneumatic guns of the dynamite cruiser Vesuvius were officially tried last Wednesday, in the Delaware River near Cramp's ship-yard at Chester, and gave complete satisfaction. Fifteen shots were fired in 17 minutes and the machinery worked without fault.....A Maryland oyster-packing syndicate proposes to raise the prices of the bivalves on the ground of the great damage done to the beds by the late storms. A trust in luxuries will hardly be successful, as curtailment of consumption would certainly follow increase of price.....

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Editor of Edgefield Advertiser.

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GEO. W. BARTLETT, M.D.

BUNKER HILL, IND., March 14, 1888.
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FOREIGN NEWS.

SATURDAY, October 12, 1889.

AFTER a world of diplomatic finessing, and "backing and filling" on the part of the Czar, that mighty potentate has finally consented to meet Emperor William, and last Thursday arrived at Kiel, the great German naval port on the Baltic, where he was received with broadsides from the German and English iron-clad fleets stationed there to greet him. Next day he went to the imperial palace at Potsdam, 17 miles southwest of Berlin, and afterwards to the latter city. Everywhere the greatest pains were taken to manifest the greatest cordiality, and everywhere the utmost precautions guarded against Nihilist plots which were much feared. After much urging, he granted an interview to Bismarck. It is thought the Chancellor offered him a "free hand" in Bulgaria and Armenia as the price of his withdrawal from the French alliance, coupled with a threat of the consolidation of the Kingdom of Bulgaria in case of refusal. The Russian semi-official papers, however, say the visit will not in any way affect the political situation..... In the supplementary elections last Sunday in France, the Republicans elected about two-thirds of the 183 members of the Assembly who were to be chosen. Their opponents—Monarchists, Imperialists and Boulangerists—were badly demoralized by the previous triumph of the Government. The new Chamber of Deputies will consist of 365 Republicans against 211 opposition members, including the members from the colonies. The Republicans comprise 238 Moderates and 126 Radicals; while the opposition consists of 106 Monarchists; 58 Imperialists and 47 Boulangerists. Of the 576 members 287 belonged to the last Chamber; 43 were members of former Chambers, and 239 are new men. Having no further use for a man "in the soup," the Loyalists and Bonapartists have severed their connection with Boulanger, and many of his own most prominent adherents have repudiated him, and call themselves "Revisionists," a revision of the constitution having been the chief "point" in Boulanger's "platform." The financial backers of the late "Man on Horseback" have withdrawn their support, and he has gone to the Island of Jersey for economy's sake. The future looms black for him, but the French are the ficklest people on earth, and as "it is the unexpected that happens" in France, he may yet swing or be hoisted into the saddle again. At present the Republic appears more firmly established than at any former period of its existence..... Barbed wire fencing has been found very efficacious for fortifying entrenched positions in Germany.....Henceforth every branch of the German cavalry will be armed with the lance as its chief weapon; though neither the sword nor carbine will be discarded.....The Paris International Exposition has been the most successful ever held anywhere, in spite of the active or dormant opposition of every monarchial government in Europe, which were opposed to it on the ground that it represented the throne-overturning French Revolution, inaugurated 100 years ago by the destruction of that infamous prison-fortress, the Bastile. The Eiffel Tower as a success has even exceeded Buffalo Bill and his Indians. Its receipts since the opening of the show, on May 15, have been over 5,000,000 francs.....The King of Siam arrived in Paris Monday..... "The O'Donohue" of the Glens, who was in Parliament from 1857 to 1885, is dead..... .....The world is tremendously busy just now building very expensive war vessels. Sixty of the monsters in all were launched last year and 100 were on the stocks at its close..... The London Bread Trust, or union of bakers, expects to make 20 per cent. per annum on a capital of $2,500,000.....Spain is being encouraged by all the prominent European governments to get up a Congress of all the Spanish-American States, to be held at Barcelona or Madrid, as an offset to the Pan-American Congress now junketing in this country.....The complete success of the dock strikers in London has stimulated dock workers elsewhere to strike also. Those at Cardiff, Wales, have compromised. In a big strike of the same sort at Hamburg, Germany, and another at Flensburg there are no signs of settlement. Laborers brought from other places are clumsily doing the work, protected by strong guards of soldiers, a considerable number of whom are also taking the strikers' places. The other day a lot of striking German miners got an increase, which raised their wages to $4.50 per week—quite big wages for workmen in the Fatherland.....

AGRICULTURAL NEWS.

SATURDAY, October 12, 1889.

CONSUL GRIFFIN, of Sydney, N. S. W., reports to the State Department at Washington that both New South Wales and Victoria contemplate sending commissioners to the United States with the view of inducing the latter country to assist in establishing a line of fast steamships between the Australian colonies and the ports on the Atlantic coast of the United States to develop the export of Australian wool to this country. The total export of wool to the United States direct from Australasia during the season of 1888-89 was 38,240 bales, of 400 pounds each, against 21,813 bales for the previous season. During the past year 456 American Merino Sheep were imported into New South Wales by the way of London, as the quarantine laws of the colonies forbid importations direct from America. The reason given for this is that the animals may have the benefit of inspection by experts in London. Consul Griffin says the visit of Hon. W. G. Markham, president of the Wool Growers' and Sheep Breeders' Association of New York, to Australia, has been the means of attracting very general attention to the benefits to be derived from the introduction of high-class American sheep. Indeed, it is almost impossible to take up an Australian journal without finding the merits of these valuable sheep discussed. Mr. Markham introduced the Vermont Wrinkled Merino in 1880, with the firm conviction that the breed would be of great value to the Australian stock. At the annual show of the Denliquin Agricultural Society held last June, the principal prizes were carried off by the sheep of the American and Australian cross. The judges in awarding the prizes stated that these fleeces were unsurpassed in length of staple, luster, density and firmness. The number of sheep in Australasia at the close of 1888 was 96,487,811, valued at $156,519,312. The annual leap was 20,770,293, valued at $40,241,124, and the wool clip for the year was 458,451,710 pounds, valued at $74,368,505..... Stockmen in Southeastern Wyoming are reported to have suffered heavily from the depredations of wolves and coyotes upon calves and colts.....A New York milk-dealer was sentenced to pay a fine of $100 for selling adulterated milk, besides being severely denounced by the judge..... Chairman Sledge, of the National Cotton Committee, with other leading alliance officers, has recommended a meeting of the Cotton Exchange in St. Louis contemporaneous with the National Farmers' meeting in December.....Haaff, the dehorner, has gone into the business of despavining, de-curbing and de-ringboning horses.....It is said that the upper Missouri country will not ship over two-thirds the number of cattle shipped last year, on account of the heavy losses of cows and calves on the ranges in 1887..... Bernard Levy of this city, a milkman who has already paid over $500 for selling adulterated milk, was arrested for the fourth time the other day. He was probably trying to make enough to pay his fines..... ....Last week, two solid trains of 48 cars loaded with raisins left California for the East. California's resources as a fruit supply seem to be unlimited.....A young Iowa farmer has invented a steam binder which is said to have worked well..... Iowa is reported as having an enormous crop of apples and melons, and a good crop of sweet potatoes. Next we know, she will have a boom on hand.....Destructive prairie fires are reported from Iowa, Wisconsin, and other parts of the West. Much hay and grain in stacks, and in many cases farm buildings have been destroyed... In addition to the Exposition awards, the Ministry of Agriculture of the French Government have awarded the Whitman Agricultural Co. of St. Louis, a special gold medal for the great superiority shown at the Noiselle field trial of their hay-press over all competitors.....A Southern New Jersey peach grower comes to the front with a certain cure for the yellows. He has a fair crop of peaches this year, while his neighbors have none. He says that his remedy never fails, and that he intends to bring it before the public shortly. "It is too valuable to give away," however. .....The farmers in Stevens County, Kansas, have suffered four successive failures of crops, and are without the means of support for the approaching winter. They have issued an appeal for help which has been indorsed by the Governor..... Farmers in several Western States are reported to be holding on to their wheat in anticipation of higher prices; more than two-thirds of it is said to be still in the growers' hands.....There was frost in Mississippi and Alabama on Monday night. This is the earliest for many years..... The boiler of a thrashing engine exploded near St. Cloud, Minn. on Monday, severely injuring several men. This is a duplicate of several reports from different localities.. .....Last week's total shipments of live stock to foreign ports from New York consisted of 3,792 cattle, and 122 sheep with 10,430 quarters of beef. Boston shipped 2,000 cattle and 7,082 quarters of beef; Baltimore 3,848 cattle, and Philadelphia 490 beeves and 2,000 quarters of beef. Prices of American beef are well sustained in England....

Miscellaneous Advertising.

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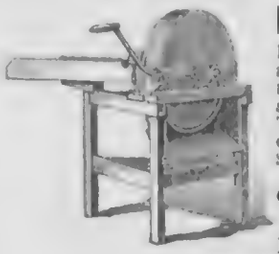

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Write us at once **H. B Griffing, Sons & Co.,**
70 Cortlandt St.,
New York City, N. Y.

Crops & Markets.

SATURDAY, October 12, 1889.

THE GRAIN MARKET is very quiet. Wheat shows an upward tendency, while reports from the winter-wheat belt indicate a large part of the crop still in the growers' hands, who are inclined to sell at present prices only as ne essity compels. The fall seeding has generally been heavier than in recent years, except in certain localities where drought has prevented proper preparation of the soil. Corn and oats show a downward tendency in price.

POTATOES are in large supply in this city, and are large and of excellent quality. The price is well maintained, however, as the demand is good. Sweets are plenty and a trifle lower in price. Prime Virginias are worth $1.50 per barrel, with Jerseys ranging higher. Turnips bring a good price at present, $1.50 to $1.70 per barrel. Onions and other vegetables show little change.

APPLES are coming forward quite freely, but there are very few prime lots. Nice red apples well assorted and packed are in good demand, but other grades are neglected. The Southern trade take a good many apples and they require red fruit, Baldwins usually satisfying their requirements as well as any.

Messrs. J. C. Houghton & Company, Liverpool, cable that in their market American apples are in good demand, at the following prices for sound fruit: Baldwins, $2.68 to $4.87, Greenings, $3.16 to $3.65.

Messrs. James Lindsay & Son, Glasgow, cable their market as follows: Greenings, $3.40 to $3.89; Baldwins, $4.13 to $4.85; Kings, $4.85 to $5.83; Ben-Davis, $4.62 to 4.85. The shipments to October 5, 1889, aggregate about 43,000 barrels, against a total to same date last year of about 175,000 barrels, a difference in favor of last season of about 132,000 barrels. This week the shipments will probably be heavier than heretofore, the market abroad having improved and the late varieties of apples being in condition to ship.

LATEST MARKETS.

PRODUCE AND PROVISIONS.

NEW YORK, SATURDAY, October 12, 1889.

NEW YORK MARKETS.

COTTON.—The quotations, according to the American classification, are as follows:

	Uplands.	New Orleans and Gulf.	Texas
Ordinary	7⅞	8⅛	.....
Strict Ordinary	8 5-16	8 9-16	.....
Good Ordinary	9¼	9⅜	.....
Strict Good Ordinary	9 11-16	9 15-16	.....
Low Middling	10 3-16	10 7-16	.....
Strict Low Middling	10 7-16	10 11-16	.....
Middling	10⅝	10⅞	.....
Good Middling	11⅛	11⅜	.....
Strict Good Middling	11⅜	11⅝	.....
Middling Fair	11 13-16	12 1-16	.....
Fair	12 7-16	12 11-16	.....

STAINED.

Good Ordinary	7¾	Low Middling	9 5-16
Strict Good Ordinary	8⅜	Middling	10⅛

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 18@21; Scoured Texas 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

POULTRY.—Chickens—Spring, per lb, 9@10c. Live Fowls near-by, per lb, 11½@12c; do Western, per lb, 11½@12c; roosters, per lb, 6½@7c; Turkeys, per lb, 9@11c; Ducks, Western, per pair, 60@75c; Geese, Western, per pair, $1 40@$1 50.

POULTRY.—DRESSED—Turkeys, mixed, per lb. 10@15c; Fowls, western, choice, 10@11c; do common to good, 7@9c; Ducks, spring, good, 10@17; Squabs, white, per dozen, $4 00@$——; do dark, do, $1 50@$1 75; Chickens, spring, 11@17c; Fowls, near by, 11@12c.

GAME.—Plover, per doz, $1 35@$1 75; Snipe do, do, $1 75@$1 75, Woodcock, per pair, $1 00@$1 25; Grouse, do do, 75@80c; Partridges, do, $80@$1 25. Duck, Mallard, 50@75c; do, Teal, 20@40c; do, Redhead, $0 75@$1 00.

HOPS.—State, New, 11@13c; do, 1888, best, 11@12c; do, prime, 9@10c; do, low grades, 6@8c; do do, 1887, 3@5c; do do do, California new, best, 13c; prime, 10c.

HAY AND STRAW. Old Hay—Timothy, best, 85@90c, do good, 75@80c; do medium, 55@65c; shipping, 55@—c; New Hay—Timothy, best 75@80c; do good, 60@70c, do medium, 55@60c; shipping, 45@50c; clover, 45@50c; Straw—No. 1 Rye, 65@75c; short do, 50@60c; oat do, 40@45.

BEANS.—Marrows, New, $2 45@——; New Mediums, choice, $2 15@2 20; Pea, $2 15@$2 20, Red Kidney, $3 75; White Kidney, choice, $2 60@2 70, Foreign Mediums, $1 35@$1 55, California Lima, $3 50@$——; Green Peas, $1 20@$1 30; Italian, $1 85@$2 00.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted at 7¾@8c, and farmers' grades at 6@6½c. Pecans, 5@6½c.

SEEDS.—Clover is hard to sell; exporters quiet New prime, future deliveries offered at 7, and choice, 7⅛c, with fancy at 7½c. Timothy quoted at $1 50@$1 60.

FRUIT AND VEGETABLE MARKETS.

VEGETABLES.—Potatoes—Jersey, per bbl, $1 65@$1 75; Long Island do, $2 00@$2 25; Sweets do, $1 50@$2 50. Cabbage, new per 100, $3 50@$4 50. Egg Plant, per bbl, $1 50@$2 00. Turnips, per bbl, $1 50@$1 70 Corn, per 100, $1 00@$1 50. Onions—Orange Co. Red, $1 00@$2 25; Eastern White, $2 00@$3 00; Eastern Red, $2 00 @$2 50; State, Yellow, $1 50@$1 75. Lima Beans per bag, $2 50@$3 00.

FRUITS.—FRESH.—Apples, per bbl, $1 25@$3 00. Pears, per bbl, $2 00@$4 00; do per keg, $1 25@$3 50; Plums, per crate, $1 00@$1 25. Peaches, per basket; $0 60@$2 00. Grapes, best per lb, 3@7c; do, good, do, 2@3c. Cranberries, C. C., per bbl, $6 00@$8 00; do do, per crate, $2 25@$2 75. Quinces, per bbl, $4 00@$7 00. Lemons, per box, $3 50@$7 00.

DOMESTIC DRIED—Apples—Evaporated, old, 4½@6¾c; do choice, new, 8½@—c; prime, 7½@8c; sliced, new, 4@5c; do old, 3@3¾c; Chopped, 2¾@—c, Cores and skins, —@—c. Cherries new, 10@12c; do, old, 8@10c. Raspberries new 22@25c; Blackberries, 5½@6¾c. Peaches, Delaware evaporated, peeled, 15@18c, do do, unpeeled, 8@10c; Georgia, evaporated, peeled, new, 12@14c; do do do, unpeeled, 7½@10c; do do, sundried, 9@10c. Huckleberries, new, 11@12c. Plums, new, 6@7c.

PROVISION MARKETS.

NEW YORK.—PROVISIONS.—PORK.—New Mess, $12 25@$12 75; Short, Clear, $12 00@$13 50; Extra Prime Mess, $10 25@$10 75; Prime do, $10 75@$11 00, and Family $2 00@$13 00. BEEF—India Mess, in tierces, $12 50@$14 00; Extra Mess, in barrels, $7 00@$7 50; Packet, $7 25@$8 00 per bbl, and $11 00@$12 00 in tierces; Plate, $7 50@$8 00; Family at $11 00@$14 00. HAMS.—$15 25@$15 75 winter packing. CUT MEATS.—Quoted 12 lbs, average, Bellies, 7@——c; Pickled Hams, Hams, 10¾@11c; pickled Shoulders, 4⅞@5c; Smoked shoulders 5¾c; do Hams, 11½@11¾c. Dressed Hogs.—City, heavy to light, 6 7-16@6¾c. Pigs, 7c. LARD. City steam, $6 20; October, $6 50; November, $6 32; December, $6 25; South America, 7 25c.

BOSTON.—PROVISIONS firm and steady. New Mess, Pork, $13 75@$14 00; Old Mess Pork, $13 00@$13 25; Extra Prime new, $13 00@$13 25. LARD, $8 50@$9 50.

PHILADELPHIA, PA.—PROVISIONS.—Potatoes, Maryland Bose, per bbl, $1 50@$1 75. Provisions were steady. BEEF.—City family, per bbl, $8 00; do packets, $8 00@$8 50; Smoked Beef, 12@14c; Beef Hams $16. PORK.—Mess, $13 50@$14 50; do Prime Mess, new, $13. 50; do family, $15 00@$15 50; Hams, smoked, per lb, 12@14c; do, S. P., cured, in tierces, 9½@11c; do do, in salt, 10c; sides, clear ribbed, smoked——@8c, Shoulders, in dry salt and fully cured, 6¼@6¾c; do do, smoked, 7c; Shoulders, pickle cured, 7@ ¼c; do do smoked, 8@8½c; Bellies, in pickle, 8@8½c; do breakfast Bacon, 9½@10c. LARD. Steady; City refined, 3c; do steam, 7@7¼c; butchers' loose, 6½@7c.

CHICAGO.—MESS PORK.—$10 70@10 75. LARD—$5 95@$6 00 per 100 lbs: Short Rib sides (loose), $4 95; dry salted shoulders, boxed, $4 60; short clear sides, boxed, $5 25@$5 37.

DAIRY AND EGG MARKETS.

NEW YORK.—BUTTER—New—State and Penn. best, 25½@26; Elgin, best, 25½c; Western, best 24@24½; do prime, 20@22c; do good, 15@18; do poor, 12@14; State, Dairy, half-firkins, tubs, best, 23@24c; do do prime, 20@22; do do fine, 16@18; Welsh tubs, fine, 19@21c; do do, good, 15@17; firkins, best, —@——c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 16@18; do fine, 12@15; Western dairy, fine, 12@14c; do fair, 10½@11c; do poor, 9@10c; do factory, fresh, best, 12@13c, do prime, 11@11½; do good, 9@10; do poor, 7@9c.

CHEESE.—State factory, fancy, 10¾c; do do fine, 9½@10½c; do do, prime, 9@10c; do do, fair to good, 8¾@9½c; Ohio, flat, prime, 9½@9¾c; do good, —@—c; do, good, —@—; Skims, light, 7@8c; do medium, 2@3; do full, 1@2c.

EGGS.—Near-by, fresh, 20½@21c; Canadian, 20@—c; Southern, 19@20c; Western, best, 20@—c; limed, 19c; ice house, 15@17c.

PHILADELPHIA.—BUTTER scarce; Pennsylvania Creamery, extra, at 24@25c; Pennsylvania Prints, extra 28@30c; B. C. and N. Y Creamery, extra, 24c; Western Factorp, 14@16c; Packing butter, 11@12c. Eggs were firm; Pennsylvania firsts, 23@—c; Western firsts, 19@20c. Cheese dull—steady; demand fair; New York full cream at 3½c; Ohio flats, choice, 7¼@7½c; do, fair to prime, 14@14½c.

CHICAGO, ILL.—BUTTER.—On the Produce Exchange to-day the butter market was generally weak. Fancy Creamery, 16@23c, Choice Western, 17@19c; Choice Dairy, 18@20; Common to Fair, 9@10c. Eggs firm at 18@19c.

GRAIN MARKETS.

WHEAT—Sales—No. 1 Northern, cost, freight and insurance, for milling, 91c; Ungraded Winter Red, 78@89¼c No. 2 Red, 86½@87c afloat; No. 2 Red, elevator, quoted at 86@86¼c; No. 3 Red, 82c, elevator; Steamer No. 3 Red, 83c, elevator; No. 2 October, 85¾@86¼c; do November, 86⅝@87¼c; do December, 87⅝@88¼c; do January, 89@89¼c; do May, 92⅝@92⅞c. RYE—Quiet, but steadily held. Western quoted at 48@51½c; State, 55@57c. BARLEY—Dull. CORN.—Sales.—Ungraded Mixed at 37¾ 40⅛c; No. 2 Mixed, 39½@39⅝c, elevator, 39⅛@40¼c, afloat as to delivery; No. 2 White, 38½c, elevator, 39½c, afloat Low Mixed, 38c, elevator; No. 2 October, 38¾@39c, do November, 39⅝@39 15-16c; do December, 40⅛@40¾c; do May, 41½@41¾c. OATS.—Sales.—No. 3, 25c; No. 3 White, 27½c; No. 2, 25⅞@26c, elevator, 27c delivered; No. 2 White, 28¼@29c; No. 1 White, 30c; Mixed Western 24@27½c; White do, 27@35c, No. 2 October, 25¾c; do November, 26c; do December, 26¼@26⅜c; do May, 28⅛@28¼c.

LIVE-STOCK MARKETS.

New-York, Saturday, October 12, 1889.

BEEVES.—Poor Texans went as low as $2 80, and from thence ranged up to $3 30; Colorado cattle sold at $3@$3 40, poorest to best; Native do at $3@$4 80; Texas cows at $2 75; bulls at $2 25@$2 80; stags and oxen at $2 50@$3 50.

CALVES.—Unchanged at $2@$2 65 for Grassers (few selected, $2 75); $3@$3 50 for Fed and Western Calves; $5@$8 for Ordinary to Choice Veals.

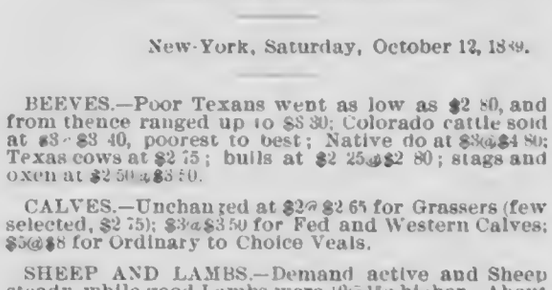
SHEEP AND LAMBS.—Demand active and Sheep steady, while good Lambs were 10@15c higher. About everything sold. Very few strictly prime Sheep offered Ordinary to good sold at $4@$5 15, and a deck-load of Kentucky do, averaging 116 lbs. at $5 50. Lambs ranged from $5 50 to $7 25 for very common to choice, and "culls" sold at $4 75@$5.

HOGS—Steady, but slow, at $4 60@$5 per 100 lbs.

Communications Received for the Week Ending October 5, 1889.

W. F.—M. E. B.—L. L. B.—M. C. H.—L. E. M—E. S. L.—M. L. H.—J. N. M.—W. A. M.—G. C. G.—J. W.—J. W. G.—C. H.—J. E. P. R.—P. B. G.—J. A.—D. B. H.—S. B. H.—A. W. S.—C. E. L. H.—B. W.—R. B.—O. H. A.—F. R. W.—J. Q. A.—J. P. P. C. B.—J. S. C.—H. D—T. E. B—W. E. T.—W. H. C.—E. S. A—E. G. B.—E. H. A.—G. M. O.—A. T. T.—M. H. C. G.—E. T.—D. A. S.—D. B.—F. W. S.—J. D. L. W. McE.—A. P. A.—P. H.—E. C.—D. D. S.—H. S.—I. P. W. H. I—Mrs. I. V—C. M. S.—J. T.—W. J. B.—A. J. C—E. P. C.—P. B. O.—C. H.—W. D—E. P. R.—C. M. L—C. F.—E. G. F.—E. H. J.

Miscellaneous Advertising.



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KENTUCKY STOCK FARMS For Sale—Bargains. 600 Acres, the very best, all in grass, $60 an acre; 460 acres good land no improvements, $30 an acre. 20 other Farms for sale. Address
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LOW-DOWN WAGON on high wheels—only **Practical, Common Sense** Farm Wagon in the world. Send for 28 reasons why.
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MILLS for grinding ear corn, shelled corn, corn and oats, buckwheat and rye. A BOY CAN OPERATE and keep in order. A complete mill and sheller for less than $100. REDUCED PRICES **for Fall of 1889** OVER 20,000 IN USE. Received **Highest Awards** at St. Louis, Cincinnati, New Orleans and Indianapolis fairs and Expositions. Send for Book No. 18—interesting and valuable. Mention paper, and address
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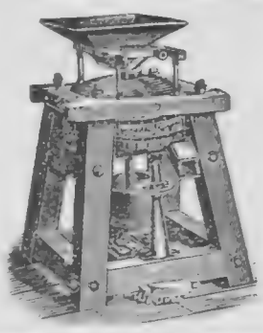

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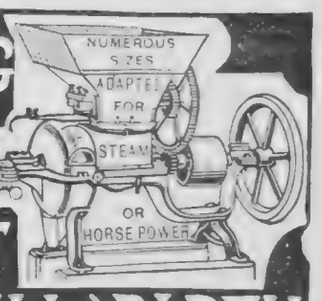

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Shipped on short notice by rail in car-load lots, at close figures. We have imported ashes for 25 years and guarantee ours to be of the best quality. Before ordering secure our prices and other information.
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Leads All its Competitors.
It works either rags or yarn, is Simple, Durable, and EASY TO OPERATE. Price, by mail,
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Satisfaction guaranteed or money refunded. Send for Circulars.
Agents Wanted.
G. W. GRIFFIN & CO.,
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It is an age of Steel. It has cold rolled Steel Arms and a Malleable are cold pressed and of superior quality. The Wheel is built on the tension or bicycle plan. Thousands of them are in use. They have been and are sent the world over **on approval.** $50 buys our perfect Self-regulating Steel Aermotor which does as much work as any 10-ft. wooden wheel. $100 buys our perfectly Self-regulating Steel Geared Wind Mill for grinding grain, cutting feed, sawing wood, etc., which does as much work as any 16-ft. wooden wheel. We are the only makers of a Tilting Tower that **never has to be climbed.** It saves human lives and doubles the life of the wheel. **The Aermotor runs and does effective work when all other wheels stand idle for want of wind.** Send for copiously illustrated printed matter showing how to put power in your barn. ***THE AERMOTOR CO.,*** 110 & 112 S. Jefferson St., Chicago.

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We have concluded to offer a portion of our specially selected lands, the best in Marion County, in lots of ten acres or more, from $5 to $25 per acre. The land for growing oranges and other fruits. Also all vegetables and crops grown in Florida. This land is rapidly being settled by people from Ohio, Illinois Iowa, Indiana, New York, Holland, etc. Three Mills, Three Railroads, and only sixteen miles from the county seat (Ocala). High, healthy country. No malaria. **Correspondence solicited.** Inclose stamp. We refer to the Merchants' National Bank of Ocala, Fla. Address
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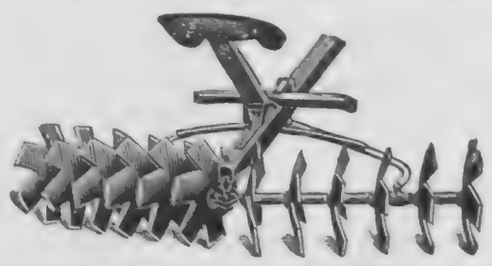

For preparing the ground for fall seeding, the Clark's Cutaway Harrow will more than pay for itself in one season. No use for the plow on stubble land. Take it and try it and you will buy it. Send for new circular.
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Pennsylvania Agricultural Works, York, Pa.
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Send for Catalogue. Portable, Stationary, Traction and Automatic Engines a specialty. Warranted equal or superior to any made.

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FERINITE A Mahogany Finish. Can be applied by any one. Two coats on common wood produce a beautiful finish—more attractive than natural wood. Durable, economical. Send for circular and sample of Wood finished with **Ferinite** to SEELEY BROTHERS, 32 Burling Slip, New York; 17 High Street, Boston.

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Send for catalogue of Feed Cutters, Feed Mills, Stock Supplies.
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Literary.

MAGAZINE REVIEWS.

SCRIBNER for September has an article by Prof. Shaler of Harvard on "The Common Roads." These were in the primitive periods of history simply trails over which pack-animals transported passengers and freight. The invention of wheeled vehicles necessitated better roads. The Romans were the first to build good carriage-ways. Great Britian and Switzerland have the best roads of the European countries. The United States are most poorly provided with roads of any country of equal area and general culture, owing to their abundant means of water communication and the rapid construction of railroads. The author must have had personal experience in the common American method of road repairing, as he graphically describes the "annual road-making picnic." He says it is probable that the sum of the road-tax in this country, taking into account the execrable roads commonly found, is greater than that of our ordinary taxation. To remedy this state of things, the agricultural colleges should teach road-making; the work should be done by the township or county governments, thus permitting the utilization of machinery now inaccessible. Numerous suggestions are offered in relation to improving the country roads on different soils. "Electricity in War" is discussed by Lieutenant W. S. Hughes of the United States Navy, in its relation to Naval Warfare, and by Lieutenant John Mills, of the U. S. Army, in its relation to Land Warfare. The uses to which it is put are numerous. It is used in the powerful search-light; for signalling between vessels long distances apart; for torpedo detectors; firing large guns; estimating the speed of ships; exploding torpedoes, etc. Indeed, it seems well-nigh impossible to imagine any mechanical work to which it cannot be applied. By its aid the speed of a cannon ball may be ascertained. A torpedo has been invented which may be sent out over the water, guided and propelled from the shore, and exploded at will or automatically upon striking the enemy's vessel. Donald G. Mitchell under the caption: "A Scattering Shot at Some Ruralities," gives some observations among some of the depopulated and decaying New England villages and farms. Two stories of travel are: "A Summer in Iceland," and "How I Crossed Masai-land." There is the usual proportion of fiction. Charles Scribner's Sons, New York.

LIPPINCOTT'S space is largely occupied by the novel "Creole and Puritan," by T. C. DeLeon. Anne H. Wharton essays an answer to the much mooted question: "What Shall be Our National Flower?" She favors the goldenrod. "The Trials of Magazine Editors" are vividly portrayed by Junius Henri Browne. They evidently have to suffer a great deal from over-ambitious authors, or would-be authors, but the writer is constrained to exclaim: "The trials of the editor are certainly manifold and peculiar, but less serious and harassing than those of writers." The publishers have added a new department: "With the Wits." While some of the humorous hits are very good, some give the idea of being made to order out of very scant materials. Some of the most interesting departments have been dropped, and this issue is not, with the possible exception of the novel, equal to the usual standard. J. B. Lippincott & Company, Philadelphia.

THE WRITER has quite an argument from a woman in favor of the addition of the termination "ess" to the title of a woman who engages in professional or mechanical occupations. If she essays to heal the sick, she should be known as a doctress, or rather a physicianess; if she would climb higher and erect a mansion wherein to dwell, she becomes a carpentress, or, excuse the slip, a buildress, as carpenters are somewhat out of date. Should her inclinations lead her to till the soil, she would become a farmress. She might also become a cookress, a bakress, an editress, a conductress, and so on *ad libitum*. Don't let us have any half-way business about this reform! There is considerable good advice in "About Handwriting," which we would be glad to see followed. "Queries" contain much interesting information. The Writer, Boston.

BOOK REVIEWS.

WE ARE in receipt of the "Album of Agricultural Statistics of the United States" from Hon. J. M. Rusk, Secretary of Agriculture. It contains 16 maps of the United States each presenting a separate topic, *e. g.*: Percentage of unoccupied and of farm lands comprising the superficial area of each State. Acreage of corn, (and wheat and oats on separate maps) per 1,000 acres of superficial area in each State. Average values of each kind of live stock in each State. Average value of lands in the United States, etc. An outline map is presented, in each case, showing the boundaries of the several States, and by means of the different colors, the facts to be presented are instantly conveyed to the eye, imparting the desired information much more quickly and readily than could be done with statistical tables. To illustrate: one map contains in each State a semi-circle in four colors: one color represents the comparative area of tillage lands, another the grass lands, a third the woodland, and the fourth the unproductive lands. A glance shows the comparative area of each in the different States. The album is a new departure in statistical work, and is a very interesting, and at the same time valuable addition to statistical literature. Department of Agriculture, Washington, D. C.

THE ENGLISH FLOWER GARDEN. A new edition of this very entertaining and valuable book is just at hand, and in it numerous changes appear. In noting these, the author, W. Robinson, Editor of "The Garden," "Gardening Illustrated," etc., asserts his belief that any book with a useful aim would be bettered were the author compelled by law "to keep to it and mend it all his life." One avowed purpose of the book is to destroy the notion that a flower-garden must be of set pattern and placed at one side of the house. For the benefit of those of our readers who may not be familiar with the first edition, we may say that the book forms volume I. of the Garden Cyclopedia, two parts. Part I. consists of a description of some of the best typical English gardens, and discussions of hardy plants and ways of arranging them; climbers; Alpine and rock gardens; spring, autumn, and fragrant flowers; color in the flower garden; roseries; wasted efforts; etc. Part II. gives full descriptions of all the best plants for the garden. Mr. Robinson pithily says: "Select only good plants; throw away worthless kinds; there is no scarcity of the *very best*." The book is written in the interest of out-door plants only—hardy and half-hardy—and pays no attention to bedding plants. Unlike most English works, this is almost equally valuable to the American and the English gardener. Profusely illustrated and indexed; cloth, green and gold; 6x9; 832 pages. John Murray, Albermarle Street, London.

Indust'l Societies.

BAY STATE AGRICULTURAL SOCIETY.

(RURAL SPECIAL REPORT.)

THE Third Annual Cattle Show and Fair of the Bay State Agricultural Society was held in Mechanics' Building, Boston, Mass., from the 7th to the 12th of October. It was in all respects the best and most successful agricultural exhibition ever held in the East. On the main floor of the exhibition hall directly as one entered the building, were the flowers and shrubs, flanked on one side by long rows of tables loaded with vegetables, and on the other by similar tables covered with fruit. The gallery was filled on one side with the poultry exhibit and on the other with implements. One of the side rooms was appropriated by the ladies and was well filled with various articles of domestic manufacture. The other side room was used by the Grangers. On the central bridge of the gallery, Mr. Ellis of Norwood, had a fish hatchery, where the process of hatching fish from the spawn was carried on. The spawn used was that of the carp, and the young fish in all stages of development were shown. The sides of the main hall were filled with agricultural implements. In the center was located the show-ring, while the bands were located on the stage surrounded by a perfect wilderness of trees and shrubs.

Along the rear of the buildings an annex was erected for the swine, and adjoining it were the sheep pens. The exhibition of both sheep and swine was in many respects the best ever seen in New England. The horses and cattle were kept in stalls in the basement when not in the show-ring on the main floor.

On the whole, the fair was an unqualified success. Naturally it was compared, not with the fairs of other societies, but with the great fair of two years ago held by the society in the same building. The verdict seemed to be that while the arrangement of the exhibit was better, the average character of the articles shown and the general appearance of the exhibit were about the same. The working dairy attracted much attention and will be described in a separate article. J. H. G.

THE LADIES' HOME JOURNAL

For OCTOBER contains the opening chapters of

MAUD HOWE'S Society Novel, "PHILLIDA."

"Phillida" is a story of English society life, written by one who thoroughly knows her ground. With her distinguished mother, Mrs. Julia Ward Howe, Miss Howe lived for some time in England, and her talent and beauty made her eagerly received among the very best people. She has made good use of her rare opportunities, and has studied the charms and foibles of English society with a keen and impartial eye. The heroine is an American girl who goes to England and creates a furore in London society.

FLORENCE HOWE HALL contributes another paper on "*Affectations and Inelegancies of Speech.*"

SUSAN COOLIDGE writes a splendid story for the girls—"*A Coming Out*"—treating of a young girl's training for a society "coming out."

"A New York Woman of Fashion."

Pen portraits of a dozen well-known society women of New York. Written by one of the "four hundred."

MARGARET E. SANGSTER contributes one of her graceful poems—"*In the Night Season*"—beautifully illustrated.

"Forgotten Graves of Famous Authors."

by EDW. BOK. One of the most interesting papers ever published.

All Hallow Eve—a nutting shake and other games. Illustrated.

Autumn Brides and Brides Maids—with other fashion matter complete. By our own Mrs. JOHN W. BISHOP, now in Paris, furnishing the latest news in Styles, Novelties, etc., for *The Ladies' Home Journal.*

Other features are "*Nursing in Fevers*," by Mrs. A. R. RAMSEY. "*Practical Home Dress Making*" by EMMA HOOPER. "*Flowers and House Plants*," by EBEN E. REXFORD. "*English Meat Teas.*" "*Talks with the Doctor*," etc.

The Ladies' Home Journal is the ideal home periodical for Christian, cultivated families. Pure in tone, never sensational, always an unobtrusive moral in its fiction, and always helpful and practical. It employs the most distinguished writers and artists, and is filled with the best obtainable *original* matter. Is always *new*, *fresh*, and attractive by its handsome printing and illustrations. It is read by *everybody*; at least it has nearly half a million subscribers and buyers, a larger circulation than any other periodical, which shows its great popularity.

The October Number is ready on the news stands, and **costs but 10 cents a copy. A Three Months Trial Subscription may be had for only Twenty-Five Cents,** sent direct to the publishers.

For ONE DOLLAR we will mail The Ladies' Home Journal from now to January 1st, 1891—that is the balance of this year—FREE, and a FULL YEAR from January 1st, 1890, to January 1st, 1891.

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HAY FEVER
CATARRHAL DEAFNESS

A NEW TREATMENT.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been discovered which permanently cures the most aggravated cases of these distressing diseases by a few simple applications made (*two weeks apart*) by the patient at home. A pamphlet explaining this new treatment is sent *free* by A. H. DIXON & SON, 337 and 339 West King Street, Toronto, Canada.

Miscellaneous Advertising.

DR SETH ARNOLD'S COUGH KILLER CURES COUGHS AND COLDS. PREVENTS CONSUMPTION.

FOR 25 YEARS

I have used Dr Seth Arnold's Cough Killer and it is the only medicine which relieves my cough.—*Peter Edel, Gloversville N. Y.* **Price 25c., 50c. and $1 per bottle.**

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Consignments Solicited.

CATALOGUES, ETC., RECEIVED.

COLCORD'S SYSTEM OF PRESERVING GREEN FORAGE.—The R. N.-Y. is glad that Mr. Colcord has prepared this volume. In many respects it is the most important publication relating to ensilage that has appeared since Mr. Goffart began the literature of the silo. We have described this "patent system" of making silage so frequently that most of our readers know what it is. For the benefit of those who have not given the matter much thought, we may say briefly that Mr. Colcord conceived the idea of preserving green forage, corn, clover, it matters not what, without any fermentation. The ordinary silo is a tight box or room in the building, drainage of which is carefully avoided and outside air is guarded against. The material with which the silo is to be filled is thrown in and permitted to heat up to a high temperature. This high heating is considered beneficial, it being asserted that after a certain degree of heat is reached the product cools down, the ferment germs being destroyed. The high heat produced in these silos has led the owners to compare their silage to preserved fruit. Now Mr. Colcord believed that this heat was not necessary. Quoting from Mr. Goffart, he says: "The end to be attained is to prevent all kinds of fermentation. Fermentation preserves nothing; on the contrary, it is always a preliminary step towards a decomposition more or less putrid; towards a real destruction." What does he do, then, to take the place of what the scientists advocate in the way of "killing heat?" A strong, air-tight silo is built much like those used by the high-heat people. There are strong beams placed above it to render it possible to produce a strong pressure. At the bottom is an opening with pipes leading to the outside. A device called a silo governor fits to this opening at the bottom of the silo. This governor is the characteristic feature of the system. It comprises a series of connected perforated pipes so arranged that they branch all about through the silo. The cut corn is thrown into the silo in the usual way—down among these perforated pipes. When the silo is full it is covered with an air-tight cover and powerful jack-screws are placed under the heavy beams and worked so that the cover is pressed powerfully down. Then, as can be readily seen, the juice and water in the silage—all the substances that might cause heat and fermentation—are pressed into the perforated pipes and can be drawn away at the outside. The product left is not "silage" as most people recognize that substance, but "preserved green forage." Mr. Colcord, in this little volume, gives all the details of his system and explains it at length.

As to the merits of his system, it is evident that, counting the cost of the governor and the labor required in adjusting the pipes and working the screws, the patent silage will cost more per ton than the common product. Is it worth more per ton after it is made? That is the question. The R. N.-Y. fully believes it is.

DAIRY EXPERIMENTS AT THE NEW JERSEY STATION.—Bulletin No. 57 of this station outlines some experiments that are now under way to test the relative merits of different breeds of cows. Three cows of each of the following breeds, Ayrshire, Guernsey, Jersey, Holstein-Friesian and Short-horn, are being fed and milked together somewhat after the plan followed at the Geneva, N. Y., Station. The food and milk are frequently analyzed. At the end of the year it will be possible to tell how much each cow has eaten, how much milk she has produced and how her milk compares in value with the standard. It can be readily seen that such a test will prove very interesting when it shall have continued long enough to give a fair basis for calculation.

PETER HENDERSON & COMPANY, 35 & 37 CORTLAND STREET, NEW YORK.—Autumn catalogue of bulbs for fall planting, plants for winter flowering and seeds for fall sowing. Handsomely illustrated. Besides hardy bulbs, roses, a large collection of chrysanthemums, hardy shrubs and small fruits are catalogued.

STRAWBERRIES FOR CANADA.—Bulletin No. 5 of the Experimental Farm at Ottawa, Canada, is devoted to strawberry culture. The most economical methods of culture are given and an excellent list of varieties with the characteristics of each.

THE MURRAY HARNESS.—The R. N.-Y. again calls attention to the catalogue of the Wilbur H. Murray Company of Cincinnati, Ohio. The prices given for all sorts of harnesses and buggies are certainly surprising. So far as the R. N.-Y. can learn, the goods are of such quality as to make the offer a remarkable one. This is the year for economy. Buy at headquarters and save all you can.

CREOSOTE STAINS.—Circular from Samuel Cabot, 70 Kilby Street, Boston, Mass. There are seven reasons why these stains are worthy of use. They preserve the wood, they are less expensive than paint and at the same time just as durable, the coloring effect is more beautiful than that of paint, the stains decrease the combustibility of the wood, they are more easily and quickly applied than paint and will stand the weather better. A novel device is adopted for advertising the stains. Pieces of wood stained in different colors are sent to those who desire to investigate the merits of creosote stain. You had better send for them.

A STUDY OF WINDBREAKS IN THEIR RELATION TO FRUIT-GROWING.—Bulletin No. 9, September, 1889, from the Experiment Station at Ithaca, N. Y. In this bulletin Prof. Bailey has adopted the "Symposium" plan of giving information. The pamphlet presents the views of 79 well known fruit-growers, with comments and elaborations by Prof. Bailey. The arrangement of the answers is most admirable and the conclusions and arguments are forcibly and clearly given. In fact, this bulletin is a model for clearness and pithiness. Prof. B. says that while the best horticultural writers are nearly unanimous in recommending windbreaks for all fruit plantations, there is, nevertheless wide difference in opinion and practice among good cultivators concerning them. Fruit-growers, as a rule, either wholly oppose shelters or positively advocate them. It was because of this difference of opinion that the "symposium was organized and prepared." Prof. B. gives the following "general summary" of the points made by his correspondents.

1. A windbreak may exert great influence upon a fruit plantation.

2. The benefits derived from windbreaks are the following: protection from cold; lessening of evaporation from soil and plants; lessening of windfalls; lessening of liability to mechanical injury of trees; retention of snow and leaves; facilitating of labor; protection of blossoms from severe winds; enabling trees to grow more erect; lessening of injury from the drying up of small fruits; retention of sand in certain localities; hastening of maturity of fruits in some cases; encouragement of birds; ornamentation.

3. The injuries sustained from windbreaks are as follows: Preventing the free circulation of warm winds and consequent exposure to cold; injuries from insects and fungous diseases; injuries from the encroachment of the windbreak itself; increased liabililty to late spring frosts in rare cases.

a. The injury from cold, still air is usually confined to those localities which are directly influenced by large bodies of water, and which are protected by forest belts. It can be avoided by planting thin belts.

b. The injury from insects can be averted by spraying with arsenical poisons.

c. The injury from the encroachment of the windbreak may be averted, in part at least, by good cultivation and by planting the fruit simultaneously with the belt.

4. Windbreaks are advantageous wherever fruit plantations are exposed to strong winds.

5. In interior places, dense or broad belts, of two or more rows of trees, are desirable, while within the influence of large bodies of water thin or narrow belts, comprising but a row or two, are usually preferable.

6. The best trees for windbreaks in the Northeastern States are Norway Spruce, and Austrian and Scotch Pines, among the evergreens. Among deciduous trees, most of the rapidly-growing native species are useful. A mixed plantation, with the hardiest and most vigorous deciduous trees on the windward, is probably the ideal artificial shelter belt.

SYSTEMATIC TESTING OF NEW VARIETIES.—In Bulletin No. 8 of the Pennsylvania Station, Prof. Geo. C. Butz announces that the station is prepared to test novelties, in the way of vegetables, flowers or fruits. The station will not, of course, offer any of these novelties for sale; the originator's right is fully understood. The desire of the station is merely to test the plants accurately by the side of dozens or hundreds of other varieties. Originators will do well to communicate with Prof. Butz.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

COST OF DIVISION FENCES IN NEW YORK.

S. T. L., Kingston, N. Y.—My neighbor has a building 100 feet long on his line. I have a building 75 feet long on my line. Both lots are about 150 feet long. If I build a fence to the end of my land must my neighbor pay half? If he says that the fact that his building is 25 feet longer than mine saves me 25 feet of fence, must I contribute half the cost of the whole fence including the wall of the building for 25 feet?

ANS.—Outside the incorporated cities and villages of this State, half the expenses of a division fence is borne by the owner of each of the pieces of property between which the fence runs, provided each owner has his property inclosed. If either owner leaves his property uninclosed, he need not contribute towards the fence until such time as he sees fit to inclose his premises. In incorporated cities and villages the question is generally settled either by the charter or by ordinance; but in all cases, so far as we know, the expense is shared substantially as under the general law. The owner of adjacent premises is not, however, obliged to contribute towards the cost of the wall of a building because it partially replaces a partition fence.

LAW OF INHERITANCE IN TENNESSEE.

L. S. M., Jacksonville, Fla.—A in common with four brothers and sisters owned valuable land in Tennessee inherited from his father. A moved to Florida, married there and died, leaving a widow and one child. The child died in infancy—12 months after the father's death. What interest does the widow inherit in the land? What interest, if any, did the child have in it? If the child had an interest in the land, to whom does it descend?

ANS.—Under the law of descent in Tennessee, upon the death of a husband, the wife is entitled to a life interest in one-third of the real estate, and the remainder goes equally to the children. On the death intestate of an owner who leaves no issue, and no brothers or sisters, or their issues, as was the case with the child under consideration, the real estate goes to the surviving parent. Accordingly, in the present case, the whole of the husband's interest in the real estate in Tennessee, vested in the widow upon the death of her only child.

T. L. H., Queens County, Long Island, N. Y.—What birds can be legally shot in this county from now until the end of the season?

ANS.—Wild ducks, geese and brant may be killed in any other part of the State, from September 1 till May 1; but in the waters of Long Island, they may be killed only between October 1st and May 1st. Woodcock may be killed on Long Island between August 1 and January 1, and prairie chickens between September 1 and January 1. Robins and blackbirds may be shot on Long Island between November 1 and January 1. Snipes and plovers July 10 to January 1. Rail-birds September 1 to January 1. It is a misdemeanor at any time to kill song birds or any other than game birds except for scientific purposes; but English sparrows are not protected by the act; and, indeed, it is a misdemeanor incentionally to give them food or shelter. Neither are crows, hen-hawks and owls protected by the act. Night hunting and the use of artificial lights, or pivot or swivel guns or nets is prohibited.

Miscellaneous Advertising.

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For frost will seize
And quickly freeze
The frisky, festive, fiendish fly.
—*Washington Post*

EGGS and carpets are alike in two respects; they are laid and beaten.—*Boston Bulletin.*

"THEY say Smithers don't get along with his wife." "I knew she wouldn't agree with him; she's too rich."—*Harper's Bazar.*

FOND MAMMA: "What are you drawing on your slate, pet?" Little Nell: "I was tryin' to draw my dolly; but I dess I'il tall it a tlothes pin."—*New York Weekly.*

SHE: "How do you like my new shoes, Adolph?" He (dreamily): "They are simply immense." It took the two families a week to patch up a peace.—*Detroit Free Press.*

ON THEIR WEDDING JOURNEY IN AN ART GALLERY.—She (pointing to a statue): "This is Minerva." He: "Was she married?" She: "No, she was the goddess of wisdom."—*Life.*

TYPEWRITER AGENT: "I called to see you in reference to your typewriter. Would you exchange if you could get some improvements?" Merchant: "I can't; I'm engaged to her."—*Judge.*

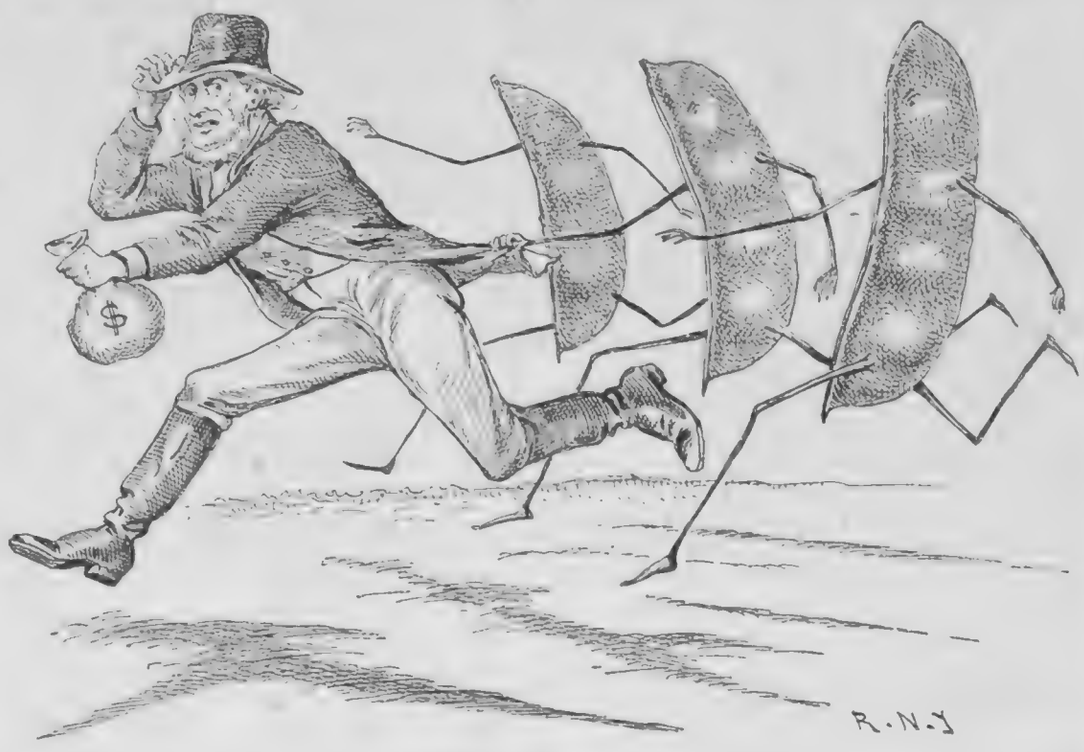
"THE sunflower is the most conceited flower of the vegetable kingdom," remarked the judge. "How is that?" asked the major. "It has the big head."—*Pittsburg Chronicle Telegraph.*

"DR. TANNER was not the first man who lived on water for 40 days," said Smudge. "No:" queried Fudge. "Of course not." "Who else?" "Well, what's the matter with Noah?"—*Toledo Blade.*

CUSTOMER: "I see you advertise 'umbrellas recovered while you wait.'" Shopkeeper: "Yes sir; certainly, sir." Customer: "Well, I lost an umbrella a year ago last fall, and I guess I'll sit down here while you recover it for me."—*Boston Herald.*

POSTAL CLERK: "Here is a letter addressed to Colonel Blank, and it is reported that he is dead. What shall we do with it?" Head of the Division: "Supposed to be dead, eh? Well send it to Philadelphia. If it don't reach him there it will have to go to the dead-letter office."—*Chicago Liar.*

"SAD case, that of one of my tailors," said a Water Street merchant this morning. "The best man I had working on trousers has become totally deaf." "You don't mean it; what was the cause of it?" asked the anxious customer. "I don't know, but I suppose it resulted from working among such extremely loud spring patterns," was the unfeeling reply.—*Home and Farm.*



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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XLVIII. NO. 2074. NEW YORK, OCTOBER 26, 1889. PRICE, FIVE CENTS. $2.00 PER YEAR.

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WHICH EXPLAINS ITSELF!

Pomological.

FRUIT TREE QUESTIONS.

Trees on Light and Heavy Soils.

GRAFTING A VARIETY ON ITS OWN SEEDLINGS.

An Early Variety on a Late One.

PAINT FOR TREE INJURIES.

The following notes are written in answer to these questions, which were sent by a subscriber in California:

1. *Is it advisable to graft any variety of tree on sprouts raised from its own seed?*
2. *Would it injure tree or fruit growth to grow an early-fruiting or maturing variety on a very late one?*
3. *Will not common paint be a preventive of injuries to tree bodies from mice and insects?*
4. *Is it possible that a tree or fruit will grow 'equally well on light as heavy soils,' as claimed by some?"*

FROM T. H. HOSKINS, M. D.

1. There is no reason to believe that any ill result would follow the grafting of cions from any tree upon seedlings of the same tree, if of sufficiently vigorous growth. There is some theoretical presumption in favor of it, since there would be a probability of close resemblance in habit of growth, and therefore less likelihood of either cion or stock overgrowing the other.

2. As a rule, no. Yet, as there are certainly cases where grafts upon a slow-growing stock from a tardy bearer are forced into early bearing, so it is possible that in some cases grafting an early sort upon a late sort might have some retarding effect upon the maturity of the fruit. Yet in large orchards grafted upon miscellaneous stocks, few if any striking instances have been observed.

3. Possibly; but I should not regard it as safe, unless annually renewed. The best and cheapest protection is to tie thin slips of wood (lath, waste veneer, old shingles, staves, or clapboard), around the trunks. I have practiced this for 20 years without losing a tree, at a cost of less than one cent per tree, annually.

4. Yes, it is quite possible, as is shown by fine orchards on both sorts of land. But though this is often true, especially with apples and pears, there is a choice to be made, when possible. Thus, the quince cannot be grown with assured profit on light soils; and the foreign plums and their seedlings also do much better on strong land. On the other hand, cherries, and our native plums thrive best on the lighter, gravelly soils; and the same is true of the peach. But whatever the soil, it may be so amended and improved, by skilled culture, that a very large assortment of tree fruits can be grown on a limited area with reasonable success, so far as the soil itself is concerned. It must be remembered that climatic influences will also have to be considered, since results are not dependent upon soil or culture alone.

Orleans County, Vt.

FROM P. M. AUGUR.

1. If the inquirer means a variety in its true sense, I would say: "No." If he means to graft a seedling upon seedling stocks of its own species I would say: "Yes." Thus the pear will grow upon the thorn, the Mountain Ash, the apple and the quince; but in general it does best upon the pear, and for general orchard purposes it should be so worked; but it is not important to go closer than that by working it upon seedlings of its own variety.

2. I should say in general: "No," and yet the character of the stock does somewhat modify the time of ripening and the quality of fruit. For instance, the Roxbury Russet grafted upon the Golden Sweet, which is early in ripening, is modified both in flavor and, sometimes at least, in keeping qualities. Therefore seedlings of some late, hardy keeper would be better in general than seedlings of a very early variety.

3. I should say emphatically: "No." Oil paint in general I think injurious to trees. Better use a decoction of tobacco stems and soap in the right proportions, applied in a lime wash, with sulphur added. This will be excellent in cases of black, gummy exudations on the peach or cherry, and will indeed be safe and useful always. A conical mound of earth or coal ashes will protect against mice.

4. Here the law of adaptation comes in. Some varieties seem best adapted to heavy, others to light soils. It is safe and wise to learn what varieties have proved best in any given locality, and with similar soil, climate and surroundings one should use the successful kinds. No one rule of universal application can be given.

Middlesex County, Conn.

FROM A. W. SIAS.

1. I shall take the affirmative of this question for the following reasons: 1. Because my experience teaches me that the greater the similarity between the stock and the cion, or graft, the better the result. 2. I contend that it is not advisable or practicable to graft anything but seedlings. To explain: if a greater number of Baldwins or Greenings are wanted one should, first, sow the seeds of these varieties and when the young trees are one year old graft the Baldwin seedlings with Baldwin cions, Greening seedlings with Greening cions, etc., making it a point that the stock and graft, or cion must be near relatives, and, unlike the occasional results of the union of first cousins in the animal kingdom, there will be no fools. I contend that where the stock and graft are near relatives they will have a similar cell structure with a cell caliber in the stock about the same as in the graft; hence the stock will not carry up sap to the graft faster than it can be properly utilized, and so that abnormal beetle-like deformity so common in case of the union of different species and distant relatives will not be produced. 2. My experience leads me to take the negative side of this question. Perhaps the greatest disparity in season of fruit maturity with the union of two varieties with which I have experimented is in the case of the Flemish Beauty Pear on the June-berry. Now while it is a well attested fact that this union will dwarf both the pear and June-berry stock to a considerable extent, it is not clear to me that it dwarfs the fruit of either stock, or that it dwarfs or shortens the life of either plant owing to the inequality of the time of the ripening of the fruit.

3. Yes; but to what extent can we use this preventive without injury to the tree? Will some one explain?

4. The largest and most rapid-growing trees I have yet seen were on light soils, and where the water supply and other necessary conditions were not wanting; but where droughts are frequent and the mercury ranges very low, I would prefer heavy soils every time.

Olmsted County, Minn.

FROM W. M. BENNINGER.

1. It is not neccessary to graft or bud on stocks grown from seed from the same variety of fruit; it is better to use seedlings from wild or hardy fruit; and budding on one-year-old stock is the best. However, apples do best on apple roots and pears on pear roots and so on; budding on other classes of fruit is not advisable. The only extensive change made is in case of the pear on the quince for dwarfing purposes and only a few varieties are successfully worked in this way, and the standard or a pear on a pear is preferable.

2. I am of the opinion that an early apple grafted on the top of an old tree of a very late variety would, for the first few years' fruiting, ripen later or that it would resemble the original trees in some respect; but a change will occur as soon as the sap is uniform to the graft on top. Young trees will hardly ever mature their fruit the first year in bearing, and if they do so in any case, I think it is due to the natural root, but they generally mature their fruit the second year in bearing.

3. Paint would injure the trees; it would close the pores and harden the bark. I find soft-soap suds the best wash for young trees. The bark of a tree must be kept soft and smooth, and the best way to keep it so is by cultivation and fertilizing. Very old trees with rough and old bark may be white-washed once in a great while, but this should not be repeated, as it would injure the bark.

4. All fruits succeed best on heavy soils. Peaches and sweet cherries can be grown on light gravelly soils and they will bear better if well fertilized and cultivated.

Lycoming County, Pa.

FROM E. WILLIAMS.

1. I take the term sprouts to mean seedling stocks and cions. If so, the question is too broad a one to admit of an affirmative answer. When a youth, I planted a lot of apple seeds selected from one of our hardiest and most reliable sorts, thinking thereby to obtain a more hardy constitution to start with than by using a promiscuous lot of seeds of whose antecedents I knew nothing. The seedlings showed, as all seedlings will, considerable variation in vigor of growth—some being much stronger and more vigorous than others, while some were so weak as to be rejected as unfit for budding. Most of these stocks were budded to different varieties; many of them to the variety which produced the seed. I do not know that these made any better trees than other stocks would have made; but I certainly cannot see any objection to such a course, or do I believe there is anything wrong in it; but it is not always practicable, especially in large nurseries, and even if it could be demonstrated that it is advisable, it would enhance the cost of such trees beyond their value for commercial purposes. I think the laws of heredity have much to do with the health and longevity of trees—more perhaps than we generally suppose—and I should expect to secure a larger percentage of healthy, long-lived trees from seed of our native apples and pears than from our modern and more highly improved kinds; but I have no facts in my own experience fully to confirm this idea. We have in all this region native pear trees that are, perhaps, a century old. In their natural condition they bear a hard, austere winter fruit, only fit for cooking; but I have never seen one of these trees in its natural condition, or grafted to other kinds, that exhibited a symptom of pear blight; hence I conclude that seedlings from these trees would make admirable stocks on which to work our more improved varieties, and I believe they would possess a hardier constitution than stocks grown from seeds of the latter. As our fruits advance and improve in quality, there seems to be a retrogression in health or hardiness in about the same ratio.

This correspondent's idea, if applied to cherries, would be a difficult one to pursue owing to the fact that very few seeds of our improved kinds ever perfect themselves, while the native black or Mazzard Cherries almost invariably perfect their seeds, and hence are generally used as stocks for our Heart and Bigarreau varieties.

The idea when applied to peaches would meet with opposition at once, as the universal sentiment among peach-growers is that natural southern peach seeds produce the best possible stocks for this fruit. It is through the seeds of our improved kinds that we must look for and obtain further improvement, and yet I cannot see why a seedling peach tree grown from a healthy Crawford's Late seed would not be as good a stock on which to grow a tree from its parent as one grown from southern seed, unless it might be deficient in some element of hardiness or health. The principle of heredity and in-and-in breeding comes in here; but whether this influence is as potent in vegetable as in animal life, or whether it is totally inert, I have no facts at hand to sustain either side of the question, if such exist. Who knows whether an Early York, or Late Crawford, budded on seedlings of the same, would make less satisfactory trees than if budded on stocks from southern seed? Who knows!

2. There would probably be more or less influence one way or the other, but not of an injurious character. It is often necessary and advisable to graft a weak and crooked-growing variety, like the Winter Nelis Pear, for instance, on a strong and sturdy grower like the Buffum, to aid in overcoming this objectionable feature. A late-maturing variety as a stock for an early-maturing one might have a retarding influence, but it is uncertain, and we have not yet mastered the subtle mysteries of Nature to that extent that we can tell in advance just what to expect from these combinations. Every variety of fruit seems to have its own peculiar qualities well environed, else we should see more changes and variations than we do. Take the matter of color, for instance. Why should not this blending of colors show an influence? If so, we should expect to see the color of a red apple toned down when grown on a stock of a white, green or yellow variety; but it matters not how many different veins the nourishment passes through, the color comes true at last. In speaking on this subject to an old neighbor some years ago, he referred me to his Baldwin grafts set in the tops of Harrison trees, from which he invariably got his highest-colored fruit. The size did not average so large as on other trees, but the color was more intense and it was always so. Why?

3. It would probably prevent injuries from these sources. Paints of various kinds have been recommended and condemned for this purpose; but were I to use them, it would be with caution. Lime whitewash, or whale-oil soap, applied with sufficient frequency, would probably be quite as effective and not at all injurious.

4. Universal experience proves such claims fallacious. Argument to prove the contrary is unnecessary, as abundant evidence of indisputable character exists in almost any locality to show the absurdity of any such claim.

Essex County, N. J.

FROM T. T. LYON.

1. There can be no doubt that all grafting is deleterious to the vigor, health and longevity of the resultant plant just in proportion to the dissimilarity of the stock and cion, and their consequent inability to form a perfect union. The grafting of cions from an unworked seedling, upon sprouts from its own roots, although useless, so far as improvement of either tree or fruit is concerned, insures the most perfect adaptation of cion to stock. A seedling of many species of plants is more or less liable to vary from the parental type, and such variation may be assumed to affect more or less unfavorably its value as a stock on which to engraft the original variety. The results of the use of stocks of the character last indicated may doubtless fairly be assumed to afford occasion for the conviction, so widely entertained, that seedling trees are more hardy and productive than those budded or grafted.

2. Cases are occasionally given in which stocks are alleged to have more or less influenced and modified the season or other qualities of the variety worked upon them. That the stock does frequently, to a limited extent, exert such modifying influence, is doubtless beyond question; but I question whether either the fact of such variation, or its direction or extent, can, in the present state of knowledge of the subject, be determined except by actual trial.

3. Paints, prepared and applied with linseed oil, would doubtless be injurious to trees by arresting transpiration from the surface but for the fact that the oil soon hardens and becomes ruptured by the enlargement consequent upon growth. Although occasionally used with impunity, to destroy insect enemies, it seems preferable to repel mice and similar enemies by the use of a more porous and less dangerous material.

4. Experience has long since demonstrated the fact that most, if not all, classes and varieties of trees possess a limited but variable capacity to adapt themselves to variations of soil; but the fact is equally well established that any given variety or class of tree or fruit, will, other things being equal, reach the most satisfactory results only when its preferences are thoroughly satisfied.

Van Buren County, Mich.

FROM P. BARRY.

1. There is no objection to grafting a variety of fruit on its own seedlings, provided they are healthy and vigorous and suitable for stocks.

2. To graft an early-fruiting variety of fruit tree on a late one, may not injure the fruit, but may retard its fruiting. If the trees grafted upon were of feeble growth, it would naturally unfavorably affect the one grafted upon it.

3. Common paint on the bodies of trees might prevent injury from mice, but would probably kill the trees.

4. Some trees will grow equally well in light and heavy soils, but among fruit trees some succeed better in light and some in heavy soils.

Monroe County, N. Y.

FROM AN OLD FRUIT-GROWER.

1. It is not probable that we should gain anything, on the whole, by procuring seedlings from any variety to graft that variety on. There are some particular kinds, as, for instance, the Buffum Pear, the seedlings of which would be more vigorous like

their parents than the average; but there are others feeble and crooked-growing like the Winter Nelis and Giffard, which would be better grafted on some other vigorous seedlings. Cultivators who are noted for the fine specimens of their fruits, are not indebted for their success to the seedlings they have used, but to rich soil and skillful culture.

2. Trees which mature their fruit early are not distinguished for any uniform characteristic of growth. Some are strong growers and others feeble, and in selecting the seed for the growth of stocks, the best growers should be chosen—not early or late ones.

3. Common paint does well for covering wounds from pruning or accidents; but some composition of the nature of grafting-wax is less liable to scale off, especially near the ground. Either will do well.

4. As a general rule, fruit trees do better on clay soils or strong loams than on light or sandy soils; and a list of such varieties as succeed well on light soils could be made from extensive trials in different localities.

FROM J. S. HARRIS.

1. My experience and observation indicate that a perfect union between graft and stock is essential for the health, vigor and long life of the tree, and that this can be insured only between varieties of any species, that are very nearly allied. Therefore seedlings of a variety would make the most reliable stocks for the variety. Earlier fruiting is often induced where the union is not so perfect.

2. If the varieties are nearly enough allied to make a perfect union, there would be no perceptible difference in the tree or fruit of an early variety grafted upon a late one, and the top would govern the period of activity in the root.

3. Common paint is a protection against insects, but the oil with which it is mixed frequently causes the death of the tree.

4. Some varieties of fruits are adapted to heavy clay, others to loam and others to sandy soils, and those that will succeed on one kind of soil will not do equally well upon any of the others.

Houston County, Minn.

Horseman.

HUNTER BROOD-MARE, FLORIMEL.

FIGURE 262 is a re-production from the Live Stock Journal, London, of the Hunter brood-mare Florimel and foal, owned by John Cooper, Brook Hill, East Haddon. She was bred in Ireland, was never exhibited until last year when she won first prizes wherever shown. She won the first and champion prizes at the Royal Show at Windsor the past summer.

Farm Economy.

Marketing Crops.

WHEN, HOW AND WHERE

RURAL READERS SELL PRODUCE.

SOME INTERESTING NOTES.

SELLING is just as important as producing. The business farmer takes advantage of every extra price; his goods are sold at the right time and in just the right condition. We are always interested in knowing how our friends conduct their business, what they have to sell, when and where they sell it, what would induce them to hold their product for a better price, and what they depend on for reports concerning the markets. It is believed that farmers can very profitably compare notes on these matters, so we begin this week the publication of short notes from some of our friends. The present notes refer mainly to farming at the East. Later on we shall have something in the same line to say of Western marketing.

CONNECTICUT.

OF late I have been more of a market-gardener and dairyman than general farmer, so that my large hay and grain crops have been disposed of on the farm, and I find a local market for my garden truck and dairy products. When I formerly sold hay in the New York market, I found October and November to be the best months to sell, there then being a large demand while the market was not crowded. Apples and potatoes I market early if prices are good; for by holding them I find the loss by rot and shrinkage and the cost of rehandling, is not compensated for by the extra price. I depend on the RURAL crop reports to keep me informed regarding the condition of crops in the different parts of the country that rule the New York markets. If there be a surplus and I know that prices will be low when my products would ordinarily get to market I hold them until better prices can be obtained. My daily paper quotes market prices and I am somewhat governed by them. H. D.

Greenwich.

MASSACHUSETTS.

My chief crops are onions and potatoes with some garden truck, all of which are sold at the village one mile distant. The vegetables are sold at whatever time I can best attend to the business. I find market reports in several papers; but rely chiefly on those in the R. N.-Y. and the New England Homestead. In the "agricultural news" and reports of the former, I get a good idea of the prices and condition of crops through the country; and in the latter a thorough knowledge of the amount of crops, and condition of the markets in New England. The prices at Boston to a certain extent control prices here, as our dealers go there for vegetables of all kinds, if the local production is short. Through the summer and fall I read carefully and watch closely all that relates to my chief crops in all parts of the country, and pick up what I can in regard to foreign markets, and if crops seem to be good at home and abroad I sell as soon as I can, as prices here are usually better then than later on when all wish to get rid of perishable crops. If crops are short I hold till mid-winter or spring, for prices advance as the supply grows short. F. L. A.

East Pepperell.

MICHIGAN.

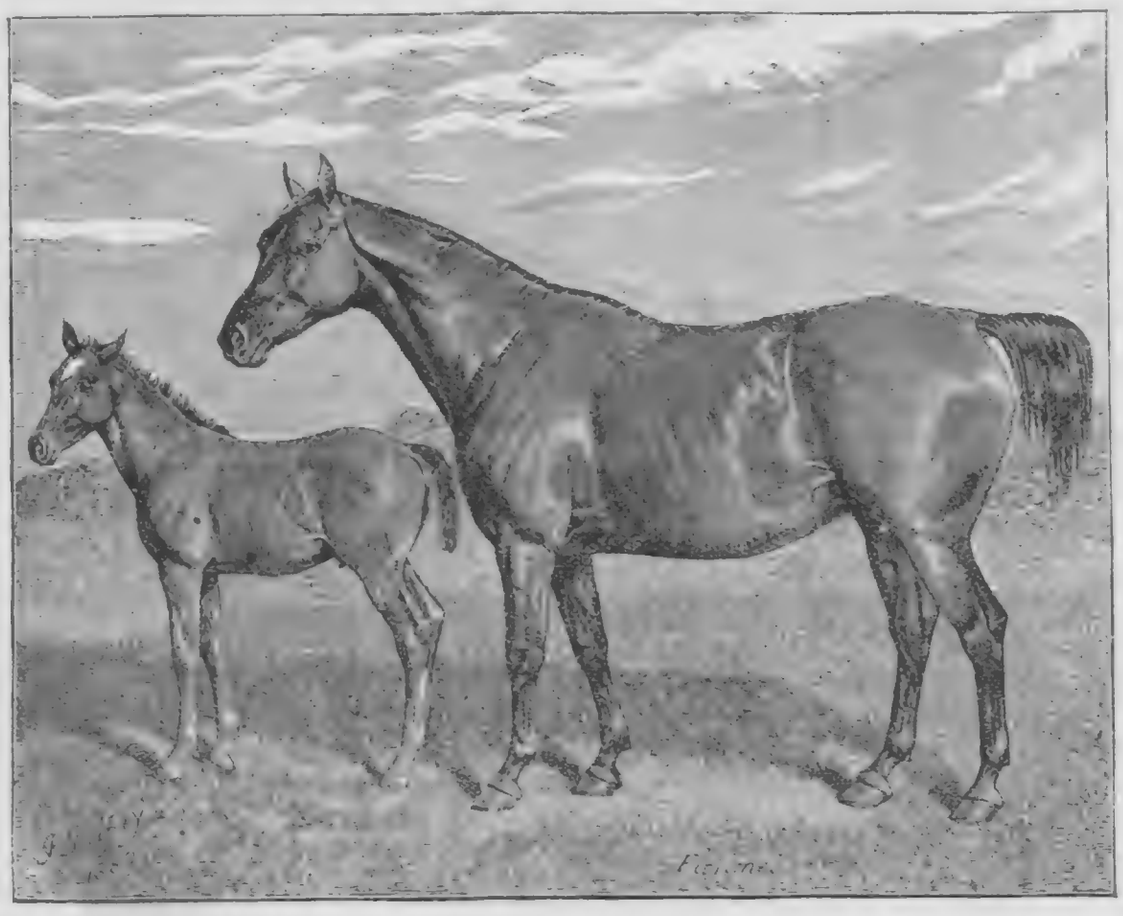
AS WOOL comes first, I generally hold till towards the latter part of the market, as, nine times out of 10, the wind-up of the wool market is the best. Very few around here hold their wool over, as the practice has not been considered very profitable all things considered. Butter we pack through the summer. We set our milk in deep cans and churn our cream sweet and make sweet butter and keep it sweet till fall. When the price suits we sell. When I was in debt I sold my wheat as soon after thrashing as possible, as it immediately saved paying interest. I generally watch the European markets and also the state of the crops in those countries, as wet weather on the European continent lessens the hard-wheat supply there, and half of the wheat grown there cannot be ground without an equal bulk of hard wheat, so if they have not got it there, they must get it where it does grow, which means from us. I do not want to delude any one, but I am looking for a healthy rise in wheat soon. In regard to the pork product, the Chicago Pork-Packers' Monthly Price Bulletins are a good guide. For instance, this year the prices on all salt and smoked meats are quoted considerably lower than last year, showing that the supply is greater than the demand. Last year the prices for these goods kept advancing; those who sold early this year, I think, hit it. About beef cattle: I have been in the meat business some time myself and I would say, when you get your beef "critter" fat, sell him if you can get a fair price. Be specially careful to get your beef ready in the spring and sell it. Don't "summer" it; if you do, you will get only a small return for the trouble.

One thing I have always endeavored to do—when any one product is bringing a good price I sell; when it is cheap there is no danger in holding; on the contrary, doing so is often a benefit. C. F.

Bancroft.

I MAKE it a point to sell wheat in the fall as soon as thrashed. Potatoes are sold as soon as dug when people are buying their winter supplies, unless the prospects are good for a considerable advance in price (say at least 20 per cent.) which I determine by statistics from the Agricultural Department and agricultural papers of different States. Apples I sell in the winter after the inferior fall fruit has been disposed of—from the first of December to middle of February. E. H. P.

Warren County.



HUNTER BROOD-MARE, FLORIMEL.

RE-ENGRAVED FROM THE LONDON LIVE-STOCK JOURNAL. FIG. 262.

I TAKE three agricultural papers, two county, one State and the World. In these I get home and foreign markets. My principal crop is wheat and from close observation of the markets at home and abroad, I have come to the conclusion that prices have about touched bottom, so I have decided to hold on to my crop and run the risk of getting less for it, for the chance of an advance in price. Last year I sold 100 bushels at 76 cents in September and four months later I sold 800 bushels for $1 per bushel.

The RURAL encouraged me to hold to a certain extent. Last Saturday I sold 50 bushels at 70 cent per bushel; 800 bushels more I am holding in hopes of an advance. A short time ago I saw in the R. N.-Y. that apples were scarce and bringing a good price East, so I didn't sell. Lots of my neighbors sold theirs for $1. per barrel; but I held on and have just sold mine for $1.50 per barrel. I rather think it paid to take the R. N.-Y. Also I saw in the same paper that potatoes were short in a good many places and rotting badly, and that they are worth $1.50 a barrel so that I have concluded not to take 25 to 30 cents per bushel at present. Perhaps I may lose; but the future will tell. R. F. B.

Benton.

BY reading the agricultural papers—I take five weeklies—and also the reports of the Department of Agriculture, I obtain some idea of what prices will be; but I find that to sell in the fall is the best, as the extra prices received in the spring will not cover the shrinkage in bulk or loss of weight of the majority of farm products. M. N.

Menominee.

NEW HAMPSHIRE.

I RAISE no crops excepting winter apples, small fruits, poultry and eggs. For many years I have shipped all of my apples to Liverpool and London, assorting and packing them in the orchard as soon as picked, and shipping at once. I always get good prices. My small fruits, of course, I have to sell as soon as picked. I keep 2,000 hens. I raised 4,000 Plymouth Rock chickens this year. I dress off the cockerels, usually in January, February and March, and never keep hens more than one year as they are not so profitable after that time.

Hancock. C. E. L. H.

I USUALLY sell crops, like potatoes and apples, soon after harvesting them, and I think that for a term of years it averages as well as to store them and bear the loss from decay and shrinkage; besides, I have the use of money sooner. As regards live stock and wool, I consult reports of the Boston and Brighton markets. M. A. N.

Sullivan.

NEW JERSEY.

THE chief crops I grow for sale are sweet potatoes, tomatoes, watermelons, wheat, and early white potatoes, ranking in importance in the order named. The major part of my sweet potato crop I store in a specially constructed house till winter. I am then governed in selling by the size of the year's crop and the quantity of it housed in this locality as nearly as I can learn. If I consider the amount housed is sufficient to meet the demands of the market with little increase in price, I sell the larger part at Christmas and New Year's, as there is usually a larger demand for them at that time, and I escape the larger loss of shrinkage and decay incident to a longer holding. If I consider the amount stored to be inadequate to the demands of the market, I hold till nearer spring. The tomatoes are grown for a local canning house at a stated rate per ton. The watermelons of course must be shipped as they ripen, the grower being allowed no "say" in the time of their sale. What wheat I grow—a moderate amount only—is sold about December 1, unless by the market reports of the daily and weekly papers I consider a rise in price imminent in the near future. My early white potatoes are sold as soon as they are fit to dig.

In the matter of the correct time for the sale of our farm crops it is certain we all cannot hit on just the best time, and if farmers would not get wild, as they seem to do at times, and rush large quantities of produce on an already falling market, to the detriment of themselves and the benefit of the buyers, they might come nearer to dictating the prices their labor should bring, and may we all hail the day when by organization or otherwise, farmers may know when to sell so there shall be no gluts, and all crops shall be sold at the best time. E. G. B.

Penn's Grove.

OUR money crops are chiefly citron melons, sweet corn, berries, asparagus, grapes, tomatoes, cucumbers, etc. The above we cannot hold, so we are compelled to ship them whenever they are fit, regardless of market prices; otherwise they go to waste, and this is sometimes the case, as the market prices now and then get below the cost of shipment. Sweet potatoes are grown quite extensively, but they are not held, as a rule, later than it is safe to leave them in the ground without injury from freezing. White potatoes are grown more abundantly back a few miles in heavy soil, and when the bugs first made their appearance it was said that this county (Monmouth) was growing more potatoes than all the rest of the State. To learn the market, we consult our commission salesmen, and also refer to the market reports in our papers for a general idea of the condition of crops and prices in all parts of the country.

Point Monmouth. J. S. C.

WE labor under different circumstances from those that influence the Western

farmer, and are not troubled so much about holding or selling our crops. I farm about 60 acres: about 20 are in berries. They are sold as soon as they can be picked, mostly in the New York market. Our next main crop is sweet potatoes. Some sell in the fall and they pay well then; others, like myself, have their cellars fitted for storing, and keep potatoes till winter or spring. We have found that it pays best to store and to sell about the holidays and from then till spring. Our commission houses as well as our agent at the station keep us posted as to prices. Corn, round potatoes, all kinds of garden truck, eggs, butter, pork, etc., not consumed at home, are sold in our local market. In winter I run a chicken ranch and raise about 2,000 broilers, which are sold in New York in early spring. I am posted as to prices by my agents and the houses in New York. A. P. A.

Vineland.

NEW YORK.

I GROW mostly perishable crops for home consumption and sell them as soon as I can for what they will bring. T. E. B.

Schuylerville, N. Y.

I SELL my crops generally in the fall. I rely mostly on the government reports for keeping myself posted on the amount of the different farm products raised, and hold or sell accordingly, and even then I am sometimes deceived. According to observation, the farmer that makes a general practice of selling his crops in the fall, realizes the most money. But few farmers are aware of the large per cent. that is lost by shrinkage by holding too long. C. P. B.

Stafford.

AS TO marketing our crops, I am in a dairy country and our money "crops" come from the cows in the shape of butter and cheese. The milk is carried to the factory and there made up into butter or cheese. We pay a man to sell these. We have a sales day when salesmen and buyers get together. The salesman is a patron of the factory. We try to raise enough on the farm to keep the cows; little beyond dairy products is sold from the farm. J. H.

Sinclairville.

IN regard to marketing my chief crops, I would say that my decisions are somewhat varied. Sometimes they are based on actual information and oftentimes on theory. I have recourse to the last-named means only when I am unable to procure definite information. My chief crops are evaporated raspberries, potatoes, lambs, wool, sheep, wheat and oats. The latter are secondary with me. In the first place, I take every possible means of keeping myself posted from the commencement of the season, taking four papers, one daily—a Rochester morning one—three weekly, the R. N.-Y. included. This gives me a large range in regard to the markets, both local and distant. I watch closely the government reports on growing crops. I also get price currents from commission firms once a week, from New York, Philadelphia and Boston, and ship my products to these cities if local buyers are not paying what markets at headquarters warrant me to ask, less freight and other expenses. I live in one of the best fruit sections of Western New York, where nine-tenths of the apples and black raspberries are evaporated, and my principal crop being dried berries, I handle them to get all I can out of that crop. I barrel them as soon as they are properly dried, in new sweet barrels, and if the crop is generally light and other evaporated fruits correspondingly so, I hold until the first of February of the ensuing year, (no later) and then sell. If before that time they reach a figure near what I think is a good offer I sell to the home buyers or ship to some distant dealer. I never am anxious to sell any crop that I produce when I see local shippers riding around the country buying up any particular commodity. But when I miss their presence at certain seasons, I begin to look for them and sell what I have of crops that have been above the average in production for the year. In selling potatoes I prefer to dispose of them in midwinter as I can do it cheaper when the teams are not so busy. There is a time—generally in February—when potatoes are the highest on the average, for the year; that is when the stock bought in the fall before navigation and cheap freight rates are over, runs out, and before the spring trade and shipments arrive at headquarters. Last winter was somewhat an exception to this rule owing to its being such an open season. I deviate from this rule when the crop is large and very cheap in the fall, as was the case last year. Then I get all I possibly can to market. Wool I sell at or near shearing time, as I find it brings me more at that time than at any other, as the manufacturers send their men regularly every season to buy and take it in and they are able to pay more for such grades as they want than they could if they bought from some heavy Eastern dealer who had paid freight and commission from the West. I sell my lambs at the local butcher's or to runners from Rochester, keeping myself posted on the Buffalo market, and making my price accordingly, turning off my store sheep when there is a scarcity and prices are high, as at present. Wheat and oats, I sell when there is the best demand from millers and feeders, which is generally during the winter months, or in the case of a wheat boom or corner I drop mine into market if I can when the "corner" iron is at a white heat! Sometimes these rules of mine do not work to my benefit. When I get too much theory mixed in with my ideas in regard to the probable price of a certain crop, I often lose as much as I make on some others about which I have more certain knowledge. F. W. S.

W. Walworth.

MY chief cash crops are potatoes, pork and butter. I sell as soon as my crops are ready for market. I think that, taking one year with another, that is the best time to sell. I have sometimes held my produce for higher prices when I thought, from reading the crop reports in the RURAL and other papers, that the state of the crops in general warranted it, but have not always been successful in getting a higher price. I usually manage to have early spring pigs, and sell them about the middle of September, at the opening of the fall trade. And then I have early fall pigs, which I sell about March 1. I manage to have my cows fresh in September or October, because winter dairying pays better than summer dairying. I have a fine crop of Monroe Seedling Potatoes this fall, and am putting them in the cellar. My reason for this is that there is a demand for that kind for seed next spring, at a higher price than potatoes are bringing now. If my crop were any of the common varieties, I would sell as soon as they were dug. From reports of the potato crop I see nothing to indicate a higher price. P. C. B.

Middle Falls.

I AM a milkman and am selling about 225 quarts per day. I produce most of it myself and sell it at five cents per quart in summer and six in winter. I think a great deal of the RURAL. O. W. G.

Olean.

OHIO.

To keep posted on the market I watch the prices in the nearest large market as given by the papers, also the State reports and various other reports as to the probable yield at home and abroad, and make comparisons with the condition of things the previous year. But, of course, these things can not be depended upon as a certainty, for a corner is likely to occur without much regard to the relation of supply and demand. Some farmers around here held their wheat last year and the good prices came: they were offered $1.10 per bushel, but held for a little more, and are now selling it for 75 cents. Unless there appears to be quite a considerable deficiency in the supply, I sell my grain as soon as it is thrashed and avoid all risk, shrinkage, waste, etc. Corn and oats I seldom have to sell. If I had them I would prefer to feed them to sheep and hogs, and sell the hogs in early fall or spring, and the sheep in March or June. Wool I sell when about two-thirds of the wool in this vicinity is bought; the price usually starts low and competition brings it up until the bulk of it is bought, and then very often it drops. Potatoes I would haul to market right from the field, if I could get 25 cents per bushel for them, unless I had more than the average facilities for storing them. C. E. F.

Brighton.

PENNSYLVANIA.

Corn, wheat, oats, potatoes and tobacco are our chief crops. Corn is sold from February 1, to September 1. Some is sold from the field; but not a great deal. Wheat is sold about from the time when it is in a condition to be thrashed until spring unless there is a rise in the markets, when sales are the highest. Oats sell highest about June, and tobacco from March 1, to May 1. Potatoes are sold from October 1, until the weather is too cold for shipping. To learn the prices I inquire of the local dealers and observe the market reports of the city papers. I do not hold my products, but sell them when I have time to thrash and deliver, unless the markets are up, when I try to meet them, for future prospects are very uncertain. J. S. C.

Shiremanstown.

POTATOES are my chief crop. Sometimes I sell in the fall and at other times in the spring—about planting time. I try to keep myself posted on the state of the market through local dealers and the market reports in the R. N.-Y. I decide when to sell by the prices offered, and the crop reports in the R. N.-Y. L. W. McE.

Wilawana.

OUR chief marketable products are hay and dairy goods. Hay is pressed and sent to New York and the coal mines. Butter is generally sent fresh, though some is packed and held for better prices, which are nearly always obtained in December and later. Potatoes are a failure—half a crop at most. Buckwheat is good; oats fair. I stock my farm with sheep and colts.

Wellsboro. D. A. S.

THIS is a dairy section. Wheat is the only grain sold, and I generally sell from the machine. I usually thrash it in August. I value the RURAL for its information as to crops, and think it is the best source of information I know of as to the abundance or scarcity of crops. J. P.

Wawa.

RHODE ISLAND.

Our chief crops which we turn direct into money are potatoes and garden truck. In case of the latter, we endeavor to grow such as will find a ready market at the hotels here during July and August. Potatoes we sometimes sell at the same time; but often we hold them till February, when, as a general thing, they bring a trifle more in the Providence market, because, I suppose, the winter supply is then reduced and the weather too cold for extensive shipments. I determine whether to sell or hold them in August, by the price paid at our local market, by the reports in my papers on the general crops throughout our country and by the R. N.-Y. "Special Reports." Hay I never sell, but turn it into money first through my cows. (I sell milk during July and August and butter the remainder of the year), and, second, through my sheep for early lambs and wool. Stock-raising does not pay here now except that we need domestic animals to keep up a proper balance on the farm. Grain I cannot grow for the figures at which I can buy it, but I grow considerable in the rotation of crops and turn it into money with more or less profit, first, through my hens (for eggs), turkeys and geese, for the Thanksgiving and Christmas markets, and, second, through my hogs for spring and fall pigs for the local demand. E. P. C.

Block Island.

VERMONT.

THE large majority of the inhabitants in town are engaged in "raising" marble and preparing it for market. It is mostly sold by drummers, though the marble dealers throughout the country have a date for coming together here and having a good time, and selecting such as they desire. So far as the crops from farmers and market-gardeners are concerned, I think there is no special time for marketing them, as we are within three or four miles of the largest village in the State (and some say in New England), where the products can be sold at any time when ready, so that there is no need of studying markets abroad. There is a cheese-factory in town and I am told that the products are sent to the Boston market about once a month. One or two farmers raise very fine Merino sheep which they are in the habit of selling in the West and Southwest whenever they can get their price. J. D.

W. Rutland.

Everywhere.

RURAL SPECIAL REPORTS.

Illinois.

YELLOW CREEK, Stephenson County, October 3.—It appears as if we should have a better clover seed crop than in previous years. Corn is an average crop. Wheat is poor. Rye is an average, oats from 40 to 60 bushels. Potatoes are above an average crop. P. A.

Indiana.

ELKHART, Elkhart County, October 7.—Clover seed is worth, $3.75 to $4 per bushel, and there is probably 50 per cent. of a full crop in this county. Of wheat some report 30 bushels per acre, and there is probably 80 per cent. of a full crop. Of corn some report 97 per cent. of a full crop, but it will not average over 80 per cent. Oats are the best crop in the last five years, and will average 40 bushels per acre. Potatoes a fair crop. Rye an average of 20 bushels per acre. There was a large crop of hay and it is worth from $6 to $8 per ton. Apples one-quarter of a crop, and of a poor quality. Of the growing wheat crop reports say there is no fly, but the weather is too dry, so it comes on slowly. P. H. O.

Michigan.

MASON, Ingham County, October 5.—In Mason and the vicinity clover seed is a full crop. Wheat is generally sown. The weather has been cold and dry since about the middle of September. Unless we have rain soon wheat will be small for winter. Potatoes are a good crop and of excellent quality. Apples about two-thirds of a crop. T. W. N.

BRIGHTON, Livingston County, October 6.—Clover seed has averaged about two bushels per acre: this is more than the average yield. Other crops haven't done as well as usual on account of drought.

I. H. P.

MONROE, Monroe County, October 11.—What clover has been thrashed turns out poor—not half a crop. One thrasher said that he thrashed all day on 20 acres and got only eight bushels; another said that he had not made more than enough to pay expenses so far. Wheat in yield is as good as last year; but the quality is not so good, it has shrunk more or less. Early-sown oats are better than last year; late-sown were struck with rust and were light. Corn will not average over two thirds as much as last year. Hay will average as good as last year. Hay and grain were secured without any rain to hurt them, and the weather is dry yet. Early potatoes are good; late ones are not as good as they would have been if it had not been so dry. Pears and apples the best we have had for a long time. Grapes are good. W. D.

QUINCY, Branch County, October 7.—As regards clover seed in this section, the crop is extra, probably 25 or 30 per cent. better than for a number of years. The potato crop is good—no rot. Wheat poor—injured by aphis. Apple crop fair. Oat crop *very* good. C. H.

New York.

AVOCA, Steuben County, October 1.—Some time since I reported potatoes 60 per cent. of an average crop. I find, as they are being dug, that the estimate was far too high, it looks now as though there would be one-half an average crop. Grain is not yielding very well. C. H. E.

Ohio.

EDGERTON, Rock County, October 5.—Three different men who make a business of hulling clover seed and who thrash over a large scope of country report a scant half crop of both large and small clover seed. Corn, oats, potatoes and hay are good crops; wheat good on the sand, poor on clay and heavy soil. H. S.

MEDINA, Medina County, October 5.—According to present indications the clover seed crop will be a full average at least. Of wheat we are thrashing a very heavy crop. Corn very poor and potatoes nearly a failure. There is a large crop of hay; but it is uniformly of poor quality, as haying weather was very bad. W. P. W

DEFIANCE COUNTY.—Clover seed in my neighborhood has not turned out well: one to three bushels per acre. I hear, however, that on the gravel ridges there have been yields as high as six bushels; that is, of the "big" kind. Price low: $3.50: to the "huller," 75 cents. Wheat is not up yet; the weather is too dry and on that account less was put in than was intended. Only here and there have we a fair yield of corn. Wheat, oats and hay are average crops.

I. I. J.

Vermont.

WILLIAMSTOWN, Orange County, October 12.—Early-planted potatoes are yielding fairly well; while later-planted are not half a crop. Early in the season potatoes began to rot, but a week or 10 days of dry weather saved them from further decay. Through our township there will not be much more than half a crop; mine yielded at the rate of 175 bushels of marketable tubers to the acre; they are selling for 50 cents per bushel here. H. L. P.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

AN AILING COLT.

F. H. Arenzville, Ill.—A yearling colt was castrated last spring and did well. He was put in a strange pasture with other horses. After some time he was found down and when he got up he would sway backwards and forwards and then fall down. About four weeks later when I saw the colt, when standing up he was liable to fall at any moment. His jaws were not locked, but there was every other appearance that he was suffering from tetanus. He was and is still very easily frightened; the cords of his neck were so tightly drawn that he couldn't get his head to the ground, and he was weak in his back. I gave a stimulating liniment to be rubbed on the back, neck, and loins and prescribed for him inwardly, and he seemed to improve, but not sufficiently. In traveling 2¾ miles to my place he fell a number of times. I have had him for 10 weeks. He eats heartily, looks well and can get his head down to the ground. His fore parts are apparently all right, but he is still weak and his hind parts are ailing, and the muscles near the roots of his tail are wasting away. What is the trouble?

ANS.—The condition of the colt may be the result of an injury, a kind of blood poisoning, or possibly a mild form of tetanus. If the wound from castration healed readily and there has been no trouble from it since, it is probably not tetanus, at least not from the castration. Having no clue to the cause of the condition, we cannot suggest treatment, or give any opinion as to the chances of recovery. It is probably a peculiar case, that would require a personal examination to form a correct diagnosis.

MARE NOT BREEDING.

J. E., Keokuk, Ia.—My 16-year-old mare is in good health, has a good appetite and is able to do all the work required of her; she has been a regular breeder until the last two years. She has been bred each of these seasons, but she has failed to bring a colt since 1887. This season she has been bred to a five-year-old stallion—a sure getter—six times. The last time she received a double service, and then refused for two months. About that time she began to spill blood and continued to do so for five weeks and then acted as if she was in heat. The party who owns the stallion refused to let him serve her, thinking she had some disease. She then stopped bleeding and showed no more signs of being in heat. She eats well, is in excellent health and gaining in flesh, but now after three months she begins to bleed again. 1. Is it possible that she is with foal? 2. If not and she should come in heat, would it be safe to let a horse serve her? 3. Is the spilling of blood caused by disease, and should she be treated? If so, what treatment should she have to effect a cure?

ANSWERED BY DR. F. L. KILBORNE.

1. The mare is probably not with foal.

2. Until the cause of the hemorrhage—bleeding—is ascertained we would not consider it advisable to have the mare served. The chances are against her breeding again.

3. The bleeding may be due either to disease or injury. A personal examination would be necessary to ascertain the nature of the trouble before we could advise treatment.

THE SCOTCH PINE AS AN ORCHARD WIND-BREAK.

W. B. G., Farmington, Michigan.—Would Scotch Pine make a good wind-break around my orchard on heavy clay soil? What other variety would be more suitable? At what distances apart should the trees be set?

ANSWERED BY ROBERT DOUGLAS, WAUKEGAN, ILL.

Within 200 feet of where I am writing stands a Scotch Pine wind-break, planted 19 years ago on heavy clay soil, with trees 12 to 18 inches high, which were once transplanted, placed 20 inches apart in a single row. It was cultivated the first year, but has not been cultivated since that time. It has never been pruned. The trees are all living and nearly of uniform hight. A single row planted closely, makes a much better wind-break than a double row. While the Scotch Pine should not be planted as a permanent forest tree, its extreme hardiness makes it second to none for a wind-break.

LAMENESS IN PIGS.

Mrs. M. R., Presque Isle, Ohio.—My three-months-old pigs are in good growing order; but three weeks ago they became lame in the hind legs, and their joints are slightly swollen. They have a dry pen and a small, dry yard to run in, and are fed a very little corn with a slop of boiled potatoes, milk and shorts. What ails them?

ANS.—The lameness may be due to rheumatism or to constitutional weakness. See that the pigs have warm, comfortable quarters with plenty of dry bedding. Do not overfeed. Add flax-seed-meal to the ration in proportion of one part of meal to six or eight of the swill feed. Try the following powders giving one dessert-spoonful night and morning in the feed to each pig: Sulphate of magnesia, bicarbonate of soda and nitrate of potash, each one-half pound—mix.

SEEDING WITH GRASS.

H. P. L., Bergen County, N. J.—On page 640 Charles Chapman says he sows grass seed with rye in the fall, but if wheat is sown the grass seed is used in the spring. Why is this?

ANSWERED BY CHARLES CHAPMAN.

I would not sow Timothy with wheat in the fall because I believe that several fields of wheat have been seriously injured in former years by the rank, thick growth of Timothy. I have never noticed any injury to the rye crop from a heavy growth of Timothy, and as this protects the clover roots during the first winter, I shall continue to sow Timothy with rye in the fall.

Miscellaneous.

E. M. Mc M., Southville.—The Empire Drill is made by the Empire Drill Company, Shortsville, N. Y. It is a good one.

F. W. H., Warren, Maine.—Would the Berckmans Grape be likely to bear and ripen its fruit here, if laid down and covered with earth during the winter?

ANS.—We think so.

M. I. Mc M., Smithville Flats, N. Y.—What is the name of the tree from which the inclosed branch was taken?

ANS.—The Common Cork Elm (Ulmus racemosa). It grows wild on "river-banks, west of New England to Wisconsin and southward," says Prof. Asa Gray.

P. H. A., Fort Smith, Ark.—Which of the two inclosed specimens of grass is Johnson Grass—No. 1 or No. 2 What is the name of No. 3?

ANS.—No. 1 is Johnson's Grass; No. 2 Panicum virgatum—Tall Smooth Panic Grass—No. 3 Erianthus ravennæ—Ravenna Grass or Giant Wooly Beard Grass.

T. B., Townville, Pa.—How should a monthly rose be treated?

ANS.—If in a pot, see that the drainage is perfect. Keep the soil mellow on top and mingle with it a pinch or so each of unleached wood ashes and nitrogen in some form. Fine bone would be good. If in the open soil, mulch it with old manure.

W. B. C., Shippensburg, Pa.—I have a fine heifer that eats well, and seems well when lying down; but when up she breathes heavily, like a horse with the distemper. There is no discharge from the nostrils, though there are indications that the seat of the disease is there. She has been thus affected only for a few days. What is the cause and a cure, and is the disease contagious?

ANS.—A personal examination would be necessary to locate the cause of the heavy breathing. It is probably some local trouble and not a contagious disease.

R. D. M., (no address).—1. What is the best way to protect through the winter young grape-vines that were set last spring and which have made a fair growth through the summer? 2. Does a thrifty Shaffer's Raspberry need winter protection? 3. Where can seed of Livingston's Golden Queen Tomato be got?

ANS.—1. Lay the canes down and hold them by a stone on the top of each. Then cover with evergreen boughs or any loose material. 2. The Shaffer is hardy in the climate of New York. 3. It is a mistake to call the Golden Queen Tomato Livingston's. W. Atlee Burpee of Philadelphia, Pa., catalogued it years ago. It is the best of the yellow tomatoes.

Discussion.

FARROW *vs.* FRESH COWS.

PROF. C. S. PLUMB, KNOXVILLE, TENN.—The articles in the RURAL of September 28, on the relative merits of farrow *vs.* fresh cows, interested me very much. Fortunately I had, near by in my desk, over 200 milk records of cows, covering periods of from 150 to 720 consecutive days. These records all relate to one herd, which consisted of Jerseys, Ayrshires and natives, with the Ayrshires strongly predominating. Of the 210 records, 34 pass over 12 or more 30-day periods.

In January 1887, in an article in the National Live Stock Journal, I discussed this same subject and from that article I quote the following first table as the most direct evidence I have upon the matter. It is compiled from the records in my possession, and may be accepted as reasonably accurate. The periods are 30 days each, and A, B, C, D, E, are records of native cows, and I, II, III, IV, V, of Ayrshires.

TABLE I.

PERIOD.	A.	.	C.	D.	E.	I.	II.	III.	IV.	V.
1	681	812	809	859	816	800	998	923	783	691
2	688	843	885	920	739	877	1039	953	794	753
3	767	885	862	453	705	901	1002	940	631	801
4	726	830	781	318	621	694	740	666	572	573
5	650	784	776	312	581	665	654	552	496	605
6	631	746	608	349	604	612	642	631	564	624
7	662	729	565	321	533	593	654	624	512	470
8	530	577	516	392	520	491	654	565	463	429
9	522	545	500	358	453	420	599	480	456	411
10	466	471	446	361	462	359	544	392	462	401
11	389	460	418	331	459	389	477	298	466	396
12	378	504	386	307	386	573	474	225	520	346
13	415	440	411	339	361	506	422	494	579	374
14	446	402	398	314	372	561	400	504	528	403
15	409	333	370	321	359	545	356	540	445	423
16	436	345	343	196	311	456	291	460	355	380
17	382	365	278	226	320	421	271	412	344	369
18	554	316	262	248	335	425	243	430	249	264
19	589	...	362	118	343	389	...	392	233	...
20	547	...	399	...	...	324	...	356	130	...
21	531	...	365	...	...	165	...	321	122	...
22	555	...	351	...	...	...	...	321	140	...
23	559	...	279	...	...	...	...	290	...	...
24	...	...	228	...	...	...	...	248	...	...
Total pounds	12,513	10,387	11,598	7,043	9,280	11,166	10,460	12,017	9,844	8,713
Average lbs. per period ..	544	577	483	371	488	532	581	500	447	484

All of the above figures refer to pounds. The first five rows, designated alphabetically, relate to natives, while the last five relate to Ayrshires.

The smallest average yield given was 371 pounds, the highest 581 pounds. Only two cows fell below 450 pounds. The natives gave an average yield per period, of 492.6 pounds, and the Ayrshires 508.8 pounds, or an average yield of 500 pounds for each of the 10 cows, for 18 months or more. Estimating this milk to have at least a value of two cents per quart on the farm, the milk for one period would be worth $5, or for a year $60. Adding to this income the value of manure, we get a considerable additional sum. There certainly was a profit here.

As nearly as I can estimate, from 179 yearly records, discounting all under five and over 15 months, a cow producing milk, not with calf, practically becomes farrow after 9.3 months. Comparing the first nine periods of the animals above mentioned as not farrow, and the last 15 periods as farrow, we find the smallest average quantity given by any one farrow for 30 days, is 276 pounds; the largest 475 pounds. The natives' average is 376 and the Ayrshires' 383 pounds, with 379 pounds for the 10 animals.

After selecting the yields of five other natives, and five Ayrshires, not noted in the table given for the first nine months of milking, and comparing them with the average period yields of each animal given in the above table, we get the following:

	—NATIVES.—					—AYRSHIRES.—				
Average of table,	544	577	483	371	488	532	581	500	447	484
Av. of other set,	700	607	454	488	560	614	444	563	693	493

In the first table, it will be noted that the average amount of milk produced per period for the 10 cows during periods 15-24 was 379 pounds, while in the second period we get an average of 561 pounds for the 10, or a gain of nearly 100 quarts in favor of those not farrow.

All of the above cows were better than average milkers, hence if a milkman had kept the best of them, and fed them high, he would have found them very profitable animals. But, under ordinary circumstances, it seems to me that the figures strongly favor breeding the cow each year. A rest of a month or six weeks will suffice for the animal prior to calving. On the college farm here, I breed the cows yearly, endeavoring to arrange so as to produce the least amount of milk in one herd during July, August and September, when there is not the demand or price in this region for milk or butter that we get the rest of the year.

As I write this, I have before me a copy of an agricultural paper containing a picture of Landseer's Fancy, with a brief statement concerning her record, which has not yet been beaten by a Jersey—936 pounds, 14¾ ounces of butter in a year. As bearing directly upon this question of farrow vs. fresh cows, I note that Landseer's Fancy has but just dropped her 14th calf. And yet she must be a very profitable cow entirely outside of her value as a breeder of thoroughbred stock.

THE NEW JERSEY MILK LAW.

FRANKLIN DYE, SECRETARY N. J. STATE BOARD OF AGRICULTURE.—A farmer in New Jersey rests in jail rather than pay a fine imposed upon him for selling milk which fell below the legal standard. The farmer claims that the milk came directly from his cow and that nothing had been added to it. If this be true, which is the culprit—the man or the cow? The New Jersey law requires that milk shall contain at least 12 per cent. of solids. This looks reasonable enough; it would seem that a cow giving milk less than 12 per cent. of solids is not worth keeping, yet there should be no foolishness or carelessness about the official examination of the milk. The proportion of solids in milk from a given cow will vary considerably. A cow at the Wisconsin Station gave but 11⅛ per cent. of solids in the first pint of milk drawn from her; while the last pint contained 19⅛ per cent. Fright, change of feeding, a chill and other conditions may affect the cow so that a sample of her milk would give an entirely untruthful record of her usual performance; so that we see that carelessness in the enforcement of a milk law may do injustice.

In the above—taken from the RURAL of October 5, page 664—there are a few questions to be answered which will require a few "ifs."

The first "milk bill," or starting point of our present milk laws, was passed in 1875, and grew out of the practice followed by the creameries in the northern part of our State, to enter the market and sell their "skimmed milk" in competition with "whole milk," and though at a lower price, the retailer could and, it is claimed, did add, or mix a small quantity of "whole milk" with it, and sell it as "pure milk." This was, of course, an injury to those engaged in milk dairying, and to consumers of milk—to the former because he did not obtain the price he should for the product of his cows, and to the latter because he did not receive "whole milk." On account of this, an agitation of the question was begun and carried to the legislature and resulted in the enactment of the law referred to. That law was subsequently changed and amended in many particulars, and the law now governing the milk question was passed in 1882. It requires a man to sel pure or unadulterated milk, and the ad dition of water, however pure it may be, claimed to be, under the law, an adulteration. A person cannot be imprisoned under this law except for refusing to pay the fine

imposed for an offence proved (by chemical analysis—not by a "lactometer,") or by continuing to sell adulterated milk. Now, keeping in mind what the law in this particular is endeavoring to secure, according to its requirements, "whole" or "pure milk" is milk *just as it comes from the cow.* According to the *spirit* of our law, the milk test made at the Wisconsin Station shows that that milk was pure; but according to the letter of the law, a man selling such milk would be adjudged guilty of adulteration. The test at the Wisconsin Station is not by any means an isolated case, and there are gentlemen of reliability who claim that there are cows that will not by any course of feeding produce milk containing 12 per cent. of milk solids. Mr. Browning, of Camden, says he knows it to be a fact that the quality of milk varies with the different seasons, and admits that sometimes the milk from his herd falls below the standard fixed by law. On the other hand, Dr. Shippen Wallace, of the State Board of Health, says he "is thoroughly convinced that there is no herd of good, healthy cows (and if the cows are not healthy the law forbids the sale of their milk) in the entire State whose milk on analysis will show less than 12 per cent."

From the experiment at the Wisconsin Station, and other similar testimony, and taking Dr. Wallace's statement into consideration, it is clear that milk from most herds should be thoroughly well mixed together before canning and carting to market, and that no analysis of the milk from one or two cows only should be made to prove the standard of a herd, or the character of the owner.

In the case instanced above, if the man did not water the milk—and he claims he did not—he does well to become a martyr rather than pay an unjustly imposed penalty. Moreover, if this was his (?) first offense, and his cows' milk fell below the legal standard for want of strong feed—grass, owing to so much rain has been very flabby this summer—if his character for honest dealing in his business life is established, he ought to have been released, free of cost, with an admonition to strengthen the feed. Otherwise every farmer must needs be a chemist or else send his milk often for examination. And this suggests whether it would not be better to inspect the milk in order to have it *produced* pure and up to the required standard rather than to seize a sample now and then in a hap-hazard way in order to find milk that falls below the legal standard. This would require an occasional inspection of the dairy stables of milk-producers, as to their construction, ventilation, etc., their daily cleanliness, the condition of the pails, cans and milkers at milking time, the courses and varieties of feed, the character of water and the usual condition of barn-yard or stable surroundings. Certain requirements of this kind, made of otherwise honest men, would, it seems to me, secure better milk from all herds and all the time, than can be obtained by the present method. Also, let samples of milk be taken from the stock of producers and retailers of milk in all parts of the State quite frequently, and let the results of the analyses be published somewhat as the analyses of fertilizers are now published. This would have a tendency to drive poor milk from the market.

Chemists admit, I believe, that they cannot determine whether the water in the milk is there through Nature's work or owing to adulteration. If they could determine as to the latter point, the law would be just. Failing in this, it is assumed that pure milk should show 12 per cent. of solids. Now, much milk is produced in the State that will yield more than 12 per cent. of solids. If the standard of purity fixed by law is a certain per cent. of solids, are not the producers of such milk—as some of them claim—justifiable in watering their milk down to the legal standard? The chemists cannot tell the difference, and yet if the milk-owner should be *detected* putting water in such milk, though it be *above* the standard, he could be arrested, and if proved guilty, must pay the penalty or go to prison! Our "milk law" is not perfect, but I will not find fault with it until I am able to suggest a better one. A man who sells water for milk ought to be punished; so ought the long list of adulterators of other goods. Milk ought to be sold on its merits, from original packages from the dairy and the creamery. The quality of the milk being fixed at these two starting points, the retailer must be held responsible for what he sells. This whole subject is a very important one. It may be necessary to continue the discussion in a future issue of the RURAL.

IS HAY, HAY?

PROF. F. E. LADD, GENEVA, N. Y.—The R. N.-Y.'s question, "Is a ton of Timothy hay of the same value for feeding, regardless of the soil upon which it is grown?" is one worthy of careful study. It is a common saying among feeders, that "hay spends well this winter, or hay spends poorly," which means that the feeding value of hay grown on the same farm varies more or less for different seasons. Thus the farmer has recognized a difference in the feeding value of different lots of hay. As yet there does not seem to be sufficient data to determine whether hay grown on different soils has a like feeding value. From observation and such experiments as have come under my observation, I believe that Timothy grown in clay soil will be found to have a different feeding value from that grown on sand or muck. The difference in soil, however, does not seem to be so influential as that in the climatic conditions. Some investigations at the New York Experiment Station at Geneva, as given in the sixth and seventh annual reports, seem to demonstrate that the feeding value of Timothy, and of the hay from other grasses as well, is quite variable, as judged from chemical analyses. It was found that the albuminoids or "muscle-formers" in Timothy from the same plots for two years were:

	PER CENT.
Timothy 1886	4.69
Timothy 1887	8.12

For Orchard Grass and Tall Meadow Oat Grass we find the albuminoids as follows:

	PER CENT.
Orchard Grass 1886	7.38
" " 1887	8.94
Tall Meadow Oat Grass 1886	6.75
" " " " 1887	10.37

In one ton of the above-named hays there would be of albuminoids.

	1886	1887
Timothy hay	79 lbs.	137 lbs.
Orchard Grass hay	124 "	151 "
Tall Meadow Oat Grass hay.	114 "	175 "

From the last table it seems very evident that the feeding value of the hay for the two years was very different and the common saying, "Hay spends poorly or hay spend well," is justified.

The examinations of hay from different localities made at the same station, show less variation in feeding value than for hays grown at the same place under different climatic conditions. From the analyses as given for Timothy hay, one ton, for 1887, would have of albuminoids:

HAY FROM	POUNDS IN ONE TON.
Maine	146
New Hampshire	135
New York	137
Wisconsin	123

In the clover we have considered the albuminoids only, and of course the carbohydrates would change somewhat the relative feeding value; but as a whole the albuminoids, (in hays cut at the same period of growth—full bloom—as in these experiments) may safely be considered a fair measure of the relative feeding values. The studies thus far made seem to indicate that the variation in the feeding value of hays from different localities and soils is not so great as upon the same soil under varying conditions of rain and sunshine. We may say that, often, all the climatic conditions are a more potent factor in determining the quality (and sometimes the quantity) of the hay crop than are fertilizers of recent application. As a general conclusion, it would seem that, one season with another, on the same farm the maximum hay crop will have a minimum feeding value, and the minimum hay crop a maximum feeding value.

FEEDING CORN.

P. H. JACOBS, HAMMONTON, N. J.—Corn is probably the cheapest poultry food, but something depends on the season of the year, and also the climate. Where the winters are very cold a larger ration of corn may be given. The value of carbonaceous food depends not entirely on its adaptability for egg-production, but also on the supply of warmth it affords. Many persons attribute the increase of eggs to corn, when, in fact, the corn has induced egg-production more by keeping the hens warm rather than through the supply of egg elements afforded, and as warmth in winter is essential to the production of eggs, corn, wheat or any carbonaceous food is valuable. Corn alone will not produce eggs. A hen that is fed exclusively on corn will be unable to supply the mineral elements of the eggs, and though she may, by eating largely of corn, find sufficient nitrogen for an egg, she will, in time, from the excess of carbon, become excessively fat.

I find the cheapest egg food in winter, and the most complete in the proportions of nitrogen, carbon, and mineral matter, is a mixture of clover (chopped into half-inch lengths and scalded), corn-meal and bran. This ration supplies bulky food (or an equivalent of green food), promotes digestion, and costs less than any other food. It affords a variety, and corn may be given also. Experiments show that as long as the hens are kept in exercise, corn may be fed liberally, but though one may attribute all the beneficial effects to corn, yet the amount of food of a various kind picked up by the hens in winter, is greater than may be supposed, especially if they have access to the barnyard, as they will pick up clover heads, leaves, the blades of corn-fodder, and other food required.

The best indicator is the hen herself. When she refuses corn and seeks something else, it denotes that she wants some element not fully provided by corn. In like manner she will reject other foods and eat corn. The best results are obtained from a varied diet, and though the hens may do well on corn, yet they may do better on variety. Milk in this section is too expensive. Wheat is used more than corn here, though corn is regarded as the cheaper grain. Meat is the best egg-producing food, but it is expensive. It should be fed in connection with grain, however. My advice is to feed corn, as the hens would get but little else in some sections, and it is almost indispensable to egg-production in winter, in cold climates. The RURAL's suggestion to use milk is excellent, but such a diet, exclusively (milk and corn), would compel the hens to drink to excess to secure the desired amount of solids, while the continued feeding of curds would affect the bowels. Hens should not be fed on a concentrated food any more than cows or horses. Clover, potatoes, milk, meat, with plenty of corn, are better than any single article. It is not an easy matter to make up a "perfect ration" for a hen. If she ceases to lay regularly, corn will soon cause her to become useless, but as long as she is producing eggs she will use a vast amount of "raw material" for that purpose. Milk, daily, added to other food, will largely assist in supplying many elements not obtainable so easily from other sources.

IMPROVEMENT IN POTATO DIGGERS, ETC.

P. M. B., RINGTOWN, PA.—F. A. B., Rising City, Nebraska, says that he is interested in potato-diggers. When people write for publication, or for any other moral purpose, and, more particularly, to give or ask for information about farming, about which there should be no secrets, why not give the full name and address, so that if any one wished to write to them he could do so? I have no digger to advertise, but would like to correspond with him about one. A few years ago, I made a small model of a digger, of the success of which I felt quite sanguine at the time. It has no shaker, but instead, a revolving cylinder. A working one should be two feet long and two or 2½ feet in diameter, with two-inch meshes. I had some doubts about the row going into it, but none whatever of its working. It would clean the potatoes, leaving them free from earth, excepting those that would go through a two-inch mesh. Now I think I can overcome the difficulty of getting the potatoes into it, and I think it can be made to work where the ground is pretty clear of weeds.

R. N.-Y.—There are several reasons, more apparent to editors than to the general public, for not publishing the names and addresses of correspondents. Many seek free advertising in this way, and it is unfair to our regular advertisers who pay for the space they occupy, to *give* space to others. Then many correspondents do not wish to be subjected to the annoyance of answering the numerous letters which thoughtless persons are likely to inflict upon them and which are many times entirely needless. Then again, there are numerous sharpers of all kinds ever on the outlook for the names and addresses of farmers; for, these once obtained, they are sure to tempt or bother the people with alluring circulars and specious schemes, and if the names and addresses are given in the paper the rascals are pretty certain to utilize them. The editor must be the judge of the extent to which these rules may be suspended. If our friend has a novel and valuable improvement in potato-diggers he should have little difficulty in inducing some implement manufacturer to take hold of it, as there is considerable chance for improvement in these valuable implements.

MORE ABOUT THAT MONTANA BOOM.

E. B., MERCHANTVILLE, N. J.—I write to thank the RURAL NEW-YORKER for pulling the scales from my eyes as to the Montana land boom now occupying so much space in many journals hitherto considered reliable and truthful. With me it has been an enigma why so much space was devoted to the laudation of this new sister State. I naturally supposed that the space was paid for by some land syndicate or railroad corporation. But it was not until the R. N.-Y. laid the matter open to its readers that I fully comprehended the cause of such extended puffing. I extend to it my personal thanks for its bold exposure of these designing editors, and feel that I hazard nothing in saying that it has proved a benefactor to more than one young farmer in its family of readers who were seriously contemplating going to try their fortunes in this far distant land. The editor of the Orange Judd Farmer has for years been an especial friend of mine and his misfortune with the American Agriculturist aroused my deep sympathy, so much so that I discarded the Agriculturist and subscribed for the Prairie Farmer under his management, Since his retirement from that journal I have been an object of his generosity by receiving the Orange Judd Farmer gratuitously. I had about made up my mind to subscribe for it regularly. I like to have a Western farm paper among the many I now take, and dislike to have a paper that is not worth paying for. The R. N.-Y.'s exposure has so thoroughly laid bare the position of the journal in question that I shall order it discontinued.

USE OF ROTTED POTATOES.

HENRY STEWART, MACON COUNTY, N. C.—Some weeks ago I stated in a communication to the RURAL that I was feeding rotten potatoes to pigs and cows as a test of their healthfulness, or otherwise. Two cows, milking, have had each a peck of the least damaged potatoes daily for more than three weeks, and four pigs have been turned into the potato field where they eat the diseased and rotten tubers that were rejected at the digging. Nothing in any way unusual has been observed in the cows or in their milk or butter, nor has anything unusual been observed by close examination of the milk and butter under a microscope of 500-diameter power. The pigs are doing excellently, fattening on their ration of milk, with the potatoes, and now of corn and have cleaned up every tuber without any repugnance and with the usual good appetite of thrifty young pigs. I have myself eaten potatoes that were quite black when cooked, several times, taking the dose with shut eyes, but willingly as a test of this question; so far nothing has happened to me.

SURE DEATH TO LIVEFOREVER.

W. H. C., EAST FREETOWN, N. Y.—I have found a much easier and more effective way of destroying liveforever than that described by W. H. D., in the RURAL of October 5. First procure a root of diseased liveforever and set it out in a bed of liveforever and it will kill the pest for rods around, the first year, and continue to spread and kill it as long as any remains in the field. When it once gets started in a field, liveforever is sure to go. Not a branch of it will be left to mark the spot where once it had perfect sway.

HAY FROM DIFFERENT SOILS.

G. M. O., MEADVILLE, PA.—My observations, extending over a period of 14 years, lead me to the conclusion that hay has not always the same feeding value, varying with the soil on which it is grown. My farm is situated in a valley, and I have both bottom land or flats and hill-side; the flats are clay land and sandy loam, the hill-side gravel: the hay raised on the gravelly soil while not always as heavy a growth, always gives the best results in feeding. You can satisfy the cattle with it and they thrive better than on hay raised on the flats. The hay on the flats is always lighter and the cattle do not always like it as well and they eat a greater bulk of it (I think the cold nights especially when moist, have something to do with it). We can raise more hay on our flat land, and the meadows are smoother, so we are more apt to cut our hay there, but it is not as good to feed. I have always had my cows shrink in their butter when turned into pasture on the flats from off hill pasture. There may be some deficiency in the flat soil that causes the difference in the feed, flavor and feed value. I know that when we want good, well-flavored potatoes for our own use, we do not plant them on the flats; they are not dry and mealy as raised on our gravelly soil, or as good-flavored. There is a vast difference in small grain

raised on the hill-side and on the flats. The grain is not nearly as heavy or plump, nor does the wheat make as good flour. Now if soil has a marked influence on other things, why not on hay?

What Others Say

IDAHO PEAR.—A very interesting, conservative illustrated pamphlet is received of this promising fruit, with a colored picture as a frontispiece. As our readers are aware, the R. N.-Y. is in fact, as is freely acknowledged by the company introducing it, responsible for its quick appreciation. Without the slighest acquaintance with the originators or with those who forwarded specimens to this office to prejudice in its favor, we were struck by its odd shape, its being seedless or nearly so, its excellent quality and with its decided superiority to any other pear of its season. The Idaho, as it has since been named, was therefore described and illustrated in its issue of November 27, 1886. It is not known, of course, how it will succeed away from its place of birth; but in so far as can be judged it is one of the most promising novelties among pears that has ever appeared, and we are free to advise our readers, North, South, East and West, to give it a trial in an experimental way. To aid in the dissemination of new *improved* fruits is a matter that the R. N.-Y. has always had at heart, regardless of advertising patronage, as its record during the past 12 years must abundantly show. We quote from the pamphlet above alluded to:

"During the fall of 1886, Mr. C. T. Stranahan and J. H. Evans, of Idaho, about the same time and each without any knowledge of what the other had done, sent specimens of the pear East, Mr. Stranahan sending to the American Agriculturist and the Farm & Garden; Mr. Evans to the RURAL NEW-YORKER. The Editor of the R. N.-Y. being absent from the city when the pear was received, it was somewhat damaged by being over-ripe when tested. Notwithstanding this, he was struck with it at first sight, and wrote immediately, requesting a better specimen for illustration in the RURAL NEW-YORKER! The season of the year being past, only a small pear or two were to be found on the trees that had been left as not worth gathering; these were immediately forwarded, and from one of them was made the first illustration of the Idaho Pear. The specimen shown in the engraving was very much flattened, and there were probably few persons who without any knowledge of the fact would have guessed the uncouth-looking figure to represent a pear. The novel appearance of the pear, and more especially the high encomium of praise awarded it by the Editor of the R. N.-Y., elicited immediate public attention, and the day following the receipt of the RURAL NEW-YORKER, letters were received making inquiries in regard to the pear, and requesting cions for testing, nor has there been any cessation of public interest during the past three years, as attested by the hundreds of letters that have been received. A few admiring friends of the Idaho Pear, believing from the warm words of welcome that had been awarded the first few specimens that had been sent abroad, that lovers of good fruit everywhere would appreciate this most excellent pear, resolved upon making a systematic distribution of the stock and hence the Idaho Pear Company.

At the time the first specimens of the fruit were sent abroad the Idaho had been variously designated among the few who had any knowledge of it as the Mullkey or Lindsay Seedling Pear. Upon receipt of the letter of the Editor of the R. N.-Y. requesting a second specimen and containing such a high commendation of praise, Mr. Evans concluded its good qualities were as likely to be appreciated abroad as at home and that it was entitled to a more characteristic name, that its distinct and rugged form was indicative of the land of its birth and that it could go forth under no more suggestive name than that of its native place —Idaho—The Gem of the Mountains.

In the pamphlet alluded to, high praise is given to the Idaho Pear by such good men as Prof. Budd, J. J. Thomas, Dr. Hexamer, Parker Earle, P. Barry, P. J. Berckmans, Dr. Hoskins, Waldo F. Brown, T. T. Lyon, W. Falconer, Storrs & Harrison Co., T. V. Munson, H. M. Engle, etc. The pamphlet will be sent to any of our readers upon application to the Idaho Pear Co., Lewiston, Idaho.

"WHY MONTANA IS BOOMED.—Under the heading 'A Serious Matter,' the RURAL NEW-YORKER, in its issue of September 7, draws aside the curtain and allows its readers to look behind the scenes and learn why it is that certain newspapers—and especially the Orange Judd Farmer—are so persistently booming Montana in their editorial columns:"

The above is quoted from the Iowa Homestead of September 20. The Homestead then quotes the editorial alluded to in full and then goes on to say:

"There is nothing new in the above, so far as newspaper publishers are concerned. The Editor of the Homestead had a polite invitation from certain railroad officials to become the guest of their road, in company with a coterie of distinguished agricultural editors, when this scheme was first organized. Not wishing to be under any obligations to any railroad, we declined the invitation. We have watched the development of the scheme ever since. While the other editors have been quite decent about it, and have evidently refrained from making representations that might mislead the unwary, the Orange Judd Farmer has thrown itself so fully into the work of editorially booming Montana as to awaken the suspicion that it is merely an advertising hand-bill of the Manitoba Railroad. We presume it is its privilege to do so, but, having taken this position, it is scarcely reasonable that it should ask to be classed with legitimate agricultural newspapers."

SAVING WAGES FOR FARM HANDS.—Waldo F. Brown in the columns of the Albany Cultivator and Country Gentleman, strives to impress on every farm hand the importance of saving and safely investing a part of his wages. If he saves $100 the first year of work, it may be worth more to him than $1,000 a few years later. Mr. Brown would much rather a son of his should earn by his own labor $100 the first year he was his own master than to have him make $1,000 by speculation, and if he found that he had saved three-fourths of his wages he would feel that his financial future was safe. He has had four hands during the last five years, and but one of them saved a dollar of his year's wages. It looks like a slow way to get a start in the world, to lay up a paltry hundred dollars a year, but he who does it, in a few years has enough to buy a team and tools to begin as a renter, or to make a payment on a piece of land which will be a home for him. Mr. Brown has met at institutes and other farm gatherings during the last 10 years thousands of the leading farmers of several States, and he has often been surprised to find that the best and wealthiest among them began life as farm laborers, and fought the battle of life single-handed. He has three neighbors who began as farm hands within 12 years, who worked by the month until they had saved $500 or $600 each, then rented farms, and who have now bought them. They were all young men who took an interest in their work, never thought of the 10-hour plan, and whose wages were increased from year to year. It took Mr. Brown three years of hard work to save $300, but those $300 were worth to him more than he could possibly have foreseen at the time. There are plenty of openings on the farm for young men of pluck and principle, and the chances of success are as good now as when he started.

CONCENTRATION OF WEALTH.—In regard to the concentration of wealth in the United States, Thomas G. Shearman says, in the Forum, that as lately as 1847 there was but one man in this country who was reputed to be worth more than $5,000,000; and though some estimated his wealth at $20,000,000 there is no good reason for believing it to have been so great. At the smallest reasonable estimate, there must now be more than 250 persons in this country whose wealth averages over $20,000,000 for each. But let us call the number only 200. Income tax returns arranged in large classes, multiply by from three to fivefold for every reduction in the amount of one-half. For extreme caution, however, we estimate the increase in the number of incomes at a very much lower rate than this. At this reduced rate, the amount of wealth in the hands of persons worth over $500,000 cash in the United States would be about as follows:

200 persons at	$20,000,000....	$ 4,000,000,000
400 persons at	10,000,000....	4,000,000,000
1,000 persons at	5,000,000....	5,000,000,000
2,500 persons at	2,500,000....	6,250,000,000
7,000 persons at	1,000,000....	7,000,000,000
20,000 persons at	500,000....	10,000,000,000
Total.....		$36,250,000,000

The estimate is very far below the actual truth. Yet, even upon this basis, we are confronted with the startling result that 31,000 persons now possess three-fifths of the whole national wealth, real and personal, according to highest estimate ($90,000,000,000) which any one has yet ventured to make of the aggregated amount. Nor is this conclusion at all improbable.

WIDE-AWAKE ITEMS.

THE DIAMOND GRAPE has not as yet borne fruit at the Rural Grounds. A vine was sent to us b J. T. Lovett in April of 1887. This was raised among a lot of 2,500 seedlings by Jacob Moore of Brighton, N. Y., the originator of the Brighton Grape, who deemed it the best of the collection. Nearly everything is claimed for it, vigor, hardiness, healthiness of vine; earliness and perfection of the berries.....

HOARD'S DAIRYMAN says, that, ton for ton, many farmers are finding out that unthrashed oats cut when the grain is in the rather soft dough state, and cut fine with a straw-cutter, are better than meadow hay—cut equally fine—to feed cattle, especially milch cows. As a rule, good farmers raise far more weight of oats to the acre than hay.....

THE FARM JOURNAL insists that calves, colts and all young animals should be treated so that they will come to you as to a friend. If you feel ugly and must kick something, let it be a log or a stone wall, or something that will not suffer. A few experiments in this line may cure you of the habit of feeling ugly.....

OUR "What Others Say" column is not as lively as usual this week. We are very sorry, but are you going to hold us responsible for the shortcomings of our contemporaries?.....

GO TO the woods; find a Papaw and transplant it to your own garden. In 10 years it will make you a thickly foliaged little tree, and it will bear its banana-looking fruit to eat if you like its sweet, custard-like flesh.....

A CORRESPONDENT of Mr. Peter Henderson, says Garden and Forest, recently sent to him, from France, a cluster of grapes upon which some of the berries were green, some black, some half green and half black —the colors divided sharply by a meridian line—and some were striped green and black. This seems like another example of the influence of strange pollen. But a letter which accompanied the grapes stated that all the clusters were mottled in the same way, and had been every season since it began to bear, some nine years ago. The vine is a seedling of unknown parentage...

THE R. N.-Y. is right glad to see that Secretary Rusk indorses Ex-Secretary Colman's recommendation that the Washington seed business be transferred to the experiment stations.....

THE Wilder Pear is well worth a trial....

A GOOD DEAL of space will be given next week to potatoes. The RURAL is sad that its own reports will not be of a nature to give doubting Thomases a chance to cavil as of yore.....

A FIRST-RATE small tree for a brook-side or wild garden is Aralia spinosa—well called the Devil's Walking-Stick.....

DIRECT.

—WESTERN RURAL: "Perhaps you are close in making a bargain, want every cent that is coming to you, and expect people to do just as they agree. That is all right. If you pay every cent you owe and do just as you agree, you can afford to be called mean, and we will venture to say that those who know you most intimately will say of you: "He is close, but he is a good husband and father and friend and a very nice man."

—LONDON AGRICULTURAL GAZETTE: "The late Mr. J. J. Mechi's farm is in the market. It seems but the other day that the genial farmer of Tiptree Hall, still enamoured of his lath-floored cattle boxes, his irrigation, and his thin sowing, was showing us round his beloved domain. And what a cheerful faith the "old man eloquent" had in himself and his theories, in spite of all his misfortunes. It was not farming that ruined him, though he must have lost a good deal by its costly improvements, in spite of his balance-sheets which partook of his sanguine character. Tiptree Hall has long ceased to attract attention; but it will be associated with the bold farmer who attracted world-wide attention 20 years ago."

—E. P. POWELL, IN POPULAR GARDENING: "The hollyhock is my pride. I do not know a finer plant, all in all, than this malvaceous giant. It stands on my lawns in at least 50 distinct shades of color—from black and red to yellow and white. Everybody enjoys them; and visitors drive 10 miles to examine them, and ask for seeds."

—"Over all sheds and barns should grow grape-vines and running roses. The shame of our homes is that we run lawn mowers in front and keep Gehenna in the rear. Nothing can be conceivably more vile than the average barn surroundings of our American homes. A new departure here is sorely needed."

—CENTURY FOR OCTOBER: "The mischief of opinions formed under irritation is that men feel obliged to maintain them even after the irritation is gone."

—"VOTES should not be counted, but weighed."

—"THE small writer gives his readers what they wish, the great writer what they want."

—"TO be content with littleness is already a stride towards greatness."

—LIFE: "Soup a la Jay Gould: Take a little stock, six times as much water, and then put in the lamb."

—BADGER (mad and excited): "Say, your dog ate up seven of my hens last night. What are you going to do about it?" McGall: "Well, if it don't make the dog sick I won't do anything about it."

—MOTHER: "You have drawn that donkey very nicely Johnny, but you have forgotten one thing. Where is his tail?" Johnny: "Oh, that donkey does't need any tail. There are no flies on him."

—GARDEN AND FOREST: "The Shiawassee Beauty Apple rises higher in my esteem year by year, as I become better acquainted with it. This season, when there are but few apples, and of these few most are ruined by insects, Shiawassee is large, fair and perfect. A seedling of the Fameuse, it is yet quite distinct, being larger, more flattened, more brightly red, and distinctly more acid, though with the true Fameuse flavor. The tree is very hardy, having endured several of our severest winters; and, above all, in point of comparative merit with its parent, it is free from the fungous spotting so ruinous to the Fameuse." T. H. HOSKINS.

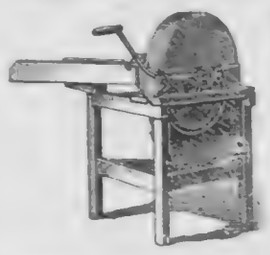
Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

Scrofula in its severest forms, salt rheum, and all other blood diseases, are cured by the great blood purifier, Hood's Sarsaparilla. The voluntary statements of cures by this medicine are really wonderful. Send for particulars to C. I. Hood & Co., proprietors Hood's Sarsaparilla, Lowell, Mass.

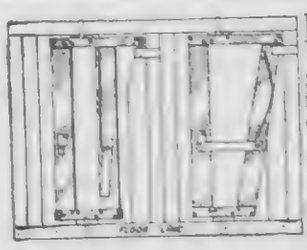
NOTHING ON EARTH WILL MAKE HENS LAY LIKE SHERIDAN'S CONDITION POWDER

Highly concentrated. Dose small. In quantity costs less than one-tenth cent a day per hen. Prevents and cures all diseases. If you can't get it, we send by mail post-paid, One pack. 25c. Five $1. 2 1-4 lb. can $1.20; 5 cans $5. Express paid. Testimonials free. Send stamps or cash. Farmers' Poultry Guide (price 25c.) free with $1.00 orders or more. L. S. JOHNSON & CO., Boston, Mass.



DICK'S FEED CUTTER

For Hay, Straw and Ensilage. *The only machine that cuts and splits corn stalks.* We also sell the TRIUMPH STEAM GENERATOR, and GRIFFING'S CORN SHELLER AND SEPARATOR. Write us at once **H. B Griffing, Sons & Co., 70 Cortlandt St., New York City, N. Y.**



BOON to DAIRYMEN

Perfect Swinging Cow Stanchion. Self-locking by entrance of cow's head. Free delivery at principal points. Send for circular. Mention this paper. **Scott & Locke, Orford, N. H.**

THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, OCTOBER 26, 1889.

NOTICE.

THE RURAL NEW-YORKER is invariably discontinued at the end of the term subscribed for. Any copies sent to non-subscribers are sent without charge as specimens merely.

IF the standard of purity fixed by law is a certain per cent. of solids, are not the producers of such milk—as some of them claim—justifiable in watering their milk down to the legal standard? The chemists cannot tell the difference, and yet if the milk-owner should be detected putting water in such milk, though it be above the standard, he could be arrested, and if proved guilty, must pay the penalty or go to prison! See page 710.

AT the Minnesota Experiment Station a "school for meat inspectors" has been established. It is proposed to give such instruction as will qualify men for the duty of "inspection on the hoof." In spite of the adverse decision of the courts, it seems evident that Western farmers look to this "meat inspection" as the best means of handling the trade in dressed beef. The probabilities are that efforts will be made to push a law having this inspection for its basis, that will be so framed as to be declared constitutional.

OUR friend A. L. Crosby, has this to say about a matter that would please many farmers:

"The Blush Potato, by the way, is improving. It used to scatter very much; there would be almost as many potatoes between the rows as in the rows; but now they are much more sociable, and there is no trouble in digging them with a potato plow."

Can it be that the location of the manure or fertilizer has anything to do with the position of the tubers? Will a concentration of the manure in the hill or drill tend to produce a concentration of the tubers?

SOME of our friends have manifested a good deal of concern about the adulteration of buhach. It has been claimed that Eastern firms adulterate the California product. A friend in California writes as follows concerning the matter:

"Inquiries have been made throughout the country in regard to buhach which is retailed at every little cross-road store. While much of it does not seem to be up to the standard quality, no incident has yet come to light in which direct fraud can be proven, although there is but little doubt that in some instances it is practiced. The crop of buhach in California this year is very good, but is not in excess of the demand."

SOME of our impatient friends want to know why we do not tell them more about the famous butter extractor. We have already given about all the *facts*. We might print any amount of theory and philosophy about the machine, but the actual facts can only be demonstrated by practical results. Will the extracted butter keep? Will the machine supersede creamers and pans and churns? Will the dairy business be "revolutionized?" There are plenty of men who stand ready to give an opinion regarding all these matters, but the actual results will have to be worked out in the old, old way. When any facts regarding the quality of extracted butter or the economical value of the extractor are presented, the R. N.-Y. will gladly give them.

EFFORTS are being made to render the coming New York farmers' institutes very valuable. Secretary Woodward informs us that he has secured the services of Prof. J. W. Sanborn, recently Director of the Missouri Experiment Station. The other workers who proved so popular last winter will all report for duty. It is proposed to hold 40 institutes this year, although if all the places that call for one could be served there would be 100. The first will probably be held November 18 and 19. The R. N.-Y. will print a full list of the locations as soon as it is decided upon. It is not necessary for the R. N. Y. to repeat that it is most heartily in favor of this institute work and that it urges all its friends to attend all the meetings possible.

THE recent decisions regarding the constitutionality of certain anti-dressed-beef laws promise to provide some interesting test cases regarding game laws. Many Western States have laws forbidding the exportation of certain kinds of game from the State at any time of the year. The decision in the dressed-beef cases was based upon the fact that Congress has the sole right to regulate the traffic between the States. Game dealers in this and other large cities claim that if the State authorities have no right to prohibit the entrance of dressed-beef they have no right to prohibit the export of game. They propose to test the matter. The prohibition of game exports has hitherto proved one of the best means of preserving game from market sportsmen.

THE R. N.-Y. the past spring for the first tried the effect of spraying an apple-tree with water and Paris-green. The tree (Newtown Pippin) is about 14 years old from the nursery, and has borne for four seasons without maturing a single apple, so far as known, that was not injured by the coddling moth. It was first sprayed when the apples began to set and the tree was not entirely out of bloom. It was again sprayed four days after, and again when the apples bent from an upright to a downward position. It bore a moderate crop and though every apple was examined there was not a trace of the coddling moth. The quantity of Paris-green used was a level teaspoonful to two gallons of water. It was sprayed on *every* part of the tree underneath and over the leaves, through a Vermorel nozzle. The experiment was conducted in a small way certainly, but it proved what the R. N.-Y. desired to prove for itself, that thoroughly spraying apple-trees will insure the destruction of the coddling moth without the slightest apparent injury to the foliage.

THE losses recently incurred and likely to be incurred soon by Eastern companies engaged in making loans on Western farm mortgages should teach a salutary lesson. There has never been any system of inspection or supervision in case of loans made by such corporations. In their eagerness to earn commissions and to make prompt use of the funds entrusted to them, they have often taken unjustifiable chances and accepted insufficient security. Indeed the people of the West have been hardly more anxious to borrow than the people of the East have been to lend. In many cases farmers have been over-persuaded to take loans when they could have done without. Tens of thousands of Eastern money have been invested in mortgages solely because the rates of interest were irresistible, without any proper investigation into the value of the land or the borrower's ability to pay. Even decisions of the courts were neglected in the greed for high interest. The reaction from such feverish imprudence must be expensive; but it is safe to say that the vast majority of Western farm mortgages are good, and that they will be duly paid as fast as they mature.

WHEREVER the Grange or the Farmers' Alliance establishes a store or depot for furnishing its own members with supplies at first cost, there is always a tendency to excite the ill-will of other store-keepers in the place, and also that of their friends. This is quite natural. The goods furnished are good and unadulterated; and even the general public can usually purchase them for the same prices charged for ordinary goods of the same kind elsewhere, and sometimes for lower figures. So long as human nature remains what it is and always has been, such competition must beget ill-will. The farmers very naturally support their own side, but it is seldom the feeling finds vent in violence. An exception has just occurred at Dothen, a small town in Alabama. The Farmers' Alliance had established a farmers' warehouse there. As soon as it began business, it was called upon to pay the usual drayage and other licences imposed on other business houses in town. This demand was refused and the manager was arrested. On the day set down for his trial 300 heavily armed Alliance men assembled round the Court House, and the town's people also came armed to the teeth. A pitched battle took place between the two parties, which resulted in the death of two men on each side and the wounding of many more. Such events are truly deplorable, and in this case all the more so inasmuch as the farmers appear to have been most in fault.

IT IS very evident from the notes on "Marketing Crops" printed in this issue that the R. N.-Y. has among its subscribers some very keen and shrewd business men. "Selling a crop is just as important as raising it," We feel sure that our readers will appreciate this opportunity of comparing notes. While the products and practices of different sections are different, there are certain laws that hold good the country over. The Iowa farmer, with his great herd of cattle or horses, may wonder at the New Hampshire man with his 2,000 hens; yet in selling their different products they are both guided by similar laws of supply and demand. They are both after the highest possible price; they hold their products only when it seems evident that the supply is limited. To the business farmer a true report of the condition and location of a certain crop is of more importance than present prices. The cost of holding a crop is considerable: shrinkage, waste and proper storage must all be taken into consideration. We notice that most of our correspondents seem to agree that in the majority of cases it is safer to sell the crop as soon after harvesting as possible, unless the facilities for storing it are of the best. If farmers could so organize their business that they could tell approximately what it costs to produce a crop, they could easily determine the profit in current prices. We are speaking now of articles that can be kept for a reasonable time. With fruits and other perishable products, of course nine out of every 10 growers must sell for the market price or lose the whole.

$10.

THE R. N.-Y. offers a prize of 10 dollars for the best column of "Notes on a Back Number." Contestants may select any number of the R. N.-Y. for 1889. They are to write short notes in approval or criticism of the various topics discussed in that number. The articles must not be over one column in length. The prize is to be given to the column showing the most sense, and in which the greatest number of topics are discussed. It is proposed to publish all the essays in the form of a "Discussion" symposium.

NEW IDEAS.

"I OFTEN wonder what there *can* be left *of interest* to publish. Having read your paper seven or eight years, it seems you must have covered all the ground. But I am agreeably astonished to find every copy fully as good and fresh and new as the one before it." Thus writes a subscriber in Wisconsin. The R. N.-Y. has often wondered why its esteemed contemporaries do not get a little more "out of the rut." Now and then we compare their current issues with the corresponding dates of previous years, and it is quite astonishing to see how little real progress has been made. The same things are talked about in almost the same language. The R. N.-Y. in its farm life comes upon thousands of new and interesting things that are well worthy of thought and study. We take great pleasure in investigating what to us are new matters, and one subject leads to another until we realize that the science of agriculture is full of pleasant and profitable mysteries. The R. N.-Y. is blessed with a constituency of thoughtful and observing readers who are always ready to contribute from their fund of experience. As its circle of correspondents widens the R. N.-Y. is very agreeably surprised to see how many there are who are patiently and systematically studying the laws of Nature and the various conditions of farm life.

Such minds crave new ideas and strong thoughts from sections of the country where there are special conditions to be observed. We find that young farmers in particular want to think and reason out agricultural propositions. It is for this reason, among others, that the R. N.-Y. makes a strong feature of the 'symposium" and encourages its readers to discuss whatever may be said in these columns. Our agents often meet farmers who say: "One number of the agricultural paper is just like another. I want something *new*." This is a fair criticism of too many of our farm papers. The student, the progressive man, be he farmer, lawyer, doctor, or what not, must grow and investigate and absorb new things. One cannot successfully stand still in these days—one must go forward or fall behind. The R. N.-Y. addresses itself to progressive and enterprising farmers who desire to keep up with the times and to know all that is going on.

BREVITIES.

DON'T let that old horse get too poor before winter sets in.

THE market was never so well supplied with hickory nuts or so poorly supplied with chestnuts.

"I OWE my success as a gardener to the R. N.-Y., and I shall never be without it.'
Leadville, Colo. W. J. P.

IF anybody can give a better egg food for winter than that suggested by Mr. Jacobs on page 710, the R. N.-Y. wants to know what it is.

IN William Falconer's article on Henderson's Bush Lima, page 690 of last week's issue, "weighs 63 ounces" should read weighs 6¾ ounces.

CAN anybody tell us why there should not be State Associations formed for the New York breeders of Holstein-Friesians, Jerseys and Short-horns?

ON the farms near New York almost all the oats are bought. Farmers feed a good many oats to their horses, too, particularly during the marketing season. It would seem as though oats would be a good crop for the "city farmer."

IN almost all neighborhoods there is a farmer who grows a small crop of buckwheat, has the grain ground into flour and then peddles it out among his neighbors. The chances are that this member of the community will do well this year.

TWO WEEKS AGO the R. N.-Y. gave a detailed account of the new business of selling produce at auction. Thus far the business has been confined mainly to fruits. Last Wednesday the first auction sale of sweet potatoes occurred and resulted very satisfactorily.

IN many parts of the West potatoes are bought at 30 cents per bushel. They are being sent to this city where the consumers are lucky if they can buy at $1.00 per bushel. It would be quite an interesting study to trace this business through and see who gets the 70 cents difference.

A GREAT many silos have been filled with clover this past season. A great many farmers are regarding these experiments with a feeling of misgiving. The R. N.-Y. believes that a great majority of them will be agreeably disappointed, especially when they realize how difficult it would have been to cure the clover just right.

A HEAVY crop of fodder-corn will take out of the soil about all the manure you can put in. Many a farmer has proved this to his sorrow by manuring heavily and then sowing thickly the large B. and W. Corn. He gets a rank growth, but the succeeding crop tells a story of weakness. In many cases a crop of the smaller varieties of corn would yield as large a crop of edible fodder and leave the soil in much better form for succeeding crops.

YOUNG JESSE HOYT who inherited about $600,000 from his father, the late millionaire Jesse Hoyt, is holding up a wheat "corner" in this market "by the tail." The manly young plunger has been quite successful in the wheat pit for the last two or three years and is now "long" on 2,000,000 bushels of December wheat. He refused to make a profit at 89 cents per bushel the other day, in the confident expectation that the market will go higher before it goes much lower. "Old Hutch" in Chicago appears to be of the same opinion, as he is reported to be preventing a decline there by the power of his millions.

The Swineherd.

THE HOG AT THE SOUTH.

E. A. BISHOP.

Hog-raising in the South a neglected business, hence neither profitable nor popular; advantages of an Essex-Berkshire cross; corn and sorghum for "soiling;" sweet potatoes and peanuts fine pork-makers; feeding to avoid disease; a local market.

IN the South, where hog meat forms such an important article of food, there are few things of more moment in the economy of the farm than the raising and curing of meat for home consumption. There are, however, but few who raise sufficient for home use, the great majority depending upon the West for their supply. This should not be so, for we can raise pork as cheaply and of as good quality as the Westerners. The average Southern farmer has no piggery, or at best but a makeshift of a few old rails made into a little pen without covering, and used for a few weeks in the fall and then torn down. The rest of the year the hogs shift for themselves to a great extent and run at large in the highway, making their headquarters for sleeping just outside the front fence and in the barn-yard. With such care it is not to be wondered at that pork-raising is not popular or profitable. The pigs should have a good pasture to themselves, with running water if possible.

I have no suitable pasture and am compelled to keep mine up a large portion of the time. I find, however, that my hogs add no small amount to the income of the farm. Of prime importance is the breed, and right here at the outset is the source of much profit or loss. Much time and food are wasted every year by raising the razor-backed, piney-wood rooter that, at his best, is composed largely of bone, hair and muscle. I have found that the hog best suited to my needs, is a cross of the Essex and Berkshire. I use a thoroughbred Essex boar upon selected Berkshire and grade sows. This gives me a thrifty, quick-growing pig, with small bone and a fine quality of meat in the most desirable parts, and a small amount of offal. The demand is for small to medium rather than large hogs, an eight to 12-months-old pig weighing in the neighborhood of 200 pounds being a convenient size to handle and cure. The course of feeding that I find most profitable is to feed just as little corn and whole grains as possible; a small amount just before killing time being all I use. This is the whole-ear corn ground in a Scientific Mill and used to help out the swill and green feed for the last few weeks. What I do feed is first the waste from the kitchen and from the garden vegetables.

I sow drilled corn and sorghum in succession, which are cut, a small load at a time, and brought to the barn to be fed out. This makes the bulk of the feed and takes the place of a pasture. The hogs are given fresh water to drink every day. Aside from this, I have one lot of land—10 acres—which is inclosed with a tight fence and here, besides other crops, I plant sweet potatoes and peanuts, and in the fall, after gathering enough of the potatoes and peanuts for seed and home use, I turn in my pigs and let them get the rest, staying until the feed gives out or the weather becomes too wet and cold.

For a valuable and cheaply raised hog food I would recommend peanuts. Twice as much peanut feed can be raised to the acre on the same land as of corn, with no more work in cultivating, and there will be no labor in harvesting, as the hogs can do that themselves. The sweet-potato vines after the crop has been dug also make a valuable addition to the food supply. I intend to try silage this winter when my other feed gets low, also several hundred bushels of turnips. The latter I shall cook.

The general health of my hogs is excellent, sick hogs and cholera being something I have had no experience with at home, though my neighbors often complain of heavy losses. A little sulphur put in the swill barrel occasionally, and charcoal thrown into the pens will aid in keeping up the thrifty condition of the herd. Charred corn cobs are also good. In short, feed corn sparingly and use, instead, green food which we can obtain in abundance, and at much less cost during the greater portion of the year. All of my hogs are consumed or sold fresh without curing, as I find this the most profitable way of disposing of them, there being always a good demand, and there is much less trouble than in cutting and packing. Still I much prefer pork put up in the New England way—in brine—than with dry salt, as the meat does not become so hard and has a better flavor. For killing, a sharp, cold day is preferable and the water should be brought to a temperature of 160 degrees or at least between 150 and 170 degress. A cheap thermometer will be found of service here. A small shovelful of hard-wood ashes well stirred into the tub of water, will aid in making the hair come off easily. Care in dressing helps wonderfully in selling if one wants a good price.

Talladega, Ala.

Farm Topics.

WHAT TO DO WITH THE STRAW.

Shouldn't be burned, or allowed slowly to rot in a pile in the field, or sold except for fertilizers; may be exchanged for manure; should be kept covered; as yard litter; its great value as supplementary feed; as bedding for stock; as a blazing insect destroyer; as a winter mulch for wheat.

SOME farms owing to the particular composition of the soil are very productive of straw, and the farmer is sometimes puzzled to know what to do with it. The alluvial land lying along rivers and creeks usually produces an average crop of grain, and a very heavy growth of straw. As I own such a farm myself and have given the subject much consideration, perhaps I am able to offer some useful suggestions in regard to the proper disposal of the straw. In the first place, let me mention what should *not* be done with it.

It should not be burned. Burning straw, though very common in the West, is not much practiced in the East; but I have sometimes seen the smoke of burning straw piles on the flats along the Susquehanna River. Last year the buckwheat straw which was thrashed in the field and is not considered of any value for feeding to cattle, was generally burned as soon as the machine was moved out of the way.

It should not be allowed to rot in the field where it is thrashed. When there is not sufficient barn room, part of the grain is frequently thrashed in the field, and a big pile of good, bright straw is left for several years to be an eye-sore in the field, to be plowed around, to furnish an asylum for rats, mice and other vermin, and finally, when rotted down, it makes but a small quantity of manure without richness or strength, and it is seldom spread to obtain the little value that remains in it. I believe that of the two practices, the burning is the better, as it gets the straw pile out of the way at once, and the ashes, if carefully gathered up and spread, are of more value than the dust of the rotted straw.

It should not be sold. In Great Britain, where good farming is more general, and more pains are taken to make and save manure, selling straw from the farm is considered an unpardonable sin, and is strictly forbidden in most of the leases to tenants. Of course, near the cities and large towns straw is sold and manure bought to supply its place on the farm. I have often exchanged a load of straw for a load of manure—say half a ton of straw for a ton of good horse stable manure—and the person with whom I made the exchange brought the manure to my field and took home the straw. There are teamsters here, and I presume in every neighborhood, who have no farms and have more manure than they need for a garden, and are always willing to exchange it for straw. Long, bright rye straw is in great demand for making paper and sometimes fetches nearly as much as hay. It might answer to sell rye straw and with the money it brought buy some bone-meal or other commercial fertilizer that has been found beneficial to the soil, but the great danger is that the straw would be sold and the fertilizer would not be bought.

What, then, should be done with the straw? As soon as it is thrashed, if it has been pitched out of doors, pitch it back into the barn again, or into some place where it can be kept dry. A stack in the yard, built ever so well, will get wet on top, and in the winter will have a thick frozen crust on top so that you cannot get any dry straw from it without great trouble.

The Hon. B. Laporte of this county built a straw barn on purpose for straw. It stands on a level with the basement of his barn and is very convenient for filling from the machine, which stands on the main floor. The sides are planked with 2x4 scantlings spiked on far enough apart so that cattle when in the yard can put their heads between them and work at the straw. When they have eaten all that is within their reach, more is thrown down from above, and dry straw can be obtained for any purpose whenever wanted. Mr. Waldo F. Brown litters his barn-yard with straw a foot deep or more at the beginning of winter. I think it is better to pitch it out into the yard a little at a time every day; it gets trampled to pieces better, the manure becomes incorporated with it more evenly and it decomposes faster than if a large quantity were pitched into the yard at once, when the decomposition only takes place on top, and the under side remains a long time unrotted. A large amount of straw that is bright and not weather-beaten, can be fed with profit to stock, especially to young cattle, and a larger amount still, can be used for bedding. I stable all my cattle of every age and description now, and the young animals receive a plentiful feed of straw in the morning, which they commence eating very readily, and what they leave is taken out of the mangers at night and thrown under them for bedding, when they are fed hay. It is surprising how much straw can be used during the winter for bedding cattle and horses, how much cleaner and more comfortable they look, and what a large amount of good manure they will supply.

In order to make cows and fattening cattle eat straw and thrive on it, it must be cut fine, moistened, and meal containing a proportion of rye or oats (to make it thick), must be mixed with it.

Being short of hay one season, I wintered all my stock, horses cows and eight steers, almost entirely on cut straw and meal. The steers were fatted, and I never had any cattle gain faster. The cows gave a good yield of milk and did just as well as if they had been supplied with all the hay they could eat. I am firmly convinced that most farmers who do not use silage could feed a great deal of cut straw and meal, with more profit than hay. Mr. Waldo F. Brown tells of a farmer in Ohio who, after his wheat ground is prepared, and before drilling in the seed, burns a thin coating of straw all over the field, and thinks it pays well for the straw and the labor of putting it on, by the increased yield of grain and the destruction of insect pests.

A good many farmers, after the ground is frozen hard at the beginning of winter, draw straw on their wheat fields and spread a thin, even layer all over their wheat. It prevents winter-killing by keeping a part of the snow from blowing off, and if there should be no snow, it keeps the plants warm and prevents the injurious effects of sudden changes—freezing and thawing—which destroy their vitality and push their roots out of the ground. It acts also as a mulch, keeping the surface moist and mellow and preventing it from becoming encrusted in the spring. Hogs when kept in the pen, if abundantly supplied with straw, will manufacture more manure out of it than any other animals of their size in the world. There are ways enough for the profitable disposal of straw without selling, burning, or wasting it. It requires labor to properly utilize it, but no good thing is ever obtained without the labor of somebody.

J. W. I.

Sugar Run, Pa.

Miscellaneous.

CORRESPONDENTS' VIEWS.

STABLE MANURE.—We use stable manure on corn and grass land. It may be applied to corn land any time in the fall, winter or early spring. To meadows and pastures it is best applied in the fall and early winter. I have never observed other than good effects to follow on its application either to corn land or pastures. A too liberal application to meadows will cause the grass to grow rank and coarse and to lodge badly in a wet season, while in a dry season it only insures a good crop. Applied either to oats or wheat, it will generally cause a rank growth and lodging. I never knew it to prove otherwise than beneficial to corn. I have seen dozens of fields of corn in which a person could tell to the row where manure had been applied. Three years ago I inspected a field of 12 acres of corn, four acres of which had received a liberal dressing of good stable manure, and the difference in growth was so marked that one would almost have thought the field was planted with two distinct varieties. The four acres of manured land actually yielded more bushels of corn (I forget just how many more) than the other eight. I believe there is no crop grown that is more benefited by an application of good stable manure than corn, let the season be wet or dry.

MANURE ON POTATOES.—The effect of stable manure upon potatoes has invariably been injurious with me. It causes scab, rotting, coarse, uneven, pronged tubers, besides a growth of weeds and grass that it is almost impossible to subdue. If, after the land is heavily manured, a crop of corn is grown upon it, then it is in prime condition for potatoes. Some of the finest potatoes I ever saw grown in this section were grown on such land. I consider it next in value to well-rotted clover sod for this crop. The chief objections to it are the corn stumps which are a nuisance in a potato patch.

Christian County, Ill. FRED GRUNDY.

FEEDING HOGS.—I believe that it pays to keep the pigs of all ages growing; that is, it pays better to feed regularly a certain amount of feed rather than to turn the animals out on grass and water for three or four months, and then put them in the pen and feed all they will eat for two or three months, and then slaughter them. Breeding sows should not be fat or over-fed when suckling pigs. It is better to let them fall off in flesh than to overfeed them with strong feed. I have much faith in bran and middlings for breeding and growing stock.

REMEDY FOR LUNG WORMS IN SHEEP.—Turpentine in quantities of one tea-spoonful in a half gill of sweet milk for a 40-pound lamb, or double the quantity for a large lamb or sheep is a good remedy for lung worms. It should be given on an empty stomach and for three successive days. If the animal is badly infested, the dose should be repeated after three days. As soon as a lamb does not keep up with the flock the presence of lung worms may be suspected.

E. J. B.

Titusville, N. J.

BINKUM'S TOOL-HOUSE— Binkum had the best equipped tool-house I ever saw. It was his hobby. It was as cleanly swept as any woman's kitchen floor need be. Everything was in perfect order. Plows, chains, hoes, spades, axes, were all arranged in the most orderly manner. Even the broom-sticks had been preserved until perhaps 70 had been accumulated. All implements had been cleaned, polished and oiled. It would do any man good to inspect that tool-house. The three sons would no sooner have dared to soil one of those immaculate shiny hoes by digging in the ground with it than they would have used a watch for a foot-ball. This model tool-house was kept securely locked, and was made an end instead of a means. Binkum seldom allowed himself or anybody else to use his tools. He had many a sneer for the farmers who "never had any tools." His aversion to work and love of whisky landed him in the almshouse and the sheriff dissipated the contents of the well-ordered tool-house.

O. H.

Greeley, Col.

AS A HISTORICAL NOVELTY in the horticultural line, I send the RURAL an apple from the oldest apple tree on the Pacific coast, or rather from one of the group of the four or five oldest trees. The seeds were planted by the Rev. Spaulding, Missionary to the Nez Percès Indians over 50 years ago, and the trees were for about 40 years objects of Indian horticulture, and during this period—in the winter of 1861 and 62—the mercury dropped more than 40 degrees below zero, which fact certainly attests the hardiness of the trees. The one from which the fruit is sent is about 7½ feet in circumference near the ground and is still vigorous, having made a good growth the past summer.

J. H. E.

Lewiston, Idaho.

[The apple was received in perfect condition. It was about the size of a Baldwin. Skin bright yellow; flesh white, subacid, tender and of fair quality. Eds.]

GRAFTING THE TOMATO AND POTATO.—Some happy amateur, who, like our common progenitor, Adam, derives enjoyment from tilling and keeping his garden, and who has not seen a potato-ball for 10 years, has conceived the idea of growing a potato stem up close to a tomato stem, inarching them together when they have grown sufficiently, and when united stopping the tomato growth everywhere excepting through the graft, and severing the potato stem below the graft. It is possible that the potato top, having no tubers to feed, may spend it-

self in the production of flowers and seed. Every child should be taught how to produce plants, and to guide or change their growth by grafting and training as a profitable and ever interesting occupation for many a spare hour. The experimenter referred to, will, it is to be hoped, tell every body, through the papers, how his experiment resulted. "W."

Tyrone, Pa.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

MORE than once we have had something to say about fashions in mourning—we don't mean in actual *mourning*, but in the clothes used to denote it. And there is no doubt that people more often offend canons of taste in this direction than conform to them.

It sounds heartless to tell one bereft of her nearest and dearest that she must wear just such garments for so long a time—that she must gradually lighten the gloom of her apparel until she throws it off altogether. But the wearing of mourning is a purely formal affair; the deepest black cannot express the lonely grief of a real mourner, or disguise the frivolity of one who puts it on merely because it is the fashion. It is a custom to be honored for its antiquity, and it is often a protection to the bereaved one.

* * *

BUT so many women make mourning a veritable byword. There are those careless ones who put on the inkiest of sables for a few months, and then flaunt out in gay colors without any decent interval of sober half-mourning garb. We have been repeatedly shocked by seeing women in crape veils and mourning garb at theatres and other places of amusement—at fairs and festivals of every sort. If their feelings do not prevent them from enjoying any frivolous amusement, why advertise their levity by wearing mourning? So long as unrelieved black is worn, no place of public amusement should be frequented; certainly the sight of a crape veil at a comic opera is not only absurd, but hardly decent.

* * *

NEXT to the frivolous pleasure-seeking mourner comes the perpetual mourner. How many women do you know who, because they lost a dear one three or five or 10 years ago, still wear crape and what the English term first mourning, and seem to have devoted themselves to mourning for the rest of their lives? This is especially the case among American women, because rules for mourning are not so rigidly laid down here as they are in European countries. Now, in point of fact, the deepest mourning—that of a widow—should not last more than three years, and this is longer than French fashion allows. One year of black with crape; one year of plain black; six months of black-and-white, and six months of gray or lavender is the longest mourning one should indulge in, and even this is excessive. Two years is the longest allowable for parents, brothers or sisters. It is too often either selfishness or ostentation which prompts excessive mourning apparel, nor have we the right to obtrude our grief on every one.

* * *

THERE are several Mourning Reform Associations in England, organized for the purpose of lessening the display made under such circumstances, which is often a sore task to a slender purse. In England it is customary to provide mourning, usually two sets, for the servants of the bereaved family, be they many or few, and this is a very heavy expense. Many people of rank try to discourage this ostentation, but it is an old custom. Lady Marian Alford, an English woman well known for her benevolence and philanthropy, left in her will an express stipulation that no mourning should be worn for her, and that her funeral should be as plain and simple as was consistent with respect.

* * *

WE wear mourning garments in token of a sorrow which we ought assuredly to stifle and to conquer. The loss of our dear ones seems scarcely expressed by the deepest of black, and yet we must all feel the selfishness of such gloom. Among the new hymns approved by the late Episcopal Convention is one for the burial service which is so trustful and devout that we must quote it here, at the risk of its seeming out of place:

"A voice is heard on earth of kinsfolk weeping
The loss of one they love;
But he is gone where the redeemed are keeping
A festival above.

The mourners throng the way, and from the steeple
The funeral bell tolls slow;
But on the golden streets the holy people
Are passing to and fro;

And saying as they meet, Rejoice! another,
Long waited for, is come:
The Saviour's heart is glad: a younger brother
Hath reached the Father's home."

TAKE LIFE EASILY.

MRS. S. H. ROWELL.

"WHAT an easy woman Mr. Howe has for a wife!" said Mr. Metcalf, as he laid down the paper and stretched his feet to the grate. "I never saw a person so easy and calm!"

"What have you seen to make you think so now?" said his wife.

"I never saw much of her before to-day, but when Mr. Howe had that attack in the store yesterday morning, I happened to be in the store, and so called a hack, and went home with him. Mr. Edson rang the bell and when he told her that he had brought Mr. Howe home sick, she turned as pale as a ghost, but as quickly as possible wheeled the sofa into the center of the sitting-room, had the pillows on it and a blanket before we got him into the house. She was not flurried one bit, seemed to know just what to do. She loosened his clothes, and rubbed his side, and got some medicine to give him, before she even spoke a word; then she got some hot water in a bath tub and got his feet into it. Edson and I stood by to see if we could help her in any way. She seemed adequate to the situation. She just rubbed his feet, legs and hands till he came to a little.

'He was not fit to go to the store this morning;' she said, 'he was sick all night, but he said it was necessary for him to be there this morning, as he had important business on hand.'

'Ought we not to call a physician?' said Edson.

'I will see how he is directly; but I think it was only a fainting spell. He did not eat a mouthful of breakfast, and only drank a cup of coffee,' and she was as cool and collected as I am now. Every one thought it was a fit when he fell to the floor in the store.

He struck his head against something when he fell, and there was a big bump as large as an egg marking the place. When she saw it, she bathed it in hot suds, and then got a piece of raw beef-steak and bound it on the place; then she gave him some more medicine, wiped his feet, put on his socks; and with a smile said, to him: 'You are feeling better now I think.' She was feeling his pulse, and he opened his eyes, and the color came to his lips, as he said he was getting over it.

'What folly to faint away!' he laughed, as he saw us. 'My wife tried not to have me go to the store till I was able to eat something; but I felt so sick that I could not taste a mouthful. I presume I shall be all right in an hour, so as to be back to the store this evening.'

We protested against it; Mrs. Howe said she would make him a cup of tea and a slice of toast before that question was settled. As there was nothing for us to do, and they did not need a doctor, Edson and I took our departure. Mrs. Howe followed us to the door, to thank us for our kindness, and remarked that she did not think her husband would go down town to-day. Edson and I both exclaimed, after we left the yard, upon her self-possession; and Edson said, if he had been carried home insensible, his wife would have had hysterics, and a physician would have been sent for, and all the neighbors called in, and a general hubbub would have followed while everything was so quiet and easy at Howe's."

"Did he go to the store in the afternoon, Mr. Metcalf?" asked his wife.

"No, but I called in, on my way home. He was lying on the sofa, reading. He said he was all right except where he hit his head: that was rather sore yet; but his wife was caring for it, so it would be nigh-well in the morning he thought. I saw he had a slice of beef upon it. When I spoke of his not coming to the store in the evening, he laughed, and said he might have gone, but his wife did not wish it, and he thought he had made her trouble enough for one day. Then I spoke of how calm and collected she was, and how she knew just what to do.

'Oh yes, that is her way. She takes life easy. She never gets excited, let what will turn up, and I am such a nervous fellow that it is lucky for me that she is so cool and collected. Now after you and Edson went away this morning, she just had a good cry; her feelings gave way; the tension had been too strong on her nerves. I expect she was awfully frightened; but you would never have known it by her appearance, till I was all straight again.'

We had a real nice chat, and I left him as chipper as a lark, and Mrs. Howe came in with a face beaming with smiles."

"You probably thought how your wife would have acted" said Mrs. Metcalf; "I could not have done the first thing for you."

"I do not think you would have been as bad as Edson said his wife would have been; but I rather think you would have fainted away if I had been brought into the house looking like a corpse."

"Oh, I could not have done the first thing, I know! and I do not see how Mrs. Howe could either! How could she think?"

"Perhaps she has learned to take life easy: again she may not have as excitable a temperament as you have; and, then, she may have had a different training in her home when a girl; or she may have seen the necessity of controlling her feelings on account of her husband's nervous temperament. But it is a blessing in any home for a woman to take trials easy."

"I doubt whether I ever could learn to be calm under such dispensations; but I can understand how much better it would be for all if I could. I have always heard that Mrs. Howe was one that took life easy, let what would happen."

ABOUT PERFUMES.

A WRITER in the New York Sun says that perhaps no pretty feminine sacrifice more augments woman's witchery over man than the subtle faint fragrance which she contrives to impart to the fluttering folds of her gowns and belongings. This is not produced by emptying a pint of triple extract on a handkerchief after the manner of men, but of sundry dainty devices and combinations of odors which each woman invents for herself, and which make possible a certain individuality in perfume so marked that an observing lover is aware of his lady's presence by the atmosphere, and can select her handkerchief from a dozen others by its odor. Some luxuriant women bathe in perfumed toilet waters, *à la* Mrs. Potter, whose bath of violet tincture, supplemented by quantities of violet powder, made the fragrance of her favorite flower continually emanate from her presence. Another pretty fancy with ladies is to tie up sweet grasses, clover, and rose leaves in little silken bags and place them between the folds of their wearing apparel. Sprigs of lavender and sweet verbena are folded in their lingerie, after the fashion of their grandmothers, and an ancient recipe for lavender bags, handed down from some dear, dead, dainty belle, is regaining popular favor. Its ingredients are:

One-half pound lavender flowers.
One-half ounce dried thyme and mint.
One-quarter ounce ground cloves and caraway.
One ounce common salt.

All tied up in a case of linen to be hung inside a wardrobe or chest.

A very delicate perfume is made of a combination of heliotrope and violet powder, with an equal amount of orris root, which latter is said to be an excellent medium for the other powders and helps them to retain their delicate fragrance for a longer time than they will when used alone. Small sachets of lawn or linen, shaped like an envelope the lid of which fastens with a button and buttonhole, and from which the cotton may be easily removed to be dusted with fresh powder, are favorite receptacles for the powder, which must be renewed very frequently, as its perfume is as fleeting as it is faint. These are scattered all through the folded lingerie, between the handkerchiefs, and are placed in the pockets or draperies of dresses. But the most cunning device of all, and one which never fails to produce just the faint, delicious fragrance desired, are the corsage sachets, which are made of silk or satin, are about two inches square, and of which as many may be worn, fastened inside the waist, as desired, as they are very thin and flat, and can be placed inside the corset if necessary. The warmth imparted by the fair wearer causes them to send fluttering forth the most delightful odor with every breath or stir of the bodice, until the pretty conceit of a lover that his mistress breathes fragrance is verified.

GOLDEN GRAINS.

TO be content with what we have is the real secret of happiness. The real needs of humanity are comparatively few, but the artificial and conventional are illimitable and insatiable.....

NOTHING is more expensive than penuriousness, nothing more anxious than carelessness, and every duty which is bidden to wait returns with seven fresh duties at its back.....

IT is not what life is to bring to a man but what he is able to carry into it, that will determine his happiness.....

EVERY man is his own ancestor, and every man his own heir. He devises his own future, and he inherits his own past.....

WE have not a muscle whose law of strength is not action; we have not a faculty of body, mind or soul whose law of improvement is not energy.....

THE way to do good is to be good. There must be light; then it will shine.....

FORTUNE does not change the character, but it reveals it.....

LANGUID, low-toned color or goodness never overcomes anything. It must be positive, full of blood, radiant as an angel. Then a man shall go out with a conception of goodness into the community and wherever he goes he will carry conviction to evil, so far as conviction can be produced at all.....

LOVE those who advise but not those who praise you.....

ONE ungrateful man does an injury to all those who are wretched.....

CHARACTER is indicated in little things; hence, men are judged by little things. So simple a matter as the paper on which a man writes a note has its indication of his character; and it has its bearing on the estimate which is formed of him by others...

IF to do were as easy as to know what were good to do, chapels had been churches, and poor men's cottages princes' palaces...

A GRACIOUS and beautiful life is always a healthy one and is always associated with a sane and healthy mind and almost always with a healthy body.....

NO PERSON of mature years can consider himself properly equipped for the cares and responsibilities of life unless his own bodily powers are strong and his brain rendered elastic by exercise and training.....

OH that men could be kept courting all the days of their life! What a school the school of love is!.....

OUR trouble is not to know what to do, it is to have a heart to do what we know...

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

"Ye who long for work of nobler mould,
Oh, learn how common things may aid;
Whoever digs for diamonds or gold
Must needs use first—an iron spade."

FOR MOTHERS.

MOTHERS are more apt to think of things which amuse the girls than the boys—that is, after the former reach their teens. Boys are expected to play out-of-doors most of the time, and also to select their companions outside. But the greatest mistakes boys make in their lives are often made just at this period. Then, if ever, a boy needs his mother. Let us exert ourselves to keep our lads near us.

One way to do this is to give the boys a room all for themselves. Here they can collect whatever their fancy may dictate. Do not fit it up in any great style, and do not be particular in regard to the care of the furniture. Let the youngsters have one place, at least, where they can make a dirt if they wish to. Do not growl if the floor is covered with chips; do not complain if

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

tools and paper are littered all about; do not find fault if they have their companions (neighbors' children) with them every evening, even though they rack the carpet (if there be one) into holes. If your boys are near at hand, you know where they are. You know that they are not at the village saloon, laying a foundation for a life of dissipation. See that they have something to read. Give them some good weekly papers, magazines, and any books which you can find that will interest them and prevent them from reading dime novels and stories of the "Old Sleuth Library" and their ilk. Do not insist that their reading matter must be entirely "goody-goody" or even good; but select things which have a good moral tone and also enough excitement to make them interesting.

* * *

THE nights are quite chilly now and mother must see that the children are warmly covered. Colds contracted now are apt to last all the winter through. For little children I think it is best to make night-drawers and stockings all in one, especially for the winter. All mothers know how hard it is to keep the little ones covered up warmly during the cold nights, and must readily see the advantage of having the drawers and stockings combined. They may be made either of flannel or canton-flannel. They are far preferable to night-gowns, for the latter are apt to become twisted or caught up, thus allowing the little feet to get cold.

* * *

KEEP the children's bed-rooms well ventilated. A child that has slept in a close, stuffy room wakes in the morning feeling tired and languid, and is very often fretful and cross. This is all wrong. If the air be pure and the little one put to bed properly, he will greet us with a cheery smile, and often before we know that baby is awake we hear the patter of the soft, little pink feet on the floor, and a voice calling: "Mamma, take baby down!"

* * *

MOTHERS, if you can possibly find time, help the children with their lessons. They will take more interest in them if you do. Have the little ones to recite to you; pronounce the hard words for them, etc. Every mother who loves her children wants to see them intelligent men and women, and if she exerts all her strength to make them so, she can have that supreme pleasure. If you are a busy mother who has to spend every spare moment with a needle in your fingers, you might get one of the older children to read aloud to all, you correcting and explaining as she reads. In this way you can do your sewing and interest and instruct the children at the same time.

DORA HARVEY VROOMAN.

SOME SIMPLE REMEDIES USED BY THE "RURAL" PEOPLE AND THEIR FRIENDS.

MR. C. paints the outside of the children's throats with iodine when they complain of soreness.

WHEN Uncle John suffers from sore throat or hoarseness he puts a small quantity of vaseline into his mouth and lets it dissolve slowly. This he repeats three or four times a day.

LIZZIE V. says that her cough mixture consists of two gills of molasses, one of vinegar and 20 drops of oil of tar. Mix thoroughly. Dose, a tea-spoonful several times a day. Shake every time before using.

WHEN Mr. C. feels that he has taken cold he gives his body a thorough rubbing with a crash towel, and then rubs a little alcohol on. He firmly believes that he has in this way "staved off" more than one cold.

MRS. V. gives the following as their family liniment for external use only: Equal parts of sweet oil, liquid ammonia and alcohol with the addition of a scant part of turpentine. Shake before using.

THE sore throat gargle at the "Rural Grounds" is made by adding 15 drops of refined carbolic acid to a quart of water. Shake *thoroughly* every time before using. Gargle four or five times a day. In the case of one member of the family who suffers from a "full" throat—swollen tonsils—a teaspoonful of powdered tannin is put into a glass of water and the patient gargles the throat with this every two hours.

MISS B. says that the great remedy at her home is *lard*. It prevents discoloration and soreness from bruises, and if well rubbed in over muscles that have been violently exercised, it will prevent stiffness the next day. Her sovereign remedy for burns is a paste of baking soda and water. Take a wet cloth, cover with the paste and bind over the burn. Should the paste become dry, wet it from the outside.

ABOUT WOMEN.

THERE are some people who like to take "a dig" at women whenever they get a chance. They say that we cannot do as good work as men, yet when given the opportunity we generally come out successfully.

The following, taken from the Detroit Free Press, show what some women can do when put to the test:

The Huntsville Democrat was founded in 1823, and was owned and managed many years by J. Withers Clay, a well-known Democrat in Alabama. Four years ago Mr. Clay was stricken with paralysis. The war had left him, as it had left many thousands of others, in poverty, and at the time that paralysis overtook him he was recovering in a measure from the disasters of that conflict.

Mr. Clay has four daughters. The eldest is Mary, and the youngest Miss Elodie, Virginia and Susie coming in between. The youngest was a clerk in the Post Office. The eldest devoted her entire time to taking care of her father. Mr. Clay had been given up by the physicians, who said he had only a few days to live. Miss Mary, who herself was an invalid, tried massage and all the advanced methods of treatment. She made a study of the subject and devoted herself entirely to her father. The result has been that Mr. Clay has partially recovered from the effects of the stroke. He is able to walk around and to understand what is said to him, although he cannot write or speak. Yet the girls manage to understand what he desires them to do. It is a remarkable fact that when Miss Mary began to nurse her father she was herself an invalid and a very slim, delicate girl. The results of the four years' care have been that she is now robust and in better health than she ever was in her life before. The two girls, Virginia and Susie, bravely took charge of the paper. Miss Virginia had some trouble with the employees at first, who thought that they could do as they pleased now that a young girl was at the head of affairs, but she speedily brought order out of chaos. One remark that she made will illustrate her energetic qualities. One of the employees had said that Susie was a printer's devil, and this remark gave great offence to Miss Susie. Miss Virginia blazed out at the person who made this remark:

"You will have to treat Miss Susie with respect," she said. "I want you to understand that I am the devil in this office, and so you can govern yourselves accordingly."

She promptly discharged those who were rebellious, reorganized the office, did everything from writing the whole paper sometimes to setting type, and when that was done went out as collector, and gathered in the shekels due. As collector Miss Virginia was a great success, and those who met the charming young women in Detroit will understand the difficulty a man would have in refusing to pay a bill that was due. She collected debts that no man could have collected, and she and her sister have made a great success of the Huntsville Democrat. Personally Miss Virginia Clay is a handsome, tall, and rather slim girl. In conversation she can more than hold her own in any company, and all in all she is an excellent example of what the ladies of the new South can do when they try.

WOMEN who have entered the field of journalism generally succeed. A number of our daily papers employ women reporters and their work invariably gives satisfaction. Mrs. Frank Leslie is an example of what a woman can do when she determines to succeed and gives her energies to her labors.

DRESS, a magazine published in the interest of women's proper mode of dressing, is published by a woman—Mrs. Annie Jenness-Miller.

THE YOUNG IDEA, of Boston, is edited and published by a youg woman—Miss Charlotte H. Allen.

THE WOMAN'S JOURNAL, of Boston, is devoted to women and their work. Lucy Stone and Alice Stone Blackwell are two of its editors.

MRS. BENEDICT, who edits a department in the Philadelphia Item, also conducts a paper called, Mrs. Benedict's Fashion Journal.

MISS MARY F. SEYMOUR, who is a teacher of stenography and typewriting in New York, is publishing The Business Woman's Journal. It is devoted to things which directly interest the business woman. It is a bi-monthly.

MANY more women who are successful in newspaper work might be mentioned did time and space permit. D. H. V. O.

CERISE says that the white of an egg is her shoe polish. The effect is good without damaging results.

MARY B. rubs her fine kid shoes with vaseline and says it is especially valuable for softening the leather after it has been wet and has dried.

A CHANGE.

TOMATOES sliced rather thick, dipped in thin egg batter and then fried, are liked as a breakfast dish.

CUT bananas in two lengthwise and fry in a very little butter. Serve hot with beefsteak for breakfast.

SWEET TOMATO PICKLES.

ONE peck of green tomatoes sliced thin without peeling. Mix a small bowl of salt with the tomatoes and let stand over-night. In the morning heat to boiling two quarts of vinegar, a pint of sugar, two table-spoonfuls of ground mustard, two small table-spoonfuls of black pepper, one of allspice and one of cloves. Slice thin 10 medium-sized onions. Drain the liquid from the tomatoes. Put tomatoes and onions into the hot vinegar and simmer until the tomatoes are tender. Put into cans and screw on the tops while hot.

MRS. JOHN A. VOORHIS.

A GOOD *round* steak—it must be from the top round and at the thickest part—is a most economical cut, and when well cooked and served immediately, it will be found juicy and of good flavor.

Miscellaneous Advertising.

YOUNG CHILDREN

Are so liable to Croup, sudden Colds, and various throat troubles, that no family should be without

AYER'S Cherry Pectoral

It gives instant relief and effects a permanent cure.

"I have used Ayer's Cherry Pectoral in my family for thirty years and have always found it the best remedy for croup, to which complaint my children have been subject."—Capt. U. Carley, Brooklyn, N. Y.

"Four of my children were taken down at one time, the past winter, with influenza; but they were soon cured by the use of Ayer's Cherry Pectoral and Ayer's Pills."—M. Powers, Red Lodge, Montana.

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Prepared by Dr. J. C. Ayer & Co., Lowell, Mass. Sold by all Druggists. Price $1; six bottles, $5.

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IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the buttermilk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere. More of it Used than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & Co., Burlington, Vt.

THE WONDERFUL LUBURG CHAIR. 100 STYLES. BABY COACHES

COMBINING 5 ARTICLES OF FURNITURE IN ONE

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Made cheaply and quickly by using a Triple Motion

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Will freeze in half the time of any other Freezer and produce Cream of the finest quality.

White Mountain Freezer Co., 134 Hollis St., Nashua, N.H.

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SALESMEN WANTED AT ONCE.—A few good men to sell our goods by sample to the wholesale and retail trade. We are the largest manufacturers in our line in the world. Liberal salary paid. Permanent position. Money advanced for wages, advertising, etc. For full terms address, Centennial Mfg. Co., Chicago, Ill., or Cincinnati, O.

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Beecham's Pills act like magic on a weak stomach

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BEECHAM'S PILLS

THE GREAT ENGLISH MEDICINE

WORTH A GUINEA A BOX

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WEAK STOMACH; IMPAIRED DIGESTION; DISORDERED LIVER;

they **ACT LIKE MAGIC:**—*a few doses* will work wonders upon the Vital **Organs, Strengthening** the muscular **System;** restoring long-lost **Complexion;** bringing back the **keen edge of appetite,** and arousing with the **ROSEBUD OF HEALTH** the *whole physical energy* of the human frame. These are "facts" admitted by thousands, in all classes of society, and one of the best guarantees to the Nervous and Debilitated is that **BEECHAM'S PILLS HAVE THE LARGEST SALE OF ANY PATENT MEDICINE IN THE WORLD.** Full directions with each Box.

Prepared only by THOS. BEECHAM, St. Helens, Lancashire, England.

Sold by Druggists generally. **B. F. ALLEN & CO., 365 and 367 Canal St., New York.** Sole Agents for the United States, ***who (inquire first),*** if ***your*** druggist does not keep them,

WILL MAIL BEECHAM'S PILLS ON RECEIPT OF PRICE, 25 CENTS A BOX.

News of the Week.

HOME NEWS.

SATURDAY, October 19, 1889.

SINCE September 1, there have been six deaths in this city alone from alternating electric currents used in lighting the streets, and 15 deaths from contact with electric wires in other places. Nine of these were also caused by alternating electric currents. This system belongs to the Westinghouse Company; the Edison system does not concern itself with alternating electric currents, and the electric currents used by it are comparatively safe, as owing to their nature and strength they will seldom or never kill. Mayor Grant of this city is waging a vigorous war against the street-lighting electric companies for not insulating their wires properly and neglecting to put them under ground where conduits for that purpose have been provided. Those parts of the city lighted by the companies have been left in black darkness during the last three nights as a consequence of an effort on the part of the companies to force public opinion to put a check on the mayor; but public opinion applauds his action..... A short time ago the National Burial Case Association—the great Coffin Trust, which controls the coffin product of the country—advanced the price of caskets 40 to 55 per cent. and sent out notices to undertakers everywhere, warning them that if they didn't join the association before October 16, they couldn't purchase any more of the association's goods—they'd be boycotted. This has roused much indigation everywhere and a coffin-makers' organization just formed at St. Louis, threatens to undersell the Trust 60 per cent. A Cradle Trust is next in order, so that everything may be "cornered" from the cradle to the coffin..... .....There are 500 cases of typhoid fever in Johnstown, Pa., owing to the very unsanitary condition of the place after the flood. Bodies of the victims are still being found at an average rate of two a day. The cheap, ready-made houses purchased at wholesale by the Flood Commissioners are hardly fit for affording winter shelter! Many are suffering from want of fire, and clothing, and winter is rapidly approaching. That do-nothing Commission, however, still clings to over $1,600,000 of the money contributed by charity for the relief of the sufferers. A large staff of well paid cerks draw regular salaries, however. Many of the contributions have never been collected it is said, many have been misappropriated or "gone astray." It is estimated that fully 25 per cent. of the contributions have been "lost" in this and other ways. This would make a loss of over $750,000 in cash, to say nothing of the losses in other supplies. Never was charity more generous; never were charitable contributions more disgracefully mismanaged..... A good deal of fuss is just now being made about the recent discovery of tin in the Black Hills. Our annual importations of tin plate amount to $35,000,000, and if we could supply our wants at home, there would be a big saving. The Engineer and Mining Journal, a pretty good authority, says that only two pounds of tin have been discovered in Dakota, and that by means of these two pounds, millions of capital have been raised in the United States, England and France, for the purpose of working the "mines." There's a good deal of talk, too, about putting a "protective" tariff on foreign tin for the benefit of the prospective native industry. A good deal of fuss certainly about two pounds of tin, which may be the result of "salting" the "mines" but the weight of authority is still in favor of the genuine nature of the discovery..... C. P. Huntington and Jay Gould are reported to have pooled their railroad interests. This would make a gigantic consolidation, but the report is probably false or at any rate "premature."..... Arrangements have been completed for holding, at Montgomery, Ala., in the early part of November, one of the most complete expositions ever held in the State. It is to be known as the Southern Exposition; but products and visitors are cordially invited from all parts of the country. Low rates have been secured on all the railroads for freight and passengers. and liberal stop-over privileges will be given. For full information apply to Mr. W. C. Bibb, Secretary, Montgomery, Ala.....The great Piedmont Exposition at Atlanta, Ga., illustrating the products of the extensive Piedmont section of the South, promises to be a brilliant success. A great deal of hubbub has been made there during the past week about the visit of Governor Hill of New York State, who is making a Southern trip to start his Presidential boom for 1892, outside his own State. It looks now as if he would be ex-President Cleveland's most formidable rival; but 1892 is half a century off yet, so far as political prophecies are concerned..... Ontario, Canada, boasts of a surplus of $1,927,514 for the last fiscal year..... Illinois is the only State where a complete record of farm mortgages is available, and it is found that, outside of Chicago, all the town and farm mortgages amount only to $123,733,098, instead of over $500,000,000 for farm mortgages alone as politicians claimed during the last campaign.....The Canadian Chinese Restriction Law imposes a tax of $50 on Chinese immigrants, and is embarassing to the British Government, which is held responsible for its dependency's act by the Chinese Government, which threatens to retaliate against British trade in the Flowery-Kingdom. It is likely that, to please England, the Dominion Parliament will risk giving offence to the people of British Columbia, by repealing the law. This would remove the last restraint to Mongolian immigration to this country through Canada, for it has been found impossible to prevent Ah Sin from smuggling himself across the border..... The original Tabernacle of the Rev. T. De Witt Talmage, the famous Brooklyn preacher, was of iron, and was burned in December 1872. A brick building with stone facings, having a frontage of 150 feet and a depth of 113 feet, was opened as its successor in February, 1874. It cost $118,000 and since then it has been enlarged and improved at an additional cost of $85,000. Its seating capacity was 2,800 and it was generally crowded when Talmage preached. Early last Sunday morning it caught fire from some unknown cause and was entirely cremated. Insurance $129,450. Talmage appeals eloquently to the general public for $100,000 more to build a larger and finer structure.....While little is being said of late about doing away with the dangerous stove in railroad cars, many of the companies have been honestly working to substitute steam-heating. The occurrence of another appalling holocaust in a railroad "smash-up" will, however, be probably needed to push the alteration vigorously ahead. Another reformation urgently needed is the introduction of an improved method of coupling cars on all the roads. Statistics prepared by the Railroad Commissioners of Iowa show that in that State alone, with 8,000 miles of railroad, 352 brakemen were killed or injured in 1888 because of the use of the common link-and-pin coupling and the hand-brake on freight cars..... Out of 142,000 Federal offices only 27,000 are covered by the civil service law; but the aggregate salaries of these 27,000 places is between $30,000,000 and $40,000,000, or nearly one-half of the annual aggregate salaries of the appointive places in the United States civil service.....Secretary Noble has decided that Senator Manderson's re-rating was illegal, and under that decision the Nebraska Senator has returned to the Treasury the special certificate sent him by Commissioner Tanner for $4,000 in payment of arrearages under the new rating. Manderson declares emphatically that he had never solicited a re-rating. Secretary Noble maintains all unsolicited re-ratings were illegal, and money paid on them will be recovered wherever possible, future pensions being retained in part-payment where it it impossible to recover the money paid.....An agitation for eight hours' work per day has already started among labor organizations. Of these the Federation of Labor, which claims 600,000 members, is now by far the largest. It has just decided to start a striking fund of two cents a week for each member. The Knights of Labor is still powerful though its membership is steadily diminishing. Chief Arthur, of the Brotherhood of Locomotive Engineers, says that if the organization shall decide to associate with any other, it must find a new chief. He firmly believes it should remain independent..... ..... President Elliot, of Harvard College, who has long been eminent as a Mugwump, has gone completely over to the Democrats. Of course both the great parties speak in very different terms indeed of this step on the Professor's part.....Five cotton warehouses, two cotton-presses, and 4,500 bales of cotton were burned at Savannah, Ga., the other day, loss estimated at $4,000,000.....Axtell in his mile against time on the Terre Haute track a week ago, not only broke his own record of 2:14, but broke the world's stallion record, made by Maxey Cobb, 2:13¼, by making the mile in 2:12. Colonel Conley of Chicago, who, it is thought, represents a syndicate, has bought the young wonder for $105,000—the highest price ever paid for a horse.....The Carnival Association of St. Paul have decided to build another ice palace this winter. The City Council will be asked to appropriate $20,000 for the building and the remaining $30,000 will be raised by subscription.... A request has been sent to the committees in charge of the arrangements for entertaining the Pan-American Congress in the different cities, begging them to omit the projected banquets as they would really prove too much for the visitors' health..... ..... A British syndicate has just purchased three big breweries capable of an annual output of 125,000 barrels, at Indianapolis, for $2,000,000..... After five weeks' hard work, only eight jurors have been secured in the Cronin murder case in Chicago, and some of these may yet be rejected as disqualified for one cause or another by the prosecution or the defence. The whole country has been shocked during the past week by a vile attempt to "fix" one or more of the jury so as to "hang" it in favor of the accused. Bribes for such action, some as high as $5,000, were offered to several men likely to be placed on the jury. Already 11 of the subordinate conspirators have been arrested, among them the private secretary of Alexander Sullivan, the notorious lawyer and ex-chief of the Clan-na-gael. Circumstances point strongly to him as being the head-center of this disgraceful conspiracy. More infamous even than the Anarchist outrages has been this whole foul Cronin business, showing such widespread corruption among people hitherto deemed honest if not honorable.....In the matter of the World's Fair New York is moving tortoise-like. Books for subscriptions to a guarantee fund of $5,000,000 are to be opened at once, and, it is thought, there will be no difficulty in securing that amount. There is less snarling at the site selected by the Site Committee, as the disgruntled editors have begun to see the mischief they have been doing. Chicago has continued to work steadily, energetically, and skillfully. St. Louis is working slowly, but persistently. Washington is waiting for Congress..... Gen. John F. Hartranft, ex-Governor of Pennsylvania, died at his home at Norristown Thursday noon. Born in Montgomery County, Pa. in 1830; graduated at Union College, Schenectady, New York in 1853, and was admitted to the Montgomery bar in 1860. Entered the war as colonel of volunteers at Lincoln's first call for troops, and served brilliantly to the end. Commanded the Third Division of the North Corps in the assault of Fort Steadman in March 1865 and was brevetted Major-General for the gallant capture of the works which had been captured by Confederate General Gordon a short time before. The title of "The Hero of Fort Steadman," commemorated Hartranft's bravery..... ..Thomas W. Giblin, examiner and general agent of the Lockwood Mortgage Company, of Wellington, Kansas, has disappeared and is said to be a defaulter to the amount of $4,000..... Last Saturday night the grave of Ralph Waldo Emerson, at Concord, Mass., was opened by ghouls and the coffin was left exposed when they were frightened away. It is believed that they wanted the skull. The coffin wasn't opened though somewhat decayed, it having been eight years since the burial. Much indignation in the town finds vent in an offer of $500 for the arrest of the miscreants. Where would the rascals find the brains to fit that skull?..... .....Senator Vest is very ill at his sister's house in Sedalia, Mo.....The total product of minerals of all kinds mined in Canada the past year was $16,500,000. The more valuable was coal, the output of which amounted to 2,658,134 tons. The gold product of the year was 61,310 ounces, and the iron product 78,587 tons..... It is reported that the entire plant of the Brush Electric Light Company has been sold to the Thomson-Houston Electric Light Company on a cash basis, for $3,250,000..... .....Edward A. Perry, ex-Governor of Florida, died at Kerrville, Texas, the other day at the age of 56.....

It is Worth Reading.

We understand a busy man's views in regard to prolixity. In these days, affairs proceed at a railroad rate, and there is no time for unnecessary halt, so we fall in with this idea momentum, and briefly call attention to the essential points of a vital matter, or rather, we let others do it for us. Here are extracts from two letters which need no further comment:

REISTERTOWN, MD., Feb. 15, 1888.

"I would like to see you and tell you what Compound oxygen has done for me. It was slow but sure. Now almost after two years, after using only one treatment, I think I can say truthfully my health is as perfect as it can be on earth. Two doctors of Baltimore examined me and said mine was a hopeless case of asthma, and I will not tell you how much I have suffered with my lungs."

MRS. MARY R. IRELAND.

A concluding extract from another letter will furnish most satisfactory reading:

MYERSVILLE, MD., Aug. 6, 1888.

"I believe the Compound Oxygen Treatment to be an invaluable remedy, because of the incalculable benefit I received from its use." REV. A. M. SMITH, Pastor of Ev. Lutheran Church.

We publish a brochure of 200 pages regarding the effect of Compound Oxygen on invalids suffering from consumption, asthma, bronchitis, dyspepsia, catarrh, hay fever, headache, debility, rheumatism, neuralgia; all chronic and nervous disorders. It will be sent free of charge to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa.; 120 Sutter Street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, October 19, 1889.

THE most remarkable thing in England of late is the nearly unbroken list of successes of the Gladstonian candidates in the bye-elections for Parliament. In the Elgin and Nairn district in Scotland, at the general elections in 1886, the Liberal candidate was successful by 119 votes; whereas two weeks ago he had a majority of 532; while the Conservative majority of 71 in North Bucks, England, was turned into a Liberal majority of 208 the other day. In 1886 Petersborough was carried by the Tories by a majority of 289, while last week the Liberals secured the seat by a majority of 251. The very decided increase in the Liberal vote everywhere is dismaying the Conservatives. Landlord and tenant and capital and labor are, however, taking the place of Home Rule as "war cries," in the Liberal canvass. It isn't so much that the English and Scotch people are losing interest in Home Rule for Ireland as that they are realizing more strongly the nature and importance of questions more intimately affecting their own interests. The laborers are setting themselves more resolutely against starvation wages from employers; and tenants are more rebellious than ever against the exactions of landlords, and the recent enlargement of the franchise gives both classes much more influence in elections. Extremists believe that before long there will be a concurrent triumph of Home Rule and land nationalization..... For the nine months ending September 30. French imports increased 40,810,000 francs and the exports 245,534,000 francs over those for the corresponding period last year..... A school children strike has broken out in London, Manchester, Glasgow and Dundee and is spreading rapidly all over England and Scotland. The strikers are regularly organized, appoint patrols to prevent other children from attending school and often use violence in doing so. They frequently stone the windows of school-houses and mob obnoxious teachers. They demand the abolition of caning, of the study of tasks at home, shorter school hours and more time for play. In all respects the youngsters' strike is modeled on those of workingmen..... The Czar's visit to the Kaiser appears to have been quite cordial and his interviews with Bismarck very friendly. At the final separation at the railroad depot there was of course the usual amount of hugging and kissing—or perhaps a little more than usual. It is thought that the prospects of peace have been strengthened. Bismarck showed the Russian that with a firm alliance between Germany, Austria and Italy, and the assured support of Great Britain and Turkey, together with a strong desire on the part of other countries to prevent or shorten a war, there would be little hope for a triumph even for the combined forces of Russia and France. Another result of the visit appears to be a confirmation of Prince Ferdinand's position as ruler of Bulgaria. Immediately after the Czar's departure German bankers and capitalists made a large loan to the Principality, which they would not have done without assurances from high quarters that no disturbance of the present order of things would take place there in the near future. Moreover, the Prince is now in Paris on a visiting trip through Europe, and if he were not certain of his position at home he would not have dared to go abroad. What concessions the Czar has obtained for his complaisance in this and other matters, time will show..... The French Government is about to send a commission to Panama to inspect the canal works. No report of experts not employed by the company has yet been made in spite of the unprecedented amount of money laid out in the work. French public opinion now demands a thorough investigation by impartial experts.....King Malietoa of Samoa, has advised the people to elect Mataafa as their principal king. He will be satisfied himself with position of viceking. It is understood, however, that the Germans will not recognize Mataafa, so that there may be more trouble in Samoa.. .....King Louis of Portugal, aged 51, who has reigned for 28 years, is at the point of death from total paralysis of the whole body..... An explosion at Bentelee Colliery, at Langton. Staffordshire, England, last Wednesday, completely wrecked the mine, and killed 59 of the 70 men who were working below at the time.....In Servia, M. Paschies, leader of the Radicals, has been elected to the Presidency of the Parliament, and this is held to indicate the complete ascendancy of Russian influence in Servian affairs. It is said that with a Radical Congress behind him, he will be able to expel the present young king and restore the old Slav dynasty, which was expelled before the present upstart German set of princlings were put on the Servian throne. Milan and Natalie, with all their disgraceful matrimonial quarrels, would in this way be got rid of. Austria, however, is likely to veto such policy, if she can, as a Russified Servia would be a perpetual menace on her southern frontier.....Italy has made a treaty with Menelek II, the new King of Abyssinia, by which she assumes a protectorate over the whole of that country. This has an area of about 300,000 square miles and a population of about 5,000,000, mostly Christians. It is mostly an elevated table-land with an altitude varying from 5,000 to 7,000 feet in different districts. Except in the rainy season, the climate is strictly temperate. The country is capable of enormous development, and Italy, the last comer among the nations in Africa, is likely to secure one of the best of the recent prizes .....

Miscellaneous Advertising.

SEND 10 Cts. in P. O stamps to E. & O. WARD, for circular about Shipping Produce Also recipe for Preserving Eggs. Produce Commission Merchants. Established 1845. No. 279 Washington St., New York City

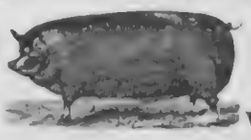
JONES OF BINGHAMTON

HE PAYS THE FREIGHT.

5 Ton Wagon Scales, Iron Levers, Steel Bearings, Brass Tare Beam and Beam Box for $60.

Every size Scale. For free price list mention this paper and address JONES OF BINGHAMTON, BINGHAMTON, N. Y.

HOG CHOLERA AND SWINE PLAGUE PREVENTED and CURED.



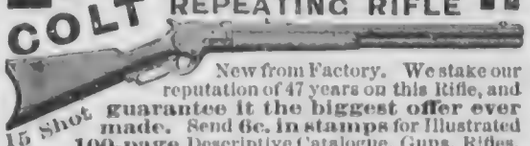
Particulars and Information Free. AGENTS WANTED.

W. H. DOLE, 71 Clinton Street, Boston, Mass.

KENTUCKY STOCK FARMS For Sale—Bargains. 600 Acres, the very best, all in grass, $60 an acre; 460 acres good land no improvements, $30 an acre. 20 other Farms for sale. Address W. H. BLAKELEY & CO., Bowling Green, Ky.

IMPORTED SUFFOLK DOWN RAM lambs for sale The blackest-faced and most ornamental of all the Down families. M. B. STREETER, Westbury, L. I.

LOOK COLT NEVER SUCH BARGAIN BEFORE $11 REPEATING RIFLE



15 Shot

New from Factory. We stake our reputation of 47 years on this Rifle, and guarantee it the biggest offer ever made. Send 6c. in stamps for Illustrated 100-page Descriptive Catalogue, Guns, Rifles, Revolvers, Fishing Tackle, Bicycles, Sporting Goods, &c. JOHN P. LOVELL ARMS CO., Boston, Mass.

AGRICULTURAL NEWS.

SATURDAY, October 19, 1889.

SOME of the loan companies doing business in southwestern Kansas are finding themselves in new difficulties. It was a common practice in old pre-emption days for the pre-emptors to arrange for loans on their claims prior to final proof to enable them to pay the government and to supply the necessities of life. Many of them have found it impossible to pay the interest on account of failing crops, and this has brought on foreclosure proceedings. One of these unfortunates employed an attorney to defend him. He, in common with many others, had made his loan and had all the papers drawn before his final proof was made. According to the ruling of several judges, the transaction was illegal, and the mortgage therefore void. In many cases, it is said that the agents in making loans, had dated the papers back several months; this, also, was illegal. The loan agents seem to have feathered their own nests, but between them and the borrowers, it looks as though the loan companies would be left in the lurch. This can but prove disastrous both to the farmers who wish to borrow, and to those who have money to lend. The West has depended largely upon the East for money to develop her resources, and she needs more help from the same direction, but the uncertainties that seem to surround the lending of money in that quarter will be likely to have a deterring influence upon capitalists.....

A Georgia genius has just patented a flour barrel made of cotton duck. The barrel is 12 or 15 pounds lighter than a wooden one and 10 or 15 per cent. cheaper. When empty the barrel can be pressed into a small space and shipped to the mill to be refilled. It is waterproof and stands the weather better than the old-fashioned barrel. The tests so far made of it have been highly satisfactory, it is said.....The Guernseys belonging to Vice-President Morton have been exhibited at numerous fairs this fall, and have won many prizes, gold medals, etc.....Over 2,000 tons of raisins have already been shipped East from Fresno, Cal.....A Pennsylvania farmer wants the Governor to set apart a "sparrow day," when a wholesale onslaught may be made on the obnoxious birds.....A couple were married at the North Carolina State Fair, and the spectacle attracted an immense crowd. The bride and groom, and four couples who attended them, were attired in costumes of Southern cotton bagging. The Southern people don't want jute bagging, not even to be be married in. .....The Missouri State Horticultural Society will hold its 32nd annual meeting at Lebanon, December 3—5. The railroads will give special rates, and entertainment will be provided. Those wishing special topics discusssed, are invited to submit them to the secretary, L. A. Goodman, Westport, Missouri.....

The New York State Poultry Society was organized at Syracuse, October 10, with Geo. E. Peer of Rochester, president; F. E. Dawley of Syracuse, secretary. The object of the society is to work in harmony with the State Agricultural Society in promoting the poultry industry of the State. It will furnish helpers in the institute work, and, if permitted to do so, will take charge of the poultry exhibit at the State Fair. From the character of the men composing the society, and the high standing of the officers elected, it looks as though the New York State Poultry Society had come to stay, and that it would fill the need so long existing for a first-class poultry society in this State.....

The Erie (Pa.) Chrysanthemum Club will hold its exhibition November 5-7. All entries outside of Erie must be made before November 1. The display will include, besides chrysanthemums, green-house plants, cut flowers, floral designs of various kinds, fruits, etc. A liberal premium is offered by the citizens of Erie for the best model of a flower garden and pleasure grounds. H. Tong, one of the vice-presidents, offers a five-dollar gold piece for the best essay on floriculture by a pupil of the Erie Public Schools. Very liberal premiums are offered, both in cash and articles donated by citizens and others, and every preparation is being made for a successful exhibition. Bennett Dobbins, secretary.....

The steamer Holland, arrived on Wednesday with 118 Coach and draft horses belonging to M. W. Dunham of Illinois, besides several for other parties. The vessel has brought over 304 horses for Mr. Dunham this season. The last shipment included 13 first-prize-winners at the Paris Exposition, and six prize-winning Clydesdales from the same show.....The Indiana dressed-beef law has been declared unconstitutional by Judge Irwin of the Marion County Court.....The eighth annual meeting of the American Forestry Congress, and the fourth of the Pennsylvania Forestry Association, convened in Horticultural Hall, Philadelphia, Tuesday evening. H. G. Joly of Quebec in an address, dwelt forcibly on the common interests of Canada and the United States in the preservation of their forests. On Wednesday, B. E. Fernow, Chief of the Forestry Division of the Department of Agriculture, spoke of the limitations under which the Division performed its work. Congress refused to make appropriations, and nothing could be done but to gather and compile statistics. The long-leaved pine is said to be disappearing from the Gulf States. Florida made the encouraging report that the planting of orange groves kept pace with the destruction of the pine forests to the benefit of all interests. A congratulatory report of the successful working of the Arbor Day Law in New York was given. Prof. Fernow favored governmental control of timber land, but confessed that the government was unable to manage its own timber lands, and in the States of California and Colorado its regulations even impeded the local authorities .....

Two more Pennsylvania live-stock insurance companies have been closed up by the courts.....The receipts of cattle at Chicago last week reached the enormous total of 82,356 head.....In the first eight months of 1888, Great Britain imported from this country 105,200 head of cattle; in the corresponding months this year, 182,000, a very heavy increase. The percentage of increase in shipments of sheep was still larger.....

The new country residence of W. Atlee Burpee situated on his Ford Hook Seed Farm near Doylestown, Pa., was destroyed by fire on Thursday afternoon. The family had just vacated it the day before.....

Crops & Markets.

SATURDAY, October 19, 1889.

WELL, my farmer friend, what say you to a walk among the commission merchants this fine morning to see what they have on hand and how the various farm products, over which you have toiled and sweated in storm and sun, are handled at this end of the line? Nearly all of the wholesale business is done in the lower part of the city. Everything arriving from any direction is landed on the wharves, for all freight nearly must come to New York by water. Your car-load of potatoes shipped over the Pennsylvania railroad arrived at Jersey City early this morning; in company with several other cars it was run on a float carrying about 10 cars, and towed to the dock at the foot of Cortland Street. Here the potatoes are unloaded into the freight-house and a truckman who is employed by your consignee to look after all goods arriving for him, immediately delivers them at the latter's store, for which service he receives five cents per barrel. Sometimes such products are sold on the track, but all small lots are taken to the stores. Here we find a motley collection of all sorts of fruits, vegetables, poultry dead and alive, butter, cheese, eggs, honey, hog-dressed calves, hams, maple sugar and sirup, sweet cider, flour, grain, feed, all kinds of game in season, herbs of various kinds, and if there is any product of the earth not found here, you will be puzzled to say what it is. Business has been going on here since about five o'clock this morning; in summer it begins about three. But you may wonder where all this immense accumulation goes to! New York has a population of about 1,500,000, and Brooklyn about half that. There are numerous cities and towns within a radius of 50 miles having populations of 200,000 and under which depend largely upon New York for their supplies. Then there are about 400,000 people coming into and going out of the city daily. Then there are the numerous ocean steamers going from this port to all parts of the world, many of them carrying passengers sufficient for a good-sized country village; these must be supplied with provisions for their long voyages. Add to these the fact that New York is the grand distributing point of the whole country, and the wonder ceases.

POTATOES seem to be very plentiful and the receipts are of good quality. This dealer who handles large quantities says that shipments have been very heavy, especially from the West, and that the demand is very moderate, hence prices are somewhat lower. He thinks it would be well for those having potatoes to ship to wait a while, as prices are not likely to be much better until the present large stock is reduced. You will notice by looking over some of these barrels which have been opened, that the packers made a mistake in not assorting them more carefully. Here is a barrel of fine Roses which would have sold for $1.75 if the packer hadn't been so anxious to put in every potato that would possibly do. Look at them! Scattered all through the barrel are potatoes too small for market, with here and there a scabby one, which gives them such a disreputable look that they must be sold for about $1.25. The small ones all chink in between the larger ones, and do not fill up any; they serve only to reduce the price. This dealer says that sweet potatoes have been scarce during the past few days, and that the price of prime ones has advanced. He says that people who know what good potatoes are, call for the Virginias, as they are considered superior to those grown in New Jersey. We miss the immense quantities of onions which were piled up on every hand last fall, and this odorous ingredient of soups and stews will be somewhat scarce and higher in price. Cabbages and other vegetables you notice are plentiful, and mostly of good quality, though there are some poor lots, which will have to be sold at very low prices.

SOME of the commission merchants make more of a specialty of particular products, and they can usually do better in selling such than when they handle a miscellaneous assortment. Some other day, we will look over some of the dealers in other products. We can only say now that the butter market is weaker and a trifle lower on account of heavy supplies; the egg market ditto; and the poultry market under large receipts, has taken quite a drop. Choice apples are in demand, and grapes have advanced in price.

LATEST WHOLESALE PRICES

OF

COUNTRY PRODUCE.

New York, Saturday, October 19, 1889.

BEANS.—Marrows—New, $2 45@$2 55; New Mediums, choice, $2 15@$2 20; Pea, $2 15@$2 20; Red Kidney, $3 75; White Kidney, choice, $2 60@$2 70; Foreign Mediums, $1 35@$1 55; California Lima, $3 50@$——Italian, $1 85@$2 00. Green Peas, $1 20@$1 25.

BUTTER—New—State and Pennsylvnia, best, 24½@25; Elgin, best, 25c; Western, best 24@——; do prime, 19@22c; do good, 15@18c do poor, 12@14; State, Dairy, half-firkins, tubs, best, 23@24c; do do prime, 20@22; do do fine, 16@18; Welsh tubs, fine, 19@21c; do do, good, 15@17; firkins, best, —@——c; do prime, —@—c; do fine,—@—c. Western Imitation Creamery, best, 16@18; do fine, 12@15; Western dairy, fine, 12@15c; do fair, 10½@11c; do poor, 9@10c; do factory, fresh, best, 12@13c, do prime, 11@11½; do good, 9@10; do poor, 7@9c.

CHEESE.—State factory, fancy, 10¾c; do do fine, 9¼@10¼c; do do, prime, 9@10c; do do, fair to good, 8¾@9¼c; Ohio, flat, prime, 9½@10c; do good, —@—c; do, good, —@—; Skims, light, 7@8c; do medium, 3@4c; do full, 1@2c.

EGGS,—Near-by, fresh, 20½@21c; Canadian, 20@20½c; Southern, 19@20c; Western, best, 20@20½c; limed, 18c; ice house, 15@17c.

FRUITS.—FRESH.—Apples, per bbl, $1 25@$3 25; Pears, per bbl, $2 00@$5 00; do per keg, $1 25@$3 50. Plums, per crate, $1 00@$1 25. Peaches, per basket, $0 60@$2 00. Grapes best per lb, 3@7c, do, good, do, 2@3c. Cranberries, C. C, per bbl, $6 00@$8 00; do do, per crate, $2 25@$2 75; Jersey, do, $1 75@$2 25. Quinces, per bbl, $4 00@$7 00. Lemons, per box, $3 50@$7 00.

DOMESTIC DRIED—Apples—Evaporated, old, 4½@7¾c; do choice, new, 8½@9c; prime, 7½@8c; sliced, new, 4@5c; do old, 3@3¾c: Chopped, 2¾@—c, Cores and skins, —@—c. Cherries new, 9@10c: do, old, 8@10c. Raspberries new 22@25c: Blackberries, 5½@7¾c Peaches, Delaware evaporated, peeled, 15@19c, do do, unpeeled, 8@10c; Georgia, evaporated, peeled, new, 18@15c; do do do, unpeeled, 7½@10c; do do, sundried, 9@9½c. Huckleberries, new, 11@12c. Plums, new, 6@7c.

GAME.—Plover, per doz, $1 35@$1 75: Snipe do, do, $1 25@$1 75, Woodcock, per pair, $1 00@$1 25; Grouse, do do, 80@90c; Partridges, do, $65@$1 20. Duck, Mallard 50@75c; do, Teal, 20@40c; do, Redhead, $1 00@$1 75; do Canvas-back, $2 50@$3 00.

HAY AND STRAW. Timothy, best, 85@90c; do good, 70@80c; do medium, 50@60c; Clover, mixed, 50@60c; shipping, 40@45c. STRAW—No. 1 rye, 70@75c; short rye, 50@60c; oat, 40@45c.

HOPS.—State New, 12@—c; do, good, 10@11c; do common, 7@9c; do 1888, best 11@12c; do do prime, 9@10c; do do common, 6@8c; California, New, best, 12@—c; do good to prime, 10@11c; do Old, best, 12@—c, do common and fair, 7@9c.

NUTS—Peanuts are quiet. Fancy, had picked, quoted at 7¾@8c, and farmers' grades at 6@6½c; Pecans, 5@5½c. Chestnuts, $1 50@$5 50 per bushel; Hickory Nuts $1 25@$1 50 per bushel.

POULTRY.—DRESSED—Turkeys, mixed, per lb, 8@14c; Fowls western, choice, 9@10c; do common to good, 7@9c: Ducks, spring, good, 14@18; Squabs white, per dozen, $3 50@$——; do dark, do, $2 50@$——. Chickens, spring, 9@16c; Fowls, near by, 11@12c.

POULTRY—LIVE.—Chickens—Spring, per lb, 8@9½c. Fowls near-by, per lb, 9@10c, do Western, per lb, 8½@10c; roosters, per lb, 5½@6c; Turkeys, per lb, 8@11c; Ducks, Western, per pair, 60@75c; Geese, Western, per pair, $1 25@$1 50.

SEEDS.—Clover is hard to sell; exporters quiet. New prime, future deliveries offered at 7, and choice, 7⅛c, with fancy at 7½c. Timothy quoted at $1 50@$1 60.

VEGETABLES.—Potatoes—Jersey, per bbl, $1 40@$1 65; Long Island do, $2; State do, $1 50@$1 75. Sweets do, $1 50@$2 50. Cabbage, per 100, $3 50@$4 50. Turnips, per bbl, $1 25. Onions—Orange County Red, $1 00@$2 25; Eastern White, $2 00@$3 00; Eastern Red, $2 00@$2 25 State, Yellow, $1 50@$2 00.

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 11@18c, and Spring do 8@21; Scoured Texas 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

GRAIN MARKETS.

WHEAT—Sales—Ungraded Winter Red, 77@92½c latter to millers; No. 1 Northern Spring, 93c, delivered do, c., f. and l., 92½c; No. 1 Hard, c., f. and l., 97½c; No. 2 Red, 85@85¼c, afloat: do elevator, quoted 84¾@85c; No. 3 Red, 80¾@81c, elevator. RYE Quiet but firm. Western, quoted 49@52½c; State, 56@57c. BARLEY—Dull and weak. CORN.—Sales—Ungraded Mixed, 37½@39½c: No. 3 Mixed, 37¾@38c, elevator; No 2 Mixed, 39@39¼c, elevator. 39¾@40¾ afloat, according to delivery; No. 2 White, 39½c, elevator. OATS. Sales—No. 3, 24½c; No. 3 White, 27@27½c; No. 2, 25¼@25½c, elevator, 26½c delivered: No. 1 White, 28½@28½c; No 1 White, 35c; Mixed Western, 23½@27c; White do, 27@35c. FEED.—Quoted 40 lb at 60@65c 60 lbs, 55@60c; 80 lbs, 65@70c; 100 lbs, 75@80c; Sharps, 80@85c; Rye Feed, 70c.

LIVE-STOCK MARKETS.

New-York, Saturday, October 19, 1889.

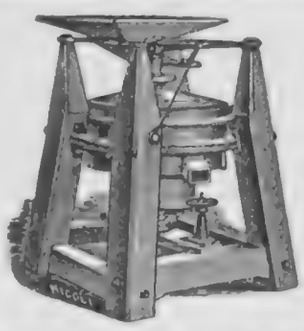
BEEVES.—Texans and Colorado Steers sold at $3 10@$3 50; very ordinary to choice native cattle at $3 10@$4 70, with the bulk of the sales at $3 40@$4 50. Bulls sold at $2@$2 70; Stags and Oxen at $2 65@$3 4; Cows and Heifers at $1 80@$2 15. The European market continues slow with no further improvement in prices.

MILCH COWS.—Receipts for the week thus far 151 head. Slow for common stock, but good Cows are in demand at well sustained prices. Quotations are $30 to $50 per head.

CALVES.—Grassers ranged in price from $2 00 to $2.-6½. Fed Calves sold at $2 87½@$4, and mixed with Veals at $4 75@$5; Westerns at $2 80@$3 75; common to prime Veals at $4 75@$7 50, and Picked Calves at $8.

SHEEP AND LAMBS.—Lambs ruled firm at an advance of ½c to ¾c per lb, with not many very choice offerings. Poor Sheep sold at $3@$3 50, decent to prime at $4@$5 35, and 13 head, selected, at $5 75. Cull Lambs sold as low as $5, and ordinary to choice at $5 50@$7.

HOGS—Good to prime Hogs sold at $4 90@$5 15.



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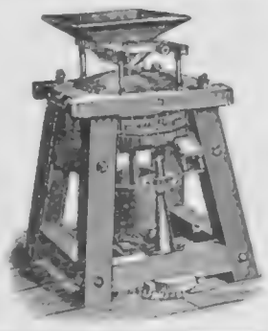

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Are growing the Largest and most Complete Assortment of Nursery Stock in America. In BUDDED APPLES and STANDARD PEARS they acknowledge no competition—quality considered. Nurserymen and Dealers will consult their own interests by getting prices on this Superb Stock before buying. Special inducements to buyers in large quantities.
SMITHS, POWELL & LAMB, SYRACUSE, N.Y.

Communications Received for the Week Ending October 19, 1889.

F. G. K.—M. C. T.—C. C. V.—W. F. P—W. W. P.—Mrs. A. B, thank you.—E R.—C. H. W.—D. E. G.—F. T.—K. D.—A. M. J.—A. C.—W. S.—J. H. M.—B M S.—R. J.—S. A H., thank you—M. B.—N. B.—F. A. C.—L. E. R. F. B—W. P. McM.—J. E.—R. D. M.—M. N.—J D—R. M—J. C.—C. S. P.—E. W.—P. S.—K. D.—J. A. B.—G. B. G.—P. G.—L. McU.—S. E. C.—M. E. S., thank you.—M. A.—E. L. B.—H. H. A.—J. A.—M. G.—J. H. L.—E. E. A—E. J. M.—J. H. C.—M. D T.—M. L. P.—S. F. W.—A. A. H.—E. A. M.—E. P. R.—S. A. W.—W. C. A.—J. G.—J. S F.—E A. F.—L. M. M.—W. S. W.—G. A. N.—H. N. S.—M. I. L.—M. W.—G L. D.—M. M L—A. F. E.—W. C. J.—J. A.—E. M. J.—J. R.—B. W. D.—L. M.—R. B. R.—H. W. H.—H. C—L. M. C.—G. E G.—L. H K. J. S. C.—M. E. M.—D T.—E. G. W.—L. S. T.—L. A. W. M. L. D.—E. D. B.—C. M D.—L. R.—M H.—C. G.—C. C.—J. S. A.—G. Z. A.—W. E.—E. T. L—W. B. P.—C. F. O. Mrs. L. C. M.—W. O. F.—E. P. R.—D. H. S—A. E. S.—E H. C.—C. G.—C M. I.—J H.—T G.—E P.—A. T. T.—W. D. P.—P. McM.—P. H. J—P. W.—A. F. W.—O .K. L.—P. S.—J. C. S.—C. T. L.—J. P. W. L—M. D. H.—L. H. M.—C. H. F.—H. H.—H. S. W.—H. W. H.—J L B.—T. C. J—F. D. D.—C. L. P.—M. B. P.—J. R.—S. W.—C. S. C.—S. M. C.

Miscellaneous Advertising.

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Use, with your other feed, at least
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Write us for prices and other particulars, and mention the RURAL NEW-YORKER.
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and **Farmers** with no experience make **$2.50** an **hour** during spare time. A. D. BATES, 164 W. Robbins Ave., Covington, Ky., made **$21 one day, $81 one week.** So can you. **Proofs and catalogue free.** J. E. SHEPARD & Co., Cincinnati, O.

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NEW YORK STATE DRAIN TILE AND PIPE WORKS,
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ROUND, SOLE AND HORSE-SHOE TILE, over 13 inches long. By cargo or smallest quantity. Our new improved machinery makes superior round and sole tile, excelling anything offered heretofore. First Premium wherever exhibited. Price-list on application. Vitrified Glazed Pipe and Tile Machines.

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My list of Holland, French, Cape and other Bulbs for out-door and home cultivation contains all the popular kinds and desirable novelties of the season. Now is the time to plant hardy bulbs, i. e., Hyacinths, Tulips Crocus, Narcissus, etc, if you want a fine display in the spring; for the house or conservatory none so easily grown as French Hyacinths, Amaryllis, Freesias, Alliums, Oxalis, Callas, Chinese Narcissus (see cut), etc. Address
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Indust'l Societies.

THE DANBURY FAIR.

(RURAL SPECIAL REPORT.)

THE week ending October 12 has proved a very successful one in every way for the Danbury, Connecticut, Fair. The weather was fine and the attendance large. About 18,000 to 20,000 persons were on the grounds Thursday and Friday. The Agricultural exhibits were fine, but they formed a very small portion of the various displays. Some of the best cattle within a radius of 100 miles were brought here on exhibition: these included Jerseys, Holsteins, Devons, Swiss and Short-horns. A. G. Barnes & Sons exhibited their thoroughbred herd of Holsteins from Mountain View Stock Farm, New Milford, Conn. Henry E. Johns as foreman and manager for Mr. Robert Hoes of Spring Farm, Lake Waccabuc, N. Y., exhibited their thoroughbred herd of Jerseys, also granular, ball and print butter, and some horses, including the family, cart, riding and trotting stock. He showed four pairs of thoroughbred Jersey steers and oxen which he claims can do just as much work as any cattle of their weight; they are smart and active.

There was a very good showing of sheep for a fair in this locality. Mr. Nathan Seeley's flock of Shropshire-Downs from his farm in Wilton, were as handsome a lot as can be found in this section. D. H. Van Hoesen of Wilton, exhibited Spanish Merino, Shropshire-Down and Cotswold sheep, also four Angora goats and a fleece. These goats created a great deal of comment as they are something new here. Mr. Van H. has had them with his sheep for the past four years and has had no trouble from dogs; the year before he put them there he had 21 sheep killed by dogs. The horse show was the best the society has ever had; horses were exhibited from all the surrounding counties and also many from New York State. The trotting horses were many and the trotting was good and occupied the attention of thousands every day during the week. The agricultural machine exhibit was not large, but the goods exhibited were of the latest improvements in mowing machines, hay-rakes, harrows, cultivators, plows, lawn-mowers, cutting-machines, hay-carriers, wind-engines, manure-spreaders, hay-presses, wagons, etc.

The improved creamery goods were exhibited of the Cooley, Moseley & Stoddard and Peerless systems. Samples of fertilizers were shown by H. J. Baker and Brother. The Mapes, and Quinnipiac Companies distributed their circulars only. The exhibits inside the tents and buildings consisted of vegetables, fruits, etc. The showing was not large but the quality of all exhibits was fine, including potatoes and all garden vegetables. Apples, pears, quinces, peaches, grapes and canned fruits were well represented. Bread, cakes, pies, etc., were shown by the ladies. Butter and cheese, both home-made and from the factories were exhibited in good shape. The ladies' department was so full of fancy articles that the room allowed them was not large enough; the exhibits brought out some of the finest of needle-work from old and young.

C. F. O.

Literary.

MAGAZINE REVIEWS.

IN THE HOME-MAKER for October, Catherine Owen tells about "Cheap and Good Country Living," but the title is misleading, as the nearest the author gets to the country is as far as the suburban towns within reach of New York. People who call living in these towns living in the country, know as much of genuine country life, as the average farmer knows of the manner of life of the millionaire city dweller. Still there are many good suggestions. One is in regard to keeping meats and other perishable articles of food without ice. Cool, pure air, such as is found in a clean, well-aired cellar is the first consideration. A hanging safe, with sides of wire gauze to protect from the festive fly, hung in a draught of air is excellent. "An Inherited Vice" is a well-written story, by Bessie Chandler, of one of those disagreeably clean persons, who are waging a perpetual warfare on dirt, and who make life a burden to their families. Cleanliness was not next to Godliness with her, it *was* Godliness. She said she "wouldn't mind dying so much if only there was something cleaner to be buried in." Her daughter married a fine young man, and came near ruining him by her inherited vice, but a fortunate combination of circumstances happily intervened. A fine illustration and charming description of "Cliff Seat, Ticonderoga," the summer home and birth-place of Joseph Cook, are given by Frances J. Dyer. The original homestead slightly altered forms a part of the magnificent residence, and is occupied by the venerable mother of Mr. Cook. It is a home worthy the renowned owner and his talented wife. A sound, sensible article is "Our Boys' Politics." A mother was bewailing the opening of another saloon as an added temptation to poor men to spend their money and lose their manhood. Her eight-year-old son burst forth with the staggering query: "What do they let them do it for? Ain't there *any Christians in Congress?*" What a commentary on prevalent forms of government in restraining vice, in those few words! There are articles for young people, housewives, mothers; about fashions, window and cottage gardening, etc. Single numbers, 20 cents. The Home-Maker Co., New York.

ONE OF THE BEST journals published for the housekeeper is the Ladies' Home Journal. It is now in its sixth volume and has attained an enormous circulation. For the amount and quality of matter, it is the cheapest paper of its class published in America, if not in the world. The October number contains the opening chapters of "Phillida," a novel by Maud Howe. "Talks with the Doctor" contain sundry suggestions about cleanliness and soaps. A test of good soap is given. "Don't use the nose as a test in buying soap; use the *tongue*. Touch the tip of the tongue to it; if it has a *sharp*, alkaline taste, don't buy it." The "Mothers' Corner" has much to interest the possessors of babies, little and big. Marie Merrick in "The Evils of Spanking" discourages that orthodox method of correction. "The First Weeks of Infancy" is a short but extremely valuable article for those having the care of young infants. The use of drugs and medicines is discouraged. "Contagious Diseases" gives precautions to be used in cases of scarlet fever and diphtheria. A department of fashions gives the latest styles from Paris. There are many short stories, and much other valuable and entertaining matter. Send for a free sample copy. One dollar per year. The Curtis Publishing Company, Philadelphia.

LEND A HAND has a report from the teachers sent by the Massachusetts Indian Association to instruct the Apache prisoners at the Mount Vernon Barracks in Alabama. The Apaches show great aptness in learning and using the English language. The best element of the tribe ask for a school and farms. The just settlement of the Indian question seems to be a perplexing problem. "The Cure of Inebriety" is an extract from a report made by Dr. Day to the Washingtonian Home in Boston. It deals with opium and chloral as well as with alcohol, and gives much information as to their effects upon habitual users. Considerable space is given to reports from Ten Times One Clubs, Kings' Daughters, the Ramabai Association, and kindred organizations. J. Stilman Smith & Co., Boston.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

D. D. S., Oswego, N. Y.—A and B's farms adjoin each other. A has plenty of timber for a fence on his land; but he uses barbed-wire for his part of the division fence. B requested him to fasten two lines of poles to the fence to make it less likely that stock would injure themselves against it. A thereon placed poles on top to the posts and says it is now a lawful fence. If B's stock should injure themselves by coming in contact with it, will he have any redress?

ANS.—If the fence is a lawful one, B will have no redress; if it is not, he will have good grounds for action against A for any damage done to his stock by the fence.

Rural Topics.

CAN THE EAST LEARN AGRICULTURE FROM THE WEST.—Perhaps my Eastern experience is too limited: but the matter to me looks very much like this: Both sections of the country have many successful, prosperous farmers, men of intelligence and ability in their profession. The proportion of farmers who are making more than a bare living from their farms seems greater in the West than in the East. There are two apparent reasons for this: one is the fact that the West is a comparatively new country—with land of much greater natural fertility. The East, with land somewhat exhausted and naturally harder to work, is at a disadvantage. Again, the East is almost too conservative. As a rule, the majority of the farmers do not go about the country so much, or compare methods and results. They cling too hard to old ways. The ways of their fathers are considered good enough for them. Innovations are looked upon with distrust. They wait too long to let some one else give everything new a thorough trial—and then they doubt still.

The Western man comes from the same stock; but he has cut loose from the parent stem and "gone West"—evidence No. 1 of thrift and a desire to better his condition. But he finds himself in a big country. Nature has provided a boundless expanse of a country fair to look upon. He wants to do things upon a correspondingly big scale. He buys too much land. He builds too fine buildings. He buys too much machinery. He rushes into every new scheme and finally fails—a victim of too much enterprise. The successful man East or West is a medium between these two.

The "general average" of Western farmers has more skill in the care of stock. He provides better stables. I believe the stables and barns in the dairy sections of Wisconsin, taken as a whole, are excelled nowhere in the country. Here I think the East may learn from the West—to a certain extent. I also think that in many sections of the West the farmers excel those of the East in maintaining the fertility of the soil. The East spends hundreds of thousands of dollars annually for expensive commercial fertilizers. The Western man by a judicious rotation of crops, and by keeping sufficient stock to eat all coarse fodder produced upon his farm, by farming to produce a large amount of coarse feed, then by saving and applying his manure, not only maintains but increases the fertility of his land. Again, with less of an incentive to careful and economical feeding of stock, he gives the matter more attention. As a result, he keeps more stock upon a given quantity of land; hence he has more fertility to return to the land in the shape of manure. Thus at the end of the year he finds his business in a more satisfactory state than does his Eastern co-worker.

Bullion, Wis. E. G. F.

Miscellaneous Advertising.

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THE MOST DISTRESSING FORMS OF SKIN AND scalp diseases, with loss of hair, from infancy to old age, are speedily, economically and permanently cured by the CUTICURA REMEDIES, when all other remedies and methods fail.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease from pimples to scrofula.

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FRUIT AND PRODUCE COMMISSION MERCHANTS,
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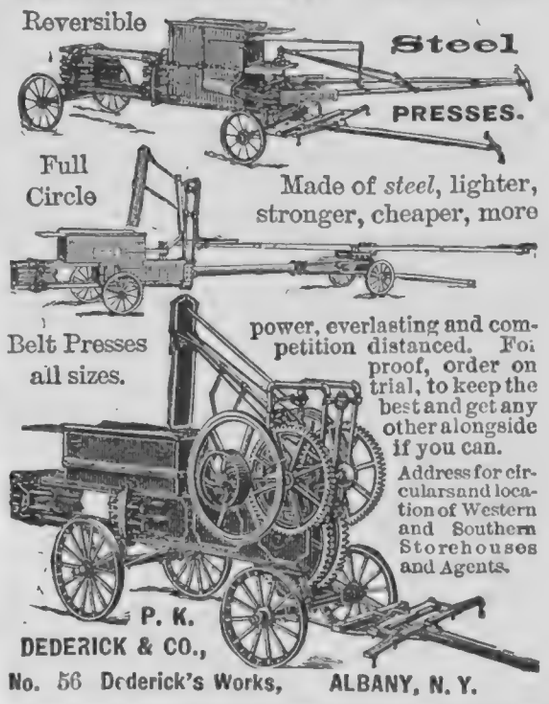

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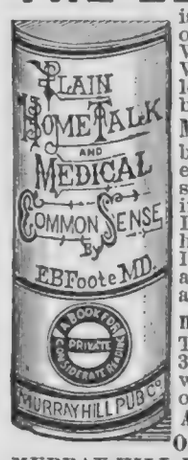

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STEAM! STEAM!
Quality Higher, Price Lower.
For Strictly Cash, Complete Fixtures except Stack.
2-Horse Eureka Boiler and Engine, $135
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Other sizes at low prices.
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Our Improved 1889 Cutter contains many new and valuable features. Strong and durable, easy to operate, not liable to accidents. Treatise on Ensilage and Catalogue, also Plans for Silo, Free.
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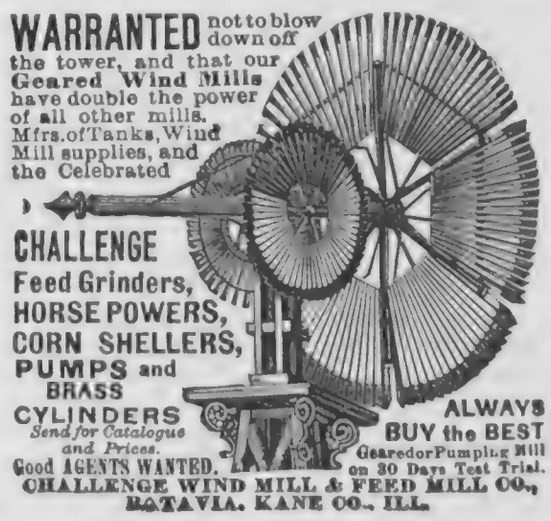
WARRANTED not to blow down off the tower, and that our **Geared Wind Mills** have double the power of all other mills. Mfrs. of Tanks, Wind Mill supplies, and the Celebrated



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Send for Catalogue and Prices.
Good AGENTS WANTED.
ALWAYS BUY the BEST
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Various,

A JERSEYMAN'S JOTTINGS.

THE CONGRESS OF AMERICAN NATIONS.

THE rains have been so constant of late that I have had more time than usual for reading. I am considerably interested in the coming meeting of the representatives of the Republics of America and I have read all I could find printed on the subject. My interest in what I may call Spanish America dates back to my boyhood. In my younger days the rush to the California gold diggings carried off four of my brothers and various other relatives. I wanted to go myself, but it seemed better that I should stay at home on the farm, and so I stayed. But those who did go had so many curious tales to tell about the people and practices of the South American countries that I became deeply interested in their history and resources, and it has been a sort of hobby of mine to keep posted regarding their progress. All readers know that they have a special liking for the history of some foreign country or for some period of old history. I have enjoyed reading about the history of Spanish America rather than about that of European countries. So it may be seen why I am deeply interested in this gathering or convention.

Why It Is Called.—It looks to me like a matter of business rather than one of sentiment. We are all "Americans" to be sure, from Alaska to Patagonia. As a matter of fact, the American pedigree of our Spanish-speaking friends is about 100 years longer than ours is. Still, we Yankees and Jerseymen have always assumed that the English-speaking folks are the true Americans. Before we get through with this convention, we shall doubtless look at this matter somewhat differently. The Southern Republics have always regarded the United States with a little suspicion. It is a good thing we can't read Spanish, for some of the articles in South American papers would make us feel like going on the war-path at once. This convention is based on business and not on sentiment. It is a question of trade. These Spanish Republics have sent the wisest and brightest men they have to look over our resources and compare prices so as to see what they can buy here to advantage and also what they can sell. The bulk of their trade at present goes to England and Europe. As a matter of fact, so far as any sentiment goes, they would just as soon trade in Europe as trade with us. It is a matter of dollars and cents, of return business, of cheap transportation and favorable tariffs. The countries south of us have fruits, hard wood, dye-stuffs, cotton, sugar, rubber, minerals, hides, meat and wool to sell. They want to buy manufactured goods, dairy products and breadstuffs.

Do We Want Their Trade? Certainly we want to sell them all we can. We are conducting business in this country for the purpose of selling goods. Give us the chance of supplying, say 75 per cent. of the imported bread-stuffs and dairy products used in South America, and every dairyman and wheat grower, would feel the effect of the new market at once. Give our manufacturers a chance at this trade, and every manufacturing town in the country would brighten up. But this is not to be any one-sided affair. If we sell to these countries, we will have to buy something from them. Other nations do so, we must. Suppose, for example, Brazil says: "We can provide you with all the coffee and sugar you need Buy of us and we will buy our butter, cheese, flour and manufactured goods of you." Then the Argentine Republic says: "Buy our wool, and we will buy our supplies of you." And Mexico, Columbia, Peru and other countries come forward with si nilar propositions. They all want to buy, but they all have something to sell in return. They have traded with European countries for a long time. They don't care to change unless they can "better themselves." But now come the United States wool-grower, sugar-maker, and the official who draws a big salary for "investigating" sorghum or the cotton planter. "You must buy our products first," they say. "We don't care for this foreign trade if it necessitates the purchase of the products we handle at a cheaper rate than we can profitably produce them." Then the agents of foreign countries go to the Spanish Republics and say: "We control the commerce of the world. The United States have not the necessary steamships for transporting their goods." So two of the most important things to come before this convention will be

Transportation and Tariffs.—As for transportation, there is not much to fear about that. A railroad through Mexico that shall connect with the railroad systems of South America, so that a car can run from New York to Buenos Ayres, is a possibility, and steamships can be built and manned by Yankees as well as by French or Germans. But all these vast enterprises will require millions of capital, and that must come from merchants and manufacturers who will not invest it unless they are assured that the tariffs can be so adjusted that the goods they handle will be put through the custom-houses on the most advantageous terms. The custom-houses of the Spanish Republics are something wonderful as regards their ability to mix things up. In many of them the customs authorities receive no salary, but depend upon the fines which they are empowered to impose and of which they receive 50 per cent. A slight clerical error will prove sufficient for one of these officials to impose a fine of 50 per cent. of the value of the article. Before any satisfactory business can be done there must be a system of uniform tariffs and customs regulations to serve for all the countries. When we consider that our present administration was put in power because of its advocacy of a high tariff, and also the immense difference between the volume of trade in this country and that from each of the smaller countries, the difficulties in the way of the convention can be understood. To my mind it is the most wonderful business scheme that the world has ever known. Its possibilities are absolutely beyond ordinary comprehension. If it be rightly managed and wisely developed it will change the history of America.

Other Points.—If we are going to do business with Spanish people we shall have to have people who can talk Spanish. If this Congress is a success we shall come to the times when Spanish will be a more important study in our schools and colleges than French now is. The delegates are now traveling about the country to see what things we have to sell, and how we produce them. We don't hear of their looking at any Eastern farms. Those in charge of the trip seem to think the West is the only agricultural section worth showing them.

JERSEYMAN.

CATALOGUES, ETC., RECEIVED.

NATIONAL SILVER CONVENTION. This convention is called to meet at St. Louis, November 26. The object of the convention may be learned from the following extract from the circular sent out by the chairman:

"We believe that our senators and representatives in Congress should be urged to restore silver to its ancient use as money, by giving it free coinage. This will place it on an equality with gold, and we believe at a par with that metal. Until this is accomplished, it should be earnestly insisted upon that the maximum amount of 4,000,000 dollars' worth of bullion should be coined per month."

"BITTER WEED."—Bulletin No. 9 of the Mississippi Experiment Station. Those who are familiar with agriculture in the Gulf States must have noticed a beautiful, green plant with large, golden-yellow flowers. It creeps everywhere—along roadsides, into pastures and old fields—wherever it can do any damage. From the date of its coming till frost the Southern dairyman is weary of life. The milk, the butter and the beef are all tinged with a bitter taste strongly resembling the characteristic taste of quinine. The common bitter-weed, Helenium tenuifolium, while giving the bitter taste to everything produced from it, is considered harmless so far as its effects upon the system are concerned. In fact, it is considered a good tonic for cattle in the spring, while it promotes digestion in a proportion of human beings. Dr. Phares, who prepared this bulletin, has observed the matter for 46 years. But another plant closely related to this one, viz: H. autumnale, does injure and kill some domestic animals. Experiments conducted at the Mississippi College, show that calves and sheep are injuriously affected by this plant, while horses and mules are driven by its effects to violent efforts. A pint or two of lard poured down the animal's throat always gives prompt relief. Animals seem to have no special fondness for this weed except when they have been deprived of green food for some time and are then driven where the weed is plentiful and other green plants scarce.

Animals, notably sheep, once intoxicated by the plant and recovering, seem to acquire a mania for it, and when finding themselves in localities where it grows hurry to and devour it.

A MONTHLY POULTRY PAPER with the alluring motto: "How to make Money with a Few Hens," has been started by the enterprising firm of I. S. Johnson & Co., Boston. It is edited by A. F. Hunter, and is called the Farm Poultry Monthly. It is well filled with practical poultry matter, drawn quite liberally from various papers. It is intended for the farmer more than for the fancier.

DIGEST OF THE ANNUAL REPORTS OF THE AGRICULTURAL EXPERIMENT STATIONS.—The pamphlet is issued by the Department of Agriculture. It is prepared by Prof. W. O. Atwater and contains a condensation of the reports of the directors of the experiment stations. As the R. N.-Y. has before stated, the law requires the directors to make annual reports giving a synopsis of the work done during the year. The Department of Agriculture at Washington is to condense these synopses. Thus we have, in this volume, an outline of the work done at all the stations during 1888. It is a valuable pamphlet—an excellent index of American agricultural experiments.

MANURES FOR MINNESOTA.—In Bulletin No. 8 from the Minnesota Experiment Station, we find a number of timely articles. In spite of the belief, quite general among a class of Western farmers, that fertilizers and manures are at present unnecessary, the Minnesota Station wisely begins to talk about these substances now. We are given a list of the crops produced in Minnesota with the values of the various fertilizing elements contained in them and the amounts removed by each crop. This makes a startling showing. The Minnesota farmers who begin to study it now will be richly repaid for their study 20 years hence. There is another excellent article on the by-products of wheat. In 1888 the mills of Minneapolis alone produced 7,056,680 barrels of flour, requiring over 30,000,000 bushels of wheat. This of course threw on the market vast quantities of bran, shorts, screenings, weed seeds, etc. The wheat crop of Minnesota yields, in addition to the flour, 200,000 tons of bran, 50,000 tons of shorts and 75,000 tons of "screenings" containing light grains of wheat and many seeds of weeds. Not half of this vast "by-product" is kept in the State—it goes to other sections where the farmers know its value for fertilizers and feed. Strange as it may seem to Eastern farmers, the "screenings" are most sought for by Minnesota farmers. Near the mills these screenings cost $7 per ton, and wideawake farmers are begining to see the great value of this product. Fed whole to horses the "screenings" compare favorably with oats; when crushed they are well liked by dairy cows. Many sheep are now winter-fed near Minneapolis and St. Paul on "screenings" and hay, while hogs and poultry thrive well on this feed. In fact, of all the by-products produced at the flouring mills, the "screenings" seem the most economical food. In fact, we are told that the demand for the "screenings" is so great that it is impossible to supply all that is called for. Many millers grind the screenings and either mix it with shorts or bran or sell it as "flour of screenings." It must be remembered that while all the "screenings" is demanded for near-by feeding, tons of bran and shorts are shipped out of the State. The following table gives the average composition of "screenings" as compared with other substances.

	PROTEIN. *per cent.*	FAT. *per cent.*	CARBO-HYDRATES. *per cent.*
Oats	11.38	4.81	60.05
Screenings	11.67	3.00	65.83
Clover Hay	12.55	2.44	40.55
Bran.....	15.36	4.14	57.59
Shorts.....	13.83	3.83	53.50

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THE autumn poet doth appear.
And many and many a rhyme will weave;
Of autumn leaves when autumn's here,
Some one autumn make him leave.
—*Credit lost.*

THE dentist may take root and yet not grow.—*Troy Press.*

WHO kills all the dead letters? Miss Direction.—*New Hampshire Patriot.*

JUST think what a monotonous worldful of human beings we should be if we were all handsome.—*Rochester Post-Express.*

LITTLE MAN (proudly): "Yes, sir, I'm a self-made man." Big man: "What was the matter, did the material give out."—*Time.*

THE TORONTO GLOBE tells of a man who has cooked his own beefsteak for 15 years. He must like it very well done.—*Detroit Free Press.*

"MEET me on the corner to-night, and dew not fale," he wrote. And she answered him: "There's no such word as fale."—*Lawrence American.*

MERCHANT: "You couldn't get here any earlier, eh? Breakfast at stake, I suppose." Clerk: "No, sir; it was the steak at breakfast."—*Time.*

THE boy who was bent on eating the green watermelon was in the same condition about half an hour after he had done so.—*Terre Haute Express.*

POLICEMAN: "Do you have to take care of the dog?" Nurse-Girl: "No; the missis says I'm too young and inexperienced. I only look after the children."—*Life.*

"THERE," said the new lady of the castle, "are the graves of the former owner's ancestors. My ancestors," she added proudly, "are all living."—*Harper's Magazine.*

MISS BOSTON: "Papa, I find our professor of pathology very interesting." Mr. Boston: "Our what?" Miss Boston: "Our professor of pathology—our guide, you know."—*New York Sun.*

"GOOD morning, little orphan," said the corn to the oats. "Why do you call me orphan?" replied the oats. "Because you have no fodder," chuckled the corn. The oats was shocked.—*Credit lost.*

OLD BULLION (in a lamp store): "Have you got a glass globe?" The New Clerk: "No; we don't keep balloons." Old Bullion: "Dear boy, if I were your employer you wouldn't keep your job, either."—*Puck.*

ON THE EIFFEL TOWER.—Mother and Girls (ecstatically): "My! isn't it high?" Father (in a gloom that reaches to the base of the tower): "Well, what of it. Have you seen anything in Paris this summer that wasn't high?"—*Life*

JENKINS (angrily): "Hey," boy! How do you dare to get on this weighing machine with me?" Boy: "Jus git our total, boss, an' then I'll jump off, and when I see how much you weigh then I'll know how I weigh. See?"—*Life.*

ETHEL: "Did you go to Italy?," Harriet: "O, my, yes! We staid there two months." Ethel: "What do you think of the lazzaroni?" Harriet: "O, it's awful. I tried some the first night I was there, but it doesn't suit my taste at all."—*Life.*

BONES: "Say, Jones, best chance you ever saw! A piece of property absolutely free!" Jones: "How? What? Where?" Bones, (pointing to evangelist distributing missionary literature): "Over there: a tract of the better land."—*Texas Siftings.*

FERGUSON: "So our cook is going, is she? Well, I hope the next one will be of a more literary turn." Mrs. Ferguson: "What do you mean by that?" Mr. Ferguson: "A more earnest disciple of the art of Browning, don't you know."—*Detroit Free Press.*

RATHER A HANDICAP.

LITTLE DOT: "Oh, ain't that nice! Come on, Grandpa, let's try it."

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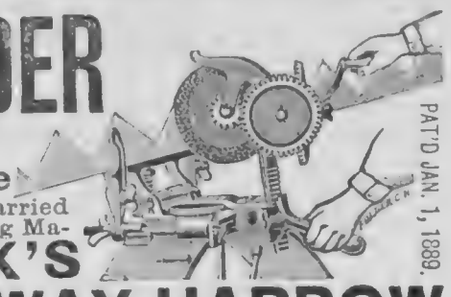

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII. NO. 2075. NEW YORK, NOVEMBER 2, 1889. PRICE, FIVE CENTS. $2.00 PER YEAR.

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Field Crops.

Notes from the Rural Grounds.

THE THREE BARRELS POTATO EXPERIMENT.

RESULTS OF THE REGULAR CONTEST PLOT OF THE R. N.-Y.

How Much Fertilizer may Profitably be used for Potatoes on an Impoverished Soil that Needs "Complete" Fertilizer?

SIXTH SEASON'S EXPERIMENTS.

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FERTILIZER UNDER AND OVER.

THE THREE BARRELS.

ON April 10, three barrels of the same size were provided with perfect drainage and filled to within 16 inches of the top with garden loam and sand—half and half—thoroughly mixed. While mixing the sand and loam together, Mapes's potato fertilizer was added—one-quarter of a pound to each barrel. In the first barrel a single tuber (medium size) of the R. N.-Y. No. 2 was placed upon the loam and sand, being 16 inches below the top of the barrel. In the second barrel a single tuber of the same size of the R. N.-Y. No. 3 was similarly placed. A single tuber of the R. N.-Y. No. 4 of the same size was placed in the third barrel. These potatoes were then covered with about three inches of the same sand, loam and fertilizer, the distance from the top of the soil being now about 13 inches. As the shoots of the growing potatoes appeared above the surface, more soil and sand were added until the barrels were filled to within an inch and the tops were allowed to grow as they would, being at length supported by a platform raised to the hight of the barrels. The seed was planted April 10 and the shoots of all three appeared above the soil May 18, there being scarcely 10 hours' difference.

Planted 16 inches deep where would the tubers form; near the bottom, near the top, midway, or in tiers from the bottom to the top? This is what the experiment was designed to show. It was also designed to show the root and tuber-forming growth of plants raised under these peculiar conditions. The plants were watered as water was needed. It was unnecessary to apply poison as the potato beetles seemed to prefer a lower plane. In the earlier part of the season the leaves showed no Flea-beetle perforations and few were seen upon them. Later they injured the leaves as much as those growing in the regular "Contest" plot near by. This is noted because it has been stated that the Cucumber Flea-beetle confines itself to within a foot or so of the ground.

It was the design to have sawed the barrels lengthwise in halves and to have removed the soil and sand just as the vines began to show maturity, but while yet the potatoes would cling to the stems. Thus the root and tuber-bearing systems could have been well shown after the sand and soil had been carefully washed out by the use of a hand pump and hose. The vines "blighted," however, in mid-July and were quite dry and dead before the services of a photographer could be secured.

The cut shows fairly well in what part of the barrels the tubers grew, apparently from four to 12 inches below the surface, yet while washing out the sand and soil, several fell from their places. The reader must bear in mind that back of those shown in the photograph other potatoes were covered and concealed by the sand and soil. The yield was as follows: R. N.-Y. No. 2 yielded 13 marketable potatoes, eight small and two rotten, weighing six pounds. The decayed tubers were not weighed or taken in the account. Allowing three square feet to the hill as in field culture, the yield would be 1,452 bushels to the acre.

The No. 3 blighted earlier than the others and the yield was 20 very small potatoes, weighing 14 ounces.

The No. 4 yielded 13 marketable and three small tubers. Not less than 10 were rotten and not estimated. They weighed 4⅓ pounds.

THE REGULAR CONTEST PLOT OF THE R. N.-Y.

OUR older readers will not be interested in the details of this renewed effort to raise at the rate of 700 bushels of potatoes per acre on one-fortieth of an acre. But the details should all the same be furnished to the many new subscribers of this year who know little or nothing about it. Not only was the attempt made on one-fortieth of an acre, but upon two measured acres as well, the one located on high, sandy land, the other upon low, moist, loamy land, so that, let the season be wet or dry, there would be one acre adapted to the weather. Both are comparative failures owing to blight. The R. N.-Y. No. 2 was the variety planted on the low-land acre; Brownell's Winner on the high, light land. Particulars of the yields will be given later.

THE CONTEST PLOT.

The trenches were dug April 6, 10 inches deep and wide, 11 in number, each 33 feet long and three feet apart. Twenty-five pounds of Mapes's potato fertilizer (1,000 pounds to the acre) were then sown broadcast, walking through the trenches—not *in* the trenches alone, but over the soil piled up between the trenches as well. The bottom of each trench was then loosened with a Hexamer pronged hoe. Five inches of soil were then raked back into the trenches and on this the seed-pieces (half of medium-sized potatoes with the seed end cut off) were placed exactly one foot apart, making 33 in each trench or 363 in the entire plot. Such large seed pieces were never used before. The trenches were never before dug quite so deep and never before placed upon so great a depth of *mellow* soil. This work was done in a perfect manner as the weather was fine and the soil in splendid condition to work. The trenches were then filled, being careful to fill one at a time and complete it so that the work could be done without walking on the completed trenches. Never was there a mellower seed-bed.

NOTES OF PROGRESS.

May 7. To-day Flea-beetles were noticed in great numbers. Some of the plants were four inches high, others just breaking through. Sprayed all with tobacco soap dissolved in water, using two ounces to a pailful of water. Not effective.

May 8. Sprayed the plants with water in which tobacco stems had been boiled; also with whale-oil soap water, one ounce to one gallon of water.

May 9. Used Thymo-cresol and Paris-green and water. Corn-cobs were dipped into crude carbolic acid and one placed between every two plants. Not effective in the least.

May 10. A cyclone attended with heavy rain. In the evening after the storm as many Flea-beetles were noticed as before the storm.

May 12. One table-spoonful of hellebore, one heaping table-spoonful of buhach, 25 drops of sulphuric acid, one tea-spoonful of Paris-green to a pailful of water were sprayed on the vines. No effect.

May 14. Two tea-spoonfuls of Thymo-cresola

PHOTOGRAPH OF THE R. N.-Y'S BARREL EXPERIMENTS. Fig. 264.

a heaping tea-spoonful of Paris-green to a pailful of water sprayed on the plants.

The leaves now began to show some injury from these applications.

May 17. Fleas thicker than ever. Applied Bordeaux Mixture on half the plot, and on the other aloes dissolved in hot water, four ounces to two gallons. The fleas seemed delighted with both.

May 22. It was plainly seen that the R. N.-Y. No. 3 plants (second trench) were dying. It was decided to dig them up and plant Minister instead. A few days after several rows were dusted with unleached wood ashes. The fleas the next day were not so numerous upon the dusted plants. They preferred the plants not dusted. Later the plants of the entire plot were first sprayed with water (being dry) and then a mixture of the following was sifted upon them: Paris-green, two pounds extended with one barrel of plaster; sifted unleached ashes; one-eighth pound of snuff, making in all a quarter of a barrel in the proportion of two-thirds ashes and one-third poisoned plaster. This was found to repel the fleas somewhat.

June 16. Excessive rains up to this time. The vines have made a fine growth.

July 23. Excessive rains up to this time. Soil saturated. Every variety is more or less injured by the Flea-beetle.

July 30. Vines dying.

THE KINDS PLANTED.

Trench No.	1	R. N.-Y No. 2, 33	pieces.
" "	2	" " 3, 33	"
" "	3	" " 4, 33	"
" "	4	" " " "	"
" "	5	" " " "	"
" "	6	" " " "	"
" "	7	Brownell's Winner, 33	"
" "	8	Monroe County Prize, 33	"
" "	9	from J.H. Woodburn, Sterling, Ill., 11	"
" No.	9	New Queen, 22	"
" "	10	Seedling of Rose from Thos. Lazell, Big Rapids, Mich., 22	"
Trench No.	10	Tonhosks from Theron E. Platt, Newtown, Conn. 11	"
Trench No	11	Brownell's Winner, 33	"

THE YIELD.

No. 2 yielded 63 pounds or at the rate of 454.66 bushels to the acre. They seemed to be about half grown. There were few rotten potatoes.

MINISTER yielded 32 pounds or at the rate of 234.66 bushels to the acre. Many small many rotten.

No. 4 (third row) yielded 53 pounds or at the rate of 388.66 bushels to the acre. Many rotten; half grown.

No. 4 (fourth row) yielded the same as the preceding—53 pounds.

No. 4 (fifth row) yielded the same within a fraction.

BROWNELL'S WINNER (seventh row) yielded 38 pounds or at the rate of 278.66 bushels per acre. Many rotten, all small.

MONROE COUNTY PRIZE yielded 63 pounds or at the rate of 462 bushels to the acre. Many rotten.

WOODBURN SEEDLING yielded five pounds. There were 11 hills. This is at the rate of 110 bushels per acre.

NEW QUEEN, 22 pieces yielded 48 pounds or at the rate of 469.33 bushels to the acre. The tubers were small but there were a great number.

SEEDLING ROSE yielded 71 pounds or at the rate of 520.66 bushels to the acre.

BROWNELL'S WINNER (duplicate row) yielded 71 pounds or at the rate of 520.66 bushels to the acre. This last row was planted with seed from Mr. Brownell while the other row was planted with seed raised here last year.

THE ENTIRE YIELD

was 549 pounds, without making any allowance for decayed tubers, which is at the rate of 367 bushels to the acre. Taking the whole lot, probably over one-fourth were rotten, while the sound potatoes were not over one-half the usual size.

To what extent the premature death of the vines was due to fleas, to excessive rain or to fungoid causes, we are unable to form any opinion.

HOW MUCH FERTILIZER MAY BE PROFITABLY USED FOR POTATOES ON AN IMPOVERISHED SOIL THAT NEEDS "COMPLETE" FERTILIZER?

THE soil on which these experiments have been carried on for the past *two* years is so impoverished that the yield by the most careful trench culture without fertilizer is less than 150 bushels of potatoes to the acre, while paying crops of corn or vegetables of any kind are out of the question. Fertilizer (Mapes's potato) has been used from 440 to 2,200 pounds to the acre for two seasons on this particular plot and for four seasons on two other fields and the results have been essentially the same, whether the weather has been wet or dry. The variety was the Rural Blush. The season the wettest ever known.

COMPLETE RESULTS OF THE PAST SEASON'S TRIAL.

First Series

	bushels per acre.
Plot 1. Natural soil	161.33
" 2. 440 pounds fertilizer	190.66
" 3. 880 " "	212.66
" 4. 1320 " "	278.66
" 5. 1760 " "	330.
" 6. 2200 " "	308.

Second Series

Plot 7. Natural soil	154.
" 8. 440 pounds fertilizer	187.
" 9. 880 " "	216.33
" 10. 1320 " "	245.66
" 11. 1760 " "	297.
" 12. 2200 " "	330.

Third Series

Plot 13. Natural soil	117.33
" 14. 440 pounds fertilizer	128.33
" 15. 880 " "	198.
" 16. 1320 " "	282.33
" 17. 1760 " "	300.
" 18. 2200 " "	344.66

Fourth Series

Plot 19. Natural soil	146.66
" 20. 440 pounds fertilizer	165.
" 21. 880 " "	238.33
" 22. 1320 " "	304.33
" 23. 1760 " "	249.33
" 24. 2200 " "	363.

AVERAGES.

Natural soil	144
440 *pounds fertilizer*	168
880 " "	216
1,320 " "	278
1,760 " "	294
2,200 " "	336

Rot prevailed more than ever before. The rotten potatoes were not estimated. The vines were injured by the Flea-beetle and died nearly one month earlier than usual. The tubers seemed to be about three-quarters of the normal size.

It seems to the R. N.-Y. that farmers cultivating impoverished land should learn a valuable lesson from these experiments which have been conducted long enough to prove that there is a reasonable chance of raising profitable crops of potatoes by the liberal use of high-grade fertilizers. The guaranteed analysis of the fertilizer used is as follows:

Ammonia	4½ to 5 per cent.
Phosphoric acid	8 to 10 " "
Potash	6 to 8 " "

UNDER AND OVER EXPERIMENTS CONDUCTED FOR THE THIRD YEAR.

RESULTS show thus far that in a wet season the fertilizer should be strewn over the seed; in a dry season under.

The trenches were dug the same depth, viz. six inches. In the "fertilizer *under*" trials the fertilizer was strewn in the bottom of the trenches and the seed-pieces (Blush) placed on or in contact with the fertilizer. In the "fertilizer *over*" trials the pieces were placed in the bottom of the trenches and the trenches filled to within one inch. The fertilizer (the same as that used in the experiments recorded above) was then strewn on this soil in the trenches at the rate of 1,320 pounds to the acre, and the remaining inch of the trench filled in and the soil leveled. Fractions are omitted in the result.

			BUSHELS PER ACRE.
Plot 1 ..	Fertilizer	*under*	293
" 2 ..	"	*over*	293
" 3 ..	"	*under*	205
" 4 ..	"	*over*	293
" 5 ..	"	*under*	213
" 6 ..	"	*over*	275
" 7 ..	"	*under*	176
" 8 ..	"	*over*	176
" 9 ..	"	*under*	279
" 10 ..	"	*over*	260
" 11 ..	"	*under*	242
" 12 ..	"	*over*	308

AVERAGE.

UNDER.....235 bushels per acre
OVER.....268 " " "

We shall next present the results of having planted potatoes all the way from two to 10 inches in depth. This experiment has been carried on for three seasons.

FIRST REPORTS OF POTATOES TRIED THE PAST SEASON.

SIXTY-FOUR different kinds of potatoes have been raised here, in very small quantities (as usual), during the past season. The R. N.-Y. trench system, so often explained, was the method employed. The Mapes potato fertilizer is the only "complete" fertilizer that has been used on this plot during the 12 years that these trials have been carried on. A less quantity was used than in preceding years—viz., 1,000 pounds to the acre. The soil, it was thought, was rich enough. As high as 2,000 pounds to the acre have been used on this plot, while lime, kainit, bone, ashes, hen manure and horse manure have been freely added as it was deemed advisable so to do. A better preparation of the soil was never made. The early season was precisely as one who was striving for a premium crop might desire. They were planted April 9. It should be repeated that the vines of all the kinds planted died prematurely—whether from the injury they sustained from the Flea-beetle or from "blight," or from the unprecedentedly wet season, is not known to the writer.

MRS. FORAKER POTATO. FROM NATURE FIG. 265.

MRS. FORAKER. This variety was received from M. Crawford, Cuyahoga Falls, Ohio. The seed potatoes were in a perfect state of preservation. The yield was at the rate of 393.25 bushels to the acre. The yield of large and small potatoes was as eight of the former to 20 of the latter. Skin, white; shape elliptical, flattened. The eyes were few and those neither deep nor prominent. It is a beautiful potato. The illustration shows the average, characteristic size and shape.

GOV. FORAKER, from Mr. Crawford. The yield was at the rate of 393.25 bushels to the acre. But two pieces were planted yielding 3¼ pounds. Nearly white skin, long, cylindrical, slightly flattened. Eyes few but rather more prominent than those of the other. There were seven large and 11 small. A shapely, promising potato.

BADGER STATE from J. C. Vaughan, Chicago, Ill. The yield was at the rate of 403.33 bushels to the acre. Three pieces were planted yielding five pounds—13 fair size, 19 small. Nearly white skin; rather long, often cylindrical, often small at one end. Eyes medium. It is not a shapely potato.

SUNLIT STAR, from same. Three pieces. Yield seven pounds, or at the rate of 564.66 bushels per acre—22 fair size, 25 small. Oblong-cylindrical, a little flattened sometimes. Eyes medium, not deep. None large. Purplish-buff color.

WIDE AWAKE from Iowa Seed Co., 809 Walnut Street, Des Moines. Three pieces. Yield 584.83 bushels to the acre or 7¼ pounds for the three hills—24 fair size, 50 small. Long; cylindrical, nearly white. Few eyes, no rot.

EARLY THOROUGHBRED from T. C. Davenport, 124 Dock Street, Philadelphia. Four pieces yielded nine pounds or at the rate of 544.50 bushels to the acre—26 large, 36 small, six rotten not estimated. This would have been a heavy yield in a favorable season. Pink-buff color; shape variable. Eyes rather prominent.

BEAUTY OF HEBRON from P. E. Island sent by T. C. Davenport. Three hills yielded 11½ pounds, or at the rate of 927.66 bushels to the acre—31 large, 20 small. Rather longer than B. of H. as previously grown.

BEAUTY OF BEAUTIES from A. Rose, Penn Yan, N. Y. Tried for the third year; five pieces. Yield 7¼ pounds or at the rate of 350.90 bushels to the acre. They seemed to be about half grown. Shape oblong-flattened, often wedge-shape, some roundish like the Peachblow. Buff skin russeted. Eyes medium—20 large, 15 small.

This is the potato which this man advertised as the same as the R. N.-Y. No. 2. There is little doubt that the sale of a large quantity was secured in this way. He contradicted his own statement not until the season was so far advanced that the bulk of sales had been made. The R. N.-Y. No. 2. is so distinct in vine and tuber that it need never be mistaken for any other variety.

A YIELD OF 700 OUNCES!

THE Rural No. 2 Potato received weighed one ounce. I sprouted it and got seven sprouts and lost one of them by rotting. I planted the six out in the garden about the middle of May. About the middle of June I made 30 cuttings from the tops of the vines and rooted them and put them out about July 10, in the garden beside the first ones. I dug them on the 29th of last month, and from the six original hills I got 19 pounds; from the 30 hills of cuttings I got 24¾ pounds, making a total weight of 43¾ pounds from the one ounce of seed. One of the tubers weighed 18 ounces, one 17 ounces and two weighed 16 ounces each, and as one can judge from the photograph the average was very large. Among the product of the cuttings there were no small potatoes; they ran from one to three large ones to a hill.

I send a photograph of the entire crop that a better judgment may be formed of the average size of the tubers. I think from the reports the R. N.-Y. is publishing that the potato will be largely planted next spring. Potatoes are over an average crop here and I have not heard of any rot in the county. They are selling at 25 cents per bushel. N. B. D.

Marshall, Ill.

[R. N.-Y. Accompanying this report is a statement from the editor of the county paper who, in company with other reliable witnesses, saw the potatoes dug. The editor concludes his remarks as follows:

"This may sound like a fish story, but, nevertheless, it is true in every particular. If there were not witnesses to bear us out in it we would not publish it."

An excellent engraving of a photograph of the yield from this little potato is shown at Figure 266.

I cut my Rural No. 2 Potato, which was very small, into six pieces, planted them in six hills three feet apart without any fertilizers or extra cultivation. I raised 40 merchantable, fine-shaped tubers free from scab weighing 16 pounds, the largest being 24 ounces. Eight of the largest averaged 16 ounces each. Of other varieties planted the Empire State was the best. From a barrel planted the largest did not exceed 16 ounces. The Pearl of Savoy did fairly well. Early Thorburns were almost a failure, being small and scabby. I experimented with sulphur for the scab but found no benefit. From reading the R. N.-Y. last winter, I was induced to try some Japanese Buckwheat. I find that it is the best kind for this climate. Common or old varieties do not fill well and generally blight, as we have very little cloudy weather during the buckwheat season. I cut my first crop of clover the first of June to avoid the midge, but it failed to seed. C. W. M.

St. Charles, Minn.

Rural Topics.

ROT IN POTATO "SEED."

Discussion of a "Discussion."

SAFE TO USE "SEED" FROM ROT-INFECTED FIELDS?

PRACTICAL FARMERS SAY YES.

SCIENTIFIC MEN DOUBT IT.

Study the Facts before you Pay an Extra Price for "Seed" from Districts where "Rot has not Prevailed This Year."

ON page 643, the R. N.-Y. printed a note from "D. C. L., Cranbury, N. J.," concerning the practice of planting seed from potato fields in which a portion of the crop had rotted. As our readers know, several professors at our experiment stations have brought forward the statement that the "germs" or spores of the disease known as potato rot remain in the tubers alive and ready to develop and spread all through the plant if at any time during the growing season the conditions of atmosphere and temperature are right for their development. Hence these professors go on to say that it is not entirely safe to plant potatoes from fields where there has been any serious damage from rot. "D. C. L." combatted this theory, giving an experience of his own to show that the character of the seed had little or nothing to do with the rot; that it was due almost entirely to the weather and the condition of the soil. This is a matter of great importance this year when we consider the condition of the potato crop of this season. There are certain sections where there has been absolutely no rot to speak of. If our scientific friends are right, the seed potatoes from these regions are worth more than those grown on soil where rot has prevailed. Before our readers pay an extra price for such seed, we want them to obtain all the facts. The following notes have been written with "D. C. L.'s" note as a text:

FROM PETER HENDERSON.

Although I have had little experience with potatoes, I reason from a general knowledge of horticulture that there is likely to be no danger in using for "seed" potatoes that have been grown in the vicinity of fields where the rot has been, or even if the seed itself is partially affected. The "rot" as I understand it, is in almost every instance due to a condition of excessive moisture. The "working roots" of the plant die from that cause, the leaves begin to spot owing to injury by a parasitical fungus, which, however, is a *consequence* and not the *cause* of the disease. Tubers from potatoes so affected would not, in my opinion, be any more likely to rot than others, unless the conditions favorable to the disease were present.

This "spotting" of the foliage, variously called "rust," "blight" and "black spot," no matter whether on a potato, a celery or a rose plant, is in every instance which I have ever investigated, brought about by the destruction of the working roots, mostly from excess of moisture, but occasionally from its opposite—excessive drought. The destruction of the roots shocks the vitality of the plants, and the ever-present spores of the fungous parasite pounce on the diseased subject. We have reason to believe that these spores are more or less always present, but if there is no shocked plant, no weakened subject, there is no suitable "soil" for their germination. There is no reason to apprehend that even if these spores remain in the potato "seed," the crop will be injured more than if they were not present. This, of course, is only theory. I have had no actual experience on the subject; but the statement of "D. C. L." seems to confirm this theory in his practice. Potato rot the past season has been so universal that it is safe to say that a large proportion of the "seed" that will be planted, may hold the germs of the disease, but if the weather next year be unfavorable to their development, it is reasonable to hope that no bad results will follow. Were it otherwise, the disease would so spread that the potato crop might be annihilated.

Jersey City, N. J.

FROM EDWIN TAYLOR.

I am not sure that I have ever had experience with potato "rot." To be sure, my potatoes have rotted, more or less, in low places every year when water stood over the ground for any length of time, particularly in very hot weather. Sometimes all have rotted in such places; sometimes a portion only. Those that came through at all seemed to be all right and have been stored and planted along with the remainder of the crop without the rot showing itself in the bin or in the next year's crop, except in low spots again. Sometimes, in our climate, shallow-planted potatoes "cook" in the ground and rot, if the season is very hot and dry. Sometimes, again, potatoes of the Early Rose type will partially rot—half the tuber perhaps will do so; but such potatoes will generally dry up and the sound end will keep through till spring. They are often planted; but I never heard it suggested that they propagated the disease.

Edwardsville, Kansas.

FROM HENRY IVES.

Many farmers are already considering to what extent the prevalence of blight and rot in the present potato crop will affect the quality and value of the tubers for seed next year, and I think it very commendable in them to exercise this care and forethought; and I feel quite confident that it will prove good policy for planters whose crops were more or less affected with blight and, perhaps, rot to obtain their seed for another year from some good potato-growing locality (be it far or near-by) where the crops were not thus affected. There are several good reasons for this, and especially the two following:

Let me first say that I make this suggestion, not through the fear which some seem to entertain that "seed" from infected fields would necessarily perpetuate the rot. This is not to be feared any more than that one will be poisoned by eating potatoes from a crop on which Paris-green had been used. My reason for urging the practice is the very practical one that the tubers, the tops of which were killed by the prevailing blight, necessarily stopped growing then, and being only half grown at the time, they were immature and not fully developed; and all concede that tubers in this condition are poor for seed purposes. Moreover, besides this seeming necessity for making such a change of seed at the present time, such a change almost always proves beneficial for the purpose of crop improvement in any season. For this latter reason I have at intervals, for three different seasons, obtained my seed potatoes from the eastern part of Maine for planting in Western New York, and always with good results. I have also noted, in some cases of almost total failure of the crop either from the rot or on account of a drought, when seed had to be obtained from other localities more or less remote, that often in less than two years many farmers in those sections would say that they had been the gainers, in the long run, by such failures for one season; and the extraordinary commercial facilities of the present day will soon afford any region where failure has occurred a supply from other sections where there has been an abundance of well-matured tubers, so that by judicious selection, at ordinary prices, most planters may secure such a change of seed as may prove of much advantage to them.

Genesee County, N. Y.

FROM G. W. P. JERRARD.

I can give no information from my own experience, on the subject of potato rot as affecting the tubers for seed purposes the following year. We have never been so unfortunate as to have received a visit from that dreaded disease in this part of Maine.

Caribou, Me.

FROM C. H. EVERETT.

I do not believe that the germ of the potatoto rot can remain in the tuber for a considerable length of time without causing it to decay. If the potatoes remain sound from the time they are dug until planting time I should consider them perfectly safe for seed. The rot with us this year is what we call a "wet rot." The tubers that have not rotted are very bright; those that have been affected are all gone. I should not, however, want to purchase seed where dry rot prevailed; for with this disease one cannot tell which tuber will be affected next. I expect to plant next year seed from fields that are affected with rot this year, and as an experiment I shall plant some that are partly decayed, and report the result to the R. N.-Y. next fall. I do not expect that I shall be able to tell the tubers from such seed from those from the soundest seed except by marking the plots.

Steuben County, N. Y.

FROM D. B. HARRINGTON.

The point raised by D. C. L., will undoubtedly figure conspicuously during the coming season for planting, many seedsmen claiming superiority for their seed, on the ground that it was grown in regions where there was no rot this year. My experience extending over nearly a quarter of a century induces the belief that it makes but little difference how badly the rot prevailed among the crop from which the seed came, if the tubers are sound and well preserved at planting time. If the fungus had attached itself to the tuber, and been transferred to the cellar, rot would commence at once in the bin, and continue while any of the live spores remained. But suppose we should plant a tuber to which the fungus is attached? The office of the latter is to produce decay, and consequently it would only accelerate that condition that is absolutely necessary to give life to the plant and enable it to reproduce itself. Have the R. N.-Y.'s learned correspondents ever examined the remains of a decayed seed potato? It is a simple experiment and will go a long way in determining the question. If the fungus should be found in the old potato, then we have conclusive proof that it does not affect the growing crop. If the disease could be transmitted from one crop to another, our potato industry would have disappeared long ago, for there are few farmers who have not planted seed grown in infected districts.

My opinion is that the rot is caused by the formation of poison spores, or fungi, by the action of the elements on cold, sour, improperly drained soil. These spores are of the nature of the deadly yeast plant, and as fast as they mature, detach themselves from the ground, and float in the air to the nearest substance. Having attached themselves to the vine, the deadly work begins. The first symptoms may be detected by the scorched appearance of the leaves at the edge and points. Sores develop on the stalks, the tubers cease to grow, and the vines die prematurely. Rain and heavy dews wash the spores down to the roots and tubers, and rot commences. The fault is not in the seed, but in the atmosphere and soil. I will guarantee to grow a good crop, free from rot, on our Wisconsin prairie, or sandy plains, from seed grown in the most affected fields in the State of New York. It would be money in my pockets to take the other side of the question, as there is no rot here. For the good of the potato industry, I hope this discussion may settle the question satisfactorily.

Walworth County, Wis.

FROM T. H. HOSKINS.

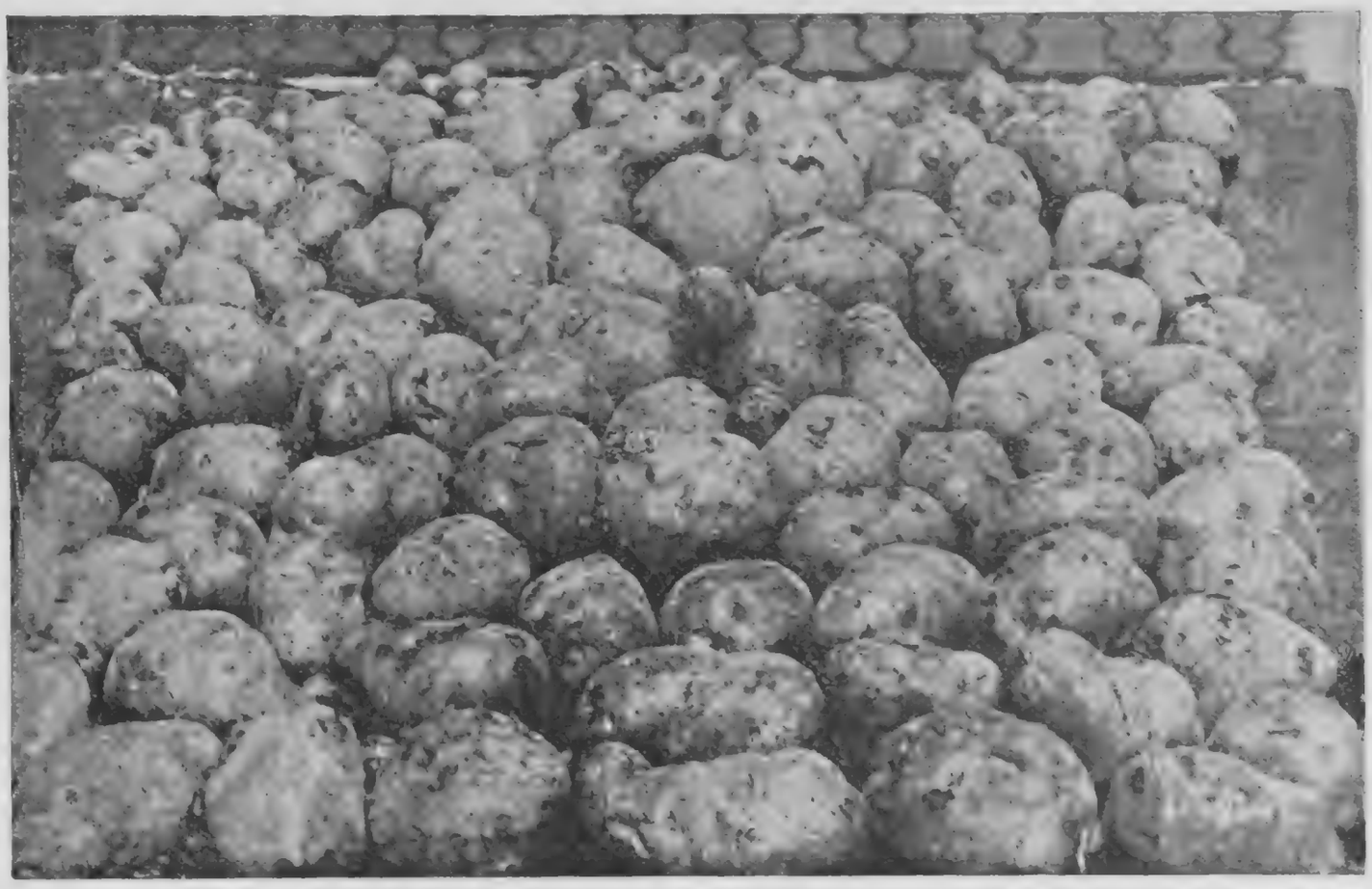
In reply to the RURAL'S request, I will relate my own experience. Last fall I pitted my seed potatoes, and when the pit was opened and the potatoes were taken out, about two bushels of more or less rotten tubers were thrown aside on the ground. A female member of my family, who is fond of making experiments, noticing that the sound portions of these rejected tubers were sprouting, planted a row of them in her garden just as they were, that is, without separating the sound from the decayed parts. This was a number of days before I planted any of the sound potatoes; and from this planting of semi-rotten seed a fine growth was made, and our earliest table potatoes were afterward dug from them. As there were no "skips," it seemed evident that the disease made no progress in the tubers after planting, or at least not enough to affect the vitality and vigor of the stems coming from the sound eyes. A farm hand gathered up the remainder of the lot, and dumped them around some half-dozen newly set apple trees, which soon after received a rather heavy mulching with straw. Shoots from these made their way through the mulch, grew vigorously, and bloomed; but as they were then quickly destroyed by the bugs, no search was made for a crop in those places.

There has never been a year in the past 20 in which I have not found more or less decayed tubers among my seed potatoes in the spring; but there has never been anything observed to show that the disease had extended from an unsound to a sound potato in contact with it. This refers to the common dry rot, and not to the wet rot, where the whole mass of tubers seems to deliquesce, indicatingth at the disease is communicable from tuber to tuber. This form of rot I have seen but little of for many years. It seems to follow that if the disease is not even communicated to plants that spring from sound eyes in a partly decayed tuber, still less will it spread to other tubers; and far less could it be expected to extend to a crop which is sound, from another crop, attacked with decay consequent upon a local cause.

Newport, Vt.

FROM PROF. W. A. BUCKHOUT.

I am obliged to say that we have never made any experiments in this direction,



THE PRODUCT OF A R. N.-Y. No. 2 POTATO WEIGHING ONE OUNCE. FIG. 266.

We are paying attention to the rot this year, but have never tested seed in the way indicated by D. C. L. Theoretically seed from an uninfected region should be greatly superior to that from one known to have been seriously affected by rot the previous year. The suggestion made in the Bulletin of the Tennessee Experiment Station, Vol. II, No. 2, page 36, indicates a promising line of experiment—namely: that heat less than that required to destroy the growing power will kill the spores and mycelium in infected tubers and perhaps copper sulphate will have the same effect. This bulletin is the best contribution to the subject which we have had this year. The rot has prevailed so widely that it is doubtful whether absolutely sound seed can be found.

Pennsylvania Experiment Station.

FROM O. H. ALEXANDER.

My experience shows that it is not a good plan for our farmers to select seed potatoes from a section where rot has prevailed. I dislike to plant any seed that is affected, as I am inclined to think, from what I have observed, that it invites disease to the vines and the new tubers; but one may plant good, healthy potatoes on flat, low lands, and should there be such a rainy season as we have had this year, they will be liable to decay, but not on rolling land. The disease we know as potato-rot may be induced by many predisposing causes, such as feebleness of constitution of the variety planted, rendering the crop an easy prey to the disease; and planting on low, moist land or on land highly enriched by nitrogenous manures, causing a morbid growth which invites disease. But by far the most widespread and most common cause of the disease is sudden changes of atmospheric temperature, particularly when accompanied by rains.

Charlotte, Vt.

FROM PROF. E. S. GOFF.

Unless we disregard the teachings of science and of experiments upon this subject, we can hardly escape the conclusion that seed tubers taken from a crop that was largely affected with the potato rot due to the fungous parasite Peronospora infestans, would be more likely to be followed by an early development of the disease than seed tubers from a healthy crop.

The experiments of Mr. J. L. Jansen of Denmark, as reported in the Gardeners' Chronicle (Vol. 21. new series, p. 208), showed not only that diseased tubers produced less vigorous plants than healthy ones, but that plants grown from diseased tubers developed the disease earlier than those from sound ones. Mr. C. B. Plowwright, of England, who is very high authority upon this subject, has made the statement (Ib. p. 448), that "one diseased set planted in a field is a powerful agent for evil in that field before the general outbreak occurs," and Mr. Jansen, of Denmark, also a high authority, has stated (Ib. p. 589) that "the disease will spread with far greater rapidity from 40 or 50 evenly distributed centers than when it originates from only one place on each acre."

The subject is of less importance in this country than in England, as it is comparatively seldom that the disease prevails here to any great extent, but I should regard it as quite unwise to plant seed tubers from a diseased crop when seed from a healthy crop was readily attainable.

Experiment Station, Madison, Wis.

FROM J. C. VAUGHAN.

My experience in regard to potatoes grown from seed produced in sections where rot has prevailed extensively, is very limited, as for several years our entire stock of the standard newer varieties has been grown in the extreme northern part of Michigan on the Lake Shore, and we have never had a potato rot from the disease yet.

Chicago, Ill.

FROM PROF. L. H. BAILEY.

It is certainly unsafe to plant potatoes which contain spores of the rot, but I cannot say that tubers from a region where rot has prevailed are unsafe, from the fact that one field may be attacked and an adjoining one may not. I can simply advise, as the safe method, to secure "seed" from regions where the rot has not prevailed during the previous year.

Cornell University, Ithaca, N. Y.

FROM FRED. GRUNDY.

Three times in the past 18 years I have lost nearly my entire crop of potatoes by rot. Each time the rotting was caused by excessive and long-continued rains. By storing what sound tubers I could gather in a cool, dry place and in small lots I always managed to save enough for seed in the following year, and the seed thus saved invariably grew as strongly and produced potatoes fully as fine as did seed imported from other States by my neighbors. It may be true that the spores or germs of the potato rot remain in such tubers as are *slightly affected* for some time; but that they are to be found in the clean, sound tubers found among those affected, or that they will develop in such tubers when kept under conditions unfavorable to their development, I doubt mightily. I am perfectly well satisfied, however, that the soundest potato in the world will develop the disease if kept for some time under the conditions which favor its development. That some potatoes which were grown in a rot-infected district will not grow as well and produce as good tubers as those imported from other localities is all twaddle. All that is needed is that they be stored in a cool, dry place and then planted in suitable soil.

Christian County, Ill.

FROM R. BRODIE.

Here is my experience concerning a five-acre field of potatoes, one-half of which was planted with Beauty of Hebron; the other half with Early Rose. The soil was a clay loam with a sandy sub-soil; the seed was from a gravelly field the crop in which had partly rotted last year. Six rows of Crown Jewel Potatoes from Philadelphia were planted in the middle of the field, and all were manured alike. The result was that I obtained a-quarter of a crop of Early Rose and Beauty of Hebron, while I had two-thirds of a crop of Crown Jewel. The latter variety made a more vigorous growth and withstood the blight much longer than the other kinds It seems as if the Early Rose and Beauty of Hebron are losing their vigor and getting "run out," and that we ought to plant the newer varieties that can withstand the blight; for so long as we have a vigorous, green top, we are sure to have sound potatoes at the root. On the other hand, I had seven acres on a gravelly hill, planted with the same seed—Rose and Hebron—and here there was a fair crop of good, sound potatoes. One of our best farmers told me that he had procured seed potatoes from two different sections where there was no rot, and that the product rotted worse than that from the seed he had himself saved. Some farmers are buying potatoes by the car-load for next year's seed.

One of my neighbors had 15 acres of potatoes manured in the hill, the sets being placed right on the manure. They rotted so badly that he obtained only 100 bushels altogether. Mine rotted badly also, but still they averaged 100 bushels to the acre. I plowed under about 25 loads of rotten manure to the acre—part in the fall and part in the spring—worked the land thoroughly with the Acme and Scotch Harrows, then planted the potatoes with the Aspinwall Planter, applying about 300 pounds of potato fertilizer to the acre. With the use of commercial fertilizers potatoes have a bright, clean appearance, and are better shaped than when no fertilizer is used. It is my opinion that potatoes will not rot any more with barn-yard manure well mixed with the soil than they will without it. I had a small field planted with potatoes; on half of it barn-yard manure was applied; the other half I thought rich enough to produce a crop without manure, but was mistaken. The tops were more vigorous where manure was applied. When the blight came the small tops on the unmanured part disappeared the fastest. On the manured part the potatoes were larger, while on the other they were small and not marketable. No commercial fertilizer was used in this field.

Montreal, Canada.

Everywhere.

RURAL POTATO REPORTS.

THE following notes have been condensed from the many letters we have received from subscribers who planted the potatoes sent out last spring:

CANADA.

EIGHT EYES.—Fourteen inches apart in trench. Planted May 27, dug October 3, clay land; stable manure used, yield 20 pounds—all good size but one. W. E. T.
Beaverton, Ont.

FIVE EYES.—Planted May 25, dug September 19. Yield, 36 tubers weighing 14 pounds three ounces. C. E. M.
Spring Hill, N. B.

SIX EYES.—Dug September 11, yield 35 tubers, weighing 23 pounds. Last of six varieties to succumb to the blight.
Highland Creek, Ont. B. F. C.

FOUR EYES.—Started in a flower po. Trench system, rich soil. Yield, 18 tubers weighing four pounds. T.S.
Pelee Island, Ont.

FIVE EYES.—Trench system. Yield 31 pounds. J. J. A.
Thesalon, Ont.

EIGHT EYES.—Fifteen inches apart in trench. A little barnyard manure. Dug September 18. Yield 53 tubers, weighing 29¼ pounds. Finest lot of potatoes I ever dug. A. W.
Castleton, Ont.

CALIFORNIA.

PLANTED five pieces April 30, dug August 12; yield 14 pounds of fine potatoes remarkable for number of merchantable tubers.
Sebastopol. A. E. S.

SEVEN small one-eye pieces were planted April 10. The largest vines I ever saw for such small seed-pieces. Dug September 30. Yield eight pounds. I will give it another trial next year, as it always takes seed one year to become acclimated.
Alturas. L. J. K.

COLORADO.

WE had nine hills from a potato the size of a small hen's egg. They were planted May 3, and frozen down by our June frost. Killed by frost September 5; not ripe. Yield 53 tubers weighing 15 pounds. Not many small ones. MRS. C. H.
Aspen.

CONNECTICUT.

FIVE hills, trench system, blighted and rotted, yield two pounds 14 ounces.
Uncasville. D. A. S.

DAKOTA.

MY small tuber was cut in eight pieces and planted in hills May 15; dug September 10. Yield 65 potatoes, weighing 15¾ pounds. Considering the very dry summer, I consider the yield a remarkable one.
Glover. E. F. S.

ILLINOIS.

PLANTED three two-eye pieces April 22. Yield 7½ pounds. W. B.
Beverly.

PLANTED two potatoes. Yield 20 pounds. Healthiest variety I had. Less blight than others. G. D.
Bunker Hill.

SEED potato weighed 2½ ounces. Planted on prairie sod never before plowed. Yield 5½ pounds. I. M. L.
Alden.

PLANTED eight eyes in deep trenches. Sod in bottom then seed-pieces lightly covered with dirt and then hen manure and ashes. Yield 22½ pounds. I. B. C.
Prospect Park.

PLANTED my potato whole. Yield 4½ pounds. J. E. T.
Yorktown.

I CUT my potato to eight eyes. Planted in hills three feet apart, two pieces in each hill. Yield 12 pounds. Very fine.
Hamilton. MRS. J. P. LAM.

PLANTED 10 hills April 18. Good black soil, no fertilizer. Dug August 28. Yield 20 pounds one ounce. A. G. C.
Sycamore.

FOUR eyes, four hills. Dug September 12. Yield 8¼ pounds. Very fine, not a scab or scar. D. B. P.
Pana.

INDIANA.

ONE potato, weight 1½ ounce, yielded six pounds; very dry season. L. B. D.
Courtes.

TEN very small eyes planted April 29, fertilized with phosphate in hill. Dug September 2, yield 19¾ pounds. Flea-beetles destroyed vines, or I would have had more. They are fine. E. W.
Salem.

ONE potato size of hulled walnut, planted in garden, in one hill, yield 3¾ pounds nice, smooth, large tubers. M. N.
Selma.

ONE small potato. Two hills dug and used by mistake, but the remainder yielded 27 potatoes. T. C. C.
Mt. Auburn.

IOWA.

FIVE eyes, in good garden soil, ordinary cultivation. Dug September 29, yield 58 potatoes, weighing 27 pounds. The largest weighed one pound, 11½ ounces. They outyield anything I have ever tried. O. G. H.
Decorah.

SIX pieces planted May 28, were dug September 25. Yield 31 potatoes of good size. They had a poor chance. R. C. S.
Campbell.

ONE small potato started in box in the house, planted out in trench, and fertilized with well-rotted manure. Dug September 9. Yield 38½ pounds, largest weighing 22 ounces. The price of the R. N.-Y. can't buy the product of the little potato.
Tipton. E. A.

TWELVE eyes planted in garden, May 2, level cultivation. Dug September 7. Yield 86 tubers weighing 28 pounds 11 ounces. Largest weighs 23 ounces. M. B.
Corning.

THREE pieces planted May 10, dug September 16. Yield 20 large, smooth tubers, two small ones. Whole weight 10 pounds.
Oasis. D. M. D.

FOUR two-eye pieces planted in one hill on rich ground; came up June 4. Watered with liquid manure. Blossomed June 26. Vines died September 1. Dug September 7. Yield 36 tubers, weighing nine pounds. The largest weighed one pound. N. G.
Cresco.

NINE pieces planted May 15, fertilized with yard-manure. Dug September 11, weighed September 24, 37½ pounds. There were 90 tubers; 40 of them weighed 30 pounds. The largest weighed 20 ounces. Very few small ones. M. Mc C.
Muscatine.

SIX two-eye pieces planted in four-inch trench, May 10, fertilized last fall with stable manure. Dug September 2. Yield 33 tubers weighing 14 pounds, all marketable but three. I am proud of them.
West Union. D. K. G.

KANSAS.

EIGHT single-eye pieces, planted in black, sandy loam, fertilized with stable manure. Ground flooded twice. Yield 68 potatoes weighing 35 pounds, no small ones.
Clyde. A. G. M

SEVEN hills yielded 15 pounds, all nice potatoes. M. B.
Lyndon.

SEVEN pieces in trench, no fertilizer or cultivation, yield 58 tubers weighing 14½ pounds. A. .
Centralia.

MICHIGAN.

CUT to seven pieces. Yield 14 pounds, marketable but three tubers. The potato will prove a success. MRS. J. D. I.
Galien.

WEIGHT of potato, three ounces, very much wilted from being kept till May 5 Cut to nine eyes and planted by the side Beauty of Hebron, White Star, Early Rose and White Elephant. Wood ashes all the fertilizer used. Here is the result:

	TOTAL YIELD. lbs. oz.	FOUR LARGEST lbs. oz.
R. N.-Y. No. 2...	20 14	3 11
Beauty of Hebron	30 4	3 8
White Star.....	24 8	no very large
Rose.....	32	5
White Elephant.	47	7 4

Harrisville. W. A.

FOUR hills. Yield 34 tubers weighing 14 pounds 12 ounces. No fertilizer used.
Hagar. H. N. S.

TWO small potatoes made 14 eyes. Planted May 7, dug October 2. Yield 21½ pounds. Crocker's superphosphate used.
Midland. E. P. R.

POTATO cut to 11 eyes. Yield 31 tubers weighing six pounds 11 ounces. Mixed hen and sheep manure put in bottom of

trench and covered with earth before planting the potatoes. C. F. H.
Clarksville.

CUT to 13 eyes. Plants killed by Flea-beetles. Dug August 28. Yield 11 pounds.
Burnside. MRS. W. S.

POTATOES cut to nine eyes. Planted *à la* Rural's trench system. At the rate of 800 pounds per acre of Chicago Celery Phosphate used over and under the seed. On surface at the rate of 200 pounds wood ashes and a light dressing of compost

(*Continued on Page 729.*)

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

MEAT FOOD FOR POULTRY.

What does the Rural New-Yorker find the most economical meat food for poultry? Where is it bought and what does it cost?

FROM HENRY HALES.

I find the cheapest meat food for poultry is pork scraps in cake. I buy it at pork-packing houses in Paterson, N. J., at two cents per pound. I break it up and soak it in cold water till it is softened and then I mash it up in the soft food. I find poultry more eager for it by far than for the beef scraps broken fine and sold for three cents per pound. The next cheapest fresh meat feed is haslets when they can be procured from a slaughter-house or meat market in quantity.
Ridgewood, N. J.

FROM L. H. MORSE.

I buy kidneys of our meat man for feeding poultry and like them as well as anything.
Newark, N. Y.

FROM P. H. JACOBS.

The best meat food for poultry consists of the neck and coarser portions from the butcher, chopped, and fed three times a week, a pound to 16 hens, or an ounce to each. The cheap portions of the meat will answer. It should be lean—no fat. Liver and lights are also excellent and cheap. I find but little benefit from the commercial ground meat, as its value is reduced by superheated steam and the enormous pressure to which it is subjected before grinding. The Hollis meat is cheap and good, but it must be used before the contents of the can are affected by exposure after it has been opened. Ground meat with ammoniacal odor will be rejected by fowls. I regard ground dried fish as better, though it is not always readily accepted.
Hammonton, N. J.

FROM A. F. WILLIAMS.

The cheapest and best meat for poultry is fresh bone and scraps from the market. Grind these up with a bone-mill which costs only $5 to $7, and poultry will relish them and they will not hurt them.
Bristol, Conn.

FROM SAMUEL WILSON.

The cheapest and best thing we can get in this line is meat and tallow scraps from the butchers' shops. These come in large, pressed cakes about the size of large cheeses, and cost from one to 1½ cent per pound.
Mechanicsville, Pa.

FROM P. WILLIAMS.

Ground beef scraps are the cheapest and I think the best meat for poultry. I buy them in Boston in large quantities and I think they are worth $38 or $40 per ton. The Bowker Fertilizer Company keep them in Boston, and Kirby & W. J. Stanton keep them in New York. Hot water should be poured over them and then they should be allowed to settle over-night.
Taunton, Mass.

FROM JAMES RANKIN.

I consider finely-ground beef scraps the cheapest and best animal food for fowls. I use about 20 tons of it each season, paying from $32 to $35 per ton for it.
South Easton, Mass.

FROM KNAPP BROTHERS.

We find that the best, cheapest und most wholesome meat for poultry for use in cold weather is the flesh of old cows that dairymen are often willing to sell for from $5 to $8 or $10 each as winter is setting in. We have bought in this way two or three at a time oldish farrow cows that were hardly worth wintering. We dress them like beef, and hang the meat up where it will keep good for a long time and use it as required, chopped fine, either raw or cooked.
Fabius, N. Y.

FROM C. E. ROCKENSTYNE.

I feed refuse from a slaughter-house near me. You can get beef scraps in New York: they are good.
Albany, N. Y.

FROM A. J. PERKINS.

We use ground scraps made by C. A. Bartlett, Worcester, Mass. We buy in large lots at two cents per pound. They will keep for months in hot weather. The fowls like them and they answer every purpose as a meat food. We have used them for several years with good results.
Fulton County, N. Y.

FROM E. H. UPSON.

The cheapest meat food for poultry is milk, either sweet or sour. I prefer sour (thick) milk as the fowls seem to relish it better than sweet milk. No other meat food is needed. In the absence of milk any lean meat is good. Fat meat is injurious to poultry as it increases the susceptibility to disease unless fed in very small quantities. Even then it does them no good. As we live on a farm and usually keep one or more cows, the milk we feed our fowls costs us practically nothing. I have come to the conclusion that too much meat is usually fed to fowls. I now have a pen of 10 hens that have been kept in a yard for one year without a taste of meat and only *occasionally* milk. They are in the very finest condition.
Wilmot, Indiana.

FROM ORSON WINANS.

In my locality it is not difficult to get the offal from butchers' shops for nothing. But as to the commercial meat foods prepared expressly for poultry, I am not prepared to say which is the cheapest, that is, which brand contains the best actual value for the money. For myself, I have had some experience with "chandlers' scraps" from the soap factory. I get mine at Catskill, N. Y. It comes in cakes, grindstone-shape, say 2½ to three feet in diameter, four to six inches thick. It consists of lean scraps, bits of bone, the tissue of fats, etc. boiled over a furnace and subjected to great pressure to extract the grease. It has to be broken up with an axe or heavy instrument, and it has to be either powdered fine, or soaked 12 hours before the birds can eat it; as the lumps are hard, I prefer soaking. Fowls either free or confined devour it with great relish after they learn its taste. If fed dry the hens should not be allowed to gorge themselves as it swells or puffs up very greatly by absorbing water or moisture. This article usually costs me at the factory about two cents per pound, and I consider it, all around, about the most satisfactory of anything I can secure. Many extensive poultrymen cook it with grain, vegetables, etc., daily, preferring to feed it that way, but the second cooking is merely a matter of convenience for the fowls.
Oak Hill, N. Y.

CORN WORMS, ETC.

A. H. S., Oswego, N. Y.—1. I send the RURAL some specimens of insects I found in some of last year's sweet corn I was shelling. Do they change into millers, and can the corn be fumigated so as to destroy them without injuring it for seed? 2. I also found and destroyed two white worms about an inch long and about the size of a large pin. They were almost semi-transparent and appeared jointed, or in sections scarcely an eighth of an inch long. I had found them twice before under the border of a carpet. What were they?

ANS.—1. The specimens inclosed are corn-worms. They transform into moths in May; also in July and August. They attack all kinds of grain when stored in bins. The insect in all its forms may be destroyed by subjecting the infested grain to a heat of 167 degrees F. for 12 hours, or to a somewhat lower heat for a longer time. They may also be destroyed by subjecting the grain to the fumes of burning charcoal. The larvæ will also perish if the thermometer falls to zero. 2. The last mentioned probably do not belong to the family of moths usually found under carpets, among clothing, furs, etc. We would suggest, if any more be found, and any trouble be apprehended from them, that specimens be sent to Dr. J. A. Lintner, State Entomologist, Albany, N. Y.

DEHORNING CATTLE.

A. M. J., Lakewood, N. J.—How are cattle dehorned—how held?

ANS.—A full description of the method of dehorning was given on page 365 of the last volume of the R. N.-Y. A narrow stall with a stanchion at one end is best for holding the animal. A strong halter or rope may be used to draw up the animal's head and to hold it quiet. A very sharp, fine-toothed saw is used, and the horn is severed just at the base, leaving a trifle of skin on it. As soon as it is removed, a layer of absorbent cotton is applied to the stump and pressed down to stop the flow of blood. In warm weather a coating of pine tar should be applied before the cotton. No inexperienced person should think of attempting this operation, as, unless properly performed, it is quite likely to prove dangerous, if not fatal. The proper time for dehorning, if it must be done at all, is when the calf is from three to six weeks old. Except in the case of vicious animals, public sentiment seems to be opposed to the practice; and even these are not always subdued, as instances are on record where dehorned animals have inflicted serious injury upon individuals coming in their way.

VALUE OF GYPSUM IN THE STABLE.

F. W. H., Warren, Maine.—How much can a farmer afford to pay for gysum to be used in the stable, the price being based on the commercial value of the nitrogen saved by its use? How much may be used for each cow or horse?

ANS.—Gypsum is always worth its cost for itself alone; whatever nitrogen it may save from loss by combining with the ammonia which escapes from the manure is a clear gain. Another gain is made in the purification of the air of the stables by the absorption of the ammonia that would escape and make the air impure. In using it for the purification of stables, the use of as much as will whiten the floor is about right, but its good effect is not confined to this alone, for in the manure it will always be combining with ammonia. Hence it may be used liberally without fear of loss by so doing.

KEEPING CARNATIONS AND ROSES OVER WINTER.

C. M. C., Monmouth, Me.—How should carnations and tea roses be kept through the winter in this section?

ANS—Lift them and plant them in moderately shallow boxes and close together, but not close enough to press against each other, and winter them on a shelf in the cellar and near the window. Or put them singly in somewhat small pots. Keep them as cool as possible in winter, that is, say between 32 degrees and 40 degrees and avoid a high temperature or a low one. Ventilate freely when convenient, but avoid draughts, and never allow the soil to become very dry in winter. If the roses are strong and have been well ripened, they will not need so much light in winter, but can be kept well enough on the floor of the cellar.

Miscellaneous.

L. M. H., Roxbury, Va.—What is the nature of the process and machinery for manufacturing cedar oil?

ANS.—The wholesale druggists here inform us that most of their product comes from a secret process which requires expensive and complicated machinery.

C. G., Ridgeville, Ill.—1. How far apart should Palmetto Asparagus be set for field culture? 2. Will it get past the first cutting on rich soil without manure?

ANS.—Asparagus in the R. N.-Y.'s estimation is generally planted too close. We should choose four feet by 18 inches for field culture. 2. Yes, but the stalks will be smaller.

B. M. C., Old Point Comfort, Va.—1. What is the proper time for transplanting such trees as beech and live oak? 2. Which is the better time for sowing grass—fall or spring?

ANS.—1. For your climate transplant all deciduous trees now, evergreens in *early* spring. 2. It is now so late that we should prefer spring.

A. S. B., Waynesboro, Pa.—What are the names of the apples specimens of which are inclosed?

ANS.—The specimens were submitted to Messrs. Ellwanger & Barry, of Rochester, New York, who tell us that although the apples are not as fine specimens of their respective varieties as those grown by themselves, still they think that No. 1 is a Fall Pippin; Nos. 2 and 4 are Northern Spy, and Nos. 3 and 6 King (of Tompkins County.) No. 5 they do not recognize.

V. A. T., Chili, N. Y.—1. What is the best early potato for field culture? 2. Is the Early Essex good as regards yield and quality Where canit be obtained? 3. Is the Maine Rose a late potato and is it a good marketable variety?

ANS.—1. In one locality one kind succeeds best; in another, another kind. The only good test is to try different varieties in a small way. 2. R. D. Hawley of Hartford, Conn. It yields well at the Rural Grounds and the quality is excellent. 3. The Maine Rose is the Early Rose raised in Maine.

F. E. E., Sectonia, Ohio.—1. I want to set out about an acre of strawberries. I can buy Bubach No. 5 plants right here for $5 per 1,000, and at a New Jersey nursery for $3 per 1,000. At which place should I buy? 2. I wish to set out about 1,200 blackberry plants next spring. I want a fine-looking berry, of good quality and productive. I can get Agawam and Kittatinny for $10 per 1,000 and Taylor for $5; which should I get?

ANS.—1. If you know the home plants to be strong and good, buy them in preference. The difference in price is scarcely to be considered. 2. We would advise you to try Kittatinny and Minnewaski.

J. W. G., Elkhorn, Canada.—1. How can I obtain the seed of an especially early tomato spoken of by Mr. Falconer in a recent R. N.-Y.? 2. Have soft-wood ashes (those from poplar) and bone ashes much fertilizing value?

ANS.—1. The tomato referred to is probably the Ignotum; the seed will be offered by seedsmen in their forthcoming catalogues. 2. Ashes from soft wood generally contain a larger percentage of potash. According to Dr. Kedzie's estimate, ashes from poplar wood are worth about $15 per ton for fertilizing purposes, although the value of any particular sample could be determined only by analysis.

Discussion.

CULTIVATE OR MULCH—WHICH?

P. H. R., DOWNIEVILLE, CALIFORNIA.—"Plants will grow whether we understand the method of their growth or not," as Prof. Porter says, but the agriculture of the 19th century demands thinkers—such as we confidently hope the agricultural colleges are turning out—hence radical changes in methods ought not to surprise those who have nearly worn out their lives in the vain effort to wear the world out by crippling a side at a time. "Plants will grow;" but will they all grow alike; or will some delve deeply for sustenance while others draw life from very near the surface? Study both ends of your plant. He who has not studied root-growth is ignorant of the fundamental knowledge necessary to the intelligent production of any plant, and if he is successful he is so by the favor of God or because kind Nature holds a bounteous store which the plants may appropriate despite much maltreatment. If we must follow the present generally adopted system of stirring the soil to promote its productiveness, then it follows that we ought to inaugurate the closest system of study of the long-neglected end of the plant. But forces are active which will, probably, greatly change the requirements of food production. New lands are being settled and utilized for the production of their quota of things which may be, for convenience, more susceptible of cultivation than mulching; new knowledge is obtained by the public of facts which lead them to discover the non-necessity for much that has been considered indispensable. Corn is produced solely for the fat there is in it. Is grease king? It is not a necessity and its unstinted use is more condemnable than praiseworthy. Corn is the only important crop that cannot be more easily mulched than cultivated, and to plow up the roots of the plant to produce

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies.

an ear of corn is about as wise as to wash the feet to make the hair grow.

The study of roots would be the best education obtainable by any man who tills the soil. Just remember that, though we often change the habit of the top of the plant, we have never been able to change its root-growth—except by selection—notwithstanding all the root-pruning to which we subject it. It is difficult to kill our garden plants; but we *can* do it, or at least so cripple them as to make them unfit to breed from. This terrible root-destroying process, to which our plants are yearly subjected, makes it necessary to be changing to new originations of plants. "Our varieties run out," the farmer says. What wonder that anything should *try to "run"* when an ignorant, well-fed man with a lively team starts at it with a deep-running shovel-plow! It seems to me folly "of the ordinary kind" to put on a lot of manure to grow a crop of weeds; consequently I do not grow them. But it seems folly "of no ordinary kind" to put on an abundance of manure, and, having grown a strong lot of surface-feeding roots, to mangle them with your implement of torture called a cultivator. I have no plow or cultivator with which to stir the soil after planting. In my method no weeds are allowed to mature; I have water in abundance with which to dampen the soil, when necessary. Now, given a "stirrer" and harrow with which to prepare my seed-bed, what useful purpose will a cultivator serve on my farm? It may be that the plowing, cultivating and hoeing of the ground may be of value in pulverizing the manure lying near the surface, thereby affording the *next* crop a better chance for available material for growth; but the crop *then needing* it is certainly injured. Cultivating may destroy some larvæ; but the most destructive insects do not burrow, and those that do, sink so near the plant, as a rule, that they are not found by the ordinary methods of cultivation. If it is said that manures undergo decomposition from the exposure to light and heat incidental to cultivation, I say that it is more than offset by the early, increased vitality of the plant caused by allowing the ground to become warmer; besides, what does it avail you whether the manure is decomposed or not since there can be no roots in the soil reached by the cultivator? When you use nitrates on the surface in which there are no roots the land must receive just the proper distribution of moisture or your nitrates will leach away in the winter rains. These considerations, added to the facts that manure enriches the soil only for about a foot in depth, and that one-third of that is lost by the system of cultivation generally adopted, lead one to inquire, seriously, whether the hour is not pressing when we should adopt many new methods in modern agriculture?

Yesterday I soaked the ground around a hollyhock that stood 11 feet high, and pulled it up. It had one root that went down, but the rest of its roots were only from one to two inches beneath the surface. Did I plow about it? No. Neither did I hoe it; but flat-lying leaves, like those of the oak, were scattered about it, and water was given it several times during the season, and thus do I raise all kinds of vegetables and fruits in a state as near perfection as may be seen in this country.

Apropos, I shall plant, this fall, wheat in drills and test four methods: Mulching with straw; mulching with boards, only allowing space for the plants to come up; leaving some to fate, while some will be cultivated.

In Mr. Terry's criticism of V. A. S., on page 509, he seems to be "boring pretty close to the lead," as we would say out here. He says, in discussing the propriety of raking off the mulch to cultivate: "It might pay on strawberries where one gets $400 or $500 an acre; but then I would put it back after working the ground." Now, if it were my case, I should consider that, before the season had advanced far enough to make soil-stirring profitable, a considerable amount of vegetable mold had formed in the suface of the soil under the mulch, and that it was precious to the roots of the plant and necessary for the latter's perfect development; consequently I would rather pay for allowing the mulch to rest than for raking it off, cultivating the ground and replacing the mulch. Try mulching on all your crops, leaving it on and giving them a little water if you can. Even a very little water is valuable if put on a good mulch at the proper time. Try this method, and you will wonder how strangely we have clung to the vicious habits of our ancestors. [R. N.-Y. Our readers will remember that this writer lives in California where peculiar conditions of agriculture are found.]

A MILKMAN AGAINST THE SILO.

A. J. T., FRANKLIN PARK, N. J.—Contributors to the RURAL NEW-YORKER from time to time have treated on the advantages of a silo and the use of silage as a factor in the acquisition of a plethoric bank account and I do not now remember having seen within the last year or two a single correspondent who did not strongly favor the silo. In the very teeth, as it were, of so much favorable evidence, it is with considerable diffidence that I venture to offer anything that looks like dissenting from the popular favor in which it is apparent the silo now basks. However, I will state only facts, leaving RURAL readers to form their own opinions. It is now several years since I was seized with the silo fever and while it was at its hottest I erected a silo of medium capacity holding perhaps 70 tons. I have the silo yet, but it is no longer annually stuffed with silage It was built wholly above ground, and as a receptacle for the storage of green food for stock it has proved worthy of the confidence placed in it, all the silage taken from it being of unexceptionable quality and in all respects satisfactory as a wholesome and nourishing fodder for my cattle, so that the fact that the structure has been diverted from the uses for which it was originally intended cannot be ascribed to any inherent defective qualities of the silo itself. It now yearly contains plain honest clover or Timothy hay, which is leisurely stored therein at hay time, and as leisurely and unexcitedly taken therefrom on its way to the feeding mangers later in the season. The reason of this change of heart may be briefly stated as originating in the effort to make silage a staple article of food in a dairy of milch cows, the milk from which was daily forwarded to customers in New York City.

The railroad transportation to the city covered only about 40 miles. The milk was aërated and cooled in the usual way known to any milk dairyman, and left in a tank of ice water until hauled on the afternoon of each day to the railroad station. Every precaution was taken in the matter of cleanliness of the utensils employed and nothing of the most orthodox methods was omitted to make the milk sweet and wholesome. The ration of grain fed with the silage consisted of ground corn and oats together with a proportionate amount of wheat bran and there was no neglect in feeding. A short time after commencing to feed silage, I received a note from the dealer in town asking why I did not send better-smelling milk. I replied, inquiring what was the odor he objected to, adding that it was perfectly sweet when it left my premises. His answer was more emphatic than polite, and included an opinion that unless a reform was at once instituted he could no longer attempt to sell my milk. I was suspicious of the silage, but cordially disliked to be obliged to relinquish my favorite theory that the system of silage was to be the future hope of the dairy interests, and I determined to give it a thorough test even at the risk of losing my customer. With this commendable resolution in view I wrote him that possibly my man at home was at fault in his care of the milk, and that I would give him such a "raking over" as would doubtless improve matters in the milk-house. The "raking over," however, consisted in ordering the man to stop the silage and feed clover hay and the usual ration of grain only. This continued for a couple of weeks, during which time the city milk-man reported an agreeable change in the odor and taste and that everything was satisfactory. After giving him time to settle down fairly to this conviction, I again ordered that the silage should be fed, limiting the quantity to only one feed a day. In two or three days I again heard from town. "What is the matter with your milk? It smells worse than a sour-kraut barrel."

I decided to visit the milk-dealer in person and examine for myself if his fault-finding had any foundation in fact. An hour was selected before he had begun to distribute the milk, and, in fact, before he had opened the cans. He asked me to walk around to his refrigerator and inspect a can, as he unfastened and removed the lid. I did so, and as he quickly pulled off the lid it was deftly turned up side down, thus bringing the cylinder with all its accumulated fragrance directly in contact with my olfactories. The "bouquet" was indescribable, but approached as nearly as may be to that of a combination of stale sugar-house molasses and some kind of acid—something which while not strictly unwholesome, was yet entirely foreign to the usual and natural odor of sweet milk.

"Now," said he, "I don't personally dislike that smell; I could drink milk well enough myself that smelled no worse than that; but my customers are making such a great racket that I shall lose them all if I continue to sell them this milk. You *must* manage in some way to prevent this odor or we shall be obliged to part company—you can see or smell for yourself that *something* is wrong."

Convinced by this time, beyond peradventure, that the silage was at the bottom of the mischief, I reluctantly gave an order to feed the milch cows no more of the stuff. The same dealer afterward continued to take the milk for a long time, reporting it as entirely satisfactory to his patrons. The silage thenceforth was relegated to the young stock or dry cows, much to the disgust of those we were milking, which would any time toss aside good hay to get at a mouthful of silage. Perhaps in a milk business where the fluid is distributed to customers soon after milking no harm would result; but for milk sent long distances to a city market I should interdict the silo by all means.

EARLY KING AND ERIE BLACKBERRIES.

T. GREINER, NIAGARA COUNTY, N. Y.—Some of the largest of these two berries in existence have been under my almost daily observation, during their growing season, for several years, and this may be a sufficient excuse for me to volunteer to add my mite to the literature on the subject. I am quite certain the Erie is distinct from the Lawton, but greatly doubt whether it is very much better. It is the same strong grower, and, if anything, more productive. The berry differs but little in quality, but is plumper or rounder in shape. The cane is exceedingly thorny, apparently healthy and hardy in New Jersey. Its greatest fault is one which it has in common with the Lawton, perhaps even in an intensified degree, namely that of turning red and appearing stale or in the first stages of decay very soon after being picked. A few hours' standing renders freshly-plucked, luscious fruit in the baskets so exceedingly unattractive as to be unfit for sale, and I have known the greater part of a crop left on the bushes to go to waste merely on account of the unwillingness of buyers to accept the ill-looking stuff.

While, on the whole, I think the RURAL NEW-YORKER has spoken too favorably of the Erie, its verdict concerning the Early King does not, in my opinion, do it justice. From first acquaintance, I have always held and still hold the Early King in high esteem as a fruit for the home garden. I have found it the equal of the Early Harvest in earliness, and while the latter, where hardy enough, is a good market berry, it has not the quality which would entitle it to a great deal of respect by the home grower. Here the Early King finds its place, for although the berry is small, it has all the superiority in sweetness and absence of core which characterizes the better kinds of wild blackberries. In cane it seems to be moderately vigorous and healthy, and fairly productive, although not the equal of many others. I believe that it well deserves a place in the home garden, which is more than I would care to say about the Erie.

D. B., COLERAIN, OHIO.—I see in the RURAL NEW-YORKER of October 5, a lengthy communication from G. W. Campbell of Delaware, Ohio, in regard to the Woodruff Red Grape in comparison with the Colerain. He speaks of it as not being so vigorous a grower as the Woodruff. I have measured with a rule the length of the growth of some average vines of Colerain and the Woodruff, without any forcing or the use of any fertilizer whatever. Most of the main shoots made from 10 to 20 feet of growth during the past summer. I measured the entire growth from one bud starting in the spring, and it was 52 feet. If the Woodruff or any other variety can beat that, let us hear from any person who has it through the RURAL NEW-YORKER. Besides, the quality of the Colerain is much superior to that of most other kinds, and its earliness, too, will commend it to all. I do not care to criticize Mr. Campbell's judgment on grapes; but as he says of the opinion of the Woodruff held by the RURAL's editor, on further trial and acquaintance with the Colerain I think he will change his opinion.

THE DRESSED BEEF BUSINESS.

F. E. E., GENEVA, N. Y.—1. The RURAL asks: "Has the trade in Chicago dressed beef made itself felt in farming interests in your section?" Yes. A warehouse at our railroad station practically controls the price of dressed meat. This price is such that local butchers can buy the best dressed meat at a nominal figure; hence if they handle cattle in the home market it must be at a price low enough to compete with the dressed-beef price. There is no longer a demand for tallow at prices for which our butchers will render it, and all the rough fat goes as offal. This throws more of the expense of handling on the carcass and the price on foot must be set low enough for these expenses to fall within the dressed-meat price. Thus the burden is thrown on the stock-raiser and feeder. The price is too low to make it safe for farmers to raise and fatten stock with any certainty at all of making even a small profit on the operation.

2. To what extent has it affected the raising and fattening of beef cattle? My acquaintance with this market has been comparatively short, but from accounts and present appearance it seems the trade in beef cattle has become nearly stagnant. Very few really good beeves can be found. The few I have seen driven to market were scarcely above good store condition, and would bear 30 to 60 days' feeding for a good market.

3. Has it changed the business of local butchers to any extent? Yes. There is a constant pressure to cut Chicago dressed meat from the competition in trade. Each must put before his customers as good an article as that offered by others, and he will buy it from the cheapest source. This by a natural course will soon be the warehouse near the railroad, because the best cannot be profitably produced at home.

4. The business is carried on to the farmer's disadvantage most plainly. The consumer is not benefited in the least by the change, and it is doubtful if the butcher was not better off when he had his old-fashioned dealings with the farmers.

5. What can a person suggest as a means of fairly regulating the matter? This is not an easy question to answer. If one can tell just how to handle the Standard Oil Trust, the Sugar Trust, etc., the meat question can be settled in the same way. The State inspection laws are wrong, because they inferfere with constitutional freedom of trade between the States. It seems that the only feasible legal means is a general law passed by Congress which shall at once grasp the "Trust" principle and break the power of a few monied kings to manipulate the trade of the whole country. This is one of the great questions our legislators have to face and it is only killing time and beating around the bush to pass such measures in our State legislatures as can be construed to conflict with the freedom of trade between the States.

What Others Say

TRUE INWARDNESS.

THE MICHIGAN EXPERIMENT STATION mentions Burpee's Superior, Rural New-Yorker No. 2, June-eating, New Queen and Early Oxford as meritorious potatoes.....

FROM various tests in the culture of potatoes at the N. Y. Experiment Station the following conclusions are drawn, as given by the American Garden and previously alluded to in these columns. Little or nothing is gained by using cut potatoes for seed, over whole tubers of the same weight. Seed tubers badly sprouted yielded about 8½ per cent. less than the unsprouted ones. Earliness of crop was not influenced by exposing the tubers to light and warmth before planting. Yield was materially reduced by removing the seed end of planted tubers. Fertilizer placed below the seed may be slightly preferable to fertilizer placed above it. The more rapid consumption of the seed tuber on rich than on poor soil is probably due to a more abundant supply of moisture.

WHETHER it is better to place the fertilizer above or below will depend upon the season—whether wet or dry. So, at least the R. N.-Y.'s experiments indicate as given in another column of this issue.....

THE editor of the New England Farmer, with this year's experience, is ready to let late potatoes go and depend on but a single variety and that variety will be the Polaris. The R. N.-Y. has tested three distinct kinds under that name.....

THE MARK LANE EXPRESS says that there is a difference of opinion as to the proper time to harvest potatoes. Many farmers prefer raising the crop immediately after growing ceases; others believe that tubers should be left in the ground until

the haulms have fallen, and the weather has become cool. The main point of contention resolves itself into a rather nice question: Do the tubers keep better when lifted early, or later? Some hold that if potatoes are dug as soon as they begin to rot, it will stop the disease from spreading; others dispute this theory under the impression that when the disease has set in, it is best to let the tubers remain in the land until the chill breezes of October come to their aid—to the rescue of the unaffected potatoes. The subject is one which our experiment stations might well experiment upon.....

PROF. I. P. ROBERTS states, in the Breeder's Gazette, that water should be hot—not less than 90 degrees—in order that it may be palatable to animals. His sheep took it without injury and with apparent relish at 105 degrees. In order to induce animals to drink water enough in cold weather to furnish a solvent or disintegrant for the large amount of dry matter consumed, especially by dairy cows, the animal should be kept warm. Some experiments with pigs last winter at the Cornell Experiment Station, seemed to show that those kept in cold quarters were unable to consume as much food as those kept in warm quarters, simply because they could not be induced to drink a sufficient amount of cold water to make assimilable their food.....

PROF. ROBERTS heats the water for all the domestic animals, the station horses included, and he is quite certain that it gives a saving either in food or in increased production of not less than 10 per cent. Farmers are certainly progressing. Fifteen years ago he was hissed off the stage at a dairymen's convention in New York because he advocated heating water for dairy cows.....

PHARO'S POTATO CHART will interest and instruct all growers of potatoes. It is about five feet square and printed upon fine, heavy white paper which may be folded to any size desired. It shows the origin, formation and shape, relative size and time of maturity of the leading varieties of potatoes.....

IT would appear from our reports that there is no other variety that forms its potatoes closer to the main stem than does the R. N.-Y. No. 2, and there is no other that bears so low a proportion of small tubers.....

WE have lost none of our faith in Brownell's Winner, though it would be well, perhaps, to buy "seed" from localities where the rot or blight did not prevail.....

THERE seems to be little doubt that *sound* potatoes will command remunerative prices this year. According to our reports Iowa, Illinois and Indiana have produced the largest crops. Nearly every report we have received from the Eastern States mentions "blight" or that the vines died prematurely. The short crop is in many instances attributed to the Flea-beetle.....

THE MICHIGAN FARMER says the loss by hilling potatoes is estimated by a well-informed grower at not less than 15 per cent. of the crop.....

IN reply to a question as to the relative values of corn in the ear, shelled corn, or crushed corn, Prof. Shelton replies in the Industrialist that the answer is wholly one of cost of shelling, grinding, or crushing. If he had plenty of hogs to follow cattle, he would prefer to feed corn in the ear, according to the familiar plan. If he had plenty of power, and it was easy and comparatively costless to shell or grind or crush, then he would shell, grind, or crush as the case might be. He is satisfied of this, however, that with beef at present prices, and corn at less than 20 cents per bushel, we cannot afford to pay five cents a bushel for shelling and grinding.....

MR. A. I. ROOT says that Henderson's Bush Lima is fully equal in flavor to the pole Limas. He says that a peck of pods will make more quarts of shelled beans than a peck of large Limas. Mr. Root further says that it has been catalogued for years as the Dwarf Sieva. He thinks that the Kumerle will prove a wonderful acquisition.....

MR. HOARD says that practical dairymen are now milking cows that breed once per annum, about 11 months of the year, keeping them well enough fed, so that there is a good flow of milk and a healthy, vigorous calf, too. A good cow's milk for two months, is worth more than a common calf at birth.....

THE FARMERS' REVIEW trusts that the season of farmers' institutes now about to open will be the most successful on record, and in order that this may prove the case it hopes politics will be entirely left out of the question at such gatherings and strict attention be paid to agriculture and its truly kindred topics. The only cloud in sight that threatens to dim the bright record of our farmers' institutes is this ghost of politics, which has already appeared upon more than one occasion. To the managers of these annual conventions of farmers we would strongly suggest this idea and advise them to substitute the names of practical farmers for those of professional-circuit-going politicians in printing the programmes for the approaching institutes. Leave them out!.....

AN experienced writer in that incomparable journal the London Garden, says that potatoes need no drying, and if lifted, as they ought to be, in favorable weather they may be stored as fast as dug.....

THE following note is copied from the London Garden of September 21st:

"RURAL NEW-YORKER POTATO.—In the spring of 1888 I received a potato from New York, for trial. It was called Rural New-Yorker No. 2; but as the season turned out unfavorable, I resolved to give it another trial before forming or expressing an opinion on it. This spring I planted the produce of one of last year's plants, and have just dug the crop, and a finer lot of tubers I never saw, there being no really small ones, but all of good average size. Several are one pound in weight and of most excellent quality. It is a white potato, very solid, with shallow eyes and oval shape, just the thing for a main-crop variety. I may add that the potatoes were planted between rows of young fruit trees, and in a quite open position the crop would doubtless have been heavier. The tubers were simply cut up to a fair seed size. The crop from one medium-sized potato in two seasons, amounted to fully two bushels of fine sound tubers.—J. Groom, Gasport."....

ABSTRACTS.

——FARMERS' REVIEW. "The RURAL NEW-YORKER, after quoting portions of an editorial published in a recent issue of the Farmers' Review, relative to the analyses of baking powders made by the Department of Agriculture, says:

'The RURAL NEW-YORKER quite agrees with the spirit of the article above quoted, and the Farmers' Review does good service in thus forcibly condemning such apparently needless work. Turning from the shortcomings of the Department of Agriculture, the RURAL NEW-YORKER would feel pleased if the Farmers' Review would heartily join it in condemning a culpable piece of business in which certain farm journals are engaged. The publishers, owners, proprietors or editors, as the case may be, of these papers are pecuniarily interested in booming certain Montana lands. They praise them up to the skies editorially, while their advertising columns are liberally given up to Montana advertisements. Now all this is being done while the readers of these journals are kept in ignorance of the fact that the editors or proprietors are cracking up the lands in which they own a share and for which they are striving to obtain the highest price.'

The Farmers' Review heartily indorses the position taken by the RURAL NEW-YORKER on this question. It is certainly beneath the dignity of any agricultural newspaper having the interests of its constituents at heart to lend itself to advertising schemes of that nature; and the paper that seeks to build up its financial prosperity on the sands of real estate speculation, outside the paths of legitimate journalism, is a disgrace and reproach to the whole fraternity."

——BALTIMORE AMERICAN: "Charges of plagiarism still continue. It is now hinted that successful and hitherto unsuccessful farmers crib the stores of their corn magazines from Nature's cereals."

——MICHIGAN FARMER: "The trench system of culture of potatoes, which is a hobby with one of our esteemed agricultural contemporaries, is almost universally conceded by those who have tried it to be good for a small plat but too expensive for field culture."

——DR. HOSKINS, in the Vermont Watchman: "'Gardeners, as a rule, are in favor of changing the seed of potatoes frequently. Experience seems to have proven the desirability of this change, and leaves little doubt but that planting the same kind year after year on the same soil tends to weaken the variety.' So observes an exchange, but the statement is true only of gardeners located south of the true potato belt. Where the potato is at home, and well treated, on suitable soil, it will improve rather than weaken."

——PHILADELPHIA PRESS: "A farmers' club is the proper weapon with which to stir up agricultural interests."

——"TO THE BREEDER'S GAZETTE it seems that Secretary Rusk sized up the situation exactly when, after an examination of the butter extractor, he said sententiously: 'This means revolution if it means anything.' And it is not a revolution backward, either."

——TRIBUNE, OF ROME, N. Y.: "The national flour should be wheat."

"In poultry circles, the old hen generally proves her good standing by sitting."

——READING TELEGRAPH: "Corn is an emblem of peace, but it is never appreciated until it gets on its ear."

——ORANGE COUNTY FARMER. "The consumer knows the tendency of the small fruit to sift through to the bottom, and instead of being willing to pay for a package of fruit like the top, he is willing to pay only for such fruit as is at the bottom."

"A hard-handed tiller of the soil was presented with a sample copy of an agricultural paper at one of the county fairs recently. He refused to give 25 cents for a trial subscription because 'times were hard and money scarce,' and with a knowing wink in his off eye passed on. He stopped at a striking machine, not four rods from the paper man, fumbled the copy of the paper into a ball, thrust it down into his pocket, and blew in just 45 cents to show that he couldn't strike any harder than a smaller man who followed the business for a living"

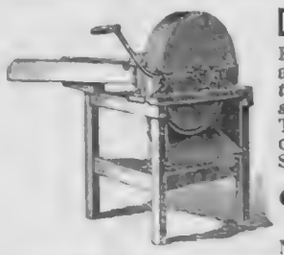
——CORRESPONDENT, N. Y. TRIBUNE: "If a German sits down on a piece of land, you can almost insure his success. Two Germans, now better off than myself, worked for me by the day 20 years ago."

Miscellaneous Advertising.

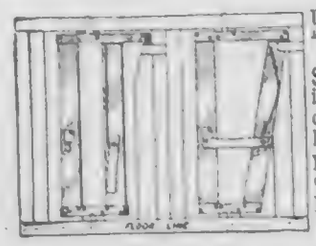
Hood's Sarsaparilla
100 Doses One Dollar

It is Economy to buy Hood's Sarsaparilla, because it is the only medicine of which can truly be said: "100 Doses, One Dollar." It possesses peculiar strength and curative power, and effects cures where other preparations fail. Try it, and you will realize its merit Sold by all druggists. Be sure to get Hood's Sarsaparilla.

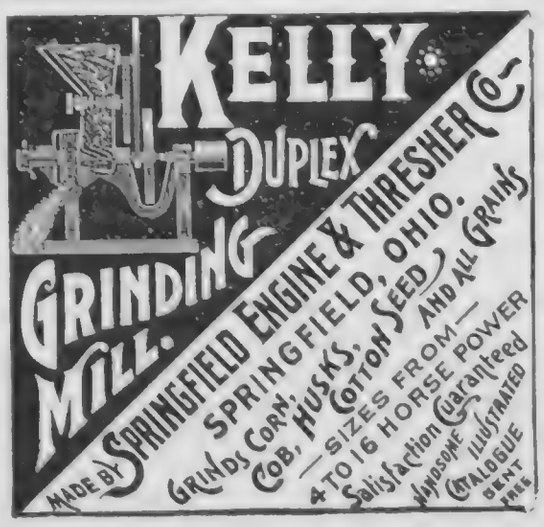
NOTHING ON EARTH WILL **MAKE HENS LAY** LIKE SHERIDAN'S CONDITION POWDER
Highly concentrated. Dose small. In quantity costs less than one-tenth cent a day per hen. Prevents and cures all diseases. If you can't get it, we send by mail post-paid, One pack. 25c. Five $1. 2 1-4 lb. can $1.20; 3 cans $5. Express paid. Testimonials free. Send stamps or cash. Farmers' Poultry Guide (price 25c.) free with $1.00 orders or more. I. S. JOHNSON & CO., Boston, Mass.



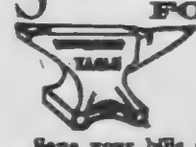
DICK'S FEED CUTTER
For Hay, Straw and Ensilage. *The only machine that cuts and splits corn stalks.* We also sell the TRIUMPH STEAM GENERATOR, and GRIFFING'S CORN SHELLER AND SEPARATOR. Write us at once H. B Griffing, Sons & Co., 70 Cortlandt St., New York City. N. Y.



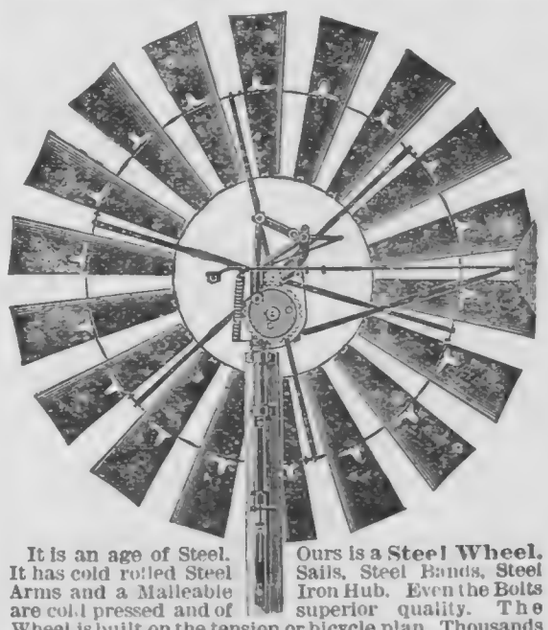
BOON to DAIRYMEN
Perfect Swinging Cow Stanchion. Self-locking by entrance of cow's head. Free delivery at principal points. Send for circular. Mention this paper. Scott & Locke, Orford, N. H.



SOMETHING TO HAMMER ON, FOR FARMERS.



ANVILS.
Save your bills at the Blacksmith's and Machine Shop by having on the farm one of these celebrated ANVILS—*fully warranted*, and of the best material.
Best Hardened Cast Steel Face and Horn.
All sizes, from 20 lbs. to 90 lbs., at from $6.00 to $8.00 each. Larger sizes at 9 cts. per lb. Address, for Circulars, &c., FISHER & NORRIS, Original and Only Manufacturers. Trenton, N. J.



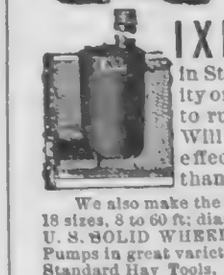
It is an age of Steel. It has cold rolled Steel Arms and a Malleable are cold pressed and of Ours is a **Steel Wheel.** Sails, Steel Bands, Steel Iron Hub. Even the Bolts superior quality. The Wheel is built on the tension or bicycle plan. Thousands of them are in use. They have been and are sent the world over **on approval.** $50 buys our perfect Self-regulating Steel Aermotor which does as much work as any 10-ft. wooden wheel. $100 buys our perfectly Self-regulating Steel Geared Wind Mill for grinding grain, cutting feed, sawing wood, etc., which does as much work as any 16-ft. wooden wheel. We are the only makers of a Tilting Tower that **never has to be climbed.** It saves human lives and doubles the life of the wheel. **The Aermotor runs and does effective work when all other wheels stand idle for want of wind.** Send for copiously illustrated printed matter showing how to put power in your barn. ***THE AERMOTOR CO.,*** 110 & 112 S. Jefferson St., Chicago.

EVERY FARMER HIS OWN MILLER DO YOUR OWN
Shelling and Grinding at home, saving tolls and teaming to and from the Grist Mill. This work can be done rainy, windy days when out-door work is suspended on the farm. The same Mill will cut corn stalks, saw wood, run churn, grindstone, pump water, etc. We make the HALLADAY Geared Wind Mill in 11 sizes, 1½ to 40 horse power, and GUARANTEE they have no equal for Power, Durability and Storm Defying qualities.

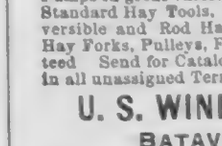
1 X L 2-HOLE Corn Sheller
Adapted to run by hand, horse, steam or wind power. Not cheaply made but strong, durable and effective in its working yet light running. It is constructed similar to the large Power Shellers and is the best 2 Hole Sheller on the market.

HORSE POWERS
and JACKS, both single and double Geared, made heavy and strong.

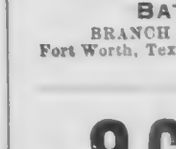
THE IXL STALK CUTTER
made in 5 Sizes, with Safety Fly-Wheel, Safety Lever, and all late improvements.



THE IXL IRON FEED MILL
3 sizes, both Belt and Geared Mills. Can be run by any power and especially adapted to Wind Power. Will grind any kind of grain and is the lightest running and most effective Feed Grinder made.



SAW TABLES
Both Swinging and Sliding Tables. We make a Saw Table especially adapted to sawing long poles. Special care is taken to make these machines strong and durable.



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THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, NOVEMBER 2, 1889.

THE reports of the Womens' National Potato Contest are now in the hands of the judges and the prize-takers will be announced as soon as practicable.

THE R. N.-Y.'s ADVICE TO FARMERS: *Don't save for seed potatoes or purchase seed potatoes which, owing to rot, blight or any other cause, failed to mature fully.*

IT is worthy of note that the R. N.-Y. seedling potatoes from seed (true seed) planted last February, blighted as early as established varieties growing in neighboring fields.

FARMERS who have received letters from "Webb & Warren" of Philadelphia, offering to purchase butter, are advised to "go slow." The R. N.-Y. will print what it knows about this firm next week.

ROT, Flea-beetles and blight! These are the enemies that we had to contend against in potato culture the past season. The R. N.-Y. met these enemies and fought them with all its might. But it met with a disastrous defeat.

"THERE'S no use talking, we farmers with hilly farms have to come to the use of swivel plows. The old plows leave too many dead furrows for rains to wash through and start a gully." That is the way a New Jersey farmer recently put it and there are many others who will agree with him.

IN a wet season, put the fertilizer *over* the seed potatoes; in a dry season *under*. That is, thus far, the result of the R. N.-Y's. tests. But how is one to know whether the season is to be wet or dry? Well, read the R. N.-Y. If it predicts a *dry* season, its readers may assume it will be WET!

MR. E. L. GAULT, Treasurer of the Keystone Manufacturing Company, writes:

"Your excellent paper with the high standard you have recently placed it at, is a work of art well worthy of careful preservation and a fit representative of American agriculture. We wish you every success!"

HOW HIGH will potatoes go? Seed potatoes will be high next spring, but potatoes for the general market will not vary much in price from other years of scarcity. Customers seem to have settled upon an intrinsic price for potatoes. When the price goes above that, consumers will eat rice instead of potatoes. Again, whenever the price reaches a certain limit, we shall find European potatoes in our markets. Two years ago this happened; it will happen again next spring.

A. W. LIVINGSTON'S SONS send the following note:

"WE must tell you of our experience thus far with the Kumerle Dwarf. Last winter we were fortunate enough to secure half a dozen packets containing 25 beans each. We did not test them because our friend Mr. Root, of Gleanings in Bee Culture, offered us 'their weight in gold' for them, and we accepted, receiving $78. This we considered our golden opportunity to make first sale of this promising variety."

PROF. C. M. WEED reports the successful use of the Bordeaux Mixture on potato vines. Applications were made May 28, June 6, June 29 and July 16. The blight appeared in the field about the middle of June and for six weeks did serious damage. Prof. Weed says that the sprayed vines remained green longer than those not sprayed with the mixture, and the yield is reported as being nearly 20 per cent. heavier on the sprayed portion, while it is claimed that the tubers were also free from scab. By adding London-purple to the Bordeaux Mixture Prof. Weed says we may fight the blight and the beetle at one operation. The R. N.-Y. tried the Bordeaux Mixture without any apparent benefit.

ATLANTA, by far the most populous, enterprising and important city in Georgia, is rejoicing at a recent decision of the Georgia Farmers' Alliance, which has selected the "Gate City of the South" as the place where it will build a large warehouse, through which all the supplies for the entire Alliance in that section will be handled. This means that the trading of 80,000 farmers will be done in Atlanta. The design of the Alliance is to do away with middlemen and cut down as much as possible the expenses connected with the purchase and sale of all farm supplies and products. This is an excellent idea which has for years been, here and there, put in practice by the Grange to a limited extent, and by the Alliance to a greater extent in several States, but especially in Texas. The greater the amount of business done, however, the greater the risk of mismanagement and partial or total failure; for while it is comparatively easy to secure a man capable of successfully managing a small business, it is a mighty difficult matter to find one able, honest and unselfish enough to manage a large one successfully.

THE reports of the R. N.-Y. potato No. 2—page 724—are all that space permits in this issue. They will be read with interest as showing in what soils and under what conditions the potato thrives best. Readers will kindly bear in mind that the R. N.-Y. can have no interest in praising this remarkable variety beyond its deserts, since the entire stock (a matter of two bushels) was sold several years ago to a single firm who propagated and introduced it. We have never raised it for sale, have none for sale and do not ever expect to have. It is all we have to show as the result of 12 years of work with seedling potatoes, the No. 3 and No. 4 having failed through rot and blight. Its value to the country—be it great or small—will be the sole measure of our reward.

The reports show that a careful man, who is willing to take pains with a small thing, can produce results well worth considering. The specimens of the potato that were sent to subscribers were, of necessity, small ones. Many of them, after their long journey by mail, were anything but promising in appearance. The R. N.-Y. has never distributed any seeds or plants that did not give promise of excellence. Those of our readers who believed in this fact went ahead with their little potatoes. When the price at which the potato is to be sold is announced, we shall see how many have paid for their year's subscription by their work with the little potato.

FAILURE OF THE NO. 3 AND NO. 4 SEEDLING POTATOES.

AS has been stated more than once in these columns, the RURAL NEW-YORKER seedling Potato No. 3 outyielded the No. 2, planted side by side, and the R. N.-Y. No. 4 outyielded the No. 3. Both varieties were shapely and of the first quality. It will also be remembered that our effort to raise at the rate of over 700 bushels to the acre last year failed on account of the trifling yield of the No. 3 caused by the destruction of the vines by the Flea-beetle. The best of the tubers were saved for seed and planted this year. Again the Flea-beetle destroyed the vines and the variety no longer exists. Worse than this, the No. 4, on account of rot and the Flea-beetle, seems so weakened that it may well be doubted whether it will ever regain its original vigor. We had hopes for these two remarkable varieties more confident even than for the No. 2, and looked forward with a deal of satisfaction to their early introduction to the farming public. Well, perhaps it is better to have labored earnestly and failed than not to have labored at all.

DANGER AHEAD.

IN the Northwest and still more in the South the Farmers' Alliance is taking quite an aggressive line of action not only in political but also in economic affairs connected with the agricultural interests. Until a comparatively recent date, the Grange strongly objected to any interference on its part as an organization in political matters; but of late it has changed its policy in this respect, having learnt that in order to advance the best pecuniary welfare of farmers, it must take decided action with regard to legislation certain or likely to affect their interests. From its inception, however, the Alliance has taken a prominent part in politics, now favoring one party, now the other, even in the same section, its course being directed by the influence it conceived the policy of either party would have upon the agricultural interests of the region. Its membership and influence are growing faster in the South than in any other section, and there is some danger that it may there be led into a policy that may cause it to lose the sympathy of the community at large. In South Carolina the war it has been waging against the Jute-bagging Trust is gradually involving side issues of a somewhat serious character. It began by boycotting the manufacturers and dealers in jute-bagging, and now it is extending the same method of intimidation to newspapers, towns and cities against which it believes it has any cause of complaint. One of the five daily papers published in the State, has been boycotted because the editor published something that displeased the Alliance men; the city of Greenville, the third in size in the State, is suffering from a stagnation in business due to a similar boycott; Spartanburg, the fourth city in the State, has also been boycotted by a local Alliance; while Charleston, the chief city in the State, has been boycotted by the Sumter County Alliance, whose members are forbidden to buy goods or send any cotton there. The boycott is probably the most persuasive means of coercion ever practiced by the many against the few. Still there is about it something brutal that is sure, in the long run, to enlist public sympathy in favor of its victims, if it is used too frequently or too persistently, and unsupported by public sympathy it is up-hill work for any movement, however beneficent, to succeed.

A GIGANTIC ORGANIZATION OF MILK PRODUCERS

IT is estimated that the milk bill of New York City amounts to $10,000,000 a year. The vast supply is furnished by about 10,000 farmers and milk-producers living in New York, New Jersey, Pennsylvania, Connecticut and Massachusetts, and is handled in the city by about 100 milk-dealers who are members of the Milk Exchange. This small body of middlemen organized for self-interest absolutely controls the price paid to 10,000 unorganized producers and demanded of 1,500,000 unorganized consumers. The latter cannot well form an organization; the former should have no great difficulty in doing so. A similar organization has been in successful operation for supplying the London market for 19 years, and surely what Englishmen have done for a city of 4,500,000 people, Americans can do for a city containing only one-third of that population. The first important step to that end was taken last Thursday at Middletown, N. Y., at a mass-meeting of 300 farmers from the five States that supply the city with milk. The design of the convention was to push the organization of a milk-producers' union to be known as the "The Union of Milk-Producers for the Supply of the New York Market." Its object is the formation of a vast trust to control the city milk market, do away, as far as possible, with middlemen, supply the consumers direct and regulate prices. There is no doubt that such an organization can furnish the metropolis with purer and better milk, at retail, for five cents in summer and six in the winter than that now supplied by the Milk Exchange at six and eight cents. Nearly all the adulteration which is now so objectionable to adults and so fatal to children is the work of the milk-dealers, and this cause of just complaint would be at once removed, while the producers and the consumers would be alike gainers by the success of the undertaking. The scheme originated at Oxford, Chenango County, about eight months ago, and already 30 local branches have been organized and 10 more are in process of formation, and such an impetus has been given to the enterprise by the Middletown Convention that it is expected that by next spring the time will be ripe for the organization of a stock company. This is intended to have a capital of $500,000, to be contributed by milk-producers at the rate of one share of stock, at $25, for each 40-quart can furnished per day. An agent will be stationed at each shipping point to receive and forward milk and cream, and there will be a central distributing depot at this city. It is expected that 200 branches will be established within the next three months. The plan is admirable and feasible. This is, *par excellence*, the era of organizations, and farmers who do not organize for self-protection and self-interest are not keeping up with the age.

BREVITIES.

WHAT do you think about rot in potato "seed" now?

WE have not succeeded in procuring any seed-balls of the No. 2.

THE R. N.-Y. has no occasion to feel sad that its potato challenge of $100, to go to some charity, was not accepted.

THE entries for the prize offered for the "Notes on a Back Number" are coming in lively. This will be an excellent "symposium."

THE indications are that there will be a revival of the interest in sheep. This is due to the continued dullness in cattle and hogs at the West.

WE have not succeeded in getting a single seed-ball of the R. N. Y. No. 2. We were in hopes that some of our North-western friends might favor us.

THE Dwarf Lima Bean Special has called out a good deal of comment. Next week Prof. J. L. Budd will detail his experiences in cutting back the ordinary pole Lima.

THE proportion of rotten potatoes raised in the barrel experiment was greater than the proportion of rotten potatoes raised in the "Contest Plot." It is difficult to account for this.

PROBABLY about the middle of next year some of our esteemed contemporaries will begin to talk about the auction system of selling farm produce which the R. N.-Y. has already described.

A BARBED Wire Trust has just been formed to tighten the grip of the manufacturers of barbed wire on the pouches of farmers and stock-raisers. It embraces nearly all the manufacturers in the country and has already put up the price of the product, and is expected to make another advance before long. As the patent monopoly steps out, the trust monopoly steps in.

SOME of our readers find fault with the R. N.-Y.'s cartoon pictures of the farmer. We have a picture coming now that will cause such readers to "take it all back." We have a photograph of five representative Illinois farmers who, as our correspondent states, "started with 0 and ended with 000." They are typical farmers, each one representing some distinct branch of agriculture or horticulture. This picture will give further evidence of the wonderful resources of photo-engraving.

WHAT is the cost of living in your neighborhood? This is a live question. In these times it is hard to think of one that is more important. Next week the R. N.-Y. will begin the publication of statements showing the cost of living in various parts of the country. All who have kept accurate accounts of their living expenses are requested to compare their accounts with those we shall publish and send us the statement. The R. N.-Y. thinks a good deal of help may be gained in this way.

WHILE bee-keepers at the North are agitating for legislation against the spraying of fruit trees with arsenites during the blossoming season as a protection against fruit-injuring insects, sportsmen at the South appear to have an equally valid cause for legislation against the use of Paris-green by cotton-planters for the destruction of the cotton worm. Complaints come from many quarters that the liberal use of this arsenite has been playing havoc with the game birds, which fed upon the poisoned worms, of which they are very fond. Partridges and prairie chickens which were very numerous in many regions have, it is said, been nearly all destroyed. Whole flocks having been found dead in many places. There is danger that unless the worms are saved from the poison, the sportsman's occupation will soon be gone in wide areas. Just as it's an ill wind that blows nobody good, it's a good wind that blows nobody ill.

Everywhere.

RURAL POTATO REPORTS.

(*Continued from Page 725.*)

Yield 14 pounds 6½ ounces, 14 pounds and one ounce marketable. Quality fine.
Sodus. O. B.

MAINE.

TEN pieces were planted May 5. Blight struck them August 1, and they were dug August 10. Yield 10 pounds three ounces, all marketable but four ounces. They were the handsomest potatoes I ever saw.
S. Deer Isle. G. L. R.

POTATO weighed three ounces and was cut into 13 pieces, put into a box in March, and set out in row, 12 inches apart, May 4. Yield 42 potatoes weighing 19 pounds, largest weighed 20½ ounces. F. W. H.
Warren.

MISSOURI.

EIGHT eyes planted April 10. Dug August 16. Yield 16 pounds. W. H. R.
St. Louis.

MINNESOTA.

FOURTEEN pieces planted May 2, dug September 13, yield 53 tubers weighing 18 pounds. Largest weighed one pound.
Grand Meadow. F. S.

TEN pieces planted on land without manure for four years. Yield 14 pounds, two ounces, largest weighing 14 ounces.
Pine Bend. F. M.

TEN eyes were nipped by frost, then nearly dried up. Dug September 30, yield nine pounds, 13 ounces, largest weighing 14½ ounces. M. M.
Minnesota Lake.

SIX pieces, planted about middle of April, dug October 4; 24 merchantable, 11 small; bad drought. W. McP.
Strother.

NEW YORK.

I CUT my potato, about the size of a hickory nut, in two pieces, and planted in a six-inch trench June 1, with a handful of bone dust and ashes above and below each piece with soil next the seed. The largest 11 weigh 11 pounds one ounce. The largest four weigh 26, 25, 23 and 19 ounces respectively; all good-shaped potatoes. P. A.
Perry.

I PLANTED my potato in eight hills May 16. So wet we could hardly cultivate them. Dug September 1; yield, 19½ pounds. One weighed two pounds, another one pound 11 ounces; only two or three too small to use; no rotten ones. S. T. B.
Collins Center.

I PLANTED 14 one-eye pieces in hills three feet apart each way; 12 grew. Blighted August 10. Dug September 1—30 pounds. Largest seven weighed 7½ pounds; one weighed 22½ ounces; remarkably smooth. No signs of rot, though other varieties are rotting badly. I would not give my 30 pounds of potatoes for three times the subscription price of the R. N.-Y. D. M.
Brookdale.

SIX eyes planted in garden May 10. Dug September 18, yield 14½ pounds, all sound.
Dempster. N. P. S.

PLANTED seven eyes. Dug August 31, 23 pounds, nearly all of eatable size. The largest weighs one pound 10 ounces.
Stockport. F. P.

I PLANTED my potato, and by cutting it in two and taking off sprouts, I made nine hills. Top-dressed with ashes, and mulched with new-mown hay. Blighted early. Dug September 10. Yield 16 pounds in all. Only three were small. The largest five weighed 24, 19, 17, 17 and 15 ounces respectively. No signs of rot. E. C.
Hoosick Falls.

I PLANTED my 13 potatoes cut to one eye, about May 20, on sandy loam. I plowed trenches four inches deep, scattered ashes and hen manure, mixed it with the soil, dropped the seed, covered with one inch of soil, scattered more ashes and hen manure, put on another inch of soil and filled up the trench as the potatoes grew. Flea-beetles attacked them, and blight struck them, but I got 13 pecks all of large size, the largest weighing two pounds. They are the finest lot of potatoes I ever saw, and are free from rot. I. P. W.
Fredonia.

THREE eyes, three hills. Hurt by frost. Yield 5¼ pounds. No bugs or beetles on the vines while other varieties suffered. The best potatoes were where I used stable manure. A. R.
Marilla.

FIFTEEN eyes from two small potatoes. I relied on the R. N.-Y.'s guess of a dry season and planted on my wettest soil. Used at the rate of 1,000 pounds per acre of Homestead phosphate. Failure. Yield only 7½ pounds. C. M. L.
W. Henrietta.

"A LITTLE dried-up thing" cut to four pieces. A table-spoonful of Bradley's phosphate in each hill. Yield 11 pounds. It is the "coming potato." R. H. T.
North River.

SEVEN eyes. Planted in trench. Yield 16½ pounds. C. H. F.
Forestville.

EIGHT eyes planted May 11 in trench, with a liberal application of phosphate. Dug September 27. Yield 50 potatoes weighing 15 pounds. The largest weighed 26 ounces. D. H. S.
Middleport.

THIRTEEN one-eye pieces were planted May 1 in trench in rich soil, fertilized the previous year with yard manure. Total yield 11 pounds, one-fourth pound unmerchantable. Five tubers weighed five pounds. Two weigh 1½ pound each. J. H. C.

TWO small potatoes made 12 eyes. Fourteen inches apart, trench system, four inches deep. Yield 24 potatoes, 19 marketable. R. C. F.
Sinclarville.

FOUR eyes. Hog manure used. Dug September 13, 15 tubers, weighing six pounds. J. D. H.
Constableville.

ELEVEN eyes, two with flesh no larger than peas. Dug September 17. Yield 19¾ pounds, 40 potatoes, 36 marketable. J. H.
Ea. Aurora.

BY cutting to single eyes and dividing the largest I secured 14 sets. Planted in a trench eight inches deep. Liberal dressing of "Unicorn" phosphate. Trench filled in at intervals. Yield 34½ pounds. No rot, though other varieties suffered. This potato has a future. R. N. L.
Red Hook.

THREE eyes sprouted in the basin. Potato yield five pounds 10 ounces. A. H. H.
W. Bloomfield.

EIGHT eyes. Yield 31 potatoes weighing 10¼ pounds. J. W. H.
North Greece.

FOURTEEN eyes, 14 hills. Yield 21¾ pounds. Much pleased with yield and potato. MRS. A. J. G.
Adams Center.

TWELVE eyes. Planted in garden and well fertilized. Yield 33 pounds.
Porterville. A. L. B.

ELEVEN eyes, cut in four pieces and planted in two hills in garden soil enriched with wood ashes. Yield 4¾ pounds. Another variety a few feet away rotted so badly that 12 hills yielded less than the two hills of No. 2. H. B.
Cobleskill.

NEW JERSEY.

I PLANTED my potato about May 8 in the field with other potatoes so they received only ordinary culture. Blight struck them before maturity. Dug September 7, yield 54 tubers. Weight 12 pounds 2 ounces.
Freehold. D. P. M.

SIX hills yielded 11½ pounds, one of which weighs 1¼ pound. They are very fine-looking potatoes. P. S.
Hillsborough.

SIX eyes planted in a box, produced 14 plants. Planted out six of them early in May, destroyed by bugs. Latter part of May planted remainder, which gave me 22 tubers weighing five pounds. J. W.
Vineland.

EARLY in May I cut my potato in five pieces, and put it back in the box a few days before planting. Fertilized with poultry droppings and phosphate. Had five pounds of handsome tubers. S. P. F.
Vineland.

I CUT my potato into 10 one-eye pieces, and planted April 20, in sandy loam, in a trench. I put the cut sides down, put on an inch of soil, then at the rate of 1,000 pounds of potato fertilizer per acre, and filled the trench nearly full. Bugs bad, and blight killed tops. Dug, August 15, 21 potatoes, weight three pounds six ounces; several rotted. Nice, smooth, good shape.
Westfield. C. R. W.

NEW HAMPSHIRE.

ONE tiny little tuber made seven hills of one eye. Dug, July 30, 4½ pounds. Blighted July 16; not a fair trial. MRS. B. B. C.
S. Sutton.

THIRTEEN very small one-eye pieces were planted June 1. Dug last of August. Yield 38 tubers, weighing 7¾ pounds. Not one has rotted, while every other sort we planted has rotted more or less. F. E. S.
Hudson Center.

NEBRASKA.

FIVE hills, level culture, no trench, yield 22½ pounds, largest tuber 26 ounces. Largest perfect shape 18 ounces. L. C. B.
Nebraska City.

SIX pieces planted in garden, yielded 17 potatoes, largest weighed 10 ounces.
Tilden. I. N. F.

TWELVE pieces, yield 122 potatoes of marketable size, weighing 42 pounds, and two pounds small ones. Largest five weighed five pounds. Hoed once. H. B.
Humbolt.

TWO pieces planted May 10, in trench. Yield 70 potatoes weighing 55 pounds.
Delta. A. N.

POTATO weighed three ounces. Yield 20 pounds, 14 ounces. No manure. S. L. T.
Fairfield.

ONE small tuber planted May 21, yield 76 potatoes weighing 26 pounds. Largest five weighed 4½ pounds. Largest weighed 18 ounces. H. F. W.
Newport.

ONE tuber planted May 10, had two hoeings, dug September 28, yield 22½ pounds, the largest weighed two pounds five ounces.
North Loup. H. H. S.

OHIO.

TWELVE eyes planted April 20. No extra care, badly injured by bugs. Dug September 25. Yield 25 pounds, fine, smooth tubers; largest one weighed 20 ounces.
Bellefontaine. G. A. H.

FOUR hills, fertilized in hill with well-rotted stable manure. Flea-beetles killed vines before blossoming. Dug August 29, yield 15 potatoes weighing 3¾ pounds.
W. Middleburgh. J. W. B.

TWENTY-ONE pieces were planted on moderately fertile, sandy soil about April 15, in a trench, fertilized with potato fertilizer. Dug September 18; yield 85 tubers weighing 4¼ pounds, largest 19 ounces.
Rockport. W. A. B.

THREE pieces planted according to R. N.-Y. trench system. Yield from two hills 13 potatoes weighing 10½ pounds. Nine weighed nine pounds; the largest two weighed 2½ pounds. H. S.
Edgarton.

EIGHT single-eye pieces in poor soil, yielded 42 potatoes weighing 14 pounds. The largest weighed 21 ounces. J. T.
Highland.

EIGHT hills without fertilizer yielded 46 potatoes weighing 15½ pounds. The largest weighed one pound. M. H.
Sidney.

TWELVE small eyes started in hot-bed, and 35 sprouts planted out June 1; dug

(*Continued on Page 735.*)

Floricultural.

FLOWER GARDEN NOTES.

W. FALCONER.

SIMPLY because summer has gone and the frost has come and destroyed all tender plants is no excuse why you should leave your garden in a bedraggled and untidy condition. Give it a thorough good tidying up and you will be pleased for doing so all winter long. First of all, with a stout stake or label driven well into the ground beside them, mark the places of fraxinella, lilies, creeping milkweed (Euphorbia corollata), pleurisy root (Asclepias tuberosa), gypsophila, Large-flowering Bell-flower (Platycodon) and other plants that die down into the ground out of sight. This serves as a safeguard against digging them up or injuring them in digging in spring.

Then look after all the tender plants. If they are hardy enough to live out-of-doors under a little mulch covering, all right; leave them there and delay mulching them over about as late as you do your strawberries: that is, until immediately before you expect severe weather to set in. And if you have any plants that really are not hardy enough to survive the winters in the borders; for instance, hybrid pentstemons, montbretias, the finer tritomas, Verbena venosa, Salvia Pitcheri, and the like, lift them at once and plant them in a cold-frame set up in a warm, sunny place; or, failing a frame, lift and plant them in pots or boxes and winter them in a cool room or cellar. And cut over the old stalks of pæonias, larkspurs, phloxes, sunflowers, and other tall-growing perennials and clear them all away.

You will probably find the borders freely scattered over with innumerable seedlings of larkspur, fox-gloves, Sweet Williams, coreopsis, gaillardias and others. Now, no matter whether you want any of these or not, let them alone till next spring; but if there are any large, rough things among them, which you don't want, weed them out, and pull out weeds of all kinds. Then over all the ground scatter a good dressing of well-broken up rotted manure and leave it there till spring. This fertilizes the land and protects not only the young plants, but also the crowns of the old ones, and it saves them all from heaving by frost, and field mice do not like burrowing among rotted manure. Of course, in the case of hollyhocks, Sweet Williams and foxgloves, additional protection over-winter should be given; some dry tree leaves, leafy evergreen branches, dry ferns, sea thatch or the like spread over them will supply this want.

It may occur to many that this is a good time of year to dig over borders in which perennials are grown, also a capital time to lift, divide and transplant perennials, but, really, it is a bad time for any of these operations. The plants now are going to rest and should not be disturbed. Even hardy plants are much hardier when they are firmly rooted and well established in the ground than when they are newly transplanted, and freshly planted plants at this time of year or plants in freshly dug ground are always apt to be heaved out of the earth in winter and often injured. It is always best to lift, divide and replant perennials just before they are about to start again into full growth, or before they have finished their season's growth, or in the case of bulbous or tuberous plants, while they are dormant, or, in the event of early-spring-blooming plants, like trilliums, moss pink, arabis, etc., in late summer in time to give them a firm root-hold before winter.

You can plant out hardy bulbs, like snowdrops, crocuses, squills, poet's narcissus, and daffodils, hyacinths and tulips, just as late as the bulbs keep plump and sound and the ground is open from frost; but, at the same time, the sooner the bulbs are planted now the better they will bloom in spring. There is an opinion common among the people that the lawn should have a good, rough beard of grass on it over winter and that this will preserve the grass roots from getting winter-killed; but this is contrary to my experience. If your lawn is in this condition, mow it over with the scythe while the dew is on it, and rake off the mowings. The lawn will now look clean and pretty, and will not gather and hold in tussocks the tree leaves as they blow about and there will be no dead grass to rake out of it in spring before it can be mown. And in spring, instead of the young grass coming up weak and spindly among the rough beard of old grass, it will thicken itself to begin with.

I have no patience with the people who cry out against mulching lawns with short manure over-winter; they urge two excuses, namely, the unsightliness of the top-dressing and the unsavory odor arising from it. The top-dressing is of decided advantage to the lawn; it protects the turf from the vicissitudes of winter, enriches the land and lays the foundation of a surface coating of rich, spongy material in which short grass revels. As regards the bad smell, no sane man would use rank, ill-smelling manure, when well-rotted

barn-yard manure can be had, and this has very little bad odor, and when previously composted with loam no perceptible smell. Besides, after the first rain or snow-storm any ill odor it might before have had is washed out of it. I top-dress acres upon acres of our lawns with short manure every year and I am positively convinced that these dressings are of immense immediate and lasting benefit to the lawns.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

MARION HARLAND SAYS: "I would guard one point jealously. Rightly filled, there is enough in the sphere of wife, housekeeper and mother to satisfy any woman, whatever may be her aspirations. Of all forms of whining sentimentality I have least patience with the cry for a higher mission than that of home-making and child-rearing. As the sum of over 30 years' observation of this form of intellectual unrest and the perusal of hundreds of letters from malcontents, I assert, without fear of contradiction, that the unfortunates who raise the lamentations are in the proportion of a thousand to one, and they are those who are the least fit to take the lowest seat in the woman's kingdom."

Brave, sensible words are these; we commend them to the many girls who, troubled with vague aspirations, think "the trivial round, the daily task" too mean and paltry for their hopes and desires. Home life, with its loving sacrifices and simple virtues, is the sphere every really womanly woman should hope for. But, alas! there are plenty of lonely women to whom real home life is an impossibility, though they may contrive some resemblance to it. Let the women who have homes be doubly grateful for their good fortune.

* * *

DEMOREST'S MONTHLY has something to say about the care of the feet, which will give comfort to a good many sufferers. The writer remarks that women whose feet have become misshapen from excessively narrow boots can do much to remedy the difficulty by care and pains. Select easy, roomy shoes, and stockings of soft fabrics. Bathe the feet thoroughly in water comfortably warm, never allowing it to grow cold enough to feel chilly, and wipe them thoroughly dry with a soft towel—coarse crash is almost poison to sensitive skins. and often causes irritation and a small eruption like rash. Then rub into them thoroughly about the joints or injured parts, either cold cream, or, what is better, glycerine, perfectly pure and mixed with double the quantity of water. Especially should it be diligently applied to the joints of the great toes if they are enlarged or painful. Wipe off with a damp cloth and dry carefully, after which powder the feet thoroughly with rice-flour powder. Brush off all that comes away easily and put on the stocking, being careful that no semblance of a seam comes over the sensitive joints. Adjust the shoe carefully—never "jump into" any article of wearing apparel—smooth the boot over the foot and ankle if it is a high top, and be certain that it is comfortable.

These cautions may seem trifles, but the feet are ill, and all conditions of recovery must be observed. Take care that they do not become very cold or in the least damp. The ankle should also be protected by gaiters or leggins, if there is any necessity for going out in wet weather. The difficulty is an inflammation of the joint membranes, and has had many serious results. At night the feet may be wiped off with a damp cloth, and the glycerine and powder repeated. Ladies who adopt this plan, will never find soft corns coming between the toes.

For hard corns there is nothing better than a little judiciously applied caustic, which should just touch the hardened part of the corn, never the surrounding flesh. Repeat every other day, first soaking the feet in warm water, and gently scraping the surface of the corn until it will finally come out altogether. Great care must be taken to keep the caustic from the whole flesh, and the foot should never be damp, as the application will spread rapidly. Such a course of treatment, persisted in, has in several cases restored to quite passable shape and comfort, feet that were considered hopelessly deformed.

THE foregoing suggests a kindred subject, the care of the feet. The New York Sun says that of course every lady keeps her hands clean, and it is hardly necessary to mention that perfect cleanliness is the first requisite to a soft and white hand. This cleanliness is only brought about by two or three daily scrubbings with a brush and with the vigor usually applied to remove the grime from the little fist of the proverbially dirty small boy. No matter how dainty may be your occupation, the water used should be warm, not hot, and the soap be generous in quantity and purest of the pure in quality. There are several efficacious remedies for whitening the hands used by their advocates and inventors. One is the use of lemon juice and glycerine: another which is very highly recommended, is Indian meal and glycerine; and still another is the country girl's lotion, sour buttermilk, whose acid removes stain and sunburn, and whose oil is peculiarly beneficial in making the skin soft and smooth. Any preparation used at night is more efficacious if kid gloves are worn, and perhaps no wiser and less harmful process can be suggested than the careful cleansing through the day with warm water and Castile soap and the application at night of rose water and glycerine covered with kid or rubber gloves.

Handsome nails, which display a crescent of white at the base and a delicate pink tint throughout, are as much a gift as the poet's genius or the artist's skill, but one visit to the manicure will enable you to see how even the most ugly ones may be attractive and pleasing if nice care is taken to trim away the rough skin at the base, which should never be done without first soaking them in warm water, to file the edges in a smooth curve, following the outlines of the finger tip, and to polish the surface every day. Probably an hour each week devoted to the care of the nails, with a little time spent each day in polishing and cleaning them carefully, will keep them in nice order, and they should never be cleaned with any kind of a sharp instrument, as that roughens the surface so that they retain the dust which drifts under them.

It is said by "salesladies" in glove stores that a lady who can wear a No. 5 glove is as unusual as one who wears a No. 12 shoe, and that a large hand looks better, smaller gloved in a mousquetaire of undressed kid, because of the loose folds about the wrist, and that tight sleeves are as unbecoming to a large hand, whether gloved or ungloved, as low heels to a long foot.

GOLDEN GRAINS.

IT seems to me, says George Eliot, we can never give up longing and wishing while we are thoroughly alive. There are certain things we feel to be beautiful and good, and we must hunger after them.....

OUR times of greatest pleasure are when we have won some higher peak of difficulty, trodden under foot some evil, and felt day by day so sure a growth of moral strength within us that we cannot conceive of an end of growth.....

RUSKIN says that all true science begins in the love, not the dissection of your fellow-creatures; and it ends in the love, not in the analysis of God.....

BROODING over real sorrows and imaginary miseries says the Christian at Work, will make the best of us moody and wretched. Nursing grief and affronts and telling the sad stories of our woes have as depressing an effect as narcotic drugs. Sleeping in unventilated rooms often produces chronic wretchedness, even if these rooms are furnished with the appliances of wealth and refinement. Association with grim persons is depressing and dispiriting. Good health, mental, spiritual, and bodily, is worth working for. It casts out the malaria of moodiness and lifts us into the sunlight of joy.....

HAVE you never stood by some arm of the sea which penetrates far inland, and seen its emptiness and ugliness? asks George Harris. There is only the oozy, miry bed of the creek; the blue line of ocean is far away on the horizon. There is no human power by which it can be filled with water. The little streams from the hillsides could never fill the thousand empty indentations in our coast. But the great unquiet ocean begins to creep in. It spreads slowly over the flat bottom, and winds into every bend of the shore, and fills every crevice of the rocks; it covers the long grasses, it drives you back step by step; it surges in, lifting itself with quiet strength, until the little gulf is filled to the brim, and the bowing billows come over the surface, and the ships are lifted from their beds and sail away to their appointed havens The inlet is full; it is filled with all the fullness of the ocean, and with its mighty power. So we are empty till we are filled with the power of God. The toils and sacrifices and duties of life seem too heavy for us; but when inspirations from God begin to come in upon us, when His love rises in our hearts, with His grace and inexhaustible power behind it, we can carry all burdens buoyant upon such a strength, and can feel an undercurrent of Divine Power filling our hearts.....

I SEE the course of my life, said Thoreau, like some retired road, wind on without obstruction into a country maze. I am attired for the future so, as the sun setting presumes all men at leisure and in contemplative mood, and am thankful that it is thus presented blank and indistinct.....

IF rivers come out of their prison thus bright and immortal, shall not I, too, renew my spring life with joy and hope? Have I no hopes to sparkle on the surface of life's current? It is worth while to have our faith revived by seeing where a river swells and eddies about a half-buried rock.

MEASURE your health by your sympathy with morning and spring. If there is no response in you to the awakening of nature, if the prospect of an early morning walk does not banish sleep; if the warble of the first bluebird does not thrill you, know that the morning and spring of your life are past. Thus you may feel your pulse.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

"Unless we act in the living present,
There is naught that we can save;
The future is not ours for labor,
Though our hearts be e'er so brave."

EXTRACTS FROM SUNDAY EVENING TALKS AT THE RURAL GROUNDS.

THE DIFFICULTY OF BEING ABSOLUTELY SINCERE.

DOWNRIGHT SINCERITY, candor, strict integrity are rarely met with. Every one of us, every day, has occasion to feel that he was not quite true to himself. "I am glad to have met you"—"I am happy to make your acquaintance"—"I hope to have the pleasure of seeing you again," are usually uttered without *any* of the feeling which the words imply.

We listen to a shockingly stale or pointless anecdote and laugh heartily "when the laugh comes in." *Is that candor?* I have on a hundred occasions laughed at jokes which I didn't see through at all, rather than display my ignorance of the points involved. Yes, my dears, I have had frequent occasion to blush over this insincerity.

"Favor us with a song, Miss De Jingle." "Oh, I sing wretchedly and am not at all in practice."

"Oh, you sing enchantingly, Miss De Jingle." "Oh, dear, no. I only squeak a little for my own entertainment." Both were uncandid. Both uttered baby falsehoods.

"Now, how old would you take me to be, Mr. Bosh?" "Let me see—30? What *is* your age?" "I am 48." "You don't say so? You certainly do not look to be one day over 30." On his way home Mr. Bosh remarks to his friend: "Did you notice how I tickled the old maid?"

"Come and see us again and stay longer," often means: "Delay your next visit and don't stay so long."

"We have enjoyed your visit exceedingly," means, oftentimes: "We are glad it has come to a close." The financial world is alive with these petty deceits. Sincerity is rarely known in the diplomatic circles of governments, while in the court circles of European society it is a matter of constant study which shall most glibly rattle off these evidences of a courteous and mannerly insincerity. As the world becomes enlightened, think you we are drawing any closer to the simple manners of the lowly Christ?

* * *

YOU may as well have a diamond set in your nose as to have it fixed in your pierced ears. There is no difference except it may interfere with the use of your handkerchief.

Ask yourself this question and *answer* it too: Why do you desire to wear diamonds? Do they make you handsomer? Fix yourself up as nicely as you can, will a diamond on your finger make you handsomer? Why do you place it there? Why do you wear diamond finger rings, diamond ear-rings, diamond pins? Do others love you more for doing so? Do they respect you more? Why do you wear them? Are you happier for thus exhibiting your wealth? Is it as a mark of wealth that you feel gratified to wear diamonds? Does it soothe you to be able to say: "I have diamonds, you have none." "I am wealthier than you?" Do wealthy people who have lots of diamonds respect you or love you more because you, too, have lots of diamonds? Does it please the one or the other to learn that his diamonds are the less or the more valuable? Do poor, worthy people *honor* and love you more when they see you in your glittering jewels?

Who is benefited by diamonds? They represent just so much capital that is lying idle, which might be put to noble uses.

When I was young, diamonds charmed me. I felt a degree of importance *with* my diamonds, that I did *not* feel without them. I felt that strangers *judged* me in a measure by my diamonds. "He must have money;" "He must be a young fellow of some importance," I fancied they said. And, pray, what good did that do? If afterwards they discovered I was worth at the outset but two or three thousand dollars they might well have said: "That young man has more diamonds than brains." Wealthy people who are purse-proud are the most unlovable, repulsive class of people in the world. It is just they who delight in diamonds. From this point of view and coming back to my text, it may be asked if the wearing of diamonds is not an act of wickedness, inasmuch as they are *not* worn from any high or commendable motive; while they hold millions of capital that might be invested to do great good.

* * *

A HERO or heroine is one who explores the darkest places; who imperils his life in the attempt to rescue others or to accomplish some noble purpose, and the nobility of the act is measured by *the degree of danger* or exposure. There are too many who desire to know how to swim without ever going near the water. There are too many of us who wear our virtue as the Irishman paraded the mutilation of his ear which was pierced by a bullet as he was running away, panic-stricken, from the enemy. "Yes, sur, I larst that ear in sarvin' me counthry."

* * *

ONE thing which should make all people, who live to do good, grieve, is the social relations which generally exist a few years after marriage as compared with those which existed during the *wooing* and *honeymoon*. There are many exceptions. We are considering the rule. There is no more lovely, enchanting sight than the love and respect which we occasionally see between man and wife in old age. They tell of purity, chastity, patience, frugality—in short, they tell of all that God loves in his children. "Well done thou good servants" may fittingly be said of them.

* * *

THERE need be little doubt, friends, that when we meet in that other world there will be intense surprise to find that many of us who deem ourselves entitled to the orchestra chairs or private boxes will find that obscure seats are reserved for us *in the pit*—for that great drama of "Eternal Life" where each shall be judged by the exquisitely impartial wisdom of the Divine heart and mind.

THINK OVER.

ENJOY your children.

Girls and boys, cultivate stick-to-itiveness.

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

Be frank; be true; be happy!

TIME for study for both young and old.

VOW that, should health and life be spared you, you will know more about *something* by the first of next May than you do now.

ENTERTAINING THE BABY.

MARY WAGER-FISHER.

AS I was riding in a railway coach between New York and Philadelphia not long ago, I noticed, as I often had before, a baby traveler and the perpetual distractions to which it was subjected by the woman—presumably its mother—who had it in charge. The child was possibly one year old, and when its attention was not being directed to objects outside the car, it was nudged, and poked, danced up and down, fed with knick-knacks and so pestered with what was designed to be diverting, as to weary an onlooker, to say nothing of the effect upon the nervous organization of the child itself. Unquestionably, in no other country in the world do young children receive the amount of coddling they do in this, and of all people we are the most nervous and restless. How much the lack of a quiet, undistracted babyhood has to do with this, may be left to individual opinion. But it is reasonable to suppose that a child left to its own self for amusement, its mental faculties being allowed to develop slowly and naturally, its infancy in brief passing in the most uneventful manner without excitement of any kind, must develop into an adult of far more physical and nervous endurance than the child subjected to what may fittingly be called the forcing process. Mental alertness is a valuable quality; but there is a certain commonplace sturdiness that is not at all brilliant, but which is indispensable to prolonged self-maintenance.

The quiet way in which English and German children are reared is very different from the American plan, and the outcome is equally different. Our women have a delicacy of organization, an unabashedness, and a quickness in repartee, that are both exquisite and startling, while our men have a push and "go" that to the Old World folk seem phenomenal. Surely we are not a nation of plodders, but if it were not for the continuous intermixture of the "plodding" element, the saving salt of imported slow-going-ness, would we not in due time become a nation of nervous "drive-ahead" lunatics? I remember meeting a little girl betwixt seas, who was making her *fourth* trip across this continent, and she had reached the mature age of 18 months. The alertness and intelligence of the child were remarkable, and her American parents were very proud of her achievements. She was pale, restless, bright-eyed—enough to give one a heart-ache and to predict an early grave or an insane asylum as her ultimate station. And she has her counterpart sisters the "States" over, babies tender in years, but old in experience, babbling of fashions and plays, of the cities they have seen—never of the quiet fields and meadows—of party gowns and dances, of the times they have been out of bed until midnight, of the money spent in confections—a hot-house existence that has crept even into the remote villages of the country, so that to see a little old-fashioned child, round and rosy, that sleeps 12 hours out of the 24, lives on bread and milk, and who has experienced nothing more exciting than the slow jog of the family horse, never says anything "smart" nor anything committed to memory to "show off" on occasions, is a grateful relief to the mind. It yields a restful sense as of a growing oak that in years to come will be a source of strength and security.

THE BLUNDER BOX.

PUT a pasteboard box with a slot in the cover in an accessible part of the house for receiving slips of paper upon which are written grammatical errors made by the different members of the family—it is well also to include slang. Each member is to write down the mistakes that he or she hears with the maker's name attached. The box is left undisturbed for a week. At the end of that time let the family assemble. Appoint some one to open the box and read the "blunders." As he or she reads, the member whose name is attached to the slip corrects the mistake and gives the reason for doing so.

It is a capital brake on careless speech. Try it.

HUSK BEDS.

IN a late RURAL I noticed an item in regard to husk beds, and wish to urge all who use straw for beds to try at least one bed made of corn-husks. I am sure they will be repaid. The husks make a soft bed and one which is always light and easily stirred, never becoming matted, like straw. They are also durable and cleanly. Place the husks—or part of them—on the table. Use only the inner husks. Take a few at a time and cut off both ends, using a pair of sharp shears. With the "husking-pin," or an old-fashioned, two-tined fork, split them in strips not more than an inch wide. Drop the refuse in your lap, and the prepared husks in a large basket at your side. This is not so tiresome a task as it seems, and even the little children can help. Every fall the old husks should be emptied out on sheets spread out-of-doors, and left to air in the sun. With the addition of a few new ones, the bed is as good as new.

MRS. LEVI NILES.

OUR boy was a kicker. We knew that an ounce of prevention would be worth pounds of cure if we could only prevent his catching cold at night from kicking off the blankets. We had tried unsuccessfully pinning and tying the blankets down. Finally we found our ounce of prevention in the form of a bag. It was made of soft flannel, quite wide, of good length and secured to his night clothing at the waist. The confinement was so slight that he did not object and there was enough warmth in the flannel to prevent the little limbs and feet from becoming chilled even did he succeed in throwing off his blanket.

GRAHAM GEMS AS MADE AT THE RURAL GROUNDS.

THREE cups of milk—when milk is scarce we use half water—two well-beaten eggs, a little salt, four cups of Graham flour and two full tea-spoons of baking powder. Beat all together. Have a hot oven. Grease the gem pans and place in the oven until hot. Dip in the mixture and put into the oven at once. The success or failure of these gems depends largely upon the temperature of the oven.

GRANDMAMMA Carman's baking powder biscuits are hard to beat. We have always thought that in connection with her good ingredients and the "quick" oven, her swift manipulation of the dough after adding the wetting went far towards insuring her unvarying success.

We remember a pleasant picture of Grandpapa and Grandmamma in the kitchen "at the farm." Grandmamma had just started to make the favorite biscuits while Grandpapa sat close by, watch in hand, timing her. When the biscuits were placed upon the tea-table he announced with pardonable pride that it had then been just *thirteen minutes* since "Mammie" had started to make those biscuits and then asked in a challenging tone, if we younger cooks could beat that!

Miscellaneous Advertising.

When You Know

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why not try it yourself? As a blood-purifier, this medicine has no equal. Listen to good advice: Take Ayer's Sarsaparilla, and no other.

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A NEW TREATMENT.

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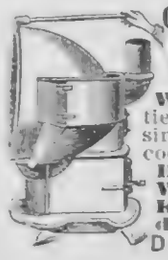

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Farmers and Teamsters, save your Horses save your Harness save your Plows, save your Money by buying the cheapest Singletree on earth, and THE BEST.

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AGENTS LOOK HERE

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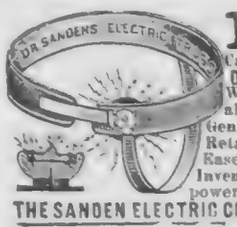

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FOR A DISORDERED LIVER try BEECHAM'S PILLS.

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34 PARK ROW, NEW YORK.

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Agents will be supplied with canvassing outfit on application.

Entered at the Post-office at New York City, N. Y., as second class mail matter.

News of the Week.

HOME NEWS.

SATURDAY, October 26, 1889.

It has just been discovered that under authority of an act of Congress passed in 1866, the President can send "any number" of friendly Indians to settle in the Cherokee Nation until all the land is taken up. It is said that if the Cherokees shall persist in refusing to sell the Cherokee Strip to Uncle Sam on the terms offered, the Commissioners in charge of the matter, in order to bulldoze the recalcitrants, will strongly urge that the Cherokee country should be crammed with a motley swarm of strange aborigines.....Last Monday, at Wilkesbarre, Pa., a lot of Hungarians, "just for fun," fired at a passing 12-year-old boy, and fatally wounded him. They are now in jail for the joke. In their own country these ruffians would be shot down like the dogs they are, by soldiers for such an atrocity. Unless they receive exemplary punishment here Gatling guns will be soon needed to prevent them from giving vent to their brutal nature. Very little of the vaunted Magyar chivalry comes to these shores; but we get by far too much Magyar ignorance, dirt and brutality.....Last Tuesday was selected by the Adventists of Screamersville, Pa., for the "crack of doom," and they put on their "ascension robes;" but there wasn't a "crack." A lot of other Adventists selected Friday, October 25, for the "Day of Wrath," and undisturbed by the failure of their co-religionists' expectations, got ready for flight into the "unknowable;" but not a toot of the Archangel's trumpet was heard. All parties clung to their property, however, right along; not a neighbor got a chance of a bargain at a cent less than any article was worth even when the end of the world was expected next day.....Letter-carriers throughout the country are contributing $2 apiece toward a monument to their warm Congressional friend, the late Hon. "Sunset" Cox.....

After eight weeks and one day, a jury for the trial of the accused "Cronin murderers" was completed at Chicago last Tuesday. By the official count 1,115 jurymen were examined and 975 were excused on one plea or another, no fewer than 175 were challenged—97 by the defence and 78 by the prosecution. With one exception every accepted juror was born in the United States, the exception being an Englishman; and with two exceptions all had American parents. All are Protestants. The jury is said to be a representative American one, and the members appear to be an intelligent and fair-minded body. The trial, which will probably last till about Christmas, began last Thursday. Sixteen indictments have been found against persons accused of having attempted to "fix" the Cronin jury in favor of the defendants. There's little moral doubt that Alexander Sullivan was the prime mover in the conspiracy; but legal proof is still wanted. "Alec" is a long-headed, shrewd, secretive fellow, with a mighty smart wife. He was tried for a cold-blooded murder a few years ago, and escaped, 'tis said, by getting the jury "fixed."

Hearty!

The laborious and expensive efforts to establish a footing in popular regard, for a worthy commodity, are often indirectly supplemented by gratuitous testimony.

When the genuineness of such tribute cannot be doubted, its influence exceeds in importance the costly repetitions of the most judicious advertising.

In the science and art department of the Harrisburg (Pa.) Church Advocate, April 11, 1888, may be found the following unsolicited endorsement of DRS. STARKEY & PALEN'S Compound Oxygen Treatment.

"In some experiments with ozone as a curative agent, an English lady, so far advanced in consumption that her case appeared hopeless, has been treated with inhalation of this gas, with results described as marvelous. After a month's treatment the appetite was regained, the sleep calm and refreshing, and there was a very good prospect of recovery. The ozone was prepared by passing a stream of Oxygen through the current of an induction coil, and was administered with atmospheric air in the proportion of 1 to 5. The experimenter has reached the conclusion that the ozone treatment is specially applicable to all germ diseases."

This instance needs no comment.

Send for the brochure of 200 pages, containing the history of Compound Oxygen. It will be forwarded free of charge to any one addressing DRS. STARKEY & PALEN, 1529 Arch St., Philadelphia, Pa., or 331 Montgomery street, San Francisco, Cal.—*Adv.*

FOREIGN NEWS.

SATURDAY, October 26, 1889.

NEWS from Japan tells of 685 cases of death and 121 of serious injuries during the floods of September 17. Over 1,000 houses were swept away and thousands of acres of crops destroyed. Incomplete returns show that during 1889 72 perfectures have been devastated, 2,419 people killed, 155 wounded and over 90,000 people deprived of means of subsistence. More than 50,000 houses have been swept away or submerged, 150,000 acres of crops destroyed, about 6,000 bridges washed away and some hundreds of miles of road broken up. In proportion to its area and population Japan has fared much worse even than China.....King Louis of Portugal, a good man weighing 250 pounds, and in appearance not unlike ex-president Cleveland, died at the age of 57, on October 19, at Lisbon, with all his family around his bedside. His eldest son, the Duke of Brazanza, aged 25, has succeeded him under the title of Carlos I. He was married on May 25, 1886 to the Princess Amelie of Orleans, daughter of the Compte de Paris, the Royalist claimant of the throne of France. The new king is smart, well educated, a fair painter and "the best shot in Portugal."..... "Reliable information" from Emin Pasha and Henry M. Stanley is to the effect that they will both, together with several other white African travelers and adventurers, reach the eastern coast of the Dark Continent in the latter part of next month. A world of information and misinformation badly mixed has been given with regard to Stanley and Emin, too, on "reliable information."".....Cordite is the name of a new smokeless powder equally fit for small arms and artillery, lately discovered by Lord Armstrong, in England. Unlike the German "smokeless" explosive, this is absolutely smokeless, and the deadly fumes arising from the former are absent in "cordite." Smokeless powder is absolutely necessary with quick-firing guns, as with the smoke-making kinds the gunners would be suffocated in clouds too dense to allow them to see the enemy.....The Sultan of Zanzibar has promised that all the children born in his dominions after January 1 next, shall be free. This is considered a great concession by ordinary folks; but anti-slavery fanatics insist that the despot should at once free all slaves big and little.....Chili has passed a law to go into effect on January 1, abolishing import duties on agricultural tools and a large number of other articles useful in various industries.....American wild turkeys have been successfully acclimated in large flocks in the forests on the estates of Count Breuner in Austria, on the Danube.....Servia has abolished all her consulships in Germania and entrusted all her consular business—to Austria?—no: to Russia.....

AGRICULTURAL NEWS.

SATURDAY October 26 1889.

AT the Annual Show of the British Dairy Farmers' Association a trial was made of a new churn called the "improved patent churn for churning butter *in vacuo*." It consists of a tinned cylinder of Bessemer steel 2½ feet long, and nine inches in diameter, supported on four flexible legs. It has fixed on top an air pump which exhausts the cylinder after it has been charged with cream, and is worked in a horizontal position; the benefit claimed for it is that no gas is generated, and that the concussion is greater. Owing to an accident, the machine did not fulfill the claims of the inventor, so that other trials may be required

Miscellaneous Advertising.

"JONES, HE PAYS THE FREIGHT."

Scales of all sizes. 5-Ton Wagon Scale, with Brass Tare Beam and Beam Box. $60. For free Price-List of all kinds, address
JONES OF BINGHAMTON, Binghamton, N.Y.

165th THOUSAND.

LOOKING BACKWARD

By EDWARD BELLAMY. A story which describes a possible Golden Age just before us. It has excited a wider and deeper interest than any book since "UNCLE TOM'S CABIN." $1.00 handsomely bound in cloth; 50 cents in paper.

"A revelation and an evangel."
FRANCES E. WILLARD.

UNCLE TOM'S CABIN.

By Mrs. STOWE. Popular Edition, large type, bound in cloth, $1.00.

**** For sale by all Booksellers. Sent by mail, post-paid, on receipt of price by the Publishers.*

HOUGHTON, MIFFLIN & CO., Boston.

ASPINWALL POTATO PLANTER

Better than Ever.

Absolute Guarantee given to do PERFECT AND RAPID WORK.

PLANTS CORN
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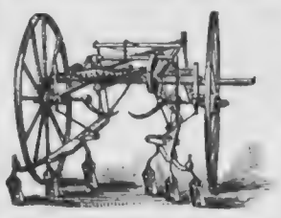
Write for illustrated circular. *Mention this paper.*

ASPINWALL MANUFACTURING CO.
THREE RIVERS, MICHIGAN.



THE GREAT POTATO CULTIVATOR.

(Hudson's "Bicycle" Patents)

THE GREATEST LABOR-SAVER IN CROPS IN 20 YEARS.

No more holding the plows with the feet. No more rein snatching and horse-guiding, and tearing out plants. No more difficulty in getting around at ends. No trouble on side hills.

Any boy now can "hoe" potatoes, cabbage, corn or cotton, any depth, or shape on the Hudson "Bicycle" Cultivator as fast as horses can walk.

T. B. Terry says: "It is perfect child's play to use it. Beats our Planet, Jrs., four hours to ten—same work."

Send early orders We Warrant Fully.

R. H. AGRICULTURAL WORKS, Riverhead, N. Y.

PEERLESS LEADS THE WORLD.

TRACTION & PORTABLE "DOMESTIC" & CREAMERY **ENGINES**

Steam Gang Plows, Threshers and Cleaners.

Latest Improved and CHEAPEST **SAW MILL** on the market, with PATENT VARIABLE FRICTION FEED.

PATENT DOGS, SET WORKS, and SAW GUIDE.

Send for Catalogue to the

GEISER MFG. CO.
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Invite correspondence. *Mention this paper.*

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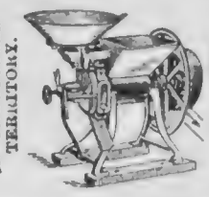

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QUAKER CITY GRINDING MILL
IMPROVED DURING 1889.

For Corn and Cobs, Feed and Table Meal. Grinds finer, runs lighter, is more durable than any mill on the market. Send for Catalogue before buying.

Agents Wanted IN UNOCCUPIED TERRITORY.

A. W. STRAUB & CO., Philada., Pa. Territory East of Ohio.
SPRINGFIELD IMPLEMENT CO., Springfield, Ohio Territory West of Pennsylvania.

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25 CENTS — 25 CENTS

BEST COUGH MEDICINE.

Recommended by Physicians. Cures where all else fails. Pleasant and agreeable to the taste. Children take it without objection. Sold by all druggists.

THE PARKER EARLE STRAWBERRY.

THE LARGE, FIRM HIGH-COLORED BERRY.
THE SWEET, RICH-FLAVORED BERRY.
THE PERFECT BERRY IN FLOWER, FRUIT AND PLANT.
THE STEEL-CLAD BERRY THAT BEARS SO WELL.

Successful North, South, East & West.

$2 per 12; $10 per 100; $50 per 1,000. Safely by mail.

UNDER TRADE-MARK. Catalogue Free.

T. V. MUNSON, Denison, Texas.

$3 BLACK HAWK Corn Sheller & Separator.

Always in order: never chokes; shells clean; used by boys or men. Always throws out cob. Rapidly finding its way to every corn-growing country around the world. Buy from dealer or send me $3.50 for sample, express prepaid. Sole manufacturer and patentee,

A. H. PATCH, Clarksville, Tenn.

100,000 PEACH TREES FOR SALE.

at lowest prices, and strictly true to name. Send for price list. Address OAKLEY APGAR, Califon, Hunterdon Co., N. J.

New Farm Book.

Colcord's System of Preserving Green Forage, without **Heat** and **Fermentation**—The whole subject is treated concisely in detail, so that any one can build the Silo and work the process with success. The book is well illustrated. It will be mailed to any address on receipt of $1. by the author,

S. M. COLCORD, Dover, Mass.

HOLSTEIN-FRIESIANS. A choice lot of cows, in milk, and young stock, for sale. Most of them are descendants or relatives of Empress, 19,71[illegible] pounds in one year: 108 pounds in one day; Ondine, 90½ pounds in one day; Copia 99½ lbs in one day, and Pledge, 110½ lbs in one day. GERRIT S. MILLER, Peterboro, N. Y.

with your name in beautiful type for printing cards, marking linen, books, etc., and our new novelty the Wizard flat rack (stick to glass, wood or any flat surface) sent postpaid with full catalogue for stamps or silver. 6 for $1. Agents wanted. Ingersoll Bros. 45 Fulton St, N.Y. City.

to prove its efficiency.....A movement is on foot to secure the opening of two agricultural schools in Tasmania..... At a New York county fair a novel contest was held between young women to see who could harness, hitch to the wagon, drive a certain distance, unhitch and unharness a horse in the shortest time. Some remarkably quick time is reported..... A Western farmer is reported to have sold 100 bushels of corn for $30, and the cobs for $27. There is quite a demand in some localities for bright, clean cobs, for the manufacture of corn-cob pipes. A lot have been exported to England and they were received with great favor.....A single steamer brought over 4.000 bags of Italian beans into this port this week. This will have a tendency to keep down the price of home-grown beans.....The Egyptian cotton crop which is now being gathered is reported to be yielding very poorly..... The Corn Palace festival at Sioux City, Iowa, was a great success, and was visited by immense crowds. The idea was original with Sioux City, and was designed to show the decorative value of the agricultural and natural products of the upper Missouri River. The cost of the palace was $57,000, and 10,000 bushels of corn were used in its decorations.....Prof. C. V. Riley, who had charge of the agricultural exhibits at the Paris Exposition has recently received the official list of the awards given exhibits under the auspices of the Department of Agriculture. These include five grand prizes, 37 gold medals, 55 silver and 39 bronze medals, besides 38 honorable mentions. This does not include agricultural machinery. In 1878 the exhibit received one grand prize and two gold medals, and others in proportion.....Some large farms are reported from Manitoba. The "Bell Farm" 314 miles west of Winnipeg embraces 100 square miles or 64,000 acres. It is inclosed with a post and wire fence. In some of the fields the furrows are four miles long, a "bout" being a half day's work for a man and team. Another land owner has 11 farms each containing 10,000 acres. The work on these farms is done with military precision..... Walter A. Wood, president of the mower and reaper manufacturing company at Hoosick Falls, N. Y., that bears his name, has won fresh laurels during the past summer at the Paris Exposition. We referred several weeks ago to the degree of success already attained with his straw-binder, which was there exhibited. Mr. Wood has achieved the greatest success ever achieved at a World's Fair by any harvest-machine manufacturer. He has been honored with several decorations of the Legion of Honor, and has also had the degree of LL.D. conferred upon him by Hobart College. He is of New England birth, has always evinced great mechanical genius, and has achieved great successes wherever his harvesting machinery has been exhibited, and has carried off highest honors in the most stubbornly contested trials. His life is an exemplification of the possibilities open to persevering labor in this country. Americans, and especially American farmers, should be proud of such a man.....

Crops & Markets.

SATURDAY, October 26, 1889.

ST. LOUIS reports a stock of 1,811,819 bushels of wheat against 4,089,701 bushels one year ago. Reports from Minneapolis say that that the amount stored in elevators there and in the surrounding country is 10,000,000 bushels less than one year ago. Chicago reports a lighter stock of wheat than they have had for years. Reports from other markets are all in the same tone. The amount of wheat in producers' hands in the winter-wheat belt is no larger than it was one year ago. The exports of wheat have been light, but exports of flour have been heavy.

BUTTER is very slow of sale. Prices are very weak and unusually heavy receipts cause a downward tendency. Fancy creamery is the only grade selling readily. State creamery pails have become unpopular, and are not wanted. Tubs holding 50 to 60 pounds are most in demand.

CHEESE has dropped somewhat in price under heavy receipts and light export demands.

EGGS are a little firmer in price for strictly fresh, as the receipts have fallen off considerably. Other grades show little change.

APPLES are firmer in price, Western lots having fallen off considerably. Good fall varieties fit for table use, Kings and Greenings, are most in demand.

PEARS, if choice sell well, Beurre Bosc bringing highest prices. Sheldon, Anjou and Duchesse also sell well. Kegs holding one-third of a barrel, commonly called "thirds," are the most desirable packages.

GRAPES are plenty and sell slowly. The principal source of supply is Western New York. Concords, Delawares and Catawbas are the principal varieties with a few Niagaras. Five and 10-pound baskets are the favorite packages.

QUINCES have been very scarce and sell well if choice. The Orange is the principal variety.

CRANBERRIES are plenty and the market is very quiet.

EVAPORATED fruits are generally strong, especially apples. Stocks are well cleaned up, and prices are likely to be well sustained. Fifty-pound boxes nicely faced and packed are the favorite packages.

HOPS are very low and dull. This is due mainly to a very light export demand, and the probability of heavy supplies from the Pacific coast. The crop has also been heavier in this State than was anticipated.

POULTRY is on the down grade. Receipts have been very heavy, and stock that is not prime sells very slowly. Fancy stock, well-fattened, and arriving in good order will sell readily at outside quotations. Choice venison is wanted.

POTATOES have come in from the West in large quantities and the supply exceeds the demand. The choicest lots sell readily, but poor stock goes very slowly. The prospect is that prices will not go to either extreme.

ONIONS are somewhat lower, but there is no accumulation of stock, and choice, dry lots rule firm.

CAULIFLOWER is not plenty, and choice is in demand at $5 per barrel.

CELERY is plenty. Long Island sells for 60 to 75 cents per dozen, while western is as low as 20 and 25 cents.

SQUASH from Long Island are plenty. Marrows are worth 75 cents, and Hubbards $1.25 per barrel.

TURNIPS are plenty and of good quality at $1.00 per barrel.

LATEST WHOLESALE PRICES

—OF—

COUNTRY PRODUCE.

New York, Saturday, October 26, 1889.

BEANS.—Marrows—New, $2 45@$2 55; New Mediums, choice, $2 15@$2 20; Pea, $2 15@$2 20; Red Kidney, $3 75; White Kidney, choice, $2 60@$2 70; Foreign Mediums, $1 35@$1 55; California Lima, $3 50@$—Italian, $1 85@$2 00. Green Peas, $1 20@$1 25.

BUTTER—New—State and Pennsylvania, best, 24@24½, Elgin, best, 25c; Western, best, 23½@24c; do prime, 19@22c; do good, 15@18; do poor, 12@14; State, Dairy, half-firkins, tubs, best, 23@--c; do do prime, 19@21; do do fine, 15@17; Welsh tubs, fine, 19@21c; do do, good, 15@17; firkins, best, —@——c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 16@18; do fine, 12@15; Western dairy, fine, 12@15c; do fair, 10½@11c; do poor, 9@10c; do factory, fresh, best, 12@13c, do prime, 11@11½; do good, 9@10; do poor, 7@9c.

CHEESE.—State factory, fancy, 10½c; do do fine, 9½@10c; do do, prime, 9@10c; do do, fair to good, 8¾@9½c; Ohio, flat, prime, 7½@10c; do good, —@—c; do, good, —@—; Skims, light, 7@8c; do medium, 3@4c; do full, 2@4c.

EGGS.—Near-by, fresh, 21½@22c; Canadian, 20@21½c; Southern, 19@20c; Western, best, 20@21½c; limed, 17c; ice house, 15@16c.

FRUITS.—FRESH.—Apples, per bbl, $1 50@$3 75 Pears, per bbl, $2 00@$5 00; do per keg, $1 50@3 50; Grapes, best per lb, 3@7c, do, good 2@3c. Cranberries, C. C, per bbl, $5 00@$7 75; do, per crate, $2 25@$2 50; Jersey, do, $1 25@$2 50. Quinces, per bbl, $3 00@$6 00. Lemons, per box, $3 50@$7 00.

DOMESTIC DRIED—Apples—Evaporated, old, 5@7½c; do choice, new, 8½@9½c; prime, 8@8½c; sliced, new, 4@5c; do old, 3@3¾c; Chopped, 2¾@—c, Cores and skins, 2½@—c. Cherries, new, 9@12c; do, old, 8@10c. Raspberries new, 22@25c; Blackberries, 5¼@5½c. Peaches, Delaware evaporated, peeled, 15@19c, do do, unpeeled, 8@10c; Georgia, evaporated, peeled, new, 13@15c; do do do, unpeeled, 7½@10c; do do, sundried, 9@9½c. Huckleberries, new, 12@13c. Plums, new, 7@9c.

GAME.—Plover, per doz, $1 25@$1 50; Snipe do, do, $1 25@$1 50, Woodcock, per pair, $0 90@$1 00; Grouse, do do, 75@90c; Partridges, do, $65@$1 20. Duck, Mallard, 50@75c; do, Teal, 25@50c; do, Redhead, $1 00@$1 50; do Canvas-back, $2 50@$3 00, Grouse, per pair, 75@90c; Venison, per lb., 5@22c.

HAY AND STRAW.—Timothy, best, 80@—c; do good, 65@70c; do medium, 40@50c; Clover, mixed, 45@50c; shipping, 40@44c. STRAW—No. 1 rye, 60@70c; short rye, 40@50c; oat, 30@35c.

HONEY—In one-pound boxes. White Clover, 14@15c; Buckwheat, 10@12c; Beeswax, 22@28c.

HOPS.—State. New, 12@—c; do, good, 10@11c; do common, 7@9c; do 1888, best, 11@12c; do do prime, 9@10c; do do. common, 6@8c; California. New, best, 12@—c; do good to prime, 10@11c; do Old, best, 12@—c, do common and fair, 7@9c.

NUTS.—Peanuts are quiet. Fancy, had picked, quoted at 7¾@8c, and farmers' grades at 6@6½c; Pecans, 5½@6½c. Chestnuts, $5 00@$6 00 per bushel; Hickory Nuts, $1 25@$1 50 per bushel.

POULTRY.—DRESSED—Turkeys, mixed, per lb. 6@13c; Fowls, western, choice, 9@9½c; do common to good, 7@9c; Ducks, spring, good, 14@18; Squabs, white, per dozen, $3 00@$3 50; do dark, do, $2 00@$2 22; Chickens, spring, 9@16c; Fowls, near by, 11@12c.

POULTRY—LIVE.—Chickens—Spring, per lb, 9@10c. Fowls near-by, per lb, 9@9½c, do Western, per lb, 8½@9½c; roosters, per lb, 5½@6c; Turkeys, per lb, 8@11c; Ducks, Western, per pair, 60@75c; Geese, Western, per pair, $1 40@$1 65.

SEEDS.—Clover is hard to sell; exporters quiet New prime, future deliveries offered at 6¼ and choice, 6 ½c, with fancy at 6¾c. Timothy quoted at $1 50@$1 60. Canary, 2@4c.

VEGETABLES.—Potatoes—Jersey, per bbl, $1 25@$1 50 Long Island do, $2; State do, $1 50@$1 75; Western, do, $1 00@$1 75; Sweets do, $1 50@$2 75. Cabbage, per 100, $3 50@$4 00. Turnips, per bbl, $1 00 Onions—Orange County Red, $1 00@$2 25; Eastern White, $2 00@$3 00; Eastern Red, $2 00@$2 50, State, Yellow, $1 50@$2 00.

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 15@18c, and Spring do 19@25; Scoured Texas, 52@58c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

Communications Received for the Week Ending October 26, 1889.

H. L. W.—O. W—C. J. M—L. J. T.—S. P. S.—P. B. C.—A. S. B.—C. P. G.—J. W. N.—W. P. C.—A. W. N.—G. W. H.—L. H.—E. W. L.—J. C.—O. H.—B S. V.—W. C.—F. G.—H. O.—J. D.—P G.—W. H. W.—G. B.—T. H. H.—C. P. J.—C. W. R.—S. M. R.—F. S. W—O. W.—E. L. W.—R. S.—J. H. T.—R H. T.—C. E. R.—A. J. P.—K. McF.—R. E. S.—T. E. A.B.—O. V. R., in time.—J. N. B.—L M. Y.—K. R.—M A. A.—S. B. D.—L. G.—J. F., thank you.—F. E. E—E. E. S.—R. H. T.—J. H. T.—E. L. W.

Miscellaneous Advertising.

SEND 10 Cts. in P. O. stamps to E. & O. WARD, Produce Commission Merchants, for circular about Shipping Produce Also recipe for Preserving Eggs. Established 1845. No. 279 Washington St., New York City

FOR SALE. A BARGAIN.

A three-run Custom and Merchant Mill; good water power, 40 acres farming land; a dwelling house and barns; possession given at once. Apply to Mrs. J. G. BURCK, North Hoosick, Rens. Co., N.Y.

FARM MILLS
OF FRENCH BUHR,
Twenty-eight Sizes and Styles.
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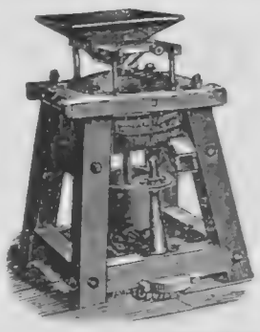

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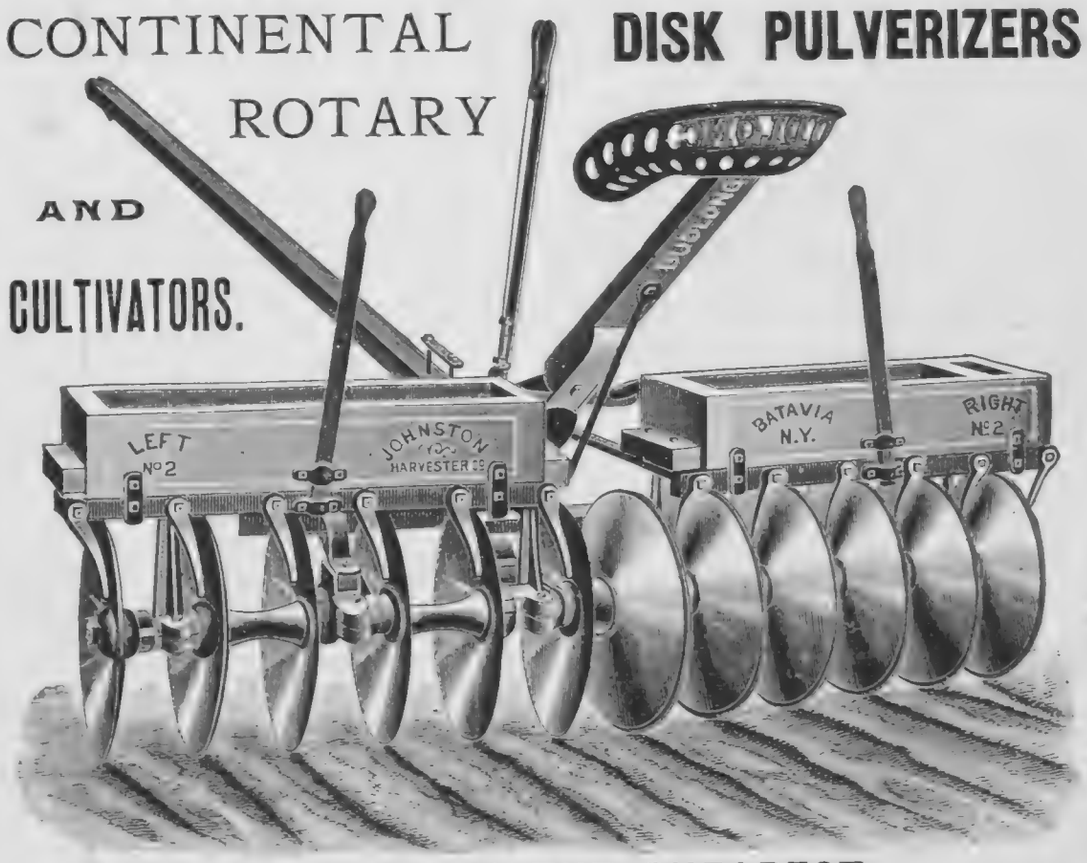

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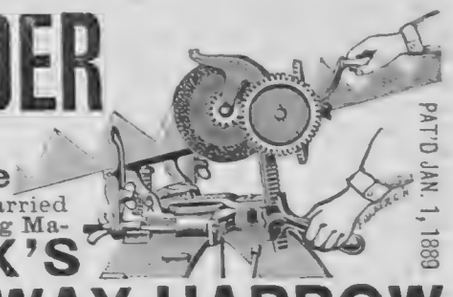

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AGENTS WANTED in every county. We can show proof that agents are making from $75 to $150 per month. Farmers make $200 to $500 during the winter. Ladies have great success selling this Washer. Retail price, only $5. Sample to those desiring an agency $2. Also the Celebrated KEYSTONE WRINGERS at manufacturers' lowest prices. We invite the strictest investigation. Send your address on a postal card for further particulars.
LOVELL WASHER CO., Erie, Pa.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

NEW YORK GAME LAWS.

S. R. J., Ballston Spa., N. Y.—Will the R. N.-Y. publish a copy of the New York Game Laws as they are in force at the present time?

ANS.—To publish a full *copy* of the Game Laws of this State, with all their verbiage, would occupy by far too much space. The following is a brief but full synopsis of all the laws with amendments down to December 1, 1888, showing the "open season," that is, when game may be lawfully killed in the Empire State:

Deer, August 1 to December 1; moose and fawns in the spotted coat are protected, however. Hounding is prohibited except in Queens and Suffolk Counties during the first 10 days of October, Indians excepted. Crusting of deer prohibited. Ducks, geese and brants, September 1 to May 1; in the waters of Long Island, October 1 to May 1. Night-hunting and the use of artificial lights, pivot or swivel guns or nets prohibited. Use of floating batteries, etc., prohibited. Bough houses and decoys must be within 20 rods from shore, except in Great South Bay west of Smith's Point, Peconic Bay, Shennecock Bay, Lake Ontario, River St. Lawrence and Hudson River below Albany. Shooting from boats prohibited, except on Long Island Sound, Lake Ontario, and the Hudson River below Nyack. Quails, November 1 to January 1. Rabbits and hares, November 1 to February 1. Hunting with ferrets prohibited. Woodcocks, August 1 to January 1; in the counties of Oneida and Delaware, September 1 to January 1. Ruffed grouse and prairie chickens, September 1 to January 1. Snipes and plovers, July 10 to January 1. Rail birds, September 1 to January 1. Netting and snaring grouse and quails prohibited. Squirrels, August 1 to February 1. Eagles and insectivorous birds are protected, except robins and meadow larks, from October 1 to January 1. Nests protected, except those of crows, blackbirds, hawks, sparrows and owls. Sunday shooting prohibited. Salmon trout, April 1 to October 1; in Lake George, May 1 to October 1. California trout, September 1 to May 15. Black bass, Oswego bass and muskallonge, June 1 to January 1, except black bass in Dutchess County and Lake Mahopac, July 1 to January 1; Lake George, July 20 to January 1; bass and muskallonge in the St. Lawrence, Seneca, and Oswego Rivers, Lakes Erie, Ontario and Conesus, and Niagara River above Niagara Falls, May 20 to January 1; black bass in Paradox Lake and Schroon Lake and River, July 1 to January 1. The catching of black and striped bass weighing less than half a pound is prohibited.

RIPARIAN RIGHTS.

S. T. L., New Brunswick, N. J.—A small part of a farm which I have lately acquired abuts on the Raritan River; how can I secure the riparian rights, and what are they?

ANS.—Riparian rights are the rights which a land-owner has in the water adjoining his premises and in the land under that water. If the stream is not navigable he is allowed to use the water or the land in any way which is not inconsistent with the rights of owners whose lands lie above or below or opposite him on the same water. An Act of March 18, 1851, made it lawful for owners of land in New Jersey situated along or upon tide-water to build docks or wharves upon the shore in front of their lands and in any other way to improve the same, and when so built upon or improved, to appropriate the same to their own use exclusively. They may also build beyond the limits of ordinary low water provided it is done in such a manner as not to interfere with the public rights of navigation, upon a license obtained from the Riparian Commissioners. Where the stream is small and does not supply water enough to satisfy the natural wants of the different proprietors living on it, none of the proprietors can use the water for irrigation or manufacturing; but for domestic purposes or for watering stock one proprietor will be entitled to use all the water if necessary. Every person who owns land situated on a stream has the following rights: 1. that it shall flow naturally through his land; 2, that it shall not be diverted from its accustomed channel by any proprietor whose land abuts on it higher up its course; 3, that it shall flow off his land through the land of his neighbor below in its accustomed place and at its usual level. If any farmer shall make any change in the natural flow of a stream to the material injury of any other owner situated upon it, or by interference shall prevent the stream from flowing as it was accustomed to flow, he is responsible for all damages he may occasion. Still a diversion of a stream may be made by a farmer, if it be returned to its natural channel before it leaves his premises. No proceedings on the part of the owner of land abutting on a stream are necessary to acquire these rights. They are inseparably annexed to the soil and go with it.

DEPOSIT ON CONTRACT FOR PURCHASE OF FARM.

S. T. L., Steuben County, N. Y.—A buys a farm of B and pays $250 down, agreeing to pay the remainder at 3 p. m. next day; but he does not get to the appointed place with the money until 5.30 p. m.; can B decline to fulfill the contract for the sale of the property, and are the $250 forfeited?

ANS.—Whether B may legally decline to deliver the property to A, and whether the $250 are forfeited by A depend upon the exact wording of the contract, which is not given by our correspondent. It is not uncommon for one person to pay money to another for the right to purchase property, should he decide to do so, at any time before a given day or hour. If that was the contract in this case. then A has received the value of his payment, B having held the property at his disposal until the hour agreed upon, and A cannot justly claim anything more. If, however, A had agreed to purchase the property, and B had agreed to sell it to him and taken the $250 as part of the purchase money, A's failure to be on hand with the remainder of the money at the appointed time, would not, under any ordinary form of contract, forfeit his right to have the conveyance made to him. When the purchaser pays the purchase money, or a part of it, prematurely, and the vendor refuses to complete the title, the purchaser has in equity a lien on the estate.

MINORS AS HOLDERS OF REAL ESTATE.

P. S., Bath, N. Y.—Can a minor hold real estate in his own name in this State?

ANS.—Certainly, and in every other State in the Union. There are hundreds of thousands of minors in this country who are the owners of real estate. There is no objection whatever to such title. The only difficulty is in the reconveyance if the minor wishes to sell it, as he cannot execute a deed to give a good title until he attains his majority, and it can be alienated before that date only by order of a proper court.

Literary.

BOOK REVIEWS.

THE RAINBOW CALENDAR is the bright and taking title of a little volume by Kate Sanborn containing short selections in poetry and prose for each day of the year, leap years included. Decoration and Independence Days, Thanksgiving, Christmas and other special days are honored with special selections. Each day of the year has a page to itself, though half the number would suffice to contain all the matter given. This seems to be a favorite trick of the book-makers to make a little go a great way. The selections include extracts from Bryant, Browning, Thoreau, Holmes, Longfellow, Josh Billings, Helen Hunt, Hawthorne, Whittier, Burdette, Bayard Taylor, Frances E. Willard, and many others.

Small bits of a poem or story are sometimes very unsatisfactory, but these selections are so skillfully made and so charmingly arranged that they form a combination as bright and cheering as the crescent which gives them their name. Cloth, illuminated; five by seven inches; $1.25. Houghton, Mifflin & Co., Boston.

THE latest collection of Uncle Remus's (Joel Chandler Harris) stories consists of "Daddy Jake, the Runaway," which gives the book its title, "Brother Rabbit's Courtship," and a dozen other negro-folk tales, given in Mr. Harris's inimitable style. Daddy Jake was a spoiled house-servant who got into trouble with the overseer, and thinking that he had killed the white man, fled to the cane-brakes. His master's two children missing "their most agreeable companion" sorely, one day started down the river in an old bateau to find him and bring him home. After drifting for miles the boat got into an eddy near the very cane-brake where the old negro was hidden and they were restored to their distracted mother by the runaway, Daddy Jake. The book is gotten up in fine style, with broad margins and heavy cream paper. The cover has a portrait of Daddy Jake, and also shows the turkey and the rabbit going through a fantastic dance. The illustrations are by Kemble who is unequaled in illustrating this style of literature. Boards; 8½ by 10½ inches; 145 pages; price $1.50. The Century Company, New York.

LITERARY LANDMARKS by Mary E. Burt, Teacher of Literature in Cook County Normal School, Englewood, Illinois, is a small volume by a teacher of many years' experience, intended as a guide in the selection and use of books in and out of the school-room. The author says that it is not because she knows so much of books, but because she knows so little and has spent many years and hundreds of dollars to get a small knowledge of books, where, by taking a direct road, she might have had a much larger knowledge at less expense that she offers the results of her work in the school-room. Diagrams are given outlining plans of reading for children of different grades or ages, but it strikes us that some of the books mentioned are rather heavy reading for children of the specified ages. They certainly would be for those who have enjoyed the advantages of the ordinary country or public school only. Still the book is a welcome addition to this too meager department of literature. There are 152 pages, of which 44 are taken up with a list of books recommended, with their price and publishers, and comments upon them. Four and one-half by seven inches; cloth, 75 cents. Houghton Mifflin & Co., Boston.

THE NEW ELDORADO is an account of a summer trip to Alaska by Maturin M. Ballou, and is a graphic description of a journey to that vast territory of which so little comparatively is known. When the United States purchased this great expanse of ice-bergs, forests, islands and mountains, it was considered a very foolish transaction by many people, but Wm. H. Seward who was chiefly instrumental in consummating its purchase, considered it one of the most important acts of his official life. He said that it might take two generations before the purchase was properly appreciated. Its area is three times that of the Republic of France. So little was the new acquisition appreciated that it was not even granted a territorial government until 1884. Governor Swineford of Alaska says that 20 years ago he made political capital out of Seward's purchase. He called it the refrigerator of the United States. He heaped obloquy on William H. Seward. He now declares that he shall spend the rest of his life in making reparation to what he has so foully wronged. This volume is by a man who has evidently learned to travel to the best advantage. He describes his journey via the Northern Pacific Rail-road, and tells of all the wonderful sights of this great region; tells about the natives of the different parts of Alaska, their customs, religion, manner of life, etc.; the resources of the country in the way of fisheries, furs, mining, agriculture, etc. This book cannot fail to be a great instructor to any thoughtful reader. Five by eight inches; 352 pages; cloth, $1.50. Houghton, Mifflin & Co, Boston.

Miscellaneous Advertising.

I have used many kinds of cough medicine, and I believe Seth Arnold's Cough Killer is SUPERIOR TO ALL. It relieved my cough at once and helped the children over a bad cold quite speedily.—*Mrs. E. T. Willard, 559 East 6th St, South Boston, Mass.* 25c., 50c. and $1 per bottle. ALL DEALERS SELL IT.

Name on 32 Fancy Shapes, ALL HIDDEN NAME CARDS & Agt's outfit, 10c. Neptune Co., Fair Haven, Ct.

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A new invention for cutting Hay, Straw, Sheaf Oats and Corn Fodder. It Splits as well as Cuts Cornstalks, leaving NO SHARP EDGES to cause sore gums. Cattle eat all up clean. Buy a TORNADO and save half your feed. Send for circulars, giving full particulars and prices, to W. R. HARRISON & CO., Canton, O.

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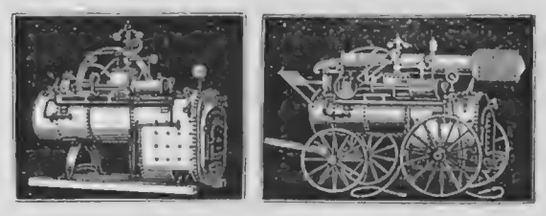
STEAM ENGINES,
Portable, Agricultural, Stationary.



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BONE MEAL for Poultry, Granulated Bone and Crushed Oyster Shells Calcite Ground Flint and Bee Scraps. Send for new price-list.
YORK CHEMICAL WORKS, York, Pa.

Everywhere.

RURAL POTATO REPORTS.

(*Continued from Page 729.*)

September 19. Yield 113 potatoes, weighing 29 pounds. Largest weighed 13 ounces.
Elyria. C. R. M.

FORTY-FOUR small eyes yielded 37 pounds 13 ounces, trench culture. M. M.
Centre.

PENNSYLVANIA.

THIRTEEN eyes planted April 23, in a trench with potato fertilizer. Flat cultivation. Yield, 46 potatoes, weighing 15 pounds. J. E. W.
New Alexandria.

FIVE eyes planted May 1; soil well fertilized; yield nine pounds 10 ounces.
Girard. MRS. A. B.

TEN eyes planted May 7, in a trench; only six grew. Yield, 20 potatoes of fair size.
Saegerstown. E. A. K.

ONE small potato; yield, 6½ pounds—21 potatoes in all. Fertilized with wood ashes.
Eaton. MRS. H. H.

POTATO weighing 1¼ ounce cut into seven pieces, and received regular field culture. Yield, 23 tubers, weighing eight pounds; all marketable. A. P. A.
Meadville.

SIX pieces planted May 25; four grew. Dug September 24; yield, 13 marketable potatoes, weighing three pounds. Largest weighed six ounces; smallest the size of a hen's egg. MRS. W. D. H.
Beaver Falls.

VIRGINIA.

TEN one-eye pieces planted May 1, seven grew, fertilized with bone phosphate. Dug October 9, yield eight pounds, nice potatoes.
Speedwell. H. M. A.

FIVE hills, fertilized with one pint of hen-manure in each hill, planted April 1. Dug second week in August. Yield nine pounds nice, smooth potatoes with no sign of rot.
Barren Springs. F. C.

FIVE hills blighted early, but yielded 43 tubers weighing 18 pounds; beauties.
Fagg. G. W. B.

THREE eyes in garden soil, no manure, planted July 1. Dug September 26, yield nine tubers, weighing three pounds two ounces. MC A. K.
Winchester.

VERMONT.

POTATO cut to 11 eyes. Planted May 18 in trenches, fertilizer at the rate of 500 pounds per acre above the seed. Dug September 9, yield 16½ pounds. H. L. P.
Williamstown.

POTATO as large as a butternut, yielded seven pounds seven ounces, entirely free from rot though other varieties rotted badly. J. F. B.
Tunbridge.

WISCONSIN.

SEVEN pieces planted April 20, in soil well fertilized with stable manure, and wood ashes. Killed by frost September 18. Dug September 30. Yield 17 pounds of smooth, sound potatoes. J. V. L.
La Crosse.

SIX eyes planted in garden. Dug September 28, yield 39 tubers, weighing 10 pounds 10½ ounces. W. D.
Lynxville.

EIGHT hills planted April 15 in good, deep soil, dug September 21. Yield 77 tubers weighing 29 pounds six ounces, 890 bushels to the acre. A. C. P.
Richland Center.

SEVEN hills yielded 40 potatoes weighing 11 pounds six ounces, dug September 4.
Oconomowoc. MRS. C. H. J.

TWO hills planted May 8, fertilized with rotten manure in the hill. Dug September 28, yield 19 potatoes, largest two weighed 28 ounces. A. J.
Neenah.

WEST VIRGINIA.

TWO SMALL tubers made 34 eyes—planted in pots, reset in field May 15. Dug September 9. Yield 37 pounds. J. D. S.
Wellsburg.

PLANTED April 4, seven eyes. Yield 11 pounds 14 ounces. L. H. W.
Welcome.

WASHINGTON.

I PLANTED seven one-eye pieces in trench eight inches deep with a liberal layer of well-rotted manure under them. I then covered them about three inches, and filled trench when they came up. No other cultivation. I dug 42 potatoes weighing 22 pounds. The largest weighed 17 ounces. Every potato is perfect in form. J. B. A.
Mitchell.

WYOMING TERRITORY.

MY little potato gave six eyes. Cut by frost June 6, bloomed July 15. Killed by frost September 6. Yield 64 potatoes weighing 16 pounds 10 ounces. W. J. S.
Buffalo.

RURAL SPECIAL REPORTS.

Kansas.

IUKA, Pratt County, October 15.—This has been a year of general prosperity in this section. Wheat, oats and corn are all above the average. Almost all vegetables are in abundance. Potatoes are a good average excepting later kinds which will be a very short crop. There is very little rot. We have a large crop of sweet potatoes and the quality can't be excelled by any Jersey potato. Our long, dry spell was broken by a general rain on the 14th and 15th. The acreage of wheat sown this fall is the largest ever put in, and we are sure of a good stand for the ground is thoroughly soaked. All kinds of feed are abundant and cheap. Wheat 50 cents; oats, 10–12 cents; corn 12–14 cents per bushel; hogs, $3.25; cattle (cows and heifers) $1.25–$1.75 per cwt.; potatoes, 45 cents; butter, 12 cents; eggs, 10 cents; chickens, $1.50 and $1.75 per dozen. With an abundance of cane for honey and numbers of cows for milk—surely we are in "the land of milk and honey." J. J. M.

Michigan.

MIDDLEVILLE, Barry County, October 13.—Clover seed is not more than half a crop. The dry weather shortened it; but there is no use in getting discouraged; clover is the only thing to keep life in my land as long as I can get a seed. Wheat did pretty well by measure, but was light in weight; barley was also light. Oats were a fair crop—about 40 bushels to the acre. Potatoes are a fair crop, when planted early.
P. MC M.

PARMA, Jackson County.—Probably there will not be more than a quarter of a crop of clover seed. Corn about half a crop. Wheat a little short. Oats an average crop. Potatoes and all other crops are good on reclaimed low land; but otherwise they are short; but there is enough for culinary purposes generally. Strawberry plants set early got a good start; the first runners rooted but it has been so dry since that not one-fourth of the runners have rooted, which makes scant matted rows. Cattle are depending on fodder as in winter. Fodder is abundant. Grapes half a crop and their value has been diminished by frost. E. B. C.

YPSILANTI, Washtenaw County, October 17.—Clover seed has been a very poor crop for the amount of straw—one bushel to the acre is a fair average. Apples about 60 per cent. of a crop; corn, 55 per cent. The outlook for the coming wheat crop is about 25 per cent. and unless it rain soon there will not be that much. R. S.

New York.

FARMINGTON, Ontario County.—The oat crop in this section was light. Hay, corn and winter wheat were good. Early potatoes are a failure, while later varieties on some farms are much better than was expected. Fruit is scarce and of a very inferior quality. E. A. H.

LE ROY, Genesee County, October 9.—No clover seed is raised in this town nor has there been any for three years. Potatoes are badly blighted—only a half crop. Wheat, barley and oats are very good crops. Beans are good on dry lands. Apples are scarce. The hay crop is very heavy. Prices of all kinds of farm products are low. Wheat on the ground is rather small.
S. S.

Miscellaneous Advertising.

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GARDINER IRON WAGON CO.,
Mullica Hill, N. J

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CUTICURA REMEDIES CURE SKIN AND BLOOD DISEASES FROM PIMPLES TO SCROFULA.

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CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, are a positive cure for every form of skin and blood disease, from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c. RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., Boston, Mass.

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Nothing to get out of order!
Freezing does not damage it!
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Investigate and you will buy no other
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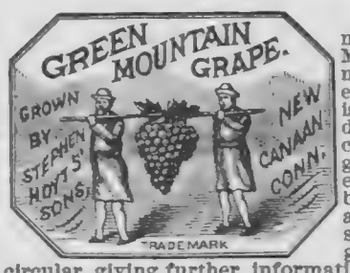

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A most excellent top-dressing for lawns and grass-plots, producing a rich and vigorous growth. Sold in packages from five pounds to the ton.
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What Others Say About It:
Compared with Keiffer it is far superior in quality. AMERICAN GARDEN.
Quality best. PATRICK BARRY.
It is not so sweet as the Bartlett, but higher flavored—more vinous. THE RURAL NEW-YORKER.
Trees now for the first time offered for sale!
Single Tree by mail, post paid, $2.50; Three for $6.00.
Send for illustrated prospectus containing a finer list of testimonials than any new fruit that has ever been introduced.
THE IDAHO PEAR Co.,
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TREES Root Grafts—*Everything!* No larger stock in U. S. No better. No cheaper. PIKE CO. NURSERIES, Louisiana, Mo.

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Humorous.

The RURAL NEW-YORKER *is prepared to offer very liberal terms to good, responsible* PERMANENT *agents. Correspondence solicited.*

GEORGIE saw a telegraph wire and poles for the first time. Gazing for a minute or two deliberately at it, he remarked, in his slow way: "Is there any woman big enough to hang clothes on that line?" —*Youth's Companion.*

A NEW JERSEY editor yearns for the "gingerbread his mother made 40 years ago." If he wants to lay a sidewalk in front of his property he should use granite slabs. He will find them quite as hard and durable as gingerbread made 40 years ago. —*Norristown Herald.*

A SEEDY individual being told that his coat "looked as if it hadn't had a nap in a dozen years," replied: "I beg your pardon, but this coat has been lying in my wardrobe two and 20 years till to-day, and that's time enough to have had a good, long nap."—*Mountain Echo.*

MOTHER: "Did the scholars vote on the question of a national flower?" Johnny: "In our grade the most of them wanted the golden rod." Mother: "How did the principal vote?" Johnny: "I didn't ask him, but I guess he's in favor of the birch rod."—*Burlington Free Press.*

"What are you digging, dear?"

"I'm goin' to plant mashed potatoes. I like 'em better than the other sort."

No Family! No Physician!
No Factory! No Stockraiser!
No Workshop! No Plantation!
No Hospital! No Farrier!
—SHOULD BE WITHOUT—
PHENOL SODIQUE
The Invaluable Domestic Remedy!
For descriptive circulars and testimonials address the Proprietors, HANCE BROS. & WHITE, Philadelphia.
For Sale by Druggists and General Merchandise Dealers

SCAB H. C. & J. C. GROOME, of Locust Hill Stud Farm, Wythe county, Va., say of THYMO-CRESOL (The Cold-Water Dip): "*It has been with us notably successful in curing Scab in Sheep, in an advanced stage. We have found the growth of the wool materially promoted by dipping Sheep in it early in autumn. It destroys Lice on Colts, is a most useful dressing for the Hoofs of Horses, and a valuable remedy in cases of Grease and Thrush. We have found it a speedy cure for Mange, and as a Disinfectant and Purifier its merits cannot be too highly commended. In fact, the limits of its usefulness to the stock-breeder are difficult to realize, and here we should be inclined to feel quite helpless without it.*" Imported only by LAWFORD BROS., Baltimore, Md. Sample by Mail, 50c.

NAME on 50 Cards, Gilt Edge, White Dove, Fringe and Hidden Name, 10c. Frost Co. East River, Conn.

LANE'S PATENT STEEL DOOR HANGER
ANTI-FRICTION.
The most perfect article of its kind made. No more breakage; ease of movement and satisfaction guaranteed. LANE'S PATENT STEEL TRACK
No Wood work. Simple and durable.
Send for Circular.
Manufact'd by
LANE BROS., Poughkeepsie, N. Y.
Sold by Hardware Dealers Generally.

FRAUDS, SNAPS AND HUMBUGS

Are still worked on the people with amazing success; statistics show that there are at least *a hundred suckers born every hour,* who are ready to catch onto every "fraud scheme" that comes along. Among them are those who buy Buggies and Harness from the firms who advertise *something for nothing,* and when they get the good, hard-earned money, they send a cheap, shyster buggy or harness that a man is actually ashamed to hitch his horse in.

The majority, (this leaves out the suckers), of the American people have awakened to the truth, and will now have nothing but the

"MURRAY" BUGGIES AND HARNESS,

which are the Best and Cheapest, and which are more widely recommended than any other, and of which the editor of this paper says:

"THEY WITHOUT DOUBT CAN'T BE BEAT FOR THE MONEY."

A "MURRAY" $5.95 HARNESS.

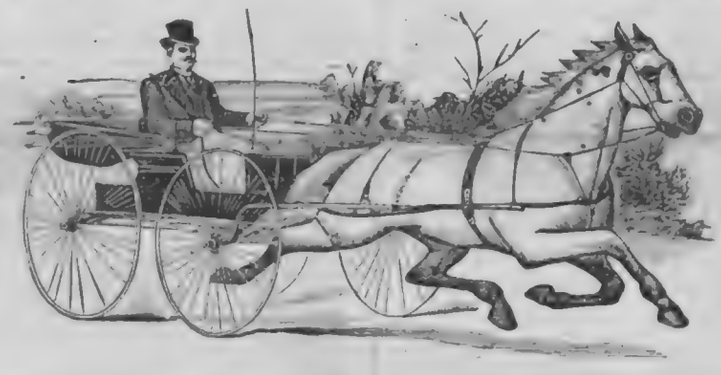
CANTON, N. Y.

To the Wilber H. Murray Mfg. Co.:

Gents—Your Harness received all right and am very much pleased with it, so much so that you can expect my future trade.

Yours truly,

A. M. PIKE.



A "MURRAY" $55.95 BUGGY.

CONESTAGO, PENN.

To The Wilber H. Murray Mfg. Co.:

Gents—The Buggy I ordered from you arrived in good condition, and is very satisfactory. Every one who examines it, pronounces it the best for the money ever brought to our country. I expect to be able to sell a few of them for you in the near future.

Yours truly, *P. C. HILLER.*

We don't give COLD DOLLARS FOR DIMES, neither do we offer unheard of inducements to exhibit or introduce our goods, for the "Murray" Buggies and Harness are too well known for any such work as that. If you want the best goods for the least money, write us for our illustrated catalogue containing full description and plain net cash prices of the "Murray" Buggies and Harness.

WILBER H. MURRAY MANUFACTURING COMPANY, CINCINNATI, O.

ANNIHILATORS OF HIGH PRICES AND EXORBITANT PROFITS.

DISAPPOINTED IN THE PRESIDENT.—A bright boy at Nahant came to town on Wednesday to see the President, and on his return was asked what he thought of him. "Well," replied the young republican, "I was disappointed. There's a man in Lynn who looks more like Mr. Harrison than he does himself."—*Boston Herald.*

Miscellaneous Advertising.

AN ELEGANT COUNTRY HOME FOR SALE AT A BARGAIN.

Located within an hour's ride of New York City. House has 10 rooms with all improvements; barn 14x20. Two acres of land. Great variety of small fruit, shrubs, etc. Fine location for greenhouses. Price, only $4,500. Terms easy. *Must be sold.* J. H. GRIFFITH, Care Rural New Yorker, N. Y. City.

PILES. Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository. A simple remedy mailed FREE. Address TUTTLE & Co., 28 Nassau Street, New York City.

Choice Seed Potatoes.

Pure Seed Rural New-Yorker No. 2, Early Puritan, Early Sunrise, Polaris, Chas. Downing, Burpee's Superior, Early Ohio, Early Maine. For sale by the barrel bushel or pound. SPRINGDALE FARM, Trenton Falls, N. Y.

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The Earliest, Best Keeping and Latest Sprouting Potato. E. HURLBURT, 128 Genesee Street, Utica, N. Y.

SAW MILLS, IRON FRAME, STEEL ARBOR, IMPROVED HEAD BLOCKS.
ALEXANDER, BRADLEY & DUNNING,
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For Sale by the Hardware Trade.

IF you cannot get this Meat Chopper from your Hardware Dealer, send money to us and we will express by first fast train.

ENTERPRISE M'F'G CO.,
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HORSES
FOR ALL PURPOSES AT LAKESIDE.

Standard Bred Trotters.
A rare lot of Young Stallions of most popular lines of breeding.

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Imported and American Bred, of very superior quality, style and action.

Clydesdales.
A Superb Lot of Young Stallions, Mares and Fillies of this valuable draft breed, the result of years of intelligent and careful importing and breeding.

Percherons.
A few unusually fine young Stallions of this deservedly popular breed.

Catalogue containing full descriptions and pedigrees mailed to parties interested. In writing mention this paper.

SMITHS, POWELL & LAMB,
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FOR SALE!

Three-year-old Coach Stallion, ¾ brother to Duke, "the handsomest horse in America"—the best three year-old I ever saw. Four-year-old trotting bred stallion by Clark Chief, Jr.; has showed a 2:35 clip; has never been handled. The finest pair of 16 hand coach horses in the State; five and six years old, mare and gelding. Also sucking colt, sire Billy Wilkes, dam by Columbus 95. This stock will be sold at one-half their value, as owner has other business.

Also 500 bbls. Monroe Seedling Seed Potatoes, $3 per bbl., the finest in quality and yield from 300 to 450 bu. per acre. Order quick. WALLACE L. HUBBS, Inwood Farm, Jonesville, N. Y.

FOR SALE AT A BARGAIN
Two pairs of Thoroughbred Poland China's, six months old, and bred from the best herds of Illinois. For prices, write to E. G. WALLIS, Apulia, N. Y.

KENTUCKY STOCK FARMS For Sale—Bargains. 600 Acres, the very best, all in grass, $60 an acre; 460 acres good land, no improvements, $30 an acre. 20 other Farms for sale. Address W. H. BLAKELEY & CO., Bowling Green, Ky.

BARNEY & BERRY SKATES CATALOGUE FREE.
SPRINGFIELD, MASS

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XLVIII. NO. 2076. NEW YORK, NOVEMBER 9, 1889. PRICE, FIVE CENTS. $2.00 PER YEAR.

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Floricultural.

A LA MARQUE ROSE, NILES, CALIFORNIA.

THE illustration, Figure 268, is from a photograph of a La Marque Rose on the house of James Shinn, Niles, California. It is budded on a double Cherokee Rose. The Cherokee was planted, a one-year-old rooted cutting, in the spring of 1877. About 1882, the Cherokee being then a large plant, well up to the second-story window, three buds of La Marque were inserted at from four to nine feet from the ground. The top was cut back, and the buds got a start. At present the vine is about one-third Cherokee and two-thirds La Marque. It grows so luxuriantly that it has to be cut away from the house and windows every year. If any attempt had been made to spread it over more space it would easily have covered four or five times as much of the porch; but other roses, a Bigonia grandiflora, clematis, Catalonian Jessamine, and other vines occupy places on the lattice around the house, and the La Marque has to be restrained. There are some roses upon it for 10 months in the year. The heavy bloom is in April and May.

The original Cherokee stock separates into two large stems near the surface of the ground. Each of these is a trifle over 11 inches in circumference. Three or four small Cherokee stems four inches in circumference also ascend from this point. The largest La Marque stem is 12⅛ inches in circumference or larger than the stock. The other two La Marque stems are nearly as large. The union is perfect, and the whole plant is thrifty and vigorous.

Farm Topics.

TWO LETTERS THAT SUIT US.

My father and I are farming together, as in some way I have escaped the attractions and allurements of city life. I scarcely know how, for from my earliest recollection I have had a longing for a mercantile life, a longing which sometimes almost overcomes my resolve to be a thorough and practical farmer. I am 24 years of age, married and living on the farm with my father and mother, under the same roof but as two separate families, the house having been arranged for that purpose. Nearly one year ago the R. N.-Y. was introduced into our home. To say that I have become an interested reader hardly expresses how much I am thankful for the amount of good it has done me. Suffice it to say that I carefully read every issue and thereby am becoming so interested in things relating to the occupation of the farmer that I am nearly forgetting my aspirations toward another kind of business, and right here I believe is one reason why so many of our farmers' sons leave the old farm to seek their fortunes in the cities. One may travel through the country and take the farming class generally and in not more than one home in every 25 or 30 is there to be found an agricultural paper of any description for the boys to read. The older ones are content to plant and sow and jog along in the same old rut year after year, to look for better times and say that "farmin' don't pay" as it used to; but the boys who are coming up will not take the places of their fathers on the farm because they want something new; some variation to the old, old plan, and not finding it they leave home and the city receives them. Now the doctor will take his medical journal, the school teacher his educational paper, the business man his daily paper, the politician his political party paper; but the farmer, where is he with the paper which relates especially to his interest? Let me whisper it! he is "way back" like his picture in some of the city papers. But he says he can't afford an agricultural paper. Now just see: these men can afford to store their lumber wagons in the fence corners and other tools in like places, and then can't afford an investment which will pay 50 per cent. on the money invested! Too thin! I feel like going out and stirring up some of these men and making them take the R. N.-Y. a year on trial, feeling sure that they would continue in well doing when once they were started on the right track. H. S. W.

Little Utica, N. Y.

I am glad to note that it is not proposed to lower the standard of the R. N.-Y. Its success must demonstrate that the farmers of the United States appreciate and will heartily support a journal that is at once an ornament on the table of the wealthy and so dear a friend in the homes of the poor that they cannot afford do do without it. The ranks of cheap farm papers are filled to overflowing now; I am a subscriber to several. There are good papers among them; but the R. N.-Y. is far the cheapest when we take into consideration the feast it places before us. L. H.

Dansville, N. Y.

ANOTHER MICHIGAN THRASHING SCENE.

OUR friend, William Anderson of Alcona

A LA MARQUE ROSE AT NILES, CALIFORNIA. From a Photograph. Fig. 268.

County, Michigan, sent us the photograph, a copy of which is shown at Figure 270. Three or four years ago, Mr. Anderson and 11 of his neighbors formed a company and bought a $600 thrashing machine direct from the makers. The agency fees saved by this transaction amounted to $90. This practical form of co-operation has been successfully carried out. The members of the company pay enough for their thrashing to cover the expenses of running the machine and any possible breakage. Two cents per bushel for fine grain and one cent for coarse have paid all expenses thus far. Our picture shows the machine and the members of the company at work. We frequently hear of plans for co-operation among farmers. Here we have an instance of the success of such a plan. Who doubts that this company does improve the social and neighborly feeling of the community as well as the business affairs of the farmers. Blessed is the farming community where such combinations are possible.

The Vineyard.

A NEW METHOD OF GRAFTING.

I INCLOSE a sketch—see Figure 269—of the way in which Mr. John Cretors of Leavenworth, Kansas, grafts the grape very successfully, commencing not earlier than June 22, on stocks half to three-quarters of an inch in diameter. A slit is cut upwards

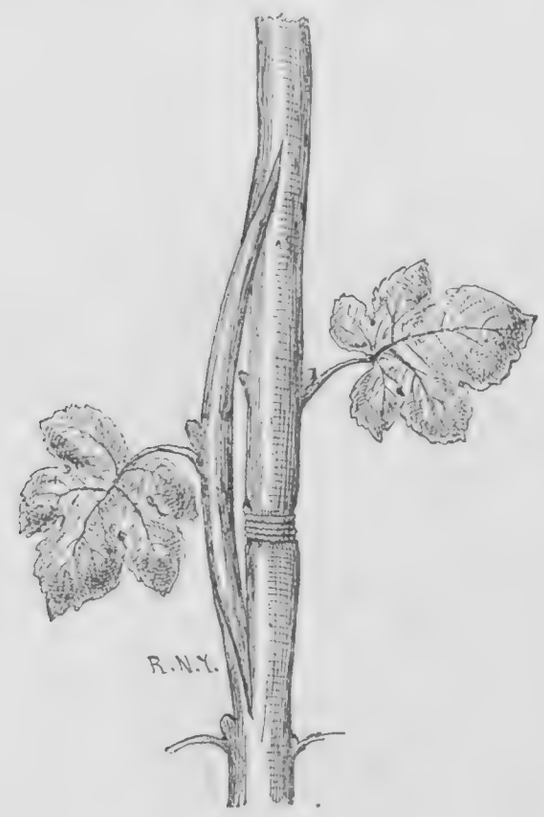


Fig. 269.

and a similar one downwards in the stock at any convenient hight above the ground, and the graft is cut with a bow-like bend which keeps it tightly in place. The grafts are tied with rubber bands a quarter to three-eighths of an inch wide pretty tightly or they are wrapped tightly with tin-foil cut in strips half an inch wide rubbed down closely as the wrapping proceeds, then over the foil they are wrapped tightly with soft cotton wrapping yarn; then the stock between the ends of the graft is tied tightly with hard cord. C. W. K.

Los Gatos, California.

Rural Topics.

Making a Living

ON A

LONG ISLAND LOT OF 12 ACRES;

MOST OF IT IN SCRUB OAKS!

CAN A CITY MAN DO IT?

AS THE R. N.-Y. stated two weeks ago, the following letter was recently received from a man in this city:

"I own a farm of 12 acres, 20 miles out on Long Island. It is average Island land with a small house, etc. Eight acres are Scrub Oak and hazel brush; four are cleared. My family consists of a wife, a father and a mother-in law (too old to work) and three children two to nine years old. I am a real estate broker. At the end of the year in the city I am usually $100 in debt for living expenses, though I work like a slave as most "curb-stone" real estate agents do—to say nothing of the mental strain of getting food and rent for a family. Now does the R. N.-Y. or its readers who are practical farmers think that I could make a living on my 12 acres by working it myself? When young, I had three years' experience on a Western farm. I worked 40 acres of corn all by myself having no help except at topping and husking time and the yield was 85 bushels to the acre. But this was in the West where hand-hoeing was deemed almost a disgrace. What means would the R. N.-Y. recommend as the most economical for clearing those eight acres of Scrub Oak and hazel brush? What crops would be best to give the quickest returns, my cash capital to get utensils etc. being, say, $300? Would poultry raising for eggs or market be advisable?"

THE R. N.-Y. always hesitates to give advice in such a case, because it knows that there is no general rule that can be given. A complete change of business is always a serious matter. Nothing could be more abrupt than a change such as our friend proposes. The whole thing will depend upon the man, and in this case, his family. In any event "a living" can only be secured by practicing the strictest economy, by most hearty co-operation indoors and out, and by the most constant labor and observation. This letter has been referred to some farmers on Long Island, who have for years studied the conditions of farm life there. Their replies are not encouraging, but the R. N.-Y. cannot help feeling that they are far more sensible than those sometimes given by persons who view country life from a distance. The R. N.-Y. will be glad to hear from others regarding this matter. It is particularly anxious to learn if the same conditions prevail in the vicinity of other large cities. Since the above was written the letter from W. D. Pyles has been received. This puts a new face on the matter. It must be remembered that Mr. P. lives in a section where the climate and natural conditions are all more favorable than the would-be Long Island farmer will find them. We shall be glad to hear from others who have gone from the city to the country.

FROM O. A. F.

I can see no way by which this correspondent can make his farm of four acres of cleared land and eight acres of Scrub Oaks of any practical value to him except for a home. He says there is a house on the place and that he can raise $300 in cash. A farm of that size would not require stock, except one horse, and he would have to confine himself to market gardening. But he must have experience first, or very closely watch a neighbor "whom he knows to be successful." It would be better still to work for him a year at $15 per month "going wages," and learn the business. He will make more money by the latter method. Shrewd, experienced farmers are obliged to figure very closely to make their farms support them, and in the majority of cases he will find that the young farmers who are not well forehanded depend on outside work to help them pay their fertilizer bills. A man who is willing to fill in his spare time with team work, such as mowing, trucking, etc., can generally find plenty of work. I should judge that it takes as much intelligence and experience to manage a farm successfully as it does to manage a ship successfully, from the fact that the best farmers dropped corn and the best captains were cabin boys. No amount of explanation would tell a person as much about farming as one month on the farm, or as much about the water as one month before the mast.

Promised Land, N. Y.

FROM A LONG ISLAND FARMER.

In reply to the inquiry as to whether a man can make a living on a 12-acre farm within 20 miles of New York City, I should say it would depend to a great extent upon the man and his family. Tens of thousands of men are living on such farms or garden spots and supporting large families; but these men are living and working in a way in which no American would care to live and work. They work all day in the fields and spend the night on market wagons driving to the city or waiting about the market. For them there is no rest during the busy season; no Sabbath or holiday is recognized. Life is one eternal routine of work and struggle. But the man is not the only slave; his wife and children work with him. It is a common thing to see a whole family working together in a field on a Sunday or holiday; during week days they seem to be at work about all the time, even using lanterns to get the produce ready, after it is too late to work in the field. The houses of these people are of the plainest description, and their interiors are utterly devoid of any ornament or evidence of luxury. They know and care little about education, and as a rule take no agricultural paper. Their food is of the coarsest description. It is safe to say that by far the larger proportion of these farmers (?) or gardeners do not speak the English language. Living as these people do, they can afford to sell their produce at the very low price which it usually brings in the New York market and still have a margin of profit; indeed many of them have saved up large sums of money and have gradually enlarged and improved their lands until they have become relatively independent. Now I take it the inquiry comes from an American who is accustomed to live as Americans do. The very nature of the inquiry shows that the man feels the necessity of "supporting his family." This I should say, without any hesitation, would be an impossibility on a farm or garden of the size mentioned. I should say the net result of a man's or a woman's labor—for women earn almost as much as men—would not be over one dollar per day. This would not begin to support a family.

Pearsalls, N. Y.

FROM DAVID CARLL.

After 40 years' experience in farming on Long Island I cannot conceive any way by which a man could make a comfortable, or even a decent living for himself and family on such a place as is described. If he could work for some of his neighbors or do something by which he could earn money in addition to what he could get off his place, he might "make it go," not otherwise in my opinion. I presume a man in such circumstances could as economically clear up the Scrub Oaks with sheep as in any other way.

Deer Park, L. I.

FROM H. A. BROWN.

I think it about impossible for any city man to support a family of seven on four acres of cleared land and eight of uncleared. It is possible to do so if the man and his father are able-bodied and willing to get right down to hard work and close economy, and can dig the stumps and clear the land all up themselves, provided the land is fair, loamy soil, and there are reasonably good market facilities. It must be remembered that we have to compete with the fast-developing South, with its early productions; with the boundless West, with its ever-increasing products and lowering prices. I honestly and conscientiously believe Long Island to be one of the most healthful and pleasant places on the continent; but there are only three classes that can live successfully on the middle portion of the island, viz., the rich, the practical Eastern farmer, and the very frugal, hard-working poor man, who will live within his income be it ever so small. I believe the cheapest way to clear up scrub land is to dig the scrubs by hand with a mattock. It costs, if hired, from $16 to $30 per acre to stub them. I hardly think more is necessary; but if this man tries farming let him practice after the best farmers near him, or the best of the class who produce what he wishes to grow. I have given a poor German good advice and he is doing well, though he had but $4 when he and his wife came here.

Wyandance.

FROM W. D. PYLES.

On page 680 a man wishes to know if he can make a living on 12 acres of land on Long Island; I do not live on Long Island but will give a little of my experience. I worked for my father on a farm till I was 20 years old; then I worked in Washington City for five years, saving in the mean time $700 and also fracturing my ankle joint so as to render me unable to perform much work that requires a good deal of walking, such as plowing, etc. I went eight miles from Washington, D. C., and bought 15 acres of poor land, paying $1,200 for it—part cash and the rest in yearly installments. That was in '81. There were no buildings of any account. I first bought a pair of horses and one two-horse bed wagon for hauling manure from Washington. I bought strawberry and raspberry plants and set them out and began a fruit and vegetable garden for market. I have the farm paid for and have bought another of 15 acres, and another of nine acres, and all are paid for. I own three fine horses weighing 1,050 to 1,250 pounds each, three head of cattle and raise hogs enough to furnish me with lard and meat each year. I have built a fine dwelling, as well as a bank-barn, a wagon-shed, a corn-house, a blacksmith shop, etc., costing between $2,500 and $3,000 all paid for. Like friend Terry I am a specialist. Strawberries, sweet-potatoes and grass are my special crops. But, unlike him, in regard to butter and milk, I have my own Jersey cow and make my own butter and get my milk pure. I raise all the vegetables my family use, so I have a comparatively small bill at the grocery store. I keep my sweet potatoes till the price rises in winter, sometimes as late as April the following year. I've made all I own except $700, since 1884. I lost money the first two years, and came out even the third. I began to gain in the fourth and am still ahead.

I hire one man by the year and pay him $15, furnishing him a house and fire-wood and vegetables from the garden. He boards himself except breakfast which I give him so as to have him come earlier in the morning. I have a house for a tenant on one of my farms, in which my man and his family live. His family pick berries, etc., which helps him along. I hired my first man in '81. He stayed with me for seven years. Next year will make the second for the present man. I treat my help well and he satisfies me in return. I often let him have a horse and wagon to carry his family to church, camp meeting, etc. If the Long Island correspondent is an economical man I don't see why he cannot do well on his 12 acres. My land has improved till most of it is worth $100 per acre, while I can buy plenty of land near me for $10 to $20 per acre, so I am improving my farm and living as well. There are plenty of men who owned farms when I came here who predicted that I'd stay only two years and "bust;" but I am here yet and away ahead of them. Most of them come to me for advice now instead of ridiculing me as they did at first.

Prince George County, Md.

Dairy Husbandry.

THE QUALITY OF BUTTER

As Affected by Different Grains.

WHAT DAIRYMEN SAY.

SOME months ago Mr. Henry Stewart wrote the following for the R. N.-Y.:

"In my careful and long-continued experiments I have found that foods affect butter in the manner following:

Buckwheat bran—white, crumbly butter.

Linseed-oil meal—soft, oily, flat-flavored.

Bran and middlings, both wheat and rye—light, rather soft.

Corn-meal—firm, yellow, high-flavored.

Cotton-seed-meal—hard, rich-flavored and yellow.

Oats—light, crumbly, poor-flavored.

Peas—yellow, rich, soft."

A number of dairymen have been asked to tell us how far this statement coincides with their own experience. It seems evident that there is room for a good deal of experimenting with these foods. How do some of our dairymen know that they are feeding the most economical butter ration?

FROM J. W. NEWTON.

So far as my experience goes, Henry Stewart is right in his estimates of the effect of grain feeds on the quality of butter; but I think that hay (or its equivalent) as part of the ration has even a more marked effect than grain. In other words, a good hay feed combined with a poor grain feed will make a better quality of butter than a good grain feed combined with poor hay. More prominence should be given to the quality of the butter resulting from different feeds than to the

quantity, and the most economical butter ration is that which produces the most butter of the best quality at the least cost. This is a problem for the stations of the dairy States to work out.

Stowe, Vt.

FROM W. B. PRATT.

I have never fed wheat or buckwheat bran for butter, but have used both in slops when an increased flow of milk was wanted, and have found both good for the purpose of producing it. For making butter in the winter I have added to early-cut and lightly salted hay either clover, Timothy or Orchard Grass and fodder-corn or corn-stover, a daily ration of sliced Golden-Tankard Beets, sprinkled with two to four quarts of corn and oat-meal, in about equal parts of each by bulk. The excellence of corn-meal is questioned by no one; nor have I ever discovered or suspected injury to the quality of the butter from the oat-meal part of the ration. Indeed, in seasons when the oat-bin has been fuller than the corn-crib it has been thought that the larger proportion of oats that entered into the mixture was more satisfactory in its results, possibly because of the better condition of the animal arising from a less concentrated ration. If the color of butter is traceable to the food given, then ought not yellow corn give a more golden hue than white corn? Who shall say that it does? If it is the kind of meal rather than the nature of the animal that determines all other characteristics of butter, then ought not all cows give a like quality of butter from a like sort of feed? Who will say that they do? I have not had experience with many of the sorts of meal mentioned.

Prattsburgh, N. Y.

FROM GEO. M. ORRIS.

I feed mostly bran to my cows in summer and half corn and oat chop with bran in winter, and I know that my butter was higher-flavored last winter than it is now, but I attribute it to the mode of making it more than to the feed. I have been placed in a position requiring me to make my own butter, and I know that there is a great deal to be learned yet in the making of butter and the feeding of cows. I shall try some experiments this winter on this subject and report to the R. N.-Y. I fully agree with Mr. Stewart in regard to buckwheat-bran (shorts) and linseed-meal. I discovered their effects on butter some time ago. I always was in favor of corn-meal for cows in the cooler months of the year; but disliked to feed in summer as the cow seemed to fatten up too much when fed on it in warm weather; but it is a great feed for butter if fed with wheat-bran, pound for pound. I have fed some cotton-seed-meal and it made the milk very rich; so much so, indeed, that I thought the butter tasted oily. I may have fed too much of it. I have never fed any pea-meal to my cows. There is a great difference in the flavor of butter according to the way it is made up, for so many things one comes in contact with damage flavor, such as weather, water, feed, ventilation, too much ripening, poor salt, ill-treatment of cows, etc., so that a dairyman has always to keep his wits about him or he will get left occasionally. Dairying is about as trying a way to make money as one may well get into.

Meadville, Pa.

FROM J. MCLANE SMITH.

My business is furnishing cream, not making butter. I churn only when I have some cream left over. I have never fed pea or cotton-seed-meal or buckwheat-bran, as they are not sold in our market. My usual ration consists of wheat-bran and malt sprouts, with the addition of crushed corn and a small amount of linseed-meal in winter. These in our market afford the proper nutriment at the least cost. But I have never fed the ingredients separately to note the effect.

Dayton, O.

FROM H. S. WEEKS.

As my farm has for many years been devoted almost exclusively to the production of cream for hotel use, I have not experimented much in feeding for butter; but I have used all of the feeds mentioned by Mr. Stewart, except cotton-seed-meal and peas, and find none that will take the place of corn-meal as a part of the ration in making rich, heavy cream, though if silage from well matured corn along with some of the other foods named be used, my own experience is that equally good results will be obtained, and my custom is now to feed bran and middlings with silage, and when the cows are at pasture or on green feed, to add corn-meal or corn and oats ground together in the proportion of one-third in weight.

Oconomowoc, Wis.

FROM F. D. DOUGLAS.

I have had little experience with any one of the various kinds of feed named, when used alone, as a grain ration for milch cows, because of the fact that neither alone makes a well-balanced ration, while all, with the exception of buckwheat-bran, are valuable as constituents of judiciously constituted rations. The results of Mr. Stewart's experiments were substantially as I should have expected. From my previous knowledge of the characteristics of the various foods tested, I should not have anticipated just the results obtained from the use of well cured oats and peas, but I do not question the correctness of his results, as I have always used these foods in connection with corn and cotton-seed-meal. In such a combination, I regard both as valuable, when fed to a butter-producing herd; but the characteristics of the two former constituents would naturally counteract the defects claimed for the latter, and thus make an excellent combination, as I practically find them to be.

Whiting, Vt.

FROM C. M. LUSK.

My experience with some of the kinds of feed mentioned is limited. There is no question in my mind that the feed makes a vast difference in the quality of the butter. I have fed buckwheat ground and found that I got a greater quantity of milk, but it was not very rich in butter and what was produced was white and of an inferior quality similar to winter butter. I find the same to be the case with wheat bran and middlings; but the butter from them is not so light-colored. I have also found that ground oats do not make good butter. Corn-meal makes butter that is high-colored, firm and of the best flavor. I have not fed cotton-seed-meal or linseed-meal. I do not feed oats. To increase the flow of milk I feed middlings and bran, and corn-meal to improve the quality of the butter. There is as much difference in the quality of butter from the different feeds mentioned as there is in that from dry hay and grass fresh in June. As far as my experience goes, I agree with Mr. Stewart, and my experience covers a period of over 25 years, having had a dairy during the whole time.

Broome County, N. Y.

Pomological.

A NEW SEEDLING APPLE.

I SEND the R. N.-Y. a box containing two apples, seedlings from this county. The original tree grew from seed planted in a fence row, 65 years ago, and is still in good bearing, although showing much age. The specimens I send were taken from younger trees grafted from the parent. Its age proves its longevity and hardiness—it is surely an iron-clad. Its bearing qualities are first-class. The fruit does not scab or drop. The tree is an upright, strong grower, bears its fruit evenly on the tree and is a constant bearer. Our local nurseryman from whom I procured the samples sent, says that the fruit is to-day the best in western Indiana as to quality. While mellow in October, it will keep till March. This apple should be brought before the public. A. C. B.

Park County, Ind.

R. N.-Y.—This apple (but one specimen was received) is, in shape, oblate-ovate, with a deep cavity, a short stem, shallow basin and calyx. It is about the color of King (Tompkins County) obscurely striped and lined with yellowish-red. The flesh is yellowish-white, tender, fine-grained, slightly sub-acid, aromatic. It is an apple of excellent quality and in so far as can be judged by the one specimen, it is well worthy of introduction.

Sheep Husbandry.

WINTER FEEDING OF SHEEP.

Hard to restore good condition once lost; extra feeding must be begun slowly; salt indispensable; how to feed it; separating the different classes; all poor animals should be culled out; regular feeding of paramount importance.

A NORTHERN MICHIGAN THRASHING SCENE. FROM A PHOTOGRAPH. SEE FIRST PAGE. FIG. 270.

IT must be remembered that sheep are not to be allowed to get thin during winter with the idea that their condition can at any time be readily raised by better feed, as in the case of the horse or ox. It is always difficult, and, unless properly managed, expensive and hazardous to attempt to raise the condition of a poor flock in the winter, especially if they have reached that point where they manifest weakness. If the feeding of a liberal allowance of grain be suddenly commenced, fatal diarrhea will often supervene. All extra feeding, therefore, must be begun very gradually; and it does not appear in any case to produce proportionate results. Roots, such as ruta-bagas, Irish potatoes and the like, make a substitute for grain or serve as extra feed for grown sheep. The ruta-baga is preferable to the potato in its equivalents of nutriment. No root, however, is as good

for lambs and yearlings as an equivalent of grain. Sheep may be taught to eat nearly all the cultivated roots. This is done by withholding salt from them and then feeding chopped roots a few times, rubbed with just sufficient salt to induce them to eat the roots to obtain it; but not enough to satisfy their appetite for salt before they have acquired a taste for the roots.

Sheep undoubtedly require salt in winter. Some salt their hay when it is stored in the barn or stack. This is objectionable since the appetite of the sheep is much the safest guide in the premises. The salt may be left accessible to them in the salt-box, as in summer; or an occasional feed of brined hay or straw may be given them in the warm, thawing weather, when their appetite is poor. This last is an excellent plan, and serves a double purpose. With a wisp of straw, sprinkle a thin layer of straw with brine, then make another layer of straw and give another sprinkling and so on. Let this lie until the next day, for the brine to be absorbed by the straw, and then feed it to all the grazing animals on the farm, which need salt.

If flocks be shut up in small inclosures during winter, it will be necessary to divide them into flocks of about 100 each, consisting of sheep of about the same size and strength; otherwise the stronger will rob the weaker, and the latter will rapidly decline. This is not so important where the sheep roam at large; but even in that case, some division and classification are best. It is best, indeed, even in summer. The poorer and feebler can in this way receive better pasture, or a little more grain and better shelter in winter. By those who grow wool to any extent breeding ewes, lambs, and wethers are invariably kept in separate flocks in winter, and it is best to keep yearling sheep by themselves with a few of the smallest two-year-olds and any old sheep which are kept for their excellence as breeders but which cannot maintain themselves in the flock of breeding ewes.

Old and feeble or wounded sheep, late-born lambs, etc,, should be placed by themselves, even if the number be small, as they require better feed, warmer shelter and more attention. Unless the sheep are of a peculiarly valuable variety, however, it is better to sell them off in the fall at any price, or to give them to some poor neighbor who has time to nurse them and who may thus commence a flock. If any one principle in sheep husbandry deserves careful attention more than others, it is that the utmost regularity must be preserved in feeding. D. W. T.

Homeworth, Ohio.

Farm Economy.

MORE ABOUT

Marketing Crops.

CONNECTICUT.

HARTFORD County, October 14.—My principal crop is leaf tobacco, and it is the only crop raised in this section the product of which exceeds the local demand. Dairy products are next in importance. I also sell some hay, potatoes, beef, poultry, eggs and fruit. Tobacco is sold to buyers who come through the country looking for it, and the price depends more on the quality of the leaf than on the figures in the market. Prices last season ranged from 10 to 25 cents per pound. As an almost invariable rule, early sales are the best, and the season to buy begins as soon as the tobacco is grown, while it is in the field, and continues till the next May. As to keeping posted on prices, sales of tobacco and the prices received are reported in the local newspapers. I never hold if I can get a fair price; but it sometimes happens that the buyers get afraid of the crop and will not buy except at a very low figure; then it is advisable to hold, as there is little to lose and possibly something to gain. I sell my cream to the creamery company of which I am a stockholder, and at present I am selling the skim-milk for one cent per quart to a peddler who sells it in a neighboring village. Other products are also sold in the same village at the market prices at the time of selling, which is whenever I have time to carry them to market. E. P.

DELAWARE.

CLAYTON, Kent County, October 19.—My chief crops are peaches, grapes, strawberries, raspberries, currants and gooseberries and I have to sell each crop in its season. To post myself on the markets, I take the R. N.-Y. and a number of other papers and during the fruit season I received daily telegrams this year. The crops were light and poor in quality and prices were low. A. S. R.

SMYRNA, Kent County, October 19.—My chief crops are peaches, pears and, until the last three years, grapes. Black rot has destroyed the grape crops of these last three years. In marketing I am governed by the ripening of the fruit and ship to commission-men or sell to any one offering satisfactory terms. Like my neighbors, I am informed by telegraph of the condition of various markets by commission-men, so we are very much at their mercy. I like the plan suggested in a late R. N.-Y. of auctioning the fruit and think some such plan must soon be adopted.

Of corn I grow "Sheep's-tooth" or "Southern White" and sell to a local agent who allows 10 cents per bushel above market quotations for yellow. I keep posted on the markets by reading the papers and am somewhat influenced by suggestions on the market, as given by the R. N.-Y. This year I tried two acres of potatoes planted according to the RURAL Trench System and raised 488 bushels. I gave a light dressing of manure broadcast and 500 pounds of special fertilizer per acre in the trench. This yield is one of the best, and as far as I know, the best in this section, the yield generally being 100 to 150 bushels per acre. I want to do better next year on the same plan, but with more fertilizers. W. P. C.

INDIANA.

CARMEL, Hamilton County, October 21.—Our chief crops are hogs and wheat. The former we are almost compelled to sell when they are ready; but we are governed somewhat by the reports of the market in the daily papers. Generally we hold our wheat till late fall or winter on account of the better price after the rush that follows thrashing. J. R. C.

MARYLAND.

CAMBRIDGE, Dorchester County, October 18.—My chief crops are wheat and corn. The sale of these is a lottery. I have tried shipping at all seasons and have come to the conclusion that an early shipment is, in the majority of cases, the best. I aim to post myself as far as possible on the state of the market by the daily papers and the R. N.-Y. I have been holding my grain this season on account of the supposed shortage in Europe and the decrease of our surplus: but I shall now sell. J. C.

TRAPPE, Talbot County, October 21.—For some years I sold my crops just as soon as I could get them in order—the earlier the better—but for the last two years (since prices have declined to an almost unprofitable extent) I have studied the crop reports of the R. N.-Y. and those of the Agricultural Department as to home and foreign supplies. If the Western or European crops are short I hold, otherwise I ship. I held my wheat till June of this year owing to reports of short crops and missed it. WM. C.

MICHIGAN.

ELMIR, Sanilac County, October 18.—We sell our chief crops in October and November. Clover seed is sold in February. I keep myself posted on the markets by studying the reports in the R. N.-Y. and the Toledo Blade—the two best papers in the world. I sell because I want cash. If wheat is low, I hold it till May and June. When wheat is scarce, the market is high. C. L. M.

OHIO.

ANDOVER, Ashtabula County, October 19.—How to get the most money out of what we have to sell is a matter deserving the careful attention of every farmer. It takes money to lubricate the wheels of domestic life, so that it does not matter so much how many tons of surplus farm products we have to offer for sale as it does how much cash we can drop into the bank to be credited to our account. Some farmers of my acquaintance act under the iron-clad rule of selling everything "as soon as it is ready for market." I do not consider this a wise course to follow. There are always thousands and tens of thousands of farmers who are so "hard up" that they are forced to sell anything that will bring them a little money. As a rule, they fill the market immediately after harvest with their wheat, corn or potatoes, and the farmers who hold off for a while until the "glut" upon the market caused in this way has been worked off are, as a rule, the men who obtain the top prices. I would not be understood as advising farmers always to hold their crops for higher prices. It very often happens that the earliest in market take the cream of the prices. I usually try to know what the future prices are likely to be. My commission-men keep me informed as to prices and supply and demand by sending me their weekly quotations. The State and National Agricultural Departments furnish full information in regard to the yield of various farm crops. If the yield of a certain perishable crop—like potatoes—is below the average, as reports this year indicate, the probabilities are that the price of that particular farm product will advance. If we take the subject of grain under consideration, the crop of a single year is not all we have to consider We must inquire further and learn how much surplus carried over from former years we have to add to the amount produced. We must know something of the demands of the world for our wheat, corn, oats or barley and inquire if other nations have a deficiency, how much of our surplus will be demanded to feed their inhabitants. I often obtain valuable hints from the doings of the gamblers in the grain markets of New York and Chicago. The members of the Board are pretty well informed upon this subject. If their bids upon wheat for delivery three or four months hence indicate a considerable advance or decline, I take the hint, or, as the boys express it, "catch on." In short, I avail myself of all the information within my reach and then act upon my own judgment. C. T. L.

BELLAIRE, Belmont County, October 18.—So far as selling is concerned we have to depend entirely on our local market. Our cereals, berries, garden produce and fat stock are sold in Bellaire. We raise fruits of almost all kinds and find a ready, if not a very remunerative market for them in the same place. In an apple year, we sell our apples to a dealer who ships them to other markets, and we can tell about what he makes by reading the agricultural and other papers that give market reports, and I find that our local markets are about as good as those at any other point. I have been taking the Ohio Farmer for many years, and am taking the R. N.-Y. this year, and I find in them about all the information that one needs about the markets, and in fact sometimes more than will give satisfaction—when, for instance, apples are bringing a good round price, and a man has none to sell. Last year they were a drug on the market; this year there are none. Farmers who have any are selling them for $1 to shippers and for $1.25 to $1.50 in our local market. This is because a shipper makes a clean sweep of all and the farmer gets his money in a lump; whereas if he hauls them to town, he loses a day, and expenses besides. So he doesn't gain much by the higher price. I was looking for potatoes to command a better price, but have failed to find the expected figures. Reports seemed to indicate a shortage that might cause a brisk demand and better prices, but they are as low as last year (40 cents) and there are no signs of any advance. I. H. D.

PENNSYLVANIA.

BROOKLAND, Potter County, October 23.—We have a local market for our produce in the lumber district just south of us here. Our principal crops are hay, oats and buckwheat, in the order given. Prices are regulated by the Buffalo or Western prices in car-lots delivered at the nearest railroad shipping points, plus cartage into the country, for there is generally a deficiency in this section. For the last two or three years, however, we have raised rather more hay and buckwheat than we used, and those nearest the railroads have shipped some to city markets; but we do not raise more than half the oats, and almost none of the corn used for ground feed. Prices at present are about as follows; hay, $10 to $12, loose, per ton; oats, 33 to 35 cents per bushel; buckwheat flour, $2.50 per 100 pounds. Prices vary a little, according to expense of delivery. W. D.

BADEN, Beaver County, October 16.—A few years ago we left a farm in Ohio, which was five miles from a railroad. Here we are 21 miles from Pittsburgh and five to nine miles from other and smaller manufacturing towns, and a railroad runs through the farm. It has taken me a few years and perhaps more than a few blunders to learn several things. One should not try to garden and farm at the same time unless he has plenty of help, as one or both occupations are likely to be neglected. Better lay out only enough work for a wet season; then if you are favored with a dry season in which to do the stint, all right. But if you lay out work for a dry season (as I did this year), and get a wet one (like the spring and summer of 1889, for instance), take care. My aim now is to feed all the hay, oats, corn and fodder I can raise on the farm. The straw I use for bedding. If we have more wheat than we can use, I have it ground at a good roller mill and sell the flour to families in some of the neighboring towns, keeping the bran and middlings to feed to my cows or hogs. Hogs I try to have ready for the butcher early. Our first markets in the fall for hogs appear to be as good as any. My hogs run in the orchard through the summer where they are kept in good condition, and do not require much corn to get fat if the fattening is done early, before severe weather begins. If potatoes or apples bring fair to good prices in the fall, I think it better to sell them then than to hold them over-winter and run the risk of their freezing or rotting and of bad roads for hauling them away, and possibly lower prices. I learned a few things about selling butter here. Each store-keeper appeared to have his own price which was sometimes as much as six cents per pound more or less than that offered by the next one, perhaps only a few rods away and very easily overstocked. I now have regular customers for my butter, and am trying to make more of it. Calves I generally sell for veal when they are four to six weeks old. J. W. D.

KNOX, Clarion County, October 12.—First I sell my chief crops as soon as I get them ready for market, if the price suits, and the price always suits on a rise. I do not try to get the highest market possible, but I avoid the lowest, which often follows holding too long. One "step I take," to keep posted is to subscribe for the RURAL NEW-YORKER; further I study the condition of the markets of the world, as given through reliable sources. I "determine" as to "selling or holding," as the girl did about getting married. She said: "I read in the Bible that they that get married do well; while they who remain single do better; but I am satisfied to do well" so am I with regard to selling my crops. Hereabout we raise our chief crops from a deep sandy soil known as the "third sand," which on my farm lies at a depth of about 1,100 feet, and is richest at the bottom. We use a plow-point weighing about 3,500 pounds reaching to the bottom of the soil from the surface, but we never turn up this deep soil; nor do we ever sow; though we do sometimes plant a torpedo in it. We experience no difficulty in cultivating our deep soil. We raise the crop by means of a sort of bean pole, known here as a sucker rod. I need hardly add that mine is an oil farm. M. E. H

VERMONT.

I DO not sell a great deal. I have a small farm of about 75 acres. I keep from three to five cows and one horse. I make butter and have eggs and pork which I sell here at home or I exchange for flour and sugar and other things that are wanted in the family. I sell all the maple sugar that I can make amongst my neighbors. Potatoes are very good this year; corn too is sound and good. J. Q. A.

Cavendish.

Most of our produce is sold to local buyers, although quite a number of our dairymen are sending their butter to commission-men in Boston and other cities in Massachusetts. The ruling price here the past season for good butter has been 14 cents per pound; while those that have shipped their butter have received from 16 to 18 cents. All the grain we raise is fed on our farms and a large amount of Western corn is yearly bought and fed. Farmers here are feeling the effects of low prices for their produce while paying high prices for farm labor: $20 per month is the price paid this season and the chief question asked among farmers is how are we going to pay our family bills, our taxes, our help and the interest on our mortgaged farms, and the question is a serious one. Here are the prices now offered for what we have to sell: wool, 25 cents; butter, 15 cents: potaoes, 35 cents; oats, 35 cents; hogs, fat, four cents per pound; beef cattle, $3 per 100 pounds: store cattle, calves, $4; yearlings, $8; 2-year-olds, $12; cows $15. How are these for prices in old Vermont?

Lowell. F. H. S.

Everywhere.

RURAL SPECIAL REPORTS.

Illinois.

SENECA, Lasalle County, October 25.—Potatoes are a large crop; price 25 cents per bushel. Several car-loads have been sent from here to Eastern New York. I raise the Potentate for my main crop and think it is the best potato I have ever planted. D. L. C.

Indiana.

ANGOLA, Steuben County, October 20.—Clover seed is two-thirds of a crop—from two to five bushels to the acre. Crops in general were good. We have a good supply of hay of which there was three-fourths of a crop. Corn and oats yielded about the same, and there was an increased crop of potatoes and apples, especially of the latter. Over 100,000 barrels have been already shipped out of this county and more than as many more are still to be shipped. We have two large cider presses and evaporators in this town in addition to others through the county all doing a big business. Hog cholera is very bad in the western part of the county. One man lost all he had except one pig—180 head. Another lost over 200, but notwithstanding all that, business is very lively and everything is on the boom. We are located in the northeast part of the State and this is the highest county but one in it. We have beautiful spring water and 72 lakes well stocked with all kinds of fish, besides many beautiful resorts and a fertile soil, so that I can see no reason why we should not be a prosperous community. I am the originator of the Dutter Seedling Strawberry and it is with me the best I have yet found, and I have 43 varieties. I am a reader of the RURAL NEW-YORKER and it is the best of its kind in the land. We have had a very dry fall. Early-sown wheat looks well, especially on gravelly or loamy soil; but later-sown wheat looks bad on clay soil. J. D.

Michigan.

HOWELL, Livingston County, October, 21—The large kind of clover seed is turning out very well as reported by thrashers—about 20 per cent. above the average. On account of the drought, pure clover seed is a short crop, yielding only about 25 per cent. of an average. Wheat averaged a fraction over 17 bushels per acre, and was very badly shrunken. Oats yield is placed at 37 bushels per acre; though some claim to have raised 65 bushels. The potato crop was badly injured by the drought. The yield is about 65 per cent. of an average—no rot. Winter apples yielded better than farmers thought when they first commenced to pick—about 80 per cent. of an average. From this town up to October 17 9,000 barrels of winter apples were shipped, besides over 6,000 bushels of cider apples, the latter being shipped to New York State. One firm bought 1,200 bushels of cider apples in one day. Corn is about 40 per cent. of an average and the ears are very short. The prospect does not look very favorable for wheat next year. Little of it has come up yet, though it has been sown five and six weeks. Some farmers have not sown any wheat, the ground having been too dry. The drought still continues, and is the worst ever experienced in these parts. We have not had any rain to help plowing since June 27. C. P. J.

HART, Oceana County, October 20.—The weather is very dry and cold at night. Potatoes are about all dug. They were marketed first at 30 cents, then the price dropped to 25; and now it is only 20, though the quality of the crop is the best—no rot. Corn is a rather poor crop. I. H. F.

New York.

RUSHFORD, Allegany County, October 24.—Farmers are feeling a little blue in this section. There is no fruit of any kind. Potatoes are about one-half a crop on an average; but of good quality. There was a fair yield on dry soil; but on river flats and mucky land the crop was very poor in quality and yield. Hay a good crop. Oats gave a light yield. Winter wheat was a failure on account of the spring frosts. Prices for all kinds of cattle are very low. The price of cheese has averaged low, and it has taken more milk than usual to make a pound of cheese. A. L. L.

Pennsylvania.

EVANS CITY, Butler County, October 24.—In this part of the State we raise mixed crops. Wheat was a full crop; rye a good one. Oats were not extra; they rusted. Corn is not half a crop; the weather was so wet from planting time till harvest that the land could not be worked. Potatoes are not half a crop; they blighted and rotted very badly; there are fields not worth digging. Some don't get more than the seed. Hay was a good crop and it was secured in pretty good order. There is a great deal for sale. Not much wheat has been sold yet; the farmers don't thrash till the beginning of winter. It sells at 85 and 90 cents per bushel. Oats 30 cents; corn 50 cents; potatoes 50 cents; hay sells for $8 to $9 per ton delivered at the railroad. We can sell all of our marketing at home as this is in the oil country where a great deal of produce is consumed. J. O. C.

FLOURTOWN, Montgomery County, October 28.—Wheat is a full crop. Corn, about being husked, will generally be good except where injured by excessive rains. Oats are good in quantity, but very light in weight. Potatoes with us have generally been a failure on account of too much rain. Hay has been an unusally good crop. A great amount of it is hauled loose on wagons to Philadelphia. It is now selling at from 60 to 85 cents per 100 pounds according to quality. Most of the farmers in our locality sell milk, shipping it on cars to Philadelphia. The price per quart is three to 3½ cents in summer and four in winter. Much of it also is sold to dealers who serve it through the suburbs of the city. Some few farmers serve their own milk to the families. This pays best when it can be rightly managed. Some farmers thrash their grain soon after harvest. I generally do my thrashing during the winter as it is necessary for me to keep hired help by the month. I feed during winter oat-chaff together with cut corn-fodder and clover hay made wet and mixed with corn meal, bran and linseed-cake-meal. This gives very satisfactory results. S. Y.

Wisconsin.

DELAVAN, Walworth County.—Dry here; cisterns, wells and streams all low. This is our third dry season in succession. To counterbalance this will the floods come next year? Among farmers there are bitter complaints of low prices for farm produce. T. K. P.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

A PLUM ORCHARD.

F. L. A., East Pepperell, Mass.—I wish to set a plum orchard of 200 trees; what varieties for market and home use shall I set? The land is level; soil a moist sandy loam. I am told that for such soil the Lombard is best, and that in market it is as much a standard among plums as the Baldwin is among apples; is that correct? Would a heavy mulching composed of equal parts of mulch and good stable manure, well mixed, and allowed to stand over winter, be good to apply to trees set last spring and next spring; or would it be better to apply it only to those set last spring?

ANSWERED BY T. H. HOSKINS.

The Lombard is generally regarded as the best market plum for Southern and Middle New England, and is successfully grown up to the Canada line (45 degrees north) in the Champlain Valley. It is of medium size and quality, and the tree bears heavily. It grows and bears well on medium light soils, if they are not too sandy and infertile. In such a soil manuring and mulching are needed. Ashes and chemical fertilizers, such as ground bone and potash salts, are well suited to plums and other stone fruits. Boston is an excellent market for plums, if the seller can keep clear of the middlemen, who in that city (and most others) want about all the profit there is in what passes through their hands. As for the substance of the mulch, if the manure is used I should prefer it to be pretty strawy, but it is better to work the fertilizing material into the soil between the rows, and put the mulch around the trees, over a circle eight or 10 feet in diameter. The roots of the trees soon fill all the ground between the rows, and therefore whatever fertilizer is used ought to be applied evenly, and worked well into the soil. The fall is the best season to do this, but an application should be made in spring rather than none.

SCRATCHES OR GREASE-HEEL.

O. B., Sodus, Mich.—My six-year-old mare has been suffering from scratches or grease-heel for the last eight months, and no treatment given has done any good, though I employed a skillful veterinarian. During the summer the legs appeared now and then to be nearly healed, but the trouble would break out again. The legs swell over the hocks at night, but the swelling goes down when the animal is worked. She eats well, is full of life, and always seems to feel well. She is with foal. Is there any remedy?

ANSWERED BY DR. F. L. KILBORNE.

I do not know that I can give a *sure* remedy for grease-heel or scratches, but I can advise a course of treatment that almost always effects at least a temporary cure: Individual cases of all chronic diseases of this kind often require special treatment, and two or more trials may be made before hitting upon the remedy that is adapted to that particular case. Because a remedy has proved a *sure cure* in one case, it is not certain that it will do so in another. For the local treatment, rub benzoated oxide of zinc well into the cracks once daily until the crusts have been all softened and removed, leaving a clean, healthy-looking surface. Then apply daily an ointment of equal parts of spermaceti and almond oil. *Do not wash* the limbs to clean them, but simply rub or brush dry. Keep the animal out of the wet and mud as much as possible, and whenever she comes into the stable with wet limbs, rub them dry. Internally, give two table-spoonfuls of the following powders in the feed night and morning: sulphate of soda, 16 ounces, powdered gentian, eight ounces, iodide of potash, eight ounces, powdered nux vomica, four ounces: mix.

ANGORA GOATS.

E. D. A., Buffalo, N. Y.—Will the same care and feed given to sheep do for Angora goats? Is our climate too severe for them, and should they have better shelter than that which will do for sheep? Are they subject to any particular disease which can be guarded against? About how many pounds of "hair" do they shear, and what is the best market and how much per pound does the hair fetch?

ANSWERED BY MILLER & SIBLEY.

Angora goats do not thrive well upon marshy ground. They should have shelter to which they can run in every rain storm, as there is no oil in their fleece, and they instinctively seek shelter from storms. They do best on hilly land and will live on twigs, sprouts, etc., where sheep would starve to death. Our flock, numbering about 200 head, does more towards keeping down sprouts on newly cleared land, (as we are informed by our man in charge) than would a force of six men constantly employed. If running on wet land, they are liable to get sore feet, which, however, are easily cured up by a little attention. Our best billy sheared nine and one-half pounds. The weight of the fleece varies greatly with age. We should say that five pounds would be a large average fleece for animals in their prime. At one time the price was one dollar per pound and upwards, but at present we understand it is considerably less; we think 35 cents.

ABOUT POTATOES.

W. G. S., Benedict, N. Y.—1. Why have we no potato balls now? Is it on account of the Colorado Beetle? 2. How do potatoes "mix" in the hill?

ANS.—1. It seems to be a law of nature that as we change plants to our needs or "*improve*" them as we may, they deteriorate in other ways. Thus double flowers are produced at the cost of stamens and pistils. Many fruits—apples, pears, oranges, for example—as they are increased in size become seedless. We grow potatoes for the tubers and the plants having been propagated by tubers through generations, their nature is changed. We produce larger tubers and more of them. The energy of the plant which, generations ago, was divided between tubers and seed-balls, is now directed towards tubers entirely. 2. Potatoes do not "mix" in the hill. It is impossible. Any variation in potatoes, that appears in the product of the same seed potato, is owing to *bud* variation—just the same as any green-leaved plant is liable to produce a colored-leaved shoot. These are called "sports" for want of a better word. It seems to the R. N.-Y. probable, as it has before stated, that "sports" are really the cropping out of foreign blood or hybridization, the effects of which, though dormant for years, finally become potent through peculiar conditions.

NASAL DISCHARGE IN A HORSE.

E. P. R., Midland, Mich.—My seven-year-old mare has a slight discharge from the nose, looking like thick, sour milk. It is only noticeable when she snorts or blows her nose. She has no cough and is in fair condition. She has been in pasture nearly all summer during part of each day. This discharge has continued all summer. What can I do to cure it?

ANS.—Feed a hot bran mash daily at night, and add two table-spoonfuls of the following powders: sulphate of iron four ounces, Barbadoes aloes four ounces, nitrate of potash 16 ounces, powdered gentian eight ounces. Rub the whole region of the throat externally and daily with the following liniment until the skin is slightly blistered: white Castile soap and camphor gum, each two ounces, spirit one pint, aqua ammonia and sweet oil, each one-fourth of a pint. Mix. Shake well before using.

ABOUT FRUIT TREES.

G. S., Brooklyn, N. Y.—1. If a young fruit tree is planted in an old orchard, say about four feet away from where the old stump was taken out, will it thrive? I have been told it would not grow. 2. Is it true that nothing in the shape of a fruit tree will grow within 30 feet of a walnut tree?

ANS.—1. The roots of old trees extend in all directions further than the branches. The soil becomes more or less exhausted unless the orchard has been well supplied with plant food. It is for this reason that young trees make a feeble growth in such places. The best thing to do is to enrich the land. 2. This is an old story. Thirty feet from the walnut is too close to plant a fruit tree. Aside from the obstruction offered by wide-reaching tops and roots of the walnut, fruit trees will grow in its vicinity as well as in the vicinity of other trees.

FUNGOID ON RASPBERRY CANES.

E. H., Jonesville, Vt.—I send to the R. N.-Y. samples of the Turner Raspberry canes for examination. What is the disease that affects them? What is its cause and is there a remedy?

ANS.—There is no known remedy. It is caused by a fungus which attacks the canes of the current season, first attacking the bark, then extending deeper until the cane is killed. The berries wither. This dread disease is so rampant at the Rural Grounds and in many other places that the culture of raspberries is practically impossible. Unless some remedy be found raspberry culture will be a thing of the past.

Miscellaneous.

E. W., Salem, Indiana.—W. Atlee Burpee, of Philadelphia, Pa., sells Scotch Terrier dogs.

A Subscriber, Sussex County, N. J.—Our seedsmen know nothing of any corn by the name Rocky Mountain. It was probably a local name for the old white flint.

H. R., Waterbury, Conn.—What is the best way of advertising for a situation for a first-class butter-maker?

ANS.—By stating his qualifications in the advertising columns of the R. N.-Y.

Subscriber, Union County, N. J.—What is a reliable mining paper—not so much for the stock quotations, but for general information concerning mining interests?

ANS.—Send for samples of Mining Review, Chicago, Ill.; Mining and Scientific Press, San Francisco, California; and Engineering and Mining Journal, New York.

E. A. F., Hancock, Vt.—What is the name of the inclosed variety of buckwheat?

ANS.—Our seedsmen here know nothing of the variety, and the catalogues make no mention of it. The grains inclosed have very much the appearance of the common gray buckwheat, but have a deep suture down the center of each face. Do any of our readers know anything of it or its value?

D. P. R., Downieville, Cal.—Does the peach yellows affect seedling trees that stand where the pits were planted?

ANS.—The disease called the yellows appears to be as likely to attack untrans-

planted seedling peach trees as trees that have been transplanted. It seems likely, however, that seedlings of improved varieties will be more liable to attack than others, because they are more "delicate and refined."

E. F., Portland, Oregon.—1. What would be a proper rent to ask for a 100-acre cultivated farm which yields an annual income of $1,000 to $1,400, teams and tools to go with the land? 2. What organ would be best for children who want to learn to play, tone, price and durability being taken into consideration?

ANS.—1. We cannot say. So much depends upon the condition of the farm, its location and other conditions that we know nothing about. 2. The Cornish organ is cheap and durable—worth its price.

B. S. V., Marlboro, Ohio.—My Jersey cow dropped a calf about six weeks ago, and for the last two weeks one quarter of the udder has been gradually swelling and hardening. The milk comes slowly from that quarter, though little if any soreness appears to be present. The skin there seems to be twice as thick as it ought to be. The milk appears good; what should be the treatment?

ANS.—Bathe with hot water two or three times daily and rub thoroughly dry each time. Then apply belladonna ointment, rubbing it well in. Give one table-spoonful each of glauber salts and nitrate of potash once or twice daily in feed.

C. E. M., Perrineville, N. J.—Our cattle here are afflicted by a disease with the following symptoms. Their milk shrinks; the teats swell and become sore; the dung is hard, and the urine red. They stop eating and either lie down or keep walking from one part of the field to another. The end of the nose is red. What is the trouble?

ANS.—We cannot give a satisfactory diagnosis from the description. We suspect, however, the disease may be Texas fever; but in the absence of the history and extent of the outbreak we cannot say positively. If our suspicions be correct the disease will disappear after frost. Treatment is not satisfactory.

P. G., Oswego Falls, N. Y.—1. Will pine shavings used as a mulch for strawberries have any injurious effect on a light, sandy soil? 2. What causes newly cut capons to bloat up between the skin and the body? When the bloated part is pierced with a penknife the air rushes out as if coming from a punctured balloon. 3. If a testicle, after being detached from a bird, is left in the body, will it have any effect on the health of the bird? 4. Does my third question answer my second?

ANS.—1. Not if partially rotted. We would not advise a heavy application, if fresh 2. The trouble is caused by the respiration of the bird, when the skin is not closed over the incision; puncturing the bloated part was the correct treatment; but one should not make any larger opening than possible. 3. No good effect. It would probably act like any other foreign matter, and might lead to inflammation. 4. No.

E. O., Carroll, Iowa.—1. Which is the best hand cream separator? Where can it be obtained and at what price? 2. What are the best books and papers on the general management of poultry? 3. What are the best markets for potatoes from this place? 4. Who are reliable commission merchants in New York and Philadelphia?

ANS.—1. The De Laval is a good separator. Write to P. M. Sharpless, West Chester, Pa., for circulars and prices. 2. The Poultry Keeper, published by the Poultry Keeper Publishing Co., Parkesburg, Pa., is among the practical poultry papers published. The same firm publish several cheap books relating to the several branches of poultry culture. I. K. Felch, Natick, Mass. also has a very good book on breeding. The Orange Judd Co., 751 Broadway, New York, also publish several books on poultry. 3. Prices are higher in the Eastern markets, but of course freight rates will partially balance the extra price. Compare prices in the different cities, and then by learning the freight rates from your place, you can determine which place offers you the best market. 4. E. & O. Ward, 279 Washington Street, and S. H. & E. H. Frost, 100 Park Place, New York, and Warren, Harper & Bro., Philadelphia are reliable commission merchants.

Discussion.

SOME ITEMS OF THE COST OF LIVING IN COLORADO.

O. H., GREELEY, COL.—I herewith send a table which gives the number of our family and the yearly cost of sugar, coal, bread, etc:

17 YEARS—1872—1888.

	No. of Adults	No. of Child'n	Equivalent to No. of Adults	Yearly Cost of Sugar & Mol's.	Cost for Each Adult.	Breadstuffs of All Kinds.	Coal & Wood.
1872	3	1	3	$39.90	$10.97	$82 80	$58 65
1873	3½	2	4	44 16	11.04	57 64	60 65
1874	4	2	5	47.28	9 46	69.65	64.60
1875	4	3	5½	41.00	7.45	68.23	54.20
1876	5	4	7	42.27	6 04	78 76	52 65
1877	5	4	7	60.48	8 64	76.84	47.29
1878	5	4	7	86-76	12.39	76.67	53 55
1879	6	4	8	67,07	8.38	61 91	55.35
1880	5	5	7	68.37	9.58	78.92	65.00
1881	2½	5	4½	43 47	7.66	71 75	54.85
1882	2½	5	5½	69.25	12.59	64.22	53.48
1883	2½	6	5½	66 95	12 17	62.77	43 75
1884	3	7	6½	77 50	11 92	68 45	49 00
1885	4	7	7½	54.20	6.22	59.10	40.70
1886	3	7	6½	56 00	8.61	59.30	27 38
1887	5	5	8⅓	46 40	5 48	69.65	26 00
1888	7	4	9	56.80	6 31	84.80	46.65

No account can be rendered of fruits, vegetables, butter, milk, cream, meat, fowls, eggs, etc., since these are raised on the place, at least in part. During the last 10 years we have generally bought flour, coal and sugar in wholesale quantities, thereby making a material saving. It would be impossible to compute the exact yearly cost of any article for each adult, because the supply of one year sometimes ran over and was used during the following one. The present computation extends over a period of 17 years—from 1872 to 1888 inclusive. For 1872 the cost of coal, with only one stove in use was $58.65, or $16.22 for each of the three adults composing the family. In 1888 the whole cost of coal was $46.65 with two stoves in use, or an average of $5.18 for each of the nine adults in the family. The per capita cost of sugar in 1872 was $10.63, and $6.31 in 1888: breadstuffs, including yeast, baking powder and saleratus, cost, in 1872, $27.60 per capita against $9.42 in 1888. The family expended per adult for coffee, tea, chocolate, cocoa, $1.96 and $1.20 respectively for the years under consideration. The family kerosene cost $4.90 in 1872, and $9.80 in 1888. As regards coal, it may be said that in the early days it cost $7.00 per ton, while it can now be had at $4.50 and $5.00 per ton. When Denver was nothing but a little village, and the Greeley flouring mills had just been built and the first products of irrigation were coming into market, wheat was worth from $1.50 to $2.00 per bushel, and we paid $7 for a 98-pound sack of flour. This will explain why it cost $27.60 for the bread of each adult in 1872, and only $9.42 in 1888, when we laid in our wholesale supply at a trifle over two dollars per sack.

It may be noticed that the cost of coal fell in 1886 and '87 to $27 and $26 respectively—much below the average. This was because in those years we tried the experiment of burning the low-priced nut-coal which is in reality the best of coal chipped out by the miners before blasting down the lump coal.

I remember when a boy hearing my father often make the remark: "If it cost only twice as much to shoe my girls as it does to shoe my boys, I would make no complaint." I thought then, and I still think, the remark was unjust to the girls, and I resolved that I would test the matter and know the exact cost of shoeing man and woman. By the way, what an improvement there has been in shoes for women's wear, especially in the thickness and width. Well, for 17 years and more I have stuck to my whim regarding the relative cost of men's and women's foot gear and clothing, and now for the first time the secret shall be divulged.

Common observation would seem to teach that it would not cost as much to walk on carpets and level floors as to wade through streams and tramp up and down on the rough earth through slush and among stumps; but some men do not see it in that light. Now, as a matter of fact, I paid $21.85 for my "understandings" in 1872, and my lighter and better half paid $5.65 for hers. She was in the house while I was breaking snow-drifts or walking many miles a day. To be sure that was an exceptional year. But in 17 years the average cost of my own shoes has been $13.94, and that of my wife's $6.32. and among the girls and boys of my family the case is even more against the male side of the house. As to the matter of clothing, women are charged with extravagance. Wife and I are plain, common people, always dressing humbly as those blessed with large families should, of course. Wife makes a good deal of her own clothing, and mends a good deal of mine which is largely bought ready-made. The average annual cost of my clothing is $39.98, and of hers $26; that is, those are the amounts of cash paid out.

DWARF LIMA BEANS.

PROFESSOR J. L. BUDD, AMES, IOWA.—I have read with much interest the reports of careful growers and observers on the relative merits and value of the so-called dwarf Lima beans. In connection with this discussion my experience in cutting back the runners for eight years in succession may have some interest. A few years ago the large Lima bean was used almost daily during its season in the college boarding department. We soon found that the poling of a full half-acre of Limas was expensive, and sometimes the vines wanted to go everywhere except up the poles, unless time was given to their training. This led to a trial of cutting back the climbing tendrils with a smooth Dutch sickle as often as needed, each time cutting a little higher. When the pods were large enough to begin picking, we found that we had quite stiff, bushy plants from two to three feet in hight well loaded with large, perfectly filled pods. I was so pleased with the experiment that it was continued for eight years, seed from selected pods growing near the ground being planted each year. Each year the tendency to running decreased and in the eighth year only a few runners started, but not to an extent requiring cutting back. At this time the vegetable garden for the use of the boarding hall was put in charge of the steward and the growing of Lima beans was dropped and the seed was lost. In addition I was told that a Lima-bean grower near Santa Barbara, Cal., had developed a tall bush variety by continued cutting back for six years.

AN IOWA MAN ON DWARF LIMAS.

F. S. W., DES MOINES, IOWA.—I had more than 30 varieties of beans under test this season. As to Lima beans for my family use, I have no use whatever for the bush sorts. True, I have only tested the Henderson Bush Lima which I have found to be no earlier than Extra Early Jersey, while it is hardly worth calling a Lima. In my catalogue for next season I shall recommend the planting of these beans only where people are too lazy to prepare anything better; for I regard them as better than no Lima at all. The Extra Early Jersey is the only Lima that can be relied upon here for a sure crop: every season I have raised some very fine crops of Dreer's and King of the Garden. The past season I had fine crops of the Dreer's, Early Jersey and King of the Garden, and have harvested, for the first time, a good supply of ripe beans. Under critical tests, the Dreer's was decidedly the best in quality, the Early Jersey being second, while the King of the Garden was the largest and most showy in appearance, and it sells well in the green state. I do not think preparing poles, and poling beans is such a tremendous or such an unprofitable job, as some do. In fact, I always feel well paid for raising pole beans It has been a fact well established in my family from father to son, that there is no variety of bush beans that will compare to any close degree in quality with our pole varieties. Here I have no trouble in securing good poles. I get good oak ones, from two to four inches in diameter at the but end and eight feet long, at a cost of a cent and a-half to two cents each. These will last four or five years, for I take them up every fall and put them away so that they are in the ground but little over four months. In spring I get my land well prepared, then mark out four feet, and with a shovel-plow make deep furrows, running the tool twice in the same furrow. A man follows the plow with a spade, and, every four feet, chops a loose place in the bottom of the furrow The poles are sharpened at the lower ends and are sunk as deep in these holes as a man can press them down by hand, and then with a nine-inch diamond plow I fill up the furrows around the poles and with a hoe make nice hills around the poles and plant my beans—always at least two good stands. This arrangement is for Limas: for other pole beans I do not make such careful preparations, neither do I use such large poles, as good brush will do for one season for a good crop of most other varieties of pole beans.

EXPERIMENTS WITH CORN.

O. K. L., INDIANOLA, ILL.—A neighbor used a subsoil corn-planter this year. It has two mold-boards, turns the furrows to the right and left and opens a trench from three to seven inches deep. Between the mold-boards is a tooth something like a cultivator tooth, that digs the bottom of the furrow. The corn is dropped in this loose soil. The ridges between the rows are 10 inches high. As the corn grows, cultivation levels these ridges; hence the seed and roots are deep and drought-proof. This is very essential on loose prairie soil if well drained. To carry this theory to an extreme: when growing corn began to start spur-roots from the joints, I put around a hill of corn a curb a foot high and filled it with soil and wet it occasionally. Spur-roots started from the buried joints, so I banked four feet high—nearly up to the ear. The three stalks made a powerful growth, pushed by the extra roots. If the soil is loose and deep try a few deeply-planted hills next year. Again, to study the smut question: I saved the smut from corn last year and put a handful in the hill at planting time. Every hill so treated showed symptoms of smut. I believe seed corn should be soaked or washed in copperas water. Dusting smut on the silk of growing corn afforded proof that the pest is reproduced in this way. Every hill so treated produced smut. Two-thirds of the cows and mares in this vicinity last year lost their fetuses, most likely from eating smutty or ergotted corn fodder. The book accounts of several stallions were worth only 10 cents on the dollar. There were so many "slinks," and the farmers lost the season or the use of the mares. Infected seed corn must be washed, and the land infested by ergot or smut must be put under some other crop. The trouble due to this matter hereabouts is getting serious.

MR. COLCORD SPEAKS.

S. M. C., DOVER, MASS.—I thank the R. N.-Y. very much for its recent editorial notice of my system of ensilage and find no fault with it for not being able to see the system in a stronger light. It says: "The high heating is considered beneficial, it being asserted that after a certain degree of heat is reached the product cools down, the ferment germs being destroyed." Reflection for a moment will discover that the heat and fermentation must, and do, commence at or near the center of the silo, and that the silage does not heat up near the walls for quite a while, so that this continual fermentation and heat continue until the silage is spoiled, and the loss is in quantity as well as quality: the fire cannot be put out. The editor is also in error in his closing sentence in which he says: "It is evident that counting the cost of the governor and the labor required in adjusting the pipes, and working the screws, the patent silage will cost more per ton than the common product." This I am happy to state is not the case. It will cost more in time and money to weight the silage than to press it with jack-screws, and for the amount of corn used in both systems one can take out more tons of perfect forage when mine is employed than he can of imperfect silage from the silo. I cannot compare the cost per ton where the same corn and the same pressure are employed, because I don't make the common sort of silage; but I have no doubt that the cost of the patent silage, ton for ton and pressure for pressure, is considerably less than that of the other kind, aside from its superior quality. Full reliance can be placed on the statements in my book about the economy, convenience and safety in the use of jack-screws.

N. M. H., ROSE, N. Y.—Do not afflict the community at large by deciding that the Blanchard is the best churn, for, unless worked by power, it is a man-killer. I prefer the dash; but the Davis is the churn for me. We keep 10 cows this summer and the churning is no trouble.

What Others Say.

MORE ABOUT ENSILAGE.

DR. MILES takes the sound view, as Prof. E. M. Shelton believes, that a number of small silos are better than one large one of equivalent capacity. The large silo exposes a large surface of silage during the time that it is being fed out; and, unless the amount fed out daily is large, considerable loss from molding and decay is likely to result. Prof. Shelton greatly prefers removing the silage by beginning at the top, taking it off an inch or more each day as the wants of the herd suggest, and shoveling the silage through a small shaft, located next the silo wall, to the ground. In calculating the capacity of the silo, Dr. Miles uses as a basis of computation the current

facts regarding the weight and daily consumption of silage by cattle, placing the weight of the cubic foot of silage at 40, and the daily consumption of silage per cow at 50 pounds. Of course there is silage and silage, and the Kansas College experiments of last year made with very great care gave figures considerably lower than these. The corn silage last year weighed exactly 34 pounds to the cubic foot, and the average daily consumption of silage by each of 60 head of cattle, one year old and upwards, fed exactly four months, was 34 pounds. The largest and most greedy cows were unable to consume much more than 50 pounds of silage daily, a slight increase on this amount being almost invariably followed by purging and like unfavorable symptoms.

Dr. Miles discourages the thick seeding of corn designed for the silo because of the feeble, immature, and watery character of the plants thus grown. It is doubtless generally true, as Dr. Miles remarks that "Indian corn will yield a greater aggregate of valuable cattle food per acre under good farm management than any other crop." although Prof. Shelton is inclined to think that, for Kansas, sorghum is a serious rival of the great staple for the purposes of the silo.

A GOOD STORY, which illustrates some modern business methods, is told by the Butchers' Live Stock Gazette:

Mr. Jones sold a bullock to Mr. Lazarus for $16, to be taken and paid for when fat. When Mr. Lazarus came for the animal Jones said he would like to have a forequarter for his own use. Mr. Lazarus willingly accepted the order and, after,the bullock was slaughtered, delivered the meat. A few days later Jones went to town, called on Lazarus, and, as a preliminary to a settlement, asked for his bill. "Dot's all right, Mr. Jones I haf the bill already made out. Here you are" Mr. Jones read.

MR. JONES, DR, TO JACOB LAZARUS—

To one quarter of beef, 185 lbs. at 10 cts.	$18.50
By credit one bullock	16.00
Balance due	$ 2.50

"Good heavens, Lazarus, you get three quarters of the beef, the hide, tallow, and offal, and bring me in debt $2.50. How's that, old man?"

"Ah, Mr. Jones, that beef vas sheap at 10 cents a pound."

"But, Lazarus, you only gave me $16 for the whole bullock."

"Ah, but, Jones, dot's pizness, pizness, do you see?"

"Well, Lazarus, next time I have a fat bullock I'll kill it myself, use one quarter and throw away the rest, and then I will save $2.50. You see?"

"Ah! ah! but dot's not pizness; farmers should not be butchers—dot's bad."

SAMPLES.

SECKEL PEARS are small and poor this year, as judged by those in the New York market.....

THE LAWRENCE is a late autumn and early winter pear, of fine quality, though not equal to the best and only partially melting; but it has the good quality of never becoming scabby; is always fair, and the tree holds its foliage late in autumn until the fruit is well matured. It is a good market variety. Thus speaks the veteran pomologist, J. J. Thomas in the Country Gentleman.....

THE SHELDON, Mr. Thomas says, when well grown under good cultivation is scarcely equaled for delicious flavor and for its excellent melting quality. Its rounded form and dull russet skin do not make it particularly attractive to one unaccustomed to its delicious character. The tree is not so reliable a bearer as some other varieties, and it is more subject to the blight. If the fruit is not well grown and well ripened it is poor enough.....

MOORE'S ARCTIC PLUM is rapidly growing in popularity along the northern border of plum culture, says Dr. Hoskins, in Orchard and Garden. Its vigorous growth, precocity in fruiting, hardiness, and resistance to the curculio, all commend it to growers; while as a market fruit it has many merits, and finds a ready sale. Farther south, some complaint is heard of its dropping, but nothing of this is seen northward. It bears very young, and tends to overbear, even to suicide. It is not strictly iron-clad, yet is plainly the hardiest among the varieties of European origin, barring the Russians, of which we as yet know but little, though that little is encouraging.....

H. M. ENGLE & SON send us fine Paragon Chestnuts as large as any of the seedling Japans we have seen raised in this country. An engraving of one of them will appear later. The quality of the Paragon is nearly as good as that of our largest American chestnuts, without the astringent skin of the average Japan. The R. N.-Y.'s oldest Paragon is two years from the nursery. It has made a short growth as, we fear, the soil and situation are not congenial.....

A WRITER in the London Garden mentions several rose authorities that pronounce Marshall P. Wilder and Alfred Colomb the same in every respect. The R. N.-Y. has had a good chance to compare these roses for three years past as a specimen of each has been growing side by side. The result is that except the Wilder has borne a few more roses and a little later, we cannot tell the one from the other.....

AMONG all the introduced climbing flowering shrubs says Garden & Forest, few have proved more satisfactory than Lonicera Japonica, var. Hallii. It differs from the typical L. Japonica chiefly in being practically ever-blooming, and from June until after severe autumn frosts its fragrant white and yellow flowers are continuously produced. It is becoming well-known and commonly planted. The well-known and very fragrant Dutch Monthly Honey-suckle (Lonicera Periclymenum) also has a few flowers at this season, but they are very apt to be unpleasantly infested by aphides. This is a decided objection to it. At the Rural Grounds not less than six frosts have occurred that froze water from an-eighth to a-quarter of an inch deep. The foliage of Hall's Honeysuckle is as green and fresh as ever and flowers are still in bloom here and there. If we could have but one climbing shrub it would be Hall's Honeysuckle.....

DON'T you know what to plant? Consult the American Pomological reports. Consult your nearest neighbor that is posted as to fruits. Consult the nearest honest nurseryman. If, without more definite information you care to make selections try, among strawberries, Parker Earle, Downing, Cumberland, Crescent. Among apples try Baldwin, Yellow Transparent, Gravenstein. Among grapes try Moore's Early, Eaton, Brighton, Niagara, Colerain, Berckmans, Ulster, Antoinette, Worden. Among plums try Reine Claude, Bradshaw, Imperial Gage. Among currants try Fay and White Grape. Among gooseberries try Downing, Houghton. Among cherries try Black Tartarian, Coe's Transparent, Gov. Wood, May Duke. Among raspberries try Cuthbert, Golden Queen (a yellow Cuthbert), Turner, Hilborn, Springfield. Among blackberries, Minnewaski, Kittatinny, Snyder. Among pears try Idaho, Tyson, Howell, Sheldon, Anjou, Bosc, Bartlett and Seckel. Among peaches try Good, Lovett's White for late, Troth, Crawford's Early, Salway, Stump.....

THERE is a widely prevalent idea that even a very ignorant person can make a success of farming. This opinion says student J. W. White in the Speculum, a monthly published by the students of the Michigan Agricultural College, is held not only by many town people, but by a large class of our farmers, especially those who have become wealthy without the aid of an education.

By looking over the history of our own country we may better understand why this idea has gained so strong a foothold. There never was a nation better supplied with cheap and fertile lands than ours. In addition to crops produced, these lands have increased in value to such an extent that large profits are realized from money invested in them. Many ignorant farmers have through these advantages reached their ideal success—wealth; hence their notion that an education is of no practical importance to the farmer seems fully demonstrated to those that hold wealth in like esteem.....

THE above journal for October presents a photo-engraving of the new professor of agriculture, Eugene Davenport, well known to R. N.-Y. readers as a frequent contributor to its columns. The sketch of his life is interesting. One cannot read it without feeling that Prof. Davenport is in every way well fitted for the position and that a more judicious selection could scarcely have been made.....

"AS A thoroughly practical man," the sketch concludes, "Prof. Davenport will demonstrate in the field what he teaches in the class room. As a hard student he will give the pupils under his charge solid meat. As a courteous, genial gentleman he will attract all students to him. As one "apt to teach" he will prove that the subject of agriculture can be made interesting in the class room. At least this is what his friends expect, and confidently predict. It is a happy omen that he comes with the hearty support of all who know him and love the institution."

IN the autumn of 1879 Dr. Beal buried bottles of seed of 21 kinds of plants. The seeds were mixed with sand taken from three feet below the surface, loosely placed in bottles and buried about 20 inches below the surface. During the past summer the seeds with the sand were removed to the botanical laboratory and kept moist for some time, when some of the seeds of Pigweed, Black Mustard, Shepherd's Purse, Pepper-grass, Mayweed, Evening Primrose, Smartweed, Purslane, Pigeon-grass and Chickweed produced good seedlings. Nearly four years ago he buried some black walnuts and acorns in well-drained sand, at depths varying from a few inches to about three feet. At the end of two years some of the acorns and walnuts planted near the surface were found to have come up the summer after being planted, while those buried from eight inches to two feet below the surface had all decayed. All the walnuts deeply planted had decayed, but some of the acorns buried from two to three feet were alive.....

WORD FOR WORD.

——VERMONT WATCHMAN: "Farming needs the whole man."

——HOARD'S DAIRYMAN: "There has been a greater per cent. of growth in the use of cream, in our cities, within the past two years, than in the consumption of any other product of the dairy. We predict its use will increase; for there are many finding out that cream is better and cheaper than milk."

——"AFTER a while, if the butter extractor succeeds, and supersedes, largely, present methods of making butter, the telling of how to treat cream and churn, will be as 'stale, flat, and unprofitable,' as to describe the old match and flint-lock guns of a past age."

——FARM & FIRESIDE: "Catalogue makers have gone about as far as they can possibly go. The painter's colors and the vocabulary of the English language have been drawn on until there is nothing left with which they can go further. It will be a good thing to see simple, truthful statements and natural illustrations and colors in common use."

——POULTRY MONTHLY: "In 'breeding for fancy points,' the 'points' are made of more importance than the poultry."

——WESTERN RURAL: "The estimate of the value of Montana differs with different visitors. If anybody desires to know what the country is, better go and see it and take nobody's word for it."

——CORRESPONDENT OHIO FARMER: "Should the churn swing or revolve? Both churns are operated to produce concussion upon cream. The one secures it by revolving, and the cream falling down upon the heads of the churn, is thrown into 'temporary confusion.' The other, by a quick swing and return, brings the cream into the end of churn and causes it to recoil back upon itself, and practically results in the same kind of agitation. In both churns the cream needs to be quite thin to get the best working. In the swing churn the washing and granulation of the butter can be carried on without a fastening on of the cover at each point of change. Both churns have their friends. If there is any point gained, it is in the salting process, the revolving churn giving the butter a little greater drop, may thus come a little nearer doing perfect work. So far as I can see all else is equal. I have both, so am not supposed to be partial."

——N. Y. TIMES: "A dairyman whose stupidity and obstinacy alone deserve the punishment is now in jail—refusing to pay a fine—for selling milk below the legal standard of quality—viz., 12 per cent. of total solids on the ground that the milk sold was precisely as it came from the cow. There are poor cows which none but an ignorant or a stupid man would keep, and it is a beneficent law which compels dairymen to get rid of the unprofitable beasts or inflicts a fine as a punishment for keeping them. It is as dishonest to keep a cow for the purpose of selling her milk whose milk is known not to be up to a reasonable standard equivalent to the price paid for it as to put water in better milk and reduce it below the standard. The imprisoned dairyman thinks he is a martyr, but he is simply a fool."

——CHAS. A. GREEN: "While there are many honorable real estate men in the West, there are many who are human sharks, seeking whom they may devour. Their plans are often well laid to deceive the most wary. No one should go West on the representations of strangers, and above all, should never engage to buy land that he has not seen. I was shown lands in California, Oregon and Montana, that had been advertised and sold as the best fruit lands in the world, that were not worth one cent per township, on account of location or barrenness."

——"While I might criticise the business men of the West as having too much enthusiasm, I own that Eastern men have not enough. Instead of Eastern men going West why do they not make more of their opportunities in the East? The East has advantages that the West has not. Why not make more of them? Why not make a plunge for success here? The answer is, it is so much easier to plunge where all are plunging. It is hard work stirring up the dead. As a Western friend remarked: 'Eastern people are asleep and they don't want to be waked up. All a live Eastern man can do is to come West where he will be appreciated.'"

——POPULAR GARDENING: "Dead-set against filling the cellar under the dwelling with vegetables and fruits—that's what I am."

——ALBANY CULTIVATOR: "An experienced commission merchant remarked that if the Anjou Pear only had a fine red cheek, it would be the best of all market varieties."

——CREDIT LOST:

"When usury presents a note,
On which your autograph you wrote,
Your heart within you rattles:
You struggle in the days of grace
To raise the value of its face,
Or get the sheriff on your place,
Then—good-by goods and chattels."

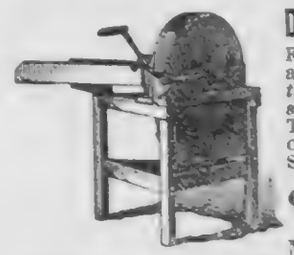
Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

Do You Feel all tired out, nervous, irritable and without appetite? Hood's Sarsaparilla will overcome that tired feeling, tone your nervous system, purify your blood, sharpen your appetite, cure indigestion and sick-headache, and make you cheerful and happy. Be sure to get Hood's Sarsaparilla

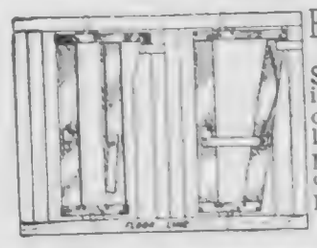
NOTHING ON EARTH WILL MAKE HENS LAY LIKE SHERIDAN'S CONDITION POWDER

Highly concentrated. Dose small. In quantity costs less than one-tenth cent a day per hen. Prevents and cures all diseases. If you can't get it, we send by mail post-paid, One pack. 25c. Five $1. 2 1-4 lb. can $1.20; 5 cans $5. Express paid. Testimonials free. Send stamps or cash. Farmers' Poultry Guide (price 25c.) free with $1.00 orders or more. I. S. JOHNSON & CO., Boston, Mass.



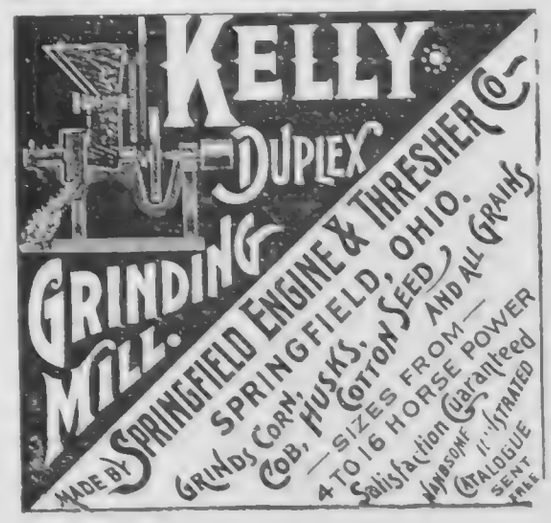
DICK'S FEED CUTTER

For Hay, Straw and Ensilage. *The only machine that cuts and splits corn stalks.* We also sell the TRIUMPH STEAM GENERATOR, and GRIFFING'S CORN SHELLER AND SEPARATOR. Write us at once **H. B Griffing, Sons & Co., 70 Cortlandt St., New York City. N. Y.**



BOON to DAIRYMEN

Perfect Swinging Cow Stanchion. Self-locking by entrance of cow's head. Free delivery at principal points. Send for circular. Mention this paper. **Scott & Locke, Orford, N. H.**



THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, NOVEMBER 9, 1889.

NOTICE.

THE RURAL NEW-YORKER is invariably discontinued at the end of the term subscribed for. Any copies sent to non-subscribers are sent without charge as specimens merely.

THE judges have divided the list of prizes offered to the prize-takers in the R. N.-Y's. Women's National Potato Contest into 200 souvenirs. The amount of work involved in deciding as to whom the prizes shall be awarded is considerable and it will be several weeks before conclusions will be arrived at and the results published. A considerable number who have produced large yields have failed to append the necessary corroborative certificates.

OVER one thousand R. N.-Y. readers sent in their names as contestants in the Women's National Potato Contest, and 550 have sent in their reports.

A CABBAGE-GROWER near this city who has made a reputation for supplying extra good red cabbage, was asked for the secret of his success. He stated that the seed was of less importance than the location and environment of the plant. He said he always sows red beets all about his cabbages, and it is this that gives them their beautiful color. "That beats Jacob's cattle experiment all hollow," was the comment of a seedsman who heard this theory expounded.

ALMOST every week the daily papers contain advertisements of "sore" horses for sale. Last week a friend of the R. N.-Y. followed up one of these advertisements. He found 10 horses at the stable of the United States Express Company in Jersey City. They were all young animals of good color and breeding—easily worth $250 each if entirely sound. He was offered the entire lot for about $1,100. So far as he could judge, the horses were hoof-sore—there seemed to be nothing the matter with their legs. There was a good chance that a few months on bare ground, without shoes, would cure them of most of their lameness. Some farmers like to speculate with these "sore" horses, but unless a man is an excellent judge of a horse and something of a veterinary surgeon, there is a good deal of risk about the business. Buying from the express companies is much safer than buying from the horse railroads, because it is well known that the express people never buy poor horses.

THERE seems to be a great deal of nonsense connected with the business of testing milk. During the past week a milk-dealer of this city was tried before a jury for selling milk containing a lower per cent. of fat than was required by the regulations of the Board of Health. The chemist employed by the Health Board analyzed a sample taken from a certain can in a delivery wagon, by what he calls the Wanklin-Waller method, and found that it contained only 2.64 per cent. of fat, while the regulations say that milk must contain at least three per cent. The driver of the wagon testified that he took a sample of milk from the same can, which was examined by a chemist who had been employed by the United States Government and by the State Dairy Commissioner, and who testified that he analyzed it by the Adams method and found that it contained 3.08 per cent. of fat. He also stated that the State Dairy Commissioner had rejected the Wanklin-Waller method, and preferred the Adams as more accurate. There was no evidence to show that the milk had been adulterated or watered, but the assumption was that it had been skimmed. The accused was acquitted, and it is difficult to see how any other result could have been reached. Such trials as this may be needed to agitate the subject, but such contradictory results will tend to bring distrust upon all methods of analyses in the eyes of practical farmers.

EVEN if such a combination as that proposed at the Mississippi Valley Wheat Growers' Convention, could temporarily succeed in controlling the price and supply of wheat, long-headed farmers may ask would it not be likely to end in disaster to the American farmer? Wouldn't its chief beneficiaries be a handful of gamblers who are speculating for an artificial rise in prices in the bread market? The first effect of such a speculative combination would undoubtedly be to draw all the reserves of wheat out of the granaries of Russia, India, Australasia, Chili, Canada and other surplus-producing countries, and it is not at all unlikely that the manipulators of the scheme would soon discover that the stock of wheat in the world is considerably larger than they had imagined. The next effect of an attempt arbitrarily to raise the price of bread in this country would certainly be to extend the area of wheat production in other quarters of the globe, and by largely increasing the world's supply permanently lessen the dependence of consumers upon the American markets. There is no doubt that the present low prices of wheat are due, partly at least, to the impetus given to foreign production during recent years by the cornering operations of a few unscrupulous speculators in our markets. If the effects of the operations of a handful of middlemen have proved so injurious, what disasters may not be expected from similar operations practiced by a combination of a multitude of producers? It is well to think calmly and deliberately over the questions briefly suggested here, especially when discontent at low prices and strange projects for artificially bettering them are in the agricultural air.

$10.

THE R. N.-Y. offers a prize of 10 dollars for the best column of "Notes on a Back Number." Contestants may select any number of the R. N.-Y. for 1889. They are to write short notes in approval or criticism of the various topics discussed in that number. The articles must not be over one column in length. The prize is to be given to the column showing the most sense, and in which the greatest number of topics are discussed. It is proposed to publish all the essays in the form of a "Discussion" symposium.

GRAIN FOOD AND BUTTER.

CAN you add anything to the discussion of grain feeds for butter on page 739? This is a very interesting subject and is well worthy the attention of every dairyman. There appears to be a universal belief that corn-meal is the best grain food that can be given butter cows. During the past year the R. N.-Y. has tried quite a variety of grains, such as wheat and rye brans, "horse feed" oats and corn-meal. Our test for quality of butter is the opinion of the "dairymaid" who makes the butter without knowing what the cow has eaten. Nothing has been found to equal good corn-meal for making hard, firm, yellow butter. The difference between corn-meal butter and bran butter is to be seen at once. In our opinion, the better the cow the wider the difference and the quicker it is to be noticed. The point is raised in the discussion that corn-meal is not so good when fed while the cows are at pasture. The R. N.-Y., from its own experience, considers this point sound. While the cows have plenty of good, sweet grass, we would feed less corn-meal and more bran. As our readers know, the R. N.-Y. has been feeding a good deal of cabbage to dairy cows; with this cabbage we feed corn-meal just as we would feed it with clover hay. Mr. Newton's idea that the hay of the butter ration has a marked effect on the quality of the butter is well worth thinking over. "*A good hay feed combined with a poor grain feed will make a better quality of butter than a good grain feed combined with poor hay.*"

We believe that most dairymen will agree with this statement. It is most respectfully referred to the consideration of the farmers who think that corn-stalks and corn-meal are a perfect ration for dairy cows.

A VAST SCHEME AND ITS DRIFT.

A CONVENTION of over 200 delegates representing the wheat-growers of 17 States and Territories in the Mississippi Valley, began its sessions in St. Louis on October 23 under the auspices of the Farmers' Federation of Topeka, Kansas. The announced object of the meeting was to devise ways and means to obtain better prices for the wheat, and ultimately, doubtless, for the other products of the farmers of the vast valley extending from the Alleghanies to the Rocky Mountains and from the Canadian line to the Gulf. Those present disclaimed "any purpose of denouncing trusts or combines," or of forming one themselves. They simply sought to remedy existing conditions which force wheat-growers almost to give their crops away. They denied any wish to charge exorbitant prices for the cereal; they merely desired to regulate the supply to such an extent that the demand will not be so exceeded as to result in disastrous competition. "A good price for the products of the farm," exclaimed President Allen very truthfully, "means good times, the revival of business, more employment for labor and better pay, the improvement of railroads, fewer failures and the liquidation of mortgages."

"Realizing the individual feebleness" of farmers and "the great importance of unity of action as a class," the President urged farmers to delegate to a power of their own creation the exclusive right to market their products. The Farmers' Federation, with a projected capital of $20,000,000, three-fourths of which it is proposed shall rest forever in the care of trustees to secure farmers in control, offers itself as the embodiment of this power. It claims that before reaching the consumer the products of the farms of the Mississippi Valley are charged $10,000,000 paid annually as commissions to middlemen, and it proposes to do the whole business through a system of salaried agencies for $1,000,000 a year! Meanwhile the convention determined to "fix the minimum price that wheat shall be sold for in the Chicago market" during the current season. Farmers are urged not to sell for less; but, instead, to "corner the surplus of 120,000,000 bushels in their granaries and farms and to notify Mark Lane that it will not be sent forward until a price is offered that will justify exportation. This would," we are assured, "bring up the price of wheat in the home markets in all exporting countries."

Among the fine resolutions passed by the Convention one urged the making of "such reciprocity treaties with those foreign nations to which we ship our farm products as will cause" them to remove the customs duties from American agricultural imports, "thereby causing us to receive a higher price for our foreign farm surplus, and thereby fixing higher prices upon all we sell at home." Another resolution urged the repeal of all our duties on farm implements and on the raw materials used in making them.

Judging from the reports of the proceedings of the convention, that have reached us, the conclusion is inevitable that had it been packed by the concoctors of trusts in general and the advocates of unrestricted free trade, its action could hardly have been more favorable to the objects both of these classes have most at heart. The proposed scheme is, in reality, a gigantic trust, designed, like other trusts, to restrict production and raise the price of one or more products to consumers at home and abroad. Farmers are now the greatest sufferers from trusts and their most influential opponents; surely those engaged in a trust for controlling the prices of the necessaries of life throughout the world would be hardly in a position to make war upon minor trusts controlling matters of minor importance within a comparatively circumscribed area.

Again, farmers are the loudest and most influential opponents of the repeal or diminution of duties on raw materials, because their wool, sugar, etc., are in the shape of raw materials when they market them. With what face could they demand the abolition of duties on one or two particular kinds of raw materials for their own special pecuniary advantage while insisting on the imposition of heavy duties on other kinds of raw materials to the pecuniary disadvantage of the rest of the community? Again, the United Kingdom takes more than twice as much of our exported agricultural products than all other countries combined, and the United Kingdom imposes no import duty on any of them except on tobacco and intoxicants. In return for the abolition of taxes on the small imports of these few luxuries, are we to throw open all our ports to free trade in the multitudinous products of that vast workshop?

There is no intention whatever of raising here any question as to the wisdom of the policy advocated by the convention; we merely desire to state it and briefly suggest the drift of it in plain language so that every farmer in the country can clearly understand the matter. It may be time for farmers to change the policy most of them have hitherto followed with regard to trusts and the tariff; if so, no doubt this new scheme will receive a generous support.

BREVITIES.

READ what Prof. Budd says about dwarfing Lima beans, on page 742.

THE indications are that the pickle crop will be very light this year. The crop of cucumber seed is also light.

"I CALL a potato small when it comes under the size of a Plymouth Rock hen egg."
Clyde, Kan. A. G. W.

THE latest Government report places the average condition of potatoes as, with three exceptions, the lowest ever reported.

THE R. N.-Y. has a symposium coming on the best methods of growing, curing and handling the clover-seed crop, that will prove very interesting.

"I SAVED the smut from corn last year and put a handful in the hill at planting time. Every hill so treated showed symptoms of smut." See O. K. L., page 742.

THAT is an interesting article on the cost of living in Colorado, see page 742. How does it compare with the cost in your own family? If you have the figures, please let us know how they compare with these.

AN Iowa subscriber who enters for the "Notes on a Back Number Prize," writes: "Whether I receive the $10 or not, I feel that it is worth that much for a Granger to write essays on such diversified material as your paper contains."

FOXINESS in a grape is a quality that need hardly be considered nowadays in so far as market demands are concerned. The Niagara is, as generally grown, one of the foxiest of grapes and yet it meets with a readier sale than any other native white grape today.

THE R.N.-Y. is informed that cabbages are sent from Belgium to the London market at a cheaper rate than the English railroads charge for carrying the vegetable 50 miles. Cheap and rapid transit makes the Danish and Norwegian dairymen and the French gardener formidable rivals of the English farmer.

"I WOULD like to buy some of your State of Maine Potatoes because they look very much like the Rural New-Yorker No. 2" said a potato-grower not long since. "Brownell's Winner will suit me because it looks so much like the Early Rose that I can sell it for that potato," said a farmer. So it goes. How are you going to know that you are getting pure seed of desired varieties? This is bad business, folks.

"COME, boys, let's take a drink to begin the day on!" This remark came from a group of young men who followed the writer up the street from the ferry. The group soon disappeared inside a saloon. "I should not care to have that young fellow in my employ," was the remark made by a business man. "When a man gets into such a state that he must leave his work to get a drink, he ought to be watched—he's not trustworthy."

OF all the out-door games that the R. N.-Y. knows of, it would commend lawn-tennis to its readers, both male and female. The exertion required in a four-hand game is not necessarily laborious or violent, while it may be increased or lessened to suit the temperature whether it be warm or frosty. There is no tedious waiting, the turns coming in rapid succession. Again, it is not a game of chance; the most skillful couple will win in any extended series of games. It is an innocent, inspiring, social, healthful amusement.

Miscellaneous.

EXPERIENCES AND REFLECTIONS.

FRED. GRUNDY.

WE began using our celery the last week in August and have had it on the table every day since, and there is enough yet standing in the garden to last till the middle of January. Next week I shall prepare a trench eight inches wide and 14 inches deep, and when the first freezing cold spell comes along all that remains will go into it in a jiffy. When lifting the roots to be set in the trench I sink a pointed shovel about three inches from the plant, grasp it with one hand and bear down on the handle of the shovel with the other and out they come. A gentle rap of the root against the handle removes all superfluous earth and it is ready for the trench. In the trench it is packed moderately close, a little soil is thrown on it, the trench is covered with boards and straw, and it keeps finely.

In setting out my celery this season I tried a new plan. I wanted to set out something over 500 plants and all the ground then available was a strip 54 feet long by nine wide, so I set the plants six inches apart in rows two feet apart. The soil was already rich, but when the plants were set out I gave it a good dressing of well-rotted manure. The plants made a vigorous growth from the start, and as soon as they were large enough I began to blanch some of them by setting three-inch drain tiles over them. Twenty-five tiles were used, and when a plant was cut for use the tile was set over another, the outside stalks being broken off at the time. In this way we have kept the table steadily supplied without difficulty. I blanched part of one row with boards 12 inches wide, setting them on edge on either side of it and fastening them together with strips of lath. They were placed four inches apart at the bottom and two at the top and the celery between them blanched very nicely—better if anything than that in the tiles.

Next year I shall set my celery exactly as I did this year and on a spot especially enriched and prepared for it. That intended for early use I shall blanch with boards 12 feet long and 14 inches wide, setting the lower edges four inches apart and the upper 1½, and firmly fastening them together with short cross-pieces. When the sun shines hot, as it often does in the early fall, tiles get pretty warm and sometimes toast the celery inside, and for this reason boards are better at this time than tiles. When the weather gets cooler I shall use four-inch tile, because it is easier handled than boards. Celery blanched with boards or tile is much cleaner and nicer than that banked with earth. If I had to grow celery in rows four or five feet apart I should set out very little, and if I had laboriously to build a levee on either side of it to blanch it, I'd go without.

PLYMOUTH ROCKS are the leading breed of fowls in this section. They seem to fill the bill for an all-purpose fowl better than any other. Buyers of market poultry also appear to prefer them to any other breed and quickly snap them up, if fat, at the top prices. I notice that fanciers or breeders are assiduously cultivating the comb and wattles of this breed, and professional judges make a practice of awarding the premiums and prizes to cocks having combs sticking two or more inches above their heads and weighing half a pound or so. Now I have raised poultry quite a number of years, and I have learned that the less comb and wattles there are on them the better. My poultry house is much warmer than the average, and yet some of my fowls get their combs and wattles frozen every severe winter. A cock or hen that has its comb or wattles frozen is utterly worthless until the injury is entirely healed. The healing of a frozen comb requires from six weeks to two months, so if the freezing is done in February—as it most frequently is—any person possessed of a grain of common sense can see how the keeper of tall-combed fowls is handicapped. Farmers—especially those living in the Northern States—buying cocks for breeding purposes should not accept one having a comb over half an inch high. For each additional half-inch they should compel the breeder to deduct 20 per cent. from his regular price; if clipped 50 per cent. None but cranks of the most pronounced type would expect farmers to build hot-houses for their poultry merely for the purpose of protecting an utterly useless appendage from frost. At the St. Louis Fair I noticed that a professional judge had awarded the first premium to a Plymouth Rock with a comb like a section of a cross-cut saw, and wattles like a pair of saddle-bags. Off with such trumpery!

In the matter of refurnishing the interior of poultry houses for the winter, I would suggest that the old perches be brought down from their high estate and placed not over 18 inches above the floor. A fowl can roost just as comfortably on a low perch as on a high one, while it is very much easier to climb upon. The man who places the perches even with his nose or higher should be compelled to go to bed *via* the roof and chimney route until he learns better.

Christian County, Ill.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

BEAUTIFUL indeed are the furs for the coming winter. Long furs seem likely to hold sway; chiefly, no doubt, because the framing of soft hair is so becoming to a woman's face. The most fashionable will be sable, but this is only within reach of a wealthy purse. Black monkey, stone marten, lynx and bear are favorites; cinnamon bear is a very pretty and becoming fur. Apparently the long boas will again be worn, and there are many pretty cravats and collars. Flaring Medici collars of fur are seen on many new coats, and are eminently becoming. Another pretty thing is the rounded Russian collar, coming in a point to the waist. Fur capes, coming to the waist, have been worn more than ever this autumn, and they are very pretty and comfortable. The newer ones are not so much raised on the shoulders as they were. Black astrachan is very much worn in these capes, sometimes in combination with other fur.

* * *

WRAPS, as well as gowns, may be dated by their sleeves. Last year, you may remember, the long coats of the newest mode had either bell sleeves or a tight undersleeve with a flowing angel sleeve over it. This season the newest long coats seen are as tight as tight may be, like a redingote having a puffed sleeve, either the mousquetaire, which is a very wrinkly leg of mutton with the fullness pushed toward the top, or else they are made with one large puff coming below the elbow, finished by a deep velvet cuff. It certainly looks as if tight sleeves were entirely in the background, like the bustle. All the new gowns have just one short reed about 12 inches below the band, just to keep the skirt from hanging too heavily, and a little thin pad at the top is permissible, but this is all; the dress is expected to slope gradually without any protuberance. With the disappearance of heavy draperies, tight sleeves, and high heels, it does look as if fashion were becoming more sensible.

* * *

JUST think what a woman's paradise the wind-swept State of Kansas must be! The women have put Prohibition in the constitution; they have full municipal and school ballot, and co-education in the State University. Women are school commissioners, and treasurers of school boards, superintendents of schools, registers of deeds, and police justices. The Assistant Attorney General is a woman, and there are more woman preachers, doctors, lawyers, bankers, farmers, editors and merchants than in any other State. Truly woman's sphere must be in the State of Kansas.

* * *

Apropos of the Kansas women, the Atchison Globe speaks of the numerous decorations worn by the Atchison girl. It says that she wears a yellow ribbon because she is a suffragist, purple for the King's Daughters, blue for prohibition, and white for the White Cross Legion. Societies for all sorts of improvement, mental, moral and physical, seem greatly to occupy feminine attention in Kansas.

* * *

ONE is often at a loss in mending a much-prized piece of china when it is broken into several pieces which will not stay in position while drying. A writer in Harper's Bazar gives a very clever expedient for such difficulties. The idea originated with the possessor of a set of quaint little butter dishes, one of which was broken into five pieces. Every attempt to keep the pieces together until the cement hardened proved a failure. At last a bright idea struck the puzzled housekeeper. She took a large saucer, greased it with lard, and then mixing plaster-of-Paris and water to a thick cream she nearly filled the saucer with it. Soon it hardened to the consistency of putty. She then greased the convex side of an unbroken butter plate with lard, and pressed it into the plaster even with the upper rim of the plate. When the plaster had hardened still more she removed the plate, and there was an exact mould of it. Both saucer and plate were greased so that the plaster should not adhere. She then put cement on the pieces of the broken plate and fitted them into the mould, which held them firmly in place. The cement hardened, making a very creditable job. This idea will be found very useful in mending badly-broken pieces of china.

"WANTED: A YOUNG WOMAN OF GOOD ADDRESS."

BESIDES being an unappropriated blessing, I am a young woman of good address, to whom the advertisement quoted above might be supposed to apply. Like a traditional beau sabreur, all the world is mine oyster—but, alas! I've only a feeble pen to open it. Many struggles with the metaphorical but refractory oyster give the impression that an agreeable personality only is the feeblest tool one can possess, and yet it is the only one with which many women are furnished. We who belong to the great untrained are ready enough to do *something*—but what? Country girls of all classes—I am one of them myself, pushing along with pen and needle, both excellent tools for mediocrity to starve by. A well-trained woman with a specialty has little reason to fear starvation, unless the three grim spinners bear a grudge against her. The army of unfortunates is made up of the foolish virgins, who drift carelessly through school, acquiring a varied fund of useless information, and then dance through the first years of long skirts in daily expectation of the fairy prince.

Of course, we all feel sure mentally that we shall marry; we may have to struggle along for a few years, but some man of keen discrimination *must* finally realize our feminine perfections. In the mean time we must work, and herein lies the burden of our woes.

Most of us are ambitious, like the woman who recently wrote of her struggles to provide flounced petticoats and evening gowns on an income of nothing certain a year; though, to tell the truth, one has a haunting suspicion that if Thackeray had met this ingenious dame he would have given her a chapter to herself—in the "Book of Snobs." As a natural outcome of our ambitions, we don't want to drag on a restricted existence, subject to the rich man's contumely and the rich woman's unattainable bonnets. So we must go to a wider field—wider, indeed, in that it gives us more scope for drudgery.

The average young woman who possesses a home, but whose pocket-money must be represented by a minus sign, is always on the lookout for some means of adding to her income. So she eagerly scans the papers for advertisements of work to be done at home. She may find plenty of them—embroidery, knitting, crochet-work, and they all come to the same thing in the end—so much to be paid for "instructions," and so little for work, with sundry deductions for error. The advertiser is usually a man, who knows as much of crochet-work as he does of cuneiform hieroglyphics, but his spider-web is always well stocked with silly flies. Of course there are some legitimate concerns, where a woman without other means of support—God help her!—may make as much as the sewing women who do shop work.

An advertisement for "a young woman of good address; previous business knowledge unnecessary," usually means a canvasser of some sort. It may be for some article of women's or children's gear, or the latest invention to revolutionize kitchen work, or it may be some entirely superfluous publication. In any case the experience is similar. The palpitating young woman climbs a lofty range of stairs suggesting Avernus by their difficulty of ascent. She enters the office, where she is abstractedly welcomed by its presiding genius, whose flow of language suggests that he is a reformed book agent in disguise. If induced by this oratory to make a trial of the work, the applicant pays a moderate deposit on the samples she takes, and listens with high hopes to the ex-agent's stories of successful canvassers. He tells how Miss Blank makes 40 dollars a week and Mrs. Dash twice as much, and how Mesdames Blank and Dash regard the canvasser's life as the happiest lot on earth. The young woman who has good address but no business knowledge tries the work; if she is a born canvasser she sticks to it, and comes in time to regard it with the tolerant semi-liking we usually extend to our perfunctory breadwinning. If not, she takes a few rebuffs, and then returns her samples to the ex-agent, who is not nearly so entertaining on the second interview, and whose courtesy is distinctly strained when a request is made for the deposit. Doubtless there are women who make a good living as canvassers, but these fortunate sisters have the ability to make a living at anything they undertake.

Having tried these little outlets, the would-be breadwinner—no, not breadwinner—the foolish virgin settles down in her nest and spins cobwebs, like Mademoiselle Arachne. Her cobwebs may take the comparatively harmless form of art embroidery, but there is always danger of the literary fever. Every one writes nowadays, and aimless girls with no technical education and a certain amount of bookishness are very apt to drop into literature, much as Silas Wegg dropped into poetry. With most of them literature means poetry—or rather verse. The humble person who now addresses you speaks with feeling here. My first literary venture took the form of verse, and when that ill-freighted argosy returned, "declined with thanks," I thought that heartless editor was a lineal descendant of the reviewer who murdered Keats. Now I should like to publicly thank that noble man, in that he refrained from crucifying me in print as the writer of such ineffably feeble verselets. But we don't all look at it from this high moral standpoint. The return of a pet manuscript accompanied by that cold-blooded printed slip we all know so well, is usually the cause of heart-rending pangs, unless we are hardened to the point where we simply re-write the unappreciated infant of our fancy, and send it to try the soul of some other editor. Rejected manuscripts form a common ground whereon all writers meet; it is a professional incident falling on the just and unjust alike.

Since every one who knows anything, and many who do not, inform us that the writer's lot is not a happy one, it is hardly likely that a young woman who has failed at occupations less exacting should acquire ease by her pen. A good many of us have tried it, but as the Dowager Mrs. Gowan says, "it never does." A few little stories, perhaps, in those literary periodicals which talk superbly about encouraging budding genius, but which, viewed from a vulgar material standpoint, are exceedingly "poor pay"; a few "Hints to Mothers" or 'Talks to Graduates" in some domestic publications, and the slenderly-armed aspirant is finished.

To come down to common sense, a girl who is no more equipped for bread-winning than a soft-shelled crab, is entirely out of place in this competitive period. She has no means of livelihood except marrying—fortunately for us, and unfortunately for them, a great many men regard helplessness as true womanliness, so the incapables have quite as good a matrimonial opportunity as their more helpful sisters. But this does not obviate the absolute necessity for every woman to master a trade or profession, even where circumstances seem to render it needless.

Perhaps the industrial millennium would arrive sooner if we did not all seek so anxiously for "genteel" employments. Some of us certainly would be better off if we gave up poor clerical work, and feeble scribbling, and ineffective teaching to cook and sweep and sew. We might do good work in such capacities, but such is the inconsistency of human nature that we don't want to. Besant is right in thinking that few women care to work except for love. But sooner or later everything must find its level—even the women who advertise for "any employment not menial."

What do you expect to do, most patient reader, when this social revolution comes? This didactic writer may wield broom and duster as my lady's chambermaid—perchance may wear cap and apron, as the custodian of well-fed olive branches in Bryant Park or Madison Square. COTTAGE MAID.

HOME DRESS-MAKING.

OLIVE E. DANA.

IT is the season once more for changes and remodellings, and, let the impecunious rejoice, it is the season of seasons for home dress-making. Was there ever a time when Dame Fashion allowed such large latitude in the choice of fabric, style and ornamentation? Was there ever a time when the prevailing modes were so simple and so easily followed, and the effects so charming?

This is the time surely for one to make over one's old dresses, to combine old with new, and old with old into dainty gowns that shall delight both the wearer and the beholder. It is a comfort to most women, especially to home-keeping people, to have pretty and becoming dresses for home-wear. And they can be gotten up this year with little outlay.

Two or even three materials may be used, they tell us, in the same gown, and almost any sort of garniture one happens to have. These house-dresses admit, too, of almost unlimited piecing. There is such a variety of trimming used that it is very easy to conceal a seam. And even if it cannot be hidden, it shows very little on a woolen dress, if neatly sewed and pressed. Old basques or polonaises may be cut off at the belt to serve for plain waists. The draping may be re-adjusted in plaits or gathers at the back with little trouble. Shirring the front breadth of the skirt enables one to use short lengths, and plaitings, especially the fan-plaitings, allo v of narrow pieces.

Or an extra breadth or two, added to the old draperies, will usually make one of the full, plain, gathered or plaited skirts. A flannel thus planned, with a full, plain, broad-hemmed skirt, plaited into a binding and a plain or plaited waist with a broad belt is comfortable and convenient for house-wear in winter-time. Braid is a pretty garniture, if one chooses, on such a dress. The wide black braid formerly in vogue, is very suitable for use on dark-blue, green or gray flannel. Or such a dress is almost equally tasteful if only collar and cuffs, of the same or contrasting color, and perhaps fashioned from some laid-by bits of velvet, are added. Cashmere takes kindly to much shirring and smocking, and these serviceable accomplishments in needlework —which are not hard to acquire—give new freshness to old material.

For a street-gown one could not of course combine and piece so freely, and one would have to be more critical about the condition of the old goods. But there is much liberty as to mode and trimming as well as in the choice of goods. It is good news to women with light purses that dark colors will be most popular the coming season, and that cashmere is among the leading fabrics. Velvet, surah, and watered silk seem to be the favorite goods for trimming.

A pretty fall street suit lately noted was of dark-gray flannel, with plaited draperies and small round basque. Its chief garniture was formed of rows of narrow velvet ribbon, garnet, or, more accurately, cardinal in hue, which crossed cuffs, collar, and the simulated square neck in front. For cold days a jacket of the same material with the dress was worn. It had no trimming and fitted as everything does, tightly.

Stripes combine well with plain goods. To a navy-blue serge was lately added goods of the same color with a broad stripe of darkly-shaded gray running through it. The latter material forms the fan-plaited front of the skirt, the plastron,—which is loose at the top and laid in fine plaits lower down, —the sleeve-puffs, etc. The effect is most harmonious. Later it will be worn with a jacket of dark-blue beaver, with collar and sleeve trimmings of gray fur.

Home dress-making, whether of garments cut and fitted elsewhere, or wholly planned by the maker, demands painstaking attention to details.

It is very annoying to find one's basque one-sided—a defect almost hopeless—or the neck too high or too low, or the sleeves of unequal length after the dress was completed. All these matters require care, accuracy and patience, and to insure the best results, the experience which comes only by some practice. I think some good women do too little of such work, either because of lack of time, strength or inclination or perhaps because it seems a folly and a waste of time to "make over" very often. So some of us come to wear, at home at least, garments that are out of date and, quite likely, ugly, when a little application and ingenuity would quite transform them and us. And I cannot think time so spent is wasted.

What we appear to be has some subtle, re-acting influence upon what we are. To be, even in looks, some distance in the rear of the prevailing fashion, sorely weighs one who strives to be in more essential things abreast of the current.

And a woman is not womanly who does not wish and try to be attractive and comely, and capable, in her own way, of giving pleasure.

And she makes a mistake who dresses unfashionably or unbecomingly, who will not give due attention to little matters of toilet and etiquette, and relinquishes, thus, one prerogative of her womanhood, a mistake only less great and disastrous than hers who makes these things her supreme aim.

CLEANING GLOVES.

WE are indebted to the Detroit Free Press for some suggestions on this subject.

Gloves are an important consideration to women. Even those women who possess wealth sometimes find themselves so placed as to necessitate the cleaning of their gloves. To women who are compelled to economize the matter is of very considerable importance. Georgia Cayvan, the well-known actress, has gathered a treasury of useful knowledge in this direction, and in a recent conversation with a friend she did thus impart:

"You see, one needs so many gloves. There are not only those I wear on the street, but there is hardly a part I play that does not call for at least two or three pairs on the stage; but I have got hold of a recipe, given to me by a little old French lady, and now I clean them myself over and over again and make one or two pairs last me through one of those long runs of a play. I go to a chemist's shop and ask for a quart of deodorized benzine, one dram of sulphuric ether, one dram of chloroform, two drams of alcohol, and enough lavender water to make it delicately perfumed and pleasant. The clerk mixes that up for me properly, and when I get it home I pour about a cupful of it into the basin and wash the gloves in it. If I have been wearing them a long time and they are very black, I have ready prepared two bowls in both of which is some spirits of wine slightly perfumed with the lavender water. Through this I give them two rinsings, but if they are not very much soiled one rinsing will be sufficient. Then I lay them on a table, and with a piece of soft white flannel I rub them smooth, so that all the wrinkles from the washing disappear, and they become partially dry; after which I stretch a cord across the corner of my dressing-room, in the light, but out of the sun and wind, and on this I hang them and let them dry for 24 hours. If the gloves are very thin and not of the first quality I dry them on my hands, slipping them on and buttoning them, and then scrubbing them briskly with a dry flannel to quicken the process of drying them. But I don't think that pays; it takes too much time, and. no matter how careful one is, a cheap glove never looks well after it is cleaned. I think, on the whole, it is cheaper to throw them away, or rather, never to buy them."

GOLDEN GRAINS.

"GEORGE ELIOT" says that she wonders whether the subtle measuring of forces will ever come to measuring the force there would be in one beautiful woman whose mind was as noble as her face was beautiful—who made a man's passion for her rush in one current with all the great aims of his life.....

THE RURAL CALIFORNIAN says that we are apt to underrate the amount of executive ability and organizing capacity of the woman who thoroughly keeps a house, without making life a burden to all its other inmates. The well-ordered home, where cleanliness is the rule, and thrift and thoroughness are still united with liberty, always seems to exist of its own accord. Such a housekeeper as holds the helm there, however, is as rare as that perfect actor whose finished work conceals his art, and makes the play seem real.....

THE lack of order is the principal defect in every imperfectly kept home. System is the first important requisite. Necessity, comfort, luxury; these in their order should be considered and provided for. The same general style should prevail all throughout the house; not beginning with elegance in the parlor, to wind up with meager bareness in the boys' room.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

THE GOURD AS AN ARTICLE OF UTILITY AND GRACE.

THE gourd is a climber of remarkable growth and dense luxuriant foliage. Aside from these admirable qualities its fruit is useful as well as ornamental. Indeed, it can be made a thing of wondrous beauty and "a joy forever."

The varieties best adapted for decorative purposes are the Pear-shaped, Bottle-shaped, Orange and Dipper-shaped, and the Hercules Club. There are many other varieties of fanciful form, but these are the most practical. The variety known as "Chinese Loofa" must not be omitted for it is certainly worthy of mention. The interior of this gourd, when ripe, is a tough, fibrous mass which makes the best of bathing cloths. For this purpose it cannot be excelled. It is neither as rough as a brush nor as soft as a sponge. It is, to a limited extent, already an article of commerce.

The gourd, preparatory to decorating, must be fully matured before being picked. Better leave the fruit on the vine until the frost has turned the foliage. Then pick, and the only precaution to be observed is that they are carefully dried. This is most effectively done by laying and standing the gourds in a shallow pan of coarse sand,

Gothic Design in Red and Blue Oil Paint. Fig. 271.

which has been heated in the oven or in the sunlight. Turn them frequently that they may dry evenly. This drying process loosens the seeds and inner tissue which is shaken out of a hole cut where the stem was attached. With the aid of a little water all matter will readily come out.

Powder-Horn with Etched Scroll and Oiled. Fig. 272.

The gourd is now ready to be ornamented.

This is a vast field for ingenious taste and artistic fancy. The gourd may be painted black, coated with gum-copal varnish, and ornamented with a sprig of golden-rod or a cluster of black-eyed yellow daisies. A Grecian design in bronze and gilt is very effective on the black. Another way is to etch a scroll with a sharp-pointed knife, and finish by simply oiling. An antique or Japanese design is pretty painted in oil. The simplest decoration is to varnish, and before being allowed to dry sprinkle thoroughly with metal powder or diamond dust. Something really artistic is this: Paint a gourd a dull blue and decorate with a gothic design in Pompeyan red. This will prove rather intricate and tedious, but the result will amply repay the artist.

As to the use of the gourd: In southern countries it is quite general. They are converted into powder-horns, dippers, ladles, water-flasks, wine bottles, vinegar cruets, and even cups.

When intended for powder or a liquid a

Painted Black and Decorated in Bronze and Silver. Fig. 273.

wooden stopper is supplied. Filled with cologne or toilet water they are charming gifts.

The orange or pear-shaped gourd makes a dainty rose-jar. Cut through its widest part, and glue a strip of heavy paper to the edge of the under cup to prevent the upper from slipping off. Fill with spiced rose-leaves; or, if these are not to be had, fill with cotton heavily scented with sachet powder. This shape is also nice for a casket for small jewelry or buttons. The illustrations given explain themselves.

ANNA HINRICHS.

MAKING AND REMAKING DRESSES.

SHE is indeed a most fortunate woman who possesses the gift of invention and the habits of thrift and economy. Should she be in straightened circumstances these virtues are the fairy wand by whose aid she can manage to keep herself and her family well-dressed, self-respecting and entirely comfortable. Nowhere are system and order more essential than in domestic management. There are so many things pertaining thereto, which seem of little importance but which require to be constantly under the watchful eye of the mistress lest work accumulate and clog the wheels of its intricate machinery.

Many a woman of delicate health accomplishes an extraordinary amount of labor by being rigidly systematic and a thorough economizer of time. Our home journals have recently shown a most commendable purpose to give information in regard to the prevailing fashions in dress. This is well, yet every woman who attempts the making or the remaking of her own or her children's clothes should subscribe for a magazine devoted wholly to that work. Formerly these were mostly reprints of elaborate Paris fashions entirely unfitted to practical every-day life; but this is no longer so. There are now some which not only illustrate and describe all grades of dress but also give explicit information on all subjects pertaining to dress. Fashion, instead of being the mistress it too often is, can be made a most accommodating and efficient ally.

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

That woman is well-dressed, who is dressed appropriately for the time and place, as well as for her own circumstances in life. Even a strong, self-reliant woman feels more at her ease, and can better do herself justice when she knows her dress is not attracting attention by its *outre* appearance. How much more, then, is this felt by the timid, shrinking woman, who requires the most favorable environment to bring out the luster of her character. And this principle applies with equal force to children. I know the great tendency is to overdress our girls, yet I also know some excellent mothers who go to the other extreme and endeavor to impress upon their children's minds the idea that the old-fashioned theory—long ago exploded—"that it matters not how one looks," is true, and so are doing their susceptible, oversensitive children an irreparable wrong.

An instance recently came under my immediate observation, where a boy of 16 years of age, though a strong, sturdy, self-reliant and independent fellow, yet proved to be as sensitive at heart as a timid girl. His father had insisted, against his wishes, as a matter of economy, in purchasing him a frock coat for school, and when the child could endure it no longer, he confided, with apologies and blushes to the little mother that the sneers and jeers of his companions when he rose in the high school to answer the questions asked of him, were so cutting and confusing that he could not do himself justice in his studies. The world will soon enough knock off these sensitive corners without our assistance.

To the woman compelled to study economy and dress herself and her family on a small allowance, the purchasing of materials becomes of first importance. Almost without an exception, it will be found most satisfactory to buy the best materials possible. It costs no more for lining and making a good, all-wool dress that will do excellent service for two seasons, and which can then be cut over for a child, than for a half-cotton one which will be faded and vulgar-looking before one season is half over. Very many goods which are needed annually or semi-annually in a family, such as standard cotton goods and all such as comes under the head of "notions," can be very advantageously bought at wholesale of a jobbing house, and all materials should be purchased of large dealers. Shopping by mail is now so easy that the dweller in the most remote country town need never be compelled to pay country merchants such exorbitant prices as they usually ask on all but standard goods. Illustrated catalogues and samples of all kinds of goods are freely sent out, and one can thus deliberately compare the different kinds of goods and select exactly what she wants and be sure that the order will be carefully filled.

There are also great opportunities for saving in buying goods after the hight of the season is over, as our merchants are fast learning that to dispose of their surplus stock cheaply is far preferable to letting the goods accumulate. For a trifling sum many a remnant of fine goods can be secured, which, in the form of collar, cuffs, vest and panel, will liven up many an old dress and make it really handsome. It used to be often advisable to have a dress nicely fitted by a professional maker, when making it yourself; but patterns can now be obtained which are so reliable as to fit any style, and so definitely explained, as to cut and make, that this is seldom now resorted to. In the hands of an ingenious woman, one of these patterns is capable of an almost unlimited amount of changing, so that several suits can oftentimes be made with but one pattern. Care should always be used in placing the patterns properly on the goods: all are plainly marked in this respect, and nothing stamps your work as unprofessional and bungling sooner than lack of careful attention to this point.

It is good economy to get a yard more than is needed for a dress, as one almost invariably wishes to remodel it. But if you ever have fears about the quantity of cloth for a garment, lay it down and carefully place each part of the pattern as it must go, before putting your shears to the cloth. A fine and firm quality of silesia is preferable to a coarse, heavy one for waist and sleeve linings, and the former should be cut cross-wise of the goods, as this will prevent any stretching—and cause the garment to retain its shape much better.

Do not be tempted with making a sham skirt for any new dress, unless it is a heavy cloth one, and should be very careful that by no possibility will it show. Many a costume which looked well when draped indoors, has, when subjected to out-of-door breezes, had its beauty totally spoiled by the sight of a contrasting "sham."

A skirt form for draping over is one of the most efficient aids to home dress-making, as it relieves one person, and often two, of a hard, nervous strain. Sensible women of abundant means consider it wiser to have but few dresses at one time, and to wear them out while in style, thus often having fewer in number than many a village maiden thinks essential for her wardrobe.

Because ultra fashionable people who have both the time and means for such wasteful extravagance, are again endeavoring to make trains stylish for the street, do not be enticed into making your one garment with such an appendage. Neither make an ample train on your simple tea gown, which must be worn on going into the kitchen, "up stairs and down stairs and in my ladies' chamber," because your wealthy friend K-s was beautiful in a dress of that style. Though old and trite the advice, I must reiterate it—a nice quality of black silk is preferable to anything else for the *one* nice dress; for by the aid of trimmings and lingerie it can be made to do duty as full dress, semi-dress, or elegant simplicity.

In the remaking of dresses careful attention to details is, if possible, more essential to success than when making new ones. All garments should be carefully ripped apart and the stitches be taken out; then each must be either sponged or washed—and smoothly ironed. Sometimes, however the material is perfectly good, and requires only to be larger or smaller, longer or shorter and so on. A sleeve too tight at the shoulder may be made comfortable by inserting a V-shaped gore, either plain or puffed, of similar or of contrasting material, and covering the seam with cord—gimp, etc. Sleeves that are short may be lengthened by piecing out the lining, and covering it with a plain or fancy cuff, or a puff of silk above a narrow wrist-band. A sleeve that is worn only at the elbow can be cut apart an inch or two and the worn-piece taken out and a bias puff inserted of similar or contrasting material. Skirts may be lengthened from the top and covered by draperies; if the breadths are gored, each must be ripped apart, pieced down separately and then trimmed off and the different parts sewed together again. Children's skirts can often be lengthened by the addition of a flounce at the bottom or by setting in a band of insertion. A rent or a soil in a skirt can often be effectually covered by changing the style of the drapery somewhat or by covering with ribbons, braids, gimp, etc., etc.

Waists can often be made larger by inserting a V-shaped piece in the center of the back, after piecing out the lining, and a garment of wash goods is handsome made of all over embroidery. The same thing may be done in the front by piecing out the lining and then covering with a fancy vest of the desired width. The odd effect produced by trimming the fronts of a basque unlike are not only stylish but sometimes a convenience in cutting out.

It is even more essential when cutting over an old dress than with new goods that one should carefully make her plans before commencing operations. By the exercise of ingenuity and good taste, two old dresses can often be combined in one new one with great success and at a very trifling cost. The domestic dyes are easily and successfully used and will freshen up many a faded garment so as to look almost new.

Nearly all colors will dye some shade of brown, and the different shades of blue make handsome greens when dipped in a yellow dye; drabs and light grays make handsome dark shades of red. In short, a great amount of satisfaction can be obtained both in the dyeing and remaking of dresses, painstaking attention to details being the price of success.

KATHERINE B. J.

A QUESTION.

MISS S— and I were discussing Mrs. C—'s little girl, a pretty creature of three years, and Miss S— said:

"I don't think her mother is doing right. She is always saying: 'Speak lower, Cora,' and she never allows her to laugh or shout aloud at her play. I don't think it is good for a child's lungs never to use them in making loud noises." Now, the little girl is a delicate child who takes cold very easily, though her careful mother dresses her sensibly. Will some one who knows, tell us who prize a low voice, whether we are injuring our little one's health to secure it?

MRS. LEVI NILES.

NOT PLEASED WITH CHARITY; CLEANING A SEWING MACHINE.

I AM glad that some one has protested against Charity Sweetheart's tirades. I rather enjoyed reading her letters at first, though I did not necessarily believe that all those experiences happened to one person, and that that person would make them public. But afterwards I wondered at the R. N.-Y. for publishing such nonsense. I would not expect much kindness from my brother if I should make his faults public in that fashion, and he would be pretty apt to remind me that I had faults as well as he. It naturally makes us all a little indignant to have any one who pretends to have such refined tastes forget the common rule of doing as we would be done by to those who have the first claim for consideration from us.

I would like to tell the RURAL readers how I clean my sewing machine. I have a wide-mouthed bottle in which I keep kerosene and a mucilage brush to apply it with. Of course all know that the kerosene must be wiped off after it has been thoroughly run in, and sperm oil applied. But the idea is that by keeping the bottle and brush for that very purpose, it is so much handier than going to the can and getting a little in a dish every time the machine needs cleaning.

EMMA L. BLISS.

CLARA'S ORANGE PUDDING.

TAKE four good-sized oranges, peel, seed and cut into small pieces. Sprinkle a cup of sugar over the pieces and let stand. Into a quart of nearly boiling milk stir two table-spoonfuls of cornstarch mixed with a little water and the beaten yelks of three eggs. Let cook for a few minutes, careful not to burn. When cool (you must beat it up from time to time) pour over the oranges. Make a frosting of the whites of eggs beaten and a half cup of sugar, and spread over the top of the pudding. Place in the oven for a few minutes to brown.

AUNT ELIZA'S JUMBLES.

FIVE EGGS, two cups of sugar, one and a-half cup of butter. Prepared flour to make a soft dough. Flavor with lemon or vanilla.

MRS. KATIE HOPPER.

Miscellaneous Advertising.

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Life has been saved by a bottle of

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Prepared by Dr. J. C. Ayer & Co., Lowell, Mass. Price $1. Six bottles, $5. Worth $5 a bottle.

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Made cheaply and quickly by using a Triple Motion.

White Mountain Freezer.

Will freeze in half the time of any other Freezer and produce Cream of the finest quality.

White Mountain Freezer Co., 134 Hollis St., Nashua, N.H.

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I WISH the address of ladies afflicted with SUPERFLUOUS HAIR. Two-cent stamp. Mrs. Dr. M. E. Freeman, 99 Stanford Street Boston Mass.

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With Dumping Caldron, empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also make **Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Caldrons, Etc.** Send for circulars. D. R. SPERRY & CO. BATAVIA, ILL.

AGENTS LOOK HERE and **Farmers** with no experience make **$2.50 an hour** during spare time. A. D. BATES, 164 W. Robbins Ave., Covington, Ky., made **$21 one day, $81 one week.** So can you. **Proofs and catalogue free.** J. E. SHEPARD & Co., Cincinnati, O.

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News of the Week.

HOME NEWS.

SATURDAY, November 2, 1889.

THE Weldon extradition treaty with Canada will not be promulgated until the United States Senate shall have acted on the extradition treaty made some time ago between the United States and England.... ....Gen. Raum, the new Pension Commissioner appears hitherto to have caused no complaints anywhere—he has done nothing.....
It is feared that Judge Cooley will be unable ever to resume his work as chairman of the Interstate Commerce Commission. His trouble is from paralysis, whose symptoms have continued to increase since he reached home. It will be hard to find as good a man for the place.....
The destitution in North and South Dakota on account of the failure of crops is reported to be wide-spread. It is estimated by some that 20,000 families are in want, and the relief committee are doing their best to meet the needs of the sufferers, but so far the contributions received are inadequate. The distress is greatest in Ramsey and Niloo Counties. The story about 100,000 starving settlers is declared to be an exaggeration, however.....
The rifle news from the South is rather scant just now. True, in Harlan County, Ky., the feud between the Howards and Turners is still raging fiercely. Yesterday came a report that the law-and-order party, under Judge Lewis, had just killed six of the Howards; but both parties were receiving reinforcements and the struggle was still doubtful. Harlan County is strongly Republican and the Democratic State government is said to be slow in interfering in hopes that both factions may wipe each other out.....Gen. F. E. Spinner, instead of dying of cancer, is now in fair health, and writing a book at the age of 88.....An English syndicate is to build a bridge over the St. Lawrence River at Quebec, and also a railroad from Quebec to Belle Isle.....
Postmaster-General Wanamaker has just promulgated the rates the Government will pay for telegraph service during the current year. It averages 33 per cent. less than the old rates, and the Western Union hasn't yet decided what to do in the matter.....
The "Cronin" trial drags slowly along at Chicago; things look bad for the accused, however, so far.....As regards the World's Fair, New York has already raised over $2,000,000 of the $5,000,000 Guarantee Fund voted for by the Finance Committee, and contributions are coming in at the rate of about $250,000 a day. There's a great deal of grumbling yet at the possibility of a part of Central Park being taken and some refuse to contribute till all intention of doing so is disclaimed. Some of the owners of the land wanted for the site are asking extortionate terms, and matters are not at all in a splendid shape. Chicago has her Fair matters in precisely that condition, having already a Guarantee Fund of $8,000,000. She is still working intelligently unanimously and enthusiastically to secure Congressional support in her favor. St. Louis is, as usual, quiet and a trifle lethargic. Washington, always powerful in social influences on Congressmen, has just projected a gorgeous banquet in support of her claims and will henceforth act energetically—for Washington.....
Secretary Noble has notified the cattle syndicate who have leased the Cherokee Strip that they must vacate the whole territory by June 1. If the Cherokees refuse the Government's offer of $7,200,000 for the 6,000,000 acres in the land, they can get nothing henceforth from outsiders. Intending settlers are reported to have set fire to the grass, and the cattle on hundreds of miles of blackened pastures are starving..... .....The price of oysters has reached the highest figure ever known in most of the seaboard markets—storms and a "combine".....This is an "off" year in politics through most of the country; but, Gracious! how hotly they're whooping things up in Virginia. Both sides are quite sure of victory; and all sorts of roorbacks are as thick as leaves in Vallambrosa. Politics in Ohio, too, are sizzling.....
Clement Garrett Morgan, colored, ex-barber, ex-school-teacher and ex-hotel-waiter, was elected to the unique honor of class orator at Harvard University the other day by a majority of one in a total vote of 250. He appears to be a very intelligent, well-educated, gentlemanly man, who has struggled nobly to secure an education. Of course, the kid-gloved Bloods and Swells who have hitherto run the annual elections are considerably disgruntled.....Ex-President Rutherford B. Hayes has been re-elected Commander-in-Chief of the Royal Legion which convened at Philadelphia the other day.....Senator Vest has fully recovered from his recent illness.... ...Senator Randall is again in fair health.....
The Pan-American junketers are having a truly halcyon and hilarious time of it, and have telegraphed Secretary Blaine that they've not tired of their trip as reported, but want lots more of it. The Pacific coast claims that it ought to be visited, as it is nearer to all the South American Pacific States than any other part of the country.....Canada is to have a sub-Atlantic cable of its own, which is to be laid next year by a company with a capital of $1,600,000. It will cost less than any cable hitherto laid, 'tis said, though it will have all "the latest improvements."
The Sandwich Islands appear to be anxious to have their relations with the United States more intimate than they are at present, and hence ask for closer commercial relations, promising not to negotiate treaties with any other country without the knowledge of the Government of the United States.....The mine-owners of Victoria, British Columbia, want to be annexed to the United States.....Alabama State four-per-cent. bonds sold the other day at a premium. A few years ago her eight-per-cent. bonds found slow sale at 70 cents on the dollar. Good for Alabama! .....Mexico has just shown its anxiety for reciprocity by imposing prohibitory duties on imports of live cattle and dressed meat. This is following the example of the United States, however, and imitation is surely a compliment.....
The land rings in New Mexico are jubilant at the recent removal of their implacable foe, the Hon. ex-Congressman, Geo. W. Julian, of Indiana, who for four years has been Surveyor General of New Mexico..... .....English capitalists are said to be negotiating with many of the most important cheese factories to form a Cheese Trust.....Buffalo and other "border" towns complain that Canadian workmen cross the line every day and work at "cut" rates.....
Contracts will be given out by the Government in a few weeks for the construction of 30 twin-screw sea-going torpedo boats, and a company of New York, New Haven and Philadelphia capitalists, with a capital of $6,000,000, has been formed to build them. They'll be quite formidable in size, speed and equipment.....An English syndicate has at last gobbled up all the St. Louis breweries, except one, for $12,350,000!.....
In 1840 William Parger sold a pair of mules for 28 acres of land on the Missouri near Kansas City. Changes in the river bed since then have increased the tract to 260 acres, worth $200,000, and the title to the increase has just been affirmed by the courts in favor of Parger's widow.....That Cadwell-Murat marriage was declared "off" last Friday. The cool-headed-and-hearted American girl offered $10,000 a year for the princely great-grandson of the old French inn-keeper; but he thought himself worth more, especially as his son's rich wife offered him the same sum for not marrying at all, as she didn't want a ranking lady in the family.....C. P. Huntington's adopted daughter, Miss Prentice, niece of the multi-millionaire's wife, has clinched the bargain with the German Prince Hardzfeldt, having married him last Monday. Cash consideration not yet mentioned.
A Snell-murderer Tascott has been discovered simultaneously in Philadelphia and Colorado during the week, and neither has proved to be the eagerly sought Simon Pure, to the $50,000 disappointment of their captors who hoped to get the big reward.. .....The Westinghouse Electric Company, which uses several million pounds of copper yearly in its electric works, will mine its own copper in future, having bought valuable mines in Arizona.....A letter written to the N. Y. World dated Florence, Italy, October 12, states that the reason Mr. Blaine declined to be a candidate for President last year in his famous Florence letter was that he had a stroke of paralysis at Milan, and subsequently was dangerously ill with paresis at Florence for several weeks. His sickness was followed by melancholia. It is generally believed there's truth in the report, and as the Plumed Knight is now all right he may enter the lists at the next Presidential tourney.....
The Mennonite colonists are doing remarkably well in the Canadian Northwest, where many of them have been settled for 14 years, and are now worth $10,000 to $20,000 each. Fresh immigration is expected. In this country, too, Mennonites are prospering wherever they have settled, as they are extremely frugal, industrious and economical.....
President Harrison has appointed November 28 as Thanksgiving Day.....Survivors of the wrecked steamer Earnmoor say that the boat's crew sustained life by cannibalism.....Major E. A. Burke, ex-Controller of the State of Louisiana, instead of returning at once to "vindicate" himself from the charges of having misappropriated hundreds of thousands of dollars entrusted to his care, has fled from England to Belgium to avoid extradition, as a number of indictments for forgery, etc., have been found against him in New Orleans. No man in the country had a higher reputation for honesty, honor and executive business ability than had Burke a few years ago.....

FOREIGN NEWS.

SATURDAY, November 2, 1889.

THE EMPEROR WILLIAM escorted by the German and English fleets, after his sister's wedding, steamed from Athens to Constantinople, on a visit to the Sultan. His reception has been grand. Bismarck is anxious to form, supplementary to the Triple Alliance, another "Alliance of Peace," embracing England, Turkey and perhaps Spain, and the Emperor's visit to the Porte will no doubt tend to secure Turkey's adhesion. Meanwhile Russia is unusually quiet, waiting perhaps to see how Bismarck will carry out his recent arrangements with the Czar. Peace appears assured until spring at any rate.....
In England the Parnell Commission has again begun its sessions, but little or no interest is now felt in its action. That it will make some sort of a report adverse to the accused is a foregone conclusion, but it will fall flat on the public attention..... ....Russia is just now on extraordinarily friendly terms with the Pope and has conceded all his demands with regard to the appointment of Catholic bishops and the government of the Catholic churches in Holy Russia. No doubt Italy's adhesion to the Triple Alliance makes Russia all the more cordial with the Vatican.....
Latest reports from two independent sources in Africa say that Stanley and Emin Pasha will soon arrive at Mpwapa, 150 miles inland from Zanzibar.....
The Prince of Wales is reported to be suffering incurably from Bright's disease. Two years is the longest span the doctors are said to give him. The London papers are requested not to discuss the topic.....
It is reported that the Czarevitch has been betrothed to Princess Marie of Greece, and Prince Ferdinand of Bulgaria to Princess Louise of Alencon belonging to the Orleans family.....
The marriage of Princess Sophie, sister of the Emperor of Germany, and the Duke of Sparta, Crown Prince of Greece, celebrated at Athens, last Sunday, was the most brilliant wedding that has probably ever occurred. No fewer than 99 "royalties" or members of royal families, were present, including the Emperor, Empress and Dowager Empress of Germany, the King and Queen of Denmark, and of course those of Greece, and the Queen and Crown Prince of Italy, the Crown Prince of Russia, the Prince and Princess of Wales, and "any number" of German princes and Grand Dukes and other "royal" notabilities. Owing to the remarkably good fortune of the royal family of Denmark, close relationship exists between several of the most powerful royal houses of Europe. One daughter is Empress of Russia, another Princess of Wales, and another a member of the Orleans family, while a son is now King of Greece, and another would probably have been Prince of Bulgaria were it not for the political complications to which such an election would have given rise. The presents to the "happy couple" were numerous, rich and gorgeous.....
Official statistics show that 32,000 Irish laborers migrate to England every summer to take part in the harvest work, returning home before winter. Five-sixths of them are supplied by Connaught....The straight-out Boulangerists assure the General of the fidelity of the party to his cause and of their confidence in his ultimate success. It is said that he will suddenly enter France and demand a new trial. If he does he'll be probably imprisoned to serve out the penalty imposed at the last.....Owing to an increase of the German forces on the Northern frontier of France, the French government will send 100,000 more troops in that direction. Every move of one power on the military chess-board of Europe, is certain to cause a counter-move by another.....

AGRICULTURAL NEWS.

SATURDAY, November 2, 1889.

THE Western Economic Association having headquarters at St. Louis, has adopted resolutions calling upon the Secretary of the Interior, and upon Congress to take the proper action to include in the next census statistics showing what percentage of the people in this country occupy their own farms and homes and what proportion are tenants; also as to what proportion of those who own their own farms have their property free from debt, and what percentage of the value is mortgaged. The act authorizing the census did not authorize the collecting of these and similar data, and a special act will be necessary to enable these very important items to be included. There is no doubt but farm property is greatly overtaxed, as well as heavily mortgaged, and one long step in the matter of securing relief is to have the facts collected and published to the world. Let the light shine!.....
The Vermont Dairymen's Association will hold its 20th annual meeting at the Town Hall, Rutland, Vermont, January 15, 16 and 17, 1890. The much-talked-about butter extractor will be exhibited. Speakers of National reputation on dairy matters will give addresses. Premiums to the amount of $200 will be paid on butter and cheese. A programme will be issued in December. E. L. Bass, secretary, West Randolph.....
There will be an auction sale of Jersey and Holstein cattle at the American Horse Exchange, Thursday, November 14. The animals offered are from several noted herds. .....It is reported that a man pretending to represent Philadelphia commission merchants has been swindling the cranberry growers about Barnegat, N. J. His game was to negotiate for the crop, and then borrow small sums of money on the strength of the deal.....
Reports show a lack of pasturage in many of the Western States, on account of the drought, Illinois, Wisconsin and Minnesota suffering most.....Nebraskan farmers have decided to organize a beef-packing house at West Lincoln, for the purpose of supplying the home market. They are confident of being able to cope successfully with the Beef Trust.....Judge Arthur T. Reeve, formerly of Iowa, Chief of the Seed Division of the Department of Agriculture, died in Washington on Friday of last week.....The squaw men are reported to have settled on all the land for miles around Fort Pierre, S. D., and trouble is anticipated from intending settlers who claim that the Government has decided squaw men no better than other whites....
The Secretary of Agriculture issued the following order to managers and agents of railroad transportation companies which took effect November 1: The order of July 3, 1889, prescribing regulations for the transportation of Texas and other Southern cattle and for the isolation, cleaning and disinfection of pens which had been occupied by such cattle is hereby revoked. It is believed that the danger from splenetic or Texas fever has passed for the present year.
.....A meeting of the hay-dealers of Quebec, Canada, who have claims against the United States Government for the refunding of duties, is called for St. John, November 5. It is said that the claims amount to over $800,000.....Growers and shippers of California grapes claim great things for the irrigated vineyards. They yield better of larger, sweeter, better flavored and more highly and uniformly colored clusters. The shippers say that the fruit grown upon irrigated land also carries better than any other.....
Farmers' institutes will be held in New York State the coming fall and winter as follows:

PLACE.	COUNTY.	DATE.
Plattsburg	Clinton	Nov. 18–19
Malone	Franklin	" 20–21
Ogdensb'g	St. Lawrence	" 22–23
Salem	Washington	" 25–26
Val'y Falls	Rensselaer	" 29–30
Newport	Herkimer	Dec. 2– 3
Rome	Oneida	" 4– 5
Weedsport	Cayuga	" 6– 7
Penn Yan	Yates	" 13–14
Fonda	Montgomery	" 16–17
Cairo	Greene	" 18–19
Walden	Orange	" 20–21
Monticello	Sullivan	" 23–24
Walton	Delaware	" 27–28
Geneseo	Livingston	" 30–31
Albion	Orleans	Jan. 3– 4
Akron	Erie	" 6– 7
Warsaw	Wyoming	" 8– 9
Angelica	Allegany	" 10–11
Bath	Steuben	" 13–14
Watkins	Schuyler	" 15–16
Trum'nsb'g	Seneca	" 17–18
Albany	Albany	" 22–23
Glens Falls	Warren	" 24–25
Cobleskill	Schoharie	" 27–28
Owego	Tioga	" 29–30
Bainbridge	Chenango	" 31– Feb.
Bin'hamt'n	Broome	Feb. 3– 4
Oneonta	Otsego	" 5– 6
Horseheads	Chemung	" 7– 8
Lyons	Wayne	" 10–11
Hamilton	Madison	" 12–13
Boonville	Oneida	" 14–15
Carthage	Jefferson	" 17–18
Oswego	Oswego	" 19–20
Po'keepsie	Dutchess	" 21–22
Millerton	"	" 24–25
Mt. Kisco	Westchester	" 26–27
Riverhead	Suffolk	" 28– Mar. 1
Spr'g Val'y	Rockland	Mar. 3– 4
Marathon	Cortland	" 5– 6
Ellico'tville	Cattaraugus	" 7– 8
Sincl'rville	Chautauqua	" 10–11
Le Roy	Genesee	" 12–13
Can'nd'gua	Ontario	" 14–15

Miscellaneous Advertising.

SEND 10 Cts. in P. O. stamps to E. & O. WARD, Produce Commission Merchants, for circular about Shipping Produce Also recipe for Preserving Eggs. Established 1845.
No. 279 Washington St., New York City

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Freight Paid.
Warranted for 5 Years.
Agents Wanted. Send for Terms.
FARMERS'
Barn and Warehouse Scales.
JONES OF BINGHAMTON, Binghamton, N.Y.

HAY AND STRAW PRESS.

Guaranteed to press three tons more of hay in one day (10 hours), than any other portable two-horse press, with the same amount of help. Give it a trial. Satisfaction guaranteed, or no sale and freight refunded. For conditions, circulars, etc., address
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FOR SALE. A BARGAIN.
A three-run Custom and Merchant Mill; good water power, 40 acres farming land; a dwelling house and barns; possession given at once. Apply to
Mrs. J. G. BURCK, North Hoosick, Rens. Co., N.Y.

FOR SALE!
Three-year-old Coach Stallion, 7/8 brother to Duke, "the handsomest horse in America"—the best three-year-old I ever saw. Four-year-old trotting-bred stallion, by Clark Chief, Jr.; has showed a 2:36 clip; has never been handled. The finest pair of 16 hand coach horses in the State; five and six years old, mare and gelding. Also sucking colt, sire Billy Wilkes, dam by Columbus 95. This stock will be sold at one-half their value, as owner has other business.
Also 500 bbls. Monroe Seedling Seed Potatoes, $3 per bbl., the finest in quality and yield from 300 to 450 bu. per acre Order quick. WALLACE L. HUBBS,
Inwood Farm, Jonesville, N. Y.

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Crops & Markets.

SATURDAY, November 2, 1889.

WE are constantly in receipt of inquiries from friends asking our advice as to the advisability of selling or holding certain products, and as to prospective prices. While the R. N.-Y. is willing and anxious to furnish all the information obtainable, it must be excused from giving advice relative to the disposal of produce. Left to the unobstructed working of the natural laws of supply and demand, it would be comparatively easy to foretell the approximate prices of staple farm products. Knowing the usual consumptive demand, the amount on hand, and the probable supply, it becomes a very simple problem. But there are many things to disturb the equilibrium of trade, to which we have before referred in these columns, such as the operations of the gamblers in produce, the supply of certain products from unusual and unexpected quarters, the unreliability of furnished reports, and, sometimes the occurrence of destructive calamity, like the potato blight, untimely frosts, or a watery deluge. These and other similar conditions make it extremely problematical as to the wisest course to pursue in regard to holding or marketing crops. For example, one subscriber writes us that he has a car-load of potatoes, that he can sell them for 35 cents at his railroad station, but he thinks it is not enough. He asks whether he had better sell, ship them himself, or store them until spring. Let us do a little figuring. New York State and Western potatoes are quoted to-day at from $1.25 to $1.75 according to variety and quality, Rose and Hebron bringing higher prices, and Burbanks and Stars, lower. Supposing our friend ships his potatoes to a commission merchant in this city; he must pay five cents per barrel cartage; five per cent. commission for selling, besides transportation charges, and the chance is that his potatoes which he thinks the finest ever grown will be graded perhaps about medium, and sell accordingly. Then there is some risk from shrinkage, etc. But, suppose our inquirer concludes to store his potatoes until spring. We think no one who has had experience in handling potatoes will deny that under ordinary conditions, 35 cents per bushel in the fall right from the field, is as good as, or better than 50 cents in the spring. Is there a probability of the price being enough higher to warrant storing them? The day is past when excessively high prices may be expected in spring. The new crops from Bermuda and the South are put down here so early and so cheaply, and foreign potatoes are brought here at freight rates that will barely pay the cost of handling, whenever the price is likely to be moderately high, that only fair prices can be counted on. These remarks will also apply to many other products. Our own impression is that the man who has good potatoes or onions, and has facilities for storing them safely, will not lose anything by so doing. The Government crop report for October places the potato crop about eight or nine points lower than one year ago. We believe that potatoes will be worth considerably more money at some time between now and spring than they are now, but this is simply an opinion, and must be taken at its face value.

THE CUBAN crop of sugar promises well, and stocks on hand are nearly 20 per cent. heavier than last year.

BUTTER of the best grades is active, and in good demand. Lower grades are dull, and the market is overstocked.

BEANS have probably reached about the top notch in price. New lots arriving are of poor quality, and large arrivals of foreign will prevent any extravagant prices.

EGGS are advancing for strictly fresh, prime, clean stock. Limed, held, and ice-house show little improvement.

FRUITS show little change, except that choice grapes are somewhat higher. The auction sales of California and Eastern fruits continue, and several lots of Florida oranges have been disposed of at satisfactory prices. Mr. Goodsell has obtained for California fruit the highest prices ever realized in the United States. As high as $6 was received for a single crate of 20 pounds of Morocco Grapes, while a car-load averaged 15 cents per pound. Concord Grapes shipped by the Chautauqua Grape Growers' Association sold for 31 and 32 cents per nine-pound basket, and the manager of this association says that this method has brought them more money than any other, and they have shipped 100 cars. He says: "We begin to think that this is the proper way to sell grapes." The R. N.-Y. was the first to publish a full account of this system of selling fruits, and the confidence then expressed in the system has been strengthened by the results of recent sales

LATEST WHOLESALE PRICES

OF

COUNTRY PRODUCE.

New York, Saturday, November 2, 1889.

BEANS.—Marrows—New, $2 75@$—; New Mediums, choice, $2 15@$2 20; Pea, $2 10@$—; Red Kidney, $3 40; White Kidney, choice, $2 60@$2 70; Foreign Mediums, $1 35@$1 55; California Lima, $3 50@$—Italian, $1 85 @$2 00. Green Peas, $1 20@$1 25.

BUTTER—New—State and Pennsylvania, best, 24@24½; Elgin, best, 25c; Western, best, 23½@24c; do prime, 19@22c; do good, 15@18; do poor, 12@14; State, Dairy, half-firkins, tubs, best, 23@—c; do do prime 19@21; do do fine, 15@17; Welsh tubs, fine, 19@21c; do do, good, 15@17; firkins, best, —@—c; do prime, —@—c; do fine,—@—c. Western Imitation Creamery, best, 16@18; do fine, 12@15; Western dairy, fine, 12@15c; do fair, 10½@11c; do poor, 9@10c; do factory, fresh, best, 12@13c, do prime, 11@11½; do good, 9@10; do poor, 7 @9c

CHEESE.—State factory, fancy, 10½c; do do fine, 9½@10c; do do, prime, 9@10c; do do, fair to good, 8¾@9½c; Ohio, flat, prime, 7½@9½c; do good,—@—c; do, good, —@—; Skims, light, 7@8c; do medium 5@7c; do full, 2@4c.

EGGS.—Near-by, fresh, 23½@26c; Canadian, 22@24c; Southern, 20@22c; Western, best, 22@24c; limed, 17c; ice house, 16@20c.

FRUITS.—FRESH.—Apples, per bbl, $1 50@$3 75 Pears, per bbl, $2 00@$6 00; do per keg, $2 00@2 50; Grapes, best, per lb, 3@7c, do, good 2@3c. Cranberries, C. C., per bbl, $4 00@$7 50; do, per crate, $2 25@$2 50; Jersey, do, $1 25@$2 50. Quinces, per bbl, $2 50@$5 00. Lemons, per box, $3 50@$7 00.

DOMESTIC DRIED—Apples—Evaporated, old, 5@8½c; do choice, new, 9½@10c; prime, 8@8½c; sliced, new, 4@5c; do old, 3@3¾c; Chopped, 2¾@3c, Cores and skins, 2½@—c. Cherries, new, 9@12c; do, old, 8@10c. Raspberries, new, 22@25c; Blackberries, 5¼@5½c. Peaches, Delaware, evaporated, peeled, 15@20c, do do, unpeeled, 8@10c; Georgia, evaporated, peeled new, 13 @15c; do do do, unpeeled, 7½@10c; do do, sundried, 9 @9½c. Huckleberries, new, 12@13c. Plums, new, 7@9c.

GAME.—Plover, per doz, $1 25@$1 50; Snipe do, do, $1 25@$1 50, Woodcock, per pair, $0 90@$1 00; Grouse, do do, 60@85c; Partridges, do, $75@$1 15. Duck, Mallard, 60@75c; do, Teal, 25@50c; do, Redhead, $1 00@$1 50; do Canvas-back, $2 50@$3 00, Venison, per lb., 5@20c.

HAY AND STRAW.—Timothy, best, 80@—c; do good, 65@70c; do medium, 40@50c; Clover, mixed, 45@50c; shipping, 40@45c. STRAW—No. 1 rye, 60@70c; short rye, 35@40c; oat, 30@35c.

HONEY—In one-pound boxes. White Clover, 14@15c; Buckwheat, 10@12c; Beeswax, 22@23c.

HOPS.—State. New, 12@—c; do, good, 10@11c; do common, 7@9c; do 1888, best, 11@12c; do do prime, 9@10c; do do, common, 6@8c; California, New, best, 12@—c; do good to prime, 10@11c; do Old, best, 12@—c, do common and fair, 7@9c.

NUTS.—Peanuts are quiet. Fancy, had picked, quoted at 7¾@8c, and farmers' grades at 6@6½c; Pecans, 5½@6½c, Chestnuts, $4 00@$5 50 per bushel; Hickory Nuts, $1 50@$1 75 per bushel.

POULTRY.—DRESSED—Turkeys, mixed, per lb. 6@13c; Fowls, western, choice, 9½@10½c; do common to good, 7@9c; Ducks, spring, good, 14@17; Squabs, white, per dozen, $3 00@$—; do dark, do, $2 00@$2 25; Chickens, spring, 9@15c; Fowls, near by, 11@12c.

POULTRY—LIVE.—Chickens—Spring, per lb, 9@10c. Fowls near-by, per lb, 9@10c, do Western, per lb. 9 @9½c; roosters, per lb, 5½@6c; Turkeys, per lb, 8@11c; Ducks, Western, per pair, 60@75c; Geese, Western, per pair, $1 40@$1 65.

SEEDS.—Clover is hard to sell; exporters quiet. New prime, future deliveries offered at 6¼ and choice, 6½c, with fancy at 6¾c. Timothy quoted at $1 50@$1 60. Canary, 2@4c.

VEGETABLES.—Potatoes—Jersey, per bbl, $1 25@$1 50 Long Island do, $2; State do, $1 25@$1 65; Western, do, $1 00@$1 75; Sweets do, $1 75@$3 00. Cabbage, per 100, $3 50@$4 50. Turnips, per bbl, 90@95c Onions—Orange County Red, $1 00@$2 00; Eastern White, $2 50@$3 25; Eastern Red, $2 00@$2 50, State, Yellow, $1 50@$1 75.

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 15@18c, and Spring do 19@25; Scoured Texas, 52@58c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

GRAIN MARKETS.

WHEAT.—Sales—No. 1 Northern spring, 90¼@90¾c, afloat, closing at 90¾c; Ungraded Winter Red at 76¾@90c; latter fancy for milling. RYE.—Quiet and more or less nominal. Western quoted 51@52½c; State, 55 @56c. BARLEY.—Unchanged in price and dull. CORN.—Sales—Ungraded Mixed and White, 40@42½c; No. 2 Mixed, 41¼@41½c, elevator, 42@42⅝c afloat. OATS.—Sales—No. 3, 25c; No. 3 White, 27@27½c: No. 2, 25¾@26c, elevator, 27c, delivered; No. 2 White, 28½c; No 1 White, 34c; Mixed Western, 24@27c; White do, 27@34c. FEED.—Quoted: 40 lbs at 65@70c; 60 lbs, 60@65c; 80 lbs, 65@70c; 100 lbs, 80@90c; Sharps, 90@95c; Rye Feed, 70c.

LIVE-STOCK MARKETS.

New-York, Saturday, November 2, 1889.

BEEVES.—Sold at $3 40@$5 per 100 lbs; ordinary Texas do $3 30@$3 40 per 100 lbs, and native cows and bulls at from $2 to $2 70 per 100 lbs. A better demand for American cattle and American refrigerated beef in London and Liverpool is reported by cable, but quotations are not given.

CALVES.—Veals sold at from 4 to 7½c per lb. Grassers and ordinary western calves sold at 2@3½c. per lb.

SHEEP AND LAMBS.—Sheep sold at $3 50@$5 40 per 100 lbs; lambs at $5@$6 85, a small bunch going to $7.

HOGS.—The small number offered for sale alive changed hands at $4 20@$4 75 per 100 lbs.

Communications Received for the Week Ending November 2, 1889.

J. C. B.—C. V. G.—S. M. B.—J. D. W.—A. C. B.—G. L. D.—L. W.—E. L. B.—L. A. L.—Mrs. R. B. Wasson, thanks for drawing.—A. M. A.—E. J. W.—L. B. S.—D. F. S.—A. G. D.—C. W. M.—H. H.—H. C. C.—H. A. B.—M. M. L.—C. W. J.—L. H.—E. L. H.—J. D. W.—L. S. B.—E. B.—F. K. P.—V. G.—F. R.—S. W.—V. D. S.—O. C. B. C. G.—J. A.—R. B.—H. E. M.—C. T. S.—H. H. L.—A. D. M. W. G. S.—R. H. S.—C. P.—O. O. S.—P. H. W.—P. C.—J. A. D.—J. B. P.—S. M.—R. W. G.—T. H. G.—N. N.—J. K. W.—C. D. H.—C. A. B.—T. V. M.—S. B.—G. D.—C. M. M.—J. C. B.—D. H. K.—M. J. G. F. S. W.—J. R. B. C. C. W.—P. H. S.—J. H. T.—J. Y. D.—E. H. S.—E. J. McC.—E. H.

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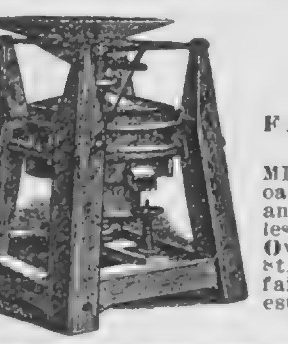
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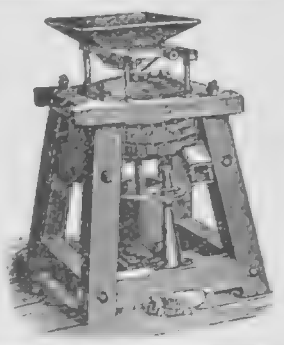

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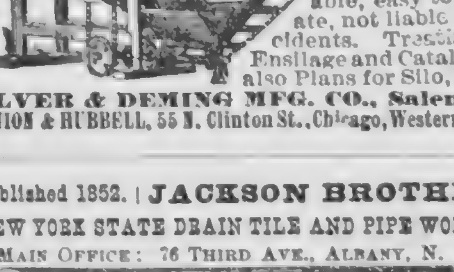
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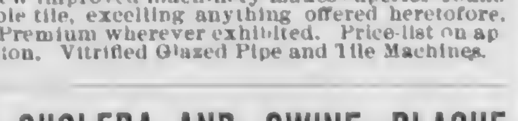

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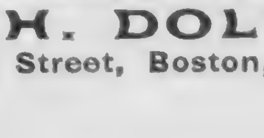
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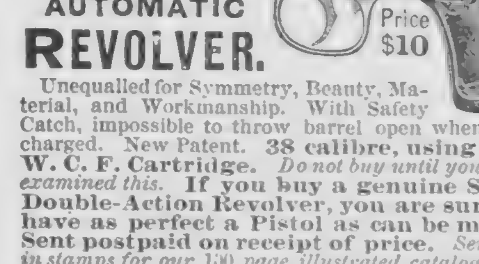
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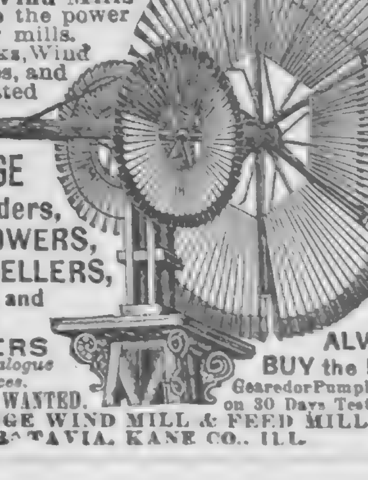
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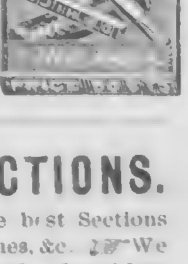

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Literary.

MAGAZINE REVIEWS.

HARPERS contains a very bright, readable article from that indefatigable student of nature, W. Hamilton Gibson, entitled "Bird Notes." It is wonderful how many and what varied notes the trained ear distinguishes in the songs of birds where the unobserving hear nothing but a meaningless chatter. Mr. Gibson gives a long list of birds which he is able to identify by their songs, which he can hear in a June morning. Here is how he describes the flight of a familiar bird: "Why this brief vision of golden filigree that seems suddenly flung across my fancy? What is the talisman? 'I've cheated ye, per chick o pee, per chick o pee!' What but the tiny goldfinch that has passed overhead in its looping flight, festooning the ether in glancing drapery of black and gold, each embroidered loop pinned with a wisp of song." Isn't that a beautiful picture? And how many of the notes here given carry us back to rural scenes and country fields and we seem to hear repeated the well-remembered notes of the bobolink, the meadow lark, the robin and many other familiar friends of our younger days. Thomas A. Janvier gives an illustrated article, "The Mexican Army," which describes the organization of the military forces and explains how President Diaz has created "an orderly, well-disciplined, trustworthy" military force loyal to the nation out of a mass of scattered commands faithful only to their respective generals. He considers this development as full of significance for the future of Mexico. Another article of peculiar interest at this time when representatives of the South American Republics are traveling in our country is "The Republic of Columbia," by Hon. Ricardo Becerra. The resources of the country are wonderful in the way of valuable woods, minerals, etc. Owing to certain causes these have been but little developed. The foreign commerce amounts to $30,000,000 annually, of which about one-third is the product of her trade with the United States. Her imports from this country are about $5,000,000: chiefly flour, lard and other articles of food; hardware, machinery, oil, cotton fabrics, etc. There are no large fortunes, and in some parts of the republic every laborer owns his house and plot of ground, together with several head of cattle and mules. "At Grande Anse" gives some vivid impressions of the sights on the island of Martinique. "A Century of Hamlet" by Laurence Hutton, gives a history of the presentation of this character in New York, from the first appearance of the younger Lewis Hallam, November 26, 1761, to the time when Edwin Booth assumed the same part, November 26, 1861. Portraits and notices are given of the different noted actors who have played this part during the intervening time. There are other interesting articles, poems, the usual editorial departments, etc. Harper & Brothers, New York.

THE BUSINESS WOMAN'S JOURNAL contains a sketch and portrait of Mary E. H. G. Dow, ex-president of the Dover, N. H., Horse Railroad. Something over a year ago, Mrs. Dow owned a small amount of stock in the road, which was not a paying investment. Patrons of the road found fault with it also, as the accommodations were very meager and the fares high. In this condition of affairs a Boston syndicate proposed to buy the road at a very low figure. Mrs. Dow concluded that if there was any money in the road, she might as well try her hand at it. She went quietly to work and when the next meeting of directors was held, every one was very much surprised to find that she had acquired more than half the stock, and was therefore master of the situation. Several gentlemen who wished to be on the board of directors refused to vote for a woman for president; they said it was preposterous, and meant bankruptcy. But as she owned the majority of the stock, she held the key to the situation, and by voting for her, they could be directors, otherwise not. They succumbed. Her first move as manager was to double the insurance; then to pay cash for everything, thus getting a large discount on all bills; she raised the wages of employees and reduced the fares. In short, by the application of sound business principles, she managed the road to the satisfaction of the public, paid a portion of the old debt, and declared an 11-per cent. dividend as against five per cent. in former years. Then, to cap the climax, she secured from the legislature an amendment to her charter allowing the use of electricity, thus enabling her to dispose of the road at a large profit. In addition to her business ability, Mrs. Dow is a most estimable wife and mother, a skillful housekeeper and cook, an expert gardener, an amateur veterinary surgeon, is a good shot, a fine swimmer, and possesses all the graces belonging to lovely woman. One such example as hers will do more to secure for woman the concessions she seeks than thousands of loud-mouthed lecturers who prate about what woman would do if she only had the chance. Mrs. Dow had the chance and she improved it. Her first chance was when a young girl, her father being in poor health, the management of the farm fell upon her shoulders. There is much more of interest to women, notably the article in relation to the reappointment of the two women who have done such faithful work as school commissioners in this city, and who have the whole force of the political machine against their reappointment. The price of the magazine has been reduced to 55 cents per year, or 10 cents per single copy. Bi-monthly; Mary F. Seymour, 38 Park Row, New York.

ST. NICHOLAS begins its 17th volume with the November issue, and it has become quite a lusty, vigorous youth. It celebrates its birthday by appearing in a new dress—of larger type—and by adding to its always generous number of pages, so that more than the usual amount of matter is given. Two contributors describe different methods of rabbit-hunting in the West. One, entitled "Coursing with Greyhounds in Southern California," by C. F. Holder, gives the method employed by the white sportsman in that State. The other, "A Pueblo Rabbit Hunt" by C. F. Lummis, gives the primitive method employed by the Pueblo Indians of New Mexico. They kill the game by means of a curved club, a sort of boomerang, which they throw with great skill. "The Poet of the Hempstead Centennial" is a story which will please the boys. A bright boy of 14, shy and sensitive, who had manifestly little business ability, having of necessity to choose some trade, chose that of printer because it was in some way connected with the illustrated papers which had so interested him. During the third year of his apprenticeship, the town in which he lived, decided to hold a bi-centennial celebration and advertised a generous prize for an ode suitable for the occasion. After much hard study, after anxious days, and sleepless nights, the committee at a crowded meeting announced its decision, and to the astonishment of everybody, our hero included, the dazed boy received the prize. Harry A. Doty tells "Why Corn Pops." "Jokers of the Menagerie" is an amusing account of the pranks of some of the animals in the zoological garden at Central Park. A very amusing little comedy in verse is "Sir Rat," with characteristic illustrations. There are several other articles both entertaining and instructive, and all of a high order of merit. It is a good number. The Century Co., New York.

THE CENTURY gives the first installment of the autobiography of Joseph Jefferson. He was almost born in a theater; at all events, his earliest recollections are entirely connected with one. Behind the scenes in a rickety old frame building in Washington was his first play-house. He gives reminiscences of his early and later life and of the many noted men with whom he has been associated. An adventure at the home of Lincoln is related in which he was befriended by the latter, then a young lawyer. Numerous illustrations of noted actors are given. "The Problems of Modern Society" is the first of a series of "Present-day Papers." The author is Dr. Langdon, who with Bishop Potter, Drs. Munger and Dike, Professors Shields and Ely, and Seth Low, have formed themselves into a "Group" for the purpose of discussing certain sociological questions of consequence to the well-being of the community. George Kernan gives a chapter of "Adventures in Eastern Siberia." The Lincoln History treats of "The Second Inaugural," "Five Forks," and "Appomattox." Mark Twain contributes an article "A Connecticut Yankee in King Arthur's Court," which consists of extracts from his forthcoming book having the same title. Judge Ernest H. Crosby makes his appearance as a story writer, in "The Case of John Van Arsdale." Mrs. Carter describes "Street Life in Madrid." "Friend Olivia" by Amelia E. Barr, and "The Merry Chanter" by Frank R. Stockton, are serials begun in this number. "The Grolier Club" is an account of the history, purposes and methods of this new club. There are numerous poems, open letters, short articles, etc. The Century Co., New York.

THAT FAVORITE old fashion periodical, Peterson's Magazine, is being constantly improved to keep abreast with the times. For 1890 it promises a new cover, new type, and eight new serial stories, besides other attractions. Its Thanksgiving number has three short stories and a poem for the season, portions of interesting serials by Alice Maud Ewell and Frank Lee Benedict, a finely illustrated article about butterflies, "Talks by a Trained Nurse," a short talk about bulbs and other matter in the regular literary department. The fashion department gives practical and very stylish designs, with a pattern for a walking-jacket, while the fancy-work department has several holiday designs. A lovely design of peacock's feathers, and a colored design for embroidery deserve special mention. The cut-paper patterns are a very excellent feature, being worth more than the cost of the magazine, in hard cash, to the home dress-maker. The magazine will be furnished to new subscribers till the close of 1890 for $1.75. Regular price $2. Peterson Magazine Co., Philadelphia.

BOOK REVIEWS.

THREE DELIGHTFUL holiday trifles from Lee & Shepard, that lie on our table are a Christmas and a New Year souvenir, and a calendar for 1890. Each is in the form of a booklet of artistic cards, gilt-edged, and printed in delicate colorings and quaint type, tied with ribbon, and arranged with silver rings and chain for suspending wherever they may appear most charming. The price of these pretty gifts is 75 cents each, put up in separate boxes. But the very sweetest and most bewitching of all the dainty devices of the bookmakers, to our mind, is Our Baby's Book. In style of get-up, it is quite similar to the preceding, but the cards are much larger, about 10 by 11 inches, and the type is all illuminated. There is a page for Baby's birth, with an appropriate verse; another for its weight, at different periods from birth till two years old; one for name, lock of hair and first tooth; one for christening, with the names of sponsors; one also for Baby's first picture, etc., so that the twelve pages form a complete and tangible record of Baby's little life, even of "Baby's Own Wise Sayings and Doings!" What adoring mother or family circle could ask for more? Lee & Shepard, Boston.

A NEW NOVEL by Lucia True Ames purports to be the "Memoirs of a Millionaire." In spite of its doleful title and tragical ending, the book is pleasant and very interesting reading. It contains much needed information as to the condition of the children of toil, and is full of new schemes for improving that condition. One of these consists in establishing libraries and reading rooms in the frontier townships that are starving for such privileges, as an aid in shaping the future of young towns and of the children of the pioneers. The book will bear careful reading by the thoughtful and will induce thought in those who are careless. The author takes the ground that the young man who has been born with the heritage of American citizenship, and who does not spend himself in trying to pass its privileges on to those less favored, is more to blame than the anarchist. Five by seven inches; price $1.25; Houghton, Mifflin & Co., New York and Boston.

"A RAMBLER'S LEASE," is a very pleasantly written story by Bradford Torrey, giving an account of a naturalist's rambles in the woods and fields of New England. The author has found so much pleasure in other men's woods and fields that he has come to look upon himself as in some sort the owner of them. His private opinion is that the world belongs to those who enjoy it, and he thinks that some of his more prosperous neighbors would do well, in legal phrase, to perfect their titles. In this book he has tried to be of service to them in this direction. He has succeeded in making that rare combination, an entertaining narrative, joined with much instruction. A great deal of natural history is woven into this tale of the woods and fields, which cannot fail to receive a warm welcome. Cloth, five by seven inches, 222 pages; $1.25. Houghton, Mifflin & Co., Boston.

SUN AND SHADE. This is the unique title of a monthly magazine published by the Photo-Gravure Company 3d Ave. and 10th. Street, Brooklyn, N. Y. The magazine is well named. Each number is a collection of remarkably beautiful photo-engravings printed from the finest photographs that can be obtained. The engraving, the press-work and the mounting are all perfect. This is doubtless the most artistic periodical published in this country. The price is $4.00 per year or 40 cents for each number.

Miscellaneous Advertising

BEAUTY of Skin & Scalp RESTORED by the CUTICURA Remedies.

NOTHING IS KNOWN TO SCIENCE AT ALL COMparable to the CUTICURA REMEDIES in their marvelous properties of cleansing, purifying and beautifying the skin, and in curing torturing, disfiguring, itching, scaly and pimply diseases of the skin, scalp and blood, with loss of hair.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c; RESOLVENT, $1; SOAP, 25c. Prepared by the POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

Dull Aches, Pains and Weaknesses instantly relieved by the CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster. 25c.

MASON & HAMLIN

The Cabinet Organ was introduced in its present form by Mason & Hamlin in 1861. Other makers followed in the manufacture of these instruments, but the Mason & Hamlin Organs have always maintained their supremacy as the best in the world.

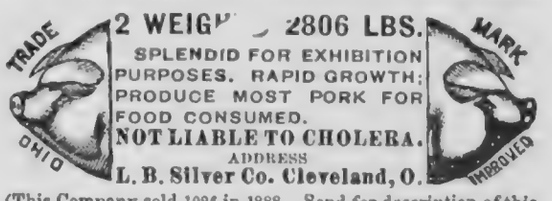
Mason & Hamlin offer, as demonstration of the unequalled excellence of their organs, the fact that at all of the great World's Exhibitions, since and including that of Paris, 1867, in competition with best makers, of all countries, they have invariably taken the highest honors. Illustrated ORGANS $22 to $900 catalogues free.

Mason & Hamlin do not hesitate to make the extraordinary claim for their Pianos, that they are superior to all others. They recognize the high excellence achieved by other leading makers in the art of piano building, but still claim superiority. This they attribute solely to the remarkable improvement introduced by them in the year 1882, and now known as the "MASON & HAMLIN PIANO STRINGER," by the use of which greatest possible purity and refinement of tone, together with greatly increased capacity PIANOS GRAND & UPRIGHT, for standing in tune and other important advantages.

A circular, containing testimonials from three hundred purchasers, musicians, and tuners, sent, together with descriptive catalogue, to any applicant.

Pianos and Organs sold for cash or easy payments; also rented.

MASON & HAMLIN ORGAN AND PIANO CO.
BOSTON. NEW YORK. CHICAGO.



2 WEIGH 2806 LBS.
SPLENDID FOR EXHIBITION PURPOSES. RAPID GROWTH; PRODUCE MOST PORK FOR FOOD CONSUMED.
NOT LIABLE TO CHOLERA.
ADDRESS
L. B. Silver Co. Cleveland, O.

(This Company sold 1026 in 1888. Send for description of this famous breed and mention this paper.)

Splendid Location. Good Salesmen. Daily Returns.
WARREN, HARPER & BRO.,
FRUIT AND PRODUCE COMMISSION MERCHANTS,
110 Dock St., Philadelphia, Pa.
Reference: Sixth National Bank and the Trade Generally.
Consignments Solicited.

HOME STUDY. Book-keeping, Business Forms, Penmanship, Arithmetic, Shorthand, etc., thoroughly taught by MAIL. Circulars free
BRYANT & STRATTON'S, 415 Main St., Buffalo, N.Y.

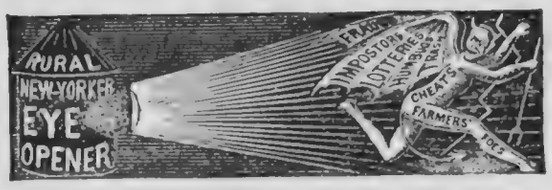
EMPIRE AGRICULTURAL WORKS
LATEST IMPROVED MACHINES in the MARKET.

It pays to get our Illustrated Catalogue and Price on Tread and Sweep Power, Thresher, Separator, Corn Sheller, Feed Cutter with Crusher, Land Roller, Engines, three to ten Horse Power.
S. S. MESSINGER & SON, Tatamy Northampton Co., Pa.

FERINITE A Mahogany Finish. Can be applied by any one. Two coats on common wood produce a beautiful finish—more attractive than natural wood. Durable, economical. Send for circular and sample of Wood finished with Ferinite to SEELEY BROTHERS, 32 Burling Slip, New York; 117 High Street, Boston.

The OHIO STATE JOURNAL

Daily circulation, 11,000; Weekly, 25,000, thoroughly covers the fifty central and southeastern counties of Ohio—the richest district in the Union. Eastern Office, 11 Tribune Building, New York. F. E. DUFFY, Manager Foreign Advertising Department. Send for Specimen Copies.
OHIO STATE JOURNAL CO., Columbus, O.



BOGUS BUTTER BUYERS

A BRACE OF CLEVER ROGUES.

The following correspondence will practically explain itself:

DEAR RURAL:

I HEREWITH send you two letters which I suspect point to a subject for your "Eye-Opener." Letter No. 1 was handed to me by a neighbor and I answered that I would like to supply the firm with butter, but could not send any till I became satisfied that it was "all right." This brought letter No. 2 written by Webb (?), and I began to think I might get a paying thing; but wishing to be sure of my ground I went and examined Dun's Mercantile Reporter, and not finding the firm name of Webb & Warren in the Philadelphia lists, I began to think that some one was trying to get 300 pounds of my good butter for nothing. Now if you think it in the line of duty or charity to investigate this case I, for one, would be very glad to learn the result of your investigations. J. W. W.

Belmont, N. Y.

NO. I.

We would like to make arrangements with some one in your section to supply us with 300 pounds of sweet, dairy butter per month, put up in six packages for our own use and a few friends. We have been getting our butter from York State for years and the party who supplied us is now living in New York City; and we will have to look for some one else to deal with. The butter must be strictly pure and there must be no coloring in it, and it must be shipped by express. We distribute it, and send you the amount of the bill on the 1st or 15th of each month. Please favor us with an early reply, and if you don't handle butter, pass this to some good party for reply. WEBB & WARREN.

150 Vine Street, Philadelphia.

NO. II.

"Your favor of the 30th of September is duly noted. For the last 11 years Mr. James E. Wood of St. Lawrence County, now living in New York City, has supplied us with butter of his own make and it was done in a perfectly satisfactory manner. After he had moved to the city we had to look up some one else. We have had several replies to eight or 10 letters we put out. Some say they can buy for us; others are inclined to look upon us with some suspicion. Well we will explain to you why we get our butter from the producer. First, we can get it cheaper, and, secondly, we get a more even grade of the article. We can pay this month 30 cents f. o. b., that is about 31 cents here according to the express rate and when we go to market we have to pay 45 and 50 cents for a good article, and you know that it is impossible to buy an even grade of butter in that way; besides, the cost is much more sometimes, reaching 75 cents in the winter time. We don't mean to create an impression that we are stingy, but business is business and a few dollars saved per month are the interest on a few hundreds and while Mr. Warren and myself are getting along in years we still adhere to the maxim: "Take care of the cents and the dollars will look out for themselves." We would like you to send us 300 pounds at once and we will send you a bank draft on the 15th for your bill. We are out of good butter and have been since the 15th of last month. There are six families and we take a 50-pound package each per month. If you can't supply us with all we need this winter, we should think you could manage to buy some of your neighbors. Now a word about ourselves. We don't know what difficulty you folks have in dealing with people, but presume you have your ins and outs the same as every one does. If we were in to fleece you, don't you think we would bait you for a little more than 300 pounds? Well, we have been handling mortgages, stocks and real estate for 30 years and can refer you to any mercantile agency or any house in the city. If you will ship us the butter on receipt of this, we will be likely to deal with you some time. Please either ship at once or let us know, as we have another farmer situated about as you are who seems to want our trade. If you can put the butter down lower than 30 cents we expect you to do so. This is rather a long-winded epistle, but we want you to understand the matter fully. WEBB & WARREN.

The first letter is a poorly printed typewriter circular, evidently printed by an ordinary press. The name and address are in clearer type, evidently put in later. The matter was placed in the hands of a very trustworthy correspondent in Philadelphia who reports as follows:

"We have your inquiry of the 19th, in regard to Webb & Warren, 150 Vine St. We sent a man down to this address and he found it was a cigar store, kept by some one of a different name from that given. He went in and found two men and a woman throwing dice; he asked if they knew of the firm and after a significant look at each other, they said they did not, but they thought the concern had moved away from there about a week ago and had gone to Baltimore. This is all the information he was able to obtain. They are not given in the directory or the mercantile report, and we think it is safe to say that they are a 'snide' concern of some kind."

This is an old trick. It is always safe enough to bear in mind that a city man who is really anxious to obtain good butter will be willing to pay for it C. O. D. or give references that can be readily hunted up.

CATALOGUES, ETC., RECEIVED.

MORTGAGE INDEBTEDNESS ON THE FARMS AND HOMES OF THE COUNTRY.—This is the heading of a circular sent out by the Western Economic Association of St. Louis, Mo. The substance of the circular is that the times demand an investigation into the state of American mortgages. Accurate statistics showing the actual facts regarding such mortgages would be of great value in determining some of the many problems of political economy which are now being forced upon us. Various strong statements are being made regarding the distribution of wealth in this country as well as the tendency of such wealth towards a small proportion of our population. An accurate statement of debts and mortgages would throw new light on these questions. It appears that the required statistics can only be secured through the agency of the National Census Bureau. As matters now stand there must be a special appropriation and special authority from Congress before the Bureau can undertake the work. The object of the circular is to urge farmers to write to Secretary Noble at Washington and also to the Congressmen from their respective districts urging the necessity of such special appropriation and authority. Granges, farmers' clubs and institutes are strongly urged to pass strong resolutions in favor of the project and forward them to their representatives. This is a matter of considerable importance, and we hope our readers will help the cause along.

AMERICAN POMOLOGICAL SOCIETY.—The proceedings of the 22d session of this society are sent by the Secretary, A. A. Crozier, Ames, Iowa. As our readers know, this session was held at Ocala, Florida. The R. N.-Y. gave a full report of the proceedings. The publications of the American Pomological Society are accepted as the highest authority on pomological matters. It is enough to say that this volume fully sustains the high reputation for solid value won by previous ones.

PEACH ROT AND PEACH BLIGHT.—We are informed in an "editorial bulletin" from the Department of Agriculture that Dr. Erwin Smith has treated this subject in the September issue of the Journal of Mycology. The disease is due to a parasitic fungus.

"Dr. Smith finds that this fungus causes a very characteristic blight of the twigs and branches. In rainy seasons this is quite apt to occur, especially if the rotting fruits are allowed to remain upon the tree. He also finds that the fungus lives over-winter in decayed fruits, and in this way is re-produced year after year. In the spring these dry, wrinkled fruits, which have been left upon the earth or still cling to the branches, swell and soften under the influence of repeated rains, and produce a new crop of spores exactly like those of the previous season. The practical importance of this discovery is very great. Could the blighted twigs and rotted fruits of one season be entirely destroyed the fungus would disappear and the rot with it. The more nearly complete this removal of infectious material can be made the safer will be the succeeding crop. During the growing season the fungus produces innumerable spores and spreads its infection very quickly. For this reason, all rotting peaches should be removed from the trees and buried or burned, as soon as discovered. This can be done during the picking season without much additional expense; but it may frequently be necessary to do it before the fruit is ripe, if the grower would save any portion of it in a marketable condition. Finally, not a single rotted fruit should be allowed to winter over. All must be destroyed. If fruit-growers would unite and follow this method systematically for a series of years, the losses from peach rot would be reduced to inconsiderable proportions. These remarks apply also to the rot of plums and cherries, which is caused by the same fungus, known technically as Monilia fructigena."

ADVANCE SHEETS of the Bureau of Statistics for the month of September give a very favorable showing for the exports of agricultural products, as compared with the same month of 1888. The following table shows the total exports in four of the leading branches of trade:

	September.	
	1889.	1888.
Animals.....	$2,850,248.	$1,087,050.
Breadstuffs.....	9,874,788.	12,758,169.
Cotton.....	17,907,778.	8,999,288.
Provisions.....	8,709,549.	6,718,522.
Totals....	39,342,363,	29,563,029.

The figures show that the total exports for 1889 exceed those of 1888 by about one-third. The increase in cattle is about 175 per cent., in provisions nearly 30 per cent., while cotton has about doubled. The heavy increase in the latter is attributed partially at least to the corner in Liverpool. The only item showing a decrease is breadstuffs, which declined more than 20 per cent. The shrinkage was in the amount of wheat, the amount of corn having largely increased. The shrinkage in wheat exports is largely due to the unsettled condition of the markets, and the constant fluctuations in prices caused by the operations of the grain gamblers. The farmers of this country can raise enough to feed the world, if the markets can be arranged to handle the products.

Miscellaneous Advertising.

DR. SETH ARNOLD'S COUGH KILLER CURES COUGHS AND COLDS PREVENTS CONSUMPTION

Wm. E. Anderson, Bolivar, W. Va., writes: My little girl was very sick with cough and bowel difficulty; was told by two physicians

SHE COULD NOT LIVE.

Was advised by neighbors to try Seth Arnold's Cough Killer. I did so and it cured her. 25c. 50c. and $1 per bottle. SOLD BY ALL DEALERS.

Animal Meal for Poultry Food.

Cheapest and Best Animal Feed on the market. Good substitute for beef scraps (*which are high and scarce*) Send for Circulars for more particulars. I will send you a Poultry Book of 31 pages free.

C. A. BARTLETT, Worcester, Mass.

LOW-DOWN WAGON on high wheels—only Practical, Common Sense Farm Wagon in the world. Send for 28 reasons why.
GARDINER IRON WAGON CO.,
Mullica Hill, N. J

THE PURINTON STEAM GENERATOR!
IS THE BEST ARTICLE ON EARTH
For cooking any kind of food for stock. Cooks boils or steams anything with economy and dispatch.

Made of boiler-plate steel!
Safe, durable and substantial!
Nothing to get out of order!
Freezing does not damage it!
Easy to manage as a stove!
We sell more than all others comb'n'd
Has always given satisfaction!
It will suit you.
Investigate and you will buy no other
We also make Tank Heaters and 2 4-6 Horse Boilers and Engines
J. K. PURINTON & CO.,
DesMoines. - - - - IOWA

Trees, Seeds and Plants.

1838. POMONA NURSERIES. 1889
DER TRADE 1 MARK FUL
WONDERFUL PEACH
Lawson, Kieffer, Le Conte Pears: Spaulding and Japan Plums Apples, Cherries, Quinces, and Nut-bearing trees. Strawberries, Raspberries, Blackberries and Grapes in large supply—all worthy old & promising new varieties. Catalogue free. Wm. Parry, Parry, N.J.

LANDRETH'S LAWN GRASS SEED
Is a mixture of the finest varieties of perennial grass seeds, producing a most beautiful and permanent sod in a short time. The lawns and grass plots in and around Philadelphia afford ample evidence of the superior quality of the *Landreth's Lawn Grass Seed.*
All Varieties of Grass and Clover Seeds carefully selected, thoroughly re-cleaned, and freed from all imperfections.

LANDRETH'S LAWN FERTILIZER.
A most excellent top-dressing for lawns and grass-plots, producing a rich and vigorous growth. Sold in packages from five pounds to the ton.
D. LANDRETH & SONS,
21 & 23 South Sixth Street Branch Store, Delaware Avenue and Arch Street, Philadelphia, Pa

THE IDAHO PEAR.
What Others Say About It:
Compared with Keiffer it is far superior in quality. AMERICAN GARDEN.
Quality best. PATRICK BARRY.
It is not so sweet as the Bartlett, but higher flavored—more vinous. THE RURAL NEW-YORKER
Trees now for the first time offered for sale:
Single Tree by mail, post paid, $2.50; Three for $6.00.
Send for illustrated prospectus containing a finer list of testimonials than any new fruit that has ever been introduced.
THE IDAHO PEAR Co.,
LEWISTON, IDAHO

TREES Root Grafts—*Everything!* No larger stock in U. S. No better. No cheaper. PIKE CO. NURSERIES, Louisiana, Mo.

DUTCH BULBS FOR FALL PLANTING
We import, from the best sources in Holland, a large assortment of Bulbs of finest quality which we offer at reasonable prices. Catalogues and price-lists free to all applicants.
D. LANDRETH & SON,
21 & 23 South Sixth St., Philadelphia, Pa.

PETERSON'S MAGAZINE FOR 1890
BEST AND CHEAPEST
THE BEST STORIES—Our stories and novelets are from some of the most popular authors, and are admitted to be the best published. 8 novelets and nearly 100 short stories will be given during the year.
THE BEST HOUSEHOLD DEPARTMENT—embracing articles on health, nursing the sick, home dressmaking, the garden, kitchen, and other subjects invaluable in every household.
THE BEST FASHION DEPARTMENT—giving the latest styles of dress, fully described, illustrated by **Handsome Colored Fashion-Plates** and numerous wood-engravings.
THE BEST FANCY-WORK PATTERNS—many of them printed in colors—embracing the newest and most popular designs produced at home and abroad.
TERMS: $2.00 PER YEAR, IN ADVANCE.

2 Copies,	$3.50	With a handsome premium, to the getter-up of the club.
3 Copies,	4.50	
4 Copies,	$6.40	With an extra copy of the magazine for one year, to the getter-up of the club.
6 Copies,	9.00	
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THE HIGHEST GRADE MADE AND THE CHEAPEST TO THE FARMER.

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PROF. GEORGE H. COOK, of the New Jersey Experiment Station, reports, in a late bulletin, upon what the R. N.-Y. has so persistently endeavored to impress upon its readers.

As a rule, he says, the fertilizer which contains the greatest amounts of nitrogen, phosphoric acid and potash is the cheapest; for the cost of manufacture, freightage and rate of commission are the same for high-grade as for low-grade fertilizers, and *the labor on the part of the farmer is increased as the grade of the goods decreases.*

The R. N.-Y. confidently anticipates the time when there will be no demand whatever for low-grade fertilizers.—*Rural New-Yorker, Aug. 24th* 1889.

Farms Growing Steadily Richer, and Profits Increasing from the Long-Continued Use of the Mapes Manures.
NO EXHAUSTION IN ANY CASE.

"Jersey Farms That Pay."

THE RURAL NEW-YORKER, June 22d, 1889, states: "And while on this subject the R. N.-Y. is led to refer to a farming community it has just visited. This community is in New Jersey, within 50 miles of New York. The cheap lands of the West will so flood Eastern markets with staple products that New Jersey farmers will have to become gardeners or truckers! Farming cannot be done without the use of stable manure as a basis; chemical fertilizers will "burn up" the soil! At certain seasons of the year we hear these statements repeated over and over again. How ridiculous they appear after a visit to the community we speak of. Here we have a class of farmers growing rich at producing hay, potatoes, corn and wheat. Yes, actually growing rich at producing Western products within 50 miles of New York. And it is done practically *without stable manure; a farm having less than 10 head of cattle sells from* $1,000 to $1,200 *worth of hay and absolutely grows stronger and more productive each year.* Under such a system of agriculture the boys stay at home, farm life is robbed of its worst features and becomes a very ideal life of comfort and happiness. We saw this life realized—saw the crops, the tools, the men. We were so interested in it that we propose to tell R. N.-Y. readers just what we saw. We hope our report will lead to some hard thinking. It will be nothing but a report as honestly written as possible."

The reports on these farms may be found in the RURAL NEW-YORKER, on pages 441 and 442, July 6th, and on pages 459 and 460, July 13th, 1889, under heading "New Jersey Farms that Pay." On these farms (D. C. Lewis and others) the Mapes Manures have been used almost exclusively from ten to fifteen years successively, and the crops *average fully* double those grown in former years under the systems then practiced. Poor lands are now purchased at current low rates with confidence by farmers who know from experience that they can bring up these lands into good, profitable grass-growing condition, and make money from the start.

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"Mr. Mapes has studied industriously and has worked conscientiously to help the farmers. I believe he has tried as hard to serve the farmers' true interests as any one in this room. He knows how to make good fertilizers adapted to their needs, and he is making as good ones as he knows how to make. *They are* RELIABLE *and* MAY BE DEPENDED UPON. *You may be sure of getting* WHAT YOU BUY—*getting what is guaranteed. I am glad to stand here and authoritatively make these statements.*"—PROF. GEORGE H. COOK, DIRECTOR OF THE NEW JERSEY STATE AGRICULTURAL STATION, at a meeting of the State Board of Agriculture, at Trenton, N. J.

"The Mapes Fertilizers, though higher in price than some others, are scientifically, carefully and honestly made. In the use of them we are always pretty sure of good results. We use them every year and have not been disappointed in their action (May, 1888). They seem to go *right to the spot* and *stay there better* than any other sort we have used. We get *most excellent results* in both corn and potatoes."—(Nov. 1888.)—*Wilmer Atkinson, Farm Journal*

"Under average conditions, and in far the greater number of cases, we do not hesitate to name the Mapes Potato Manure as the **Best** and **Most Profitable** fertilizer for Potatoes."—*American Agriculturist.*

"The Mapes Potato Manure is certainly as good a fertilizer for the crops as we can expect to find."—*J. T. Lovett, Orchard and Garden.*

"Its action **approaches certainty**, or as near it as any manure can be expected to do."—*E. S. Carman, Rural New-Yorker*

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Humorous.

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TED was invited out to tea with his mother one day, and among other dainties a saucer of orange gelatine was set before him. It was a new dish to the little fellow and he eyed it disparagingly a minute, then said, very politely: "If you please, ma'am, thank you. I rather guess you can have it back—it keeps wagging so."—*Cincinnati Gazette.*

NOT many days ago a gentleman had taken affectionate leave of his wife and daughter, for a three months' trip abroad. The child, a lovely little girl of two and a-half years, stood by a chair with her thumb in her mouth—a favorite pastime, and, to her, a panacea for all her childish ills. She watched her mother for a few moments, saw the tears filling the lovely eyes and dropping one by one from her cheeks, then went to her side, and with a comforting tone, looking pityingly up to her face, said "Mamma, suck 'oo fum!"—*Texas Siftings.*

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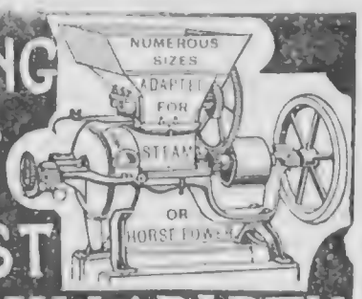

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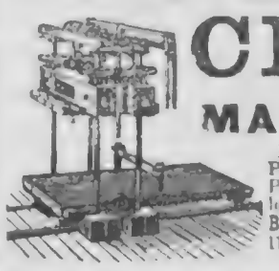

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII. NO. 2077. NEW YORK, NOVEMBER 16, 1889. PRICE, FIVE CENTS. $2.00 PER YEAR.

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Horseman.

FANNY FERN.

HATTIE B. COLBY.

HAVING from a child loved horses, I have been much interested in the portraits of the horses in the R. N.-Y. since it has been received regularly in our home for several years. I have through circumstances taken an interest in the farm, and since the feebleness of age made it necessary for father to give the care of it, in part, to me I have tried to understand the business, and to make it successful and to become a good farmer.

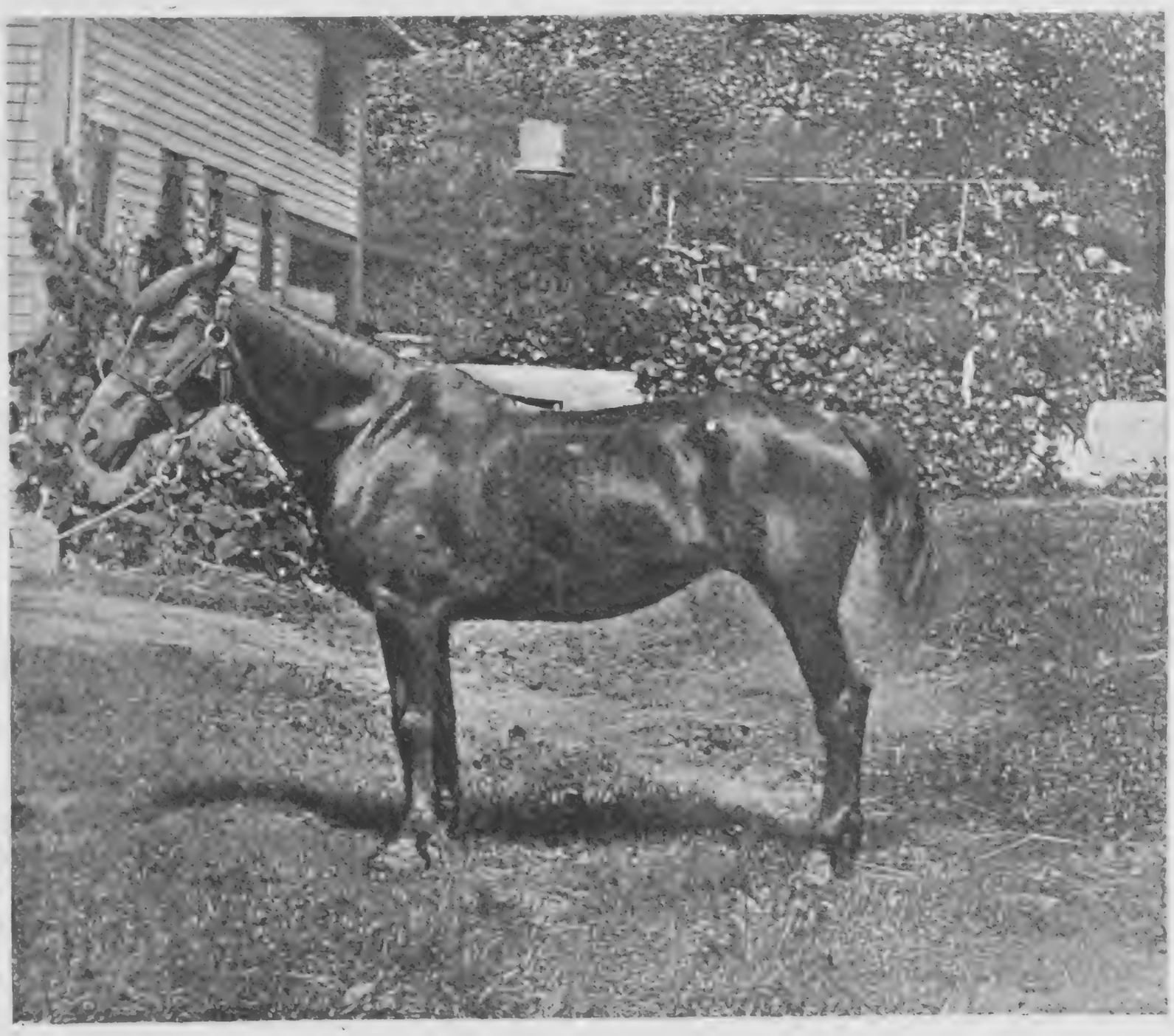
The very handsomest farm animal to my mind, is the horse, and as I see the horses as they pass by at the fairs I quietly observe them, and like to read of them, and it has struck me as a wrong move when, in rocky, hilly New Hampshire the heavy draft horses, and the delicate trotters were introduced. Either class as a true farm animal is entirely out of place here. The type of horses which is fast running out was by far superior for this place. At Fig. 274 a fine specimen of the race—the old Morgan blood—is shown in "Fanny Fern." She was foaled in June, 1854. The picture was taken in July, 1889. She was raised by Johnson Colby in Sutton, N. H. Her sire was Flying Morgan and his sire was the celebrated old horse Justin Morgan. Her dam was Kate of Crown Point, sired by old Engineer. Her dam was Black Bess, a French-Canadian mare. Engineer was a race-horse of considerable note in his day for long distances upon the ice of Lake Champlain. He was owned at Ticonderoga, N. Y., and my uncle said, the white horse was ahead fully his share while Bess trotted nearly as fast as he would run. So the combination of speed and endurance was hers upon her dam's side, while the beauty and goodness of the Morgan family are well known.

Fanny Fern is of a rich chestnut color with a small white star in the face, showing no black, but shades of chestnut, with heavy mane and tail in her young days; then her weight was 1,000 pounds; at present she is somewhat lighter. She raised two colts, one sired by a Morgan horse (name forgotten).

This colt was a chestnut, and a large, powerful horse. Her second colt was by Lightfoot, which was sired by old Vermont Black Hawk. This colt, Kate, we now own and she is a prompt, nice horse at 22 years old, more slender in build than her dam, a trifle over 900 pounds in weight and a dark chestnut with black points. She never showed the dam's speed and endurance, although a good horse. Horses that can take medium loads promptly over hilly roads and around sharp turns, and a buggy 10 miles an hour are far better than those that can make a mile in fast time, or than large horses that cannot be safely trotted over the rough roads; if they do draw heavier loads, they go slower. I wish the Morgan horses were improved and treasured, and the blood kept, instead of the other bloods being introduced. The Wilkses, Almonts, and Lyonses are too frail and slender for farm work, and the grade draft breeds are too heavy amid our rocky fields, and very unsatisfactory upon the road. Fanny Fern is at present at Newport, N. H. She is now very hearty and vigorous, and still able to take her owner on our country roads at a 10-mile-an-hour gait without urging. She will not yet bear the whip. For endurance, for cheerfulness in the harness as a driver, and for kindness to proper handling and ease to keep, she is a grand specimen of the famous Morgan family. She was never tried upon the track. A few of her drives were 25 miles in two hours and 20 minutes from pasture, and without grain, with a common buggy and two persons, and she was not at all tired or lifeless. I could have come right home after it, but rested her for four hours, and then came home nearly as quickly, although up grade.

She has traveled 80 miles in 14 hours, and done her next day's drive as well as usual. In the snow with a good track and three inches of light snow with a sleigh and two persons (over 200 pounds each) she has gone 12 miles in 55 minutes, and in one drive she made five miles in 20 minutes. This will show what a good farm horse can do, and she would do the farm work in the same style. With 500 pounds of grain in the farm wagon she refused to walk but went at her usual gait. She is very knowing and would resent an insult like being struck, just as most men would. We never strike her, but strangers often get struck back again. With abuse she would have been ugly—it was all there. Much of my love for horses is owing to dear old Fan. It was hard to tell which was the happier, when in our girlhood sister Jennie and I would take Fan and fly away over the stretches of hill and valley of my beautiful home land. We often took trips of 12 or 15 miles for our after-tea ride, with the dear mother saying: "Be back before dark, girls;" while some said: "Those Colby girls will get killed yet with that ugly horse." But old Fan always minded the rein if drawn, and a gentle call would stop her. The comparison of a French draft or Norman grade with the Morgans is not very flattering for a true farm horse. The latter is the true every-purpose horse of the New England farms. We must combine strength, endurance, speed and beauty to fill this place, and also look to the expense of the animal's keep. Two good grade Morgans can be readily kept upon the feed for one large, heavy horse according to the experience of several who have tried it.

Merrimack County, N. H.



MORGAN MARE FANNY FERN. From a Photograph. Fig. 274.

The Vineyard.

THE COLORADO GRAPE.

Editors R. N.-Y.:

I HAVE to-day shipped to you by express a sample of my seedling grape "Colorado." I would like your opinion of it. The vine is six years old from the seed. It is about two weeks later than the Brighton in ripening. As to hardiness, I left a part of the vine on the trellis unprotected and I know it will stand zero without protection. Zero weather was the coldest we had last winter. I have a grape arbor 300 feet long by 10 feet high planted to choice grapes. On one side I had a Brighton and on the other a Chasselas. These two vines interlocked their branches on top of the arbor and while they were in bloom the bees were very busy. Both vines set very fine clusters of fruit and I thought it would be a good chance to get a good seedling. I saved these clusters until they were dead-ripe, washed out each variety by itself and sowed them at once separately in boxes in my hot-house and raised about 2,000 seedlings. I saved some 600 which appeared to give most promise. They have almost all fruited this year and this is the only one I think worthy of propagation. This vine last year bore about five pounds of fruit; this year it has borne 40 pounds. I only propagated 11 vines from it last year; this year it has made but very little wood owing to its bearing so heavily.

J. G.

Canon City, Col.

R. N.-Y.—The grapes were received October 21. The bunches are of medium size, rather long, averaging five inches, not shouldered. Berries crowded, larger than Delaware, not quite so large as Catawba; color of Catawba. The quality is sweet, there is not a trace of acidity; pulp perfectly tender and melting, or dissolving, the seeds, which are rather large, separating at once. Skin *thin* yet very firm. Should this variety be found hardy and vigorous it will prove a decided acquisition wherever it will succeed. A portrait would have accompanied this note had the bunches not been injured in transit. Grapes for distant shipment should be firmly and closely packed.

Farm Economy.

MAKING A FERTILIZER

OUT OF

Tankage, Ashes and Hen Manure

SUITABLE FOR POTATOES.

A SUBSCRIBER in Eastern Kansas sends the R. N.-Y. the following note:

"What would be a proper mixture, by weight, of ground cattle tankage—principally bone—elm-wood ashes and chicken droppings for a complete potato fertilizer, to be used on black sand river bottom loam—a soil that will produce 150 bushels of potatoes per acre without fertilizer? How much should be used per acre and how should it be applied (the crop will be irrigated if necessary) to produce the largest yield? The supply of material is abundant."

This note has been referred to the directors of the agricultural experiment stations in the States in which fertilizers are most generally used. The replies follow:

FROM G. H. WHITCHER.

I must say that the problem the solution of which is sought by the R. N.-Y.'s Kansas inquirer, is a very difficult one; for the materials (except ashes) are so highly nitrogenous that it is practically impossible to mix a well proportioned fertilizer for potatoes from them. I do not know the history or character of the correspondent's soil, but I have no doubt it is very well stocked with nitrogen and I feel very sure that a fertilizer with no nitrogen, or with but one or two per cent. at most would be best on it for potatoes.

The following analyses represent the average compositions of hen manure, "tankage" and ashes.

	HEN MANURE Fresh	TANKAGE	ASHES
Water	45.73	*14.61	*12.00
Potash	.18		5.5
Phosphoric acid	.47	10.67	1.85
Nitrogen	.79	7.08	

*Mass. Ex. St. Rt. 1888

The potato crop is one that uses up potash and phosphoric acid in greater proportion then it does nitrogen; the following table compares corn, wheat and potatoes, showing the actual number of pounds of nitrogen, phosphoric acid and potash taken up from the soil, per acre, for the various crops.

	Nitrogen.	Phosphoric acid.	Potash.	Ratio of Nitrogen to Potash and Phosphoric acid.	Ratio of Phosphoric acid to Potash.
	Per Acre.				
Corn.					
Sound ears 97 bu } Soft ears 15.... } Fodder 5,352 lbs. }	76.74 lbs.	35.6 lbs.	82.6 lbs.	1: 1.5	1. 2.3
Wheat.					
Grain 15 bushels } Straw one ton. }	25.6	12.2	14 9	1: 1.	1: 1 2
Potatoes 200 bu.	38.4	21.6	67 2	1: 2.3	1: 3 1

This table shows that the ratio of nitrogen to the two minerals in potatoes is small, and it also shows that the ratio of potash to phosphoric acid is larger; that is, while wheat uses nearly as much nitrogen as it does of both phosphoric acid and potash, potatoes use 2.3 times as many pounds of the latter as they do of the former; and not only is this the case, but in the ash of wheat there is only a little more potash than phosphoric acid (1.2: 1); while the ash of the potato shows over three times as much potash as of phosphoric acid; or, to put the table in another form: for every pound of phosphoric acid used by wheat, 1.2 pound of potash and 2.1 pounds of nitrogen are required; while potatoes under like conditions use up 1.7 pound of phosphoric acid, .9 pound of nitrogen and 5.3 pounds of potash. This tabulates as follows:

	Phosphoric acid.	Potash.	Nitrogen.
Wheat requires food in the following ratio.....	1	1.2	2.1
Potatoes.....	1.7	5.3	.9

I have entered somewhat into these details because I wish to make it clear that potatoes do not require nitrogen to anywhere near the same extent that wheat does; but their demand for potash is far greater. The results of experiments in New Hampshire have led me to fix upon two combinations of crude fertilizing chemicals for potatoes. One of these has *no nitrogen* and is designed to be used when potatoes follow some crop which has been manured with nitrogenous animal manures; the other has a small amount of nitrogen and would meet most cases.

Combination IX. (New Hampshire Experiment Station bulletin 6. p. 31) is as follows:

			ANALYSIS OF MIXTURE.
Dissolved Bone-black..	340 lbs.	Phos. acid	11 per cent.
Muriate of Potash....	160 "	Potash	16 "
Enough for one acre..	500 "	Nitrogen	——

Combination X (same bulletin).

			ANALYSIS OF MIXTURE.
Dissolved Bone black..	300 lbs.	Phos.acid	9 6 per cent
Muriate of Potash....	150 "	Potash	15.0 "
Sulphate of Ammonia.	50 "	Nitrogen	2.0 "
Enough for one acre..	500 "		

These I believe to be well proportioned potato fertilizers.

Now to return to the problem at hand, how can the hen manure, tankage and ashes be mixed? First of all, let me say that the ashes must not be mixed with the other materials; for whatever soluble or reverted phosphoric acid there may be in the tankage or manure will be rendered *insoluble* by the action of ashes, if the mixture ferments, and there will also be a loss of nitrogen in the form of ammonia; hence unless the mixture is *used immediately*, one should never mix ashes with organic matter containing phosphoric acid or nitrogen. A mixture of tankage and fresh hen manure in equal parts would contain somewhere near 5.6 per cent of phosphoric acid, four per cent. of nitrogen and less than one-tenth per cent. of potash. The potash evidently must come from the ashes, and to get 67 pounds will require 1,200 pounds, or about 25 bushels. In this amount, there will be 22 pounds of phosphoric acid, which is exactly the amount needed by the crop, so that the ashes alone would prove a very well proportioned fertilizer; but suppose we take 500 pounds of mixed tankage and hen manure in equal parts, and 1,000 pounds of ashes for an acre: this would supply the following:

	Lbs.	Nit'g'n.	Phos. acid.	P'tash.
Hen Manure and Tankage mixed,	500	20	28	1½
Ashes,	1000		18	55
Total supplied,		20	46	55½
Required by crop,		38	21	67

Now the difficulty is at once seen: we get too much phosphoric acid. But perhaps this mixture will come as near as we can get with the materials mentioned. If the R. N.-Y.'s correspondent could buy muriate of potash at a reasonable price, the problem could be solved as follows: 500 pounds of the mixed hen manure and tankage; and 500 pounds of ashes, while 100 pounds of muriate of potash would give 20 pounds of nitrogen, 37 of phosphoric acid and 78 of potash.

N. H. Experiment Station.

FROM DR. PETER COLLIER.

I would say that I don't know, but I would make experiments were the case my own. I certainly would not, however, mix elm-wood or any other ashes with chicken droppings for fear there would be a loss of nitrogen through the chemical action of the fixed alkalies upon the hen manure.

Geneva, N. Y.

FROM W. W. COOKE.

On the supposition that the ashes are unleached and the chicken droppings partially dried, as they would naturally be when swept up from the chicken-house floor, a mixture of 350 pounds of tankage, 300 pounds of ashes, and 200 pounds of hen manure would give a fertilizer equal to 600 pounds of a first-class ammoniated superphosphate with an abundance of potash and be a full amount for an acre.

Vermont Experiment Station.

FROM C. S. PHELPS.

The fertilizing materials at the disposal of this Kansas correspondent are so variable in composition that it is impossible to recommend a mixture having a definite percentage of the three essential ingredients—nitrogen, phosphoric acid and potash. Elm ashes are rich in potash. If well dried and quite free from earth or sand, they will contain not far from 10 per cent. Taking the ashes on this basis, and the general average of tankage and hen manure, the following mixture would be a good one for use on rich bottom lands: Tankage (largely bone) 800 pounds; chicken droppings, 400 pounds; ashes (elm wood), 800 pounds.

This mixture will contain:

Nitrogen.....	2½–3½ per cent.
Phosphoric acid.....	4 –4½ " "
Potash.....	4 –4½ " "

The mixture may be applied at the rate of 1,500 pounds per acre, 1,000 pounds to be harrowed in and the rest applied in the hill or drill. In using a mixture of this kind one precaution is essential. Ashes contain much caustic lime, or calcium oxide, and should never be mixed with compounds containing ammonia—as tankage, blood, hen manure, or sulphate of ammonia—and allowed to remain in a pile for several weeks, or even days, before using. If this be done, organic nitrogen will be rapidly changed to, and given off as, carbonate of ammonia, and of course, lost to the plant.

When mixtures of this kind are desired, they should be prepared not longer than one day before wanted for use.

Storrs School Connecticut Agricultural Experiment Station, Mansfield.

FROM DR. E. H. JENKINS.

It is impossible to give an answer. Tankage consisting chiefly of bones, contains in every 100 pounds, about four pounds of nitrogen and 20 pounds of phosphoric acid. Ashes contain from five to nine pounds of potash and two pounds of phosphoric acid in every 100 pounds, while "hen manure" refers to anything and everything scraped from the hen roost and may be a strong or a very weak manure. But what does the correspondent's soil lack? It may be only water or it may be drainage; if so, any manure may be wasted or worse than wasted on it. It may be that it has an abundance of nitrogen and phosphoric acid in it already; if so, the tankage will be of little use. The only rational plan for him to follow is to test his own land, using the materials named singly on separate rows and in various combinations, supplementing them perhaps with certain chemicals. The details of this plan have been so fully described that I need not go into the matter—see for instance, Bulletin No. 1 of the Storrs Station. If he does this, in a year from now he will have some indications of what his soil needs and what it does not need, that will be a great help to him and his neighbors.

Connecticut Experiment Station, New Haven.

FROM DR. C. A. GOESSMAN.

Ground cattle tankage and hen manure vary so widely in composition that it is hardly possible to decide how much of each should be taken. Wood ashes ought not to be mixed with hen manure; such a mixture would set the ammonia free; for this reason the wood ashes are best applied separately—before or after the hen manure. Taking into consideration an average composition of the various articles mentioned, I should recommend the following proportions per acre: 350 pounds of ground tankage; 350 pounds of hen manure and 600 pounds of good, unleached wood ashes.

Massachusetts Experiment Station.

FROM E. B. VOORHEES.

Soils of the character mentioned usually respond favorably to additions of mineral or ash elements, viz: potash, phosphoric acid, lime, etc. The quality of this particular soil also indicates that reasonably large dressings would be required for the greatest profit.

Where wood-ashes are cheap they should furnish the chief amount of fertilizing material. A mixture of the following proportions applied at the rate of 3,000 pounds per acre, would seem to be advisable: unleached ashes 2,000 pounds; tankage 400 pounds, and hen manure 600 pounds. This quantity of material would furnish, approximately, 125 pounds of potash, 80 pounds of phosphoric acid, 30 pounds of nitrogen and 600 pounds of lime—an applicatian of plant food equivalent to about 1,200 pounds of a high-grade potato manure per acre; an amount which is within the profitable limit in average seasons. The application should be made as follows: 1,500 pounds of the ashes should be broadcasted after plowing and well harrowed into the surface soil. The remainder of the ashes and the other materials should be thoroughly mixed and evenly distributed over the row previous to planting; the covering of the potatoes would insure a complete incorporation of the fertilizing material into the soil near the roots of the plant. The ashes which contain considerable quantities of lime, would probably act quickly upon the nitrogenous materials in the mixture, which should therefore be used soon after mixing to prevent possible loss of ammonia.

New Jersey Experiment Station.

IMPLEMENTS YET NEEDED IN POTATO GROWING.

THE progress we are making in methods of culture calls for constant additions to our already large stock of implements. Just now the progressive potato-grower has reason to complain about the lack of various tools to facilitate some operations in our modern method of growing potatoes. We need, for instance, a single device for pulverizing the soil in the bottom of the trenches. Possibly such an implement might be combined with shovel-plow and seed-coverer. The sketches shown at Fig.

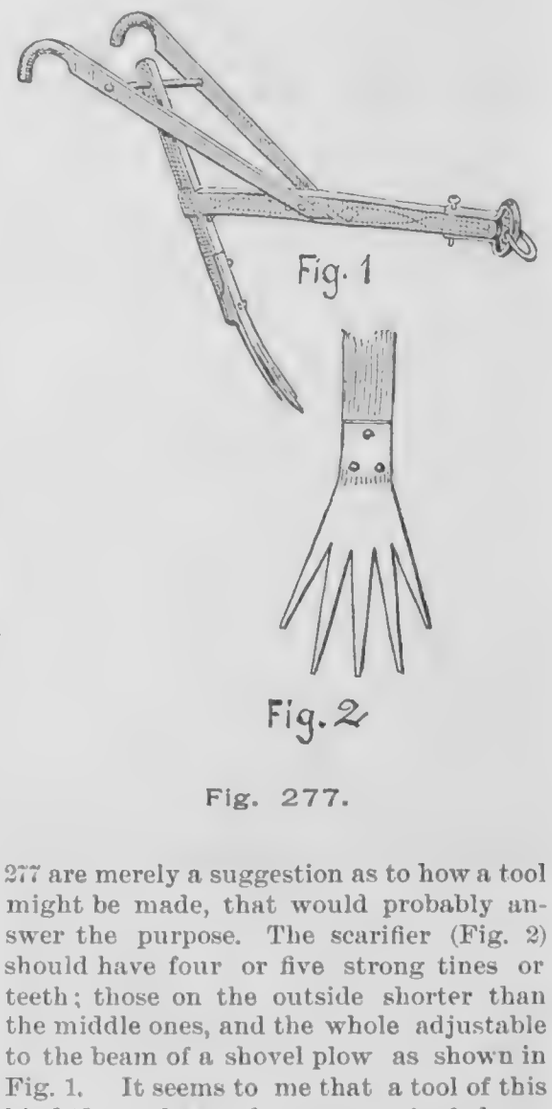


Fig. 277.

277 are merely a suggestion as to how a tool might be made, that would probably answer the purpose. The scarifier (Fig. 2) should have four or five strong tines or teeth; those on the outside shorter than the middle ones, and the whole adjustable to the beam of a shovel plow as shown in Fig. 1. It seems to me that a tool of this kind (drawn by two horses, as a single horse would have to walk in a furrow) could be used to mellow up the soil in the bottom of a trench to a considerable depth, and if some fertilizer be applied below the seed, the tool would mix this up quite thoroughly with the soil at the same time.

Another implement needed is a simple device for scattering the fertilizer evenly, and at any desired rate over the lightly covered seed-pieces in the trenches, and a third implement to the construction of which our manufacturers should give speedy attention, is a more convenient contrivance than any yet offered for the application of poisons on the vines. Devices of this kind are now made, but they are intended for wholesale operations, while we, poor people, (and I belong to the majority) who grow the crop only to the extent of a few acres at most, suffer for the want of a cheap and effective spraying apparatus to be carried on the back (knap-sack-fashion, like the higher-priced Vermorel or Weaver pump) and arranged for spraying Paris-green solutions for the potato bug, tobacco-tea for the flea beetle or kerosene emulsions for other insect foes. These suggestions are offered for the consideration of manufacturers of agricultural implements. I see no reason why they could not accommodate us, and at the same time be doing something for their own benefit. T. G.

Niagara Co., N. Y.

Pomological.

THE LINCOLN—A NEW SEEDLING PEAR.

THE parent of the seedling pear of which I sent specimens to the R. N.-Y. a few days ago, is 54 years old from the seed, and is as vigorous as any tree at any age; it has always been free from blight or any other disease to my knowledge. It is one of the heaviest bearers known to me. It is a fine grower, making one of the most beautiful fruit trees seen anywhere. As it is a seedling it reproduces itself from the roots, and any person acquainted with the tree can always distinguish its offspring by their uniformity of growth and hardiness, and the

sameness of color of the fruits, etc. I have about 80 of the trees growing at present.

Lincoln, Ill. W. E. JONES.

R. N.-Y. The flesh resembles that of the Angouleme. The quality is, so to say, a combination of Bartlett, Angouleme and Anjou. Very juicy, aromatic. The *skin* is like that of the Angouleme; seeds few and small. Received September 14. The pear is represented at Figure 275, with a half-section at Fgure 276. Mr. Jones writes us that he has but recently decided to name it the Lincoln, and as such we now present it for the first time.

Farm Topics.

SOME MORE CROP ROTATIONS.

CONTINUATION OF REPORTS.

FROM M. B. PRINCE.

The usual rotation here with cotton farmers is, first year cotton; second, cotton; third, corn, with slight variations to wheat or oats, for 20 years; then for 20 years more or less to "old field" pine. New land in these later years is planted with tobacco for two years, then it is put under wheat to be followed by corn. On our lands clover makes but a feeble growth without manure, consequently a regular rotation is almost impracticable when we consider the fact that of necessity we must plant more acres of corn than of all other crops combined. A crop of cow-peas plowed under every third year assists wonderfully in sustaining the fertility of the soil; but this is not practiced to much extent. Growing no tobacco and but a few acres of cotton, I follow to a limited extent a three-year rotation, which has proved satisfactory: first, melons with manure in the hills and fertilizer broadcast; second, corn; third, cotton with fertilizer in drill. I use my stable manure on the melons, sweet potatoes, turnips and in the garden. When there is any left it goes on the clover patch. "Why?" Because these are my best paying crops and without the manure, the returns would be very meager. A top-dressing is of but little use here, as the frequent heavy "washing" rains carry off too large a percentage.

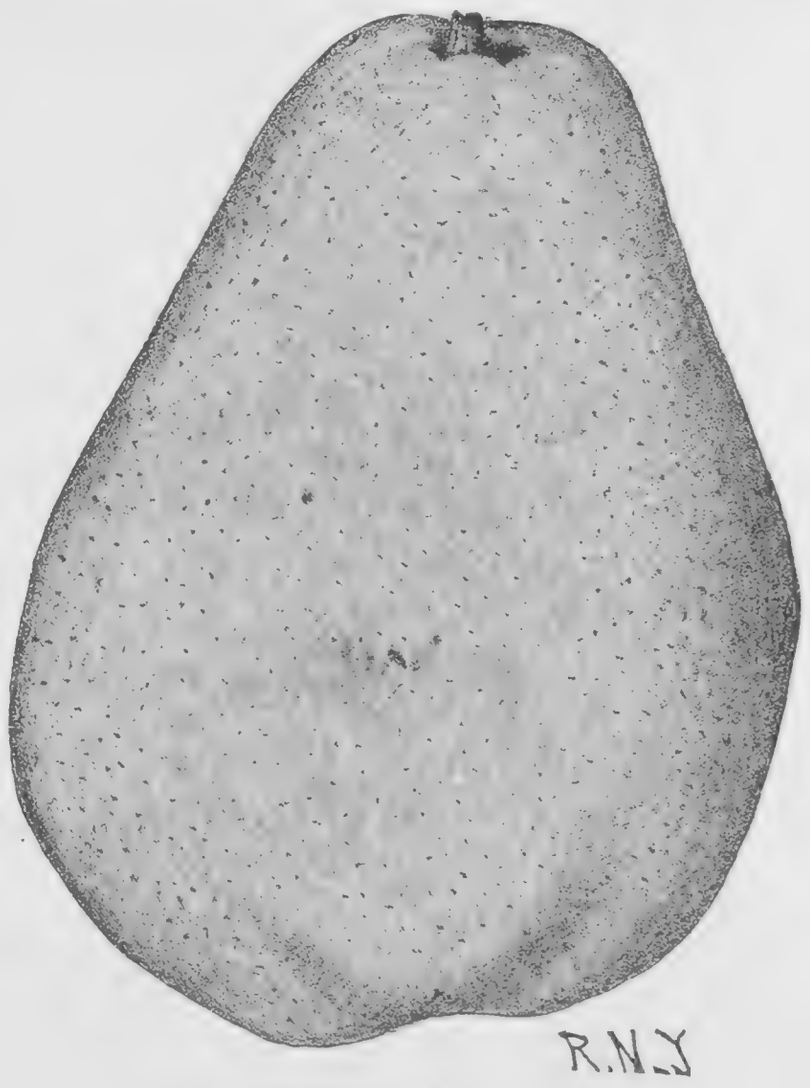
Vance County, N. C.

FROM JAMES DAVIS.

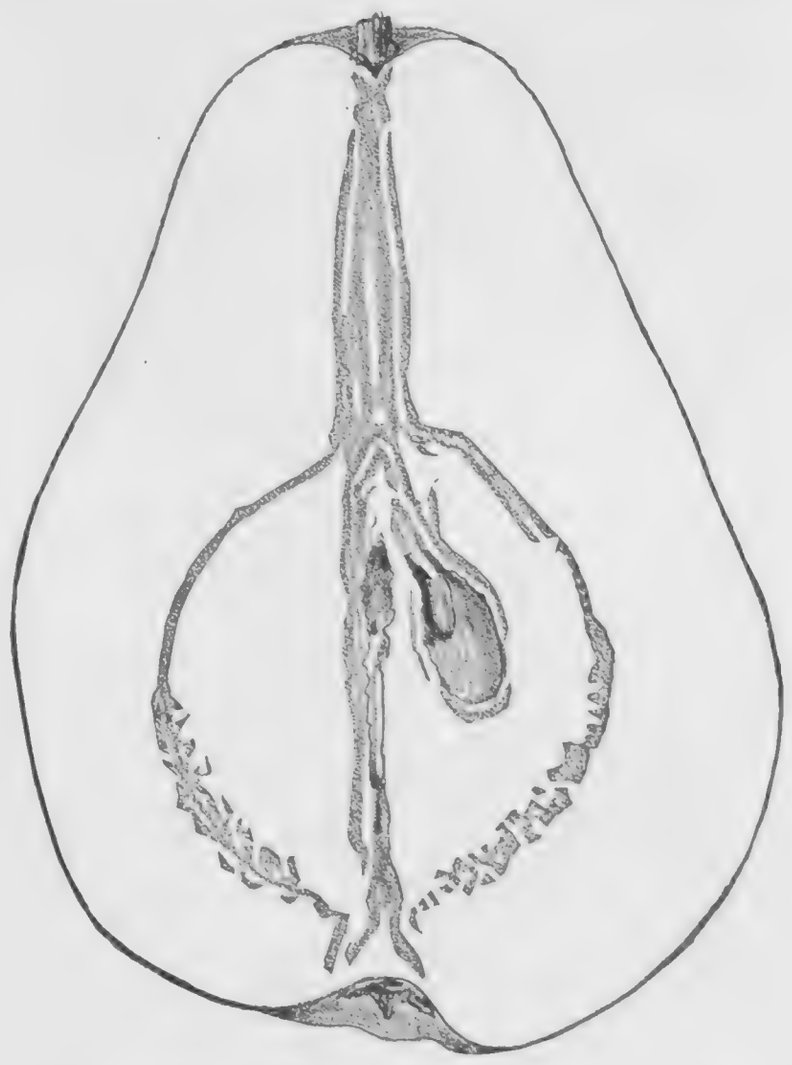
My rotation has been two crops of corn, followed by oats or wheat, seeded down with clover and Timothy, mowed or pastured two years. Till last year I used no commercial fertilizer, and the manure was put on the poorest parts of the field, both for corn and wheat. This fall I bought a ton of fertilizer, Currie's Guano, for the wheat ground. Having to move the manure from the barn-yard, I set my boy, 13 years old, to making a manure heap with the cart while I was helping the neighbors to thrash. First the chip dirt from the wood-house was put in the bottom about a foot deep, then the manure from the barn-yard, then the sheep manure, and then the stable manure. At the last working of my sod-ground corn, July 22, I sowed about half of the field with rye, which is now (October 25,) a mass of green. As soon as the ground freezes, I intend covering it with the composted manure, and what I make through the winter will be hauled and spread as convenient. I hope to have enough to cover the whole field. I shall pasture the rye awhile in the spring, and then plow for corn. I expect hereafter to use all my stable manure for corn.

One of my neighbors, who has been very successful, uses the following rotation: One crop of corn, followed by wheat; seeded down with Timothy and clover, mowed or pastured two seasons. I hope by using the fertilizer on wheat, with the aid of clover, to keep up two crops of corn rotation. The grub-worms have been so destructive on sod-ground corn this season, that I would have to buy corn if mine was all on sod land. Some fields are hardly worth husking. With regard to the effect of stable manure on potatoes, when the manure has been applied in the spring the potatoes have been scabby. Last year I tried sulphur in the hill when planting the potatoes, but so far as I could see it had no effect; all were scabby alike. When the manure has been put on in the fall there was no trouble from scab. Our potatoes in this neighborhood have given a full yield and are of fine quality, with no rot of any account. Early Ohio for early, and Rural Blush for late, give us the largest yields, though White Elephant still does well. For the last three or four years, I have been raking the leaves from part of the wood lot and putting them in the compost heap and sowing with Orchard Grass and Timothy. This season the wood-lot yielded nearly as much pasture as the pasture field. I hope this fall to clear up the remainder of the wood lot, and seed down as heretofore for pasture. We have had fine rains and the pasture is still excellent. I think I never saw wheat look better, though much of it has been sown late; about the usual number of acres have been sown in this neighborhood. I have six acres sown with Diehl-Mediterranean, which looks fine.

Fosters, Ohio.



THE LINCOLN PEAR. FIG. 275.



THE LINCOLN PEAR. HALF SECTION. FIG. 276.

FROM F. R. WENTZELL.

I am employing the same crop rotation that my father followed 50 years ago, and so is nearly every other farmer in this county. It is the old five-year plan. We have our farm divided into five fields—one in corn, one in truck, to be sown to wheat in the fall; one in wheat, two in grass; one to mow and the other to pasture. The next season we pasture the one we mow this. In discussing the matter of crop rotation the R. N.-Y. has touched on a matter of vital importance. We followed this mode of farming years ago, and with some economy could make a comfortable living for our families. But the time has come when we cannot do it; and the great question is what can we do. Scattered over this country are hundreds of farmers who are living on farms of from 50 to 100 acres who are getting worse off every year. Some of them have bought the farms and are paying heavy interest, while others are paying large rents. Last spring they could not pay the rents, so a good many of them gave their landlords chattel mortgages on their stock, hoping to do better this year, but they are worse off this year than last. It is very plain to my mind that we must change our mode of farming. This keeping in the old ruts made by our forefathers must at once be done away with. Last spring I used my stable manure on early potatoes. I carted it out and put it in a compost, then spread all the hen manure I had on the top and worked the heap over several times so as to mix them thoroughly together. At planting time I marked out my rows, spread the mixed manure in the rows, dropped the potatoes and covered them with the plow. Never before had I obtained such nice early potatoes; they were large, smooth, and free from scab.

Salem County, N. J.

FROM E. H. COLLINS.

My usual crop rotation is clover, corn or potatoes or oats and wheat. Formerly I sowed clover in small grain in the spring, and broke for the other crop the next spring, not losing a crop year for grain. But my soil lost fertility and became hard and I was compelled to let the clover have the ground a year and mow it. The soil is now improving. We must also thank clover for clean culture. Year after year weeds came after potatoes were "laid by" and I would vow that the next crop should be clean, but to no effect until I planted on a clover sod. Clover and sheep make clean culture easy. Many methods of handling stable manure are given by good farmers; but somehow they require so much handling that one soon feels like cutting across a corner somewhere, especially in the busy season. He also wants some time for reading and attending the farmers' club, etc., and I find that if I keep the stock well bedded and the bed level, I can take a day when the weather is suitable and clean out and haul to the field and spread the manure at once and it is done for. If I have well rotted manure I like to spread it on plowed ground ready for any crop. If not very rotten, it may be spread on my level sandy soil in the fall and plowed under in the spring and it will do well for either corn or potatoes. I had five acres of potatoes this year on the above plan and they were smooth and a good crop.

The white-grubs damaged the Rose varieties badly about here; they did less harm on the manured plots. The vines on these plots also recovered better from damage done the roots by the grub. The variety was Late Rose and the yield about 180 bushels per acre. A part of the field was trenched and yielded somewhat better. The White Star and Burbank were not troubled so badly by the grub. Rank stable manure turned under just at planting time does not increase the yield of potatoes and may dry out the hill and ruin the crop. Chemical analyses of water from tile ditches draining manured and unmanured plots show that there is practically no waste except of nitrates. The phosphates and potash salts are held by a weak chemical union with the soil. The nitrates may be held in the soil by keeping the ground covered with a green crop of some kind. Now with my sandy loam I fear to plow under fresh manure because much of it is placed so far below the roots of young plants that I fear a leaching of the nitric acid into the subsoil before the plants reach it. But if spread upon sod a few months before breaking, these elements will be washed into the soil and utilized by the green plants. At our Carmel Farmers' Club this question received much attention and a second reason was given for surface manuring. It was argued that the dried roots of a very young plant greatly outweigh the dried tops and that this ratio changes as the plant matures till it is reversed in a full-grown plant. Following this hint of nature, I like to mix well rotted manure with the surface soil on plowed land and harrow it in and allow the rain to carry it through all parts of the seed-bed and thus give the young plant a booming start.

Mattsville, Ind.

FROM A. L. CROSBY.

I plow sod for corn and potatoes, next year sow oats, to be followed in the fall by wheat seeded with Timothy then and with clover in the spring. This has been my rotation; but I intend to change it by sowing cow-peas in place of the oats. My reasons for making this change are: the oat crop prevents the early plowing of the ground for wheat; the oats are ready to harvest just as the late summer rains come and they get more or less damaged; if the ground is rich the oats lodge, and if it is poor they don't pay, and even with a good yield the oat crop is not a very profitable one; then the time taken in putting in the oat crop is usually just so much taken from the preparation of the corn and potato ground. On the other hand, the cow-peas can be sown at any time from after frost until midsummer; they make a first-class crop to be plowed under for wheat; they make the very best pasture for cows and pigs; they keep down the weeds; they leave the land in good condition for any other crop—clover perhaps excepted—and I believe for these reasons they will make a more profitable crop than oats.

I use stable manure on any crop except oats, but I think I get about all there is in it when I use it to top-dress Timothy. At what time? Any time after the hay is off, the sooner the better, no matter about the hot sun or the drenching rain, if manure is spread on almost any kind of soil and at any time it is safe—and saved. Manure spread on sod in the fall and plowed under

in the spring, will by that time have been dissolved—the soluble part—and will be, after the sod is turned, within easy and quick reach of the roots of spring crops. I have had no success with any kind of artificial fertilizer for potatoes; Mapes's special potato manure, 1,000 pounds per acre, S. C. phosphate thick enough to cover the ground, hard-wood unleached ashes spread with a shovel so freely that I was afraid it would burn the plants when they came up, were all used without profit or even enough benefit more than barely to show where they had been sown, but stable manure tells a good story every time, and I do not know that there is any limit to the quantity that may be profitably applied. I grow the Rural Blush Potato almost exclusively and have no trouble with rot or scab. The only trouble is to get on enough manure and then keep the ground clean; if I do that then I expect a paying crop of nice, smooth potatoes.

Catonsville, Md.

FROM J. C. STRIBLING.

I apply stable manure to small grains and winter vetches in the fall, and haul some out again in the spring on early corn and cotton lands. After growing good hoed crops, stable manure shows good effects on small grains that follow. Notwithstanding this fact, however, I apply all the stable manure that can be had in the fall on rye, barley, oats and vetches (wheat generally follows cotton that has been heavily manured). This plan pays well in winter grazing, besides so hastening the harvest that I can grow a late crop of corn and cow-peas in addition to the small-grain crop. My winter vetches and barley where stable manure was applied, are now nearly a foot tall, and will afford good grazing at times, and give golden-colored, good, mellow butter all winter. Potatoes grown on land where an old stable stood, smelt like a stable when the cook brought them to the table, and could not be eaten. My observation is that stable manure makes potatoes rough and ill-shaped, while commercial fertilizers produce smooth-skinned, shapely potatoes.

Pendleton, S. C.

FROM J. T. W. LUCKEY.

The general rotation here, as well as my own, has been corn first, oats second, wheat (seeded in the fall to Timothy and in the spring to clover) third; then, of course, grass follows as fourth. Of course there are exceptions to all rules and sometimes this is the case here, especially in the grass crop, as sometimes it is fourth or fifth, which will materially change the rotation of the others. This county is comparatively new and the land being a rich black loam, seems to retain its fertility to perfection. To illustrate, a farm near-by is owned by a capitalist and there is a field of about 40 acres cleared, on which corn has been raised for 10 years in succession and the crop this year will average as good as the first; hence we use nearly all of our manure on our wheat as a top-dressing on the high places, more as a protection than as a fertilizer. This fall the first artificial fertilizer was brought to our county and I sowed it in the drills with the wheat. I use stable manure on potatoes with good results; but the ground is thoroughly drained by tiles. However, we pay little attention to potatoes, corn and hay with hogs, cattle and horses being our main objects.

Decatur, Ind.

FROM L. HULBERT.

We apply our manure on clover-sod if we can get it, plow it under, and plant the ground to corn or potatoes, followed by barley or oats, then winter wheat and seeded. There has been no change lately. Summer-fallowing was practiced considerably at one time, but is not now. We use stable manure on corn and potatoes, also as a top-dressing on winter wheat. We seem to get the best results from the application of the manure in this way. The corn or potato crop leaves enough of the fertility to afford a good crop of barley, and the ground is left in good condition for winter wheat. When applied to wheat in the fall, its invigorating influence enables the plant to withstand the winter, which, in this section, is quite an essential thing. Then as grass seed is usually sown on winter wheat the beneficial influence on the young seeding is very apparent.

In regard to the effects of barn-yard manure on potatoes, I will relate some of my experience. In the spring of 1888 I planted potatoes in a field that had been pastured two years previously. The grass had not been eaten closely, leaving a considerable growth to be turned under. On a portion of the field barn-yard manure was applied in moderate quantity; on the remainder no fertilizer of any kind was used. The variety planted was White Star. The result was so favorable for the manure that a person unacquainted with the facts, and seeing the potatoes growing, judging from the appearance of the tops, would say that there were two distinct varieties, the tops on the manured portion having a much more vigorous growth. The tubers corresponded with the tops. There were from one-third to one-half more potatoes, with no more scab, on the manured part. The soil is a clay loam. This year I planted a field under very similar conditions and I have never had potatoes more free from scab than they are now. They yielded 150 bushels to the acre when many crops of potatoes in this vicinity did not yield 50. The blight did not strike them until late.

Dansville, N. Y.

Dairy Husbandry.

THE OWEGO, N. Y. CREAMERY.

Land and products in Tioga County, N. Y.; buckwheat galore; a great and growing dairy interest; the Standard Butter Company, the largest combined creamery and cheese factory in the State; the building and its equipment; its capacity; nature of the business; vast extent of its shipments; cream-gathering; employees; mode of handling cheese and butter; causes of its great success.

MUCH of the land in Tioga County, like that of Delaware, "is turned up edgewise." Wherever you see a valley you will discover a stream along the banks of which wind and twist one or more railroads. In August, when the dairy conferences were held at Spencer, Nichols and Owego, the haying and oat harvests were at the zenith; the potato vines rusted and blackened; the barley—what little there was—was in stacks, and an occasional field of tobacco on the Susquehanna River flats, or "bottoms," as they are called down there, was being gathered. But in every direction could be seen fields of buckwheat in blossom, looking like so many fields of snow, framed in green. Along the valleys, on the steep hillsides and on the summits of the mountains were buckwheat fields stretching away as far as the eye could discern—buckwheat, buckwheat, buckwheat! It is received in exchange for everything but railroad fare down there, and is the standard of values in the county. There ought to be enough of the product thrashed in Tioga County this season to carpet the State with "slapjacks." I hope there will be.

So much of the land being set up on edge, it affords good grazing territory, especially for sheep and small cattle, and should be better utilized for that purpose; and, as the growing dairy interest there is mostly in the line of butter, there ought to be more Jersey cows and less of the long-horned aborigines. Those little Jerseys will climb the steep hills almost as easily as will sheep; the large natives, Short-horns and Holsteins will not. Then, there are pure, sparkling mountain brooks leaping down the hills and affording a plentiful supply of the purest and best water. Before long there will be more Jerseys and Guernseys, more creameries, more *good* dairymen; less scrub cows and scrub dairymen, less native grass pastures, less "live-forever" growing in the fields, less buckwheat. The dairy conferences and the farm institutes that have been and are to be held this winter, will give the ball, already started, such an impetus that it can't be stopped from rolling.

Nearly all the cows in that county are natives, and, as a rule, the farmers feed no grain ration, except during a few days in spring when the cows are coming fresh; consequently the ratio of butter to milk is not usually a good one. There are some exceptions, however, to the rule: among them are those at some of the creameries, notably those at Owego and Spencer. The former is larger and better-appointed than any other of the kind in the State, and perhaps the dairy readers of the R. N.-Y. will be interested in knowing something about it. It is not properly—or rather wholly—a creamery, but a cheese factory and creamery combined, and it is known as the

"STANDARD BUTTER COMPANY."

It is located at 174 Front Street, close to the business part of the village, and is owned and operated by George Truman, Son & Company. The plant is entirely new, having been erected last year, so that this season is its first in its enlarged capacity. It has already established both a national and foreign reputation, having shipped invoices of butter to nearly every Northern and Southern market and exported some large shipments. Its product is among the very best: else it would not have been awarded the first prize for creamery butter at the late great International Fair at Buffalo, over all competitors.

The building was planned and furnished, after mature deliberation, and is found to be in every respect what was desired. Its dimensions are 100x40 feet, and it is 27 feet high; the lower or creamery room being 17 feet high, and the upper room 10 feet. Its cost, including equipment and vat, was $15,000. All the partitions are double-papered and the floors, which are of the best pine 1⅝ inch thick, are padded. Adjoining the creamery floor is the neatly appointed office. At the east end are the ice-house, engine-room, "pool-room" and refrigerators. In the creamery room are located the dairy implements as follows:

1 Curtis oil-test churn.
1 De Laval Turbine Separator.
1 Cheery quart-test churn.
8 cream vats.
2 Davis & Remington center-drip butter workers.
2 300-gallon churns.
1 250- " "
1 80- " "
1 600-gallon cheese vat.
1 curd sink and one combination-gang cheese-press,

The motive power is a 15-horse-power engine, supplied by a 20-horse-power boiler, and there are also a five-horse-power boiler for heating purposes, a Blake donkey pump, an elevator, etc., etc. At this writing, Mr. Thompson, the business manager, informs me that only 1,000 pounds of butter are made daily. During the "flush"—June season 3,000 pounds were made, some of which was put into cold storage. August 20, there were 1,000 oak firkins holding from 100 to 110 pounds each, in the great refrigerators, designed mostly for export. At present the product goes to 20 different parties, and orders for more than can be supplied are daily received. At present most of the butter is put up in eight and 16-ounce prints, and two, three, and five-pound boxes, for which the highest market price is received. The churning capacity of the building is 5,000 pounds daily; but there is not sufficient vat room for that amount; therefore it has been decided to erect two new creameries this winter to be located at convenient points, thus lessening the expense of gathering some of the milk and cream, and relieving the present creamery of some of its heavy burden.

Milk is received and made up on any plan the customer prefers. Some is received and the cream raised by deep setting; some is centrifuged; some bought to be peddled in the village, and some is made into cheese. Of course, now that milk is worth nearly one cent a pound, the dairymen's scrub cows have lessened the supply nearly two-thirds; but in another year a better state of things is hopefully looked for, as a number of the patrons have changed from summer to winter dairying, so that, probably, the daily make of butter during the winter will be not less than 500 pounds. The new creameries will be supplied with separators or butter extractors. This season there have been 320 milk and cream patrons supplying milk from about 3,000 cows, and butter has been made every day. The firm also purchases a large amount of dairy goods from other makers, handling from September to April, from 600 to 1,000 packages of butter each month, and 250 cases of eggs each week. Apples and potatoes are also bought. Three hundred pounds of cheese were made in August—the maximum being 500 pounds—which are mostly Cheddars weighing 40 pounds each; not all, however, are full-cream, some being skims: and there are a few small cheeses weighing six pounds each.

Fairlamb, Moseley & Stoddard, and Cooley cans are used by the patrons from whom cream is gathered over 13 routes. The Fairlamb cans are, however, most largely used, and they are sold to the patrons by the creamery company at their exact cost, or they are rented to them, if they prefer to rent, at 50 cents each for the season. About one-half of the product is from gathered cream, the rest from milk delivered at the creamery. All goods are sold direct to the consumer or retailer by the firm, and the processes of creaming by deep setting, churning, washing and working, are the same as those practiced by our State experts, Messrs. Gilbert, Curtis, Munson and Green. Seven hundred quarts of milk were peddled daily during August. The milk was set in "shot-gun cans," in the "pool-room," in water at 40 degrees, until taken out by the peddlers. Five men, known as "skimmers," are employed to gather cream from the farmers, and five are employed in the creamery. The firm is composed of George Truman, George Truman, Jr., and A. Chase Thompson, the latter being the business manager and secretary. Mr. N. Haster is the general superintendent; the superintendent of the cream routes is Mr. J. Card; of the milk routes, George Nichols; and of horses, cream and milk wagons, A. Truesdel. The accountant is Mr. Lester Shay. A large building for stable purposes is to be erected near-by, and a night man will be placed in charge, whose business will be to inspect all the wagons, cans, harnesses, etc., and have each team ready for the driver at six A.M. daily. With the enlarged facilities, it is confidently predicted by Mr. Thompson that not less than 5,000 pounds per day will be the product next season.

The second floor of the creamery building is used in part as the cheese-curing room, and in part for the manufacture of cheese boxes, in which is employed a man who also does the necessary cooperage for the concern. The ice-house and refrigerators are situated in the east end of the building, the former having a capacity of 1,200 tons. The temperature of the refrigerator in which were stored the 1,000 packages of butter, was kept at 40 degrees. After a package is filled it is placed in a cooler and left two or three days to settle, when the cork in the head is withdrawn and the intervening space filled with strong brine; then the cork is driven in again, thus sealing the contents in an air-tight package. This form of package is for export, but there are some, at times, which are not exported; these are sawed in two at the center, the butter is cut with a wire; covers are made to fit each half-tub, and the packages are sold to dealers who handle only that form of package. A cellar was constructed under a part of the building at a cost of $500 for the special purpose of storing packages until wanted for filling. There are 20 different styles and forms of package, every market having a particular one, and no other. Butter goes to nearly every prominent market from Boston to New Orleans.

A large cistern for storing butter-milk is placed under-ground outside of the creamery, where the milk is stored until taken by patrons. The remainder is piped into the river near-by. The cistern is so arranged that no odors escape from it, so that none of the disagreeable and sometimes positively offensive smells that one encounters at too many creameries, are ever met with. Indeed, so particular is Mr. Thompson to have everything neat and sweet, that he is paying a large rental for a vacant lot for which he has no use adjoining the creamery, fearing that it might be used for some purpose that would be injurious to the latter. Such precautions, strict business principles, the employment of none but experts for the work, the making of only the finest goods, which always command the highest market prices, the payment of liberal prices for all milk and cream bought, the low price charged patrons for making up their milk, with the promptness displayed in the payment of all monies, are the causes which have contributed to the unparalleled success of this, the greatest creamery in the State. C. W. JENNINGS.

Rural Topics.

RUMINATION.

HENRY STEWART.

THE engraving of granular butter on page 675, in a recent RURAL tells more than words. It is now about 10 or 12 years since I sent a little dish of butter in this form to the R. N.-Y. office to be pictured as an example of what granular butter was and should be. And yet it is necessary, after all that has been written on the subject, to repeat the pictorial representation. How true it is that we need "line upon line, precept upon precept" before any truth or improvement can become established.

FIRST PRIZE BUTTER MADE FROM SCRUB COWS!! Here is another text for a homily. Mr. Cornwall seems to be rather ashamed of the fact, for he says: "But I have been using a pure-bred Jersey sire the last year."

This, however, does not detract from the credit given to the scrub cows. I dislike that word "scrub." It is too much akin to the terms "the common people," "the working classes," "the lower orders" used by so many to distinguish those people who are not rich. It is alleged to be a fact that there are more virtue, more goodness in general among these persons than among the so-called higher classes; and how would the world get along without them: for to their labors we owe everything, even the wealth which makes some people feel like gods among us. So with the scrub cows. I respect them and sympathize with them: but I do them strict justice and treat them precisely in the same way as I treat my pure Jerseys and Ayrshires.

"PAPA thinks the care of cows is more important than the breed" says Miss Leah Allen, and the young lady with grade Jerseys and native cows (scrubs) takes a first prize for her butter. No gilt-edged, high-pedigreed, blue-blooded Jersey could have better treatment than Mr. Allen's cows get. You are right, Mr. Allen, and your example is worthy of constant rumination by every one who makes butter.

MY CATTLE are the common native breed, says Mr. Fear. The herd of Mr. Goodrich is two-thirds grade Jerseys and the rest are common natives. One herd only is of Jersey cows, whether pure or not Mr. S. does not say. A most useful lesson to be derived from the narratives given by the prize-winners is this: that with good feeding, clean keeping and milking, good care of the milk and cream and good churning, it matters not what kind of cows; what churn, or system of milk-setting may be in use, the prize goes to the skillful person.

BUT WHY USE COLORING? I used to some years ago, but it was in deference to the taste of my customers who desired a high color. For seven years I have not used any coloring and my butter sells as well as it ever did. It has brought 30 cents per pound all the summer in a market where the common country butter sells for six to 10 cents. With good pasture in the summer and green (in color) clover hay and corn-fodder, well saved and cured, and the right grain food—yellow corn-meal for the bulk of it in the winter—the butter will be yellow enough to please any taste that has not been spoiled by ill-usage. Instead of coloring, the practice of feeding for the right color as well as flavor must soon have leading and popular demand in the dairy business, because it is the only honest, truthful method.

FEW contributors to agricultural journals have written more about scab in potatoes than I, and I have always associated the use of fresh stable manure with this disease or defect in the tubers. Mr. Terry's experience verifies this idea. "I am done with that kind of business," says Mr. T. I have been done with it for 10 years, at least, when, for experiment, I planted plots of potatoes with fresh manure, old manure, poultry manure, wood ashes, no manure and artificial manure, and had scab in precisely the order given up to no manure and then I had none, the fresh-manure plot being wholly damaged without one clean potato. I don't care so much for the cause of any evil if I can prevent or avoid it; although I like to learn the ins and outs of everything; and if we can avoid the potato scab, what does it matter if the cause is a disputed question. From the first, I have felt confident that it is due to a mechanical injury by some living creature, and not to a fungus, and the association of the scab with fresh manure is clear, evident and reasonable; whatever attracts wire-worms is accompanied by scab.

THE picture of Mr. Terry's tools will afford matter for rumination among the readers of the R. N.-Y. for a long time. The Western lady who wants to see Mrs. Terry's household tools would, no doubt, be satisfied; for she has no doubt everything needful in that line—a washing machine, sewing machine, carpet sweeper, labor-saving range, oil stove for summer use, hot and cold water through the house, stationary wash-tubs, drains, bath-room and water-closet, and by and by she will have electric lights through the house, with a heap of other smaller affairs which might be grouped, like Mr. Terry's small tools, in the barrel. "First make it fit for thyself in the field and then furnish the house." "The value of this lies in the application of it."

Macon County, N. C.

ILLINOIS FARMING.—My specialty is dairying on a 90-acre farm located 35 miles southwest from Chicago, six miles west from Joliet. My butter from full-blood Jersey cows is contracted by the year at 25 cents. In addition I raise a few Shropshire lambs for Easter markets which are also contracted to a Joliet butcher. Timothy hay is baled in early fall to make room for corn-fodder, and sold to stable-men in Joliet usually; occasionally I ship a carload if an unusual demand or better prices are noted in other markets. Corn is shelled next May and held in readiness for a good market and usually sold when the new crop is assured. Oats are harvested at the earliest possible date, thrashed from the field in July and sold immediately. Nine seasons out of 10 the first good white oats delivered in market bring a much better price than those sold later or until the following spring, when an account of waste must be added to the cost of production. Hogs are marketed twice a year, about June or December, and are always sold at about nine months old. Clover seed is consigned to a Chicago commission house.

How do I keep posted?

I have weekly quotations from Chicago commission firms, and market reports by the R.N.-Y., Ohio Farmer, Farmers' Review and Hoard's Dairyman, also crop conditions in all parts of the country through the above papers. The law of supply and demand doesn't govern as formerly. Failure of crops in one section doesn't mean higher prices in another section more favored. My determination to sell or hold a crop is always based on, first, the cost of production, second, the price offered, third, the condition or yield, local and general, of the crop under consideration or of sympathizing crops. It is unsafe to speculate on future prices of our staple crops. If I am offered a good margin on the cost of production I sell at once. If the price offered leaves me no margin and the conditions warrant no immediate advance I sell and put the money to the best use possible, and go to figuring to produce the next crop at less expense, but, of course, there is a limit and I believe it is almost reached in some lines. P. H. M.

Plainfield.

Everywhere.

RURAL SPECIAL REPORTS.

Iowa.

DES MOINES, Polk County, October 28.—Since my last report from this section, the weather has been very dry, and there are no prospects of any fall rain as yet. Our weather is fine for work—clear and cool—and the fall work is progressing finely. Potatoes are all harvested and corn-husking has begun in earnest. Our late potato crop was not first-class in yield or quality, though in some sections the acreage was unusually large, so that our market is glutted with potatoes which are a dull sale at 15 cents per bushel. We have an abundant crop of almost everything and everything is cheap. Winter squashes, late cabbages and turnips are the only crops we are short in. Our weather has been too dry for these crops as they are mostly made in the fall. We thought that our onion crop would be short, but plenty seem to be offered and they are dull sale at 40 cents per bushel. There is an abundant supply of good winter apples and the market for them opened at 30 cents per bushel; but they are now worth 50 to 75 cents per bushel. Corn is selling at from 12½ to 15, and oats are worth 15 cents per bushel. Cattle plentiful and cheap. Hogs are scarce and bringing good prices. A great many of our farmers are selling out; some to go West and some to get clear of their indebtedness for surplus stock and farm implements. Property at these sales is sold on 12 and 14 months time, and usually brings a good price, though these sales are beginning to get dull and the crowds who attend them are not nearly so large as formerly. I see no hope for prices on farm products to be better here soon. F. S. W.

RUNNELLS, Polk County, October 26.—We have had a beautiful fall. Corn is about half cribbed; yield not as good as expected—about 40 bushels per acre. Potatoes good except early varieties. They are selling at 10 cents per bushel. Corn is 16 cents; oats 12 to 14; wheat of poor quality and a small yield and worth 50 to 60 cents. Upon the whole, it is very discouraging to farmers, especially when it takes more than the price of a bushel of potatoes to get one bushel to market, say, 300 miles away. The inevitable is coming as fast as the wheels of time roll round, when labor will receive its just reward. J. K. W.

Nebraska.

TAKAMAH, Burt County, October 26.—We have had three unusually dry seasons here. We have had enough rain each season to make a fair crop; but the ground is drier to-day to a greater depth than it has ever been since the country was settled. A great many wells are giving out. There is every indication that things will freeze up in this condition. Things froze up very dry last fall, and although the winter was one of the mildest known, yet small fruits and especially grape-vines suffered badly. All crops are fair; corn is good and potatoes are very good; no potato rot here. Potatoes are selling as low as 10 cents per bushel delivered; but a great many were sold for 15 cents. Beef cattle are worth about 1¾ cent per pound. Money is very scarce. Hogs are about 3½ cents on foot with a good deal of cholera in the neighborhood. T. H. G.

New York.

EMINENCE, Schoharie County, October 26.—Our money crops are chiefly butter and hops. The former is made at home; almost all have creameries, some Cooley's others Reid's. Hops were not a large crop, but what we had were of fine quality. Oats and buckwheat are fair crops. Potatoes very poor—about one-third of a crop. There were but few apples. Almost every farmer keeps a few sheep. J. C. T.

Pennsylvania.

NEW BLOOMFIELD, Perry County, October 30.—There is little or no clover seed, so far as I can learn, in this county. In this immediate neighborhood there is none. As compared with previous years it is a total failure. The potato crop was seriously injured by too much wet weather and the rot. It will not be half a crop. The corn crop is unusually good—much better than the average. Wheat that was sown early looks very well; but many farmers were delayed by the wet weather, and some of the wheat is only now coming up. C. A. B.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

COTTON-SEED-MEAL AND LINSEED-MEAL USED AS FEEDS.

H. O., New Canaan, Conn.—In a late R. N.-Y. Mr. Henry Stewart said: "Cotton-seed-meal is not a healthful food for pigs." On page 677, under the head of "Tough Pork" I find this: "The use of carbonaceous food as corn, oil-meal, etc., is necessary to the finishing off of any animal used for meat." In the same issue an advertisement says: "Use with your other feed one-third linseed-meal." Just before reading the above I had told my man to add from two to three quarts of linseed-meal to a cooked half-barrel of potatoes, apples and corn, for pigs whose fattening for the butcher had just been started. What is the explanation of the apparent discrepancy in the above remarks?

ANSWERED BY DR. HENRY STEWART.

Cotton-seed-meal is cotton-seed-meal, and oil-meal is commonly understood as linseed-oil-meal. The two substances are entirely different in regard to their action upon the digestive organs and the bowels of an animal. The cotton plant has some medicinal qualities which seem to be concentrated in the root and the seed. The root has a well-known effect upon the nervous system which is connected with the uterus and causes abortion, and the oil of the seed has a similar effect. The meal produces costiveness, and its highly nitrogenous properties have a very active effect upon the kidneys as well as upon the circulation. It cannot be safely given to pregnant animals or to horses and pigs because of its highly stimulating properties. In these animals it causes congestion of the brain,—what is commonly called blind staggers. The less highly organized ox tribe may be fed safely with it if it is given moderately, but while steers and dry cows may not suffer from six to 10 pounds of it daily for a short time while they are fattening, yet cows in milk are very liable to be injured by even so small a quantity as four pounds daily, being often attacked by garget (inflammation of the udder) or by premature delivery of the calves. Linseed-oil-meal, on the other hand, is a bland, digestible substance; it is laxative and soothing in its effects. Its nitrogenous properties contained in the albuminoid substances exert no injurious effect; they are digestible and are assimilated healthfully; while the fat (of the old-process meal) is absorbed into the blood without any unfavorable action upon the circulation. The new-process linseed-meal contains very little actual fat, but about 32 to 40 per cent. of nitrogenous matter with nearly 40 per cent. of carbohydrates other than fat, among which is a large quantity of gum and mucilage. These facts are mentioned to show that oil-meals vary considerably in character, and cannot be considered in the light of food as at all similar in their uses and effects, and they should be chosen with special reference to their fitness and with a good understanding of their different characters. The feed mentioned as given to the pigs is wholesome and good. It might be mentioned, to avoid a mistake, that the whole cotton seed is fed liberally to mules in the South without any ill results. The hulls, however, act as a dilutant to the oil of the seed and the digestive ability of a mule is far greater than that of any other animal, except perhaps a beaver which lives well upon bark and the twigs of trees, and the mule cannot be made a standard by which other animals are to be judged.

KEEPING FROZEN MEAT IN WINTER.

R. B., Montreal, Canada.—What is the best way of keeping frozen meat (beef, pork and poultry) through the winter? A farmer whom I know, who grows lots of peas, packs his frozen meat in peas, and any thaw that comes does not injure the meat in the least, but we don't all grow peas.

ANS.—One of our neighbors keeps meat all through the winter by packing it in snow. A beef animal is killed in early winter while the weather is cold, and while there is plenty of frozen snow. The beef is cut into proper sizes, and strong barrels are taken for holding it. A layer of frozen snow is put at the bottom, then a piece of the frozen meat, then more snow and so on until the barrel is filled. The whole is pounded down into a compact mass, and left in the barn where the sun will not reach it. The meat is taken out as required for cooking. In ordinary winters, the meat will keep in perfect condition. Sometimes a very warm spell melts the snow. In this case, the meat must be removed from the barrel, and placed in brine, or it will soon spoil. We have read of farmers who pack such meat in wheat or other grain, but have never seen it done successfully.

SENSE OF TASTE AND SMELL IN HENS.

Several Subscribers.—Have hens any sense of taste or smell? It occurs to us that they have not.

ANSWERED BY P. H. JACOBS.

There is no doubt on my part that a hen possesses all of the five senses. She will reject ammoniated bone-meal and readily accept odorless bone-meal, though both may, in appearance, be alike. The hen has shown her partiality for spices, and she will readily detect any changes in her food before touching it with her bill. But for the senses of taste and smell she would be unable to select her proper food, and in hundreds of instances I have known hens to accept or reject certain substances, and this could have been done only by the aid of the two senses mentioned. A hen will swallow hard, odorless substances, but even then she will often drop them and attempt to detect their nature before swallowing. She depends principally on sight, as do all birds, but I have known blind hens to show a preference for foods that could be selected only by smell and taste. I have known them to avoid filthy food and odors, and also greedily to accept food slightly sea-

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies.

soned with salt when that substance had been withheld for a while.

THE PRICE OF THE R. N.-Y. NO. 2 POTATO.

W. G. W., St. Paul, Minn.—Last spring I purchased some R. N.-Y. No. 2 Potatoes and they were sent to my father in Chicopee, Mass. He now writes me that they have yielded very well indeed, and would have done much better had it not been for the unfortunate blight that was so general in Massachusetts during the summer. All late potatoes suffered badly, but the No. 2 did very well in spite of the blight. I shall sell a few of these potatoes and would like to know what price I ought to charge. I don't wish to charge more than the usual price and would like to know what those who have them for sale think a fair and reasonable figure for them this season. The quality of the potatoes of this variety that we have raised is excellent.

ANS.—The demand for the R. N.-Y. No. 2 is almost unprecedented. The price next spring is sure to rule very high.

PROPAGATING HICKORY NUTS.

W. R. H., Royer's Ford, Pa.—1. How should nuts, such as the Shellbark, be propagated? 2. Will the variety reproduce itself? 3. How should the nut be treated to make it sprout? 4. Can the variety be budded on the hickory? 5. What sort of a blackberry is the Wilson Jr.? 6. Is the R. N.-Y. No. 2 Potato an early or late variety?

ANS.—1. Hickory nuts for seed may be packed in boxes—a layer of sand, a layer of nuts, etc. Bury the box in a well-drained place and plant in the spring. 2. No. 3. Answered above. 4. Yes, but many will fail. Few propagators are skillful enough to meet with much success in budding the hickory. Mr. Trumpy of Parsons & Co., Flushing, L. I., is one of the successful ones. 5. The Wilson Jr. is almost a reproduction of the old Wilson Blackberry. 6. Late.

DIFFERENCE IN VALUE OF ASHES.

E. L. W., Brooklyn, Pa.—What are the relative values of ashes from a wood-acid factory and Canada unleached ashes and common wood ashes from stoves.

ANSWERED BY PROF. E. F. LADD.

An analysis of ashes from acid works, in comparison with the average of three analyses of Canada unleached ashes, as given in the last annual report from the New York Agricultural Experiment Station, shows as follows:

	PHOSPHORIC ACID.	POTASH.
Ashes, acid works	1.40 per cent.	5.55 per cent.
Ashes Canada	1.23 per cent.	6.97 per cent.

The Canada ashes have more potash but less phosphoric acid than the ashes from the acid which I analyzed. The difference in value, at present prices, for the above samples would be about six cents per hundred in favor of Canada ashes.

THE USE OF PLASTER AS A FERTILIZER.

G. S. P., Winslow, Me.—In the very interesting article in a late RURAL regarding the hay crop of the table-lands up the Hudson, land plaster is mentioned as the only fertilizer used. How is it applied? How much is used per acre; when, and how often? Is it applied on clover or on land "worn out" as is sometimes done in this State? As our main crop is hay and the soil is also a heavy clay, the successful methods there might do as much for us here, along the Kennebec.

ANS.—An ordinary application is 500 pounds per acre or one ton for four acres. It is broadcasted. It is excellent in spring on clover. It costs here about $5 per ton.

THE WILDER PEAR.

P. W., Rochester, N. Y.—In the issue of the R. N.-Y. for October 26 amongst "Wide Awake Items," I find this: "The Wilder Pear is well worth a trial." Which of the Wilder pears is referred to—Is it Fox's of California, raised by him and named some years ago, or the one put out by Mr. Green, of Clifton, N. Y., last year? The Fox seedling is a large, late-keeping pear of excellent quality, and it alone is entitled to the name. Mr. Green's is an early variety, but I don't know the quality.

ANS.—We referred to the Wilder of Mr. Green. We were not aware of the existence of another Wilder.

Miscellaneous.

F. W. E., Hot Springs, Ark.—Send a stamp to the Mississippi Experiment Station, A. & M. College P. O., Miss., for a copy of the bulletin on silos and ensilage.

W. R. A., Willimantic, Conn.—Can I get potash cheaper than by buying unleached ashes at 17 cents per bushel delivered?

ANSWERED BY DR. PETER COLLIER.

Those in charge of the fertilizer control stations of the country have given the following as the trade values of potash for 1889:

In high-grade sulphate 6 cents a pound
" chloride 4½ " " "

Quite recently a large dealer in hard-wood ashes offered them to me, guaranteeing a certain per cent. of potash; the price by the carload lot was such that the potash would have cost 12 and one-fourth cents a pound. Potash can therefore be bought for much less in the German salts than in unleached ashes.

Discussion.

POULTRY AT EXPERIMENT STATIONS.

I. K. FELCH, NATICK, MASS.—The R. N.-Y. has in times past urged the importance of making experiments with poultry a part of the work at our experiment stations. Here are a few thoughts that have occurred to me as valuable in this connection.

The public are much agitated as to the very best breeds and those that are the most practical. To my mind there can be but one way to secure a solution of this question. Each breed must be kept under the very best circumstances to make it the most profitable. To do this we must make three classifications:

The heavy or Asiatic breeds come first. These may be kept under the following conditions: Give them free, open-air exercise by furnishing an open shed attached to their quarters, and a yard sufficiently large to allow them to keep on growing continually. The feed should be three-tenths vegetable, two-tenths animal and one-half grain; the last should be wheat bran, oats, barley and corn. Corn and meal should not be over 15 per cent. of their grain feed. In the open shed there should be a box 4x4 feet filled with hay, chaff or cut straw and leaves in which they should scratch for all their feed. After the vegetable mash, with bran and meal, in the morning, let them scratch for the barley, wheat and oats. At roosting time give them the corn part of their food for the day.

The American class Plymouth Rocks, Wyandottes and Javas come next. They want the same treatment so far as shelter and runs go; let them have the same feed also, excepting that about 20 per cent. of the grain feed may be of corn.

The Leghorns may have the same yards and house quarters, but they will stand 40 per cent. of their grain feed in corn. Their vegetable and animal food should be in the same proportions.

The cost of raising birds from chicks and the full receipts from each class are important questions. Kill all males when they weigh four pounds to the pair, live weight, and note the cost per pound of raising them from the shell to that age, by weighing the whole number, male and female, when hatched and the day the males are turned off as broilers at the above weight. Kill all the females at six months old, selling them for poultry.

The three kinds of receipts, then, for each breed will be:

1. Receipts for broilers.
2. " " eggs.
3. " " fowl's meat.

less the cost of keeping them. The weighing when the broilers are killed will show which is the most profitable breed for broilers, and the supplying of these is becoming a gigantic business. The receipts from the egg will demonstrate to which breed the most profitable winter layers belong. The profits during the whole year for the food consumed will show which is on the whole the most profitable breed.

There is no breed for large, heavy roasters that will compare with the Light Brahmas to be killed when six to eight months old; but one should also find out by actual test which breed will give the largest number of pounds for the food consumed. I should say kill the Leghorns at five months of age; the Plymouth Rocks at six months; the Light Brahmas at seven months old, feeding during all the last months of their lives very heavily with hard whole corn.

Here is another item: Pick all white birds and sell their feathers separate; for white hens' feathers sell for 28 cents a pound; while colored feathers bring only six to eight cents a pound. This makes a great difference, as the feathers alone will pay dressing expenses if they be white ones.

I am conscious that for purely practical purposes the following breeds will be found to be the best;

Light Brahmas.
White Plymouth Rocks.
White Wyandottes.
Barred Plymouth Rocks.
Laced Wyandottes.
White Leghorns.

I put in the last to secure a summer crop of eggs while the others are hatching and running with their chickens. I am of the opinion that were all the Leghorn fowls emasculated it would affect the summer price of eggs fully eight cents per dozen. I mean that the incubating breeds would fail in summer as producers of eggs to fill the place of the Leghorns to such an extent as to make eggs worth that much more, so no well regulated poultryman can ignore the Leghorn race, if he is to have a uniform supply of eggs. To secure this in the best way I think Leghorns raised wholly as egg producers hatched in August and September, the most desirable, killing the cockerels either by pinching their heads when hatched, or eating them when six weeks old, when not larger than quails. The pullets raised in this way will lay a larger number of eggs during the great demand at our summer resorts than will pullets raised in any other way. This experiment may be tried also. Here is another point: The death rate in the different breeds from the shell till they are disposed of as broilers, also the amount of sickness and the number of cases of roup that result from distemper, and the number of deaths from six to 16 months old, are items that give all Asiatics a big advantage, for the death rate among Brahmas after they are a week old, is very small—the smallest among all known breeds. All the points I have named can be secured in one season in the same pens of stock, and one season's active work will give a vast amount of authentic information.

CURIOUS POTATO RESULTS.

S. B., SEAFORD, DEL.—As the subject of potato growing is one of increasing interest, I desire to give a little of my experience this summer. What I am about to relate would seem to be almost incredible, but proof will be given to any doubter who may desire it. On my farm, which is five miles west of Seaford, Delaware, I had an old strawberry bed 100 yards long by 40 wide. It had grown up thickly with clover and Crab Grass. Lengthwise it ran about east and west. At the extreme west end is a large and wide-spreading apple tree, from under which we gathered this fall 22 peach baskets full of apples. About the beginning of the third week in June, this piece of ground was plowed to a depth of five inches, a drag chain having been used on the plow to pull under the clover and high grass. In the bottom of each third furrow cut potatoes of the Mammoth Pearl variety were dropped. The pieces contained from one to three eyes each. The sod was turned down directly on the pieces. No manure or fertilizer of any kind was used. About one-third of this patch was so much under water this summer that the yield was nothing. This part was at the end of the patch opposite to the apple tree. The middle got but little cultivation, and immediately under the tree none at all, as that part though planted to within 10 feet of the trunk of the tree, was used as a play ground, and as pasture for a calf. The vines of the potatoes were either eaten off or otherwise destroyed. At the latter part of the last week in September, the potatoes were plowed out. And now for the results: We got a very few small tubers from the middle of the patch up to within 30 feet of the tree. From this point up to the tree they rapidly increased in size until we got right under the tree within 10 feet of the trunk. Right here where the ground was trodden down and so hard that it was very difficult to turn it up with a two-horse plow, and the clods of dirt had to be broken open to get the potatoes out, was the largest and finest crop that I have ever seen raised. To the south of the tree and only a short distance from it stands the home, so that the potatoes on the north side of the tree were almost constantly shaded, but just there, close under the tree, where the ground was the hardest, the potatoes were the finest, and right around and under the tree we gathered up 21 baskets, and all but the contents of one basket were extra large and perfectly smooth.

A FEW USES OF COPPER RIVETS AND BURRS.

C. W. R., CLARK'S HILL, IND.—Small economies coupled with steady application will insure the success of most farmers. Do copper rivets and burrs figure in your farm economy? Here are some of the uses to which I put them. Several winters ago I happened to snag one of a pair of rubber boots, making it useless for wading in water. They were patched by a cobbler in the most approved manner. The surface of the boot was roughened, the patch was firmly held in place for some time and then allowed to dry for 24 hours; but in less than a week it came off. I got a box of rubber cement and tried sticking a patch on myself, but with no better success. In sheer desperation I took the boot out to the shop, put a short rivet through the hole and hammered it down tightly. This answered my purpose so well that when the uppers began to crack rivets were put in the split places, thus changing the place of bending. Result: the uppers wore out the rubber soles as well as heavy leather ones that were put on before the rubber ones wore through. The boots lasted three years (being used in wet weather and in ditching) and were pretty well decorated with rivets before they were given up as useless. Rivets will fasten the buckles and straps on horse collars very securely if the straw is taken out down below where the rivet is inserted. They will do to fasten a broken line, but they make a rather rough job. Chip basket handles are made firm by using them in time. They may be used in the place of screws when joining two pieces of wood together. When wanting an extra long one, a wrought nail and copper burr answer the purpose, cutting the nail to the required length. For mending belts, splicing straps, etc., nothing is perhaps more expeditious or better. Other uses will be found for them if a supply be kept on hand. It is better to buy pound boxes of the lengths you want, for in the assorted boxes there are too many short ones.

HIGH PRAISE FOR THE KIEFFER PEAR.

"BATES," ROCKVILLE, INDIANA.—In the spring of 1886, a neighbor of mine, a thorough fruit grower, set out a Kieffer Pear tree, two years old from the graft. This season the tree bore 50 well grown pears of large size: three weighed 30 ounces and one weighed 12 ounces, and there were no small ones. The samples before me are a most beautiful golden yellow and have an exquisite blush, which any woman would envy. As to quality, while not the best to the amateur and practiced fruit-dealer, the buyer of pears in the market would select a basket of Kieffers before one of almost any other variety offered, and on tasting would pronounce the fruit first-rate. This variety is destined to become the market pear of our Western markets. It will be rated here as the Clairgeau is rated in Eastern markets. The tree is a strong, healthy grower, hardy and free from disease, and it bears at once.

LIMA BEANS WITHOUT POLES.

ELVA, BUCKINGHAM COUNTY, VA.—My garden is an acre fenced round with a picket fence five feet nine inches high. The posts are inside. I run a wire along from post to post, one foot from the ground, and another four feet above it. Two-ply cotton strings are put from wire to wire and the Limas are trained on them, being nipped off when they reach the top—five feet. If this be omitted the plant will run along the top wire. Sunflowers are also planted along the fence at intervals of four feet. In some instances the Limas got hold of one and branched all over it.

E. W. S., NORTH COLLINS, N. Y.—I haul manure on the land as soon as it is made whenever I can conveniently do so. I plow it under one or two weeks before planting time, work the land thoroughly before putting in the seed, set my grain drill to put the rows three feet apart and two kernels to the foot, which will take eight to 10 quarts to the acre, according to the size of the kernels. I open the fertilizer slide wide and put in from 200 to 300 pounds to the acre of the best fertilizer, whether the land is manured or not with yard manure, as it will keep off crows and worms and give the corn a big start which is important on cool land. I cultivate early and until the ears are well formed. In this way I grow 100 bushels of sound ears per acre and it is splendid to feed before the ears are too ripe, or cut and put in a silo. One rod of one of these rows of corn would be a far better feed for a cow than all the thickly grown corn an animal could eat. If I figure aright, the yield would make 800 feeds, each feed having the equivalent of two quarts of meal besides the stalks. How can I grow as cheap a stock feed and leave the land in as good condition? I grow from 50 to 75 acres each season.

R. C. F., SINCLAIRVILLE, N. Y.—I read four agricultural papers, so I get that old gag about fast-walking horses thrown in

about twice a month. Do the editors put it in for want of copy or do they really think they would like to plow at the rate of four miles per hour—40 miles or five to six acres per day according to the size of the plow? How many teams in this State have the nerve to do it? How many hired men are there that will follow the team? With such horses what would one want with a steam plow?

R. N.-Y. Nothing is ever put in the R. N.-Y. to "fill up." No, we do not care to run behind a plow. At the same time, when we haul a load to market, we do not want to "poke" along as many teams do. What a good many farmers want in a horse is the ability to walk fast when fast walking is required.

E. M. T., CATAWISSA, PA.—In "Discussion" I notice that E. C. B., Middletown, Pa., makes a complaint that his "Sharpless Strawberries produce berries of a different type, like the Charles Downing." This is the home of the Sharpless. Mr. J. K. Sharpless, its originator, lives here, and in showing me at one time the mother plant, stated that he thought it originated from the seed of a Charles Downing. Why should not E. C. B.'s berries resemble the Charles Downing if that be true? In my opinion they did not get "mixed." They did not "hybridize." It was simply the old law of atavism or "harking back," manifesting itself.

What Others Say.

HOW A GREAT DOCTOR WON HIS WAY.—Sir Andrew Clark, the President of the Royal College of Physicians in London, is one of the most distinguished medical men in the world. For many years, says the N. Y. Sun, he has been connected with the medical school of the London Hospital. The first clinical lectures ever given in England were delivered at this institution, and the first laboratory organized in the country for the practical teaching of physiology and pathology was organized by the London Hospital. A few weeks ago the members of the medical and surgical staff of the hospital presented to Sir Andrew Clark a portrait of himself, and on the occasion of the presentation Sir Andrew made a speech which is interesting and instructive as showing that even in these modern days the highest degree of success is attainable by those who, when they start out in life, have very few advantages, let them be professional men, business men or farmers.

"I had the habit of dealing with every day of my life as if it were my whole life," he said. "I was contented and happy over what the day brought me. I had no ambition of any kind, and I hated schemes and intrigues.

Firstly, I believe that every man's success is within himself, and must come out of himself. No true, abiding, and just success can come to any man in any other way. Secondly, a man must be seriously in earnest. He must act with singleness of heart and purpose: he must do with all his might and with all his concentration of thought the one thing at the one time which he is called upon to do. And if some of my young friends should say here, 'I cannot do that—I cannot love work,' then I answer that there is a certain remedy, and it is work. Work in spite of yourself, and make the habit of work, and when the habit of work is formed it will be transfigured into the love of work; and at last you will not only abhor idleness, but you will have no happiness out of the work which then you are constrained from love to do. Thirdly, the man must be charitable, not censorious—self-effacing, not self-seeking; and he must try at once to think and to do the best for his rivals and antagonists that can be done. Fourthly, the man must believe that labor is life, that successful labor is life and gladness, and that successful labor, with high aims and just objects, will bring to him the fullest, truest and happiest life that can be lived upon the earth."

No saying is more common among physicians than the declaration that a strong physical constitution and good health are necessary to success in life; yet there have been many instances in which the rule does not seem to have been true. Darwin, the greatest naturalist of his time, was always an invalid, and here we have Sir Andrew Clark, one of the most eminent men of the present day, telling us that he was so sickly that his life was not deemed worth a year's purchase when he began the active work of his singularly successful career.

WHICH MAY REMIND YOU.

T. V. MUNSON, one of our foremost authorities, says that the Red Cedar (Juniperus Virginiana) is one of the trustiest evergreens for Texas. He pronounces the Austrian the most successful pine.....

MR. MUNSON pronounces his new grape, named Rommel, the finest early white grape known to him. He considers Brilliant, another of his own seedlings, as resembling the Delaware though better in several essential respects.....

HE offers the promising strawberry Parker Earle for sale.....

H. A. PHILLIPS of Sun Prairie, Wis., tells Hoard's Dairyman that his herd consists of 10 cows, three of them full-blood Jerseys, and the rest grades. In 1887, his cows made an average of 256 pounds of butter. In '88, 298 pounds each, besides the cream and milk that a family of nine consumed. He also raised eight calves from their milk, mostly skimmed. His cows feed in the pasture, in summer; and he feeds four quarts of bran, oats and corn mixed, to each cow per day. In winter he feeds good hay and corn-stalks. Last winter, he fed 40 pounds of silage per day to each cow in lieu of dry stalks, with eight quarts of oats and corn—three-fourths oats, and one-fourth corn ground together. He proposes to use the same feed the coming winter. His neighbors say their cows are "mostly dry;" while his are still doing as well as at any time the past summer. Four of the cows are fresh, and more of them soon will be. They are "dry," not over two weeks in the year, on an average. He furnishes private families with butter at 25 cents in summer, and at 30 cents five months in winter. So his cows pay him well for their food and his work.....

T. B. TERRY says, in the Albany Cultivator, that an old friend of his who has been in business for 40 years, and has over $50,000 invested, told him that competition was now so great that it was with difficulty that they could hold their own. (The son is now in partnership with the father.) They do not live as well as many well-to-do farmers. They told him plainly that they were obliged to economize. He doubts whether the men have had a day off from business this year. Truly, one half the world does not know how the other half lives. With an investment of perhaps $10,000, Mr. Terry has no difficulty in living fully as well as his old city friend. His house is as well furnished and he knows he and his family have more fruit and luxuries in their season than the city friends. For about five months in the year farmers are tied up tightly and must attend right to business. The rest of the year they can be away, back and forth, as they choose, or take it very easy at home.....

HAVE you Clematis coccinea?.....

THE quality of Excelsior Sweet Corn is a trifle better than that of Early Concord. In other respects the Concord is as desirable and a somewhat heavier yielder. They ripen nearly at the same time, Excelsior being the later.....

DIRECT.

——CARL SCHURZ BEFORE THE AMERICAN FORESTRY ASSOCIATION: "The destruction of the forests of the country will be the murder of its future and its progress. It seems to me that wherever the forests cover the head-waters of great rivers the Government should keep possession. If the possession is gone, then regain it. Look at the valleys of the Hudson and Mohawk—already the flow of these rivers is diminished from 20 to 30 per cent. If the destruction of the forests continues the United States will be as completely stripped as Asia Minor."

——LONDON FIELD: "The best of the horsechestnuts is the Double-flowered, which, I believe, is of American origin, and for some time after its introduction to this country was regarded as an overrated subject; but within the last two or three years I have met with it in much better condition than previously, and can now understand the remarks of Mr. Barry, of Mount Hope Nurseries, Rochester, who says: 'The Double-flowering Horsechestnut is justly admired for its elegant form and magnificent inflorescence. The absence of fruit, by which much litter is avoided, is an important argument in favor of its employment.' My own notes concerning this variety reveal the fact that it is about a fortnight later in opening its blossoms than the ordinary kind, and consequently extends the blooming season, added to which, the double flowers retain their beauty longer than the single ones."

[The R. N.-Y.'s experience with this beautiful tree, accompanied with an illustration appeared on page 193 for 1881. EDS.]

——FARMERS' REVIEW: "A few days ago, at the Union Stock Yards, the well-known Tom Ponting was talking to a number of cattlemen, and incidentally alluded to the subject of dehorning. Said he: 'My friends, dehorning has cost me $1,000 during the past summer in feeding steers. Deprived of their horns, the cattle huddle together in the shade as close as sheep do, and the heat there is terrible. I tell you they are almost suffocated and lose flesh or make none from the food consumed. Besides this, they kill out the grass where they stand, and in wet weather poach it into mud. This discovery was a revelation to me and I believe the bad effects from crowding in the summer when heat and flies are at their worst, will more than counteract all the advantages claimed for dehorning.'"

——IOWA HOMESTEAD: "So long as the West can produce corn, wheat, beef, pork, sheep, wool and horses and lay them down in Eastern markets cheaper than the Eastern farmer can produce them, the Western farm will afford better security for an investment than the Eastern farm, and therefore the flow of capital from the East to the West is the normal condition in which both the Eastern investor and Western farmer will be profited. It will not always be so. Just as soon as there is a substantial advance in the one item of cattle, Western farmers will begin to pay off their mortgages. Sound loan companies tell us they are doing it even now, and that in the grass and corn districts real estate mortgages are becoming very scarce, even at seven and eight per cent. interest. Firms that loan at six per cent. in large sums tell us it is hard to keep their money out. With such a state of facts it seems strange that agricultural journals in the East should raise the cry that Western mortgages are unsafe. There is nothing safer. We hope in the near future they will become so secure that they will rank with the Government bond and command no higher rate of interest."

——BREEDERS' GAZETTE: "By common consent the fabled crow that dropped pebbles into the long-necked water jug until its contents rose to a hight which enabled him to slake his thirst had a great intellect. There are thousands of people, however, who in a like case seem to lack the perceptive faculties of this long-headed bird of fiction. The farmer who has cattle to sell is just now in about the same position as the raven immortalized in the pages of Æsop. Values receded into the belly of the jug some time ago, but those who have persistently dropped the pebbles of improved blood into the market have been able to get an occasional 'sip' at least. Pebbles—and good large ones, too—are just now cheap and plenty. This fable teaches their use."

——PUCK: "The pig that gets into clover thinks the sward mightier than the pen."

——PECK'S SUN: "It's a remarkable cow that knows his own fodder." "Corn in the ear is worth two on the foot."

AUTUMN WHISPERS

This is the harvest of the year,
And nature now rejoices
The while corn stalk from ear to ear
In ripe and husky voices.

Each ear smiles to its neighbor ear,
Its fair proportions praising,
And all remark the crop this year
Is surely quite a-maize-ing.

—*Chicago Herald.*

——AGRICULTURAL SCIENCE:

"THE MISSOURI AGRICULTURAL COLLEGE VS. PROF. J. W. SANBORN. You were good enough to mention my charges touching the management of the Missouri Agricultural College. Since the matter is thus before your readers, permit me to condense a volume into a few words. I have waged for the past two years a contest against the use of positions under me, as spoil for mere politicians, against nepotism in its worst form, against violent misappropriation of funds, and a general anti-agricultural college atmosphere surrounding the department for which I was in a measure responsible. Agricultural Science reaches the agricultural college workers of this country. I wish them to know that my deposition grew wholly out of a contest made not only in the interest of our Missouri farmers but in the interest of departments of agriculture associated with universities, and hence is a matter of general interest. The contest is sustained by our farmers, and already largely successful, is promising to be wholly so in the end. Pardon this personal statement, but the issue here is a public and not a personal one and more sharply drawn than has before occurred in the history of agricultural colleges of this country. J. W. SANBORN.

Columbia, Missouri, September 3, 1889."

——LIFE: "The season is now here when there is a practical unanimity on the question of a national flower—buckwheat flour."

——AMERICAN GARDEN: "Horticulture offers a field in which many lessons of value in the future may be taught. In the garden we can, not only teach our boys and girls how to grow fruits, flowers and vegetables, but we may lay the foundation of knowledge and a thirst for more, which may prove of inestimable value in later years. Study of Nature leads to the development of knowledge. Youth seeks to know the whys and wherefores of what is going on around us, and as we learn the glories and beauties of Nature we become better fitted to perform our life work, whatever that may be."

——T. B. TERRY IN THE ALBANY CULTIVATOR: "There is no honorable, legitimate business in the world that pays better in proportion to the brains and capital invested than farming."

——W. H. BOWKER IN THE NEW ENGLAND HOMESTEAD: "I want to see as rigid inspection of butter and other food products as there is of fertilizers, and when that time comes everybody will be benefited, except the unscrupulous dealer or manufacturer, who lives by his wits."

——LONDON LIVE STOCK JOURNAL: "A cow's escutcheon: The most remarkable air-bubble of modern times."

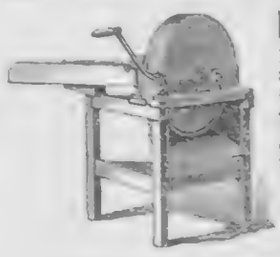
Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

All Run Down from the weakening effects of warm weather, by hard work or from a long illness you should take Hood's Sarsaparilla, which will purify your blood, expel scrofula and all impurities, regulate the liver and other organs, cure headache, give strength and create an appetite. Be sure to get Hood's.

NOTHING ON EARTH WILL MAKE HENS LAY LIKE SHERIDAN'S CONDITION POWDER

Highly concentrated. Dose small. In quantity costs less than one-tenth cent a day per hen. Prevents and cures all diseases. If you can't get it, we send by mail post-paid, One pack. 25c. Five $1. 2 1-4 lb. can $1.20; 5 cans $5. Express paid. Testimonials free. Send stamps or cash. Farmers' Poultry Guide (price 25c.) free with $1.00 orders or more. L. S. JOHNSON & CO., Boston, Mass.



DICK'S FEED CUTTER

For Hay, Straw and Ensilage. *The only machine that cuts and splits corn stalks.* We also sell the TRIUMPH STEAM GENERATOR, and GRIFFING'S CORN SHELLER AND SEPARATOR. Write us at once. **H. B Griffing, Sons & Co., 70 Cortlandt St., New York City. N. Y.**

BOON to DAIRYMEN

Perfect Swinging Cow Stanchion. Self-locking by entrance of cow's head. Free delivery at principal points. Send for circular. Mention this paper. **Scott & Locke, Orford, N. H.**

THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, NOVEMBER 16, 1889.

IT would probably be well for every firm in the country that has new and promising varieties of seed potatoes to offer, to advertise them in the R. N.-Y. Potato Special to be issued in about one month. In that number the prizes of the Rural's National Potato Contest, amounting to about $1,000, will be awarded.

THE R. N.-Y. begs to ask its chemist-friends a question. Upon some of the zinc-labels in use in its experiment grounds, a fine whitish powder accumulates, which destroys the lead-pencil names written thereon. Upon other zinc-labels this does not occur. How may the non-corrosive kind be determined?

TWO MONTHS ago the R. N.-Y. cut some late-sown fodder-corn and stacked it while green in small stacks. We began to feed it last week to the cows. The greater proportion of it is green and sweet, and it makes excellent food for stock. We attempted to follow the method described by Mr. C. S. Rice. A mistake was made in stacking the fodder while it was too green. Aside from that, the experiment was a success. The product is as good as any silage we have seen, and, being tied in small bundles, is easier to handle.

MANY leading horsemen are of the opinion that we are to witness a great increase of interest in the breeding of pacing horses. In past times a great majority of horse-buyers have regarded the pace as an awkward, illegitimate gait. In almost every township throughout the country can be found a farmer who owns and drives a "racker" showing more or less of the true pacing gait. While the neighbors generally recognize the speed of such a horse, they are prejudiced in favor of a square trot or a gallop. Those who have kept close watch of such matters assert that public opinion is changing and that the pacer is gaining new friends, and that within a few years his breeding and training will begin to rank in importance with the development of trotters.

HOW TRULY phenomenal the weather has been this year, not in this country only, but all the world over. Seldom, if ever, has such calamitous destruction of life and property been recorded from meteorological causes. Tens of thousands of lives and tens of millions worth of property have been lost by floods in China and Japan. British India has also suffered very severely. Europe—well the weather record in Europe has been worse than that in America. It looks, too, as if the bad record will remain unbroken till the end. Floods and tempests are still raging beyond the Atlantic; and news of a terrible snow storm and blizzard comes thus early in the year from as far south as New Mexico. Several human deaths are already reported and the fatality among live stock is appalling. Whole herds of sheep, we are told, are being wiped out, and the range for 30 miles round Dayton, N. M., is covered with carcasses. Truly 1889 deserves to be recorded as a phenomenal year in the annals of the Weather Bureau.

AMONG the varieties of sweet corn tried at the Rural Grounds the past season was the "Everbearing" from W. H. Maule, of Philadelphia, Pa. The claim was made that "it ripens a few days before the Early Genesee and that each stalk will produce one to two well developed ears. Now if these are picked when mature, one to two and even four more ears will set and develop on the same stalks during the next two to four weeks, single stalks producing during the season frequently as many as six well developed ears."

The plants grew, in a moderately rich soil, from six to seven feet tall. Some of the stems, leaves and tassels were green, others were purplish. The average number of ears to a plant was two borne from one to two feet above the soil. The ears were about nine inches long, tapering from tip to but and having from eight to 10 rows, which were generally close together and parallel. They ripened a few days after Concord.

No evidence whatever appeared of an "everbearing" propensity.

SEVERAL of the Eastern papers appear muddled with regard to the cause of the differences in the prices of agricultural products in different parts of the country. For instance, the American Economist tells us that while the farmers of Massachusetts can sell their corn for 70 cents per bushel, those of Nebraska can get only 19 cents per bushel for theirs. This great difference is accounted for on the ground that the Massachusetts farmers get 70 cents for their product because it is sold in the home market; while the Nebraska farmers can get only 19 cents for theirs because it is sold in the foreign market. This, of course, is sheer nonsense. The price paid for corn in Massachusetts is the price of Nebraska corn laid down in Massachusetts, with the cost of cartage, freight, handling, storage and commissions added. If this were not the case, why should not Massachusetts consumers buy the cheap corn of Nebraska; and why should so many Massachusetts and other New England farmers desert their home markets and go West to raise 19-cent corn in Nebraska?

LAST Thursday the General Term of the Supreme Court of New York State handed down an opinion affirming Judge Barrett's decision that the Sugar Trust agreement is criminal and that the North River Sugar Refining Company had forfeited its charter by joining it. Judge Barrett's decision was scathing against such combinations; the Supreme Court's is just as trenchant. It says that it is clear that the chief purpose of the trust was to make money by avoiding competition, limiting the supply of a necessary of life, controlling the product and regulating the price. A combination of such a character is, the Court says, subject to the condemnation of the law and "a criminal enterprise." It is a legal misdemeanor to commit any act injurious to trade or commerce, and this and similar trusts are organized for the committal of such acts, as a means of attaining selfish ends hostile to the public welfare; hence the law will neither excuse nor tolerate them.

This decision, concurred in by three out of the four Judges, is considered the most serious blow trusts have hitherto received in this or any other country. It is diametrically opposed to the principle of their organization. This is fundamentally the same in all, and therefore the decision applies to all, though, of course, each will have to be fought separately unless, anticipating their fate, they shall change their organization into a legal form. It is thought that there will be no appeal, and should there be one, it is considered certain by lawyers that the Court of Appeals will affirm the decision so strongly rendered by the two lower courts. The Standard Oil Trust, the exemplar of such organizations and the greatest of them all, is certain to be the next attacked.

RUGOSA CROSSES OF 1889—"AGNES EMILY CARMAN."

WE have just planted about 300 seeds from the white Rosa rugosa, the pollen parents being yellow Tea roses. The aim is to produce a hardy, constant-blooming yellow rose with the disease-resisting foliage of Rosa rugosa—a pretty high aim, to be sure, but one that may not be outside of the possibilities. The rose illustrated in the R. N.-Y. of three weeks ago, the first known hybrid with Rugosa, in so far as published records show, has been handed over to one of our prominent nursery firms for propagation and introduction. The R. N.-Y. has neither the time, the facilities, nor the skill to do such work. It is, moreover, against our long-time principles to use our own columns to effect the sale of anything whatever. It is probable that this rose will have to be propagated either by layering or by budding, as we are informed it cannot profitably be increased by cuttings. In reply to the many friends who have desired to purchase this rose, it may be said that it will be placed in the market so soon as an accumulation of stock warrants its being offered for sale. It has been named "Agnes Emily Carman" as a recognition of the services of one who has aided in producing these hybrid roses not less than has the R. N.-Y. itself.

CHEAP WIT.

THE first report of "Uncle Jerry Rusk," our bright and forceful Secretary of Agriculture, a full synopsis of which is given elsewhere in this issue, is an excellent document from a farmer's standpoint. Of course, therefore, it incurs considerable ridicule from some of the political papers which can see nothing except what is laughable or comical about a farmer, his vocation or anything relating to him. One is quite safe, however, in predicting that not one of the sarcastic and jocular articles and paragraphs that have tickled the fancy of the readers of the daily issues, will be dumped into the weekly editions intended for "rustic readers," although nearly the whole of these editions are hashed up from the "undistributed" type of the dailies. They ridicule the office the Secretary holds as a needless "humbug post;" and carp at his desire to enlarge its functions. They jeer at his plea for more clerks and experts and more money for a library and museum. The idea that the government should help agricultural education is "nuts" to their cheap wit, and they have nothing but a sneer to throw at the proposal to bestow more attention on crop and market reports to aid the farmer against the all-grabbing speculator. They all grandiloquently declare that "agriculture in this country is capable of sustaining, protecting and promoting itself" without government aid. The demand for an appropriation of $1,359,000 for the Department for the next fiscal year is an outrage to their parsimonious-in-the-wrong-place souls, although made for the purpose of "sustaining, protecting and promoting a calling which lies at the foundation of the country's prosperity and power." 'Oh well! let them have their cheap little joke. It pleases them and probably some of their readers, and doesn't hurt us. We ought and will have that appropriation, however,

KEEPING UP THE PACE.

A SUBSCRIBER of the R. N.-Y. who may safely be called one of the most enterprising farmers in the country, writes as follows:

"I don't see how in the world you can continue for a great while gathering such an array of useful matter for your columns. When I see what you put out every week I am thankful I am a farmer and not an editor. Say, during the busy season, I wish you would take a rest and only come out once a month, I get so behind with my reading."

The R. N.-Y. anticipates little difficulty in keeping up the pace it has cut out. It is probably because we know so little about agriculture and are so anxious to learn more, that we are able to present new ideas in a distinct and original manner. If the R. N.-Y. were to assume the part of a dogmatic teacher giving advice and information from the knowledge of its editors alone, the paper might be dull enough. There are thousands of good farmers throughout the country who have become so interested in some particular branch of agriculture that they may be said to have mastered it.

The R. N.-Y. relies upon the help of such men to make its pages bright, varied and instructive. We do not believe there is a paper in the country that has a larger list of contributors than the R. N.-Y. can show, or that has better facilities for reaching and gaining the attention of farmers who have made a reputation for superior excellence in any branch of agriculture. The R. N.-Y. takes a special pride in enlisting the services of such men and the constantly widening range of our list of contributors evidences the success of such efforts. With the help of such men, the R. N.-Y. cannot fail to improve. There is not the least danger of our running short of ideas; agriculture is too hopeful and too interesting to us. There are too many problems to be studied out, too many interesting facts to be recorded, too many methods to be compared, too many of Nature's lessons to be learned. The R. N.-Y. goes at its work with enthusiasm and with the help of its good friends hopes to do its full share in the task of ennobling and enriching the American farmer.

BREVITIES.

FEWER live turkeys are sent to this market than ever before.

SOME interesting notes on "The Cost of Living on the Farm" will be printed next week.

THE R. N.-Y.'s "Brown Patagonians" turn out to be a mixture of Dark Brahma and Polish fowls. They are fine, heavy birds, but in no sense a distinct breed.

THE R. N.-Y. grew a good crop of carrots for the horses and now finds that the animals do not care for them. We had supposed that all horses were fond of carrots.

LET the rats eat the germs from kernels of corn and then give what is left to the hens. The hens will not touch the food unless they are very hungry. What does this prove?

"I WOULD not be without the R. N.-Y. if you raised the price to $5.00 per year. It has saved me many times its cost already this year, so what I get the remainder of the year will be clear gain. W. R. S."
Mapleton, Mich.

THE R. N.-Y. is quite surprised to learn from its correspondents how general the practice of mulching wheat and rye has become. The farmers who make clover seed growing a part of their farm practice find the clover haulm a profitable mulch for winter grain.

THE new Shah Tomato (potato-leaf) was not prized very highly at the Rural Grounds the past season. It is irregular in shape, generally yellow in color though sometimes varying to an Acme and to a yellowish red. The Golden Queen is, in the R.N.-Y.'s opinion, the best yellow.

THE latest novelty in poultry is a Japanese breed, the Mino Hiki, which is to claim recognition on the strength of its long tail. "The tails have been known to grow to a length of 20 feet." (!) The breed seems to be a cross of the Game. It occurs to the R. N.-Y. that American farmers had better do something towards reducing our national egg bill before they go to breeding for "tails 20 feet long."

It seems that there is a demand in Australia for American Merino rams of good breeding. This trade has thus far been almost monopolized by breeders in Vermont, Ohio, New York and Michigan. An effort is now to be made by California breeders to secure a portion of it. California Merino breeders will enjoy advantages in shipping facilities and have also a climate quite similar to that of Australia. So at least the California breeders argue, though they will find that blood from a more northern and colder country will be constantly needed to maintain the heavy fleeces.

That wheat-growers' convention at St. Louis finally "went back" on the lead of the men who wanted to repudiate the competitive principle in the production and sale of grain and organize a gigantic trust. As pointed out in last week's R. N.-Y., the objections to such a course are exceedingly strong. In the long run hundreds of representative farmers in convention assembled are pretty certain to detect any mistakes there may be in any project offered, and the St. Lonis convention, instead of adopting the trust principles, finally resolved to ask Congress for laws to destroy all existing trusts and prevent the formation of others. On the whole, the ways of trusts, like those of other law-breakers, are a trifle hard just now.

THE much self-advertising Claus Spreckels has just opened his big sugar refinery at Philadelphia. Its capacity will be 1,000,000 pounds a day at the outset and 2,000,000 by February. His San Francisco refinery has a capacity of 1,000,000 pounds a day and he is going to build a similar one in New Orleans and has already started a building for doubling the amount of his operations in Philadelphia. These will all be completed, he says, within a year, and then he will turn out 6,000,000 pounds of refined sugar a day. The Sugar Trust now produces 8,000,000 pounds a day, and Claus with highly commendable public spirit and a shrewd eye to private gain, vows an exterminating war against it. With so doughty a rival fighting it in Pennsylvania, and the courts "knocking it out" in New York, the days of the "monopoly" appear to be numbered. Now that Claus has opened his refinery let him shut his mouth—at least for a while.

The Poultry Yard.

PREPARING FOR WINTER.

Now is the time to make everything snug about the poultry house. Have it warm, light and clean, so that the hens will be comfortable and happy. They should have protection from the cold rains of fall, especially if they haven't finished moulting. The house should face the south or southeast, with plenty of windows on that side. Some people think that all the light a hen needs is enough to find the way to bed. The writer knew an intelligent farmer, one who made farming pay, who built a new hen-house, and put just one small pane of glass in it for light; he had plenty of old sashes, too, from an old house he had just torn down; but he "didn't know as hens wanted much light." A hen will not stay in a dark place unless compelled to. Another mistake farmers make is in placing the hen-house in some out-of-the-way corner, like the north side of the barn, where nothing else would be expected to thrive. It should have the sunniest location possible, and should be so placed that the hens may have access to the sheds and barn-yard without getting into the snow, and where they will be protected from the wind as much as possible.

THE HOUSE should be impervious to wind and water. If an old house, it should be thoroughly cleaned, whitewashed liberally with a good allowance of petroleum in the wash, the roosts saturated with petroleum, (the crude is as good for this purpose as any,) the nests emptied and saturated, or burned with their contents, and everything made as clean as possible. The inside of the house should be lined with tarred paper, with the laps covered with laths to keep the paper snugly in place.

THE ROOSTS should be placed low down, and all on the same level. The old fashion of building the roosts like a ladder is a very pernicious one. The hens all want the highest places like the Scribes and Pharisees of old, and crowd each other to get there. A board should be placed under the roosts to catch the droppings, sprinkled with land-plaster, dry earth or sifted coal ashes, and cleaned off frequently—every day is not too often. The roosts should not be too narrow especially if the fowls are heavy. Inch boards cut into strips three or four inches wide are best. Make everything smooth so as not to harbor vermin.

THE NESTS should be arranged so as to be dark to prevent the hens acquiring the habit of egg-eating.

THE FEED BOXES for feeding soft feed should be so placed that the hens cannot get into them with their feet. The best arrangement is an alley two or three feet wide running the length of the building, separated by a lath partition, through which the hens may reach the feed placed in troughs in the alley. The nests and roosts may also be placed next the alley, so that the eggs may be gathered and droppings removed without going inside the pens.

THE FLOOR should be covered with several inches of dry earth, and littered with straw among which the grain should be scattered. Provide also a dust-box, and box of bone, gravel or other grinding material. Don't forget, also, to provide suitable drinking vessels. The man still lives who claims that hens don't need water. The man also lives who thinks hens don't pay. Well, they don't pay—some folks—and no wonder.

GREEN FOOD also, should be provided; cabbages are excellent, and soft heads may be utilized if buried. Clover is also excellent either siloed or as hay chopped and steamed as wanted.

WINTER LAYERS. Early-hatched pullets and early-moulting hens are best. Don't be foolish enough to think they will not lay if deprived of a male companion. They will lay just as many eggs, if not more, and the eggs keep better if not fertilized.

BREEDING STOCK should be selected from the best layers. On most farms, one pen of a dozen or 15 hens will furnish all the eggs required for setting. One cock is sufficient for that number, unless he be a Brahma, when two will be required. Now, what earthly use is there in keeping a half-dozen or more roosters to worry the hens, and eat the provender when only one is needed? Select a dozen or 15 of the best hens or pullets, and put them in a pen by themselves: then get a rooster of different blood—a full-blood can usually be purchased very cheap in the fall—and you are in a position to improve your stock at least 50 per cent. The old haphazard way of setting eggs from the flock at large should be a thing of the past. Decapitate the rest of the worthless cockerels, and hold a thanksgiving feast over the remains. You wouldn't think of raising calves from your poorest cows to replenish your dairy, now, would you? You would most likely select the best cow for a breeder. Why not follow the same rule with the poultry and improve the stock?

Field Crops.

BUCEPHALUS BROWN'S NOTIONS AND IDEAS.

THE POTATO CROP has been harvested, and in New England is, to a great extent, marketed. The very early spring encouraged extensive planting, and the absence of frost after April 1, prevented anticipated losses from that cause; so that up to August 1 there was the general expectation of an immense crop, with consequent low prices. I understand that many R. N.-Y. readers are anxious to know the outcome of the large area planted by one of my neighbors, to which I referred some time since.

SIXTY ACRES is a large area indeed for a single farmer to plant with potatoes in this section, and the experiment was regarded as extra-hazardous. The whole work of planting, cultivating and harvesting was done by machinery, and the first 18 acres were got in so early that they were fairly well matured before any disease appeared, the crop being about 200 bushels per acre, sold at 80 cents, less commissions and freight.

THE FORTY-TWO ACRES remaining began to blight very early in August, and soon the tops were entirely dead. The feeling was that the crop would be very small, and the tubers inferior. Rot was likely to make them not worth digging. This crowning misfortune, however, did not appear, and, as digging proceeded, it was seen that things were not so bad as to leave no profit from the adventure. I have just received the figures of the entire crop on the whole 60 acres, which are as follows:—8,958 bushels sold at an average net price of 49 cents per bushel; 800 bushels reserved for seed, 100 bushels on hand, besides the small potatoes from the whole crop. The entire expense of seed, fertilizer, planting, cultivating, and harvesting was $2,100, or $35 per acre.

THESE FIGURES show that even in so unfavorable a year a very fair profit was possible; and it seems to me evident that it was insured, under the circumstances, only by the liberal fertilization of 1,000 pounds of Stockbridge Potato Fertilizer per acre, at a cost of $1,140, which was more than half of the total expense. I say this with the more assurance, because my own crop of 10 acres, planted at the same time, on similar land, with 600 pounds of the same fertilizer per acre, did not quite reach 100 bushels per acre. I do not see any reason why the extra 400 pounds of fertilizer did not give my neighbor his extra 65 bushels per acre.

TAKING ACCOUNT only of cash expenditures and receipts, there was a net profit on the crop of $2,289.42 I do not understand that my friend's personal labor, or the cost of the team work of his own horses, the wear of implements, etc., are included in the $35 per acre of expenses; but these are well offset by the potatoes left unsold and reserved for seed.

SOME LESSONS are to be learned by this experience, and the most striking one, perhaps, is that blight and rust may together destroy the life of the potato plant without causing the tubers to become diseased. This knocks over quite a number of theoretical opinions on the subject. Allowing that the rot is really caused by the blight or rust fungus running down the stems into the tubers, how can the fact that scarcely any rot appeared in this crop be explained? It may possibly be said that if the rot is caused by the rust fungus, then the early advent and rapid work of the blight prevented the spread of that fungus to the tubers by suddenly killing the tops, allowing them to dry up so quickly and thoroughly that the rust fungus could not reach the tubers.

THE PAST SEASON has been a very exceptional one, and for that reason its teachings are of limited value as a guide to future practice. It has been a phenomenal year all around. No frost from April 1 to October 5, in northern New England is a thing almost if not quite unknown in past experience. A very warm May was followed by a cool June and July, with much rain and very little sun. Early September was warm and dry, followed by three weeks of wet weather. Since October 7, fine harvest weather has continued up to the present date, October 21.

Miscellaneous.

MORE ABOUT SELLING CROPS.

CANADA.

OUR principal crop here is wheat, and as our prices are ruled by those in the European markets and the quantity in view from other countries as well as our own, to ascertain these points we have to rely on the reports in what we think the most reliable newspapers at home and abroad. We study them and act accordingly. I have sometimes kept grain over two seasons when I thought it too cheap, and have gained by doing so sometimes, but as often lost, if not in price, by shrinkage in different ways. The market is so much ruled now by millionaire bulls and bears, that it is very difficult to tell how it will turn, and therefore I think that, taking one year with another, when we can get a fair price it is best to sell early; but when prices are very low I would risk keeping the product back. T. B. M.

Hamilton.

CROPS around here are generally sold as soon as harvested. The producers keep themselves posted by studying the daily papers and through commission merchants.

St. Catharines. A. J. D.

I RAISE only small fruits and market them at our home market in the city of Hamilton. I find that by growing number-one stuff I establish a ready sale to my own customers. I start with strawberries, raspberries, blackberries, plums and peaches, and close the season with grapes and apples. T. S.

Grimsby.

KANSAS.

IN selling winter wheat we depend on papers from Kansas City and Chicago, to keep us posted. We generally hold till late in spring, as prices are then generally higher, though we are governed somewhat by the prospects of the next crop.

Hogs, we sell as soon as they are fat, feeding all the year round, generally waiting to make a car-load, so as ship to Kansas City ourselves. Cattle we commence feeding in September or October and feed about six months till spring, and sell without letting them have any green grass in the spring till sold. J. H. T.

Chapman.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

WHAT are you going to do during the long winter evenings? Now is the time to plan amusements and occupations for the coming season. Crochet work and gossip,—we don't mean ill-natured gossip, but just trivial talk about persons and things,—will form the evening's occupation in a good many households. As to the first, a little crocheted edging is all well enough, but it should not be allowed to exclude other work. Apart from the fact that change is desirable and bought edging cheap, it is tiring to the eyes. But individual taste must decide this.

* * *

CHANGE of work is desirable, so let the "pick-up" occupations vary from crochet work to embroidery or outlining or drawn work, or whatever may be chosen. And as a relief from aimless talk which may easily degenerate into ill-natured gossip (for few among us are above this occasionally,) let some book be chosen for reading aloud. Where there are several readers to take turns, this becomes both pleasant and profitable to all. We don't recommend confining the reading to those books which are severely described as "improving," rather than anything else; they should be pleasant also. In addition to history, travels, biography and general essays, some good novels should be read. Where there are young girls, Miss Alcott should have a place of honor; so should Miss Mulock. We wish that every romantic girl, who thinks she is suffering from crushed affections, could read the latter's pathetic little story "Miss Tommy," or "My Mother and I." But this authoress is so fully a woman writing to women, her purity and high-minded simplicity make her an educator among girls.

* * *

BOOKS are not always plentiful, but one may usually find something to read, and let it always be the best obtainable. After all, the girl with a taste for books which she can't always obtain is better off than one with plenty of books and no appreciation thereof.

THE EAST WIND.

OUR CORRESPONDENT, Docia Dykens, writes as follows in a recent letter:

"There was a criticism of some length in the paper on my remarks about the "East Wind," and it was just a little unjust to accuse me with having merely repeated remarks garnered from English books. The editor's theory in regard to the east wind in this country may be correct as a theory, but practically it is not applicable to this particular spot on the globe. I live on an island in the lower end of Lake Erie. The lake is frozen over just about three months. When the ice breaks up in the spring it *always* floats down towards Buffalo and lingers there for weeks after this part of the lake is clear of ice, consequently the winds from the east blowing over all this ice are extremely cold and piercing, and often bring large fields of ice back to our channels here. We have more east winds in the spring than at any other season; but at any season a northeaster on the la e makes the roughest sea we have. Our prevailing winds through the summer are from the west and southwest, the latter being especially mild and delightful."

THE FAMILY PAPER.

J. H. G.

I HAVE noticed that many farmers' wives and daughters oppose the taking of an agricultural paper in the same way as a professional or business man takes a paper. They do not think the men folks can afford to take a paper devoted exclusively to their calling. They want a story paper which contains acceptable stories; no matter what else it may contain, it is good enough for the family. In this they make a great mistake. From such papers the boys and the girls get false notions of life. Instead of fostering a love for the homestead and the old folks, such papers tend to induce the boys to go out into the world and make their fortunes and marry an heiress, as the heroes in the stories do; or the girls want to acquire the bewitching ways of the heroines they read about and marry the son of a millionaire or a foreign nobleman. When it is too late the mother discovers that she has been nursing the Demon of Discontent, until her family has been ruined by him. There is no better or more exalted occupation in life than that of agriculture and home-keeping, and mothers should see to it that only such papers as exalt agriculture and home life should be allowed in their homes. Infidelity is doing its devilish work in American homes, as well as in American churches. The mother who is quietly and unostentatiously teaching her boys and girls that there is no place like home, be it ever so humble, and who is tying them fast to her apron strings with the golden chains of love and reverence, is doing a far nobler work than she who is trying to make her children brilliant. The one means it may be moderate success with an assurance of health and happiness; while the other means in all probability lamentable failure and misery. No farmer's wife with the true interests of her family at heart will ever begrudge the price of a good agricultural and home paper. If your husband will not subscribe for it, make your eldest

boy a Christmas present of it, and get it in the family.

LETTERS TO A COUSIN.

IV.

MY DEAR COUSIN:—And so you have read "Looking Backward," and you think the idea altogether chimerical. Furthermore, you have no patience with a man who would fall asleep on the eve of his wedding day and sleep 112 years, and then wake up and fall in love with his sweetheart's grand-daughter (as witty as ever); lastly, you are not particularly interested in social reforms. Very well, my dear cousin, but you shall not be left in ignorance by the wayside. The demand for Edward Bellamy's book has been phenomenal, the sales averaging 1,100 copies per day. The clever plausibility of his schemes has captivated many readers. "Yes" (I hear you say) "people like to be humbugged." Of course that is all true, but do let us be humbugged in a new way just for a change. We are rather tired of the old. Two new clubs, the Nationalists and the Christian Socialists, that were organized in Boston, and now have members all over the Union, have adopted many of Bellamy's ideas. The Christian Socialists urge the members of their club to live up to their own creed of treating all mankind as brothers. Their organ, "Davon," has on its list of contributors the names of many prominent writers, among others being those of Rev. Dr. E. E. Hale, Col. T. W. Higginson, Mrs. Helen Campbell (who wrote "Prisoners of Poverty") Rev. Dr. Heber Newton, Rabbi Schindler and Edward Bellamy. Now, will you still elevate your head and say with withering scorn and a fine show of incredulity that the book is all "bosh" when some of our most earnest thinkers pronounce it good?

The Nationalists also have an organ, the Nationalist, which has a very wide circulation. They, as their name indicates, put their hope in the nationalization of all industry, and claim that combination and not competition is the life of trade. So much for that subject. I will not go into details, for I am pretty certain they would bore you, and sometimes I do have a little consideration for the person to whom I am writing.

The Library Association of S——are giving a course of lectures this season that promise to be very interesting. The Rev. Frank W. Gunsanlus, of Chicago, lectured on Savonarola, the Italian priest and reformer, on the opening night. He gave a brief sketch of the agitator's boyhood, then dwelt at some length on his life and work among the Florentines (George Eliot vividly describes this part of the man's life in Romola), and finally, in a striking word picture portrayed the tragic end. Mr. Gunsanlus is a very enthusiastic speaker, and carries his audience right along with him. A friend told me that last year, at Chautauqua, some one asked for a definition of eloquence, and a gentleman arose and answered "Frank W. Gunsanlus, we considered him the personification of eloquence." Perhaps you remember him when he was pastor of Eastwood Chapel in C——and afterwards filled the large opera-house Sunday afternoons with wide-awake people. That was eight or nine years ago, and he was said to be only twenty-three then. We all thought him wonderful, but people predicted that he would not last long, and thought he was killing himself by hard study. Socially, he was very much beloved. At a picnic he seemed in his element and would crack jokes all the way home, riding in the tail-end of a big wagon with his long legs swinging almost to the ground. A pretty young girl who taught in his Sunday-school was worrying over her graduation essay and he kindly offered to help her. Of course, she got along swimmingly then. I've forgotten what her subject was, but it was something big and when she handed it in, the Principal of the school read it over and then looked up with his keen, black eyes and said quietly: "Who helped you with this?" "Mr. Gunsanlus." "Very well, suppose you go home and write one yourself now." Mr. G.'s family consists of his wife, two or three little boys and a sister. At home he was just a big boy romping with the little boys. His sister took one or two special studies at the school I attended, and was considered very intellectual; indeed, her talented brother used to say that she was the flower of the family. I haven't heard of her for a long time. I believe she married. Mr. Gunsanlus always managed to have the best musical talent in the city at his church. He used to say he could not preach at all if there was no music, but after a grand solo he always felt inspired.

Speaking of music, I went to hear Emma Abbott a few weeks ago in the opera, "Romeo and Juliet." Her costumes were gorgeous; but Emma herself is not as pretty as she once was, nor is her voice anything wonderful. Moreover, the character, "Juliet," is not at all suited to her style. But something occurred that made the evening exceedingly interesting, and I wonder if I can make it appear so to you. To begin with, there were three in our party and I occupied the third seat from the end of the row. Just in front of us, occupying the first and second seats, was a large, light-complexioned man and a slender, nice-looking young lady. He was the most voluble talker I ever heard, and you perceive that when he turned to talk to the young lady he also came very near facing me—so near, in fact, that it was quite impossible to avoid listening to the talk that flowed on incessantly. It was also impossible not to be amused. He had deep, glittering blue eyes and a long, light beard, and I quite forgot to say at first that he was a German and talked in his native tongue and was evidently well educated. He talked of music, the drama and a hundred other things, to which I, of course, gave little heed. But suddenly my attention was arrested by these words: "Will you have me for your husband?" (literally translated) Imagine! Could I have heard aright? Yes, there was no mistaking the look with which he was regarding his companion. "Heavens!" I whispered to F. "That man has just proposed to the girl!" She evidently gave him a negative answer for he looked furious and exclaimed. "Very well, I will take you home and we will break this right off to-night." Oh me! I asure you that the stage "Romeo" only had half of our attention after that. The curtain rose on the last act, the poison scene, and the irrate Teuton would cast swift glaces from the stage to his companion and utter a word or two under his tawny beard, which seemed to mean that he would do something equally desperate. The young lady had grown quite white and kept her opera glasses up to her eyes to avoid *his* gaze. I, too, had to fasten my attention on the stage, for he seemed to comprehend that I had understood and told, and consequently stared at me in a most annihilating manner. Nevertheless, I have lived to tell the tale. We watched them leave the theater and walk three or four squares, he on one side of the pavement, she on the other. Well, dearest, so much for having bestowed a little of my precious time on the study of German. "A little learning is a dangerous thing." It has certainly made me one enemy. We all agreed that the girl did perfectly right to refuse him, but if her answer had been different our amusement would have been greater, for I beleive he would have made himself quite ridiculous. Criticize me if you will, but do it with loving skill.

Affectionately, DOCIA DYKENS.

GOLDEN GRAINS.

TALMAGE says it is a good thing to graduate at the Royal College of Trouble. These graduates are in all the higher and nobler walks of life; in all the more illustrious ranks of the redeemed. Have you not observed that many of our greatest and most effective writers and reformers have been fitted for their special work by the baptism of tears? When men receive the honor of knighthood, they are touched with the flat side of the sword. When men are set apart for the honors and dignities of the Kingdom of God, they are pierced by the sharp point and cut by the sharp edge. Suffering is the road to perfection alike with individuals, nations and the world itself. All is necessary. Paul suffered much, but Paul could not afford to dispense with one shackle, one scourging, one pang. It was training. It was the royal school of trouble. It was the road to perfection.....

THE Christian idea of repentance, says Dr. Eaton, involves two chief elements—the changing of one's mind and the reformation of one's habits of life. It is not enough for a man to say before the altar that he is sorry for his sins and then go out into the world and commit the same sins again. It is not enough for a drunkard to repent of drunkenness and then continue in drunkenness. The sinner who has really repented will no longer sin; the drunkard who has repented will no longer use false weights and measures; the politician who has repented will no longer tamper with the consciences of voters, or seek to buy his way into public office, and the minister who has repented of indifference and coldness will no longer try to bring his hearers to Christ by half-hearted services.....

DR. COLLYER reminds us that we never speak of Washington as an old man. He was struck with immortal youth. Washington did not ask if life was worth living, but he proposed to himself to make life worth living. His great watchword was "duty"—not pleasure, not the pursuit of money as the end of life and living, but "duty." In the wilderness, on the battle-field, in the market, in the camp, in the council he was a man of amplest influence. Everywhere they found him asking: "Is this my duty as a Christian?" A whole man, and therefore a holy man, his great example stands colossal seen of every land. "The path of duty was the way to glory."

BEECHER says that every man is for truth, or he is for error. Every man is for right, or he is for wrong. Every man is for benevolence, or he is for selfishness. Every man is for the spiritual, or he is for the animal.....

IN what other painful event of life has a good man so little sympathy as when overcome with sleep in meeting time? In his lawful bed a man cannot sleep, and in his pew he cannot keep awake!.....

IN reply to an inquiry, Lyman Abbott defines Mr. Beecher's position on the subject of Christian Evolution:

"Evolution" signifies the derivation of all the various forms of life from a common origin, by progressive change, according to certain laws, and by means of resident forces. It is best typified by the course of embryonic development. "Christian evolution" is a phrase which represents the belief that the efficient forces of such a process are the energy of God in Nature. Mr. Beecher so believed. See his book. Christ's saving work, as he taught, includes all that Jesus did and said and suffered. The death of Christ, in Mr. Beecher's view, was no less a part of his saving work than his life.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

"The tissues of the life to be
We weave with colors all our own,
And in the field of destiny
We reap as we have sown."

—Whittier.

EXTRACTS FROM SUNDAY EVENING TALKS AT THE RURAL GROUNDS.

"FOR unto whomsoever much is given, of him shall much be required: and to whom men have committed much, of him they will ask the more."

"We must make some allowance for him, because he does not know any better!"

"There is no possible excuse for him, because he ought to know better!"

We have all heard these expressions; we have doubtless all thought them when considering the shortcomings of others. It seems to be natural for us to look at things in that way. It seems to be a part of the natural justice that lies at the base of all our thoughts and feelings to believe that education and study carry with them a certain responsibility, while the lack of them, to a certain extent, absolves one from responsibility. Whether right or wrong, this idea holds. We are always shocked at witnessing an act of rudeness on the part of one who has had every advantage of polite society. The rough fellow, who never had any "bringing up," may disgust us by his ill-manners, but we are far more ready to find excuses for him than for the man who "ought to know better" because of his education and associations. And so it is with other qualities. The just critic always considers this matter of education before forming a decided judgment. A little reflection will convince all of you that this is true. With this fact in mind, two things occur to me that I think are worth considering.

First. Education of any kind involves a responsibility that cannot be dodged.

Second. No man or woman who wants to be self-respecting can afford to go through life taking advantage of the leniency granted those who fail to assume this responsibility.

I believe in a doctrine of strict accountability. The country contains so much wealth. One man by earnest application and hardest toil accumulates millions. Will he not be held responsible for the spending of his money? Will there be for him only praise for the energy and perseverance displayed in gathering it together? How much good have you done with your wealth? How have you invested it so that heavy hearts have been made lighter, so that light has chased away shadow, so that the world has grown better and happier? It seems fair enough, to me, that such questions will be asked of the man who is rich in this world's goods, and that a rich reward may be due the one who, by means of honest and manly effort, accumulates a fortune and spends it so that the world is made better. There need be nothing necessarily wicked about the accumulation of a fortune. Too many who accumulate money forget about the responsibility that goes with it.

It is much the same way with an education—and by education I mean the information we may acquire concerning any subject—it makes no difference what it may be. We should remember that the moment we learn the difference between the right and the wrong of any matter we assume a new responsibility. We are not as we were before. When held to a strict and fair account, we cannot plead ignorance as an excuse for any dodging of duty on the lines included in the scope of our study or observation. The accumulation of mental wealth, reading, thinking, observing, entails a responsibility as certain as that following the gathering of money. Why should we not be held to a strict account for the information we acquire? How have you used your learning? In how far has it taught you charity, patience, strength of character, ability to withstand disappointments and losses, ability to advise and comfort others? And how far have you made use of this ability in your intercourse with those about you? Why are not these questions as fair and just as those that may be asked of the rich man? It is safe to assume that when the final summing up of our lives takes place, such questions as these will be considered.

It is the duty of the even-minded human being to do his best to cultivate and improve his mind. The mind is the richest, most delicate gift that God has given us. It is the index of life revealing our thoughts, our lives, our mental struggles and investigations clearly and honestly. The training of this mind is the life-work assigned to every human creature, and it is fair that we should be judged by the showing we make at the end. Live a blank, vacant, purposeless life, filled with thoughts only of present and future pleasures, stale commonplaces in the way of thoughts and a course of reading that brings nothing but amusement, and what sort of a mind do you turn out?

No, God meant, when He placed within your reach the great privileges of thought and study, that you should be held responsible for the use or abuse of that privilege. The world has been filled with opportunities for drawing in strong, beautiful and helpful thoughts. Good and true men and women have left the records of pure and beautiful lives for us to ponder over. Great minds have left strong thoughts for us to study and apply to our own needs and our own circumstances. Nature is filled with the most wonderful examples of the certain results that follow a true observance of the laws of life.

Do you not believe then that the human being who, in the midst of all this wealth of information and wisdom, fails to grasp what he can, fails to draw into his own life and soul a portion, at least, of the sweet examples of patience, fortitude and strength, that other lives have left us, that dumb lives are acting before us every day, fails to live up to his possibilities and fails to carry out the work God gave him to do? Who is worse, the one that knows the difference between right and wrong and then

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria,
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

fails to do right, or the one that fails to accept an opportunity to learn the right and then pleads his ignorance as an excuse for wrong-doing? It is my belief that the latter is as deserving of punishment as the former.

So I would have every boy and girl, every man and woman impressed with the idea that it is their duty as reasoning human beings to cultivate and improve the mind—to acquire information—just as much as it is their duty to preserve the health of the body. Both have been given us in trust, when we hand them back they will be examined and measured for progress. That is fact one. Another fact is that education is a serious matter since every fact we assimilate increases our responsibility and decreases the number of excuses we might reasonably offer for wrong doing.

A HOUSEHOLD cannot thrive whose mistress does not realize the value of *fixed times* scrupulously adhered to.

ODDS AND ENDS FOR THE HOME.

FOR years somber mahogany, walnut and ebony held sway. Now, however, light woods, such as antique oak and ash, are used in preference. They give a cheerful, light tone to a room, and save the housekeeper lots of worry, for the highly polished dark woods always appear with a coat of dust, despite repeated brushing and dusting.

* * *

SUPERABUNDANCE of ornament, both in the way of pictures and bric-a-brac, wearies the eye and obtrudes unpleasantly upon the notice. It also gives one a heavy or depressed feeling to go into a room which is overcrowded in this manner. Too little ornament is also to be avoided, for this latter condition makes an apartment look bleak and bare. A happy medium is best.

* * *

SECURE a large proportion of plain neutral tints in your rooms. Positive or brilliant colors shou ld be used only in small portions.

* * *

PLAIN colors are more restful to the eye than any regular "pattern" can ever be. It is best, therefore, in the room where one spends most of the time—where one works—to banish patterns as much as possible.

* * *

NARROW oak frames, about three-quarters of an inch to one inch wide, are very pretty for etchings, engravings, or water-colors. To my mind plain frames are the best. Who has not seen an elaborate gilt frame, inches and inches wide, containing a tiny color or print in the center? To me this is ridiculous. The *picture* should be the noticeable thing—not the frame. Plain, flat, natural wood frames showing the grain, are very pretty indeed. We are glad to see that they have been growing in favor for the last few years.

* * *

ANOTHER departure from the gaudy, glaring, gilt frames formerly the rage is a plain flat frame made of wood, with a thin coat of silver. The grain of the wood shows through and is very effective indeed.

* * *

ANOTHER cunning device is to extend the picture, or portions of it, across the smooth, flat frame. While in an art gallery in Philadelphia a short time ago, I saw several pictures treated in this way. One represented a limb of an apple tree, filled with soft pink-and-white blossoms. On the limb perched a bird, with its mouth open as if singing! The bough ran diagonally across the picture from left to right and continued over the frame, which was of flat natural wood about four or five inches wide. On the upper right-hand corner of the frame above the branches was a flying bird—probably the mate of the songster on the bough. The effect was lovely in the extreme.

* * *

ANOTHER represented a chained lion and tiger. The picture was large and the chains were apparently of heavy metal. Where the chains ceased in the picture they commenced on the frame, only on the latter they were made of metal and fastened to a stake. The effect was very good and one could scarcely detect where the picture ceased and the reality began.

* * *

STILL another, treated in the same way, represented a sea beach. Off in the distance the fishing smacks were visible. On the beach were several men and boys, some preparing to leave, while others were mending their nets. The nets were spread on the sands and extended across the flat frame, only on the frame they were made of the real material.

* * *

MONEY alone cannot make artistic homes—unless one who has money and no artistic taste hires the proper person to spend the money for him. Refinement cannot be purchased at will along with expensive articles of dress or furniture. It must come by education in the principles of art, and, therefore, takes time. True culture is a growth, not a garment.

DORA HARVEY VROOMAN.

LIFE says that a skillful cook is the most popular of all interior decorators.

MUNSEY'S WEEKLY: Mr. Filosopher (handing his wife a 20-dollar bill): "Woman is an enigma."

Mrs. Filosopher: "Thanks, dear. But why did you make that remark?"

Mr. Filosopher: "She will face a frowning world and cling to the man she loves through the most bitter season of trial and adversity; but she wouldn't wear a hat three weeks behind the style to save the government."

JOSEPH JEFFERSON in his Autobiography in November Century writing of "hard times" says that his mother was a brave woman and endowed with that kind of pride that preferred the degradation of earning an honest living to the more elegant profession of getting in debt.

"The tongue is the key of the mind:
And whenever it opens the secret-hung door,
What lies in the storehouse behind,
Whether gems or mere rubbish is hidden no more."

HEALTH OF MOTHERS.

"I BELIEVE it is a positive sin for me to be sick," says one mother, "for I never can feel or act like a Christian when I am ill." All women certainly should desire to be well and strong, and mothers particularly need the blessings of health, yet how pitifully few of them are free from bodily ailment. So many requirements of their lives are opposed to the best conditions of health, that, unless special care is taken, illness seems well-nigh unavoidable.

The numerous, varied, and continual demands on time, strength, patience and every mental and moral faculty, are exhausting in the extreme, and unless one is able to marshal sufficient physical force to meet them fairly, life can be little else than a burden. All honor to those rare, beautiful souls who have learned to bear invalidism with patience and sweetness! But the accomplishment is too difficult and doubtful of attainment for most of us, and she who would best minister to her loved ones should make all possible effort to secure and to keep good health.

If mothers fully realized how much health depends on the amount of pure air taken into the lungs, they would at least try to breathe better. They do have time for that, if not for regular out-door exercise. What a grand thing it is to *breathe*—really breathe—long and regularly to the very depths of one's lungs! It is restful and invigorating, yet thousands of women never know this luxury, simply because their manner of dress will not permit it. If only women *would cease* to consider corsets a necessity! If they would only assert their rights and declare themselves free from the thralldom of that health-destroying implement! But they won't! They will continue to spend money that might mean shoes, or bread, or bibles for somebody, to squeeze the life out of themselves. Not that they ever wear corsets tight—oh no, "why you could put your whole hand under" every time; and then if they didn't wear them, they "would drop all to pieces," you know. Their muscles so long cramped and insufficiently nourished have not strength to be self-supporting, and they probably would fly into thousands of fragments if corsets were removed.

Men are much healthier than women and corsets are undoubtedly mainly responsible for this difference, yet multitudes of women might believe and know that who would continue to wear them just the same. They would tell you how nice they think it must be to be well and strong; but then they "would be of no shape at all without corsets." Besides, if they should get very sick there are plenty of pills and powders and liquid swindles at $1 per bottle, the swallowing of which is much less bothersome than the doing of some sensible thing in the way of dress and exercise; and so their precious God-given health must be sacrificed for *looks*! But Dame Nature has her own tyrannical ways and will not accept medicine as a substitute for pure air. Her method of purifying the blood is to let plenty of oxygen into it, and if people will prevent the free action of the lungs they must sooner or later be severely punished. A whole army of diseases just outside the human citadel lies in wait to attack the first weak point. Strengthen every part that it may successfully resist disease, and the secret of good health is won. As there is no strengthener like pure blood and no blood-purifier like pure air, common sense and religion teach the folly and sin of disregarding human nature's grand processes.

But wrong as it is for any one to do this, the crime seems tenfold greater when *mothers* ignore the righteous laws of human life and health. If mothers and all the dear girls who may become mothers, would breathe, dress and exercise properly, the dawn of a healthier, happier era would be at hand. Consumption, rightly called "lung starvation," would be well-nigh impossible if right breathing were always practised. Thousands of people who seek health in Florida and elsewhere, might get well at home if they were willing and persevering enough to make right use of their lungs. If pure air could be sold by the bottle or the pound, it might, perhaps, be more properly regarded; but it is so cheap and so abundant—to be had, like salvation, simply for the taking—that its curative powers are greatly underestimated.

Oh! mothers, weak and exhausted with your many cares, threatened, perhaps, with disease, but without time or means to take expensive journeys, even though you die, try this simple remedy—not spasmodically, but regularly and persistently. It will help you far more than all the medicine you can take, and it will not cost you a penny either. Take care of your bodies, dear mothers; they are the soul's necessary machinery during this life, and one's best work can never be done unless the machine is kept in harmonious working order. It is a religious duty to keep as well as possible and mothers owe it to the generations following to bequeath them as perfect health as lies in their power. Take needed rest and recreation, take rides and walks and frequent baths—and daily naps, if you can—but whatever else you do or fail to do, wherever you are or however you feel, be sure that you breathe, *breathe, breathe.*

CARRIE ELLIS BRECK.

ACCORDING to the London Queen, black will be much worn this winter. The fashionable colors of the moment are pampas-green, emerald-green, bison-brown and reddish violet.

Miscellaneous Advertising.

For Women

Of delicate constitution, no better medicine can be recommended than

AYER'S Sarsaparilla.

It is highly concentrated, economical, safe, and pleasant to to take.

"This is to certify that after having been sick for twelve years with kidney disease and general debility, and having been treated by several physicians without relief, I am now better in every respect, and think I am nearly well, having taken seven bottles of Ayer's Sarsaparilla."—Maria Ludwigson, Albert Lea, Minnesota.

Ayer's Sarsaparilla,

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

Price, $1; six, $5. Worth $5 a bottle.

THE GREAT ENGLISH REMEDY.

Beecham's Pills

For Bilious and Nervous Disorders.

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BY ALL DRUGGISTS.

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W. BAKER & CO.'S Breakfast Cocoa

Is absolutely pure and it is soluble.

No Chemicals

are used in its preparation. It has *more than three times the strength* of Cocoa mixed with Starch, Arrowroot or Sugar, and is therefore far more economical, *costing less than one cent a cup.* It is delicious, nourishing, strengthening, EASILY DIGESTED, and admirably adapted for invalids as well as persons in health.

Sold by Grocers everywhere.

W. BAKER & CO., Dorchester, Mass.

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FARMERS We make the only **Saw Mill** in America that *fully* suits your purpose. Cuts 2000 ft. per day with 4 H. P., and 10,000 with 15 H. P. Larger sizes up to 50,000 ft. per day. Also Portable Corn and Flour Mills, Water Wheels, etc. Send for catalogue. DeLOACH MILL MFG. CO., ATLANTA, GA.

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Lowden's Perfection, Latest Improved. Best Field Fence Machine in the U. S. Every Farmer his own fence builder Write for Illustrated Catalogue to L. C. LOWDEN, Indianapolis, Ind.

AGENTS LOOK HERE and **Farmers** with no experience make **$2.50 an hour** during spare time. A. D. BATES, 164 W. Robbins Ave., Covington, Ky., made **$21 one day, $81 one week.** So can you. **Proofs and catalogue free.** J. E. SHEPARD & Co., Cincinnati, O.

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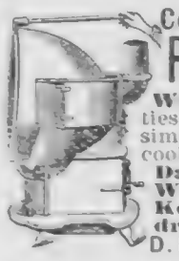

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BEACHAM'S PILLS cure sick headache.

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News of the Week.

HOME NEWS.

SATURDAY, November 9, 1889.

TUESDAY'S elections were pretty bad for the Republicans. The Democrats carried New York State by over 20,000, though the Republicans have the Senate by 19 to 13 and the Assembly by 68 to 60—a decreased majority in both houses. Iowa, always a Republican State, went Democratic by at least 7,000, but there too the Republicans have the legislature on joint ballot, securing a Republican U. S. Senator. Campbell has beaten Foraker in Ohio by about 12,000, and the legislature, too, is Democratic by a majority of 10, blasting the Senatorial hopes of the fiery Halstead and bringing Rice forward as a Senatorial possibility. Abbett has won the governorship of New Jersey by 12,000 majority over his Republican rival, Grubb. The Senate is Republican by one majority, but the House is strongly Democratic. The Republican plurality in Massachusetts is only 6,000. Russell, the Democratic candidate for Governor, and a "farmers' friend," made a splendid fight. Mahone has been "snowed under" by a majority of 35,000 in Virginia, but he is probably too lively a little man to stay down. Nebraska has given a solid Republican majority of 25,000. It was, of course, a Democratic "walk-over" in Mississippi. The Republicans attribute their reverses to neglect and lack of interest in their masses in an "off" year; also to failure of the government to "turn the rascals out" fast enough to make room for greedy office-seekers, and to a smaller extent to the Tanner embroglio. The Democrats say the people are getting educated, especially on the tariff question. Both parties express unbounded confidence in future triumphs..... .....
The Pan-Americans have swung round the circle back to Philadelphia. They've been having a happy and instructive time of it.. Thursday last Miss Kate Drexel, the second daughter of the late F. A. Drexel, the well-known Philadelphia banker, who left her $6,000,000, took the white veil of the novitiate at the Convent of the Sisters of Mercy, at Pittsburg, Pa. She can "go into the world" any time for the next two years, and with $6,000,000 she could easily buy an impecunious duke or even prince in Europe. .....Philip Armour, Jr. and Miss Mae Lester, daughter of a millionaire Board of Trade operator, were "mysteriously" married in Chicago, Thursday. Both families are gladly reconciled to the happy union.....When "Old Hutch" made that corner in wheat, Buffalo (N. Y.) bakers raised the price of bread and have since refused to lower it. The "boss" combine has just been broken, one of the largest operators having kicked over the traces.....The Standard Oil Trust is asking New York State for 300,000 feet of land under the East River adjoining its Long Island City property. It wants to erect on it mammoth docks for its own private use. Its business now is declared to be a nuisance to public health and a menace to adjacent property owing to danger of explosion and conflagration.....
Pension Commissioner Raum has decided that all intricate questions must hereafter be referred to him, and he has assumed personal supervision over the boards of review and re-review as well as over the medical and other divisions of the bureau. He insists that all clerks and other employees must perform their full duty. He is himself the hardest sort of a worker.....
Vice-President Morton has determined, it is said, to locate permanently in Washington, where he is investing large fractions of his fortune in real estate, although he may retain a legal residence in New York for political uses...Secretary Proctor wants an Assistant Secretary of War. The Department is one of the largest of the government, there being over 1,500 employees in Washington and over 11,000 throughout the country.....
The Cherokee Indians are getting obstinate. They say they are being bulldozed and that they will not yield an inch of the Cherokee Strip.....The Government of the Province of Quebec, Canada, has just paid over to Father Turgeon of the Society of Jesus, the $400,000 voted to the order in settlement in full of the property taken from them by the English Government "ages ago." The Protestants in the Dominion are indignantly angry and the Catholics jubilant.....An additional defalcation of between $350,000 and $400,000 on the part of ex-Treasurer Burke, has been discovered by the Louisiana authorities. The absconder is said to have sought refuge in Spain, with which country we have no extradition treaty.....
President Flagler and Treasurer Maas of the Cotton-Seed Oil Trust, acknowledge that they have lost $527,000 of the Trust funds by speculating for the Trust's benefit with its money without the knowledge of the trustees. Flagler has contributed $150,000 and Maas $100,000 out of their own pockets to meet the deficiency, leaving a loss of $277,511 for the Trust to bear. Both have resigned, and the Trust is to be changed into a corporation under the name of the American Oil Company. The new company will issue $21,000,000 common stock and $15,000,000 preferred stock to be secured by the shares of all the companies merged into the new corporation. Each share of the trust will be entitled to 50 per cent. of its face in new common stock and 25 per cent. in new preferred stock. It is estimated that the Standard Oil Trust and several other trusts may follow this example and become companies. Trusts are amenable to no State or National law; companies are.....
The New York State Supreme Court has just decided that the clause in the will of the late Samuel J. Tilden, giving about $5,000,000 for the establishment of public libraries in New York City, is void by reason of legal technicalities. Tilden was considered one of the smartest lawyers in America, yet it seems he couldn't draw or get others to draw a valid will. The case now goes to the Court of Appeals.....A disastrous fire destroyed half a million dollars' worth of property in Petersburg, Va., Thursday morning.....
The double-headed volcano of Colima, Mexico, which has a devastating record, is again in active eruption, and has done much mischief and is threatening a world more.. ....Ex-President and Mrs. Cleveland visited the White House Thursday, and had a pleasant time with President Harrison.... New York has contributed over $3,000,000 of the $5,000,000 Guarantee Fund of the World's Fair. Interest here is lagging, and not a few say the thing would be a nuisance and expense to them, though, no doubt, profitable to business men. Chicago has lost none of its vigor and is now working on New York Congressmen to support its cause. No news from St. Louis or Washington.....The Labrador fishermen bitterly complain that their business is a failure and that they themselves are destitute because American and French fishermen use trap nets and other devices for the wholesale destruction of fish, and that both nationalities treat the three-mile limit with contempt. The Canadian Government is going to "inquire about the matter." What else can it do? ....The "Cronin trial" at Chicago grows worse and worse for the prisoners. Their Clan-na-Gael friends had the supreme impudence the other day to hold a public meeting in their behalf and to issue an appeal to their "kinsmen and friends" in Ireland for moral support during the trial.....The board of trustees of the University of Pennsylvania this week adopted the co-educational system in a modified form.....
Ex-Secretary of State Thomas F. Bayard, of Delaware, was married at Washington, last Thursday, to Miss May Clymer—"one of the most interesting society events of the season."".....There was a widely circulated rumor that George W. Childs of Philadelphia, had said that Gen. Grant's body would soon be removed from New York either to West Point, the National Cemetery at Arlington opposite Washington, or to the Soldiers' Home at the latter place. Childs emphatically denies that he ever said anything of the kind, and none of the Grant family knows anything about the matter.....Mrs. "Stonewall" Jackson, who is now childless, is writing a biography of her husband.....There's talk of "bursting" the Barbed-wire Trust by repealing the $12-per-ton import duty on iron wire.....
Holders of large tracts of Florida land have just formed a big syndicate owning 6,000,000 acres. All the business connected with the improvement, sale and lease of the various tracts will be conducted under one head at Sanford.....It is reported that owing to official mismanagement there are not funds enough in the Ohio State Treasury to meet current expenditures, so that many State creditors are in distress.....
The American Bar Association composed of the best lawyers in the country, has written to the President a strong letter showing the necessity for legislation for the relief of the over-crowded condition of the docket of the Supreme Court. A case put on the docket now can't be reached for three years and the business is fast accumulating, much to the loss of litigants in the most important cases.....
A company has just been formed in London with a capital of $2,500,000, capable of unlimited expansion, for the purchase of the Chicago grain elevators. Some of the Windy City's elevators are said to have been sold already to the English syndicate that has purchased the flouring mills at Minneapolis and most of the elevators throughout the Northwest. For eight years the annual income has averaged eight per cent. and the price is reported to be made on this basis. The Pillsbury and Washburn mills at Minneapolis together with the Star elevators and 75 of the Van Dusen & Co.'s elevators have already passed into English hands. The Van Dusen elevators comprise a long line extending along the Chicago and Northwestern railway and across Dakota.....Monday the President issued a proclamation admitting North and South Dakota into the sisterhood of States. The papers for his signature were shuffled before him so that neither he nor anybody else could tell which was admitted first.... .....Two of the eight steamers heretofore running between San Francisco and Chinese ports have been withdrawn owing to a falling off in trade due to anti-Chinese American legislation.....
Governor Knapp of Alaska, complains that there is no law in the Territory providing for the transfer of land, and, except mineral lands, there is no process by which land can be acquired. It is impossible to own even a house there.....Fortunate Commodore F. A. Ramsey has for 10 years had some of the fattest and most comfortable berths in the Navy, and he has just been appointed head of the Bureau of Navigation, in Washington, the most important Bureau in the Navy Department.....
Testimony from all sections of Massachusetts is emphatic in praise of the Australian ballot system tried in the whole of the Old Bay State for the first time at last Tuesday's elections. There's little doubt that this system will be in force in all the States before many years are passed..... .....A division nine miles from Duluth, Minn., where land was worth $16 per acre, was platted some time ago and given a name like that of the most valuable division of the city. Then the swindlers sold the plots to greenhorns and over $337,000 worth of them had been recorded when the fraud was discovered last Tuesday.....
The 2,000 Indians occupying the Wind River Reservation, just south of the Yellowstone National Park in Wyoming Territory, are said to be actually dying of starvation owing to the fact that the rations issued to them are shamefully insufficient compared with those issued to other Indians.....

FOREIGN NEWS.

SATURDAY, November 9, 1889.

THE German Emperor has had a magnificent reception in Constantinople. In costly presents, street decorations, etc., etc., the visit must have cost the impecunious Sultan considerably over $1,000 000. It is believed that though no actual treaty was negotiated or formal bargain made, a very cordial understanding has been arrived at on political matters. Russians are mad that a German Emperor should visit their immemorial foe. Some say, however, that Bismarck is sacrificing Austrian interests diplomatically to Russian. Anyhow, an agreement between the Triple Alliance, England and Turkey would make a war on the part of Russia and France combined "midsummer madness." Little Montenegro appears to be Russia's only staunch friend in Southeastern Europe.....
The Boulangerists have held a well attended conference at the General's residence in the Island of Jersey, but nothing serious is likely to come of it.....
Last Wednesday, the great Paris International Exposition, after a brilliant and financially successful career of six months, came to an end. Over 400,000 persons were present at the closing fete. In spite of the opposition of all the world's royalties, it was the finest and most profitable show ever seen. It brought enormous sums of money to Paris and other parts of France. American visitors alone left there, it is estimated, about $100,000,000. Then it has greatly educated the French people. It was one of the best supports of the Republic during the recent elections. The great majority insisted that nothing should be done to imperil its success; hence the collapse of Boulangerism.....
Dr. Peters, the German African explorer, and would-be rescuer of Emin Pasha, (Dr. Schnitzer, a Silesian) has been massacred by the Massai with his band of Somali attendants. Stanley and Emin with 800 followers are pressing on towards the coast opposite Zanzibar. Emin was taken prisoner by his own 200 Egyptian soldiers who, after years of faithful service, had revolted. The Mahdists had captured his Province in Equatorial Africa, and so, after all, in spite of his enormous hardships and terrible losses, Stanley, who started out to relieve Emin, has actually done so. Another expedition is about to start inward from the coast with supplies for Stanley's men.....
Spain is to have an International World's Fair at Madrid, to open on August 3, 1892, in commemoration of Columbus's discovery.....That wide-awake young Conservative Mugwump, Lord Randolph Churchill, as usual after a Tory reverse, startles old-fogy Bourbons by urging the Conservatives to consider "reform in the land laws, the sweating system as well as laws affecting the workingmen" of England.....
.....A scheme for the federal union of the Australian colonies, modeled on that of Canada, is being vigorously pushed by Sir Henry Parkes, Premier of New South Wales.....The overflow of the Po and other rivers in Italy has caused great losses of life and property.....Rev. Dr. O'Reilly, treasurer of the Irish National League of America, has handed to the National League authorities in Ireland $40,000 collected in America.....
In the Solomon Islands an Englishman and three native boys were murdered and eaten by cannibals a few weeks ago, and an English war-ship has bombarded the coast villages in retaliation.....
Prince Alexander of Battenberg, ex-Prince of Bulgaria, was a little over a year ago engaged to be married to a grand-daughter of Queen Victoria and sister of the present Emperor of Germany. Much to the indignation of all Royalties, he jilted her and married Mlle Marie Loisinger, a well-known opera singer. The new Princess has just died in childbirth at Gratz.....The lighter-men of the London docks are again on strike to force their employers to compell their regular employees to join the Union.....
The Government of Ecuador is the last to forbid Chinese immigration.....The Argentine Republic proclaims that it will sell 15,300,000 acres of good farm and grazing land at 80 cents per acre, the proceeds to contribute to the redemption of some of the Republic's depreciated currency.....
Peru owes English bondholders $280,000,000 and $150,000,000 more will be needed to put her railroads in good condition. She has just made a settlement with the bondholders by which she virtually gives the latter for 66 years, control of her railroads and mines as well as of all of her guano deposits not owned by Chili, a concession of 4,000,000 acres of land and an annual payment of $400,000 from the customs revenue. Chili as a result of the late disastrous war, seized upon nearly all Peru's rich nitrate beds and some of her most valuable guano deposits, and she has just made the best terms possible with her creditors to get means to start national life again.....The wife of bonanza millionaire Mackay, who has of late years been toadying and hobnobbing with all the accessible princes, princelings and social notabilities of Europe is suing an English newspaper for libel, for having said she was formerly a washerwoman.....

Miscellaneous Advertising.

SEND 10 Cts. in P. O stamps to **E. & O. WARD,** Produce Commission Merchants, for circular about **Shipping Produce** Also recipe for **Preserving Eggs.** Established 1845.
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Ease, Comfort and Thrift!
THE BEST CATTLE FASTENING
Smith's Self-Adjusting Swing Stanchion!
The only practical *SWING STANCHION* Invented Thousands in use. Illustrated Circular free.
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CANADA UNLEACHED HARD-WOOD
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For **MAPLE, SORGHUM, CIDER,** and **Fruit Jellies.** Has a corrugated pan over firebox, doubling boiling capacity; small interchangeable syrup pans (connected by siphons), easily handled for cleansing and storing; and a perfect **automatic regulator.** The **Champion** is as great an improvement over the Cook pan as the latter was over the old iron kettle hung on a fence rail. Catalogues Free. Mention this paper.
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A position as Farm Manager. Dairying a specialty. Am capable of taking full charge of gentleman's place, outside of greenhouse. Can keep books. Best of reference furnished Address "Manager," Stamford, Conn.

New Farm Book.
Colcord's System of Preserving Green Forage, without **Heat** and **Fermentation**.—The whole subject is treated concisely in detail, so that any one can build the Silo and work the process with success. The book is well illustrated. It will be mailed to any address on receipt of $1. by the author,
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OHIO STATE JOURNAL CO., Columbus, O.

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3 alphabets of neat pica type. Type holder, bottle of INDELIBLE ink (warranted not to wash out) ink pad, tweezers and directions in neat case. Will set up any name quickly, can be changed 1,000 times. For printing cards, marking linen, books, etc. Make money by doing printing and selling this outfit. Full catalogue and agent terms with each. 3 outfits, $1. Ingersoll Bros. 45 Fulton St. N.Y. City

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Two pairs of Thoroughbred Poland China's, six months old, and bred from the best herds of Illinois For prices, write to **E. G. WALLIS, Apulia, N.Y**

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AGRICULTURAL NEWS.

SATURDAY, November 9, 1889.

ENGLISH farmers are apprehensive that the trade in frozen mutton from the Australian colonies will seriously interfere with the profits of sheep breeders in that country by reducing prices. The trade began in 1882, and the shipments for the year ending June 30th last, reached a total of 1,200,000 head.....England also furnishes the report of a field of something over five acres in area, yielding 30 tons, 14 cwt., of potatoes per acre, or about 690 bushels. The variety was the Magnum Bonum.....The following account of the breeding and pedigree of the fastest stallion in the world, and the highest priced horse in the world, an account of whose wonderful speed, and subsequent sale were recently given in these columns, may prove interesting. Axtell was bred by Mr. C. W. Williams proprietor of Rush Park Stock Farm, Independence, Iowa. Mr. Williams was poor, but managed to buy two mares—paying for them $250. These were full sisters. They were got by "Mambrino Boy," he by Herr's Mambrino Patchen. The dam of Mambrino Boy was by Stroder's Cassius M. Clay, Jr. The second dam of Axtell was by Mambrino Royal. He bred one of these mares to William L., by George Wilkes. William L., is one of the noted stallions belonging to George Wilkes Simmons, Lexington, Ky., and is full brother to Guy Wilkes 2:15¼, and his dam was also by Dr. Herr's Mambrino Patchen. It will be seen by those familiar with pedigrees that Axtell has in his veins, first of all, Wilkes blood, the best Clay blood, Mambrino, Sir Archy, Diomed, Pilot Jr. American Eclipse, Abdallah, and several strains of Messenger blood. Axtell is so well balanced that he trots in five-ounce shoes before and four-ounce behind. He is bay in color, about 15½ hands high, and weighs about 1,000 pounds.....Dairy Commissioner Thom, of Wisconsin, has unearthed something decidedly "rotten in Denmark." At a cheese factory in Aztalan, Jefferson County, he and his assistant, H. K. Loomis, found a factory where four separators were running, and the skimmed milk was being made into cheese. About a pound of rotten butter was added to each 100 pounds of milk. The butter was evidently what had spoiled on the hands of country grocers, and had been dumped into cheese and soap boxes, fish kegs, and tubs; was streaked with green, rotten mold all through it, and emitted an odor which Mr. Thom declares was the worst he ever smelled. The butter, grease, mold, odor and all are put in a sheet-iron can and melted, and, without any effort to purify it is mixed with the milk, and the milk heated and coagulated before the stuff has a chance to rise. The commissioner says he has reason to believe that several other factories are engaged in the nefarious business, and that others are contemplating entering it. He also says that it means ruin to the dairy industry of the State.....The Russian Government has authorized certain railways to construct grain elevators, but reserves the right to appropriate them at any time it sees fit .....About 10,500,000 eggs were cooked at once in Chicago, Monday evening. The occasion was the burning of the upper floors of the Western Refrigerating Company's cold-storage warehouse.....A mechanical cotton picker is being experimented with in Mississippi. It is said to do the work of 100 negroes.... The Nebraska State Board of Agriculture, will hold its Annual meeting and also a Winter Corn Exhibit at Lincoln, beginning on January 21 next. The Armory Room in Grant. Memorial Hall has been secured, and there will be abundant space for a large display. The quantities of corn required are not large, and the premiums are liberal, so there should be a large exhibit. There will be numerous addresses and papers from able speakers. Robert W. Furnas, secretary, Brownsville..... At Bay State Fair, the co-operative creamery using the Cooley system of cream gathering and butter-making, won the first prize with the milk from mixed herds, over some of the best Jersey dairies using the separator and other processes. This was the first time that the creameries have had to compete with the fancy dairies in the same class, and therefore the co-operative factories using the Cooley system feel very much gratified at the result. There were over 200 entries of butter at this fair which is said to be the largest number of entries ever made. In the competitive contest the butter-maker who won the gold medal used cream raised in the Cooley creamer, churned it with the Davis Swing churn, and worked the butter on the Eureka butter-worker. In the contest for the best package of not less than five or more than 10 pounds, the contest was very close, between the Deerfoot dairy of choice Jersey cows using the separator process, and the West Dudley creamery using milk from mixed common cows, handled with the Cooley system. Each was scored 99 and a dozen or more experts, consumed 1½ day in deciding which was entitled to the first prize, finally deciding in favor of Deerfoot. With such odds in the matter of cows, this is a wonderful showing for the Cooley system. The milch cows entered for competition were all ruled out or withdrawn, as the managers had ruled that no prize should be awarded for milk containing less than the legal requirement of solids; that is, 13 per cent. The Green Mountain Stock Farm, West Randolph, Vt., was awarded the sweepstakes gold medal at the Paris Exposition for butter made by the Cooley process. This firm also manufactured the model working creamery for the United States exhibit at this exposition, which was awarded the gold medal. This firm has been awarded 22 gold medals during the last year, 14 of them being on the Cooley creamer and its products. This certainly is a good showing, and one of which any company may feel proud.....

Crops & Markets.

SATURDAY, November 9, 1889.

THE PRICES of wheat, oats and corn show an upward tendency, with everything very quiet. The visible supply in the United States and Canada in round numbers is: wheat, 25,000,000 bushels against 33,000,000 one year ago, and 35,000,000 two years ago; corn, 7,000,000 bushels against 10,000,000 one year ago, and 7,000,000 bushels two years ago; oats, 7,000,000 bushels against 7,000,000 bushels last year, and 6,000,000 two years ago; rye about the same as last year and barley a trifle more. This is according to the statement of the New York Produce Exchange.

BEANS show slight changes. White Kidneys are scarce and the price is well maintained. Red Kidneys are lower. Several cars of California Limas have arrived, and prices have declined. Pea beans are weak and lower.

BUTTER shows no change except that some small lots of extra, fresh table butter have exceeded quotations. Such butter is taken as fast as offered. The export demand is very light.

CHEESE shows little change in prices, although the export demand is quite strong. Skims are very dull.

EGGS advance slowly for strictly fresh, but trade is dull in everything else. Limed are very dull, and but little is doing with them.

APPLES have arrived quite freely from the West, and good fruit sells readily. The West is furnishing better fruit than New York, and better prices are obtained. Varieties most in demand are Western Kings, fancy fall varieties and Greenings.

GRAPES are in lighter receipt and prices are somewhat firmer. The Concord is the leading variety, in spite of all talk to the contrary. The majority of people buy it in preference to red, green, white or any other color. Another feature noticeable here; growers talk of packing their grapes in 10-pound baskets. What becomes of them? None are sold here. Dealers here sell nine-pound baskets.

PEARS are very quiet but prices are firm for fancy table varieties.

CRANBERRIES vary greatly in quality, also in price. There is a large quantity of defective, poor fruit on the market which sells very slowly at low prices. Fancy fruit is not plenty and sells readily at outside figures.

ORANGES from Florida are becoming more plentiful, and are of fair quality. With the decreasing supply of pears, grapes, and other domestic fruits, there is an increased demand for oranges and other tropical fruits.

LATEST WHOLESALE PRICES

—OF—

COUNTRY PRODUCE.

New York, Saturday, November 9, 1889.

BEANS.—Marrows—New, $2 60@$2 75; New Mediums, choice, $2 10@$2 20; Pea, $1 90@$1 95. Red Kidney, $3 25; White Kidney, choice, $2 60@$2 75; Foreign Mediums, $1 70@$1 90; California Lima, $3 00@$——Italian, $1 85@$2 00. Green Peas, $1 05@$1 10.

BUTTER—New—State and Pennsylvania, best, 24@24½; Elgin, best, 25c; Western, best, 23½@24c; do prime, 19@22c; do good, 15@18; do poor, 12@14; State, Dairy, half-firkins, tubs, best, 23@—c; do do prime, 19@21; do do fine, 15@17; Welsh tubs, fine, 19@21c; do do, good, 15@17; firkins, best, —@——c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 17@19; do fine, 12@15; Western dairy, fine, 14@16c; do fair, 10½@11c; do poor, 9@10c; do factory, fresh, best, 12@13c, do prime, 11@11½; do good, 9@10; do poor, 7@9c.

CHEESE.—State factory, fancy, 10½c; do do fine, 9½@10c; do do, prime, 9@10c; do do, fair to good, 8¾@9¼c; Ohio, flat, prime, 7½@10c; do good, —@—c; do. good, —@—; Skims, light, 7@8c; do medium 5@7c; do full, 2@4c.

EGGS.—Near-by, fresh, 23½@26c; Canadian, 22@24c; Southern, 20@22c; Western, best, 22@24c; limed, 17c; ice house, 16@20c.

FRUITS.—FRESH.—Apples, per bbl, $1 50@$4 00; Pears, per bbl, $2 00@$6 50; do per keg, $2 00@2 75; Grapes, best per lb, 3@7c, do, good, 2@3c. Cranberries, C. C, per bbl, $4 00@$7 50; do, per crate, $2 25@$2 50; Jersey, do, $1 25@$2 50. Quinces, per bbl, $2 50@$5 00. Lemons, per box, $3 50@$7 00.

DOMESTIC DRIED Apples—Evaporated, old, 5@8½c; do choice, new, 9½@10c; prime, 8@8½c; sliced, new, 4@5c; do old, 3@3¾c; Chopped, 2¾@3c, Cores and skins, 2½@—c. Cherries, new, 9@12c; do, old, 8@10c. Raspberries, new, 22@24c; Blackberries, 5¼@5½c. Peaches, Delaware, evaporated, peeled, 15@20c, do do, unpeeled, 8@10c; Georgia, evaporated, peeled, new, 13@15c; do do do, unpeeled, 7½@10c; do do, sundried, 9@9½c Huckleberries, new, 12@13c. Plums, new, 7@9c.

GAME.—Plover, per doz, $1 50@$1 75; Snipe do, do, $1 50@$1 75, Woodcock, per pair, $0 80@$1 00; Grouse, do do, 75@$1 00; Partridges do, $75@$1 15. Duck, Mallard, 60@75c; do, Teal, 25@50c; do, Redhead, $1 00@$1 50; do Canvas-back, $2 50@$3 00; Rabbits, per pair, 30@40c; Quail, per dozen, $1 50@$2 25; Venison, per lb., 5@20c.

HAY AND STRAW.—Timothy, best, 80@—c; do good, 65@70c; do medium, 40@50c; Clover, mixed, 45@50c; shipping, 40@45c. STRAW—No. 1 rye, 60@70c; short rye, 35@40c; oat, 30@35c.

HONEY—In one-pound boxes, White Clover, 12@14c; Buckwheat, 10@12c; Beeswax 22@23c.

HOPS.—State, New, 12@13c; do, good, 10@11c; do common, 7@9c; do 1888, best, 11@12c; do do prime, 9@10c; do do, common, 6@8c; California, New, best, 12@—c; do good to prime, 10@11c; do Old, best, 11@12c, do common and fair, 7@9c.

NUTS.—Peanuts are quiet. Fancy, hand picked, quoted at 7@—c, and farmers' grades at 5½@—c, Pecans, 5½@6½c. Chestnuts, $4 00@$6 00 per bushel; Hickory Nuts $1 50@$1 75 per bushel.

POULTRY. DRESSED—Turkeys, mixed, per lb. 7@8c; Fowls, western, choice, 10@12c; do common to good, 7@9c; Ducks, spring, good, 11@17; Squabs, white, per dozen, $3 00@$——; do dark, do, $2 00@$2 25; Chickens, spring, 9@15c; Fowls, near by, 11@12c.

POULTRY—LIVE.—Chickens—Spring, per lb, 9@10c. Fowls near-by, per lb, 9@10c, do Western, per lb. 9@9½c; roosters, per lb, 5½@6c; Turkeys, per lb, 8@11c; Ducks, Western, per pair, 60@75c; Geese, Western, per pair, $1 40@$1 65.

SEEDS.—Clover is hard to sell; exporters quiet. New prime, future deliveries offered at 6¼ and choice, 6 ¼c, with fancy at 6¾c. Timothy quoted at $1 50@$1 60. Canary, 2@4c.

VEGETABLES.—Potatoes—Jersey, per bbl, $1 25@$1 50 Long Island do, $2; State do, $1 25@$1 65; Western, do, $1 00@$ 70; Sweets do, $1 75@$3 00. Cabbage, per 100, $3 00@$4 50. Turnips, per bbl, 75@80c Onions—Orange County Red, $1 00@$2 25; Eastern White, $3 00@$4 00; Eastern Red, $2 25@$2 75, State, Yellow, $1 75@$2 00. Cauliflower, per bbl, $1 00@$5 00; Squash, Marrow, $0 75@$1 00; do Hubbard, $1 00@$1 25, Celery, per doz. bunches, 15c@$1 00.

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 15@18c, and Spring do 19@25; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskot, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

GRAIN MARKETS.

WHEAT.—Sales—Hard Spring, 94¾c, afloat; No. 1 Northern, 90½@90½c, afloat; Ungraded Winter Red, 76½@89¾c; No. 2 Red, 84@84½c, afloat; 84c f o b.; do in elevator quoted 83¾@84¾c. RYE.—Unchanged in price and quiet. Western quoted 51@52½c; State, 53@56c. BARLEY.—Still rulee in buyers' favor. Sales—Ungraded Canada, 62½c. CORN.—Ungraded Mixed and White, 40@43c; No 2 Mixed, 41½@41⅝c, elevator, 42⅜@42½c afloat; No. 2 White, 42½c, delivered. OATS.—Sales. No. 3, 25½c; No. 3 White, 27⅜@28c; No. 2, 26⅛@28¼c, elevator, 27¾c, delivered; No. 2 White, 28⅞@29c. No. 1 White, 34c; Mixed Western, 24@27½c. White do, 27@33½c. FEED—Quoted: 40 lbs, at 60@65c 60 lbs, 60@65c, 80 lbs, 65@70c; 100 lbs, 80@90c; Sharps, 90@95c; Rye Feed, 70c.

LIVE STOCK MARKETS.

BEEVES.—The range for ordinary to choice beeves was from $3 25 to $4 85, with the bulk of the sales at $3 30@$4 50. Oxen and stags sold at $2 30@$4 35, bulls at $2 10@$3 65; cows at $1 75@$2 90. Latest private cable advices quote British markets slow and unchanged.

MILCH COWS.—Market slow for fair to prime cows, at $35 to $50 per head. Poor trash sold as low as $28.

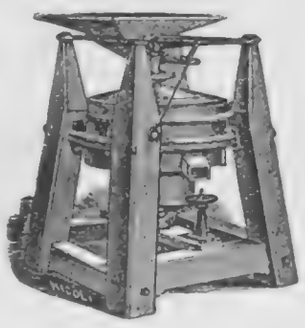
SHEEP AND LAMBS.—Very ordinary to choice Sheep sold at $3 8½@$5 50; Culls at $3@$3 50, and common to prime Lambs at $3 50@$6 40, with a few selected up to $6 50@$6 70. There was a firmer tone to the trade, and all grades of Live Calves sold a fraction higher. Sales of grassers were at $2 40@$2 60; fed Calves sold at $3 75@$3, and ordinary to choice Veals at $3@$—. A car-load of grassers was sold on Tuesday at $2 25.

HOGS.—Market firmer and prices 10@15c higher, at $4 25@$4 45 fo. fair to prime Hogs.

Communications Received for the Week Ending November 9, 1889.

E. T.—A. M. W.—E F D. H. U C.—W. B. G.—A. B. B. G. E N.—T. B. T—P. A. J.—J. A. T.—C. M. G—H. A. M.—I. D. S.—G. H I.—W. H. G.—L. J. S.—O. H. C.—J. F. S N. L.—T. B. H—J. W. D.—H. L. J.—C. H. W.—A L C.—C. S. J. H. H.—J. G.—D. W. F.—H. D.—A G. J H. G—J. A. W. A. R—A. A. K.—A. J. S.—J. Y. S.—A. C M.—S. M B.—J. W. I. W. B P—F. W. H. W. E. R—N. L.—J. H W.—H. M. S.—W. B R.—L F.—W. P H.—W. C—J. H. W.—A W. S.—P. W.

Miscellaneous Advertising.



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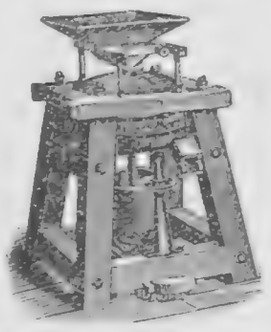

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A NEW TREATMENT.
Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been discovered which permanently cures the most aggravated cases of these distressing diseases by a few simple applications made (*two weeks apart*) by the patient at home. A pamphlet explaining this new treatment is sent *free* by A. H. DIXON & SON, 337 and 339 West King Street, Toronto, Canada.

Various.

A JERSEYMAN'S JOTTINGS.

COMBINATION AMONG MILK-MEN.

I HAVE been considerably interested in the description of the proposed milk trust or league of dairymen. The recent convention at Middletown, N. Y., was a very important affair, in my opinion, and I am curious to see what will come from it. Over in my country the milk business is not so important as it is in New York State. Still, we are greatly interested in this movement, because, if the milkmen can devise a scheme for securing better returns for their labor and a fairer share of the proceeds, it is reasonable to suppose that we who produce potatoes, small fruits and truck can learn the principles of the business and handle our own stuff to better advantage. I recently had occasion to discuss this matter with a man who is interested in milk dairying in New York State. He is a city farmer who has invested $60,000 in a farm up the Hudson River. This farm is run on business principles with every needed appliance, and yet the prices of milk are such that there is absolutely no interest paid on the $60,000 invested. Mind you, I am telling what was told me. Whether somebody else could make more money out of the property I do not know. One thing is sure—this man, being in the city every day, knows how the milk is sold and handled here, and has ideas of his own regarding the reasons for the present low prices and the best way of helping matters.

Now this man buys his own milk—that is, at his city home he buys milk of the man to whom the milk from his farm is shipped. This milk-dealer pays him a little over two cents per quart and charges him, at retail, eight cents per quart for exactly the same milk. In spite of this difference in price, the milk-dealers claim that they are not making much money. The tendency is to allow the farmer less rather than more. This man that I speak of, has, more than once, had his milk contracted for at a certain price for a stated term. In spite of this contract, returns would be made for less than the agreed price, the reason given being that the state of the market would not permit a higher rate. Let the dairyman object to this and the dealer says: "All right, I will not take your milk—I can get all I want—I don't need it." Then the farmer must hunt up a new market. The fact is that under the present arrangement, this milk business is about the most one-sided thing than can well be imagined. All the farmer can do is to forward his milk and take what the dealers see fit to pay him.

What makes the low price? I asked my friend this question. Here is the substance of his reply. The chief fault lies in the manner of disposing of the surplus milk. There is always a surplus—that is, more than the regular dealers require. This surplus varies from five to 12 per cent. each day; after the regular dealers are supplied, the cans left over go "on the platform" as it is called—that is, they are placed aside and sold at auction. This milk is bought mainly by speculators who get it for a very low price, and then, by underselling the regular dealers, cause dissatisfaction all around. The price that dealers pay to the farmers is determined, to a great extent, by the price obtained for this milk that goes "on the platform." It can be seen that if 10 per cent. of the milk were to sell for only 30 per cent. of the ordinary retail price, the average price of all would be reduced.

What Is The Remedy? This is another question I asked. I want to know, for it is this bothersome surplus that hurts our trade in market truck and small fruits. My friend has his remedy: whether it is sensible or not, I leave for readers of the RURAL to decide. "Let the farmers control the milk that goes on the platform!" There are 12 railroads supplying milk to New York city. Let the farmers along each railroad form an association, with a section at each point from which milk is shipped. Let the association on each railroad elect a representative to meet the representatives from the other 11 railroads and form a board of directors who shall watch the markets, regulate supply and demand and look out for the interests of milk-men generally. Let every farmer who sends milk to the city pay one cent per day for each can he sends, the fund thus accumulated to be used in buying all the milk that goes "on the platform"—this milk to be run through a butter extractor or taken at once to the tenement-house districts and sold at five or six cents per quart. By thus controlling all surplus milk, the farmers can check speculation and support the legitimate milk dealers who are needed in properly distributing milk. Most of the plans already proposed are on too large a scale. Can farmers obtain the services of men competent to carry them out? There is danger in this. Better begin in a small way and develop the business. Control the surplus first in the way indicated and then, if possible, enlarge the field of operations. JERSEYMAN.

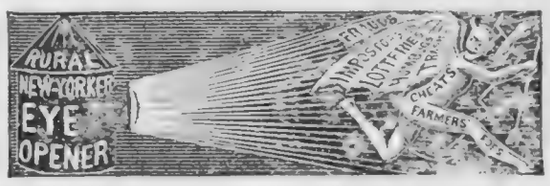
Literary.

MAGAZINE REVIEWS.

LIPPINCOTT contains the novel "A Belated Revenge," which was left unfinished by the late Dr. Robert Montgomery Bird, and has been finished by his son Frederic M. Bird. It contains considerable of the local history of the South and Southwest, which was obtained by the author during an extended trip through those localities in 1833. "Does College Training Pay?" is the title of a short article by D. R. McAnally. Some surprising statements are made in regard to college graduates. Diligent inquiries among railroad corporations, manufacturers, and all other lines of business show that the college-bred man is not only an exception to his fellows, but that not a few of the leading men in the industrial and commercial world prefer to engage young men who have grown up in the business rather than those who have enjoyed the advantages of collegiate training. One great railroad magnate stated the case thus: "College graduates have too much to forget." The author is inclined to answer his own question in the negative, and he attributes the apparent failure to the colleges themselves, which, he says, are from 25 to 250 years behind the times, being modeled after the semi-medieval universities of Europe, and which seem to be seeking to crowd more and more into their curriculums, instead of endeavoring to make their instruction more practical. No reference is made in his article to agricultural colleges. His conclusions, while not very flattering to the colleges, should be very comforting to those who have not enjoyed the advantages (?) of a collegiate course. "The Question of Pure Water for Cities," contains much of value to country dwellers. "Hand-writing and Writers" gives the peculiarities of the handwriting of many noted writers. While poor penmanship does not necessarily denote genius, many noted men have been guilty of great illegibility, not the least of whom was Horace Greeley whose bad writing is proverbial. "With the Wits" improves with age. J. B. Lippincott Co., Philadelphia.

THE PHRENOLOGICAL JOURNAL now in its 88th volume, contains much of interest for the student of the science of phrenology, while there is much to interest the general reader. Biographical sketches and portraits are given of Prof. Elias Loomis, for many years professor of natural philosophy and astronomy at Yale, and whose death occurred last August; of Austin Corbin, president of the Long Island and Philadelphia and Reading Railroads; and of Ella Dietz Clymer, president of Sorosis. Braunfels Castle, or the Castle on the Brownrock, in Germany, is illustrated and described. "Doings of Women Folks" describes several exchanges which have been established in New York by women for the benefit of their sex. A very interesting article on "Mental Cultivation" contains much valuable information. "Consumption in the Sleeping Car," sounds a note of warning about the dangers attendant upon this luxury of travel. Fowler & Wells Co., New York.

THE HOME-MAKER for November is hardly up to its usual standard. The editor, Marion Harland, sees a hopeful sign in the disposition of the inhabitants of the Southern States to engage more and more with each succeeding year in the celebration of the great Yankee festival, Thanksgiving, while, on the other hand, the observance of Christmas is becoming more general in New England, where it was formerly little noticed. Estelle Thomson contributes another article in the "Wonderland" series, "The Date-Palm and its Fruits." It is evident that she has not the material at hand which she has had for her former articles, as the Date-palm is not so common in California as the other fruits of which she has written so entertainingly. These trees are being planted to some extent in the southern part of the State. There are two or three good Thanksgiving stories. "A New Industry" tells how a young wife who hadn't a spark of genius for anyting but cooking, turned that accomplishment to a most useful and helpful purpose in time of sorest need. "A Tombola Party" describes a new, and we should judge, a very interesting game for home entertainments. "Light Infantry" is a dissertation on babies by Frank Chaffee who claims to be a bachelor. He says that bachelors do love babies if they only have a chance, but he admits that there are some kinds of babies that they don't love, and they are not to blame for it. "A Plea for the Mother-in-law" is entered by Helen Marshall North. The Home-Maker Company, New York.



CALIFORNIA'S COLLAPSED LAND BOOMS.—Nearly two years ago, the Eye-Opener on several occasions, issued emphatic notes of warning against investments in the boomed town-sites in Southern California, and gave numerous instances of the fraudulent nature of many of the "booms." It is to be hoped that the warnings had a deterrent effect on intending investors in such enterprises. According to the latest advices, there isn't a single boomed place which hasn't inflicted a loss on permanent investors: the only people who have made money by any of the undertakings are those who sold out during the period of inflation and pocketed dishonest profits. Most of the boomed sites have collapsed, while a few are still trying to allure the unwary. The most accomplished real estate manipulator can no longer keep up inflation prices, and with humble unanimity all those that still retain any vitality, have just prayed the State Board of Equalization for a great reduction of taxes. The figures represented are interesting to Eastern men who have backed up the booms with their coin, and now hold deeds to remote sand lots graced with a profuse growth of cactus burrs. The figures for Los Angeles County afford a good example of those for some others. State Comptroller Dunn says that he knows personally of one piece of property which, in 1887, sold for $15,885, and which has since been returned to the owner for $6,000—the face of the mortgage upon it. At Oak Knoll, lots that readily sold two years ago at $500 cannot now be sold for $100. An official list of boomed town-sites in Los Angeles shows sales amounting to $403,980 and the assessment on the same property is only $90,590, while the owners insist on a reduction of at least 20 per cent. in the rate. Sixty paper towns were projected in all parts of the county, two at least of which were in the desert; but even lots in these were unloaded on the ususpecting Eastern public. The 60 town-sites comprised 79,350 town lots as listed by the assessors and at present the whole 60 have only 2,351 inhabitants. Among the towns were Borden City, having 1,920 lots platted, and not a single inhabitant; Chicago Park, 2,286 lots, and one single inhabitant, the watchman who takes care of the leading hotel; Carlton, 4,060 lots, and no inhabitants; Manchester, 2,304 lots, with not a soul in it: West Glendale, 8,128 lots, and no inhabitants; Sunset, 2,032 lots, and one inhabitant, he being, as in the other case, watchman of an expensive hotel. The mass of these town-sites are not merely tracts of land with a stubble of surveyor's stakes. Many of them are laid out in streets, some with avenues leading to nowhere, cement side-walks, on which jack-rabbits scamper up and down, and an occasional electric light standard which affords a resting place for owls, and here and there perhaps the skeleton of a half-finished house.

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AGRICULTURAL REPORT.—The first report of the Secretary of Agriculture is a brief, pointed, comprehensive document, bristling with facts, and prolific in suggestions and recommendations. Secretary Rusk evidently believes that he holds his office for the benefit of the agriculturists of the country, and he appeals earnestly and confidently for such support as will enable him to acquit himself creditably in the position assigned him, and to see that the work confided to him is efficiently performed.

The Secretary makes the usual references to the work of the several scientific and other divisions in his Department, and in addition he deals at length with certain plans for the thorough re-organization of the Department of Agriculture and suggests several new features in the interest of the development of agriculture. The first efforts toward a re-organization were hampered because of the surprising fact that the appropriations for the current fiscal year were made entirely upon the basis of the old organization, no account being taken of the entire change in the status of the Department. A striking contrast is drawn between this amount and the appropriations for agriculture made by those countries which the report says "are the most active competitors of American farmers in the world's market." A comparison shows that Great Britain appropriates for agriculture $1,500,000, Germany $2,850,000, Brazil $20,000,000 for agriculture and mines, France $8,000,000 for agriculture alone, and Austria more than $4,000,000.

It is his desire to organize the Department upon even a broader plan than these and other countries have established.

The Secretary pays a high compliment to Assistant Secretary Willetts. The problem which presented itself to the Secretary of getting the results of the work done by the Department more promptly before the people, has been solved by the establishment of a new division, which furnishes promptly to the agricultural and commercial press a synopsis of the main points of every bulletin and report published by the Department. Citing the circulation of the papers which have received and utilized the synopses furnished by the Department, the Secretary regards the plan as virtually covering the entire field, "for," he adds, "the farmer who does not read some paper devoted to his calling is beyond the reach of intelligent effort on his behalf."

The results of the labors of the Division of Entomology have been of great importance. Several parasitic enemies of the Scale insect so destructive among the orange-groves of California have been successfully introduced. Special investigations have also been made of the leaf-mite of the orange in Florida, the horn-fly, an imported pest of cattle in the middle Atlantic States, the grain aphis in the Central States, and blights, fungi, etc., in different localities. The Secretary says that interest in silk culture still remains unabated, and he is very hopeful of the future of the industry. Of the crop-reporting system, the Secretary says, "* * * While approximate and valuable, it is in danger of becoming discredited by the popular acceptance of its results as exact in precision and absolute in authority. It should be remembered that they are not the conclusions of a thorough census, though they may be far better than the work of a poor census; that they are the consolidations of local estimates of agricultural experts, and are intended as a foil to the interested, biased and untrutbful statements that speculators issue to mislead their victims." Of the rapid development of agriculture in the Rocky Mountain districts, the Secretary says that the Division of Statistics has been directed to investigate their resources with all the facilities at its command. "The results," he adds, "will surprise the Eastern States with views of wealth and progress of the Great American Desert of the recent past."

The region where the sorghum-sugar industry may be attended with success has been localized in the southern part of central Kansas, west and south of Wichita, and in parts of the Indian Territory resembling it in soil and climate. There are perhaps other parts of the United States where similar success could be secured, but these have not been pointed out. Special attention is to be given to the development of varieties of sorghum containing a higher content of available sugar. Important progress has already been made in this direction. Many localities in the United States, especially in the north and on the Pacific coast, are known to be specially suitable for the production of a sugar beet rich in saccharine matter. The interest in this subject developed by the successful experiments in California will be met by the publication during the coming winter of a full report on the beet-sugar industry in the United States.

The Botanical Department is to be specially occupied in an effort to solve the problem of increasing the forage yield on the 200,000,000 acres of the arid region outside of possible irrigation by promoting the productiveness of the grasses now growing there. To aid in this work, and in procuring a productive grass for the Southern States, the Department proposes to undertake experimental work specially devoted to this subject. In regard to textile fibers, the question now occupying the attention of the Department is the utilization of flax, jute, ramie and other fibers, all of which can be cultivated in certain sections of this country by means of improvements in machinery, such as will do away with the excessive manual labor incident to its preparation for manufacture. A special investigation into this field of labor in Europe is now being made by a capable man commissioned by the Secretary for that purpose.

In treating of the office of experiment stations and their work, the Secretary emphasizes the necessity of remembering "that quality more than magnitude decides the value of every enterprise, and that this one can attain its highest success only in proportion as the laws which underlie the practice of agriculture are discovered and made available to the practical toilers of the farm." The report urges the duty of the government to assume a more definite supervision of such forest areas as are still owned by it and as occupy a position of importance in the regulation of water flow and of other climatic conditions, and emphasizes the importance of the relations which the forests bear to the problem of irrigation in the arid lands and on their immense annual product. The Secretary recommends the setting apart of some 300 acres of the Arlington estate for the use of the Department for the testing of new varieties of fruits and other important experimental work at present impossible owing to lack of room.

The Secretary announces some changes in the manner of purchasing seeds, and his determination closely to observe the products of other countries in order that the seeds of such as are found to possess singular excellence may be secured and experimented with in this country. The employment of a competent expert is also contemplated, one who can efficiently perform the inspection and nomenclature of cereals. A supply of five varieties of Mediterranean wheat and also of Bermuda Grass seed has been ordered from Europe, the latter being specially designed for the Southern States.

The library is reported to be very deficient, both in material and arrangement. The museum is being rapidly extended. The importance of having a standard for the naming of new varieties is enforced. A gratifying report is given of the excellence of American agricultural products at the Paris Exposition.

The subject of agricultural organizations is dwelt upon earnestly, their astonishing growth during the past few years being cited as strong evidence of the growth of the spirit of self-help among the farmers. The farmers' institutes are referred to particularly as one of the greatest movements in the history of agriculture, and as the strongest lever for raising and upholding the work of superior agricultural education represented by our system of agricultural colleges and experiment stations. The Secretary recommends, without going into details, that the Department should be empowered to afford aid and encouragement to this work.

In referring to the work of the Bureau of Animal Industry, pleuro-pneumonia naturally is first noticed, the situation being regarded as most encouraging. This disease is now said to be effectually under control and restricted to Kings and Queens Counties in New York State, to New Jersey, and a limited section in each of the States of Pennsylvania and Maryland. A careful review of the field, together with the arrangements made for the supervision of the limited districts still infected, justify, in the Secretary's opinion, "the most sanguine hopes" in regard to the proximate complete eradication of the disease. Texas fever, says the report, is generally spread through the channels of interstate commerce, and therefore can only be effectually controlled by the Federal government, hence the necessity of legislation which shall be ample and clearly defined.

The language used by the Secretary in regard to a national meat inspection law is pointed and vigorous. The necessity for inspection at the time of slaughter is, first, to enable the authorities promptly to locate any cattle disease centers, and, secondly, to avoid the anomaly of leaving the inspection of our own meat products to the officials of other countries, thus giving foreign governments some show of reason for the claim that they have better opportunities for learning of disease among American cattle than are enjoyed by our own government. He accordingly advocates "such an amendment to the law under which the bureau is at present organized as will provide for such official national inspection as shall guarantee the fitness of our meat products for food consumption under the seal of the United States government." Authority and means are also desired to enable the Department to exercise a close supervision of the economic side of the cattle markets, the characteristics of stock commanding the highest price, variations as to age, weight and quality, and all facts bearing upon the cattle industry which will enable the bureau to supply to farmers such information as it is impossible for them to obtain for themselves.

The dairy interest comes in for an earnest share of attention, and the intention is announced to establish a special division in the Bureau of Animal Industry devoted exclusively to the service of this great interest.

Poultry is made the subject of a special paragraph, and the Secretary declares it to be his intention that it shall receive more attention.

The sheep industry secures special consideration in the report. The growth of the mutton interest is referred to as one greatly to be encouraged. As to wool-growing, the reduction of the tariff in 1883 is earnestly deplored. To it is attributed the great reduction in the number of sheep, which has since then fallen off by about 7,000,000 head, while the importation of wool has increased from 78,850,651 pounds in 1884 to 126,487,729 pounds the past year. "On behalf of this industry," says the Secretary, "I recommend these facts to you, and should they be submitted to Congress I ask for them intelligent and careful consideration."

In conclusion the report submits figures showing the importance of agriculture, which produces an annual yield of nearly $4,000,000,000, employing on the 5,000,000 farms 10,000,000 persons, representing a population of 30,000,000 people, while the value of live stock alone is estimated at $2,507,000,000. That agriculture underlies all other industries, it alone making our vast commerce possible and rendering the product of our mines valuable, assigns to it the first place in considering the well-being and prosperity of the country.

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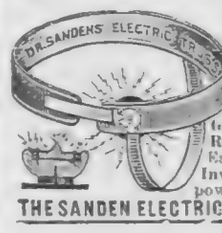

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And everybody knows
Where the shamrock grows;
Scotland has her thistle
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But the American emblem
Is—the one-dollar-bill.

- *Credit Lost.*

BEHIND THE TIMES—Its publishers.—*Puck.*

A STORY of high life—The Attic Floor.—*Puck.*

SOUND to the corps: A bugle call.—*Texas Siftings.*

"Is it a sign that a hen meditates harm to her owner because she lays for him?"—*Texas Siftings.*

THE bad small boy, when his mother calls, is like the echo. He answers, but he doesn't come.—*Somerville Journal.*

MR. TOP HEAVY: "Will you share my lot, Penelope?" Penelope: "Yes, if there is a brown stone front on it."—*Life.*

IF a cat has nine lives it is marvelous why it kicks and howls and makes such a fuss about losing one.—*Portland Transcript.*

"THAT was a pretty hard story to swallow," said the cellar, as the upper part of the house fell into it.—*Terre Haute Express.*

POSTMASTER: "The letter is too heavy; it wants another stamp." Mrs. Jones: "Why, that will make it heavier still!"—*Humoristika.*

THE people of Spanish America have the advantage of us in one respect: they speak the language that Columbus discovered our hemisphere in.—*Portland Transcript.*

A SCHOOL-TEACHER instructs his pupils that "politics" is a plural noun. Politics may be plural, but some of its results are decidedly singular.—*Norristown Herald.*

OMAHA TEACHER: "Can any of the class explain to me why the way of the transgressor is hard?" Omaha Spark: "I guess it's 'cause it's traveled so much."—*Omaha World.*

CUSTOMER: "I say, Mr. Shortweight, that cheese is full of holes." Shortweight: "Yes, that's the way it comes." Customer: "Well, I don't want to pay for half a pound of holes."—*Life.*

"YOU all remember the words of Webster," shouted an orator. "No, I don't," interrupted a man in the gallery. "Do you expect us to remember the whole dictionary?"—*Farm Journal.*

MR. SCADS (to upholsterer): "Mr. Wirey, please call on me this afternoon, I want to see you on business." Mr. Wirey: "With pleasure, sir!" Mr. Scads: "No pleasure, sir—purely business."—*Puck.*

CITY POET: "What a very queer-looking yellow weed that is." Young lady: "Yellow weed! Goodness me! This is the beautiful 'Golden Rod' that you raved about in your last poem."—*Michigan Farmer.*

NONE CLAIMED IT.—An enviable quickness of repartee was shown by a French actor when the head of a goose was thrown upon the stage. Advancing to the footlights, he said: "Gentlemen, if any one among you has lost his head I shall be glad to restore it at the conclusion of the piece."—*Chicago Journal.*

HERE is a man who is the benefactor of his race, or wants to be. A German musician has discovered that many persons who study music practice too much. Funny that no musician ever found that out before. Other people have known it ever so long.—*Fort Worth Gazette.*

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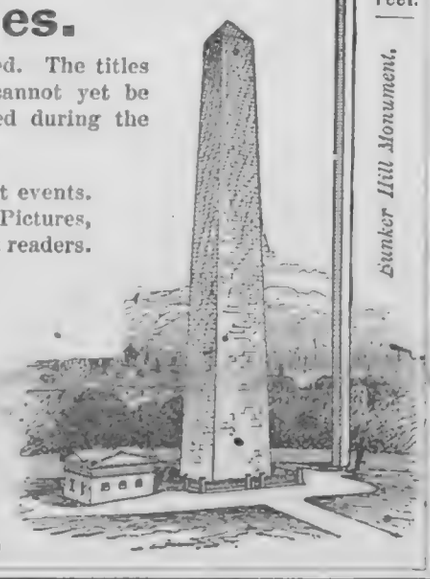

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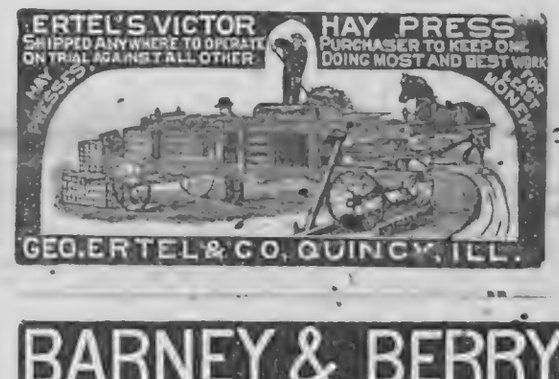

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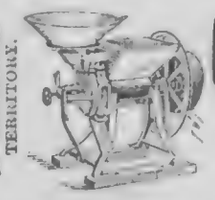

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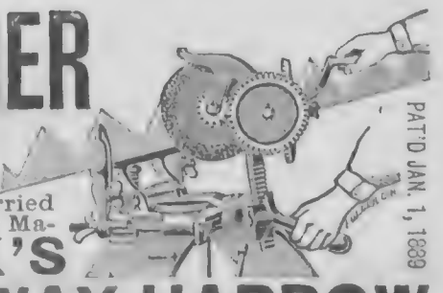

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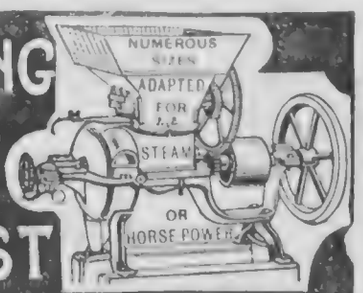

THE BEST MILL ON EARTH

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XLVIII. NO. 2078. NEW YORK, NOVEMBER 23, 1889. PRICE, FIVE CENTS. $2.00 PER YEAR.

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Horticultural.

THE R. N.-Y.'S HYBRIDS BETWEEN THE BLACKBERRY AND RASPBERRY.

ANOTHER of the R. N.-Y.'s blackberry-raspberry hybrids fruited during the past season—and another chance occurs to record a failure. The illustration, Fig. 278, is a photograph of a fruiting stem, and shows, therefore, the berries true to nature. The plant is strong and vigorous, with characteristics both of the raspberry and blackberry. It resembles the blackberry, however, in most respects, though distinctly *not* a blackberry. The illustration shows a fair average of the fruit—there was not a perfect berry on the plant. It is an interesting fact that though the drupelets were those of the blackberry, the flavor of the raspberry was pronounced. We have a dozen of these hybrids which have not yet fruited, but those which have fruited give little or no promise that anything of value will ever come from the hybridism beyond the interesting fact itself.

Rural Topics.

RATS! RATS!!

"WEEDS OF THE BUILDINGS."

HOW TO KILL THE PESTS.

DOGS, CATS, POISONS, TRAPS.

"How do you proceed to kill rats and mice about your farm buildings? In what way do they cause the greatest damage? Are they increasing in numbers?

FROM FRED GRUNDY.

I HAVE fought rats and mice for years, and am still hard at it. This season they seem to be more numerous and destructive than ever. They are everywhere—in the stables, poultry-houses, pig-pen, garden and open field. The first thing they seriously damaged this season was my strawberries. Of these they ruined over a bushel by nibbling the seeds off just as the berries were ripening, giving them a dirty, rusty appearance and rendering them unfit for any purpose. They also bit gallons of them off the stems while green. A neighbor who grows quite a large lot of strawberries lost several bushels in this way. I placed several spring and Delusion traps, baited with fried meat, in my patch and caught a large number of the little pests, most of them being the regular house mice. Both rats and mice began on the sweet corn as soon as it was out of the milk, climbing up the stalks at night and tearing open the ends of the husks and eating down the ears. One man told me a few days ago that he had shot several large rats gnawing away at the ears in the day-time. As soon as the field corn was out of the milk they began on that in the same way. They cleaned up most of an acre of very fine corn for a man who lives near a creek in the suburbs of the village before he suspected their presence. They are especially destructive in shocked corn, sometimes devouring all but a few ears on the outside. They burrow holes in the ground 12 or 14 inches deep, and eight to 12 feet laterally, piling the dirt up two or more feet high inside the shock. We have neither rats nor mice in the house. When it was built the carpenters were cautioned to be especially careful to leave no openings through which the pests might enter. I have a vegetable cellar outside with a double board roof packed with cut straw, and they got into that and proceeded to clean it out in style. I spoiled their fun, however, by burning sulphur on an oil stove placed inside and closing the doors tightly. The fumes penetrated every crack and crevice and made it so unpleasant that they left in disgust.

In the stables the mouse crop is kept within reasonable bounds by several cats that abide there; but they don't seem to trouble the rats. For catching these I use an old-fashioned sliding-door trap baited with sweet corn, apples, sweet potato, etc., and they never get very numerous. I once used Rough on Rats for poisoning a large colony of mice that had settled in the cow stable, and when they came out of their holes to expire they were picked up and swallowed by my fine Plymouth Rocks. The effect of such highly seasoned diet was extremely disastrous to the fowls, and I bought some more. I have used strychnine on crushed sweet corn with emphatic results, and I consider it superior to any other poison for destroying rats and mice in the field. My main reliance about the buildings, however, is on cats and traps. In constructing farm buildings great care should be exercised to avoid making rat harbors and mouse dens.

Christian County, Ill.

FROM PROFESSOR A. J. COOK.

I use traps in the house and cats in the barn. This is for mice. I have trapped rats quite successfully. Some years ago the pests were quite annoying about our house and barn. The red squirrels came to live with us. They got into the house walls and garrets. We rather enjoyed seeing them and so encouraged their sojourn in the house. The only objection to their presence was that their early waking and gambols sometimes disturbed company and they sometimes found and appropriated the children's nuts that were stored in the chambers. On the whole, we liked their company. After the squirrels came the rats all left, and we have not seen a rat for years either at the house or the barn. I have no doubt that the squirrels drove the rats away. If this would work successfully every time, then it might pay to introduce and encourage the presence of red squirrels about the house and barn. Three or four squirrels about the barn do no harm. So far as I have tried them I can recommend red squirrels as the best of rat-traps.

Ingham County, Mich.

FROM T. B. TERRY.

Our old house was overrun with rats and mice. They did about as they had a mind to up-stairs and down cellar. They had been "holding the fort" for many years, and they kept on in spite of us. When I built a new house, six years ago, I determined to occupy it alone. The cellar was built of hollow bricks, with a thick cement floor, and screens were put over all windows. The wood-shed and all are mouse-tight. Two or three times a mouse has been carried in with the wood, when throwing it into the wood-shed; but as there is nothing there for mice to eat they can be caught in a trap as soon as it is known that any are there. These hollow bricks are glazed, so that a mouse or rat cannot climb up the underpinning and hold on while gnawing through the wood-work; neither can it by any possibility get through the wall.

It is not so easy to keep these pests out of the barn. My granary in the barn-basement is rat-proof, however. It, also, is built of hollow bricks, with a tile and cement floor, and the sills above are bedded in cement on top of the hollow brick walls. Then the floor above is made of two-inch, matched Norway pine. We tried hard to keep the new barn, built some years ago, shut up until I could get the old one with its numerous inhabitants torn down and cleaned up; but enough of the rascals got in for a start. Since then I have kept two or three barn cats, and I haven't for a long while seen a rat or mouse, although for a time the vermin were very numerous. When the cats were first put in, the rats kept in the straw above and seemed to think they were all safe; but after a time they wanted a change of diet, or some water, and as they could not go down into the basement with safety they actually gnawed three holes through the siding of the barn to get out and I don't think they ever came back. When the doors are shut at night they cannot get into the barn any more than they can get into the house, and possibly we could get along now without the cats, as there is nothing whatever that they could harbor in around the barn. Those that escaped probably spread the news in the neighborhood that water was scarce in our straw loft.

I believe I have tried, in years past, about every way of catching rats that was before the public; but usually I had to admit that the Lord didn't make me as smart as our old rats. I thought I had them once when I read that if a rat was caught and singed and let go again, he and all of his race would leave the premises. My man caught an old fellow, and removed his hair over a burning newspaper and returned him to his friends in our old wood-shed. He staid by us, saucier than ever, till he died of old age. When we were so fortunate as to catch any more, we singed them clear through. I might state, to show how

THE R. N.-Y. HYBRIDS BETWEEN THE BLACKBERRY AND RASPBERRY.
FROM A PHOTOGRAPH. FIG. 278.

thoroughly we have conquered these pests, that this year, wanting the granary to store early potatoes in, I put up a car-load of wheat in bags and piled them up in our covered manure shed, where they stood for weeks entirely uninjured. This alone was worth more to us than the cost of keeping the cats for years. Rats and mice never did us any very great injury; but in some way or other it always seemed that when they were running, we hadn't quite got that "dominion" of which Prof. Roberts spoke so grandly in a late number of the R. N.-Y. They are rather small game; but nevertheless I have enjoyed getting the upper hand of them.

Hudson, Ohio.

FROM A. L. CROSBY.

I suppose these may be called the weeds of the buildings, and are as useful in their way as the weeds of the field, that is, they help us to realize that we live in a vale of tears. If we could only farm without weeds

The only remedies I know of for rats and mice are cats, dogs, poisons and traps. Poisons I never use; cats and dogs I always keep a supply of, and when the rats get very numerous I set traps, but after catching a dozen or so, no more will enter the traps for a long time. But I have noticed that there seemed to be a smaller number about than the proportion caught would account for, and I am under the impression that they emigrate to some neighbor, and my belief is helped by the fact that sometimes there seems to be a sudden large increase in the number of rats about the buildings, I suppose because one of my neighbors has been warring with them, and they have left him in a body.

I read once of an easy plan to get rid of rats; it was to catch one alive, paint him red and then turn him loose; it was said he would drive all the rest away. I set a trap and after weeks of waiting, caught one, and painted him red and let him go, "his native freedom to enjoy." That night he went back into the trap. I am convinced that there is no easy way of getting rid of these rodents.

If I thrash my grain soon after harvest and husk the corn before winter, rats do not do me much damage as I can keep them out of the granary and corn house, but the mice are hard to get even with, as they can live on so little and do so much damage at the same time. They cannot be scared like rats; catching them in traps doesn't seem to make much impression on their number, and though the cats and dogs kill a great many, yet there always have been plenty of mice and I am afraid always will be.

The damage mice do is in "littles," but it counts up in the course of a year. Gnawing holes in grain bags and bins, cutting the bands of grain sheaves, fouling the grain, cutting holes in shingle roofs, destroying samples of choice seeds that have been "carefully" put away, committing suicide in pails of cream and in various other ways reminding us that they are doing their work faithfully and thoroughly while we occasionally jam a corn-cob in a mouse hole, and wonder what mice were made for anyhow.

Catonsville, Md.

FROM H. A. MARCH.

"Rats in the granary, rats in the barn, rats in the chicken-houses; rats all over the farm." There is no pest that can equal the long-tailed rodent for malicious meanness here on Puget Sound—no not even the heathen Chinee, for the Chinaman takes only what he can make use of, while I have had rats gnaw into my brooders and kill 50 fine broilers of a night and they did not eat half of one. I carry on an extensive chicken ranch in connection with cauliflower-seed raising. I raise from 1,000 to 1,500 chickens each year, and keep from 500 to 800 laying hens in 15 houses, and, of course, use large quantities of grain and ground feed, the odor of which, with that of the poultry, brings the rats from the woods and from all the neighbors' places to mine, especially in a cold snap in the winter or a very dry time when feed is short in the pastures, for the pests will feed on clover and get fat like so many woodchucks. Then we are fairly overrun with them. They become so bold that they will carry off young chickens in the day-time and attack the hens in the coops. But the worst trouble they cause me is by getting into my underdrains. We have no tile here for draining, so have to use cedar bolts, which are laid on rails and answer a very good purpose, as they are very lasting, (some that have been down over 30 years are still doing good work). Now the rats will enter the drains where they empty on the beach, travel up a distance, gnaw through the planking, and dig out to the surface, of course, filling the drain with earth and necessitating the opening of it sometimes in a dozen places in 100 yards. Trapping does no good. Ten men with a dozen traps each would hardly make a showing; it would amount to about as much as trapping rabbits in Australia. "Rough on Rats" the pests won't touch. I have baited them for three or four days with meal, and then put Rough on Rats in the dish, and it would stand until it was decayed, and not a rat would touch it.

Strychnine is the only thing that will fetch the pests every time. and this is the way I use it:

I take four quarts of wheat, put it into a kettle kept for that purpose and into no other; cover it about an inch with water, set it on a fire to heat. Now take half of a bottle of strychnia or one-sixteenth of an ounce, put it in a cup with a couple of spoonfuls of vinegar which will dissolve it, now mix it with the wheat and water and bring it to a boil (stay with it, you can't be too careful), every little while stir it up as the wheat swells and softens; keep on stirring until the water is all absorbed by the wheat, then it's ready for business; after taking it off the fire while it is yet moist, take a large handful of brown sugar and stir it into the mass. This removes the bitter taste of the strychnia and gives it a gingerbread odor that will fetch them from long distances. To feed the wheat and make it safe, take a box about the size of a soap box; saw out a hole about the size of a rat hole on each end and the sides; now under the box set a quart pan with the poisoned wheat in it; lay a flat stone on the box and the thing is done. I put the boxes under the barn, pig-sty or chicken house; in fact, in any place where they will be safe from children, pigs and chickens. And now, brother farmers, if you are going to poison rats let me tell you, *do it yourself.* Don't trust it to the hired man, or to the boys; but go right at it yourself, and be sure you put the poison where you know that it will be safe from "little hands" and all domestic animals.

Fidalgo, Washington.

FROM GEORGE DORMIRE.

Rats do not trouble my house, I guarded against them when I built it. I also intended that the house should be mouse-proof, but in this I failed. Mice are giving us a little trouble in the dwelling-house and in the barn and other outbuildings they are having full sway and are quite troublesome. The best way to prevent the ravages of mice and young rats is to keep their numbers reduced as much as possible by means of self-setting traps and good cats. A good cat is the best trap in existence. She is the natural enemy of mice and their certain destroyer, and it is much cheaper for me to feed a few cats than it is to feed the mice, to say nothing of the annoyance from them. But with grown rats the case is different. It is seldom that a cat will attack a full-grown rat, and it seems that the flesh of rats is not wholesome food for cats. My experience has taught me that any continued and persistent warfare against the pests is the best means of getting rid of them, or of keeping their numbers reduced, and the best mode of fighting them is by the use of a good rat-terrier and a gun or revolver. Rats are extremely averse to be made targets of in shooting, but that is risky business about a barn. I do not think that the pests are more numerous or troublesome than they used to be. They are quite numerous and troublesome at times, and then again there will be but a few. In grain crops they damage our corn mostly by shelling it and eating the hearts out of the kernels, and unless we have a tight floor in our cribs the corn so shelled is likely to go to waste. They are also damaging the foundation walls under the barns and outbuildings by burrowing under them, thus causing them to fall down or otherwise weakening them.

Carysville, Ohio.

FROM R. BRODIE.

Living, as we do, a few minutes' walk from the city, we are troubled more by rats than farmers who live farther in the country. In winter they take refuge in the hot manure that is carted into the fields from the city, and in summer I have even cut them with the mowing machine in cutting hay. In my barn my grain and feed bins are lined with sheet-iron, but it is harder to keep them from burrowing under the foundation of the root cellar. I have filled their holes with broken glass, but they make other holes alongside. If building again, I would get the footing stone laid in cement and part of the floor also. Mice are much more easily trapped than rats, the latter being much more cunning. I have tried poisoning with a phosphorus preparation; but I would rather stand the living mice and rats than the smell of dead ones in the house. In the barn, however, it did fairly well till they looked on it with suspicion and fought shy of it.

The best way to fight them is to have a good cat or two and a couple of good dogs. I have a terrier and a Collie dog, both good ratters; but the cats are the best for the house as they will not chew up the woodwork as the dogs do. Unfortunately the neighbor's dog killed my pussies; since then the mice have been increasing. Our girl caught 11 in a trap yesterday. The dogs are the best for keeping down the rats about the barn and on the farm. They will hunt them out from under the stable and barn floors and not give them a chance to make nests. No farmer should be without a Collie to care for the cattle and a Scotch terrier or a fox terrier to guard against rats and mice. Where the rats caused me most damage was in a root cellar under our barn. The pests found their way under the floor into the cellar; the holes they made let in the frost which did a world of injury in addition to the amount of stuff the nuisances destroyed, and the dogs could not find their way through the closed doors into the cellar. I intend building a root cellar away from the other buildings. I have not seen a rat about my buildings this season, but I come across an occasional dead one in the fields and orchards, that the dogs have killed. When I was young my father used to give us a penny a rat for all we were able to trap. It was great sport.

St. Henry of Montreal, Canada.

FROM C. C. WARREN.

We are not troubled with mice or rats about the house as we keep two cats, but we have only the small woods rats to contend with. Those big imported fellows that sit up on end, waving their tails like banners in the air and which can put an ordinary cat to flight, have not yet made their advent here and I am not anxious for any of their company about the barn and corn-crib. I sometimes use poison to keep down those small rats, but am not troubled much by them. About the only damage they do is to eat a little corn.

Grand Bay, Ala.

The Vineyard.

CALIFORNIA WILD GRAPE-VINES.

THE Vitis Californica, which is being used for a resistant stock on which to graft many varieties, is one of the most picturesque and beautiful objects on the California river bottoms and in the ravines. Very few writers have spoken of it, and very few tourists ever get a glimpse of the grape in its native haunts, because it is seldom seen in the cultivated valleys or near the high ways of travel. It grows on the Lagunitas, the Alameda, the Sonoma, and the Sacramento, along the Salinas, San Joaquin and Russian Rivers. It is at its best in central and northern California. One of the most beautiful examples of wild-grape arbors in the State is to be seen along the Rio Linda and Chico Creek, on Gen. Bidwell's farm in Butte County. Here, for 15 miles the trees on the banks are covered with grape-vines, in vast domes, spires, arches, arbors and columns. The illustration seen at Figure 280, shows but two out of thousands of forms which these magnificent vines have taken in their superb luxuriance of growth. They creep up banks and cover piles of stone and ledges of rock. They cross from tree to tree, in leafy bridges. When in bloom they scent the air for miles. In autumn so abundant are the small, purple clusters that they seem to color the whole forest. After the leaves and fruit have fallen, the vines are still worth admiring study, for they reveal their labyrinthian intricacies and are the delight of artists and photographers even more than during their leafy luxuriance in summer. The vines seem to have little choice about the trees they clamber over. The sycamores and alders, white oaks and maples are all loaded with wild-grapes that in a few years climb to the tops, and trail back in a thousand graceful and flowing curves. In the Vaca Valley some of these large vines have been grafted to Muscats and Black Moroccos, with entire success. C. H. S.

Niles, Cal,

SOME FINE OLD GRAPES.

I SEND by express to the R. N.-Y. a basket of grapes, of the older varieties, Catawba, Concord, Diana and Iona, that the Editor may judge of their quality as compared with that of some of the newer kinds, and of the same as grown at the Rural Grounds. They are some that were grown by me on the south shore of Lake Erie, not a great way from Cleveland, Ohio. The weather has been such that they were allowed to hang on the vines until October 24th. Thousands of acres have been planted with vines along the shore of the lake, generally from one to two miles from the water, and vine-growing has become a great industry employing a great many people. The Concord is taking the lead of everything else on account of its productiveness, hardiness and cheapness, and I sometimes think on account of its quality, as people want it more and more.

I wish that I could send to the R. N.-Y. some Delawares; but they are gone for the season. They were the "fairest of the fair;" and when perfect have hardly been equaled for fine flavor. Miner's (the true Victoria) made fine bunches this year the same as Concord. I have put in a small bunch of dried Brighton that the Editor may see how much sugar there is in them—something like a raisin. H. B. SPENCER.

Cuyahoga County, Ohio.

R. N.-Y. The above grapes, though not so large as they often are seen in market, were of the finest quality. It is certainly true that Concord is all the while making friends. At this time the price of Concords and Catawbas in the New York market is the same.

Dairy Husbandry.

THE EFFICIENCY OF SEPARATORS

An interesting study: results of experiments with various hand and power cream separators; varying results with the Lefeldt and De Laval power separators; conditions that affect the results; results from the De Laval hand separator and the "Baby Separator;" power needed to operate them.

THERE have recently appeared in German papers the results of experiments with regard to Lefeldt and De Laval milk separators to determine under what condition the greatest efficiency of creaming can be obtained. As these results are of equal value in our country, I wish to give a liberal translation of the work of Dr. J. Klein and M. Kühn, O. Nuebert and H. Wilhelm, as epitomized in "Biedermann's Central Blatt für Agrikulturchemie." Only general results are given.

Klein and Kühn have experimented upon Lefeldt's small separator with milk at different temperatures, with greater or less influx, and with different sized pistons for regulating the flow of the skimmed milk. From many results they conclude that the efficiency of creaming is, within certain limits, greater as the temperature of the milk rises. An efficiency of 94 per cent. was obtained between 82 and 93 degrees (F.); and one of 93.16 per cent. at 70 degrees and of 87 per cent. at 55 degrees. The efficiency of creaming sank as the quantity of milk used in a given time was increased even if the relation of cream to skimmed milk remained the same as with the smaller quantity. This same relation was retained by enlarging the opening for skimmed milk and substituting larger pistons. While an efficiency of 94 degrees was obtained by the influx of 587 to 627 pounds per hour, it sank by the use of 1,100 pounds to 87.52 per cent.

If the quantity of milk used remained the same, the relation of cream to skimmed milk exerted less influence. When the relation was one part of cream to four parts of skimmed milk a creaming efficiency of 95.16 per cent. was obtained. When it was one part of cream to 10 of skimmed milk the efficiency sank to 94.12 per cent. only.

Naturally with the higher efficiency lower fat contents of the skimmed milk were obtained. With the highest efficiency the skimmed milk contained .20 per cent. of fat and with an efficiency of about 90 per cent. it contained .30—.40 per cent. of fat. From the above it appears that the best results were obtained with the relation of one part of cream to five parts of skimmed milk. Klein and Kühn conclude that Lefeldt's Separator, running at 6,000 revolutions per minute, with milk above 77 degrees, and a ratio of cream to skimmed milk as one to five and using 620—640 pounds of milk per hour, reaches an efficiency of 94 per cent.

They found that with the DeLaval Steam Separator under normal conditions with 7,000 revolutions a minute and a milk temperature above 77 degrees, and a relation of cream to skimmed milk as one to five and an influx of about 680 pounds of milk per hour, a creaming efficiency of 95 per cent. was obtained.

The test of the DeLaval Horizontal Hand Separator showed that with the same relation of cream to skimmed milk, using 330 pounds of milk per hour with a temperature above 77 degrees, an efficiency above 92 per cent. was obtained if the crank was turned 40 times a minute. If it was turned faster, the relative amount of skimmed milk became greater; if it was turned slower, the relative amount of cream increased. Both must be avoided as much as possible by turning regularly.

For the purpose of obtaining a regular supply of milk, the authors recommend the use of a large storing can for the milk, from which it flows into the can placed upon the separator. A strong man was barely able to keep the separator in uniform motion for half an hour, although an essentially easier motion should be obtained from a newly built machine. Finally the authors have experimented with the smallest of DeLaval's centrifugal machines, the Baby Separator, and obtained with it by using 125 pounds of milk per hour at a temperature above 77 degrees, a creaming efficiency of 91.2 per cent., and they claim that a maid-servant of medium strength can keep the Baby Separator a whole hour and even longer in regular motion.

O. Neubert has experimented with the Hand Separator and Baby Separator. With the Hand Separator by using an hourly quantity of 330 pounds of milk at a temperature of 86 degrees, he obtained a creaming efficiency of 87–93 per cent; by using 220 pounds of milk per hour, he obtained an efficiency of 91.8–92.8 per cent. Where the milk influx was regulated better by the swimmer of the apparatus, the creaming efficiency for 400 pounds of milk per hour was 89.9 per cent.; with 375 pounds of milk, it was 90 per cent. and with 300 pounds, 89 per cent. at which reduced quantity the cream flow sometimes stopped. The fat contents of the skimmed milk varied between .28 and .40 per cent., according as the machine did its best or poorest work.

During the first trial of the machine the necessary exertion was seemingly great, so that a strong man was scarcely able to turn more than an hour. However, after an improvement in the axle-beds and after carefully oiling, the machine ran much more easily so that a strong man could turn it for between one and two hours without noticeable fatigue or breaking down. With the Baby Separator, using 220 pounds of milk an hour, a creaming efficiency of about 90 degrees was obtained and the exertion was about the same as that necessary for the improved hand separator.

H. Wilhelm reports upon the Baby Separator. He praises its work under normal conditions; but states that the machine is heated by running a whole hour, and recommends that it be stopped every half hour and oiled anew to prevent wearing out. The author states that the Baby Separator can be turned at least 15 or 20 minutes by a boy or girl He obtained a creaming efficiency of 89.9 per cent. by using 130 pounds of milk per hour at a temperature of 86 degrees having a relation of cream to skimmed milk of one to five.

It will be noticed that the statement of Neubert in regard to the ease with which the hand separator can be run differs materially from that of Klein and Kühn. I have seen the hand separator in frequent operation and it was always run by two strong men where the machine was used for about two hours a day. Personally I should consider the statement of Klein and Kühn as very nearly correct, and I believe that Neubert must have used an unusually easy-running machine.

Hanover, N. H. CHARLES L. PARSONS.

THE CORNELL UNIVERSITY AGRICULTURAL ASSOCIATION.

Object, membership and plan of work of the association; Canadian cheese-making discussed; farms and farmers on both sides of the line; five stages of cheese-making: coagulation, heating, dipping, cutting and pressing the curd; differences between the processes employed in Canada and in New York.

AT Cornell University there is an organization known as the Cornell University Agricultural Association. It is an association formed for the purpose of discussing the leading topics and principles of the agriculture of the day. The students seek by this intercourse and close association to benefit themselves by widening their knowledge of the science of agriculture. The active members are the agricultural student body. Besides these, there are several honorary members, consisting of the Agricultural Faculty—Profs. Roberts, Caldwell, Law, Bailey, Prentiss, Comstock and Dudley—and also Prof. Robertson of the Ontario Agricultural College and Prof. Wickens of the Imperial University of Austria. The Association meets every Tuesday evening, in their quarters at the agricultural reading-room, when a debate is held, or some one presents a paper. In either case the subject is open to discussion. These meetings are considered by the students to be of the greatest benefit to them. The meeting of Tuesday, October 29th, was of especial interest, as the subject treated of one of the products of New York's greatest industries, the dairy. The speaker was Prof. H. H. Wing, Deputy Director of the Agricultural Experiment Station at Cornell University. The following is a report.

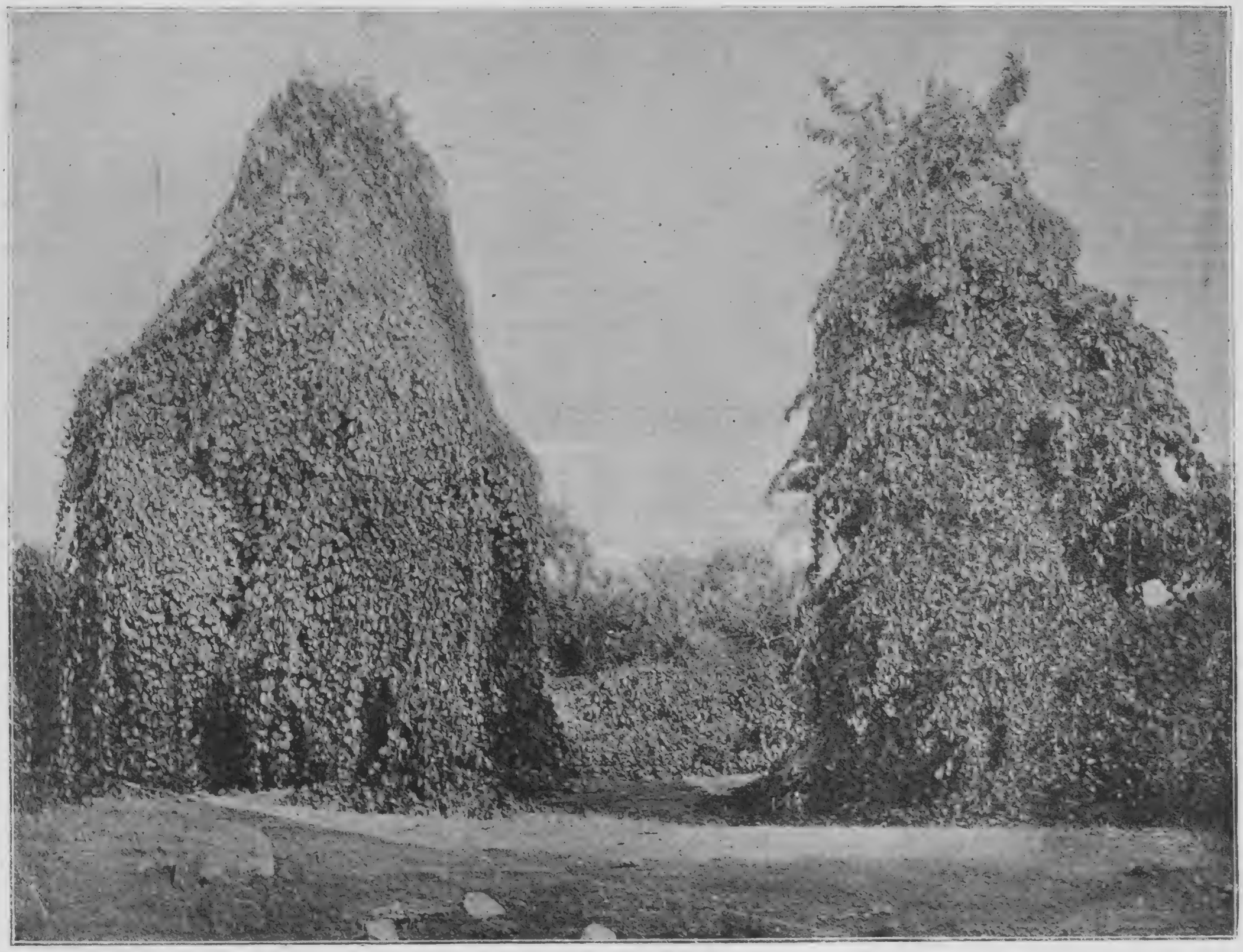
Prof. Wing announced as his immediate subject, Canadian cheese. During the past summer he spent some time in Ontario, studying in general its agriculture, and in particular cheese-making. Preliminary to his general discussion, he first gave a brief outline of the condition of Canadian farms and farmers. The soil and climate of Ontario are similar to those of New York State with the exceptions that the land appers to be less fertile, and the growing season about one month shorter. This latter fact prevents the successful growing of corn. In place of this crop, large quantities of turnips and peas are raised. The prices of crops and the financial condition of the farmers seem to be about the same as here. The factory at which Prof. Wing was, is located at Bluevale, and is under the charge of T. J. Dillan, one of Canada's most expert cheese-makers. The factory is a large one, having a capacity of about 36,000 pounds of milk or 45 cheeses per day. The milk is delivered only once a day. It is usually all in by nine A. M. and then the process begins. The entire process may be divided into five distinct periods.

1. Coagulation—from the reception of the milk till the curd is ready to cut.
2. Heating the curd.
3. Dipping the curd.
4. Cutting the curd.
5. Pressing.

STAGE 1. As the milk is being turned into the vats, the steam is gradually applied until the milk reaches a temperature of 84–86 degrees. Ordinarily it is ready to set (applying the rennet) as soon as the vat is full. But it is not always so. A proper degree of ripeness should be reached before the rennet is added. This time may be determined by an arbitrary test. There are many tests; in fact, nearly every maker has his own. The regular test, however, depends upon the time it will take for a certain quantity of rennet to effect coagulation in a certain amount of milk. This test varies, however, because of the different strengths of rennet extracts, and the various sizes of the vessels used. The test given, however, was as follows: When one tea-spoonful of rennet will effect coagulation in a tea-cupful of milk in ten seconds the milk is ready to set. Rennet is usually added at about the rate of 3½ ounces per 1,000 pounds of milk, but the amount varies somewhat with the weather and the condition of the milk. The rennet is first added to a pail of water and this is then added to the milk. This causes an equal distribution of the rennet. The milk is next stirred for a few minutes and then left. In 30 to 40 minutes the curd will be ready to cut. This completes the first stage.

STAGE 2. The curd is cut in small cubes a little over one-half inch through and then stirred with the object of separating as quickly as is possible the whey from the curd. Heat is gradually applied until a temperature of 98 degrees is reached. During this operation the cubes have become smaller and smaller, and more leathery in appearance. The process of heating and stirring requires very careful work to prevent the breaking or bruising of the curd and consequent loss. In a short time acid develops, and the curd is ready to dip. The test in this case is, when curd applied to a hot iron will "hair out" one-fourth of an inch it is ready to dip.

STAGE 3.—The whey is run off quickly, and the curd is dipped into the sink. Here the processes employed in Canada and New



CALIFORNIA WILD GRAPE. FROM A PHOTOGRAPH. FIG. 280

York differ somewhat. The Canadian maker tries to keep the curd well stirred up to give it as much air as possible and at the same time to keep it warm. The New York maker allows it to become more compact. The curd is now cut into large chunks and piled up, when it has the appearance of India-rubber. The time during which it remains in this condition varies with the condition of the milk and the weather. The proper time when the curd is ready to cut in the mill is determined by another test. The hot iron is used, and when the curd will "hair out" one inch it is ready.

STAGE 4.—The curd is cut in small strips, and then stirred for 10 to 15 minutes. The appearance is now changed, the curd taking on a soft, silky feeling. The color also begins to develop. Fat can be squeezed out, and as soon as the curd is salted it will be ready to go to the press. Salt is used at the rate of about 2¾ pounds per 1,000 pounds of milk.

STAGE 5.—The curd is then put in the hoops and pressure is applied, at first gently and finally with full power. The processes followed in Canada and New York differ in some points. New York makers dip the curd and after stirring it awhile put it in the press. Time is not given for so full a development of acid and color as in Canada.

E. T.

TWINS.—A well-fed cow, and a well-filled pocket-book; a general-purpose cow, and a no-purpose owner; a fat-as-a-seal heifer calf, and, later on, "dairyin' don't pay;" a cow to the acre, and a farm of rich acres; a trained—not "broken"—cow, and an undented milk bucket; a warm cow stable, and saved feed; a dairy thermometer, and no inquiry as to why the butter doesn't come; a gentle owner, and an intelligent cow.—A. L. CROSBY.

Everywhere.

RURAL SPECIAL REPORTS.

Illinois.

FRANKLIN GROVE, Lee County, October 28.—The clover crop in this State is far better than any we have had for five years, and we have had good weather to husk it. Corn is a fair crop though not of very good quality. Oats are of good quality. The yield was about 40 bushels per acre. H. H.

Indiana.

ROCKVILLE, Parke County, October 29.—Spring, summer and autumn have been delightful and productive. Cereals, fruits and flowers have been in great abundance, and the promise of our coming crops is very good. The great pest has been the grub-worm, and the only birds I have ever seen devour it—the crows, blackbirds and English sparrows—all the boys have written and printed permission to slay—and even premiums are offered for their scalps.

BATES.

Kansas.

MEADE, Meade County, November 4.—We are having the second snow storm of the season. This is the earliest winter the oldest settlers have seen. Corn was mostly good. It sells at 15 to 20 cents per bushel. Wheat was poor on account of dry weather in the spring. A large acreage of both wheat and rye has been put in this fall. Plentiful rains have put both in good shape for the winter. All kinds of feed are very cheap. Stock of all kinds are low.

N. R. B.

Missouri.

BELTON, Cass County, November 9.—This has been a year of general prosperity in this county. We have had a bountiful supply of everything except money which is very scarce. Corn will go from 30 to 60 bushels per acre, and it is selling at 18 and 20 cents per bushel. Most of the farmers are feeding their corn to cattle and hogs. Oats were nearly a failure. We had a heavy fog at blooming time and rust struck them. Price 12 to 15 cents per bushel. Wheat was very good—yield 20 to 40 bushels; but the acreage was small. I never saw a better prospect for winter wheat than we have now, and the acreage is large. Flax was not very good, there being too much wet weather in the spring which is very injurious to that grain: yield from three to 12 bushels per acre, the price ranging from $1. and over. Potatoes were about half a crop—50 to 100 bushels per acre. The shortage was due to too much wet weather in the spring, which kept people from working them, letting the weeds get the start, checking them and thereby reducing the yield. Price 30 to 40 cents; no rot here. There is about as much money in potatoes as in anything we plant. Hay was an extra good crop, but owing to so much wet weather it was put up in very bad shape. Price low: we can hardly dispose of it. Clover seed is a very light crop; on account of so much wet, it did not fill out—yield one-half to three bushels per acre; price $3.75 per bushel: a good many did not hull their crops. Navy beans were good, but the weather was almost too wet for them to set. I raised from one pint two bushels of very fine ones. Our cash products here are corn, wheat, clover seed, hay, cattle and hogs. Vegetables of all kinds were good, so were berries. Blackberries were an immense crop and sold for 40 to 50 cents per gallon.

C. A. D.

Wisconsin.

BRILLION, Calumet County, November 7.—Farmers are practically through thrashing, and the yields of grain have been above the average. Thrashing in this section, though farms are small, (40 to 160 acres, 80 is the general size) is done entirely by steam. Traction engines are used, which are not only self-propelling, but they draw the separator and water tank as well, thrashing 800 to 1,500 bushels is an ordinary day's work. The best report I have seen from this county was 900 bushels of barley thrashed in five hours, and 1,650 bushels of mixed grains in a day—the product of 32 acres. Prices are low: wheat 70 cents; barley, 30 to 50 cents; oats, 15 cents; bran, $8 per ton. There was no rain here from September 10 to November 1. October was a remarkably pleasant month—only five cloudy days. The fields have been so dry that plowing on clay lands has been impossible. On November 1st we had a light rain not sufficient to moisten the ground more than two or three inches. To-day is quite cold and a slight crust has frozen on the ground. Quite a large area of winter grain has been sown. Early-sown (1st to 10th of September) looks well; that sown later is small.

E. G. F.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

RINGBONE: DISLOCATION OF KNEE-CAP IN A COLT.

W. G. S., Benedict, N. Y.—1. My four-year-old colt I began to work this fall. He is a very fast walker. There is a small enlargement on the pastern of one hind leg. The animal shows no lameness yet, but when he steps out while drawing hard, one step is shorter than the other, the longest being made by the affected foot. I fear it may become a ringbone. What can be done to prevent this? 2. A two-year-old colt when led out of the stable this morning, stretched out and one hind leg became stiff as if affected by the cramp and it could not move ahead until I took hold of the foot and lifted it up and forward, and it catches again in a few steps and then it is all right. Is this a stifle-joint difficulty, and will it be likely to be permanent?

ANSWERED BY DR. F. L. KILBORNE.

1. The longer step is not due to the enlargement. In fact, it rather indicates some trouble on the opposite limb with the shorter step. If there is no farther growth or lameness, try the application of the compound tincture of iodine to the enlargement daily until the skin is blistered. Then omit for a few days, and repeat if necessary. If, however, the enlargement continues to grow or causes lameness—*i. e.* if it becomes a ringbone—the best treatment is to have it thoroughly fired by a competent veterinary surgeon. If either the dam or sire of the mare has ringbone it would be well to fire at once, because the earlier a ringbone is fired the better the chances of a recovery. It is not usually advisable to breed from a mare with ringbone, and especially if the ringbone has appeared in two or more successive generations. If a ringbone develops as the result of a severe injury it is not so liable to be transmitted, and a desirable mare with such a ringbone will often raise sound colts. A stallion with ringbone, except for special reasons, should always be rejected for breeding purposes. 2. The trouble was dislocation of the knee-cap at the stifle joint. When dislocated as above, you can feel the rounded bone at the other side of the joint, where it has been allowed to slip owing to a relaxed condition of the muscles. In raising and bringing the limb forward (which you very properly did) it is also well to press on the knee-cap from the outside to assist in throwing it into position. To prevent a recurrence of the accident, clip the hair and apply an active blister over the whole region of the joint. (Powdered cantharides one half ounce, vaseline two ounces, spirits of camphor 20 drops). Rub the blister well in for 10 or 15 minutes. Tie the head short to a high rack to prevent the colt reaching the blister with her mouth. After 24 hours carefully wash off the remaining blister with Castile soap-suds, and apply vaseline daily until healed.

MULCHING AN ORCHARD.

J. H. T., Chapman, Kan.—As mulching young fruit trees is recommended, is it good policy to continue it 10 years or more on upland ground having a black soil two feet deep, and a yellow clay sub-soil? The object would be not so much to manure the ground as to keep up a thrifty growth, by keeping the ground moist, in our many dry summers, and keeping the weeds down without expensive hand labor.

ANSWERED BY PROF. J. L. BUDD.

West of Lake Michigan to the Rockies, I have reason to believe the best mulching for young orchard trees is good cultivation. In all cases coming under my observation the mulching for four or five years in succession tends to bring the surface-feeding roots to the top, when a sudden cessation of the practice always results in severe injury—if not total loss—of the trees by root freezing. A friend now living in Nebraska lost a fine young orchard by neglecting the mulching after it had been continued for seven years. In this case even the Duchess and the crabs were root-killed, showing conclusively that the mulching favored a shallow habit of rooting. And yet I believe in any system of shading the soil during the heated term. We cannot do this by covering the whole surface after the spring cultivation, with marsh hay, as is done by some pear growers in New Jersey; but we can do it by the annual sowing of Japan Buckwheat about the first of July. As many are prejudiced against this crop, I would request a careful trial of it in the orchard by sowing half of the land three years in succession with buckwheat, and managing the other half in the usual way. I think all will find—as I have done—that the half shaded with buckwheat will in three years show larger, cleaner, and healthier trees than the other half, and its first crop of fruit will be more abundant, more uniform in size, and excellent in shape and color. I said Japan Buckwheat as since its extended trial, I find it a more certain crop than our old sorts, and it answers the purpose of keeping the soil moist and cool quite as well.

THE WHITE GRUB.

V. D. S., Lewistown, Pa.—What is the history of the white grub that has been destroying a large amount of potatoes in this neighborhood? In nearly all cases the damage was done where a sod had been turned down. How can we protect the next crop from the pest? Would dressing the sod with lime be a preventive?

ANSWERED BY PROF. A. J. COOK.

This insect is the larva of the common large May Beetle—Lachnosterna fusca. Each beetle lays scores of eggs in meadows, strawberry beds or other permanent herbage. These eggs hatch into the white grubs that live three years, eating the roots of grasses, strawberry plants, and if forced to it, roots of corn, wheat and even the tubers of potatoes. I presume those that have troubled V. D. S. by eating his potatoes were in the third year, as he says they were large. He says they troubled potatoes on sod ground; this is their habit. It is probable that they will not trouble the potatoes next year on the same ground, unless perchance there be others in the land in the second year of their development, which is not likely. A little examination will tell. It would do no good to scatter lime on the sod before plowing, as the lime is not harmful to the insects. There is always danger of plowing sod for such crops. The only safe way is to examine the land carefully in the fall. If the grubs are found in force, plow early in the fall, then drag often in the fall and spring. We thus give the birds a chance to free the soil from the pests. I have known blackbirds to rid acres of meadow of myriads of these grubs in a few days in late summer. It is also well sometimes to turn hogs into badly infested meadows. We thus turn the grass into pork indirectly through the sleek, full-fed grubs. In case lawns are injured it is best to spade them up and re-sod or seed. In case of strawberries frequent changes of bed—never planting on sod or old strawberry ground—is the safe and easy cure This change pays in any case.

SITE FOR A PEACH ORCHARD.

A. S. B., Waynesboro, Pa.— I have a nice, smooth piece of land, lying well up along the mountain, with north and west slopes covered with chestnut, pine and oak timber. I want to remove the timber; some of it has been taken off already. I want to plant the ground with peach trees. The soil is a mountain gravel of a flinty sort. Are the location and soil suitable for peaches? Would it be advisable to plant the peach trees soon after the land is cleared?

ANS.—The elevation and the north and west slope are favorable and so is the character of the soil and the fact that it favors the growth of chestnut trees, which are nice in their requirements. They can, however, endure a drier air than peach trees like, and quite as much seems to depend on calm, mild, humid air, such as we generally have in June and September, as on a dry, healthful soil. An exposure facing east is favorable because it affords shelter from the parching effects of wintry northwesters. If some of the timber is allowed to remain, especially some pine, to add to this shelter and to dampen the air somewhat by its exhalations, so much the better. The surest judgment as to the fitness of any locality for any special kind of fruit is obtained from observation of the growth and yield under like circumstances in the same region. The trees can be planted as soon as the ground is cleared, but should not be interfered with by weeds or sprouts any more than any other cultivated crop. If there are many decaying roots in the ground they may develop an acid injurious to the growing roots and a good dressing of ashes or lime or both would be advantageous in any case. A wide mulch of pine brush around each newly planted peach tree has been found very favorable to their growth and repellent to the borer beetle.

VALUE OF ASHES FROM A CORD OF WOOD.

A. S. B., Waynesboro, Penn.—What is the value of the ashes from a cord of hard wood; also the value of the same from a cord of light wood? What weight of ashes ought to be yielded by a cord of wood? I have a lot of wood for which I have no near market; it could be cut and piled in one place cheaply; I want to know what the ashes, per cord of wood, will be worth to me as a fertilizer. State the probable quantity per cord, and its approximate value on the farm where it is to be used as a fertilizer. Will it be worth more if covered with earth and burnt to charcoal?

ANS.—A cord of hard wood will make about 70 pounds of ashes, worth probably 60 or 65 cents. The soft-wood ashes may contain about the same amount of potash, but a smaller amount of phosphoric acid than the hard wood, so their value would be determined by the requirements of the crop to which they were to be applied. We should think the ashes would hardly pay for the labor unless the latter were *very* cheap. On general principles, the R. N.-Y. is opposed to the practice of burning up wood for the sake of the ashes alone. Dr. Hoskins, as our readers know, uses large quantities of wood in burning bones. He believes this to be the best way, all things considered, to "reduce" the bones to a suitable condition to be used as a fertilizer.

INDIGESTION IN YOUNG PIGS.

R. H. S., Rhinebeck, N. Y.—What ails my nine-months-old pigs? First, two were attacked—one laid out flat on its side, and the other got on its front knees with its nose pressed hard on the floor, while it stood up behind. The second laid down flat also, and inside of 12 hours both were dead. Another has since died and two others are similarly affected. When the last ones were attacked they would go round and round in a circle if hurried. The last three attacked are now all right, being in good, healthy condition. Those that died were troubled with twitching and spasmod

ic jerkings of the stomach. On opening the carcasses I could find nothing strange except that some parts of the entrails were bloody. Their feed was pumpkins and corn, boiled, with ground oats and rye put in a trough dry and fed with the boiled feed. All acted in the same way in pressing the nose against the ground.

ANS.—The trouble was probably due to indigestion or over-feeding. Medicinal treatment of pigs of the above age is usually very unsatisfactory, and in fact should rarely be necessary where the pigs are properly fed—not over-fed soon after weaning—and kept in suitable quarters. See notes on the care and feeding of young pigs in recent numbers of the RURAL.

SMALL FRUITS, ETC.

S. F. S., York, Pa.—I wish to plant for our local market, small fruits and vegetables, which I will retail myself. What varieties of strawberries, raspberries, blackberries should I procure? What will the plants cost per 1,000? Where can they be bought? What are two-year-old asparagus roots worth per 1,000 and where can they be bought? Where can I buy the Rural New-Yorker No. 2 Potato? How much per bushel?

ANS.—Strawberries: Sharpless, Bubach, Charles Downing (if it succeeds in your locality), Pearl, Parker Earle. Raspberries: Cuthbert, Marlboro, Hilborn (black). Blackberries: Kittatinny, Minnewaski. The strawberries will cost about $2.50 per 1,000: the raspberries about $8.00; blackberries about $8.00 The Minnewaski will cost more. Two-year-old asparagus roots will cost about $7.00 per thousand. All seedsmen sell them. The R. N.-Y. No. 2 will be offered by all seedsmen. You should be careful to secure the *true* No. 2, as other kinds have been offered for it.

STIFLE LAMENESS.

S. N. L., Chatham, N. Y.—My horse was stifled about three months ago. Although he is able to go about with careful usage yet he is very lame when I attempt to trot him. He refuses to back as it seems to hurt him. What can I do for him? I would prefer not to blister him.

ANS.—The most satisfactory result could probably be attained by either blistering or firing; but the application of a strong liniment or tincture of iodine two or three times a week, with a long period of rest, say, at least three or four months, might effect a cure. If possible keep the horse on a warm dirt floor (preferably in a box-stall where the animal can have more exercise, otherwise he should be walked out daily,) where there will be little difficulty in getting down and up without danger of slipping. A light, laxative diet should be given while the horse is idle.

A STEAM GENERATOR FOR HEATING WATER.

W. B. H., Boise City, Idaho.—In fixing up a laundry and bath rooms, I desire, if it is practicable and economical, to put in a steam generator such as the "Purinton" for heating water in wash and bath tubs and boiling clothes in stationary tubs. Will the steam passing through short pipes into a tub containing water and clothes, boil the clothes thoroughly? Is the use of a steamer more economical of fuel and labor than heating water and boiling the clothes on a stove?

ANS.—The R. N.-Y. has not seen this generator used for the purpose named, but it is informed by creditable correspondents that such use is convenient and economical. We have no doubt about the economy of using such a generator in the laundry and bath-room.

Miscellaneous.

J. L., Sand Point, Idaho.—Wm. MacNaughton's Sons of this city buy furs of all sorts. They can doubtless tell you where you can sell buck horns.

W. M. P., Eldorado Springs, Mo.—Does the World Manufacturing Company, 122 Nassau Street, New York, still have the New American Roller Organs for sale, and are they reliable?

ANS.—Yes; yes.

E. W. A., Buckingham County, Va.—A neighbor proposes to work my five-year-old Concord vineyard on shares. He is to do all the cultivating with horse and hoe as well as all the pruning and manuring. What should be his share?

ANS.—Nothing is said about picking, trimming and packing and marketing the fruit. If the neighbor does all these, an equal division of the profits would be about equitable.

C. P., Parnassus, Pa.—My riding horse has had the scratches badly. Just now there is no sore or inflammation. I keep the animal clean and use sweet oil when desirable. If I neglect to do this even for a day, a hard horny substance forms, something like the frog of the foot. 1. Is the trouble grease-heel? 2. What can we do to cure it?

ANS.—1. Yes. 2. Try the course of treatment advised in the F. C., of November 9th 1889, for Scratches or Grease-Heel.

C. F. B., West Groton, N. Y.—Will it pay me to buy Canadian unleached wood ashes to be sown on a meadow that was mown last season, and which I wish to mow again next year? How much should be used per acre?

ANS.—The various conditions are so little known to us that we cannot give a trustworthy answer. At any rate, we should sow, besides the ashes, some form of nitrogen. Ashes, in so far as potash and phosphoric acid are concerned, are a first-rate fertilizer.

W. R. S., Mapleton, Mich.—1. Is it safe to pasture hogs in an orchard after spraying the trees with Paris-green for the coddling moth? 2. Will a wet, swampy piece of ground make a good hog pasture? The water in it is pure spring water and the ground could be drained. 3. What is the average cost of keeping a hog up to the age of six months? What would be its average weight then?

ANS.—1. We should wait a day or two before turning the hogs into the orchard, although reliable experiments seem to show that there is little or no danger even on the day of the spraying. 2. We believe that a portion of a hog pasture should be high and dry. Hogs will do better if they are provided with a dry spot in which to make their bed. 3. We shall have to refer this question to some of our readers.

Discussion.

THE COST OF LIVING ON THE FARM.

H. D., GREENWICH, CONN.—I could not keep any record of family expenses so as to give the average cost of each individual, as the family varies in number according to the number of help kept and of friends who visit us. Usually we are 11 in family. Prices rule here about the same as in New York City markets; if anything, they are a trifle higher here. Our beautiful town is on the highest coast-land between Maine and Florida and is the summer home of many New York families who help to consume most of the local produce, and so keep up our market prices. Now butter brings 30 and 35 cents; eggs, 36; milk, 7; and cream, 35 and 40. These are produced on our farm, but I pay for flour $6 direct from the Produce Exchange, and in town $7, and we use one barrel in three weeks. Sugar costs nine cents and we use two barrels a year; coffee 30 cents per pound and we use two pounds per week; tea, 60 cents, one pound lasts us three weeks; the value of our chocolate, etc., I cannot estimate as we use less of these. Molasses is 70 cents; kerosene by the barrel is 10 cents per gallon, by retail 15; we use two gallons per week. I only use one coal stove in our sleeping apartments; that consumes two tons during the winter. The present price of coal is $6. Wood I burn in four stoves, but that I cut on the farm; price $6 per cord. I agree with O. H. of Greeley, Col., that it costs more to clothe a man than it does to clothe his wife. I know it costs more than twice as much for my clothing, shoes and slippers as for my wife's.

A. R., MARILLA, N. Y.—I have never kept any account of expenses since 1875. My income being very small, I became discouraged and only kept an account of the butter and eggs and other farm produce sold. Then at the end of the year, I would take an inventory of the stock, tools, etc., also of the amounts paid on debts and so find out what my profits had been after paying the farm and living expenses for each year. I have been more interested in the profits than in the expenditures. From April 1, 1875 to September 7, 1875 my total living expense for two except for wood, was $110.54. I had just commenced house-keeping, but cut my own fire wood on the farm. I set down only the items and dates with the cost. From January 1, 1877 to October 19, 1877, our family of two used 156 pounds of sugar: cost $16.94. I wish T. B. Terry would tell us through the columns of the R. N.-Y., what his profits usually are after paying his farm and living expenses; also what percentage they would be on the amount of capital invested in the business of his 50-acre farm. A merchant could tell the rate his capital was paying him. Why should a farmer be unable to do so? My farm has paid as well as any branch of business in this vicinity, in proportion to the amount of capital and brains invested in it. "Farmin' pays."

A. P. A., MEADVILLE, PA.—In looking over my books I find the following footings for the years:

	1883.	1888.
For clothing	$42.08	$49.25
Boots and shoes	13.85	15.75
Groceries	47.28	39.48

The family consists of three adults. I do not have to hire much help though I get a hand for two or three days at a time during a rush. Several nieces and nephews, however, that live in the city, make us a visit regularly every summer, and of course all help at the table. Though keeping a strict account of receipts and expenditures, I have not reduced my system of book-keeping to so fine a point as to open a separate account for each article; but under the head of "groceries" I include tea, coffee, sugar, spices, etc., in fact, everything in the way of groceries. Meat, vegetables and flour we produce ourselves and so no entry of the value of these is made in my grocery account. Occasionally a piece of fresh meat helps to swell the sum total of the bill, but not often, as plenty of eggs and chickens answer the purpose instead and are always at hand.

W. D. P., CAMP SPRINGS, MD.—My family consists of myself, wife and two children, and my mother and a niece live with me, and there is one hired man, making seven in all. The following items are only for myself, wife and two children:

Grocery bill, for 1888		$200 00
Clothing,	"	30 00
Shoes,	"	18 50
Medicines,	"	4 50
Doctor's bills,	"	3 00
Total		$256 00

I do not count what I raise on the farm, such as vegetables, fruits, meat, milk, butter, lard, poultry and eggs, of which we use all we wish either fresh or canned as far as fruit is concerned. We live as well as the majority of our neighbors. I raise fruits and vegetables for market and we have abundance of them for our own table. Some of my neighbors' families do not have strawberries, and several sorts of vegetables they have only when they buy them and that is seldom. I get my wood from the farm. I have accounts for several years, and find they average nearly the same except in the year in which I was married; then my own bill for clothing was larger than that for all the family in any year before or since.

T. B. TERRY, HUDSON, OHIO.—I keep a cash account, and buy almost everything we use and pay cash for it, so it is simply a matter of time and figures to get very closely at what it costs us to live. My family averages six persons, besides company—wife and I, two daughters and a son, all grown up, and hired help equal to one man for the year. In the line of groceries and provisions we consume in a year about six barrels of white flour, Graham and buckwheat, two bushels of marrow beans, 24 pounds of coffee, 12 of tea, 50 of rice, 470 of granulated sugar, a barrel of sweet potatoes, 52 bushels of Irish potatoes, 28 gallons of maple sirup, six of molasses, 20 pounds of dried peaches, 24 of raisins, seven of Royal baking powder, besides the numerous little things that it would take up too much space to mention in detail. It takes about 50 gallons of the best oil to keep our home well lighted. In oil and fuel we never attempt to economize. We used during the last 12 months 85 large-sized cakes of Ivory soap to keep us clean. I suspect our folks do not economize any in soap, as we used not to need so much. Our entire meat bill for the past year, including beef, chickens, pork, lard, oysters, fish, etc., foots up to $73. It is all purchased, as we do not keep even a pig or a chicken. To make those six barrels of flour go down pleasantly required $55 worth of the choicest creamery butter, costing from 18 cents in mid-summer to 26 cents paid the other day for our winter supply. It is many years since I have allowed my wife to fuss making butter from two or three cows—a constant daily drudgery almost the year around. I can make the money on the farm with far less expenditure of the vital force of the firm—wife and I are partners.

Our egg bill for the year spoils $17. It would have gone higher, but we buy eggs in the spring and put them down in lime-water. We are using 10-cent eggs now when they cost about twice that price in market. We drink lemonade in summer, instead of hard cider, which puts $9 on to the cash account. In the way of fruit we consume, fresh and canned, more than 40 bushels of strawberries, raspberries, blackberries, grapes, currants and peaches, besides 20 bushels of apples. Those who wish may live on the "fat of the land;" but as for me and my family we thank God for the fruit. Estimating what we grow ourselves at what we could sell them for at wholesale, our fruit bill runs up to $137—doctor's bills——0.

We grow our own Lima beans, tomatoes, pie-plants and sweet corn. All other little vegetables we find it far better to buy of those nearby who make a business of growing them. The vegetables we do grow are right in our potato field, in rows with the potatoes I might say, in passing, that we aim to grow what is necessary in order to get the best. We can raise better strawberries, raspberries, Lima beans and sweet corn than we can often buy. We can buy as good eggs, butter, chickens, etc., as can be produced. We keep one cow to furnish us milk and cream. I think these would bring at the factory $40 a year.

Now, of course, it is almost impossible to get at such figures as these to a cent, as some supplies are left over from year to year; but our grocery and provision bill for a year, including many little things not mentioned above, does not vary much from $4.83. Thus our eating and drinking costs, in cash, about $1.55 a person, a week. With a little cutting down on the luxuries this might be reduced to a dollar a week. We have lived on considerably less than that.

To keep us warm I bought for this winter seven tons of anthracite coal, at a cost of $5.40 per ton. To do the cooking requires $25 worth of stove wood and oil for a year. The wood costs $1 per pile (of 18-inch wood) eight feet long and four feet high. We use an oil-range for hot weather. About four cords of chunk wood are used up-stairs in very cold weather to help out the big base-burner below, that can ordinarily warm the whole house. We do not live in the kitchen, but in the whole house which is warmed and lighted, as a rule. How it would shock my good mother, if she were living, to see us daily using the best rooms in the house. Total cost of fuel for the year $67, without counting the hauling, which is a very small matter.

What we wear is not so easy to get at correctly. After getting the figures from the girls (I give them $10 or $20 at once, and they buy their clothes, etc., so that the cash account does not show the cost), I have concluded that to dress us all a year, including over-head and under-foot, costs pretty close to $216. I threw out all cloaks and over-coats from the year's account, and then added in $5 a year for each person for furnishing these garments. For example: I bought a new overcoat for $20 and one daughter had a new cloak that cost $28. On the average these will last us about five years, which makes about $5 a person, a year. Then I have had two suits of underclothing; but they will last two years; so only half the cost is put in this year's account. So, although the clothing bill foots up more than we expected, it is pretty close to the truth—$43 per individual. It will not do to count incidentals, such as church expenses, cost of traveling, books, papers, lecture tickets, flowers, etc., at less than $125. For the use of our carriage, sleigh, harness, robes, etc., for pleasure riding, I charge 15 per cent. per annum on their cost, or $50. As we keep no special driving horse I will say nothing about the use of horses.

To get at our real family expenses $80 should be taken from the above $483 for what the hired man ate, when the total will be found to be $861 for our family of five full-grown persons. But there is one other point that farmers are quite apt to overlook in their estimates of the profits of farming. Our farm has paid for and furnished us a nice home to live in. One wouldn't forget it if he had to pay rent for such a house all furnished in town. Our home has cost, including all furnishings, close to $4,000. I certainly could not afford to keep this insured, painted, and in repair and taxes paid, and stand wear and tear on furnishings (including carpets and bedding), together with interest on the investment, and rent to a careful family for 10 per cent. on its cost. But I will lend money to myself cheaply and call the whole use of the home 10 per cent. on its cost. Thus the actual cost of living on our little farm foots up $1,261.

Can a 50-acre farm stand this drain? Yes, and pay a fair interest on its value, thus leaving the owner the above sum for his

labor and supervision. It can do this without counting any income except that directly from the farm, and the farm is hardly run to more than half its full capacity either. Nearly all farmers, like Mr. Greeley, have their own fruits, butter, milk, meat, chickens, eggs, etc. They may get a little idea of what the farm is doing for them in this line by noting what we pay for all these things. My wife says: "Do tell them that we feed the cats pretty well; that will help out a little. I am afraid they will think us pigs from the quantities of provisions bought." You will kindly note that the R. N.-Y. particularly called for this article on our private affairs.

Summit County, Ohio.

LONG ISLAND SMALL FARMING.

T. T., BROOKLYN, N. Y.—It seems to me that the RURAL's correspondents "O. A. F.," "L. I. Farmer," and "H. A. Brown," are not the farmers properly to advise a poor man as to how he can make a living on 12 acres of average Long Island land. They are altogether too high-toned, and evidently have now and always have had sufficient means. W. D. Pyle's letter has the true ring. Farming, like all other vocations, depends more upon the man than on the land. I am a poor city lawyer earning perhaps about $1,200 per year. In my younger days I had about five years of excellent instruction in farming, particularly in vegetable culture. To my mind truck or milk farming amounts to slavery. I would not follow either for the gift of a $25,000 farm, but other kinds of small farming I love, and I have found them profitable. Let me here say that in my opinion the cheapest and best way to clear land of Scrub Oak on Long Island is to do it by a large coulter plow drawn by two yoke of oxen. Hire the oxen if not able to buy them. It is all very well for the few fat and well-to-do Long Island farmers to sneer at the methods of the poor German ones; but do not the Germans usually thrive better with fewer advantages than our small farmers? And why? Simply because they are more frugal and industrious. The small Long Island farmer is, as a rule, shiftless. He can sit in the town store and talk politics all day and consider himself a statesman. Go to his farm and see his house and barn without the paint they so much need; his horse and cow lean; his plow, harrow and tools out-of-doors, and the stable and stock uncleaned for weeks! No saving of manure, no proper frugality and little industry.

Now, I think any ordinary man ought to make at least a living on 12 acres. I own a farm of 14 acres in Hempstead. I bought it because I got it very cheap last summer, and I calculate to make $500 above expenses this year, and if I do not I shall be disappointed, for I have done that much and more before under similar circumstances. Now I would say to the owner of 12 acres: Wait until March next. Then go upon your farm. Get a cheap horse for about $25 at one of the city horse-car stables. Hire a green German by the month at, say, $10. Attend the auctions of second-hand farm implements in your locality, and buy a plow, harrow, hoes, and such tools as you need. Start a hot-bed at once. Plant all the vegetables you want for your family liberally. Buy a cow, plant one acre of corn for fodder for her. Buy 100 chickens and inclose them in a quarter of an acre of wire fence, moving this fence upon a fresh quarter of an acre every month. Shelter your chickens either by excavating earth and covering it like a cistern, giving air and light, or putting up posts eight feet high with cross-pieces on top, or pieces inverted V-shape, and covering the roof with sea weed or leaves, covered with grass in profusion. Have no smaller breed than Wyandottes. The eggs and manure will well repay you. Now, that you have cleared your farm of the Scrub Oak—a man and yourself ought to clear half an acre per day, if the Scrub Oak is light—you will have, say, 10 acres left for crops. Put five acres of it in the best variety of sweet corn you can get. If you cannot have it very early, let it be very late, say, ready to market in September. Put three acres more in late cabbages, and the other two acres in potatoes. Do the work all by horse labor. Keep the cultivator going. Manure the hills all you can on the *top of the ground* after about one month of growth. Write to all the hotels within 10 miles as soon as your crops are ripe, and offer corn at 25 cents less per 100 ears than they may be paying, and push the sale of other things, such as eggs, chickens, vegetables, etc., being careful to grow only the best varieties of the latter. You ought to sell $25 worth of hot-bed plants. With the hired man on the place all the time, you could spend in the winter certainly half of the week in the city at your real estate business. That is what I intend to do as to my business, remaining on the farm the other half. The railroad commutation fare for 20 miles from the city is only $70 per year, and then you can go out and in every day for that sum, if you choose. Then an honest real estate agent ought to stir up some business near his farm, drawing papers, etc. Small farming well conducted pays better than any ordinary small business in the city, if one likes it. Some people (almost all of the ladies, for instance) would sooner live and half starve in a city in some over-crowded tenement-house than dwell upon a fine farm in comfort. It is only a matter of taste. Four out of five of the young city lawyers admitted to practice within one year, either become office clerks or go into other business, and the same can be said of most of the other city vocations. Failures abound, and rich men can live best in the city, of course. The poorer or middle class of city folks, however, would be far better off upon small farms.

THE "BEST METHOD" OF KILLING POULTRY.

C. H. W., ROCHESTER, N. Y.—In a recent number of a "practical" poultry monthly, I find some very concise information given as the "*Best Method*" of preparing fowls for market. I quote the passage in full below, and would ask the R. N.-Y. if it is the method usually pursued by the amateur or professional poultry-man; or whether there is not some other, more practically followed, which is less cruel than the "best," and still free from the objections to the "old method" of beheading, which the same authority informs its readers, "leaves a ragged, bloody, unsightly neck exposed which is *revolting to many sensitive persons.*" If not, I for one would prefer to deaden my feelings to the sight of the "bloody necks" rather than to the horrible barbarity of the "best method."

The passage referred to is as follows—The italics are my own:

"The best method of killing and dressing is to hang the fowls by the feet by a small cord; then, with a sharp knife, give one cut across the upper jaw, opposite the corners of the mouth; after the blood has stopped running a stream, place the point of the knife in the groove in the upper part of the mouth, run the blade up into the back part of the head, *which will cause a twitching* of the muscles. *Now is the time*, for every feather yields as if by magic, and there is little danger of tearing the most tender fowl or chick. Before it *attempts to flap* you can have it picked perfectly clean."

This is not, as the humane reader might suppose, a ghastly joke aimed at the inexperienced slayer in his abortive efforts to extinguish life in the too vivacious fowl, but it is just what it purports to be—concise and perspicuous directions, seriously given, for "killing and dressing by the best method" and in a manner the least likely to offend the supersensitive and æsthetic feelings of the cultured or critical public.

R. N.-Y.—This advice is positively inhuman. It is a bungling, cruel operation, particularly when done by amateurs. When the writer kills a hen he stuns it by giving its head a sharp rap and then chops the head off as quickly as possible. This we believe to be the quickest and best way. It is true, however, that poultry sent to the New York market must be killed so that the head remains on the body. For this trade the birds should be killed at once by thrusting a long, slender knife far back through the mouth into the brain. This will cause less pain and bring death quicker than the butchering process described above.

DRESSED BEEF AND FREE TRADE.

C. H. W., BERGEN COUNTY, N. J.—The recent discussion regarding the effects of the dressed beef business on Eastern farming was interesting to New Jersey farmers, who perhaps more than any other class feel the injury done by this business. It may interest readers of the R. N.-Y. to learn how a local orator takes this dressed beef matter as an illustration of the probable effects of free trade. Years ago, he says, we made our own beef and sold it to local butchers. This represented home manufacturing, for we were enabled to make our own manure, provide winter farm work, make butchering a regular trade and make a profit on the beef. Western farmers discover that they can produce beef cheaper than we can. They can grow heavier crops of hay and grain while their land is not taxed for one-fifth of what ours is. They are cheap producers and they want our market. The standard free-trade argument, as applied to this case, would be that since beef can be produced so cheaply at the West, it should be made there, and brought here and sold to consumers for a lower price than the New Jersey farmer can afford to sell it for. By means of rapid transportation and concentration of capital this plan has been carried out and we may see how the result has borne out the theory. New Jersey farmers can no longer raise beef cattle. They are now obliged to pay cash for manure. They now buy their meat instead of producing it themselves. There are three or four new calls for cash and no new source of income. The price of the dressed beef is no lower than that of our own beef used to be. It was made a little lower while our beef was being driven out of the market, but when once we failed to compete, up the price went again. Nor do Western cattle-men seem to be gainers. They are all complaining about low prices. So, then, free trade in dressed beef between one State and another destroys an important agricultural feature of New Jersey, brings no extra profit to the Western producer, gives the Eastern consumer little or no relief in the way of cheaper prices, and only makes the middlemen, or handlers, rich. Carry out this same result in the trade between a foreign country and our own, and we see our own manufacturers crippled, the laborers of the other country and the buyers of our own but little benefited, and the importers and handlers getting rich.

THE JEFFERIS APPLE AND A FEW OF ITS COMPEERS.

T. T. LYON, SOUTH HAVEN, MICH.—Some weeks since, the RURAL published a notice of this apple by Pomologist Van Deman, of the Department of Agriculture, giving it a very high character. I planted this variety in my trial orchard as early as 1850; and I will not essentially differ from Mr. V— in his estimate of its quality; although I regard it as too high—considerably so, as grown in Michigan. I observe that Downing designated it as "very good," (doubtless as grown in its native region—Pennsylvania) and I found an unmistakable, though slight, deterioration, even with the short northward migration to this State. It is in season through September. My criticism of Mr. Van Deman's notice is based less upon his estimate of the Jefferis than upon the fact (which will probably be admitted to be such by most pomologists, and probably even by Mr. Van Deman himself,) that there are several varieties covering nearly or quite the same season, which take rank considerably higher than this as dessert apples. The following are a few of those to which I more particularly refer:

PRIMATE, ripening in succession, from mid-August to October, is ranked by Downing as "very good" to "best." Its most serious fault is that large specimens are liable to be water-cored.

EARLY JOE, ripening from mid-August to mid-September, ranks as "best." The tree, though a slow grower, is very productive, and the fruit, though slightly lacking in size, is exceedingly beautiful, sprightly and delicate in texture.

GARDEN ROYAL, a Massachusetts apple, ripening the last of August and through September, is classed as "best." It is productive, even-sized, richly colored and mild in flavor. The tree is small and well suited to the garden.

AMERICAN SUMMER, (Pearmain) ripening from the last of August to the end of September, ranks as "best." When well grown, it is one of the most beautiful of apples; very similar to Garden Royal in flavor, although at least twice its size. Other varieties would bear a mention in this connection; but the foregoing will suffice to indicate the true rank of the Jefferis as a dessert variety.

COMPARATIVE PROFITS FROM LARGE AND SMALL COWS.

A CONNECTICUT FARMER, FAIRFIELD COUNTY, CONN.—I infer by the remarks in the R. N.-Y. at different times that the friends of Jersey cattle claim that because they are small, it therefore takes less to keep them than to keep animals belonging to larger breeds. Now for over 20 years I have had the care of a dairy varying in size from 15 to 23 cows, and at the same time I have looked after other stock, and my experience has been that Jerseys and other stock of that class are, as a rule, harder keepers than the animals of the larger breeds, or, in other words, it takes more grain, besides hay or grass, to get a dollar back in products and then the Jerseys generally do not keep in as good condition as the others. On the same ration which would keep a large cow gaining and at the same time giving a good flow of milk, the smaller one would almost always lose in milk and condition. There are, to be sure, exceptions. Some of the smaller cows are closely and compactly built, and some of the larger ones are coarse and raw-boned; but I am speaking of average herds of both kinds. There are more exceptions in the Devon breed than any other. My principal business was selling milk, but at times I made butter and sometimes fattened calves, and I think there is more profit in a cow that will give a large quantity of milk (even for butter) than from one that gives only about half as much, providing both make the same number of pounds in a year. Why? Because the skim-milk of the larger animal is worth so much more, not only in quantity but in quality.

"DISEASED LIVE-FOREVER."

O. O. S., FREDONIA, N. Y.—I notice in the R. N.-Y. of October 26, a communication from W. H. C., East Freetown, N. Y., about "live-forever," in which he says that a diseased root of it, if introduced among healthy roots, will just make 'em sick. Now I'm just pining away for a diseased root. Give, O give me a diseased root! Where can I get one? Mine are awfully healthy—just "bustin' wid health." Can the R. N.-Y. put me in connection with W. H. C.? Or has it a "diseased root" around the office or the experiment grounds? What is the distinctive feature of a "diseased root?" Any light in this Cimmerian darkness, this grim gloom, will brighten the path to the tomb of live-forever.

FROM W. H. CALDWELL.

O. O. S. can procure a "diseased root" or a root of diseased live-forever by addressing me. One may set out a root of diseased live-forever in a patch that is "just bustin' wid health" and in about three months he will see "awfully healthy" roots begin to pine away. The stalks will begin to die just above the ground, and the roots will turn a reddish color and begin to rot. Then these roots may be taken out and planted in other fields of the "awfully healthy" pests. It takes about two years to rid a piece of the nuisance.

IS BRAN, BRAN?

J. B., FRANKLIN, TENN.—In one of the back numbers of the R. N.-Y. a certain professor claims that the new roller-process bran is as good as or even better than the old-fashioned mill bran. It may be so in an analyzing pot; but not in the cow's stomach. Is bran more valuable and wholesome with nails, screws, long sack needles in it and therefore in the cow, than the coarse, clean, old-fashioned country mill bran? Just look in an old dairy cow's stomach and you will be astonished. I have found an alarming quantity of such stuff in the stomachs of cows that were killed because no longer profitable for the dairy; they were not sick either; they merely failed at the pail and were not thrifty to sell for beef. Cannot the bane of the dairy business (abortion) be traced to this source? Has a miller a right to sell floor sweepings, dust, cheat, cockle, etc., for bran? Why is cockle in the bran whole, and not ground up like the wheat? Is it separated from the wheat before the latter is ground and then thrown into the bran? If I had a valuable herd of cows I would not feed bran, but what is a substitute for it? What can a farmer feed to cows for milk or butter production besides corn-meal?

What Others Say

TALK OF AN ENGLISH FARMER.—An interesting talk with Mr. Burpitt, an English farmer who has settled near Atlanta, Ga., is given by a writer in the Southern Farm. He says: "Think of a farmer after his day's work is done, working until 10 or 11 o'clock at night by moonshine. Think of his refusing to stop at his work to talk to a visitor, but carrying the writer at a dog-trot with him up and down his furrows. Think of a farmer who stands by three rules: 'Not an idle day in the year;' 'not an idle acre on the farm;' 'not an idle hand in the family.' And what a wonderful island is Jersey, of which he tells—only seven by 12 miles, and yet supporting 63,000 people out of the soil—and covered with 1,800 miles of glass frames. And how a farmer is ridden there, giving one-tenth of all cereal crops to

the church, paying a tax on every calf that is born, and paying a rent of $35 per acre, and taxes almost as much more. What a godsend America is with its cheap land, its low taxes, its church separate from State, to such a farmer. Mr. Burpitt truly says that if the English farmers knew what a future there was in Georgia for them—what happiness and independence—the ships of the ocean could not bring them fast enough. Can't we learn something from the frugal and saving and industrious habits of this Englishman? Does he not tell us of many things that we need to learn. What is wasted on a Georgia farm, if saved, would make the farmer rich."

LEAVES FOR TEACHERS.—In a late lecture, at the Royal Institution, Sir John Lubbock, the eminent naturalist and statesman, gave an account of the adaptation of the forms and surfaces of leaves, with diagram illustrations showing that the "wonders of the leaf" are by no means confined to the fittings of their internal structure. He showed reasons, founded on the nature and habit of the tree or plant, for all the various shapes, sizes, manner of position on the stems, and spacings of leaves and blades. For example, a stout stem carries a large leaf. If the distances from leaf to leaf (from bud to bud) are constitutionally great the leaf will be broad. If stems of an equally stout habit bear closer buds, the leaves are compelled to grow to a greater length in order to attain a proportional area of surface. Leaves that expose both sides to light and heat have stomata on both sides—(the mouths which gape open in damp weather to give off redundant water, as a fowl or dog gapes in summer to give off excessive heat). The Black Poplar and the Compass Plant are examples of this. In very hot, dry climates leaves become smaller and fleshier, and stomata fewer; often the leaf stem flattens out in Australian plants and the leaf proper shrinks as in asparagus which belongs to the large-stomated lily tribe. In evergreens, some of which retain a leaf three to six or more years, the leaves are small, tough, leathery, often spiny and glossy, shedding rain or snow readily, and are protected by a pungent taste.

Leaves furnish abundant matter for a whole summer of daily object-lessons of never-ending interest, and every teacher should be prepared to lead his young charges into these pages of endless interest from the book of Nature, from Arbor Day on.

THE RURAL'S LUNCH.

THAT first-rate farmer G. W. Hoffman, ex-president of the Elmira Farmers' Club, says in the Husbandman that he has been slow in adopting the use of ensilage. But others are outstripping him and he believes that every farmer who carries on successfully the milk or dairy business, will eventually adopt the use of silage as the leading food for his cattle.....

A CORRESPONDENT of the Michigan Farmer guards its readers against a "Toledo nursery," name not given. The agents are selling the Lucretia Dewberry for from $10 to $40 per hundred and other fruits in proportion.....

A. L. CROSBY under the caption, "A Cow—Hen Item," in Hoard's Dairyman, says that butter, cheese, and eggs are three manufactured products that when well made and in sufficient quantity per animal—cow or hen—will pay a good profit. The egg is just as much a manufactured article as butter or cheese, only in egg-making we use the hen as the mill and put the raw material in it to be made into eggs. Among these raw materials skimmed milk is one of the most valuable, and it is to this by-product of the butter dairy that he wants to call attention. There has never been such a good supply of eggs on his farm since he has known it as during the year about to close (his hen year ends November 1), and he attributes much of his success to the fact that the hens have had nothing to drink but skimmed milk. The hens are not allowed free range of course; free range means the loss of many eggs, the hatching of chickens at the wrong time, the free distribution of fertilizer on farm implements and family carriages, scratched-up gardens and the complaint of the cussedness of hens in general, and our own in particular.....

THE AMERICAN FLORIST mentions a new tree label sent to it by Johnson & Stokes of Philadelphia, Pa. It is so thin that by writing on it with only slight pressure a name can be impressed on it and the same cannot be eradicated except by hammering. As copper is very durable and the price placed upon the labels is reasonable we believe they will be very useful, especially on plants in the open field in summer. The R. N.-Y. proposes to try these labels and report results to its readers. Our trouble with zinc labels is that the zinc oxydizes and the fine whitish powder effaces or destroys the lead-pencil writing. Some samples of zinc are affected in this way, others not. The R. N.-Y. would much like to know how to tell the one kind from the other.....

THE common and much advertised "Moonflower" plant sold by florists and Ipomæa bona-nox grown from seed (dark in color) are indistinguishable. So says Wm. Falconer, in the American Florist, and so said the R. N.-Y. when the trumpet of the "Moonflower" was first blown. Ipomœa grandiflora, on the other hand, continues Mr. Falconer, from the New York seed houses and Ipomœa Childsii, and the White-seeded Moonflower raised from seed gathered for him in the wilds of Southern Florida are one and the same. They are more luxuriant in growth than is Bonanox and their blossoms are one-fourth larger. The R. N.-Y. last year raised this Ipomœa from little plants sent to it by A. W. Smith of Americus, Ga.....

PRES. CHAMBERLAIN of the Iowa Agricultural college, says, in the Albany Cultivator, that the Duchess of Oldenburgh, a splendid fall apple, is quite hardy at Ames, Iowa, fruits while the trees are small, and bears most prolifically. This is the only well-known apple that is now considered hardy there. The college experiment orchard most of it planted eight years ago, has a large number of new and most promising fall and winter Russian varieties. The yield this year was immense; several hundred bushels. It was the first fruiting of some of the kinds, and the test of "quality and keep" through the winter will be watched with great interest.....

MR. HARRISON, of the Storrs & Harrison Co., pronounces the following the cream of the winter-flowering roses: Bon Silene, Catherine Mermet, Duchesse de Brabant, Isabella Sprunt, La France, Meteor, Niphetos, Papa Gontier, Queen's Scarlet, Perle des Jardins, Safrano, Souvenir d'un Ami, Sunset and Bride.....

THE GLORIOUS "SUNSET" PLANT.—An illustration of this from nature appeared in the R. N.-Y. of August 3 last. William Falconer says, in the American Florist, that it is too glorious at 50 cents a plant when it can be gotten up so easily from seed, and seed is retailed in New York for five cents a packet. He has grown some of the Western sphæralceas for a dozen years and now has scores of plants of this glorious novelty. They are very hardy and long-lived and last in bloom almost all summer, but there is nothing striking about the plant or blossoms; the flowers are small and of a poor color: among cut flowers of no value whatever, and precious little among border plants.....

THE WESTERN RURAL in answer to a correspondent who inquired if Montana was a good place for a young lawyer, says: "We cannot answer that question. The law is out of our line, and we do not know where the best place for lawyers is in this world." Our contemporary evidently doesn't wish to help boom Montana.....

ABSTRACTS.

——EDITOR OF THE IOWA HOMESTEAD: "Horticulture is a sentiment in Iowa—corn, grass and live stock give us our daily bread."

——POPULAR SCIENCE MONTHLY: "The farmer pays for a paper, as likely as not, which tells him, and has been telling him for a generation or more, that the beneficent system which prevents him from buying 4,500 articles as cheaply as he might, and compels him to sell his own products, minute in number, at the lowest price which ingenious legal artifice can dictate, is a measure for his particular benefit."

——LONDON AGRICULTURAL GAZETTE: "There are signs that the country will not much longer submit to the meddling and muddling policy of the Government in relation to pleuro-pneumonia. In Scotland, in Ireland, and in Yorkshire the cry of dissatisfaction has become vociferous. Ratepayers and stock-owners alike are disgusted with a policy which costs enormous sums yearly to carry out, and which has utterly failed to rid the country of a preventable disease, or even to diminish its ravages to a commensurate extent. * * * Many of the complainants in Scotland, Ireland and Yorkshire have asked for the total or partial cessation of slaughter as a means of extirpating the disease."

——JOURNAL OF COMMERCE: "We once heard from the lips of an extreme partisan, that he would vote for an imp of darkness (and he described him in a single word) who was the nominee of his party in preference to an angel of light put up by the other side."

——BOSTON COURIER: "It has been observed that the man with the fewest failings is the man most tolerant of those of his neighbors."

——JOURNAL OF COMMERCE: "Self-denial is not only the law of greatness and of goodness, but also of all material success. The great bane of the poor, by which we mean those who live from hand to mouth, is their want of a resolute self-denial in the use of their daily or weekly earnings. And this runs all the way up to the man of business, who wastes his thousands a year through self-indulgence on the part of himself or his household, and finally goes down in credit and pocket for want of the capital which might have been gathered in the exercise of a proper self-restraint."

——ROBERT INGERSOLL: "A wonderful thing is clover. It means honey and cream; that is to say, industry and contentment; that is to say the happy bees in perfumed fields, and at the cottage gate, Old Bos, the bountiful, chewing satisfaction's cud in that blessed twilight pause, that like a benediction falls between all toil and sleep. The clover makes me dream of happy hours—of childhood's rosy cheeks, of dimpled babies, of wholesome, loving wives, of honest men, of springs and brooks and violets, and all there is of painless joy in peaceful human life. A wonderful word is clover. Drop the "c" and you have the happiest of mankind. Take away the "c" and "r" and you have the only thing that makes a heaven of this dull and barren earth."

——PUCK: "A bird in the hand is worth two in the bonnet; but it does not cost as much."

——COMMERICAL BULLETIN: "Ovacoats—Egg shells."

——EX-SECRETARY OF AGRICULTURE, NORMAN J. COLMAN: "This whole system of speculation in futures is wrong. It has been the cause of the loss to wheat growers of hundreds of millions of dollars. It unsettles prices. It creates fictitious values. Millions of bushels of promises can be sold, and not one grain of wheat be delivered. It is not selling wheat but selling wind—or selling nothing. But, by just such gambling transactions, having no relation to demand and supply, the market can be put down or up to suit the speculators, and, in nearly all such transactions, the farmers are left."

——"People don't stop to consider the farmer is a laborer. No one labors harder. He has no eight hours or even 10 hours' law to protect him. From the earliest dawn to the darkest twilight he is toiling with the endeavor to make a living for his family. No matter how intense the heat or how severe the cold, he must keep up the struggle. Sick or well the work must go on. Half our population nearly are farmers. Has this great class no rights? Shall they continue to be taxed by a protected class until they become paupers?"

——"The farmers are ignored. The interests of the real creators of wealth are lost sight of, that manufacturers may amass great fortunes. They are taxed by these classes on everything they buy; not to go into the coffers of the United States Treasury, but to go into their own plethoric pockets. Their princely residences, their liveried servants, their costly turn-outs in every manufacturing town, testify to the wealth they are making, and the farmer is toiling early and late and by the sweat of his brow, supporting them in this style of living."

——N. Y. HERALD: "In comparison with the fashion in which that World's Fair fund is rolling up the speed of a snail is so rapid that it positively takes our breath away. There is a curious impression abroad, of which the public mind ought to be disabused at once. This fund, fellow citizens, is for the Columbus exposition of 1892; that is to say, for the four-hundredth anniversary of the discovery of America, not for an exposition five hundred years from now, or for the one-thousandth anniversary of that great historic event. If we were preparing for a celebration in the year 2,392, we might congratulate ourselves upon having made a very good start, with a fair prospect of raising the necessary sum in time. We shall not be here, however, on that magnificent occasion, unless the elixir of life turns out to be more effective than it hitherto has been, and therefore leave to our descendants the responsibility of that occasion.

As for the exhibition of 1892, we must either claim it at once or surrender our rights to that young giant of the West, Chicago, who has pulled out his wallet, plethoric with big bills, and planked it down in guarantee of good faith. New Yorkers don't run much to monuments and expositions and such things, and every acre of the Park is so precious that we shall probably end by breaking every man on the wheel who votes to tear up one of its grass blades or scrape the moss from one of its rocks. Chicago has no reverence for natural beauties, and is enterprising enough to carry the project through if it takes every park she owns. After all, New York is the best monument of the Republic, and it is itself an exposition of all that is noblest and grandest in modern civilization. Perhaps it is the proud consciousness of these facts causes us to delay. Let Chicago take the hint and go ahead."

——LIFE: "With Chicago the Fair is a matter of vital importance. That enterprising city has prairie lands for sale and a speculative arena that needs new victims. It needs to make money out of the wayfarer and sojourner to pay the interest on the mortgages with which it is plastered. Chicago's existence has from the first been a boom, and the boom must not be permitted to collapse. Its citizens, including even the women and children, can well afford to go crazy on the subject and devote to it as much money, bluff, time and talk as they have in their respective possessions. Chicago must have the fair at any price. New York may stop to consider its cost. With Chicago it is a necessity. With New York it would be a luxury."

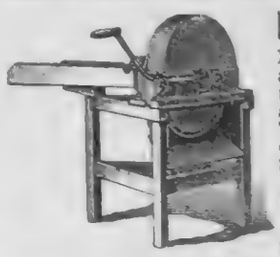
Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

Dyspepsia's Victims are numbered by thousands. Do not continue in misery, but give Hood's Sarsaparilla a trial. The many remarkable cures it has effected warrant us in urging it upon your attention if you suffer from indigestion, sick-headache, biliousness or other stomach disorders. Be sure to get Hood's.

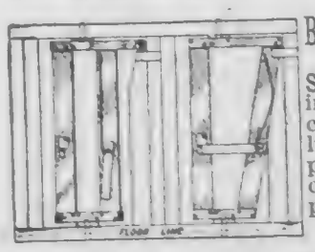
NOTHING ON EARTH WILL MAKE HENS LAY LIKE SHERIDAN'S CONDITION POWDER

Highly concentrated. Dose small. In quantity costs less than one-tenth cent a day per hen. Prevents and cures all diseases. If you can't get it, we send by mail post-paid, One pack. 25c. Five $1. 2 1-4 lb. can $1.20; 6 cans $5. Express paid. Testimonials free. Send stamps or cash. Farmers' Poultry Guide (price 25c.) free with $1.00 orders or more. L. S. JOHNSON & CO., Boston, Mass.



DICK'S FEED CUTTER

For Hay, Straw and Ensilage. *The only machine that cuts and splits corn stalks.* We also sell the TRIUMPH STEAM GENERATOR, and GRIFFING'S CORN SHELLER AND SEPARATOR. Write us at once **H. B Griffing, Sons & Co., 70 Cortlandt St., New York City. N. Y.**



BOON to DAIRYMEN

Perfect Swinging Cow Stanchion. Self-locking by entrance of cow's head. Free delivery at principal points. Send for circular. Mention this paper. **Scott & Locke, Orford, N. H.**

THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, NOVEMBER 23, 1889.

NOTICE.

THE RURAL NEW-YORKER is invariably discontinued at the end of the term subscribed for. Any copies sent to non-subscribers are sent without charge as specimens merely.

MR. TERRY, on page 773, estimates that each member of his family eats about three barrels of potatoes yearly. Is that an average of potato consumption *per capita*?

"THE RURAL NEW-YORKER has been the most profitable instructor I have had since I changed my occupation to farming. I began this late in life, but feel more interest in the business than in any I have followed, although I spent over 40 years in the printing office, from devil to editor and proprietor."

Thus writes a Michigan subscriber. It would seem that there is still hope in agriculture while a man can make such a statement as this.

"IN order to succeed with poultry, one must be part hen himself." So said a farmer the other day in speaking about the possibilities of farming. It is equally true that a man must be part sheep or part cow or part horse in order to succeed in caring for either of these animals. And it is equally true that a good book-keeper must be part book and a good tailor part cloth in order to excel. Success in these days comes only to those who absolutely master some one thing; who stick to it and study it until they absorb from it the secret of success.

"*So far as I have tried them, I can recommend red squirrels as the best of rat-traps.*"—So says Prof. Cook on the first page of this issue.

IT is with very sincere regret we learn of the burning of the home buildings of our friend and contributor Dr. T. H. Hoskins. Not only were the buildings destroyed, but all the contents of his seed-rooms. Not a thing was saved. All of the varieties of corn, peas, beans, etc., over which he had worked for years were wiped out. His nominal loss, outside of insurance, is $3,000, but this does not include the greater loss of the varieties referred to. This is a severe blow to Dr. Hoskins at his age, which though not great, puts him, nevertheless, at a time of life when one is reluctant to plunge in and repair by arduous work such sad misfortunes.

A FINE QUALIFICATION.

A NEW correspondent of the R. N.-Y., who lives in Livingston County, N. Y., thus states his reasons for considering himself qualified to write about agricultural topics:

"We, that is, father, brother and myself, have about 900 acres of land in this county divided into four farms, three of which are worked on shares by tenants. The products of the four farms for the present season are as follows, in round numbers:

5,000	bus.	wheat	av'ge	y'ld	per	acre	26½ bu.
2,500	"	barley	"	"	"	"	85 "
2,800	"	oats	"	"	"	"	40 "
7,000	"	ear corn	"	"	"	"	100 "
850	"	potatoes	"	"	"	"	70 "
436	tons	hay	"	"	"	"	2 tons

As to stock, we have at present 116 head of cattle, 41 horses, 44 hogs and 200 sheep. We expect to feed this winter, for the New York market, 600 sheep and three or four car-loads of steers. We have used a car-load of fertilizer this and in fact every season and work all our corn, straw, coarse fodder and three-quarters of our hay into manure, thereby making the land more productive every year besides paying six per cent. net."

So it seems that farming on a large scale is not confined to the West exclusively. We feel sure our readers will be interested to learn of the methods employed on these four farms.

THE COST OF FARM LIFE.

THE figures showing the cost of farm life, which appear on page 773, are very interesting. Such comparisons are valuable. That much-desired surplus which we all want for a "rainy day," is to be obtained more through what we save than through what we earn. In these times it is hard to save money unless the members of the family make a business of self-denial and studied economy. In a general way it may be said that if our neighbor can obtain food, raiment and true happiness at a cheaper rate than we can, he has an advantage over us as great as the superiority of his farming methods which enables him to produce a larger crop than we can grow. Let us study the various statements as they appear in the R.-N.-Y. Are our own expenses greater or less? In what items can the difference be found?

Another point of value about this matter is suggested by a subscriber as follows:

"It is to be hoped that the inquiries made by the R. N.-Y. into the domestic expenditures of farmers and the answers thereto, will induce many persons to keep accounts of their living expenses in future. Too many farmers do not know anything about their receipts or expenditures. At the end of the year they find out from their creditors how much they are in debt, and this is the extent of their knowledge in business. If they could be induced to read the RURAL NEW-YORKER one year they would be wiser and no doubt richer too."

ISN'T IT TIME?

SMALL wonder this country is flooded every year by a tidal-wave of foreign immigration, much of it very undesirable. Besides the genuine attractions it offers to the poor of other nations in the form of remunerative employment; to the adventurous in the form of a host of opportunities for rapid enrichment; and to the oppressed in the form of freedom from the tyranny of exacting militarism, grinding taxation and despotic rule, numerous swindling allurements help to add a multitude of ignorant, credulous and avaricious dupes to the incoming throng. Railroad and steam-ship companies dot the continent of Europe and the islands of her seas with agencies whose chief business is to beguile passengers for profit, even by all sorts of delusive misrepresentations; land syndicates and manufacturing and mining magnates and corporations here are equally unscrupulous in securing foreign settlers and workmen; and, worst and most heartless of all, many of the countrymen of the victims, on this and the other side of the Atlantic, cause thousands of poor peasantry to abandon their homes and cherished associations every year, to seek in vain here for an illusive Eldorado which had been glowingly pictured to them as a substantial reality by their deceitful compatriots.

It is seldom that slow-footed justice overtakes these rascals, but she does occasionally. Last Thursday, at Wadowice, in Austria, 65 persons were put on trial charged with swindling a multitude of Galician peasants by inducing them to emigrate to America by false statements and then obtaining a commission on their passage money. Among the accused are a Commissary of Police, the Comptroller of the Customs, a Hungarian Judge and a number of Customs officials. In addition to making large sums by deporting credulous rustics and villagers, the swindlers made "enormous gains" by threatening to expose military deserters to the authorities unless they paid exorbitant figures for passage and outfits. In one year 5,799 deserters were dispatched in this way. Surely it is high time to regulate immigration, not only for the sake of the well-being of our own countrymen, but also for the protection of many of the immigrants.

THE VOTERS SHOULD SPEAK.

FROM present indications there is no doubt that a strong effort will be made in the next Congress to repeal the duties on raw sugar without touching those on refined. To silence dissatisfaction among domestic producers, it will be proposed to compensate the sugar-cane planters of Louisiana, the sorghum growers of Kansas and the sugar-beet ranchers of California by a bounty on raw domestic sugars. This would enable the Republican party to reduce the revenue, according to its promises, while harmonizing conflicting interests. Moreover, the measure could be advocated as a compliment to our South American guests as a step towards commercial reciprocity with the nations of this Western Hemisphere. True enough, more than three-fourths of all our imports of raw sugar come from the French, Spanish, Dutch and English, West Indian possessions and other parts of the globe which are wholly outside the reciprocity scheme now being discussed in this country. Most of the commercial advantages of the proposed measure would therefore accrue to this country's commercial rivals. So long as our manufacturing interests are favored by a protective tariff, it would evidently be unfair to ruin the home producers of raw sugar by the removal of similar protection, unless they were reimbursed by bounties equal in amount to the duties removed. The aggregate of these bounties would form only a comparatively small proportion of the loss of $50,000,000 inflicted annually on our fiscal revenue by the repeal of the tariff on raw sugar. Who would be the real gainers by the proposed legislation? Would it be the sugar consumers at large, or the sugar refiners—the public or the Sugar Trust and its competitors? Would the prices of refined sugar be lowered in proportion to the duties abrogated, or raised in proportion to the Treasury bounties paid to the domestic producers of raw cane, sorghum and beet sugar; or would prices take a medium course? It is evident that the whole matter would depend almost entirely on the action of the sugar refiners, whose business is now virtually in the control of only two parties—the Sugar Trust and Claus Spreckels. Has their policy hitherto been of such a character as to justify the public in expecting fair and equitable dealings at their hands when their own interests are intimately concerned? Many insist, as the only real safeguard for consumers, that duties on raw sugar should not be repealed unless those on the refined product are swept away at the same time. What does the mighty constituency of the farmers of the country say on the matter?

THE KNIGHTS AND THE ALLIANCE.

ONE of the most important subjects discussed by the Knights of Labor at their convention at Atlanta during the week, was the advisability of federation with the Farmers' Alliance, the most aggressive association of agriculturists. Such federation would mean a union or league for political and also, where desirable or practicable, for economic purposes. To a great extent such an alliance has already been in operation for some time in Texas with fairly satisfactory results. The order of the Knights of Labor is composed wholly of operatives in various non-productive vocations; while the members of the Alliance are all producers. What could, in theory, be more advantageous to both parties than a combination of producers and consumers? The interests of both, however, do not always run in the same or parallel lines. To begin with, while it is to the benefit of the producers to obtain high prices for their goods, it is to the benefit of the consumers to pay low prices for the same commodities. Both classes, however, could secure these antagonistic benefits, in part at least, by dividing between them the large taxes now levied on both by middlemen. An economic union for the direct transfer of products could accomplish this desirable object. Again, the Knights are fighting for higher wages for labor; the Alliance men complain that farm labor is already too high-priced for the profits from the farms.

Once more, the means adopted by the Knights for compelling higher wages are often very detrimental to their proposed allies. The great railroad strike by the Knights on Gould's southwestern system three years ago, and that of the kindred organization, the Brotherhood of Locomotive Engineers, on the Quincy system one year ago, inflicted losses running high among the millions on the farmers and stockmen of a dozen or more States and Territories. There are several other points also in which the economic interests of both classes to a minor extent clash; but there are likewise several in which one class could well advance the pecuniary welfare of the other. Politically and economically the interests of both alike are particularly antagonistic to reckless public expenditures, to high and unfair taxation, to unscrupulous cornering of food products, to all sorts of monopolistic exactions, and to all legislation discriminating in favor of capital against labor. Surely there are many purposes for which the Knights and the Alliance, and the classes they represent, could unite with mutual and reciprocal advantages.

"*Those who wish may live on the 'FAT of the land;' but as for me and my family we thank God for the fruit. Estimating what we grow ourselves at what we could sell them for at wholesale, our fruit bill runs up to* $137—*doctor's bills*—0."—T. B. TERRY, page 773.

BREVITIES.

CONCORDS are still selling as high as Catawbas.

WHY do you cover your cabbages heads down, roots up?

READ what Prof. Budd says about mulching orchards with Japan Buckwheat—page 772.

"WIFE and I are partners." See page 773. That means industry, cheerfulness, goodness, happiness.

JOHN GOULD of Ohio writes: "My silage this year is splendid. It cost about $4. per acre to cut and put in the silo, or 22 cents per double load of 2,000 pounds."

THE white grape Antoinette (Miner) seems to be little known. It is one of the hardiest varieties grown at the Rural Grounds and its quality is better than that of Concord.

QUITE a good deal of complaint about tough pork comes from farmers this year. Many charge the trouble to the account of extra milk feeding. Have you noticed it? How do you account for it?

HOW much is an acre of apple trees worth just coming into bearing? The trees are supposed to be varieties adapted to the climate and planted in a fertile soil. How much is an acre of peaches worth? Of quinces? Of pears?

OUR hired man said last evening: "That is the best paper you have," as he laid down a copy of the RURAL NEW-YORKER and we have five weekly papers and get quite a number of monthlies. And I think he is about right. S. H. R.
Cabot, Vermont.

THE R. N.-Y. has just completed the planting of no less than 2,000 seeds, the result of hybridizing Teas and Hybrid Remontant roses upon Rosa rugosa. They were planted an inch apart each way in shallow square boxes of mellow garden soil. These boxes, protected by a frame, will be kept out-of-doors until February when they will be removed to the house and placed in the conservatory.

"POTATOES, whether early or late, should never be left in the ground long after the vines die." So say our contemporaries. It may be good advice. But the R. N.-Y. gives its own experience, right or wrong, for what it may be worth. *Late* potatoes mature so late that there is not much time before frost to leave them in the ground. Let the season be what it may, there is not the slightest chance of their sprouting, and, as we believe, they had as well be left in the ground until frosts are threatened, as to be harvested earlier.

THE R. N.-Y. has not been able to find any better fowls for eating purposes than the Dorkings or their grades. Light Brahmas, unless full-grown, are found to be tough and bony. Leghorns we do not care to eat at all. Wyandottes and Plymouth Rocks are excellent but lack the abundance of breast meat found in the Dorking. The experts tell us that a great development of breast in poultry is due to the excessive use of the wings. Our Dorkings are quiet birds not given to flying, yet they are "as broad across the breast as they are long in the back."

Arboricultural.

THE PARAGON CHESTNUT.

Eds. R. N.-Y.:

SEEING a note in a late issue of the R. N.-Y. in regard to the Japan chestnut sent to the editor by Mr. Kerr, we take the liberty of sending some samples of this

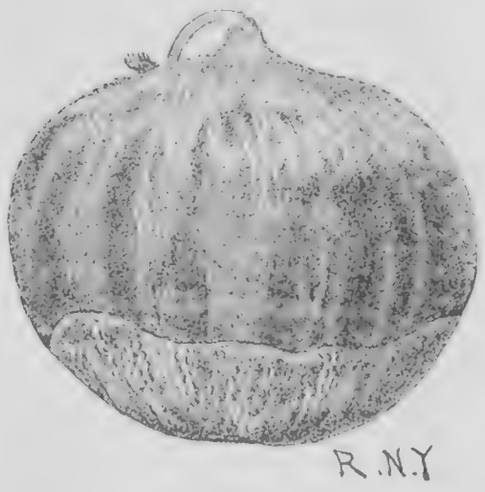


Fig. 279.

year's Paragon, and ask how much smaller are they than the Japan?

Marietta, Pa. H. M. ENGLE & SON.

R. N.-Y. A correct portrait of one of the chestnuts sent is presented at Figure 279. The quality of these chestnuts is nearly as good as that of American chestnuts. Of course, the flesh is coarser, but it is free from the bitterness and astringent taste of Japan chestnuts in general.

The scarcity of chestnuts in the New York markets this year has renewed the discussion regarding the possibilities of nut-growing as a business. There are many farmers who claim that the chestnut crop can be made to compare favorably with the wheat crop from a financial point of view. The R. N.-Y. proposes to investigate this matter and will secure the views of some of those who advocate the planting of chestnut trees for commercial purposes. If some of our waste lands can be utilized by means of this crop, we want to know about it, and at the same time we do not wish to induce our friends to take up a useless labor.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

WHEN one is tired and chilled and suffering from the nausea which results from going too long without food, we think no other stimulant is so effective as a cup of scalding-hot milk. As a rule, most stimulants may be compared in action to a whip and spur, which may irritate the poor, tired frame to temporary activity without any lasting benefit. But the milk is a food too: often persons who cannot drink cold milk without nausea or indigestion can take it readily when scalded. A cup of scalding milk is certainly an admirable "night-cap" for a chilly person to take when going to bed in a cold room. It warms one through and through, and the warmth is lasting.

* * *

SO MANY of us who live in country homes are compelled to sleep in extremely cold bed-rooms—not at all a hardship to a robust person, but a very serious matter to a thin-blooded or delicate woman. Such a one will often lie awake literally all night, aching with cold, to get up in the morning depressed and nervous, lacking all vitality, and in a condition to become the prey of any disease. It is impossible to entirely obviate this trouble, but it is certainly an additional comfort to sleep in flannel. Not merely between blankets, but also to wear a flannel night gown. Many people simply retain the merino or flannel undergarment they wear during the day, wearing it under a muslin night-dress, but this is a practice to be condemned. It can only be regarded as unhealthful not to say unclean.

* * *

A RECENT RURAL gave a recipe for Graham gems, and no doubt a very good one. But it contained baking powder, which is objected to by many believers in what is called hygienic diet, of which coarse Graham flour forms an important part. Better than "Graham" is the "entire wheat" flour, which is fine, but dark colored, containing all the nutriment of the grain. We make delicious gems from this flour without any "raising" whatever. The two indispensables for success are iron pans, thoroughly heated, and a very hot, steady oven, which bakes well from the bottom. Put a pinch of sugar and a pinch of salt in your mixing bowl. Beat two eggs, and pour them into a half-pint cup; fill the cup up with milk. Pour this into the bowl; then half fill the cup with milk, and fill it up with water. If milk only be used the gems will be tough. Add the milk-and-water to the eggs, stir it all up and then begin to stir in the flour. Put enough flour to make a stiff batter that will just drop off the spoon. Fill the little pans level full; they must be well greased and thoroughly hot. Put the gems on the bottom of the oven in a very hot place, *and do not open the oven door to look at them for half an hour.* If you do they will sink at once. At the end of this time they should be well-browned, and puffed high up, but examine the bottoms; if they are not uniformly brown there is still danger of a collapse, so they must be put in the oven for some 15 minutes longer. Rightly made, these gems are as light as a feather. Eaten hot, they are delicious, but they are also excellent cold, and are superior to ordinary bread for dyspeptics, or sufferers from any disease of stomach or bowels. But if the oven door is opened prematurely, or if it is not hot enough on the bottom, the unfortunate gems are apt to come out thinner and flatter than they went in.

* * *

"HYGIENIC food" is often rather a delusion, as far as ordinary humanity is concerned, but there are plenty of people who would be far healthier if they used entire wheat flour, to the exclusion of the white dust we generally use. The trouble with much so-called Graham flour is that it is ordinary flour with bran mixed in; it seems as if the entire grain is not ground up together, and we unquestionably lose a good deal of nutriment. The entire wheat flour gives all the nourishment, and must be recommended, though in making ordinary yeast bread with it we should recommend the addition of a handful of bran, to prevent it from being too moist.

SOME HOLIDAY BOOKS.

OLIVE E. DANA.

THE holiday books are especially dainty this year, and some of them have interest and value for more than Christmas-time. Among the latter class are two pretty volumes from the Riverside Press: Ballads, Lyrics and Sonnets, from Longfellow, and Interludes, Lyrics and Idyls from Tennyson. The contents of the former are especially attractive, including with the hundred selections given, some of the most beautiful and best known songs of the poet of the Charles. Without illustration, its fair print, broad margins, gilt top and lettering, and the unique blue and white combination of the cover, invite comparison with other more pretentious gift books. And the companion volume is as comely, with green instead of blue in the binding. I suppose the book which lies beside them before me, and which I have been examining with interest, may hardly be called a holiday volume; yet it is not unsuitable. "Character and Comment, selected from the novels of W. D. Howells" is its title. Mr. Howells's insight—for it is more than penetration—that peculiar, feminine instinct of his, we all know is marvelous. And he has, too, a genius for expression. Moreover, he has a rarer quality—not so often attributed in due measure to him—sense. These three elements can but crystallize in incisive, piquant sayings, in delicious repartee and pungent reflection. So all the bright bits and hits, which the reader of novels is sometimes the last to appreciate, and the non-reader of novels of course will not get at all, are gathered here. It goes without saying that a good many of them are about women and their ways. And there are sentences among them that many a woman might read with profit, even if she didn't relish the characterization.

A charming Christmas book reaches us from Lee and Shepard—"The Wooing of Grandmother Grey," by Kate Tannat Woods, with illustrations by Copeland. The poem is pleasing, but the pictures do more than please, they delight. Quaint, homelike interiors, lovely winter scenes, pretty groupings around old time hearths, winning faces, and the sweet looks of Grandmother Grey herself, arrest the reader as he turns the heavy leaves. It is an idyl of old-time, told with exquisite faithfulness by both pen and pencil.

Boys and girls with an appetite for the wonderful, and most of them have it, will enjoy "The Adventures of Little Baron Trump, and his wonderful dog, Bulger." It will afford entertainment for many a long evening. And all the pictures are the quintessence of fascinating grotesqueness. And the booklets, what art is expended on them! One for Christmas, another for New Year, and an 1890 calendar beside, I note. The booklets are lovely, with dainty designs in delicate tints, and appropriate selections of verse accompanying them. They are printed on ivory cardboard, of peculiarly satin-like texture and finish, have gilt-edges, and are ribbon tied, with silver chains. And the calendar is even prettier, with its odd, fanciful designs and comical child faces. J. Pauline Sumter is the artist, and her skill in work of this kind has been many times demonstrated. All the three are of convenient size and graceful oblong shape. They usher in the happy season of gift-making auspiciously.

Roberts Brothers' announcements are inviting, and the books themselves more than fulfill the promises of their prospectus. All the autumn issues of this house and their holiday issues are numerous and noteworthy, are books of permanent worth. First and foremost, because by many of us eagerly anticipated, is "The Life and Letters of Louisa M. Alcott," by Ednah D. Cheney. The book is even more fascinating and suggestive than was expected. Some of her experiences and observations are irresistibly laughable; her struggles are heroic, with much pathos in them, and the suggestions and encouragements of her brave career, invaluable to women-workers everywhere. Of these more serious lessons of her life, and of some of the truths she taught, writing, working, waiting, living, I would like to talk with the RURAL readers more at length, by-and-by.

A posthumous volume of hers, "Lulu's Library," appears simultaneously with the "Life." It is designed for children, but its juvenile title hardly does justice to the wisdom, shrewdness and sweetness which commingle in the nine wholesome stories of the pretty blue-bound book—stories that older "Lulus" might read with profit.

The opening chapter of "Recollections of her own childhood" is characteristic and entertaining.

When I read "Just Sixteen," as the title of "Susan Coolidge's" last book, I supposed it meant 16 years, of course, and was very likely about a girl, or girls, of that age. But lo! it means no such thing, this taking title. It is given because there are just 16 stories in the volume. "Susan Coolidge"—I believe her real name is Sarah C. Woolsey—is known as the author of all the charming "Katy Did" books, of "A New Years' Bargain," "A Little Country Girl," and many other stories. Her pen-name is also familiar as appended to some of the most helpful and beautiful religious poetry of the day.

These 16 stories are as entertaining as one would expect them to be, coming from her pen. They carry, too, a good many lessons that young girls will be both braver and tenderer for heeding. The first one is of "A Little Knight of Labor," and is especially good. "A Balsam Pillow" affects to tell the story of the very first of that fruitful, fragrant family. "The Do Something Society" has a lesson for those young people who are fond of giving and of helping, yet who expect really to but pass on, transformed a little, the pennies from Papa's or Mamma's purse. A better way is pointed out. And "Ninety-Three and Ninety-four" compares the experiences of two girls in renovating their rooms, and making them pretty with a little money.

In their "Famous Women" series, the same publishers bring out "The Life of Jane Austin" one of the most interesting characters treated of in the series. Her work seems not unlike that of her New England sister-author, Miss Alcott, the charm of the books of both consists so largely in their unstudied naturalness, while both found the material for their stories usually close at hand. The biography is likely to do more than its author modestly hopes it will accomplish—make Miss Austin's books even better known and more highly appreciated" though that, too, is to be desired. There appears, too, a novel, by Louise Palmer Heaven, "Chata and Chinita," a Mexican romance. While for the children comes one big enough and bright enough to be a half-dozen books in one. "Grandma's Rhymes and Chimes" is its title. Do any of my readers ever wish their childhood had fallen in these fortunate days? And wasn't one chief cause of that futile regret the delightful books gotten up just for the little ones? Such pictures, such stories, such songs as are made for them! All three, songs, tales, pictures are here. I might tell of at least two grown people who couldn't resist reading it through and found it vastly entertaining. But grown-folks must not be ashamed of reading "The Kingdom of Coins" by Bradley Gilman, although illustrations are comically grotesque, and both they and the story, to the last page, savor of Wonderland. I suspect its precepts we all ought to heed, and perhaps need to be reminded of; they belong to the worrying, wondering work-a-day world, though the adventures prove to have been "all a dream."

HOME GOVERNMENT.

J. H. G.

WHILE it is undoubtedly true that very much that is good in American home-life has come to us from our English ancestry, yet in some things we have done well in departing from the traditions of our fore-fathers. The autocratic bossism of the English husband and father is intolerable in this land of freedom. The father should command, if he commands at all, because of his superior knowlege and experience, not because of any special prerogatives which belong to his relationship to the family. The divine right of Kings is not recognized in this country; neither is the divine right of the husband and father. It may be said that in many instances paternal or maternal authority is not respected as it ought to be, but I think the cause is oftener due to its excessive severity exercised than to the mildness of the home rule. The exercise of power in a harsh, despotic manner, is not nearly so apt to command obedience as the practice of firm, judicious advisement.

An English authority, Mrs. Mallison, speaking through the Bradford Observer, asks in how many households do we see the earliest and rudest form of government prevail when it should have given place to another more liberal? How often do we see the will of the man. who is strongest by physical force, ruling, and perhaps crushing, the very life of the dependent members? In such homes no discussion is allowed "My son must go into the work I get for him, or he shan't stay at home;" "I won't have my daughter waste her time over those evening classes;" "I don't choose," —such and such a course of action being held sufficient reason for decision. In such households the gentle, loving mother often stands an unhappy witness of conflicts between possible harmless wishes of the children and the despotic love of power, ruling for the sake of ruling. Many an English father who. in the pride of his heart, declares that "his house is his castle," acts the despot to his family in a degree he would not tolerate from those who govern him. In other homes we see the growing children allowed more liberty of deciding and acting for themselves, and the government of the family running on easier lines. Here the rule of arbitrary power gives way to the government which attempts, at least, to consider the happiness of those governed, and endeavors to get reasonable and willing co-operation. This we may fairly regard as the second stage of family government. For a long period in the life of the home this probably provides for the interests of the governed in the best possible way; but we often see it outlive the period when, in healthy life, it should give place to still freer forms of rule. In such families we do not lament over the lives of their young members spoiled and crushed by the will of one overpowering ruler, but we often see sons and daughters living in a state of tutelage, as though they had not arrived at manhood or womanhood. In such families we may see a son with strong tastes and ability in one direction thwarted in the employment of these by a father who wishes him to exercise his powers in some other way. A boy with the tastes of an artist is forced to go into trade as a butcher or saddler, where his perception of form and color has no

exercise; a son who loves open-air work is condemned to live in towns and labor at a desk. The man who would have made an excellent painter or designer makes a very indifferent and unhappy tradesman, the would-be farmer a discontented clerk. We may see too, in other homes, a house full of women kept idle by the, perhaps altogether gentle, though unwise will of the father, who does not "choose" that his daughters should go out into the world, and in stifling their desires of independence and activity is exercising his despotic power as governor.

BREAD-MAKING.

SWEET FERN.

YEAST BREAD NO. 1 WITH YEAST.

I HAVE tried many methods of making bread, but none can compare with the following, either in the quality of the completed article or in the ease of its preparation: To make the yeast (which will keep for three weeks or more) take a quart of potatoes mashed fine, four table-spoonfuls of sugar and two of salt, put in a kettle over the fire with two quarts of boiling water, add slowly eight table-spoonfuls of flour, previously moistened with water, continue to stir till well cooked and thick, remove from the fire and add two quarts of cold water and two yeast cakes. Let stand in an earthen jar in a warm place till light, which will be in five or six hours. If a pint of the yeast is left for the next making, using only one yeast cake, it will rise in a little over *two* hours. Do not attempt to keep it in an air-tight vessel. The bread is made as follows: Take a pint of yeast (well stirred) to a loaf of bread, do not sponge, but stir in flour till very stiff, then knead until it is smooth and will cleave from the board; put in the bread-pan and when light—which will be in about two hours—form into loaves. These will be ready for the oven in a little over an hour. If you wish it to be out of the way very early, knead the night before and set it in a cool place to rise—in the cellar in warm weather.

Yeast bread may be put in a warm place to rise, but there should be no direct heat. It is a good plan to warm the flour in cold weather.

YEAST BREAD NO. 2 MADE WITHOUT SOFT YEAST.

Put in the bread-pan at noon, about two cups of mashed potatoes, (nothing equals the Henis fruit strainer for mashing potatoes, it is the same as pressing them through a colander) add a little salt and sugar, as much cold water as is required—a pint to a loaf—and no more than one-half a yeast cake, (there is but little choice between any of the reliable yeast cakes on the market, providing they are not stale) stir in enough flour to make a stiff batter, cover and set in a cool place; it will be light at night; add flour and knead quite briskly for five minutes; put back in the pan; set in a cool place. In the morning form into loaves; let rise and bake; it will be out of the way as early as can be desired.

BREAD CAKE.

One tea-cupful of bread dough, one cup of sugar, three table-spoonfuls of butter or lard, two beaten eggs, half a cup of raisins, spices to taste, flour enough to make a stiff batter, let rise and bake.

SALT-RISING BREAD.

Although one may not especially fancy "saltrisin'," it makes a change and is to be preferred if the flour is poor, as the quality of the flour when the bread is made in this way does not make nearly so much difference as it does in the case of yeast bread. The methods of making are too numerous to be mentioned: The following will be found as reliable as any and it gives as good results: put a pinch of salt, sugar and soda in a tea-cup, fill one-fourth full of very warm water, stir stiff with canaille or if that is not to be had, three table-spoonfuls of Indian meal and enough flour to make it very thick, set the tea-cup in a bowl of hot water, put in a warm place, being careful not to scald. If set at noon, it will be light at night. Set it in the cellar till morning, or, if set at night it will rise to the top of the tea-cup by morning *if kept warm*. Before breakfast, pour enough hot water into a quart bowl to fill it one-fourth full, add a pinch of salt, sugar and soda, and flour enough to make a stiff batter, and, last, beat in the rising or "emptins" from the tea-cup. Set the bowl in a dish of warm water; the contents will rise to the top of the bowl in about three-quarters of an hour; then pour into the bread-pan, add sufficient water for the number of loaves required; sponge if you wish, but it is just as good stirred stiff and moulded into loaves, being careful to mix it as soft as possible. Set to rise in a *warm* place with *no draught*, it will be light in two hours. Do not let it rise as light as yeast bread, as it will run over. Bake about one-half hour.

When bread is taken from the oven, rub the crust with a buttered cloth and turn on the side, or crust downwards, cover with a bread-cloth to steam. Bread keeps sweeter in tin than in anything else; nothing is better for this purpose than a clean, bright wash-boiler.

GOLDEN GRAINS.

TO be silent, to suffer, to pray, said Fenelon, when there is no room for outward action, is an acceptable offering to God. A disappointment, a contradiction, an injury received and endured for God's sake, is of as much value as a long prayer; and time is not lost which is spent in the practice of meekness and patience.....

SEE that your child never leaves any task half done or slovenly finished; and therefore give not too many tasks, says the Christian Union. Thoroughness is the corner-stone of success. There is no place in the world now for smatterers, who know a little and only a little, of everything under the sun. There is always an honorable place for those who can do any kind of honest work in the best manner.....

CONTENTMENT with one's opportunities and circumstances as good material and tools with which to work is one of the happiest conditions into which a man can bring himself; but contentment with what one has done and achieved as the full measure of his work always marks the end of growth. When the energies pause, and the worker settles down, he may find comfort and ease, but the inspiration of the great struggle is no longer with him; his real life is finished unless he takes into some other field that energy which has secured him success. Not to rest content with the winning of any goal or the doing of any work is the duty of every man who wishes to get and make the most out of life. For the real joy of living is to be found, as the greatest of teachers long ago said, not in receiving but in giving. The real joy of life lies in the putting forth continuously of one's whole strength, lies in the consciousness that one's nature is steadily expanding by use.....

STEADY work for the love of it, and for the satisfaction and peace which it brings, never breaks the worker down. On the contrary, it so weakens temptations from without, and so destroys inferior ambitions and desires, that it gives the whole nature steadiness and poise. It is the best cure for restlessness. The joy of life for strong natures lies in a noble activity; a work adequate to the aspirations of the soul; a work that brings calm by its magnitude, and by its very demands evokes the best and greatest in us.....

ONE may be better than his reputation, or his conduct, but never better than his principles .....

PRAY for others in such forms, with such length, importunity and earnestness, as you use for yourself; and you will find all little ill-natured passions die away, your heart grow great and generous, delighting in the common happiness of others, as you used only to delight in your own.....

THE sun should not set upon our anger, neither should he rise upon our confidence. We should freely forgive, but forget rarely. I will not be revenged, and this I owe to my enemy; but I will remember, and this I owe to myself .....

EVERY solitary kind action that is done the world over, is working briskly in its own sphere to restore the balance between right and wrong. Kindness has converted more sinners than either zeal, eloquence or learning; and these three never converted any one, unless they were kind also. The continual sense which a kind heart has of its own need of kindness keeps it humble. Perhaps an act of kindness never dies, but extends the invisible undulation of its influence over the breath of centuries.....

SILENCE is not golden when it falls frostily upon the little ones, ignoring their efforts to please, and showing them practically that they are of small account in the eyes of their parents and teachers. What a pity it is that we are so chary of praise when praise is so often the oil which causes the household machinery to work without friction? It is so easy for some of us to blame, so hard to utter the generous approval.....

WHO that knows what life is can expect to be perfectly happy? Go, clad in an armor that will enable you to defy the assaults of envy; carry your sun with you, and have your world within yourself where you are both law-giver and judge....

BE to yourself forever true; know for the rest, God cares for you .....

There are profound sorrows which remain stored in our souls, and which we always find there when we are melancholy...

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

Shut every door that leads to prosperous life,
He still hath hope who hath a helpful wife.
I liken woman to that modest flower
Which bends its head before the gentle shower,
But when the forest by the storm is lain
Looks brightly up to beautify the plain.
—C. E. Banks in Youth's Companion.

If you give because you feel that you MUST, *don't do it. The gifts that carry with them thoughtful kindness, friendship, love, are the ones most appreciated.*

"GOOD-WILL" SUGGESTIONS.

BELLE'S CHRISTMAS GIVING: INEXPENSIVE BUT USEFUL.

IN our household, money has been a "skurser" article than usual. Mother said when she saw how "cramped" we should be after getting our winter "must-haves," that we really could not make any Christmas presents this year, as times were so close. But Belle went to work when the first cold snap came, saying that Christmas comes only once a year, and that she meant to make a few presents any way. For a dear, invalid friend she cut 20 pieces of cream, blue, rose and gray paper-cambric the size of a page of sheet-music, pinked the edges neatly, then pasted upon these leaves comforting texts, bright bits of poems, and a few dainty pictures, birds and flowers, finishing with a ribbon loop to hang up by.

Another friend who has a beautiful home and everything she "fancies," was brought back to the scenes of her childhood when Belle's present was received—a vase covered with gray moss and scarlet bitter-sweet berries. The vase was only a brown stone jar, and a cracked one, but the gray moss was thickly glued over it, and the bright berries, with a few sprays of pressed fern tastefully arranged, made a gift not to be despised, though it cost nothing but a little work.

For a young girl who toiled for bread in a crowded city, and had little to cheer her, an old-fashioned butter bowl, (a cracked one which mother had laid aside) was filled with paper cut fine, then over the flat top prepared green and gray moss was gummed, and the outside of the bowl was covered with pine cones, twigs and tufts of gray moss. Then a cross was made from two laths, wound with the gray and green moss, pine twigs and bitter sweet berries, and suspended or hung directly over the bowl of moss. Bunches of bitter-sweet berries, with snow-white shells were sprinkled thickly over the moss.

For a young house-keeper who had never learned to cook, a "cook book," containing only well-tested and original recipes, suited to the purse, and culinary skill of the often discouraged young woman, who never imagined "getting enough for Richard to eat," would prove such a task. The leaves were cut from a stiff yellow wrapping paper and folded at the top so that the "book" might be hung over the kitchen table and easily handled. There were more recipes telling just how to make palatable dishes from leavings, than fancy pastries, and Arie Belle said she felt more than compensated when a good neighbor, and a "man," too, said "Brown's wife seems to do better now, with the provisions he carries in. I don't have to walk over cold vegetables, bread, and scraps of meat, as I come up the alley-way next their house. I used to think when I'd see good bread and meat thrown out, no wonder Brown never had a good suit of clothes. My wife always said she was a good little woman, anxious to learn."

For a dear, old "body," who has her second sight, but few good things to read, two thin pine boards were sawed just the size to hold papers and magazines; on the edges meant for the back, gimlet holes were bored two inches apart, through which the cord might be laced. The boards were papered with dark, pretty wall-paper, and the front edges were tied together with a bright ribbon. A neighbor kindly gave us some copies of magazines to put in our "holder."

For a little "chore" girl, who had no "folks," and lived with an old couple who could spare little of their substance, an apron was made from a scrim window curtain. The holes were cut out, and a pretty pattern was chosen, Ann's face beamed with surprise and delight when she learned the pretty apron was really for her.

For a young girl who possessed dainty tastes, and "roomed," but worked early and late in a factory, two pretty oval mats for the "mantel-piece" were made from creamy white cotton-batting, (the sheet wadding.) Cut the foundation of any desired size, and it may be oval, square, hexagon or round, then make a box-plaited ruffle two inches wide, button-hole-stitch the ruffle to the foundation and the upper edge of the ruffle with any colored zephyr desired, scarlet or rose is pretty. The ruffles must stand up around the foundation, and one, two or three ruffles may be used. They are very cheap and pretty.

For the wife of our pastor, who has a cabinet organ, Belle made of shaded yellow and of purple zephyr a pair of pansy mats for the lamp stands, which were much admired, and really did look like the real "posies."

Crochet plain stitch, blending the shades as best you can, little round wheels, the size of a large pansy, then sew a ring of them around the center, another around that, and when the mat is large enough stand up the border wheels and sew them to the mat. If the wool is nicely shaded all the yellow and purple pansies may be fairly imitated.

For a tired, hard-working woman, who had about her a growing family, a half-dozen napkins made from coarse unbleached cotton; but neatly hemmed and each child's initial worked with red cotton in the corner, were fashioned, though the offering was timidly made, as the cotton was only the covering of canvassed hams, carefully washed and cleansed.

"I don't think Mrs. Clare will mind the cheapness of our gift; she'll know we'd gladly give a better one, if we had the means," said sister, humbly, as she folded up the last napkin marked with a big J. for Johnny. The children were delighted with their napkins, while Mrs. Clare, said one day: "Them children *will* have their napkins every meal an' I've come to find it's no savin' of work not to use 'em, as then the table-cloth keeps nice. I used to think napkins too nice for any body but the "tippies."

"For somebody else, we made a work bucket instead of a basket to hold the many damaged stockings, aprons, etc., and it was both convenient and looked nice. Take one of those large buckets that candy or fine-cut tobacco comes in—cost about 10 cents—wash off the labels and rub smooth with sand-paper; then paint the bucket and the lid any desired color, after first screwing some sort of a knob or handle on the lid to lift it by. Our bucket was stained walnut, then decorated with bright pictures—plums, oranges, apples and peaches. Around the lid a border of autumn leaves was gummed, and then a coat of varnish was given the whole.

Since then we have seen for a young girl's room a very beautiful one rubbed very smooth and painted a cream-color, with a bright vermilion border one inch wide at the top.

Another lady, who used her "bucket" for

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria.
When she had Children, she gave them Castoria

holding letters, bills, etc., and did not want to get a can of paint, papered it with dark-blue paper, adding a picture of pansies, callas, and blush roses. This was very pretty and cheap.

For another friend who must spend much time in her room, we rooted a white lily, not a calla. For the pot, we picked up in an alley a powder keg, about one foot deep and seven inches across. It was badly rusted inside, but the outside was in good condition. Some small holes were punched in the bottom, and a coat of green paint was given to it, and we were able to carry a thrifty plan to her one gloomy, wintry day, which would bloom before the snow departed.

Belle made a quaint, pretty hand-mirror, from an old broken looking-glass, by having a piece cut, triangle-fashion, then framing it in thin wood and royal purple.

A number of periodicals for which sister contributes, have sent quite a large assortment of bright and pleasing chromos. We could not afford to buy frames for them, but thought some of them would carry a little brightness into several darkened homes, so we selected some of the darkest ones, prepared for the top and bottom a thin strip of wood one inch wide, and an inch longer at each end. This was covered with plush, vivid scarlet for the darkest picture, wine or maroon for the lighter ones. These strips were fastened to the pictures and a loop of ribbon to hang by, matching in color the plush, finished it. For bed-rooms these chromos are very effective. Where pictures of this style are so plentiful, one does not care to buy frames; by using the satin or plush-covered strips, one may make use of them satisfactorily.

For a little boy who dearly loved dumb animals, Belle made a scrap-book of paper cambric leaves, dark blue and red in color, pinked or notched about the edge, filling it with pictures of cats, dogs, horses, cows, wild animals, fowls, birds and fishes, and pasting in as many descriptions of the creatures and their natures as she found. For a little girl pictures of celebrated women and their work, were carefully selected by sister who said: "I want to foster in Charlie the love he now has for dumb animals, and to plant in little Lou's heart a love for the good and noble of her own sex."

The simple gifts were not all given on Christmas Day, or even in holiday week. The giving began before and was kept up pretty much all winter, and Belle kept treasuring every available bit of anything that could be worked over into something useful or ornamental, saying: "Silver and gold I have none, but such as I have I'll freely give."

It's the "heart gifts," and not the show ones which are most appreciated by even those who have a goodly store of the world's good things. ELLA GUERNSEY.

ALWAYS acceptable to a woman—a dainty apron.

SOME AFGHANS.

AN afghan is a comfortable and useful thing to have about the house, even if one doesn't own a carriage. It is handy to throw over one when taking an afternoon siesta; to throw across the foot of the bed if the feet be cold; to wrap around the body when passing through long, cold halls, such as one often finds in country houses. A good, comfortable afghan may be made at very little cost. Germantown wool, which can be bought by the hank at a very reasonable rate, will do quite as well as more expensive zephyr for one of these household comforts. Red and black are good colors to select as they do not fade and grow dim as soon as lighter and more delicate shades. To make a plain, serviceable afghan, crochet (afghan stitch) five strips, 10 inches wide and the desired length. (I like a square afghan best, and if you do also, make each strip 50 inches long.) You may make three black and two red, or *vice versa*. If you have three red it will be somewhat brighter. Down the center of the black strips embroider in cross-stitch, as one does on canvass, a vine of flowers, two or three butterflies, or anything that suits the fancy. Join the strips together with a chain stitch, or, if you like, railroad stitch, using old gold wool. Make a row of old gold, plain stitch, all around the entire afghan. Then make a fringe about five inches deep around the whole. You may make the fringe of clusters, say five black, five red, then five black and five red again, and so on, or you may make them alternate—one of each.

Another pretty afghan may be made of the same colors only arranged differently. Crochet, (afghan stitch) a large square of black—say about 30 inches square. You will require a long, wooden needle for this. Next crochet four strips of red the same length—30 inches. They are to be fastened to the sides of the black square, chain-stitch. When you have done this you will find that there will be four empty spaces at the corners. Crochet a square of black to fill these. This is done by making the square the exact width and length of the *width* of the side strips. Join with old gold. A wreath of flowers embroidered in the black center-piece, with the initials worked in the exact center (in old gold) is very effective. A rose bud may be embroidered in one corner, a daisy or two in another, a lily in another and carnations in the remaining one. Border with a fringe.

A dainty pretty afghan for baby's use may be made as follows. Crochet one strip (either in afghan or shell stitch) of white zephyr nine or 10 inches wide, and the desired length Embroider daisies of gold with white hearts down the center of this strip. Then make two more strips, of the same length and width, of a delicate blue. Embroider daisies of white with golden hearts down the center of these. Place the white strip in the middle with a blue strip on each side: join together with gold railroad-stitch. This forms a rich chain where the fastening comes. Make a border of some open stitch which will permit a ribbon of delicate blue or gold to be run in and out around the entire edge. If you prefer you may fasten the strips together or the ribbon may be run in and out where joined. Finish with a fringe four inches deep. Make in clusters, say six blue, six white, etc

Another dainty afghan may be made of white basket cloth. Cut the cloth the desired size. Then have the edge scalloped in deep points, each point being "pinked." In the center embroider a wreath of daisies and forget-me-nots in Arasene, or, if you prefer, daisies and wild roses. Sew a frill of Torchon or Antique lace around the edges so that it will fall in a ruffle beneath the scallops. If you have forget-me-nots make a large bow of pale blue ribbon and fasten to the upper right-hand corner of the afghan. If you have wild roses make the bow of a delicate rose pink. These last two are delicate and will not stand hard usage without becoming soiled. You may use more serviceable colors, but follow the general instructions and have pretty and doubtless more useful afghans.

DORA HARVEY VROOMAN.

A ROSE jar filled with dried rose leaves and fragrant spices, makes a charming gift.

CHIPS.

"O, HOW good that sounds;" exclaimed a lady visitor, as the sound of the ax was heard at our kitchen door. "I almost envy those who have nice chips to resort to when they wish a quick fire; I never go through the woods where men have been chopping without a pang of regret that such excellent kindling is allowed to go to waste; that I have not even a basketful of it at home." I herewith offer this basket of chips from the woods hoping some of them may be a means of giving comfort and warmth to the rooms of our readers during the long, winter months.

The bright autumn leaves should be ironed till dry with an iron just hot enough not to "blister." A little beeswax rubbed on the iron brings out and preserves the brilliant colors. A cluster of red and yellow maples glued on a black frame and varnished is pretty. Then there are the ferns which retain their color so well when pressed, while they are unsurpassed for "spatter-work" pictures. This is so simple yet so amply repays the work, that I venture a few directions, though, doubtless, many are familiar with it: arrange the leaves as desired, on white card-board. With a brush (an old tooth-brush will answer,) rub ink through a fine sieve over the whole surface, in fine spatters—the finer the more pleasing the result. Where shading is desired, remove a leaf or half of one after the card-board is partly covered with ink, and continue the "spattering" process till the picture is dark enough

Remove the remaining leaves and you have a work that resembles a fine steel engraving. A handsome design is a cross and crown. These figures are cut from paper and arranged with leaves. At the foot of the cross, which is nearly white, are ferns and flowers. The crown above is dim, the paper having been removed early in the process. Light easels are made of cat-tail-flag, leaving the heads on top. For a cabinet picture, a rustic easel constructed of apple tree twigs gilded or varnished is pleasing. It may be ornamented with acorns or beech-nuts.

Chestnuts gilded and strung on narrow ribbon form an inexpensive gift, though one perhaps too suggestive to one addicted to relating worn-out jokes. The lichens which abound on old logs must not be overlooked. They should first be thoroughly dried; then a snow scene painted on the white surface, and the rest varnished, transforms it into a "thing of beauty." One unskilled with the brush may obtain surprising results in a simple pencil sketch—done not with a pencil, but scratched with a pin. RUTH RAYMOND.

"GIRLS, let's club together and get mother that comfortable, willow rocker that she spoke of seeing at K——'s last week, for her Christmas present."

REMEDY FOR DAMPNESS ON WALLS, ETC.

Referring to an item in the R. N.-Y. of October 31st, giving the scientific reason for the loss of wall papers and damage to books through the dampness which has so largely prevailed in this part of the country, I thought my experiment might be adopted with success by others. My house is a large old-fashioned stone building with a slate roof which had been neglected by the owners until the walls were already damp. I had the roof repaired and a roaring wood fire was made in the furnace immediately after every rain. All windows and doors were shut until the rooms were well warmed: then every opening that would cause a direct draught was made. My neighbors thought me a little daft but there is not a loose or faded piece of paper in the house, nor are there any moldy odors or damaged clothes, and no books have been injured since the first fire was built. It was my first year in the country and I did not know what to do, but my original idea proved to be the correct one.

Nordhoff, N. Y. MRS. A. ELMORE.

Miscellaneous Advertising.

Our Grandsires

Would have appreciated a purgative at once so mild and so effective as

Ayer's Pills,

the old cathartics being too harsh and drastic for common ailments.

"Ayer's Pills are the best medicine known to me for regulating the bowels, and for all diseases caused by a disordered liver and stomach."—Philip Lockwood, Topeka, Kans.

"I have been taking Ayer's Pills and using them in my family since 1857, and cheerfully recommend them to all in need of a safe but effectual cathartic."—John M. Boggs, 807 W. Chestnut st., Louisville, Ky.

For Sick Headache and Indigestion take

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We retail at the lowest wholesale factory prices, and ship goods to be paid for on delivery. Send stamp for Catalogue. *Name goods desired.*

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Will freeze in half the time of any other Freezer and produce Cream of the finest quality.

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INK PAD J.J. ALLEN **3 ARTICLES 12c** J. Allen ONLY 12¢ For the Lot.

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AGENTS LOOK HERE

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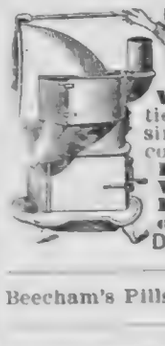

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Beecham's Pills act like magic on a weak stomach

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34 PARK ROW, NEW YORK.

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WEAK STOMACH; IMPAIRED DIGESTION; DISORDERED LIVER;

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WILL MAIL BEECHAM'S PILLS ON RECEIPT OF PRICE, 25 CENTS A BOX.

News of the Week.

HOME NEWS.

SATURDAY, November 16, 1889.

AT 1:45 P. M. Friday, November 8, Col. William Cassius Goodloe, Collector of Internal Revenue of the Seventh Kentucky District, and Col. Armstead W. Swope, ex-Collector of Internal Revenue under Hayes, both among the most prominent leaders of the Republican party in Kentucky and highly esteemed and honorable men, but bitter political rivals, met in the post-office at Lexington, Ky., and after fiercely glaring at each other and uttering some angry words pitched in with chivalrous savagery to kill each other. Goodloe, 48 years old, a member of the Clay family, was armed with a clasp-knife, the traditional weapon of the Kentucky Clays; Swope, 50 years old, a native Kentuckian also, was "heeled" with a pistol. Swope fired first, hitting Goodloe in the abdomen. The latter then fiercely carved his antagonist and, though receiving another shot, in a few moments inflicted over a dozen cuts on him before he fell on his face and died. With the coolness and bravery of his race Goodloe waited inevitable death till the following Sunday, when, after joining the Episcopal Church, he died surrounded by his weeping family and friends at the hour when Swope's body was being lowered into his grave. Both were good men; neither would be guilty of an ungentlemanly action; neither wanted a fight; but both were prepared for one, and through a false, semi-barbarous code of honor each became at once a murderer and a victim, plunging the families of both into distress and their hosts of friends into sorrow. The terrible lesson is sure to produce good, but at what an appalling cost!..... Last Monday President Harrison completed the work of converting three Territories into four States by issuing a proclamation admitting Washington into the Union. Montana was admitted the previous Friday, (November 8) and the two Dakotas on November 2. There are now 42 States in the Union, the original 13 having more than trebled. For 13 years the number had stood at 38—since August 1, 1876, when Colorado, the "Centennial State" was admitted. How long until other stars shall be added to the flag? Wyoming, with all requirements, is loudly knocking at the door already; Idaho is much better fitted to be a State than Nevada; Utah would already have been a State were it not for Mormonism; New Mexico—well New Mexico, why shouldn't she too soon join the Sisterhood?..... The Catholic Centennial Jubilee, commemorative of the 100th anniversary of the establishment of the Catholic hierarchy, or form of government of the Church in this country administered by the bishops and clergy, opened with great splendor at Baltimore last Sunday. Over 1,000 prominent laymen from all parts of the country and an extraordinary gathering of church dignitaries lent force and solemnity to the occasion. Many eloquent speeches were made, but that of Honore Mercier, Prime Minister of Quebec, and the most prominent French-Canadian delegate, has created the greatest sensation. He spoke glowingly of the extraordinary increase of the French-Canadian population in the Dominion and the Union. He expects they will become, ere long, the dominant race in Canada and New England. There is among them a strong and growing desire for annexation to the United States or at least ultimate independence of British rule. The immemorial antagonism of the French and English races has become deeply embittered in Canada by the exasperating stimulant of active religious hostility. The Protestants are loud in threats and the Catholics equally emphatic in defiance, and the future outlook is by no means amicable.. ..... According to a decision just rendered by the Supreme Court, N. J., a law passed in 1878 is unconstitutional, though under it the boroughs of Sea Island City, Somer's Point, Ocean City, Avalon, Anglesea, Holly Beach, Cape May Point, South Atlantic City, Beach Haven, Barnegat City, Lavalette, Point Pleasant and Atlantic Highlands were incorporated. These are all in debt, the outstanding bonds aggregating over $250,000. This indebtedness will be worthless unless the N. J. legislature shall pass a law rectifying all mistakes..... Boston capitalists have made preparations for sinking wells on the south shore of the Gulf of St. Lawrence in Canada, expecting to develop a rich oil field there. Boston refiners having been driven out of business since pipe lines were laid from the Pennsylvania oil regions to New York, Philadelphia and Baltimore, expect to get a fine supply of Canadian oil near home..... All the Philadelphia oil refineries have passed into the hands of the Standard Oil Trust, and the Pennsylvania Railroad Company proposes to discontinue carrying crude oil. The oil-producers of Western Pennsylvania, therefore, find themselves at the mercy of the Pipe Line Monopoly controlled by the Standard. It is said that to escape from oppression, they have raised $6,000,000 to build an independent pipe line to some point on the Atlantic coast. The route of the line has not been disclosed lest the Standard should succeed in blocking the project.....Owned personal property—chiefly cash and bonds—to the amount of $628,989.95 and still committed suicide the other day! Surely Oliver Garrison, lately of this city and formerly of California, brother of the late Commodore Garrison, must have been crazy to be guilty of so big a folly and so unexpiable a crime..... Astonishingly large as the desertions from our army are, those from the Marine Corp are still larger. Out of 1,823 enlisted men 515 deserted last year—considerably over one-fourth!.....It appears that the greatest Democratic gains in the recent elections occurred in rural districts. This being an "off" year in politics, it is claimed that the farmers, not feeling themselves constrained by party ties, voted according to their convictions. Even in Ohio where the Democratic party and candidate for Governor openly made the campaign on the basis of "free wool," large Democratic gains were made in country places. The anti-Tariff feeling is said to have helped the Democrats in the country, and the anti-Prohibition feeling had the same effect in the towns.....Dave Wambold, the well-known "negro" minstrel, died in this city last Sunday night, aged over 50. He left between $75,000 and $100,000.....Volapuk, the "universal language," is gaining ground in this country and elsewhere. More than 2,000,000 people are now studying it; 2,000 books have been published on it; 30 periodicals are devoted to it, and 600 societies for its advancement have been organized—so say its advocates.....The first sod of the Nicaragua Canal was formally turned on October 22. Much of the preliminary work in the way of clearing the route, laying down a railroad for the transportation of men, supplies and materials, and setting up a telegraph line, has already been done in a business-like manner, and the outlook is good..... In Ohio the auction for the seat in the U. S. Senate now occupied by "Standard Oil" Payne, is quite brisk. Calvin S. Brice, millionaire Chairman of the Democratic National Committee, and millionaire manufacturer Thomas, of Springfield, are now the most likely bidders.....Ellis, a Texas negro, is striving to obtain concessions of land from the Mexican Government for a large negro colony from the South. Many high officials favor the project; but the white Mexicans are generally against it: they think the Indian population is quite as much of an "off color" element as they ought to contend with..... A convention of the Knights of Labor has been in session at Atlanta, Ga., during the week. No officers are to to be elected: changes in the constitution and other matters alone claim attention. Federation with the Farmers' Alliance, Equal Wages for Women doing Men's Work, Children's Labor, National Banks and Governmental Control of Railroads and Telegraphs, were the chief topics discussed. The membership of the order has fallen off from 700,000 three years ago, to about 200,000; but it is claimed that the internal dissensions which were the main cause of this decline, have been eliminated, and that the order is now increasing and prospering..... In the National Women's Christian Temperance Union, which has been in session at Chicago during the week, there have been several discordant breezes, the gustiest of which arose from a difference of opinion among the members as to the advisability of the association taking an active part in "practical politics!" The majority voted in support of such a policy, whereupon the Iowa delegates withdrew. It is said that many ministers and other well-wishers are withheld from supporting the organization on account of its participation in "politics."..... The Western Union refuses to agree with the rates for sending Government messages fixed by Postmaster-General Wanamaker on October 30, last. It says that his reduction amounts to an average of 40 per cent., and that to do the business at that rate would entail a dead loss upon it.....The Pan-American excursionists returned to Washington last Wednesday, after just 42 days' absence, during which they had traveled 6,000 miles on the same train, drawn by the same engine, with the same set of officers—the longest trip ever made by the same train. All were greatly surprised as well as pleased with what they had seen and delighted with their treatment. After pleasure, work!..... The Secretary of State of Missouri warns the Missouri companies that have joined the Lead Trust, the Cotton-seed Oil Trust and the Linseed Oil Trust that unless they at once withdraw from the Trusts in compliance with the lately passed Anti-trust Law, he will straightway take measures to annul their charters. They'll probably withdraw.... ..All our window-glass makers are forming a "combine": "to lower the price of glass," they say, "by cheapening its manufacture;" "to raise the price of glass," the people know, "by forming a monopoly." The would-be monopolists are "protected" by an import duty ranging from 55 to 125 per cent. on competing goods from abroad..

FOREIGN NEWS.

SATURDAY, November 16, 1889.

YEARS ago the Boers of the Transvaal Dutch Republic of South Africa enacted a strong protective tariff. The country has of late been rapidly populated, and the Pretoria government made no allowances for the fact. Droughts have of late ruined the crops and destroyed vast numbers of sheep and cattle, so that a famine now prevails throughout the country. The government has abolished all tariffs on foodstuffs and established forage depots here and there and is giving bonuses to wagons bringing in provisions from the English possessions to the south. The government of Natal, the nearest of these, has offered a bonus of $5,000 to the first 50 provision wagons starting for Joannesburg, the center of distress, where food is now selling at famine prices. Recent rains promise to mitigate the destitution soon..... The new French Chamber of Deputies met Tuesday, with a Republican majority of 154, and a fair prospect of a harmonious session, as there is a healthy inclination for compromise among the warring factions of the majority.....Letters from explorer Stanley, lately received at Zanzibar, say that he and his party expect to reach that place by the middle of next January. They hadn't reached the place where Dr. Peters and his people were massacred, however, and their arrival at the coast may still be delayed by hard fighting. Assistance and supplies will be pushed rapidly forward by the New York Herald and the German authorities at Zanzibar.....

AGRICULTURAL NEWS.

SATURDAY, November 16, 1889.

THE proprietors of the Lakeside Stock Farm at Syracuse must be hard to please if they do not experience feelings of satisfaction over the numerous prizes won by the animals comprised in their herd of Holstein-Friesians. The animals have been shown only at the largest fairs in New York State, and have never been shown outside the State with two exceptions. At the New York State Fair at Albany, N. Y., the animals from this establishment won all the first and all the second premiums in the Holstein-Friesian class, except on two-year-old bulls, where they did not compete. The first was, however, won by a bull bred at Lakeside; they also won sweepstakes prizes on best bull and best cow of any age, also the special prize of $100, offered by the Holstein-Friesian Association for the best herd of Holstein-Friesians on exhibition. The firm also won the sweepstakes, seven first and two second prizes on Clydesdale horses; sweepstakes on French Coach stallion, and several first and second prizes on Percherons, Roadsters, and others. At the Buffalo International Fair, their stock also took a large number of prizes. Their bull Netherland Statesman took sweepstakes prizes for best male of any age. Netherland Prince and four of his get took first prize for bull and produce, besides which a large number of other animals took first and second prizes. In the Horse Department they were also very successful, entering stock in 17 classes, and winning 16 prizes, including the $600 prize for Clydesdale stallion and four of his get won by Rufus and his progeny. Besides the prizes won by the firm, large numbers of animals bred by them and sold to other parties, took high honors at the Bay State Fair, New England Fair, Rhode Island State Fair, Wisconsin State Fair, Illinois State Fair, and many other State, district and county fairs. The firm and the stock deserve all the honors received..... The New York State Dairymen's Association will hold its 13th annual convention at Ithaca, N. Y., December 10-12. A cordial invitation is extended to all, especially to women and young men. Suitable space will be provided for the exhibition of dairy products and utensils. Governor Hoard, of Wisconsin, Major Alvord, Prof. W. W. Cook, of Vermont, Col. Curtis and other noted dairy writers and speakers have promised addresses. Josiah Shull, Ilion, secretary.....The Kansas State Horticultural Society will hold its 23d annual meeting at Paola, December 3-5. All local horticultural societies are requested to send delegates. Space will be provided for the exhibition of seasonable fruits and horticultural products. Entertainment will be provided. G. C. Brackett, secretary, Lawrence.....The Dunellen Phosphate Company has been organized in Florida with a capital of $1,200,000. It is intended to develop 3,000,000 acres of new phosphate land in the State..... The United States Consul at Jamaica reports that an exhibition will be held on that Island during the winter of 1890-91, under government auspices. A large space will be given to exhibits from the United States, which will be admitted free of duty. The consul thinks the opportunity a good one for the exhibition of sugar machinery of American manufacture.....Secretary Rusk has just written a letter to the President calling attention to the fact that the House of Representatives failed at its last session to make an appropriation for the printing of the annual report of the Department of Agriculture.....The exports of pure-bred horses from England are said to be on the increase though the destinations vary considerably. The London Live-Stock Journal gives the distribution of the exports for the nine months ending September 30, as compared with the same periods in two preceding years as follows:

	1887.	1888.	1889.
Holland.....	$233,730	$250,945	$311,980
Belgium	386,575	377,180	383,195
France	125,160	356,910	360,510
United States...	240,495	338,425	283,060
British North America.....	788,365	969,755	764,200
Other countries.	414,655	1,001,225	1,640,475
Total..	$2,188,980	$3,304,440	$3,745,420

The value of the exports to the United States seems to have fallen off, while those to France, Holland and "other countries" have increased. The latter include the shipments to South America..... The California State Board of Trade have another train of three cars about completed and fitted out with the products of the State, which they will send throughout the eastern cities, to show the wonderful resources of their soil and climate.....The Association of American Agricultural Colleges and Experiment Stations has been in session at Washington during the week. Resolutions were adopted favoring the co-operation of the stations in the testing of varieties of fiber plants and machinery. The association called upon Secretary Rusk in a body at the Department of Agriculture, on Wednesday afternoon, and were entertained by him at his house in the evening..... The American Ornithologists' Union have been in session at the Museum of Natural History in this city. Papers were read upon various subjects connected with our native birds, their habits, migrations, etc.....

Miscellaneous Advertising.

SEND 10 Cts. in P. O stamps to **E. & O. WARD,** Produce Commission Merchants, for circular about **Shipping Produce** Also recipe for **Preserving Eggs.** Established 1845.
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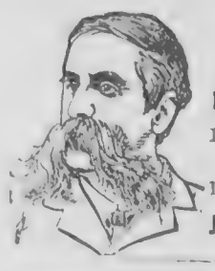

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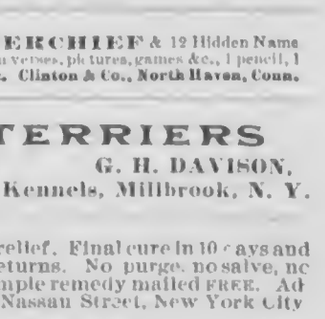
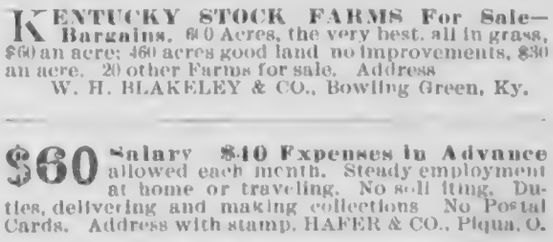


Price **$5.** THE **"NEW"**
RIGHT SPEEDY
CORN SHELLER.
Pat. Jan. 30, 1877, and **April 30, 1889.**
AGENTS WANTED.
It is the **Practical Hand Sheller of the World,** proven by thousands of testimonials. It will **SHELL ANY CORN Perfectly.** WARRANTED for 5 YEARS.
I will send Sheller, express prepaid, on receipt of **Price $5. or Handsomely Nickle-plated $6.** Send for circulars. CURTIS GODDARD, Alliance, O.

CHAMPION Single B/L **SHOT GUN**



Insist upon getting the "Champion"; if your dealer hasn't it, send to us. Send 6c. in stamps for Illustrated 100-Page Catalogue of Guns, Rifles, Revolvers, Police Goods, &c. JOHN P. LOVELL ARMS CO., Manuf'rs, Boston, Mass.

POULTRY PAPER, 16 pages, 4 months for 10c. Sample *free.* C. C. DEPUY, Syracuse, N. Y.

NAME on 1 **HANDKERCHIEF** & 12 Hidden Name &c. Cards, 400 album verses, pictures, games &c., 1 pencil, 1 eraser, 1 pen & holder, all 10c. Clinton & Co., North Haven, Conn.

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From Champion Stock. **G. H. DAVISON,**
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PILES. Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository. A simple remedy mailed FREE. Address TUTTLE & CO., 78 Nassau Street, New York City

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$60 Salary **$40 Expenses in Advance** allowed each month. Steady employment at home or traveling. No soliciting. Duties, delivering and making collections. No Postal Cards. Address with stamp, HAFER & CO., Piqua, O.

FARMERS We make the only **Saw Mill** in America that *fully* suits your purpose. Cuts 2000 ft. per day with 4 H. P., and 10,000 with 15 H. P. Larger sizes up to 50,000 ft. per day. Also Portable Corn and Flour Mills, Water Wheels, etc. Send for catalogue. DeLOACH MILL MFG. CO., ATLANTA, GA.

Crops & Markets.

SATURDAY, November 16, 1889.

THIS department has necessarily been very much contracted this week on account of a press of advertising and other matter.

There has been little change except that the prices of grain show a slight upward tendency. Reports from the West say that the corn crop has been greatly overestimated, both in yield and quality.

LATEST WHOLESALE PRICES

—OF—

COUNTRY PRODUCE.

New York, Saturday, November 16, 1889.

BEANS.—Marrows—New, $2 60@$2 75; New Mediums, choice, $1 95 @$2 00; Pea, $1 90@$1 95, Red Kidney, $3 25; White Kidney, choice, $2 60@$2 75; Foreign Mediums, $1 70 @$1 90; California Lima, $3 00@$3 25; Italian, $1 75 @$1 80. Green Peas, $1 05@$1 10.

BUTTER—New—State and Pennsylvania, best, 24@25½; Elgin, best, 26c; Western, best, 24@25c; do prime, 20@23c; do good, 16@19; do poor, 12@14; State, Dairy, half-firkins, tubs, best, 23@—c; do do prime 20@21; do do fine, 15@17; Welsh tubs, fine, 19@21c; do do, good, 15@18; firkins, best, —@—c; do prime, —@—c; do fine,—@—c. Western Imitation Creamery, best, 18@20; do fine, 12@15; Western dairy, fine, 15@17c; do fair, 11@12c; do poor, 9@10c; do factory fresh, best, 12@12½c, do prime, 10½@11; do good, 9@10; do poor, 7 @9c

CHEESE.—State factory, fancy, 10½c; do do fine, 9½@10c; do do, prime, 9@10c; do do, fair to good, 8¾@9½c; Ohio, flat prime, 7½@10c; do good,—@—c; do good, —@—; Skims, light, 7@8c; do medium 5@7c; do full, 2@4c.

EGGS.—Near-by, fresh, 23½@26c; Canadian, 22@24c; Southern, 20@22c; Western, best, 22@24c; limed, 17c; ice house, 15@17c.

FRUITS.—FRESH.—Apples, per bbl, $1 50@$3 75; Pears, per bbl, $2 00@$3 50; do per keg, $2 00@2 75; Grapes, best per lb, 3@7c, do, good, 2@3c. Cranberries, C. C, per bbl, $4 00@$8 00; do, per crate, $2 25@$2 50; Jersey, do, $1 25@$2 50. Lemons, per box, $1 75@$6 00.

DOMESTIC DRIED Apples—Evaporated, old, 5@8c; do choice, new, 9½@10c; prime, 8@8½c; sliced, new, 4@5¼c; do old, 3@3¾c; Chopped, 3@3¼c, Cores and skins, 2½@3c. Cherries new, 9@12c; do, old, 8@10c. Raspberries new, 22@24c; Blackberries, 5¼@5½c. Peaches, Delaware evaporated, peeled, 15@20c, do do, unpeeled, 8@10c; Georgia, evaporated, peeled, new, 13 @15c; do do do, unpeeled, 7½@10c; do do, sundried, 9 @9½c Huckleberries, new, 12@13c. Plums, new, 7@9c.

GAME.—Plover, per doz, $1 50@$1 75; Snipe do, do, $1 50@$1 75, Woodcock, per pair, $0 50@$1 00; Grouse, do do, 75@$1 00; Partridges do, $75@$1 00. Duck, Mallard 60@75c; do, Teal, 25@50c; do, Redhead, $1 00@$2 00; do Canvas-back, $2 50@$4 00; Rabbits, per pair, 20@36c; Quail, per dozen, $1 50@$2 00; Venison, per lb., 5@15c.

HAY AND STRAW.—Timothy, best, 80@85c; do good, 65@70c; do medium, 40@50c; Clover, mixed, 45@50c; shipping, 40@45c. STRAW—No. 1 rye, 70@75c; short rye, 40@45c; oat, 30@40c.

HONEY—In one-pound boxes. White Clover, 12@14c; Buckwheat, 10@12c; Beeswax 22@25c.

HOPS.—State New, 12@13c; do, good, 10@11c; do common, 7@9c; do 1888 best 11@12c, do do prime, 9@10c; do do. common, 6@8c; California, New, best, 12@—c; do good to prime, 10@11c; do Old, best, 11@12c, do common and fair, 7@9c.

NUTS.—Peanuts are quiet. Fancy, had picked, quoted at 6½@7c, and farmers' grades at 5@—c, Pecans, 5½@6½c. Chestnuts, $4 00@$6 00 per bushel; Hickory Nuts $1 75@$2 00 per bushel.

POULTRY. DRESSED—Turkeys, mixed, per lb. 7@12c; Fowls, western, choice, 10@11c; do common to good, 7@9c; Ducks, spring, good, 10@16; Squabs, white, per dozen, $3 00@$—; do dark, do, $2 00@$2 25; Chickens, spring, 7@15c; Fowls, near by, 11@12c.

POULTRY—LIVE.—Chickens—Spring, per lb, 9@10c. Fowls near-by, per lb, 9@10c, do Western, per lb. 9 @9½c; roosters, per lb, 5½@6c; Turkeys, per lb, 8@11c; Ducks, Western, per pair, 60@80c; Geese, Western, per pair, $1 25@$1 55.

SEEDS.—Clover is hard to sell; exporters quiet. New prime, future deliveries offered at 6¼ and choice, 6½c, with fancy at 6¾c. Timothy quoted at $1 50@$1 60. Canary, 2@4c.

VEGETABLES.—Potatoes—Jersey, per bbl, $1 25@$1 50; Long Island do, $2; State do, $1 25@$1 65; Western, do, $1 00@$1 70; Sweets do, $1 75@$3 25. Cabbage, per 100, $3 00@$4 50. Turnips, per bbl, 70@75c Onions—Orange County Red, $1 00@$2 2—; Eastern White, $3 00@$1 50; Eastern Red, $2 25@$3 00, State, Yellow, $1 75@$2 00. Cauliflower, per bbl, $1 00@$5 00; Squash, Marrow, $0 75@$1 10; do Hubbard, $1 00@$1 25, Celery, per doz. bunches, 15c@$1 00.

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 15@18c, and Spring do 19@25; Scoured Texas 52@53c, Delaine, 36c, Indiana, 2—c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c, Scoured Colorado, 53c; Australian, 38c.

GRAIN MARKETS.

WHEAT.—Sales—No. 1 Hard at 95c delivered; No. 1 Northern, 9½@92c, delivered; Ungraded Winter Red; 78@84c No. 2 Red in elevator quoted, 84@84½c. No. 3 Red quoted 81½@82c, elevator. RYE.—Held higher, but prices are more or less nominal. Western quoted, 54@56. BARLEY.—Unchanged in price and dull. CORN. Continued small receipts and scarcity of stock, together with the advance in wheat, had a stimulating effect on the general market. Sales—Ungraded Mixed and White at 40½@43¼c; No. 2 42¼@42¾c, elevator, 42¾@43c afloat; No 2 White quoted at 41½@42c, elevator; No. 1 November, 4—@42¼c. OATS.—No. 3 Mixed at 27c; No. 3 White 29¼@29½c; No. 2 Mixed, 28@28½c elevator, 28½c delivered; No. 2 White, 30¼@30½c; No. 1 White, 34½c; Mixed Western, 25½@29c; White do, 30@36c.

LIVE STOCK MARKETS.

BEEVES.—Very common to prime bullocks sold at $3 25@$4 75c per 100 lbs; oxen and stags at $2 75@$3 70; cows at $1 85@$2 87½c, and bulls at $2@$2 75. Latest private cable advices from Great Britain indicate a continued dull market for beef and cattle, and prices are weak all around.

MILCH COWS.—Receipts for the week thus far 126 head. Good stock scarce and a little firm but common cows are plenty and not wanted. Inferior stock sells at $25@$30, decent to good at $35@$50 per head.

CALVES.—Grassers at $2@$2 40; Fed Calves and Mixed at $3@$4 50; Veals at $5@$8, and Western Calves at $3 40@$3 87½.

SHEEP AND LAMBS.—"Cull" Sheep sold at $2 50 @$3; ordinary to good at $3 75@$5 25; common to very choice Lambs at $5 35@$6 65, and a load of extra heavy do at $6 70; "Culls" sold at $4 50, and mixed stock at $4 30@$5

HOGS.—No sales on live weight. Nominally weak at $4@$4 40 per 100 lbs.

Communications Received for the Week Ending November 16, 1889.

C. F. B.—S. G.—M. W. F.—M E. W., thank you —T. C. D.—E. G H.—W. W. H—S. M—V. B. L.—W. G. W.—C. S. W.—A. H. B—H M S. L. H.—A. L. J.—A. W.—T. M.—L. W. R.—E. G F.—T. T.—E. F. L.—A. W.—W. S—J G.—J. B. S.—J. B.—E F. D.—G. M. O.—G H. W.—D. C.—F. G.—G. W. S.—W. F. H.—L. V. F.—W. L. J.—P. C.—W. C S.—C. M. L.—C. H.—C. F. H.—B. B.—Mrs. E. D. B.—B. F. J.—H H W.—H O. H.—H. C.—J. L. D.—A. H.

Miscellaneous Advertising.

LINSEED OIL MEAL FOR FEEDING ALL DOMESTIC ANIMALS.

THE BEST FOR CATTLE, COWS, PIGS AND HORSES.

Use, with your other feed, at least

ONE-THIRD LINSEED OIL MEAL.

Please remember that this meal has an intrinsic value equivalent to three times over that of corn or oats. Write us for prices and other particulars, and mention the RURAL NEW-YORKER.

DETROIT LINSEED OIL CO., Detroit, Mich.

Fruits, Flowers, Vegetables, Ornamental Trees and Plants, Nut Trees.

If you want to know all about them, the latest discoveries in methods of culture, varieties, management, in combating insects, diseases, etc., get *Orchard & Garden.* It is devoted exclusively to horticulture, thoroughly original, practical, pure and entertaining; its contributors the most eminent horticultural writers in the land. The household department alone is worth many times the cost of the journal. It is finely illustrated, elegantly printed on best paper and bound; 16 to 24 pages, 9 by 12 inches, monthly, *only fifty cents a year.*

We will send it free for two months to all who will name this paper.

Orchard & Garden, Little Silver, N. J.

FARMS TO LET.

Two adjoining farms containing 94 acres One has new house, with seven rooms, and outbuildings; the other has about 250 fruit trees. Large barn with hay carrier, threshing machine and saw. Cellar of 1,100-barrel capacity, and half or whole of double house. These farms will be rented together or divided, with any number of acres in each. They are 16 miles from New York City, near depot on N. J. & N. Y. R. R., are in a high state of cultivation, and suitable for hay and grain, dairying or trucking. Owner,

J. VAN WAGONER, New Milford, N. J.

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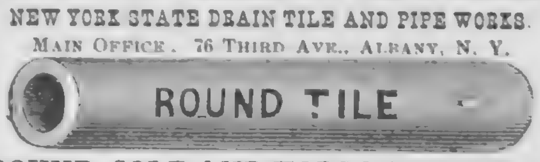
MAIN OFFICE, 76 THIRD AVE., ALBANY, N. Y.



ROUND, SOLE AND HORSE-SHOE TILE, Over 13 inches long. By cargo or smallest quantity. Our new improved machinery makes superior round and sole tile, excelling anything offered heretofore. First Premium wherever exhibited. Price-list on application. Vitrified Glazed Pipe and Tile Machines.

THE PURINTON STEAM GENERATOR!

IS THE BEST ARTICLE ON EARTH

For cooking any kind of food for stock. Cooks, boils or steams anything with economy and dispatch.

Made of boiler-plate steel!
Safe, durable and substantial!
Nothing to get out of order!
Freezing does not damage it!
Easy to manage as a stove!
We sell more than all others comb'n'd
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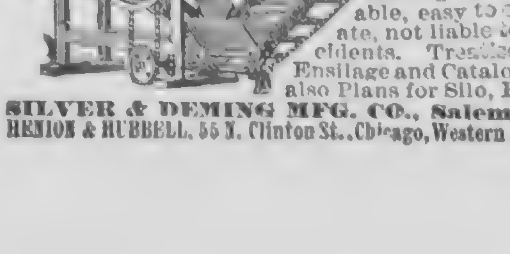
It will suit you.
Investigate and you will buy no other
☞ We also make Tank Heaters and 2-4-6 Horse Boilers and Engines

J. K. PURINTON & CO., DesMoines, - - - - IOWA

OHIO ENSILAGE AND FEED CUTTERS



Our Improved 1889 Cutter contains many new and valuable features. Strong and durable, easy to operate, not liable to accidents. Treatise on Ensilage and Catalogue, also Plans for Silo, Free.

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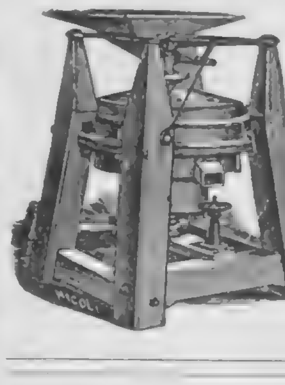
HENION & HUBBELL, 55 N. Clinton St., Chicago, Western Agts.



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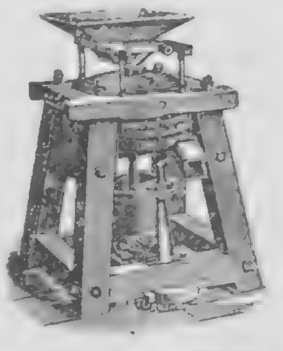
Twenty-eight Sizes and Styles.

FACTORY ESTABLISHED 1851

WARRANTED

MILLS for grinding ear corn, shelled corn, corn and oats, buckwheat and rye. A BOY CAN OPERATE and keep in order. A complete mill and sheller for less than $100. REDUCED PRICES for Fall of 1889. OVER 20,000 IN USE. Received **Highest Awards** at St. Louis, Cincinnati, New Orleans and Indianapolis fairs and Expositions. Send for Book No. 18—interesting and valuable. Mention paper, and address

Nordyke & Marmon Co., Indianapolis, Ind.



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Unequalled in Process! Unequalled in Convenience!

HAVE MOST LABOR SAVING DEVICES.

The **SWEEPSTAKES GOLD MEDAL** at

PARIS EXPOSITION

just closed, was awarded to Butter made by the **COOLEY PROCESS.**

This is the **THIRD GOLD MEDAL** at Paris Expositions, being **EVERY EXPOSITION** since it was invented.

Awarded the **GOLD MEDAL** at the **GREAT LONDON SHOW.**

Awarded the **GOLD MEDAL** and **FOUR FIRST** PREMIUMS at Bay State Fair, Boston, where there were over **200 ENTRIES.**

Awarded GRAND **SWEEPSTAKES** PRIZE at last Vt. Dairymen's Exhibition.

EIGHTY of the Best Creameries and Dairies of the State in this contest.

FOURTEEN GOLD MEDALS

have been awarded since the opening of Fairs a year ago.

THE BEST IN ITS OWN STATE,
THE BEST IN ITS OWN COUNTRY,
THE BEST IN THE WORLD.

Complete Apparatus for Factories and Dairies. Illustrated Price List Free.

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TO PRACTICAL FARMERS.

If you want a paper that fearlessly defends and advocates the rights of Farmers under all circumstances, subscribe for

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GREATLY IMPROVED IN EVERY WAY FOR 1890.

It has been established over 40 years, is a 16-page weekly **Agricultural, Live Stock** and **Family Journal.** Its **Market Page** is the most valuable ever published, and its **Legal** and **Veterinary Departments** are alone worth more than the subscription price. As a **special inducement** we will send the **OHIO FARMER** every week from time subscription is received until Jan. 1, 1891, for **ONLY ONE DOLLAR** Send for **FREE SPECIMEN** copy, and compare it with any other journal of its kind. Address

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The Cabinet Organ was introduced in its present form by Mason & Hamlin in 1861. Other makers followed in the manufacture of these instruments, but the Mason & Hamlin Organs have always maintained their supremacy as the best in the world.

Mason & Hamlin offer, as demonstration of the unequalled excellence of their organs, the fact that at all of the great World's Exhibitions, since and including that of Paris, 1867, in competition with best makers, of all countries, they have invariably taken the highest honors. Illustrated **ORGANS** $22 to $900 catalogues free.

Mason & Hamlin do not hesitate to make the extraordinary claim for their Pianos, that they are superior to all others. They recognize the high excellence achieved by other leading makers in the art of piano building, but still claim superiority. This they attribute solely to the remarkable improvement introduced by them in the year 1882, and now known as the "MASON & HAMLIN PIANO STRINGER," by the use of which is secured the greatest possible purity and refinement of tone, together with greatly increased capacity for standing in tune and other important advantages. **PIANOS** GRAND & UPRIGHT.

A circular, containing testimonials from three hundred purchasers, musicians, and tuners, sent, together with descriptive catalogue, to any applicant.

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WOOD ASHES,

NATURE'S COMPLETE FERTILIZER

For Fruit, Grass and Grain. Quantity and quality guaranteed By rail in car lots. Send for PRICE PAMPHLET and SAMPLE.

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—MANUFACTURERS OF—

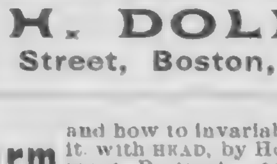
Pure Animal Bone FERTILIZERS!

For all Crops and Soils. Factory and Principal Office on Passaic River, Newark, N. J. Baltimore Office, 202 & 206 Buchanan's Wharf, foot of Frederick St. Write for "Farmer's Manual," mailed **Free.**

BARNEY & BERRY SKATES CATALOGUE FREE. SPRINGFIELD, MASS

HOG CHOLERA AND SWINE PLAGUE

PREVENTED and CURED.



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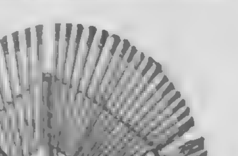
W. H. DOLE, 71 Clinton Street, Boston, Mass.

Tape Worm and how to invariably remove it with HEAD, by Home Treatment. Particulars for 2c. stamp Dr Freeman Medical Co. 99 Stanford Street, Boston, Mass.

HARROLD BROS., Wheatland, Dak. Pure-bred Holstein Friesians for sale Mercedes Carl heads the herd. Write for what you want.

DICK'S Seamless Foot-Warmer Shoes Every Winter. Woven by hand; wool lined. Warm, soft, strong. Where dealers have none (*canvassers wanted*) we mail postpaid. Ladies' sizes, $1.35. Gents', $1.60. W. H. DICK, Manufacturer, [Write plainly.] Dansville, N.Y.



Animal Meal for Poultry Food.

Cheapest and Best Animal Feed on the market. Good substitute for beef scraps (*which are high and scarce*) Send for Circulars for more particulars. I will send you a Poultry Book of 31 pages free.

C. A. BARTLETT, Worcester, Mass.

WARRANTED not to blow down off the tower, and that our **Geared Wind Mills** have double the power of all other mills. Mfrs. of Tanks, Wind Mill supplies, and the Celebrated

CHALLENGE Feed Grinders, HORSE POWERS, CORN SHELLERS, PUMPS and BRASS CYLINDERS *Send for Catalogue and Prices.*

ALWAYS BUY the BEST Geared or Pumping Mill on 30 Days Test Trial

Good AGENTS WANTED. CHALLENGE WIND MILL & FEED MILL CO., BATAVIA, KANE CO., ILL.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

DESCENT OF PROPERTY IN ARKANSAS.

L. A. M., Lawrence County, Ark.—A died intestate lately in this neighborhood, leaving a large farm and considerable wild land in another part of the State. He also left a mother and sister and also three children of a half-sister. Can the half-sister's children inherit any of the property?

ANS.—By the law of descent and distribution in Arkansas, relatives of the half blood inherit equally with those of the whole blood in the same degree. To this rule there is one exception: if the property in question came to the deceased by gift, descent or devise, then those persons not of the blood of the ancestor from whom it came are excluded from the succession. In the case put by our correspondent, we are not told whether A was male or female. We assume that the intestate died without leaving wife or husband, descendants or father. That being the case, if the estate in question came to the deceased from his or her father, it will revert to the father's heirs: if it came from the mother, it will revert to her and her heirs: but if the estate is a new acquisition, it will go to the mother during her life-time and then descend to the collateral kindred. On the completion of the mother's life estate, the children of the half-sister will together be entitled to a share equal to that of the sister of the deceased.

LONG LEASES IN OHIO.

L. M., Morgan County, Ohio.—A leased a farm to B for 10 years; and after the lapse of one year and seven months sold the property to C who wants to obtain possession on or before next New Year's Day. Can he do so to A's loss?

ANS.—In Ohio all leases for a longer term than three years must be in writing and signed by the parties concerned, in the presence of two witnesses, who shall subscribe their names as witnesses, and such signatures shall be acknowledged before some officer having authority to acknowledge deeds, and the acknowledgment thereof shall be in all respects the same as the acknowledgment of deeds. The lease must be recorded in the office of the Recorder of the county in which the premises are situated, and unless so recorded or filed for record, the same shall be deemed fraudulent so far as relates to a bona-fide purchaser of the property, having, at the time of the purchase, no knowledge of the existence of such an instrument. If A went through the above formalities with his lease of the property, he can hold it against C by performing the terms of the lease; if he failed to do so, C can legally obtain possession of the farm, if he did not know of the lease when he bought it.

A WIDOW'S RIGHT OF "QUARANTINE" IN NEW YORK STATE.

"An Old Subscriber," Oneida County, N. Y.—A man dies at home on his farm in this State without leaving a will. His mother and several brothers and sisters are therefore interested in his estate as well as his wife. Does the latter as a tenant in common have a right to live on the homestead without paying rent, and, if so, has she a right to the whole house or only rights with the others? At the time of the man's death and since, none of his relatives have lived in the house, except the widow, and he left no children.

ANS.—By the statutes of this State the widow has the right to "tarry in the chief house of her husband" 40 days after his death without being liable for any rent, and in the meantime is entitled to her sustenance out of the estate. At the expiration of the 40 days she may be expelled by the heirs if she cannot make an agreement to rent the premises. If the whole house was necessary for her accommodation, she could retain possession of it all during the "quarantine," and this is usually allowed.

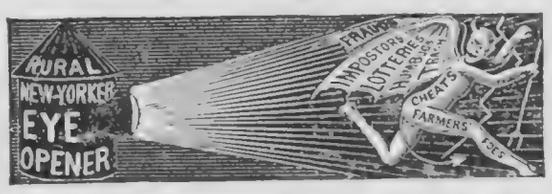
RECOVERY OF STOLEN PROPERTY.

L. N. T., Williamsport, Pa.—Several months ago a valuable horse was stolen from A, a neighbor of mine. The other day he discovered him in the possession of B living nearly 100 miles away. B is known as an honest man, and declares he bought the horse of C, who also has a fair reputation. C says he bought him from a traveling dealer who had several other horses for sale. Can A recover the horse from B without tracing him through the various hands through which he may have passed?

ANS.—Yes; if he can prove the identity of the animal. A stolen or mortgaged horse may pass through the hands of 50 men, each of them acting in good faith and paying full value for him, without in the least impairing the right of the owner or mortgagee to take the animal whenever and wherever he can find him. Under such circumstances the purchaser has no better title than the thief had.

A. P., Norden, Neb.—G put two mares to a stallion. He was not to pay for the services of the stallion unless they proved to be with foal. Before this could be proved G's barn was burnt and with it both mares. Must G pay for the services of the stallion?

ANS.—Under the rather peculiar circumstances we should say decidedly not. Of course, it is not to be presumed for a moment that the burning of the barn and its valuable contents was due to any fault on his part. As the owner of the stallion cannot prove that the services his horse was guaranteed to perform, had actually been performed, he has no legal means of forcing payment therefor.



A PRECIOUS TRIO OF SWINDLERS.—The Cromo Printing and Publishing Company of Cincinnati, Ohio, was one of the humbugs, or rather swindles, most strongly denounced by the Eye-Opener half a dozen years ago. Back of it were a trio of rascals who, after a long career of successful fraud, have been checked by the strong arm of the law, at least temporarily. Their real names or aliases are Algernon Granville, Frank Gerrish and E. Harmon Clark. All three were arrested the other day, at Chicago, by the Post-office authorities for sending fraudulent matter through the United States mails. The Eye-Opener's knowledge of the fellows began away back when under the guise of the Cromo Printing and Publishing Company, they published a catchpenny affair called The People's Safeguard. This was promptly denounced in this department. It offered prizes amounting to $15,000 to the persons who would first guess the number of links in a watch chain a cut of which was given in the paper. Each guesser was required to forward a small sum of money with his estimate of the number of links. This neat little scheme netted the rascals $8,000 to $10,000, before the Post-office authorities discovered its nature, and arrested Granville, who posed as the editor of the Safeguard. Over 300,000 letters received by the concern from its dupes in all parts of the country were captured, many bitterly complaining of the frauds practiced by it on the public. Though hundreds of persons guessed the correct number, not a single prize was ever paid. Swindling of this sort is, of course, an almost invariable characteristic of the concerns who make offers of that sort. Granville was soon released under $1,500 bail, and has never been tried. For the next few years the rascals practiced different kinds of confidence games in various parts of the country, and, finally, about two years ago, settled down in Chicago where they organized the Imperial Printing and Publishing Company. Soon afterwards this was stigmatized as a fraud by the Eye-Opener. The firm from the outset worked the "green goods" game on a new plan.

They decided to dispense with the publication of a paper and depend entirely on weekly publications with a big circulation. It is deplorable that many of these, whether exclusively weekly prints or weekly editions of dailies, are ready to admit into their columns all sorts of advertisements, however doubtful or fraudulent they may be on their face, provided payment to themselves is assured. What could bear on its face more plainly its fraudulent character than the following advertisement which this bogus concern found no difficulty in getting inserted in scores of papers all over the country.

WANTED—A slick man in every county to handle our excellent goods; one that is willing to take risks for large gains; goods done up in packages of 1s. 5s, and 10s. Address, by express only at our expense, Imperial Engraving Company, 280 South Clark Street, Chicago, Ill.

Of course many inquiries were received in answer to such advertisements from all parts of the country. In reply the rascals sent carefully worded notes telling of the nature of the "goods" or "engravings" in which they were dealing and giving the prices. As a sample of the engraving a $1 bank note was inclosed in each letter. As fast as the remittances poured in, the orders for the "engravings" were filled by forwarding needles done up in "packages of ones, fives and tens." Of course the dupes were in no position to cause a scandal, being self-implicated swindlers. Numerous swindles of the above kinds are still flourishing rankly in various parts of the country, and this exposure of those that have "come to grief" should serve as a warning against others of the same stripe which have as yet escaped the clutches of the law.

LIVE STOCK INSURANCE RISKS.—The recent failure of the Standard Mutual Live Stock Insurance Company of Reading, Pa., against which the Eye-Opener warned readers of the R. N.-Y. over a year ago, well illustrates a form of fraud to which farmers are frequently exposed under the most plausible appearances. The company had issued over 8,000 policies on horses alone, and a large amount of money is still due to owners whose animals have died. Although started in Reading, the concern's principal business offices were in Philadelphia and the heaviest proportion of the fraudulent losses were incurred there and in the neighboring districts. There is little doubt that at the outset it was intended to do an honest business, but when temptation to fraud came at a period of financial stringency, the moral forces of the managers were not strong enough to resist. Horses that were almost worthless were insured by the agents for large amounts, and in nearly every instance the horses died in a suspiciously short time after they had been insured.

It is now charged by the company that the insurance paid on such animals was invariably divided by the policy-holders with the agents who made the insurance. Of course in such frauds the honest policy-holders who were assessed for the payment of the fraudulent policies suffered heavily. Culpable carelessness on the part of the managers and flagrant fraud on the part of the agents naturally rendered the company slow in meeting the claims of its policy-holders, and some of those whose claims had been long outstanding brought suits against the company for the amount of their policies. With the ventilation of its methods of conducting the business came the collapse of the company, and the honest policy-holders who had for a long time been paying assessments to meet fraudulent and other losses, in addition to heavy expenses incurred by the officers, were left in the lurch. Several other similar companies in Pennsylvania are said to be in as bad a plight as the Standard was before its real condition was ventilated in court.

The most vexatious and dangerous feature of this and of all similar mutual assessment benefit or insurance associations in all parts of the country, is that every member is considered, in law, as part of the partnership. The opinion widely prevails among the members of such societies that if any of them does not desire to pay his assessment he need not do so, and that that will be the end of his membership in the society. Practically that is the way in which such schemes are worked, as the officers seldom force the members to pay their dues; but should any of the societies ever get into financial trouble the members would find that its creditors could sue all and every one of the policy-holders for assessments enough to pay their claims. All participate in the profits and are held liable for a share of the debts, if any exist. Resignations from the association would not avail, and persons who supposed that their membership had lapsed from non-payment of assessments, would realize, on the subpœna of a constable, that they were still active members, liable for their share of the just debts of the society.

Literary.

BOOK REVIEWS.

READY FOR BUSINESS or Choosing an Occupation, is the title of a small book by George J. Manson, which is intended, as its name indicates, for a guide or help to young men in the selection of their life-work. It points out the requirements and possibilities of various occupations, mechanical, mercantile and professional, and indicates the steps necessary to enter any apprenticeship. The occupation that engages the attention of more men than any other in this country, the one which is the foundation of all others, is—perhaps inadvertently—omitted. The book is very evidently written by a New Yorker, and it is possible that he never heard of the science and profession of Agriculture. There never was a time when specialists were in such demand, and received such returns for their skill as the present. The man who can do one thing extremely well is the successful man, and it behooves every young man to learn his capabilities, and choose well the occupation for which he is best adapted. Cloth; five by 6½ inches; 108 pages; 75 cents; Fowler & Wells Company, New York.

EVERY-DAY BIOGRAPHY is, as its name indicates, a volume intended for every-day reading. Several very brief sketches of prominent Americans, as well as of some English and European celebrities are given for each day; the arrangement being made according to the birthdays of the subjects noticed *e. g.*, October 30; in addition to several others, "Andrew Jackson Downing, an American landscape gardener and author, born in Newburg, N. Y., October 30, 1815. He was lost on the Henry Clay, a North River steamboat, July 28, 1852. He was editor of the Horticulturist for six years previous to his death: and his 'Fruits and Fruit-Trees of America,' has passed through several editions. He probably had few superiors as a landscape gardener, even in Europe." The list of subjects includes all classes of society, but the majority, we are glad to note, are Americans. An alphabetical index is given of all persons noticed, so that one may readily refer to any desired name. It is a most excellent book for a busy man or woman. Cloth: five by 7½ inches; 378 pages; $1.50; Fowler & Wells Co., New York.

PENS AND TYPES is a small volume by Benjamin Drew which is intended, so the author says, as hints and helps for those who write, print, read, teach or learn and this should include nearly every body. It treats of writing for the press, proof-reading, style, punctuation, orthography, capitalization, etc. There is a great deal of valuable information for all students. In writing of typographical errors the author expresses the opinion that many, if not most, of them are due to illegible penmanship, and we are inclined to think from our own experience that he is more than half right. This book, thoroughly read, would tend to do away with much of this, and might avert the strained relations that sometimes exist between editors and contributors. It is a helpful book. Cloth; five by 6½ inches; 204 pages, revised edition; $1.25. Lee and Shepard, Boston.

OSBORNE OF ARROCHAR by Amanda M. Douglas, is a good example of fiction for its own sweet sake. There is no lurking "purpose" to disturb the even flow of events; there is not even a villain; the beauties are extremely beautiful; the lovers are models, and there are enough to go around. The moral tone is good, and if numerous tricks of manner and circumstance seem oddly familiar to readers of Miss Douglas's earlier works, still the book is very pleasant reading. Cloth; six by eight inches; 449 pages; $1.50. Lee and Shepard, Boston.

Miscellaneous Advertising.

O. D. Cook, of Woonsocket, R. I., says: Dr. Seth Arnold's Cough Killer cured me of a very severe cough in a short time. I heartily recommend it for all it claims to do.

IT IS INVALUABLE to all who would preserve their health. **25c, 50c. and $1 per bottle.**

ALL DEALERS Sell It.

LOW-DOWN WAGON on high wheels—**only Practical, Common Sense** Farm Wagon in the world. Send for 28 reasons why.
GARDINER IRON WAGON CO.,
Mullica Hill, N. J

EMPIRE AGRICULTURAL WORKS
LATEST IMPROVED MACHINES in the MARKET.

It pays to get our Illustrated Catalogue and Price on Tread and Sweep Power, Thresher, Separator, Corn Sheller, Feed Cutter with Crusher Land Roller, Engines, three to ten Horse Power.
S. S. WESSINGER & SON, Talmage, Northampton Co., Pa.

Floricultural.

CHRYSANTHEMUM SHOW AT THE UNITED STATES NURSERIES, SHORT HILLS, N. J.

(RURAL SPECIAL REPORT.)

A fine show; its arrangements; some choice orchids; fancy prices; bewildering chrysanthemums; Mrs. Alpheus Hardy; the Snowball; Shasta; blooms of great size; Lacroix, and other fine varieties; red sorts make a poor show; duration of the exhibition extended.

IF all the members of the R. N.-Y. family could have seen the orchid and chrysanthemum show given by the United States Nurseries, Short Hills, N. J., November 4th to 9th, instead of having but a bald report, with all the brightness and beauty left out, they might have considered themselves most fortunate.

The exhibition was arranged in four long, continuous greenhouses with the climax at the farther end. As the visitor entered the orchids first claimed attention. The houses were filled down the center with ferns, palms, anthuriums, and the like, bordered with Zebra-striped Marantas and fine grasses, and banked at the ends with masses of blooming orchids. Around the sides were cypripediums, or lady's slippers, of which the firm catalogue about 400 varieties. Only a few sorts of these showed bloom, though some of the few were quite rare.

Among the more showy orchids were some fine plants of Phalænopsis, with large narcissus-like clustered blooms. The pale-yellow clusters of Oncidium varicosum recalled the touch-me-not of our swamps; while O. ornithorhynchum showed large clusters of fine, pinkish-mauve flowers, not at all showy, but of such rare fragrance that the single plant filled the house with its delightful odor. More conspicuous than any of these, though less beautiful, was a large plant of Vanda Sanderiana, claimed to be the finest now in the States, and valued at $1,000. But most charming of all were some sister plants, Vanda cœrulea, with large bouquets of delicately-veined or spotted blooms, of pale lavender-blue with darker centers.

At the foot of the stairs leading to the chrysanthemum-house, a dazzling scene met the eye. The entire center of the long house was filled with an oblong bed of the famous $1,500 chrysanthemum, Mrs. Alpheus Hardy, which was one sheet of feathery, frost-like bloom. To see this was alone worth the trip. The entire circumference outside the walk was banked with plants of great variety and innumerable colors. Most of them were grown in the beds, but all spaces were filled with plants in pots, to make a complete mass of color. Prominent on one side toward the center was the Snowball, a perfect white variety of first size, with broad, twisted petals. Across from it was Shasta, a very free-blooming white Japanese, with drooping tubular petals and of immense size.

The variety that could show a measurement of less than four inches was "nowhere," and, indeed, very few such were seen. In the first tour around the house, about 20 prominent varieties were noted, none less than six or seven inches across, as large as paeonies, but delicately shaded in color, and perfect in make-up. Ordinary blooms of Mrs. A. Hardy were from four to five inches across, and last year this was about the limit; but now a few strong plants that had been grown for exhibition blooms showed flowers that must have measured over seven inches! Perhaps the largest of all was Philippe Lacroix, having a thick bloom of pale pink, with twisted, drooping petals; two other fine pinks were Excellent, a huge Chinese incurved, of a pale lilac rose shade, and Lillian B. Bird, an exquisite creamy shell-pink Japanese sort of immense size.

Three fine yellows of first size were M. Constant Varin, and La Fortune, golden yellow, and Mrs. H. Cannell, primrose-yellow, "one of the best." California is still paler, a beautiful shade, but the blossom is not quite so full. A huge, fluffy, blush-white, very beautiful, first sent out by the proprietors, is known as Sunny-side. A creamy-white, Tacoma, is called the best for general planting because of being very profuse and a rank grower; it is not quite so large and perfect as some sorts.

But these huge show varieties have little use for florists' work, or for personal wear. Three fine, white sorts for this purpose are Alaska, Narragansett and Belle Pointevine. Jeanne d'Arc is a perfect white, having the outer tips just touched with pink. A second, and a third trip around failed to show a single red variety worthy to rank for beauty with those already mentioned. Many were large and of fine shape, but the colors are all shades of magenta or of brick-red, and are very ugly. Mrs. Andrew Carnegie, from which so much was hoped, proved disappointing, the petals curving to show only the dull side. The nearest approach to a pretty red sort was Bras Rouge, which has its petals rolled into tubes which show the dark-red prettier side.

The courtesy of the firm in providing refreshments and carriages for its guests is worthy of note, and was well appreciated. It was decided to hold the exhibition open for another week. C. S. VALENTINE.

CATALOGUES, ETC., RECEIVED.

"DISHORNING." This is the title of Bulletin No. 10 from the Mississippi Experiment Station. The first sentence in the book is as follows:

"For this spelling the reader is respectfully referred to all the dictionaries and encyclopedias."

The R. N.-Y. would like to inform "the reader" before he starts out that this examination of "all the dictionaries and encyclopedias" will result in a wild-goose chase. Analogy with regard to the formation of other words with the same prefix, however, would lead us to prefer dehorning to dishorning. Thus Webster gives the obsolete word dehusk. Dr. Phares, the author of this bulletin, has prepared the most concise and practical treatise on the subject that we have yet seen. "Mr. Haaff, the original dehorner," seems to know all about the subject, but his teaching is conducted in such a hammer-and-tongs style that he fails to convince many people who ought to be convinced. Dr. Phares is a man of long experience in the treatment of cattle diseases as well as in the management of stock for the dairy or shambles. The following extracts give an idea of the plan of the bulletin:

"The operation, may be performed on animals of any age with little danger of serious injury. So far as pain and danger are concerned, the section may be made at any distance from the skin. But other considerations determine the place of section. As a rule, the nearer the head the better. Notwithstanding the assertions of many that the operation never injures the animal and never endangers life, we have too much testimony from the best surgeons and have had too many calls for assistance to accept the statement.

In some instances the hemmorrhage has been very large, extremely prostrating and requiring most active and skillful treatment to arrest it and save life. Fever has followed loss of appetite and flesh, with slow recovery. It is true such cases are rare, yet as they do occur, every care and precaution should be observed to give the animal the best chances. We are convinced that we have seen instances in which, if death has not been absolutely caused, it has at least been hastened by the operation. Without great loss of blood, there have been many cases in which there have been some fever, nervousness, diminished appetite, flesh and milk. It is not a very rare thing for some suppuration to occur after operation; and more rarely caries of the bone gives trouble for months, with offensive discharges. Hemmorrhage is from one artery—rarely two—situated at that part of the stub near the ear. Hence it will be perceived that plugging the sinus through which one sees some inches down into the head is worse than useless for stopping the flow of blood. But solution of persulphate of iron (Monsel's solution) thrown into the artery or introduced with a glass point instantly forms with the blood a firm clot or plug. The flow may sometimes be arrested by compress and bandage around the head above the ears.

When a large horn is removed a frightful, large raw surface is left, and in its middle a huge cavern extends down into the head. One may see into this cavern several inches; the polished white walls reflecting the light well illuminate its interior. Some operators have mistaken this white surface for brain, and declare that they cut off the horns down to the brain; others within an inch of the brain, exposing that important organ to view. This, if true, would be horrible, and render the operation many thousand fold more dangerous and cruel.

A moment's glance at the anatomy of the head will show the absurdity of such assertions, and that a belt three inches broad, including the entire top of the head may be removed without touching the brain. Equally absurd is the twaddle about the cruelty of cutting through the exquisitely sensitive marrow of the horn core. Nothing could be more useless or out of place than marrow in the ox horn. The formation of the core has been explained. Now a word about its covering—the horn proper. This is of about the same character, chemically, as hair, hoof or nails. It is secreted or formed in about the same manner. In the horn of the calf, when but two or three inches long, elongated bundles resembling masses of agglutinated hairs are as readily perceived as the bundles of fibers in boiled lean beef. A number of organs are wisely formed with little or no sensitiveness, as liver, lungs, heart, brain, because in these sensitiveness would be much worse than merely useless,—absolutely pernicious. So the horn possesses no great degree of sensitiveness, being intended for great exposures, for hard usage and violent blows. There is no need, then, no place for the morbid, mawkish sentimentalism so much affected by writers and talkers on the subject of dishorning.

Horns are often lost by various accidents. Not long ago, in the herd of the writer, a beautiful cow made a vicious charge with all her power upon another, who received the shock in such a way as to suffer no injury, while at the moment of collision a horn of the assailant was snatched off instantly, leaving the entire core uncovered. In a few weeks it was recovered with a layer of horn, but deformed. The next day another cow lost a horn in the same way. In some instances both horn and core are knocked off; and cases have been seen in which both horn and core were broken some inches from the head and required surgical aid.

In many instances horns are ornamental, and in some countries, in a state of nature, useful to protect against the attacks of beasts of prey. But in domestication, protected from these dangers, the horns are well-nigh or wholly useless to the animal. In a herd as a whole they are injurious, being employed to injure each other. They are often injurious to the individual. Finding that he has weapons with which he can assail others he neglects his legitimate business of grazing, browsing, taking water, and wastes time in teasing others and keeping them away from food and drink. He is all the time more or less excited and uncomfortable, so that his own well-being is impaired by having horns. Deprived of them he becomes quiet, not liable to violent excitement, eats, drinks, sleeps, enjoys contentment and grows fat. So much from his own standpoint.

From the proprietor's standpoint: The horns of the stronger are a terror to the weaker animals, which are deterred from food, drink, rest; persecuted, gored, bruised, excited in a tyrannical, cruel manner, appealing powerfully to the pity of the merciful owner for relief. "For the righteous man regardeth the life of his beast." These considerations justify the removal of all horns.

But man is financially interested in the matter. Since dishorning is really a merciful procedure, he should have no scruples about resorting to it to protect his property and promote his interest. He prevents these animals from wounding and bruising and famishing one another, saves a vast amount of time in handling, of room in sheltering, and of feed stuff. His beeves are fatted for market with much less expense of feed and in less time. They go into the markets, as attested by the dealers at the great cattle depots, in much better condition, having whole hides and unbruised flesh, both of which sell more promptly and at better prices, while the cost of transportation of the live animals is much less, because a large number can be packed in each car. For like reasons the milk, cream and butter products are increased in quantity and improved in quality. It is true that the product is in some instances slightly reduced for a few days after being dishorned, but after the excitement passes off and the wounds heal the beneficial results are permanent.

The operation should be performed when the animal is in good, sound condition and plenty of good, wholesome food and water and good quarters accessible. The healing should generally be complete in from three to eight weeks according to size of the wounds. Usually no application to the raw surface is necessary except pine tar."

PREVENTING THE INJURIES OF POTATO ROT.—This is the most interesting topic discussed by Prof. Weed in Bulletin No. 6, volume 2 of the Ohio Experiment Station. Some weeks ago the R. N.-Y. referred to the results claimed by Prof. Weed. These results are now repeated for the purpose of emphasizing them. All through the East rot and "blight" have done a great amount of damage this season and potato growers are anxiously looking for some way of fighting these diseases. Here are the conclusions reached by Prof. Weed:

"So far as a single experiment can be relied upon, the results here reported seem to me to indicate the correctness of the following provisional conclusions:

(1.) That a large proportion of the injury done by the potato rot can be prevented by spraying the vines with the Bordeaux Mixture.

(2.) That this treatment apparently diminishes the amount of scab affecting the tubers.

(3.) That by adding London-purple to the mixture the same treatment may be made effective in preventing the injuries both of rot and Colorado Potato Beetle."

Although the R. N.-Y. has repeatedly given the formula for the "Bordeaux Mixture," we quote what Prof. Weed has to say about it

"The solution used was what is commonly known as the "Bordeaux Mixture," the standard formula for which is as follows:

"Dissolve six pounds of sulphate of copper in 16 gallons of water, in another vessel slake four pounds fresh lime in six gallons of water. When the lime mixture has cooled to the temperature of the air, pour slowly into the copper solution, mixing the fluids thoroughly by constant stirring."

As this formula seemed to be rather expensive on account of the large amount of copper sulphate required, I diluted it about one-half, using six pounds copper sulphate and four pounds lime to 50 gallons water instead of 22 gallons, as ordinarily recommended. We usually made it by filling our Nixon barrel machine, which holds 50 gallons, nearly full of water, and then adding three or four gallons hot water in which the six pounds of copper sulphate crystals had been dissolved. The freshly slaked lime was then poured in, and after a thorough stirring the mixture was ready for use. Sometimes instead of the crystals we used *powdered* copper sulphate, in which case it was not necessary to heat water to dissolve it, the powder being simply put in the barrel of clear water and was soon dissolved. When we wished to add London-purple, we simply put it in either before or after the mixture was made."

Those of our readers who are of an investigating turn of mind are respectfully requested to add this experiment to their list for next year.

Miscellaneous Advertising.

How to Cure Skin & Scalp DISEASES with the CUTICURA REMEDIES.

THE MOST DISTRESSING FORMS OF SKIN AND scalp diseases, with loss of hair, from infancy to old age, are speedily, economically and permanently cured by the CUTICURA REMEDIES, when all other remedies and methods fail

CUTICURA the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease from pimples to scrofula.

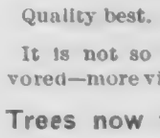
Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c.; RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

Relief in one minute, for all pains and weaknesses, in CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster. 25c.

IMPROVED EXCELSIOR INCUBATOR



Simple, Perfect and Self-Regulating. Hundreds in successful operation. Guaranteed to hatch larger percentage of fertile eggs at less cost than any other hatcher. Send 6c for Illus Cata. GEO. H. STAHL, Quincy, Ill.

Trees, Seeds and Plants.

LANDRETH'S LAWN GRASS SEED

Is a mixture of the finest varieties of perennial grass seeds, producing a most beautiful and permanent sod in a short time. The lawns and grass plots in and around Philadelphia afford ample evidence of the superior quality of the *Landreth's Lawn Grass Seed.*

All Varieties of Grass and Clover Seeds carefully selected, thoroughly re-cleaned, and freed from all imperfections.

LANDRETH'S LAWN FERTILIZER.

A most excellent top-dressing for lawns and grass plots, producing a rich and vigorous growth. Sold in packages from five pounds to the ton.

D. LANDRETH & SONS,

21 & 23 South Sixth Street Branch Store, Delaware Avenue and Arch Street, Philadelphia, Pa

THE IDAHO PEAR.

What Others Say About It:

Compared with Keiffer it is far superior in quality. AMERICAN GARDEN.

Quality best. PATRICK BARRY.

It is not so sweet as the Bartlett, but higher flavored—more vinous. THE RURAL NEW-YORKER.

Trees now for the first time offered for sale!

Single Tree by mail, post paid, $2.50; Three for $6.00.

Send for illustrated prospectus containing a finer list of testimonials than any new fruit that has ever been introduced.

THE IDAHO PEAR Co.,

LEWISTON, IDAHO

TREES Root Grafts—*Everything!* No larger stock in U. S. No better. No cheaper. PIKE CO. NURSERIES, Louisiana, Mo.

DUTCH BULBS FOR FALL PLANTING

We import, from the best sources in Holland, a large assortment of Bulbs of finest quality which we offer at reasonable prices. Catalogues and price-lists free to all applicants.

D. LANDRETH & SON,

21 & 23 South Sixth St., Philadelphia, Pa,

"Your brother ought to marry. He is too good a man to be wasted."

"But he thinks he oughn't to, you know, because he's a minister."

"And why shouldn't a minister marry if he wants to?"

"I suppose it is because he may have a son, and you know what a minister's son usually is."

Humorous.

The RURAL NEW-YORKER *is prepared to offer very liberal terms to good, responsible* PERMANENT *agents. Correspondence solicited.*

HIS CHOICE.

"WHERE do you think," said she,
"The World's Fair ought to be?"
He drew her to his side,
And hugging her replied:
"I'm satisfied, my dear,
To hold the fair right here." —*Life.*

A SUITABLE DIET AT SEA—Rolls.—*Burlington Free Press.*

TEMPERANCE ORATOR: "What is it my hearers, that drives men to drink?" Voice from back seat: "Salt mackerel."—*Life.*

HOUSE HUNTER (examining a beach cottage): "Where does this little entry lead?" Agent: "Why this isn't an entry, sir; this is the dining-room."—*New Hampshire Patriot.*

PHYSIOLOGISTS and doctors say that when a person takes a cold, it always settles in the weakest part of the system. This is why so many persons have colds in their heads.—*Boston Globe.*

TRAMP: "Be careful how you refuse me food—you might be entertaining an angel unawares!" Servant: "Faix, I niver see an angel, but if they be loike yez it's divil a wan I want to be."—*Time.*

"WHAT have you in the shape of oranges?" asked a customer at the common store in a small town. "Base-balls and doughnuts," was the response. "Which'll you have?"—*Minneapolis Journal.*

MRS. TONAY (after passing a newly painted house): "Good gracious! And I have been brushing close up to it all the way. Do please look, Mrs. Sharpe, and see if I've got any paint on me." Mrs. Sharpe: "I don't think there's any on your clothing, Mrs. Tonay."—*Boston Transcript.*

A LADY who, though in the autumn of life, had not lost all dreams of its spring, said to Jerrold: "I cannot imagine what makes my hair turn gray. I sometimes fancy it must be the essence of rosemary with which my maid has been in the habit of brushing it. What think you?" "I should be afraid, madame," said the distinguished dramatist, dryly, "that it is the essence of thyme."—*The American.*

Miscellaneous Advertising.

HOME STUDY. Book-keeping, Business Forms, Penmanship, Arithmetic, Shorthand, etc., thoroughly taught by MAIL. Circulars free
BRYANT & STRATTON'S, 415 Main St., Buffalo, N.Y.

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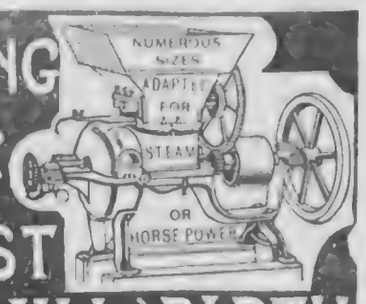

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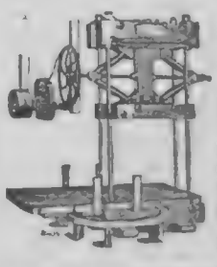

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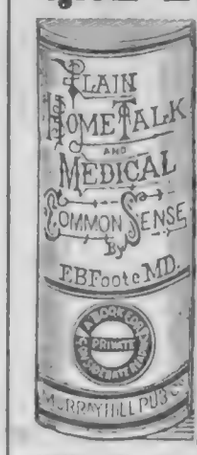

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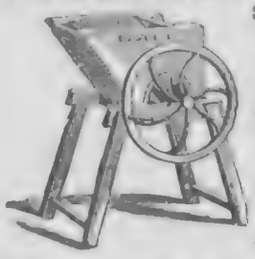

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A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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Horticultural.

A FARMER'S SMALL FRUIT GARDEN.

T. B. TERRY.

Worth reading, studying and imitating: the small-fruit plot; treatment and kinds planted; cultivation at odd times; pleasure in work; a non-regrettable mistake; small fruits galore in 15 months from planting; truth frozen in a photo; "seeing is believing;" great pleasure and profit within reach of all for small outlay.

THREE years ago the writer knew but little about the small-fruit business. He certainly did not know in how short a time after the plants were set out one could get a good crop of raspberries. Probably many readers of the R. N.-Y. are equally ignorant. With the hope of starting some farmers to growing small fruits in abundance for home use, he gives his experience, with a photograph from life to back it. There are 100 rods of pretty good garden soil between my house and the little orchard seen in the background of the picture at Fig. 282. It slopes toward the east, where the house stands. One year ago last April, I determined to devote this land to small fruits for our home use. It was then a very heavy clover sod, which had been mowed one year. It was thoroughly plowed and harrowed, and about the first of May, raspberry, blackberry, currant, grape and strawberry plants were set out. I bought two or three little books treating on the subject, and read up the back numbers of the papers on small-fruit culture. Several friends in the business were consulted as to the choice of varieties. I was practically entirely green in the business, never having set out a raspberry plant or a grape-vine, nor had I seen any one else do it.

I put no manure on the land, as I felt that it could not be spared from the fields. What has been done comes from good tillage on a heavy clover sod. We set out four varieties of red raspberries, three of black-caps, three of blackberries, two of currants and quite a number of grapes. Last summer we kept the cultivator and hoe moving pretty constantly in that patch. We would run through it hastily with the cultivator before going into the potato field, after a shower, and then after we got through in the field we would go over the fruit garden again and finish around the plants with the hoe or rake. The rows were all eight feet apart and there was plenty of room to turn at the ends. It took only an hour or two to go over the plot with the cultivator. We hardly missed the time. We always kept ahead of the weeds, just stirring the mellow ground each time, so that it was a pleasant job. It was a great surprise and pleasure also to see how the plants grew under such treatment. In a very short time passers-by seemed to look as though they were surprised too. This stimulated us to work even more faithfully. I got so interested that before fall I would have laughed at an offer of $100 for my vines and plants, which I presume had not really cost me more than $50, labor and all.

We had rows of strawberries between the rows of raspberries, grapes, etc. This was a mistake; but still we got probably 20 bushels of berries, all of which we ate and canned or gave away. This was not new, as we had had strawberries before. On the Fourth of July we ate our last strawberries for dinner, and that night we had our first raspberries for supper. At this time (August 3) the raspberries are not quite gone. During the past month we have had them not as freely as we had strawberries, but in great abundance. They were large and fine. We cut the bushes about two-thirds back last spring, and took care to keep the ground mellow about them, or mulched during the season. I confess I never knew how nice raspberries might be until I had eaten heaping saucers full of Cuthberts and Shaffers, large and fresh, right from my own bushes and fully ripe when picked.

Now, this might all pass as talk, not exactly lying, but the rather pardonable exaggeration of an enthusiast; but, friends, how about the photograph? It shows our two rows of Shaffer Raspberries only. There was a shrub in the way so we were obliged to set the camera close to the ends of the rows, which brings the first bushes out of focus; but you can see the middle of the rows. They were set eight feet apart, but you can see that there was only room to go between them when the photograph was taken, and they were still growing. As to hight, my man who stands there is five feet 10 inches without his hat. The rows of raspberries are each six rods long and we have certainly picked more than a bushel to the row from the rows you see, while the prospect for next year is tremendous. As soon as the strawberries were all picked we cut up the vines and mulched all the ground between the rows of raspberries heavily, with the strawberry vines and wheat straw. The picture shows this. Cultivation has, of course, not been needed since then.

Now had I written that in 15 months from setting out the plants, I had grown raspberry bushes six feet high and six feet wide, which had during that time produced berries enough to more than pay for the plants and labor, how many farmers without experience would have believed it? But there is the photograph, and you know I would not dare lie about the time of setting the plants out, or much about the yield, with the R. N.-Y. coming to neighbors. Oh! my friends, you can get lots of pleasure, and for months have the choicest berries on the table at every meal as free as water from a very little good land, if you will only be thorough in your work. The cost of the plants and vines is hardly worth mentioning; the knowledge of how to do it is now free to all; all that is lacking is grim determination. How many farmers will get that before next spring?

Summit County, O.

T. B. TERRY'S RASPBERRY PATCH. From a Photograph. Fig. 282.

Dairy Husbandry.

HOW DO YOU PROCEED TO

DRY UP

Your Cows? Methods of Feeding

OR

Treatment. Some Able Dairymen

STATE FACTS!

FROM SMITHS, POWELL & LAMB.

Of course, any one acquainted with dairying matters knows that exceptions are met with at almost every turn, and for these exceptions the treatment must be special. We aim to give all our cows a rest from milking after making a record. This we do both for the good of the animal and the calf it will produce. We prefer to milk young heifers through the entire season, believing that it may influence the milking properties of the calf which any of them carries. We intend to allow our cows to go dry from four weeks to two months, the period depending somewhat upon circumstances and the amount of milk they have been giving the previous season, their condition, etc. We lessen the feed, particularly the grain feed we give them and many

times discontinue it entirely, or feed only the very lightest food, such as wheat-bran. Of course, enough has to be fed an animal to keep her in good condition, and some animals will not very materially diminish the quantity of milk they give unless a decided reduction is made in their feed. The drying off of cows is probably one of the nicest and most careful requirements of the dairy, and our opinion is that more injured udders are produced by improperly drying cows than by any other cause. As soon as the quantity of milk will permit, we stop milking twice a day, and milk only once a day for some time, and then when the condition of the animal and the amount of milk she is giving permit it, we begin to skip a day, then two, and so on, until the cow ceases to give any milk.

There is a very great difference between cows of the same breed as regards their inclination to dry off. However, Holstein-Friesians, as a class, we think are more inclined to milk continuously than any other breed we know of. We can cite many instances in our own herd, where we have found it either very difficult or impossible to dry off cows. Notable instances of this character were the famous cow Clothilde, which gave over 26,000 pounds of milk in a year, and Addie, which gave over 17,000 pounds in a year, and both of them milked for several successive seasons without being dry, although the grain ration was taken away entirely and the fodder ration was reduced to the lowest quantity that we felt the health of the cow and fœtus would admit of. Other instances of this same character could be specified, but space forbids. We regard it as a very dangerous procedure to attempt to dry off a cow, the natural inclination of which is to give milk, even though she gives milk for a longer time than we think best for her own good and that of the calf. We prefer to have a cow milk continuously, season after season, rather than to run the risk of injuring her udder by forcing her to become dry.

Syracuse, N. Y.

FROM GEO. M. ORRIS.

I gradually discontinue the grain feed of the cows we want to dry off, beginning two months before they are due to calve, except a part of the ration of bran. Then I begin by milking them once per day for a time; then I leave longer intervals between milkings. I keep a more careful watch when the milk gets thick in the udder, milking it out as often as necessary, and keep watch of the udder almost till calving time. I try not to have my cows go dry over one month, and a young cow with her first calf I try to milk up to calving time almost. At present, I have two heifers that are due now, and had commenced to spring the udder before I quit milking. Now we only try not to allow any milk to get thick. I think it is better for young cows not to dry them up very long. I try to feed a cow well while she is dry, so that she will gain in condition, but not lay on fat. I do not feed any corn-meal at this time—only wheat bran and clover hay. I do not find quite as much difference between cows of the same breed as between cows of different breeds. My Jerseys milk for a longer period than do my Short-horns, but the feed has a good deal to do with cows keeping up their flow of milk for a long period. Cows dropping calves in the fall, keep up the flow of milk for a longer period than cows which drop their calves in the spring. I am sure that a cow will do better after calving if she has been dry a reasonable length of time. But cows will *not* do better after calving in proportion to the length of time they are dry; for I have seen cows go dry after milking for four or five months, and they would not do as well as cows that were not dry at all.

Meadville, Pa.

FROM L. F. ALLEN.

There are several ways of drying off a cow from her milk, such as milking only once a day; not milking the udder clean; rubbing the bag with salt and water, and some other ways familiar to all cow keepers. A period of four to six weeks is long enough to let a cow go dry. To let her remain so longer than that is to lose time. I have not, as a rule, made changes in the food of the cows while they are going dry. I have found little difference in drying off different breeds of cows. The habit is acquired chiefly from the treatment of the cow when breeding early.

The Guernseys, in my experience, hold out longest in milking. It is impossible to dry off many of them from the time they have one calf until they have another, and still they bring a good calf. The yield of milk will increase for days or weeks until the usual quantity is given. I prefer that a cow should go dry for four to six weeks.

Buffalo, N. Y.

FROM C. M. WINSLOW.

I should like to have my cows go dry about a month or six weeks; but I seldom get them dried off much before they begin to "spring" and sometimes I am not able to dry them entirely then. I milk once a day for a few days; then skip a day; then skip two days, etc., but when I milk, I milk clean. I find some variation among cows of the same breed and even of the same family. A cow will also milk up to calving time some years, while in others she will go dry a longer or shorter time. I think both cow and calf are stronger if the cow goes dry a month or so, and the cow usually has a better udder after she has had a rest. In trying to dry off a cow, I should, of course, take away the extra feed.

Brandon, Vt.

FROM DAVID CARLL.

My cows are Jerseys, all of my own raising, and are inclined to milk until near calving time. I feed a grain ration of wheat-bran and corn-meal to all milch cows the year round. About six week before they are due to calve, I reduce this feed from one-half to two-thirds, milking them only once a day for a few days and then every alternate day for a few days more, when they usually dry up. Occasionally one will milk up to calving. A few years ago I had a Jersey cow that dropped six calves before she was seven years old, and she was never dry after she first came in milk until she died when eight years of age. She produced some valuable calves and gave a good quantity of milk which made as large a quantity of butter as the milk of many cows does in a life-time of as many more years.

In my opinion a cow should go dry six weeks. It is undoubtedly better for the cow and for the calf. There is a difference in cows of the same breed and of the same family. I think a good deal depends upon the management of the cow the first year she is in milk. If she is well fed and properly milked to near calving time, she will be more likely to continue giving milk persistently than if she is carelessly milked and allowed to dry up soon.

Suffolk County, N. Y.

FROM A. L. CROSBY.

When I have occasion to dry off a cow, I milk her but once a day for a few days, then every alternate day for a few days more, and after that watch her udder to see that there is not too much milk in it; if so I milk out a part of it. But my practice now is not to dry the cows off at all, but to milk them up to the time the milk changes, just before calving. The only change I make in the feed is to decrease the grain ration in winter; in summer I stop it altogether, but let the cow have all the hay or grass she wants. My cows are registered and high-grade Jerseys and this breed is one of persistent milkers, the from-calf-to-calf kind. Of course, there is some difference even between cows of the same breed, but I don't believe my Jerseys average much over two weeks "dry;" I don't think I ever had one go dry for four weeks. Some of my cows have never been dry since they dropped their first calves; for instance, my oldest Jersey is now carrying her seventh calf, calving the first time at two years old, and she has never been dry. Her calves make fine cows, two of them being considerably larger than their dam. It is reasonable to suppose that a calf dropped by a cow that gave rich milk nearly up to calving time, will not enter the world in a "fat" condition, but "change of pasture makes fat calves," and if you want a fat calf you can "change its pasture" after its birth, and find cheaper pasturage than the butter fat of the milk. I want no calves fat except the bull calves to be sold for veal. I have not noticed any injury to cow or calf as the result of milking the cow up to time of calving and do not know of any reason why there should be.

Catonsville, Md.

FROM W. B. PRATT.

To dry off a cow, milk but once a day for awhile; then less frequently as the flow is checked, giving the milk to the pigs, and when the secretion is wholly arrested empty the udder thoroughly to avoid danger from garget or other obstructions in the teats when the cow again comes in. Cows should have a rest of at least two months, and if they get more than that, there is no loss of yearly profit and there certainly is a saving of time in drawing grudgingly-yielded strippings. A good cow will store up flesh and energy during her vacation, and run off the same into the milk pail when she resumes business. One that will not do so has mistaken her calling and should be disposed of. No change should be made in the feeding except that special messes, as of meal, should be omitted when early-cut hay and corn-fodder are so good as to cause an increase of weight and improvement in the general condition during the period of idleness. If the cow does not thus improve, cut the fodder earlier next year, feed plentifully, and there will be no failure or unnatural stimulation by a meal diet to the animal's harm. A great difference appears in different breeds and herds and the persistent milking quality appears to so run in families that the character of the calf in this respect when matured can be safely predicted. The man who keeps but a single cow would perhaps be better served by a long milker; but where a number of cows are kept, I am inclined to think that long milkers are not so very much more valuable than the others, as people usually think. I have cows that would give milk up to the time of calving, but I have never allowed them to do so; and therefore I have not had experience on this point. The rule has been to choke them off at a proper time beforehand. I have had cows so liberal and persistent in their milk yields as to become too shadowy to please the eye of the lover of sleek-looking stock. Such a tendency has been checked by extending the intervals between calving to a year and a half. This may be advantageously done when a part of the herd are wanted fresh for winter use.

Prattsburgh, N. Y.

FROM C. M. LUSK.

I milk twice each day till about the first of December and then once each day till the cows are within six or eight weeks of calving; then I stop short and after three or four days, I milk them clean; I do so again about a week later. I have never had any trouble in drying off a cow in this way. I aim to let my cows rest about two months. Some will go longer and some not so long. All the change I make in the feed is to give less grain; or none at all if I have been feeding. I do find a great difference between cows of the same breed as to drying off. I have had cows that could hardly be induced to give milk to within four months of coming in; while others would give milk to the day of calving, both kinds being kept on the same feed. The former are disposed of at the first opportunity. I now have two cows that will give milk to the time of calving and they did it last season although I intended to dry them off two weeks before calving. I do not think the calves were as strong as they would have been had the dams dried off, but the cows did as well as any cows I had. A cow that is disposed to run to milk requires more feed than one that is not in order to keep her up. It is a poor policy to feed all cows the same ration of feed. The more milk a cow gives the more feed she ought to have. I have had cows that I could not get fat while milking and feeding, consequently I had to stop feeding till they were dried off. Other cows would take on fat without materially increasing the flow of milk. The former are the cows for the dairy; the latter for beef, and the sooner they go to the shambles the better.

Broome County, N. Y.

A PAIR OF TAME DEER. FROM A PHOTOGRAPH. FIG. 283.

The Naturalist.

TAME DEER.

SOME weeks ago our friend William Anderson, of Alcona County, Michigan, wrote of a brace of tame deer that had become genuine family pets. At our request he sent a photograph of the deer, a reproduction of which is shown at Figure 283. It is a beautiful little picture—we do not know when we have seen a prettier one. It will make some of our Eastern readers think hard when they consider the surroundings of farmers who can show such pets right out of the neighboring forests. "Farming pays," however, right in the locality where these animals were bred. "Farming pays" anywhere, for that matter, when brains and business are used as a farm team, and the kindness and patience that were needed to turn these naturally wild animals into gentle and loving pets, have done their full share towards making "farming pay" in the highest and noblest sense.

Architecture.

A CHEAP METHOD OF INCREASING BARN OR STABLE ROOM.

AT Fig. 284 we show a cheap method of increasing the scanty barn room of many farms. The addition consists simply of a lean-to added to either end of an ordinary barn; these may be used for stables, for storing implements, wagons, etc., for a shop, or various other purposes. The artist has represented them as having each a small door, but for housing implements larger doors will be necessary. Windows might also be added, and other changes may suggest themselves. The cut is intended simply as a hint of the possibilities of such additions. The capacity of a barn may be nearly doubled, while the expense need not be heavy. Floors may be added or not, according to the uses to which the ad-

dition is to be put. Such additions are preferable to separate small buildings for the reason that they are more sheltered from storms and winds, are more

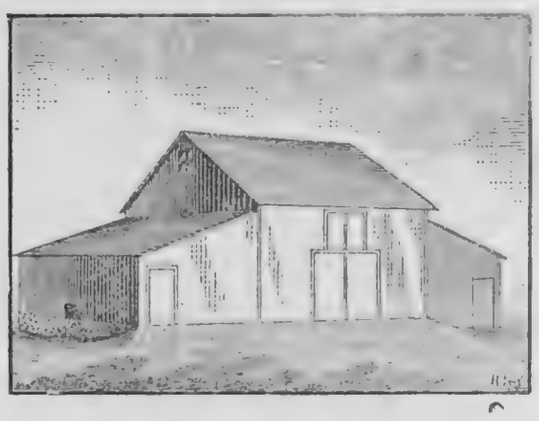


Fig. 284.

convenient in doing chores, and may be utilized for storing grain, hay, etc., in productive seasons.

Sheep Husbandry.

OPHTHALMIA IN SHEEP.

HENRY STEWART.

INFLAMMATION of the eyes with resulting loss of sight is a frequent disease in sheep in the winter. When once it begins in a flock such is its contagious nature that it will quickly spread through the whole unless the right precautions are taken. This disease mostly has its beginning in the fall; when the sheep are pastured upon stubble, the stiff, short straws come in contact with the eyes wounding and irritating them and causing the inflammation, which, unallayed by any curative measures, proceeds to suppuration, and a secretion of diseased pus which is left on the feeding racks or other places and is thus communicated to the other sheep. This pus is also deposited within the space between the cornea and the conjunctiva or covering membrane, which lies over the cornea and, doubling back, covers the under surface of the eyelids, thus completely inclosing the front portion of the eye. Here it forms a bluish-white layer, at first cloudy and partly transparent, but at length becoming thick and opaque and totally obscuring the sight. Or this deposit may be made between the capsule of the crystalline lens and the adjoining membrane in front of it (the membrane of the aqueous humor) and thus form the deeper obstruction commonly known as a "cataract," and very difficult to remove.

The pain from this intense inflammation is very great and seriously disturbs the health of the sheep which stop feeding, grow thin and in time suffer from a complication of disorders to which these animals are so subject, and when the spring arrives and the shepherd hopes his troubles are over, the animals die and both they and their lambs are lost, and the care and feeding through the winter are labor and money thrown away.

The disease in question is one that is to be prevented, if possible, by avoiding the cause. One winter some years ago my flock was diseased in this way, and looking for the cause, I found fragments of rye beard and of chaff from the rye straw used as litter and of which the sheep ate freely at night, lodged in the eyes. Previously I had noticed the sheep troubled by weeping and inflamed eyes when running on the rye stubble in the young clover, and by the immediate removal of these causes and simple treatment the trouble was removed. Afterwards by looking out for any possible cause in this direction, I avoided any more of this disorder. At times the use of Timothy hay will cause the disease and more especially when the racks are made so wide apart that the sheep can thrust their heads through the bars and among the stiff stems and so wound the eyes, and the seeds or chaff can get into them. A good form of rack to avoid this trouble is that here shown at Fig. 285.

The front is made of upright bars two inches wide and three inches apart; the back part is of boards set closely together and sloping forward at the bottom, so that the hay slides down and keeps close to the bars in front where the sheep can reach it. The trough for grain is at the front. The rack is raised a foot from the ground on small posts six or eight feet apart, so that young lambs cannot get fast in any way. Two of these racks may be set together, connected behind so as to form a double rack to be placed in the middle of the shed, and others may be built against the sides of the shed. If the hay-loft is over the sheep-shed the hay may be dropped into the racks with the least possible labor. Since I first used this kind of rack I have never had any trouble with inflamed eyes in my sheep, in the winter.

A frequent cause of this disorder among Western flocks is the alkaline dust of the soil in the dry, hot weather, and the intensely hot reflection of the heat rays of the sun. Where this difficulty is experienced the sheep may be saved by being inclosed during the middle of the day for some hours, and let out to feed in the evening and night when the soil is not so dry or dusty and the heat of the sun has passed. Another very common cause is the use of a too close and warm stable from which the sheep are turned out and exposed to a cold storm of sleet or rain or damp snow; or to dry snow and bright sunshine, the reflection of which is painful to the eyes and produces snow blindness and inflammation. Saturated fleeces chill the sheep and when the chilled animals go into a close stable they huddle together and steam and stew and over-heat themselves, and make the skin so tender that they suffer from the cold on going out again, and thus, passing from one extreme to another, contract an inflammatory condition which may affect the eyes and the nasal membranes, producing catarrh of these organs, or causing disorder of the lungs.

The following treatment will be found effective for the trouble after the causes are removed. First the affected sheep should be removed to a separate place which is dark and protected from the most severe cold. They should be given a light, cooling, antiseptic medicine, hyposulphite of soda in dram doses daily being very useful. The eyes should be examined for any foreign substance, which should be removed if easily possible, by a soft camel's-hair pencil; otherwise a small quantity of linseed mucilage—made by boiling linseed in a little water—may be injected into the eye, by which the offending matter will be able to make its way to the outer corner of the eye where it can be seen and re-

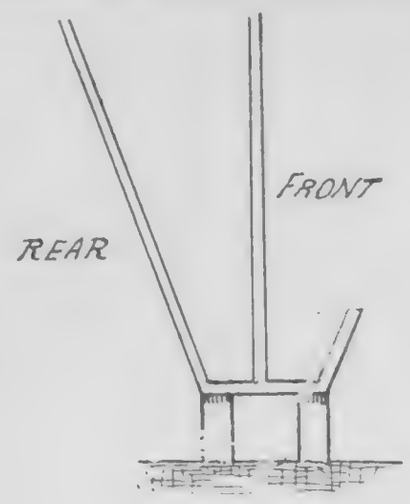


Fig. 285.

moved. To this mucilage may be added a fourth part of a solution of 10 grains of sulphate of zinc in an ounce of water, and two drops of wine of opium. When the eye is cleansed and this palliative injection has been used for two days, if the cloud remains, a pinch of burned alum is put into a goose-quill or small tube, and is blown into the eye. Burned alum is made by heating a lump of common alum on a hot stove, and after it has been freed from its water of crystallization by the boiling and bubbling, it remains a dry, pulverulent mass, which is easily reduced to a powder. A few repetitions of this will cause the absorption of the purulent deposit and will clear the eye. It would be well to give all the sheep the above-mentioned quantity of the soda hyposulphite, powdered and mixed with a little molasses, and spread on the back of the tongue, and to continue the treatment for a week.

Everywhere.

A SUMMER OUTING IN THE NORTH CAROLINA MOUNTAINS.

MARY WAGER-FISHER.

Why the place was selected; the journey southward; Bull Run; a fine country, where only men are lacking; general shiftlessness, dilatoriness and laziness; much new agricultural machinery; little or no attempt at home adornment; Danville; a negro king or preacher; fashion among the colored population.

JUST how and when my attention was first directed to the mountains of North Carolina as a desirable summer outing place, I am unable to say. A relative spent a summer in them in the region of Asheville: a dear friend had spent two winters in them for health's sake, and died in the second one; and a botanical acquaintance had heard tall tales of the richness of the flora at an out-of-the-way place called Highlands in Macon County, just north of the State of Georgia. So from one source and another, I had formed the intention to go thither when circumstances should insure me a generous length of time to spend away from home. At length it came about that early in the month of June, 1889, I set out with my laddie, a well-grown boy of twelve years, for the unknown region that from afar promised so many enticing features. Through correspondence a boarding place had been engaged for us in a private family, but of this we had no definite knowledge, except an assurance that our prospective hostess was a "very intelligent woman." That was a favorable promise, but when every one we met, who had been South, said to us: "Oh, you will find the mountains delightful, but you'll get absolutely nothing fit to eat, nor a clean bed to sleep in," the outlook was not particularly satisfactory. As usual, when the summer time came, I was thoroughly worn out, and I required everything that was most strengthening in food, air and wholesome surroundings, and it did look like a wild-goose chase to expect to find them in the mountains of Western North Carolina. Anaximander poked a little fun at the adventurous undertaking, hoped it would turn out all right, and started us off evidently with the expectation of seeing us back at the end of a month.

We went *via* Baltimore, Washington, Danville, Salisbury on to Asheville, and until Salisbury was reached, the heat of the weather increased as we proceeded southward. From Salisbury, a higher altitude yielded a fresher atmosphere, and from that point we suffered no further discomfort from the temperature. The heavy floods of the early summer had played havoc with the railroads for some distance beyond Washington, and for miles the cars crept carefully along, at great loss of speed. The railroad crosses the Bull Run battle field, and the conductor, who had fought on the Confederate side, pointed out to us that ill-fated ground. My oldest brother, who was also the eldest child in the family, had fought in that battle, and as he was brought home dead not long after that, the spot had to me especial interest. A little further on we came to Manasses, and some remnants of earth-works on the brow of a hill were the only suggestions we saw in our long day's ride through Virginia, of the stormy times of the Secession War.

There is a great deal that is attractive in the counties of Virginia through which we rode and the entire region, if tilled and cared for as are the farms in Central Pennsylvania, would nowhere be surpassed for beauty. But as spittoons appeared in every car seat the moment we left Washington, so evidences of the shiftlessness of the South became at the same time manifest. It may be a cranky notion of mine, but I cannot imagine a spitting tobacco-chewer, and a thrifty, tidy, tasteful, well-kept farm homestead as going together.

At various railway stations were new agricultural machines to be seen, which indicated a revival of agriculture under improved conditions. At one place where the train was halted for some time, I saw five negroes and two white men loading a large wagon with the detached parts of farm machinery, and the exceeding dilatoriness, and lack of energy in movement, that kept these seven men at a task that two Yankees unaided would have performed in the same length of time, seemed to explain a great deal of the shiftlessness that agriculturally characterizes the whole South. Rarely in town or country are there indications about the homes of the people of a taste for beauty. Green, well-kept turf in lawns, flowers and shrubs the scattered population seems to care nothing about, and unpainted country houses, with the outside chimneys at either end standing stark-bare, have a very lonely look, and they could be made so pretty with the native ampelopsis growing over them. The country is rolling; there is always the fine line of the mountains in the distance, there are noble trees left standing here and there, and the great lack alone is men—men of energy and good judgment, and, above all, of good sense, who do not look upon labor as ignoble, and do not regard the tilling of the soil as a plebeian occupation only suited to "niggers." Hands without brains do poor execution in any department of work, and particularly in a region where the soil for generations has been exhausted through mal-treatment, is the need of intelligence the more required.

When we reached Danville the shades of night had fallen, and we left the train to get a night's rest in a hotel. We were directed to a new one in which we found good beds and good food. Danville is sharing with Atlanta in a business revival, but the business is largely tobacco, the new, large brick buildings at every turn being warehouses for this especial Virginia product. Cotton ware-houses and cotton manufacturies, however, are projected, and the enterprise in business, I was told, was largely Southern. Danville has electric cars and electric lights with much of modern "go" in the atmosphere.

As trains on the Southern roads are like the people in being chronically behind time we had to wait 20 minutes next morning in the railway station. The waiting-room was carpeted and furnished with low rocking-chairs, and the larger part of the traveling public that morning was colored. An old man of pure negro blood, who was dressed in heavy broadcloth, with the addition of a beaver overcoat, which the state of the weather did not require, sat eating a luxurious breakfast from a tray in front of him, placed on a chair, while a colored waiter stood devotedly by fanning off the flies, which hovered persistently about an enormous wen which grew from the top of his head. When he had finished his repast and put on his shiny stove-pipe hat and consulted his gold watch he looked like a Prince of his race, and the marked attention which he received could only be explained upon the ground that His Majesty was a Baptist preacher. The colored women who were waiting for the train were smartly dressed in Directoire gowns and large hats; their babies were clad in Hamburg embroideries and showily lace-trimmed robes—all in the latest styles. Illustrated fashion journals evidently have a very considerable patronage among the colored people of the South. Everywhere they seemed to be more prosperous and more given to the vanities of this world than the "poor whites." But a planter confirmed my suspicion that the colored people had such a weakness for personal display as to lead them to spend their first and final dollar toward the accomplishment of that end.

RURAL SPECIAL REPORTS.

Oregon.

SPIKENARD, Jackson County.—The valley of the Rogue River is in the extreme southern part of Oregon. From its peculiar location and surroundings it has its own distinctive climatic conditions. It is drier than the Willamette Valley and there is more rain than in California. The Coast Range shuts off the ocean fogs. There is, perhaps, no finer climate anywhere. Our annual rainfall is about 25 inches. The mercury rarely touches zero in winter, or goes beyond 90 degrees in summer. The very best conditions here exist for fruit culture which is largely carried on. All except the citrus fruits are raised in perfection. Grain and stock are largely raised. Hogs and corn, beef and butter, poultry and eggs all pay good dividends. No swine plague is ever heard of, nor is poultry ever affected with cholera. Alfalfa is at home on our soil, often producing eight tons of hay per acre, being cut three times during the season. Where the land is irrigated, four crops are often secured. Though we do not make much noise in the world, we have just as good a country as anybody. We don't "boom" our country because we know by observation that to boom is to kill. Merit, only, will win in the end. Land is worth a fair price and only those who can buy a home should think of coming. I am not after immigration; I simply desire to contribute to the knowledge of geography of the readers of the R. N.-Y.

Of course, Oregon has her own flora. Some one has called her the "emerald land." She is, too, the "flowery land." Many of our native plants are catalogued with a great deal of trumpeting, but not more than they deserve. Our lilies, the most popular of which is the Washingtonianum, are among the floral gems of the earth. No one of the whole queenly family is more beautiful, fragrant and popular (at home) than this. It is vexatious to see it catalogued as a California variety when it is indigenous to only a small portion of that State next to us. I have presented it to many a Californian. The calochortus, erythronium and our several fritillarias are other fine plants dear to florists. S. M.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

COMPOSITION OF LATE-GROWN GRASS.

J. H. S., Spring Valley, N. Y.—This year there have been many complaints from dairymen about here to the effect that, while the pastures kept green unti fall, the quality of the late grass was very poor. Have any chemical analyses ever been made to show that there is any difference between the first growth of grass and that which comes later in the season? If there is a difference dairymen should know it and supply other needed foods.

FROM PROF. E. F. LADD.

I have made analyses of a few of our grasses from different cuttings, always at the same stage of growth—full bloom—and I have generally found each successive cutting more nitrogenous than the preceding one. I have found this true for four successive cuttings of Alfalfa and for two crops of mixed grasses. Second-crop clover is considered best suited, fed in small quantities, for young calves and lambs as they come to the barn for winter. By analyses we find such wilted grass to have a larger per cent. of albuminoids than the first crop. The chemical composition of the dry matter from the mixed grasses for the two cuttings was as follows:

	FIRST CUTTING.	SECOND CUTTING.
Ash	5.69	7.55
Albuminoids	9.25	13.25
Crude fiber	41.51	39.40
Nitrogen-free extract.	40.37	36.12
Fat	3.18	3.68

In general, then, we may say that the second and subsequent crops of grass are more nitrogenous than the first.

My opinion is that the poor quality of the late grass is due not so much to the chemical composition of the dry matter as to the condition of the grass. The fall has been a wet and cloudy one and every cell of the grass has been fully distended with water and in addition considerable surface moisture has been present most of the time. An animal in order to secure the necessary amount of dry matter to sustain life and produce milk has been forced to consume a bulk beyond its capacity. Such an animal may be filled up, but is not fed—only stuffed. To illustrate; in an experiment with corn, as a forage, cut at the period of tasseling this season, I found by analysis 91 per cent. of water and that it would be necessary for a 1,000-pound cow in full milk to eat 300 pounds of this stuff per day in order to have the full amount of dry matter called for by the German feeding standards. From the few experiments made I question whether the dry matter of grass grown under such conditions as have existed this fall, is as nutritious as that in more favorable seasons, especially as regards the so-called nitrogen-free extract. The supposed poor quality of grass the present fall is probably due to the presence of an excessive amount of water in and on the grass, making it necessary for the cows to overburden their stomachs with a mass of wet grass ill suited to their needs as butter producers.

Geneva Experiment Station.

FROM PROF. W. W. COOKE.

So far as I know, we have never made any analysis at this station that would bear on that point. Reasoning from general principles of plant growth, the first grass of spring having a larger store of plant food at its command, should be better in quality than that which grows in the later part of the year.

Vermont Experiment Station.

FROM DIRECTOR G. H. WHITCHER.

I cannot give any analyses further than to state that there is doubtless a decrease in the nitrogenous part of the food as compared with the non-nitrogenous. We are now making analyses that will indirectly bear upon this matter, but not so fully as if we had planned for it. We practice feeding largely of corn-meal in early summer as a supplementary food and as the season advances we put in more of middlings and still later gluten or cotton-seed meal. Pasture feed alone will not keep up the milk flow as New Hampshire pastures run, and hence as milk falls off, the wide-awake dairyman adds grain and keeps up the product: the shiftless dairyman lets his cows "work their passage" and contents himself with the thought that is too prevalent, namely, that cows need a chance to cleanse their systems from the evils that follow grain feeding in winter and that this is best accomplished by withholding grain until they again come to the barn. The result is dry cows at housing time, and no income during the months when prices are the highest.

N. H. Experiment Station.

CHEESE.

H. C. B., Westernville, N. Y.—A local paper contains a statement concerning a Mr. Ryan, who is said to be "engaged in obtaining options for the purchase of cheese factories in various counties in the Central and Northern part of the State. He reports that he is getting along in an encouraging manner. He expects that he will get options on about 50 factories in Oneida County. He wanted to have it understood that he was not representing any English syndicate. He was representing for the present no one but himself. Of course, if all these cheese factories are purchased, it will require considerable money, and it is likely that a syndicate will furnish it. Whether the capital will be furnished by Englishmen or Americans Mr. Ryan says will not be determined until later on. The owner of the factory in each case agrees that if the option is accepted he will not engage in the manufacture of cheese elsewhere in that locality and that he will assist the purchasers to make a success of the enterprise. The value placed upon the factories ranges from $500 to $5,000, according to their size and equipment."

How does the RURAL NEW-YORKER think such a plan of bringing a number of factories under one management will affect the milk-producers' interests? Would a backing of English capital tend to lower the price of cheese?

ANSWERED BY PROF. H. H. WING.

So far as it has come under my observation, those localities seem to be most prosperous where the cheese-making is done on the co-operative system; *i. e.* where the patrons themselves own and operate the factories. The plan of bringing a large number of factories under one management need not affect the interests of the milk-producers otherwise than favorably, as numerous instances of the successful management of such combinations, notably the "Marshfield" and "Cloverfield" combinations in this State, testify. The main advantage of this combination system lies in the strict superivsion of all the factories by some one interested in the output of the whole. This insures a better and more uniform product, which in turn brings an advance in price and a greater profit to the producer. I am not one of those who look with alarm upon the large amount of English capital that is now seeking an investment in American manufactures of various sorts with a probable view to a monopoly of the output. It is only a very few years ago that John Bull attempted to "corner" the great American steer on the Western plains, and we all remember how soon the British lion tucked his tail between his legs. It seems to me that the result of the attempt to control American beer, flour, and cheese can be scarcely more successful. In my opinion, the one great thing that keeps down the price of New York State cheese is its miserably poor quality. It not only lowers the price, but it materially decreases the consumption. It is with shame for my native State that I am compelled to say that it is next to impossible to buy at any price, in our local markets, a piece of cheese of even fair, not to say first quality. We have allowed the Canadians to crowd us out of the English markets, and were it not for the 15 per cent. tariff, the retail grocers of Little Falls and Utica would in all probability be selling Canadian cheese. Our makers have only to educate themselves a little more and give a little more labor and pains to their work to enable us to bid defiance to the cheese, the capital, and the competition of any other country.

ABOUT MANURE.

L. W. R., Benton Harbor, Mich.—I have a quantity of horse and cow manure which I propose to mix, and intend to use in the hill in melon culture next year. 1. Can I add chemical fertilizer which will increase the value of the manure more than the cost of the fertilizer? If so, what kind—*i. e.* what elements should predominate, and how much shall I use to each two-horse load of manure? 2. Is manure from animals bedded with sawdust and shavings of oak and elm worth as much as it would have been had the animals been bedded with straw? If not, why not? Has the acid contained in the wood a deteriorating effect? 3. I bring most of the manure used on my farm from town; this has never been re-handled, so that much of it is "fire-fanged" and very light and fluffy. The fathers' idea was that such manure had lost much of its value; while a recent writer in the R. N.-Y. says it has lost practically nothing, except "the water and a little ammonia; but a little of this makes a great smell." What does the R. N. Y. say to this? Does manure lose by heating? What, and how much?

ANSWERED BY DR. PETER COLLIER.

1. Stable manure is, in my opinion, as near what is termed a complete manure as we can get. I know of nothing which can be added to it which will enhance its value beyond the cost of the manure and the fertilizer added. 2. The average of the several kinds of straw, according to the tables of Professor Wolff, gives 5.61 per cent. of ash, and of this ash there is an average of 26.7 per cent. of potash, and 6.9 per cent. of phosphoric acid; while the average of many kinds of wood is 1.15 per cent. of ash, of which 15.5 per cent. is potash and 8.1 per cent. is phosphoric acid. It will be seen therefore that straw contains a much larger amount of plant food than does sawdust, but owing to the fact that sawdust is such an excellent absorbent for the more valuable liquid manure, its use in the stables as bedding is to be highly recommended. Recent careful experiments at the station show the average market value of the phosphorus, potash and nitrogen in the solid dung of the cow, fed upon a mixed ration, to be nearly four cents per day, while the value of the liquid manure was over six cents a day and together they were over 70 per cent. of the market value of the food fed. 3. I do not know what loss manure sustains by fire-fanging, but I do not believe it to be very great. We hope to settle that question by careful experiments in the near future. A common but very mistaken idea prevails that the offensive odors of the barn and yards are due to ammonia or its compounds. This is rarely if ever the case.

PETROLEUM AS A WOOD PRESERVER.

G. D., Carysville, Ohio.—1. Which is the best method of applying crude petroleum to fence posts in order to render them more durable? I have contracted for a quantity of oil for the purpose of experimenting with it upon fence posts, and want to know what are the best means of applying it. Should the oil be heated or applied in a cold state? 2. What kind of paper does the R. N.-Y. prefer that its correspondents should use for manuscript?

ANS.—1. A painter of over 30 years' experience gives his views as follows: "It will not be beneficial or safe to heat petroleum oil. It has great penetrating powers without heating. As it is a light oil (with no body) it is not much of a wood preserver when the wood is continually exposed to the weather unless a film or an enamel after dipping or painting, is applied by painting the surface to make it impervious to air and water. I have just examined a neighbor's fence posts that were first dipped in a trough containing petroleum, then the bottoms of the posts were dipped in gas-tar which forms the enamel. These posts (oak) had been set 15 years. They were sound and in a good state of preservation. Gas-tar sticks best to such surfaces as are first filled with petroleum or paint. Where there is no film or enamel petroleum does not preserve the wood. 2. Paper just one-fourth the size of this page is easily handled by editors and compositors. Most writers use sheets that are too large. Of course, you will write on one side only!

TESTING MILK AT CREAMERIES.

Several Subscribers.—At the Wisconsin creameries is any system of testing milk used? What about the fairness of paying patrons on the basis of the amount of fat in the milk?

ANS.—This question has been referred to some of the best Wisconsin creamery-men. Here are two answers.

FROM J. M. ANDREWS.

We have the Curtis oil test for milk; also Short's method, both of which we use for testing milk delivered by the patrons. I think Short's method the more reliable for milk: but for creameries run on the gathered-cream system, the Curtis oil test is better, and most of the creameries operated by that system pay by the amount of fat in the cream. The only objection I have to it is that it is almost impossible to make a test of the product from 50 or 75 patrons without breaking several bottles.

Fort Atkinson.

FROM H. K. LOOMIS.

The creameries in this State generally take the milk and run it through separators and the milk is tested by Short's method. A few creameries in the State gather cream and I think they generally use the oil test. There could be no objection to a careful testing of cream, and a system of payment based upon the amount of fat in it.

Sheboygan Falls

MUCK.

R. W. H., Jasper, N. Y.—I have a large swamp of black muck; I can run a stick down 10 feet and easily withdraw it again. Is this valuable for fertilizer? If so, how can it best be used?

ANS.—Probably the muck is valuable but just how valuable it is can be determined only by an analysis. It may be said that what is commonly termed "muck" varies in fertilizing value almost as much as do different brands of fertilizers. Doubtless you can make arrangements to have the muck analyzed at the New York Experiment Station at Geneva, N. Y. It is safe to say that almost any light soil will be benefited by a dressing of muck. It may be hauled out of the swamp and spread over the surface like manure and plowed in. We have hauled many loads of muck to the barnyard and mixed it with the manure. It also makes a fine absorbent in the stable; while, made into a compost with night-soil, it makes fine manure.

WARMING WATER FOR STOCK IN WINTER.

G. W. S., Parishville. N. Y.—Will it pay to warm water for milch cows in the winter where they have to go out-of-doors to drink?

ANS.—This will depend on the cost of warming the water, and this cost will depend upon the amount of water needed, the price of the fuel, the facilities for securing water and the location of the tank or drinking place. Try an experiment with a few of your cows; give them warm water to drink and treat them in other respects just as the other cows are treated. You can then see what the warm water is worth. Experiments with the warm water give no satisfactory results. The Minnesota Station found little or no benefit from warm water, while the Wisconsin Station records a little profit from its use. The R. N.-Y. can give an opinion only, and that opinion is that for cows in warm, tight barns water directly from the bottom of the well is best at all seasons.

A FRUIT LADDER, ETC.

F. K. P., Delavan, Wis.—1. How long can a good, portable fruit ladder be made, and what is the best pattern? 2. How long can a good fruit-picker or tree-pruner be made and work well? 3. Is there a good pocket pruning saw?

ANS.—1. The best portable fruit ladder is the one made by splitting and spreading a light pole of spruce or cedar, not over 12 feet long, driving an iron ring about one foot down from the small end and putting a bolt through the ring and pole. The pole should be split with a saw up to this ring, the divided parts spread open so as to be 18 to 25 inches apart at the bottom, and the rungs put in at the proper distances for convenience, say nine inches. 2. About 10 feet. 3. No.

Miscellaneous.

W. H. R., Oakville, Canada,—A. J. Caywood & Sons, Marlboro, N. Y., sell the Minnewaski Blackberry.

A. H. H., Raysville, Md.—We propose to treat the subject of hedges exhaustively within the next few weeks.

J. F., Danville, Ill.—Is soot valuable as a fertilizer and insecticide?

ANS.—We certainly regard soot as a very valuable fertilizer, and believe it would also be of great value as an insecticide.

W. D., Burlington, N. J.—Can I raise a crop of white potatoes on meadow land by mulching with hay or straw? The meadow is too full of weeds to raise grass.

ANS.—We doubt if a profitable crop can

be so raised; that is, if we understand the question.

J. M. S., Rutland, Pa.—Where can I get registered swine?

ANS.—What breed of swine? Here are the names of a few breeders: F. D. Curtis, Charlton, N. Y., Duroc-Jerseys; C. H. Warrington, West Chester, Pa., Chester Whites; S. E. Shellenbarger & Co., Camden, Ohio, Poland-Chinas; Springer Bros., Springfield, Ill., Berkshires; W. Atlee Burpee and Johnson & Stokes, Philadelphia, Pa., various breeds.

J. G., Carbondale, Pa.—What is the best work on the care of horses and mules. I have charge of a large number of mules here, and the legs of nearly all of them are in a terrible condition.

ANS.—For diseases of farm animals there is probably no better book than Law's Veterinary Adviser, published by Dr. James Law, Ithaca, N. Y., price $3. This probably will not give all that you wish about the handling and feeding of the mules. We do not know of just such a book as you want. A good one could be compiled from the columns of the R. N.-Y.

A. H. B., Chicago, Ill.—How can I convert oak leaves, now falling, into manure in time for use for next season's crops of grass for pasture and hay?

ANS.—The leaves can be scraped into piles with rakes or by other means. They make good bedding or can be used in the manure heap. They can be converted into good compost by rotting them down. To do this properly, something must be mixed with them to hasten decay. Night-soil or some similar manure is excellent for this purpose; in fact, about the best use for night-soil is to serve as a composting agent for muck, leaves or similar material. In the absence of manure, lime is often used to start the rotting with quite satisfactory results. A layer of leaves about a foot thick, then lime enough to make them white, then more leaves and so on. The best place for leaves will be found in the stable or on the manure heap. As a rule, the R. N.-Y. doesn't believe it pays to collect leaves.

Discussion.

MORE ABOUT THE COST OF LIVING.

FRED. GRUNDY, CHRISTIAN COUNTY, ILL.—Here is a partial list of family expenses for each adult in 1888.

Flour	$5.90
Cereals, rolled oats, pearl barley, etc.	1.85
Meat, largely fresh beef	7.55
Sugar	4.75
Tea and coffee	1.62
Wood and coal for two stoves cost	18.60
Family supply of kerosene	4.10

Flour is bought by the sack from the large flouring mills in the village at $2.60 to $3 per sack of 98 pounds. Coal is shipped in on the railroad and we buy it by the bushel, a full supply of mixed nut and lump for winter being laid in, at 7½ to nine cents per bushel, some time in October. Meat is bought mostly from regular butchers at eight to 12½ cents per pound. We buy some from farmers who butcher beeves of their own raising, and sell by the quarter or 100 pounds to neighbors at 4½ to eight cents per pound. Eggs, butter, chickens, vegetables, milk and the greater part of the fruits used are produced on the place and no account of them is kept. We burn quite a lot of corn-cobs in the cook stove in summer because they make a hot fire quickly and it is soon gone. Very little molasses is used because we find it so very difficult to procure a thoroughly good article. Most of the stuff usually sold as molasses or sirup would destroy the stomach of a rhinoceros, if the animal could be induced to eat it. Boots, shoes, clothing, etc., cost about the same here as in any village between New York and Omaha.

C. F. H., CLARKSVILLE, MICH.—THE RURAL NEW-YORKER of Nov. 2, asks the following question: "What is the cost of living in your neighborhood?" If this question could be answered correctly or even approximately, it would be shown that a wide difference existed in the cost of living in families of equal numbers and means in this neighborhood, not only in the aggregate outlay, but also in the use and consumption of different articles of diet and dress. Our family comprises three adults. Below will be found a table of our expenses for the past three years and 10 months, beginning January 1, 1886.

	Sugar.	Groceries	Meat	Light	Tea.	Coffee	Cloth'g.
1886	$30 03	$14 50	$21 20	$8 76	$2 94	$6 50	$31 06
1887	8 10	25 41	2 55	5 50	3 10	7 00	36 74
1888	9 43	15 97	37 10	4 0	3 80	6 25	44 87
1889	26 10	25 33	21 71	3 52	2 15	25	33 50

For many years past I have kept strict debit and credit accounts of all receipts and expenditures in trade—before and since moving on a farm—hence I am able to give a very correct statement of our family expenditures. I have separated from the general grocery account the items of sugar, coffee, tea and kerosene. In addition to the sugar purchased, we have used about 100 pounds of maple sugar, each year, manufactured on our premises. Also, to the meat account must be added about 250 pounds of beef of our own slaughtering each year, except 1887. The consumption of pork has been principally hams, as we have not had a hog on the premises since 1884. The expenditures for clothing include shoes, etc., which have been for two members of the family only—wife and myself. It will be observed in the above table that no account is made of the amount of flour, fuel, fruits, vegetables, butter, milk, eggs and fowls consumed, as no direct outlay of money is made for those articles. About 18 bushels of wheat manufactured into flour for family use, and about 15 cords of wood are consumed per annum. It will be noticed that the item of sugar has cost this year more than double the outlay in any previous year. This is one of the consequences of protected trusts rather than of an increased number of pounds purchased. My farming experience is limited to the last seven years, and as the farm labor has been done by experienced farmers for a share of the crops, I have not hired much outside labor—not enough in the years above enumerated to add materially to the expenses.

W. S. S., PLEASANT VALLEY, ILL.—I believe the R. N.-Y.'s idea of collecting estimates of the cost of living in different parts of the country might prove very valuable to town people who think of trying country life. Our family consists of four adults. We produce all the flour, meal, potatoes, milk, butter and vegetables we use and most of the meat, fruit, etc. We use very little smoked or salt meat, but patronize the butcher's wagon in the summer and butcher for ourselves in the winter, or buy beef by the quarter and keep it fresh, selling it so to the neighbors when we butcher. For the past five or six years our average yearly outlay for dry goods for the family has been $100, as nearly as I can figure it from our accounts. For groceries $70 or $80; for meat about $15 cash paid out; coffee and tea $5 to $10, and sugar, honey, etc., $20 or $25. These latter items are not reckoned with the other groceries. Our fuel costs nothing but the labor of cutting and hauling 80 rods or so, as this is a timbered part of the State. Our real estate tax runs from $2 to $15 on each 40 acres per year. I haven't any accounts very far back so as to be able to compare the cost of living then and now; but the expenses for the past five years or so have been quite uniform: $300 per year will cover the whole, including repairs, blacksmithing, postage, and all the other little leaks; but not including the price of stock, machinery, etc., for the farm.

S. B. W., RIVER FALLS, WIS.—Our account is rather meager, and has been kept with the idea of knowing the total amount of our expenditures rather than the cost of each item. For the year 1888 my outlay for two adults—no children, but some help hired by the day, but none by the month, no account being kept of flour, vegetables, meat, fowls, eggs, butter, milk and cream—was as follows.

Groceries and dry goods	$108.07
Sugar	15.00
Wood estimate	50.00
Total	$173.07

The above is an estimate of what we "stayed on" rather than the cost of living.

R. H. T., NORTH RIVER, N. Y.—I have never kept an account except of flour, pork, sugar and tea. Butter, cream, eggs, vegetables and potatoes I raise myself. I have my own wood, so all the cost of it is that of cutting and hauling it and we do that by odd jobs. There are eight of us in the family. This would be for each member about $26.43 per year, or about 51 cents per week.

We consume 12 barrels of flour at $6 per barrel	$72.00
6 barrels of pork at $16	96.00
500 pounds of sugar at 7½ cents	37.50
20 pounds of tea at 30 cents	6.00
Total	$211.50

A YOUNG FARMER'S IDEAS AND PRACTICE.

W. L. J., SOUTHPORT, N. Y.—I have long had it on my mind to tell the R. N.-Y. how much I appreciate it. Of the six agricultural papers I subscribe for, the R. N.-Y. is the one I can least do without, and so long as it is kept to its present standard it may count on my hearty support. I am a young farmer and try to be a progressive one. I cannot claim, like T. B. Terry, to have made my farm, for I inherited it; but I try to make both ends meet and 'lap on' "some." My farm contains about 35 acres of sandy loam, from which I support a family of eight persons, and we have many of the luxuries of life. I have a large new barn, (not built from the profits of the farm) 60x46 feet with 18-foot posts, which I fill from my small farm. I keep three horses, 10 cattle, a number of hogs and about 100 hens. We make butter the year around. I feed my cows bran four parts and cotton-seed meal one part, with good pasture and corn-fodder through the summer. In the winter I feed equal parts of corn and oats ground together, with roots (carrots, mangels, turnips and small potatoes) and good hay and corn-stalks. I have warm stables for all my cattle. I keep one man the year around. I believe in fall plowing, and follow mixed farming. My rotation is about as follows: a Timothy sod with 18 to 20 loads of barn-manure per acre spread on and plowed under in October or November when it is allowed to lie rough till spring. Then I apply 500 pounds of kainit per acre, thoroughly cultivate and plant to corn May 1 to 15. This is followed by potatoes or oats, and the ground is seeded to grass with wheat and mown for three years, then pastured and plowed again. I plant potatoes on the trench system, using 2,000 pounds of commercial fertilizer per acre broadcasted after the ground has been trenched. In the season of 1888 I raised 406½ bushels of potatoes per acre, true measure. My money crops are potatoes and hay. My grain is marketed in the shape of milk, cream, butter, chickens, eggs and pork. Our village being a summer resort for wealthy city people, we get extra prices for the products of the farm. I make all the manure I can, and buy as much as I think I can use with profit. I believe the proper time to apply manure is whenever one has it.

M. M., MINNESOTA LAKE, MINN.—Our family numbers five adults—two men and three women—and the yearly cost is as follows:

Wheat ground for flour	$42.90
Butcher's meat	38.00
Fowls	9.50
Sugar	25.50
Home-made sorghum sirup, 40 gallons @ 20 cents	8.00
Tea	8.00
Coffee	18.25
Fruits, baking powder, vinegar, etc.	21.00
	$171.15

Wheat, meat and fowls are put down at the figures we could get for them if we sold them at the time we used them. Of the cost of potatoes, buckwheat and all sorts of vegetables we did not keep any account. Wood we have to buy here. Last year's supply cost $20, and we had to haul it 18 miles, which made 10 days' work for one man and a team. Clothing came high:

Clothing for one man	$37.75
Boots and shoes for ditto	18.50
	$56.25
Clothing for one woman	$36.90
Shoes " " "	10.25
	$47.15

We live and dress in the same way as a large majority of the hard-working people in this county.

CORN FODDER.

C. S. RICE, LEWIS COUNTY, N. Y.—Reading the note concerning the R. N.-Y.'s corn fodder experiment, mentioned on page 760, leads me again to refer to a matter I have discussed before. From 20 to 30 tons of corn-fodder can easily be grown on one acre of land. A dairy of 30 cows will profitably consume several acres of such fodder each season before the usual time of opening the silo. Labor is not plentiful, wages are high and the prices of dairy products are low. It is therefore well worth the study of the dairyman to cut, cure and place before the cows this heavy crop with the least possible labor and at the same time secure fodder of the best quality. About two years ago I gave the readers of the R. N.-Y. some account of a method that I had practiced with perfect satisfaction for years, and under varying conditions of crops and weather. Experience since that time has only confirmed my previous opinion of its practicability and value. Many farmers have tried it with success and have commended it for general practice, while others have made a partial failure. Without attempting to account for such failures or compare my way with the practice of others, I will give a brief account of my way of cutting, curing and feeding this year's crop.

The variety of corn is known here as Sheep's-tooth. A little more than a-half bushel of seed to an acre was drilled in on six acres of good, well-manured corn land. The rows were 32 inches apart. The crop was cultivated three or four times and grew to the hight of from nine to 12 feet. There were some ears on the thinner portion of the field. It was cut the first week in September. It had been in tassel for some time and the ears were about in condition for roasting. The corn stood up well, and it was cut with the reaper two rows at a time. The piece was divided in the middle, and the reaper cut on all sides so that no time was lost. An average of five hours' time of two men to the acre completed the job of cutting and cocking the fodder. The rakes were allowed to run but not to throw off the corn. When the platform was well loaded the team was stopped and the corn was drawn off by hand. The bunches were large, containing about 400 pounds each and were left in rows. The corn was handled with the hands and five or six of the bunches were put in each stack. The stacks were made 10 feet across on the bottom, and as high as the men could place the armful—say, six feet.

About one ton of the green fodder was put in a stack. The work of cocking was begun as soon as cutting was completed. There was no rain during the whole time. The armfuls were crossed occasionally; the cock was kept in good shape and finished by the two men, one on each side, bearing down the ends of stalks that they might at once take proper shape to shed rain. The week after the cutting it rained nearly all the time and has done so perhaps every other day since. The rain has never penetrated the cocks to any extent. Only one or two tops of cocks have been blown off. There has been no heating, souring or molding. The fodder is in perfect condition from top to bottom except a little that is weather-beaten on the surface. Although the stalks are large the cattle eat them with a relish and perfectly clean; there is no waste whatever. It is as good corn-fodder as I ever saw. A large feed of it has been given the cows once a day from the time of cutting.

The stalks are long and although a hay knife was used to cut them up so that they could be pitched from the cock to the wagon, still it was hard, heavy work to load them. The men now load them with the team in less time than when it was done by hand and there is no lifting whatever. A low, broad-tired wagon with a hay rack that is eight by 16 feet in size, is placed near the cocks and the team is removed. Three planks are laid from the ground to the hind end of the rack and with an inch rope 60 feet long the cocks are drawn up the plank and a load as large as the team can draw is put on in a short time. A large iron ring is attached to one end of the rope for convenience in forming a noose. The rope is passed around the cock part of the way under the edge and part of the way a foot or more up on the side and the end is put through the ring and the team is attached. The rope when drawn tightly holds the entire cock firmly like a bundle, and it is drawn up the plank and forward on the rack. Enough cocks are then drawn on to form a load as large as the team can draw. Such a load will last my stock five days and it is thrown direct from the wagon in front of the cows. As there is another wagon for farm work the stalks are unloaded only as they are needed and all extra handling is avoided.

The harvesting and curing of corn-fodder and feeding it from the first of September to the first of January can be done in this way with perhaps as little labor as by any method that can be devised. The quality of the fodder is excellent. Corn for curing in this way should be sufficiently mature when cut. The cocks should be made of a size according to the length of the stalks. If a large cock is made with short stalks it will probably become wet. If in the case of corn-fodder 10 feet long the cock be but three feet high, the ends of the stalks will rest on the ground and the stack cannot take the conical form necessary for shedding rain. I have enough of such fodder now in the field to feed the stock once a day until February and I intend to continue to feed it direct from the field while it lasts.

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies

Past experience warrants the belief that this can be done conveniently and with little or no damage to the fodder.

POTATOES AND OTHER POINTS.

W. C. S., HARMONY, R. I.—On page 712 of the R. N.-Y., A. L. Crosby speaks of the Rural Blush Potato as improving and being more sociable. I have planted this variety ever since the little potato was first sent out by the R. N.-Y. and have found it to vary considerably as regards the spreading habit of the tubers in different years and in different soils the same year—especially this year—and I believe its conduct in this respect is due to the preparation of the ground, and to a less extent to the character of the soil, rather than to the location of the fertilizer for the following reason: This year I attempted to imitate the R. N.-Y. Trench System to some extent. The ground was plowed in the fall and manure was spread on in March. The soil was harrowed and plowed twice before planting in the spring. On May 7, the ground was furrowed out: I went twice in a row with a 2½ conical plow and then went through the rows with a harrow made for the purpose, leaving a level seed-bed 10 inches wide and very fine, about six-inches below the level of the field. Three-eighths of an acre was prepared in this way; three-eighths more was simply furrowed out once in a row. Part of the field was a light sandy loam gradually running to a rising gravelly soil. Both pieces were planted the same day mostly with the Rural Blush Potatoes. On the sandy loam and in the large furrows they spread as badly as ever. I measured some stems having a potato each on the end, that were 16 inches long, and it was slow digging to get them clean, but as I got on to the gravelly ground and single furrows the potatoes were more concentrated in the hills; the harder the ground, the closer the potatoes grew.

On this same piece of ground fertilizers were applied in different ways. On one-quarter of an acre 200 pounds of the Mapes Potato Fertilizer were broadcasted and 200 pounds were spread in the furrows after the potatoes had been dropped and covered with about one inch of fine earth; on one-quarter of an acre 400 pounds of Mapes Potato Fertilizer were broadcasted; on one-quarter of an acre two cart-loads of hen manure were broadcasted and all were well harrowed in before furrowing. There was but very little difference in the yield of the same variety. What little difference there was I attribute more to the difference in the nature of the soil than to anything else; but there was a large difference in the looks of the vines at the first and second hoeing; but all gradually came nearer together at the close of the season. A part of the first quarter of an acre was planted with different varieties which I expected to yield a very large crop; but a man who plants potatoes is liable to be disappointed as the R. N.-Y. well knows. The varieties I planted were one-half a bushel of Thorburn's Early, in 577 hills; one-half bushel of the Rural New-Yorker No. 2—lacking one pound which I had sold—in 454 hills; and three pounds of the Great Eastern in 64 hills. All were planted as nearly one foot apart in the rows as possible without exact measurement. The rows were three feet apart. The Thorburn planted 123 hills more than the Rural New-Yorker No. 2; the tubers not being so large but having more eyes. On August 5, the Thorburn vines began to turn yellow at the ground as though they were getting ripe. The rest of the vines were green and very handsome, having been kept very free from bugs and weeds. On August 12, blight struck them and in three days the whole field was black and the vines were slippery. I commenced digging the Thorburns at once. I picked up 18 measured bushels, leaving about two bushels rotten on the ground. The three pounds of Great Eastern produced 2½ bushels all picked up. The Rural No. 2 yielded nine bushels all picked up. The last two varieties were very green as the skin slipped very badly. All three varieties rotted very badly after they were dug; so that I have saved only four bushels of the Thorburn; one bushel of the Great Eastern, and 5½ bushels of the Rural No. 2. The latter rotted somewhat since they were put in the cellar. The Rural Blush was left in the ground three weeks longer before it was dug, and to my surprise there were but a very few rotten, and the crop is keeping all right. I was very much disappointed in the Rural No. 2 Potato. When I planted them six large potatoes were dry-rotten so that I got only one and two sprouts from a potato; nine had large hollows or were false-hearted. The vines did not look thrifty, and there were very few to a hill, many of the hills not having more than one or two vines. They were very large and close to the ground with a few small branches growing from them. The potatoes were of good size and had the blight not struck them, I think that without a doubt they would have been very large. The quality is good, but as they were not ripe I cannot say much about this point.

A PLEA FOR INTELLIGENT FARMERS.

E. F. D., LIMA, N. Y.—The letter of H. S. W. on the first page of number 2076 pleads for more intelligence on the part of the farmer and I would heartily second his plea. With our present system of free schools, our newspapers published by the million and books at a nominal price, there is no reason under heaven why the farmer of to-day should not be an intelligent man.

This is an age of progress, of advancement. The merchant who stands at the head of his line in the city is the educated, reading man. He knows when and where to buy and when to sell. He is conversant with the prices of silk at Lyons and of cottons at Manchester and Lowell. The commercial bulletins, price currents and various trade papers find their way to his desk daily. He studies the law of supply and demand. He keeps posted as to the stock of his competitors. While others sleep, he is awake. While others cry "hard times" and waste their time in waiting for customers, he acts. He is prepared for emergencies; he advertises, marks down prices, throngs his store with customers and success crowns his efforts. The times demand farmers modeled after this merchant. They must be educated. They must read. They must keep abreast of the onward sweep of invention. They must study their soils. They must keep a finger on the pulse of trade. They must be familiar with the contents of the store-houses of Europe and Asia. They, too, must watch the supply and demand and then prosperity and independence are theirs.

This discussion about Montana touches a subject that interests nearly every Eastern farmer, and that is: Why go West? Is the soil more fertile? Is the climate more salubrious? Are the chances for a better society and for better education for your children to be found there better than in the East? Oh, no. Despite the attractions held out by the railroads; despite the descriptions of the Western Paradise given by oily-tongued, unscrupulous land agents; despite the glowing accounts of the West's prosperity published in its local papers; despite the wonderful crops of corn in Kansas, and of wheat in the Dakotas, the Western farmers are bearing heavy burdens that we know nothing of, and there are thousands of them this very day in every Western State and Territory, who wish themselves back on the old farms in the East. Some seem to think that it does not cost anything to get a farm in the West. To such I submit the following: The president of one of the largest mortgage investment companies doing business in the Dakotas, writes that it costs about $3,000 for the Eastern farmer to get 160 acres of prairie land under good cultivation. It takes two years at the least to do this, and the living expenses of an average family of five during this period are something enormous. I know of a farm of 150 acres, two miles from a New York Central Railroad Station, 350 miles from New York City, that will produce with ordinary cultivation 3,000 bushels of potatoes, 600 bushels of wheat, 500 bushels of oats and 20 tons of hay annually, that can be bought for $4,500. The buildings are old but comfortable, and a wind-mill forces water into the house and then to the barns. That farm is certainly cheaper than a quarter-section in the West, and I presume there are hundreds of farms throughout New York just as cheap. I would reverse Horace Greeley's words, and say: "Young man, go East." The East has many advantages over the West, so why not stay here? Do your best; that is all that God asks of any one.

WHO USE SILO WEIGHTS?

JOHN GOULD, PORTAGE CO., OHIO.—With the merits or demerits of Mr. Colcord's patent system of making silage I am not personally familiar, and so far as I know, it may be exceedingly valuable, but Mr. Colcord should not attempt to make out a case of economy for it by bringing in a contrast that has no existence, so far as I know, west of the Alleghany Mountains. People may yet be cutting half-grown silage fodder in the East and putting tons of stone on a double-planked silo cover; but I have no knowledge of any locality in the West where the remark that it will cost more in time and money to weight silage than to use jack-screws will apply. In fact, I do not know of a man who weights his silage, and but few go beyond a cover made of tramped straw or marsh hay, a foot thick. This simple cover is put on three days or so after filling the silo, and we now hear very little of silage moulding on the surface, or being damaged in the corners. This straw cover, without boards or weights beyond a few old rails to assist in making the straw mat down, allows the warm, moist air to escape, but prevents the upper air from coming in contact with the silage, and this is all that one needs in making "sweet silage." Some do not even cover the silage with anything, especially if feeding is to commence within three or four weeks from the filling, which is now a very common practice in Ohio. Some commence to feed from the silo the next day after filling. When the silage is left uncovered for four weeks, after it has been put into the silo, there will not be over two inches of mould upon the surface, and young stock will eat about all of this if they are permitted to have access to it. Two pits of silage near here were left wholly exposed from May to August, and there was less than three inches of mould upon the surface. There must be a better presentation of Mr. Colcord's case in the West than that set forth by the assertion that "jack-screws are cheaper for pressure than covers and weights," for silo men cannot see what either of the three has to do with making the finest of sweet silage.

Moreover, a good many of our leading silo men will smile on reading that with some patent they would be enabled to take out more tons of perfect forage than of imperfect silage, when the loss from all causes by their plan of siloing thinly-planted, fully mature-fodder, will not exceed one ton to 100. When farmers by their latest plans of siloing fodder and cheaper yet better silos, can put in silage for 18 to 30 cents per ton, and have it keep sweet and fresh for a year, it will be hard work to introduce an improvement that will cost them as much as their present plant has cost them; but as they have hitherto readily adopted the best way that could be found for handling silage they will be likely to avail themselves of all new improvements; hence it is not impossible that the "governor" may be an improvement that will be worthy of general adoption.

THE ODOR OF FERTILIZERS.

W. L. SNYDER, CHEMIST, MICHIGAN CARBON WORKS.—The question asked on page 578: "Is the manufacture of superphosphate for fertilizer, as at present conducted, offensive to the sense of smell?" may be answered by yes and no. To some people, yes; to others no; at some times yes; at others, no. At a first encounter with the odor of fertilizers the human nose is quite apt to hustle a message up to the brain that it has struck something disagreeable this time sure; but after a time it is not so certain about it and finally recalls nearly the whole message. It is a clear case where "familiarity" does not "breed contempt." Personally I like the odor of the commercial fertilizers with which I have had to deal. The R. N.-Y.'s answer is a good one, and I am especially interested in the last sentence which refers to the odor as a disagreeable one that might be annoying to some people but is in no way injurious to health.

What Others Say

THE UTILITY OF WHAT MAKES LIFE INTERESTING.—Under this title, Garden & Forest prints in a late number some forcible thoughts and suggestions.

The growing interest in out-of-door life, and in means of recreation that can be enjoyed in the open air, is one of the most encouraging tendencies of the time. Gardening and the care of flowers and trees are becoming more and more attractive to thoughtful and cultivated people everywhere. These are sane and wholesome occupations, and they are coming to be depended upon for relief from weariness and "nervous prostration," as it is found that pleasant activity in the open air is often a more potent restorative than medicine. The primary benefit comes, of course, from our breathing purer air, and more of it, when out-of-doors; but every one needs a more inspiring reason for going out than the bare and depressing thought of the need of improvement to health. It is much better to think about our flowers or shrubbery, or to be interested in plans for the care of a garden or door-yard, than to think of ourselves in any more direct way. In all such activities immediate utility is associated with the more ideal aims.

The best garden or farm is partly a work of art. Its order and beauty add to the interest of life for its possessor, especially if he cultivates it with his own hands and brain. A day laborer with a garden, or a few square yards of ground about his door, has an artist's opportunities in the application of his taste to the capabilities of the area which he plants and shapes. He may have the delight of creating something beautiful and interesting which did not exist before. It is a serene happiness to think out plans for doing the best that can be done with even the smallest piece of ground on which anything can be made to grow. He who has room for trees has it in his power to make enduring changes in the landscape, and the care of even a few trees will supply much of interest from the time they are planted till their protector can walk or rest at will under their shade. One becomes attached to them as to children and friends, and they respond in their way. The watch against their many foes often involves unpoetical activities; but struggle is the condition of all animate being, and life without it, if it were possible, would not be interesting.

The defense of trees against their insect enemies introduces us to one of the most interesting provinces of the out-of-door world, the life of birds and their services to man. In the order of animal existence on our planet they are the natural instruments for keeping insect life down to its normal level and proportion. But we have repressed the bird population in this country to such an extent that we have produced an enormous over-development of insect life, so that the dominion is given over to them, and they have become an all-pervading curse, like that of the frogs in Egypt when they covered the land, entered the houses and climbed into the very bread-bowls. Learned men write books and governments make large appropriations to help farmers, orchard-growers and vine-growers to defend their crops against injurious insects, but if we were civilized enough to protect our friends and allies instead of cherishing our enemies, the birds would soon dispose of most of these pests.

It is often observed that birds are more particular about their food than formerly, and that many of the worst insects are not eaten by them. But that is because their supply of food is so abundant that they can afford to be dainty and to eat only what they like best. It is much the same as if a banquet for a thousand men were served every day for half a dozen. They could taste here and there, and would make little impression on the whole supply. It is so with the birds because they are so few, but if they were protected till the bird population began to press upon their means of subsistence, they would not be so fastidious, and would be glad to get any kind of bug or worm, and would snap up every one that showed his head.....

BY THE SHORT WAY.

EDITOR CHEEVER of the New England Farmer, says that he has no objections to seeing colonies of Swedes or other European workers settle in Vermont. He has a high regard for the people. He has twice met some of them in the New Sweden of Maine, but he does not wish again to see men as disappointed in this country as were some of those settlers before they had learned how to adapt themselves to the new surroundings. He is not sure that a farm that is not good enough for him is good enough for a Swede or an Irishman. If the States are to expend money for repopulating the deserted lands it will be better to expend it in making farm life attractive to people already in the country rather than in schemes for bringing in new recruits.....

MR. J. J. THOMAS mentions Maiden's Blush, Lawver, Beauty of Kent, Fameuse, Princess Louise, Jonathan, Rome Beauty and Shiawassee Beauty as among the handsomest apples known.....

DR. LAWES in his annual estimate of the wheat crop for Great Britain, as published in the London Agricultural Gazette, says that it is obvious that the question so often asked as to what manures produce wheat of high quality cannot be answered unconditionally, when land which has received no manure whatever for half a century yields wheat of a heavier weight per bushel than land highly manured every year. The truth is, there is much greater differ-

ence in the weight per bushel of the grain grown by the same manure in different seasons than between that of the grain grown by the more than 20 different conditions of manuring in the experimental field in one and the same season. In other words, quality of grain depends much more directly on the character of the season than on the description of the manures employed.....

PROFESSOR CARROLL says that at the suggestion of an eminent medical man an interesting experiment as to the value of small doses of chlorate of potash in increasing the milk of newly-calved cows has been tried at the Munster Dairy School. The experiments show that there was a slight increase in the average yield of milk during the time the cows were receiving one-quarter ounce of chlorate of potash per day. The cows kept in good health during the experiment, and there was an increase in their weight, showing that the increased yield of milk was not brought about by any drain on the system induced by the use of chlorate of potash.....

IT was said, long ago, by a careful economist, says the Husbandman, that farmers East would find larger profits if they would abandon half their acres under cultivation and bestow all their labor upon the remaining half. The estimate was not extravagant. There are many farms that give no profit whatever under cultivation, except from small areas, properly fitted and tilled, although much larger areas are plowed, seeded and yield crops barely sufficient, or less than sufficient, to pay for the work.....

IN the case of wet fields it is poor economy to do anything with the land until it is drained and made fit for use. Better leave it for grazing, or for any use that does not involve labor, for labor expended upon it while it is not in proper condition is something like direct loss.....

A HUNDRED bushels of potatoes to the acre may yield some profit, but with soil well kept up to all needs the yield may be 200 bushels, or even 300 bushels, the excess in large part, profit. So with corn, wheat, oats, barley and other crops. The trouble is in spreading over too much surface.....

UNDER present conditions thoroughness in farming is the only guarantee for success, and thoroughness is impossible to the farmer who spreads his labor over an area so great that seasons and conditions overrule his plans.....

THE NATIONAL STOCKMAN says that whether one is justifiable in borrowing money or not depends on his ability to make out of it more than it costs him. If he cannot do this borrowing is unwise. Many are compelled to borrow from time to time, though, in order to save what they have, and are in a state of perplexity as to whether it is better to sacrifice outright or to carry a load which one's income hardly seems to warrant. Debt should, of course, wherever practicable, be avoided; and the man who never finds it necessary to borrow is to be congratulated. The trouble with farmers borrowing money is that margins have been so narrow as to render it doubtful whether its use will pay its interest; and yet we know many farmers who are operating on mortgage money to advantage.....

DR. HOSKINS mentions, in the Vermont Watchman, as under his observation in his own town, a fine orchard, well cared for in unbroken sod, that had been giving but light crops of fruit, or none at all. Last autumn the owner plowed up one-half of it, applied a light coating of manure, and gave the land a good stirring up. It had not before been plowed for many years, and of course, many of the roots were torn up and broken off. The result of it is that the plowed portion of the orchard is loaded with fruit, the foliage of the trees is large, and of that deep-green shade which indicates health and thrift, while the unplowed section has but a scattering crop of wormy fruit, and the foliage is dwarfed and sickly pale in color. The experience carries its own lesson. Don't be afraid of putting the plow at work in the orchard.....

"THE Numbo Chestnut begins to bear at once. No waiting a life-time. So does the Paragon."

Thus speaks the Farm Journal. But the two varieties ought not to be mentioned in the same breath. The Numbo is coarse of flesh and bitter. The Paragon is of fair quality. Neither will bear anything like a crop in less than four years from the nursery.....

THE pecan can be grafted on hickory stocks and when successful renders the tree more hardy and induces early fruitfulness. Orchard & Garden says that some experiments on this point are necessary both as regards the best method of grafting, and best stocks to use. Mr. Georgeson advises that we raise or procure our trees from nuts grown in the north, and although it is not an absolute guarantee of hardiness, the percentage that winter-kill will be very small .....

NUTS should be planted in the open ground as soon as possible after they have ripened. If obliged to keep them over until spring pack away the seed in moist sand or soil; they should not be allowed to dry out, moisture is the secret of keeping nuts for seed. The proper depth at which to plant nuts is about one and a-half to two inches for hickories, walnuts and pecans, and about one inch for chestnuts. Sow the seed in nursery rows and firm the soil over them .....

AFTER seven years' test, Dr. Hoskins pronounces, in Orchard and Garden, the Red Bietigheimer iron-clad in New England. It has never been harmed though two winters of the seven were among the severest on record.....

HE says that the Milding Apple is winning its way in Maine as a variety suitable to localities unsuited to the Baldwin. It bears heavily and gives great satisfaction to growers as a profitable fruit for market.

DR. HOSKINS considers the Granite Beauty a winter apple of superior merit. It is hardier and more vigorous than the Baldwin. It is an annual bearer of large, roundish-oblong fruit. It is well striped and almost covered with two shades of red. Flesh, whitish, tender, juicy and pleasantly acid.....

IMPERISHABLE LABELS.—The need of a cheap, indestructible label, one on which the name of a tree or plant may be written easily and legibly with an ordinary lead pencil, will be readily admitted by all who grow fruit and flowers. We have before us a sample of label that seems to fill this want, being simple, effective and imperishable. It is made of thin copper, very soft and pliable, cut in label form with a split tag end of the same material which is wound around the tree or plant and gives with its growth. It can be written on or indented with a lead pencil or other pointed instrument and the writing is ineffaceable and indestructible and the label may be cleaned and brightened at any time by simply putting it in a hot fire. We think it is a good thing and it is quite cheap costing, we believe, about $1.50 per gross. Messrs. Johnson & Stokes of Philadelphia, Pa., are wholesale agents for its sale.

Upon seeing the above notice, the R. N.-Y. wrote to the above firm for a gross, which were duly received. Upon examination, the trouble seems to be with this ingenious device that the "tag" ends are so slight and thin that they do not retain their hold of a stake or branch around which they may have been twisted. If the plate-portion could end in a couple of strong copper wires they might well serve the purpose for which they are intended.....

WORD FOR WORD

——WESTERN RURAL: "A wife or sister or mother is a pretty good counselor, friend."

——NEW ENGLAND FARMER: "When the farm does not pay it is of public advantage that it be abandoned. The remedy for abandoned farms is in so educating the farming class that they can make a farm pay."

——GARDEN AND FOREST: "Two years ago a Mr. Barber tried the experiment of planting Pampas Grass on five acres of land in San Bernardino County, California. A few weeks ago he cut from the five acres 70,000 plumes, which he sold for three and a-half cents each, or $2,450 for the crop. The expense of caring for the five acres has not been in excess of $450, and the crop has netted him $400 an acre. Next season he expects to net $500 an acre, as the plants will then be three years old and in full bearing. The demand for the plumes of the Pampas Grass is constantly increasing and it has been demonstrated that it can be profitably grown on high-priced land."

——"BEET seed is easily grown, and every gardener who is desirous of fine beets should raise his own seed, carefully selecting medium-sized roots, having the characteristics most desired. These should be preserved in sand, carefully set out as early in the spring as possible, and the seed stems supported as they grow by small stakes and strings. A dozen beets will produce a pound or more of ripe seed."

——ORANGE COUNTY FARMER: "There are too many middlemen—one-half of them would easily do all the legitimate business—the others should go to work at some productive labor."

——ALBANY CULTIVATOR: "To keep apples in winter, spread buckwheat chaff on the barn floor, and on this place the apples, and then cover them with chaff two feet thick. Fill the interstices with chaff. Other fine chaff will answer. The chaff will exclude cold currents, and absorb incipient decay."

——"MANURING STRAWBERRIES.—Two neighbors set out strawberry beds at the same time. One had 14 rods, did not enrich his bed, and had three bushels of fruit, or at the rate of 34 bushels per acre. The other planted only four rods, and heavily mulched the bed with manure in autumn and spring. He had seven bushels of berries, or at the rate of 280 bushels an acre."

——SAM JONES: "I'd rather be a hundred old maids rolled into one, than to be a drunkard's wife."

——HENRY STEWART: "If a pig is fed upon bran and corn in equal parts, it will procure healthful subsistence from the former and sufficient fattening food from the latter, without any serious disturbance of the digestive or respiratory organs."

——S. S. TIMES: "As a rule, the things that are best for us are not those that we most desire, and the things that we most desire are not those that would be best for us. Therefore it is that one cause for gratitude which we are likely to overlook, is the fact that we do not have given to us the things that we most desire, and that we do have given to us so many things that we do not desire."

——T. B. TERRY: "It is a duty that we owe to the women of our households, that our personal appearance upon all occasions should be such as they may not be ashamed of."

Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

Scrofula in its severest forms, salt rheum, and all other blood diseases, are cured by the great blood purifier, Hood's Sarsaparilla. The voluntary statements of cures by this medicine are really wonderful. Send for particulars to C. I. Hood & Co., proprietors Hood's Sarsaparilla, Lowell, Mass.

If you Love, own or grow fine Fruits, beautiful Flowers, fresh Vegetables, sheltering Trees, green Lawns—if you love the Country and Nature—if you want your land to Pay, or if you want Health, Happiness and Profit in country life and work you will see The American Garden and then read it. It is the only magazine of its class in the world. Price $2 a year; 20 cts a copy. A free specimen to any one naming this paper in writing to the publishers of the magazine, the Garden Publishing Co. Ltd. 10 Spruce St, New York.

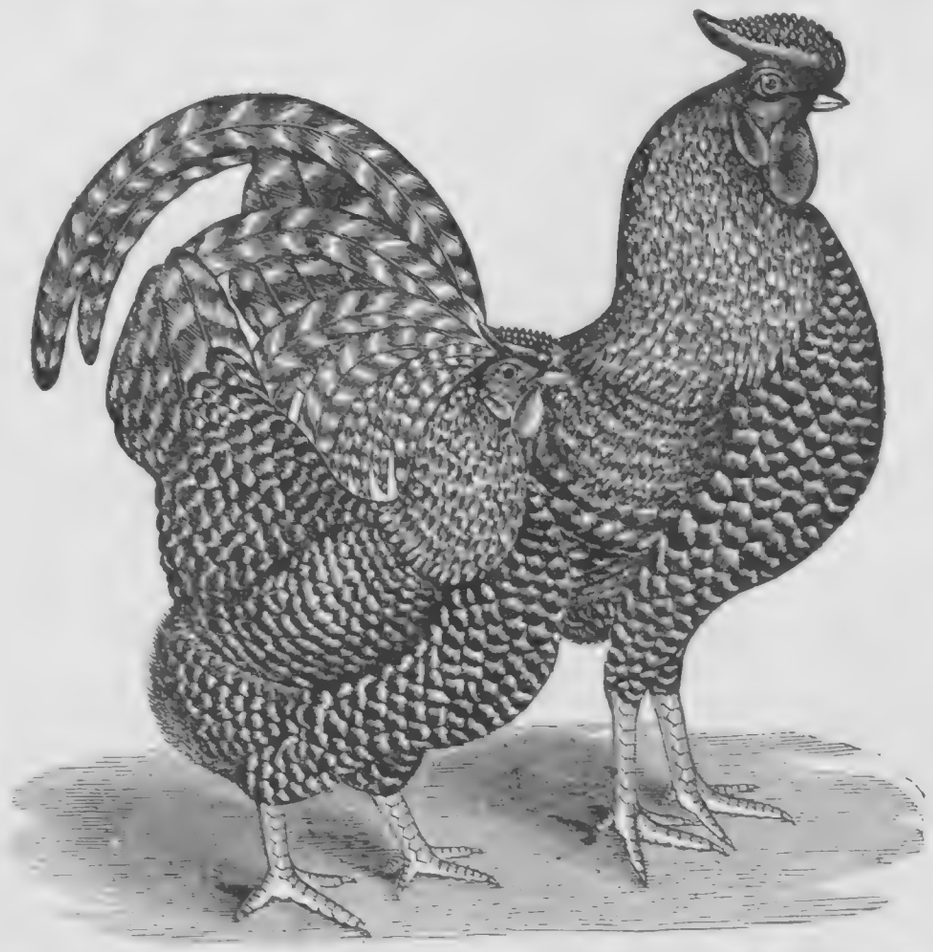
We Club it with this paper at reduced rates as below.

IN CLUB WITH THE RURAL NEW-YORKER, $3.

SALESMEN WANTED

Salary and expenses paid. Success is certain. Write J. Austin Shaw, Nurseryman, Brooklyn, N. Y.

NOTHING ON EARTH WILL MAKE HENS LAY LIKE SHERIDAN'S CONDITION POWDER



IF YOU CAN'T GET IT NEAR HOME, SEND TO US.

It is Absolutely Pure. Highly Concentrated. Most Economical, because such small doses. Strictly a Medicine. Not a Food. You can buy or raise food as cheap as we can. Prevents and Cures all diseases of Poultry. Worth more than gold when hens are Moulting. "One large can saved me $40, send six more to prevent roup this winter," says a customer. For sale by druggists, grocers, general store and feed dealers. No other made like it.

We will send post-paid by mail as follows:—A new, elegantly illustrated copy of the "FARMERS' POULTRY RAISING GUIDE" (price 25 cents; tells how to make money with a few hens), and two small packages of Powder for 60 cents; or, one large 2 1-4 pound can for $1.20 (regular price) and Guide free. Sample pack. 25 c., five for $1.00. Six large cans, express prepaid, $5.00. Send stamps or cash. In quantity costs less than one-tenth cent a day per hen. Testimonials sent free. I. S. JOHNSON & CO., 22 Custom-House Street, Boston, Mass.

THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, NOVEMBER 30, 1889.

THE series of letters "A Summer Outing in the North Carolina Mountains," by Mrs. Mary Wager-Fisher, begun in this number, will be found most entertaining and instructive.

How to cut, cure and place before the cows corn-fodder with the least possible labor and at the same time secure it of the best quality, is a question which Mr. Rice discusses in a suggestive way on page 789.

"IT is with shame for my native State that I am compelled to say that it is next to impossible to buy at any price, in our local markets, a piece of cheese of even fair, not to say first quality." So, says Prof. Wing on page 788, in an article that will be read with interest.

A KANSAS subscriber says he wants to suggest a picture for the first page of the R. N.-Y. as follows:

"The first picture is a family standing around the mother, while she is filling a 20-pound bucket of butter. If the churning fills the bucket it goes to town to buy shoes and stockings for the little ones; if not, they will have to go to school another day with their old ones. The other picture is a group of millionaires forming a trust to advance the prices of the necessaries of the people, by simply "resolving."

THE R. N. Y. wishes all its friends a happy Thanksgiving. We all have plenty of things to be thankful for. There is something entirely wrong with the human being who cannot find some bright side of life. He is not worth considering at this time of the year. Come, friends, some of us have not had the best year in the world, some of us had too much wet and others too much dry weather, some too much heat and others too much cold. It's all right so long as we have kept our faith in the future. Let's be thankful for that, anyway. The R. N.-Y. wishes all a good dinner and a merry day!

FARMERS who want to try an experiment for next year, may be interested in the following letter, written by a subscriber in New Jersey:

"It seems to be generally conceded by the growers of potatoes that another season the crop should be planted on new or different land, on the ground that the germ of the rot or blight remains in the soil. I am going to try an experiment in this way. I have just plowed a lot in which potatoes were grown this year, in order to give the frost a chance at the germs during the winter. I shall plow again in the spring and see how I come out with the crop. I would like to know what others think about this plan?"

The R. N.-Y. would like to have a number of its readers try this experiment and see if the frost will destroy the spores of the rot.

"APROPOS of the R. N.-Y's. offer of $10 for notes on a back number, allow me to suggest that it should name a particular number, say the Thanksgiving Number, or any one to be issued soon, and offer $10 for notes on it. Notes on a number of last January or June would be, as the old saying is, 'cauld kail het again,' and would be of little interest in comparison to a criticism of new matter." P. M.

Most of the people who have entered for this prize say that as all issues of the R. N.-Y. are good, there is little choice between them. The Premium List Number seems to have a good many friends, but the range is wide enough to present a good deal of variety. We prefer that the contestant should select his own issue, as it seems evident that he could do better at his own choice than he could if we were to select for him. The "Notes" thus far received are excellent. By the way, entries for this prize will close December 15.

UNITED STATES MINISTER WILLIAM WALTER PHELPS, in Berlin, has been making a vigorous fight in behalf of the admission of the American hog into the Fatherland. Even in Germany it is, of course, quite well understood that the plea that American pork is excluded merely on sanitary grounds, is only a pretext for preventing competition between hog-raisers in this country and that. William Walter is understood to stand high in the good graces of Bismarck, but in spite of this advantage and of his undoubted ability and eloquence, he has hitherto failed to make any favorable impression on the "man of blood and iron." The other day the latter's mouth-piece, the Budget Committee of the Reichstag, backed up by the farmers of the country, refused to abrogate or modify in any way the laws and decrees against importations of American hog products. American farmers, it appears, are not the only agriculturists in the world who want tariff protection for home-raised products.

RAMIE AGAIN.

THE Ramie Company of America has been formed, with headquarters at Philadelphia, for the purpose of establishing and developing the ramie industry in this country. The company proposes to furnish would-be cultivators with plants, loan them machines for separating the fiber from the bark, and to purchase the product. Now, it is not the R. N.-Y.'s province or intention to throw cold water upon any scheme which promises any reasonable prospect for increased remuneration to the American farmer, but we would advise caution in engaging in this business. Ramie is a tropical plant, and does not flourish except in a rich and moist soil, and where there are no hard frosts. It is a very valuable fiber plant and large quantities are used as a substitute for, and for mixing with silk. It is related to the nettle which is so familiar to many farmers. Something more than a score of years ago, great things were anticipated from the culture of ramie instead of cotton in the Southern States; those who had plants to sell did a thriving business, but there was no successful method of preparing the fiber for market, and the bubble soon burst. It is said that seeds of the wood nettle have been sold as those of "American ramie." It is well to experiment with these novelties, but caution is worth a great deal to the fortunate possessor. By the way, what are the experiment stations for if not to test such things?

WHY NOT?

IN the dairy districts which supply New York with milk, good milch cows are in great demand. The majority of farmers do not raise their own stock, but buy of drovers or stock agents. Present low prices of milk have induced some dairymen to change their plans somewhat and raise the calves from their best cows; but there is still a good market in these districts for good milch animals. And now we have a set of agricultural thinkers who say that this state of affairs can be made profitable to the owners or renters of the "abandoned farms" in Vermont and New Hampshire. Good milch cows can be raised on these farms just as well as in any other district. They can be driven over into the dairy districts and sold at good prices. It would even pay the buyers to pick up the best calves they could find and take them home to raise and sell later to their original owners. Are these ideas sound? Why not? All through the portions of New Jersey where broilers are raised in large numbers, the demand for suitable hatching eggs is such that farmers who are willing to comply with the regulations enforced by the hatchers can command five cents each for their eggs. It does not pay the broiler men to keep hens to produce the eggs they need. It will not pay farmers to go into the broiler business on a large scale. So one party aids the other and both are benefited. Why are there not similar reasons for believing that farmers outside of any dairy district may profitably raise cows to sell to their neighbors?

FEED MORE OATS THIS YEAR.

OATS are lower than they have been for a number of years. In the East where the great problem is how to provide the grain ration with the best economy, observing farmers should take advantage of the drop in price. As one of our feeding authorities has recently pointed out, most farmers seem to agree that oats are suitable for "horse feed" and for but little else. It is true that within a few years some enterprising farmers have enthusiastically praised oats as food for calves and young stock, but the great majority of people still seem to consider that the oat was specially designed for the horse; and this, notwithstanding the fact that thousands of these same persons eat oatmeal themselves and find it more nutritious than any other similar food. There is no reason why oats should not be fed with profit to all kinds of stock, cattle, sheep, pigs and poultry. We do not mean fed exclusively, but fed in combination with other grains and fodders. A bushel of oats this year will contain as much nutriment as a bushel contained last year. Suppose the price to be five cents less. By mixing the oats with other and more expensive substances you get your ration for milk, pork or beef at just that much less. The art of making up a good grain ration from several sorts of grain brings the best profit when some one grain is low in price. The R. N.-Y. will have more to say about grain combinations that will enable farmers to take advantage of the low price of oats. Probably a good many of our readers do not need any reminder. To all such we may say that we would like their opinion and experience as to the best way to feed oats to advantage.

CONSENSUS OF AGRICULTURAL OPINION.

THE Farmers' Congress, a heterogeneous assemblage of 325 delegates from various parts of the country, but chiefly from the South and West, which adjourned at Montgomery, Alabama, a week ago, could come to no decision with regard to the most appropriate national flower; but had no hesitation in expressing very decided opinions on various questions of grave national importance, in its "resolutions." Very properly indeed, it resolved that the Grange and all other agricultural organizations should combine to secure State and National legislation for the benefit of farmers. It resoved that Congress should establish one or more deep-water harbors on the Gulf coast for the purpose of promoting trade between this country and Central and South America; but it refused to indorse a proposal for a national subsidy to a steamboat line to carry on that trade. It demanded that the Department of Agriculture should once more ascertain the causes of swine plague and again recommend remedies for the scourge. It favored the organization of a National Board of Agriculture for the consideration and promotion of agricultural interests and the appointment of two delegates from each State to co-operate with the Board. It insisted that the legislatures of the different States should make appropriations for defraying the expenses of delegates to national farmers' congresses. It heartily indorsed farmers' institutes and recommended their introduction in all the States, and "resolved" that the National Government should aid in the matter. It advocated closer relations between producers and consumers. It demanded a comprehensive scheme for the improvement of the Mississippi River at the national expense, and the construction of a ship canal connecting Lake Michigan and the Father of Waters. It refused to urge unlimited silver coinage, or the repeal of internal revenue taxation; nor would it indorse the proposal that the taxes on whisky and tobacco should be regulated by different States to relieve local taxation. A resolution favoring the granting of bounties to sugar producers, was voted down. Finally, by a vote of 261 against 63, it "resolved" that Chicago should be the site of the World's Fair in 1892. It is always a matter of interest and often a matter of importance to ascertain the consensus of opinion of a body of 300 ordinary farmers even in a local assembly; how much more forcibly can this be said of a convention composed of 300 representative farmers from widely separated parts of the country met to discuss questions not merely of local but of national import! Such conventions are among the most potent factors in the creation of the public opinion of a country and should receive more attention from the agricultural press.

THE GRANGE PLATFORM.

THE National Grange in convention during the week at Sacramento, California, last Tuesday adopted a report favoring the increase of small farms and restriction on foreign immigration. It also resolved "to memorialize Congress in favor of the manufacture of jute and other textile fabrics for use instead of cotton bagging." If our telegraphed synopsis of the resolutions is correct, it appears that the Grange is not quite in harmony with agricultural associations in the South in this matter; for, without an exception, they all favor the use of cotton bagging in preference to jute. Even if the latter were admitted duty-free, its purchase would always take millions of money out of the country, that might well be kept at home, and the raw and manufactured products would always be liable to be "cornered" by speculators and money-eyed sharpers at home or abroad. On the other hand, the manufacture of cotton bagging would afford a profitable market for the coarse grades of the staple and this would have a tendency to stiffen the prices of the better kinds; while cotton is too abundant among us to render "cornering" practicable, except occasionally in the case of some particular "option," for a brief period. The Grange also favored the supply of school books at cost, and condemned the single-tax system. It advocated the increase of silver coinage, and the circulation of paper money, independent of the national banks, in sufficient quantities to prevent financial embarrassment. A live agricultural paper, fully awake to all movements in this and other countries, likely to affect the welfare or engage the interests of its patrons or of a considerable number of them, should be prompt in laying before them pithy condensations of the proceedings at the important conventions of recognized agricultural representative bodies, even if it cannot always indorse all the planks in their platforms.

BREVITIES.

THE STORY OF THE WEEK ON THE FARM: RAIN.

READ a Young Farmer's Ideas and Practice on page 789. It bears upon the question, Does Farming Pay?

MR. COLCORD writes as follows regarding his patent silage:

"I shall open my silo this week, probably. The silage in it has never had any acid whatever in it. I can find no changes in it. The juice is perfectly sweet."

SINCE Mr. Colcord published his book on the preservation of "green forage," a new discussion as to the desirability of weights for the silo has been started. John Gould states the case for a class of siloists on page 790. Next week the R. N.-Y. will give notes from some of the best silo builders in the country, showing their methods of covering silage and weighting it.

UNLESS the weather conditions change, the prospect for the Thanksgiving poultry market is decidedly discouraging. The supply is heavy. Fresh, prime stock, arriving in good condition, sells readily at fair prices, but anything of lower grade must be sold for whatever buyers may offer, while some is likely to be dumped in the river. Venison is outlawed, so no more must be shipped.

IT seems likely that a combination will soon be formed between the Farmers' Alliance and the Knights of Labor. A week ago Colonel L. F. Livingston, President of the Alliance in Georgia, together with a number of other prominent representatives of the order, visited the convention of the Knights in session at Atlanta and heartily approved of the projected union. The annual convention of the Alliance will begin at St. Louis on December 3, and it appears highly probable that the dream of Powderly's life—a confederation of the farmer and the mechanic—will be realized.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

THANKSGIVING season comes around again with its usual regularity, whether we feel inclined for thankfulness or not. It is not a very bright time for a good many, we fear. This has been a trying year, but at least we can take Jo March's advice, and think of our mercies. We are very apt to think exclusively of our trials, and it is just as well to have a festival which should remind us of the other side.

* * *

AMONG handy trifles which will come in very well for Christmas gifts are all styles of pincushions. Very pretty ones are fitted into the little round Japanese cat baskets, costing from two to five cents each. The cushion is made round and firm, first in a piece of stout muslin tied tightly round to keep it compact and then with a pretty piece of silk or plush. The inner edge of the basket is then glued all round, and the cushion fitted tightly in. It should be made to fit well and rather larger than the basket, or it is apt to slip down. When dry, a narrow fancy ribbon is tied around the edge, and finished with a bow.

Another novel pincushion is made with a child's little wooden spade for its foundation. The cushion may be round, square, or oval, and is fastened to the spade by a touch of glue. Four little holes have previously been bored through the spade; through these a narrow ribbon is passed tied in two bows at the back. These ribbons pass over the cushion, securing it in addition to the glue. The cushion may be of any pretty color; a narrow frill all round is quite an addition. A little bow may be put at both top and bottom of the handle, with a loose length of ribbon between, to hang it up by. The spade may be gilded or enameled. The same style may be carried out with a large wooden spoon instead of a spade. Another pretty pincushion may be made in the same way, and fastened on a small wooden palette, hung up by a bow passed through the thumb-hole.

* * *

As an aid to home dress-makers we may offer the following proportions for a skirt, which should hang well. It consists of four pieces, a straight back, 37 inches wide; a front breadth 29 inches wide at the hem, and nine at the waist; one gored piece at either side, each 24 inches at the hem, and 16 inches at the waist. It should have a thin crescent-shaped pad instead of a bustle, and a steel 12 inches long should be inserted about 11 inches from the waist. This will be found a good foundation for all the straight gowns now in vogue.

* * *

THE fortunate housekeeper who starts with a really good collection of house linen will find the care of it afterwards quite as important as the first purchasing. It will last a very long time if it is only properly cared for, but it must be examined carefully, mended, if need be, and thoroughly aired, after every wash. We have been perfectly astonished, on several occasions, by seeing housekeepers fold up their clothes and linen, and lay them away, immediately after ironing, without any airing whatever.

The first essential for neatness and good care is a convenient closet. The shelves may be covered with old sheets or coarse muslin tacked at the back, and left hanging a sufficient width to turn up over the shelf when the linen is arranged, to keep away dust. Hanging inside the door a list should be kept, giving all the articles kept on each shelf. Lavender, the orthodox perfume for clean linen, is said by some to attract moths, so the housekeeper might distribute little bags of cedar chips here and there through the closet, for the sake of the odor.

Things in constant use should be put on the lower shelves; articles less called for above. Each pile of things must be well away from its neighbor; each set of things well sorted. Different patterns of towels or napkins should never be mixed. Indeed it is really better for a house-keeper of modest means to get all her napkins, or towels, or table-cloths, of one pattern, as far as possible; some will always wear out before the rest, and there is thus less danger of broken sets.

Always use the things in rotation, putting the last article washed at the bottom of the pile. Be sure that *everything* is marked, whether washed at home or not. Most ordinary marking is done now-a-days with indelible ink, but where time and inclination allow, marking in cross-stitch is desirable. When ink is used, one of the patent glass pens, sold for the purpose, will be found preferable to any other.

GOLDEN GRAINS.

How different is the life within our breast
From what we seem to those who know us best.

BETTER take the vow of abject poverty, and live up to it forever, than to allow the love of money to sap the spiritual life......

PRAYER does not directly take away a trial or its pain, but it preserves the strength of the whole spiritual fiber, so that the trial does not pass into temptation to sin......................................

RELY upon it, this is the very substance of life, the credit sum when the balance is struck—practical usefulness. He lives to a good purpose who lives to do good and when his stewardship is ended, his works follow him..................................

THE moral courage that will face obloquy in a good cause, is a much rarer gift than the bodily valor that will confront death in a bad one.......................................

WE have certain work to do for our bread and that is to be done strenuously; other work to be done for our delight, and that is to be done heartily; neither is to be done by halves or shifts, but with a will, and what is not worth this effort is not to be done at all.....................................

TO FEAR the foe, since fear oppresseth strength, lends in your weakness, strength unto your foe, and so your follies fight against yourself...............................

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

"Open the doors and windows,
And let in the golden air,
Sweep out the dust and cobwebs,
And make the old home fair.
For swift from hamlet and city,
Swift over river and sea,
My boys and girls are hasting
To keep Thanksgiving with me."

THANKSGIVING.

IN our high-strung, hurried American life we have great need of all the helpful recreation we can obtain, and especially should we seek to foster and encourage the observance of any custom which tends to awaken the dormant emotions of gratitude in our hearts, or to knit more closely together the family interests and ties. To that grand old Hebrew nation who long ago instituted and rigorously kept their annual Feast of the Tabernacles—or as it is

Miscellaneous Advertising.

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13 Gold Medals of Merit.

Leading Dairymen will use no other.

Unexcelled for Purity, Flavor, Solubility and Strength.

Every first-class grocer sells it. Ask for this Brand. Observe the Trade-Mark.

THE EUREKA SALT M'F'G CO., Limited,
C. F. BURGER, General Agent,
Mercantile Exchange B'ld'g New York; P O. Box, 3 41.

PRODUCE COMMISSION HOUSE,
ESTABLISHED 1865.
S. H. & E. H. FROST,
100 Park Place, New York.
Shippers desiring to favor us will be furnished stencils, shipping cards, etc., on application. Promptness guaranteed. References: RURAL NEW-YORKER, Irving National Bank, etc.

New Publications.

Princely Publications.

MISS JEROME'S NEW BOOK,

IN A FAIR COUNTRY

With 55 full-page, original illustrations, engraved on wood and printed under the direction of George T. Andrew, with nearly 100 pages of text by Thomas Wentworth Higginson. Elegantly bound in gold cloth, full gilt, gilt edges, $6.00.

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ONE YEAR'S SKETCH BOOK Forty-six original illustrations. In same bindings and at same prices as "Nature's Hallelujah."

A BUNCH OF VIOLETS Original illustrations Quarto, Cloth, $3.75.

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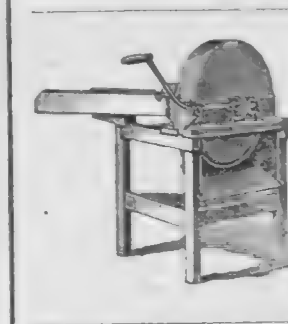

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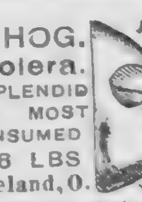

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otherwise beautifully called "feast of ingathering at the end of the year,"—being held in the autumn after the whole of the chief fruits of the ground—the grain, the wine and the oil—were gathered in, we doubtless owe the suggestion of observing a set time for thanksgiving.

Long before the Pilgrim Fathers had come to this country, there was an occasional observance of such a day in various parts of Europe formally recommended by the civil authorities, usually for some signal victory or remarkable deliverance from danger. But it was left to our own sturdy, conscientious forefathers to inaugurate its observance out of gratitude for the common mercies of life, and to make it one of our most beautiful and permanent holidays. Surely it is a most fitting and typical outgrowth of their conscientious gratitude under hard and trying conditions.

In the winter of 1620 a little band of 102 immigrants were landed on the bleak and forbidding coast of Cape Cod Bay. They were not people who had all their lives been inured to physical hardships, for many of them were gentle, delicately-reared men and women. No wonder therefore that the privation and hardships necessarily incident to life in a new country with a severe and rigorous climate, sadly decimated their ranks until ere the first year had passed a startling number of new-made graves made doubly precious and sacred their new home. Yet, in spite of all the suffering and hardships they had endured, the next winter found them with so much for which to be grateful that they had to appoint "an especial day on which to give especial thanks for their mercies."

It is impossible for us in our modern comfortable homes to conceive of the discomforts and suffering they must have endured, and when their whole harvest was gathered, I suppose it was no more than that of the average thrifty farmer of the present day. "Governor Bradford sent four men out fowling that they might obtain luxuries for a feast of rejoicing together." About this time a friendly Indian Chief, Massasoit, with some 90 men, came among them, and they went out and killed five deer, and contributed to the entertainment, which they shared for three days. Thus with a feast of venison and fowl was the first Thanksgiving Day in New England celebrated; for with their scanty, rude appliances for cooking and the small store of provisions in their larder, you may be sure there were few of the dainties which we think essential to a modern feast. This occurred in the year 1621.

Afterwards special seasons of prosperity were often made the occasion of public thanksgiving, and on several occasions a day of fasting and prayer was changed into one of thanksgiving by what seemed an immediate answer to their prayers. Such an instance occurred in July 1623. There was a very severe drought which threatened the destruction of their entire crops. The Governor appointed a day of fasting and prayer: but, lo! while they were praying copious rains fell, and it was made a day of most hearty and sincere thanksgiving, kept with religious observances as was always the custom. History tells us of various other thanksgiving days; but it was not until half a century and over had passed that we find any indications of its having become an annual custom.

During the revolution, Thanksgiving Day was a national institution, annually recommended by Congress. But after 1784, when there was held a general thanksgiving for peace, we had no other national appointment until five years later, in 1789, when President Washington by the request of Congress, recommended "a day of thanksgiving for the adoption of the Constitution." Though at various times there were proclamations of thanksgiving for especial deliverances and mercies, yet it was mainly in the New England States that an annual proclamation was issued by the Governors of the various States, and it is to them that we owe the perpetuation of the day, for they made it their principal social and home festival usually kept with appropriate religious ceremonies.

During our civil war President Lincoln issued proclamations appointing special thanksgiving for victory both in 1862 and 1863, and he issued a national proclamation of annual thanksgiving in 1863 and 1864, since which time such a proclamation has been issued annually by the President as well as by the Governors of the States and mayors of the principal cities.

In many respects this has been a most disastrous year; many terrible calamities have visited us; death has reaped an unusual harvest. The destruction of property has been immense. For some kinds of business too—noticeably for that of farming, which affects wider interests and more people than any other one industry—this has been an unfortunate year. In some sections of our vast country husbandmen have contended with a severe and destructive drought; while in others they have suffered from long-continued rains and even floods. The result of all this will be to cause many people to doubt whether they have any cause of gratitude—any reason for giving thanks. But I doubt if there be one reader of this paper who has not many. He may have to look below the surface of things material—at the real values of life—to find them; but he will be a better man if he looks and gives thanks. Let each show that he has inherited a little of that sense of justice and appreciation which the Pilgrim Fathers had.

For some strange and occult reason a majority of people seem inclined to look on the dark, rather than on the bright and hopeful side of life. They deliberately choose to hug the trials and sorrows of life to their hearts rather than to "count their mercies" and give thanks. We are not apt scholars, any of us, at learning what a valuable "elixir of life" a glad, hopeful heart is. We should pity or congratulate people rather for their temperament than for the conditions of life in which they are placed. To be sure, we did not choose our temperaments; but it is obligatory on us all to cultivate a habit of cheerfulness and hopefulness until we have made it a part of our very selves.

Financial embarrassments are hard to endure; sometimes there are circumstances which make them distressingly so; but, at the worst, they are usually soon lived through, and if honestly, bravely, and philosophically borne, rarely leave a sting behind them. Some day you may even look back and see that they were a link in God's helpful mercies. It is not wealth or even an abundance that makes unselfish, grateful hearts, for oftener it is found to be the very reverse of this, and some of the keenest reproofs I have ever felt in life came from seeing how contented, happy, and peaceful were the lives of people whom in my ignorance I had pitied.

On the busy, over-worked housewife falls the duty or the pleasure of taking the initiatory steps towards celebrating this or any other domestic anniversary. Many circumstances may deter her from making an old-fashioned New England banquet which seems a culmination of all the luxuries of the year, and to which all the uncles, aunts, and cousins are invited. This is, indeed, beautiful; but if you can only compass a simple little feast for your own immediate family, by all means do that little with enthusiastic, glad and thankful hearts. If your children are old enough to be of the least assistance arouse their sympathies, and convince them that you greatly need their co-operation. Many a mother who hungers for appreciation and praise in her round of prosaic, grinding duties, forgets to brighten her child's life by making it feel itself indispensable to her happiness. If more of the spirit of Thanksgiving Day permeated all the days of the year, we should hear far less of unhappy homes and thankless children. If we emphasized more the sweetness, the gladness and happiness which our children bring into our lives, we would enlarge their hearts, expand their sympathies and make them to become truer, braver, more unselfish men and women. There is no trouble in keeping children at home on Thanksgiving Day, because home is such an attractive place to them, they feel no temptation to leave it. Thus should it be every day of the 365.

If you live in the country and have gathered as many beautiful souvenirs of the fields, lanes, and woods as there are abundant opportunities for doing, you have ample material with which to decorate your table and home tastefully and beautifully. Relegate this part of the work to the children; let them exercise their own taste and judgment unless they ask for advice, and see what bowers of beauty they will transform your room into, and—what is better yet—see how long the spirit of helpfulness will abide with them. I have often thought that the injunction "Be virtuous and you'll be happy:" should be reversed, making it read: "Be happy and you'll be virtuous." There is no safeguard in life for either men, women or children comparable to the chords of sympathy and love which bind one to a cheerful, happy, Christian home. Such a home all go from with reluctance and return to with joy. There all days, even fast days, are thanksgiving days, and fitly typify the beautiful home immortal. KATHARINE B. J.

"WHAT an agreeable man Mr. Henderson is" said my wife, turning to me; "most companionable; and yet—and yet, my dear, I'm glad he is not my husband. You suit me very well." There was an air of conviction about this remark, as if it were the result of deep reflection and comparison, and it was emphasized by the little possessory act of readjusting my necktie—one of the most subtle of female flatteries.

"But who wanted him to be your husband?" I asked. "Married women have the oddest habit of going about the world picking out men they would not like to have married. Do they need continually to justify themselves?"

"No; they congratulate themselves. You never can understand."

"I confess I cannot. My first thought about an attractive woman whose acquaintance I make is not that I am glad I did not marry her."

"I dare say not. You are all inconsistent, you men."

From "A Little Journey in the World" by Charles Dudley Warner in Harper's.

LITTLE GIFTS.

MANY who want to give largely at Christmas time are compelled to be content to give only trifles and they are more perplexing to select than any other class of gifts, for they must be good of their kind and acceptable to the receiver. One who has time and even a little money can do wonders we all know, but there are many who haven't the time for more than a few stitches here and there and then the $5 seem very paltry that must be divided among the 20 relatives and friends, who positively must be remembered if the goodwill felt toward them is to have any expression at all. Well, that means only 25 cents to spend for each one and the thought makes life look miserable for a little while; then the determination to make every quarter do its very best lifts a little of the cloud and the planning begins. The child-friends it seems possible can be pleased by spending 25 cents for each of them, but what can be bought for the older ones? A list is made out with the following result and gifts for all are settled on at last.

Standard works in the Seaside Library in paper binding are each 20 cents. Covering them with the most artistic sateen or other cloth covers makes them worth more than their cost. Three-quarters of a yard 26 inches wide, will be ample to cover four books, so that the outlay for the covers need not add more than five cents to the cost of each book, and the binding will add very greatly to its strength and durability. Handkerchiefs at one, two or three for a quarter, according to the needs of the one to receive them, or five of the gayly bordered five-cent ones for the little sister or brother who is delighted with quantity and supremely indifferent to quality, will give satisfaction. A collar and pair of cuffs, or two nice collars can be bought for the sum we are spending, or a yard of soft ruching. There are photographs of noted people and places that can be bought for 25 cents apiece either mounted or unmounted. A collection of black pins, needles for sewing and for darning, a five-cent tape measure and a button bag can go to make one gift.

A plant or two from the greenhouse will be an acceptable offering for one friend's window garden. Five packages of flower seeds, the old favorites that sell at five cents a paper and give a wealth of pleasure, or one or two packages of rarer seeds, especially such as should be started very early in the spring, as pansy and verbena; a collection of verbena seeds, scarlet, separate and fine mixed in another package are a good choice. There are numberless useful things for the kitchen that may be acceptable gifts—a wire potato masher, a toaster, a stiff cleaning brush that costs eight or ten cents, a little strainer to be attached to the spout of the coffee-pot, a tin flour scoop, a whisk broom to be used about the stove and other articles the buyer will find when he starts out to select them to the value of our coin.

If these homely trifles happen to appear on Christmas morning in costumes of vivid calicoes or even silks with improvised heads and arms, it will be a mystery, of course, and should each one bring a speech in its hands setting forth its own special uses, and promising (of course, not extravagantly) many things for the future, that will be a mystery too.

A few such funny things in the Christmas pile are just as necessary in some homes, and just as natural expressions of the jollity felt there as the laughter that goes with the dinner and lasts after the supper. Grinning potato dolls for the most serious members of the family, gingerbread men for the oldest; a stick of candy for the one who hasn't a sweet tooth; an elaborate tissue paper bonnet for one of the boys or a pair of leather spectacles for another.

Christmas would not be itself in many homes with all the friendly jokes left out, and how these are remembered by the children when they have grown up and left home. If there is only a little to spend for the holiday gifts, let us spend it with a hearty good-will, and by forethought find some trifle that will gratify a wish or fill a need, and then give with it a rhyme, a riddle, a joke or a legend or a timely greeting, and be content, even though others spend dollars where we can spend only cents.

ALICE EWALDA BROWN.

GLEANED FROM HERE AND THERE.

AS oysters are in season now, anything about them is also in season. In looking over an old Popular Science Monthly, I find the following, which shows that, despite the old saw "As dumb as an oyster," oysters are not so dumb after all—that they can be taught to keep their mouths shut—a degree of "teachableness" not possessed by many people who would be indignant should it be only hinted that they were dumb.

"The oyster is not such a fool but that it can learn by experience, for Dicquemase asserts that if it is taken from a depth never uncovered by the sea it opens its shell, loses the water within and perishes. But oysters taken from the same depth, if kept in reservoirs where they are occasionally left uncovered for a short time, learn to keep their shells closed, and then live for a much longer time when taken out of the water. This fact is also stated by Bingley, and is now turned to practical account in the so-called 'oyster schools' in France. The distance from the coast to Paris being too great for the newly dredged oysters to travel without opening their mouths or shells, they are first taught in the schools to bear a longer and longer exposure to the air without gaping, and when their education in this respect is completed, they are sent on their journey to the metropolis where they arrive with closed shells and in a healthy condition."

I do not know whether or not any of my readers have noticed how differently the word *dumb* is used. Webster says that dumb means destitute of the power of speech—not willing to speak; silent—but in some parts of the country it is used with an entirely different meaning. It takes the place of or is synonymous with stupid. We often hear people say: "She's an awfully dumb child," when they mean a stupid child. The oyster is *dumb* when the word means silent, but from the above, not so, when it means stupid. If there is any authority for dumb being used as meaning stupid, I should like to know it. Can any one tell me?

* * *

THE ORIGIN OF WORCESTERSHIRE SAUCE.—The following is from the London World of some few years ago. "A scrutiny of the label will show that it is prepared 'from the recipe of a nobleman in the country:' The nobleman is Lord Sandys, and Messrs. Lea & Perrins's connection with the sauce came about rather curiously. Many years ago Mrs. Gray, author of "The Gambler's Wife" and other novels, well known in their day, was on a visit at Ombrisley Court, when Lady Sandys chanced to remark that she wished she could get some very good curry-powder, which elicited from Mrs. Gray that she had in her desk an excellent recipe, which her uncle, Sir Charles, Chief Justice of India, had brought thence and given her. Lady Sandys said that there were some pretty clever chemists in Worcester who, perhaps, might be able to make up

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the powder; at all events, when they drove in after luncheon they would see.

Messrs. Lea & Perrins looked at the recipe, doubted if they could procure all the ingredients; but said they would do their best, and in due time forwarded a packet of the powder. Subsequently the happy thought struck some one in the business that the powder might, in solution, make a good sauce. The experiment was made, and by degrees the thing took amazingly. All the world, to its remotest ends, now knows of Worcestershire sauce as an article of commerce; and notwithstanding that in common with most good things it is terribly pirated, an enormous trade is done in it. The profits, I am told, amount to thousands of pounds a year, and I cannot but suppose that liberal checks bearing the signature of Lea & Perrins, have passed from the firm to Mrs. Gray, to whom it is so indebted for its prosperity.

* * *

THE origin of blue-tinted paper came about by an accident, a mere slip of the hand. The wife of William East, an English paper-maker, accidentally let the blue bag fall into one of the vats of pulp. She held her peace fearing her husband's anger when he discovered the damage which she supposed she had done. Mr. East could not account for the color of the paper and thought it was ruined. He, however, put it on sale and it went like the proverbial "hot cakes." He received some heavy orders which he could not fill and was about to give it up, when his wife told what had happened. By this very blue paper, discovered by an accident, Mr. East made his fortune—and I suppose Mrs. East did also, only nothing is said on the subject.

DORA HARVEY VROOMAN.

"FANCY-WORK" OF A CENTURY AGO; TIMELY COOKERY.

IF those ladies who are so criticised for spending much needless time and eyesight in fancy-work nowadays could see some of the marvelous creations in lace and embroidery and painting done at the Moravian Home of the Single Sisters in Bethlehem, Pa., between the years 1777 and 1794, they might take courage—which would be a pity. But two or three pieces were so remarkable that I must "tell about them" anyway.

One was a bit of what looked like very fine "book-muslin" a foot in length by six inches in width; on this, partly in drawn work, and partly in embroidery, and lace stitches, were 76 palm leaves and medallions, each done in a different stitch. The medallions were arranged as a center-piece, each bearing the initials of the maker; for this was done by several different hands, and the palm leaves made a border; and so minute was this work that quite a space was left around the center-piece and a good margin beyond the border. The whole was framed under glass for preservation. Another piece of work was a satin watch paper—ask your grandmothers about that fashion—containing within its tiny circle a wreath of 50 painted blush roses, each as perfectly shaded as are the life-size ones painted to-day and the attendant in charge averred that the work was "done by the naked eye."

Our present fashion of embroidery in ribbon and arasene is but a revival of a fashion in vogue over 100 years ago, as testified by pieces shown there, but the fancy-workers of to-day have greatly enlarged the patterns; one spray, shown there, of diminutive roses, and buds and leaves, less than four inches square, including margin, was done as perfectly as that now done of five times its size; the arasene used was not coarser than our embroidery silk. It makes one's eyes ache only to look at such flowers; the eyes that guided the needle to make them must have had even greater power than Sam Weller, in the famous case of Bardell *vs* Pickwick, said he must have to answer the cross-examining barrister's questions. This work, showing such infinite patience, was done by the so-called "Moravian nuns;" but the Moravians disclaim the existence of nuns, as the term is generally understood, either past or present in connection with their church at B. The "Home," still standing, was provided literally for single sisters whether widows, "old maids," or young girls, who had not the shelter of a husband's brother's or father's house.

Perhaps the cooks who read the R. N.-Y. will appreciate a couple of recipes used by these "sisters." One is a "German Christmas Loaf, (Strietz):" One-and-a half pint of milk, one-half pound of butter, one cup of sugar, three-fourths of a pound of raisins, one-fourth of a pound of currants, three ounces of citron, two dozen almonds blanched and pounded, three pounds of flour, one tea-spoonful of salt, and one-half cake of Fleischman yeast. Set a sponge over-night with one pint of the milk, one pound of flour and the yeast dissolved in water. In the morning add the butter and sugar rubbed in the flour, the salt and the half pint of warm milk. Knead till the dough no longer sticks to the hands, adding flour gradually; lastly add fruit rolled in a little flour. Let rise again, and when light, divide into small loaves, which roll out an inch thick, lap over, and put on flat tins to rise again. When light, bake in a well heated oven for half an hour.

Another dish is called "Ollicooks" much like our doughnuts, and takes two days to prepare it. The ingredients are one pound butter, one and a-half pound of sugar, one quart of milk, one-half pint of yeast, 10 eggs and one nutmeg. Take the milk and yeast and half the butter, and set a sponge, adding sufficient flour at noon. In the evening mix the other half of the butter with the sugar and grated nutmeg to a cream, have the eggs well beaten, and put all into the sponge, adding flour as stiff as can be stirred, and set in a warm place; in the morning roll out in the hands (not on a board) put a raisin in the middle of each, lay on a board and let rise again for a few minutes: then drop in boiling lard. BETTY.

THINGS THAT HURT.

WE were going "up town" in an elevated car not long since when a gentleman with his little daughter, probably three years of age, entered the car at Park Place and took the seat opposite us. The child was exceedingly bright-looking, very observant and talkative and her clothing showed care and taste in its picturesque effect. The father was intelligent-looking, had a kind, good face and was evidently a well-to-do business man. Tied to the fathers' trim umbrella was a narrow package 18 or 20 inches in length.

The little daughter soon pointed to the package and demanded her dolly. "No," said papa, "you can't have it. The trainman won't let you have dolly on his cars." The little tot looked somewhat incredulous and after a moment of silent wonderment and a sharp look at the brakeman who stood at the end of the car said in a half crying tone: "Me want dollie." "No," came the answer "if the man should see your dolly he would come right in and take it away from you and carry it out there," pointing to the platform.

LUNCHING at a restaurant we sat at table with a mother and child; the latter could not have been over five years of age. She asked her mother for a cup of coffee. The mother evidently expected the request for she had ordered a pot of coffee and two cups. The coffee was given the child undiluted and without the slightest hesitation.

Miscellaneous Advertising.

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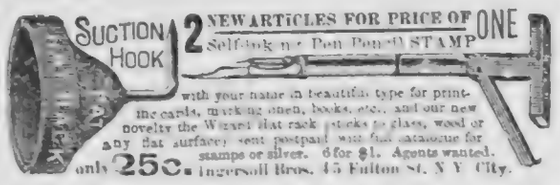

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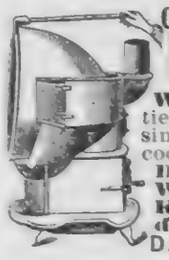
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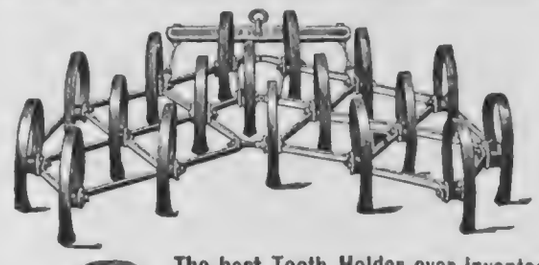

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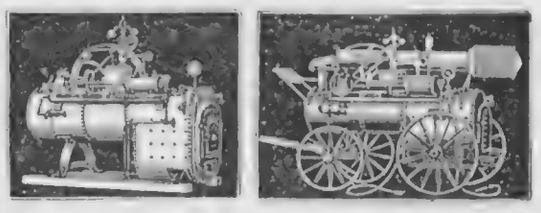

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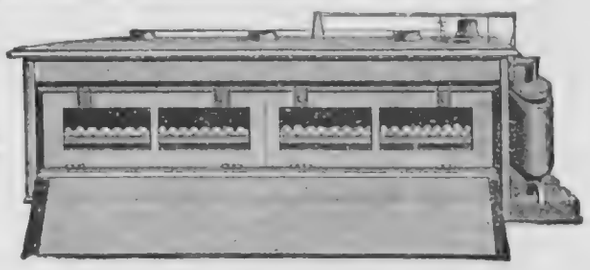

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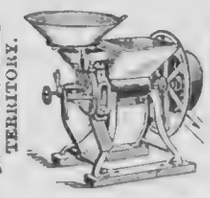

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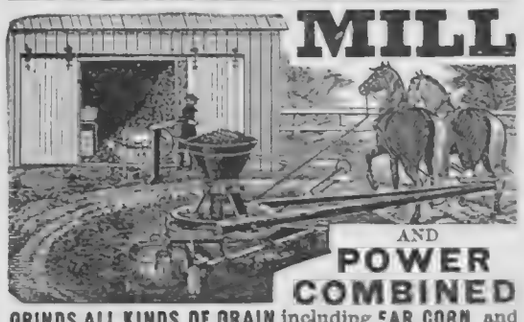

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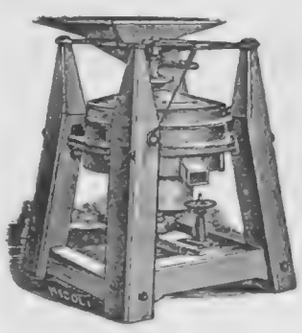

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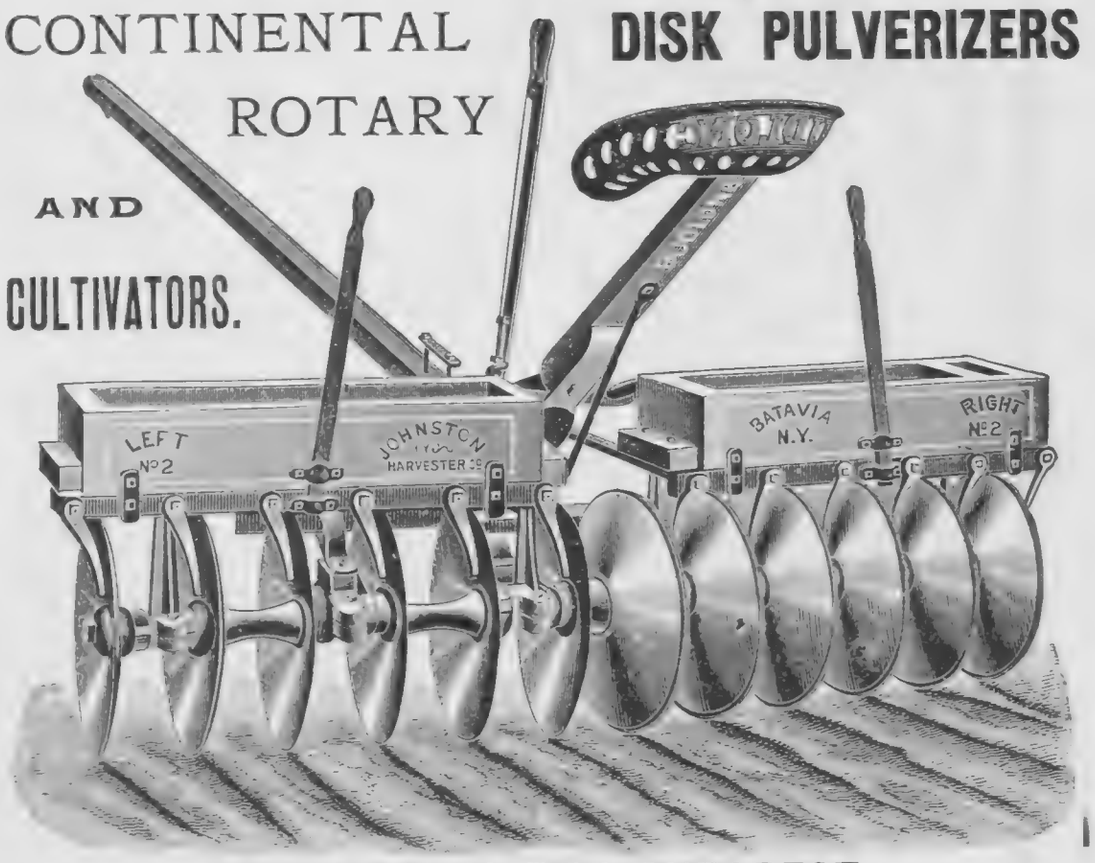

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We offer the man who wants service (not style) a garment that will keep him dry in the hardest storm. It is called TOWER'S FISH BRAND "SLICKER," a name familiar to every Cow-boy all over the land. With them the only perfect Wind and Waterproof Coat is "Tower's Fish Brand Slicker."

Ask for the "FISH BRAND" SLICKER and take no other. If your storekeeper does not have the FISH BRAND, send for descriptive catalogue. A. J. TOWER, 20 Simmons St., Boston, Mass.

Literary.

MAGAZINE REVIEWS.

DRESS for November—December, contains a continuation of the articles on "Physical Culture" with the different exercises illustrated by diagrams. These exercises are intended to produce normal development of the entire physical system. Mary A. Livermore, under "Health and Woman's Dress," gives a very sensible talk on the folly of the prevailing system of dress, which she thinks is largely responsible for the prevailing weakness of women of the present day. Many if not most of the physical conditions surrounding women and girls have vastly improved since her girlhood days; but the physical stamina of the American people does not improve. She attributes this largely to the unhygienic dress and bad habits of life of the young women, and the tobacco, alcohol and other pernicious habits of the young men. "No young, growing girl should be allowed to wear corsets." The magazine abounds in directions and suggestions for dressing hygienically and at the same time fashionably. It is, in short, an exponent of fashionable dress-reform. One criticism of the Jenness-Miller system, as well as of other dress-reform systems, is that it is too expensive for the class who need it most. Their reply is that they have sought first to interest the fashionable element, realizing that it is the society leader's dress that the average young woman watches most closely. It certainly should cost no more to dress healthfully and comfortably than fashionably and uncomfortably. Beginning with January, the magazine will be issued as a monthly. Jenness-Miller Publishing Company, New York.

GODEY'S LADY'S BOOK, the delight of so many of our mothers, and grandmothers has now been published 60 years without missing an issue. No better proof could be given that it meets the wants of its large list of readers. The November number, now before us, consists of over 90 pages, besides a full-page engraving, a colored fashion-plate and a page of architecture. The fiction consists of a Thanksgiving, a Hallowe'en, and a humorous story, three other short stories, and the closing installments of two serials: "A Model American Girl;" and "A Woman's Way." A half-dozen poems, "The Beautiful Home" Club, Chats with Our Neighbors, Household Department and Work Table, Book Reviews, etc., fill out the varied contents of the number. The Work Table gives an unusually pretty pattern for the new and popular Roman, or Guipure embroidery. The fashions are from the latest Paris models, and by a system of coupons, sent with the magazine, each subscriber has one choice from all the patterns of the month. This month there are 28 to select from. Sample copy, 15 cents. The Godey Publishing Company, Philadelphia.

BOOK REVIEWS.

HOLIDAY books multiply, and as a matter of course, a large proportion of them are for the young people. Three good examples of these are before us this week: Little Miss Weezy's Sister, by Penn Shirley, is a pleasant little child's story. It is rather bright and funny, and will suit the ten-year-olds. Cloth; 5x6¾ inches; 159 pages; price 75c; Lee and Shepard, Boston.

BETTY LEICESTER is a fresh and simple little story for girls, by Sarah Orne Jewett, which was published earlier in the season in serial form in St. Nicholas, under the title: A Bit of Color. While not at all of the goody-goody style, it is helpful and sweet, and all the girls will love Betty. Bound in scarlet and white cloth; 287 pages; 4½x6 inches; price $1 25; Houghton, Mifflin & Co., Boston.

A SUMMER IN A CAÑON is a rather more pretentious volume bound in green and gold, and decorated with cactus and camp-kettle, containing a merry, breezy story by Kate Douglas Wiggin, written for those in their "teens." It tells of the gay doings of a bright half-dozen or so of youngsters, who, with the parents of two of them, lived in camp all through one of California's delightful summers. "California boys and girls never have to say 'wind and weather permitting' from March or April till November." The fun and frolic in "Tent Chatter" and "Tent Clatter" are woven in skillfully with fine descriptions of the trees and flowers and canons, and with some of the old-time tales. The book is exceptionally healthy in tone, and will be read with pleasure by both old and young. Cloth, 272 pages: 5½x8 inches; price $1.50; Houghton, Mifflin & Co., Boston.

THE LIFE, LETTERS AND JOURNALS of Louisa May Alcott, are brought out very fitly at this time when she was wont to have a holiday volume ready for the young people. Memoirs are often thought to be rather dry reading, but perhaps no volume of fiction was ever read with more eager interest than will be given to this life of Miss Alcott. Though edited by Ednah D. Cheney, the book is almost an autobiography, as the editor has had the rare grace of almost effacing herself, and has allowed the letters and journals to tell the story. And so thoroughly like Miss Alcott's style of public writing is the style of these papers, especially the earlier ones, that one almost feels that he is reading a new story from the pen of this loved writer.

Though it was known that she supported the family by her work, the great world outside of the family friends will be surprised to learn through what straits and sacrifices she was obliged to fight her way on her path of duty. The woes of th "March" family become almost joys before the more pathetic ones of the Alcotts. Louisa's one aim, kept always in sight, was to make the family comfortable and pay the debts, which she finally did, educating her younger sister May (the "Amy" of Little Women) and assuming the support of the elder sister's children after their father's death. In one of her "moans" in her journal she says: "When I had youth, I had no money; now I have money, I have no time; and when I get time, if I ever do, I shall have no health to enjoy life." In another place she hopes her life may help others. Her hope will be realized; for this real story of duty faithfully done, through trial and sorrow and years of painful suffering from overworked body and brain, will touch all hearts, and will lead to nobler living many whom no imaginary tale could stir. The volume is uniform in size and binding with Miss Alcott's novels, and is inscribed to Mrs. Anna Pratt, ("Meg") her only surviving sister. It contains two fine photogravures, one as she appeared at 30, and one in later life, which shows very plainly the softening effect of the trials at which she so often wondered. Cloth; 400 pages; price $1 50; Roberts Bros., Boston.

IN A FAIR COUNTRY is inscribed in gold and brown on the cover of a gilt-edged, bronze-bound treasure lately from the press of Lee and Shepard. The Fair Country is our own, lying all about us, and it is so beautifully pictured in a series of essays by Thomas Wentworth Higginson, with illustrations by Irene E. Jerome, that it is difficult to tell which are most charming. Mr. Higginson is on visiting terms with flower, and bird, and every form of country life. The text consists of: April Days, My Out-Door Study; Water Lilies; The Life of Birds; The Procession of the Flowers, and Snow. Mr. Higginson says: "Most people resign themselves to be decently happy in June; they accept it; they compliment its weather, etc. But it is time to chant a hymn of more liberal gratitude. God offers us yearly a necklace of 12 pearls." He quotes a child's definition that an idiot is one who doesn't know an arbor-vitæ from a pine. Two of his sayings might be taken to point toward the national flower question, though evidently written with no thought of it: "I is impossible to create a popular name." "The *Epigæa* is really the wild flower for which our country people have a hearty passion."

Every second satiny page has an illustration breathing the spirit of the text. While all are charming, perhaps those of Water Lilies; My Out-Door Study; and the Procession of the Flowers are especially so. There are about 100 pages of text, making a thick volume. Fortunate indeed is he who receives this elegant book as a holiday gift. Nine and a-half by 13 inches; price $6. Lee and Shepard, Boston.

A DRIFT, by Julia Ditto Young, is one of those novels that make one wonder for what earthly purpose they were written, although the scene and the inscription of the book to William D. Howells lead one vaguely to suspect that the author was trying to create character studies, "after" Howells. Many would say that it is not a bad novel, but that cannot be called good which leaves the reader, as this one does, cynical, *ennuyé*, "adrift." That all the married people should become in love (?) outside the pale of the law; and that the only unmarried woman should steadfastly refuse marriage under any circumstances; while the work closes with a double tragedy, makes it an impossibility for the book, viewed purely as fiction, to give the reader any pleasure. At the same time it helps to swell the list of books, already far too large, that lead to a light conception of the sanctity of the marriage tie. Every character in the book is a study which makes rather too much of it, though some of them are quite good. The one thing in the book that might serve to point a moral is the common feeling voiced by the weak woman who has just listened to words of passionate endearment from a man who is not her husband: "I didn't know I should ever again be precious to any one; that any one would prize as a lover does, my smile, my glance, my foolish little ways." Careless husbands might find a lesson here if they would. Cloth, 275 pages; 5½ by 7½ inches; price $1.25: J. B. Lippincott Company, Philadelphia.

HEROES OF THE CRUSADES by Amanda M. Douglass, is a collection of historical sketches, 10 in number, of men who made themselves famous in these holy wars. Among them are Tancred, Godfrey of Bouillon, Saladin, and Richard Cœur de Leon. With a wealth of material comprising so much invincible valor and so much romance, it would seem that these tales might have been made more entertaining. Perhaps the best parts are the stories of Richard and Saladin, and the summing-up, in which the author says: "Blood and treasure had been wasted for the Kingdom of Jerusalem, but who shall say that it had not saved Western civilization from the forays of an intruder, and held in check the lords of Islamism who, later, made themselves masters of Constantinople," Cloth, 349 pages: 5½x7½ inches; Lee and Shepard, Boston.

Miscellaneous Advertising.

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Fig. 1 is from an instantaneous photograph of a man ascending a ladder; he has two artificial legs substituting his natural ones, which were crushed by a railroad accident and amputated. Fig. 2 exposes his stumps. With his rubber feet he can ascend or descend a ladder, and balance himself on the rungs. He can walk and mingle with persons without betraying his loss; in fact, he is restored to his former self for all practical purposes.

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Address HOWARD MFG. CO., PROVIDENCE, R. I.

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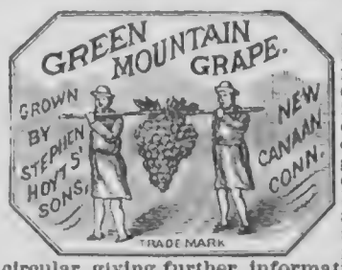

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CATALOGUES, ETC., RECEIVED.

W. ATLEE BURPEE & COMPANY, PHILADELPHIA, PA.—A circular of novelties for 1890. It is impressed upon the reader that these are actually *novelties* of real merit and that the descriptions are true to nature, having been written during growth at the firm's trial grounds called Fordhook Farm.

THE GENEVA GRAPE.—Circular from R. G. Chase & Company, Geneva, N. Y. This new white grape is illustrated and described and some good authorities on grape culture testify to its merits.

FRANK WILSON'S BONE MILL.—Catalogue from Wilson Brothers, Easton, Pa. This pamphlet grows larger and more valuable each year. We judge from this fact that the bone mill business constantly increases. This is just as it should be. We have used this mill for bones and shells for some years and find it a great help and a source of profit. If you keep hens, you need a bone-mill. The "Wilson" is the best mill.

TORNADO FEED AND ENSILAGE CUTTERS.—Catalogue from W. R. Harrison & Co., Canton, Ohio. There are 16 reasons given why the "Tornado" is the best cutter made. The best of it is that these reasons are all backed up by the testimony of solid and business farmers. The cutters themselves, with their distinct and peculiar parts are carefully illustrated and described so that one can readily see how they work. Any man who thinks of buying a cutter should examine this pamphlet. It is a good one.

MONARCH INCUBATOR.—Circular from James Rankin, South Easton, Mass. Mr. Rankin is one of the most successful poultrymen in the country. He gives the "Monarch" credit for a great part of his success, and from what the R. N.-Y. can learn this is a just credit. We do not think the every-day poultry-keeper will find any incubator that will suit him better than the "Monarch" This is merely an opinion. We have not tried to work any incubator.

KELLY DUPLEX FEED MILL.—Circulars from The Springfield Engine & Thrasher Co., Springfield, Ohio. The R. N.-Y. has frequently called attention to the Kelly Duplex Mill. To show what the manufacturers claim for it, we may quote from the circular as follows:

"In a mill intended for grinding feed the following things are desirable, and they constitute the essentials of a good mill:

First.—It must cut up the grain or material to be ground, whatever it is, into small, fine particles. The object is to enable the stomachs of animals eating it to appropriate all of it so that none of it is voided in the dung and wasted. If the grain is so cut up into minute particles of uniform size, the greatest possible surface is thus presented to the action of the digestive fluids in the stomach of the animals. Most mills crush a part of the grain or material into a pulp and leave the balance in coarse particles. Mills of that kind are not to be accepted as good grinding mills.

Second.—It must do the work with economy to the power.

Third.—It must do it rapidly so that the largest possible quantity may be ground in the shortest possible time.

Fourth.—It must be able to grind successfully all kinds of grain and grind uniformly well.

Fifth.—It must have a regulating device by which the operator may easily, and without the loss of time or *consumption of power*, regulate the quality of the grinding.

It is claimed that the Kelly Duplex possesses these qualities in a pre-eminent degree."

"ONE WAY TO SAVE MONEY" is to buy everything you can direct from the manufacturer and never pay a middleman's profit. Our readers have certainly noticed the advertisement of the Wilber H. Murray Manufacturing Company, of Cincinnati, Ohio, who are manufacturers of the "Murray" $5.95 Single Harness and "Murray" $55.95 Side Bar and End Spring Buggies. We take pleasure in saying to our readers that we know this firm and that we believe they will do just what they say and that any orders given them will receive the best attention. They make a full line of buggies and buggy harness and guarantee everything just as represented or the money is refunded. It will pay every reader of this paper who has not received one of these catalogues to write for it. All letters should be directed plainly Wilber H. Murray Manufacturing Company, Murray Building, 139 W. Front Street, Cincinnati, O.

LUBURG ADJUSTABLE CHAIR.—In examining the catalogue of the Luburg Manufacturing Company, we are reminded of the fact that the Luburg chair will prove most acceptable as a Christmas present. The chair is a marvel of comfort and convenience, with its 50 changes of position. Prices range from $7 upwards. This house also offers a full line of invalid wheel chairs, baby coaches, etc. Address the Luburg Manufacturing Company, 145 North Eighth Street, Philadelphia. All of these goods are offered as premiums to R. N.-Y. agents.

THE PRESSEY BROODER.—Catalogue from G. W. Pressey, Hammonton, N. J. When it is stated that this brooder is used on many of the best broiler farms in southern New Jersey, enough has been stated in its praise. It is cheap, simple and good.

THE WEAVER ORGAN.—Catalogue from The Weaver Organ and Piano Company, York, Pa. These organs are guaranteed for six years, that is, the manufacturers agree to replace one if, within six years, with proper care and use, it proves defective in material or construction. This is fair enough; is it not?

LINSEED-OIL MEAL—ITS VALUE AS A FEED.—This is the subject of a little pamphlet issued by the Detroit Linseed-Oil Co., Detroit, Michigan. There can be no doubt about the value of linseed-oil meal as a food for animals. The complaints from those who have used it may generally be traced to confounding it with cotton seed meal and to mistakes in feeding it—wrong combinations of the feeding elements. Like every other good thing, it can be abused. Farmers should know how to feed it to the best advantage. This little pamphlet will help them to such an understanding, and we hope all our friends will look the matter up.

ARTIFICIAL LIMBS.—Circular from A. A. Marks 701 Broadway, New York. If there is any reader of the R. N.-Y. unfortunate enough to need a new limb the best we can do is to refer him to Mr. Marks. He is the man whose ingenuity enables a person with both legs cut off to climb a ladder or ride a bicycle.

Miscellaneous Advertising

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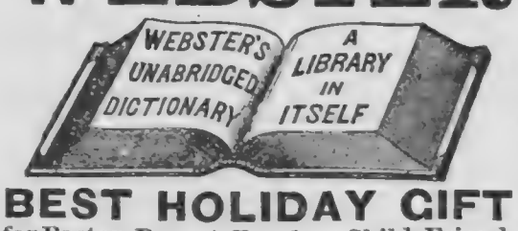

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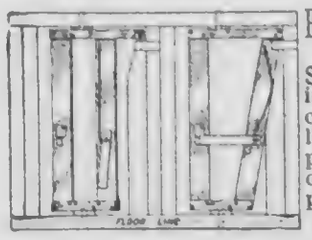

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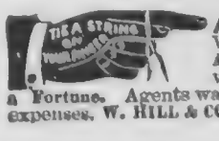

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Were given with nearly every issue during the last year, and will be continued. They give an increase of nearly one-half in the matter and illustrations, **without any increase in the price of the paper.**

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And One Hundred other well-known and favorite writers.

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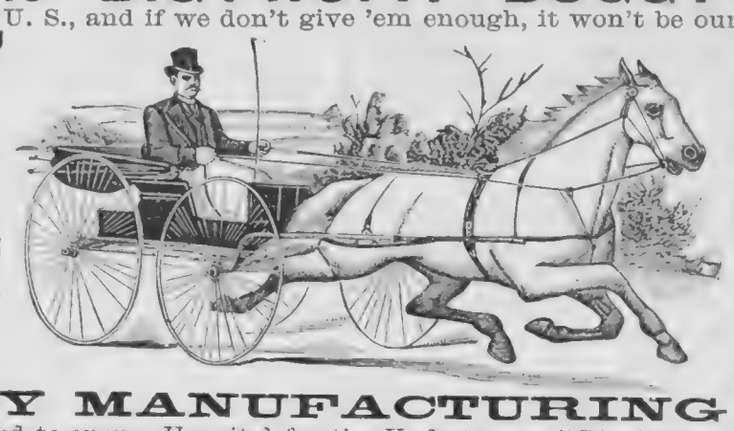

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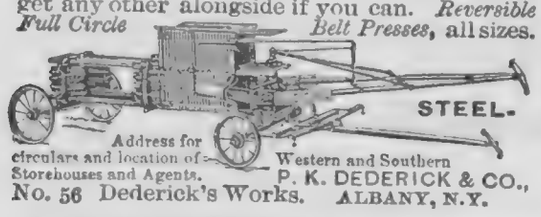

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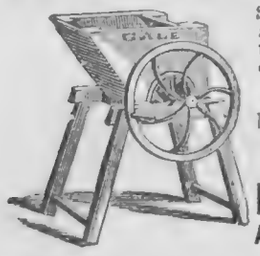

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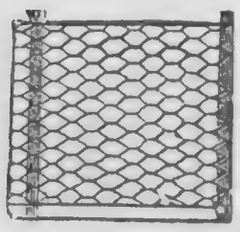

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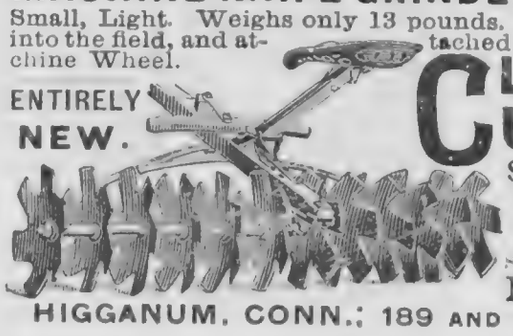

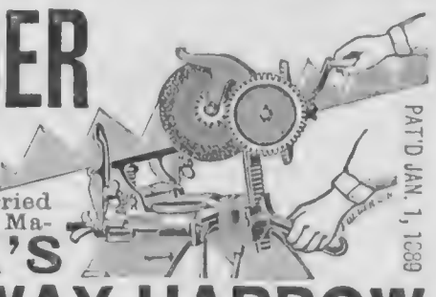

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XLVIII. NO. 2080. NEW YORK, DECEMBER 7, 1889. PRICE, FIVE CENTS. $2.00 PER YEAR.

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The Vineyard.

MINER'S SEEDLING GRAPES—THE ANTOINETTE.

T. B. MINER spent many years of his life in raising seedling grapes, all, in so far as the writer recalls, from Concord seeds. Several years before his death, he brought specimen bunches of the varieties he most prized to the R. N.-Y. office. They were Antoinette, Augusta, Adeline, Belinda, Carlotta, Victoria, Lexington, Rockingham and two or three others not recalled as we write. These were a selection from some 1,500 seedlings which he had raised, as we have said, from Concord seeds, there never having been any pretense on his part of having made any crosses. Some time later specimen vines of Victoria, Rockingham, Carlotta, Antoinette and one or two others were sent to the Rural Grounds for testing. All died except one each of Rockingham, Carlotta and Victoria, notes in regard to which have appeared in these columns every season since. The Rockingham is a black grape of higher quality than the Concord ripening at the same time. But the berries crack open and the bunches are often loose. Carlotta is a white grape ripening a few days before Concord. The berries are sweeter than the Concord and in other respects of the same quality. The vine is a rather shy bearer. The Victoria has been so fully described that no further reference need be made at this time. The vine is remarkable for hardiness, healthiness and fruitfulness. A vine of Antoinette was sent to the Rural Grounds in April of 1886 by George W. Campbell of Delaware, O., and has borne for two seasons, the past season heavily, though the bunches were all imperfect from the injury the buds sustained from the rose beetles. The photo-engraving, Fig. 286, shows average bunches.

The vine is very vigorous and perfectly healthy and, thus far, perfectly hardy. The berries ripen with Concord or a trifle earlier. They are medium to large, round, a little flattened, yellowish white, free of rot and mildew. Pulp partly breaking, sweet; better than Concord to those who do not object to their foxiness which is more pronounced. As grown at the Rural Grounds and judged at this time, it is preferable to either Empire State, Hayes or Pocklington.

FROM SEC'Y GEO. W. CAMPBELL.

The Antoinette was sent to me by the late Mr. T. B. Miner, of Linden, N. J., its originator, nine or 10 years ago. The vine has proven a very vigorous and healthy grower, very hardy, and always free from mildew. As to productiveness: it has been rather variable; in some seasons it has borne well; in others not, and although this may be said of all varieties, I think the Antoinette somewhat less reliable in this respect than some other seedlings of similar character of Concord parentage, among which may be named Lady, Pocklington and perhaps Hayes. In general character it is much like other white Concord seedlings, all of which have a general family resemblance. Its berries are round, and nearly as large as those of the Pocklington; the clusters average smaller, though they are of fair size. It ripens about with Concord, and keeps about as well, either on or off the vine. In quality it is, when well ripened, somewhat like the Lady, but, to my taste, hardly as good.

Mr. Miner originated more than a dozen white varieties which he regarded very highly, among which were the Victoria, Carlotta and the Antoinette, the latter having been sent to me as one of those which he regarded as very promising. The Victoria he also commended very highly, and he wrote me that it was "in quality so much superior to the Concord as to throw that variety back as worthless in comparison with Victoria." He had also several black varieties which he regarded highly, among which were Belinda, Linden and Lexington. I tested them, but could not find them equal to either Concord or Worden for general culture. The finest-flavored of all his grapes I consider the Carlotta, but it is in all its characteristics so much like the Hayes that I do not think I could tell the one from the other, either in vine, foliage or fruit. Although the Antoinette is healthy, hardy and vigorous in growth, of fairly good quality, usually productive and free from rot, I hardly feel justified in recommending it as a variety likely to be found useful for general and profitable planting; but as an amateur grape to make up a variety it would doubtless be interesting, and in many places might be found successful and valuable.

Delaware, Ohio.

FROM G. W. PECK.

In the autumn of 1879 I purchased from the estate of the late T. B. Miner, in Linden, N. J., several new seedling grapevines: Linden and Lexington for black, Belinda, Victoria, Carlotta, and Antoinette for white. My collection has since been increased by about 50 other varieties representing old and new sorts, including several of Rogers's Hybrids. From nearly a decade of experience I am enabled to draw a fair average comparison of such as are suited to this locality. Among the whites, both for vigor of growth and abundance of fruitage, Antoinette bears the palm, giving bunches of six to 10 ounces of grapes as large as Moore's Early, so rich in sugar as to excel in general approval; but having a medium-thick skin and full pulp. I prefer it to the Concord and it ripens earlier.

[That the Antoinette should bear berries as large as those of Moore's Early shows either that Mr. Peck's situation and soil suit it particularly well or that he has not the true Antoinette. After Mr. Miner's death, his varieties were neglected.—EDS.]

Victoria yields a heavy crop of very large berries in attractive bunches; the vine is not so vigorous or is the fruit so sweet as Antoinette, and it has a thinner skin and less pulp. In quality it is equal to the Concord and it ripens later. It is the best keeping grape I have.

The Carlotta is not so distinguished for the growth of its canes or the size of its bunches or berries as either of the above; but to me it is decidedly superior. The bunches and berries are medium to large; the skin is thin, there is very little pulp, and it is more juicy, with a sweet, aromatic flavor. The vine bears a well balanced crop, maturing with the Concord.

Other white grapes do well here such as Lady, Walter, Pocklington, Elvira, Grein's Golden, and among the blacks Worden, Cottage, Concord. Linden, Moore's Early, Wilder and Herbert, and among the reds Brighton, Vergennes, Perkins and Lindley.

Roselle, N. J.

ANTOINETTE GRAPE (MINER'S). From Nature. Fig. 286.

Farm Economy.

WEIGHTING THE SILO.

Well-Known Men Present Their Views.

SINCE Mr. Colcord gave his reasons for using jack-screws in pressing the silage into his silo, the R. N.-Y. has been asked to state how some of the men who have used the silo successfully cover and weight their product. Letters of inquiry have called out the following notes:

FROM HIRAM SMITH.

I put on top of the silage about eight inches of green wild grass, or of any green crop that will pack closely so as to exclude the air, or tar-board paper and a few inches of saw-dust, or any kind of earth. This excludes the air perfectly. Eighteen inches of cut-straw make a good cover, which is useful for bedding, as the silage is fed out, and it is therefore the cheapest of all the covers I have used. Boards, planks and weights are expensive and useless.

Sheboygan Falls, Wis.

FROM J. M. HEATH.

The best covering for silage is about one foot of earth. When the silage settles, the earth follows it and the loss, as compared with that incurred by the use of any other method, is practically nothing.

La Fayette, Ind.

FROM OATMAN BROS.

After the silage has all gone into the silo, the top is leveled and the edges are well tramped. Then we place on it a layer of two inches of bran, or two layers of one-inch boards directly on top of it. On this we put either a light cover-

ing of stone, say, perhaps an average of five to 10 pounds to the foot, or we cover the entire surface with wheat bran. We find it a good idea to put a light weight on the silage, though a great many recommend a covering of chaff or cut straw.

Dundee, Ill.

FROM F. W. A. WOLL.

The method that we have used for three years past, is as follows: When all the fodder has been put into the silo, it is tramped down around the walls and in the corners, and leveled. Tarred building-paper is then put on the top of it, making the paper lap over some few inches along the walls. A layer of sawdust, one foot deep, is put on the top of the tarred paper, and that completes the covering. By this method we have never been able wholly to avoid the spoiling of some of the silage directly under the tarred paper. As a rule, about six inches of the top layer have been unfit for cattle food. A report has recently come to us from a prominent farmer in this State who has avoided this loss of fodder from the top of the silo by the following method of covering: On the top of the fodder he puts a layer of straw a foot deep, then tarred paper, and then another foot layer of straw. His silage is said to be well preserved close up to the straw without any mold. The method seems good, but we have had no experience ourselves as to its general utility.

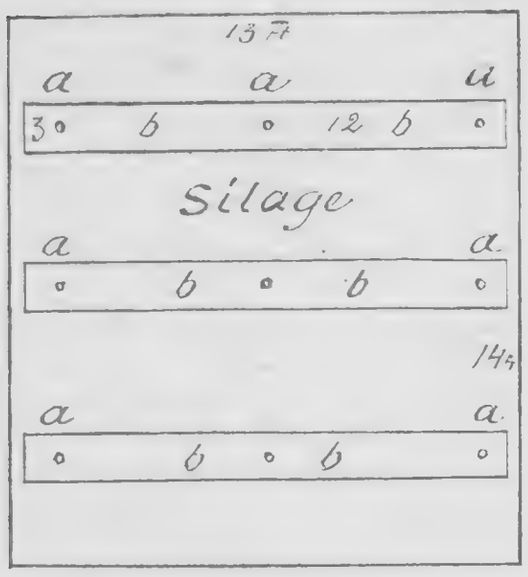


Fig. 287.

Wisconsin Experiment Station.

FROM H. A. SWAN.

After the silage has been put into the silo let it stand two days, then cut in about a foot in depth of green marsh grass (green clover will do); cover this with barn boards cut three-quarters of an inch shorter than the length of the pit, to allow them to follow the silage as it settles. Over them put a covering of tarred paper followed by another covering of narrow boards, placed over the joints beneath the paper. I have always found my silage in perfect condition on opening the pits.

Kent, Ohio.

FROM GEO. T. POWELL.

I cover my silage with about one foot of straw, with no weight. It opens well, with hardly any loss. The straw is thrown into the pig yards and quickly worked into manure. Deep silos need but a slight covering and no weight, while those only eight or 10 feet in hight require both, or great loss will result.

Ghent, N. Y.

FBOM J. T. BROOKS.

I have 10 silos on three different farms, and am experimenting each year. Last year I rejected heavy stone weights entirely; in fact I dispensed with weights of all kinds, and found there was no loss of silage in consequence. This year I acted as follows: At farm No. 1 there were four silos. Each was covered with one foot of cut straw well tramped, and nothing else. It has formed a close mat, and absorbed the moisture from the silage. I began using the latter about two weeks after packing and find it all that could be desired. At farm No. 2 there are two silos. The silage is covered with uncut hay about one foot deep and plank followers are laid loosely over the surface—there are no weights. The contents of one were fed from the time it was packed, and all the silage has been good thus far. The other silo has not yet been opened but I have no fears for the result. At farm No. 3 there are four silos. We are now feeding good silage from one which was filled in September 1, 1888. The other three pits were filled this year and covered with uncut straw, and plank followers laid closely over the silage without weights. After five years' experience I learned that heavy weighting is entirely unnecessary. In 1888 I filled 10 silos; the silage was cut, as usual, in half-inch lengths, pretty well tramped when put in and covered with hay or straw, then with tarred paper and followers fitting closely, and weighted with only a few sticks of wood to keep them in place. The silage was good at each farm as long as it lasted, which was till August 1 at farms Nos. 1 and 2, and we are still feeding it at No. 3.

Salem, O.

FROM J. T. EDWARDS.

I weight my silage by a plan devised by a certain Dr. Bailey of Massachusetts. I have three silos each 13 by 14 feet. We fill each pit until the silage is within five or six feet of the top. Then we smooth it down and lay on it three planks through which nine bolts four feet long have been thrust upward as shown at Figure 287. Then we place on these planks some short ones, as shown in Figure 288. Then we proceed with the filling until the silage is nearly to the top of the bolts. We cover with planks over which we place three scantlings with bolts going through each, as seen at Figure 289. Next we take a two-foot wrench, we turn up the nuts of the bolts so as to compress the four feet of silage into a cheese about 2½ feet thick. This will preserve the four feet of silage, and these four feet will make the weight to press the rest. If one cannot turn up the nuts to press the four

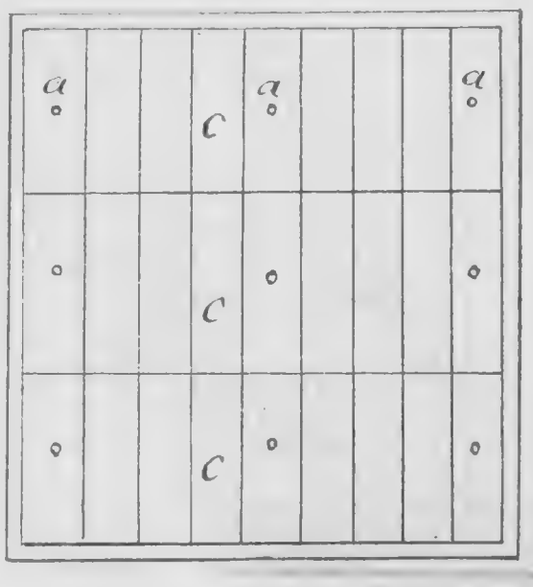


Fig. 288.

feet into 2½ at the first attempt, he should repeat the operation for a few days and he will soon press the stuff to the required solidity. Silage thus weighted keeps perfectly, as I have proven for years, and there is very little trouble or expense in preparing it. When ready to feed, simply remove the planks and take off a shaving every day. The planks need not be replaced.

Randolph, N. Y.

Explanation of Figure 287 shows the three planks placed on the top of the silage. The planks are b b b and the bolts a a a. The short planks are put on as shown at Figure 288 in which the bolts are a a a and the planks c c c. The top is shown at 289 in which d d d represent the planks e e e the three scantling and a a a the bolts. The whole system of cover and press is shown at figure 290 in which all these letters are repeated.

FROM E. P. CLARK.

My silo has been in use four seasons. Two days after the silage has all gone into the pit, we cover it with six inches of straw, then put on a double layer of boards, and on top of this four to six inches of sawdust. This method of covering is quite successful.

Mahoning, O.

FROM C. R. BEACH.

This is my third year with silos. As to how I cover after the silage is all in: The first year I covered with boards; then with tarred paper; then with about a foot of dry marsh hay, weighted with a few fence posts. The silage kept well. Last year I covered with tarred paper and the same amount of hay, omitting the boards, and I did not weight. The silage was injured five or six inches. This year I covered with fine rowen grass five or six inches deep, put on green, and on that about a foot of barley chaff and fine straw (omitting the paper and boards). The silo was thoroughly tramped every two or three days. I opened it yesterday; but little, if any, is injured. Anything will do for covering that will exclude the air, and if the silage is occasionally tramped, weighting can be omitted.

Whitewater, Wis.

MORE ABOUT SELLING CROPS.

ARIZONA.

P. O., DUDLEYVILLE, Pinal County.—We had our first frost October 29th. I cut my last crop of Alfalfa—the fourth cutting was made October 26—about 45 tons from seven acres. One half of the seven acres has been seeded nine years and the stand is good. No manure has been put on the ground. It has been irrigated sometimes once and sometimes twice between cuttings. All crops are a good average. Not much oats or rye is raised in the Territory.

W. A. L.

CANADA.

DELAWARE, Ont.—I am breeding thoroughbred stock. The crops grown here are mostly such as can be produced at the least cost and to the best advantage. The only crops sold are wheat and occasionally barley. My experience with wheat has been such as to teach me to sell as early as possible. I grow a very superior sample and most of it is required for seed. This season I was about the first in the market with wheat and I got 96 cents for milling purposes—several cents more than it could be sold for now. The same was the case last year and again in the previous one. I believe the proper time to sell is when one's produce is ready for the market, whether grain, beef, mutton, or pork. One should let the Chicago bulls and bears do the speculating. It is their game and should be left to them.

R. G.

DAKOTA.

ORDWAY, Brown County.—My chief crop is wheat. I sell in the fall generally for help, thrashing and machinery bills due in October and November. I take a lot of papers, farming and general newspapers, to keep posted. Many are believed to be printed in the interest of the wheat-buying ring which has all the strength of the Big Four in the beef business in Chicago. Bills payable cause me to sell. I hold when I can, and have hopes for better prices. I believe ,the crops of the Northwest, and of the entire country for 1889, to be grossly exaggerated, and that products will be worth more before seeding time.

M. O. H.

BON HOMME, Bon Homme County.—My main crop is hogs. I watch the Sioux City and Chicago markets on mess pork and hogs. The price of mess pork is quoted a month or two ahead, and the mess pork governs the market for hogs a great deal in

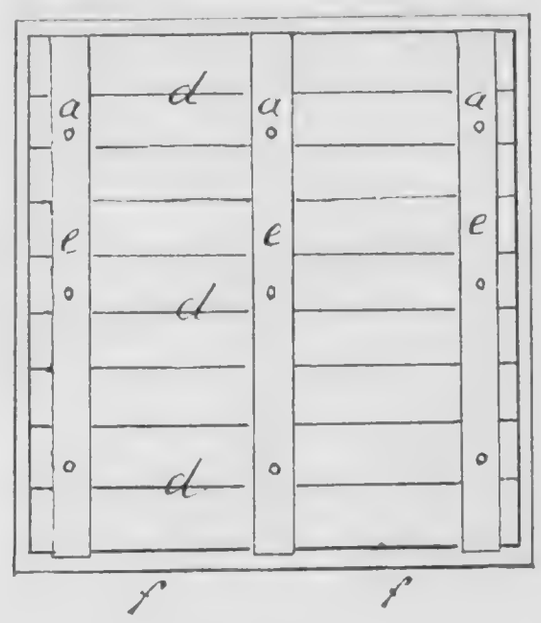


Fig. 289.

this country. If mess pork is quoted lower for December than for October I get my hogs on the market as early as I can and *vice versa*.

F. W. H.

OUR principal crop at present is wheat. We have not been able to find any truly reliable reports to depend on, as the markets seem to be controlled to a great measure by grain-buyers. I keep posted as to prices as well as possible through the different papers. Wheat is mostly marketed in the fall at the convenience or need of the holder. During the last six years wheat has averaged a better price in the fall than in the winter or spring.

H. T. D.

Ipswich.

ILLINOIS.

MOUND FARM, Kankakee County.—M chief products are Short-horn bull calves, hogs and potatoes for seed. The calves run with the cows until fall and are sold when from six to eight months old, bringing from $40 to $60 apiece. After the calves are sold the cows are milked and butter is made and sold to private families in the city. The heifer calves are taken from the cows about the same time. The sows drop their pigs in May and June. The sows are fatted and sold in November; the pigs are held until February, the Chicago market governing the time of selling. They are fed all they will eat from the start. The potatoes are left in the ground as long as it is thought safe, then dug and pitted as soon as possible. Round holes are dug about two feet deep and large enough to hold from 25 to 30 bushels below the surface of the ground. The potatoes are left higher in the center, and are covered with straw and earth. In such pits they will keep fresh and without sprouting until wanted. They are sold to farmers about planting time. The Thorburn has disappointed me. I thought it one of my best. Out of 75 bushels I could not find one without scab. Most of the grain that is grown on the farm is fed out. When I get anything ready for market it is sold.

T. C. D.

STILLWELL, Hancock County.—My chief products are wheat, pork and corn. I sell my crops during the winter when the market is not glutted, as that is the most convenient time to market. I rely a good deal on the crop reports in the different papers I take. The RURAL NEW-YORKER is my chief source of information. Crops this season are up to the average all round, except late potatoes. Stock of all kinds looks well. Pastures are good. Apples are about one-third of a crop.

J. B.

MENDOTA, La Salle County.—Stock of almost all kinds are put upon the market hereabouts at almost all seasons of the year. Corn and small grains are sold when ready or when the money for them is needed, whether the price is high or low. My neighbors have been selling their last year's crop of corn to make room for this year's crop for from 25 to 30 cents per bushel. This is a reading age and every farmer's boy from 10 to 15 years old knows all about the markets in Chicago—which is our market. My family read 10 newspapers and all of our neighbors' families are well supplied with reading matter—foreign as well as local papers are commonly taken. Saturday is a gala day in Mendota for the farmers who come in and talk over everything and have a general, jolly, good time.

O. C. B.

INDIANA.

EVANSVILLE, Vanderburgh County.—The majority of our farmers are not in a condition to hold their crops for high prices, so they have to sell as soon as they get any particular crop ready for market. Others who are able to hold do so and sell at the best prices. Wheat, oats, corn, potatoes and hay are our principal crops. Wheat sells for from 60 cents to 70 cents; oats, 15 to 20 cents; corn, 25 cents to 30 cents; potatoes, 20 cents to 25 cents; hay, $10 to $16 per ton. Wheat is looking up, and those who have kept their wheat crop will I think get a dollar a bushel before two months. Two wide-awake papers are published in our city, which give us both home and foreign markets. We have a city of 50,000 inhabitants that gives us a very good home market. Our wheat harvest commences about the middle of June, and thrashing about the first of July and those that cannot hold their wheat sell as soon as it is thrashed. Oats are harvested soon after wheat and are thrashed at the same time as wheat. Corn is gathered in October and November, potatoes are dug also in the same months. We have been blest with abundant crops this year but prices have been low.

ENTERPRISE, Spencer County.—I find,

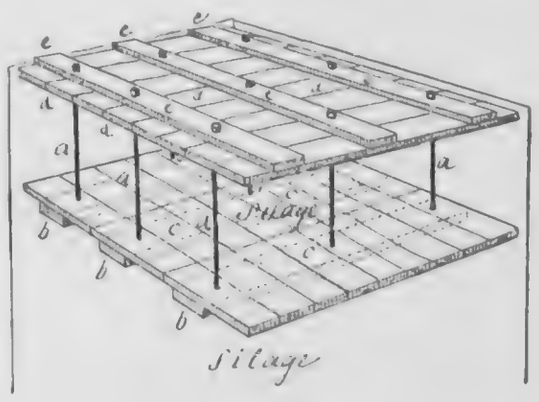


Fig. 290.

taking one year with another, that it pays to sell when a crop is ready for market; but sometimes I hold. Newspapers, crop reports, the R. N.-Y., price-currents, etc., keep me posted in regard to markets. Our crops are the staple ones. Market facilities are

good and we generally sell when a crop is ready. E. L. H.

I GROW mostly perishable crops in the way of small fruits for local markets when the Chicago market will not justify me in sending the goods there. The prices of the wheat and hogs that I sell are governed by the supply and demand at the Chicago and Buffalo markets, as quoted by three of the leading weekly papers and also the RURAL NEW-YORKER which is examined thoroughly every week. G. A. F.
Bristol.

I SELL my products at harvest time and during the fall if prices are fair; if they are very low I hold on till spring and then sometimes lose money owing to shrinkage and the low prices then ruling. I have already sold my wheat for 70 cents per bushel, and last week I sold my apples for 30 cents. Men from Indianapolis bought thousands of bushels of apples at that price. I sold my potatoes last fall for 50 cents; this spring potatoes sold for 20 to 30 cents. I keep myself posted by reading the R. N.-Y., and the other agricultural papers and a Louisville and Indianapolis paper. Potatoes are worth 20 to 30 cents here now. I am holding mine. I will sell whenever I can make a living profit on my labor and investment. E. W.
Salem.

OUR chief crops are hay and corn. I sell in the fall; the loss by shrinkage over-balances the profit if held until spring. I keep posted by reading the market reports in the Chicago papers and the RURAL NEW-YORKER. D. T. S.
Hebron.

IOWA.

NORDNESS, Winneshiek County.—We practice mixed farming. Our money crops are hogs and cream, which is sold to the creameries by the inch—present price 17 cents. We sell a good many horses which are exported both east and west. Our county is famous for good horses. We also sell beef cattle, barley and flax, which are sold as soon as thrashed. Very little wheat is raised. I sell my hogs when they weigh 200 or 225 pounds except those that I keep for breeding purposes. I hardly ever hold for higher prices, as Boards of Trade make prices too uncertain. I sell when my stuff is ready for market. O. G. H.

MARION, Linn County.—The best results will be obtained on the average of years by marketing all grain crops as soon as possible after harvesting. Fat cattle and hogs are kept thriving all the time and sold as soon as ready. Sometimes we hold for a rise, but maybe we don't get it. C. E. M.

KANSAS.

SPIVEY, Kingman County.—Wheat, corn and hogs are our chief crops. Most of us sell after thrashing, but a few hold till later. We have not made anything by holding this year as yet. Last year those that held made over 50 per cent. Kansas City is our market, so we look to their reports and I gather information from other papers including the R. N.-Y. I think it is a good plan for us to give our opinions through the R. N.-Y. regarding the holding of crops every fall before marketing. Success to the RURAL! I. B.

PRINCETON, Franklin County.—In this part of the State the chief crops are usually sold as soon as harvested. The principal crops are corn and millet and we mostly feed both to cattle and hogs. We milk the cows and sell the butter to customers at a stated price. J. F. H.

MASSACHUSETTS.

CENTRAL VILLAGE, Westport County.—I keep from four to six cows and make all the butter I can which sells to family customers for 32 cents per pound in Fall River, with a constant demand for more the year round. I also keep two or three sows and raise pigs which are sold when eight weeks old, if there is any sale for them. This fall I have two litters of pigs, but there is no demand for them, so they will be well fed until about six or seven months old and sold for pork at whatever price the market will give. Corn is quite low so I will not worry about the cost of feeding. I generally raised some potatoes, but this year they rotted so badly that I shall have but few if any to sell. They are usually sold when I think I can get the most for them or when I want most to turn them into cash, as potatoes are always a cash commodity in this locality. I look to the R. N.-Y. for information as to the crops in the country at large, and to the local newspapers for the state of the markets near by. A. D. M.

MINNESOTA.

PINE BEND, Dakota County.—My chief crops are butter, pork and potatoes. My butter is marketed every week, and the pork is mostly sold in January and February, and the potatoes are marketed in the fall. I keep posted on the market through the papers, but don't believe in holding any crop for better prices. F. M.

THE greatest rush to market our products is during September and October. By reading the market reports of our leading agricultural papers we keep posted on prices. Some sell because they have to; others whenever they have the time to deliver the goods. Many hold their wheat on account of the shortage in the crop.
Madelia. H. L. J.

WE sell our main crops, which are wheat and flax, just as soon as we get them thrashed or about the first of September, (in case of necessity). Most of the farmers in this part of the country sell most of their grain in the fall and in the spring buy seed at an advanced price. We try to keep posted on prices by noting the quotations in different cities. We have no crops this year. G. H. I.
Rosewell.

WE sell our products as soon after harvest as the crops are ready and prices satisfactory, and try to keep posted by reading the reports in several farm papers and other reports. If the market is above the cost of production, we sell, but if below, then we hold and feed. Our main crops are hay, barley, oats, corn, and potatoes. We sell what pays and feed the rest. The returns from the latter come back with good interest in better-fed stock, a little more butter, more meat, and better crops for the future. J. A. T.
Austin.

MY chief crops are barley and wheat. This season I raised 3,000 bushels of the former and 2,000 bushels of the latter. I make it a rule to sell barley in the fall and wheat the next season. I thus get an average price. If wheat should advance owing to a failure of crops or speculation I would reap the benefit. Wheat, as a rule, will average lower in the fall; but occasionally it may be higher. In this State farmers sell in the fall making the receipts in the various markets heavy, and depressing prices. I take six agricultural papers and two dailies, and keep well posted on the outlook, but it is a hard matter to strike the highest market. C. W. M.
St. Charles.

PENNSYLVANIA.

LIBRARY, Allegheny County.—We are within 10 miles of Pittsburgh and with the exception of wool, we do not sell any of our products in bulk. We endeavor to estimate the crops of the country at large, and in this the R. N.-Y. is of great assistance, and if we consider any special crop or product short, we hold for a time, otherwise we sell when we have our crops fairly ready and when we can conveniently haul them to the market. As a general rule though we consider it best to sell when our crops are fairly ready for market and rarely hold a crop over from one season to another. J. C. B.

SOUTH DAKOTA.

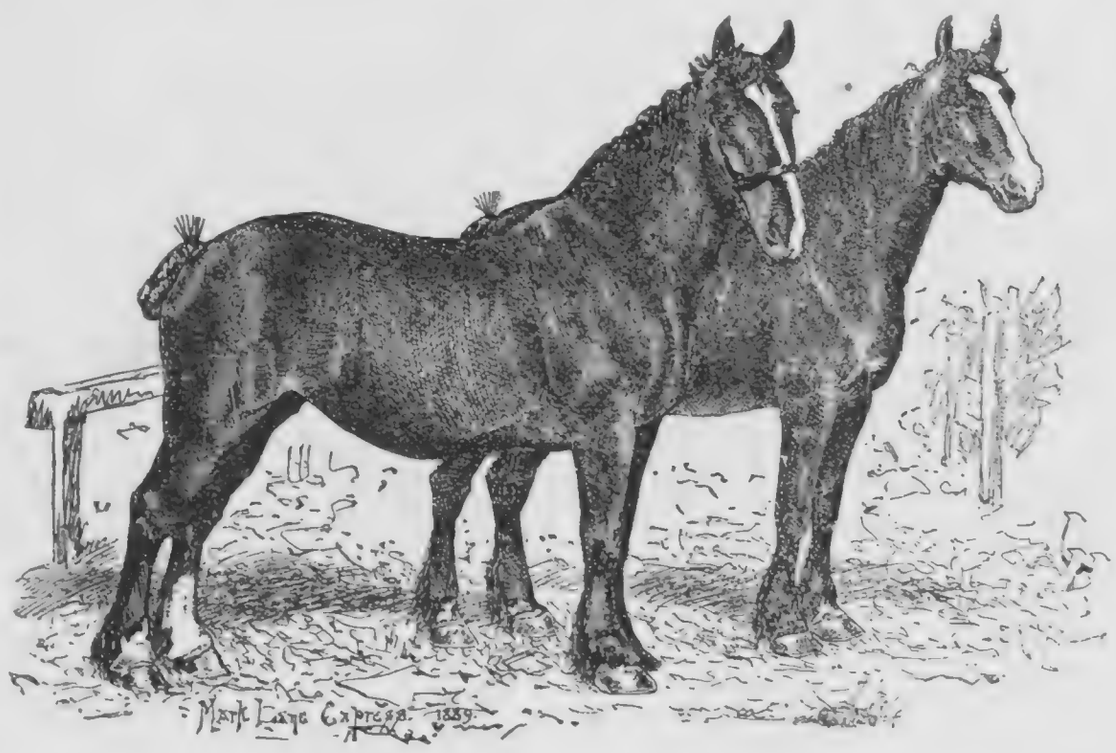
RAYMOND, Clark County.—There will be great hardships in this valley this winter. The railroad company is to haul coal in free *of freight*; but many have not money to get it at the mine price. There is no other help in sight and all of our people have a horror of county aid as taking it would class them as paupers. T. M.

VIRGINIA.

NEWBERN, Pulaski County.—I generally hold my wheat until spring and feed all my corn to my stock, as nearly all our farmers do. We have a home market for more than we can produce of corn and wheat. Corn is shipped here from the West and sold and controls our market. Ours is a grazing country, and beef is so low that there is nothing in it. Our neighborhood is now trying a creamery with some success. I believe it is the thing for us, as we can raise our calves and do not have to buy and drive from a distance. Our creamery butter sells very readily at 30 cents per pound. B. F. M.

WISCONSIN.

CALDWELL, Racine County.—Our chief products are potatoes, barley, oats, pork, wool and garden truck. The latter must of course be sold when in proper condition, and as a rule it pays best to market potatoes direct from the field, the exception being when prices are low in the fall and the crop of the country is below the average, as the case seems to be this season. Hogs and any other live stock, should be sold as soon as they are fat; but we try to have such stock in a marketable condition at a season when the receipts are the lightest. The latter part of the wool season we have found the best as a rule, selling if we can when there is the most competition among buyers. In the marketing of grain crops we try to keep posted as to the probable demand; then avoid selling at a time when the bulk of the crop is forced upon the market, as buyers take advantage of the necessities of the grain-grower more than they can in any other branch of farming. We are very often able to take advantage of an early market in a year when the old stock of grain has been consumed and there is a demand for immediate consumption. I keep myself posted on the general markets by taking a daily paper, and get all statistical information I can from government and commercial reports, and from crop reports in the several periodicals for which I subscribe, among which the RURAL NEW-YORKER ranks as one of the best. A. U.



TWO CROSS-BRED GERMAN MARES.

RE-ENGRAVED FROM THE MARK LANE EXPRESS. FIG 291.

Horseman.

GERMAN CROSS-BRED MARES.

AT Fig. 291 we reproduce a picture which recently appeared in the Mark Lane Express, an English paper, familiar to many of our readers. The picture is of particular interest for two reasons: 1. It shows the prize winners in the draft trials at the recent great German agricultural show. The team here shown drew a load of three tons 12 cwt. for a distance of five-eighths of a mile in eight minutes and 30 seconds. This load was taken in a heavy four-wheeled farm cart. 2. The picture shows the shape and physical peculiarities that may be expected as a result of cross-breeding with the English draft horse as a sire. The foremost mare is a cross between a Clydesdale sire and a Hanoverian mare. She is four years old and weighs 1,243 pounds. The other mare is five years old and weighs 1,508 pounds. She is a cross between a Shire stallion and Saxonian mare. There is a demand for good specimens of the English draft horses in Germany. The Shires and Clydesdales are much desired for crossing on the best mares of German raising. The imports of these horses to this country seem now to be dropping off since it is likely that our home-grown draft horses are about as good as the average of those in England.

Rural Topics.

CLOVER PROBLEMS.

DOES a clover sod enrich the soil? in other words, does it *add* plant food to the soil or does it simply change the elements already in the soil so that they can be more readily assimilated by the succeeding crop? My idea is that it *adds* a mere trifle, if any, of nitrogen from the air; but that by aid of its long roots it regains more or less of what has been lost through leaching. Now, if my idea is right, it seems to me that it is only a matter of time when Mr. Terry's land will fail to produce the crops he now gets. His rotation is clover, potatoes and wheat. The clover that he cuts he feeds and returns to the land. The potatoes are taken away entire. The grain—wheat—is drawn off and the straw is returned. I understand he keeps no cows and that he buys no grain to feed, nor does he grow any for that purpose. Now if he buys no manure, I am at a loss to see how he returns the plant food which he takes off in his potatoes and wheat. Will Mr. Terry, please, enlighten me on this point? The above was suggested by Mr. T.'s article on his crop rotation on page 676. P. G.
Oswego Falls, N. Y.

FROM T. B. TERRY.

The R. N.-Y. writes me that it proposes to have a series of articles from scientists as well as practical farmers bearing on this point. I write entirely from a farmer's stand-point, from 20 years' experience, from the pay-debts-and-get-ahead side. I do not know whether clover-growing "adds any plant food to the soil" or not; or whether my soil and sub-soil would analyze as rich in nitrogen as they would have done 10 years ago. I cannot help thinking that they would; but of course that doesn't prove anything. This, however, I do know that my farm was never in a more productive and satisfactory condition than it is to-day, as far as crops this season and surface indications for next are concerned. I can show to-day as magnificent a growth of clover as any man could ask for. My wheat yielded 38 bushels per acre, on all the land sown, and was perfect in quality. My potatoes brought us over $100 an acre, on all the land planted, and were free from scab and of the finest quality. I think I never had a better show for wheat at this date than I looked at out of my window to-day.

Let me tell just how these crops were raised. The field where the potatoes grew has been fertilized with clover only for some time. Neither stable manure nor fertilizer of any kind whatever has been put on it since it was in potatoes last. The first crop of clover last year was cut and taken off for hay. The second crop, which would have made about two good loads of hay per acre, was left to fall down and was plowed under this spring. The wheat was grown in two separate fields. In one the potatoes preceding it had been manured with clover sod and clover haulm, and in the other with clover sod and stable manure of the best quality, from our covered shed and cement floor. I expected the latter piece to be the best. There was the largest growth of straw. If anything, this field was the best wheat land. But I determined to know at thrashing time and not to trust my eyes; so the grain from one field was put on one side of the thrashing floor and that from the other on the other, and the clover-manured lot gave us just 40 bushels per acre, and the other about 36. This is but a single experiment; but clover haulm from which seed has been removed

and the second growth of clover when plowed under have always shown excellent results.

Years ago I used to try to save all the clover possible for hay. Then I fed it out during the winters in the way by which I could make the most out of it. Such experiences as the above have for some years made me—particularly as there was so little to be made from feeding any kind of stock—let as much of my clover as possible go back to the land without coming to the barn. I have only put in this year 20 or 25 loads, against a possible 90 or more. We shall, however, take the seed out of about half of the 70 loads—four large stacks. To leave 35 loads of hay to rot on the surface of our fields many would think wasteful. It might be in some localities; but I doubt whether I could do as well in any other way. My newly-seeded clover—after wheat this year—was mowed twice, when from eight to 14 inches high each time, and the crops were left to mulch the surface. I wish every reader of the RURAL NEW-YORKER could walk with me over the field and see what a thick, strong growth can be made in this way. The practice not only thickens the clover and kills the weeds but mulches the surface so thoroughly as to greatly benefit it. I fully believe that this clover has brought me more clear money in the end than I could have got out of it by cutting and feeding it, and much more than by pasturing it.

Twenty years ago last spring, I sowed my first clover seed, on land that was considered so poor that my tenant refused to plow it and plant it for all the crop. I also began buying manure in town and drawing it over two miles to bring up another lot. For some years I thought, with the writer of the above letter, that I must return as much plant food to my soil as I took off to maintain its fertility and more in order to bring it up. Trials of clover and manure side by side for years at last opened my eyes. I began to see that clover might be so used that it would pull me out of debt and into comfortable circumstances, so I gradually changed my farming, sowed clover for all it was worth and made money at a rate never before dreamed of. In a few years I began pushing the claims of clover for the benefit of others. It seemed as though every one was against me, and the papers were full of "clover sickness," "soil exhaustion," etc., etc. Men who knew nothing about it tried to prove that my farm had run down, that my potatoes were yielding but little, and that their quality was very poor and that I was going to the dogs generally. For two or three years I did draw pretty heavily on clover and tillage; but no drafts went to protest! I had got all out of debt and wanted some new buildings. They were built and furnished at a cost of nearly $6,000. All of the outlay was paid cash down. Then I eased up in my drafts on the clover fertility.

All the battles I have fought for clover have been to help others who needed help as badly as I did years ago. What is the use, my friends, of pulling away at the horns and tail (nitrogen from the air or not) while some one else quietly gets the milk? It may be only a "question of time" when clover will fail us. Oh dear! so it is also when our oil and gas wells and coal mines will give out; but who fails to work them on that account? Don't buy a horse or cow or tool: it is only a "question of time" when they will fail! It is well to be reasonably cautious, and to look out ahead; but too much worrying on such points isn't wise. Better make the most of what God puts in our hands to-day. When clover fails, how do you know that something better will not be found out? The air is loaded down with nitrogen: may not God endow some man with sufficient brains to find a way by which this can be fed to crops when there is a necessity for it? The writer was brought up near the ocean, and well remembers how old men used to worry in their day about what their children would do for oil when the whales gave out. Haven't we something far better now? And before that gives out electricity, almost equal to sunlight, will be lighting most of our houses.

I do not worry a bit over my clover farming. Why should I? It has brought a run-down farm up to productiveness. We have got out of debt and comfortably fixed. We shall have enough to put in the savings bank this year to buy almost as many acres as our crops grew on. "By their fruits ye shall know them." This is a better rule to go by than to pay too much attention to analysis and science. "We know in part." Science has frequently been caught proving (!) that a thing couldn't be done just at the very time that practice had accomplished it. What is science, any way? Why simply our best present knowledge, which may be found wrong at any time. Our greatest scientists are very cautious about saying anything positively. When we hear some of the small guns shoot on the clover and nitrogen question, it reminds one that "a little learning is a dangerous thing."

I ought to say, perhaps, that my farm was originally good land; but it had been abused until it would produce almost nothing. It is better adapted to clover-growing than some of the clay soils. However, I have some heavy clay, tile-drained, where clover does about as well as on lighter soil. The trouble with many in growing clover has been that they haven't given it as good a chance as they should. They have sown Timothy the fall before, or pastured the young clover, or let the weeds choke it, or let it stand too long. It cannot take all sorts of abuse and still do its best for the farmer.

Summit County, Ohio.

DOES A CLOVER CROP ENRICH THE SOIL?

A LETTER FROM SIR J. B. LAWES.

DOES a clover crop enrich the soil? There is no evidence, so far as I know, that it does. A very rich soil where we have grown clover for more than 30 years in succession is greatly impoverished. But better crops of grain are grown after clover, although it is true the clover hay has carried off large quantities of the food contained in the soil; and, further, we have satisfied ourselves that the soil for the first nine inches from the surface is richer, *i.e.*, more competent to grow a larger crop of wheat than it was before. Part of this increased food is certainly derived from the subsoil; whether all of it is so derived there is no evidence to show. Mr. Terry grows clover, potatoes, and wheat, exporting the grain of the wheat and the potatoes. Why not? Because he is exhausting his soil; would it not be better to say he is reducing its fertility, and is not all economic agriculture based upon the removal of fertility? I suppose that no other person has tried so hard as I have to exhaust my soil, and yet what is the result of 50 years' experience? That upon a soil which has no pretension to be called a rich soil, the bulk of the fertility is still there.

Rothamsted, England.

Farm Topics.

Abandoned Farms

WHY

QUIT FARMING IN NEW HAMPSHIRE?

WHAT'S THE MATTER WITH EASTERN AGRICULTURE?

FOR the past few months the papers have been full of accounts of the "abandoned farms" in New Hampshire and Vermont. If one were to take these reports just as they are written, it would be safe to presume that these States are being gradually depopulated; that whole sections of good farming land are going back to the original wilderness and that the old New England farmer, that sturdy type of Americanism, famed in song and story, is passing completely out of view. Certainly this is the impression prevailing at the West, and the R. N.-Y. has received many letters from Western farmers asking why it is that farms located within 50 miles of great manufacturing centers and within 150 miles of large and prosperous cities cannot be made to pay. Is Eastern agriculture doomed? Is the West to supply all our food? These are the questions asked by those who hear only one side of this matter, not knowing of the thousands of prosperous and intelligent farmers in these very States of Vermont and New Hampshire who succeed where others fail. We have heard too much of the "abandoned" side of this matter. Those who have these farms for sale are very anxious to find customers. The State governments are in the land agency business to the extent of booming these deserted farms. It is not strange therefore that we hear all about them. The R. N.-Y. recently received a long list of the names of those who had New Hampshire "abandoned" farms for sale. It occurred to us that these men could give the best of reasons for the condition of agriculture that has led to the present state of affairs. We therefore communicated with a number of them, asking why they wished to sell their farms and why farm lands in New Hampshire could not be made to pay a profit.

The following letters tell their own story. After reading them one may well ask: "What's the matter with New Hampshire agriculture?" The answer will, in the R. N.-Y's. opinion, be very close to the following statement recently made by President J. M. Connor of the Granite State Dairymen's Convention: "The price of every kind of labor except farm work is going up and the rising generation are too anxious for a 'soft snap' to linger round a New Hampshire pasture long."

FROM HALE CHADWICK.

I have for sale a farm of 500 acres located on a clear stream, and the tillage land—about 50 acres—is smooth and level and can be mowed with a machine. The farm was abandoned because of the death of the owner and all his family. Another farm is in Merrimack County and consists of 200 acres. The tillage land is smooth and level and a good strong soil—as good as any in the State. There are plenty of fruits—apples, cranberries, etc. It is unoccupied by reason of the death of the owner; the boys all left the old home for the village or city, and the father having died the farm was left desolate, like hundreds of others in this and other States.

Merrimack County.

FROM J. L. DRAKE.

The farm spoken of is not unoccupied, for I cultivate the land and rent the buildings. It was left on account of the poor health of the owner and an attack of Western fever which is the principal reason for the desertion of farms in our section.

Carroll County.

FROM J. D. HUNKINS.

The reason why the farm in question is deserted is that the man who owned it before me is about 80 years old, and consequently not being able to carry it on he was obliged to sell. I bought it for the wood and pasturage, and as I own another farm in the village, the buildings (which are in good repair, needing only paint) are of no use to me, so in order to sell these, I am willing to sell some land with them. It is a good bargain for any one who wants a home. It has a good location and would be a fine place for a summer residence. Four good families are living within one-fourth of a mile. The depot and post-office are only two miles away, and there is a good easy road to them. Quite a good number of our oldest farmers have died within a few years. Aside from the loss caused by these, I am inclined to believe that farming is carried on as extensively as it ever was. We have a hosiery mill here, which, of course, gives employment to a good many who would otherwise have to pay more attention to farming.

Belknap County.

FROM H. D. MARCY.

The farm referred to is owned by parties in Vermont and the man who has occupied it for several years did not pay the mortgage and concluded to give it up, and deeded it back to the parties holding the mortgage. They wish to sell and offer it as a deserted farm, as there is no one on it. It is a good stock farm and is mostly fenced with stone walls. It has running water and a house and barn, the buildings need some repairing and any party who is willing to work can make money by buying it.

It is 1½ mile from the village, where there are stores, a depot, church, etc.

Grafton County.

FROM G. E. WILSON.

I want to sell because I have more land than I need. I have only been here five years and the only particular trouble I can see is that this town has had a considerable amount of the war debt to pay since I have been here; but now nearly all is paid. It has made our taxes about double what they would otherwise have been, and a good many who were shiftless and improvident and who liked rum and cider better than work had to leave their places and go to work out and that makes it harder for the others.

Grafton County.

FROM G. R. STEVENS.

The farm I have for sale was deserted because of the death of a childless old man. It was sold at auction and I bought it. The desertion of the farms here is mainly due to the death of the owners who leave no one to take their places.

Rockingham County.

FROM A. B. DEERING.

The occupants of the farm have died, and it fell to me. Having another, I wish to sell this as I am not able to carry on both. It is in a good state of cultivation and pleasantly situated.

"What seems to be the matter with farming in this neighborhood?" The old folks have died off, while the younger people have gone to the cities. That seems to account for so many unoccupied farms in N. H. It certainly does in this vicinity.

Carroll County.

FROM H. B. WHITNEY.

This farm of 180 acres is one of the best and was owned by one family for 100 years. It was finally sold because the last owner died about three years ago. I bought it two years ago. I offer the 180 acres for $1,200, reserving all the timber except that on about 20 acres which is a sugar orchard of 1,000 to 1,500 nice Rock Maples on good ground. The rest is mostly hard-wood. There are about 40 acres in mowing which can all be cut with a machine. Nearly 75 acres are in pasture. The farm is level and is fenced with stone walls. The buildings consist of a dwelling-house 32 by 40 feet an L 16 by 20 feet, with a shed 50 feet long for wood and carriages. There are also two barns: one 34 by 56 feet, and the other 26 by 34 feet. Those are in good repair. There is a shed 34 feet long attached to the barn to serve as a stable. There are also a tool-house, a piggery, a corn-barn, and a bee-house all in very good condition. There are plenty of apples, pears, plums, and grapes. The farm lies about 2½ miles from West Canaan and about the same distance from Enfield at both of which places there are railroad stations. It is only eight miles from Dartmouth College in Hanover. There is a creamery at West Canaan. This is a good farm for a man who keeps cows. It is a level farm. I offer it at such a bargain because I have more real estate than I want. I have one or two other farms to sell.

Grafton County.

FROM H. O. HADLEY.

The farm which I have for sale is situated about two miles from the village of Temple where there are stores, a church, a hotel, etc. The former owner of the place sold it to me as he had a good chance to engage in the grocery business in one of the adjoining towns. He had bought it about 10 years before, having paid $3,400 for it. He had less than $1,000 to start with, yet he paid for the place and had it all clear of debt before he left it. It will maintain 20 cows and two horses the year around at present, and could easily be made to maintain twice as many. The building consists of a good two-story house with brick ends in good repair. There is an adjoining L 20-x30 feet one story high. It needs shingling and a few other repairs very badly. Adjoining the L is a shed 20x50 feet and near this are two barns. No. 1 is 48x36 feet and No. 2, about 30 feet from the first, is 64x28 feet. There are also other sheds and a hen-house. It is estimated there are 600 cords of hard wood on the place, and there is an abundance of apples, pears, cherries and grapes. It is about a quarter of a mile from school, and 50 rods from the nearest neighbor. The nearest railroad connection is at East Wilton or Greenville, each six miles distant. The only reason why the farm should not sell quickly for $5,000 or more, is because the main road does not extend beyond the house, so that the place is of course at the end of the road. The road is good, however, and there are no gates on it and the main roads are just in sight less than a quarter of a mile away. The only reason why there are so many deserted farms in this State is because the young men of to-day are too lazy to work.

Hillsborough County.

FROM GEO. MUNSON.

My farm is not properly on the abandoned

(*Continued on Page* 809.)

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

CONSTRUCTION OF SILOS.

H. T. K., Pruct, Ky.—At the convention of the Central Ensilage Association at Cleveland, Ohio, H. Talcott, Assistant Dairy Commissioner, stated that frost or freezing in a silo was not to be considered in building one, and that one thickness of matched boards was all the wall necessary. No solid masonry was needed he said, or double boarding with paper between, or anything but one thickness of planed matched boards. Is such a silo generally successful?

ANSWERED BY JOHN GOULD, OHIO.

It is becoming apparent that Mr. Talcott is right so far as frost and freezing have any influence upon silage. A stone silo wall 20 inches thick, is not as good a protection against frost or freezing as a single thickness of plank. Further, it is not probable that any man who builds a silo in Kentucky, will ever see any frozen silage. It is rarely that a pit of silage ever cools down much, if any, below 75 or 80 degrees, and thus it affords itself excellent protection against frost. Stone walls against silage have a tendency to conduct frost

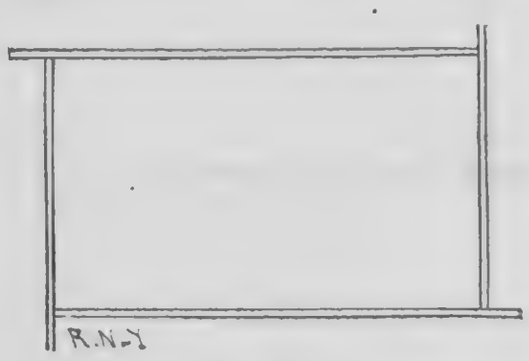


Fig. 292.

through them and cause condensation of moisture against the inside, and the contents are more or less damaged. No such injury is ever seen with a wooden wall. While I still think that in some respects double lining, with tarred paper between, is preferable for the general silo, I am so far convinced that the single boarding is sufficient, that next season I shall board one in this way in which to ensilo my oat crop. I am led to this opinion by the fact that gas-tar and gasoline make an absolutely moisture and air-proof paint, quickly and easily applied, and which promises to make wooden walls as permanent as concrete, which has a habit of cracking, owing to frost and other causes. The single lining needs more studding than double boarding, and I would set the studding as close as 16 inches from center to center. I would put on the matched boards horizontally, grooves up, and as each layer was put on, I would fill the grooves with the gas-tar and gasoline, using an old tea or coffee-pot for the purpose, and then crowd the tongue of the next course of lumber into it. When all is complete, paint the whole interior with two coats of this paint, made of gas-tar, two gallons and gasoline, one, mixed thoroughly to make an emulsion, which it will readily do after about three minutes' agitation. It can be applied better than hot gas tar, "strikes in" better, and dries as soon or sooner, and then there is no trouble with boiling tar, ignition, etc.

In my new silos I dispensed with all masonry, and, so far as I can see, they are better than any one in which there is a joining of stone and timber can be. A trench 12 inches wide and nine deep was dug the exact size of the silo, a two-inch tile was put in the bottom in a depression for it, and then 12-inch-square sills, thoroughly painted with gas-tar, especially at the ends, and half lapped at the ends were put into this trench, and thoroughly tamped at the sides so that they are as "solid as a rock." The studding was then nailed to these sills tar was applied up three feet, the three courses of bottom boards also received the same treatment. There is no floor in the silo, save the natural earth, which was drawn from the center of the pits to the walls, and thoroughly beaten down so as to make a gradual rise from the center to the walls, the earth coming up about eight inches above the sills. In building a single-thickness silo, the corners become quite important, and the boards should be put on as depicted at the Figure 292 running up four or more inches at each corner. When complete, take an inch-and-a-half square strip, take off one corner, and nail it into the corners of the silo, and paint it thickly with the tar, and you have an air-tight joint. Such a silo can be built in a barn for about 40 to 50 cents per ton capacity. In building a single-thickness silo, I would use a fair quality of matched flooring and see that all loose knots are cut out.

SHRINKAGE IN MILK.

W. E. R., Dover, N. H.—I have a Guernsey cow four years old. She went dry about a month and calved about three months ago. Two weeks after calving she was giving 16 quarts per day. She began to shrink in her milk, and I began feeding her five quarts per day of meal and bran in equal parts. She kept on shrinking and lately has given only six quarts per day. Her bag seems to be growing fleshy. Besides the grain, she has a good feed in the barn mornings and nights and runs in the pasture when the weather is pleasant. She gives her milk down slowly, but the milk is good, and a little more than seven quarts will make a pound of nice butter. Last year she was troubled in the same way. I was feeding cotton-seed meal then. I wrote to the R. N.-Y. for advice, and the question was answered by Henry Stewart and he said the trouble was caused by the cotton-seed meal. I stopped feeding cotton-seed and gave more corn-meal as he advised. I thought she milked a little better, but did not give any more milk. He said she was too valuable for beef. What does the R.-N.-Y. think now? Can anything be done for her or had I better fatten her for beef?

ANSWERED BY HENRY STEWART.

The effect of cotton-seed meal upon such high-milking cows as Guernseys and Jerseys, when fed even in small quantities, is to act upon the milk glands so as to stimulate their action in the production of milk and butter. It is frequently the case when highly stimulating food is given that the action is diverted from the production of milk, and injurious congestion, due to the increased circulation of blood, is produced. This causes tumefaction or hardness of the milk glands and the udder becomes hard or fleshy, and the glands no longer perform their office of milk-secretion. This seems to have occurred in this case and it is doubtful if any recovery will be made. If the cow continues to give a pound of butter a day she is certainly worth keeping, and it would be a pity to kill her for beef. When the cow has another calf she may probably be restored by judicious treatment. This should consist of a careful gradual drying up of the cow before calving; light feeding, without any grain at all for two months previous; a dose of one pound of Epsom salts a few days before the calf is expected; and very light feeding for a few days after it. Gentle rubbing and kneading of the udder are useful to cause absorption of the injurious matter, and restoration of the glands to healthful action, which under the circumstances is not by any means improbable. Hence there is good reason to avoid sacrificing a good cow. It will be wise, however, even now, to feed very moderately of grain, and to adhere to corn-meal only with bran given in the form of mash, and to keep the cow in a laxative condition.

PUMPING WATER FROM A DISTANCE.

W. H. W., Cranford, N. J.—I want to bring water from a surface spring to my barn. It's about 500 feet away, and six feet lower than my barn cellar. My plan is to dig a cistern in my feed room under my barn, say nine feet deep, and use a three-fourths-inch iron pipe for a syphon, placing one end in the spring and the other in the cistern. Is the plan practicable?

ANS.—The plan will not work, for the reason that the small fall will not give sufficient power to carry the water through 500 feet of pipe, and as you must have a pump to draw the water from the cistern you may as well attach it to the pipe at once and draw the water from the spring. The pipe should be laid sufficiently deep to escape the frost and have a check-valve at the end in the spring, and a good pump should be used. There will then be no trouble if the pump is worked properly, that is, with slow strokes and not sharp jerks, because in drawing the water the inertia of the long column of water is to be overcome. An air-chamber in the pipe below the pump as seen at Figure 293, would

Fig. 293.

equalize the flow of the water and make the delivery of it more easy.

WHITE CAPS IN BUTTER.

C. W. S., Parishville, N. Y.—What are "white caps" in butter and butter-milk? How can their appearance be prevented when the milk is set in open shallow pans where a fire is needed to secure the proper temperature?

ANS.—"White caps" are particles of caseine or albumen, or perhaps both, that are solidified in the sour cream by the warmth. This is a common cause of complaint at this season when milk is set in shallow pans, and the cream is warmed to prepare it for the churn by setting the cream in the churn. The usual methods of warming cream for the churn by setting the cream jar in hot water or near a stove for a few hours, will invariably cause the caseine or albumen to become solid at the edge of the jar as the warmth is not readily distributed through the mass of cream and a temperature of 80 degrees is sufficient to harden the flakes. The only remedy is to skim the milk before it is sour and to keep the cream constantly at a temperature of 62 to 65 degrees and so avoid the necessity for warming it in the usual way. We suspect this to be the cause of the trouble, not being informed as to the method practiced in this case. In cases where the writer has purposely experimented to produce these white flakes or specks in the butter, the method above mentioned was used, and it was always effective. But it was found quite easy to work the butter so as to incorporate the flakes with it when they were not too hard, and this was done without any detriment that could be detected to the butter, when the latter was used immediately; but butter made in this way will not keep. As a remedy for the precipitation of the flakes, the mixture of a table-spoonful of a solution of carbonate of soda with an eight-quart pan of milk was found effective in preventing the excessive acidity which was the cause of the trouble, even when the cream was warmed by setting the jar in water of a temperature of 100 degrees; the cream being gently stirred at intervals of 15 minutes, with special care to clear it from the sides of the jar.

HEAVES.

W. T. H., Worcester, Mass.—My horse is troubled somewhat with the heaves, especially after he has been driven. What would be the best diet for him and would it do any harm to give him carrots and how many at a time? How much corn and hay should he have?

ANS.—The subject of heaves was exhaustively treated on page 767 of the R. N.-Y. for 1886, and questions in relation thereto were also answered on page 397 of the present volume. Feed nothing dusty. Bright, clean hay will do; but if in the least dusty it must be sprinkled with water. Cut straw or hay, wet with water and mixed with ground feed is excellent. Carrots are one of the best of feeds. A peck is about the right quantity for an ordinary horse, twice a day, beginning perhaps with less. Do not allow the animal to gorge himself with hay, but give him what he will eat up readily without leaving any. Water frequently, feed regularly, exercise daily, protect from cold winds and storms, and you have done as much as any medicines can do to keep the disease from manifesting itself. Heaves are incurable, but proper treatment will keep them from being troublesome.

"POINTS" OF THE HOUDANS.

J. P. V., Seney, Iowa.—What are points and color of Houdan fowls.

ANS.—The American Standard of Excellence says that Houdans must have black and white feathers intermixed, the more evenly the better. Red or brassy feathers disqualify in the show-room. Many breeds do not show their best markings until after moulting. Most pure-bred birds will throw some chicks which are off color, so we should hesitate to say yours were not pure-bred. They should have five toes. The scale of points is for symmetry, 10; size and weight, 10; condition eight; head four; crest and beard, 18; comb, seven; ear-lobes and wattles, five; neck, five; back, six; breast and body, seven; wings, six; tail, seven; legs and toes, seven: total, 100.

KILLING SMUT.

E. L. H., Holly, Mich.—Is there any way to kill smut in oats before sowing them?

ANS.—From experiments made at the New York Experiment Station it was decided that smut was prevented by soaking the oats in a solution of four ounces of sulphate of copper in one gallon of water or half an ounce of caustic potash in six gills of water. Soak in the first about 30 hours and in the second 20 hours.

Miscellaneous.

Subscriber, Edgecomb County, N. C.—Who has Angora goats? What are they worth?

ANS.—Miller & Sibley, Franklin, Verango County, Pa., have some excellent animals. Write to them for prices.

F. M., Naples, N. Y.—I would like to subscribe for a good paper, published in the Hudson River Valley, say in Ulster County, which tells a good deal of fruit, and the condition of the vineyards, as well as of the ripening and shipping of grapes in the Hudson River Valley.

ANS.—We do not know of any such paper. The Orange County Farmer, Port Jervis, N. Y. comes nearest to it.

W. T. L. Ten B., Rhinebeck, N. Y.—Is there any agricultural college in which a person can go through an agricultural course getting work enough at the college to pay for board and tuition.

ANS.—We do not know of any institution where one can get work enough to pay for his board while taking the college course, but at the Michigan College at least half the board can be paid in this way while tuition is free.

J. L., Chicago, Ill.—I saw an item in an agricultural paper, which said that the best way to grow turnips is to sow the seed in the corn just as the field is plowed for the last time, or as the corn is "laid by." Has the R. N.-Y. tried the plan?

ANS.—The R. N.-Y. has frequently heard of this method of sowing turnips, but has not tried it. A neighbor sowed turnip seed among the potatoes at the last cultivation and made a good crop. The squashes should do as well as the pumpkins.

K. N., Hurlock, Md.—My farm is a sandy loam considerably run down, and very deficient in humus. Would it be advisable for me to use sawdust for bedding and in my compost heap, with the expectation that it will add humus, and perhaps a little fertility.

ANS.—Yes, we should use all the sawdust that we could reasonably obtain. Use all you can in the stable behind the cattle and mix it well in with the manure. It will not give the quick returns that would be felt from the use of straw or green manure, but it will help your light soil.

Discussion.

THE COST OF FARM LIFE.

J. VAN L., LA CROSSE, WIS.—For the past four years—from 1885 to 1888 inclusive—I have kept an account of our family expenses.

The yearly cost of meats, groceries, kerosene, provisions and wood.	No. of adults.	Cost for each	Yearly cost of wearing apparel including boots and shoes.	No. of adults.	Cost for each adult
1885, $198.02.	7.	$28.29	$145..	6.	24.20
1886. 162.22.	6.	27.03.	175.88.	6.	29.31.
1887. 260.57.	7.	37.22.	164.07.	6.	27.34.
1888. 269.10.	7.	38.44.	172.27.	7.	28.71.

During those four years we expended for furniture, papers, schools and music $98.64. The above table does not include fruits, vegetables, butter, milk, cream, fowls and eggs all of which were raised on the farm. If all these had to be bought, the expenses of living would naturally be considerably increased. Timber for fire-wood grows on

the place, but the yearly expense of cutting and hauling it ($40) is included in the table of expenses. If wood had to be purchased it would add $10 to the yearly cost, for all that is used for fuel can be bought here as standing timber very cheap. Clothes are bought partially ready made, and a good proportion of them are made by the women folks at home. No separate account has been kept as to the cost of boots and shoes, as this is included in the outlay for wearing apparel.

L. H., DANSVILLE, N. Y.—The following table shows the number of persons in my family and the principal items of expenditure for living expenses during five years.

	Number of adults.	Number of children	Equivalent No. adults.	Yearly cost of groceries.	Cost for each adult.	Value of wheat used for flour.
1875.	4½.	0.	4½.	$45.42.	$10.09.	$32.40
1878.	4.	0.	4.	43.92.	10.98.	22.10
1881.	4.	1.	4½.	57.26.	12.72.	34.10
1884.	4.	2.	5.	57.42.	11 58.	25.20
1888.	4½.	2.	6.	65.71.	10.95.	38.80

My books do not show the separate items of sugar and molasses, but they are included with the tea and coffee (no tobacco) under the head of "groceries." No account was kept of fruit and vegetables, as they were raised on the farm, and it was difficult to keep an account of the amount used. The price of wheat used for flour ranged from 90 cents to $1.30 per bushel.

J. H. G., QUEENS COUNTY, LONG ISLAND.—The question of family expenses is a delicate one. If the figures are low the wife will take them to her husband and show him how very economically she is managing the family. If, on the other hand, they are high the husband is sure to say to his wife: "I told you so; we are living too extravagantly. It must be stopped." In either case it is not likely that there will be any natural change in the method of living. The fact is family expenses cannot be measured as one would measure a gallon of molasses or a bushel of potatoes. A small amount of expense may not indicate judicious economy, neither would a large expenditure necessarily indicate unwise extravagance. It is not the money we expend, but what we expend it for—the manner in which we expend it—that determines the character of our living. When we have learned that money is not the end, but only the means to an end, we are in a condition to live as we ought to live. In the average estimate of family expenses I notice that the unknown quantity used off the farm is estimated roughly or omitted entirely. This makes the whole estimate incomplete and unreliable. In my own case I have lived in the country, owned my own house and bought everything needed for a family of three persons, and about the average amount of company. My expenses have been as follows:

Fuel—five tons coal	$30.00
" wood, kindling	5.00
Flour—two barrels	12.00
Meat	100.00
Potatoes—two barrels	5.00
Vegetables, celery, etc	20.00
Sugar	15.00
Coffee	6.00
Tea	3.00
Butter	15.00
Milk	21.60
Canned goods	4.00
Spices, etc	10.00
Fish	13.00
Eggs—50 dozen	12.50
Clothes	100.00
Washing—hired labor	26.00
Shoes	30.00
	$428.10

In the matter of fuel I have a furnace and a range. I find that they do not require more than two-thirds of the fuel required for stoves, and there is an immense saving in labor. I buy my meat in the city at the following prices:

Beef—sirloin steak	14 to 16 cents
" roasting piece	10 cents
" soup "	5 to 6 cents
Mutton chops	14 cents
" roast	10 to 14 cents
Pork steaks	12 cents
" sausage	10 cents

Milk I pay six cents a quart for. Clothes and shoes are bought ready-made in the city. I find that it pays to pay cash for everything, and buy direct from the producer as far as possible. I should say that there is at least 40 per cent. difference between the top "retail" price and the lowest price of food of the same quality produced direct from the producers or in the open markets. In common with almost every one else in these days of extravagant living, my chief expenses are for the luxuries—not for the necessaries of life. For example, my car fares were more than my meat bill. On the whole, I am inclined to think that the incidental expenses are greater than those which might perhaps be called essential and this is, I think, true of almost every family who live in the modern fashion. It is doctors' bills, carriage hire—or what is the same thing "carriage use"—railroad fares, concerts, theaters, etc., rather than our meat and clothing bills which eat up our incomes.

FAST-WALKING HORSES AGAIN.

H. S. W., LITTLE UTICA, N. Y.—After reading under the head of Discussion, in the R. N.-Y. of November 16, the item by R. C. F. relating to fast-walking horses, I feel impelled to write something in criticism of what he says in that article. Now, I, for one, would feel positive, without reading even a quarter as many agricultural papers as R. C. F. tells us he reads, that a good, active, smart walking horse, is the great desideratum for the general run of farmers. Perhaps it may not matter so much to the farmer (?) who spends a good share of his time driving a fancy horse on the road or talking politics in the corner grocery, whether his work-team and plow and hired man at home are walking at the rate of two miles or only one per hour. The farmers I have in mind (and their name is legion) are those who keep only two, possibly, three horses, which are used for all farm purposes and for driving on the road. For such men fast-walking horses are the kind every time. For instance, let a live, energetic man accustomed to using a good walking team, start for town behind a pair of slow-walking horses and his mental sensations will very soon tell him which kind he prefers. I, for one, would not buy a horse, however good he might otherwise be, if he possessed the fault of being a slow walker. Here at home we are of the kind who do our plowing and team work generally, and I know that a good, fast-walking business horse (not one of the highty-tighty fast-walking fly-aways) that will draw a load or an empty wagon on the road so that it will not be necessary to take a "squirt" to make him move, will draw a plow in a perfectly satisfactory way, and the hired man will not suffer any bodily harm from following; neither will the horse's nerve desert him. Then, again, when we hitch our general-purpose horse to the buggy to drive either for pleasure or business, what is more aggravating than that slow, poking gait which makes the slow-walking horse a regular nuisance so far as travel is concerned.

Walking with many horses is a habit; in fact, it is so with all horses to a certain extent. Break and work a colt by the side of a good, energetic horse and its habit of walking will be adapted more or less to the gait of the older horse. And very often a pair of horses that might have made a fast-walking team, are ruined in that respect, all because their driver is a laggard himself. In conclusion, let me say to farmers in general: when you are purchasing a team for general purposes, search for horses that are good, smart walkers, and after using them for one week, I will warrant you will never want any other kind.

THE MILK PROBLEM.

J. J. M., WHIPPANY, N. J.—There seems to be a move on the part of the milk-producers of the country sending milk to New York City to get out of the grip of the New York Milk Exchange, and from what I know at present about that movement they are putting themselves in shape to accomplish it, and until they do that and do it effectually, they—the farmers—will never get paying prices for their milk. If I understand the matter, the Milk Exchange is composed of about 100 milk-dealers, mostly of New York City. They meet once a month and "fix"—as they call it—the prices to be paid for milk the following month. The prices of grain feed or hay or cows or the cost of labor to produce the milk make no difference to them. They say: "That is the price; take it or keep your milk at home or do what you can with it. We will not pay any more for it." The farmers have stood this long enough. The time has now come to move, and to do it in such a way that the farmers can obtain control of the prices themselves.

Look at the prices paid for milk to the producers at their shipping points for the last 20 years, and what do you find? A gradual shrinkage in prices amounting to 26 per cent.; that is to say, the prices to the producers have gradually been forced down until there is no money for them in the business. How about the consumers? How much less are they paying for their milk than they did 10 or 20 years ago? Not anything less to speak of. Now does it cost so much more to handle this milk and get it from the producer to the consumer than it formerly did? Not by any means. Then where does the money go? I will let the question answer itself. Any fair-minded man will see where it goes. I contend that the producers now have a chance to change this entire business and they must do it to protect themselves, for the consumers will pay no more than they are now doing. Let matters go on in the present way 10 years longer and where will the producers land? I cannot tell.

THE DRYING OFF OF COWS.

C. E. E., AVOCA, N. Y.—With regard to the drying off of cows, my chief object is to keep them up to a full flow of milk as long as it can possibly be done with profit, and then to dry them off as quickly as practicable. I generally milk my cows until about January 1, and aim to have them fresh about the first of March, allowing them to go dry for two months; but I find that among animals of the same breed it is next to impossible to keep some to their milk; while it is almost impracticable to make others dry up in the fall and early winter. I feed corn-fodder, mangel-wurzel, pumpkins, and such provender, saving small and diseased potatoes to be fed a few weeks before calving. I consider the latter very valuable feed at that time. From the time when I begin to dry off the cows until a short time before they calve their principal feed is straw. I would not feed this were it not that the animals are in a warm location where they are protected from cold winds. When drying off I milk the cows a few times once a day and then cease to milk them for a long time, being sure that they are dry when milked the last time. I always try to keep a heifer to her milk very late, thinking that perhaps it may make a difference afterwards. A few years since one of my cows that I supposed was farrow, proved to be with calf and it was so late when that conclusion was arrived at that she could not be dried off. The calf was so poor and weak that I did not try to raise it. Another time I bought a cow expecting to milk her during the winter and fatten her for beef in the spring. Towards spring I discovered that she was not farrow. The calf was nothing but a mere framework with a hide over it. This cow was fed high for milk and beef. From my experience I conclude that the closer a cow is milked up to the time of calving or the more she is forced to give a large quantity of milk, the greater will be the injury done to the calf, but I have never noticed any injury to the cow. I keep from eight to 12 cows and sell the butter to special customers at fancy prices.

BUDDED TREES IN THE WEST.

PROF. J. L. BUDD, AMES, IOWA.—A correspondent writing from Brighton, N. Y., says: "I inclose copy of a circular which is being sent abroad in some sections: I send it to you because it evidently misconstrues or misrepresents an article by you to which reference is made. Why *budded* trees should be a swindle, I am at a loss to know. Do you not think a thing of that kind misleads the public, and really does as much harm as the evils it seeks to correct?"

The circular referred to is sent by a well-known nurseryman of Illinois, who denounces the budded trees as arrant humbugs and quotes the writer in support of his views. I reply in the R. N.-Y., as a general denunciation of budded trees was never intended by me in the article to which reference is made. Over large areas of the Eastern and Southern States budded trees of the apple and other orchard fruits are as good as, or better than root-grafted ones, but the fact remains that west of Lake Michigan the drift soils are relatively loose and friable, and our most trying winters are often without snow; hence the hardiest varieties on common commercial stocks are liable to be root-killed. Of course, they might be saved by very deep planting on dry soil; but the average planter is not aware of this need. Even when root-grafted by using a long cion and a very short root, we sometimes lose tens of thousands of hardy apple trees in the nursery if they are not deeply banked in the fall; but where properly grafted and set, a large part of our nursery trees have thrown out roots from the cions before they reached the size which planters require.

CROSS-FERTILIZATION OF GRAPES.

G. R. W., LYNDON, KY.—Reading the article about the Colorado Grape in a recent issue of the R. N.-Y., calls to my mind a few questions I would like to have answered by some of the leading pomologists. J. G., says, that having a Brighton and Chasselas growing on the arbor opposite each other these two vines interlocked their branches on top of the arbor, and while in bloom the bees were very busy, etc., etc. By all this I understand that he wishes to say that the bees fertilized one vine with pollen from the other. Now my questions are: 1. Is it possible for the bees to fertilize a grape blossom? 2. Has any one seen bees so at work as to warrant the belief that they were fertilizing the grape flowers? I have many thousands of bees and several acres of grapes, and after careful observation I am certain that I have never yet seen them at work on the blossoms. If any one will study the nature of the grape blossom, he will see that it differs from other fruit blossoms: the way the blossoms open forbids accidental fertilization; for as soon as the caps burst off, the pollen falls on the pistils and the grape is fertilized. I don't believe there is one chance in a thousand for a grape to cross with another without the help of man. There is but one way to fertilize the grape, and that is, to collect the pollen of one vine and watch one's chance to place it in the blossoms of the other vine as they open. Let us hear what others have to say.

FEEDING FOR BUTTER.

E. J. M., SHELBYVILLE, ILL.—For making butter I feed for winter rations oat-meal and corn-meal, equal parts. I find this to be as perfect a ration as I can get for producing a good quantity and quality of butter. I feed green-cut clover hay and some oats, and straw for "roughness." For a summer ration when the cows are on good grass I feed about equal parts of oat and corn-meal and wheat bran. I would not advise feeding much corn-meal when the animals are on good grass, as, in my opinion, it is likely to produce too much fat. I use high-grade Short-horn cows that have been bred for butter purposes. I have been crossing some of them with thoroughbred Jersey bulls the past year.

J. P., WAWA, PA.—The answer to an inquiry about the influence of walnut trees on fruit trees growing near them, in a late issue of the R. N.-Y., might lead some one to plant apple trees near a walnut tree. Such planting, about 1845, has resulted in the death of 12 trees, not one surviving within 75 feet of the walnut tree, while the rest of the orchard is in thriving condition. I also wish to notice some advice given in the R. N.-Y. some months since where the suckers or root sprouts of the pear were said to be suitable for grafts for the pear. I have an orchard that was grafted to some extent on such stock. The roots are of course of the same character and continue to throw up suckers certainly to the great injury of the orchard. I think such stock should not be used.

What Others Say

UP AND DOWN.—Our respected contemporary, the Journal of Commerce, speaks wise, effective words, under this head:

The path of life has been described by an old writer as an uneven way. Now it is an upward stretch, difficult of ascent, but rewarding those who climb with the invigorating atmosphere and the glorious views from the summit; and anon a downward turn with a slippery surface, until it reaches a gloomy ravine, into which the sunlight can enter only for a brief period at noon-day, and which is full of depressing vapors and noxious odors. But in one sense the ups and downs of life are almost wholly in the mental condition of those who are on the journey, and for this condition the pilgrims themselves are largely responsible. There are thousands who mourn over this bitter experience, and many who rebel against it, and fill the air with their murmuring cries, who might walk in the sunshine if they would so elect.

This is not mere theory, a poetic vision with no substantial basis, but a plain practical matter of fact, to be taken into the every-day experience. A great share of the burdens of life are the offspring of the imagination. The "ills that never happened" are the authors of the greatest portion of human wretchedness. Looking downward is the looking for evil, and the path to every one who bends his gaze wholly earthward, goes down straight into the gulch, out of

the reach of most of the sunlight. The upward look is the look of faith and trust. It does not anticipate any coming woe, and a large share of the sorrows that fill the eye and bring on the heartache are thus removed at a single sweep of the upturned vision.

What a difference there is in homes! The farmer returns from his work at night bringing with him only a record of the day's trials and disappointments. The good wife has also had her troubles and they pile them together on the table at the evening meal, or in front of the hearthstone. They dream about them all night. In their visions they are falling off precipices and sinking into deep ravines. They rise in the morning unrefreshed and go to their several duties clothed in sable, with the furrowing wrinkles sinking deeper each day into their tell-tale cheeks. They are looking downward with their eyes and thoughts full only of the roadway, its difficulties and impediments. Here is another pilgrim who has had as many struggles and crosses as the former, but he, like him, has had successes and deliverances too, and it is the brighter side of the record he has hid in his heart and brought to his home His wife has had a toilsome day, perhaps; the children have worried her, and many things have gone wrong; but when the husband appears with his sunny face the load somehow seems lifted from her aching heart. He is such a tower of strength to her weak frame and quivering nerves, and she soon adds her smile to the brightening hours. And the children, if there are any, how their ringing laugh catches a gayer tone from father's cheerful spirit. His day's experience has been perhaps a sharp conflict in the battle of life, but he has fought with an upward eye which doubles the joy of every victory and takes the sting from each defeat. The pilgrim in any part of life's journey, who can truly say with the poet: "Upward I turn mine eye," has a never-failing source of strength and hope.

RURAL LIFE NOTES.

PROF. BAILEY'S (Cornell University Experiment Station) experiments are always of a practical nature and described in plain language. A late bulletin is devoted to tomatoes. Prof. Bailey finds that both early fruiting and abundant fruiting are promoted by early sowing provided the plants are properly treated. They must be stocky plants and these cannot be produced without sufficient space to grow in, plenty of light and several transplantings. A record of his experiments fully shows this in every case. The gain in the earliness of fruiting (March 21) sometimes amounted to three weeks. The disadvantage of late planting (May 15) is particularly pronounced, especially in point of productiveness.....

IT has been the R. N.-Y.'s experience, as recorded from time to time in these pages, that rich soil is conducive to rampant vines, to unproductiveness and to late maturity. Prof. Bailey's experiments give very different results. He planted on three plots. The first received 5,460 pounds of fine, old stable manure. It was 60 by 30 feet. The second received nitrate of soda, eight pounds to 55 by 30 feet; and the last, of the same size, had received no fertilizer or manure of any kind. The rich surface soil had, moreover, been removed. The three plots were treated alike in all ways. From the first there was a great difference in the appearance of the different areas. The plants on the heavily manured plat were uniformly most vigorous and largest. The nitrate-of-soda plantation gave stocky plants of medium size with a very dark color of foliage. The unfertilized plat gave small plants with a light cast to the foliage.....

THE first ripe fruits were found on plat III.; but there were only two on the whole patch which ripened in advance of plat I. and the difference amounted to but a day. At the first picking, plat I. produced by far the most fruits, and they were in every way superior to those from the other plats. During the whole season plat I. continued to hold its superiority. In point of earliness plats II. and III. were about the same.

On October 10th the average total yield *per plant* was as follows:

Plat I. heavily manured, 12.7 pounds.
" II. nitrate of soda, 9.1 pounds.
" III. no fertilizer, 6.8 pounds

THE Rural Grounds and an acre field near them would have shown a very different state of things during the past season and, indeed, in previous years. The acre was poor soil feebly manured with less than 10 tons of farm manure to the acre. The plants began to ripen their fruit at least 10 days earlier than a small experiment plot of the R. N.-Y. containing some 100 plants. These had received both stable manure and fertilizer in liberal quantity. We cannot say positively whether the average quantity per plant was more or less. A general impression is that the poor field yielded more than the rich plot and that fewer green tomatoes were destroyed by frost....

TO SHOW how the same tomato will vary in different soils and under different treatment let us compare a few of Prof. Bailey's reports with our own. He says that the Haines (No. 64 from Northrup, Braslan and Goodwin) is too irregular. We found it fully as regular as Ignotum. Prof. Bailey considers that "regularity of shape" is one of its" particular points of superiority." In other respects the two reports agree.

Our report of the Shah (Henderson) and Prof. Bailey's are alike. It has no value. The fact of its being the first yellow with potato-leaf foliage is simply worthy of note. Our own tomatoes, however, were not all yellow. Some were reddish, others orange color.

Lorillard (Henderson) at the Rural Grounds was not only very regular and productive, but there seemed no reason for designating it as not valuable as a market variety, as Prof. Bailey does.

Mc Cullom's Hybrid with him was a "second early." With the R. N.-Y. it was late. Bay State (Bragg) was also late and of no notable value. Prof. B. estimates it as "one of the best recent introductions."

As to Prelude, both reports agree. The tomatoes are rather small, but regular in shape, very early and productive..... ...

PROF. BAILEY, says of the Ignotum, which originated with him while at the Michigan Agricultural College, that it is without question by far the finest market tomato which he has ever grown. Its particular points of superiority are large size, regularity of shape, solidity, productiveness, and uniformity throughout the season. It is the largest and heaviest of the perfectly regular tomatoes, and the most solid of any of the market sorts. The pickings from his patches this year were usually fit for market as they came from the vines; and the last picking, October 10th, after a long season, was scarcely inferior to the best picking of the season.....

As grown with us it was not particularly regular. It occurred to the writer, and a note appeared to that effect in these columns in early fall, that it should be grown from selected seed a season or so longer before introduction. As to solidity, fruitfulness, etc., the R. N.-Y. fully agrees with Prof. Bailey's report..... .....

HAS Prof. Bailey had occasion to notice (we address the inquiry to him as having given the tomato more study than others) that the color of tomatoes differs under peculiar conditions? Last year the R. N.-Y. raised about 20 different kinds in a very poor soil. Potato chemical fertilizer was liberally used, and that alone. The color inclined to a yellowish orange in all alike.

DAIRYMEN, says the Breeder's Gazette, are coming to place a high value on oats, and this year they will be used extensively on many farms in place of bran. For making solid, healthful flesh and strong bone, and giving to the animal great vigor and quality, no grain on our farms can equal the oat.....

PROF. SHELTON of the Kansas Agricultural College, speaks in the highest terms of kohl-rabi as a drought-resisting succulent crop for the West. He recalls, in the above journal, the season of 1887 as one of drought and disaster. Every grain crop upon the college farm was nearly a complete failure. Late in October he harvested from about half an acre, 205 bushels of handsome bulbs, to say nothing of several wagon-loads of tops which, without weighing, were hauled to the cattle and greedily consumed by them.....

THE past season kohl-rabi was cultivated on two detached pieces of ground aggregating something like one acre. The smaller of these (36 .00 acre) was harvested a few weeks ago. It gave 273 bushels (60 pounds) of bulbs, a yield which rates at 758 bushels or 22 79-100 tons per acre. The bulbs ran from six to 12 pounds each, although a single specimen three weeks before harvesting weighed an even 20 pounds.....

THOSE intending to cultivate kohl-rabi are advised to select clean, rich ground and to plant at ordinary corn-planting time and keep clean. While Prof. Shelton cannot guarantee a crop of bulbs in every case he is confident that with no other Western farm crop are the chances for success greater than with kohl-rabi. Of the two kinds, purple and green, sold in the market for stock purposes, the purple is greatly the better, giving larger and handsomer bulbs apparently of better quality than the "white," the name under which the seed of the green variety is commonly sold. In seeding avoid the hand drill; it always wastes two-thirds of the seed that it sows and does its work poorly. He plants by hand preferably and thereby saves seed sufficient to pay the laborer, and gets a better stand than can be had with the drill. Two to four seeds thrust into the moist earth by the thumb and fore-finger, at intervals of 10 to 12 inches, are almost certain to give an even stand in the best possible shape for the subsequent operations of thinning and hoeing.....

A NEW method of dressing chickens for market is given by a correspondent of the Massachusetts Ploughman.

The chicken is either beheaded or knifed in the throat in the ordinary way, and is instantly immersed in a tub of cold water and held there until it has ceased to kick, when it is immediately taken out and the feathers will come out by the handful, as easily as if scalded. Care must be taken to hold the chickens long enough, but not too long in the water, and remove the feathers immediately. The skin is not torn or disfigured in any way, and the dressed bird presents a particularly attractive appearance. This was done with spring chickens of about four pounds' weight. It required not over five minutes to kill and dress a bird in this way.....

THE WESTERN AGRICUTURIST says that Holstein-Friesians outnumber all the other breeds of cattle at leading Western State fairs this season. This shows the increasing interest in dairy production. The strong point with the Red Polled and Swiss cattle is that they are good dairy cattle as well as good beef animals, and the best milking families of the Short-horns are increasing in popularity in this country and Europe. Still, the beef-producer will ignore milk as of little consequence. Meanwhile the dairy cattle are increasing in popularity the world over.....

THE excellent Iowa Homestead says: "Every day we see long lines of wagons loaded with fine potatoes standing in the streets of Des Moines for which the farmers ask 20 cents per bushel, retail. Carloads can be bought at 15 cents and under. Eastern consumers need not fear any scarcity of potatoes. Western farmers would be only too glad to get 25 cents per bushel."

Yes, that is true as we know from our Western subscribers and contributors. But how much does it cost to get a barrel of potatoes from Iowa to New York?.....

LUTHER BURBANK, of Santa Rosa, Cal., is doing some valuable work in the way of producing new varieties of fruits and flowers by crossing. The American Florist says that he has 10,000 new varieties of potatoes; that he has grown over 100,000 roses from seed, 25,000 of which are retained. He is the originator of the Burbank Potato....

A GOOSEBERRY is described in the Canadian Horticulturist as twice as large as the Downing and utterly free from mildew. It is wonderfully prolific. It is a cross, by Prof. Wm. Saunders, between Houghton and Whitesmith.....

PROF. J. L. BUDD, in the Canadian Horticulturist, speaks, as the R. N.-Y. is impressed, a well-deserved word of praise for the Simon's Plum. Our own specimen is the only plum ever raised at the Rural Grounds that did not seem to sustain injury from the curculio. The flesh is very firm. Prof. Budd thinks, when better known, it will be valued for canning or stewing, as it has the peach flavor without the peach bitter.....

DIRECT.

"'Tis a marvelous science, deny it who can,
The double game of the Middleman."
- Prof. Wallace.

——FREE PRESS: "Set in her ways: A brooding hen."

——BINGHAMTON REPUBLICAN: "Favorite song of the milkman—Shall we gather at the river?"

——WEEKLY PRESS: "On broad principles it would seem that the period next ensuing will be one of improved prospects for the farmer here in the East; while the rapid increase of population in the West will open home markets, which will necessitate diversified agriculture there and help the Western farmer as well. It is a bad time to abandon farms and in our view there are few safer investments for capitalists than these deserted lands which are now so freely offered for sale."

——PRINTERS' INK: "The man who does not believe in the value of his goods is in a bad position when he tries to convince others of their desirability by means of an advertisement."

——"LYING advertisements are, and always will be, failures in the long run."

——AMERICAN FLORIST: "Mr. Halliday denounces as fraudulent the practice of selling one variety under two or more different names—obviously with the intention to deceive."

——PRES. CHAMBERLAIN, of Iowa, in the Ohio Farmer: "Change brings expense and loss in all things, especially in farming, and should never be made without clear proof of a net advantage to be gained. It will cost a thrifty farmer far more than $1,000 to move to another State and get started as well again, and another $1,000 to learn new methods, for soil and climate. Will it pay to change? Take the two States of Ohio and Iowa—grand States. My advice to nearly all the farmers in both States would be to stay right where they are and do the best they can there."

——HARPER'S WEEKLY: "It was a saying of Navisson, a lawyer, that no man could be valiant unless he hazarded his body, or rich unless he hazarded his soul."

——MILWAUKEE JOURNAL: "The man who is always looking for work seldom puts on spectacles to assist in the quest."

——T. B. TERRY: "We do not live in the kitchen, but in the whole house."

Miscellaneous Advertising.

Hood's Sarsaparilla 100 Doses One Dollar

It is Economy to buy Hood's Sarsaparilla, because it is the only medicine of which can truly be said: "100 Doses, One Dollar." It possesses peculiar strength and curative power, and effects cures where other preparations fail. Try it, and you will realize its merit. Sold by all druggists. Be sure to get Hood's Sarsaparilla.

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Highly concentrated. Dose small. In quantity costs less than one-tenth cent a day per hen. Prevents and cures all diseases. If you can't get it, we send by mail post-paid, One pack. 25c. Five $1. 2 1-4 lb. can $1.20; 5 cans $5. Express paid. Testimonials free. Send stamps or cash. Farmers' Poultry Guide (price 10c. free with $1.00 orders or more. I. S. JOHNSON & CO., Boston, Mass.

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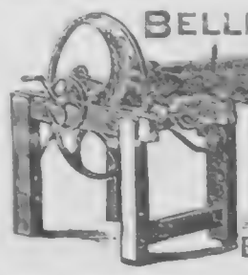

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THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, DECEMBER 7, 1889.

NOTICE.

THE entries for the "Notes on a Back Number" prize will close December 15.

ALL who have new and promising varieties of potatoes for sale, should announce them in the R. N.-Y. Potato Special to appear in a couple of weeks.

"AFTER tryng to exhaust my soil for 30 years, the bulk of the fertility is still there." Sir J. B. Lawes, page 804.

"WHAT is the use, my friends, of pulling away at the horns and tail while some one else quietly gets the milk?" T. B. Terry, page 804.

A cow with good teeth will make short work of an ear of dent corn. Cob, grain and all quickly disappear. Horses nibble off the grain and leave the cob, but some cows seem to like the taste of the cob. Cobs of dent varieties please our cow more than do the hard, flint varieties. We know of farmers who feed their corn without husking it at all. The cows eat the ears, husk, cob and all. With the softer varieties the grain is about all eaten up, but with flint corn, the older cows have a hard time. The best you can make of it, it is a curious sight to see a cow handle a big ear of corn.

THE FARMERS' ALLIANCE claims a membership of 2,500,000, and the Knights say they have a paying membership of 250,000. A confederation would therefore give 2,750,000 votes. Of this vast constituency the farmers would of course be the body; the workingmen the tail. Would the tail wag the body or *vice versa*? The union would of course be mainly for political purposes, as on the questions of wages, strikes, hours of work, etc., the two orders could not well agree. Even on the single-tax question the farmers and the operatives, as represented by the recent conventions of the Grangers and the Knights, are diametrically opposed. The Grangers strongly opposed such a measure; while the Knights emphatically approved of it. The political papers have had a great deal to say editorially during the past week about the projected union, and of course, most of them disapprove of it.

AS USUAL, the Thanksgiving market was flooded with poultry. While prime, fresh stock always sells for good prices at this time, poor lots, or those arriving in a damaged condition must be sold for what they will bring. The weather has been the worst possible for handling dressed poultry, being warm and wet, and many lots of dry-packed were so sour upon arrival that it was almost impossible to sell them at any price. The R. N.-Y. has constantly advised its readers to sell their poultry, especially fowls and chickens, before the markets become so glutted and prices so depreciated. Tons of chickens were sold in this market the past week for less money than the same birds would have brought three months ago. Does this pay? Chickens sold as low as five cents per pound! From now until after the holiday markets, it will not pay to ship anything but choice poultry to this city. Fancy turkeys and ducks especially, are wanted.

THE charters of over 250 Missouri corporations which are charged with being members of some trust, pool or combination contrary to the provisions of the Anti-Trust Law, have just been revoked. Some of them are among the largest business concerns in the State, and it is probable that no small amount of trouble and inconvenience will be caused before the vexed question of the constitutionality of the law will be settled. Some say they will not obey the law now because they know that in the future it will be declared invalid by the courts. Various other excuses are given by others for their proposed disobedience. The big fight, however, will come between the State and the large corporations which admit they are in the trusts and combinations, but claim that they have a legal right to be in them. The opposition to the law among the members of the illegal combinations is strong and bitter, and neither money nor pains will be spared to defeat it before the courts. The people of the country at large will watch with no small interest the course of the war between the State and the monopolies.

CANNED MILK.

UNTIL within a short time the stewards on the large ocean steamers have used condensed milk almost exclusively. We are now told that many are using Norwegian canned milk, which has the merit of being all ready for use as well as being without change of form, and preserving the mixture of butter fats almost exactly as the product came from the cow. This Norwegian milk is prepared by a patent process which is so simple that it is quite surprising that it ever could be patented or that it was not made use of long ago. The milk is heated to 110 degrees, then cooled to 50 degrees, then heated to 110 degrees again, and again cooled, then heated to about 100 degrees and at once placed in tin cans and perfectly sealed. After being treated in this way, it is said to keep perfectly for months in the cans, or even for several days after being taken from them. Cream taken from this canned milk makes excellent butter. It is confidently expected that the canned milk will be offered for sale at all grocery and provision stores in England within a few years. Why not in this country? The process is said to be the result of efforts made by a dairyman in Norway to provide a profitable use for surplus milk at milk factories. We have an abundance of surplus milk in this country. Why can we not have experiments made to test the value of this patent here? This is a good chance for our experiment stations to show their interest in practical dairy matters.

"ABANDONED."

THIS title is being written on hundreds of good farms in the New England States. Many of these farms are as productive as they were 30 years ago when they supported large families comfortably and happily. Right by the side of the abandoned farms the R. N.-Y. has subscribers who are actually making money at farming. Why then is this sad and disheartening title written over these farms? Page after page has been printed in reply to this question, yet the bottom of it has not yet been reached. Western competition, unjust tariff laws, high prices for farm hands, overproduction, increased cost of living; all these reasons are practically answered by the thoughtful and enterprising farmers who make farming pay right in these "abandoned" districts. Does any one doubt that there are such men? "The old folks have died off while the younger people have gone to the cities." This statement by A. B. Deering on page 804, states the fact of the matter. Find the reason why the younger people prefer city life to New England farm life and you find the reason for the abandonment of these farms. Some of the younger people *do* stay and work the farms when the old folks retire. Find the difference between the home lives of those who stay and of those who go away and you learn another part of the secret.

There are many things that might be truthfully said about the causes that have led to the decadence in New England farming. If we could live the past 50 years of our history over again, it might be that New England farmers would have changed the policy of our government in several lines. Has the immense immigration from Europe which we have encouraged for years been of unmixed benefit? We have prohibited the importation of the products of cheap labor but we have brought over the cheap labor itself. We have given away the soil that Nature designed for the next century's food-raising and used this very gift as a club to drive our own citizens away from their homesteads. Free land, cheap labor, a horde of middlemen and handlers! Again, our wonderful railroad systems! Suppose they were less wonderful. Suppose it was less easy to transport a carload of corn or a carload of butter from Iowa or Nebraska to Boston. Would the Vermont or New Hampshire farmer be better off, better able to keep his "younger people" at home? And on the other hand would the Iowa farmer be so much worse off that his profit would be changed to loss? But these thoughts are of no material consequence now. We have given away our lands; our grain and meat would feed the world, our railroads are the marvel of the century. We have turned the old conditions upside down. Those who have deserted these Eastern farms and those who are now ready to desert have not been able to adapt themselves to new and strange conditions. You can't farm in New England as you did 20 years ago and make much of a living. That seems settled. You *can* farm there in a way that will pay a good profit. How is it to be done? The R. N.-Y. proposes to let its correspondents tell for themselves.

CHEESE SYNDICATES.

CONSIDERABLE has been said of late about attempts of British capitalists to buy up the principal cheese factories in this country, and especially those in the northern and central cheese-producing sections of New York. C. B. Ryan, of Ingersoll, Canada, an avowed agent of the combination, claims to have secured options on over 300 factories in that region, and a large cheese firm in Lowville, Lewis County, has also been getting options on factories in that neighborhood, but denies that it is acting for foreign capitalists. Rumors of similar negotiations likewise come from some other dairy districts in other States. Dairymen naturally ask what are likely to be the effects of such combinations. Will they, like others of a monopolistic tendency, seek to lower prices for producers and raise them for consumers? It seems to us that combinations for such a purpose would be impracticable. The first cost of a cheese factory is not large, while the patrons are not bound to send milk unless the price is satisfactory. The manager of a factory is frequently, if not generally, a hired hand who makes cheese for a mere trifle over the cost of making it at home. What therefore could prevent the starting of a new factory by farmers in any section in which they might think they were unjustly treated by the combination? Indeed, there would be a temptation to start such factories even where no charge of the kind could be justly made, in order to force the syndicate to buy them at a profit to the owners.

Another scheme of a somewhat different nature has been quietly progressing for some time and appears more likely to be realized. It is proposed to form an important syndicate, with a capital of $5,000,000, for the purpose of supplying the markets of Great Britain with the most acceptable kinds of American cheese at the lowest price consistent with a fair profit on the investment. Depots for the proper distribution and expeditious handling of stock after landing are to be established at various ports of the United Kingdom, and fully qualified and duly accredited buying agents, including two from London, two from Liverpool, and one each from Manchester, Bristol, Hull, Glasgow, Leith, Leeds and Birmingham, and probably other large consuming and distributing points also, are to act upon this side of the water. It is to be their duty to attend personally at the various Boards of Trade in the producing districts here and in Canada, picking out and purchasing the best grades of cheese suitable for the various markets they represent, and making direct shipments through the various ports on our seaboard.

Under the circumstances this would be the closest practicable approach to a direct deal between the producer and the foreign consumer, and it is believed that if the scheme is successfully carried out, a reasonable interest can be realized on the investment from the curtailment of the customary taxes by middlemen, while a fair margin of profit can be maintained for the producer at the same time that the average cost to the consumer may be reduced. It is also proposed to start a large depot in New York City to supply wholesale operators with all the cheese they may want for home consumption. However plausible such schemes may be in prospect, and however fair the promises of their projectors, there is always some danger that when they are in the full swing of success they will use their power for unjust self-aggrandizement at the cost of producers and consumers alike.

BREVITIES.

SOME of the best hog breeders in the country are going to tell us how they find a profit in feeding oats to hogs.

"UNEASY lies the head" of the farmer whose cows are shivering on the shady side of a straw stack these chilly nights.

AT THE Chicago Fat Stock Show, a New York State Holstein cow took first prize on butter record, and a Pennsylvania Holstein second.

MORE intimate trade relations with the South American Republics seem inevitable. Will they operate advantageously for the farmers of the United States?

AN organization with the title "The National Dairy and Food Commissioners' Association of the United States" was formed in Cleveland, Ohio, on Wednesday.

ALL farmers are interested in the figures giving the cost of living on the farm. These figures tell some curious tales. By-and-by we shall give the cost of life in towns and cities. Then our readers can estimate what their wood, milk, butter, eggs and poultry are worth.

ALLUDING to the communication on "Cross-fertilization of Grapes" on page 806, the R. N.-Y. would say that it has had quite a little experience in such work. We have always *removed* the "cap" to apply the foreign pollen and have found in almost every case (the flower being *perfect*) that the pollen is ripe before the cap falls. Probably, however, the stigmas are often receptive after the fall of the cap in the case of varieties having imperfect stamens.

IT appears that the Western silo men have little use for heavy weights or jack-screws on their silos. Some of the men who write for this issue of the R. N.-Y. have made the silo so successful that they are able to keep a cow for each acre of land they own. It is evident that "patent" silage will not find many takers among these men at present. Still, the R. N.-Y. can only say that of all the samples of silage it has ever seen the sweetest and most palatable was that made by Mr. Colcord's patent.

A CORRESPONDENT, page 806, speaks of feeding a ration consisting of half oat-meal and half corn-meal to dairy cows. The R. N.-Y. has been feeding whole oats to a dairy cow. We find that the oats are more completely digested than whole corn and that they certainly increase the cow's milk yield. The butter, however, is not equal to that produced from clear corn-meal. In this experiment oats were fed alone. With one-third oat-meal and two-thirds corn-meal we do not notice any inferiority in the butter.

OH DEAR! those horrid, bothersome German chemists! Another of them has just "discovered" another substitute for butter! It is a fatty substance in the cocoanut. Of course, in many respects it is better than genuine butter; but, all the same, it is sold under the name of "the inferior product." It is being turned out in vast quantities at Manheim, a single factory producing 6,000 pounds a day, worth in the wholesale market 15 cents per pound. A very stringent anti-oleo law has just been passed by the Reichstag, which goes into force in all the German Empire on January 1, 1890. It forbids the sale of any imitation or any substitute for butter unless there is plainly stamped on the cover or article itself a statement that it is a substitute or imitation. Butter is defined to be "the article of fat in which, besides salt and coloring, no other ingredients appear except those coming from milk." It would be interesting to compare the effects of this law in Germany with those of the anti-oleo laws, national and State, in this country. According to the report of Commissioner of Internal Revenue, the other day, in spite of all legislation and of the boasts of the Dairy Commissioners and their assistants in various States, there has been a large increase in the manufacture and sale of oleomargarine during the past year in the United States.

Farm Topics.

ABANDONED FARMS.

(*Continued from Page* 804.)

list. The State Commissioner sent me a circular and I filled it out; but stated that it was not an abandoned farm though it was for sale. I took it for an investment and for the timber. It has been occupied I suppose for 100 years. It is not worn out. It is productive and well located two miles from a railroad depot, church, etc. My health is poor and hence I would be glad to sell. There are various reasons for the abandonment of farms hereabouts. 1. Our young men do not like to work on the farm. 2. Help is scarce and wages are high. 3. Our farmers do not keep their farms in a paying condition. They spend too much time riding about. They must all have covered buggies, etc. 4. Some of the farms are run out. 5. Many are too far from a railroad and a market. If we had a lot of thrifty Germans and Swedes, however, they would do well.

Grafton County.

FROM W. A. RUSSELL.

Why are the farms deserted in our town? Twenty years ago District School No. 3 had, during the winter term, between 60 and 70 scholars; now there are only five. Where are the people gone? One by one they have sought the commercial centers, until their old homes are nearly deserted. Most of them, like myself, thought farming too hard, or too dull a life, and now as the fathers and mothers pass away, no one of the family is ready to take their places. Twenty years ago the farmers never thought of buying grain, but to-day they can do so cheaper than they can raise it. Then corn and potatoes brought good prices, and if the farmers had a surplus, they could readily dispose of it at a good profit. Yet to-day, if a man is willing to earn his bread by the sweat of his brow, he can do so here on the farm, and no man gets more out of life than the independent farmer.

Middlesex County, Mass.

FROM O. H. ALEXANDER.

A great deal has been said about abandoned farms in Vermont lately. I do not know of any on this side of the Green Mountain range. I think the time is coming when more of our young men will remain at home and stick to the farms. Our Champlain Valley is one of the most charming places to live in in America. The scenery and soil cannot be surpassed and our society is first-class and our schools are excellent. No blizzards or hurricanes visit us; nor are there any thieves or burglars to speak of.

Chittenden County, Vt.

Everywhere.

A SUMMER OUTING IN THE NORTH CAROLINA MOUNTAINS.

II.

MARY WAGER-FISHER.

The "Land of the Sky;" the Blue Ridge and blue flowers; Mount Mitchell; a lonely grave; a high fountain; railroad gymnastics.

FROM Salisbury on to Asheville the country was charming. Wheat was being harvested, there were more and better houses, the smart hotels at the stations had quite a Northern look, and wealth and thrift were apparent in various ways. All the time the train was climbing higher into the mountains, the blue of the distant hills being of a most soft and exquisite hue, owing, possibly to the deciduous character of the trees with which they were clothed. The fleecy clouds were floating much nearer, and we had entered the "Land of the Sky." Miss Fisher (Christian Reid) who writes gracefully of Southern life, lives in Salisbury, and one of her books which she calls "The Land of the Sky," is a light and amusing account of the experiences of a party making a tour in the mountains.

From the time we were well in the mountains confusion reigned in my mind as to our whereabouts. Mountains were everywhere, a great brood of them, and there were no distinctive peaks, or ridges to my eyes. But to the natives, this was the Blue Ridge, that the Great Smoky, yonder the Nantehalah, afar the Blacks, and everywhere the Appalachian or Alleghanian Range. It didn't particularly matter, and to assure myself that I was in fact somewhere, I mentally classified everything as the Blue Ridge. A new, curious and very blue flower, growing in a tall spike flourished in abundance by the roadside, and I asked the car conductor what the people called it. He said he had never heard a name for it, and after some further talk he gave it as his opinion that the mountains had been named Blue because of the abundance of this flower. Some days later while walking in Asheville, I leaned over a garden fence where a young woman was gathering a nosegay and asked the name of a flower, new to me, which I saw growing therein. She did not know it, and when I commented on the blueness of her larkspurs, she said that she never before knew what they were called, and she had seen them from childhood! She probably wondered why any one should bother her head about the names of things.

Before reaching Asheville, the railroad performs various engineering antics in getting across the top of the Blue Ridge, and particularly is this the case in getting around and over what is called the Round Knob. In this place where the mountains and the rail track play at hide-and-go-seek, a hotel has been built, and by the damming up of a mountain stream, a fountain was established which threw up a stream 268 feet high, which, in American parlance, was the highest water jet in the world. But it did not jet when we saw it, and from all accounts it seemed to have lain inactive for some time. When well over the Knob, Mt. Mitchell comes into view. This mountain with its well rounded top would not attract special attention for its hight, which is 6,711 feet, 426 feet higher than Mount Washington in New Hampshire, and there are 20 other tops in North Carolina higher than Mount Washington. But it was on the top of this mountain that Prof. Mitchell—who was a New England man and the first to ascertain and publish the fact that the Black Mountains of which this is one, are the highest land east of the Rockies—lost his life, and is now buried in a lonely, cloud-enveloped grave. It was his third ascent to the top, and he went alone. As several days passed and no news came of him, a party, with an old mountaineer for guide, went in search of him, and found his body lying in a pool at the foot of a precipice some 30 feet high, over which he had probably fallen in the darkness or obscurity of the clouds. His body had been wonderfully preserved by the pure air, and it was taken down the mountain to Asheville, for interment. Some years afterward, it was thought proper by his scientific friends, that his body should permanently rest on top of the mountain which bears his name and is his monument, and with inconceivable difficulty, it was borne to the top, accompanied by a cortege of scientific men, who were three days in reaching the summit.

Now, quite a good many tourists annually make the ascent, which can be done on horseback, as there is a fairly good trail to the top, from which the view, if the clouds are off the mountain, is vast and magnificent. A young South Carolina woman told me she had thrice made the ascent, once on foot, camping over-night midway up the mountain. Professor Mitchell's grave is without name or headstone, but a wall of loose stones that surrounds his resting place, receives an additional stone or two from every visitor. When the projected railroad to the summit is achieved perhaps some further protection will be given to this singularly sad grave in the clouds. Bear and deer still abound in these mountains, as well as wild cats and no end of "razor-back" hogs, and it is a custom among the mountaineers to roll a log on the top of a newly made grave, to prevent the body from being disinterred by hungry beasts.

When within a mile or so of Asheville, the railroad sweeps along by the French Broad River, where it is joined by the Swannanoa, and we caught a few pretty glimpses of this stream so celebrated for its picturesqueness. But its waters were muddy, and for a mountain river I thought its charms had been overrated; but it may be charming in spots, as it sweeps on in its course to the Tennessee.

Asheville I would think must be pretty from any point of view from which it is approached. At all events, it seemed to me like an oasis of civilization and comfort in those mountainous wilds, and its pretty little new railway station, with its white fence at one side to keep quarreling hackmen at a respectful distance, was grateful to see, as we left the cars for another night's rest.

RURAL SPECIAL REPORTS.

Delaware.

DOVER, Kent County, November 19.—Corn is about all housed; the crop is not a large one even in the most favored sections, and I don't think I am far wrong in estimating that one-third of the whole corn area in the State will return but little more than the seed. We have not had four consecutive fair days since April 15. Corn-fodder is much damaged and the loss in its feeding value will be seriously felt. Public sales are more numerous this fall than they have been for a long time. Many farmers are quitting farming for various reasons. Stock sells low, but feed of all kinds brings full value. Wheat has made a good start; not much difference can be seen between early and late-sown. Stock are still on pasture although being fed some in the yards at night. Late potatoes were a fair crop; there are some complaints of rot now. The present outlook for farmers is not the brightest. Prices for what we have grown are low and the demand light. There are not apples enough for the home demand. The factories will soon begin to put up poultry; but little is being shipped as the prices obtained at home are about equal to those at the city markets. The ground has been slightly frozen a few times, but for the greater part of the time the weather has been warm and wet. Market quotations: Wheat, 70 cents; corn, 35 cents; oats, 30 cents; hay, $10@$15; potatoes, white, 40 cents; sweet, 50 cents; pork, $5.50 per cwt.; poultry, nine cents@11 cents; eggs, 25 cents; butter, 20 cents@25 cents. A. G. S.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

NOWADAYS, when education is supposed to be the rule, not the exception, it is a little surprising to find so many girls and women who cannot write a decent letter. No matter how prettily a girl writes, whether the round, flowing hand taught in the public schools, or the big, angular sprawl of fashion, she is no correspondent if she forgets to put her full address and date at the head of the letter. A great many do forget this, and at times it is particularly exasperating. Entire street and number, if in a town, or full post-office address in any case, should never be omitted. The date, too, is often forgotten, a very exasperating thing when any engagement is made, either for business or pleasure. As for punctuation, many a woman has no idea beyond a dash or a comma, unless it is the parenthesis. Colons and semicolons are entirely ignored. Nothing is more bewildering than to wade through a lengthy and indistinctly written letter where sentences are divided or terminated only by the dash, but several of our girl friends are guilty of this fault.

Good spelling is surely within every one's reach, yet many a woman is deficient in it. Judging from the many fairly educated persons who can never recollect the difference between ei and ie, or the changes from a single to a double l, we begin to think that Dogberry was right in saying that writing and reading come by nature. Such unfortunates might remember the clever scheme of the old Duchess of Gordon, who it is reported, said: "You know, my dear, when I don't know how to spell a word I always draw a line under it, and if it is spelled wrong it passes for a very good joke, and if it is spelled right it doesn't matter." Unfortunately, it is the easy little words one usually spells incorrectly; people who write their "thare" will usually look in the dictionary before venturing on polysyllables. In conclusion, while we admit that bad spelling does not by any means invariably imply lack of education, it certainly does show carelessness in any case, nor can we consider any woman fully educated if she is unable to write a well-composed, correctly-spelled letter in her own language.

* * *

WE recently saw some individual salt-cellars which were both pretty and cheap. They were little tiny oval Japanese baskets, made of bamboo lined with red lacquer; they were clean, unbreakable and quaint-looking, having a very pretty effect on the table. It is surprising how many pretty little Japanese articles one may buy for the table, to give a relief from ordinary white ware. Butter or cheese plates, pickle and sauce dishes, dessert plates or salad bowls—any odd pieces—may be purchased in Japanese ware, and all are within the reach of small purses. Even when not in fine china, the quaint oddity of shape and design, or the brilliant coloring, makes it uncommon and decorative, to the very great improvement of a plain tea-table.

PLANNING FOR CHRISTMAS.

OLIVE E. DANA.

WE have been pondering over our Christmas gift-making some time already—the most of us—have we not? And some of us are no nearer decision than when we began to plan and ponder. It is sometimes so hard to suit at the same time, one's friend, ones-self and one's pocket-book.

A gift should be tried by at least three tests—its own fitness, the recipient's needs and tastes and the giver's ability. How many of the presents we have given in other years abide such testing?

It is fortunate that hands as well as heads may help in the Christmas preparations. Fingers can eke out scanty funds and the gift into which love's labor goes is doubly precious. Still, our labor is not always well spent. It seems to me that every gift ought to be so chosen that it will be and bring, of itself, no less than as the expression of friendship or affection, some real help, solace, cheer, however slight. And the best gift is the most serviceable. I use the adjective, of course, in its broadest sense. After love, which is itself wise and tactful, it seems to me that judicious gift-making requires nothing so much as tact. The quality grows, too, by exercise. Shall we not try to use a good deal of it, and of its sister-virtue, pre-thought, in choosing our Christmas gifts?

More and more, it seems to me in manufactures, in fashions, in the growing realm of decorative art, skill, taste and energy are being freely expended on articles designed for common use.

More and more artists and artisans seem to feel that talent and labor are well expended if through their products men's and women's daily tasks are lightened, or their common life dignified or elevated.

And, following the same trend, all the various womanly accomplishments vaguely defined as "fancy-work" are in demand not only that a few pieces of fragile bric-a-brac may be added to the furnishings of parlor or sitting-room or chambers, but to supply articles of real use, convenience and beauty for every department of housekeeping.

Those skilled in needle-work ought to be the last to find it hard to prepare dainty and valuable gifts. If the friend or acquaintance one wishes to remember is mistress of a home, and covetous for its adorning, there is wide room for choice. Just for the dining-room, numberless pretty and useful things may be made. A linen table-scarf done in outline, with knotted fringe, is a graceful adjunct. Tray-cloths and carving-cloth are always acceptable, and vary sufficiently in design and in quality to suit all tastes and purses. Doylies and the fringed and outlined tea-napkins swell the list, while, if one desires something even simpler, a table-screen may serve the purpose. This, for a table of ordinary size, is made of a width and a-half of cheese-cloth, two and a-half yards long. It has a hem, an inch and a-half in depth, fastened by feather-stitching, done on the *right* side. The screen has also a design in each corner done in outline. One lately done has simple designs taken from stamping patterns, of creamer, sugar-bowl, cup and saucer, tea-tray, etc., done in red tambour cotton. It consumed very little time in the making, is convenient and tidy, and it may be washed. Table-mats, crocheted of heavy white cotton make an acceptable gift to the house-wife, who might also be gladdened by any of the "cozies" recently introduced and now so much in vogue. If one has very little time or skill, a pair of handsome towels may be bought, and worked with the initial letter of their future owner, or perhaps the monogram, done in outline or in solid embroidery, with washable silk corresponding in color to the border of the towel.

In the way of pretty things to wear, also,

there is wide scope for skill and ingenuity. A pair of the pretty knitted undervests which grow so rapidly under the fingers of the practiced knitter, would delight almost anybody, as would a "hug-me tight" jacket knitted after the same fashion. A pretty change from the knitted under-skirt is afforded by the embroidered flannel found in the stores. A skirt made of this material, with or without the silk crocheted edge which goes with it so well, is a dainty garment and would be a possession valued by most women.

THE HOME PAPER—A PROTEST.

S. J. L.

I OBJECT to J. H. G.'s statement in the R. N.-Y. of November 16, regarding the opposition of farmers' wives and daughters to agricultural papers. He must meet many strange women, judging from his articles. He invariably enjoins upon the women that *they* must do so and so, or everlasting ruin will close down upon them, and now he attributes the disintegration of the home circle to the mothers' and daughters' cruel suppression of the agricultural paper. In this era of papers which combine all that is practical in agriculture and entertaining in domestic affairs, there are very few who would wish to replace such a paper by trashy literature, and, besides, a man seldom needs an excuse for spending $2 a year as he likes, his wife to the contrary notwithstanding.

Farmers' wives, as a rule, are in favor of more papers than their husbands, and where trashy literature predominates, I always notice the husband is quite as much interested in the fate of the heroines as his wife is. A good agricultural paper is everything to a farmer; but that is not a full recipe for preventing boys from leaving the farm.

A sensible father is the best preventive yet discovered; one who teaches his boy self-reliance, and has confidence in his ability to fill responsible positions, praising where praise is due, and not forgetting to give him a tangible interest in his work. With something definite ahead, the average boy will remain on the farm when most needed.

Sensible mothers are also in demand to equalize the temperature between father and son, a position which I know is hard to fill, but it is done with great credit all over our land.

GOLDEN GRAINS.

PHILLIPS BROOKS says no man was ever yet hurt by knowing too much..

A LITTLE learning is a dangerous thing; but the danger is not in the learning but the littleness.....

"Truth, for Truth is Truth, be worshipped, being true as he was brave;
Good for Good is Good, he followed, yet he looked beyond the grave."

SOCRATES said: I study how I may present my soul before the Judge, whole and undefiled; and so, bidding farewell to those things which most men account honors, and looking onward to the Truth, I shall earnestly endeavor to grow, so far as may be, in goodness, and thus live and thus, when the time comes, die.....

Now, every one who suffers punishment, if the punishment has been rightly dealt him by another, must needs either himself be made better and thus benefit thereby, or else serve as an example to others, that they, seeing the sufferings which he endures, may be made better through dread of them.....

AND those who are benefited by receiving punishment from gods and men are they who have committed sins not past cure; nevertheless, both here and in Hades, only through pain and suffering does the benefit come to them, for there is no other way whereby they may be set free from injustice.....

BE courageous and noble-minded; our own hearts and not other men's opinions of us, form our true honor.....

EDUCATE the whole man—the head, the heart, the body: the head to think, the heart to feel, the body to act.....

WE cannot conquer fate and necessity, but we can yield to them in such a way as to be greater than if we could.....

THE more our gifts and graces are exercised, the more they are strengthened and increased. All acts strengthen habits.....

THE CHRISTIAN STANDARD says some people have not yet had the sentimental softness sanctified out of their spirits, nor the whine out of their voices, nor the general debility out of their deportment, nor the clinging dependence on everybody else but God out of their lives, nor the disposition to exist without good, honest labor out of their business arrangements, nor the "holy twang" out of their conversation and prayers, nor the languid affectation out of their manners!.....

OH! for a baptism of manly, stalwart, frank and stirring sanctification that can look every one in the eye, that is not continually asking favors, that does not go round apologizing for its own existence and presence, that knows some interval when it has not some special "ax to grind," and that can occasionally devote itself to unselfish care and consideration and labor and sacrifice for others! Equally from the sourly severe and the softly sentimental, good Lord deliver us!.....

OUR greatest gratitude should be that God does not regulate His gifts to us by the measure of our gratitude to Him. And as we have received, so ought we to give...

WE cannot afford to waste, or ignore, or despise anything, for, however useless it may appear to our short-sighted vision, we know not what treasures of future growth and advancement may be enfolded within it, or how readily it may respond to wise culture, like the tiny germ that is nourished in the warm soil and strengthened by the refreshing rain.....

DON'T always search for the serious side of things. The man who has no eye or ear to the ludicrous is an unhappy mortal. Next to virtue, the fun in the world is what we can least spare.....

"LIFE sometimes overlays the soul in the face with disturbing hieroglyphics which gentle death smooths away showing worthy writing there."..... .....

I NEVER feel that any man occupies my place, but that the reason why I do not have what I wish is, that I want the faculty which entitles. All spiritual or real power makes its own place.....

NATURE never hurries: atom by atom, little by little, she achieves her work.....

THE most cross-grained are by no means the worst of mankind, or the humblest in station the least polished in feeling.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

She could swing a six-pound dumb-bell;
She could fence, and she could box;
She could row upon the river,
She could clamber 'mong the rocks;
She could do some heavy bowling,
And play tennis all day long;
But she couldn't help her mother,
'Cause she wasn't very strong!

—W. C. Sheppard in Puck

CHRISTMAS WORK.

NO one can make a Christmas gift from pure motives without feeling a certain amount of pleasure in so doing. But the woman having abundant means who purchases her gifts knows not the joy which one feels who plans and makes them herself. Happy anticipations of the pleasure the gifts carry with them lighten the work and loving thoughts are worked in with every stitch. But, busy, generous, loving little woman, do not postpone the making of them until from necessity you must work early and late, while you hurry and fret, thus robbing yourself of nearly all the pleasure you might have had in the work, besides being too tired and worn to enjoy the day when it comes. The directions I here append are for easily made articles all of which admit of the use of a wide range of material and various kinds of decorations. Take an inventory of all the odds and ends of pretty things among your belongings, and see if you have not the wherewith to begin at once.

Matting of different qualities is now being used for decorative purposes with excellent results. Painted in oil, boldly, and with an eye to effect rather than elaborations of detail, it makes beautiful mountings for screens and wall hangings or banners. For the former China matting, such as is used for floor coverings, in fine quality, is best, and either white or brown makes the most effective back-ground for painting. Floral designs are usually selected for screens, and treated in a bold, rather conventional manner. Lighter grades of matting can be used for wall hangings. Such pieces are fringed out at the lower end, mounted on a bamboo rod and hung up by a ribbon at each end. One recently seen was of white China matting and the design painted on it was a grape-vine, fruit and leaves. Across both top and bottom was a very effective decoration made with Manilla rope of the size commonly used for a clothes line. That across the top was in one piece put on in loops; that across the bottom consisted of several loops and ends with a straight piece of rope passing through the loops. First ascertain how long a piece is needed for one ornament, then measure accurately for the others. With cream linen thread fasten the strands securely three inches from each end, and ravel out below this for tassels. Sew evenly and strongly to the hanging, connecting by the straight piece woven in and out of the loops; let the ends and tassels hang below. Run a bamboo or other rod through the upper loops and suspend by a rope. Half-inch gilt or wooden poles can be obtained at an upholsterer's, with small brackets for holding them.

A unique and handsome towel holder is made in this way: A band of plush four inches wide is lined with figured China silk. Gather the ends closely and fasten with small ribbon bows to two large oak rings like those used on curtain poles. Midway between the ends gather the plush and fasten to a third ring by which it is suspended. Any material can be substituted for the plush and the goods may be embroidered in any stitch. Ivory or rings of any kind of wood may be substituted, care only being used to have them large enough to allow a good-sized towel to pass through easily.

Scarfs for decorating mantels, pictures, easels, etc., are made of various materials, either embroidered, painted, with drawn work across the ends, or of figured China silk with only a trimming across the ends. Small silk tassels can be easily made and small pieces of silk can be utilized in this way. First cover small-sized brass rings with silk in single crochet stitch, care being taken to make the stitches even and close together. After covering the rings make full tassels through them and either connect them with invisible stitches, or leave a small space between each two. A beautiful mantel scarf was in figured China silk: the cream ground was quite closely covered by an Oriental design done in several shades of dull blue. The center tassel was in the lightest shade of blue, the others shading to dark at the sides. Always remember that in shading from light to dark the second gradation must be double the amount of the first, the third three times that of the first and so on. Threads, zephyr, worsteds, embroidery silk, flosses, crewel, etc., may be used in covering these rings, and they are appropriate for piano or table covers, scarfs or fancy bags.

Of bags there is almost no end. Those made of handsome plush or heavy, dark-colored silk are liked better for shopping bags than more showy embroidered ones. The casing for the draw-string is about three inches from the top. Ribbon and heavy cord and tassels vie with each other in popularity for the shirring and to carry by.

Bags of this style—but only long enough to admit of a pack of cards being easily slipped into them—have the joker fastened securely on one side by full bows of narrow ribbon at each corner, in color matching the lining and shirring ribbon.

Pieces of ribbon sewed together make handsome bags, or a combination of ribbon and strips of either plush or velvet may be used. Pretty bags for dusters are both ornamental and useful. We are often annoyed by the sight of dust on bric-a-brac, which we could instantly remove had we a duster at hand. Cover a round piece of card-board four and a-half inches in diameter. Take an oblong piece of goods 11 by 24 inches, gather at the bottom and sew to the edge of the card-board in over-hand stitch. Line and put a shir near the top, through which to run a ribbon by which to suspend it. Figured sateen lined with the plain, makes pretty serviceable bags for either dusters or soiled clothes. A piece of cheese-cloth one yard square, with an inch-wide hem on each side, cat-stitched in yellow linen floss, makes a handsome and good duster.

A small bag gathered a little ways from the bottom and drawn up so as to leave a small opening in the center, is convenient for a ball of twine, with the end drawn through the opening; shir at the top and attached to the shirring ribbon have a long loop of narrow ribbon to which is attached a pair of small scissors.

A handsome lamp-shade was made of pink surah silk. A piece four inches wide was shirred three times, quite close together, near the top, leaving a half-inch wide frill. The bottom was trimmed with Oriental lace slightly fulled on and at regular intervals pink silk tassels were attached to the hem and allowed to fall over the lace.

A bright-yellow one was very handsome and had once done duty as a white silk muffler. After having been dyed, a circle was cut out of the center large enough to allow of its being gathered enough to hang prettily, and at equal distances apart the bottom was trimmed with white silk tassels.

A large, polished horn makes a handsome hair-receiver by the addition of a four-inch-wide puff of silk, satin, or plush sewed to the large end, and bows of ribbon corresponding in color are fastened at each end with a ribbon to hang up by.

Very many pretty things can be made of white seine twine, such as brush-broom holders, hair-pin receivers, jewelry trays, thread baskets, etc. In short, given this idea, an ingenious crocheter will find an unlimited field in which to exercise her talent. Crochet fine twine in small shell stitch, shaping the article to fit some dish over which it is to be dried. After being starched twice in starch made of coffee instead of water (when perfectly dry) give the article two coats of shellac varnish and then paint with either gilt or brown liquid paint. A work basket was shaped over a two-quart basin, each scallop around the top being carefully pulled out and pinned to the board on which it stood to dry. Rings an inch and a-half in diameter were crocheted in single crochet and tied with coffee-colored satin ribbon to each side, and a bag of surah satin in the same color was sewed to the top just inside the scallop around the edge.

Japanese baskets are decorated in innumerable ways with ribbons and lace, the latter usually in hand-knit cream linen, or in white Oriental lace. Small round baskets make handsome burnt-match receivers by gathering a frill of lace to the top and letting it fall over the sides with silk tassels fastened in the scallops at the edge. Put a small glass tumbler inside, and suspend by ribbons or use standing, as preferred.

A chair or picture scarf is handsome crocheted out of cream linen thread and tied at the center with a picot-edged moire ribbon.

A great variety of articles are made of chamois leather, either alone or in combination with plush. It is handsomest painted, but ink drawing is very pretty on it. Tobacco pouches are drawn up by two ribbons run through slots cut near the top and the chamois is cut evenly to a depth of two inches at the bottom for fringe. Fringe can also be made in this way of felt, for table scarfs, etc.

Four thicknesses of blotting paper with a decorated cover of chamois pinked out around the edges, and tied at the back with ribbons drawn through holes made through both leaves and cover.

Panels of strong card-board the size of a cabinet photograph or larger, make handsome calendars by first covering them with two thicknesses of cotton wadding, then with plush, being careful to get it on perfectly smooth. Near the lower right-hand corner fasten a calendar; near the upper left-hand corner paint or embroider a spray of flowers, or else make a handsome butterfly done of picot-edged moire ribbon in a color contrasting with the plush. These can be suspended by ribbon from the wall, or stood on small gilt easels.

Simple but useful presents are bath cloths of white Turkish toweling with a small scallop crocheted all around them of knitting cotton.

A combing towel is another easily made present. A pretty damask towel is folded lengthwise and cut to fit the shoulders and cut around the neck and down through the middle of the front. Narrow lace is put around the neck for a frill, and the fronts

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

are finished to button with three buttons. Simple designs, brush, comb, etc., can be outlined in colors near the front border, if desired.

A homely but very acceptable gift for an old person is a night-cap crocheted out Germantown wool. Old people are often made wakeful by having cold heads, and these caps are a great comfort to such. Crochet a chain four inches long for the center of the back, then crochet around it in double crotchet. Now go back and forth, widening to fit the head, finish with a shell border all around. Crocheted or knit shoulder capes are rather old style, but a most acceptable gift, particularly to an elderly woman.

A great variety of articles can be made from butcher's linen; splashers, bureau and wash-stand scarfs, tray cloths, bread doyleys, etc. They can be outlined in wash silks, in white silk, or for common use in white linen floss. The edges can be fringed or trimmed with either knit or crocheted linen lace, or they can have a hem-stitched hem all around them. Tidies and scarfs for chairs can be made very handsome by outlining a design in colored wash silks, and trimming the ends with linen insertion and lace. Nearly every housewife is delighted with any gift which adds to the attractiveness of her table. And most of us are not in such affluent circumstances as not to prefer presents combining beauty with usefulness. KATHERINE B. J.

WE have seen something new in paper weights. They are of wood and called "the natural wood of Jerusalem," whatever that may be. The weights are cross-sections of a close-grained wood, three or four inches in diameter and an inch in thickness. The upper surfaces are rubbed smooth, "hand-painted" and varnished. We think that cross-sections of seasoned Red Cedar from "the State of New Jersey" would make capital weights. After bringing out the grain by rubbing, a timely inscription might be tellingly traced in silver or gold paint. Varnish or not as you may fancy.

HOLIDAY FANCIES.

NOW that the season of universal gift-giving is not far away, busy hands are preparing many dainty and beautiful tokens in loving remembrance of the season's customs. A few hints on the subject may prove profitable to those who have more time than money to spend in such ways. When one has a large circle of friends to be remembered, and every gift must be bought, the expense is by no means light, but every one has bits of silk, ribbons, velvets, etc., from which many useful and fanciful things may be fashioned.

A novel and pretty scrap bag is made of a square piece of card-board folded like a cornucopia, and covered with flowered silk. The edges are finished with silver cord and a deep bag of the silk is fastened in the top. This is gathered at the lower edge before it is put in. Casings are run at the top of the bag and narrow satin ribbons drawn in for closing it, enough being left at the top to form a frill above the casings. Tie the ribbon in long loops and support the bag by one of the loops thrown over a nail. This is very pretty hung in a corner.

A pretty case for a clothes-brush consists of a diamond-shaped piece of card-board covered with plush, with a band at the back through which the brush is thrust. Suspend by a narrow ribbon. The plush may be decorated with painting or embroidery.

A useful present for the house-wife is a bag for holding keys. This is nicest made of chamois leather. Cut the desired size and line with scarlet silk. Leave enough at the top to form a heading and make a casing for a draw-string, for which use narrow scarlet ribbon. On the leather embroider the word "keys," using wash-silks to match the lining.

Every one who crochets or knits should have a bag to keep her work in. These can be made very handsome, but a plain one is the best if it is to be much used. A very pretty one is made of a piece of silk 14 inches square. Make a narrow hem on all sides, and about three inches from the edge sew on small brass rings four inches apart. Sew a tiny plush ball in the center of the bag and one at each corner, and run a ribbon through the rings for drawing up.

A handsome photograph case is made of chamois leather lined with violet satin. It is folded over about two inches at each end, thus making two shallow pockets on one of which is written the word "Photos" in gilt letters, while on the other is painted a cluster of violets. Ties of violet satin ribbons are fastened at the ends for closing the case. This makes a very dainty and delicate case for small pictures.

A useful present for a gentleman is an umbrella case. Procure a board 30 inches in length and eight in width and give it a coat of white enameled paint, with a line of gilt at the edges. For the case take a strip of heavy white canvas and make a wide box plait of sufficient depth and width to hold an umbrella. Bind the edges with blue silk braid. Make a row of feather stitching across the top and bottom of the case, working it with blue silks to match the braid. At the top or front of the case place a full bow of delicate blue and cream ribbon. If you paint, add a spray of pink roses at top and bottom of the board. Tack the case to the board with small brass-headed nails, and at each of the two upper corners of the board place a small brass ring for suspending the case from the wall.

Another pretty gift for a gentleman is a case for neck-ties. Cut a piece of leather board 20 inches long and half as wide. Cover with either velvet or satin, and line with soft silk. A band of narrow ribbon is fastened across the case at the top, and another near the bottom, for holding the ties in place. Fold the case together lengthwise, which makes it when completed 20 inches long and five wide. Fasten a large initial letter in silver upon the outside of the cover

A handsome blanket for a baby may be made from a square of cream-colored oatmeal cloth. Embroider single blossoms of golden coreopsis at intervals over the entire surface, and bind the edges with ribbon to match the embroidery.

A pretty receptacle for watches, chains, etc., is made of a strip of very wide ribbon. One end of the ribbon is turned under to form a pointed pocket, and the remaining part is made into a bow formed of a loop and two ends. Decorate the front of the pocket with an embroidered branch of flowers.

A home-made picture frame is made of heavy rope. It should be as large as a man's thumb. One row is tacked firmly to a narrow wooden frame and another is fastened outside of that, finished with large knots at each end. Gild carefully and when perfectly dry, give it a second coat.

For a handsome hair-receiver take a small palm-leaf or Japanese fan and cover with silk of any shade preferred; pale blue or scarlet is prettiest. Line the reverse side with cambric or silesia. Make a shirred pocket of the silk and attach to the lower part of fan. (The handle should be turned upward.) Across the pocket just below the top fasten a celluloid "back" comb, placing loops of tri-colored ribbon at each end of comb. Finish fan all around with heavy silk cord. Suspend by loops of ribbon tied on the handle. MARGARET PERCY.

CHILDREN, both sexes, still wear black stockings. We were recently told at one of the large stores that they had black stockings and those only for children.

A PLEASING GIFT.

A DAINTY, inexpensive little gift may be made as follows:

Two pieces of satin ribbon of contrasting colors (light-blue and pink, cream and blue, apple-green and pink, or peacock-blue and pink) may be used with pleasing effect, each one and three-fourths inch wide and six inches long. Fringe the ends of each about one and a-fourth inch in depth. Then sew together, invisibly, two sides so that there will be no seam or ridge. A pretty spray painted or embroidered on this adds much to the effect, though it is not essential. Take a piece of satin ribbon of either color used, six inches long and three or three and a-half inches wide, and fringe each end 1¼ inch. Now place the strip first made on this other so that the edges and fringes are at right angles, and put between, two thin layers of cotton wadding about two inches square sprinkled with sachet power.

Fasten together with a tiny silk cord or chenille ribbon such as is used in embroidering, of either color, by taking a single stitch through both upper and under ribbon half way between the corners, leaving the two ends to each stitch, to be tied in a tiny bow (making in all four bows).

Now you have a dainty little sachet which mother, sister or even the brothers, will be glad to place in among the handkerchiefs and ties. MRS. H. W. C.

A FIRST-RATE INEXPENSIVE GAME.

THE game of bean-bags is one of the few games which can be played and enjoyed by all the members of a family, from "grandpa and grandma" down to the little folks. The bags and board necessary are inexpensive and easily made. Directions for making the board are as follows: Take a perfectly smooth, strong board 22 inches wide and 36 inches long, and cut a hole seven inches square, equally distant from one end and the two sides, (the distance will be seven and a-half inches.) Make an inclined plane of this board by supporting the end near the hole with a board 22 inches long and 11 inches wide standing on edge, thus making the width of this board the hight of the inclined plane (11 inches.) Join them by means of hinges.

Ten bags, each six by eight inches, are made of strong cloth (Canton flannel of different bright colors is nice, though ticking or heavy gingham answers every purpose) and nearly filled with beans. (Corn may be used if more plentiful than beans.) The bags must be sewed carefully, and all ends of threads securely fastened. They should all be of about the same weight except "Jumbo," the 11th bag, which should be eight by 11 inches and nearly double the weight.

The game is played by standing at a distance of 15 feet or more from the board, and throwing the bags one by one into the hole. Each of the 10 small bags thrown into the hole scores 10, each one resting on the board scores five, and each one thrown clear off the board counts minus 10. "Jumbo" thrown into the hole scores 20, on the board 10, off the board *minus* 20. To determine what the bags resting partly on the board and partly on the floor shall count, lift the board gently after all the bags have been thrown. If they *then* remain on the board they count five each, but each one that slides off counts *minus* 10.

The highest score possible is 120.

In a large company it is exciting and interesting to "choose sides."

MRS. H. W. COLLINGWOOD.

LONG pocket-books are no longer fashionable. The usual size now carried is 4⅛ by 2½ inches. Black is preferable to colors.

Miscellaneous Advertising.

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Who need help in their many infirmities, especially those afflicted with rheumatism, find great relief in

AYER'S Sarsaparilla.

"One year ago I was taken ill with inflammatory rheumatism, being confined to my house six months. I came out of the sickness very much debilitated, with no appetite, and my system disordered in every way. I commenced using Ayer's Sarsaparilla and began to improve at once, gaining in strength and soon recovering my usual health. I cannot say too much in praise of this well-known medicine." —Mrs. L. A. Stark, Nashua, N. H.

Ask your druggist for

Ayer's Sarsaparilla,

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

Price $1; six, $5. Worth $5 a bottle.

W.R&CO'S IMPROVED BUTTER COLOR

IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the buttermilk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere.

More of it Used than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & Co., Burlington, Vt.

THE WONDERFUL LUBURG CHAIR. 100 STYLES BABY COACHES

COMBINING 5 ARTICLES OF FURNITURE IN ONE

INVALID SUPPLIES AND WHEEL CHAIRS

We retail at the lowest wholesale factory prices, and ship goods to be paid for on delivery. Send stamp for Catalogue. *Name goods desired.*

Automatic Brake on all Coaches FREE

WHEEL CHAIRS TO HIRE. SPECIAL FREE DELIVERY.

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Ice Cream at Home.

Made cheaply and quickly by using a Triple Motion.

White Mountain Freezer.

Will freeze in half the time of any other Freezer and prduce Cream of the finest quality.

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BONE MEAL FOR POULTRY. Crushed Oyster Shells, Flint and Beef Scraps. Send for new price list.

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Splendid Location. Good Salesmen. Daily Returns.

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FRUIT AND PRODUCE COMMISSION MERCHANTS.

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PROFIT FARM BOILER

With Dumping Caldron, empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also make **Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Caldrons, Etc.** Send for circulars.

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BERCHAM'S PILLS cure bilious and nervous ills.

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Who (if your druggist does not keep them) will mail Beecham's Pills on receipt of price—*but inquire first.* (Please mention this paper.)

News of the Week.

HOME NEWS.

SATURDAY, November 30, 1889.

MONDAY, lively little Lynn, Mass., the "Shoe City," had the third greatest fire that ever cursed New England. Boston's fire in 1872 caused between $100,000,000 and $125.000,000 damages; Portland's fire in 1866 caused $12,000,000; the loss by Lynn's which burnt up 160 acres in the heart of the place, is estimated at from $7,000,000 to $10,000,000 .....On Thanksgiving Day morning a fire broke out in the business part of Boston and burned fiercely for eight hours before it was controlled, causing a loss of between $5,000,000 and $6,000,000..... An extra session of the West Virginia Legislature is to meet on the second Monday in January to decide on the contest between the Republican and Democratic candidates for Governor....."Road agents" out West were busy and lucky during the early part of the week. Within three days two stage robberies netted them $80,000, one yielding $50,000 and another $30,000, while by "standing up" a railroad train, they cleared less than $2,000.....

FOREIGN NEWS.

SATURDAY, November 16, 1889.

THE Sultan is reported to be willing to cede Turkish Armenia to the Czar in return for the cancellation of the indemnity which Turkey agreed to pay at the close of the late Turko-Russian war; but which the bankrupt condition of her Treasury has prevented her from doing. Such a scheme may help to stave off the demise of the "Sick Man of Europe" for another generation, more or less.....It is said that Russia and Germany have agreed that Prince Ferdinand shall be removed from the throne of Bulgaria in spite of the fact that the Bulgarians want him, and that the Treaty of Berlin provides for the free election of a Prince by the people, and the confirmation of their choice by Turkey with the consent of the Powers who signed the treaty. Should the Prince be driven out, Russia will have an opportunity to set up a puppet at Sofia, and will have a clear road for an advance on Constantinople.... There is in the Bohemian Diet a nationalist squabble that may ultimately lead to the partial disintegration of the Austro-Hungarian Empire. Of the 5,500.000 population of the country (20,044 square miles in area) 61 per cent. are Slavic Czechs, 37 per cent. Germans and about two per cent. Jews. The Germans inhabit the northernmost part of the country in compact masses and form a part of every city and town population, and the Czechs, the rest of the land. For generations there has been a bitter contest between the German and the Czech nationalities, and the hostility has been augmented by the successes of Prussia against Austria in 1866 and of Germany against France in 1870. In the Diet, composed of 241 members, the Germans are greatly in the minority, and in order to show their disapproval of the proposed legislation the German members have absented themselves since the opening of the session. The Nationalist majority has just declared that their absence is equivalent to resignation. The Germans yearn for annexation to the Fatherland, and the Czechs for independence; while Hungary is again plotting for the same object and Pan-Slavism is gaining ground in the outlying provinces of the great heterogeneous Empire..... Brazil has an area of 3,200,000 square miles and has, therefore, after Russia, the most extensive contiguous territory of any country on the globe. It is divided into 20 provinces and its population, made up of many races, is probably about 11,000,000. Of these probably one-third are whites, the remaining two-thirds being made up of mestizos, mulattoes, cafusos (a cross between Indians and Africans) and civilized and savage Indians and negroes, the last being the most numerous unmixed race in the empire. Some of the Indian tribes are still cannibals. Since 1871 slavery has been gradually done away with, and was finally abolished about two years ago. Of late immigration has been quite heavy, especially from Germany, Switzerland and Italy.....Brazil produces four-fifths of the coffee consumed in the United States and over half of all used in the world, nearly all the finer grades being sold as Java, Mocha, Martinique or Bourbon. Sugar, cattle, hides, horns, tobacco, cotton, barks, gums, india rubber, etc., are the chief other exported products of the empire. The country has splendid transportation facilities by water and of late years lines of railroad have multiplied rapidly... In 1807 when Napoleon declared war against Portugal, John VI. the reigning sovereign, took refuge with his family in Portugal's most important dependency, Brazil, and on the fall of the Corsican, in 1815, Brazil became a kingdom, John being King of Portugal and Brazil. In 1822 Brazil separated itself from the "Mother Country" and was declared an empire under Dom Pedro I., son of John, who had been regent of the kingdom. The latter abdicated in 1831 and was succeeded by his son Pedro II. who has lately become widely known as the greatest imperial globe-trotter. One of his latest projects was to arm a militia 100,000 strong as a check to the regular army 6,000 in number. The latter objected, and a fortnight ago, one of the generals revolted and proclaimed the deposition of Pedro II. and the establishment of a republic at Rio de Janeiro, capital of the empire, with a population of 450,000. Republicanism had long been steadily gaining ground, and the rest of the country quietly acquiesced in the movement. Dom Pedro, who is a sort of imperial Republican himself, quietly submitted, and having received a present of $2,800,000 cash, with an income of about $400,000 for himself and a continuance of the incomes already enjoyed by his family, he with the latter peacefully steamed away to Europe where all arrived safely and will winter at Cannes in the South of France. The new Republic has taken the name of the United States of Brazil, and assumed for its flag an imitation of ours with the Brazilian colors instead of the red, white aud blue. No Prince, King or Emperor now rules from Point Barrow to Cape Horn; though, of course, England and Holland, both monarchical countries, still have possessions on the continent and Spain owns several of the West India Islands.....

AGRICULTURAL NEWS.

SATURDAY, November 30, 1889.

THERE have been many conflicting reports in regard to widespread destitution in South Dakota. The Commissioner of Immigration says that many inexperienced and improvident people were attracted there, and many of them have made failures as they probably would have done anywhere. He asserts that while some farmers have lost two successive crops, every county of Dakota has surplus enough to supply all the destitute within its bound aries. The Governors of both the Dakotas concur in this opinion ..... The Indiana Horticultural Society will hold its 29th annual meeting at Indianapolis, December 3–5. Papers from prominent horticulturists are expected on timely topics. Space will be provided for the exhibition of fruits. C. M. Hobbs, secretary, Bridgeport.....A market gardener near Chicago makes a business of growing and shipping Hubbard Squashes to the New England markets. He has this year 30 acres of his own growing, and he usually buys hundreds of tons of other growers. The stock is stored until January or February before shipping begins. A selling price of $35 to $40 per ton is said to pay well, though as high as $80 has been received. What is to hinder some enterprising farmer from making money growing squashes on some of those abandoned farms of which we read so much?..... Last spring we mentioned the fact that the Illinois State Grange had offered a premium of $10,000 for a practical mechanical device for binding grain with straw. Several models have been submitted, but only one was deemed satisfactory. The inventor, however, declines to accept this amount for his rights in the device. The committee say that the machine does its work much better than straw-binding is done by hand, and that it is more simple and easy of operation than the twine binder.....The 32nd Annual Meeting of the Missouri State Agricultural Society will be held at Lebanon, December 3–5. An extended and varied programme is presented, liberal premiums are offered, and every arrangement has been made for an entertaining and profitable meeting..... At the annual meeting of the American Aberdeen-Angus Breeders' Association, held at Chicago, November 14th, the following rules were adopted: "Males red in color or with a noticeable amount of pure white above the underline, or on leg or legs, or with scurs, shall not be eligible to entry for breeding purposes, but the same, when reported as castrated, shall be accepted and counted under the rule requiring the castration of one in 10 males." Also that Rule 3, Section III. be amended by adding: "When an animal is a twin it shall be so stated and the sex given of the animal with which it is a twin. Should a twin be entered upon the record without such statement no subsequent application for the entry of an animal twin with the same will be accepted." The price of Herd Books hereafter will be $2 per volume, postpaid to members, and $3 per volume, postpaid to non-members ..... The Red Polled Cattle Club of America had a rather stormy session in Chicago, November 20. It is generally supposed that Polled cattle are more peaceable than those with horns, but their breeders seem to have had a considerable misunderstanding. An "incorporated," and an "unincorporated" club now put forth a report. J. Mc Lain Smith, secretary, Dayton, Ohio.....

Miscellaneous Advertising.

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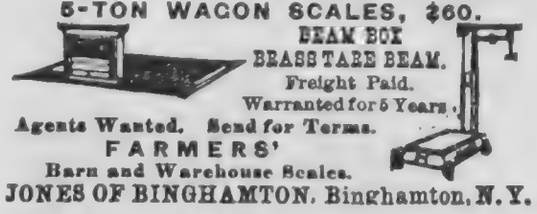
5-TON WAGON SCALES, $60.

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THE OLDEST SEED HOUSE IN AMERICA
have issued their handsomely illustrated SEED Catalogue for 1890. Merchants, Market Gardeners and Private Families desiring Good Seeds, should send a postal for a copy. FREE to all applicants. Address
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A good income is assured to the woman who will act as our agent in her own and adjoining towns, and push our business with energy and intelligence. Our instructions if followed out will make it easy to realize from $10 to $50 per week, according to ability.
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Wood Cutters.
Cheapest and best ever made. Sets a saw in 3 minutes Can be carried in the pocket and used in the woods as conveniently as a pocket-knife. Very simple and convenient. Warranted to give satisfaction; also CHAMPION GAUGE for cutting raker teeth proper length. Sample of both by mail postpaid on receipt of $1.00. ASK YOUR DEALER FOR THEM AND INSIST ON HAVING THEM AND NO OTHER; IF HE DOES NOT KEEP THEM ORDER DIRECT OF US. THIS WILL NOT APPEAR AGAIN. CIRCULAR to all who mention this paper. Address
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and Farmers with no experience make $2.50 an hour during spare time. A. D. BATES, 164 W. Robbins Ave., Covington, Ky., made $21 one day. $81 one week. So can you. Proofs and catalogue free. J. E. SHEPARD & CO., Cincinnati, O.

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Circulars free.
Simple, Perfect and Self-Regulating. Hundreds in successful operation. Guaranteed to hatch larger percentage of fertile eggs at less cost than any other hatcher. Send 6c for Illus Cata. GEO. H. STAHL, Quincy, Ill.

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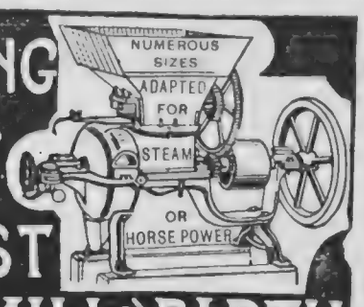

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1886,	70,126,041
1887,	83,389,828
1888,	104,473,650
1889, (Estimated),	120,000,000

Total Yearly Circulation of 1,581 Daily Newspapers in the United States and Canada, 1,782,690,000
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Daily Circulation of 1,580 Newspapers,	5,372,873
Daily Circulation of the WORLD,	340,877

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A woolen factory fitted up with modern appliances has been opened in Athens, Greece, and will employ about 120 hands. This is the first of its kind in the country, and its opening was the occasion of much rejoicing, the inauguration being participated in by church and State dignitaries.....Michigan has shipped to Texas and the Southwest over 3,000 blooded rams the past season, one breeder having shipped 1,400 Merinos.....The wine product of California for the present year is estimated at 16,000,000 gallons, which is a slight decrease. Many wine grapes have been made into raisins.....An Albany manufacturer of agricultural implements has recently made a large shipment of his goods to Moscow for use in Asia. The agent who made the purchase made a tour of the Southern States for the purpose of studying the methods of raising cotton. The Russians it is said will engage extensively in the culture of this staple in Asia.....The proprietors of the Aztalan, Wisconsin, butter and cheese factory, who were charged by Dairy Commissioner Thom with using rotten butter to "fill" their skim cheese, threaten to sue the Commissioner for damages. They claim that they do not use bad butter for filling, but the "ordinary" country store butter much the same as most people use on their tables. .....Over 330,000 head of cattle were handled in Chicago during October....Only about 500 head of buffaloes are left on the Western plains.....Texas cattle fever is reported from the vicinity of St. Louis, Mo.....California raisins which are not properly cured are disposed of to Eastern mince-meat manufacturers..... The 7th annual meeting of the Cider and Cider Vinegar Makers' Association of the Northwest will be held at the Sherman House, Chicago, December 17 and 18. The programme will be issued about December 1. L. R. Bryant, secretary, Princeton, Ill.

Crops & Markets.

SATURDAY, November, 30, 1889.

THE November Crop Report of the Department of Agriculture gives the average yield of the corn crop as 26.9 bushels which is slightly above what is considered an average crop. The quality in some localities, is, however, below average, so that the feeding value will not be above the average.

POTATOES average about 76 bushels per acre for the whole country, while the average of the Atlantic States where 40 per cent. of the entire crop is grown, is 60 bushels of very inferior quality. The highest yields are in the States of Iowa, Minnesota, Nebraska, Oregon and Washington, Maine being the only eastern State having a good yield. In some of the States west of the Mississippi the price is as low as 15 cents per bushel, while in some of the eastern States consumers have to pay one dollar per bushel. The crop seems to be very unequally distributed. Sweet potatoes yielded considerably better the average being above 90 bushels.

APPLES were a poor crop excepting in some localities in the central western States. Not only the yield but the quality is very inferior, and much of the fruit will not keep well.

THE HOP crop on the continent of Europe is reported at three-fourths of a full crop, and one-third larger than last year. English growers report a crop one-fifth larger than last year, but the quality is poor. England will need nearly 20,000,000 pounds besides her own crop, which will come either from the continent or from America. The United States crop is estimated at 35,000,000 to 37,000,000 pounds, some of poor quality, but many excellent.

LATEST WHOLESALE PRICES

—OF—

COUNTRY PRODUCE.

New York, Saturday, November 30, 1889.

BEANS.—Marrows—New, $2 60@$2 65; New Mediums, choice, $1 85@$1 95; Pea, $1 80@$—; Red Kidney, $3 40; White Kidney, choice, $2 60@$2 75; Foreign Mediums, $1 70@$1 90; California Lima, $3 00@$3 25; Italian, $1 75@$1 80. Green Peas, $1 05@$1 10.

BUTTER—New—State and Pennsylvania, best, 24@25½; Elgin, best, 26c; Western, best, 24@25c; do prime, 20@23c; do good, 16@19c do poor, 12@14; State, Dairy, half-firkins, tubs, best, 23@24c; do do prime, 20@21; do do fine, 15@17; Welsh tubs, fine, 19@21c; do do, good, 15@18; firkins, best, —@—c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 18@20; do fine, 12@15; Western dairy, fine, 15@17c; do fair, 11@12c; do poor, 9@10c; do factory, fresh, best, 12@12½c, do prime, 10½@11; do good, 9@10; do poor, 7@9c.

CHEESE.—State factory, fancy, 10½c; do do fine, 9½@10c; do do, prime, 9@10c; do do, fair to good, 8¾@9½c; Ohio, flat, prime, 7½@10c; do good, —@—c; do, good, —@—; Skims, light, 7@8c; do medium 5@7c; do full, 2@4c.

EGGS,—Near-by, fresh, 26½@28c; Canadian, 22@24c; Southern, 20@22c; Western, best, 26½@—c; limed, 17c; ice house, 15@17c.

FRUITS.—FRESH.—Apples, per bbl, $1 50@$3 75; Pears, per bbl, $2 00@$3 50; do per keg, $2 00@2 75; Grapes, best per lb, 3@7c, do, good 2@3c. Cranberries, C. C, per bbl, $4 00@$8 50; do, per crate, $2 25@$2 50; Jersey, do, $1 25@$2 50. Lemons, per box, $3 50@$4 50.

DOMESTIC DRIED—Apples—Evaporated, old, 5@8½c; do choice, new, 9½@10c; prime, 8@8½c; sliced, new, 4@5½c; do old, 3@3¾c Chopped, 3@3½c, Cores and skins, 2½@3c. Cherries new, 9@12c; do, old, 8@10c. Raspberries, new 22@24c; Blackberries, 5½@5½c. Peaches, Delaware, evaporated, peeled, 15@20c, do do, unpeeled, 8@10c; Georgia, evaporated, peeled, new, 13@15c; do do do, unpeeled, 7½@10c; do do, sundried, 9@9½c. Huckleberries, new, 12@18c. Plums, new, 7@9c

GAME.—Plover, per doz, $1 50@$1 75; Snipe do, do, $1 50@$1 75, Woodcock, per pair, $0 50@$1 00; Grouse, do do, 75@$1 00; Partridges do, $75@$1 00. Duck, Mallard 60@75c; do, Teal, 25@50c; do, Redhead, $1 00@$2 00; do Canvas-back, $2 50@$4 00; Rabbits, per pair, 20@36c; Quail, per dozen, $1 50@$2 00.

HAY AND STRAW.—Timothy, best, 80@85c; do good, 65@70c; do medium, 40@50c; Clover, mixed, 45@50c; shipping, 40@45c. STRAW—No. 1 rye, 70@75c; short rye, 40@45c; oat, 30@40c.

HONEY—In one-pound boxes. White Clover, 12@14c; Buckwheat, 10@12c; Beeswax 22@23c.

HOPS.—State, New, 12@14c; do, good, 10@11c; do common, 7@9c; do 1888, best, 10@12c; do do prime, 9@—c; do do, common, 6@7c; California, New, best, 12@13c; do good to prime, 10@11c; do Old, best, 11@12c, do common and fair, 7@9c.

NUTS.—Peanuts are quiet. Fancy, hand-picked, quoted at 6½c, and farmers' grades at 4¼@4½c, Pecans, 5½@7c, Chestnuts, $4 00@$6 00 per bushel; Hickory Nuts, $1 50@$2 00 per bushel.

POULTRY.—DRESSED—Turkeys, mixed, per lb. 7@16c; Fowls, western, choice, 8@10c; do common to good, 5@8c: Ducks, spring, good, 10@16; Squabs, white, per dozen, $3 00@$—; do dark, do, $2 00@$2 25; Chickens, spring, 5@15c; Fowls, near by, 5@10c.

POULTRY—LIVE.—Chickens—Spring, per lb, 6@7½c. Fowls near-by, per lb, 6½@7½c, do Western, per lb. 6@7c; roosters, per lb, 4@4½c; Turkeys, per lb, 8@9c; Ducks, Western, per pair, 60@80c; Geese, Western, per pair, $1 00@$1 25.

SEEDS.—Clover is hard to sell; exporters quiet. New prime, future deliveries offered at 6¼ and choice, 6 ¼c, with fancy at 6¾c. Timothy quoted at $1 50@$1 60. Canary, 2@4c.

VEGETABLES.—Potatoes—Jersey, per bbl, $1 25@$1 50; Long Island do, $2; State do, $1 25@$2 00 Western, do, $1 00@$1 90; Sweets do, $1 75@$3 25. Cabbage, per 100, $3 00@$4 50. Turnips, per bbl, 55@65c Onions—Orange County Red, $1 00@$2 25; Eastern White, $3 00@$4 50; Eastern Red, $2 25@$3 00, State, Yellow, $1 75@$2 00. Cauliflower, per bbl, $1 00@$5 00; Squash, Marrow, $0 75@$1 00; do Hubbard, $1 00@$1 25; Celery, per doz. bunches, 15c@$1 00.

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 15@18c, and Spring do 19@25; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

Communications Received for the Week Ending November 30, 1889.

H. E. M.—S. H. W.—W. W.—B. T.—R. F.—G. H. C., thank you.—M. F. W.—S. C. T.—L. S.—T. H. H.—J. K. W.—J. C. W.—J. F. H.—J. R.—F. F.—M. F. W.—B. T.—E. J. M.—N. E. B.—C.—E. C. D.—E. A.—E A. C.—G. W. P.—J. M. H—G. V. B.—E. L., thank you.—A. A. P.—E. H.—M. E. G.—D. H. B—W. B. W.—Mrs. A. Petterson, no address; as soon as you can.—M. M.—F. W. D.—C. H. E.—H. S.—O. B.—E. H.—T. W. W. S. P. V.—C. E. C.—J. C H.—S. P.—G. L.—G. R. S.—H. D. M.—A. B. D.—S. O. N. B.—H. S. W.—M. M.—J. T. B.—H. A. S.—P. H M.—A. G. S.—J. W. B.—C. A. C.—C. S. B.—J. V. L.—J. E. W.—P. H. J.—. F. W.—R. S. C.—J. G.—G. M. O.—A. W. S.—J. R.—M. M.—G. H. W.—C. E. L. H.—S. W.—E. P. C.—G. W. C.—G. A. H.—S. E. H.—H. H.—G. C N.—C. C. N. G. G G.—A. P. R.—O. W.—C. S. C.—W. A. M.—W. M. B.—J. R.—J. D B—J. N. S.—T. H. H.—P. B. R.—W. E. R. S & F—P. C.—O. W.—A. L. C.—J. E.—G. H C.—P. H. J.—A. J. P.—H. M.—W. B. P.—A P. A.—J E.—E. F. D.—L. F A.—J. L. B.—J. B. P.—D K. G.—T. H. H.—H. S. W.—E B. G.—L. D. S.—I. J. M.—C. P. W.—P. B.—J. S.—H. B. T.

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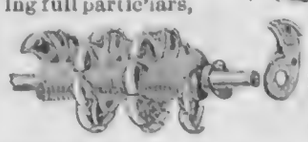
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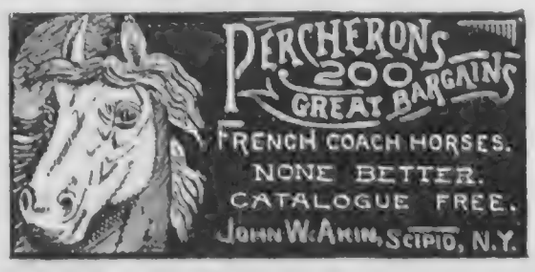

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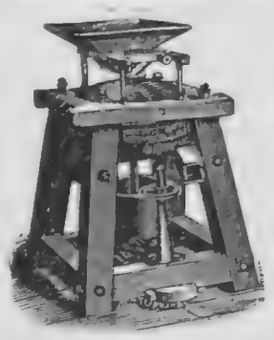

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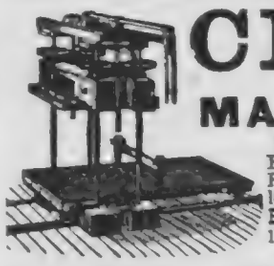
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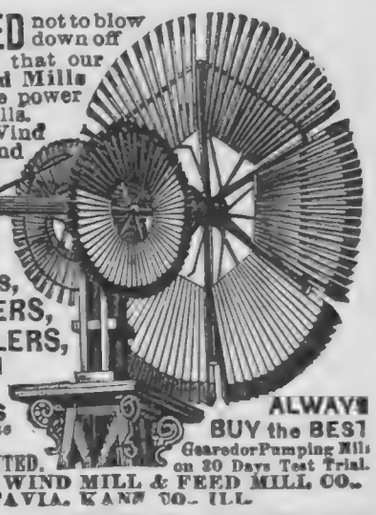
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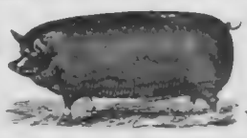
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Literary.

MAGAZINE REVIEWS.

LIPPINCOTT'S for December is an exceptionally interesting and valuable number. Charles Morris contributes an article on the "Power of the Future," in which he discusses the probable sources of power when the mines of coal which have enabled man to accomplish so much shall have become exhausted. Although there is no immediate danger of this occurrence, yet it is computed that the coal mines of England at the present rate of consumption will be exhausted inside of two centuries, and of course there must be a limit to those of other countries. All the heat and power contained in coal, wood and other combustibles came orignally from the sun—are bottled sunlight as it were, and to this source the author would look for the source of all power in the future. We are wont to speak of electricity as the power of the future, but we forget that electricity as we use it is only the stored energy produced by other means. French engineers have been endeavoring to make a more direct use of the sunlight as a means of power, and have so far succeeded as to run a printing press with the power obtained, which printed 500 copies per hour of a paper called the Sun Journal. The late John Ericsson had been actively engaged in experiments upon these machines for 25 years before his death, and had produced an engine which far surpassed that of the French engineers in efficiency. He continued to labor on this machine until within two weeks of his death and exacted a promise from his chief engineer to go on with his exoeriments.

"Building Associations," by Thomas Gaffney, describes the usual manner of forming and operating such corporations, more particularly in Pennsylvania, though the same principles govern them everywhere. There are about 1,000 such associations in Pennsylvania with some 218,000 members. "Fiddler Rakes's Fiddle" is a Virginia sketch by Rosewell Page, which seems to show that a fiddle is not always the evil thing it is represented. "Against his Judgment" is a study in moral heroism, in the shape of a very pleasantly written story with a very tragic ending, The complete novel is by John Habberton and is entitled "All He Knew." It is a story of an ex-convict who came back from prison "a changed man," and who lived the reformation he professed in spite of many discouragements, not the least of which were from a hypocritical deacon. The simple story and faith of this man though he couldn't understand the theology so freely preached to him, worked a wondrous reformation in his town. It is a touching story of simple faith and works as contrasted with Pharisaical hypocrisy. J. B. Lippincott Company, Philadelphia.

HARPER'S for December is well filled with a variety of matter suited to a wide range of readers. There are several articles peculiarly well adapted for a Christmas number. "A Golden Wedding" is a simple yet touching story by Ruth McEnery Stuart, the scene of which is laid in New Orleans. An aged negro man and woman living in adjoining apartments in an old hovel, combine their scanty resources for a Christmas dinner. It was a warm Christmas, and after the appetizing meal was finished, the old couple indulged in reminiscences of days long past, "before de wah," and of another warm Christmas when they were married. After a brief but happy period of married life the vicissitudes of that terrible institution of slavery separated the devoted pair, and the mother and her baby boy were lost to the fond father and husband. Ever since the war had freed him, he had been "a-huntin' fur Cicely." With changes of masters had come changes of names, but will it surprise the reader to learn that this aged pair crooning together over the remains of their Christmas repast were the long-separated Aleck and Cicely? For propriety's sake, they were "called out in church," again; this constituted their golden wedding and then they found their long-lost little Joe, now a minister of influence, with a numerous progeny of his own. "The Flight into Egypt" by Henry Van Dyke, is a reproduction of paintings of different periods representing that important event, with descriptions and comments thereon. "The Twelfth Guest" is a well-written story of a family Christmas dinner in the country, and the poor wayfarer who was entertained, though with many misgivings, proved, if not an angel, a great blessing to the family. "The Song of the Opal" is a strange, weird story of the far Southwest. Other stories are "The Taking of Captain Ball," by Sarah Orne Jewett; "Medusa's Head," by F. D. Millet; and "The First Countess of Wessex," by Thomas Hardy. Theodore Child contributes an article on "Modern Russian Art," which is profusely illustrated with numerous elegant engravings. There is also an illustrated article on the "Merry Wives of Windsor," which will delight the students of Shakspeare. Harper & Brothers, New York.

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The Story of a Forsaken Inn, (A SERIAL STORY) *By Anna Katharine Green.*

Life in British America, *By Rev. E. R. Young.*

Being the adventures and experiences of Rev. E. R. Young, the celebrated missionary, and his wife during their residence in the Polar region twelve hundred miles north of St. Paul, in which Dr. Young narrates how he tamed and taught the native wild Indians of the Northwest; how he equipped himself for and how he made his perilous sledging and hazardous canoe trips when visiting all the Indian settlements within five hundred miles of his home.

Honorable Henry W. Grady

Contributes a series of six articles on the "Wonderful Development of the Industrial Pursuits of the New South."

American Cookery, (A SERIES OF ARTICLES) *By Miss Parloa.*

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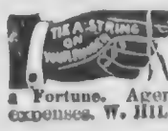

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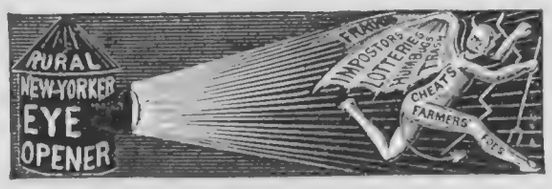

SWINDLES EVERYWHERE.—The only object of this department from its inception, over eight years ago, to the present day, has been to guard the readers of the paper against the multitude of swindles and humbugs of all sorts by which swarms of sharpers are constantly trying to victimize those who live in small towns and country places, because in the minds of all crooks and of several others, such people are much more easily deceived, bamboozled and gulled than dwellers in large towns and cities whose wits are supposed to be kept constantly "on edge" by friction with each other and who should be well posted on various forms of swindles by reading about them frequently in the papers. As a matter of fact, however, it is very likely that the people of towns and cities are swindled just as often and just as egregiously as country-people. Indeed, hardly a day passes without the appearance in the papers of lengthy accounts of old, old swindles successfully practiced on town and city business men who have the reputation of unusual smartness; while the people at large are swindled and humbugged so persistently that it would be too tiresome to give any account of their heavy losses, even if these became known to the police or the newspaper reporters. It is only when a large number of persons are known to have been defrauded by the same scheme and usually by the same person or gang, or where the trick is new and the losses have been heavy among a smaller number of people, that swindles on city folks are considered worthy of notice. Truly the swindler is multitudinously abroad among the people in towns and cities as well as in country places, and he takes all sorts of shapes and disguises. It was said of old that the way of the transgressor is hard; but nowadays this is true only or chiefly of the vulgar, thick-witted, law smashing rogue. How many very successful rascals now succeed in transferring their neighbors' purses into their own pockets just within the letter but outside the moral of the law, and how many in performing the same fraudulent trick break the law so gently, so quietly **and** so carefully that the fracture is hardly noticeable, and often resembles a natural flaw so very closely that a learned judge or several of them with the aid of half a dozen wrangling lawyers can hardly tell the difference?

The town swindles although essentially of the same family, usually differ in one or more features from the country swindles; but frequently the same form of fraud is equally successful in both places, although generally even then its dress undergoes some trifling changes in order that it may be in closer accordance with "its surrounding." A few, however, appeal in precisely the same shape and dress to the gullibility, greed or carelessness of town and country. Among these few land and town-site booms hold a prominent place. These are generally as loudly heralded in papers that fall under the eye of city-men as in those that are likely to be read by country-men, and a very fair proportion of the victims are among the former, especially in case of town-site booms. Indeed in a recent case of a very novel character up in Minnesota, it is probable that nearly all the losers were town-folks. Now that this form of fraud has once been started it is certain to be again utilized and probably under conditions by which farmers are likely to be among the sufferers; hence it deserves a warning place in this department.

SMART LAND SHARKS.—Lake View Division is a gilt-edged section of Duluth, Minnesota, worth from $2,000 to $5,000 per lot. Lake View Addition is a tract of 20 acres of poor land nine miles from Duluth. In September 1887 Lake View Addition was bought by speculators at the rate of $5 per acre. Eleven days afterwards the whole of it was transferred for $96,000. Two hours later, on the same day, still another transfer was recorded for $100,000, and this was followed a few days later by another deal in which the figure was $105,000. Thus in less than 15 days after the 20-acre tract of nearly worthless land had been bought for $100, it had acquired a fictitious value of $105,000! Then the sharpers prepared to cast their nets for gudgeons. Maps and diagrams of plats were widely distributed in places distant from Duluth, in which the fraudulent Addition was represented as occupying the place of the valuable Division. Then came an abundant harvest. The sharpers preferred cash; but were willing to take in exchange valuable property in Minneapolis, Chicago, Indianapolis and other cities, and a few eligible farms that could be readily disposed of were also gobbled up. As soon as the deeds were recorded the crooks would sell the property and realize handsomely. Then came a lull in real estate transactions in the bogus section; but about a fortnight ago the swindle bobbed up serenely again with a transfer of $19,500 worth of fraudulent lots. The record of the transactions was accidentally noticed by a Duluth newspaper, which at once set a special reporter to investigate the matter. He traced the scheme back to its original starting point, and found that over $335,000 worth of transfers had been recorded and mortgages for nearly half as much more had been filed. Many deeds had, no doubt, not been recorded, so that it is very likely the aggregate loss must be considerably over half a million dollars. Will the swindlers ever be punished by the law? No doubt they speedily got beyond its reach into Canada or some other convenient refuge for dishonest rascality.

CATALOGUES, ETC., RECEIVED.

BED-BUGS AND RED ANTS.—In Insect Life for October, 1889 Prof. C. V. Riley records a fact which he says is not generally known, viz:—that the red ant will destroy bed-bugs.

"One of Prof. R.'s assistants, had an opportunity at Meridian, Miss., during the war, of seeing an old building used as barracks and filled with bed-bugs, invaded by countless numbers of red ants. Several ants would attack a single full-grown bed-bug, pull off his legs and carry away the helpless body. They penetrated the closest cracks of the rough beds and dragged out old and young bugs and eggs. There is, then, some slight consolation in having the ants about one's house, but with care and cleanliness, especially at the North, there is no excuse for the occurrence of either pest."

Prof. R. says he occasionally meets a favored individual who has never seen a bedbug, but such fortunate people are rare. It is said that the pest was brought to England in 1503 and reached America soon after extensive settlement. Certain English writers try to father the pest on America, but "there is strong evidence that it was known to Aristophanes, Dioscorides, Pliny and Aristotle" (!) Most of us care but little about its origin; we are after its life. The following facts, taken from the article are interesting:

"The number of annual generations depends on conditions of food and warmth. With plenty of food and an even temperature they will multiply with great rapidity, while under contrary conditions reproduction may be greatly retarded. Adult bugs have been known to remain alive for more than a year without a single meal. It is this fasting capacity, together with its form so well adapted for hiding, which renders it so difficult to thoroughly disinfect an infested house.

Here again benzine must be our strongest weapon. Finely sprayed with a hand atomizer it will penetrate the minutest cracks, and is sure death to the insect in all its stages, including the eggs. It is a certain remedy, and used thoroughly will destroy every bug in a house. Kerosene is almost as good and is a little more lasting in its effects. Many preventives have been advised, but none are permanent. One of the best formulas for a substance with which to paint the cracks in a bedstead or the wall is one ounce corrosive sublimate, half pint alcohol, and one-fourth pint spirits of turpentine"

Those who introduce red ants for the purpose of killing bed-bugs will find that they must kill off the ants too or life will still be a burden for them. Speaking of this warfare, Prof. R. says:

"The first recommendation is to find the point from which they all come. Then see if they have built the nest in some accessible spot, in which case a little kerosene will end a large part if not all of the trouble. If the nest is in the wall or under the floor and taking up a board will not bring it within reach, find the nearest accessible point and devote your energies to killing the ants off as they appear. Where the nests are outside nothing is easier than to find them and to destroy the inhabitants with kerosene or bisulphide of carbon. The nests are almost always in the immediate vicinity of the house. The ants are peculiarly susceptible to the action of pyrethrum in any form, be it Persian or Dalmatian powder or buhach, and a free and persistent use of this powder will accomplish much."

Some housekeepers place traps for the ants. These traps are small pieces of sponge moistened with sweetened water. These are left where the ants congregate, and once a day or so, when the ants have collected on them, soaked in hot water and replaced.

CATTLE FOODS AND FEEDING RATIONS.—The enterprising director of the Geneva, N. Y. Experiment Station has given in Bulletin 17, an exceedingly valuable dairy feeding manual. It is just such information as is printed in this pamphlet that dairymen want, just such problems that they ought to study. Dr. Collier states that the average New York State cow produces less than 3,000 pounds of milk per year or less than 130 pounds of butter. Such dairying "don't pay." While proper breeding and selection have much to do in the work of improving our dairy cows, good care and judicious feeding must also accompany them. Dr. Collier gives tables showing the analyses of various grasses and grains, as well as the digestibility of these substances and the amounts of each required to make suitable rations. Added to these are a number of rations given by New York dairymen from their actual practice. Each of these rations is explained and analyzed in a way that will show the feeder just what is needed or just what should be left out.

For example, one herd of 12 Jersey cows average 320 pounds of butter per year. The daily feed for each cow is:

12 pounds Meadow hay.
3 " corn meal.
3 " wheat-bran.
3 " linseed-meal.
3 " oat-meal.

This ration is considered by Dr. Collier as very close to what American experience seems to indicate as profitable and economical. It is well worthy of study by dairymen. We would like to have every reader of the R. N.-Y. read this bulletin.

EXPERIMENT ORCHARD. SMALL FRUITS.—Bulletin No. 2 of the Virginia Experiment Station. Some months ago the R. N.-Y. spoke of the experiment orchard started at the Maryland Station. Now we have to record the planting of a similar one at the Virginia Station. We regard this as an excellent experiment in every way. Farmers of Virginia may learn some excellent lessons regarding varieties best suited to their soil and climate at this experiment orchard.

SOILS AND ALKALI.—Bulletin No. 9 from the Colorado Experiment Station. While this bulletin deals with local conditions—those peculiar to the Colorado soil and climate, it is of general interest to all who care to investigate questions pertaining to geology or chemistry.

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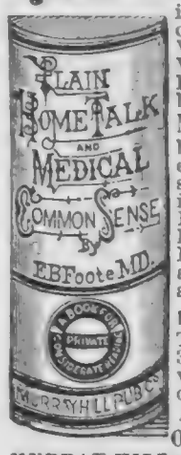

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MRS. H., mistaking a mirror for a door and suddenly starting back. Mr. H. (laughing): "Why didn't you go through, my dear?" Mrs. H.: "Upon reflection, I thought I had better not."—*Puck.*

"WHAT'S the outlook in Rhode Island?" asked a Pittsburgh man of a friend who had just returned from that State. "The outlook?" he replied. "Why that's all there is in Rhode Island."—*Pittsburgh Chronicle.*

LAWYER: "Do you swear positively, sir, that you know more than half this jury?" Witness: "Yes, sir, and now that I have taken a good look at 'em I'll swear that I know more than all of 'em—put together."—*Puck.*

ETHEL (copying her musical exercise): "Mamma, what does 'andante' mean on this music?" Mamma: "Anne Dante is the name of the composer, of course. Her brother wrote a poem called 'Dante's Inferno.'"—*Pick-Me-Up.*

MR. PRETTYBOY: "Miriam, if you will be mine, our bliss will know no alloy." Miriam Smelt (whose father is a gold refiner): "No, Mr. Prettyboy; papa assures me that anything above 18 carats fine doesn't wear well."—*Jewelers' Weekly.*

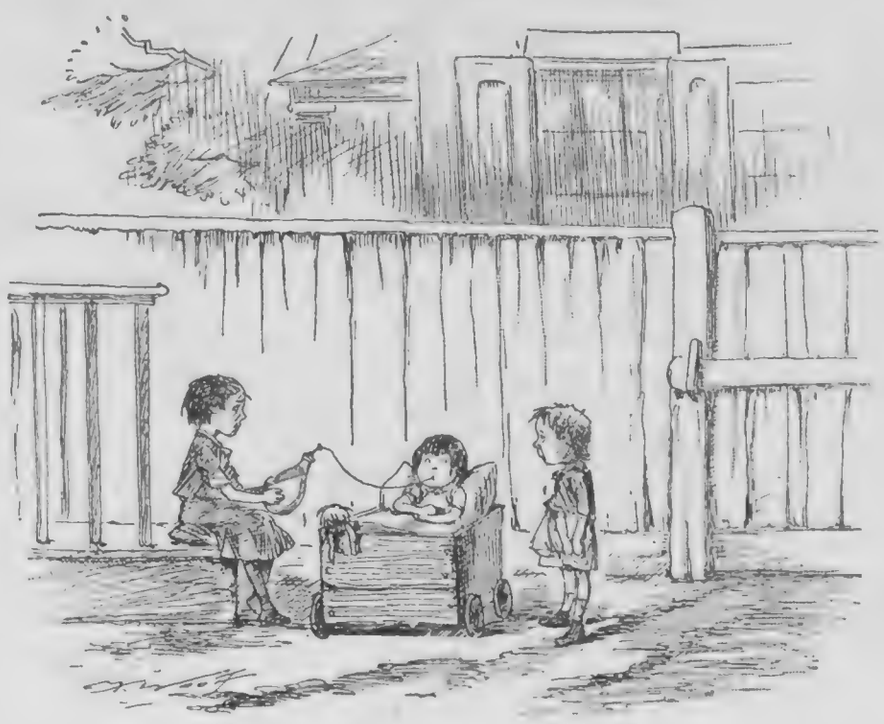
HE: "Do you read the current fiction of the day?" She: "Not very extensively, I am ashamed to say. However, I did wade through 'Robert Elsmere,' and I intend to read this 'Pigs in Clover' that every body is talking about."—*Burlington Free Press.*

A CLERGYMAN relates that he was once completely nonplussed by a youngster at a christening. The child having been taken to church to be baptized, was so much disconcerted at the minister's sprinkling his face that he interrupted him by exclaiming: "Stop! I won't play!"—*American.*

SNAGGS: "So you have been living in Kansas since I saw you last. How did you like it out there?" Boggs: "I didn't like it at all. I had no sooner taken up my residence there than the cyclone did likewise." Snaggs: "Did what?" Boggs: "Took up my residence—and carried it into the next county."—*Texas Siftings.*

INVALID FROM PHILADELPHIA: "Yes, my health is improving, but I think I grow more homesick every day." Neighbor: "And is there nothing we can do?" "Well: it's only my fancy, I know—but if you and the others on the street would only send the girls out every morning to scrub the door-steps!"—*Texas Siftings.*

"I HOPE you will pardon my late arrival," said the young man, as he seated himself in the easiest chair. "I forgot my umbrella and had to stand in a stairway until the shower was over." "That's one on you, Jennie," shouted Tommy, in great glee. "I told you so. Of course he had sense enough to go in when it rained." And the silence, like a soft hat, was plainly felt.—*Terre Haute Express.*



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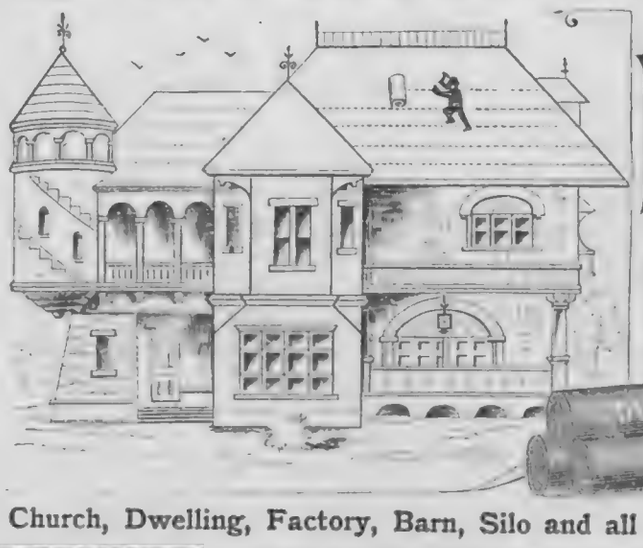

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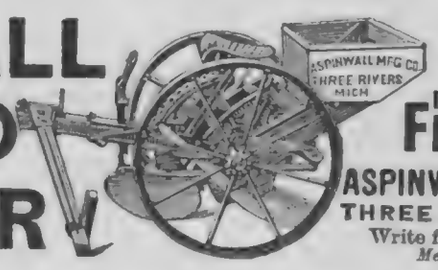

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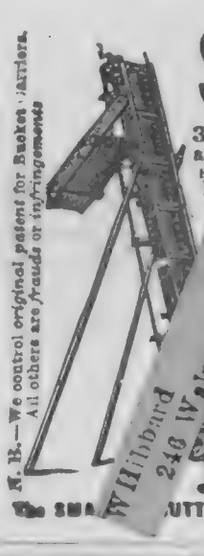

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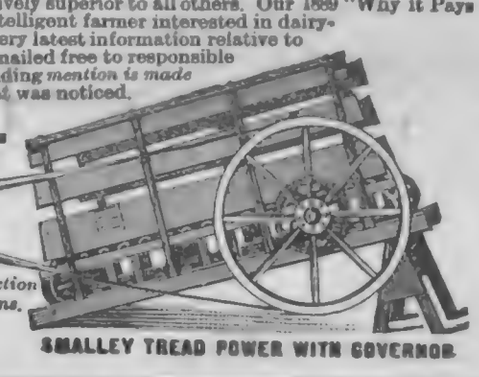

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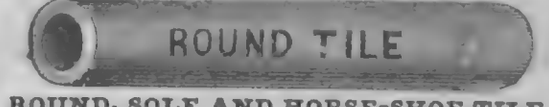

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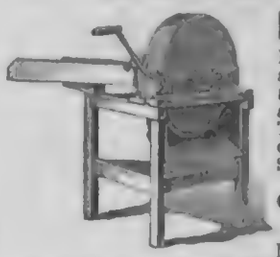

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

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Field Crops.

THE SUCCESS OF A FAILURE.

The R. N.-Y. tries to produce a large crop of potatoes on a measured acre; the unfavorable season cuts off the crop, but does not prevent a profit; neighboring farmers fail; restoring waste land by the use of chemical fertilizers; the beginning of an interesting experiment.

THE failure refers to the season just closing, which is regarded by the farmers of Bergen County, New Jersey, as the most unfavorable for the potato crop that they have ever known. It is doubtful if one farmer in 10 made any profit on the crop after paying for seed and fertilizer and allowing a fair sum for his own labor, and interest on the price of the land. It is safe to say that the majority of farmers barely paid for fertilizer and seed. Under these circumstances the R. N.-Y. takes peculiar pleasure in recording an experiment with a potato crop which at least paid a profit besides affording the chance for a most interesting study. In this year of general failure, it may perhaps be considered worthy of the title we have selected for this narrative.

The two seasons before this one were both wet, and farmers confidently expected a dry summer this year. Many potatoes were therefore planted on naturally moist soil. This had much to do with the general failure of the crop.

The R. N.-Y. was particularly anxious to produce a large crop this year, and at the same time it was interested in testing the claims made by some farmers that by means of very heavy dressings of chemical fertilizers, waste lands can be restored to fertility and be made to yield a profit during the period of restoration. By this period we mean the time that must elapse before a strong sod of clover and grass can be grown and plowed under. Old farmers frequently say that they can bring any soil into a productive condition if they can have manure enough to start a strong clover sod. A later school of farmers claim to be able to take any well-located land, no matter how poor or "exhausted" it may be, and bring it to the highest state of cultivation, *making it pay a profit from the very start.* The process by means of which this is to be done was described in the R. N.-Y's. account of the farms at Cranbury, N. J. In brief, it means a five-course rotation as follows: potatoes, grain, grass two years, corn. At least a ton per acre of a complete potato fertilizer is used the first year. In an average season this heavy dressing gives a profitable crop while it leaves sufficient fertility in the soil to mature a good crop of grain and produce a strong sod of clover and Timothy. A good dressing of stable manure is to be given the sod before plowing for the corn. The R. N.-Y. started to test this system, slightly modified, on a measured acre.

The land is located at the top of a low, rather steep hill which faces the east. Like most of the farms about it, the R. N.-Y.'s New Jersey farm is long and narrow—a single field wide and nearly half a mile long. The acre selected for this experiment is in the field farthest away from the house. So far as the R. N.-Y. knows, the acre has received nothing in the way of manure or fertilizer since it was broken up about six years ago. When the R. N.-Y. bought this farm, early in 1888, a thin, light crop of rye was growing on the acre. This crop yielded considerably less than a ton of poor straw. We considered the soil very typical of the hundreds of acres of "worn-out" and practically abandoned land in the immediate vicinity. If the Cranbury system of farming will profitably restore this soil, such restoration is possible to 99 per cent. of the "abandoned farms" of New Jersey.

THE SEASON'S WORK.

The acre was plowed April 17 and planting was begun the next day. The R. N.-Y. has always advocated three strong points in potato culture:

1. Thorough preparation of the soil.
2. The trench system of planting, involving a heavy dressing of chemical fertilizers placed so as to be available all through the season.
3. A heavy "seeding" of varieties known to be vigorous and heavy yielders from a more northern latitude if possible.

Owing to various causes, it was impossible to carry out the first part of the programme as carefully as was wished. The soil was simply plowed once, worked over with a Clark's Cutaway harrow and smoothed with a wooden-toothed harrow. The next field we treat will be plowed in the fall, cross-plowed in the spring, worked for a long time with the Cutaway, and then with the Acme. In plowing and harrowing, the Sherwood Steel Harness was used. We regard this as one of the best labor-saving devices on the farm. After plowing, trenches were made three feet apart, by means of a trench or shovel plow made by the Syracuse Plow Company. Large pieces of potato, each one containing at least two strong eyes, were dropped in the trenches as nearly one foot apart as possible, the dropper kicking a small quantity of earth over each piece as he passed. A dressing at the rate of 1,600 pounds per acre of Mapes Potato Manure was then scattered through the trenches. This fertilizer was not placed directly in the bottom of the trench, but was scattered all through it so as to fairly surround the seed-pieces. The trenches were about half filled above the seed-pieces by hauling an old harrow lengthwise of the rows. As the plants appeared, the cultivator (a Higganum Horse-hoe) was started through the rows. At each working this threw a little earth around the plants and helped to fill the trenches until, late in May, the surface of the field was perfectly level. Subsequent experience with Breed's Universal Weeder satisfies us as to the value of this implement, and with next year's potato crop we shall start the weeder a week after the potatoes are planted and keep it going at intervals of a few days until the plants are four inches high.

The crop was hoed twice and cultivated five times. At the last cultivation 1,000 pounds more of the fertilizer were scattered, broadcast, on the surface, between the rows, and worked in with the cultivator. The plants at the time were so strong and large that it was difficult for the horse to get through the rows.

Eight barrels of seed potatoes were used, as follows; seven barrels of Brownell's Winner, one of the most promising seedlings ever tried at the Rural Grounds; not quite a barrel of State of Maine and a peck of Early Puritan. The latter were planted on Decoration Day to fill in a few "misses." This potato did not have a fair showing, as the "blight" attacked the vines long before the potatoes were half-grown.

THE SEASON AND THE CROP.

As was previously stated, a dry season was expected, but instead of this the wettest summer ever known was experienced. A succession of heavy rains, followed by hot, damp, "muggy," weather, gave just the conditions considered most favorable for the development of rot or "blight." Early in the season the flea-beetles attacked the vines and punctured them seriously.

It is believed that this so weakened the vines that they proved easier victims to the "blight;" in the latter part of July the vines began to turn yellow and die. In 10 days the whole acre looked as though a fire had swept over it—a mass of scorched and blackened vines. The Brownell's Winner

DIGGING POTATOES ON THE R. N.-Y'S EXPERIMENT ACRE. From a Photograph. Fig. 296.

evidently suffered worst from this premature death. This variety requires a very long growing season. It is a remarkably vigorous grower, the vines covering the field, forming a perfect mat. The potatoes were dug in October and the crop was gathered and weighed with the utmost care. It is the first time, so far as we know, that the entire product of an acre has been accurately weighed anywhere in our part of the State. We dug from the acre exactly 11,612½ pounds. In plowing the acre later, the plowman turned out 195 pounds more that had been buried by the diggers. This makes a total of 11,807½ pounds, distributed as follows:

Brownell's Winner.....	10,773	pounds
State of Maine.....	873½	"
Early Puritan.....	161	"

We did not get anything like the heavy yield we had a right to expect in the early part of the season. However, we give the facts of the experiment just as they are. It would be pleasant to figure what the result "might have been" if the season had been more favorable. We have nothing to do with that. We only know that we dug 11,807½ pounds from the acre and that they have brought enough to pay for the fertilizer, the seed, the labor, a fair rent for the land and give a profit besides. What is left of the fertilizer is still in the soil. We estimate that it will enable us to grow a good crop of oats and two crops of clover and thus fit the land for a profitable corn crop. A few yields of potatoes grown in fields near ours will enable us to make a comparative crop statement. A portion of the field directly over the fence from our experiment acre was rented to a neighbor. On one acre and a-half about 600 pounds of fertilizer were used. The product is given as 55 bushels. Over the road, on similar soil with "about 600 pounds per acre," the report is "about 50 bushels per acre." No farmer near us has kept anything like an accurate record of the yield. We have no authentic record of a crop of more than 6,000 pounds on a measured acre anywhere near us. The R. N.-Y. believes its small measure of success is due to a heavy dressing of the complete fertilizer, the trench system and the heavy seeding of varieties known to be heavy yielders and strong feeders. To judge from the experience of neighbors. if we had used less than 1,500 pounds of fertilizer and the common varieties of potatoes the crop would have represented a loss. The second application of 1,000 pounds did not help the crop to any great extent because the vines died in less than a month after it had been made. Had they lived to maturity we should have expected great results from this dressing. As it is, "it is all in the soil." We are not in the least afraid of its disappearing except to reappear in the form of grain and clover.

THE VARIETIES OF POTATOES.

Brownell's Winner gave by far the best yield. It was planted on seven-eighths of the acre and yielded at the rate of a little over 225 bushels per acre. As before remarked, it is a very strong, hearty feeder—the vines being enormous. The tubers averaged 17 or 18 to the hill. It is a late potato and should grow with us up to the time of first frost; when cut down, as ours were, there are many small potatoes. As judged by this trial—not at all a fair one—it yielded far better than Early Puritan or State of Maine and is superior to either of these varieties for cooking. In quality we do not consider it quite as good as the Rural New-Yorker No. 2; it has not the close-growing habit of that variety and is less regular in shape. It is, however, a stronger grower and sets more tubers.

THE SUBSTANCE OF THE MATTER.

The R. N.-Y. hoped to grow a very large crop of potatoes by the use of a very heavy dressing of complete fertilizer on a hungry, worn-out soil. An unfavorable season prevented this, but, in spite of all, the yield was larger than any other grown in the neighborhood. It was grown at a profit. As before stated, oats will be sown in the spring and the acre seeded to clover. Two crops of clover will be cut when stable manure will be spread on the sod and the whole plowed under for the corn crop, which will be followed by potatoes again, We will report results with the oats and clover in due season. If the experiment succeed we shall be inclined to believe that there is no farm land in New Jersey that cannot be brought up to a state of profitable fertility, and that farmers will make more money by condensing their fertilizer on smaller areas until they can produce a heavy clover sod at will. A picture of the field and the diggers is shown at Fig. 296, on the first page of this issue.

Pomological.

HILLING AROUND YOUNG TREES

TO PROTECT THEM FROM MICE.

Beneficial or Injurious?

Prevent Mice But Cause Ice.

"THE DOCTORS DIFFER."

THE following note called out the discussion given below it:

"It has always been considered sound practice to hill the earth around young fruit trees at this season. Now comes a friend who says: 'Don't do it!' He says the swaying of the trees in the loose earth will make a socket in which ice will form and cause the bark to die. Please tell me what you think about it?"

FROM AN OLD FRUIT-GROWER.

Many mistakes are made by applying fixed rules to varying circumstances. If young trees have been newly transplanted, there is danger of injury by the wind, if a large top has been left on them. But newly transplanted trees should have the tops so reduced, when removed, that the winds cannot stir them, especially in winter when there is no foliage on them. If, in addition to this, a proper amount of roots has been taken up with them, and they have been securely set, they will stand so firmly that no wind will stir them. The mound is probably intended to exclude mice; and if so, the earth should be compactly beaten around the stem, which will further add to the security. An acquaintance set out a large orchard in grass, and banked with masses of turf around the trees, which invited the mice between these masses of turf, and they ruined his intended orchard. Had the mounds been made of compact earth, smoothly beaten, his trees would have been saved. The careless and superficial way in which young trees are sometimes dug, where the roots are cut short, and the setting out is badly performed, with no pruning of the tops, would cause the objection made to possess full force. These remarks apply to newly set trees. If the orchard has stood longer, the trees have become firmly fixed by the new roots, and the mounds of earth about them to exclude mice, will not be disturbed.

FROM PROF. J. L. BUDD.

I have practiced the mounding of recently set fruit trees in the autumn during the past 30 years without observing the injury resulting therefrom noted by the correspondent of the R. N.-Y., yet it might happen in sections having a close, retentive, clay soil. With us the mounding is practiced for two reasons: 1. The mice often girdle newly-set trees and the mounding seems to be the only certain preventive; 2. We are obliged to use for root-grafting and budding stocks which are not perfectly hardy with us and we find the mounding an advantage while depth of root is being attained. On one occasion we mounded about one-half of a cherry orchard on Mahaleb roots when a sudden freeze stopped the work. The mounded part came through in perfect order, while the larger part of the unmounded trees were root-killed.

Storey County, Iowa.

FROM T. H. HOSKINS.

I have never before heard that hilling the earth around young fruit trees is considered good practice. I have set out many thousands, and have always left the ground level, after treading the earth firmly about the trees. A little elevation may be permitted, to make sure that the ground is not dishing. It is, however, equally wrong to allow a tree to be so worked by the wind as to make a cavity by swaying. If the young tree is tall enough, or has top enough, to be in danger of this, it should be firmly supported by securing it to stakes; but I always prefer to plant trees so small as not to require this support.

Orleans County, Vt.

FROM PATRICK BARRY.

Our practice at this time of the year is to plow among our young fruit trees and the earth gets thrown up around the trees a little above the ground level, but we never "hill up." The objection raised to hilling up by the R. N.-Y. correspondent is not so serious as he represents. Hilling is frequently done to prevent damage by mice.

Monroe County, N. Y.

FROM G. P. WHITNEY.

The practice of hilling around young fruit trees, has for years been recommended by some of our fruit-growers. The location and kind of soil vary so much that the experience of one would hardly be a good rule for all. The swaying of the trees in the loose earth forms a socket and after thawing and freezing one may find his trees set in ice instead of being protected from it. Young trees ought not to be set in sod. Should there be any in sod or by the road side, I would recommend cutting the grass around them to protect them from mice, or in case of deep snow it should be tramped about them. This should be done if the trees are small. Cut the grass around the tree and put a shovelful of earth about it and tramp it down. I have never banked trees and have lost but few either by mice or frost.

Orleans County, N. Y.

FROM J. N. STEARNS.

I have several times heard the same objection raised, but I look upon it as I do on many other plausible theories which will not hold good in practice. I have between 3,000 and 4,000 fruit trees—peach, pear, plum and cherry—planted on all grades of soil, from light sand to the heaviest clay. It has been my practice for 10 years just before the ground freezes to hill up all my young trees, and even those three and four inches through, always with the best results. In fact, experience has taught me that trees so treated are much less liable to be affected by ice than those not banked up.

Kalamazoo County, Mich.

FROM W. M. BENNINGER.

The earth should be hilled and tramped firmly around all fruit trees in the fall and if this is neglected 10 chances to one the water will settle in the loose hole and the roots will freeze to death. The hill will cause the water to run away from the tree, and will also keep the latter firm so that it will need no stake.

In the nursery row and in our young orchards we plow a furrow to the tree every fall and this is done by all successful nurserymen and fruit-growers. The earth must be leveled down in the spring. The hill also prevents the mice from gnawing the trees, as they never work up a mound for fear they will get on top of the snow and freeze. We never had any trees injured by hilling up and no pockets can form if the mounds are properly made. If pockets should form they should be destroyed by tramping the earth to the trees before freezing.

Northampton County, Pa.

FROM P. M. AUGUR.

In regard to banking up around young trees, much depends upon circumstances. As a protection against mice, when properly done, it is generally effective; but is it bad for the trees? As a rule, no; though in some cases it undoubtedly may be. I will take an average case and give my "modus operandi." I take a two-acre field and plant with first-class Bartlett pears, with very good roots, 16x20 feet apart. The work takes nearly 300 trees. I plant in May. Each tree has been so thinned out in the top that it cannot sway at all in the wind. I apply a mulch of coarse manure or coarse hay. Not a tree of the 300 fails; not one has made a socket by swaying. With such an orchard a moderate and firm banking up of the trees in autumn, on land naturally or artificially fairly well drained, is a safe and commendable operation. I have, after banking, thrown a shovelful of unleached wood ashes loosely over the cone of earth as an additional safeguard and also to secure its manurial effect. We should allow no trees in our orchards with sockets at the base. The way to treat such a tree is, first, to take out three-quarters of the branches, which ought, probably, to be done in any case, and then we should firm the earth around the base, manure well, and avoid tearing off the roots with the plow or cultivator. A loose tree in an orchard is an abomination, and should at once be made firm, or replaced by a better one. On wet land mice are not so apt to be found, and a good dressing of coal and wood ashes mixed just around each tree will probably be a sufficient protection. It is proper here to say that when trees have been banked up with earth in autumn, the banking should be leveled down in spring and if any swaying has occurred, do as above indicated.

Middlesex County, Conn.

FROM JULIUS HARRIS.

Although some fruit growers have practiced hilling young fruit trees to prevent the depredations of mice, yet my experience proves that there is more danger of trees being injured by ice when hilled, than by mice when the earth around them is left in a natural condition. I have known young peach trees to be seriously damaged and many of them killed during the winter. The sockets made by the swaying of the trees are much more liable to freeze so as to hold water when the ground is raised around the trees than when left level; therefore I am satisfied that the labor in hilling fruit trees is not only useless but damaging.

Orleans County, N. Y.

FROM I. D. BALDWIN.

I have practiced hilling around small fruit trees for more than 20 years, taking the mounds away as soon as the ground gets settled in the spring, and my trees have never sustained any damage from ice forming about them. If the work is properly done, and at the right time, water cannot stand around the trees. My soil is clay, and I wait until it is damp from late rains, then bank up eight or 10 inches, making the earth firm about the trees with the spade or foot, and very little water can get in. I bank my trees for winter protection against field mice and severe cold weather.

Washtenaw County, Mich.

FITZWATER PEAR.

EIGHT specimens of this pear, which will not be offered for sale until the fall of next year, have been received at this office. The size is shown by the engraving at Fig. 297. The color is a bright yellow with russet dots about the calyx. It ripens from November to January. The flesh is tender, buttery, juicy, sub-acid, spicy and excellent. Mr. Herbert A. Jones, of Himrods, N. Y., is propagating it for sale. Its origin is unknown further than that it is from seed brought by his grandmother or great uncle or aunt, and planted in their settlement some 40 years ago. From what country the seeds were brought or what variety the seeds were taken from is not stated.

The Orchard.

Dodging the "Yellows."

Planting Southern-Grown Peach Pits.

REASONS FOR USING THEM.

THE R. N.-Y. has, of course, known for some time that a good many nurserymen use peach pits grown on the high lands of Tennessee and other Southern States for producing young trees. The business of handling and selling these Southern-grown pits has assumed a distinct shape and increases with every year. Knowing that its readers will be glad to learn more about this means of combatting the dreaded "yellows," the R. N.-Y. herewith presents the views of a number of nurserymen who have used these pits for some years:

FROM S. & O. N. BRANT.

Would seedlings from healthy, natural Texas or Tennessee peach seeds, grown on the right kind of soil, budded with healthy buds produce healthy trees? Peach seeds or buds procured from trees which have the yellows, will produce the yellows. Peach trees which have the yellows in orchards, should be either pulled up by the roots or cut close to the ground and burnt.

This will greatly help to prevent the spread of the disease. There is no other cure for it.

Morris County, N. J.

FROM C. A. CONOVER.

IN raising peach trees my opinion is that the best natural pits that can be selected by good reliable parties, no matter whether they are from Tennessee or Western Pennsylvania or North Carolina, are what all nurserymen should use, as they will produce trees healthier, longer-lived and free from yellows. Seedlings raised from pits taken from unhealthy trees will, in my opinion, not produce healthy trees. Whenever a tree begins to show signs of yellows it ought to be cut down or pulled up. At different times where a tree has been attacked by the yellows and left to stand, I have seen that in a short time the four or five trees nearest to it became affected with the same disease. Another way to take good care of an orchard is to plow it lightly so as not to disturb the roots and then cultivate it as often as needed to keep it clean and free from grass and weeds. We in this section think that the yellows often comes from neglect, from failure to take proper care of the trees. I don't think it advisable to plant a nursery on the same ground from which trees have been just taken, or to plant an orchard on the same field on which old trees have been cut down; I think doing this is a good way to produce the yellows.

Hunterdon County, N. J.

FROM CASPER HILLER & SON.

We believe that the bud of a peach infected with the yellows, inserted in a healthy seedling, will carry the disease with it; also that the seed of an infected peach would produce a diseased seedling. We also think it a fact that a young orchard planted on the site of one that had died out with the yellows, will, in a few years, die out from the same disease. In many localities where peaches formerly flourished, new plantings, no matter where the seed may have come from, cannot be kept healthy to bearing size. It will not do to attribute this to impoverished soil. We can apply potash, phosphoric acid, nitrogen, lime, magnesia, etc., in any quantity, but it would all be to no purpose. We plant Tennessee seeds because they are likely to be more healthy than the average home-grown seeds. The seedlings planted in clean soil, and budded with healthy buds, can be grown into fine trees, but in this section they finally develop the yellows and in the course of 10 or 12 years they are worn out.

Lancaster County, Pa.

FROM ASHER HIGGINS.

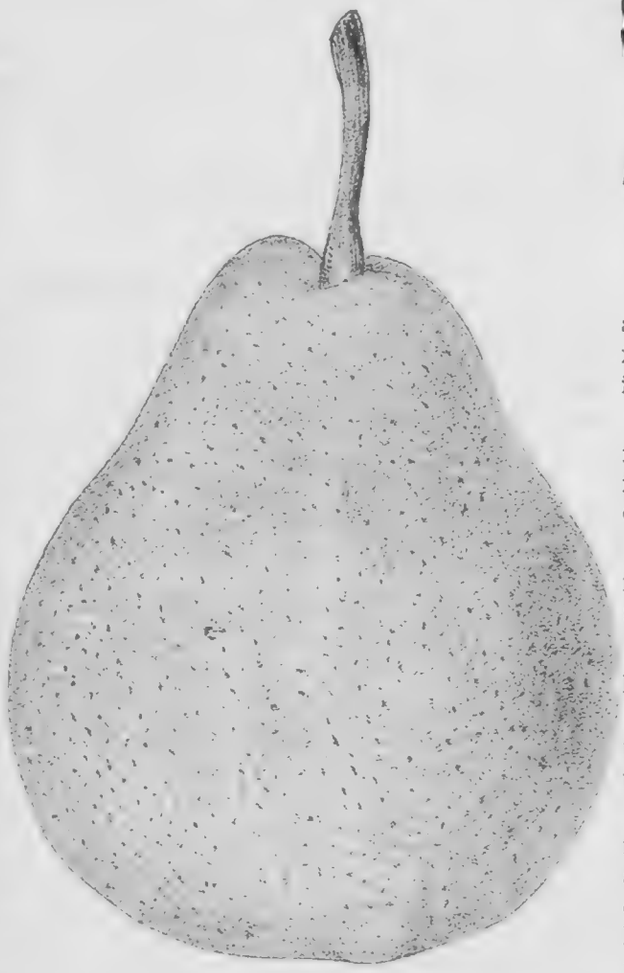
I have been in the nursery business for 20 years. I procure my pits from southern Tennessee. They are a great deal smaller and will produce a larger number of trees from the bushel than any other seeds that I can get. The trees raised from such seeds hardly ever show any signs of the yellows and are much better for planting in orchards than trees raised from inoculated pits. A bushel of good seed will make 4,000 trees.

Hunterdon County, N. J.

FROM I. C. WOOD.

We first started in about 20 years ago with natural seed procured from high grounds in Tennessee. Since that time we have procured our seed from parties who can be relied upon to furnish seed from natural seedlings. A little experience will aid one in distinguishing at a glance seeds from worked or budded trees from those from natural seedlings. My experience has been that trees grown from healthy seeds where the buds have been selected from healthy stock, will remain healthy until worn out by over-croping, lack of proper nourishment, excess of moisture or some other cause which impairs their vigor and eventually breaks up their constitution so that old age and early decline are hastened. Four-fifths of the peach trees set in this section 20 years ago are now gone because healthy trees became diseased, or because trees were raised from diseased pits, or because proper attention was not given the trees after they had been set out. It is very true that many trees have perished because they were planted in unsuitable soil owing to its being flat and underlaid with clay, consequently too retentive of water, a thing which the peach will not stand so far north as the Hudson Valley. The longevity of a peach tree raised from diseased pits depends on the stage of the disease at the time the seed was gathered, and the condition of the tree when it was set out and the treatment it received afterwards. I have known trees to show unmistakable signs of the yellows two or three years after they had been set out and to pass entirely away without ever showing a flower. Others struggle along for half a dozen or more years and produce some diseased fruit: but show a weak growth from the start. In fact, any trees that continue healthy for 10 years may, with proper attention, be kept for 20.

How can we do this? First, use healthy seed only; second, select healthy buds from trees known to be healthy. Select for the



FITZWATER PEAR.

From Nature. Fig. 297. See p. 818.

orchard a good, dry, warm soil. One year before setting the trees have the ground well plowed and harrowed; set the trees not closer than 15 feet each way—20 is still better. Plant to corn or potatoes for the first three years, leaving plenty of space on either side of the trees for breathing room. Thin out the weaker branches every season and shorten in the stronger ones one-third each season. Sow around each tree each season ammoniated bone or some special prepared peach tree fertilizer, commencing with half a pound and increasing to five pounds. After three years, grow no crops whatever in the orchard. Sow the fertilizer any time during April or May. Keep the cultivator or, what is better, the spring-tooth harrow going, say, three or four times during one season, commencing as early in spring as the ground is dry enough and, last but not least, thin the fruit. There is no one branch of the successful growing of the peach that will add so much to the value of this product and the health and longevity of the tree as this last process. In half of our trees the apparent foundation of the disease was laid by neglect of this precaution, over-cropping and insufficient nutriment. Thin thoroughly. Any handy man can earn from $3 to $5 per day in the thinning of fruit, and the operation will tend to keep the trees in a far healthier condition and add 10 years to their longevity. There is in this neighborhood an old orchard set out 20 years ago. Most of the trees are apparently in as healthy a condition as when set, and they bore a good crop of fruit the past season. Eight years ago the orchard was considered about used up. The trees had been allowed to stand in the sod for about four years; the leaves had become yellow and dropped early; the trees had grown but little for several years, and had borne quantities of small fruit. The orchard was plowed and fertilized and the sod was subdued; the trees took on new life and made a fair growth each season; the leaves became dark and large, and they hang well into the fall. The fruit is as large and luscious as it was a dozen years ago. I attribute the vigorous old age and continued health of these trees in great part to the fact that they were good healthy seedlings—in fact, if the stocks and buds had not been good and healthy these trees would have been dead long ago—still trees often die young even though they possessed perfect health on the start, because they have been neglected or some of their wants have not been supplied.

Fishkill, N. Y.

Horticultural.

Chemical Fertilizers ON STRAWBERRIES.

ANSWERS FROM LARGE GROWERS.

THE following questions were sent us by a subscriber in Maine. The answers are from well-known growers who are largely interested in the business:

1. Is superphosphate too stimulating for newly-set plants or for plants that have fruited one season? Is this true of the Crescent?

2. What is the R. N.-Y.'s opinion of nitrate of soda? of sulphate of ammonia? of muriate of potash? of ground raw bone?

3. How and when should ashes be applied to strawberries?

4. When stable manure can be bought at the barn for $4 a cord, can fertilizers be used with profit in strawberry growing?

5. After applying stable manure at the rate of 10 cords per acre, would it be advisable to use fertilizers in setting new plants or on plants that have fruited one season? If so, should they be applied broadcast or in hills, and in what amount?

6. If fertilizers are used alone, what kinds would be best; what amount should be applied per acre?

FROM J. S. CARTER.

I never grew the Crescent Strawberry and I would work carefully with muriate of potash. I tried it some years ago with fine bone, and it roasted the plants badly. Had it been worked in the soil some time before the plants were set out, it might have proved satisfactory. I have no fears of pure raw ground bone. It is a good base to work on, being slow and lasting in its effects. I would apply ashes broadcast in the spring at the time of setting the plants. I consider them safe for all crops; but they have a great tendency to bring in White Clover, which means failure with the sets the second year. I have used coal ashes in various ways without seeing the least benefit from them as a fertilizer. The difference in cost of stable manure and fertilizers, depends on the distance from which they have to be hauled and on hand hire, for fertilizers can be handled at much less outlay in time and labor. After applying 10 cords of manure on fairly good land broadcast, I would not use any fertilizer while setting the plants, unless it be raw ground bone broadcast ove the row. Yes. I would use fertilizer in the spring, if necessary, to aid in bringing the crop out. It should be applied broadcast, say, at the rate of 400 to 600 pounds per acre. I would use the fertilizer alone in setting out the plants, but prefer not to use it all at one time. I would apply, say, 500 pounds broadcast and harrow it in, and 500 pounds at the first or second hoeing, and 500 pounds more about July or August to stock and crown up the plants for fruiting. All should be applied broadcast, and worked into the soil. It should be put on when the foliage is dry, as it may burn. I use a high-grade complete fertilizer with very good results. Every one should be the best judge of the quality of his own soil, and fertilize accordingly. If it is poor, make it rich; if rich, keep it so. An application of yard or stable manure in the late fall or early winter will prove very beneficial for the following crop.

FITZWATER PEAR.

Half Section. Fig. 298. See p. 818.

Port Monmouth, N. J.

FROM CHAS. J. MAJORY.

1. In my light soil superphosphate would serve me no desirable purpose. I am obliged to use a complete fertilizer rich in potash. 2. I have never used nitrate of soda, sulphate of ammonia, or muriate of potash alone. Sulphate of potash and fine ground bone have given me very profitable returns on strawberries and raspberries. 3. I would apply ashes to strawberries in the spring as early as the ground could be worked. This is for New Jersey where I mulch strawberries for field crops. Were I in Maine I do not know whether I would need to mulch, and, if not, I would probably not work the berries in spring. In that case I would apply ashes in the fall. 4-5. My idea, based upon my own experience solely, is that stable manure at any ordinary price cannot be used on berries with profit as compared with a good complete fertilizer. I should use stable manure as heavily as possible on an old strawberry or other field to be plowed for corn, and follow with a complete fertilizer for some root crop, and then use potash and bone or a complete fertilizer rich in potash exclusively for berries. 6. Mapes Light Soil Fertilizer is excellent. A ton per acre may be applied when setting the plants. Afterward liberal quantities of Fruit and Vine Manure or potash and bone should be used.

Ocean County, N. J.

FROM A. W. WILLIAMS.

1. Plants that have fruited one season, need more stimulating than those newly set, from the fact that the year's fruiting has almost completely exhausted from the soil the elements necessary to produce a crop; for this reason I consider no fertilizer too stimulating for strawberries, the Crescent included.

2. I have had no experience in the use of nitrate of soda or of sulphate of ammonia by themselves. Muriate of potash I have used to some extent on peach trees and grape-vines, and taking into consideration the fact that the trees and vines treated by it yielded fine fruit, and produced a satisfactory and well ripened growth, I deem it one of the best fertilizers for a grower of fruits, when it is applied alternately with barn-yard manure or ground bone (pure), either of which is rich in phosphoric acid.

3. I would apply ashes (unleached) to strawberries in the fall only, if I wished results the following summer, as the action of frost tends to dissolve and disintegrate those ingredients which are naturally insoluble, and which without such action, would be many months in dissolving.

4. Barn-yard manure is indispensable to the successful grower of strawberries, and when it can be bought for $4 per cord, I think that if it is used liberaliy no other fertilizer would be beneficial, unless it might be some form of potash applied in the fall or early in the spring, in the latter case, before foliage starts. If applied later it should be brushed from the leaves with a broom. 5. After applying stable manure at the rate of 10 cords per acre, I would use no other fertilizer in setting new plants. In case the plants have fruited one year, it would be beneficial to use either sulphate or muriate of potash to increase the fruiting power of the plants, and to develop the fruit. It should be spread over the rows only late in the fall or very early in the spring. 6. Living, as I do, where stable manure cannot be obtained for much less than $5.50 per cord at the car, I use the Mapes Fruit and Vine Complete Manure liberally, believing it to contain all the elements necessary to the growth and fruitage of trees and vines. In applying it to vineyards and peach orchards I use about 600 pounds per acre, broadcasted and cultivated into the soil. It was my custom to apply it in the spring as early as practica-

ble, until the fall of 1888 when I applied it just before the ground closed. I was so well pleased with its effects the past season that I shall endeavor to use it at that time each year rather than to wait until spring, for the simple reason that in case the spring months should be dry, as they often are, the fertilizer I applied in the fall would be well dissolved and from it I should reap immediate benefit, while those of my neighbors who waited until spring to apply theirs, might not obtain the desired results and might therefore condemn the fertilizer.

Ulster County, N. Y.

The Poultry Yard.

HENS MORE PROFITABLE THAN COWS.

It is said that the profits from 25 hens equal the profits from one cow. It may be suggested that the truth of this statement depends upon the hens. Very true, but with equal truth it may be asserted that it also depends upon the cow. Taking the country at large, and averaging things, as it were, I am disposed to cast in my lot with the hens, and if any lover of the cow with a crumpled horn, or with no horns, is disposed to question my conclusions, let him take up the gauntlet or ever after give the palm to the feathered biped. Both require shelter. Buildings sufficient to make them comfortable will, of course, vary in cost as well as in architectural pretensions with the location and the taste or financial resources of the owner, but I think that 25 hens can be made snug and comfortable for less money than one cow.

Feed is quite a considerable item, but I think the 25 hens will be able to show a balance in their favor. I can keep a flock of hens, and feed them well for eggs, at an average expense of one dollar each per year. The outlay will, of course, vary slightly in different seasons and different localities, being as often under as over this amount. This would make the yearly board bill of our flock of 25 just $25. Can the cow champion beat this without starving his cow or going so near it as to reduce her milk yield? Both hens and cow must have good care, but were I desirous of the minimum amount of labor, I should prefer to care for the hens. It certainly would require less labor to gather the product of the hens' industry than to milk the cow. The droppings from a flock of hens are usually considered of sufficient value to pay for the care.

How about the product? An average hen, if decently attentive to business, will lay about 10 dozen eggs per annum. My 25 hens then will produce about 250 dozen. I can sell my eggs at an average price for the year of 30 to 40 cents per dozen, but this is too high for the country at large; 20 cents is nearer right. This makes the receipts $50 for the flock, or, subtracting one dollar per head for feed, I have a balance of $25. The first cost of the hens was probably 50 to 75 cents each, but calling it one dollar each, I have a net profit of 100 per cent. Besides this several of the hens have probably acted as incubators and thus have earned something more to be added to the credit side of the account. The first cost of the hens was less than the first cost of a good cow, so the cow must earn still more than the hens have done to make a profit of 100 per cent. Will she do it? F. H. V.

Cranford, N. J.

Everywhere.

A SUMMER OUTING IN THE NORTH CAROLINA MOUNTAINS.

III.

MARY WAGER-FISHER.

Asheville: Southern sanitation; a planter's tales; minerals; mica mines; farming; a sylvan railroad.

As there was no pressing need for us to make haste in our journeying, we settled ourselves for a week's sojourn in Asheville, for the air was so fresh and delicious that it seemed as good a place for one to grow well and strong in as higher up in the mountains. But after a few days I changed my mind on that point, for I did not like the water or the sanitary condition of the little city, which is the resort of summer and winter health-seekers from both North and South. The location is charming and the drives in every direction, the views from many points, the splendid oaks that abound and the fine horses, all go to make up a really enchanting region, under a most lovely sky. The town proper consists chiefly of one long street on top of a ridge with an electric street railway through it, while around on the adjacent hills are perched cottages with now and then one almost pretentious enough to be called a villa. But, as I have before hinted, our gracious and easy-going Southern brethren live as if utterly unaware of the causes that produce zymotic diseases and breed typhoid fevers, even in the high, pure air of the mountains.

A gentleman from Jacksonville, Florida, after he had walked over the town, said to me: "There isn't a place here that our Health Board wouldn't condemn;" but until Jacksonville was scourged with yellow fever, it didn't bother itself about drainage and house sanitation any more than Asheville was doing. Then, to add to the odoriferousness of oozing things in general, the ground at that time was covered with a carpet of 17-year locusts that were decaying after the manner of all flesh. But despite all this, the gentle breezes brought delicious air from the hills, which the presence of man had not defiled, and although the house-keeping was atrocious from the New England standpoint, and the variety of hot breads without limit, and fried chicken for breakfast, dinner and supper, threatened to become monotonous, we had a good time. The laddie climbed the mountains and brought in wonderful new flowers, interviewed our hostess as to slavery times and found out that she was glad that she no longer had to have the care of slaves, prompted the cotton planter on the piazza, who came from the Lower Mississippi Valley, to tell him his experiences in the war, and especially during the siege of Vicksburg.

This planter, who was a capital, easy-going talker, and evidently a man of unusual capacity, had considerable to say of the money to be made—and being made—in cotton culture. One Northern man had, in *one year*, paid for his plantation, having bought it cheap soon after the war. Sugar plantations were more expensive and required more experience in their operations; but in cotton there were loads of money for almost anybody who had energy and a little capital, and he wondered that any one should "go West." He admitted that the plantations were often malarious, and he might have added that no sane man from anywhere would put his health in peril, even for the possibility of making money rapidly. Some Florida people who were going North, said they had the greatest desire to eat *good* beef, as their Northern friends had assured them that Southern people who had never been North, had no idea how *good* beef tasted. There may be some truth in this, for during our week in Asheville, it was impossible for me to eat the beef served at table, which, if good at the outset, was spoiled in cooking, as it followed the fate of most Southern foods in being fried.

Asheville is 2,250 feet above the sea, and from its equable climate, it is an all-the-year-round health resort. It has no mineral springs, but it has a handsome new hotel, beautifully located, and furnished with all modern luxuries, and is filled with rich Northern parties in winter. Then there are numerous smaller hotels, and no end of boarding-houses, where one can have comfortable rooms and good board—from the Southern standpoint—for about $30 a month. Two things will suit the most fastidious—the oak trees and the sky.

From Asheville we continued our journey in a south-westerly direction over the Western North Carolina Railroad, which is still in a state of construction—a road built at great expense because of the mountainous region it threads, and a more picturesque and sylvan ride cannot elsewhere be found. The road skirts the balsam region where the conifers are in dark contrast to the lighter hues of the deciduous trees. All this region abounds both in minerals and mineral springs. It is claimed that every precious stone but the diamond is found in North Carolina. Gold mining is carried on to some extent, but the most valuable mines are those of mica. An old mica miner told me that the best mines in the State had been previously worked by a race which preceded the Indians, a clever and ingenious people of whom the Indians still bear legendary testimony. Specimens of their carving in stone are occasionally found—discoidal stones, and some fine work in amethyst. Their tools seemed to be inadequate beyond a certain point, and the mines were abandoned long before being exhausted.

The mica is found in blocks, usually, if not always, in a tilted position, and after being separated from the rock, by blasting and other processes, it is split into sheets, with a knife, and the edges are trimmed with a pair of shears, when it is ready to be packed for market. The extreme thinness to which the mica may be split is surprising. It is often as clear as glass, and, as every one knows, it is indestructible by fire, as illustrated in the isinglass in coal stoves. Latterly, the importation of mica from Southern Asia—India—has greatly diminished the profits from these North Carolina mines, the rough blocks of mica sometimes coming in the ships as ballast.

But I was more interested in the farming of this region, than in the mining, and some of it was of the most extraordinary character. Hills so steep had been plowed and planted with corn, as to make one wonder how it was ever managed without the whole outfit of man and mules tumbling head over heels into the valleys below. Now and then there were rich bottom lands in which oats, wheat, and corn throve "mightily," and the land was valued at from $50 to $100 per acre. The farm houses had a thrifty look, being often painted white; the streams were as clear as crystal, and although the land was wild and mountainous, there seemed to be unmistakable evidences that one could actually thrive there by tilling the soil, if he could manage occasionally to stand on his head!

RURAL SPECIAL REPORTS.

New York.

Forestville, Chautauqua County, November 27.—The weather for October and the forepart of this month has been extremely fine and the farmers have improved it, too. A great deal of plowing has been done, and a majority of the farmers have things in good shape for the winter. Of course, there are some who are never prepared for the winter, spring, or anything else that requires work and forethought. The grape crop of this county has been the finest ever gathered, being of good quality and bringing good prices—25 and 30 cents per nine-pound basket. It is estimated that the grape-growers of this county will receive $1,500,000 for this fall's pick. Our other fruits were nearly a failure. We had a few pears, no apples of good quality and only a few of the poor ones. Some potato-growers report success and some failure; take it all in all there is probably an average crop. Potatoes are selling at present at from 45 to 50 cents, and some for 55 cents per bushel. Newly seeded meadow and pasture lands are in excellent condition. The prospects are good for a fine cut of hay the coming season. Hay is being bought and pressed in the barn for $9 per ton; straw for $6 per ton.

I have tried the Japanese Buckwheat and found it to be a good yielder, but I cannot sell it to millers. They say it does not make good flour and does not yield as much per bushel as the other kinds. How is it with my brother farmers? I would like to hear from those who have tried this variety.

C. H. F.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

ARE FARMERS' INSTITUTES ABOVE CRITICISM?

Several Subscribers.—Most of the reports of farmers' institutes are quite enthusiastic in praise of these meetings. Is it possible that the meetings are above criticism? What do practical farmers think about them? Is there any way of finding out?

Ans.—Yes, there is a way of finding out. In answering such questions the R. N.-Y. goes straight to headquarters. We have a list of farmers who attended the institutes in New York State last winter. To a number of these farmers—names selected at random— we sent the following note. "1. On the whole, did you get enough good out of the farmers' institutes you attended to pay you for going? 2. What topics were you most interested in and if you were to go to another meeting what subjects would you like to have discussed? 3. What was there about the institutes that you did not like and what can you criticise? We shall be glad to have you tell us, frankly, what you can about these meetings."

We did not know the parties to whom the letters were sent; we simply took them to be fair representatives of the farmers who made up the audiences. The following replies give the substance of the matter.

FROM D. W. MOORE.

1. Yes, I think I did, I only had 24 miles to go. 2. I have not kept a list of the topics and cannot well answer. I was very much interested in "bee culture" and "the fattening of hogs." Were I to go to another I would like to learn, first, how to make farming pay; second, how can we afford to hire help at the present wages and the present prices of farm products; and third whether the prices of farms and farm products are likely to go up or down within the next few years. 3. I have nothing to criticise.

Niagara County, N. Y.

FROM S. B. HARLOW JR.

1. Yes. 2. Stock breeding and feeding and any subject bearing on *practical* farm management. 3. I desire to criticise some of the speakers for giving beautiful essays on "The Home" and kindred topics; for bandying small jokes between themselves, giving the impression that they were having a very pleasant outing; for evading questions which they did not appear to be able to answer instead of saying "I do not know," and for exhibiting an unwillingness to answer direct questions. To be more particular, I will express my own opinion of some of the speakers I have heard. Secretary Woodward is full of solid meat and uses much wisdom in conducting the institutes. Seth Fenner I heard read a very good paper on road-making, but in a discussion on the topic he showed a love of jokes and repartee very much out of keeping in a school. F. D. Curtis is no doubt well posted on his subjects and is a very fluent talker. He was much displeased at being questioned and was rather sarcastic and funny by turns. He has a much greater amount of assurance than some of the farmers, who have experimented on some of his theories, would give him credit for. Charles A. Green might have told how to grow fruits; but, instead, he gave us an illustration of how farmers' wives get dinner for 10 men and care for babies when it is hot weather and Mr. Green makes an unexpected visit.

I heard Professor Bailey tell what he knew in his speciality in a way that could not fail to instruct. Prof. Roberts never says a foolish thing; he certainly is an instructor in the largest sense of the word. A Mr. Ives, from the western part of the State, spoke on horse-breeding; but his knowledge seemed to be all incorporated in his paper. Col. Woodward, of Pennsylvania, is a good speaker and a man of much practical sense. Mr. Powell, of Canada, is an instructive speaker and, better yet, is an excellent man to answer questions. The ladies I should not miss if they were dropped from the lists.

Cayuga County, N. Y.

FROM THOS. HUNTER.

I attended only one of the meetings and was present at that only a part of the time, so that I am not a great authority on the matter from my own experience; but I talked with a great many farmers who had attended the institutes and I found them, almost to a man, highly gratified with the information they received. I am certainly in favor of keeping them up. I would recommend as one topic for thorough discussion "the breeding of good stock in place of scrubs."

Cayuga County, N. Y.

FROM CHAS. E. SHAFER.

I enjoyed the institute held at Brockport very much, and was well paid for attending every session. I was very much interested in the subjects of dairying, stock-feeding, ensilage and potato-growing, and in fact in all. I would like to hear discussed, first, what shall farmers do to protect themselves from the great syndicates that are devouring them; second, what can we do to avoid the yellows in peach trees.

Niagara County, N. Y.

FROM R. S. CHAPIN.

1. I attended the institute at Canandaigua, and in some respects was well pleased, and for younger members I presume attendance was a profitable investment. 2. I should think farming interests are more vitally affected by interest on debts and mortgages and taxes than by all other things combined. Certain it is that agriculture can never prosper and pay nine-tenths of the taxes while the government is loaning its millions to the banks free of interest. I think that there must be a radical change, or farming in the older States is doomed. There was nothing in particular in the institute, that I took exception to as far as it went, but it did not reach questions of the highest importance, in my estimation. I think money should be loaned on at least one-half the assessed value of good farming property at as low a rate of interest as banks pay for it.

Ontario County.

FROM E. W. STANCLIFF.

1. I attended both the county and State institutes and think it profitable to attend. 2. I was interested in silos and silage, growing crops for fodder and handling milk for butter and cheese, growing and digging potatoes, etc. 3. I have no criticism to make on what Secretary Woodward said, but our farmers tell too large yarns.

To explain a little about those yarns: Last week I examined a neighbor's silage (his silo was only one thickness of hemlock plank matched together) and the silage (he was feeding off one-half of it) was rotten for six to 12 inches all around next to the planking. Now we were at our county institute last Saturday and he told the people in the meeting how he had put up his corn and that it was sweet silage and the stock liked it. We saw it before his cows left it and men with me called it poor stuff.

Erie County, N. Y.

FROM R. L. COOLEY.

1. I can answer emphatically, yes. 2. Profitable dairying, the caring for stock, the combining of cattle foods so as to make or form perfect rations, also the construction and uses of silos and the growing of various forage plants. 3. I have no criticisms to make except that more attention should be given to the subject of bogus products, especially butter and cheese and the adulteration of foods.

Niagara County, N. Y.

FROM HIRAM GREGORY.

I attended the farmers' institute held at Lockport last January. 1. I think I did. 2. Fruit in all its departments. Of course, it is interesting to listen to discussions on dairying, bee-keeping, stock-raising, etc., but fruit-growing is my special subject of interest. 3. I choose to criticise nothing.

Niagara County, N. Y.

FROM SAMUEL MC BLAIN.

1. I think I am safe in saying that I never attended a farmers' meeting that I enjoyed so much or by which I felt so much benefited as the institute held at Geneva. The speakers seemed to understand the subjects under discussion and earnestly discussed them from their standpoint. 2. I am a farmer. I raise fruits of all kinds; also wheat, barley, oats, corn and grass. I also feed stock of some kind in the winter, for market. The speakers could hardly hit me amiss. 3. I would hardly be justified in criticizing what I could not improve. I have no doubt that arguments were used at that institute and statements made that time will refute; but that I hold was not the fault of the speakers. Theory is one thing; actual work is another. What looks reasonable may not be practicable. If I should criticise anything it would be the tendency to extravagance likely to result from following some of the suggestions made, especially by young farmers.

Ontario County.

FROM W. H. DE PEW.

I attended the institute at Auburn part of one day and enjoyed it very much. I am only 22 years of age and am working my father's farm. I thought the speakers were almost too scientific for any one of my attainments, although I take a great interest in farming.

Cayuga County, N. Y.

COAL ASHES ON LIGHT SOIL.

One of our subscribers in New Haven, Conn., says he can obtain large quantities of coal ashes. His soil is light and sandy. He has observed that coal ashes with water form a compact and sticky mass, and argues that if they could be well worked into his light soil the result would be that it would become more compact, more retentive of moisture and better able to withstand drought. Is he right?

FROM PROF. S. W. JOHNSON.

The inquirer is quite right. The hungry, coarse-textured soil of the plain upon which New Haven, Connecticut, is situated is at once improved by a liberal dressing of coal ashes, and many acres that I remember to have seen lying for years barren of any useful vegetation and used as dumping grounds are now fruitful gardens and in many cases the coal ashes have mostly done the business.

New Haven, Conn.

FROM DR. PETER COLLIER.

I believe the subscriber will find an application of coal ashes, upon such light sandy soil as he describes, to be beneficial. I presume he need not be cautioned against applying them so abundantly as to form a sort of concrete, as they will do when used for walks.

Geneva, N. Y.

FROM PROF. E. W. HILYARD.

If the soil referred to is coarse and leachy, the ashes might have a beneficial effect in correcting the condition of the soil. If, on the other hand, his light soil is itself a fine silty one, the improvement brought about by the ashes would probably not be worth the cost of application, as they bring nothing in the way of useful mineral matters with them. I am using such ash with advantage in a heavy "adobe" or prairie clay on my premises; it renders that soil more open and tillable, and *diminishes* its cohesion, thereby conferring a real benefit. There is, of course, some difference even in coal ashes; the light, fluffy sort is rarely of any benefit, while heavy red ash may add materially to the moisture-capacity of the soil, and usually also brings with it some useful ingredients. But if your subscriber has any clay marl within easy reach, that will pay him better than coal ashes.

Berkley, Cal.

FROM PROF. F. H. STORER.

There can be little doubt that coal ashes judiciously applied to many sands and sandy soils may permanently improve them, both by increasing the power of the land to hold the water which falls upon it as rain and by enabling the soil the better to suck up water from below, but it may well be questioned, in this country of cheap land, whether any farmer can afford to expend the labor necessary for moving the ashes for the sake of the hoped-for improvement: in any event, the economic gain would probably be but small. In case, however, the problem of your correspondent should happen to fall within the domain of landscape gardening, that is to say, if he has in view the tidying up of an unsightly lot so that useful grass may be made to grow upon it in the place of unsightly weeds, it may, of course, well be worth his while to endure the inevitable sweat of the face in order to please his eye.

COMPARATIVE VALUES OF HERD'S GRASS AND ORCHARD GRASS.

L. W.-P., Cornwall, Vt.—1. What are the relative values of Herd's Grass and Orchard Grass? 2. Who is a reliable hay commission merchant?

ANS.—1. In reply to our questions one of the largest hay dealers in the city writes as follows:

"There is a difference in price, as a general thing in this market, between Herd's Grass and Orchard Grass, of from $1 to $3 per ton. Orchard Grass is raised in small quantities comparatively and is not a market grass, and it matures much earlier than Herd's Grass, and at a time when work is crowding the farmers, and the attention is not given to it that is given to Herd's Grass. It is also too coarse for a good market hay, and does not bale up or show to as good advantage as Herd's Grass does. Then again, as Orchard Grass grows very rapidly, it does not seem to possess the feeding qualities that the other grass does. All in all, it is a grass that is but very little known in this market, and not much sought after."

This is the hay dealer's side of the matter, speaking from a standpoint of marketing values entirely. A great many farmers like Orchard Grass notwithstanding its acknowledged faults of growing in tufts or bunches and early maturity. A. W. Cheever, excellent authority on practical dairy matters, considers Orchard Grass "the perfection of dairy cow fodders" when cut and cured just at the right time. It is evident that the grass will not compete with Timothy in the hay markets. Like clover, it is a grass to be fed at home. 2. F. Williams & Co., New York, are reliable.

FERTILIZER FOR SWEET POTATOES.

W. D., Burlington, N. J.—The R. N.-Y. has a great deal to say of potash as one of the principal plant foods for white potatoes: what is the principal plant food for sweet potatoes?

ANS.—The chemists state that sweet potatoes differ but slightly in the composition of their ash or mineral ingredients from the Irish potato. The percentage of ash in either kind is about one per cent.; organic combustible matter about 25 per cent.; and water 74 per cent., or about two-thirds their total weight. It is in the composition of the organic matter that the sweet differs most from the Irish. It contains more sugar (some seven per cent.) and less starch than the Irish. The points of difference are mainly in the materials, which are derived from the atmosphere and water instead of from the mineral ingredients of the soil, and are due to radical differences in methods of growth, feeding power, and surrounding conditions. It is therefore, natural to suppose that a fertilizer that gives good results with "white" or "Irish" potatoes would prove excellent for sweet potatoes.

THE DUCHESS GRAPE.

H. E. M., New York City.—Is the Duchess grape hardy and productive? Is it subject to blight or rot? Can it be easily propagated and will it grow in a "strong" soil where the Delaware will not? I wish to plant about 200 vines in New Jersey; will they be likely to do well there?

ANS.—The Duchess is a variety excellent in some places, worthless in most places on account of mildew and rot. Our inquirer will probably find that it will not be of any value. We are not aware that it succeeds in any part of New Jersey.

Miscellaneous.

W. C. C., Freehold, N. J.—Van Tassel & Kearney of this city handle good horses.

S. W. B. Ladona, Pa.—You can get broom-corn seed of W. Atlee Burpee, Philadelphia, and probably of any other seedsmen advertising in the R. N.-Y.

F. M., Naples, N. Y.—What are the good and poor points of the Moyer Grape?

ANS.—The R. N.-Y. has never tried it. Opinions as to its merits differ widely.

S. H. W., Weston, Mass.—Is the Gainor Blackberry early, medium, or late? How will it compare with the Synder?

ANS.—It ripens with the Kittatinny. The berry is larger and of better quality than the Synder; but the vine is probably not so hardy.

J. H. K., Pompey, N. Y.—From whom can I get information about abandoned Vermont farms which are for sale at $5 per acre?

ANS.—Write to A. B. Valentine, Commissioner of Immigration, Bennington, Vermont, for a list of the farms and prices.

E. (No address).—Where can I get information with regard to the history and varieties of our cultivated cherries? I would like to become acquainted with about all the literature on the subject.

ANS.—Consult Downing's "Fruits and Fruit Trees of America" and the "Origin of Cultivated Plants" by A. De Candolle.

R. F., Newcastle, Ontario, Canada.—What is the best rule for measuring hay in a stack or loft?

ANS.—Hay dealers allow 512 cubic feet to the ton. This estimate is considered fair though of course much depends upon the size of the stack and the character of the hay. Find the number of cubic feet in the stack or loft by multiplying length, hight and width. Then divide by 512.

C. E. C., Marietta, Ga.—Can the R. N.-Y. give me a little information about the taxes and government of the Bahama Islands?

ANS.—What particular information do you desire? The consular reports from the Bahamas make no reference to government and taxation, though very full regarding their commerce and trade. Tell us just what you want to know and we will obtain full information through the State Department.

L. S., St. Catherines, Canada.—My garden embraces 15 acres and in spring I intend to set out a quantity of asparagus roots. Most growers say plants should be in rows three or four feet apart and from one to two feet apart in the rows. Wishing to grow as many as possible on the land, would it not be better to plant in old-fashioned beds, having rows 15 inches apart and plants 12 inches apart in the rows?

ANS.—By *all means*, plant at the greater distance, if you would have large, tender shoots and a long-lived plantation.

"Farmer's Wife," Mount Pleasant, Iowa. How does Mr. Terry of Ohio, make such a good living on 50 acres of land? Does he have a bank account to fall back on?

ANS.—Mr. Terry claims to make his money at farming. His cash crops are wheat and potatoes. As we understand him, he has paid for his farm and built new buildings out of the proceeds of his farm. Mr. T. writes a good deal for the agricultural press and does considerable work at farmers' institutes during the winter, but the money received for this work is but a small "drop in the bucket."

Discussion.

CALIFORNIA LANDS.

C. H. S., NILES, CALIFORNIA.—A great deal of harm has been done to California by nomadic land speculators and by the class of newspapers who sell their reading and editorial columns for advertising purposes. Every thoughtful man on the Pacific Coast is in sympathy with the efforts of the RURAL NEW-YORKER to state facts, all the facts—nothing but the facts—in regard to every section of country. Now I travel a good deal over California, and visit many parts of the State. I know many of the prominent farmers and fruit-growers and often discuss crops and land values with them. Some of my own conclusions may therefore be of interest to the RURAL NEW-YORKER readers. "Comparisons," in this connection, appear to me "odious." California is very different from New Jersey, but I do not see why the New Jersey farmer should not love his home as much as the California farmer loves his; I cannot but believe in the general law of compensations, which comes nearer to balancing things than the man who has "land out West" to sell is willing to admit. So I have no comparisons to make, and only a few results of observation to give readers of the R. N.-Y.

California is a very large State on the map, and it is even larger in point of variety of climate, of soil, of resource, of social surroundings, and, in brief, of social "opportunities," large and small. It is especially and emphatically true of California that no man can afford to invest here without spending several months in going over the entire State, not merely a small portion of it. There are large farming communities in California—there are whole valleys and even counties that have never had the unfortunate experience of a "boom," that contain no real estate "boomers," and where property has always changed hands on the basis of productive values. I visited Southern California at the beginning of the great land speculations there, again at the hight of the fever, and a third time after the end had come. I noticed several remarkable things: In the first place, there were not enough boomers and buyers to cover the whole territory. Lands of the finest quality, in small districts and in the midst of excited districts, staid at ordinary rates. Buyers did not go there because the country was large and they did not hear of these districts.

A real estate man offered me orange land in one of the most famous colonies for $1,000 an acre. "But," I told him, "I know all this country, and within 10 miles in district 'so and so,' I can buy the same soil, in as good a climate, with more water, for $150 an acre." I had known him for years, and he acknowledged the truth of my statement. "But," he said, "there will never be any boom over there: we can always keep it here." It was just the same in the grape, the corn, and the wheat districts of Southern California. Communities where prices of land remained almost unchanged during the land excitement, went on calmly planting and developing their resources. The worst feature in the land excitement was in the numerous "paper towns" that were laid out in most absurd situations. Nearly all the buyers bought to sell again as soon as possible, not to build or improve, and many never saw the towns or cared to see them. The effect on the

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies

country surrounding these paper towns was to cause a sudden neglect of the orchards, gardens, vineyards and fields. Every adjoining farm, it was thought, would soon be demanded for town lots. Now all this is changed; the best thing that ever happened to the southern counties was the departure of the nomadic land boomer.

The books about California are, as a rule, very hasty sketches. They are full of curious blunders. I open one famous traveler's book and there is a page of moralizing upon the strangeness of finding a stage station in Monterey named "Plato," after the Greek philosopher. If the famous traveler had looked out of the window at the station he would have discovered that it was an old Spanish town, and that the name in letters a foot long was "Pleito." A small matter? Perhaps so, but when in the next chapter the author talks of land values in California, and tells the biggest stories he has heard, the same lack of observation underlies the whole structure.

In fact, there are all sorts of lands, all grades, at all prices, in this great State of California. It is a very mountainous State—a Palestine on a large scale. Even the immense valleys of the Sacramento and the San Joaquin contain vast, rolling expanses. The "foothills" are the most characteristic feature of the State; there are cheap lands, and abundant room there. There are timber lands, reaching up to a hight of 8,000 feet above the sea; there are swamp and overflow lands about the lower courses of the rivers and the edges of the bays; there are hundreds of small mountain valleys; there are high plateaus as yet uncultivated. Prices of land vary so much that no one would risk attempting to tabulate them. A friend of mine bought 160 acres in a northern county, all fit for the plow, for six dollars an acre, went on it, and is doing well. At $25 or $30 there are hundreds of tracts in the market, some under water ditches, some in regions where the rainfall is abundant. Level valley land within 30 miles of San Francisco can be bought for $300 per acre, and that price is willingly paid, when a piece comes into market, by the farmers of the neighborhood.

For five years I have watched a process of healthy and steady settlement going on all over California, and entirely disconnected from a "land boom." It can be defined as a new development of the State by families who have come here to stay. By far the greatest number came with small means and have obtained cheap land from the government, the railroad, or by buying out pre-emptions. Some of them have settled so far up in the mountains that they live in a winter climate as cold as that of northern New York, and they are as much interested in Dr. Hoskins's articles on his Vermont orchard and garden as if they were in New England instead of California. To my mind, these poor but energetic settlers who are opening up new parts of the State, reviving the old mining counties, and making "small beginnings" are more valuable to us than men who build $50,000 houses. I have purposely avoided any discussion of the higher-priced lands of California, for so much has already been said on that subject that it may well rest for the present. There is plenty of land in northern, central, and southern California for sale in first hands at reasonable rates, varying, of course, according to soil, situation, and climate, but the buyer, as I have said, should first become familiar with the entire State.

MORE ABOUT THE COST OF LIVING.

G. A. H., BELLEFONTAINE, OHIO.—I will add my item to the facts already drawn out by this discussion. The exact cost of living on a farm cannot be fully determined because so much is consumed that is raised on the farm and of which we take no thought. Should we buy all that is consumed, or keep an account of its cost, the result would almost frighten a farmer. If this could be done I think we could more fully realize the independence of the farmer so far as eating is concerned. When we need potatoes our good wife goes to the patch or barrel and gets what she needs. If apples or fruit of any kind are needed she takes them from the farm, never thinking of pay. Chickens and turkeys, cream and butter, milk and honey are all home-raised, and we might go through a long list of other things of which no account is taken because they are produced at home with little outlay of money care or labor. Having for 20 years or more kept an accurate account of all sold off the farm and all bought, I can give a correct account of what we buy for the household use. Our family consists of myself, wife, two daughters, over 18 years, and one work hand who boards in the family and is here all the time, making his home with us. Take the year 1888, as the expenses then will come the nearest to the cost of living at the present time. Indeed the outlay has varied but little from year to year, the difference depending almost entirely on variations in the prices of the different articles bought. Our wheat is ground at the mill and 40 bushels will keep us and pay our toll. Our meat is fattened on the farm, and $50 worth is sufficient. Dry goods, including all the clothes bought for the family, will amount to $60 per year; groceries, except sugar, $17; sugar $12; shoes $15; coal-oil $4.00. We use two wood stoves in the winter and one in the summer, and burn about 40 cords of wood which sells here in the woods, cut and corded, for $1 per cord; but it cost me only the outlay for cutting, which is 60 cents per cord—put the moneyed outlay for wood at $25 therefore, then our account would stand thus:

Flour	$30.00
Meat	50.00
Dry goods	60.00
Groceries	17.00
Sugar	12.00
Shoes	15.00
Wood	25.00
Coal-oil	4.00
Total	$213.00

In the bill for dry goods is included the price of a suit of clothes costing $28, for myself, which will not occur again in five years or more. The sugar bill is small where so much fruit is used and especially canned fruit. The outlay is cut down by the use of maple sirup, as we have a sugar orchard of 800 maples and use on an average, 15 gallons of sirup much of it being used in sweetening fruit. Taking all things in consideration, the above is a fair estimate per year.

IN DEFENSE OF ENSILAGE.

H. S. W., OCONOMOWOC, WIS.—In the R. N.-Y. of Nov. 2, page 727, A. T. J. gives what would seem to be from his experience, weighty reasons for discontinuing the use of the silo in feeding for milk to be shipped for consumption in cities, but as there are large numbers who feed their cows silage and ship their milk as he does, without meeting with similar objections, must it not follow as a logical sequence that there was about his silage some peculiarity that caused the milk from cows fed on it to give forth so offensive an odor? He does not describe his method of filling the silo—whether it was done rapidly with immature fodder, without allowing time enough to elapse between fillings for it to heat, thus making sour silage, which would be very apt to impart to milk the odor which he describes; or whether his silo was filled with well-matured corn between the dough and glazing stages, which would have produced sweet silage, whether the filling was rapid or slow. Such silage when well settled and cured makes a feed that will not taint milk or cream with any odor that the most fastidious would object to. While I do not ship milk to the city as this correspondent does, I ship cream over about the same distance, and this is the tenth year in which my cows have been fed on silage, and silage alone (for roughage), during the winter months, and I have never had a complaint. I have been tempted to write this because if the trouble this correspondent experienced be capable of a satisfactory explanation, it should be given; otherwise many who would greatly profit by adopting a system of feeding that cheapens production by one-half—to put it moderately—might be deterred from being benefited by it after reading his communication. He speaks of having been "seized with the silo fever while at its hottest," as though it had since cooled down; but I opine that it is a fever that grows hotter as the years roll on, and one that will continue to do so until every intelligent farmer in the land has caught it.

KILLING SMUT IN WHEAT.

H. B. T., WALLULA JUNCTION, WASHINGTON.—I was raised on this coast and I have often wondered why so many of the farmers of the Eastern and Middle States were so long about finding a remedy for smut in wheat, (and the same remedy I have heard is equally good for oats.) Ever since I can remember seeing wheat grow—over 30 years—I have seen this remedy used for smut in wheat. It is one pound of blue vitriol dissolved in a wooden bucket of hot water with enough cold water added to thoroughly dampen seven or eight bushels of wheat. The wheat should be placed in a large, tight vessel; add the water and stir the wheat thoroughly. If allowed to remain until dry, all the better. I know many farmers who use vitriol and sow immediately, but more or less smut can be found in their crops. I have a little seed wheat that was treated with vitriol two years ago, and I will warrant that every kernel that is not cracked will grow. If any readers of the R. N.-Y. are troubled with smut I think they will find this remedy an entire success.

Eastern Washington and Oregon have, I think, had the poorest wheat, barley, oat and potato crops this year ever known. The fruit crop was splendid and brought high prices, being shipped as far east as Minneapolis.

SQUIRRELS AS RAT TRAPS.

G. G. GROFF, M D. PENNSYLVANIA STATE BOARD OF HEALTH.—From practical experience with red squirrels, I consider them only a little less objectionable than rats about a barn. Not only will they eat corn, but they will carry off and hide much more than they eat. Besides this, they gnaw buildings as rats do, and, worst of all, they destroy all birds' eggs and young birds in the orchard and lawn. This I have observed for years, as I have a grove of 10 acres near my house, in which no birds at all are reared on account of the squirrels. I cannot therefore accept Prof. Cook's rat trap. To avoid rats, have no place where they can find shelter. To drive them away, secure a drove of cats. They will leave in a little while if there are six or eight cats about a barn.

CHEESE AND RETAILERS.

JOSIAH SHULL, SECRETARY N. Y. DAIRYMEN'S ASSOCIATION, ILION, N. Y.—I indorse every word of what Prof. Wing says on page 788 concerning N. Y. State cheese, except the clause: "The retail grocers of Little Falls and Utica would in all probability be selling Canadian cheese." They would retail everything that would not answer for the best market. They want something that can be bought at a low figure, and which they can then sell at full prices. If they would not cut anything but the best grade of goods, probably four times as much would be used as now is; and in this case they could cut and retail for two cents above the cost, cut three cheeses where they cut one now, and consequently make more money than they now do.

NO POTATO BEETLES HERE.

B. T., MAPLE, SAN JUAN COUNTY, WASHINGTON.—Some time ago I saw a paragraph in the R. N.-Y. saying that the only place free from potato "bugs" was some district in Eastern Canada; but I can inform readers of the R. N.-Y. that there is in the United States a country freer from the pests than any part of Canada. In San Juan County the potato "bug" was never seen, and potato balls grow to perfection. Indeed I don't think the "bugs" have been found in any part of the Puget Sound country. I have lived in it nearly seven years, and traveled over a good share of it, and have never seen or heard of a potato "bug" here yet.

SOUR MILK FOR POULTRY.

C. A. B., FEEDING HILLS, MASS.—I see some of the readers of the R. N.-Y. advocate sour milk for poultry and some speak very strongly against it. I have fed it for years (buying of the Springfield Milk Association at two cents per gallon) and always with the best of results. For young chicks there is nothing so good as corn-meal mixed with sour milk, and allowed to stand over-night in a warm place, when it will be light and foamy like bread dough. I never have chicks sick with gapes or anything else when fed with it.

WEIGHTING A SILO.

CONNEAUTVILLE, PA.—I cover my silage with paper after it has reached a proper heat; then I put eight inches of sawdust on top of the paper. I have just opened my silo and find the silage the best I have ever had. I have sweet silage this year. I intend to cover my silo another year with dried swamp muck or peat in lieu of sawdust and then I will utilize as much as I can of it with manure as an absorbent. I think this plan will work well.

E. B. G., MANCHESTER, PA.—In a late issue the R. N.-Y. says: "The white grape Antoinette (Miner) seems to be little known. It is one of the hardiest varieties grown at the Rural Grounds and its quality is better than that of the Concord." The R. N.-Y. is right, and it is better too than a score of later introductions. I have often wondered why more was not said about this excellent grape. Are we not all too prone to let good enough alone, especially in fruit, and always on the alert for something new of which we know nothing, and which will eventually end in disappointment? Score one more for the "Antoinette."

W. A. M., AMHERST, MASS., CREAMERY.—We have tried no test of cream beyond occasional sampling by gatherers, trusting only to watchfulness on the part of the latter, to protect us against poor cream. Directors and patrons would welcome payments based upon the amount of butter contained in the cream of each, unless the tests cost so much that the receipts even of those who have the best products would be materially lessened by the outlay needed to make them.

What Others Say

THE INDIA RUBBER TREE.—The "India Rubber" or "rubber plant" is a familiar and cherished object in many houses. There is not, probably, a plant among those which, during the last 25 years, have become really popular for the embellishment of living-rooms and conservatories, which is better suited for the purpose; and there are few persons now who know anything about plants at all who are not familiar with the straight stem and splendid great, dark-green, lustrous, leathery leaves of the "rubber plant," which seems able to resist, with impunity, darkness, neglect and drought, and even an atmosphere vitiated by the gases from burning coals. Plants more than 10 or 12 feet high are not very often found in our Northern cities, and few people, perhaps, who see one of the plants flourishing year after year in the narrow quarters of an ordinary-sized flower-pot realize that it belongs to a race of veritable giants, or that the Ficus elastica, as our common "rubber" plant is called by botanists, is, in its native countries, a marvel among trees. So says Garden and Forest.

Ficus elastica was cultivated in England as early as 1815, and whoever first thought of using it for house decoration made a happy hit. It is really a fig and produces little figs precisely similar in structure to the figs of commerce.

Griffith describes a tree 100 feet high, covering with its branches an area of 610 feet, the main trunk 74 feet in girth, while the trunk with its supplementary stems was 120 feet in circumference. This species of fig, like many others found in the tropics, is an epiphyte—that is, the seed from which it springs germinates upon the trunk or branch of another tree. The young plant sends down roots to the ground, and as these grow they gradually smother the host-plant, and form an upright stem which in time becomes the support of the fig-tree. The fruit of this species, which is probably never seen outside of the tropics, is ovoid, about the size of an olive, and greenish-yellow in color.

Ficus elastica is a favorite ornamental tree throughout the tropics, and is largely used in the East Indies for shading avenues, for which purpose its wide-spreading head admirably fits it. It is cultivated in Assam, where large plantations of this tree have been made in recent years, for the caoutchouc, which it yields in large quantities.

FEED FOR DAIRY COWS:—William Crozier, the well-known dairyman of Long Island (N. Y.), says, in the Albany Cultivator, that he does not feed silage; his feed consists of cut corn-fodder, pulped mangel-wurzel, bran and ground oats. This is cut, pulped, and the coarse bran and ground oats, with some fine salt, all thoroughly mixed together. He cuts on Saturday enough to last to next Saturday, or one week. It is put in one heap on the barn floor, and covered over with a piece of old sail cloth. The mess soon warms up, though not so as to become *hot*. Each cow gets a bushel-basketful of this, morning and night, and when a cow is in full milk, or fresh, she gets one pailful of warm water, with three quarts of bran and one quart of ground oats mixed in the water, twice each day. His cows never go out of the stable in winter, nor do they get cold water—the chill is always taken off before they get it to drink. A bushel-basketful of the mixture weighs about 20 pounds. In the midday, after they are watered, they get a bunch of hay. This hay is made from his grass mixture, as his mowing land is seeded down with several mixtures, and one of the mixtures is Alfalfa, which

very important to give flavor and texture to butter. To have dairy cows in good condition, and to give rich, pure cream they must have change of feed, and not feed alone, but must be kept clean. The stables are cleaned every day, and the cows are curried and brushed once each day. This gives contentment and comfort to them, and if he finds a cow that does not give him an equal return, she goes to the butcher.

FULL AS A TICK.

WHILE still the ground is open, those who have trees of any kind to set may prepare the places which are to receive them in the early spring. Dig ample holes at least two feet deep and the wider the better. Remove the worthless soil and fill in with the best that can be procured. Mark the center so that in April or earlier a few spadefuls taken out will give in this mellow, rich soil a home for the roots that will insure vigor and long life.....

NOW, too, is the best time for thinning out. Cut away unsparingly the poorest of those trees that are trespassing upon each other. This means death or deformity to one or the other or both. Better save one good specimen than retain two or more that are deformed. Cut off the branches close to the main branch and cover the wound with some material that will protect it from the elements—thick paint, tar or anything that will stay put.....

MR. RANKIN is doubtless right, as he is reported to have said in the Massachusetts Ploughman. A certain amount of glass in poultry houses is all that is necessary, and a small amount too. When the sun shines it will be warm enough. When it does not shine the glass radiates the heat rapidly and leaves the house very cold. There is too much change in the temperature unless it is well ventilated every day, and this demands care.....

THE R. N.-Y. believes in having the windows in the east and west sides rather than in the south side.....

N. HALLOCK of Queens County, Long Island, N. Y., has this to say of the Ignotum Tomato which originated with Prof. Bailey now of Cornell University:

"I am greatly pleased with the Ignotum and the more I see of it the better I like it. I have 23 plants, and have picked 10 crates and have more to come. It was the second to have ripe fruits (Station first), but at the end of 10 days the quantity was greatly ahead of the Station. The quality is A 1; solidity, ditto. It has been picked longer than almost any other variety. I have no wrinkled ones.."....

PROF. BUDD, of the Iowa Agricultural College, writes that the Idaho Pear kept perfect foliage during the past season which was the worst for leaf fungi "in our prairie history."....

ONE of the merits of the new white grape Green Mountain is it *earliness*. Another is its pure quality. It has not a trace of foxiness. Ripe grapes of this variety were sent to us last season from New Canaan, Conn., when Moore's Early were ripening at the Rural Grounds.....

ONCE create a market for Angora fleece, and the hardy little breed will carry civilization nearer to the tops of the mountains than California gold ever did is the opinion of the American Sheep-Breeder. The writer says he once owned a flock of grades in the Sierra foothills. As soon as a permanent demand has been created for their fiber they will be better property for the mountaineer than sheep. They require neither fence nor herder; they always come home at night, and when dogs or coyotes assail them they make a bee-line for the corral, the buck covering the rear and turning often to beat back the enemy. Their flesh is good mutton and their milk is free from offensive taste.....

A WRITER in Farm and Fireside proposes to put a one-foot layer of potatoes for seed into a pit dug three feet deep, cover with a foot of chaff, with a board cover on top and upon this place soil to the depth of two feet. This will be left until June, and the tubers, if all right, will be taken out and used for planting. The plan seems worthy of a trial.....

THE ROLFE APPLE.—If any one is finding a profit in growing the Gravenstein—and it is a very profitable apple when well grown—we advise him to try the Rolfe, a Maine apple, highly recommended by the Pomological Society of that State as being much like the Gravenstein, but a month later. It is a seedling of the Blue Pearmain, and keeps up to and beyond the holidays So says Dr. Hoskins in the Vermont Watchman.....

WE are pleased to learn that Mr. Wilmer Atkinson has withdrawn from the Chinook-Montana-Boom Enterprise. Such enterprises are for editors without consciences and who do not care a whiff for the welfare of the public they profess to serve.....

ABSTRACTS.

——SUNDAY SCHOOL TIMES: "Man's 'proper study'—rightly conducted—is himself, the only personality that he has always at hand, and into whose inner life he can look.

It may be thought to be part of conceit to be continually studying oneself. More commonly, however, self-discovery is a very humbling, as it is always a sobering process. The conceited man is always the man of little real self-knowledge. However much we may find to commend in ourselves by the process of self-discovery, there will always be enough that ought to be regretted, changed, and forsaken, to effectually check any excessive self-estimation to which we may be inclined."....

——FARM, STOCK & HOME: "Cattle are low in price—very low—and many of my neighbors are reducing stock as rapidly as possible; in fact, I learn that there is a general reduction going on all over the country, but I am doing the exact contrary. 'When everybody goes out I always go in' has been my lifelong motto, and I am able to pay my debts too."

——WESTERN RURAL: "How much sooner it gets too dark to saw wood than it does to play lawn tennis."

THE MIRROR *via* TRIBUNE: "One of the strongest copartnerships on the farm is Breed & Feed."

——PHILADELPHIA INQUIRER: "How inconsistent men are. When a couple of them are poisoning themselves with whisky they are sure to preface the dose with well wishes for each other's health."

"The man who is content to idly stand,
Nor strives his hopes to gain,
Will get a ticket to the promised land
And then will miss the train."

—Traveler.

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——PUCK: "A Cereal Story—Acknowledging the Corn."

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Do You Feel all tired out, nervous, irritable and without appetite? Hood's Sarsaparilla will overcome that tired feeling, tone your nervous system, purify your blood, sharpen your appetite, cure indigestion and sick headache, and make you cheerful and happy. Be sure to get Hood's Sarsaparilla.

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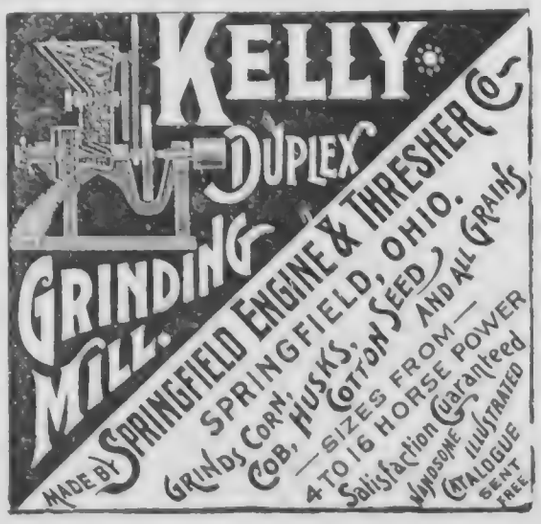

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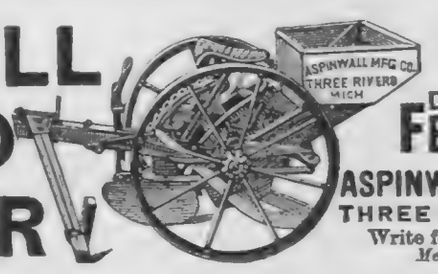

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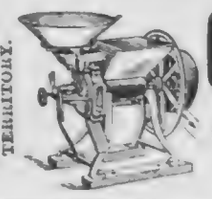

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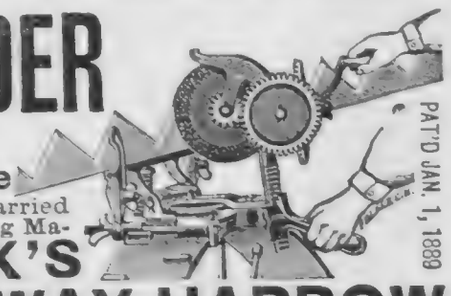

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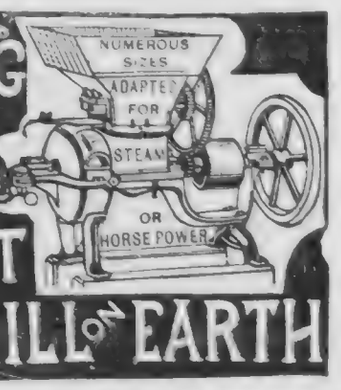

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THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, DECEMBER 14, 1889.

NOTICE.

THE RURAL NEW-YORKER is invariably discontinued at the end of the term subscribed for. Any copies sent to non-subscribers are sent without charge as specimens merely.

OUR readers will greatly oblige us if, when answering advertisements in the R. N.-Y., they state where the advertisements were seen. We like to have our advertising patrons know how much business we send them. It is well known that the R. N.-Y. looks after the interests of its readers, consequently those who declare themselves R. N.-Y. readers are sure to receive prompt and courteous treatment.

THE report of the National Women's Potato Contest will be published next week. Over 200 souvenirs will then be awarded. Many of the contestants wish copies of the paper sent to their friends. Send lists of names at once and the R. N.-Y. will have the papers mailed.

THE RURAL NEW-YORKER clubs with the Weekly New York World or with the Weekly Chicago Times one year for $2.25.

With the Chicago Inter-Ocean, or Detroit Free Press, one year, $2.50.

With the Century $5.50; or with Harper's one year, $5.

Club prices with any other publication will be furnished on application.

SHALL we take the last Proceedings of the American Pomological Society to guide us as to the most popular kinds of strawberries—those having the most double-stars? If so, the Wilson stands first, Charles Downing second, Sharpless third, Cumberland fourth, Miner fifth, Triomphe de Gand sixth. Kentucky receives the highest number of single-stars.

IT is well the public should be guarded in their dealings with Mr. Alfred Rose of Penn Yan, N. Y. It was he who by letters and in his circulars claimed that the R. N.-Y. No. 2 Potato was in reality a variety which he originated, refusing to recall these statements or insinuations until late in spring when, having effected all the sales possible, and under the threat of prosecution, he confessed they were different.

PROF. WM. SAUNDERS of the Central Experiment Farm of Ottawa, Canada, writes that his crosses between the blackberry and raspberry were so unpromising that he has lost all interest in them. The R. N.-Y.'s hybrids, judging by those that have fruited, are equally unpromising, but we have not lost all interest in them. It is proposed to raise seedlings from these hybrids, selecting seed from those that resemble both parents.

ONE result of the R. N.-Y.'s investigations as to the cost of farm life is shown in the following note from a Massachusetts farmer:

"I can give no estimate on family expenses for this year, as our whole trade has been done by the exchange of farm produce at the different stores. I shall be able to give an account another year, as I propose to know at the close of next year what the farm has done."

FASHIONS in farm products change. We find the latest illustration of this in the Paterson market where most of our eggs are sold. Up to this year white eggs were in highest demand. People seemed to believe that a brown shell was an indication of a stale egg—that is, the older the egg the browner the shell. This year many customers want the brown eggs and ask the privilege of picking them out. This may seem like a simple thing, but it means a good deal to some of our farmers who have kept Leghorn fowls because the market demanded a white egg. With this "color line" broken down, there is likely to be a change of breeeds not to the disadvantage of the farmer. Brahma, Wyandotte and Plymouth Rock birds will now give, to most of our farmers, better satisfaction.

FLORIDA ORANGE TRADE.

WE are told that the Florida orange crop promises to be light this year. In spite of this, sales just now are very unsatisfactory to both shippers and sellers. The market has been simply stuffed with fruit which sold at as low a figure as has probably ever been known for fruit of good appearance and condition.

The main fault seems to be in the shipping arrangements. But little account seems to be made of the quantity needed to supply the market. Shippers should study the market demands and not crowd so much fruit upon us at once. So far as it has examined into the matter, the R. N.-Y. is greatly pleased with the auction system of selling fruits which is spoken of on page 828. We see little reason why more Florida fruits should not be handled in this way.

Another complaint made by sellers here is an old one. "Growers must learn to pack and grade their fruit more carefully before much better prices will rule and before a generally better market will prevail. There is much complaint because of the great irregularity of the quality of every brand of fruit." Thus writes a dealer of long experience. What do the orange growers propose to do about it?

The R. N.-Y. is greatly interested in the Florida orange and truck business. It wants to see them both succeed. It would much prefer to see the fruit markets reserved for the products of American soil. We shall have more to say about Florida products hereafter, particular attention being given to the best arrangements for packing, shipping and selling. We shall be glad to receive the views of any of our subscribers in Florida, and will take pleasure in aiding them to the fullest extent of our ability.

FERTILIZERS FOR FRUITS.

THERE are undoubtedly many localities where stable manure is more expensive than chemical fertilizers. Perhaps the most striking illustration of the truth of this statement may be found among the Florida orange growers. Here we have a country admirably adapted to the growth of oranges, but strikingly weak in the physical requirements that go to make a successful stock-growing country. The soil is not naturally strong—how is it to be fed? It is safe to say that in many localities, stable manure is out of the question, and that chemical fertilizers must be used. And the question at once arises—what sort of fertilizer shall we use? What element is most necessary in orange culture? In this connection the R. N.-Y. wishes to call attention to the following extract from a well-known orange-grower of Florida. It seems to strike at the root of the matter.

"From a somewhat extended experience as an orange grower I am convinced that, taking the whole State together, orange-growers are applying too little potash to their groves. It is 'the one thing needful' in our sandy soils. Nitrogenous manures produce a rapid and seemingly vigorous growth, but it is at the expense of permanent vigor and vitality in the tree. Fertilizers are too often judged only by their immediate effects. The full penalty of this unequal system of fertilization does not come perhaps for years, and then the trouble is beyond remedy, and the unfortunate grove owner who mourns over his diseased and dying trees is utterly at a loss to account for the trouble."

And again, in a subsequent letter this same writer says: "I do not wish to recommend potash manures exclusively—far from it. This would simply be an error in the opposite direction—less disastrous perhaps than the other, in our conditions of soil and climate, but still an error and to be studiously avoided."

This means, if it means anything, that while a fertilizer rich in potash is necessary in the production of the orange crop, one-sided fertilizers, containing an excess of any one ingredient, particularly nitrogen or phosphoric acid, are harmful in the end.

A WORD TO OUR READERS.

THE RURAL NEW-YORKER is pre-eminently a paper for progressive farmers—for those who are ever anxious to excel in their calling by improvements in their appliances, seeds, live stock and methods. To satisfy this class of patronage, it is necessary that the paper itself should keep fully abreast of the foremost thought, the most advanced practice and the most economical methods of the times, at home and abroad, and this has been our constant aim and endeavor. The contents of the present annual volume, now near its close, afford our readers ample evidence of the results of our efforts during 1889 and a fair indication of what they may expect from us in 1890. Like all others who are eager to excel, we hope to do better in the future than we have done in the past; but our readers must judge of the former by the latter. Each has witnessed the play, read the book, eaten the cake and has, doubtless, come to a conclusion. He is ready to say: "I *do* or I *do not* want the R. N.-Y. for another year." Very naturally, we shall part with the latter class, however small, with concern, for who can help regretting that his earnest efforts to please and instruct have failed to win approbation? Very naturally, too, our feelings for the former class are quite cordial. We look upon them as friends. We wish to help them all we can; and shall also be thankful for a little help from every one.

Fresh subscribers are constantly needed not only to increase but to maintain the circulation of a paper. In addition to those who drop off because they have some real or imaginary fault to find with our work, others discontinue their subscriptions on account of death, change of occupation or location, hard times and for other causes. Not the least effective way of replacing the names of these on our list and of adding others to it, is through the kindly influence and good words of the friends who know us, our aims and our labors. In other matters as well as in religion, it is quite natural for good people to wish that others should adopt what they themselves approve, and a few words of praise in behalf of the R. N.-Y. opportunely spoken to neighbors of similar interests or congenial tastes would help us wonderfully, and also in their results benefit our readers by enabling us still further to improve the character of the paper.

In this connection it may be repeated that we will gladly send one or several specimen copies of the R. N.-Y. to any farmers whose names our friends may be kind enough to favor us with, and we shall feel much obliged for such lists. Now, just now and during the next few weeks is, *par excellence*, the opportune time.

The yearly subscription price will remain unchanged, viz., $2 for single copies; $1.50 in clubs of five or over. The R. N.-Y. clubs with all other respectable periodicals and the lowest rates will be furnished on application.

BREVITIES.

A GOOD month this to breed your cows, you folks who want to make winter butter

ON the first of January next the R. N.-Y. will commence its 40th year of existence. It was born, as Moore's Rural New-Yorker in 1850.

IN the opinion of the R. N.-Y. there is a growing sentiment among the thoughtful, conservative citizens of New York that the World's Fair is not wanted here.

THERE seems little room for doubt that caponizing roosters is growing in practice, and the market for good capons grows, too. But it's a cruel practice in spite of all.

THE Parker Earle Strawberry should be tried by our Florida subscribers. Its record in Texas, its home, gives some evidence that it will prove of great value in Florida.

THE cost of a ton of N. Y. City stable manure, delivered upon the R. N.-Y. premises (one mile from the station) is $2.65. Twenty five cents are charged for cartage.

BUTTER that is too strong and rank to be eaten on bread will do to cook with. Why? The products that give off the bad odors are volatile. The heat of the cooking drives them away.

THE R. N.-Y. feels safe in saying that the "Notes on a Back Number" special will be about the liveliest paper we have ever printed. It will serve to introduce a good many new correspondents.

THE rather strange spectacle of a cat with a bad case of sore throat has been seen at the Rural farm the past week. The cat was cured by applying the remedies generally used for human beings.

TO LEARN something about the influence of feed on butter, take all grain and hay away from the cow and feed her on straw and poor hay for a few days. Then try to make butter out of her cream.

IT is worthy of notice that for Florida the last American Pomological Report does not give a star to any variety of blackberry except the Lucretia, and to that it gives two stars. The Peen-to Peach is given one star.

THE question raised on page 820 as to the relative profit in keeping 25 hens or a cow is an interesting one. The R. N.-Y. will obtain some facts that will show how the matter stands in various parts of the country.

"TWELVE sweet, Florida oranges 25 cents." "Messina lemons, 30 for 25 cents." "Sweet, Russett Oranges, 16 for 25 cents." "Sugar Pines, 15 cents; two for a quarter." "'Grape Fruit' five cents," These are signs familiar to every New-Yorker.

AS THE year nears its close it is well that we should ask ourselves certain questions: Are we happier now than a year ago? Are our wives and children happier? Is the home dearer? What good have we done; what harm? What are we living for?

THIS is the way a Canadian friend puts it:

"I am confident that the R. N.-Y. makes much more money for me than it costs by following its kind advice, and when I pay only $2 00 for it per year I consider I am quite a lot ahead."

THE next picture of tools will be of those used by a Lucas County, Ohio, farmer, who says: "I have as good a kit of the latest improved machinery as can be found on any farm in Ohio—Mr. Terry's not excepted." We shall be able to decide that when the picture is printed.

THE New Jersey State Horticultural Society will hold its 15th annual meeting in the State House at Trenton on Wednesday and Thursday, December 18 and 19. The meetings of this society are always interesting and profitable. These Jerseymen know what to talk about and what to say. Go if you can.

ONE of our neighbors is eating his cake and keeping it too. How? He sells his new-laid eggs at four cents each, and eats last spring's eggs that have been kept in salt. These eggs are suitable for cooking. It appears that eggs from hens kept in a pen away from the roosters keep better than do fertilized eggs.

PROF. A. J. COOK'S statement concerning squirrels as rat catchers is being questioned by a good many of our readers. We learn of a good many instances where the two animals live on the same premises in comparative harmony. As Dr. Groff points out, on page 822, the squirrels are about as mischievous as the rats.

ANY of our readers who have used coal ashes as a fertilizer or as an improver of light soils will oblige us by sending their experience in the matter. The answers given on page 821 to a question relating to this matter are somewhat of a surprise to the R. N.-Y. We should have supposed that the ashes would have been best for heavy soils.

Dairy Husbandry.

FARMERS' INSTITUTES.

(RURAL SPECIAL REPORT.)

Farmers' institutes in New York for 1889—1890; *the institute at Plattsburgh a success, those at Malone and Ogdensburgh wet-blanketed by heavy rains; the chemistry of cattle foods; value of corn-fodder at various stages of growth; different feeding rations; how milk becomes tainted; valuable hints from experts.*

FORTY-FIVE farmers' institutes conducted in the same manner as those of previous years, will be held by the State Agricultural Society in this State during the coming winter. Their success in the past has established the value of these meetings beyond controversy. Crowded houses seldom fail to greet the institute workers on their second appearance in any town. Mr. J. F. Converse, of Woodville, will relieve Secretary Woodward of the general charge of the meetings this winter, though any correspondence in regard to them should be addressed to the latter at the office of the society in Albany. A new feature in a few meetings of the institutes will be the furnishing by the society of an extended report to all the local papers in the county in which an institute is held. The force of speakers has been materially strengthened by the addition of Prof. J. W. Sanborn, formerly of the Missouri Agricultural College, and of Prof. A. J. Cook of Michigan, in a few meetings.

The first institute was held at Plattsburgh November 18th and 19th. The weather was fine and every session was well attended. Though no local speakers could be secured to address the meeting, the interest increased to such an extent that a large farmers' club was organized at the close of the last session. Fortune would not smile on the farmers of Franklin and St. Lawrence Counties, for during the meetings at Malone on November 20th and 21st, and at Ogdensburgh on the 22nd and 23d, the weather was execrable. Rain fell every day and nearly all the day. Despite this, there was a fair attendance. More young men were present than at Plattsburgh. Very few ladies attended any of these meetings. Since dairying is the leading occupation in Northern New York the institutes were largely devoted to this branch of farming. We give extracts below from several dairy addresses.

THE CHEMISTRY OF CATTLE FOODS was discussed by Prof. E. F. Ladd, Chemist of the State Experiment Station. He said: "The terms nitrogen, phosphoric acid and potash were hardly known to farmers of our State a few years ago. The use of commercial fertilizers has made these terms common to all. As it is now recognized in crop growing that a rational system of plant feeding is essential, so in stock feeding a rational system is just as necessary. Different foods act differently in the animal. Some tend to produce lean flesh, some fat meat; others increase the milk yield, others affect the quality of milk. I have brought here samples illustrating the different kinds of foods and their composition.

(Prof. Ladd here displayed a fine exhibit of the chemical constituents of some important foods, the percentages of which are given below.)

	Water.	Crude Fiber.	Nitrogen-free Ex.	Albumen.	Fat.	Ash.
Corn-meal..	17.08	1.74	67.16	8.90	3.82	1.30
Wheat bran	13.71	10.83	52.26	14.56	3.11	5.53
Cotton-seed meal.....	11.06	3.56	23.86	40.56	13.57	7.39
Clover hay.	15.35	25.99	37.63	12.05	3.48	5.50
Timothy hay.....	15.35	26.83	44.33	6.59	2.69	4.16
Maize forage.....	80.66	6.10	10.07	1.54	.58	.99
Mangolds...	91.76	86	4.67	1.53	.15	1.03

Nitrogen-free extract consists of sugar, starch and gums and furnishes the heat of the animal system and body fat. Fat is used for the same purpose as the nitrogen-free extract, but is more concentrated and worth 2½ times as much. Albuminoids or nitrogenous products vary greatly in these foods, being very high in cotton-seed meal. It is used to produce caseine of milk, muscle, and, I believe, assists in the production of butter fats. Mangolds contain more water than milk. The ash in these foods goes to build up the bones of animals and contains much fertilizing matter. Thus we see that by buying the right foods we can purchase a large amount of fertilizing matter at the same time.

Corn has yielded at the Experiment Station per acre:

When tasseled, 9.02 tons, of which 8.21 tons were water.

When in full silk, 12.87 tons, of which 11.33 tons were water.

When in the watery stage, 16.30 tons, of which 13.97 tons were water.

When glazed, 16.14 tons, of which 12.52 tons were water.

When fully ripe, 14.23 tons, of which 10.27 tons were water.

The increased value of the mature corn is shown more perfectly by chemical examination. The maize in the tassel had only 189 pounds of starch per acre. When glazed it had 2,550 pounds, and when fully ripe there were 3,540 pounds of starch per acre.

In the earlier stages of this growth a cow must eat 300 pounds of forage to get 25 pounds of dry matter, a full feed. The cause of the complaint that cows did not do well this summer when grass was good was owing to the excess of water in the tissues of the plant and upon it, due to the excess of rain and lack of sunshine.

The value of fodder depends upon its physiological effect, its palatability and its chemical composition.

The physiological effect of different foods is very different.

In my experiments with feeds I have the following results:

Taking six pounds of corn-meal and two pounds of bran as our standard ration which furnishes a good butter, we find that the substitution of six pounds of gluten-meal for the corn-meal resulted in an increase in milk flow of three pounds, but a decrease in butter fat of two ounces per day.

Six pounds of linseed-meal in place of the corn-meal decreased the milk flow but increased the butter fat three ounces per day, which means an increase of 70 pounds per year.

Cotton-seed meal acted like linseed, except that it did not produce such a healthy condition in the animal.

Corn-meal gave a hard butter.

Linseed-meal made a softer butter, containing 3⅕ per cent. more olein.

Gluten-meal furnished an inferior butter.

The butter from wheat bran was white and poor.

Oats made the yellowest butter, but it was crumbly.

Buckwheat produced the poorest butter. It was white, insipid and lacked aroma. This experiment continued for two years. The first year the hay fed was Orchard Grass; the next year it was Timothy, Orchard Grass and Red Clover. A mixture of corn-meal, cotton-seed meal, and linseed-meal would be the best ration for cows. If I had silage I would feed a smaller amount of the linseed-meal than with dry hay. We fed from a mixture of 300 pounds of corn-meal, 200 pounds of cotton-seed meal, 200 pounds of linseed-meal, and 100 pounds of oats. If I were feeding roots I would lessen the linseed-meal.

When cattle foods are purchased their value as fertilizers should be made an important consideration. One ton of Timothy hay contains $5.48 worth of fertilizing matter; one ton of Red Clover hay, $8.20, one ton of corn-meal, $6.31; one ton of wheat bran, $13.10; one ton of cotton-seed meal, $28.68; one ton of linseed-meal, $21.42; one ton of oats, $8.37; one ton of milk, $2.80; one ton of butter, $0.26."

TAINTING OF MILK.—Geo. A. Smith said: "A cow feeding on grass that grows in the immediate vicinity of any putrid animal matter will give milk having the worst kind of a taint. I have a case that came to my knowledge last summer and which proves this quite conclusively. A factory in which the cheeses were well made had considerable trouble with the cheeses getting off flavor when they were about 20 days old. They started a thorough investigation and found that the trouble came from certain dairies where the pastures bordered on a small creek, and upon examination of these pastures it was found that the offal from a slaughter-house had been washed by the high water down along the banks of the creek and lodged where the cows had been feeding. It spoiled the milk, that is, the germs of putrefaction from this decaying animal matter lodged on the grass and were taken into the animal system. I am well satisfied that if the requisite means are used the milk will come to the factory very nearly as good in July and August as in September and October. The only question is—will the dairymen use the means?

Thorough äeration is one of the most essential points, the dipping of the milk for a few minutes does not do the business. It must be exposed to the air, either by using an elevated strainer, or pouring with a dipper, until the temperature of the milk is about the same as of the surrounding air during the summer months. Then we have a quality of milk in the morning whose flavor is all right and with enough ripeness so that the lactic acid will develop in about the right time, and the curd will not lie in the whey and become slippery or develop a gas as it is almost sure to do where the milk is cooled with cold water and not äerated. One of two things must happen to the factory system before long: either the careless, slovenly dairymen must reform and take better care of their milk, or those who produce good milk and take care of it will have to organize by themselves for their own protection. There are too many farmers who think if they can get the manufacturer to take their milk, no matter what the condition, that they are all right, because it all goes in together and will go to market in a lump, and if it does not sell for the top price, the manufacturer must make it up to that, as in a majority of cases he agrees to do."

Prof. Ladd.—Chemical examination of our silage has shown that corn loses for every 100 pounds put in a silo about five pounds, but the dry matter loses 13.5 per cent. Corn left in the field to dry loses 11.5 per cent.

Prof. Cook.—If I were commencing farming I would give this general-purpose-cow question much thought. The gentleman who has taken the first prize on butter in Michigan for the past three years, feeds silage. The trouble with the man who can't make good butter from silage is that he does not know how to make silage.

Mr. George A. Smith.—The best cow for cheese is the one that gives the best balanced milk. I would rather have an excess of butter fats in the milk than too little.

Milk at this time of the year is viscid, and often becomes cold before being strained, so that the cream will not rise easily. To correct this, add about a pint of water at 110 to 120 degrees to a-half pan of milk, bringing its temperature to 98 degrees. Then, when the milk is set in rooms where the temperature is about 60 degrees, the cream will rise easily and quickly. More cheese is produced from milk that is thoroughly äerated.

In answer to inquiries from the "Question Box," Secretary Woodward said: Remember that the food furnished cows can affect the quality of the butter. There are two values to these foods, a feeding value and a manurial value. If I can get cotton-seed meal for $22 per ton and realize the cost for feeding I have the fertilizer without cost. If we realize this manurial value we must take care of the manure.

I have 60 cows in my barn that do not leave the barn from November 1, till the next spring. I have practiced this for six years. My cows pay me better by this system than by being turned out. The best water for the cow is the warmest, up to 90 degrees. If you do not warm it the cow must after it enters her stomach. That costs money.

Last winter my cows were put into two barns; one lot had silage and the other roots. The cows that had silage on less grain and less clover hay gave 10 per cent. more milk and sold for $5.00 more in the spring.

Prof. Sanborn.—There is not to be found anywhere in the literature of science and agriculture a proof that anything is added to the value of food in the silo. German experimenters have shown that green food has no more value than dry food. One-fifth of the food cut into the silo is burned up in the average silo of the present time. When this loss is brought down to 10 per cent., I will be a friend of the silo. There is a gain in palatableness which makes it a

Miscellaneous Advertising.

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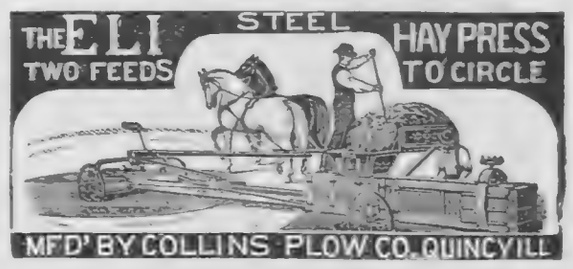

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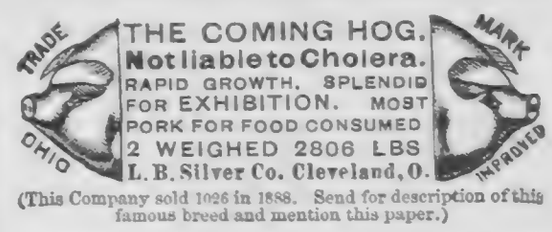

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desirable method of preserving food where land is high to feed dairy cows.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

JUST at this season fairs and bazars of every kind are being arranged, and it is often a matter of much deliberation to decide on some form of entertainment. At our fair recently the admission fee was larger than usual—we think two dollars—but every person who attended had the privilege of selecting any one article he or she chose from the wares displayed within. Some of the articles were worth more than two dollars; others less, but the choice was unrestricted. Of course such a high admission fee would not answer in many places, but a lower rate might be charged, and some prize be given with every ticket. Have pretty trifles done up in fancy paper packages, so that there would be the fun of opening them, like an ordinary prize package.

* * *

WE usually find that musical or varied entertainments take better than anything else. Quite an attractive entertainment is a café chantant. The room should be arranged like a restaurant, with as many little tables as possible and plenty of chairs; one of the greatest disadvantages to many fairs is a lack of seats, and it is terribly tiresome to stand about all an evening. The girl waiters might wear ordinary dresses, with caps and aprons, or some fancy cotton frocks, such as Swiss peasants are supposed to wear. They should be ready to serve the usual refreshments. At one end of the room a little stage should be arranged with as large an orchestra as can be managed. One can usually find a piano, violin, and flute, if no more. The orchestra should give music, from time to time, and there should be singers, elocutionists, or anything else that can be arranged. The idea is not to give a long entertainment, where people have to sit still on hard benches for three hours at a stretch, but to give the same entertainment broken up by frequent intermissions. People can move about and talk, sit at the tables and take some light refreshment, while being amused by occasional music, etc. A very ordinary entertainment becomes extremely attractive under these circumstances.

A good attraction for the café chantant is the "humanophone," a wonderful new musical instrument. Perhaps some of our readers are familiar with it. It must be hidden behind a curtain while the showman, who carries a long baton, gives a little address to the audience on the wonders of his instrument. When the curtain is drawn aside it displays a large sheet. Painted on it is a large musical staff with the ascending scale of notes, do, re, mi, fa, sol, la, si, do. Each note has its name painted under it, but the note itself is represented by a living human face. Of course, to arrange this eight young ladies stand behind the sheet, being raised on steps, each one higher than the next. They slip their faces through holes in the sheet, put just in the places of the notes. The showman or performer has, of course, thoroughly drilled them beforehand. Each girl sings simply the note she represents, the performer plays a tune by pointing his baton rapidly from one to another, each note answering to the gesture. The effect is very funny.

Spelling matches are rather old-fashioned now, but they often wind up an entertainment with a good deal of fun. Not very long since a great deal of interest was excited by the prizes in a spelling bee which finished an entertainment. Prizes were offered for the first person spelled down, and the one who lasted longest, these prizes being a hunting case stem-winder, and an open face. At the end of the match the prizes were brought out, and were slowly unwrapped by the winners. The hunting case proved to be an ordinary *pie*, with upper crust, the open face a cranberry tart without top crust. As everyone was prepared for a Waterbury, there was much amusement over this.

* * *

ONE thing we never countenance, and that is the system of lotteries and raffles at a fair or entertainment. No matter what the object is, these are illegal ways of money-getting, and must be characterized simply as gambling schemes. They bring discredit on many societies and should never be permitted.

GOLDEN GRAINS.

EYES grow dim and hands grow weary, hearts grow faint, and feet falter upon the path of life. There are few, indeed, who pass through life without being brought into some night of darkness, when what is prudent in business, or possible in the relations of life, or right in the service of God can hardly be determined, and when the soul, blind indeed, can only cry out in the darkness: "Teach me thy way, O Lord."..... .....

WHEN we begin to live out of ourselves, to appreciate interests that we do not share, and sympathize with joys and sorrows not our own, to respect knowledge that we have not gained, and wisdom from whatever source it comes, then shall we be released from the chains which keep us back from seeing much that is true, and feeling much that is good, and our lives will become full and rich to ourselves and precious to others.....

YOU find yourself refreshed by the presence of cheerful people; why not make earnest effort to confer that pleasure on others? You will find half the battle is gained if you never allow yourself to say anything gloomy.....

UNCEASING and relentless watching over ourselves, is the price of success in the higher aims of life.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

TOKENS FOR CHRISTMAS.

"Pumpkin pie! Cinnamon beer.
Christmas comes but once a year!"

"ONCE A YEAR!" Well, once a year is enough when one wants to make a lot of Christmas gifts and has a very slim purse to do it with. But a slim purse, or rather a slim allowance of "siller" may be made to go a great way after all if one only knows how.

To me a present fashioned by the fingers of one whom I love is far more acceptable than a gift which may cost twice as much, coming direct from some store. Perhaps the donor of the latter has gone off on some shopping expedition and bought for me the first thing that struck her fancy. But the giver of a token made by her own deft fingers, must have thought me worthy of having time and labor expended upon me. Hence my appreciation of the "home-made" in preference to the "boughten" gift.

Below I will give some directions as to the making of little tokens for Christmas:

TO MAKE A HANDKERCHIEF CASE.—Take a piece of chamois skin 18 inches long and nine wide. Line with some soft surah or China silk. Between the lining and the chamois skin put a thin layer of cotton, sprinkled with sachet powder. Turn one end back on itself (lining in), so as to form a pocket six inches deep. This, you see, will take up 12 inches of the length. You will then have six inches remaining. Double again, book fashion. This will give you a book-like case six by nine inches, with a pocket inside for handkerchiefs, six inches deep, (or taking up one entire side.) Bands of ribbon may be fastened across the other side, under which to slip handkerchiefs. The outside may be decorated to suit the fancy. A case made of chamois, lined with pale blue surah, and trimmed with pale-blue ribbon would be pretty. Across the back (on the outside) run a band of ribbon from the upper left-hand corner to the lower right-hand corner and finish with dainty little bows. A trailing design of wild roses and forget-me-nots painted or embroidered on the chamois, would add a beautiful finish. A case of this kind may be made from plush, velvet or satin, to suit the fancy.

* * *

A GLOVE CASE may be made in a very similar manner, only the pocket need not be so deep, and instead of bands of ribbon on the opposite side, fasten two or three tiny little pockets, made of whatever material you have, on the outside. In these put buttons, glove needle and sewing silk, also a glove buttoner. On the band of ribbon across the outside may be painted in gilt letters: "For that soft white hand of thine."

A SEWING BASKET is always a useful gift for a housewife. I saw a very pretty one the other day made as follows: "Take a square of very stiff cardboard, about seven or eight inches on each side. Cover the outside with some heavy linen or canvas and line the inside with golden China silk. The four sides were made of card-board, covered with the canvas or linen, and lined with gold silk. The sides were the same width as the bottom where they joined it, but gradually sloped out so that the top of each side was about three inches wider than the bottom. Each side was made separately and a heavy gold-colored cord was fastened around it. These cords were sewed together in joining. Little pockets for spools and thimble were sewed to the inside, opposite each other. On two of the outside pieces (on the canvas) were painted little rural scenes. On one of the remaining sides were painted, in gray and white, a spool of cotton and a pair of scissors; on the other, a needle-case and part of a paper of pins. These were very realistic indeed. The basket, of course, would be very pretty without the addition of these little artistic touches, but if one can paint, they may as well be added.

* * *

HEAD-RESTS for the back of a rocking-chair make nice gifts for mother, sister, or friend. First make two bags (either rectangular or "saddle-shaped) of cheese-cloth and fill them with cotton; also add sachet powder. Then make an outside covering for each of plush, velvet, satin, silkoline, or cretonne, as you prefer. Cover three little brass rings (which you can buy for five cents per dozen), with floss, by crocheting them over, plain stitch. Join the two bags with these rings—one at each end, and one in the center. Tie ribbon bows where you fasten to the chair. One bag or cushion rests on the back of the rocker where the head will lie and the other hangs over the back. This is a great improvement on the tidy as it is of some use. The size of the cushions will depend on the chair they are meant for. They may be made as elaborate as one pleases—embroidered or painted and composed of the most beautiful materials. But if one makes them so frail and delicate they will not be serviceable, and will not be useful either. Some dark shade of plush, such as golden brown, olive or bottle-green, tied with gold-colored ribbons would answer nicely. But if you want to make a head-rest for the old sitting-room rocker, so that father or mother may take comfort out of it, make it of some bright cretonne and tie it with serviceable, (though bright) ribbons.

* * *

RING-WORK has largely taken the place of embroidery and lace. In all the art needle-work stores in New York we see the rings put to all sorts of uses. They come in four sizes and range from three to eight cents per dozen. Pin-cushions of satin are now covered with ring-work instead of embroidery. Select the rings of the desired size—the smallest size is best for covering a cushion. Crochet them over with heavy floss; then join them with some fancy stitches. I saw a pretty cushion covered with peach pink surah with ring-work of the same color covering the whole top. The rings were arranged so as to form clusters, and between the clusters were little spider-webs made of floss. Rings, with tassels hanging from them, formed a fringe around the entire cushion.

Pretty tidies are made by having a band of ribbon, a band of rings (about four deep) another band of ribbon; then another of rings, etc., till the desired size is attained. Rings, with tassels falling from them, form fringe for top and bottom.

* * *

ONE OF THE LATEST CRAZES IN TABLE DECORATION is a set of grape leaves, six in number, to be arranged around the centerpiece. If you have any relations or friends who give little dinner parties a set of these leaves would make a nice gift. At the retail stores they cost $8 a set. If you buy the materials and make them yourself they will cost you just about $1.25. The leaves are stamped on heavy white linen. They are about eight inches long. With silk floss (get what they call "electric" floss) embroider an uneven jagged button-hole stitch around the entire leaf. Then do the veining with Kensington stitch. When finished, cut the leaf out. If you have a large dining-table and have some handsome center-piece of fruits or flowers, lay these leaves, stems in, around it. The effect is lovely in the extreme. Each leaf may be embroidered in a different-colored floss, thus adding a rich, warm glow to the table.

* * *

A PRETTY SHAVING CASE for brother may be made by taking a rectangular piece of card-board seven inches wide and nine inches long, cover with chamois skin and line the back with silesia. From the upper left-hand to the lower right-hand corner stretch a piece of ribbon about an inch wide. Finish each end with a bow. On the upper side of the case above the ribbon band, and to the right, paint a spray of witch hazel, or a branch of the fir tree, with cones. Below the band, to the left paint two or three large acorns. On the ribbon paint, in quaint-looking letters: "Take a shave?" Fasten a ribbon across the top to hang up by. Finish with a bow. A case covered with chamois, with an old rose band across and tied with gold and old-rose ribbons and painted as described above would be pretty. So also would one made with pale-blue and gold ribbons, painted with daisies and buttercups. To the back of this are attached sheets of tissue paper to be used for shaving purposes. A pretty case may be made in like manner by taking a piece of Whatman's drawing paper with jagged edges to be used for the front. The papers come in rectangular pieces seven by nine for seven cents a piece. One made of this material and trimmed with old gold and olive ribbons, with one or two sun-flowers painted on the front, would be very dainty and effective

* * *

APRONS ALWAYS MAKE USEFUL PRESENTS. If for a busy housekeeper make them of some good substantial material, long enough to protect the dress. A dainty little apron made of soft sheer mull with a four-inch hem, hem-stitched to the apron, then a row of feather-edge above that, then another row of hem-stitching and tied with ribbons at the waist, would be a nice present for sister, or aunt, or friend. Another pretty apron is made by taking one breadth of dotted mull of the desired length. Turn a four-inch hem and feather-edge it to the apron. Then with golden wash floss embroider a row of daisies across the entire apron above the hem. Use the dots of the mull for the centers and make the petals of long, loop stitches. Tie the waist with blue and gold ribbons.

* * *

IF YOU HAVE A GRANDMOTHER LIVING, don't give her some little trifling thing; but make her some good substantial gift. A nice flannel wrapper would be just the thing. A gray or a black-and-gray-mixed flannel would be best. Make it after the Mother Hubbard fashion, and have a belt to fasten in front. Make the sleeves roomy so as to be comfortable. Another useful thing for the old folks would be an afghan to be thrown over one while taking a nap, or to be thrown across the foot of the bed at nights. (See RURAL of November 23, page 779, for directions for making).

* * *

A NOVEL WAY OF DISTRIBUTING CHRISTMAS PRESENTS is to set the dining-table as for the ordinary meal—only of course one should have on the finest cloth. Then put a soup dish at each one's place. All the presents may be put in these soup dishes, or if they are too large they can be arranged in front of them. When all is in readiness have the dinner bell sounded and let the family assemble as usual. There will be lots of fun and merriment midst the opening of the packages. Try it!

DORA HARVEY VROOMAN.

ON CHARITY'S SIDE.

ISN'T it about time to let Charity alone? If her cares and trials are such as to sour her temper a little and make her portray the faults of her brother so that the mirror held up to nature comes too near home for readers, there is no reason for

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria,
When she had Children, she gave them Castoria

calling hard names. I happen to know that she is a *bona fide* girl: that she says these very things and Bert lives and breathes to-day as reckless, as warm-hearted, as careless of his sister as ever in the way of work-saving. He lets her wait on him, hunt up his cap when he throws it under the table, pick up after him continually, and I do not wonder at girls on lonely farms sometimes comparing their lot with that of those who have every facility for taking life easier. In fact, I can point my pen to 50 girls like Charity in their aspirations for better things, that will not be put down by sneers, or helped by jeers. They are girls who do their duty and work on in their little sphere trying to "make things pleasant in one little place," and many of them you would never suspect of deeper feelings; but they feel all the same the necessity for something else, and inwardly rebel against the dreary routine. Especially is this felt when city people come who have so much easier, broader lives—no pig-killing, sausage-making or lard rendering, etc.; no bread-making, dairy work, calf-feeding or poultry tending, to say nothing of the improved appliances which they do have for regular housework.

"Oh!" said a "Charity" to me the other day, "if we only had a kitchen like Mrs. Townhouse's—hot water and cold, no pumping and heating in pots, stationary tubs and a washer-woman. It seems like entering a housewife's paradise to go into her kitchen." Oh, do not blame such girls, and when the brothers make things harder by their carelessness and want of thought, what better outlet than the RURAL NEW-YORKER for telling their troubles, even if one of them sometimes forgets that "charity covers a multitude of sins."

The RURAL NEW-YORKER is not kept up specially for successes. Its editors bid us tell of our failures, of our reverses, and our trials, and if but one "Bert" should see himself "as ithers see" him, the space will not be lost that has been given to the letters that have brought forward such comments. No one can tell another's trials without living the other's life, and the picture presented by Charity is one not overdrawn. In fact I am of the opinion that its very truthfulness causes all the trouble. Charity is not a perfect girl by any means; but her outspoken protests would not tell against her if I were judging character.

Why, she said to me lately: "I had no idea they would put such severe and absurd constructions on what I wrote," and I replied: "Well, little girl, you will find out if you write for the newspapers that the public is Janus-faced, and can take anything you may say just as it happens to suit them." All this my wife indorses.

JOHN REAL.

COMFORTABLE HOUSE-KEEPING.

ALL good housekeepers have a system, a programme for each day of the week, a special day for this and for that kind of work, and the more thoroughly systematic the housekeeper the more thoroughly disconcerted is she when the "mill does not turn round with a free goodwill," with the exact grist for its particular day.

When a woman finds her world all going wrong from any one well known cause, interruptions that have kept and will keep right on occurring all through life, she should ask herself if she is simply existing to wash on a set day, that she may iron, bake, sweep and wash again, just as the Western farmer, according to a humorist, "lives to raise corn, to feed hogs, to sell for money, to buy land, to raise more corn, to feed more hogs, to sell for more money," etc., till the Omnipotent steps in and puts a stop to the business.

There is always a sensible and a comfortable medium between all extremes, and it exists between too much "system" and no "system," and it can be found by every progressive woman. The most contented housekeepers that I know, are those that have no "special days;" who plan for not more than two days ahead, doing each day whatever is the most necessary. Necessity first, then convenience. Preparing meals, washing dishes, making beds, and keeping living-rooms in order are necessities that belong to every day of the week, and should never be interfered with by any other housework.

To devote the whole time between breakfast and dinner to any one kind of work means to a woman of average strength, the eating of a dinner in anything but a comfortable state of body and mind. It is well known that if we change our work the labor will be less tiresome than continuous work of one kind; but some women are so constituted, they are such slaves to "habit," that in preference to dividing work—washing for instance—between two mornings, they would rather prolong the agony even till afternoon, and spend the remaining day in restoring their strained muscles and nerves to their normal condition. It is an easy matter to divide a washing between two days in winter or summer, and thus take advantage of both warm and short forenoons, and lessen the labor at the same time.

It is better to combine one-half of a washing with as much sweeping as can be comfortably done before the dinner hour than to devote the whole time either to washing or sweeping. A divided wash can be finished in connection with bread-baking, and the clothes can be out drying earlier than otherwise possible. Cake or pie-making or both can be followed by as much plain ironing as time will admit, while the sweeping of one or more cool rooms will give a needed change from the starched clothes for an hour or more.

I know the objections that many women have to dividing work in this way, and yet the same amount of labor is accomplished and with a degree of comfort not found in any system that does not make allowance for rainy wash-days and unexpected company. Ought a well-kept house to need sweeping from cellar to garret upon any one day of the week? Do prudent housekeepers allow a dearth of bread, pie and cake to occur at one time? Nothing short of sickness or poverty should compel one to do a washing under unfavorable circumstances.

It is no wonder that so many girls dislike house ork, when they see old housekeepers sit down during the valuable hours of a forenoon to pare pumpkins for stewing, and pass the afternoon in making pies; to prepare fruit for cooking, and be canning or making jelly or jam till the going down of the sun; wading through wet grass for fruit or vegetables; hanging clothes out and bringing them in, thawing them out and drying them by the fire; never washing one window without washing twenty; never cleaning one room without cleaning the whole house through, and never cooking a *mouthful* for themselves, but *all* for the "men folks."

Personal appearance has more to do with making housework pleasant and in creating a dislike for it in young women of naturally refined and sensitive natures, than the real work itself. To any who may doubt this assertion I would say: "Please comb your hair and dress yourself throughout the same as you would if expecting company to dinner, and protected by a good, big apron, go into your kitchen and do your work carefully, daintily (an accomplishment), and then note your feelings and see if you have not discovered something—something that will add to your own contentment, and may add to the happiness of some other woman not as large yet or as old as yourself."

MEDORA CORBETT.

Miscellaneous Advertising.

VERY OFTEN

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The best emergency medicine, it should be within reach of every one, young and old.

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Prepared by Dr. J. C. Ayer & Co., Lowell, Mass. Price $1. Six bottles, $5. Worth $5 a bottle.

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☞ Send for "How to Cure Skin Diseases," 64 pages, 50 illustrations, 300 diseases of the Skin, Scalp, and Blood, with Loss of Hair, and 50 Remarkable Testimonials. Potter Drug and Chemical Corporation, Boston, U. S. A.

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are used in its preparation. It has *more than three times the strength* of Cocoa mixed with Starch, Arrowroot or Sugar, and is therefore far more economical, *costing less than one cent a cup.* It is delicious, nourishing, strengthening, EASILY DIGESTED, and admirably adapted for invalids as well as persons in health.

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Leads All its Competitors. It works either rags or yarn, is Simple, Durable, and EASY TO OPERATE. Price, by mail,
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Cook your POTATOES with the
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With Dumping Caldron, empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also make **Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Caldrons, Etc.** Send for circulars.
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34 PARK ROW, NEW YORK.

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News of the Week.

HOME NEWS.

SATURDAY, December 7, 1889.

THE first session of the 51st Congress began at Washington last Monday. In accordance with the decision of the caucus of Republican members held a few days previously, Mr. Reed, of Maine, was elected Speaker, next to the President the most influential official in the country. He'll have a mighty hard job for the next fortnight fixing about 58 committees so as to give a Republican preponderance in each and satisfy everybody.....The President's message approved of subsidies for American steamships under the guise of "liberally remunerative" appropriations for ocean mail service. It urged national aid for the education of the colored people of the South and the supervision of the election of Congressmen by the Federal authorities. It says the tariff should be revised but distinctly insists that "protection" and not "revenue" should be mainly considered. It suggests that the tobacco tax might be repealed, and the whisky tax modified. It takes both sides on the silver question. It recommends the transfer of the Weather Bureau to the Department of Agriculture and indorses the recommendations of Secretary Rusk.....After a long illness Jefferson Davis, President of the late Confederacy, died at a friend's house in New Orleans, at 12:45 Thursday night, December 5, aged 81.....
Senators Reagan, Sherman and George have already introduced three anti-Trust bills into Congress.....The President's message strongly favors improved car-couplings for the benefit of brakemen; but contains not a word about the deadly car stove. .....Senator Edmunds favors the establishment of a grand national university at Washington in celebration of the 400th anniversary of the discovery of America instead of a World's Fair anywhere.....
A gigantic bank, with a capital of $25,000,000 of English and American money, to be operated under the English "Liability Act," with headquarters in London and branches in Philadelphia, New York, and Chicago, is about to be established. There will be smaller branches in the chief financial centers of continental Europe.....
C. Edward Silcott, Cashier of the Sergeant-at-Arms of the House of Representatives at Washington, D. C., has just absconded, taking with him $72,000, which he had drawn from the U. S. Treasury to pay Congressmen, besides $10,000 belonging to the Sergeant-at-Arms Leedom, the Democratic official of the last House, who has not yet surrendered the office to the new Republican Sergeant, Holmes of Iowa. The fugitive also took $11,000 belonging to Congressmen for back pay which hadn't been drawn, making, in all, $93,000. He was under bonds for $50,000 and his bondsmen are good. It is thought that investigation may show that the loss is as high as $142,000. The rascal took with him a notorious woman and left a wife, children and grandchildren without a cent. He is supposed to have found congenial refuge among the dishonest American colony in Canada. Of course, it now comes out that the business of the Sergeant-at Arms' Office was carried on in a very slip-shod fashion.....
Governor Mellette of South Dakota has found 650 families in Miner County in urgent need of help to carry them through the winter. Donations may be sent to him. .....Baltimore is getting a large share of the shipment of grain to Europe, while Philadelphia elevators are almost empty. Last Wednesday nine steamships were chartered for the business in the Monument City, and the Quaker City groans.... .....The old Monongahela House at Pittsburgh has just been cremated: no lives lost. .....At the close of the war there were 6,000 colored children in the schools of Georgia, now there are 150,000.....
As regards the World's Fair, New York has already raised $5,175,000 as a guarantee fund and is slowly going ahead to make it $10,000,000. She asks no financial aid from Congress, but intends to incorporate a company with a capital of $20,000,000 in $10 shares. In spite of the loud talk of most of the papers, there is very little, if any, enthusiasm about the matter. Chicago has a guarantee fund of $10,000,000, but New Yorkers say that hardly a third of it is genuine. The Windy City, however, is exerting herself vigorously all over the country to secure influence in favor of her selection as the site, and has lately begun to operate in Europe. St. Louis has a guarantee fund about equal to Chicago's and probably with the same amount of inflation, and is steadily working in her own behalf. Washington is "lying low" in hopes that the rivalry of the others will give her the big show. A considerable majority of the Congressmen who have given an opinion on the matter favor Chicago; but more than half of them declined to express their views.....
On December 3, the annual convention of the Farmers' Alliance of the South, also known as the Farmers' and Laborers' Union, began at St. Louis. Over 300 delegates were present. At the same time delegates to a convention of the Northern Alliance met at the Planter's House. They numbered 75 and represented the State organizations of Illinois, Ohio, Minnesota, Wisconsin, Iowa, Kansas, Nebraska, the Dakotas, Colorado and Washington. Delegates were present in the city also from the Farmers' Mutual Benefit Association, the Agricultural Wheel and the Knights of Labor. Telegraphic reports of the proceedings have been extremely meager, in view of the importance of so large an assemblage of representatives of Agriculture and Labor. According to the latest reports the Northern and Southern Farmers' Alliances, the Farmers' Mutual Benefit Association and the Agricultural Wheel have consolidated, and the Knights and the new organization are now in consultation with a view to co-operation rather than confederation.....A factory at Newtown near this city has for a long time been turning out cart-loads of sausages every day, and it has only just been discovered that they have all been made of horse flesh. The proprietor is defiant as there is no law against such an industry.....
The law against the publication of Sunday papers is strictly enforced in Canada, but the profane public greedily buy up papers published in the United States on the Sabbath, and now the Canadian publishers are crying out for protection.....A large part of the 10,000 population of Key West, Fla., has for years consisted of Cuban cigar-makers. They have nearly all gone home: out of 179 cigar factories only one remains open.....A New Jersey farmer bequeated to Henry George $30,000 to be spent in disseminating his ideas. The heirs contested the will on the ground that such an object was against public policy. The courts have decided to the contrary and the money will be expended for printing a large edition of "Progress and Poverty" to be distributed among farmers for what it will bring.....The manufacturers of barbed wire fences have at last formed a "combine" to put up prices under the name of the Federal Steel Trust. The present rates of duty on barbed wire and its materials range from 70 to 100 per cent., so what's to prevent an extortionate monopoly?.....
In his message President Harrison suggests that the Sandwich Islands should be requested to send a representative to the Pan-American Congress. It is thought that this is an indication that Secretary Blaine wants to add that convenient half-way station between America and Australasia to this country. There's much trouble there now about Chinese immigration. The chief industry of the islands is sugar production, and this is made profitable almost entirely by Chinese cheap labor. There are 19,217 Mongolians now on the islands, or 20 per cent. of the population. They have 23 per cent. of the licenses for wholesale merchandising; 62 per cent. of the retail merchandising; 84 per cent. of the victualing licenses; 91 per cent. of the pork butchers' licenses; 57 per cent. of wholesale spirit licenses, and a large proportion of other licensed occupations. There are about 600 Chinese mechanics to 700 of other nationalities .....
Kansas City has just added 22 square miles of prairie to her corporate limits.....
The people of Iowa voted to put Prohibition into the State Constitution, but their intention was defeated by legislative bungling. Now that the majority have changed their minds and elected a legislature opposed to Prohibition, Local Option and High License are likely to be embodied in the laws.....An official statement reduces the losses by that big Lynn fire from $10,000,000 to $1,009,500! Some of the shoe manufacturers will go South; several intend to settle in Norfolk, Va.....
The Kaweah Co-operative Colony in the San Joaquin Valley, California, from which such great things were expected by enthusiasts who believed in the theories enunciated by Bellamy in "Looking Backward," after flourishing for three years in the foot-hills, 35 miles from Visalia, appears to be going the way of all such enterprises. Those who have invested money in it—and folks in all parts of the country have done so to a greater or less extent—are likely to meet the fate of the investors in that Topolobampo Colony in Sinaloa, Mexico.....Many of the school-houses of Dakota have been provided with barrels of water, potatoes, beans, coffee and cooking utensils in case of a blizzard siege.....
Per count just completed the amount of Uncle Sam's cash in the Sub-Treasury in New York City is $183,253,206.08 in gold, silver, etc.....

FOREIGN NEWS.

SATURDAY, December 7, 1889.

AFTER three years of unparalleled hardships, of heroic endurance, marvelous resources and indomitable pluck, the greatest traveler and explorer that ever lived, the peer of the most undaunted heroes of all the ages, Henry M. Stanley, reached the coast at Bogamoyo, near Zanzibar, last Wednesday with Emin Pasha and the other rescued whites. His geographical discoveries are wonderful and valuable. Very justly, all nations, from the sovereign to the peasant, join in honoring the hero and the chivalrous Emin also. After escaping death in multitudinous forms in Central Africa, the latter has probably met it just after his arrival at Bagamoyo. Being very near-sighted, he walked out of a window by mistake and fell 20 feet upon the pavement. His body was terribly bruised and his head seriously injured. At last reports he was dying.....
A project for building a monstrous bridge, over 20 miles long, across the English Channel, connecting France and England, is taking substantial shape. The project of building a connecting tunnel was vetoed by the English government as likely to make an invasion possible. Wouldn't a bridge be equally hazardous?.....There's an epidemic of influenza at St. Petersburg. The Czar and the imperial family have been afflicted just as badly as 50,000 others. .....A famine is threatened in eight southern districts of India owing to a total failure of crops.....Strikes were hardly ever so numerous in England and several monstrous ones are threatened. In nearly all cases the men get all or most of their demands. In South London 1,780 men at the gas works threaten to go out on December 13, and the gas work men at Manchester, as required by law, have given notice that they will also strike.....The United States of Brazil appear to be getting along admirably. There has been no fighting, and foreign countries seem well disposed towards the new Republic. In the southern part of the country about 200,000 Germans have settled to escape the grinding militarism and taxation of the Fatherland, and Bismarck seems desirous that they should start a little government of their own under German protection, but nothing serious is likely to come of the matter.....
The Tory Government in England is to introduce into Parliament a bill making an appropriation of from $35,000,000 to $50,000,000, for the purpose of buying out the landlords in Ireland, and selling the land, on the installment plan, to the tenants. This is only the first Tory demand for the purpose. Under the Ashbourne Act passed in 1881, $25,000,000 were appropriated by the Liberal Ministry for the purpose; but this has been all expended.....While all the rulers of Europe are talking peace assiduously, they are all industriously increasing their fighting strength, busily building new fortifications and strengthening old ones, and spending vast sums on improved cannons, rifles and gun-powder. The dock-yards of all the naval powers are alive day and night. Larger armies, more powerful fleets and bigger appropriations are constantly demanded in the name of ——peace.....

"The Fiberite M'f'g Corp. of Skowhegan, Maine, have acquired the sole right to manufacture the Symmes Hay and Grain Caps, and although they are making every effort to be in a position to fill orders for the coming season, it will be wise for the farmer to send in his order early in order to secure them in time. Send for circular.—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, December 7, 1889.

IT is said that no stallion is allowed to stand for service in Italy unless his soundness has been certified by a commission appointed for each province in the kingdom. .....Robert Bonner keeps adding to his stock of trotters. He recently visited the Palo Alto farm, and Sunol his latest acquisition, was brought out for her new owner to see. After warming up, she was speeded for a single quarter which she made in 31¼ seconds, a 2:05 gait. Mr. Bonner was delighted with the mare, and says that she will make a mile in 2:05 another year. The eight-year-old stallion Ansel was brought out for Mr. Bonner to look at, and he was so pleased with his gait that he bought him on the spot for $10,000. He will be sent East and used for stock purposes.....Prior to 1889, there were 347 horses having a record better than 2:20; the list has been increased to 423 the past season.....
The Ohio State Horticultural Society will hold its 23d annual meeting at Columbus, December 11–13. A feature of the meeting will be the large number of discussions on live horticultural topics. Liberal premiums are offered members, a large number of papers from successful horticulturists are promised, and a general good time is anticipated. W. W. Farnsworth, secretary, Waterville.....It requires from 100,000 to 150,000 horses annually to supply the standing army in this country, and $200,000 are appropriated to pay for them .....
A shipment of 250,000 bushels of wheat was recently made from New Orleans to Uruguay, the first of the kind on record... .....The Granite State Dairymen's Association will hold its annual meeting in connection with the State Board of Agriculture, at Plymouth, January 9th and 10th. Speakers of national reputation will address the meeting. J. L. Gerrish, secretary, Mast Yard, N. H.....The ninth regular meeting of the American Horticultural Society will convene at Austin, Texas, February 17, next. Any person is eligible to membership who feels an interest in promoting the cause of American horticulture. Full particulars from the secretary, W. H. Ragan, Greencastle, Ind.....

Crops & Markets.

SATURDAY, December 7, 1889.

THE R. N.-Y. believes that the successful and profitable marketing of a crop is of as much importance to the grower as the production of the same. With this idea in mind, it is constantly on the lookout for new ideas in regard to improvements in the methods of handling and marketing farm products. Any improvement in this direction that will tend to increased prices or diminished risks and losses in handling, is worthy of the support of every friend of agriculture. We have from time to time noticed in this column the comparatively recent innovation of selling fruits at auction. Although the system has been in vogue for some 20 years in some of the larger English cities it is only within three or four years that it has been adopted here.

CALIFORNIA fruit-growers at first scouted the idea; now the two large associations that practically control all the shipments from that State say that the fruit must be sold at auction. Foreign fruits are now sold almost entirely by this method. The past autumn New York State grapes and New Jersey sweet potatoes, and more recently, Florida oranges have been thus disposed of, in nearly all cases at satisfactory

Miscellaneous Advertising.

LEE AND SHEPARD'S CALENDAR FOR 1890

HURRAH FOR THE NEW YEAR

Printed in delicate tints on ivory cardboards with ribbon bows and silver chain and rings. Neatly boxed. Price, 75 cents.

IN designing this new calendar for 1890, the artist has availed herself of her original idea of little people that give so much character to the different seasons. Thus a bevy of little folks in voluminous hats and feathers, with puckered mouths, welcome 1890 with "Hurrah for the New Year," an exquisite design. For the months there are odd figures in delicate tints. January, showing in a "brief" costume, asks: "How Soon do You Think it will Thaw?" of a wonder-eyed bird. February, in Cupid array, is gathering hearts, and entreating the birds to "Come be My Love." March, with a tattered and torn umbrella and breezy drapery, is holding on for dear life, "My, What a Blow!" April has a Japanese costume and a comical phiz as he sits underneath his parasol, entreating you to "Come in out of the Rain," May is "squeezing" a spring song from the birds. June is plucking roses. July is chasing with Chinese lanterns a butterfly. August is "sweltering" in a flaxen wig and a general plumpness of figure, and gives you an invitation under her parasol. September is entreating the birds, who say: "We think of going South soon.' Little October interviews an owl to ask: "Have you seen the moon?" and the figure is as comical as the owl. November is enjoying "Thanksgiving Day in the Morning" in a delightful manner, and the charming little Miss December is anxiously inquiring "Which is the way to Santa Claus Land."

Sold by all Booksellers, or sent by mail, postpaid, on receipt of price. To any party mentioning this paper, we will send **Free** our very handsome Catalogue.

LEE AND SHEPARD, Boston.

Maher & Grosh Special Offer.

This elegant knife ivory handle, 2 razor steel blades, by mail 50c; pearl handle, 75c; gents fine 3-blade, $1. The **Toledo 65c. Knife, now 48c.** Cut is exact size. Blades made on honor. Price for awhile, 48c. post paid, 5 for $2. Best 7-in steel **Shears**, 60c.; this Knife and Shears, $1. Send for Illustrated List 80 pages, FREE.

Maher & Grosh,
80 S. St.,
TOLEDO
OHIO.

E. L. GOODSELL,

103 Park Place, New York,

Auctioneer of Florida Oranges & All Domestic Fruits,

And Agent for the Golden Gate Fruit Association of Sacramento, Cal., and Chautauqua Lake Grape Growers' Association, Brocton, N. Y.

Having a special sales room for Florida Oranges, located in the heart of the fruit trade, and devoting my whole time to the care of the same, it is for every shipper's interest that they consign all their fruit to me. All Oranges sold the day after arrival, and check for net proceeds mailed the following day. Advances made when desired. Every shipper receives a full report of the state of the market by mail, semi-weekly.

For Stencils and Further Information, address as Above.

prices. The same system of selling is followed in many other large cities.

THE METHOD may vary in other places, but here when the fruit arrives, samples of each lot are taken to the auction room and opened for exhibition. Catalogues giving number of packages and marks of each lot are furnished to buyers who examine the fruit and decide what they will pay. At the hour of sale, the auctioneer offers the choice of a certain number of packages, usually 20 to 40, from a certain number of lots, then the remainder in like manner until all are sold. The sale of a car-load usually occupies about a half-hour.

THIS system has many advantages over the method of selling through commission merchants. The volume of business has grown so large that the latter have difficulty in handling it satisfactorily, and a more rapid method is imperative, especially for perishable products or those which deteriorate rapidly. The entire shipment is disposed of immediately upon arrival, and there are no remnants left over to entail loss upon the shipper. The shipper receives immediate returns. The auction system brings the buyers together to compete with each other, thus always insuring the highest market price, as they must bid up to secure the goods. By the old system, the sellers compete with each other to effect sales, thus tending to depreciate prices. At the auction sales, it very commonly happens that as the sale progresses, competition becomes more brisk, and higher prices are obtained. The auction system, in short, is more in keeping with modern business methods.

IN common with all deviations from long-established methods, there are many difficulties to be overcome, but, from the facility with which the business is handled in the auction room, and the results thus far obtained, the main difficulties to be overcome are at the producers' end of the line. To insure success, growers and shippers must co-operate and support this system and no other. The grading and packing of all products must be improved and made uniform. Shipping of products must be so arranged that the supply is uniform and regular so far as possible. Now, the market is glutted with Florida oranges, and prices are very unsatisfactory. No method of selling can remedy this, though the auction system will secure better results than any other. If the orange growers were all organized, and would forward oranges to about equal the demand, better results would be secured.

THE pioneer of the auction system in this city is Mr. E. L. Goodsell of 103 Park Place who has a building fitted up with every convenience especially for auction sales. He has handled immense quantities of fruits the past season, and is very enthusiastic as to the future of his pet method of handling all perishable produce. As he very truthfully says: "Results always 'talk' to the grower and shipper as arguments cannot." We append some extracts from fruit-growers and shippers, to show what they think of it. The Earl Company of Sacramento, one of the two companies previously mentioned, in addition to several other favorable things, say: "We have found this method of disposing of California fruits very satisfactory, and are certainly encouraged to continue selling in this way. The auction system has many advantages over the private-sale system, chief among which, is the fact that the auction concentrates the buyers in one room where they are compelled to compete with each other; whereas the private sale system scatters the buyers and gives them an opportunity to force the sellers to compete against each other, in selling. The great benefit, therefore, in the auction system lies in the stronger competition brought about among the buyers in the auction room."

R. B. BLOWERS, another California shipper, in writing of the sale of a car-load of Emperor Grapes, says: "Considering that the Emperors had received nearly six inches of rain, and had been transferred from the original car en route, I consider the result more than satisfactory, and a very successful wind-up of the splendid sales of the past season." Charles K. Landis, the founder of Vineland, N. J., says: "The auction is the only way to fairly market produce." E. H. Fay, manager of the Chautauqua Grape Growers Shipping Association, while very cautious about passing judgment from a single season's experience, said that of over 100 cars of grapes shipped, one sold here at aution brought the most money. From the fact that they continued shipping we would infer that they believed in the method. The writer met a dealer at one of the auction sales of Concord Grapes, and afterward asked him if he bought any grapes. "No," he said; "I could buy the same fruit cheaper at any commission house." Comment is unnecessary.

THE best grades of butter have advanced quite materially, and there is a good demand for everything of good quality. Eggs are 30 cents for strictly fresh, but this does not mean eggs which have been held for several weeks. Such will bring about 22 to 25 cents. There is a good demand for the best grades of fresh fruits with consequent increase in prices. Fancy apples are scarce, and Kings sell as high as $4 to $4.50 per barrel. Western apples are better quality and bring better prices than Eastern. While Western Greenings, Baldwins, and Spies bring $2.25 to $3, Eastern and State, same varieties, are $1.50 to $2.25. Grapes are higher. Florida oranges are very plenty. The market is overstocked, and prices are low: $1.50 to $2.50 per box. Cranberries have advanced, fancy Cape Cods, $10.50 per barrel.

THE poultry market has recovered from its Thanksgiving prostration quicker than usual. Fancy turkeys have not been plentiful at any time and are in demand now at 16 to 17 cents for dry-packed. Chickens and fowls have advanced. Dry-packed are preferred, and bring better prices. Poultry should be thoroughly cooled before packing, and packed with plenty of bright, dry wheat or rye straw. Many use too little straw.

THERE have been lighter arrivals of potatoes, and prices have advanced. Scotch potatoes are arriving. Florida cucumbers are offered at $1.50 to $2.50 per crate; egg plant at $3 to $6 per barrel; and string beans at $1.50 to $1.75 per crate. Southern vegetables sell well when of good quality.

LATEST WHOLESALE PRICES

—OF—

COUNTRY PRODUCE.

New York, Saturday, December 7, 1889.

BEANS.—Marrows—New, $2 50@$2 55; New Mediums, choice, $1 80@$1 85; Pea, $1 75@$—; Red Kidney, $3 40; White Kidney, choice, $2 60@$2 75; Foreign Mediums, $1 70@$1 90; California Lima, $3 00@$3 25; Italian, $1 75@$1 80. Green Peas, $1 05@$1 10.

BUTTER—New—State and Pennsylvania, best, 24@26½c; Elgin, best, 29c; Western, best, 24@27½c; do prime, 20@23c; do good, 19@21; do poor, 14@17; State, Dairy half-firkins, tubs, best, 22@23c; do do prime, 19@21; do do fine, 15@17; Welsh tubs, fine, 19@21c; do do, good, 15@18; firkins, best, —@——c; do prime, —@—c; do fine, —@—c. Western Imitation Creamery, best, 21@23; do fine, 15@17; Western dairy, fine, 16@18c; do fair, 11@13c; do poor, 9@10c; do factory, fresh, best, 19@20c, do prime, 15@18; do good, 10@12; do poor, 7@10c.

CHEESE.—State factory, fancy, 10@10½c; do do fine, 9½@10c; do do, prime, 9@10c; do do, fair to good, 8¾@9½c; Ohio, flat, prime, 7½@10c; do good, —@—c; do, good, —@—; Skims, light, 7@8c; do medium 5@7c; do full, 2@4c.

EGGS.—Near-by, fresh, 28@30c; Canadian, 24@26c; Southern, 20@22c; Western, best, 28@28½c; limed, 17@18½c; ice house, 18@22c.

FRUITS.—FRESH.—Apples, per bbl, $1 50@$4 50 Pears, per bbl, $2 00@$3 50; do per keg, $2 00@2 75, Grapes, best per lb, 3@7c, do, good, 2@3c. Cranberries; C. C, per bbl, $4 00@$10 50; do per crate, $2 25@$3 00; Jersey, do, $2 25@$2 75. Lemons, per box, $1 50@$4 50.

DOMESTIC DRIED—Apples—Evaporated, old, 5@7½c do choice, new, 9½@10c; prime, 8@8½c; sliced, new, 4@5¼c; do old, 3½@3¾c; Chopped, 3½@3¾c, Cores and skins, 2½@3c. Cherries new, 9@12c; do, old, 8@10c. Raspberries new 22@24c; Blackberries, 5¼@5½c. Peaches, Delaware, evaporated, peeled, 15@20c, do do, unpeeled, 8@10c; Georgia, evaporated, peeled, new, 13@15c; do do do, unpeeled, 7½@10c; do do, sundried, 6½@9½c. Huckleberries, new, 11@12c. Plums, new, 7@9c.

GAME.—Plover, per doz, $1 50@$1 75; Snipe do, do, $1 50@$1 75, Woodcock, per pair, $0 50@$1 00; Grouse, do do, 70@$0 90; Partridges do, $0 55@$1 00. Duck, Mallard 75@85c; do, Teal, 35@50c; do, Redhead, $1 50@$2 50; do Canvas-back, $3 00@$5 00; Rabbits, per pair, 20@36c; Quail, per dozen, $0 75@$1 50.

HAY AND STRAW. Timothy, best, 80@85c; do good, 70@75c; do medium, 50@60c; Clover, mixed, 45@55c; shipping, 45@50c. STRAW—No. 1 rye, 75@80c; short rye, 40@45c; oat, 35@45c.

HONEY—In one-pound boxes. White Clover, 12@14c; Buckwheat, 10@12c; Beeswax 22@23c.

HOPS.—State. New, 12@14c; do, good, 10@11c; do common, 7@9c; do 1888, best, 10@12c; do do prime, 9@—c; do do, common, 6@7c; California, New, best, 12@13c; do good to prime, 10@11c; do Old, best, 11@12c, do common and fair, 7@9c.

NUTS.—Peanuts are quiet. Fancy, hand-picked, quoted at 6½c, and farmers' grades at 4¼@5½c, Pecans, 6@8c. Chestnuts, $4 00@$6 00 per bushel; Hickory Nuts, $1 50@$2 00 per bushel.

POULTRY.—DRESSED—Turkeys, mixed, per lb. 12@17c; Fowls, western, choice, 8@10c; do common to good, 5@8c; Ducks, spring, good, 10@14; Squabs, white, per dozen, $3 00@$—; do dark, do, $2 00@$2 25; Chickens, spring, 9@15c; Fowls, near by, 5@10c.

POULTRY—LIVE.—Chickens—Spring, per lb, 9@10c. Fowls near-by, per lb, 11@12c, do Western, per lb, 11@11½c; roosters, per lb, 6@6½c; Turkeys, per lb, 10@12c; Ducks, Western, per pair, 60@80c; Geese, Western, per pair, $1 15@$1 50.

SEEDS.—Clover is hard to sell; exporters quiet. New prime, future deliveries offered at 6¼ and choice, 6 ⅜c, with fancy at 6¾c. Timothy quoted at $1 50@$1 60. Canary, 2@4c.

VEGETABLES.—Potatoes—Maine, per bbl, $1 90@$2 00; Long Island do, $2; State do, $1 25@$2 00 Western, do, $1 00@$1 90; Sweets do, $2 25@$4 00. Cabbage, per 100, $3 00@$5 00. Turnips, per bbl, 65@75c Onions—Orange County Red, $1 50@$2 75; Eastern White, $3 00@$5 00; Eastern Red, $2 25@$3 00, State, Yellow, $1 75@$2 00. Cauliflower, per bbl, $1 00@$6 00; Squash, Marrow, $1 00@$1 25; do Hubbard, $1 25@$1 50, Celery, per doz. bunches, 20c@$1 00.

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 15@18c, and Spring do 19@25; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

GRAIN MARKETS.

WHEAT.—Sales—No. 1 Northern Spring, 91¾c delivered; Ungraded Winter Red, 75@97½c; No. 2 Red, 85⅞@86c afloat; do in store and elevator quoted 84½@84¾c; No. 1 Hard Spring quoted 95¾c afloat. RYE.—In better demand and higher. Sales—State and Canada delivered for export. Western quoted 56@57c; State, 58@60c; Canada, 58@60c. BARLEY. Dull and unchanged in price. CORN.—Sales—Ungraded Mixed at 39¾@44⅝ latter for old; No. 2 Mixed, 4 1⅛@42⅜c elevator; 43@43⅛ afloat; 43⅜@43¾c special December and January; Steamer Mixed, 40@40½c elevator, 41@41¼c special January and February. OATS.—Sales No. 3 Mixed, 28c; No. 3 White, 29½@30c; No. 2 Mixed, 28¼@28¾c elevator, 29¼@29½c delivered; No. 2 White, 30¾@31c elevator; No. 1 White, 35c; Mixed Western, 27@27½c; White, do, 30@35c.

LIVE STOCK MARKETS.

BEEVES.—Poorest to best Steers sold at $3 25@$4 75, exclusive of two carloads which were disposed of at a margin over Chicago cost, and which, doubtless, brought somewhere from $5 15 to $5 25. Bulls sold at $1 75@$2; Dry Cows at $2, and some good Ohio Heifers at $3 35, one extra prime State do going to an exporter at $4 75; and Stags and old Oxen ranged from $2 00 to $4 25. Private cable advices to date quote refrigerated beef steady at 4½d, or about 9c per lb; and American live Cattle selling at 11½@12½c for the estimated dressed weight, sinking the offal.

MILCH COWS.—Arrivals for the week thus far 158 head. Trade dull. Prices range from $30 to $45 for poor to good Cows, with a few choice selling at $50.

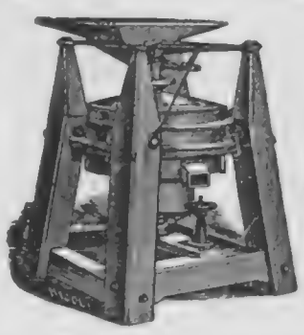
CALVES.—Weak for Grassers and Westerns, but steady for Veals. Grassers sold at $2 12½@$2 75 per 100 lbs; Fed Calves at $3@$3 25; Westerns at $2 75@$3, and common to choice Veals at $5@$8.

SHEEP AND LAMBS.—Market firm, and Lambs, quality considered, sold a small fraction higher. Cull Sheep sold at $3@$3 75 per 100 lbs; ordinary to prime do at $4@$5 80, and common to good Lambs at $5 80

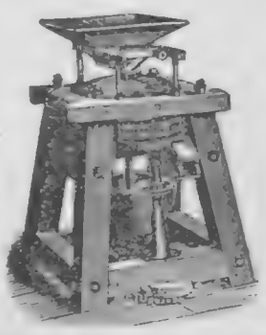
HOGS.—None for sale alive. Nominally steady at $3 95@$4 20 per 100 lbs.

Miscellaneous Advertising.

SEND 10 Cts. in P. O. stamps to **E. & O. WARD,** Produce Commission Merchants, for circular about **Shipping Produce** Also recipe for **Preserving Eggs.** Established 1845.
No. 279 Washington St., New York City

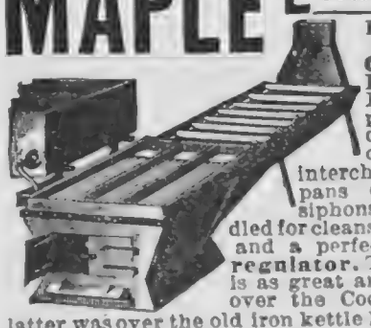


FARM MILLS
OF FRENCH BUHR,
Twenty-eight Sizes and Styles.
FACTORY ESTABLISHED 1851
WARRANTED
MILLS for grinding ear corn, shelled corn, corn and oats, buckwheat and rye. A BOY CAN OPERATE and keep in order. A complete mill and sheller for less than $100. REDUCED PRICES **for Fall of 1889.** OVER 20,000 IN USE. Received **Highest Awards** at St. Louis, Cincinnati, New Orleans and Indianapolis fairs and Expositions. Send for Book No. 18—interesting and valuable. Mention paper, and address
Nordyke & Marmon Co., Indianapolis, Ind.



A $25 WATCH FOR ONLY $5.50
Solid 18k. Rolled Gold Plate.
To introduce our **Solid GOLD and Solid SILVER Watches** we make this **Special Offer.** There is so much cheap trash offered in these days in the line of watches, by irresponsible advertisers, that the public hardly know what to expect; yet, a good watch at a low price is what they are looking for, and that is what we offer in the watch illustrated here. This watch is entirely new; the cases are of the beautiful shell pattern that has heretofore been found only in most expensive solid gold watches. Being made from **Solid 18k. Rolled Gold Plate,** we guarantee them to stand the strongest acid test. It is full Jeweled, Lever Movement, Fine Nickel Works, and fully warranted by us to be an **accurate time-keeper** in every particular. We warrant each watch for five years. In carrying this beautiful watch you will have the credit of owning a $100 Solid Gold Watch, and for use it is just as desirable. We send this beautiful watch by Registered Mail, post-paid, for **only $5.50** If you want to see the watch before paying for it, send us 50 cents as a guarantee of good faith, and we will send the watch by express C. O. D., with privilege of examination at Express Office, and if you do not find the watch just as represented, you need not take it. Can we make you any fairer offer? To every person sending the cash with order, $5.50, we will send a beautiful **Gold Plated Chain Free.** We can supply Ladies' or Gentlemen's size watch. We send our new 1890 Catalogue free. Any Bank, Newspaper or Commercial Agency will tell you we are a reliable house.
Kirtland Bros. & Co., 88 Fulton St., N. Y.

MAPLE EVAPORATOR



For **MAPLE, SORGHUM, CIDER,** and **Fruit Jellies.** Has a corrugated pan over firebox, doubling boiling capacity; small interchangeable syrup pans (connected by siphons), easily handled for cleansing and storing; and a perfect **automatic regulator.** The **Champion** is as great an improvement over the Cook pan as the latter was over the old iron kettle hung on a fence rail. Catalogues Free. Mention this paper.
THE G. H. GRIMM MFG. CO., HUDSON, O.

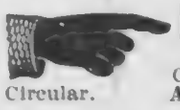
FOR SALE—FARM—Estate of Addison Willett, deceased, containing 275 acres Been in family over 60 years. Every way desirable. Investigation and correspondence solicited. Address J. A. WILLETT, North Granville, N. Y., on farm, or W. W. WILLETT, 1 Broadway, New York.

CARDS BEST SAMPLES and Premium List Free. Globe Co., Centre Brook, Ct

PILES. Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository. A simple remedy mailed FREE. Address TUTTLE & Co., 78 Nassau Street, New York City

Tape Worm and how to invariably remove it with HEAD, by Home Treatment Particulars for 2c. stamp Dr. Freeman Medical Co, 99 Stanford Street, Boston, Mass.

PURDY'S Catalogue of Plants and Trees FREE!
A 16-page Quarterly at only 25 cts. per yr. **RECORDER** Every fruit grower should take it. Every No. worth $1.00. A. M. PURDY, Palmyra, N. Y.



IMP. MONITOR INCUBATOR
AND BRISTOL BROODER
Challenge superiority. Send for new Circular. **A. F. WILLIAMS, Bristol, Ct.**

OUR
NEW CATALOGUE
FOR 1890,
containing descriptive lists of novelties and standard sorts, with illustrations of choice vegetables, cultural instructions and recipes for preparation and cooking, sent free to all applicants. Address
D. LANDRETH & SONS,
Implement and Seed Warehouse.
Nos. 21 and 23 South Sixth Street, Philadelphia, Pa.
Catalogues published in seven different languages.

BERKSHIRES, Thoroughbred, for sale. Farmers improve your stock at a very small expense. Address L. M. Russell, 800 E. Preston St., Baltimore, Md.

FOR SALE—if taken before January 1st—a well-assorted stock of **HARDWARE,** Stoves, Tinware and Wood Stock, with complete set of Tinner's Tools: will invoice between 3,000 and $4,000: in a live Dakota town of 2,500, located on the Missouri River and the N. P. R. R; store in the best brick block, with cheap rent. This bargain will stand full investigation. Address or call on **C. A. HEEGAARD,**
Mandan, Morton Co., N. Dakota.

Do not Buy a Watch
Until you see my new Wholesale Catalogue, sent for four cents in stamps; contains illustrations of over 300 beautiful Watches, from $2 up. You can select a single watch as cheap or cheaper than a retail dealer can buy in dozen lots. Large commissions and premiums to agents. Watches cleaned, repaired and regulated for 50 cents. Gold or silver-plated from $1 up. Highest price paid for old Gold and Silver.
H. R. HARDENBROOK,
58 Liberty Street, New York.

SOLID GOLD & FILLED GOLD CASES
AMERICAN MOVEMENT
STEM-WINDING ACCURATE TIME KEEPER WARRANTED 5 YEARS

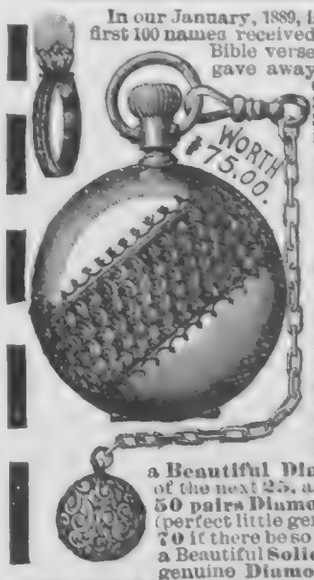
LADIES' OR GENTS' SIZE
ONLY $3.50

Having recently purchased the entire stock of watches of the Bankrupt firm of Welden, Richards & Co., consisting of solid gold, silver, and gold-filled cases, we shall offer a portion of the entire lot at prices never before heard of in the Watch trade. Among the stock are 3,750 **American Make** stem winders, in **solid gold-filled Cases,** which we shall sell singly or by the dozen to private parties or the trade at the unheard-of **low price** of **$3.50 each.** Each and every watch is guaranteed a perfect time-keeper, and each watch is accompanied with our written guarantee for five years. Think of it! A genuine, Stem-winding, American Movement watch, in solid, gold-filled cases and guaranteed for **five years,** for **$3.50.** Those wanting a first-class, reliable time-keeper, at about one third retail price, should order at once. Watch speculators can make money by buying by the dozen to sell again.

Solid Gold Watches at $3.50.
These watches must be sold, and as an inducement for you to order quickly, we will send to each of the first one hundred, ordering from this advertisement, **a solid, 14k Gold Watch** worth **$50,** provided **$3.50** is sent with the order. Elegant, **SOLID ROLLED GOLD CHAINS** of the latest patterns, for **$1.00, $2.00, $3.00,** and up. **ORDER AT ONCE.** Be one of the first and get a solid gold watch for **$3.50.** All are stem-winding, elegantly finished, and guaranteed perfectly satisfactory in every way. **Send money** by registered letter or P. O. order at our risk. Watches and chains sent safely by registered mail to any address, provided **25 cents** extra is sent to pay postage.
EUROPEAN WATCH CO.,
87 College Place, New York.

$225.00 CASH,
70 Diamond Rings,
50 PAIRS GENUINE DIAMOND SCREW EAR RINGS.
26 Solid Gold AND Silver Watches
GIVEN AWAY

In our January, 1889, issue we published the first 100 names received in reply to our last Bible verse contest, in which we gave away $225 in cash, a Solid Gold Watch, 25 Solid Silver Watches, and 71 Solid Gold and Genuine Diamond Rings.



$661 MORE TO BE **GIVEN AWAY, Feb'y 1st, 1890.**
We will give to the **First 150 PERSONS** telling us where the word **WIFE** is first found in the Bible, before **Feb. 1st, 1890,** the following valuable prizes: To the **1st** person giving the correct answer, **$100;** 2d, **$75;** 3d, **$50;** 4th, **a Solid Gold Hunting Case Watch;** 5th, **a Beautiful Diamond Ring;** to each of the next **25,** a **Solid Silver Watch,** **50 pairs Diamond Screw Ear Rings** (perfect little gems); to each of the next **70** if there be so many correct answers, a Beautiful **Solid Gold Ring** set with genuine **Diamonds.** With your answer send **25c.** to help cover expense of this adv't, postage, &c., and we will send you our **Illustrated 16 page Monthly** for **4** months and our new **Illustrated Catalogue** of Watches, Diamonds, &c. Our 11th Monthly of March issue will announce the result of the contest, with names and addresses of the winners. This offer is made solely to introduce our publications into new homes. We, as publishers, are thoroughly known. "Honesty and Square Dealing" is our motto. Our MONTHLY was established in 1877. Give full name and address. (Stamps taken.) Address
BLANCHARD'S ILLUSTRATED JOURNAL,
5 & 7 Warren Street, New York.

Literary.

MAGAZINE REVIEWS.

ST. NICHOLAS presents an interesting variety for boys and girls, old and young, in its Christmas issue. "The Boyhood of Thackeray" is an entertaining and instructive account of the boyhood days of England's great novelist, by his daughter Anne Thackeray Ritchie. The article is illustrated by fac-similes of drawings and letters hitherto unpublished and by an engraving from a bust of Thackeray at 11, and another from the last photograph taken of him. "Buffalo Hunting" is a very exciting account of adventures in the Far West by Theodore Roosevelt. These animals are now nearly extinct. "Intercollegiate Foot-ball in America" by Walter Camp, gives some reminiscences of several contests between noted college teams. Tudor Jenks contributes a very moving tale about the "Professor and the Patagonian Giant," from New York, in which the Professor furnishes a supper for the giant, who was a cannibal, and who said there was a flavor of originality which he liked about the man. "Daisy's Calendar" tells how Daisy, a young lady who was "never quite well," and whose life contained many shadows, kept a calendar for a year. Each evening, if the day had been a happy one, she drew a red line all around the date; if the day brought only some gleams of gladness she made a red dot for each gleam, and if it was a day of sorrow unrelieved by any brightness, the date was left surrounded by its own black line. It is a capital idea. Prof. Boyesen contributes a story from the Norse legends, "Little Alvilda." "May Bartlett's Step-Mother" a serial by Nora Perry, is begun in this number. There are several excellent things in verse: "How the Emperor Goes" by M. Helen Lovett; "An Autumn Revel" by Ida W. Van der Voort; "If the Babes Were the Bards," by Francis Randall; "For Christmas Day," by H. Butterworth, and "The Story of the Iceberg" by Harriet Prescott Spofford, all with characteristic illustrations. Alice Maud Ewell gives an incident connected with the Indian massacre in the early history of Virginia; it is very quaintly told in the language of the time. The Century Co., New York.

THE Thanksgiving number of The Youth's Companion is worthy of special mention. The first cover page is a triumph of the engraver's art. The articles are appropriate to the day, and the illustrations are numerous and excellent. The matter is not of the goody-goody sort which nauseates the readers of some so-called youth's papers, neither is it of the sensational, blood-and-thunder style which is a curse to our country, but it is made up of stories having such a resemblance to the experiences of wide-awake, vigorous boys and girls, that they cannot fail to be read with a sympathetic interest. The tone is elevating and good. If you have not seen this paper, you have missed a great deal, and should send for a specimen copy to The Youth's Companion, Boston.

THE LADIES' HOME JOURNAL never seems satisfied with its acknowledged excellence and high standing, but is constantly adding new attractions. Beginning with the New Year, the Rev. Dr. Talmage will edit a regular department with the title: "Under my Study Lamp." It is given out that Dr. Talmage's salary is one of the largest ever paid for editorial work, but the figures are not given. Send for a free sample copy of this excellent paper to the Curtis Publishing Co., Philadelphia.

THE NEW YORK LEDGER

"THE WHOLESOME EDUCATOR OF MILLIONS."

FREE TO NEW SUBSCRIBERS

If you are not convenient to a news stand, send two dollars to the address below and the Ledger will be sent to you FREE till the first of January, 1890, and then continued for a whole year from that date.

THE LEADING WRITERS.

CELEBRATED ARTISTS.

$2 A YEAR SIXTEEN PAGES EVERY WEEK

SPECIAL FEATURES.

Herbert Ward, Stanley's Companion.

Herbert Ward, the companion of Stanley in his explorations in Africa, is the only white man connected with Stanley's African explorations who has ever returned alive from the "Dark Continent." Mr. Ward's articles running through eight numbers of the "Ledger" are of the most intensely interesting description, and cover five years of his adventures in Africa, and they will be illustrated by sketches made by Mr. Ward, and by the reproduction of photographs taken by him in Africa. These pictures will throw much light upon the manners and customs of the hitherto unknown cannibal tribes of Africa.

The Story of a Forsaken Inn, (A SERIAL STORY) *By Anna Katharine Green.*

Life in British America, *By Rev. E. R. Young.*

Being the adventures and experiences of Rev. E. R. Young, the celebrated missionary, and his wife during their residence in the Polar region twelve hundred miles north of St. Paul, in which Dr. Young narrates how he tamed and taught the native wild Indians of the Northwest; how he equipped himself for and how he made his perilous sledging and hazardous canoe trips when visiting all the Indian settlements within five hundred miles of his home.

Honorable Henry W. Grady

Contributes a series of six articles on the "Wonderful Development of the Industrial Pursuits of the New South."

American Cookery, (A SERIES OF ARTICLES) *By Miss Parloa.*

Giving the reasons why it is imperfect, and some ways by which it may be improved.

Nihilism in Russia, *By Leo Hartmann, Nihilist.*

Leo Hartmann, a fugitive from Russian authorities, has been connected with the most daring feats of the Russian Nihilists. Mr. Hartmann shows how the intelligent people of Russia are becoming Nihilists in consequence of the despotism of the form of government. A participant in plots to kill the Czar, such as the blowing up of the Winter Palace, he is able to give true information as to how this and other great schemes were accomplished. The situation in Russia is sufficient to increase the love of every true American for our form of government.

EXTRA SOUVENIR SUPPLEMENTS.

Among these beautifully illustrated four-page souvenirs, which will be sent free to every subscriber, will be a poem by

John Greenleaf Whittier, *Illustrated by Howard Pyle.*

Written for the "Ledger" by Mr. Whittier in his 82nd year. Another souvenir will be a beautifully illustrated poem written by

Honorable James Russell Lowell.

The Ledger will contain the best Serial and Short Stories, Historical and Biographical Sketches, Travels, Wit and Humor, and everything interesting to the Household.

Other Contributors for 1890 are:

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Mrs. Florence Howe Hall.
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Mrs. Harriet Prescott Spofford.
Mrs. Emma Alice Brown.
Mary Kyle Dallas.
Marion Harland.
Clara Whitridge.
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Marquise Lanza.

Robert Louis Stevenson.
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Rev. Emory J. Haynes.
Julian Hawthorne.
Prof. W. C. Kitchin.
Robert Grant.

M. W. Hazeltine.
Thomas Dunn English.
George F. Parsons.
Col. Thomas W. Knox.
Rev. Dr. John R. Paxton.
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Prof. J. H. Comstock.
James Parton.
Rev. Dr. H. M. Field.
Harold Frederic.

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Send Six Cents for Sample Copy and Illustrated Calendar Announcement.

Address: ROBERT BONNER'S SONS, 129 William Street, New York City.

Miscellaneous Advertising.

Ease, Comfort and Thrift!

THE BEST CATTLE FASTENING

Smith's Self-Adjusting Swing Stanchion!

The only practical *SWING STANCHION* invented. Thousands in use. Illustrated Circular free.
F. G. PARSONS & CO., Addison, Steuben Co., N. Y

DR. SETH ARNOLD'S COUGH KILLER CURES COUGHS AND COLDS. PREVENTS CONSUMPTION

I have no hesitation in recommending Dr. Seth Arnold's Cough Killer for coughs and colds. A few doses cured me It is a

WONDERFUL REMEDY,

writes *G. L. Walker, a prominent citizen of Pawtucket, R. I.* **25c., 50c. and $1 per bottle.**

ALL DEALERS SELL IT.

100 SONGS for a 2 cent stamp HOME & YOUTH, CADIZ, O.

Buckeye Wrought Iron Punched Rail Fence
Also, manufacturers of Iron Cresting, Iron Turbine Wind Engines, Buckeye Force Pumps, Buckeye Lawn Mowers, etc. Send for Illustrated Catalogue and prices to **Mast, Foos & Co. Springfield, O.**

POULTRY PAPER, 16 pages, 4 months for 10c. Sample *free.* C. C. DEPUY, Syracuse, N. Y.

AGENTS LOOK HERE and **Farmers** with no experience make **$2.50** an **hour** during spare time. A. D. BATES, 164 W. Robbins Ave., Covington, Ky., made **$21 one day, $81 one week.** So can you. **Proofs and catalogue free.** J. E. SHEPARD & CO., Cincinnati, O.

VERMONT MERINOS.—A few registered Rams and Ewes.
C. A. CHAPMAN, Middlebury, Vt.

CATARRH HAY FEVER CATARRHAL DEAFNESS

A NEW TREATMENT.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been discovered which permanently cures the most aggravated cases of these distressing diseases by a few simple applications made (*two weeks apart*) by the patient at home. A pamphlet explaining this new treatment is sent *free* by A. H. DIXON & SON, 337 and 339 West King Street, Toronto, Canada.

1890. Samples Visiting Cards, 349 Games Puzzles, &c., all 2c. CARD WORKS, East Haven, Conn.

HOME STUDY. Book keeping, Business Forms, Penmanship, Arithmetic, Shorthand, etc., thoroughly taught by MAIL Circulars free
BRYANT & STRATTON'S, 415 Main St., Buffalo N.Y.

$60 Salary. $40 Expenses in Advance allowed each month. Steady employment at home or traveling. No soliciting. Duties, delivering and making collections. No Postal Cards. Address with stamp, HAFER & CO., Piqua, O.

BARNEY & BERRY SKATES CATALOGUE FREE. SPRINGFIELD, MASS

FREE GRATIS Valuable article on Feed for Poultry; reduces cost one half. Sent free. The Webster Clover Cutter prepares the clover just right for fowls. Price, $3 Also Imported Indian Games. Mention Rural New-Yorker.
P. A. WEBSTER, Cazenovia, N. Y.

AND REMEMBER
We send **FREE** 140 Fast Selling Articles in a Handsome Case and with these samples you can Grasp a Fortune. Agents wanted. Send 12c to pay necessary expenses. W. HILL & CO., 111 E. Madison St., Chicago, Ill.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

COLLECTING A JUDGMENT ON A MORTGAGED FARM.

"An Old Subscriber," Monroe County, N. Y.—A, a neighboring farmer, owes me a considerable amount of money, on which he failed to pay interest, as per agreement, and I couldn't get him to pay the principal either. I sued him and a short time ago obtained judgment. His farm, however, is already encumbered with mortgages and judgments procured prior to mine, to an amount nearly equal to its full value. Can I, on my judgment, sell A's remaining interest in the property, and in case it is struck off to me, when can I come into possession? If I can't get any money out of the property, I would at any rate like to get A dispossessed. Can I do so?

ANS.—If the judgment obtained by our inquirer was not rendered by a justice of the peace for less than $25, it may be docketed in the office of the County Clerk, when it will become a lien upon the real estate of the defendant. An execution may be obtained, and after the sale has been advertised for six consecutive weeks, the property may be sold. The purchaser will take it subject to all prior liens. He may then, by summary proceedings, obtain possession in about two weeks. He must first give A 10 days' notice to quit. If he fails to leave, a precept will be issued returnable in not less than three or more than five days, when A will be required immediately to show cause why he should not be deprived of his possession. On his failure to do so, he will be ejected. Unless our inquirer becomes the purchaser of the property, or gets a friend to buy it for him, we know of no means by which he can dispossess A.

WHEN LEGACIES ARE PAYABLE IN NEW YORK.

L. M. T., Livingston, N. Y.—Should an executor pay legacies one year after probate of a will or one year after the death of the testator? In the case in which I am interested the will was contested and letters were not issued to the executors until the will was sustained many months after the testator's death.

ANS.—The law in this State provides that "no legacies shall be paid by any executor or administrator until after the expiration of one year from the time of granting letters testamentary or of administration, unless the same are directed by the will to be sooner paid." The general rule is that legacies draw interest from the time they are payable. If, however, the legacy is given by a parent to a child and no provision is made for its maintenance other than the income from the legacy; or if it is a life-estate to a child, or to a widow in lieu of dower, the interest is payable from the day of death. When an annuity is bequeathed generally; that is, where a sum of money is bequeathed to be put out at interest and the income to be paid over, the legatee is entitled to interest from death, provided a sufficient amount remains after paying debts and other legacies. Unless the case in which our inquirer is interested comes under one of these conditions, the legacy cannot be paid until the expiration of a year from the issue of testamentary letters, however long this may have been delayed; and interest can be drawn only from that time.

CATALOGUES, ETC., RECEIVED.

CLARK'S CUTAWAY HARROW.—Circulars from the Higganum Manufacturing Corporation, New York. The R. N.-Y. has this implement in use and does not hesitate to praise it. Strictly speaking, it is more of a plow than a harrow. We have found it very useful in cutting up sod ground and working in manure.

INVALID ROLLING-CHAIRS.—Catalogue from H. S. Golightly, 203 Quarry Street, Philadelphia, Pa. The catalogue is filled with pictures of invalid chairs which seem to be very comfortable and easy to wheel. We feel sorry to think such chairs are ever needed, still let us get the best we can when they must be bought.

PURINTON'S FARM BOILER.—Circulars from J. K. Purinton & Co., Des Moines, Iowa. Our readers will remember the series of letters on "Cooking Feed" which were printed in the R. N.-Y. some six weeks ago. The parties contributing to that "symposium" used the Purinton boiler. They stated all that needs to be said about it here. We may add, however, that it is frequently used in laundries and bath-rooms for heating water for washing and bathing purposes. Send for the circulars.

POULTRY SUPPLIES.—Price list from C. H. Dempwolf & Co., York, Pa. These supplies comprise bone meal, granulated bone, crushed oyster shells, ground shells, calcite, crushed flint and ground beef-scraps. The goods are all first-class, and poultry people who need such supplies may feel satisfied that they will get what they order from this firm.

WATCH CATALOGUE.—Pamphlet from H. R. Hardenbrook, 58 Liberty Street, New York. This pamphlet gives illustrations and descriptions of over 1,000 watches, which are offered at very reasonable rates.

AGRICULTURAL SUPPLIES.—Circulars from H. B. Griffings' Sons & Co., 70 Cortland Street, New York. At this old-established house will be found tools of all sorts at fair prices.

"MYSELF."—This is the title of a beautiful 26-page book issued by James Vick, Rochester, N. Y. It is a poem describing the life of a little country girl who loves Nature and grows up to young-womanhood in an entirely natural manner. The book abounds with pictures which are printed in colors. It is intended as a souvenir to be given to subscribers to Vick's Monthly Magazine for 1890.

D. LANDRETH & SONS, PHILADELPHIA, PA.—A large-sized, illustrated catalogue of specialties in vegetable garden seeds for 1890. This firm is headquarters for the Garfield and State of Maine Potatoes, both excellent varieties. The above firm is the oldest and one of the most trustworthy in the country.

KNABE PIANOS.—Circulars from William Knabe & Company, Baltimore, Md. It appears that Dr. Hans Von Bulow, the celebrated pianist is using the Knabe pianos on his present concert tour in this country. He finds them superior to other makers'. A great many more humble musicians than Dr. Von Bulow have come to the same conclusion.

THE COOLEY CREAMER.—Catalogue from the Vermont Farm Machine Company, Bellows Falls, Vermont. Anybody who knows what improved dairying is can tell about the merits of the Cooley system. It is merely necessary for us to direct attention to the headquarters for the Cooley implements and to state that all classes of dairy goods are also to be obtained there.

SUN AND SHADE.—From the Photo-Gravure Company 3d Avenue, and 10th Street Brooklyn, N. Y. This monthly publication improves with age. Each number seems more artistic than the one before it. We know of nothing in the way of art work that excels this publication.

Miscellaneous Advertising.

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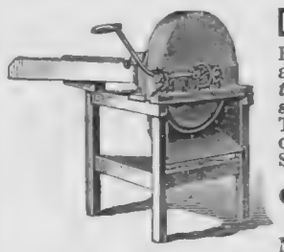
UNEQUALLED IN

Tone, Touch, Workmanship and Durability.

WILLIAM KNABE & CO.,

BALTIMORE, 22 & 24 East Baltimore Street.
NEW YORK, 148 Fifth Ave. WASHINGTON, 817 M'k't Space.



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For Hay, Straw and Ensilage. *The only machine that cuts and splits corn stalks.* We also sell the TRIUMPH STEAM GENERATOR, and GRIFFING'S CORN SHELLER AND SEPARATOR. Write us at once. H. B Griffing, Sons & Co. 70 Cortlandt St., New York City, N. Y.

MONEY for WOMEN.

Money can be earned to dress yourself and your children in fashionable clothing without asking your husband for what he can not afford,—by doing a little pleasant work at your own home for the LADIES' HOME JOURNAL. You can aid your husband in paying off a mortgage, refurnish your rooms, or start housekeeping. We offer profitable employment to women, and want to correspond with such as desire to make money.

CURTIS PUBLISHING CO., Philadelphia, Pa.

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BEST HOLIDAY GIFT

For Pastor, Parent, Teacher, Child, or Friend. 3000 more Words and nearly 2000 more Illustrations than any other American Dictionary.

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Wanted shrewd men to act under instructions in Secret Service work. Representatives receive the International Detective. Grannan's Warning Against Fraud, Grannan's Pocket Gallery of Noted Criminals. Those interested in detective business, or desiring to be detectives, send stamp for particulars. Employment for all. GRANNAN DETECTIVE BUREAU CO. Arcade, Cincinnati, O.

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IS THE BEST ARTICLE ON EARTH

For cooking any kind of food for stock. Cooks, boils or steams anything with economy and dispatch.

Made of boiler-plate steel!
Safe, durable and substantial!
Nothing to get out of order!
Freezing does not damage it!
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We sell more than all others comb'n'd
Has always given satisfaction!
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Investigate and you will buy no other
We also make Tank Heaters and 2 4-6 Horse Boilers and Engines

J. K. PURINTON & CO., Des Moines, IOWA.

NAME on 50 Cards Gilt Edge White Dove, Fringe and Hidden Name, 10c. Frost Co. East River, Conn

Splendid Location. Good Salesmen. Daily Returns.

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FRUIT AND PRODUCE COMMISSION MERCHANTS.
110 Dock Street, Philadelphia, Pa.
Reference: Sixth National Bank and the Trade Generally.
Consignments Solicited.

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Shipped on short notice by rail in car load lots, at close figures. We have imported ashes for 25 years and guarantee ours to be of the best quality. Befor ordering secure our prices and other information.

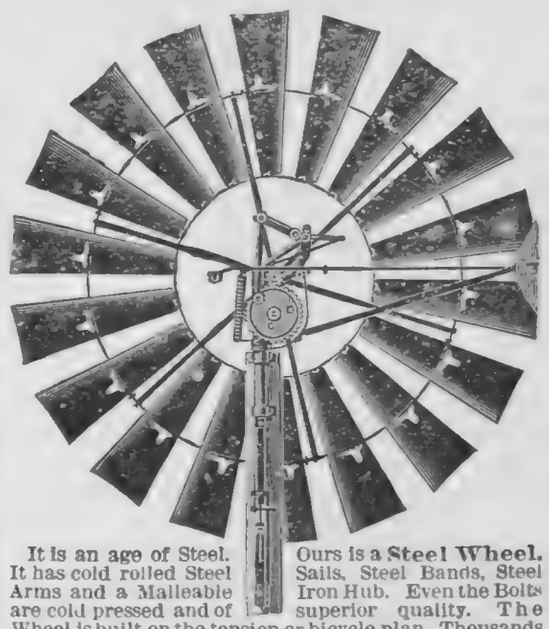
CHAS. ALLISON & CO.,
202 Fulton Street, New York City.

BURNED! Whenever burned or blistered, apply PHENOL SODIQUE promptly to the spot. It relieves pain, heals and cures so quickly, that not even a scar is left to point out the burned place.

SCALDED! No matter how badly, apply PHENOL SODIQUE, as per directions, at once; it stops the pain, destroys the inflammation, and easily removes all marks and scars. It is a great blessing. Keep it where you can easily use it, if needed.

WOUNDED! With a knife, bruised, lacerated, mashed, ever so badly, PHENOL SODIQUE will quickly cure, heal and drive out the pain. In cases of ulceration or amputation, it destroys all tendencies to gangrene. A boon to patient and physician.

Sold by Druggists and Merchandise Dealers. 50cts. a bottle. Send for descriptive circulars and testimonials to HANCE BROS. & WHITE, Prop'rs, Philadelphia.



It is an age of Steel. It has cold rolled Steel Arms and a Malleable are cold pressed and of Ours is a **Steel Wheel.** Sails, Steel Bands, Steel Iron Hub. Even the Bolts superior quality. The Wheel is built on the tension or bicycle plan. Thousands of them are in use. They have been and are sent the world over **on approval.** $50 buys our perfect Self-regulating Steel Aermotor which does as much work as any 10-ft. wooden wheel. $100 buys our perfectly Self-regulating Steel Geared Wind Mill for grinding grain, cutting feed, sawing wood, etc., which does as much work as any 16-ft. wooden wheel. We are the only makers of a Tilting Tower that **never has to be climbed.** It saves human lives and doubles the life of the wheel. **The Aermotor runs and does effective work when all other wheels stand idle for want of wind.** Send for copiously illustrated printed matter showing how to put power in your barn. *THE AERMOTOR CO.*, 110 & 112 S. Jefferson St., Chicago

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Daily circulation, 11,000; Weekly, 25,000; thoroughly covers the fifty central and southeastern counties of Ohio—the richest district in the Union. Eastern Office, 11 Tribune Building, New York. F. E. DUFFY, Manager Foreign Advertising Department. Send for Specimen Copies.
OHIO STATE JOURNAL CO., Columbus, O.

LOW-DOWN WAGON on high wheels—only Practical, Common Sense Farm Wagon in the world. Send for 28 reasons why.
GARDINER IRON WAGON CO., Mullica Hill, N. J

HORSE BLANKET HOLDER.

Keeps blanket from blowing or sliding off horse. Attached to blanket in a moment. Nickel plated, Gold mine for agents. Sample set, 25c.; Six sets, $1.00 by mail. Stamps taken. STAYNER & CO., Providence R. I.

D. LANDRETH & SONS

THE OLDEST SEED HOUSE IN AMERICA

have issued their handsomely illustrated SEED Catalogue for 1890. Merchants, Market Gardeners and Private Families desiring Good Seeds, should send a postal for a copy. FREE to all applicants. Address
D. LANDRETH & SONS Seed Farmers and Merchants, PHILADELPHIA, PA.

BULL TERRIERS

From Champion Stock. G. H. DAVISON,
Altamont Kennels, Millbrook, N. Y.

FARMERS We make the only Saw Mill in America that *fully* suits your purpose. Cuts 2000 ft. per day with 4 H. P., and 10,000 with 15 H. P. Larger sizes up to 50,000 ft. per day. Also Portable Corn and Flour Mills, Water Wheels, etc. Send for catalogue. DeLOACH MILL MFG. CO., ATLANTA GA.

A CHRISTMAS GIFT

A WHOLE PRINTING OUTFIT, Complete and Practical, Just as shown in cut. 3 Alphabets of neat Type, Bottle of Indelible Ink, Pad, Tweezers, in neat case with catalogue and directions "HOW TO BE A PRINTER." Sets up any name, prints cards, paper, envelopes, etc., marks linen. Worth 50c. The best gift for young people. Postpaid only 25c., 3 for 60c., 6 for $1. Ag'ts wanted. INGERSOLL & BRO. 45 Fulton St. N.Y. City 25c

HENCH & DROMGOLD'S

All Steel Frame Spring-tooth Harrow

A WONDERFUL IMPROVEMENT.

TEETH QUICKLY ADJUSTED BY ONLY LOOSENING ONE NUT.

The best Tooth Holder ever invented.

The tooth is held in position by a Ratchet with which it can be adjusted so as to wear from 15 to 18 inches off the point of the tooth, which is four or five times as much wear or service as can be obtained from any other Spring-tooth Harrow in existence.

Agents wanted. Catalogues free.
HENCH & DROMGOLD, York, Pa.

THE MAPES COMPLETE MANURES.

—PREPARED SPECIALLY FOR—

Potatoes, Early Truck, Corn, Orchards and Vineyards (also for Improvement of Quality of Fruit), Grain Crops, Grass Top-Dressing, Small Fruits, Tobacco, Orange and Truck Growing in Florida, Pineapples and other Tropical Fruits, Etc.

These Fertilizers are True Manures, Not Stimulants.

The official State Agricultural Station Reports show the Mapes Manures to be

THE HIGHEST GRADE MADE AND THE CHEAPEST TO THE FARMER.

They Contain the Largest Quantity of Soluble Plant Food as Compared with Cost.

PROF. GEORGE H. COOK, of the New Jersey Experiment Station, reports, in a late bulletin, what the R. N.-Y. has so persistently endeavored to impress upon its readers.

As a rule, he says, the fertilizer which contains the greatest amounts of nitrogen, phosphoric acid and potash is the cheapest; for the cost of manufacture, freightage and rate of commission are the same for high-grade as for low-grade fertilizers, and *the labor on the part of the farmer is increased as the grade of the goods decreases.*

The R. N.-Y. confidently anticipates the time when there will be no demand whatever for low-grade fertilizers.—*Rural New-Yorker, Aug. 24th,* 1889.

Farms Growing Steadily Richer, and Profits Increasing from the Long-Continued Use of the Mapes Manures.
NO EXHAUSTION IN ANY CASE.

"Jersey Farms That Pay."

THE RURAL NEW-YORKER, June 22d, 1889, states: "And while on this subject the R. N.-Y. is led to refer to a farming community it has just visited. This community is in New Jersey, within 50 miles of New York. The cheap lands of the West will so flood Eastern markets with staple products that New Jersey farmers will have to become gardeners or truckers! Farming cannot be done without the use of stable manure as a basis; chemical fertilizers will 'burn up' the soil! At certain seasons of the year we hear these statements repeated over and over again. How ridiculous they appear after a visit to the community we speak of. Here we have a class of farmers growing rich at producing hay, potatoes, corn and wheat. Yes, actually growing rich at producing Western products within 50 miles of New York. And it is done practically *without stable manure; a farm having less than* 10 *head of cattle sells from* $1,000 to $1,200 *worth of hay and absolutely grows stronger and more productive each year.* Under such a system of agriculture the boys stay at home, farm life is robbed of its worst features and becomes a very ideal life of comfort and happiness. We saw this life realized—saw the crops, the tools, the men. We were so interested in it that we propose to tell R. N.-Y. readers just what we saw. We hope our report will lead to some hard thinking. It will be nothing but a report as honestly written as possible."

The reports on these farms may be found in the RURAL NEW-YORKER, on pages 441 and 442, July 6th, and on pages 459 and 460, July 13th, 1889, under heading "New Jersey Farms that Pay." On these farms (D. C. Lewis's and others) the Mapes Manures have been used almost exclusively from ten to fifteen years successively, and the crops *average fully* double those grown in former years under the systems then practiced. Poor lands are now purchased at current low rates with confidence by farmers who know from experience that they can bring up these lands into good, profitable grass-growing condition, and make money from the start.

Vegetable Growing----Early Truck.

FROM THE RENOWNED NEW JERSEY TRUCK-GROWER, THEO. F. BAKER.

BRIDGETON, N. J., October 16th, 1889.

Mr. Charles V. Mapes:

It is with pleasure I report on the use and application of the Mapes Vegetable Manure. During the season just passed, I used it in comparison with other good fertilizers, but more especially against one brand having an analysis of six per cent. ammonia, 10 per cent. phosphoric acid, and five per cent. potash. Also used it in combination with stable manure, and alone. Applied from 500 pounds to 2,000 pounds per acre, as to the requirements of the crop to be grown, on the following crops: beets, radishes, early cabbage, early tomatoes, peppers, celery and late potatoes. While we have had a continued wet season, and all forms of manures and fertilizers have had a most favorable opportunity to do their best, the Vegetable Manure **stands at the head,** and showed by its marked effects upon all crops treated to an application to be the **most profitable, producing earlier and more abundant yields, most thrifty and less diseased plants.** Especially so with early tomatoes, peppers, early cabbage and potatoes.

Yours truly,

(Signed) THEO. F. BAKER, Bridgeton, N. J.

OVER THIRTY PRIZES WITH THE MAPES VEGETABLE MANURE—1889.

CHESHIRE, CONN., November 12th, 1889.

Mr. Charles V. Mapes,

DEAR SIR: Wishing to try your Vegetable Manure the past season, I used it on some 80 different varieties of vegetables. Where it was used there was a more luxuriant growth of tops and vines than in the neighboring rows and beds where we used barnyard manure.

The yields when the crops were gathered were plainly greater and of better types from the portions where your fertilizers were used than from the remainder of the pieces.

We succeeded in taking first prizes at our State Fair on sweet corn (which the committee classed as extra fine), crookneck squashes, Guernsey parsnips, carrots, onions, potatoes and beans, while at our local fair we were awarded some 30 prizes on our various exhibits.

In experimenting we could only grow a small quantity of each kind, therefore we think our success the greater. I am

Respectfully yours,

(Signed) CHARLES E. LORD.

FROM THE FLORIDA TIMES-UNION, JULY 26, 1889.

Upon the use of fertilizers, to a great extent, will depend the future agricultural greatness of this State. It is getting to be a pleasure to take a tour through our markets and see the advance we have made during the past three or four years. Where we formerly had poor, scrubby, sickly-looking vegetables and fruits, we now have a show that will compare favorably with any of the largest northern cities. Luscious and finely-flavored berries, melons and fruits; choice vegetables of all kinds, many of them comparatively unknown until within the past two or three years. We northerners have sighed for Lima beans and nutmeg melons, heretofore unattainable to us. This year we have both in all their glory, as fine as any raised anywhere. For the great improvement in these lines we must give the credit to the Mapes Fertilizers. They are far more extensively used by vegetable-growers than any other brand, and have given the most remarkable results during the past two years. They are sold all over the State, and to appreciate this fact you have only to ask the question: "What fertilizer do you use to produce this result?" and nine times out of ten the reply will be: "Why, Mapes, of course."

ORANGE TREES.

Extract from the Descriptive Catalogue of the famous Buckeye Nurseries, South Lake Weir, Marion County, Florida, GILLETT BROS., proprietors.—1889:

"We have tried about everything sold in the State in the way of commercial fertilizers, and some time ago came to the conclusion that the Mapes Orange Tree Fertilizer stands at the head of the list. For permanent effect on soil, and wood and fruit development it stands without a rival. In their pamphlet they use no ambiguous language; they agree to give us pure animal bone instead of Charleston phosphate rock, and there is no doubt but what they do it.

Send postal for descriptive pamphlets, (farm crops, trucks, grapes, fruits, etc.) The Mapes Fertilizers, owing to their high concentration are particularly well adapted for long shipment, and make a saving of fully one-half in freight as compared with ordinary Commercial Super-Phosphates.

THE MAPES FORMULA & PERUVIAN GUANO CO., 158 Front Street., New York.

J. R. TYSEN & CO., Forwarding Agents, at Jacksonville, Florida.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII. NO. 2082. NEW YORK, DECEMBER 21, 1889. PRICE, FIVE CENT $2.00 PER YEAR.

Entered According to Act of Congress in the Year 1889, by the Rural New-Yorker, in the Office of the Librarian of Congress, at Washington, D. C.

Field Crops.

THE R. N.-Y. WOMEN'S NATIONAL

Potato Contest.

THE PRIZE-TAKERS.

Wyoming, first; Illinois, second; Minnesota, third; Ohio, fourth; Missouri, fifth; Connecticut, sixth; Michigan, seventh; Canada, eighth; Minnesota, ninth, etc.

OVER 1,000 ENTRIES.

200 Souvenirs Awarded.

The Mapes Formula and Peruvian Guano Co., New York, $100 in cash for the largest yield grown with the Mapes Potato Manure, stable manure, or both.

Awarded to Mrs. Eliza Day, Johnson County, Wyoming. Yield at the rate of 1,015⅜ bushels per acre on one-twentieth of an acre.

Rural New-Yorker First Prize $50 cash.

Awarded to Mary Rusk, Madison County, Illinois. Yield at the rate of 970.66 bushels per acre on one-fortieth of an acre.

Bowker Fertilizer Co., Boston, Mass. One ton Stockbridge Potato Fertilizer.

Awarded to Mrs. M. J. Covell, Erie County, Ohio. Yield 920 bushels to the acre on one-twentieth of an acre. This prize was won by Emma Hissam, but on account of freight charges it was forwarded to Ohio instead of Minnesota.

Lawson Valentine, President of the Christian Union Co., N. Y.—The following books (first prize) selected from the catalogue of Houghton Mifflin & Co.:

Walden by Thoreau.
Excursions in Field and Forest, by Thoreau.
Summer, by Thoreau.
Winter, by Thoreau.
Fresh Fields, by Burroughs
Locusts and Wild Honey, by Burroughs.
Winter Sunshine, by Burroughs.
Wake-Robin, by Burroughs.
Signs and Seasons, by Burroughs.
A Treasury of Thought, by Maturin M. Ballou.
Talks Afield about Plants and the Science of Plants, by Prof. Bailey.
The Philosophy of Eating, by Bellows.
Pictures of Country Life, by Alice Cary.
The Building of a Brain, by Dr. Clarke.
Rural Hours, by Susan Fennimore Cooper.
Hints on Household Tastes, by Perkins.
Castilian Days, by Hay.
The Autocrat of the Breakfast Table by Holmes.
One Hundred Days in Europe, by Holmes.
The Common Sense of Money, by Howe.
Smoking and Drinking, by Parton.
The Gates Ajar, by Elizabeth Stuart Phelps.
Beyond the Gates, by Elizabeth Stuart Phelps.
The Gates Between, by Elizabeth Stuart Phelps.
Popular Flowers, by Rand.
My Summer in a Garden, by Warner.

Awarded to Emma Hissam, Steele County, Minnesota. Yield at the rate of 935 bushels per acre on one-twentieth of an acre. It was a question upon which the judges were divided whether Miss Hissam is not entitled to second prize, her acreage being one-twentieth of an acre.

Lawson Valentine (second prize). The Waverly set of Sir Walter Scott's novels, comprising 25 volumes.

Awarded to Mrs. Agnes C. Cameron, Texas County, Missouri. Yield 854⅜ bushels on one-fortieth of an acre. Having performed all the work herself, she receives another prize as noted below.

C. L. Ingersoll, President of the Colorado State Agricultural College, $25, in 10 volumes of the works of Washington Irving, neatly bound.

Awarded to Mary E. Warren, Fairfield County, Connecticut. Yield 810 bushels to the acre, the area being one-fortieth.

Prof. J. L. Budd, Iowa State College, Ames, 50 trees of valuable new apples, pears, cherries, plums, apricots and ornamental trees and shrubs suited to the climate of the prize-taker.

MRS. AGNES C. CAMERON.

WINNER OF FIFTH PRIZE. FIG. 299. PAGE 836.

First prize.—Awarded to Mrs. Mary A. Presly. St. Clair County, Michigan. Yield 766 bushels per acre.

Second prize (PROF. BUDD).—Awarded to Mrs. Daniel Dunn, Algoma, Canada. Yield 719⅛ bushels per acre, the area being one-fortieth.

Prof. J. L. Budd, as above; third prize.

Awarded to Sarah A. Smith, St. Louis County, Minnesota. Yield 700 bushels, the area being one-fortieth.

Thorburn & Co., (New York), $25 worth of seeds (flower or vegetable) from their catalogue for 1890.

Awarded to Mrs. J. W. Baker, Bureau County, Illinois. Yield 695 2-5 bushels, the area being one-thirty-eighth of an acre.

Peter Henderson & Co., (New York), $25 collection of plants or a $25 collection of seeds, to be selected from their 1890 catalogue.

Awarded to Mrs. Etta M. Kline, Whatcom County, Washington. Yield 694 bushels per acre on one-thirty-eighth of an acre.

Rural New-Yorker $30 in cash.

Awarded to Mrs. B. F. Closson, Highland Creek, Ontario, Canada. Yield at the rate of 686 bushels per acre on one-fortieth of an acre.

H. M. Engle & Son, Marietta, Pa., $20 as follows: five Paragon Chestnut trees, five "Good" peach trees, 50 peach trees, assorted leading varieties.

Awarded to Mrs. F. A. Bly, Butler County, Nebraska. Yield 657 bushels per acre on one-fortieth of an acre.

John A. Salzer, La Crosse, Wis., $20 in flower seeds, to be selected from his 1890 catalogue.

Awarded to Mrs. Nancy J. Neff, Belmont County, Ohio. Yield 663⅛ bushels per acre on one-fortieth of an acre.

Rural New-Yorker $20 in cash.

Awarded to Mary McKenzie, Lawrence County, South Dakota. Yield 660 bushels per acre on one-thirty-third of an acre.

E. E. Stine, Cuyahoga Falls, O., $18 in a trio of pure-bred White Holland turkeys and (2) one barrel of choicest seed potatoes in his collection grown the past season.

Awarded to Cora E. Clark, Steele County, Minn. Yield 660 bushels per acre on one-fortieth of an acre.

Chadborn & Coldwell Manufacturing Co. (Newburgh, N. Y.), one 14-inch New Model Lawn Mower.

Awarded to Mrs. R. N. Lewis, Dutchess County, New York. Yield 640⅝ bushels per acre on one-fortieth.

Paine, Diehl & Co. (Philadelphia, Pa.), one 7½-pint Self-pouring, Quadruple Silver-plated Tea-pot, listed at $16.50.

Awarded to J. S. McChesney, Louisa County, Iowa. Yield 638⅝ bushels per acre on one-fortieth.

F. M. Hance Elyria, Ohio, $16 in one trio of Black Cochins and one trio of Light Brahmas.

To E. Mahan, Beaver County, Pennsylvania. 634 bushels.

P. J. Berckmans, President of the American Pomological Society, $10 in cash.

To Eda M. Haskell, Scott County, Illinois, 633 1-10 bushels.

Benjamin Hammond, Fishkill, N. Y., $12, as follows: Two kegs of Hammond's Slug Shot, 125 pounds each; two packages of Grape Dust, 10 pounds each.

To Mrs. M. A. Gager, Howard County, Iowa, 630⅜ bushels.

John Saul, Washington, D. C., $10 in choice plants to be selected from his catalogue.

To Lizzie Abel, Belmont County, Ohio, 626 bushels.

D. Landreth & Sons, Philadelphia, Pa., $10 worth of seeds from their 1890 catalogue.

To Emma Wilson, Shelby County, Illinois, 624 bushels.

W. W. Rawson & Co., Boston, Massachusetts, $10 worth of vegetable or flower seeds, to be selected from their 1890 catalogue.

To Mrs. Edward Wilkinson, Muskingum County, Ohio, 620 bushels.

Lieut.-Gov. Jones, of Binghamton, N. Y., $10 in two platform scales.

To Mrs. E. Mainwood, Will. County, Illinois, 615⅛.

J. C. Vaughan, Chicago, Illinois, $10 collection of flowering bulbs, selected from his catalogue for 1890.

To Annie Anderson, Kitsap County, Washington, 612⅜ bushels.

Northrup, Braslan & Goodwin Co., Minneapolis, Minnesota, $10 in any kind of seeds from their 1890 catalogue.

To D. Devers, Indiana County, Pennsylvania, 612⅜.

W. S. Waite, Haley, Tennessee, $10 in a pair of either of the following breeds cooped and delivered at express station: Houdans, Langshans, Silver Wyandottes, Leghorns, W. F. B. Spanish, P. Cochins, Light Brahmas.

To Mrs. J. F. Pitt, Allamakee County, Iowa, 608 bushels.

Pomeroy & Pearson, Lockport, N. Y., $9 in one set (No. 4) Botsford Wagon Springs.

To Mrs. L. E. Wood, Dade County, Missouri, 606⅜ bushels.

Porter Blanchard's Sons, Concord, N. H., $8 in a No. 5 Blanchard Family Churn.

Mrs. Alice Brown, Livingston County, Illinois, 605⅜ bushels.

W. R. Norris, Sodus, N. Y., $8 in one trio of thoroughbred Light Brahmas.

M. J. Auten, Cedar County, Iowa, 603⅛ bushels.

James Pyle & Sons, New York, $7.50 in five boxes of Pearline, one dozen pounds each.

To Mrs. Mary A Cowgill, Benton County, Indiana, 597 bushels.

Henry Stewart, Highlands, N. C., $6.50 in the five works of which he is author, viz: Culture of Farm Crops, Dairyman's Manual, Shepherd's Manual, Irrigation for the Farm, Orchard and Garden.

To Mrs. L. A. Lane, Waushara County, Wisconsin, 591⅛ bushels.

Frank Siddall (Philadelphia, Pa.), one box of Frank Siddall's Soap, freight paid.

To Mrs. N. W. Pratt, Macoupin County, Illinois, 591⅛ bushels.

Gen. Wm. G. Le Duc, Hastings, Minn., $5 in cash.

To Flora Brown, Carroll County, Missouri, 588⅜ bushels.

Gen. N. M. Curtis, Ogdensburgh, N. Y., $5 in cash.

To Mrs. Rose T. Bigham, Livingston County, Illinois, 576 bushels.

W. A. Stiles, editor of Garden and Forest, New York, $5 in cash.

To Jane Reed, Rush County, Indiana, 574 bushels.

Sec'y. J. S. Woodward, Lockport, N. Y., $5 in cash.

To Mrs. Nancy Peck, Sonoma County, California, 570 bushels.

W. B. Alwood, vice-director of the Virginia Experiment Station, $5 in cash.

Mrs. D. A. Roorda, Marion County, Iowa, 567⅛ bushels.

George B. Loring, M. D., Washington, D. C., $5 in cash.

To Kate McFadden, Josephine County, Oregon, 564 bushels.

Charles J. Wright, Fergus Falls, Minn., $5 in cash.

To Mrs. O. Brown, Berrien County, Michigan, 560 bushels.

Prof. C. V. Riley, U. S. Entomologist, $5 in cash.

To Mrs. Aurilla Bartlett, Erie County, New York, 555 11-15 bushels per acre on one-thirty-second acre.

Mrs. E. E. Stine, Cuyahoga Falls, O., $5 as an extra souvenir to the lady who raises the largest crop by her own personal cultivation, hoeing and all necessary work.

Awarded to Mrs. Agnes C. Cameron, Texas County, Missouri. See Fifth prize.

Dr. W. J. Beal, Michigan Agricultural College, $5 in his two volumes entitled The Grasses of North America.

To Mrs. W. L. Waite, Coffee County, Tennessee, 554 bushels.

R. & J. Farquhar & Co., Boston, Mass. $5 worth of seeds (including the newest varieties of sweet-peas, asters, stocks, dianthus, etc.) to be selected from their 1890 catalogue.

To Mrs. D. T. Boyles, Cowley County, Kansas, 551⅛ bushels.

Joen S. Pearce & Co., London, Ont., $5 in seeds selected from their catalogue.

To Mary W. Hannah, Thurston County, Washington, 546⅜ bushels.

W. Atlee Burpee (Philadelphia, Pa.), $25 worth of vegetable and flower seeds, selected from their 1890 catalogue, in five premiums of $5.00 each.

First prize awarded to Adelia J. N. Peet, Marshall County, Iowa, 544 bushels.

Second prize awarded to Mary E. Haynes Licking County, Ohio, 541⅛ bushels.

Third prize awarded to Sarah E. Chamberlain, Orleans County, N. Y., 540 bushels.

Fourth prize awarded to Mrs. L. Kelley, Berrien County, Mich., 540 bushels.

Fifth prize awarded to Mrs. Elizabeth A. Fassett, Addison County, Vt., 535⅛ bushels.

Wilson Bros., Easton, Pa., $5 in a bone and shell mill.

To Phillipia Brumlay, Putnam County, Ohio, 534 bushels.

Mrs. James H. Lampman, Coxsackie, N. Y., $5 in a choice between a pair of Rouen and Imperial Pekin ducks.

To Julia S. Frogner, Grant County, Minnesota, 532 bushels.

R. N. Lewis, Red Hook, N. Y., $5 in a trio of Laced Wyandottes.

To Mrs. E. S. Lincoln, La Crosse County, Wisconsin, 530 bushels.

Theodore Neff, Bellaire, Ohio, $5 in strawberry or raspberry plants or grape vines, as may be selected.

To Mrs. C. M. Latshaw, Vernon County, Wisconsin, 529⅛ bushels.

O. P. Putnam, Leominster, Massachusetts, $5 in one pair of thoroughbred Barred Plymouth Rock chicks.

To Mrs. C. E. Dingman, Jasper County, Iowa, 520 bushels. Area 1-20 acre.

H. L. Barricklow, Rising Sun, Indiana, $5 in grape vines and ornamental shrubs.

To Mrs. A. N. Wisner, Berrien County, Michigan, 522 bushels.

Mrs. F. H. Valentine, Cranford, N. J., $5 in one pair of pure-bred Silver Wyandotte chicks, or three settings of eggs of the same breed.

To Mrs. Margaret Sneddon, Lancaster County, Nebraska, 516 bushels.

A. P. Allen, Meadville, Pennsylvania, $3 in one Single-combed White Leghorn cockerel, delivered at express office.

To Mrs. A. Miller, Frankford, Ontario, Canada, 513 bushels.

S. H. Parvin's Sons, Cincinnati, O., Six of Moody's Taylor System of Dressmaking. Price of each, $5.

First prize to Mary Weaver, Rock County, Nebraska, 509⅛ bushels.

Second prize to Mrs. O. V. Rollins, Wabasha County, Minnesota, 507⅛ bushels.

Third prize to Josephine Beasley, Skagit County, Washington, 506⅝ bushels.

Fourth prize to Mrs. Rebecca Wright, Kosciusko County, Indiana, 500⅝ bushels.

First prize awarded to Jennie S. Austin, Shawnee County, Kan., one-sixteenth acre., 484 bushels.

Second prize awarded to Myrtle Wright, Kosciusko County, Ind., 478 bushels.

Third prize awarded to Mrs. C. M. DeSel, Kaufman County, Texas, 480 bushels.

William B. Reed, Chambersburg, Pa., $20 in 10 collections of one dozen roses each for 10 souvenirs to as many ladies.

First prize awarded to Mrs. Isaac F. Crosby, McLeod County, Minn., 478 bushels.

Second prize awarded to Isa Thurwachter, Monroe County, Ill., 470 bushels.

Third prize Mrs. A. J. Jones, Sauk County, Wis., 461¼ bushels.

Fourth prize awarded to Mrs. B. C. Dunlap, Walworth County, Wis., 460 bushels.

Fifth prize awarded to Phœbe Martin, Gilliane County, Oregon, 459⅛ bushels.

Sixth prize awarded to Jessie Rupert, Douglas County, Kansas, 454 bushels.

Seventh prize awarded to Hannah A. Morton, Wright County, Iowa, 453⅛ bushels.

Eighth prize awarded to Mrs. E. T. Hammond, Winona County, Minn., 449 3-20 bushels.

Ninth prize awarded to Mrs. Wilbur C. Jennings, Fairfield County, Conn., 448 bushels.

Tenth prize awarded to Kate L. Durkee, Fluvanna County, Va., 448⅜ bushels.

MISS MARY RUSK.

WINNER OF SECOND PRIZE. FIG. 300.

Fifth prize to Mrs. W. B. Rogers, Bourbon County, Kentucky, 520⅜ bushels. This would have been awarded an earlier prize had it been received in time.

Sixth prize to Mrs. J. W. Johnson, Clark County, Kentucky, 496 bushels.

Woodason Bellows Works (Philadelphia, Pa.), $30 in powder and spraying bellows, viz: two patent double-cone bellows, extra size; two patent double-cone bellows, regular size; three single-cone bellows, large size; three single-cone bellows, regular size; two spraying bellows, regular size; in five prizes.

First Prize awarded to Mrs. C. E. Shippee, Warren County, Pa., 493⅛ bushels.

Second prize awarded to Mrs. C. M. Grossman, La Grange County, Ind., 492 bushels.

Third prize awarded to Martha Buxton, Vermilion County, Ill., 491⅛ bushels.

Fourth prize awarded to Mrs. Orson Grover, Hillsdale County, Michigan, 488 bushels.

Fifth prize awarded to Elizabeth A. Taylor, Dane County, Wis., Area one-thirty-third acre, 487 3-10 bushels.

T. H. Hoskins, M. D., Newport, Vt., $10 in iron-clad apple trees (his selection) in three premiums.

John H. Evans, Lewiston, Idaho, $12 in Idaho pear trees, one to each of six successful competitors.

First prize awarded to Mary J. Cory, Hillsdale County, Mich., 446⅜ bushels.

Second prize awarded to Mrs. Emma Bacon, Lake County, Ill., 444 bushels.

Third prize awarded to Mrs. C. J. Majory, Ocean County, N. J., 440 bushels.

Fourth prize awarded to Mrs. Eliza Spear, Ingham County, Mich., 440 bushels.

Fifth prize awarded to Mrs. J. Van Wie, Salem, Kenosha County, Wis., 440 bushels.

Sixth prize awarded to Mrs. P. B. Roberts, De Kalb County, Ind., 440 bushels.

Bratnerd & Armstrong Co. (Philadelphia, Pa.), six boxes Assorted Colors Embroidery Silk, put up one ounce in a box.

Awarded to Fannie Dick, Washington County, Minn., 437⅛ bushels.

Bartlett & Dow, (Lowell, Mass.), one Common-Sense Milk Pail.

Awarded to Mrs. L. Fisher, Johnson County, Kan., 436 bushels.

G. W. Fry, Dunlap, Mo., a choice of a setting of eggs of either Silver Wyandottes or R. C. B. Leghorns.

Awarded to Mrs. Thos. Stone, Greene County, Mo., 434⅜ bushels.

The White Mountain Freezer Co., Nashua, N. H., one four-quart White Mountain Freezer.

Awarded to Mrs. A. J. Gale, Waukesha County, Wisconsin, 434⅜ bushels.

Giddings & Read, Rutland Vt., $65, as follows: Ten prizes of 20 bulbs each of Woodbury's choice gladioli.

First prize awarded to Mrs. John H. Jackson, Erie County, N. Y., 434 bushels.

Second prize awarded to Mrs. W. H. Glosser, Warren County, Ohio, 428⅜ bushels.

Third prize awarded to Mrs. W. W. Hunt, Cuyahoga County, Ohio, 425⅛ bushels.

Fourth prize awarded to Martha A. S. Webster, Orleans County, N. Y., one-twentieth acre, 422 bushels.

Fifth prize awarded to Mrs. Kate A. Myers, Pawnee County, Kansas, 420 bushels.

Sixth prize awarded to Mrs. Jas. B. Nye, La Crosse County, Wisconsin, 420⅜ bushels.

Seventh prize awarded to Mrs. Annie V. Marsac, Emmet County, Michigan, 420 bushels.

Eighth prize awarded to Mrs. J. H. Warn, Lucas County, Ohio, 416 2-3 bushels.

Ninth prize awarded to Lucy E. Harbison, Waseo County, Oregon, 416 2-3 bushels.

Tenth prize awarded to Mrs. A. F. Morse, Audrian County, Missouri, 415 1-3 bushels.

Ten prizes of one peck each of Rogers's Seedling Potato.

First prize awarded to Annie V. Hugus, Ohio County, West Virginia, 414 5-6 bushels.

Second prize awarded to Mary C. Ingram, Chester County, Pennsylvania, 413 2-5 bushels.

Third prize awarded to Marguerith Huber, Rock Island County, Illinois, 411 9-20 bushels.

Fourth prize awarded to Augusta A. Palfreyman, Middlesex County, Massachusetts, 410 bushels.

Fifth prize awarded to Grace Sanders, Kendall County, Illinois, 410 bushels.

Sixth prize awarded to Mrs. G. M. Earl, Passaic County, New Jersey, 406⅜ bushels.

Seventh prize awarded to Mrs. Lewis B. Wheeler, Worcester County, Massachusetts, 406⅜ bushels.

Eighth prize awarded to Mary Hutton, Madison County, Indiana, 406⅜ bushels.

Ninth prize awarded to Mrs. Ada A. Haskins, Boone County, Illinois, 406⅜ bushels.

Tenth prize awarded to Mintie Grissom, Daviess County, Kentucky, 406 bushels.

Ten prizes of one pound each of the new potato, Vermont Wonder, not yet offered for sale.

First prize awarded to Laura E. Rice, Midland County, Michigan, 403 2-15 bushels.

Second prize awarded to Fannie Rupert, Douglas County, Kansas, 401 11-12 bushels.

Third prize awarded to Jane Hewitt, Mitchell County, Kansas, 400⅜ bushels.

Fourth prize awarded to Mrs. A. B. Cogwin, Oneida County, New York, 400 bushels.

Fifth prize awarded to Mrs. Myra L. Parsons, Bay County, Michigan, 400 bushels.

Sixth prize awarded to Lizzie Mahony, St. Lawrence County, New York, 399⅛ bushels.

Seventh prize awarded to Mrs. S. J. Eyerly, Fulton County, Illinois, 398 2-3 bushels.

Eighth prize awarded to Sophia E. Adams, Smithville, Ontario, Canada, 396 bushels.

Ninth prize awarded to Mrs. S. H. Calkins, Clinton County, N. Y., 396⅜ bushels.

Tenth prize awarded to Mrs. Betsy B. Colby, Merrimack County, N. H., 393⅛ bushels.

Ten prizes of one pound each of Read's Red Giant not yet offered for sale.

First prize awarded to Mrs. J. A. Childburg, Skagit County, Washington, 392 bushels.

Second prize awarded to Mrs. A. M. Rouse, Boone County, Ky., 390⅜ bushels.

Third prize awarded to Mrs. F. Willis, Washington County, N. Y., 390 bushels.

Fourth prize awarded to Annie E. Harrison, Franklin County, Kansas, 390 bushels.

Fifth prize awarded to Mrs. Thomas Geddie, Brant County, Ontario, Canada, 389⅛ bushels.

Sixth prize awarded to Mrs. J. W. Roberts, Monmouth County, New Jersey, 388 5-6 bushels.

Seventh prize awarded to Mrs. O. J. Putnam, Worcester County, Massachusetts, 387 2-5 bushels.

Eighth prize awarded to Miss Hattie B. Colby, Merrimac County, New Hampshire, 386⅜ bushels.

Ninth prize awarded to Mrs. A. R. Wright, Mecosta County, Michigan, 385⅛ bushels.

Tenth prize awarded to Mrs. A. M. Parsons, Choteau County, Montana, 384 bushels.

Ten prizes, $1.50 each of seeds of any kind, to be selected from their 1890 catalogue.

First prize awarded to Mrs. R. J. Evans, Eau Claire County, Mich., 380 bushels.

Second prize awarded to Mrs. C. S. Stilz, Sumner County, Tenn., 376 bushels.

Third prize awarded to Elizabeth Lawrence, Jefferson County, Iowa, 376⅜ bushels.

Fourth prize awarded to Jessie B. Adams, Kalamazoo County, Mich., 375⅛ bushels.

Fifth prize awarded to Mrs. J. N. Muncey, Buchanan County, Iowa, 373 9-10 bushels.

Sixth prize awarded to Mrs. Henry Beythan, Saginaw County, Michigan, 372 bushels.

Seventh prize awarded to Mrs. Maria Watts, Henry County, Iowa, 368⅛ bushels.

Ninth prize awarded to Mrs. Emma A. Heckman, De Kalb County, Illinois, 366 bushels.

Tenth prize awarded to Mrs. J. H. Valett, New London County, Connecticut, 360 bushels.

Toledo Blade Toledo, Ohio, $5 in five yearly subscriptions.

First prize awarded to Mrs. J. N. Ballinger, Logan County, Ohio, 360 bushels.

Second prize awarded to Mrs. M. E. Carter, Wythe County, Virginia, 360 bushels.

Third prize awarded to Annie Evendon, Yam Hill County, Oregon, 360 bushels.

Fourth prize awarded to Mrs. E. Blagden, Wentworth County, Ontario, 360 bushels.

Fifth prize awarded to E. C. Stirling, Chester County, South Carolina, 360 bushels.

S. Frogner, Herman, Minn., $20 in potatoes, as follows: The pound prizes to be sent post paid: the pecks to be sent by express at recipient's expense. Nine prizes of one peck each of Early Minnesota (new).

First prize awarded to Mrs. Susan Groff, Frederick County, Maryland, 359 1-3 bushels.

Second prize awarded to Mrs. Phebe Kuder, Medina County, Ohio, 358 2-3 bushels.

Third prize awarded to Mrs. W. P. McManus, Chautauqua County, New York, 356 bushels.

Fourth prize awarded to Mrs. M. H. Pitkin, Washington County, Vermont, 353 1-3 bushels.

Fifth prize awarded to Lizzie Johnson, Cattaraugus County, New York, 352 bushels.

Sixth prize awarded to Mrs. K. Farrington, Buffalo County, Wisconsin, 350 bushels.

Seventh prize awarded to Rose E. Haight, Orleans County, New York, 350 bushels.

Eighth prize awarded to Mrs. H. O. Nash, Jefferson County, Montana, one-twentieth acre, 348 2-3 bushels.

Ninth prize awarded to Mrs. R. Morrell, Berrien County, Michigan, 348 2-3 bushels.

Ten prizes of one pound each of No. 18 (not for sale.)

First prize awarded to Mrs. C. H. Warner, Jefferson County, Missouri, one twenty-first acre, 348 3-5 bushels.

Second prize awarded to Mrs. M. Manders, Faribault County, Minnesota, 347 2-3 bushels.

Third prize awarded to Drusilla J. Young, Suffolk County, New York, 346 2-3 bushels.

Fourth prize awarded to Mrs. F. H. Nye, La Crosse County, Wisconsin, (1-29 acre), 342 bushels.

Fifth prize awarded to Mrs. Maggie M. Armour, Victoria Road, Ontario, Canada, 342 bushels.

Sixth prize awarded to Mrs. E. E. Stine, Summit County, Ohio, 340 bushels.

Seventh prize awarded to Miss Leila M. Young, Suffolk County, N. Y., 336⅛ bushels.

Eighth prize awarded to Mrs. J. E. P. Randlett, Belknap County, New Hampshire, 336 2-5 bushels.

Ninth prize awarded to Maria J. Hopkins, Crawford County, Pennsylvania, 336⅜ bushels.

Tenth prize awarded to Alice Gaston, Reno County, Kansas, 335 7-15 bushels.

Ten prizes of one pound each of No. 64 (not for sale).

First prize awarded to Mrs. D. A. Starr, New London County, Connecticut, 334 bushels.

Second prize awarded to Mrs. Mary Wharton, Iowa County, Iowa, 334 bushels.

Third prize awarded to Mrs. M. M. Sornborger, Shasta County, California, 333⅛ bushels.

Fourth prize awarded to Mrs. J. A. Brace, Orleans County, New York, 333⅛ bushels.

Fifth prize awarded to Elizabeth F. Andrews, Wythe County, Virginia, 332 bushels.

MISS SARAH A. SMITH.

WINNER OF NINTH PRIZE. FIG. 301.

Sixth prize awarded to Mrs. George A. Newcomb, Cattaraugus County, New York, 330⅜ bushels.

Seventh prize awarded to Mrs. W. J. Walker, Worcester County, Massachusetts, 330 bushels.

Eighth prize awarded to Mrs Thomas Wilde, Ottawa County, Michigan, 329 3-5 bushels.

Ninth prize awarded to Miss Mamie Groff, Frederick County, Maryland, 329⅛ bushels.

Tenth prize awarded to S. A. Woodburn, Whiteside County, Illinois, 328 7-30 bushels, on 1-29 acre.

Fifth prize awarded to Mrs. Wm. Benson, Adams County, Illinois, 323 17-30 bushels.

Sixth prize awarded to Mrs. A. J. Fulkerth (No address) 324 bushels.

Seventh prize awarded to Fannie S. Kenyon, Fairfax County, Virginia, 322 2-3 bushels.

Eighth prize awarded to Mrs. Charles C. Dimon, Suffolk County, N. Y., 321⅛ bushels.

Ninth prize awarded to Samantha R. Hearn, Williamson County, Illinois, 320 bushels.

Tenth prize awarded to Mrs. Eugene G. Horton, Suffolk County, N. Y., 320 bushels.

Mrs. D. Haskell, Exeter, Scott County, Illinois, $5 in 12 prizes one dozen each of mixed tulip bulbs, to be sent post paid.

First prize awarded to Daisy Turck, Oswego County, N. Y., 320 bushels.

Second prize awarded to Mrs. H. H. Alley, Essex County, New Jersey, 312½ bushels.

Third prize awarded to Miss Minnie Muller, Otter Tail County, Minnesota, 308 2-3 bushels.

Fourth prize awarded to Mrs. Phebe M. Sheldon, Sheboygan County, Wisconsin, 308 bushels.

MRS. MARY E. WARREN.

WINNER OF SIXTH PRIZE. FIG. 302.

Ten prizes of one pound each of No. 50 (not for sale).

First prize awarded to Julia Osborn, Rensselaer County, N. Y. 328 1-15 bushels.

Second prize awarded to Mary Brown, Story County, Iowa, 328 bushels.

Third prize awarded to Phebe Oldroyd, Hampden County, Massachusetts, 326 bushels.

Fourth prize awarded to May Greethurst, Winona County, Minnesota, 326 bushels.

Fifth prize awarded to Nellie Brown, Story County, Iowa, 308 bushels.

Sixth prize awarded to Mrs. H. A. Horton, Emmet County, Michigan, 307⅛ bushels.

Seventh prize awarded to Mrs. Alfred Cook, Grafton County, New Hampshire, 306 2-3 bushels.

Eighth prize awarded to Lillian Shaw, Chase County, Kansas, 306 2-3 bushels.

Ninth prize awarded to Mrs. John Aldons, Welland County, Ontario, Canada, 306 2-3 bushels.

Tenth prize awarded to Ruth Jones, Washington County, Wisconsin, 305⅛ bushels.

Eleventh prize awarded to Mrs. Dennis M. Johnson, Erie County, New York, 304¼ bushels.

Twelth prize awarded to Mrs. C. M. Maxwell, Chautauqua County, New York, 304 bushels.

M. Murray, Centre, Ohio, five premiums, each consisting of two pounds of Ross's Favorite Potato (new.)

First prize awarded to Mrs. Janette Potter, Ontario County, New York, 303⅜ bushels.

Second prize awarded to Mrs. F. L. Avery, Middlesex County, Massachusetts, 305½ bushels.

Third prize awarded to Mrs. W. H. Cameron, Jewell County, Kansas, 303⅜ bushels.

Fourth prize awarded to Mrs. G. B. Grantier, Cattaraugus County, New York, 302 2 3 bushels.

Fifth prize awarded to Mrs. Wm. Middlemiss, Delaware County, New York, 301⅜ bushels.

Mrs. O. J. Putnam, $1 in one dozen bulbs of Freesia refracta alba.

Awarded to Mrs. M. M. Cable, Lincoln County, South Dakota, 301 1-3 bushels.

MRS. ELIZA DAY'S REPORT (FIRST PRIZE.)

The plot was 33x66 feet. The land was flat, sandy, naturally well drained. Strawberries had been raised on it for the previous three years and yielded good average crops. No fertilizer or manure was used. The ground was plowed on April 18th, five inches deep. The potatoes were planted on April 25th in trenches six inches deep, in rows two feet apart, 10 inches apart in the row; weight 120 pounds; variety Early Vermont; number of eyes in a piece, two. The weather was dry and cool. The vines were injured by frost on June 6. The crop was cultivated with the hoe on June 15 and July 3. The vines grew to a hight of 34 inches, and were three-fifths of an inch in size. They bloomed July 10 and were killed by frost on September 10. Beetles did no injury. The crop was harvested in September. There were 2,914 pounds or 48 bushels 33 pounds of marketable tubers, and 134½ pounds or two bushels 14½ pounds of unmarketable; total number of bushels 50.79, or at the rate of 1,015 4-5 to the acre. The tubers are shapely and smooth, the eyes medium. In raising another crop I would proceed in the same way except that I would make the rows two feet six inches apart. The crop was irrigated twice. The season was the most unfavorable we have had for eight years.

I do hereby affirm that the report herewith sent the R. N.-Y. is true in every particular. MRS. ELIZA DAY.

Johnson County, Wyoming.

We do hereby affirm that we measured the plot of Mrs. Day and found it of the exact area she states. We further affirm that we saw the potatoes dug and weighed as they were dug and that her statement is correct.

Signed: T. J. KEESEE.
W. J. STURGIS.
SID. S. STURGIS.

MARY RUSK'S REPORT (SECOND PRIZE.)

The plot was 33 feet square. It was a rolling, sandy, dry soil naturally drained. It had been a hog-pen for three years. The following year it had been under turnips and a large crop was harvested. The following year large crops of cabbages and tomatoes were raised on the same plot. I used no fertilizer whatever. The land was plowed on April 10th, seven inches deep. On the same date it was harrowed and rolled. Before the trenches were made it was thoroughly worked up with a triangular hoe, and the trenches were made with the same. The potatoes were planted on April 13th. The variety was the Chicago Market. The potatoes planted were of ordinary size, containing two to three eyes each. The weight of potatoes planted was 38½ pounds. They were freshly cut and planted in trenches four inches deep and 13 inches apart. The rows were two feet apart and the pieces were covered with a hoe. The weather was wet and cool. The crop was cultivated once on May 9th with the potato-digger, going about six inches deep between the rows. The plot was covered with straw on May 11th. The vines were three feet high and the stems two inches in size. They bloomed May 30, and began to die July 29, and were dead August 30.

London-purple applied once with a watering pot was used to kill the Colorado beetles. The crop was harvested September 4. Total yield 24 bushels and 16 pounds; or at the rate of 970.66 bushels to the acre. Four bushels and six pounds were unmarketable. The tubers on the average were smooth and shapely with rather deep eyes. If I were to engage in another contest I would proceed in the same way.

I do hereby affirm that the report herewith sent the R. N.-Y., is true in every particular. MARY RUSK.

Madison County, Ill.

[The above report, as well as those which follow, are all properly certified to.—EDS. R. N.-Y.]

EMMA HISSAM'S REPORT (THIRD PRIZE).

THE size of the plot was 33x66 feet. The land was flat, clayey and dry and drained naturally. Wheat had been raised on it for the previous three years and yielded 15 bushels to the acre. No fertilizer or manure was used. It was plowed in August, 1888, six inches deep; three loads of manure were applied. Two loads of horse manure each cost 50 cents, and one load of chip manure, 50 cents. The potatoes were planted on April 28, 1889. The "seeds" averaged about seven ounces each and averaged 16 eyes apiece. The total weight of the seed was 90 pounds. They were planted in trenches six inches deep, and three feet 10 inches apart, and were dropped eight inches apart in the trenches. The trenches were made with a two-horse sulky plow. The seed potatoes were cut into four to eight pieces each and the pieces were covered three inches deep with soil. The variety was the Late Rose. The vines were up on May 25, and were frozen to the ground on May 30, but they were up again on June 6. The ground was plowed out with a No. 4 shovel sulky plow on June 11, and the crop was hand-hoed on June 15. We had a very, very dry season and the weather was hot through July and August. The potatoes were plowed again on June 25. The vines were 2½ feet high and the stems half an inch thick. They were in bloom on July 15. The crop got level cultivation, and the ground was plowed shallow. The vines began to die on September 1, and the frost killed them on September 16. No potato beetles troubled them. The crop was harvested on September 24, and the yield was 46 bushels, one peck or at the rate of 925 bushels per acre. Of this quantity 42¼ bushels were marketable and four bushels were unmarketable. The tubers are large, smooth and shapely, with deep eyes. If I were engaged in another contest I would use for a fertilizer chip manure, and leached ashes half and half. I would also plant the potatoes in trenches 8x30 inches apart. Mine were too far apart one way. The following shows the cost of the crop.

Cost of labor, first plowing five cents; plowing the trenches two cents; dropping the potatoes 10 cents; covering them with soil 10; cultivating twice 10; hoeing them once 50 cents; harvesting 75 cents; cost of seed 35; total: $1.97.

I do hereby affirm that the report herewith sent to the R. N.-Y. is true in every particular. EMMA HISSAM.

Steele County, Minn.

MRS. M. J. COVELL'S REPORT (FOURTH PRIZE).

THE soil was sandy. It was an old strawberry bed, and had been plowed after the strawberries were picked, and planted to pickles. A load of hen manure was put on it and it was again plowed the past spring, harrowed and furrowed out with a small shovel plow. The ground planted was 16½ feet wide, and 66 feet long. The "seeds" were planted one foot apart and the ground was cultivated three times and hoed twice. I pulled all the weeds by hand, letting none grow. I worked at them until the vines covered the ground. I hand-picked the vines, destroying every egg and bug that I could find. The crop was dug on October 10 and the yield was 1,380 pounds. Rural Blush and the Green Mountain were the kinds planted, and the tubers were mostly cut one eye to a piece.

Erie County, Ohio.

AGNES C. CAMERON'S REPORT. (FIFTH PRIZE.)

The size of the plot was 33 feet square. It was a flat, clayey, dry piece of land, drained naturally. It had been a calf pasture and was plowed six inches deep. Four wagon-loads of barn-yard manure were put on it. On April 16, 40 pounds two ounces of the Beauty of Hebron and Rural Blush Potatoes were planted six inches deep, in drills. After the vines had appeared a heavy frost, in May, killed them all down to the ground. The spring was very wet and cold. We had more or less rain nearly every day up to wheat harvest. Since then the weather has been warm and there has been very little rain. The crop was hoed twice. The seed-pieces were planted four to five feet apart, and we all thought there would be no potatoes as the vines were so large. They began to die about the first week in August and were dead at the end of the same month. There were no beetles. The crop was harvested on September 18, and the yield was 1,282 pounds, of which 1,260 pounds were marketable and 22 pounds unmarketable. The tubers were very fine and the largest we ever raised. They were smooth and of good shape, with shallow eyes and no scabs. If I had to engage in another contest, I would make no change in my method of raising the crop. The work was all done by myself.

I do hereby affirm that the report herewith sent to the R. N.-Y. is true in every particular.

Texas County, Mo.

MARY E. WARREN'S REPORT (SIXTH PRIZE).

MY little plot was just one-fortieth of an acre. There were 11 rows 33 feet long. The land gently inclined to the southwest and was a gravelly loam, naturally drained. It was formerly planted to tomatoes, beans, corn, onions, beets, etc. About 150 pounds of Chittenden's complete fertilizer were used, costing at the rate of $45 per ton. The plot was planted April 10 and 11, with White Flower Potatoes of medium size n trenches, strictly *a la* R. N.-Y. The weather from planting time until harvest was rather wet and warm. The plot was cultivated first with a spading fork as deep as the tines would permit, and half a dozen times with a steel rake. The average hight of the vines was 2½ feet and the size of the stems about that of the index finger. They began to die about July 10, and were quite dead on the 20th of the same month, when they were dug and weighed, there being 1,215 pounds or 20 bushels and one peck, which is at the rate of 810 bushels per acre. The tubers were very shapely and the eyes were not deep. I think the potatoes were all marketable except two bushels. Paris-green was used once in solution. The flea-beetle invaded the plot once; but a good dressing of unleached wood-ashes was used with good effect in driving the pests off. If engaged in another "contest," I hardly know wherein I would proceed differently.

I do hereby affirm that the report herewith sent the R. N.-Y. is true in every particular. MARY E. WARREN.

Fairfield County, Conn.

MRS. MARY A. PRESLEY'S REPORT (SEVENTH PRIZE).

THE plot was 33 feet square or exactly one-fortieth of an acre. The land was a rich, black, sandy loam, rather flat but thoroughly underdrained with tile drains. For the previous six years celery had been grown on it and it was always of the very best quality. The plot has been fertilized every year for the past 13 years, receiving a very heavy coat of stable manure each year, besides ashes, bone dust, nitrate of soda, hen manure, etc. It was plowed April 16, about 12 inches deep. The year before it had received a very heavy application of stable manure—as much as it was possible to plow under—and last spring it got another coat of fine, well-rotted manure and a dressing of 20 pounds of Mapes's Potato Manure was put in the trenches, over the seed-pieces The cost of the manure was 25 cents, that of the fertilizer about 42 cents. Over 66 seed-pieces of the Rural New-Yorker No. 2 Potato were planted May 4, in two rows. There were also two rows of Rose's Beauty of Beauties, and seven of New Queen, making a total of 363 pieces, or hills. The seed was cut so as to average three eyes to a piece, and weighed about 33 pounds, when first cut. The pieces were cut 10 days before planting time and were planted after the R. N.-Y's. trench system, the trenches being four inches deep and exactly three feet apart. The seed-pieces were dropped exactly one foot apart. The weather was very unfavorable at the time of planting and down to May 29 it was very dry. Then there was a very severe rainfall, lasting three days, during which time about five inches of rain fell. It was followed by cold, frosty weather. During June and up to the first week in July the weather was quite favorable; but from that time down to the date of digging it was very dry. In fact we had the worst drought that has visited this section in 18 years. The crop was cultivated deeply with a Planet Jr. horse hoe just as the vines were nicely up. Afterwards a Matthews hand-cultivator was used once a week until the vines had become too large to allow us to get through. The plot was hoed three times—once when the vines were all nicely up, again when they were about six inches high, and the last time when about a foot high, and a very little earth was drawn towards them. The vines were very vigorous, especially those of the Rural No. 2, which grew fully 3½ feet high; those of the Queen were about 36 inches, and those of the Beauties 30 inches. The Queens blossomed about July 1; the others did not blossom. The vines of the Queen and Beauty of Beauties died down about August 12; those of the Beauties were considerably injured by flea-beetles. The Rural No. 2 did not commence to ripen until the latter part of August, and the vines were dead September 9, when the tubers were dug. The crop was not, to any great extent, injured by the flea-beetle, although I found the pests on the vines; but the latter grew so strong that the beetles did not injure them much.

The old beetles were picked off in the spring as soon as they appeared and hand-picking was practiced until the vines were so large as to prevent it. There were not many young bugs, and two light applications of Paris-green and plaster were dusted on the vines, after which no trouble was experienced. The crop was all dug on September 9. Altogether there were 19 bushels and nine pounds, 17 bushels of which were marketable while two bushels and nine pounds were unmarketable. The Rural No.2 yielded best as follows: 66 pieces gave four bushels of marketable and only nine pounds of unmarketable tubers, or at the rate of 960 bushels of marketable potatoes per acre; 66 pieces of Rose's Beauties gave 2⅓ bushels, one half bushel of which were unmarketable, or at the rate of 440 bushels of marketable tubers per acre; 231 pieces of the New Queen gave 12½ bushels, 1½ bushel of which were unmarketable; or about 690 marketable bushels per acre. The Rural No. 2 were the handsomest, being very large and smooth. The Beauties were inclined to be rough and somewhat unshapely. The Queens were larger and smooth. If engaged in another "contest," I would plant my plot entirely with the Rural No. 2 and would use at least 1,500 pounds of the Mapes fertilizer per acre; but I would make no other change. All the work was done by myself with the exception of plowing, cultivating with the horse and applying the Paris-green.

I do hereby affirm that the foregoing report is true in every particular.

St. Clair County, Mich.

MRS. DANIEL DUNN'S REPORT. (EIGHTH PRIZE.)

THE plot was 33x33 feet. The land was in potatoes last year. A good coat of mixed stable manure was spread in the fall and plowed under in the spring. The plot was planted on May 28, according to the R. N.-Y.'s trench system in trenches six inches deep and two feet apart, the pieces being 16 inches apart. The latter weighed about four ounces apiece and not more than two eyes were left in each. The variety was the White Elephant with a few White Stars. The trenches were half filled, then a barrel of fresh, hard-wood ashes was spread broadcast in them; then all were leveled. When the vines were in bloom I put about a bushel of hen droppings amongst them. The crop was dug on September 25. The Elephant was the more productive. There were 17 bushels of large tubers and 59½ pounds of small ones, from the size of a hen's egg down, making in all very nearly 18 bushels.

Algoma, Ontario, Canada.

SARAH A. SMITH'S REPORT (NINTH PRIZE.)

THE plot was 33x33 feet. It was a clay loam, flat, rather moist and naturally drained. In 1886 it was manured with one ton of barn-yard manure and planted with garden peas. The yield was fair, but was not measured. In 1887 it was planted with sweet corn and two handfuls of pure hen manure were put in each hill. The yield was very poor, the ears being small and not well filled. The manure was supposed to have been too strong. In 1888 the plot was planted with garden peas, but was not manured. Owing to wet weather the peas did not germinate. It was cultivated twice during the summer to keep down the weeds. On May 4, 1889 it was measured and 44 bushels of well rotted manure were spread upon it. It was plowed eight inches deep. The manure was valued at $2, and a dressing of ashes at 50 cents, making the total value $2.50. On May 11 trenches were dug seven inches deep, one foot wide and three feet apart from center to center. The bottom was loosened up about an inch deeper with a forked hoe. Thirty pounds of the Empire State were planted about six inches deep, the pieces being of the size of a hen's egg, and averaging three eyes each. There were in all 363 pieces. The weather was wet and cold, August being the wettest month known for years. On June 11 the potatoes were hoed, and on June 17, 95 pounds of unleached ashes were scattered

(*Continued on Page* 841.)

"READY FOR THE FIELD." BICYCLE CULTIVATOR. FIG. 303. PAGE 847.

Everywhere.

A SUMMER OUTING IN THE NORTH CAROLINA MOUNTAINS.

IV.

MARY WAGER-FISHER.

A Methodist preacher and his wife; Jim, the driver; "Charlie;" Dillsboro; a chalybeate spring; Franklin; a mountain hotel.

WE were five hours in traveling the 52 miles that lay between Asheville and Dillsboro, on the Western N. C. R. R. It was a heavy grade for the engine to climb, but the speed was great enough for so novel a route. A very gentlemanly and intelligent man who, on the sly, whisked a quid of tobacco out of his mouth to talk with us, gave us considerable information about the region with which all his life he had been familiar. He proved to be a Methodist preacher, and at one of the stations his wife and four boys joined him. His wife had a

pleasing face, and that cordial, "friendly" manner that characterizes Southern people and makes them so lovable. She had a box of plants in which she was interested, particularly a cutting of the Storm King Fuchsia. She said she never saw a new plant without straightway wanting one like it; and she seemed much pleased when some one on the train told her that her flower-borders at home, from which she had been absent for three weeks "with the boys," were looking well.

We reached Dillsboro at one o'clock in the afternoon. Here we were to have dinner, and then leave in a "hack" (stage) for Franklin, the county-seat of Macon, a distance of 21 miles, over the mountains. All along the railroad are structures called hotels, which are actual or prospective summer or health resorts. At Dillsboro there is a chalybeate spring, of which we drank, and the location of the few buildings there is quite attractive. My trunk had been quietly reposing in the railroad station at this point for the past 10 days, but no charge was made for storage. I had been a little "concerned" about the stage ride that confronted us, and was very much pleased when a fair-faced young fellow, 18 years old, and with beautifully white teeth, came into the train as soon as it halted, and inquired for passengers to Franklin. The Methodist preacher's wife brought him to me, saying: "There is Jim, who will drive you to Franklin, and he is perfectly trusty," and there was no distrusting that frank, manly countenance. He had been over the road "hundreds of times" and knew every inch of the way. At two o'clock his hack with three seats, a cover to the top, and rolled-up side-curtains was ready. The middle seat was given us, as being the most "springy" and two commercial travelers occupied the back one. The baggage followed in another wagon. Our team consisted of one white horse and one mule, and they pulled together harmoniously, regardless of race distinctions

For the greater part of that ride, the road lay through the unbroken forest, and when we were not climbing up one side of a mountain we were going down the other side. There did not seem to have been any method in engineering the road, and that it led in fact to anywhere, had to be taken on faith. At long intervals we passed a log cabin, with barn to match—the cabin sometimes without windows, always small, and the doorway always as full as it could be of babies and grown-ups. One or two habitations, more ambitious than the others, consisted of two cabins connected by a covered passage-way. This insured a sitting-room for the family apart from the kitchen, and as these houses had windows with sashes filled with glass, they indicated the extreme of opulence. At intervals we passed clearings of bottom land, in which men and white women in sun-bonnets toiled side by side. We saw some gardens, principally of onions, which they called "inguns," and some untrimmed peach trees by the roadside were full of fruit. One of the travelers, whom Jim familiarly called Charlie, seemed to know every one along the route, and he gave a brief history of them to his companion. He was himself a mountaineer, and seemed to think their abodes and surroundings good enough. To me they seemed poor and miserable to the last degree. "Charlie" said that a good many now subscribed to a weekly newspaper, which a few years ago was an unheard of thing. When about half the ride was accomplished, we met two men on horseback, armed with revolvers. Jim said they were revenue officers, and were hunting "moonshine" distillers of whisky. The mountaineers like corn whisky, and in proportion so hate the Government officers who endeavor to prevent its secret manufacture that the latter are always in danger of their lives. These two men, and half a dozen "schooner" wagons—wagons with hoops bent over the tops of the boxes and covered with white cotton cloth—bearing sacks of corundum to Dillsboro, were the only travelers we met in that day's ride of 21 miles, which consumed six hours. The road in places, seemed as we looked ahead, utterly impassable and the jolting was so excessive that my arms were almost paral yzed with fatigue, in clutching efforts to save myself from being pitched out by the road-side, or shaken into a jelly. The laddie made various "short-cuts" with Charlie, by the way of trails that ran straighter than the road, and loaded himself with specimens of mica, garnets, and wild flowers. Fortunately the days were then long, and the daylight still lingered as we entered Franklin, where we found a few neatly painted cottages, and even a pond or two stocked with carp. The town occupies a plateau framed in mountains, and was indeed a charming spot. There were two hotels, both pronounced "excellent" by Charlie; though the buildings were rude, they were roomy enough, and had double galleries (piazzas) running across the front, and the "feed" was not bad in the one we stopped at. When we were shown to our rooms, I was so delighted at finding a woven wire "spring" under what passed for a mattress and clean sheets on the bed, that I shut my eyes to other shortcomings. The laddie's bed had no springs, but he didn't mind that, and was asleep in a twinkling. But as I had to have both windows open in order to insure air and as each was as accessible as a door for entrance, I did not feel altogether content in the situation. However, sleep finally came, and neither chickens, pigs, nor cats, came in to disturb us, and the good-natured landlord assured us that we might have slept in perfect safety out on the sidewalk!

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

BLACK-KNOT; PLUM LICE; KEROSENE EMULSION.

K. N., Hurlock, Md.—1. Some of my apple trees are covered with knots as large as eggs; each one of them seems to be made up of innumerable small ones; what is the trouble and is there a remedy? 2. Last spring the lower leaves and buds of my plum trees were covered with thousands of little black lice or bugs not much larger than the head of a pin, while the under sides of the leaves were black with eggs. I picked off all the affected leaves and burned them, as I had only a few small trees, but this could not be done with large trees; or even with many small ones. What are the pests, and is there a remedy?

ANSWERED BY DR. C. V. RILEY.

1. The knots in the apples are the common black-knot of the plum (Sphœria morbosa) which once in a great while occurs upon the apple. 2. The insects on the plum trees were the common plum lice, of which several species are found upon this tree. (The one in question was, from the description, doubtless Aphis pruni). The best remedy is to be found in spraying the trees with a dilute kerosene soap emulsion made according to the following formula: Kerosene, two gallons—67 per cent.; common soap, or whale-oil soap, a-half pound, water, one gallon—33 per cent. Heat the solution of soap and add it boiling-hot to the kerosene. Churn the mixture by means of a force-pump and spraying nozzle for five or 10 minutes. The emulsion, if perfect, forms a cream which thickens upon cooling and should adhere without oiliness to the surface of glass. Dilute before using one part of the emulsion with nine parts of cold water. The above formula gives three gallons of emulsion and this, when diluted, makes 30 gallons of wash.

ERADICATING GARLIC ON CULTIVATED LAND.

S. W. B., Vira, Pa.—I have seven acres of hillside in which the garlic is so abundant as to make the wheat unsalable. Is there any better treatment than to farm it one year with corn, then with oats for two successive years, seeding down the second year? The field washes badly.

ANSWERED BY PROF. I. P. ROBERTS.

This rotation would not diminish the garlic, while it would subject the field to washing and would leave the land so exhausted as most certainly to endanger the seeding with grass. A better plan would be to plow the land very deep this winter, using a jointer on the plow which should be set deep so that all the bulbs of the garlic will be placed in the bottom of the furrows. Sow to oats in the spring, using not more than two bushels per acre, fertilize liberally with commercial fertilizers—home-compounded or purchased—and seed with a very liberal amount of grasses and clovers as follows: Four pounds of Medium Red Clover, one pound of Alsike, two pounds of Orchard Grass, two pounds of Red Top, and four pounds of Timothy. If the land is inclined to be wet, use no Orchard Grass and double the amount of Red Top seed. In after years fertilize the land liberally so that the grasses and clovers will positively occupy all the land, and, if necessary, sow grass seed from time to time on the weak places. It is a bad practice to cultivate fields filled with garlic unless it is done at the right time and in the best possible manner and with a view of destroying most or all of these objectionable plants. With rich land, abundant grass seed, and good management one can soon see an illustration of the principle of the good crowding out the bad.

A PEAR ORCHARD.

G. W. K., Fisherville, Va.—1. Would it pay to plant 500 pear trees on a heavy clay strong soil? What would be the best varieties for market—the fruit would have to be shipped some distance? 2. What are the addresses of a few reliable nurserymen?

ANSWERED BY N. OHMER.

1. A heavy clay soil is just the thing for pear trees, provided it is well underdrained—wet feet are not good for fruit trees. Judging from my 30 years' experience, it would pay to plant a large orchard of them. I planted 4,000 pear trees, and no tree fruit has paid me so well. I would recommend the following varieties as having been the most regular bearers, and profitable to me: Bartlett, Flemish Beauty, Louise Bonne, Lawrence and Duchesse, the latter as a dwarf. I have many other varieties, but these are the most profitable market sorts. 2 The Storrs & Harrison Co., Painesville, Ohio; Smiths, Powell & Lamb, Syracuse, N. Y.; Ellwanger & Barry, Rochester, N. Y.; N. Ohmer, Dayton, Ohio; Brooklyn Nurseries, Baltimore, Md. The names of other trustworthy nurserymen also frequently appear in our advertising columns.

ABOUT MUSHROOM GROWING.

F. H. B., Peoria, Ill.—1. How soon after planting should mushrooms appear? 2. What is the best temperature for growth? 3. What for growth in young beds? 4. Would too much moisture retard growth? 5. Some of my beds that were planted from the middle to the end of July are producing nothing.

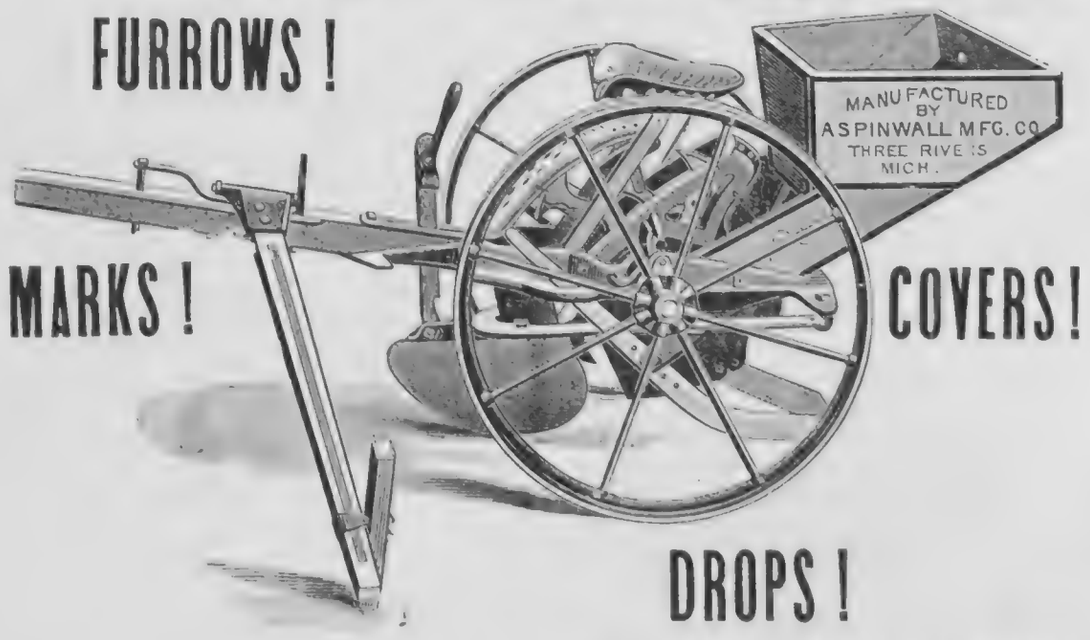
ANS.—1. Everything being satisfactory, mushrooms should appear in from six to seven weeks after planting the spawn, but a full crop should not be expected till the eighth week. 2. From 55 degrees to 60 degrees Fah. 3. The temperature just mentioned is the best at all times and under all circumstances. 4. It will kill the mycelium, hence ruin the crop. 5. Our correspondent does not describe his method of cultivating mushrooms sufficiently for us to be able to give him much information to suit his case: but we may say that July is too early for planting spawn in artificially prepared beds; the end of August is soon enough, and our market growers seldom plant before September.

Miscellaneous.

F. B. C., Springfield, Oregon.—Chas. A. Green, Rochester, N. Y., is secretary of the Nurserymen's Association. Copies of the report can be obtained from him. The price is $1.00. Write to George Wm. Hill, Department of Agriculture, Washington, D. C., for copies of the Department bulletins.

C. S. B., Monroe County, N. Y.—We have used the unleached ashes furnished by Monroe, Judson & Stroup, and believe them to be as good and pure as any of the Canada unleached ashes offered in the market. At least that is our judgment from the ashes sent to us, and from all we have heard from other sources. Their address is Oswego, N. Y.

The ASPINWALL POTATO PLANTER



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Discussion.

SMALL FARMS ON LONG ISLAND.

J. E., MELVILLE, L. I.—I have read the letters of the R. N.-Y.'s correspondents in reply to an inquiry as to how a man can make a living on a farm of 13 acres on Long Island. Now, I do not think a man (especially a city man) could make a good living on that much land, even if it was all clear, without some other resources; but I do think a man could make a healthier and better home for his family in the country than he ever could do in a tenement house in New York or Brooklyn. A distance of 20 miles from the city is not too great for a man to attend to his business there and run a small farm too. I have done so for several years and I live nearly twice as far from the city. W. D. Pyles shows a very good record at farming, but he is one in a hundred and he doesn't farm on Long Island. T. T. makes some very true remarks, especially in reference to the Long Island small farmer, but I am of the opinion that he could handle a pen better than he could handle a mattock or a plow or give better advice on legal matters than on practical farming. He says the owner of 12 acres ought, with the assistance of his man—a green German at that—to be able to clear half an acre of his land in a day. Now in my location it is considered hard work for from 18 to 20 days to stump an acre and that too by a man well used to his business. Plowing the stumps out by means of oxen I don't think practicable. It would be difficult to get a plow strong enough or made of the proper shape for the purpose. Such a plow would also turn up too much of the subsoil to the surface, and it would take nearly as long to cut off the roots and knock the dirt off the stumps as to clear the land by hand with the mattock. In my opinion the easiest and best way to clear a small place is to dig it all over with the mattock and get the roots all out. This method is slow but sure, and the land will be left in a good condition for planting. I paid $25 per acre for clearing my two first acres for a garden plot, and when it was plowed and harrowed it looked like an old wooden-tooth harrow turned upside down, with roots sticking above the surface. I next made a machine —something like what house-movers use—and cleared the land with a horse, pulling the stumps out root and branch, one at a time. It left the land easy to plow and in good condition for any crop. I burned the stumps in heaps and spread the ashes before plowing. I have now a nice little farm with good buildings, a wind-mill for pumping water for house and stock, fountain and pond, and as fine an orchard and small-fruit garden as there are on Long Island. Some of the old residents wonder what I do to my fruit trees, they look so healthy and have such fine crops of nice fruit, but as good fruit and farm crops can be raised on Long Island as anywhere, if a man takes the right way to do it. I have been in business in New York for a number of years and have lived on Long Island for the last 15 years. I have raised a large family and improved my place without any help except what has been hired, and I would not live in the city again if I got a house rent-free. There are a great many things a man can make money at outside his farm, and this helps to make both ends meet. There are hundreds of business men building homes and summer cottages all over Long Island and giving employment to hundreds of people, and every year this sort of thing is increasing. I do not depend entirely on farming. I have a good business here besides but what I have learned at farming has been learnt by practical experience, and perhaps a few suggestions from me to the owner of 12 acres might not be out of place.

In the first place, I would advise the owner of 12 acres to start a hot-bed as early in spring as the weather will permit. He should raise all kinds of early plants, including celery and sweet potatoes. He can sell enough to his neighbors to pay for the sashes at least. Let him build a chicken house of 10-inch hemlock boards—a lean-to shed roof is good enough to start with—cover it outside with tar-paper and whitewash it inside. A door and one or two sashes should be put on the south side. He should fence one-quarter or one-half of an acre with wire netting within which to keep his chickens in planting time. When the crops are off let them run where they please. Let him get as many good chickens as he can conveniently attend to. Leghorns are the best for eggs; they are non-sitters and will lay most of the time if properly managed. Eggs always bring a fair price. He should get a couple of full-bred Langshan or Plymouth Rock roosters to cross on his stock for the next season. I prefer the incubator or brooder for raising early chickens for market and home use. It is hard to get hens that will sit early enough. He should also get a couple of early spring pigs; they will be large and fat enough to be killed for next winter's pork. Let him get a good young cow—one after calving or just coming in—and plant some fodder-corn for her. Let him plow two acres eight or 10 inches deep for an orchard and kitchen garden, if it is subsoil plowed, all the better. Half an acre is enough for a garden. As many loads of well-rotted stable manure as he can afford and a few barrels of ground bone should be spread on it, and the whole should be harrowed in until the ground is level and in good order for planting. The apple trees should be 35 feet apart each way, and the peach trees should be set north and south between the apple trees. The latter will come in bearing soon, and by the time the former are large enough to bear a full crop, the peach trees may be dug up, as their usefulness will be over. Potatoes, beans, carrots, beets, parsnips, peas and other low-growing crops may be planted between the rows of apple trees for five or six years. The potatoes should be put in according to the Rural's trench system. Doing so will double the crop and make the land deep and mellow for the tree roots. No grass or weeds should be allowed to grow around trees. The cultivator and hoe must be kept at work and the owner will be surprised to see how quickly the trees will grow and come into bearing. A few rows of dwarf apple and pear trees should be planted in the garden: they will bear in a year or two. Angouleme and Anjou do best as dwarf pears. They should be planted 10 or 12 feet apart in rows with 25 feet between the rows. A few rows of currants, gooseberries, raspberries, grapes and other small fruits should also be set out as well as quinces, plums and cherries. One cannot have too many fruits; they are meat and drink and will save doctors' bills. Garden vegetables should be planted in rows between the trees so that as the owner can plow and cultivate them with the horse a great deal of time can be saved in hoeing and weeding. One should not buy large trees; those two years old are large enough; they will take root better and grow faster than larger ones and cost a great deal less. The inquirer should write this winter to a reliable nurseryman for a catalogue, select what trees he wants and have them shipped in time for planting. He should use good tools. Doing so will save labor and temper and do the work better than poor ones. Agricultural implements are so improved now and so cheap that it would not pay a man to lose time bringing home a lot of old rubbish fit only for the wood-pile or junk-shop. The old fashioned plow is a thing of the past. It would wear out more shoe leather in one season keeping it clean than would pay for an improved one.

Let him buy a Gale or a Boss one-horse plow. The Boss is the best I ever used, it keeps clean and rolls the soil over and covers up the weeds; it can be set to any depth or width of furrow. Three different sizes of mold-boards and shares come with it. It will plow between rows 15 inches apart and the whole costs only about $5. He should get a good steel-tooth cultivator; it will not cost much. A good iron-tooth harrow will answer well enough. The Cutaway is the best for new land, but it is expensive. There are a great many farm and garden tools which a handy man can make at his leisure and thus save time and money. It would be advisable to get a good, steady horse that has worked some time on a farm, if one has to pay a little more for him. As a general thing, the broken-down city car-horse is of little use. For a year or more it is hard to get him to go straight in the plow; he will walk on the plants, tramp on the corn hills, go too fast or not at all, and tear things to pieces. If extra help is needed a man who understands the business would answer the purpose best even if one has to pay him a little more wages. A poor workman, either mechanic or laborer, is dear at any price. The above gives my experience in men, horses and tools. One should not take too much stock in what every one does or says. He should read some good agricultural papers, like the R. N.-Y., and study Nature and paddle his own canoe. He should not give up his business until his place is in good cultivation unless he can find something that will pay him better in his neighborhood.

SELLING DAIRY COWS A GOOD BUSINESS.

J. J. M., WHIPPANY, N. J.,—A recent article on the raising of calves for milch cows in the dairy districts which supply New York City with milk is a good one. It is almost impossible to buy good cows any more. I speak from experience both in buying and selling, for I have done both. Sixteen years ago I began handling milch cows. I bought them in Pennsylvania, and New York State and sold them in New Jersey. Most of this stock came from Susquehanna, Wayne and Bradford Counties, Pa., and from Broome, Chenango, and Cortland Counties, N. Y. At that time such a thing as a creamery shipping milk to New York City from that section was not known, and in fact there were no creameries there to do it. The farmers kept from 10 to 30 cows each and made butter, raised calves and fed hogs. In the fall or spring, as a matter of course, they would sell some stock—generally cows or two-year-old heifers—and they would sell good ones for two reasons: they needed the money and they did not want to get over-stocked, as the calves and yearlings were coming on to take the places of the cows sold. But how is it now? The creameries have sprung up all through that country and the farmers are selling their milk and in most cases, even buying butter. They are not raising any calves to speak of for lack of skim-milk, and does any one suppose they are going to sell cows that are good for anything now? No, indeed. If one gets any it is the culls, and it is almost impossible to get a good lot of dairy cows out of the drovers' and dealers' lots. Farmers cannot sell what they have not got, and the only way out of this trouble is to raise our own calves. I made up my mind to this years ago, and bought a registered Holstein bull and to-day I have 21 head of half and three-quarter-blood heifers all from good cows. Some of them are milking and the three-year-old grades are holding their own right up with the old cows. Three or four can be raised every year without much trouble, keeping your dairy good in number and quality. It is very important that your bull be from a good milk strain. In fact, much depends on this. I am perfectly satisfied that the Holstein grades are the coming general dairy cow. I do not say this because I have them, but because I think I am right in the matter. They are good cows to hold on to their milk—not go dry six months in the year. I think they are away ahead in this. In conclusion, let me say to the milk producers: Try raising your own cows and I think if you get at it once you will keep at it. Of course, many will say it does not pay to raise calves in this part of the country; but if one raises good stock, it does. If one can get 10 good cows without buying 30 from which to select those 10, he can do more than I can.

HORTICULTURE A SENTIMENT IN IOWA.

PROF. J. L. BUDD, AMES, IOWA.—With an experience of over a quarter of a century in practical agriculture and horticulture in Central Iowa, I have a very high estimate of our possibilities in the way of agricultural and horticultural products of the North Temperate Zone. Hence I regret the appearance of such remarks as the following, which the R. N.-Y. credits, under "What Others Say," to the editor of the Iowa Homestead: "Horticulture in Iowa is a sentiment—corn, grass and live stock give us our daily bread." Very naturally in a new prairie State attention is first given to such mainstays as corn, grass and live stock; and I even admit that the settlers on the virgin prairies often get wedded to the habit of making "hog and hominy" the main articles of diet. But in our older counties we now find tens of thousands of finely fitted-up homes, with shade trees, shelter belts, ornamental trees, shrubs, all the small fruits, and such orchard fruits of the first introduction as do well in our climate. Perhaps in no other part of the Union are the villages and cities better supplied with home-grown small fruits than in Iowa, and the general culture of the small fruits for home use is rapidly extending in all parts of the State. In the central and northern districts the lists of really hardy apples, pears and cherries have been very restricted, owing to the fact that the southwestern fruits of Europe and their seedlings which do well east of the lakes, have failed mainly with us: yet our markets are often oversupplied with summer apples, really excellent native plums and small fruits, and it is now conceded that a new era is dawning in the way of cherries, pears and apples in great variety, that will prove as hardy in tree and as abundant in bearing as the Duchess Apple or four select native plums. With our system of trial stations conducted by the agricultural college and the State Horticultural Society, these new and desirable iron-clads will be rapidly tested and propagated, and the very near future will show fine amateur and commercial orchards in the very counties where corn, grass and stock are now the main staples. Everything having been taken into consideration, we have made wonderful advances in our horticultural transformation of the virgin prairie of a few years ago, and I feel like resenting the charge that our millions of trees for shelter and ornament, our millions of shrubs, our thousands of acres of small fruits, and the present status of the orchard fruits should all be included in the word "sentiment," which Webster says is "a thought prompted by feeling."

A CITY MAN'S EXPENSES.

R. G. B., PATERSON, N. J.—I take a good deal of interest in the various letters published from time to time from the R. N.-Y.'s large staff of correspondents. Just now the communications on the cost of living call for a little comment. I have thought that perhaps some of the readers would like to know what it costs a city man to live, so that they could compare his good things with theirs. In the first place, I earn $16 per week and pay $15 per month for house rent. It amuses me when I read some of the letters which say: "We don't keep any account of vegetables, butter, eggs, milk, etc." Well I will tell them what some of these things cost me: I pay 75 cents per bushel for potatoes; 32 cents per pound for butter; 16 cents per pound for chickens; eight cents per quart for milk; 25 cents for seven eggs, and other things cost in proportion. There is one point in which farmers have a large advantage over us who are "coffined, cribbed and confined," and it is an advantage that, I think very few of them appreciate; that is, the advantage of *family companionship*. I know Mr. Terry appreciates it, and right here let me shake hands with Mr. Terry and thank him for all the enjoyment I have had out of his letters. Now I work from 15 to 16 hours a day Sundays and holidays year after year, and I see little of my family. My children are growing up in a separate world from mine, and my wife sees so little of me that we can hardly have the same partnership such as Mr. Terry speaks of in one of his recent letters.

A MASSACHUSETTS ESTIMATE.

R. J. H., TEMPLETON, MASS.—I have been much interested in the discussion on the cost of living, but have not seen anything from this State. My family consists of two persons—my wife and myself. We have some visitors and help occasionally. Here are our expenses for the four years.

	MEAT AND GROCERIES.	CLOTHES.
1885.	$93.85	$45.81
1886.	55.42	26.90
1887.	58.06	40.52
1888.	69.72	43.02

This table does not include either milk, butter, eggs, or poultry. Neither have I charged myself with the lard or pork fattened on the farm, and usually I kill a young beef creature of which I keep part and sell the rest to my neighbors. We burn about 15 cords of wood per year. That does not appear in the expense account, as I cut it on the farm. The principal items would average about as follows per year: tea, $7; coffee, $2; sugar, $8: molasses, $3.50; flour, $15.50; fresh meat, $10; and the remainder goes for things too numerous to be specified. The above account does not show anything for potatoes or for various other vegetables grown on the farm, as I don't charge myself with them. I think if farmers generally kept strict accounts and gave the farm credit for all of its produce that they used, they would have to admit that farming does pay.

THOSE DESERTED FARMS.

F. L. A., EAST PEPPERELL, MASS.—Do readers of the R. N.-Y. wonder at there being so many deserted farms in New Hampshire and Vermont after reading the prices for farm products given by correspondents from those States in recent numbers? Born and reared on a hill farm in a New Hampshire town, and having spent my time till the age of 30 on one of these farms, I know a little of why they are deserted. I earnestly advise any young man with a few hundred dollars, to invest it elsewhere and not to attempt to bring up the land and repair the buildings, to say nothing of lifting the inevitable mortgage accompaniments on those old farms. One undesirable feature is the long distance at which these farms are located from any good market, and freights and express eat up the profits. As to the local markets, a dozen cucumbers and a peck of green peas would glut one of

them for a week. Wages are low and can't be otherwise, but groceries are no cheaper. If the sturdy sons of New England, brought up to be prudent and thrifty, cannot get a living on these farms, will it be any benefit to those who do live there now to have the vacant farms occupied by Swedes who can live in comfort on what a Yankee would starve on? Let the houses go to ruin and the farms return to the primitive wildernes while there is plenty of land in more favorable locations waiting to be worked.

THAT CHEESE SYNDICATE.

W. H. G., RICHLAND, N. Y.—I can't see how a "backing of English capital" is going to be a detriment to the milk-producers as long as they own the cows. I think the more factories are brought under one management the better it will be for the milk-producers. It will tend to higher prices instead of lower. The management can compel *all* of its patrons to bring the milk in good condition. This will insure a better and more uniform quality of cheese and tend to increased consumption. Prices are usually governed by the supply and demand. It matters little to the milk-producer who furnishes the capital—whether it comes from London or New York. It is only by this system of concentration and organization that the dairymen of this country can control their own business, whether it is that of milk, cheese or butter.

ROAD IMPROVEMENT.

W. V., FRANKLIN, N. J.—I wish to call the attention of the readers of the R. N.-Y. to the RURAL of April 21, 1888, on roads. I was much pleased and instructed with the views of the different parties, especially with those of Mr. Stewart when he says: "A dead level is tiresome to a horse and his driver as well. I have often said that too much perfection in grading too near a dead level is a detriment rather than an improvement to roads." I read that sentence of Mr. S. to a party who had traveled through Europe on a bicycle and said he: "I always preferred the rolling to the dead-level, perfectly graded roads." And I would farther suggest to the RURAL readers that a road machine is getting to be a necessity. The best way to have one is to discuss the thing this winter and at the next town meeting make the necessary appropriations.

MORE ABOUT RATS.

L. A. R., BROOKLYN, N. Y.—Some years ago I read in an English agricultural paper that to destroy field mice the following plan had been successfully tried:

Cut sponge in pieces of about the size of a small chestnut. and fry them in drippings and place them where the mice are troublesome. To get the drippings they have to swallow bits of the sponge. These swell and kill them. At that time we were much troubled with rats in our cellar. We closed the house for two months in the summer, but before leaving I put a plentiful supply of fried sponge where the rats could get it. When we returned there were no rats about, and we have not seen or heard of one in the cellar since.

What Others Say

BRIEFS.

WE have received a potato (Early Rose) from James Haven of Great Falls, Montana, which weighs 2¾ pounds. It measures 9⅜ inches long, 12 inches around the short and 22 inches around the long circumference. It was raised on new land without irrigation. The flesh is solid. A single tuber of the same variety weighed four pounds. It was, however, ill-shapen and knobby.....

IN 1884 the R. N.-Y. offered prizes for the largest potatoes. The first prize was awarded to Jacob Shoudy of Lawrence County, Dakota. In a box sent to this office were 14 potatoes which weighed 38 pounds. There were seven Blue Victors which weighed 23 pounds or an average of three and two-sevenths each. The heaviest was a Blue Victor which weighed 4⅛ pounds, a portrait of which appeared in the R. N.-Y. of January, 1885. It was without prongs and shapely.....

THE second prize went to J. W. Collins of Custer County, Montana. This, which was also illustrated in the R. N.-Y. above specified, weighed 4¼ pounds, being only one-quarter of a pound lighter than the first prize. Though so large, it was an almost perfect specimen of the variety, viz., Early Rose.....

AT the same time E. C. Barrow, Spink County, Dakota, sent a potato weighing three pounds eight ounces, C. W. Bower, Tompkins County, N. Y., a White Elephant, weighing three pounds four ounces.

SEVERAL of these giants were planted the next season in the rich soil of the R. N.-Y. experiment plot, but the yields did not seem to be increased over those given by smaller "seed."....

IT is respectfully submitted that the R. N.-Y.'s trials and reports of new varieties of grapes, currants, blackberries or raspberries, strawberries, potatoes, peas, corn, wheat, forage plants, etc., etc., during the past 15 years have been of great service to the country. The proposition is capable of absolute proof. As has been stated before, it does not follow that because a certain fruit, tuber or vegetable does not succeed well at the Rural Grounds, it may not succeed well elsewhere. The climate of the Rural Grounds is a trying one. It is usually favored with late spring and early autumn frosts. The atmosphere is, moreover, humid, so that varieties of grapes which may thrive in perfection at a high elevation, fail there. Nevertheless, we know of no fruit, grain or vegetable that has been condemned as worthless at the Rural Grounds that has become popular among the masses of the people. New varieties should not be judged by the way they behave under highly favorable conditions, but under those conditions which, taking the country over, are likely to prevail in a majority of cases. We have tried nearly all of Ricketts's grapes—varieties which, it was assumed by many, were to revolutionize grape culture. Our reports were submitted with great reluctance and with the feeling that they would do the R. N.-Y. harm among those who, having seen his varieties at fairs, assumed that they were a long way in advance of any of the old kinds. Time, however, has proven that, except in favored spots, all of his hybrids and cross-breeds are worthless. His Don Juan, Downing, El Dorado, Highland, Jefferson, Lady Washington, Quassaic, Secretary and others were announced with a great flourish. Where are they now as grapes for the million? His Empire State was to take the place of first among hardy white grapes. But there are several of the newer sorts that are far more promising.....

THE R. N.-Y. condemned Durand's Strawberries—varieties that were bred upon the *only* scientific principles, and that, as berries for both home and market use, were to take the place of all other sorts known up to the time of their introduction. Never were strawberries announced with a more confident assurance of their great superiority. Where are they now? They failed in the soil and climate of the Rural Grounds and they have failed generally....

THE R. N.-Y., from its own trials, condemned Teosinte, Brazilian Flour Corn, Prickly Comfrey, Kaffir Corn, Pearl or Cat's-tail Millet; while nearly every kind of sweet and field corn, oats, wheat, peas, etc. has been tried and reported upon for the benefit of our readers. Those who will put themselves to the trouble of comparing similar reports now being made by the experiment stations with these older reports of the R. N.-Y. will find that, *as a rule*, those found decidedly wanting in its experiment grounds will be found wanting in most other similar climates and situations.

LET us make now a brief review of our potato reports. During the past 15 years the R. N.-Y. must have tried as many as 1,000 different varieties. How many of those are popular varieties to-day? The Early Rose, Beauty of Hebron, Pearl of Savoy, Early Ohio, White Star, Early Sunrise, Thorburn, Early Maine, Burbank, State of Maine, Rural Blush, White Elephant or Late Beauty of Hebron and Garfield are the chief among them. The Green Mountain, R. N.-Y. No. 2, Brownell's Winner, Superior, Puritan, Corona Beauty, Alaska, Early Thoroughbred, Sunlit Star, Gov. Foraker, Mrs. Foraker, New Queen, Minister, White Early Ohio, Tonhosks, Delaware, Polaris, Crown Jewel and Everitt are among late or very recent introductions, all of which, as judged by R. N.-Y. reports, are well worthy of trial..

CALIFORNIA RAISINS.—California is beginning to outstrip Spain in the production of raisins, remarks that very valuable journal Bradstreet's. Consul Marston, of Malaga, makes the significant statement that the Spanish vine-dressers who have suffered of late years from the phylloxera have replaced vines that have been destroyed, by American stock. In 1882 the crop of raisins produced in Malaga reached 1,900,000 boxes, of which there were shipped to the United States nearly 1,000,000 boxes. Since that time shipments to the United States have been gradually but steadily decreasing. In 1888 when the total production amounted to about 700,000 boxes, only 112,000 were exported to this country. Mr. Marston adds that many Spaniards predict that the vintage of 1889 will reduce still further the purchases made for exportation to the United States, and that in a few years Malaga raisins will be replaced even for consumption in Spain by those produced in California.....

THE R. N.-Y. has raised Brussels-sprouts the past season in this way: The seeds are sown in drills three or four inches apart and the plants thinned out afterwards as needed. The culture is precisely the same as that given to cabbages. The miniature cabbages after a little frost or so are as tender as cauliflower. Mr. C. L. Allen remarks, in Garden & Forest, that a bushel of sprouts will bring as much, usually, as a barrel of cauliflower. while the yield per acre will not be materially less. It is surprising that Brussels-sprouts are not found in every private garden, as they are among the most palatable of vegetables and easy to grow.....

WILLIAN FALCONER says, in the Albany Cultivator, that there is a current idea that artificially-grown mushrooms are not as good or well-flavored as are natural or wild ones, but this is a great mistake; in fact the contrary is the truth, and there is not a more delicious vegetable on the face of the earth than a plump, fresh, young mushroom. And what a delicacy! Mushrooms are healthful, digestible, nutritious and powerfully invigorating; but they must be used when they are young and fresh.....

Their market value is worth considering. The demand for fresh mushrooms is increasing every day, and the supply has never been nearly equal to the demand. Fresh mushrooms cannot be imported from London or Paris—the two greatest centers of mushroom-growing in the world—so our markets must depend solely upon home-grown produce.....

Many farmers could add mushroom growing to their system of crops with benefit to themselves, interest to their families, and profit all round, and it is a crop particularly interesting to the young people. One requires a team of horses to haul a $10 load of hay to market, but one can put $10 worth of mushrooms into a chip basket and bring it along in his hand, and it isn't too late yet to begin. Shake out or prepare the manure in December, make up the bed at Christmas, spawn it at New Year's, and gather and market the mushrooms in February and March.. .....

HORSE manure and a cellar are all that is needed. The spawn costs only 10 cents to 15 cents a cake and each cake, divided into 10 parts, will plant a square yard of bed and this ought to bear five pounds of good mushrooms at the least. The manure is just as good for farming purposes after the mushrooms have done growing in it, as it was before it was made up into a bed—better, perhaps, for it is better rotted.....

MR. H. M. ENGLE says, in the last A. P. R., that Juniata County, Pa., is having quite a boom in peach culture, in consequence of the enterprise of the Smith Brothers who, 15 years ago, planted a few hundred trees, as an experiment, on land worth $15 or $20 an acre. They succeeded so well that not only Juniata County, but the neighboring counties of Mifflin, Huntington and Blair are now awake to the possibilities of peach culture within their borders. From the nucleus of a few hundred trees reliable reports show that last season $50,000 passed through the banks at Mifflin for peaches.....

THE indications are that Pennsylvania will, at no distant day, not only grow the peaches needed for home consumption, but have a surplus for abroad.....

THE R. N.-Y. has in preparation an entirely new system of market reports which will show at a glance the prices of the staple agricultural products in the leading markets of the country.....

THE average yield per acre of the potato prize-takers of Illinois was 506 bushels; that of Ohio, 519; of Minnesota, 515; of Missouri, 541; of Michigan 447; that of Canada 463; that of New York 379; of Kansas 408, etc., etc.....

ALLUDING to our illustrations and description of the Lincoln Pear, (R. N.-Y. page 755). Mr. A. H. Gaston, vice-President of the Marshall County, Horticultural Society, writes us that the original tree stands seven miles west of Lincoln, Logan County, Ill. and is now 54 years old. It measures 5½ feet around the body two feet from the soil and is 35 feet high with a beautiful, spreading head. "It is," he says; "a complete ironclad." W. E. Jones, a neighbor, has one of its descendants—a sucker taken from it—that is 36 years old, and by reason of better care measures five feet around the body. It has borne annual crops for 30 years. In 1888 it bore the enormous crop of 50 bushels. The fruit ripens in September.

WORD FOR WORD

——PUCK: "The Forestry Congress devotes more of its time to barks than bites."

——AMERICAN GARDEN: "It may be cause, or it may be effect, but we know that where horticulture flourishes there is a prosperous community."

——VERMONT WATCHMAN: "No one who knows Vermont believes that her farm lands are exhausted, or that they cannot be as successfully farmed to-day as at any period in her history. Let any one take a drive through our farming districts, from one end of the State to the other, and he will see evidences of thrift and prosperity which utterly do away with the idea that Vermont land is 'worn out,' or is decreasing in productiveness."

——ATCHISON GLOBE: "If you put your eyes on your neighbor's row, the weeds will grow up in your own."

——N. Y. WEEKLY:

"Young Husband—Seems to me, my dear, this chicken is pretty tough.

Young Wife—I know it is, and I can't understand it at all. I looked in its mouth and could see it hadn't even cut its first teeth yet."

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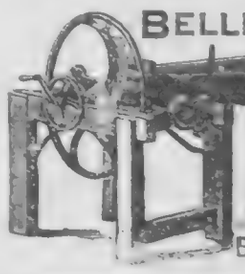

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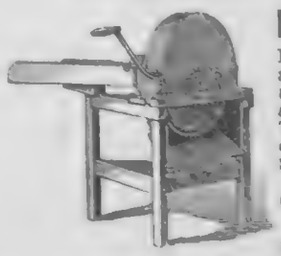

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THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, DECEMBER 21, 1889.

WE hope to present portraits of Mrs. Day, the first prize-taker and Mrs. J. Covell the fourth, with sketches of their lives, in a week or so.

IT will be seen that the first, second, third, fourth, sixth, seventh, eighth and ninth prizes are taken by those who raised their potatoes by the R. N.-Y. trench system.

THE Early Vermont takes the first prize, Chicago Market second, Late Rose the third, Rural Blush and Green Mountain the fourth, Beauty of Hebbron and Rural Blush fifth, White Flower the sixth, the R. N.-Y. No. 2 and New Queen the seventh, White Elephant eighth and Empire State ninth.

MRS. PRESLEY'S potato report (seventh prize) is interesting as showing the comparative yields between New Queen, Rose's Beauty of Beauties and the R. N.-Y. No. 2. The New Queen yielded at the rate of 690 bushels to the acre, Beauty of Beauties 440 bushels and the R. N.-Y. No. 2 at the rate of 960 bushels per acre, while the proportion of unmarketable tubers of the last was very small.

REPORT comes from the West that more sheep will be fattened than ever before in one season this winter. Farmers at the East and South seem to be preparing for fattening the usual number of sheep also, so that it looks now as though prices could not be high next spring. Still, there are hundreds of farms where no better use can be found for fodder and grain than to turn it into mutton, even if prices are lower than ever before.

SOME of our farm writers like to refer to the Western hog as a "walking corn-crib," seeming to believe fully that Western feeders depend upon corn alone for fattening their hogs. Such parties will be greatly surprised when we print a little symposium on "Feeding Oats to Hogs," which is now in preparation. Some of the most noted hog breeders and feeders in the West will contribute to it and it will seriously shake the views of the people who talk about corn-fed pork.

THERE were over 1,000 entries for the Women's National Potato Contest. Of this number 200 are awarded prizes. Wyoming takes one prize (the first). Illinois draws 19 prizes and among them the second. Ohio draws 12 prizes, Minnesota 11, Missouri 6, Connecticut 4, Michigan 15, Canada 8, Washington 4, Nebraska 3, South Dakota 1, New York 23, Iowa 14, Pennsylvania 6, Indiana 9, Wisconsin 12, California 1, Oregon 4, Tennessee 2, Kansas 11, Vermont 2, Kentucky 4, Texas 1, Virginia 4, New Jersey 5, West Virginia 1, Massachusetts 6, New Hampshire 4, Montana 2, South Carolina 3, Colorado 1.

THE "Notes on a Back Number" contest has called out some excellent work on the part of our correspondents. Many of the contributors have never before written for publication, but some of them give promise of valuable work in the future. The R. N.-Y. rather prides itself on the fact that it brings out, each year, a number of new contributors who are splendidly qualified to discuss practical farm matters. This contest will introduce a dozen or more who are well prepared to offer suggestion and advice. The entries for the contest closed on the 20th, and it is expected to publish the essays early in January.

BOTH President Harrison and Secretary Windom advocate the repeal of the tobacco tax. The President, like a truly good man, does not speak of the weed as a necessity; but the Secretary boldly declares that "tobacco has come to be regarded as a necessity by the poor as well as the rich." Would the cheapening of tobacco and the consequent increase of smoking and chewing be really a benefit to the general public, or give relief from the burdens of taxation on a necessary of life? Would the abolition of the tax relieve the producer or consumer or would the whole advantage be obtained by the middleman? Is tobacco an "injurious luxury," or really a "necessity of life?" If the former the tax on it should, of course, be retained; but, if the latter, it should, equally of course, be abolished. Tobacco-growers all over the country favor the repeal of the tax—what do you say?

A SHORT time ago the statement was made that the German authorities were disposed to be less rigorous in their prohibition of American pork and beef. An investigation has been made by the Department of Agriculture with the result of tracing the rumor to a special case where several hundred head of American cattle were subjected to only five or six days' quarantine. Such cattle are ordinarily subjected to five weeks' quarantine. The case mentioned was made special because of a special permit from the Imperial chamber granted in view of the fact that the parties interested had agreed to deliver the cattle without knowing of the quarantine. Strict orders have been given to enforce the regulations, and the consumption of American beef has also been prohibited in the German army. It is not likely, therefore, that we may expect any immediate relief in that quarter. Farmers will feel very friendly towards the administration that can negotiate better trade relations with Germany.

THE publication of the letters describing the "abandoned farms" of New Hampshire has called out a perfect fusilade of correspondence. Some of our readers seem to want to investigate the property with a view to purchasing. Such parties are referred to the Commissioner of Immigration of New Hampshire, who may be addressed at Manchester, N. H. The R. N.-Y. can only say that no one should buy these farms without a personal examination of the premises. A number of persons offer suggestions as to the causes that have led to the decadence in New England farming. Many of the explanations offered are doubtless just. As usual, the R. N.-Y. went to headquarters for information and asked those who owned the farms why the land is to be given up. We believe in getting our information at short range. Another class of correspondents question the R. N.-Y's. assertion that profitable agriculture is possible anywhere near these abandoned farms; in other words, these parties claim that agriculture on the hill farms of New England is forever doomed. We shall see about this later when some of the best farmers of that section have their say.

THERE is something exhilarating about the new Western States. They are so vigorous, so refreshingly earnest that one can't help admiring their actions even if he does not always quite approve. At the last election in North Dakota the Prohibitionists carried a constitutional amendment in favor of their views, and they are now engaged in fashioning a law which is so severe that, as a local paper says: "mankind must reform, drink water or leave North Dakota." The penalty of selling, offering for sale or giving away any intoxicating liquors will be not less than $200 or more than $1,000 for the first offense, while imprisonment for at least one year will make a second offense odious. In buying from a druggist, the purchaser must make an affidavit of the object for which he buys the stuff before every purchase, and the druggists' record of sales must be open to public inspection during all business hours. Public officials are made spies and informers under penalty of loss of office, and meetings of men for convivial purposes are declared unlawful. It is reported that the wicked "wets" are even more anxious than the extreme Prohibitionists to make the provisions of the law more severe. It is likely that North Dakota will be the first State which will teach the world the results of the strictest possible Prohibitory laws.

LAST Thursday there was an interesting story about Wall Street, the hub of the financial wheel of this country. Money was very "tight" and interest on "call" and other short loans extremely high. Why? Neither foreign complications nor the regular harvest flow of money to the rural districts all over the country for the purpose of "moving the crops" could account for it. Investigations threw some light on the enigma. It was found that $12,000,000 cash belonging to the Sugar Trust had been loaned "on call" by the Trust magnates to various banks and trust companies, and that all this money had been suddenly called in. At this season a vast amount of money is taken from New York and other financial centers to set the crops of the country in motion, and a sudden demand for $12,000,000 of borrowed money naturally caused a financial stringency. Some time ago the Sugar Trust magnates sold a large lot of their stock at $100 to $125 per share, by puffing the market. They wanted to get all they could of it back again at a lower price; hence, it is charged, they tightened the money market, thus forcing hundreds who had bought trust certificates for speculative purposes on a margin, to throw them on the market. This caused prices to sink 10 per cent. last Tuesday and 4¼ per cent. more next day, so the wily manipulators were enabled to buy from the dear public at $55 to $60 per share what they had previously sold at $100 to $125 per share. This is called "milking the public," or "shearing the innocents;" what do you think of such highly honorable, financial agricultural operations?

THE sessions of the various representative farmers' organizations at St. Louis closed a week ago. The Northern Farmers' Alliance of Kansas and South Dakota joined the Southern Alliance under the new name of the National Farmers' Alliance; but action was deferred by the delegates from the other Northern organizations until the matter can be submitted to the separate State Alliances. The Agricultural Wheel and the Farmers' Mutual Benevolent Association were also amalgamated with the new organization, which is now the most numerous and ought to be the most influential in the country. The resolutions favored woman suffrage; the reservation of public land for actual settlers; a prohibition of the acquisition of land in the States and Territories by aliens; rigid enforcement of the law against land-grabbing railroads; the free comage of gold and silver; a prohibition of national loans to banks on bonded security at one per cent. interest, while farmers have to pay eight to 10 per cent., and the payment of the national debt as fast as possible. Taxes on real estate and mortgages and a graded income tax were demanded. Strict economy in all public departments was insisted upon, the liquor traffic was opposed in all forms and a revision and reduction of the tariff were strongly advocated. A basis of federation between the Alliance and the Knights of Labor was agreed upon. It is highly probable that the new organization, which claims a membership of over 2,500,000, aided by the Knights, will have a powerful influence on political matters in the near future, as its main objects appear to be of a political rather than of an economic character.

THE American Sugar Company of Kansas has been perpetrating a fraud on the farmers about Mineola and in some other sections, a counterpart of which has not been heard of since the exposure of the notorious electric sugar frauds. About a year ago the company built a mill for a few thousand dollars to manufacture sugar from sorghum at Reade Center. The Adamson or "roasting process" of extracting the sugar was employed and marvelous results were claimed. The product was exceptionally fine and abundant. The farmers became jubilant at the success of the new industry which afforded them a profitable home market for a new "money" crop. Soon the company very persuasively proposed that the different townships should vote bonds for the extension of the works, and bonds to the amount of $90,000 were voted and the script was turned over to the company. At Ashland, Clark County, the same plan was pursued and the farmers readily voted bonds to the amount of $18,000. It is believed that like inducements were successfully used to secure bonds from farmers in other parts of the State, and that $150,000 were obtained in this way. Last Thursday the fraudulent scheme was detected and exposed. A large number of barrels of pure imported sugar had been used in making sirup excellent in quality and remarkably large in quantity from the amount of cane used. The residents of two townships in Meade County flocked to the mill and forced the manager to destroy the bonds; but it is reported that the bonds of the other townships had been negotiated. There is a great deal too much readiness and laxity in bonding municipalities and counties for works of a quasi public character; and, as in all new countries, this pernicious practice is at present most prevalent in the great, enterprising, go-a-head West. The lesson taught by the American Sugar Company should prove a salutary warning to those inclined to risk money in this way.

BREVITIES.

THE judges decided to award no souvenirs for any yields less than at the rate of 300 bushels to the acre.

THE announcements of several promising new varieties of potatoes will be found in the advertising columns of this issue.

"EVERYBODY has it in his mouth that beans are a light crop:" is the report of an old subscriber in Livingston County, N.Y.

"IT will be a good while, I fear, before you get a potato that will equal the Beauty of Hebron and Thorburn." So writes Jonathan Talcott from Rome, N. Y.

THE stock of the Kumerle Dwarf Lima is very small. So also is that of Burpee's Dwarf Lima. It will be offered for sale in very small quantities at a very high price.

IT seems that there is quite a division of opinion regarding the possibilities of a small farm near New York. The opinion given this week, on page 838 is interesting.

SHOULD we have a law compelling manufacturers to state the sources of the nitrogen, potash and phosphoric acid they use in their fertilizers? Some of our wise men will tell us in a subsequent number what they think about this.

AS SOON as possible we shall begin the publication of a series of articles on "Farming 100 acres at a Profit in Western New York." They will be written by a practical farmer and we feel safe in promising our readers something unique, interesting and valuable.

A NUMBER of subscribers write us that they have used coal ashes on light, sandy soils with excellent results. As Prof Johnson pointed out last week, the good effect is due more to the change made in the mechanical condition of the soil than to any great fertility in the ashes.

CONTRARY to the predictions of our entomologists and fungologists, the potato rot ceased just as soon as the potatoes were taken out of the soil. That is to say, though rot in the crop while growing was never before so prevalent, rot in the *harvested* crop is less than usual.

A CITY jeweler of long experience informs the R. N.-Y. that a class of city people every Christmas pay cash for jewelry and dodge the payment of food bills and rent. This is a curious phenomenon of city life and helps to explain the puzzling fact that though the world's supply of diamonds has largely increased, the price has hardly diminished.

SOME insist that the recent drop in the price of Sugar Trust certificates is wholly or in main part due to the opening, the other day, of Claus Spreckel's mammoth sugar refinery in Philadelphia. This has a capacity of 2,000,000 pounds in 24 hours and Claus declares he will run it to its full capacity. The drop in the certificates can affect only a few and those mainly speculators who deserve little sympathy; but what a multitude a drop in the prices of sugar would affect! Have you heard anything of that kind drop?

CANADA unleached ashes of average quality, as shown by 13 analyses made by Prof. Storer, contain 5.77 per cent. of potash, 39 per cent. of lime and 1.17 per cent. of phosphoric acid. Estimating the potash at six cents per pound, the ashes are worth, say, 35 cents (34.62) per 100 pounds and the phosphoric acid (estimated at eight cents per pound) about nine cents. Throwing in the lime as worthless, these ashes are worth 44 cents per 100 pounds. Unleached ashes, however, are a very variable quantity, depending upon moisture, sand and the like.

Field Crops.

R. N.-Y. Womens' National Potato Contest.

(*Continued from Page 836.*)

in the rows and worked into the soil with a pronged hoe. On June 26 the soil was loosened between the rows with a cultivator. On July 8 the vines commenced to blossom. They were about 18 inches high and averaged half an inch in diameter. On September 21 they were killed by frost. Potatoes were not troubled by any beetles at all this year. The crop was dug on September 28, the vines averaging 4½ feet in length when pulled. The yield of marketable tubers was 17 bushels and there was half a bushel of unmarketable ones. The tubers were, on an average, smooth and shapely, and the eyes shallow. In another "contest" I would plant another variety and do so in a higher and lighter soil.

St. Louis County, Minn.

Biographical.

MISS MARY RUSK.

I WAS born July 28, 1863 in Madison County, Illinois, and was left an orphan at an early age. After the death of my parents, I lived with my grand-parents, for several years. Afterwards I lived with a married brother until I was old enough to earn my own living.

I then lived with a family who gave me my board and clothes and sent me to school for about two years. After that I lived with different families, all farmers, until 1881, when I went to live in the family of Mr. Jeffress where I have been ever since. Mr. Jeffress has been a subscriber to the RURAL NEW-YORKER for a number of years, and I of course read the paper. When I expressed a desire to join the Women's Potato Contest, he kindly offered to give me a plot of ground and potatoes enough to plant it. I have done light work, such as dropping corn, planting potatoes, and working among the vegetables, but I never tried to raise a crop before; but the greater part of my life has been spent on a farm.

[Miss Rusk's photograph is reproduced at Fig. 300, page 834.—EDS.]

MRS. AGNES C. CAMERON.

MY maiden name was Agnes Campbell Bell. My parents lived at Newburgh, N. Y., where I was married to John Cameron on September 20, 1870. We then went to New York City. My husband was a plumber by trade, but in 1878 we removed to our present home on a farm. My husband had never worked on a farm nor had I myself done so till we came here. The first year we had to hire all the work done; since that time we have been able to do the work ourselves with extra help at harvest time. I have always helped my husband in planting corn and in hay harvest. I can drive a reaper as well as any man, or a sulky rake, and when I'm wanted for plowing corn, I do so. I always have a large garden on which I pride myself. This is the first contest I ever have worked for. We have always harvested good crops of potatoes. The farmers around would wonder how we could raise so many. We used to tell them they ought to read the RURAL NEW-YORKER and then they could do the same. Corn and wheat were good crops this year. We made a little over 20 bushels of wheat to the acre on clover sod: the average is 10 to 12 bushels to the acre. Corn will average 40 bushels to the acre. It would have been heavier had not frost cut it short. My husband thanks the R. N. Y. for his success in farming. We take four papers; but we think the RURAL the head of all, so we are always anxious for its arrival.

[Mrs. Cameron's picture appears at Fig. 299, first page.—EDS.]

MRS. MARY E. WARREN.

THIS lady was born on October 2, 1839, in what is now the city of Middletown, Orange County, N. Y.—then an ordinary country village. Her father, the late Benjamin Bennet, was a farmer. The original Bennet estate comprised about a square mile of land. The growing village and city has absorbed the whole of it, with the exception of about 10 acres. She was married on November 4th, 1863, and has two sons 17 and 20 years old respectively. The family lives four miles from the city of Danbury and is very pleasantly located, the house being large, convenient, and complete in all its appointments, so that housework is reduced to a minimum. Her husband has retired from business, which was of a professional nature, and devotes his attention mostly to special gardening.

[A picture of Mrs. Warren's may be found at Fig. 302, page 835.—EDS.]

MRS. MARY A. PRESLEY.

I WAS born on a farm in Jefferson County N. Y., April 19, 1823, and am, accordingly, in my 67th year. My father was a farmer from my earliest recollection. I was married on June 14, 1853. My husband "farmed" for a number of years, but for the past 15 years he has found "market gardening" more to his liking. Our crops of course are rather varied, but we make a specialty of growing "fine celery," and have every reason to feel proud of our success. Since we subscribed for the R. N.-Y. we have also grown potatoes with profit. I have always had a taste for horticulture, and I am happiest when working among my flowers. I was never particularly interested in any farm crop until after we had begun to take the RURAL, but after reading of the editor's carefully conducted experiments and experience with potatoes, so fully explained, I said that with such teaching even an "old woman" could raise a "big crop," and when the opportunity came through the Women's National Potato Contest, I gladly availed myself of it, and although the season was a very bad one I carried my point, as my report will show. Had it been a favorable one I am convinced that I would have more than made good the RURAL'S assertion that it is possible to raise at the rate of 700 bushels of "marketable" tubers per acre.

JACK FROST CATCHES MR. POTATO OUT. FIG. 304.

MISS SARAH A. SMITH.

I WAS born on this farm on February 7, 1873. I have grown to a hight of nearly six feet and am strong and healthy in proportion. Living as we do, three miles from town, I believe that the bracing walks to school in the mornings for the past nine years were in a great part the cause of my vigorous growth, as neither father nor mother is above medium size. My first recollection about taking any interest in the farm was when I was nine years old. Then father gave me a patch of ground and seed potatoes enough to plant it. This I hoed and cared for during the summer and harvested a crop of 11 bushels which were sold to father at the current price. Since then I have taken an active part in nearly all kinds of farm work, even to driving the horses in plowing, harrowing or raking hay, either of which jobs I prefer to housework. We have always taken several good papers, among which two or three have been agricultural. I early acquired a liking for the latter on account of my father subscribing for one of them in my name. This I would open and read with more pride than comprehension at first, though I soon began to read it in earnest, and now find an account of some new experiment in farm work of far more interest than story reading.

I was very much interested in the R. N.-Y.'s "contest" a year ago, and when the announcement of the "Women's Contest" was made, I immediately entered my name. Even though I should get no prize I do not regret my work on that "Contest Plot" in the least, for I rather enjoyed it, for it caused considerable merriment among our neighbors, especially when the potatoes were dug.

[A picture of Miss Smith is shown at Fig. 301, page 835.—EDS.]

Educational.

THE WISCONSIN SCHOOL OF DAIRYING.

PROF. W. A. HENRY.

A valuable short but complete course for farmers' sons; its inception and steady increase; specially adapted to farm boys as regards preliminary requirements and nature of instruction; range of subjects taught; students select special subjects for study; continuing studies winter after winter; work practical and attractive in form; having gained a better knowledge of farm operations and the reasons therefor, students learn to love farm life all the more; excellent results hitherto accomplished; bright prospects ahead.

IN reply to an inquiry from the R. N.-Y. relative to our new dairy school, allow me to make a few statements, going back a little in the history of our agricultural department, and including a description of our short course, which is essential to understanding our plan of dairy instruction.

For years our university, like most others that gave agricultural instruction, failed to draw any considerable number of agricultural students, and it was very questionable whether we would ever succeed under the old plan, which provided a long course of four years in agriculture, ranking in requirements for admission and character of studies with the other university courses. We also allowed young men to come and study for a term or more, but did not offer them any special advantages. That is, they were expected to join classes already in existence, and make their way along with them as best they could. The regents (trustees) of the university took the matter in hand a few years since, and directed that a lower, simpler course in agriculture be provided. It fell to my lot to arrange for what we afterwards named the "Short Course in Agriculture," and here let me confess that at first I believed that the plan would not succeed. However, this adverse opinion held by myself, did not prevent the best effort I could make for the new course of instruction, which I believe was really the first of its kind in America. The scheme was to provide teachers from the university force, who should give instruction arranged for the capacity and wants of such young men actually engaged in farming as might desire to secure it by leaving the farm for three months and returning to it again at the end of that period. Other institutions have offered short courses in agriculture, but I believe none, until recently at least, has made a short course *complete in itself* and distinct from all others, for such a purpose as this. We have now given instruction in this line for four winters, and last year had 40 bright, energetic young men with us, every one of whom left the farm to study with us, and hurried back again at the close of the term to continue farm wo

This course has gradually grown, until this winter we offer instruction as follows:

Daily lectures on stock breeding, stock feeding, and general farm operations, by myself; lectures by Dr. Babcock upon agricultural chemistry; by Mr. F. H. King upon soils, drainage, farm buildings, and farm machinery. The persons enumerated have their quarters in Agricultural Hall, and give their whole time up to agricultural investigation and instruction. In addition, students who desire receive training in the machine shop, going through an elementary course in wood-work, such as using the plane, learning to handle the saw, and ending with wood turning; they also receive a course in simple blacksmithing. Our State Veterinarian meets the class three times a week for veterinary instruction. This brings me to the new features offered this winter for the first time.

Having secured Prof. E. S. Goff, late of the New York Experiment Station, and one of the R. N.-Y.'s contributors, as Professor of Horticulture in the university, we have provided him with a fine laboratory, and he will this winter give instruction in horticulture. From the ample preparations he is making, I believe this will be a most instructive and valuable course. The other new feature is a course in dairying. For this we shall expend about $3,000, having built a large two-story dairy-house, with boiler room, etc. In the dairy house will be found as complete a line of dairy machinery and apparatus as we can find, including the butter extractor, centrifuge cream separator, appliances for deep setting, etc. Dr. Babcock will give instructions in handling milk and butter-making. Mr. E. M. O'Connell, a practical cheesemaker of Sheboygan County, who has studied with Prof. Robertson of Canada, and was employed the past season by the State Dairymen's Association to instruct the cheese-makers of his section, will devote his time to instruction in cheesemaking and cheese curing. To accommodate the students in this work we have fitted up a fine laboratory with desks, the same as chemical students use and will provide apparatus whereby they can familiarize themselves with the simple methods of milk analysis, such as Short's method, the lactometer, etc.

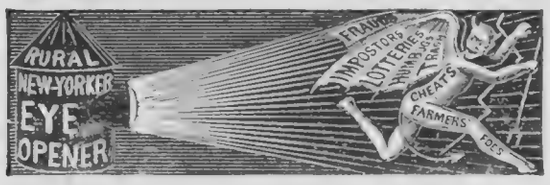
It will be seen that we offer more lines of instruction than any young man can follow in a single winter. We allow each student to choose three or four subjects, and he must adhere to them. Last year seven young men returned to continue work which they could not carry out the preceding winter; this winter we have promises that quite a good number will return for the same purpose.

As this course becomes developed, we see great possibilities for it, and from being skeptical as to the practicability of taking young men of this class into a university, I have come to believe that we have at last found the proper way to build up an agricultural department or college. In our ladder of education we have at last found that the first rounds to be put into it are the lower ones. Our lectures are not very formal, and we introduce just as much laboratory work as possible. I find that our best students do not care to have us teach them how to hold a plow, milk a cow, or sow grain. In coming to us for instruction they are under considerable expense, and most of them say that they prefer to get the reasons for things with us, and that correct practice comes quickly enough when at home. Our instruction is much of the same nature as would be given at farmers' institutes, only, of course, it is greatly superior to that, because each instructor has 60 days' time with his students.

We do not try to make scientists of these young men, but aim rather to make them careful, thoughtful, observing and practical. I have been surprised to watch their development, and note that the majority of them leave us enthusiastic in their vocation, and yet not at all puffed up or holding the idea that they are "college educated." At first it was seriously questioned whether young men of this class could be successfully handled in a university where hundreds of regular students were in attendance. I rejoice to say that during the four years in which this course has been on trial, not a single difficulty of any kind has arisen in regard to such an association. These young men board in the same clubs with university students, and are greatly benefited by meeting those who are engaged in other lines of study and investigation. They have their own agricultural literary society, and come and go without attracting any more attention than do the law students or those studying the mechanic arts. Of course this instruction has cost

the university a great deal in proportion to the numbers taught; but from the small beginning we have gained in numbers each year. I do not think we shall lack for students in the future. Our next term opens January 6, with a promise of a large class with representatives from several States in attendance.

Agricultural Experiment Station, Madison, Wis.



ELECTRIC SANATORY APPLIANCES.—From large transactions to small ones is a frequent step in swindles and humbugs. The Eye-Opener has been frequently asked for an opinion with regard to the numerous "electric," "magnetic," and "galvanic" belts and similar sanatory appliances which glowingly appeal alike to town and country people through advertisements in a multitude of papers. In the opinion of the doctors at Bellevue and New York Hospitals, the principal institutions of the kind in this city, such appliances have in themselves no curative properties, though occasionally they produce good effects through the action of the imagination, just as bread pills and similar inoperative medicaments not infrequently effect unexpected results in a certain class of cases. After consultation with the above authorities, the Eye-Opener has several times written of the matter in this way in this department. An excellent article on "Electricity in Relation to the Human Body," appeared in Scribner's Magazine for November this year. Mr. Allen Starr, the author, is an expert on the subject on which he writes, and has made special investigations into all its phases. Speaking on this subject, on page 598, he says: "The most careful experiments have shown that the human body is as completely insensitive to magnetism and as wholly unaffected by it as a piece of rubber or of wood.

A person may stand between the poles of the most powerful magnet, one which might hold up a ton of iron, without the slightest perceptible effect upon any of the bodily functions being produced. Hence all so-called magnetic appliances, brushes or combs, disks, belts, and magnets have absolutely no curative power whatever * * *. The majority of the effects produced by such contrivances are due * * * to expectant attention rather than to any action of the agents which careful investigations have shown to be inert. The writer," he continues, "once demanded of the agent of a widely advertised 'electric belt' some proof that an electric current was produced by it, and suggested that such a current could be detected by means of a galvanometer. This test was objected to, but a little frame holding a dozen pocket-compasses was at once produced, and the power of the belt, which doubtless contained some iron plates to attract the needles of the compasses, was shown as a proof of the production of electricity in the belt. Probably many who were ignorant of the difference between electricity and magnetism have been deceived by this so-called test."

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

SOMEHOW, it seems as if people more generally regard Christmas as a secular festival rather than the sacred feast it really is; the key-note of Christianity. We are apt to forget that all the mirth and jollity should spring from the primal thought of peace on earth, good will to men. Just as we forget that the idea of the gifts is really a free-will offering of pure love or friendship without any thought of self-interest. When a girl says: "Oh, I must give So-and-so a handsome present; she gave me one on my birthday," we know that whatever her ideas may be, she does not understand the spirit of Christmas at all. If we could only keep Christmas in our hearts all the year round!

* * *

HOW sorry we do feel for the poor little Puritan children, who were taught that Christmas was a Popish abomination. Just think of the harsh spirit that saw sin lurking in a branch of red-berried holly, and all the deceits of the world, the flesh, and the devil beneath a spray of mistletoe. Even mince pies and plum puddings were regarded as an invention of the enemy, an impression in which a dyspeptic might concur, and the glories of the boar's head and the mighty Christmas sausage were past. There is no doubt that the Christmas jollity of olden times resulted in great rioting and debauchery; we may be glad that it is gone. It was really the pagan Saturnalia re-christened; the appointment of the Lord of Misule and the general license permitted point to its heathen origin. These observances are regarded as relics of the Roman Saturnalia, while the use of holly and mistletoe is derived from the Druids, priests of ancient Britain. But from whatever source we borrow its observances, the real spirit of the day comes from Christianity alone.

* * *

Of course the date on which this feast falls is much disputed, but whether the event we celebrate did happen on the 25th of December or not it is enough to know that so many people of differing creeds and tongues agree to commemorate it on this day. In the Eastern or Greek Church they still celebrate the Savior's birth on Old Christmas, the sixth of January, known as the Twelfth Day or Epiphany, but for many a century the great Western Church has fixed on December 25. Twelfth Day commemorates the adoration of the wise men, and in many countries it is regarded as a very festive occasion.

* * *

HOW often have you read "A Christmas Carol?" It is the fashion nowadays to run down Charles Dickens; to call him a caricaturist, and a sentimentalist, even to say that he didn't know how to write a story after all. But if there is not material enough for a half-dozen Christmas sermons in that one story, may we never read fiction again. Think of poor Bob Cratchit, with his shabby coat buttoned over the comforter that took the place of an overcoat, striding home from church with Tiny Tim on his shoulder—poor Tim, with his frail form and his little crutch. But there were peace and good will in the Cratchit household, in spite of poverty and pain, and there was the Christmas spirit in the poor little cripple's after-dinner speech—these simple child-like words come back to us with each recurring season: "God bless us, every one."

AN OLD-COUNTRY CHRISTMAS.

AMONG the confused memories of early childhood is a vague recollection of meeting a bright-faced man, wheeling a barrow decked with red-berried holly, which was piled high with sirloins of beef. Everything surrounding the incident is indistinct now. It was in one of the midland counties of England, on the estate of a great nobleman, and the man with the barrow was distributing the beef and other substantial dainties to all the tenants of the estate, as was the Christmas custom. Christmas is a very much greater occasion there than here, although many of the older customs are now passing into disuse. The house decorations are very much more elaborate there than here, where they rarely pass beyond a wreath or two in the windows. I can remember our house being a perfect bower of evergreens, holly and laurel and mistletoe festooned everywhere; indeed the houses were as much decorated as the churches. There had been much work going on in the kitchen for weeks previous—stoning raisins, washing currants, and chopping candied peel, and we children were all gladdened by the sight of various little mince pies, very smooth and shiny, with the initials of our names on the top in raised pie-crust. We were allowed to sit up a little later than usual the night before Christmas, and we always sat in the big kitchen, with its well-scoured stone floor curiously streaked with soft sandstone, while we watched the pudding boil.

It seems that one cannot boil a plum pudding too long, and ours was always cooked for some hours the night before. There was holly everywhere, and a great bunch, mixed with mistletoe, hung in the middle of the kitchen ceiling. By and by there would be a sound of music outside, and after a song or two, the mummers would enter, expecting a glass of ale and some small money. This is a custom now going out, but years ago it was general. Parties of men and boys, often the village choir, would go about singing from house to house on Christmas eve. Sometimes they dressed in odd masquerade dresses, and acted some little pantomime. The place I recollect was the abode of the redoubtable Robin Hood, many a long year past, and in that locality the mummers used to dress up to represent that hero, singing quaint old rhymes descriptive of his exploits, which had been handed down orally from father to son.

This was really a modern survival of the medieval mystery plays. I remember a party of mummers dressed to represent Robin Hood, Little John, Friar Tuck, and Maid Marian, with their followers. They gave an uncouth dance, in which Maid Marian disported herself so vigorously as to give a passing glimpse of big hob-nailed boots and corduroy trousers. All wore masks, and they were a most motley crew. It was rather a tax sometimes, to be visited by the mummers, there were so many of them, and the hosts would sometimes play practical jokes on them, which were taken quite good-naturedly.

We did not hang up our stockings, for Santa Claus was comparatively little known among us, but our gifts were distributed before breakfast. Our little mince pies appeared at breakfast; after that we went to the bower-like church. At dinner everything else was insignificant in our childish eyes, compared with the pudding—a fragrant, rich brown mass, powdered with sugar, and crowned with holly.

In the evening we played old-fashioned games, old and young joining in blind-man's buff and puss in the corner and we wound up with the excitement of snap-dragon, lucky if we escaped without burnt fingers.

Christmas holidays and festivities were kept up until after Twelfth Day, when the decorations came down, and the season was at an end.

It is pleasant to look back on these old associations, yet at times they are a little saddening. We buy English holly and English mistletoe, and make our Christmas dainties after the old recipes; perhaps it is the Christmas feelings of childhood that we miss, after all. COTTAGE MAID.

GOLDEN GRAINS.

THE INDEPENDENT says that the facts of human life are just what they are, whether men believe or do not believe in the doctrine of a personal God and his government over human affairs. Infidelity as a creed will not change these facts for the better; but it will deprive the soul of all the consolation, comfort and hope derivable from a trustful and loving faith in God. This is an immense loss to any one.....

SEE that little speck of existence in the shape of a man, bursting with angry passion, frothing at the mouth, bellowing and roaring, cursing and swearing, acting as if he were just ready to kill somebody. Look at him. What you see is a fool. The man acts like a fool, and is a fool, besides being a sinner.....

NO MAN or woman, even of the humblest sort, can be strong and gentle and pure and good, without the world being better for it—without somebody being better for it—without somebody being helped and comforted by the very existence of that goodness.....

IF one cannot seriously and soberly think of his own life, and of the issues thereof both here and hereafter, without being miserable, he may set it down as a certainty that there is some radical fault in that life. Sad, indeed, is the condition of that man who can be happy no longer than he can be thoughtless. If he were right himself, then to think of himself would be a source of pleasure rather than of pain....

J. J. GUNDY says: A tree will not only lie as it falls, but will fall as it leans; and the great question everyone should bring home to himself is this: "What is the inclination of my soul? Does it, with all its affections, lean toward God, or away from Him?".....

AN excellent book by Dr. A. J. F. Behrends has just been issued by Baker & Clark. It contains a number of statements which are likely to provoke the antagonism of the theologian—for example Dr. Behrends says:

"It would, perhaps, be more exact to say that the decay of religion is provocative of social discontent, than to charge socialism with originating and propagating hostility against religion.".....

ANOTHER statement not, however, so likely to provoke discussion is as follows.

"Wealth must come to be regarded as imposing the responsibilities of a Divine stewardship, whose accumulation may not be stained with injustice, and whose use must obey the dictates of righteousness and intelligent philanthrophy.".....

"WE have had much to say about the neglected classes. We need to preach the law of God to the rich; to remind them that as men sow, so shall they reap, and that their own safety depends upon their justice and humanity. 'The neglected classes' live in palaces as well as hovels, and both are to be taught that the kingdom of God, man's true dignity and highest felicity, is not meat and drink, but righteousness, joy and peace in the Holy Ghost.".....

Such statements are timely and have a special significance.....

Domestic Economy

CONDUCTED BY MRS. AGNES E. M. CARMAN.

EXTRACTS FROM SUNDAY EVENING TALKS AT THE RURAL GROUNDS.

"COME unto me all ye that labor and are heavy laden and I will give you rest. Take my yoke upon you and learn of me, for I am meek and lowly in heart and ye shall find rest unto your souls For my yoke is easy and my burden is light."

* * *

To bring this home to our every-day lives who is there among us that is not given to fault-finding and which of us has not been discouraged and disheartened at times by being found fault with justly but not generously? Let us see how much of the burden of fault-finding Christ laid upon his followers. Take the example of Peter. Not a word of reproof, only one sorrowful look from the loved leader when Peter denied him. And after his resurrection the commands: "Feed my lambs;" "Feed my sheep"—a sacred trust given to him as the seal of his forgiveness.

Look at Paul's history: he persecuted the Christians with all the zeal of a Jew and a Roman combined. Was there a word of fault-finding when Jesus appeared to him on his way to Damascus? "Paul, Paul, why persecutest thou me? It is hard for thee to kick against the pricks." And Paul's cry "Lord what wilt thou have me to do?" "Arise and go into the city and it shall be told thee what thou must do." And when he reached the city it was to learn that he was a chosen vessel unto Christ to bear his name before the Gentiles and kings and before the children of Israel. Not a word of all his sins. But the true way shown to the truly penitent man.

This is the way we should treat one another. The command is "Bear ye one another's burdens and so fulfill the law of Christ." What burdens? All of them. What are our heaviest burdens. Our work? Our discomforts? No, our faults and deficiencies, and it is these that we criticise sharply in each other instead of remembering that they are part of the burdens we are to bear for each other. There is a generous, loving, hopeful, and helpful way to criticise, and by so doing truly bearing others burdens. But a constant critical supervision of each other does not lighten our burdens. How often I've thought of the sources from which I've received most help; they have been the suggestions and criticisms of those whom I knew had faith in me and believed I could improve. Others flung at me just and needed criticism, but I drew into a shell of indifference and discouragement under such influences.

It is Christ's assurance that he came to save us, that he loved us before we knew

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria
When she had Children, she gave them Castoria

him, that our sins, though they were as scarlet shall be like wool and shall be remembered no more forever. There is all of purity, goodness and love to be learned from Christ; but, leaving generalities and coming to some special thing in which we can obey the command: "Take my yoke upon you, and learn of me:" there is no better place to begin than right here in our criticisms of others, especially of those who are nearest and dearest to us. Unkind criticisms from my brothers and sisters are remembered long after the fault-finding of strangers has been forgotten, and I am painfully sure that I have many an unkind criticism to atone for by generous praise and kind advice. Thinking over all that you can recall of Bible history, is it not true that Christ's message to individuals was always hope and work for the future, never harsh reproofs for the past. The severe judgments are all passed upon classes of men—the Pharisees, for instance—and not upon one man singled out.

* * *

ONE of the members of our little circle brought up the question of sincerity at the last Sunday Evening Talk. She said that it had always been a question in her mind whether *true* sincerity really required one to state disagreeable personal truths to friends and acquaintances. *Did* friendship or kinship authorize uncomplimentary frankness? Shall criticism enter the family circle? Shall the members of a family sit in judgment one upon the other? In fact, shall the plain, unglossed truth *always* be spoken to relatives and friends? The topic brought out a deal of discussion. One member said that she thought that nine times out of 10, plain, personal truths were fatal to friendship for the very reason that the motive that prompted their utterance was usually other than that by wishing to be sincere. Another contended that absolute sincerity was the key-note of friendship; that he never said ought behind a person's back that he did not feel it to be his duty to say it to his face. Mrs. C. thought that often in a moment of irritation, temper or physical pain, we uttered sharp truths of our friends and she questioned the wisdom of repeating those pricks in cold blood

Miss B. thought it more just to go to the one to whom the unkind remarks were made and retract them. She said, further, that the lives of many children are made miserable because every one feels at liberty to tell them, flat-footed, of their failings and short-comings, and they are thankful indeed to arrive at an age when their faults are pointed out less freely by their acquaintances.

We should be glad to hear from our friends on this subject, and offer these columns for discussion in R. N.-Y. of January 25.

* * *

All matter for the Domestic Department should be addressed to River Edge, Bergen County, New Jersey.

POTATOES.

THE humblest vegetable that comes to the table is probably the potato, and it is the one we could least afford to banish. Being such a constant attendant at our tables, it must appear dressed in a variety of ways if it is to continue to please us. Well boiled in the brown jacket, which nature has given it, or baked in the same coat, it becomes a dish fit for an American. When the skin is removed, by seasoning it and adding to it cream to suit the taste, just as cream is poured over strawberries, the "earth apple," in the opinion of some, is never more delicious. To the objection made that this is extravagant, the answer is that more butter is generally used on potatoes cooked in this way than is in the cream that is used instead, and the work of making the butter is saved.

Mashed potatoes to be the best of their kind should be drained well when done, mashed perfectly, seasoned with salt and cream, and beaten vigorously, as if they were the whites of eggs, being whipped into a stiff froth, then placed in a hot oven to brown before they are eaten.

Cold, mashed potatoes when made into balls for frying are improved by adding a little milk and flour before making the balls or an egg and flour. Raw potatoes sliced thin, and boiled in a little water, then salted and peppered with the addition of a lump of butter melted in them, are good. This is a process that gives around the potatoes a dressing that is thickened by their own starch. The quantity of water over the potatoes to make this dressing will be much or little as the cook may prefer. Fried potatoes are under a ban, but some of us like to eat them occasionally at least. Raw potatoes sliced very thin and covered closely in a skillet containing a large spoonful of hot fat, come out soft and tender partly browned and with a flavor that cold potatoes fried crisp, do not have. They must be stirred occasionally while frying, and a hot fire is essential or they will be soaked in the fat and far from good.

Potato soup on a cold day is good eating. One method of making it is to cut the potatoes into chunks, boil them in water enough to make a good dishful of soup, and when the pieces are tender, thicken the soup with a-half-cupful of well-browned butter into which two table-spoonfuls of flour have been stirred after the butter began to brown. In seasoning the soup, remember that the salt in the butter has already seasoned it somewhat. Cubes of dry toast stirred in when the soup is served, complete the recipe.

Another good soup is made by thickening the boiling water with a little flour first mixed with enough cold water to make a thin smooth mixture and then dropping into the pot small dumplings made by stirring together two eggs, half a cup of milk, a little salt, a spoonful of baking powder and enough flour to make a thick, but not stiff batter; each spoonful dropped into the soup while it is boiling will make a dumpling and its size will be determined by the size of a spoonful; little dumplings are more quickly cooked through. This soup should be eaten as soon as the dumplings are done. It will take but a few minutes to cook them, so they should not be put in until the potatoes are tender.

Potatoes are too often spoiled in the cooking; because they are such a common article of food it seems unnecessary to take any pains in preparing them for the table. The commoner they are the more we prize them when unusually good.

There are several ways of dressing them in milk. One of the best is to slice raw potatoes very thin and put them in an earthen baking dish, cover them with milk and bake them. This takes longer than other methods, but the result is a very palatable dish of food.

Saratoga chips can be made in some quantity and put away for future use in paper bags. To prepare them for the table when needed, place them in a hot oven until heated through. A. E. B.

THE R. N.-Y.'S WAY OF BOILING POTATOES.

AGAIN we repeat the following directions: Select potatoes of the same size, peel, wash and pour over *boiling* water to cover. Cook until tender, but not so they will fall in pieces, drain off every particle of water, stand on the back of the stove, drawing the lid half an inch to one side to allow of the escape of steam. In a minute replace the lid, hold tightly in place and invert the sauce-pan once or twice. Again return to the fire, removing the lid as before, replace, invert again and turn into the dish in which they are served. This will give mealy potatoes, if there be any mealiness in them.

TO BAKE POTATOES AS WE LIKE THEM.

PARE and slice raw potatoes rather thin. Take of butter, or lard, or good fryings, one table-spoonful or just enough to keep the potatoes from sticking to the pan, and heat smoking-hot in an iron pan. Put the sliced potatoes in, adding salt, and bake in a *hot* oven until done, stirring occasionally.

To have them extra-nice, pare in fine parings instead of slicing them.

POTATO ROLLS.

BOIL two pounds of potatoes, pass through a colander, or mash them well; add two ounces of good, sweet lard, a pint of milk and a little salt, one gill of yeast, and as much flour as will make a soft dough. Set to rise. When light, roll and cut in round cakes one-half inch thick. Fold across and set in a warm place till very light; bake in a brisk oven. With good material, these rolls cannot be excelled. MRS. E. T. I.

SNOW POTATOES.

BOIL, pour off the water and steam off on the back of the stove, then rub through a colander into the dish you are to serve them in. Serve at once.

BROWNED POTATOES.

BEAT up mashed potatoes (liberally seasoned) until light, form into a round or oval shape, cover with the beaten whites of two eggs and brown in the oven. Slip carefully on to the dish that is to be sent to the table and serve.

POTATO PUFF.

TAKE three cups of cold mashed potatoes, add two table-spoonfuls of melted butter, a tea-cupful of thin cream or rich milk, salt and two beaten eggs. Beat together, put into a baking dish and bake in a quick oven until brown. Excellent tea dish.

POTATO CROQUETTES.

TAKE seasoned cold mashed potatoes, to each cupful add two table-spoonfuls of cream. Form into oval balls with floured hands, dip into a beaten egg then in cracker dust and fry in hot lard or drippings.

MRS. ECONOMY.

NEVER dish up boiled or baked potatoes and let them wait for other things.

POTATOES IN DIFFERENT WAYS.

DOES anybody want to know the variations played in our kitchen on the tune of plain, cold, boiled potatoes? Here they are: Milk is the key-note, and the first recipe is this: Put three-fourths cup of milk—with the cream on—in a shallow frying-pan; heat to boiling point, then add a pint of cold sliced potatoes, salt, pepper, and a generous lump of butter; simmer gently a few minutes, and serve *hot*. A second recipe is: one cup of milk to which, when it boils, is added a table-spoonful of corn-starch paste, then put in one pint of potatoes cut in dice, and the salt, pepper and butter needful. Or instead of corn-starch, stir in a well-beaten egg just before serving. The other variations are made by using the above ingredients and adding different flavors: as at one time sprays of fresh parsley: at another boiled corn cut from the cob: at another a sliced onion or two—though these last must be cooked in water awhile before being added to the potatoes. Still another way is to put bits of dried beef in the pan, add one-half cup of cold water, simmer awhile, then add potatoes, and seasoning needed. Yet one more is this: mince the cold potatoes; put in a baking dish; add salt, pepper, butter and one-half cup of milk, and bake half an hour in a moderate oven. Fried potatoes I say nothing about except that in my experience they have proven an indigestible mess, and therefore not to be tolerated in a cookery department where only wholesome food is prepared. BETTY.

Miscellaneous Advertising.

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News of the Week.

HOME NEWS.

SATURDAY, December 14, 1889.

FOR the first 10 months of the current year the number of immigrants arriving in this country was 378,141, showing a falling off of 95,032 as compared with the arrivals in the first 10 months of last year. Of late years Australia, the Argentine Republic and the various African colonies have been attracting more and more emigrants from Europe.....The actual amount of the Silcott defalcation is put at various figures: but it is no doubt under $100,000. He took $71,800 belonging to Congressmen, the sums due to 36 victims ranging from $200 to $4,800. It is more than doubtful whether the Sergeant-at-Arms is legally responsible to Congressmen for their losses, and should a bill be introduced to reimburse them from the National Treasury it is likely to meet with a strong opposition. Their losses are said to be due to their own carelessness in not drawing their pay when due and a general shiftlessness in signing for it. Silcott forged the names of many, and forgery is an extraditable offence. His present whereabouts is unknown, but the detectives are after him..... Another trade conspiracy is likely to follow the example of the Cotton-seed Oil Trust by seeking incorporation and acting openly. Eight companies belonging to the jute bagging combination, with a total capacityof 31,300,000 yards will be incorporated under the laws of West Virginia with a capital stock of $1,000,000 containing very little "water." Fourteen mills with a capacity of 30,600,000 yards will remain independent. With an over-production of jute bagging, and a growing competition from cotton bagging, prices of jute bagging, unsustained by a cabal, are likely to have a big tumble soon.....Mrs. Scott Lord, the sister of Mrs. Harrison, died at Washington last Tuesday. This will wet-blanket festivities at the White House for some time.....The Globe refining Company of Pittsburg, about the largest independent oil-refining company in the country, with a capacity of 20,000 barrels a week, storage room for over 100,000 barrels and 370 oil cars, has been bought by the Standard Oil Trust for $4,000,000. It was negotiating to lay an opposition pipe line from the oil territory to the seaboard at a cost of $3,000,000; but the Standard has once more got rid of a formidable competitor..... The funeral services of Jefferson Davis last Wednesday attracted to New Orleans the largest concourse of people that ever gathered in the Crescent City. Everything was done that could show honor to the dead and affection for him. Memorial services were also held in every city and town throughout the South. He died $40,000 in debt, but he owned a tract of 6,000 acres in Arkansas, besides his Mississippi homestead and some other property. A fund of at least $100,000 is being raised for his family throughout the South, and as Mrs. Davis objects to charitable contributions, a company has been formed to purchase the Arkansas tract at a good figure. Probably a good deal more than $100,000 will be raised.....Last Tuesday night during the performance of "Uncle Tom's Cabin" at the Opera House at Johnstown, Pa., a cry of "Fire!" was raised and in the mad stampede to escape 12 of the audience were crushed to death and 75 more or less severely injured.....Oliver Johnson, the veteran abolitionist and journalist, died in Brooklyn, Tuesday..... Throughout Kansas there is a car famine due chiefly to the enormous crops that have to be moved to the market and partly to the enforcement of the new grain inspection law and the fact that the railroads, not having anticipated such an enormous business, had not made adequate preparations for it.....

FOREIGN NEWS.

SATURDAY, December 14, 1889.

An antarctic exploration committee has been organized in Melbourne, the chief city of the colony of Victoria, Australia, and the most important city in the continental island, with a population of 250,000..... Next week Gladstone will be 80..... Boulanger has made a contract to lecture in the United States. He speaks English first-rate, his mother having been English and he having spent several years of his boyhood in an English school.....Oscar Searle, champion oarsman of Australia and the world, died the other day..... ..... The epidemic of influenza or "grippe" has spread from St. Petersburg to Stockholm, Berlin, Vienna, Paris and a large number of other important towns and cities in Europe. It is likely that the entire continent with all the adjacent islands, will soon be violently coughing and sneezing. .....The latest advices from Brazil indicate that the revolution in the country was brought about by the action of an insubordinate colonel who quarreled with the Minister of Marine over an order which he considered unjust, and shot the Minister down, whereupon the "regular" troops, disgruntled at the prospect of losing their dominant influence through the organization of the militia, mutinied. The "Imperialists" appear to have been dumbfounded at first; but have since been agitating in favor of the restoration of imperialism, and the Republic seems hardly well established as yet. There have been several bloody encounters between the troops and the people, but as all the telegraphic and postal facilities are in control of the new Republican government unfavorable news is not permitted to go abroad. The late Empress's diamonds, among the most valuable in the world, were per force left behind at Rio when the Imperial family were ordered away at an hour's notice, and they have since been stolen. If Dom Pedro refuses the income offered by the Republic or if the latter should discontinue it, the loss would be a serious blow, as the sale of the diamonds would have been the main dependence of the family in such a contingency.....

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Miscellaneous Advertising.

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AGRICULTURAL NEWS.

SATURDAY, December 14, 1889.

THE Senate committee to investigate the dressed beef business, whose investigations at Chicago and Kansas City the past summer were reported in the R. N.-Y. at the time, has resumed its investigations in Washington. Mr. H. Hoover, a Washington butcher, testified that he was told last spring that it would not be wise for him to bid on Government contracts, for if he or any of his friends got any of those contracts the Chicago beef men would not sell him any meat and would drive him out of the market. He did, however, secure some small contracts, when these threats were carried into effect. None of the agents of Armour & Co., Swift & Co., and Nelson Morris would sell meat to him or to his friends who tried to purchase for him. Complaint was made to the Chicago houses direct through an attorney. Armour & Co., and Nelson Morris answered saying that they did not countenance any such proceeding. In order to test the matter, the witness took a friend and tried to buy meat of the agents of these firms, but could not do so at the market rates. They asked him two or three times the regular rates and have not since sold him any meat. A salesman for Nelson Morris said that Mr. Hoover's statement was true, and

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STRANGE TIDINGS FROM UNFREQUENTED LANDS. A series of eight articles by Herbert Ward, the companion of Stanley in Africa. These articles will cover five years' adventures in Africa, and they will be illustrated by sketches made by Mr. Ward on the spot, and by photographs taken by him in Africa. These pictures will throw much light upon the manner and customs of the hitherto unknown cannibal tribes of Africa.——Rev. E. R. Young, the celebrated missionary, will furnish fifteen articles on the experiences and adventures of himself and his wife during twenty years' residence in British America, twelve hundred miles north of St. Paul.——Leo Hartmann, Nihilist, writes twelve sketches showing how the intelligent people of Russia are becoming Nihilists in consequence of the despotism of the Russian form of government.

ILLUSTRATED SOUVENIRS. SENT FREE TO ALL SUBSCRIBERS. The first of these souvenir supplements will be a Poem by John G. Whittier, illustrated by Howard Pyle, and engraved by H. Wolf, R. G. Tietze and E. A. Clement. The next souvenir will be a beautifully illustrated poem by James Russell Lowell.

SERIAL STORIES BEAUTIFULLY ILLUSTRATED. Continued stories will be contributed by such wholesome and captivating authors as Frances Hodgson Burnett, Anna Katharine Green, Elizabeth Stuart Phelps, Robert Louis Stevenson, Col. Thomas W. Knox, Albion W. Tourgee, Prof. W. C. Kitchin, Robert Grant, Frank H. Converse, Harold Frederic, and others.

CONTINUED ARTICLES. These articles were written especially for the "Ledger" by writers whose reputation and capability establish them as the persons most eminently fitted to treat that particular subject assigned to each.——The Hon. George Bancroft contributes three articles on The Battle of Lake Erie, beautifully illustrated.——Hon. Henry W. Grady furnishes six articles on The Wonderful Development of the New South.——James Parton contributes a series of articles on Incidents in the Life of Andrew Jackson.——Rev. John R. Paxton, D. D. contributes six articles on Experience in My Army Life.

POPULAR INFORMATION. Throughout the year the "Ledger" will contain hundreds of sketches of popular information which will supply an amount of beneficial information that will be of inestimable value to those who are in search of something instructive and useful.——Prof. Alexander M. Stevens will explain the manners and customs of the Moki Pueblos, a peculiarly strange tribe of Arizona Indians.——Dr. Felix L. Oswald is, by special arrangement, contributing a series of popular scientific sketches, embracing the observations of the writer during his investigations into the unfamiliar phenomena of natural history and occult science.——C. F. Holder contributes an extended series of articles on singular aspects of animal life on sea and land. His articles are brimful of information.

SHORT STORIES COMPLETE IN EACH NUMBER. Hundreds of illustrated short stories will be given during the year from the pens of such familiar and fascinating authors as Madeleine Vinton Dahlgren, Col. Thomas W. Knox, The Marquise Lanza, Margaret Deland, Julian Hawthorne, Harold Frederic, Harriet Prescott Spofford, Clara Whitridge, George F. Parsons, Marion Harland, Mary Kyle Dallas, Amy Randolph.

IMPRESSIVE PAPERS. These papers are a medium through which the readers of the "Ledger" will be entertained by many of the most eminent men of the day. The benefit derived from these articles will in itself compensate any one for the price of the "Ledger."——Murat Halstead contributes a series of papers on The Journeyings of a Journalist, being the experience of the author during his travels Around the Globe.——Rev. Dr. McCosh, ex-President of Princeton College, furnishes a series of papers on the present state of religious thought and development, entitled On the Border Land of Religion.——Hon. George Bancroft tells of A Day Spent With Lord Byron.——Prof. Eliot Blauvelt explains how Egypt fell into a state of ruinous distraction, consequent on the decline of the Roman government, and how every species of barbaric rudeness superseded the refined habits of the people.——Rev. Dr. Henry M. Field contributes a paper on The Lopez Expedition, the first of a series of articles descriptive of thrilling historical episodes.——Many other highly impressive papers are in preparation by M. W. Hazeltine, E. L. Godkin, Rev. Dr. John Hall, James Parton, Prof. W. C. Kitchin, Rev. Emory J. Haynes, and George Frederic Parsons.

HOUSEHOLD ARTICLES. Six articles will be contributed by Miss Parloa on American Cookery, explaining why it is imperfect, and giving some ways by which it may be improved and economy practiced.——Dr. Julia Holmes Smith will write a series of articles on Common Sense in the Nursery, offering valuable suggestions concerning the care of children.

OTHER FEATURES. The "Ledger" will also contain Historical and Biographical sketches, Poems, Ballads, Travels, Adventures, Science Items, Answers to Correspondence, and a vast quantity of matter interesting to the household.

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that he had instructions to sell to him at two or three cents above the market rates. No reason was given for this, and the instructions were not now in force. John N. Hoover, a brother of the former witness, confirmed his testimony, and said that the boycott was lifted while the Senate committee was making its investigations in the West, and that any of the firms would sell him meat now. Another butcher confirmed the testimony of these witnesses. The committee think of visiting New York to investigate the dressed-beef export trade.....

A consignment of 3,479 tons of Java sugar was recently made to a Boston firm who are not members of the trust.....

The December cotton report of the Department of Agriculture says that the crop matured late, and that early frosts reduced the yield somewhat, especially in the Northern belt. Prices are a little better than last year.....The New York State Dairymen's Association in session at Ithaca elected the following officers for the ensuing year: President, W. H. Gilbert, of Richland; vice-president, J. W. Edmonds, of Sherman; secretary, Hon. Josiah Shull, of Ilion; treasurer, G. E. Powell, of Ghent; directors—Jesse Owen, of Elmira; General Edward F. Jones, of Binghamton; Hiram Olmstead, of Walton; Dudley Miller, of Oswego; Frank Blonding, of Hubbardsville, and E. F. Ladd, of Geneva.....

The Delaware State Grange has been in session at Dover. The meeting was largely attended, and the reports showed the organization in a prosperous condition.....

The Connecticut Board of Agriculture will meet at Birmingham, December 17-19. An excellent programme is presented, and an opportunity will be given for discussion of each paper. There will be music, a question box, an exhibition of fruits and other farm products, etc. T. S. Gold, Secretary.

....The Michigan Short-horn Cattle Breeders' Association will hold its ninth annual meeting in the senate chamber at Lansing, December 18 and 19. I. H. Butterfield, secretary, La Peer.....The New Jersey State Horticultural Society meets at Trenton, December 18-19. E. Williams, Montclair, secretary.....The United States consuls throughout Canada have been instructed by the Department of Agriculture to furnish it monthly reports of the area, condition and quality of crops in their districts, together with all particulars of interest to farmers which it is possible to gather. It will not be possible to do much before another year.....

Crops & Markets.

SATURDAY, December 14, 1889.

To summarize the potato situation, there have been heavy crops in most of the Western States, and prices have been low; in all the Eastern States except Maine, which had a very heavy yield, the tubers have rotted badly, lessening the yield materially and those escaping are many of them of poor quality. The result is heavy shipments from the West which have kept the market well supplied; while prices have been low in the West, heavy freight charges prevent a very high net price to the distant shipper. Still there have been heavy shipments of Western potatoes. One dealer said he had received potatoes on which the freight charges were $250 per car-load. W. E. Duryea's Sons are heavy importers of foreign potatoes, but they inform us that their importations have been light thus far on account of the large receipts of Western stock. Freight rates favor the Scotch potatoes, as they can be brought from Dundee cheaper than they can from neighboring States. The rate now is 27 cents per sack of 168 pounds. It sometimes advances to 50 or 60 cents. At the lower freight rates which usually prevail, even with the 15 cents per bushel duty added, it is easy to see that potatoes from the interior have a strong competitor in the imported tubers. The variety imported from Scotland is Magnum Bonum. Potatoes are also sent here from Germany, England, Holland, New Brunswick, Nova Scotia, and other countries. The crop in most if not all of these countries is reported heavy, and shippers are only awaiting a cessation of Western shipments to send on large quantities. The reason of such cheap freight rates is that vessels have little freight and will bring over potatoes for about what it costs to load and unload them; they make very good ballast. Magnum Bonums sell now for about $1.80 to $2 per sack. Domestic potatoes are in good demand if of good quality. Burbanks are more in demand than they were, but the variety makes little difference. Smooth, clean, well-assorted tubers of good quality are what are wanted. Under existing conditions, prices are likely to be moderately high, and the supply ample.

LATEST WHOLESALE PRICES

—OF—

COUNTRY PRODUCE.

New York, Saturday, December 14, 1889.

BEANS.—Marrows—New, $2 50@$2 55; New Mediums, choice, $1 80 $1 85; Pea, $1 75@$—; Red Kidney, $340; White Kidney choice, $2 70@$2 75; Foreign Mediums, $1 70@$1 90; California Lima, $3 00@$325; Italian, $1 70@$1 80. Green Peas, $1 05@$1 10.

BUTTER—New—State and Pennsylvania, best, 24@26; Elgin, best, 29c; Western, best, 24@27½c; do prime, 23@25c; do good, 19@21; do poor, 14@17; State, Dairy, half-firkins, tubs, best, 22@23c; do do prime, 19@21; do do fine, 15@17; Welsh tubs, fine, 19@21c; do do good, 15@18; firkins, best, —@—c; do prime, —@—c do fine,—@—c. Western—Imitation Creamery, best, 21@23; do fine, 15@17; Western dairy, fine, 16@18c; do fair, 11@13c; do poor, 9@10c; do factory, fresh, best, 19@20c, do prime, 15@17; do good, 10@12; do poor, 7@10c.

CHEESE.—State factory, fancy, 10@10½c; do do fine, 9½@10c; do do, prime, 9@10c; do do, fair to good, 8¾@9¼c; Ohio, flat, prime, 7½@10c; do good,—@—c; do. good, —@—; Skims, light, 7@8c; do medium, 5@7c; do full, 2@4c.

EGGS,—Near-by, fresh, 24@26c; Canadian, 20@21c; Southern, 20@21c; Western, best, 23½@24c; limed, 16½@18c; ice house, 17@18c.

FRUITS.—FRESH.—Apples, per bbl, $2 00@$4 00; Pears, per bbl, $2 00@$3 50; do per keg, $2 00@2 75, Grapes, best per lb, 3@7c, do, good, 2@3c. Cranberries; C. C, per bbl, $5 00@$11 00; do per crate, $2 75@$3 25; Jersey, do, $2 50@$3 00. Lemons, per box, $1 50@$4 50.

DOMESTIC DRIED—Apples—Evaporated, old, 5@7½c do choice, new, 9½@10c; prime, 8@8½c; sliced, new, 4@5¼c; do old, 3½@3¾c; Chopped, 3½@3¾c; Cores and skins, 2½@3c. Cherries, new, 8@12c; do, old, 8@10c. Raspberries, new, 21@24c; Blackberries, 5¼@5½c. Peaches, Delaware, evaporated, peeled, 15@20c, do do, unpeeled, 8@10c; Georgia, evaporated, peeled, new, 13@15c; do do do, unpeeled, 7½@10c; do do, sundried, 6½@9½c. Huckleberries, new, 11@12c. Plums, new, 7@8½c.

GAME.—Plover, per doz, $1 50@$1 75; Snipe do, do, $1 50@$1 75, Woodcock, per pair, $0 50@$1 00; Grouse, do do, 75@$1 10; Partridges do, $0 55@$1 00. Duck, Mallard, 75@85c; do, Teal, 35@50c; do, Redhead, $1 50@$2 50; do Canvas-back, $3 00@$5 00; Rabbits, per pair, 10@12c; Quail, per dozen, $0 50@$1 50.

HAY AND STRAW.—Timothy, best, 80@85c; do good, 70@75c; do medium, 50@60c; Clover, mixed, 45@55c; shipping, 40@45c. STRAW—No. 1 rye, 75@85c; short rye, 35@40c; oat, 30@35c.

HONEY—In one-pound boxes. White Clover, 12@14c; Buckwheat, 10@12c; Beeswax 22@23c.

HOPS.—State, New, 12@14c; do, good, 10@11c; do common, 7@9c; do 1888, best, 10@12c; do do prime, 9@—c; do do, common, 6@7c; California, New, best, 12@13c; do good to prime, 10@11c; do Old, best, 11@12c, do common and fair, 7@9c.

NUTS.—Peanuts are quiet. Fancy, hand-picked, quoted 6¾@7½c, and farmers' grades at 4½@5½c, Pecans, 6@8½c. Chestnuts, $4 00@$6 00 per bushel; Hickory Nuts, $1 50@$2 00 per bushel.

POULTRY.—DRESSED—Turkeys, mixed, per lb. 10@15c; Fowls, western, choice, 8@10c; do common to good, 5@8c; Ducks, spring, good, 9@14; Squabs, white, per dozen, $2 50@$2 75; do dark, do, $2 00@$2 25; Chickens, spring, 9@15c; Fowls, near by, 5@10c.

POULTRY—LIVE.—Chickens—Spring, per lb, 8@9c. Fowls near-by, per lb, 9@10c, do Western, per lb, 9@10c; roosters, per lb, 5½@6c; Turkeys, per lb, 9@11c; Ducks, Western, per pair, 60@80c; Geese, Western, per pair, $1 15@$1 50.

SEEDS.—Clover is hard to sell; exporters quiet. New prime, future deliveries offered at 6¼ and choice, 6½c, with fancy at 6¾c. Timothy quoted at $1 50@$1 60. Canary, 2@4c.

VEGETABLES.—Potatoes—Maine, per bbl, $1 90@$2 00; Long Island do, $2; State do, $1 25@$2 15. Western, do, $1 00@$1 90; Sweets do, $2 25@$3 50. Cabbage, per 100, $3 00@$5 00. Turnips, per bbl, 75@95c Onions—Orange County Red, $1 50@$2 75: Eastern White, $5 00@$8 00; Eastern Red, $2 50@$3 00, State, Yellow, $2 00@$2 25. Cauliflower, per bbl, $3 00@$9 00; Squash, Marrow, $1 00@$1 25; do Hubbard, $1 25@$1 50, Celery, per doz. bunches, 20c@$1 50.

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 15@18c, and Spring do 19@25; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

Communications Received for the Week Ending December 14, 1889.

J. R. R.—E. T. R.—W. H. H.—H. T. J.—J. W. T.—A. A. B—E. S. G.—C. V. R.—J. R.—M. R.—J. J. C.—A. H. G.—P. P. Q.—W. F.—F. H. B.—C. E. C.—J. H. F.—J. J. C.—P. W.—J. W. N.—D. C. L.—R. C. B.—T. T. L.—J. G.—W. A. M.—C. H. F.—S. E. S.—W. F. R.—N. H. G.—G. W. T.—W. A. H.—J. M. D.—J. G.—J. M. R.—E. P C.—F. O T.—N. R. T.—T. E. B.—J. H. K.—F. L. A.—W. V.—W. P.—R. J. H.—A. A. R.—B. H. L.—G. J. G.—H S.—A. S. G.—W. R. H.—J. M. S.—S. M. B.—S F. S—S. R. McK.—C. H. B.—M K. P.—J. L. B.—L. A.—S. H.—W. L.—J. E. M.—D. J. B.—H. N. F.—L. A. E.—G. C. S.—C. E. P.—H. F N.—P. C.—C. A. G.—A. H. H.—J. R. D.—L.W. L.—W. E P.—H. U. T.—S. W. S.—C. W. R.—C. W. M.—H. O.—W. McN.—D. J. P.—C. C. E. P—W. H. B.—M. K. J.—E. B.—J. H. E.—G. D. C.—H. A. W.—W. S. G.—J. M.—A. P.—H. M.f'g Co.—E. C. & H. M.—S. E. C.—N. G. W.—B. F. M.—K. N.—E. T.—B. F. F.—A. S. B.—C. F. P.—E. F. N.—A W. S—J. S.—H. F. B.—E. F. D.—O. H. A—H. M. Co. R. E. M.—C. C.—W. C. Co.—A. W. G.—B. & T.—S. M. C. G. R.—C. G. S.—P. O. J.—W. H. P.—J. G. R.—B. S.—P. C.—M. C S.—J. H. W.—F. P. S.—A. G. M.—A. T. T.—H. S.—T. A. B.—R. B. C.—A. J. D—R. P. M.—B F. C.—L K. T.—V. L.—W. C. R.—E. F. D.—J. M. S.

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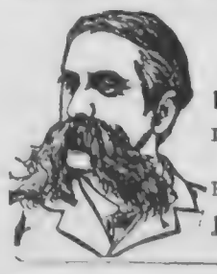

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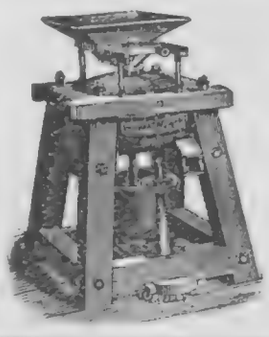

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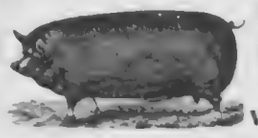

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Literary.

MAGAZINE REVIEWS.

BELFORD'S MAGAZINE contains an editors' symposium on "The World's Fair," meaning the proposed memorial celebration commemorative of Christopher Columbus's great discovery. The contributors are Col. Cockrill, New York World; Crosby S. Noyes, Washington Star; Charles Emory Smith, Philadelphia Press; Frank Hatton, Washington Post; Alexander Wilder, late of the New York Post; Thomas B. Bryan of Chicago and James S. Redpath, late of the North American Review, also of New York. As might naturally be expected, each writer favors its location in his own city. The symposium to have been complete, should have represented St. Louis which is a claimant for the honor (?) by no means to be despised. The bulk of evidence is in favor of New York which also presents the strongest arguments. The only disinterested writer is Mr. Smith. Of course, Philadelphia cannot expect any one to favor that city as a site, so he is untrammeled by selfish interests. He favors New York, and, in our estimation, makes the soundest argument of any of the contributors. Helen W. Pierson contributes "Keturah's Little Scheme," a very romantic story of a mining camp. "Old Scribe" gives a reminiscence of "Little Patti" the now famous primadonna. He describes her "as a tall, gaunt girl" who was led into his studio for the purpose of having a drawing made of her, in 1846, but as her birth is recorded in 1843 there is evidently a discrepancy somewhere. H. K. Thurber gives a short article on "Our Commercial Marine" which should be read by every American citizen. It is well known that the shipping of the United States has been rapidly decreasing, but the cause is not so well known. In 1869, of our exports and imports 66 per cent. were freighted in American and 34 per cent. in foreign vessels; in 1889, 14 per cent. were freighted in American and 86 per cent. in foreign vessels. Mr. Thurber attributes this, not to the tariff laws, but to the policy of the government which has not "protected" and encouraged the commercial marine. "Looking Forward" is a satirical sketch of 1976, intended to represent the country in the last agonies of protective fever. Felix L. Oswald, M. D., contributes a very interesting and instructive article on "Cats." There are several other contributions which space forbids our noticing, and a complete novel: "Atahualpa's Curtain," by John Dimitry. Belford Company, New York.

THE HOME-MAKER for this month is emphatically a Christmas number, most of the articles having special reference to this holiday. The frontispiece is a droll sketch by F. S. Church, entitled "Christmas All Around the World." "Aunt Polly's Christmas" is a touching sketch of an old negress who was "bawn in de family," and always "b'longed to de Hendersons," and who in her old age and helplessness was about to be sent to the poor-house. The old owners were all thought dead, and the place and the cabin where she had been permitted to remain so long, had been sold, and there was no other place for her to go. But the long-lost son of the family returned, and Aunt Polly passed her remaining days in the old cabin. "An African Christmas Story" by Barton Lee, and "Bea's Whim" by Sophie May are excellent Christmas stories for the young people. Anna Alexander Cameron gives an excellent word-picture of "Christmas on the Old Plantation." "The Evidence of the Negative" is an Arkansas narrative suggestive of a very tragic termination, but happily ending in a manner entirely different. There is a long list of "Holiday Recipes" from "Southern Kitchens" which are very suggestive of Christmas feasting. There are numerous directions for making Christmas gifts, which, considering the paucity of such instructions at this season, cannot but prove very acceptable. "Common Sense Temperance Talk with our Girls" should be read by every young woman in the land. There are numerous illustrations, but they are so decidedly inferior as to suggest the work of amateurs instead of artists. Only two or three are passable. Old readers of the Home-Maker will be saddened to learn of the death of Catherine Owen, (Mrs. Helen Nitsch) who has been a regular contributor since its first issue. A beautiful tribute is paid to her memory by the editors. The Home-Maker Company, New York.

THE WRITER has a chapter of "'Don'ts' for Young Writers," which are of equal value to older writers. From among the many valuable ones, we select a few. "Don't punctuate your manuscript with dashes in place of commas, semi-colons and periods." "If you don't know how to use commas, semi-colons and periods correctly, learn." "Don't send directions that such and such words of your copy must be italicized. Every publication has its own standard of taste about such matters, and it will probably adhere to it." Many valuable hints are given under "Needless Words." An exceedingly helpful department, "The Use and Misuse of Words," has been added. There is much that will benefit literary aspirants in its pages. The Writer, Boston.

Law.

"Every Man is presumed to know the Law. Nine-tenths of all Litigation arises from Ignorance of Law."

WHY ONE SHOULD MAKE A WILL.

L. T., Dutchess County, N. Y.—If a person who owns a valuable farm and considerable personal property, desires to make an equal provision for his wife and children, is there any particular necessity or advantage in a will? In other words, what disposition is made by the laws of this State of the estate of a man who has left no will?

ANS.—If a man dies intestate in this State leaving no children, his widow has a dower right to his real estate, and one-third of his personal property. The fee of the real estate and two-thirds of the personal property are divided equally among the children or their descendants who take the dead parent's share. There are many advantages in a will, however. It appoints an executor, whereas if the widow becomes administrator she must give bonds in twice the amount of the personal estate, and might find it difficult to obtain a bondsman. If duly drawn, the will gives the widow (if she is named executrix) the right, in case of necessity, to dispose of the real estate; whereas, if the children are minors, it is difficult to effect this. It is sometimes advisable to join a disinterested person with the widow as executor, to protect the interests of the children in case she should marry again.

WIFE SIGNING A MORTGAGE ON REAL ESTATE.

T. M. S., Seneca County, N. Y.—1. A owns a farm on which he wishes to borrow money on a mortgage. His wife is strongly opposed to the plan. Is her signature necessary to the mortgage? 2. Should a deed to real estate be in the joint names of man and wife?

ANS.—1. A wife has a dower interest in the real estate of her husband. This is a life interest in one-third of what remains of it after all the encumbrances and liens against it have been paid. This interest is ordinarily good against any one claiming under a deed or mortgage which she has not signed. In this State, however, and in several others, if a husband executes a mortgage to secure a part of the purchase money to be paid for the land, the widow will not be entitled to dower out of such land as against the mortgagor or those claiming under him, even though she has not united in the mortgage. The wife must be of age when she joins her husband in a conveyance of land in order to bar her dower or right of dower. 2. There is no advantage in having a deed to real estate made to both husband and wife.

SATISFACTION PIECE.

T. M. R., Schuyler County, N. Y.—Is the holder of a mortgage obliged by law to give a satisfaction piece when the mortgage is paid in full? If so, who pays the expense of drawing up the satisfaction piece?

ANS.—A creditor is not bound to give a receipt for money paid, and this principle is held to cover even a mortgage debt. If the mortgagor wishes to have a satisfaction piece signed, he must prepare it and present it to the mortgagor for his signature. Even then there is no summary process by which the latter can be compelled to sign it. If he refuses to do so the mortgagor's only remedy is to pay the debt in the presence of witnesses and then bring an action to cancel the mortgage of record and compel the execution of a satisfaction piece.

T. L., Herkimer County, N. Y.—A and B jointly own a mortgaged farm. When the mortgage falls due A proposes to assume it, charging the joint property with interest as before. Should A and B make out a mortgage to it, or can A be protected to the amount of the mortgage as against possible creditors of B?

ANS.—One who has bought a part of any premises subject to a mortgage can have the mortgage assigned to him and it will be as valid in his hands as in those of the original holder. Accordingly in the case under consideration, the simplest plan would be for A to pay the mortgage debt and take an assignment of the mortgage to himself.

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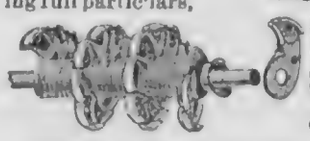

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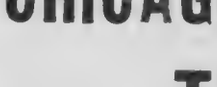

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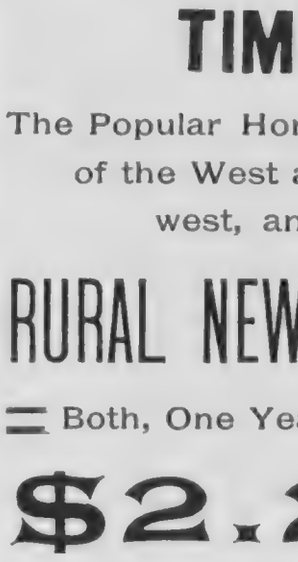

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Various.

A JERSEYMAN'S JOTTINGS.

"REPORT OF THE SOCIETY FOR THE PROMOTION OF AGRICULTURAL SCIENCE."

THE R. N.-Y. sends me a pamphlet bearing the above title and asks me to review it from the standpoint of a practical farmer! I am nothing of a scientist myself; life is a very practical thing with me, a matter of the hardest kind of dollars and cents. If the R. N.-Y. wants to know what I think about the pleasant little talks made by these scientific gentlemen, and how far I consider them valuable to me in my farm work, all very well. As for any scientific review of the matter—that is far beyond me. The meeting under discussion took place at Toronto, Canada last August. I will give the topics as they appear in the report. First let me say that I do not know that these gentlemen claim to talk so that farmers can readily comprehend them. These talks are for their own benefit—they are to be translated into the farmer's language later.

What Is Common Wheat Rust.—I do not raise wheat now and therefore do not feel much interest in this topic. After reading what Prof. Arthur has to say, I know just as much as I did before about it, certainly not any more.

Notes on Bird's-Eye Maple.—Dr. Beal gives an interesting talk on this subject. There is nothing in it that can help us to make more money at farming, but it will teach one to be a little more observing while in the woods. Dr. Beal also tells about some acorns that were buried for four years. I cannot see much point to this experiment.

The Grass Problem in Nebraska.—If I lived in Nebraska I should consider this article by Dr. Bessey a valuable and helpful one. As I live in New Jersey where we must raise the grasses that the hay men think most of, it won't do me any good.

A Bacterial Disease of Indian Corn.—Prof. T. J. Burrell tells about a new disease which attacks corn and sorghum out West. To judge from his descriptions we have never had it here. "We know too little of the disease to suggest a remedy," he says.

Arsenical Poisons as Insecticides.—Prof. A. J. Cook is a practical scientist. He has a farm of his own in which he can sink his surplus money and it may be that this sort of burial has had a good effect on him. I find that the coddling moths do about as much damage to the apples as the beetles do to the potatoes, and from a few experiments I have tried I am convinced that Paris-green will prove as effective against one insect as against the other. The average farmer has almost too much work to do at the time for spraying, and if we are to have any more seasons like the last, the poisons will will wash off faster than we can put them on. Prof. Cook thinks tobacco dust is going to kill the flea-beetle. He will find that the specimens of this insect we find in New Jersey will grow fat on tobacco.

The Nitrogen Supply of Maize.—I am always a little prejudiced against those experiments that are carried on in flower pots. There is too much multiplying about the result—too many "ifs." They are doubtless valuable as data upon which to build other and larger experiments, but that is as far as they go. I can't see anything about the result of the one recorded here that any observing farmer could not have told before the thing began.

Cranberry Gall Fungus.—Dr. Halstead has found a disease that threatens our cranberry plants. This disease dwarfs the plant and turns it red, preventing the formation of flower or fruit. Nobody knows how dangerous it is and nobody seems to know of any remedy. The cranberry crop is an important one with us and we would like to know more about this matter. Dr. Halstead has made out what he calls a "Scale of Points for Weeds." The "scale of points" we generally recognize here is about as follows:

Power of injuring farming,	100
All other qualities,	0
Total	100

However, Dr. Halstead's scale is interesting. The worst weeds I have are ragweed, burdock, Quack Grass and plantain. I see that farmers in other States report trouble from these fellows. They rank high in Dr. H.'s "scale of points."

Notes on Some feeding Stuffs.—Dr Kedzie finds that some grasses found in swamps analyze fairly well and ought to make cow food. The trouble is that such grasses are mixed up with harsh, coarse varieties which are too tough for stock to eat. They are almost too tough to use for bedding. Dr. K. finds that wheat screenings are excellent for stock food. For the price at which they are sold they are cheaper than bran or middlings. I am certain that this idea is correct.

Abnormal Production of Milk.—Prof. J. A. Myers tells of a heifer that produces five quarts of milk per day and has never had a calf. The heifer ran in pasture with a steer which began sucking her and kept up. When the steer was taken away it was found that the heifer gave milk. I have heard of one or two cases of this kind. Most farmers object to milking such heifers before they calve, but I never could see any objection to it. Prof. Myers's point is that handling and rubbing the heifer's udder may help develop it and induce a heavier yield of milk. I do not much believe in this. This "developing" business does not amount to much. To start the heifer off with a very large yield will be as apt to hurt her as to help her.

The Food Value of Sorghum Seed.—Prof. Wiley figures from his analyses that sorghum seed is fully equal, as a food for man and other animals, to corn and oats and is but little inferior to wheat. It seems to be more like wheat than corn in its composition. A great deal of money has been spent in New Jersey trying to make sorghum sugar at a profit. We have made some sugar but it has cost more than it was worth. Some of our wise men want us to grow sorghum instead of corn. We are told that we shall be able to get our sugar free, that the bagasse will be equal to corn-fodder, while the grain will equal corn for feeding. My stock do not seem to like sorgum seed. The hens will leave it until they are starved into eating it. Dr. Wiley also has a long article on some experiments made to see if the butter made from cows fed on cotton-seed was harder and less easy to melt than when no cotton-seed was fed. I do not see that there is much value to this article—certainly there is nothing proved.

Do Potash Fertilizers Prevent Blight?—After the season that has just passed we are all anxious to learn what we can about potato blight. It seems that last year Prof. Scovell noticed that the blight was least severe where a good supply of potash was used in the fertilizer; so he decided to try an experiment this year of planting different plats with different sorts of fertilizers using a good deal of potash on some of the plots to see if it would prevent the blight. The results prove little or nothing. My own idea about the matter is that a complete fertilizer is the best thing for any plant disease, unless you know that some one element is lacking in the soil. The idea of applying potash to soil that may already have potash enough is not very sound. No blight will be stopped that way.

Preventing the Potato Rot.—Here is another subject that we are much interested in. Prof. Weed's plan of spraying the potato vines with the Bordeaux Mixture has already been discussed in the R. N.-Y. I do not much believe it is practical on a large scale, still I have never tried it. Next year I mean to experiment a little. Something must be done or what with bugs, beetles and blight potato-growing in New Jersey is doomed.

There are a number of other things in the report that I do not feel much interest in. These scientists must have had a first-rate time, but unless the agricultural papers take up their essays and put them into simpler form the common farmers of the country will never be much wiser.

JERSEYMAN.

CATALOGUES, ETC., RECEIVED.

LIMITING OF FORTUNES. The R. N.-Y. has received a note from what purports to be "The United Service Club" of Washington, D. C. The object of this club is "to curb covetousness," by limiting the aggregate property in any form of individual ownership, to some fixed and reasonable sum, condemning the surplus as a public nuisance and a public peril. To bring about this desired result, the following amendment to the United States Constitution is proposed:

"No citizen or resident or investor in any or all States, Territories or Districts, comprising the United States, shall be permitted to possess, in all kinds of property, an aggregate value of more than Ten Millions of dollars; which sum shall be the limit of private property in any individual, joint-individual, guardian, trustee, or other form or device of private estate ownership. And whenever and wherever such private ownership or holding shall be found to exceed the limit above named, the surplus shall all be condemned as a public nuisance and a public peril, and be accordingly confiscated into the United States Treasury; from which it shall be from time to time, apportioned among all the State Treasuries. And the States, etc., shall, each and all, enforce this Amendment by necessary or penal legislation: failing which, Congress shall so enforce it."

Why make the sum so small? Too many of us are in danger of collecting the small sum of $10,000,000!

A BUSINESS EDUCATION.—Circulars from Bryant & Stratton Business College, Buffalo, N. Y. A course at this college will be of service to anybody who ever expects to handle any money. Who is not included under this classification?

RICE AND ITS BY-PRODUCTS.—Bulletin from the Louisiana Experiment Station. This is an interesting pamphlet, particularly so to the farmers in the Gulf States, who find rice a very important crop. It serves to feed the hired help on the Southern plantations as cheaply as any other product of the soil. Farmers in sections of the country where rice cannot be grown will be most interested in what is said about the by-products of the crop. These products are rice-bran, rice-polish, rice-straw, rice-hulls and rice-hull ashes. They are mainly valuable as cattle foods. While their production is necessarily limited, analyses show them to be so valuable, as compared with other foods, that a few enterprising feeders might strike a real bonanza by securing all they can of these rice by-products before the general public can discover their real value. In 1880 the total product of rice in this country was 110,131,373 pounds. It was all grown in eight States. It will thus be seen that the total amount of the by-products cannot be very great, still the few enterprising men who are willing to experiment with these foods and learn their true value, will, in the R. N.-Y.'s opinion, be well repaid. Rice-bran, about the only one of the products, as rice-polish is a small part of the total grain worth considering, sells in New Orleans at $6 to $7 per ton. The following analyses show the value of these rice products as compared with others better known.

	WATER.	ASH.	FATS.	FIBER.	PROTEIN.	CARBO-HYDRATES.
Rice-bran	10.67	11.10	9.97	10.95	11.29	46 02
Rice-polish	10.63	5 45	7.02	2.62	10.94	63 34
Wheat-bran	12.08	5 84	3 67	8.55	14 82	55 04
Rye-bran	12.30	3.62	2.19	3 51	15.25	63 12

It will be seen from the above that rice-bran is particularly rich in fats. It is well suited for use in a butter ration when fed with clover hay. In fact, the bran is better suited to feed with the best of fodders and will not answer to feed with poor fodders like straw or inferior hay.

HUDSON'S BICYCLE CULTIVATOR.—Circular from S. Terry Hudson, Riverhead, L. I., N. Y. The best way for us to call the attention of our readers to this implement is to refer them to the picture shown at Fig. 303, (page 836). This is taken from life and represents an energetic young woman starting for the field to cultivate the potatoes. She will do the work in good shape and without injury or loss of dignity to herself. The implement is highly indorsed by T. B. Terry and other observing farmers. We give its picture a place in this issue because it serves to illustrate how useful and enterprising the ladies of the R. N.-Y. family have become. The fact of the matter is, that with a sulky plow, an Acme or Cutaway harrow, an Aspinwall potato planter, Breed's Universal weeder, Hudson's Bicycle cultivator and Aspinwall potato digger a woman could successfully grow many hundreds of bushels of potatoes. The beauty of this cultivator is that it can be used in any crop. Send for the circular.

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SMALL POTATOES.

At last, the time has come,
Woman's skill to test;
To rival brother man,
She did her level best.

The season fair began,
But alas! rain-rotted rows
Have blighted many hopes;
And cries echo—"small potatoes"
—*E. A. C.*

PERHAPS if the potato didn't have any eyes, it would not be so often mashed.—*The Orange Grove.*

WHY are lovers like turnips, potatoes, apples and sech? Because they are usually paired.—*Agricultural Epitomist.*

"AND Smithkins plays in the band! Why, he couldn't blow a hot potato." "That's what he does; he blows the tuba."—*Tid-bits.*

YOU see a good deal of advice in the papers now about raising small fruit, but none about raising small potatoes.—*Ontario Free Press.*

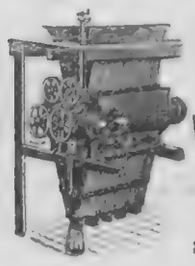
LADY: "I thought I told you I wanted curried potatoes for dinner." Bridget: "The hostler was busy, mum, and I'm no groom."—*Lowell Citizen.*

"WHY, what's the matter?" "Well, sorr, I swallowed a pertater bug, and, sorr, though I took some Parrus-green widin five minutes after tor kill the baste, shtill he's just raisin th' devil inside o' me."—*Life.*

THEY were a newly-married Irish couple, and the "better-half" being ill, the husband did the cooking. Said Barney: "Och, Biddy, dear, I've boiled a nice pot of praties! But I'm afeerd there's something the matter wid 'im! Whin I put them into the wattker they had beautiful whoite eyes, an' now that they're out they're black ones!" Said Biddy in bed, enjoying Barney's dilemma: "Barney, Barney, ye havn't put enough salt in the wattther to kill 'm an' they've been fightin' one another."—*Home and Farm.*

"KITCHEN."—"Kitchen," in the Scotch use of the word, means anything eaten with an article of food to give it a relish, such as butter with bread, or milk with potatoes, or cheese with crackers. A Scotchman once asked a poor Irish neighbor what food he gave to his children. "Potatoes," answered Pat. "Ay; but what kitchens the potatoes?" said the Scot. "Och!" replied the Irishman, when the meaning of the word was made clear, "they make the little praties kitchen the big ones."—*Youth's Companion.*

Miscellaneous Advertising.



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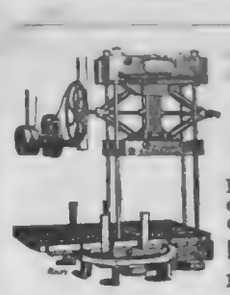

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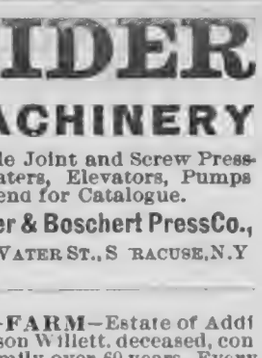

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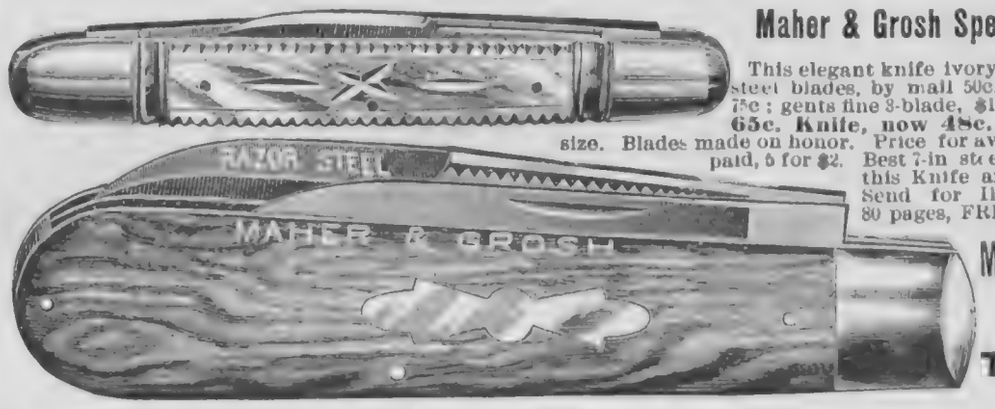

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XLVIII. NO. 2083. NEW YORK, DECEMBER 28, 1889. PRICE, FIVE CENTS. $2.00 PER YEAR.

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Biographical.

FIVE REPRESENTATIVE ILLINOIS FARMERS.

I DOUBT whether the RURAL NEW-YORKER could find among all of its subscribers five men more fairly representative of the practical, successful farmer than those whose portraits are given at Figure 306. They are not Lincolns, Gladstones or Bismarcks, but plain, every-day men, and excellent examples for our farmer boys. They didn't put on kid gloves and chokers when they were young, and strut about with a cane looking for a nice, soft, job, or loll about street-corners and saloons waiting for something to turn up, but they bravely and cheerfully went to *work* and turned something up. They worked hard for their money, and when they got it they *saved* it. They made mistakes, as does everybody, and they wisely profited by them. They know what it is to be hungry, cold and weary, and they have seen times when fate and the hand of every man seemed to be against them, but they had the grit to fight it out and of course they won the battle. They now have comfortable homes and are honored by their neighbors and acquaintances. They can attend fairs, exhibitions, institutes, and take summer outings without feeling the expense. In short, they have, by their own efforts, worked themselves up to a position where they can thoroughly enjoy all of the real comforts and blessings of life. Such men as these are truly the bone and sinew of our land, and ever will be the main-stay and support of this, the grandest government on the face of the earth.

No. 1 is Mr. M. Colbrook. He was born and reared in Germany. His father was a farmer. On arriving in this country he began working by the month for farmers. He entered the Union army and with the rest of his company was surprised and captured before Atlanta, and sent to Andersonville prison, where he remained three months. What he suffered there may be judged from the fact that he weighed over 170 pounds when he went in, and only 87 when he was released. For two years thereafter he hovered between life and death, but a sturdy constitution finally triumphed and he now tips the beam at about 200 pounds. As soon as his strength returned he began working for farmers again and investing his earnings in sheep, which were pastured on the prairies. Wool brought big prices and by careful and economical management he soon accumulated a large flock. Then he bought a quarter-section of prairie, half of which he broke and sowed to wheat. This yielded a good crop and proved a veritable boon, for soon afterward he lost almost his entire flock of sheep by disease contracted from a passing flock, and aggravated by a remarkably cold, wet season. This nearly bankrupted him, but he stuck to his land and by hard work and the closest economy held it until another good crop set him on his feet again. From that time on his progress has been unchecked, and he is now worth upwards of $25,000. One of his best strokes in farming was sowing all of his new land to winter wheat: his most disastrous, was trying to raise sheep without suitable shelter and conveniences. He advocates mixed farming to a certain extent, believing it the safest, but devotes his attention chiefly to growing corn and raising hogs. In breeding and fattening hogs for market he has been remarkably successful. His practice is to have pigs dropped moderately early, pasture them with enough corn to keep them growing lively through the summer, give them warm beds and all they will eat in the autumn, and sell them as soon as they are good, smooth light weights, such as always bring top prices in the Chicago markets. From wheat, corn and hogs most of his wealth has come. He is, as any one would infer from his appaarance, a jolly, good-natured fellow, shrewd, careful, economical, and as steady as a clock, and is highly respected by all who know him.

No. 2 is Mr. H. Grundy. He was born in England and emigrated to this country when 14 years of age, going direct to Illinois. He worked for farmers seven years, saving enough of his earnings in that time to enable him to begin farming for himself on rented land. Three years afterwards he bought 160 acres of raw prairie and succeeded by hard work and the closest economy in paying for it within five years. From that time to the present his rise has been steady, and he is now worth over $20,000. He believes in mixed farming, and follows it with such skill that he makes money out of everything he handles. His great success is wholly due to his energy and thoroughness. He asserts that money can be made in growing any farm crop, or raising any kind of stock, if everything connected therewith is done at the *right time* and in a *thorough* manner, and he *proves* his assertions. One mistake made in his early experience was trying to farm a large quantity of land with an insufficiency of teams and implements, thus working at a great disadvantage; another was in doing too much of the heavy farm work himself, instead of hiring additional help and attending more closely to his stock and other important details. He makes a large quantity of manure every year, but relies principally on a systematic rotation of crops, including pasturing with sheep and cattle, as the means of keeping up the fertility of his land. He has ample machinery for handling the various crops he grows and takes the best of care of it. He has as nearly a model farm as can be found in this part of the State, and his home is surrounded by evergreens and well protected on the west and north by a large grove of maples. He is a great reader of practical and philosophical works, and of journals of the highest class. He is a school director and a firm believer in the merits of our public school system. As will be seen, his portrait indicates the thorough farmer—practical, energetic and a master of his vocation.

No. 3 is Mr. M. Beaty, the youngest member of the group. He was born and reared on a farm in Indiana. Practically he began life in the Union army, serving three years and coming out with a little money, most of which he spent traveling over the Western States looking for a suitable location in which to establish a home. Having settled in this vicinity, he began farming on leased land and after a few years purchased a farm, going deeply into debt for it. It took several years of hard work and the closest economy to lift that burden off his shoulders, but grit and persistence finally won and he came out with flying colors. He is now worth something over $8,000 and deserves every cent of it. One of his best strokes in farming was leasing new land and sowing it to winter wheat. He has made several mistakes but none that proved very disastrous. He is an advocate of mixed farming, believing it to be the safest in the long run. He grows considerable wheat, but more corn. With these two crops he is very successful, chiefly because he takes great pains to prepare the ground thoroughly before putting in the seed. He has been only moderately successful with hogs. He puts great faith in sheep and is steadily increasing and improving his flock. He wants to have nothing to do with cattle. He believes quite strongly in clover as a means of renewing and conserving fertility. He is a hard worker, a good manager and a successful "all-round" farmer. Mr. Beaty is a very quiet man, keeps himself well informed, is rather conservative in his views, attends strictly to his own affairs and is highly esteemed by his friends and acquaintances. He is a school director,

1 2 3 4 5

FIVE REPRESENTATIVE ILLINOIS FARMERS. Fig. 306.

an earnest advocate of our public school system and takes great interest in the cause of education.

No. 4 is Mr. G. E. Maxon, a native of New York State. He was reared on a farm and at the age of 17 years came to Illinois with an empty purse and began life for himself. He worked steadily and carefully, saved his earnings until he was able to buy a farm for himself. Believing that there was more profit in raising and feeding stock than in exclusive grain farming, he soon became the owner of a herd of cattle. Close observation convinced him that there was money in Short-horn blood and he forthwith introduced it into his herd. This, together with his system of hastening maturity by means of good shelter and an abundance of food, enabled him to make money while others lost. As the profits of cattle-raising and feeding were cut down by the development of the business on the Western plains, he gradually changed to sheep and draft horses, and out of these he has made considerable money. He says that sheep have proved the most profitable stock he has handled, and one of his greatest mistakes was in farming without them. He has raised and sold quite a good many very fine draft horses. He advocates mixed farming—growing grain and grass and feeding them on the farm to stock of the *best* quality, limiting the numbers so that each animal will have the best of care and an abundance of food from birth to maturity. In connection with his farming operations, Mr. Maxon is engaged in buying and shipping fat stock. As his appearance indicates, he is energetic and enterprising, a close observer, watchful of his own interests and quick to adopt any device or practice that will facilitate operations on the farm or enhance the comforts of his stock and increase his profits. He is greatly respected by a large circle of friends and acquaintances, and last Spring was elected supervisor of his township. He now resides in the suburbs of this village and communicates his orders to the farm, one mile distant, through a private telephone.

No. 5 is Mr. T. F. Potts, a native of Illinois. He was reared on a farm and began to hoe his own row at the age of 21 years. He inherited a small amount of money to begin with, and this he employed to such good advantage that he soon accumulated quite a nice property in land and stock. Being of a rather genial and social nature, and placing a broad construction on the command: "Love thy neighbor as thyself," he was imposed upon by friends whom he was trying to assist, just at a time of great financial depression, and this gave him quite a severe backset. Nothing daunted, however, he resolutely pressed forward—worked a little harder, and economized a little closer, and in due time recovered all he had lost. He is now worth about $20,000. He has made quite a handsome sum in breeding road and general-purpose horses. For this branch of farming he has a great liking. He is firm in the belief that however depressed the market for common stock may be there will always be an active demand for well-bred, stylish horses, at prices which will justify a man in expending a liberal sum for first-class breeding animals, and taking the best of care of them. He keeps between 300 and 500 very good sheep, and thinks they have yielded him a larger profit, from the investment they represent, than anything else he possesses. He takes considerable pride in this flock, and they are given the best of care, and this is, probably, the reason they have paid so well. He is a firm believer in the fertilizing and beneficial mechanical effects of clover and sows a great deal of it. He is confident that his land is richer in plant food to-day than when first broken up. This has been brought about by means of clover and sheep. He keeps a considerable number of cattle and hogs, but devotes his attention so largely to horses that this branch of farming may be considered a specialty with him. Mr. Potts is something of a speculator, but a very cautious one. He usually has an extra iron or two in the fire, but he manages so well that he rarely gets any of them burned. His appearance indicates the quiet, speculative genius. He is a school director and a great admirer of our public school system.

Morrisonville, Ill. F. G.

SPECIAL PREMIUM OFFER.

Read what is said on page 863 about

BLAKELEE'S INDUSTRIAL CYCLOPEDIA.

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Rural Topics.

NOTES ON 1889

WHICH IS NOW

A "BACK NUMBER."

CROPS THAT PAID BEST.

PLANS for the FUTURE.

1. What crop or product has paid you best during the past season?
2. Why, in your opinion, has it paid you best?
3. Will it pay you to increase this crop or product for next year?

NEW HAMPSHIRE NOTIONS.

THE product of the farm that has paid the best considering the cultivation and the expense of harvesting, has been that of the orchard. Why was it the most profitable? First, because of a good and lively demand for the fruit, which insured a good, fair price per barrel. This season anything that was an apple could be sold without urging, at a profitable price. Again, the expense of gathering was low. Barrels were purchased at 40 per cent. discount on the usual prices. My fruit was less wormy than in '88 and there was a heavier crop per tree than ever before. The pickers were intelligent and trusty—capable of sorting and packing their own pickings, which they did from their baskets, thus avoiding expense and many bruises on the apples. Why was the proportion of wormy apples smaller? It was owing to the spraying of Paris-green and the increase in yield. It seems to be a fact that in a thinly-fruited orchard the apples are nearly all bad—that is wormy—and that there are no more pests in the orchard if the trees bear heavily. On a tree bearing one bushel all the fruit is poor, while on a tree bearing more than one bushel there are no more bad fruits than on the first. Then if the yield of the orchard is increased the culls will remain nearly the same in quantity as now, and the increase in fruit will be a profit. Five years ago there was gathered from a neglected orchard only fruit enough for our own home use—during my first year here this season the product was 460 barrels besides what was consumed in two families consisting of 12 persons, and windfalls that were thrown into the hog-yards. The orchard is kept seeded to grass and this product has doubled since I began to work among the trees with the saw, plow and stable manure. The foliage has changed from a sickly green to a thick, dark green and each tree presents an appearance of health and luxuriance and produces an abundance of new wood each year.

Next year I expect to harvest from the orchard the largest crop that it has ever borne. This year each tree has received an application of manure as a top-dressing spread as far as the limbs extend. Next year this dressing will return good interest by increasing the size of the fruit and by forming blow-buds for "'91." By such means I expect a good crop each year (Providence permitting). Now why should a half-starved orchard bear a full crop every year any more than a half-fed cow should give a maximum yield of milk or make the greatest possible amount of butter? Will young stock grow without feed, or horses do their best work when half-starved? Why, everybody knows they can't. The profit on any crop depends not so much on the price it is sold for as on the cost of producing it. To reduce the cost of production is to increase the profit in the same proportion. The capital invested in trees and land is just the same whether the orchards bear or not. The interest and tax remain the same, fruit or no fruit. The cost is less per barrel in gathering from a full than from a "scattering" tree. There are fewer poor fruits and, finally, by having a good crop of fair fruit every year one is able to secure a quick sale at the very best market price at any time when the crop is ready to sell. J. E. S.

Concord.

MY chief work last year was the erection of a barn. The business which seems to pay best in this section is dairying by selling either milk or cream to the creameries. The land is well suited for this industry. The products are in a concentrated form, and the prices received are fair—an average of 22 cents for butter, and the price of milk is on about the same basis. I think it will pay for us to increase our product for the coming season. S. C. H.

Henniker.

MY apple crop paid me best the past year, as it also did in 1888, because it is raised at the least expense. My potato crop was good; I tried to raise 200 bushels to the acre. Had it not been for rot, it would have been a paying crop. The hay crop was good, but there has been no money in it. Stock is so low it will not pay for the labor. I could do something raising lambs if we had a higher duty on wool. J. S.

Wadley's Falls.

POTATOES have been my most profitable crop the past year; because I have raised a good crop while most of my neighbors raised a poor one and my potatoes will be sold in the local markets. I raise no other crop so liable to vary both in yield and price as potatoes. Raising potatoes is like putting money in a lottery. I think, however, that in a series of years potatoes have brought me better returns than any other crop, and I shall somewhat enlarge the area planted next year. A. P.

Hanover.

MICHIGAN MEN MAKING MONEY.

THE most profitable crop on my farm the past year, and in fact for several years, has been that from my apple orchard, and this I shall enlarge until I cover that portion of the farm which I consider adapted to apples. Of general farm crops the past year, clover has given the largest margin of profit after paying for the labor and the use of the land, and this too whether I refer to the portion kept entirely for seed, or to that which was cut for hay and then allowed to ripen seed. My aim in farming is to so use the land that every crop shall make a margin of profit and still leave the land richer at the close of a course of rotation than it was at the beginning. Although I have not always received the largest cash returns from clover, yet a series of 10 years has shown that it is quite profitable, and the land is much more productive than it was even five years ago. Perhaps if I had been a more skillful feeder it would have paid better. I have not always received as much for the hay fed on the farm as it would have brought if sold; but then I had the manure and I believe in putting the clover through the animal machine and getting what I can out of it, Mr. Terry to the contrary notwithstanding. One-third of the tillable part of the farm is in clover and I shall continue to keep that proportion in clover until it fails to pay. My rotation is clover and spring wheat. The other spring crops are oats, corn and potatoes. Only enough oats are grown for the horses. Many people about here do not like sowing wheat after corn; but I find it profitable and have never lost a seeding of clover in wheat sown after corn.

Mason. W. B. R.

WHEAT is our money crop; but owing to the grain aphis it was nearly a failure in this vicinity this year, many acres being entirely ruined. Grass, including the clovers, paid me best this year, and my acreage of clover is largely increased. What with tariffs and lice, trusts and potato bugs and business men's associations, "to maintain legitimate profits," as they put it, they to determine what are legitimate—the farmer has been so throttled that his profits are *nil*. A. G. M.

Fremont.

AMONG all the fruits, both large and small, grapes and pears have paid the best, and among vegetables celery. On account of the cold, backward spring and the drought in summer, all other vegetables have met with unheard-of failure. The above are my specialties. It is becoming understood more and more every year that in farming, as in everything else, success follows only well-directed efforts in some one or two lines of activity. Then on account of the general failure of the above crops in this State as in many others, prices have been better than usual. It will certainly pay me to increase the above crops next year although labor is difficult to obtain. W. F. B.

Ann Arbor.

MILK, hogs, wheat and clover seed are the principal cash products of my farm. Milk has paid the best during the past season. It is shipped to Grand Rapids. I get one cent a pound from April to October, and one-fifth more from October to April. The price is fixed on October 1st for the coming year and has not varied for the last four years. It paid best because the price is fair and fixed, so that I know what I am working for. I feed liberally of bran, corn and oats. I think that at the present cost of these materials there is no more profitable stock farming than all-the-year-round dairying. I can see that my fields are getting more fertile and my debts are getting smaller. H. F. B.

Wayland.

RYE has been the best paying crop in my immediate neighborhood during the past year. It has paid best this season because all other crops were more or less failures, owing to an extremely wet spring, followed by an extremely dry summer. Rye seems to be able to yield a fair crop when all other crops fail; consequently much more rye was sown in my neighborhood the past fall than ever before.

Holland. C. F. P.

I AM on a small farm, and feed all the grain, except wheat and clover seed, on the farm. My largest profit comes from a pair of good brood mares. They do all the work on my farm and raise a good pair of colts each year. Next in order are sheep. I shall try to increase my stock by adding one more brood mare so that I can have a three-horse team for the harvest work. I think I know that farming does pay.

St. Louis. T. L. K.

THE apple crop has paid me, and a majority of the farmers of this State, as well as anything—no doubt better for the amount of money invested and the labor spent. The crop in this State has been simply immense and the quality was never better. It will pay to try to increase and improve the crop, which has brought into this State an immense sum of money this year, by cultivating and manuring the orchards, removing worthless trees, pruning over-luxuriant ones, not cropping the ground, etc. My orchard, which is used for a park for a large flock of hens, and which has been frequently plowed for their benefit during the last two years, has brought more money than for 20 years, although it is very old and nearly one-half the trees have been removed within a few years. I cannot close this letter without acknowledging how deeply I am indebted to the RURAL NEW-YORKER. There is no paper like it—no, not one, and especially have I been benefited by the practical writings of Mr. Terry whose letters I had read long before he became a contributor to the RURAL. This man is doing, I think, a grand, good work. Who knows but that we may be near a revolution in farming? He raises crops which yield more than double what most of us can grow and without keeping more stock than is necessary to work his land, while the most of us think that we must keep stock enough to eat all we raise in order to keep up the fertility of our land and this causes constant drudgery indoors and out, especially if cows are kept. I would like to have Mr. Terry suggest a rotation for us who are too far from a market to raise potatoes profitably. G. W. D.

Davis.

THE best paying thing on my farm this year was hogs. I wintered 21 pigs, (dropped in October, 1888) weaning them December 10, 1888, and feeding them all winter one-half basket morning and night. On May 10 I turned them to grass, and allowed them to come to the pen at night for 33 pounds of shorts (cost 70 cents per 100 pounds) which had been soaked three days in water. On May 15 I purchased a Poland-China boar pig and turned him with the

drove on June 10, 1889, as there were 13 sows in the lot and eight barrows all pure-bred Poland-Chinas. On the 5th of October I advertised them in several papers: viz., 13 Poland-China sows due to pig in October for sale for $2 for each pig and the sow to be gratis. They were all sold except two, and they have 17 pigs which I will sell in the same way. The eight barrows were penned on September 20 and fed 50 pounds of corn-meal per day and sold for ($85.40) four cents per pound on October 10. The sows sold for an average of $16 apiece. The boar was sold on September 12 for $12; I had paid $15 for him. It will be easily seen that I was feeding those pigs at the rate of just one cent per day for each in corn in winter and shorts and pasture in summer. They had the run of stubbles and orchards in September and October. Pork brings the best price. Spring pigs find too many holes so I can't pasture them and they don't get very large until December; then they can bring only small prices in market. I never go heavily into any one thing. I keep up a regular rotation of crops: corn, 30 acres, grass or hay 30, oats 30 and wheat 60 acres. I also keep 25 or 30 head of Short-horn cattle, 200 grade Merino sheep and 10 horses and colts. I raise or buy two colts and sell a team each year. I moved on this farm with my parents in 1847 from Monroe County, N. Y. J. F. F.

Almont.

VARIOUS VERMONT VIRTUES.

Unlike some of the correspondents of the R. N.-Y. who make a specialty of a few crops, I carry on mixed farming in quite a broad sense of the term. I carry on what I call general farming in a small way; that is, I keep a few cows, sheep, hogs, etc., and then do quite a business at truck-farming or gardening, and also raise some fruit for market. Our main market is Rutland, 6½ miles distant, and we don't find it takes much more time to take a load of various products and get $15 or $20 for it, than it does to go with three to five dollars' worth. As to which crops pay best, as the yields and prices vary every year, it is hard to tell. For instance, in 1888 I sowed a quarter of an acre of Yellow Danvers Onions and had a good crop and sold early and got good prices. This last year I sowed half an acre and hoed and weeded them twice, and then lost them through the maggot; but I shall try onions again next season on a different piece of land and put on lime and salt for the maggot. Again, my early potatoes this year were good; but two acres of late potatoes, planted for late marketing and winter use, were nearly a failure; but I shall plant potatoes for late marketing again another season. It takes pluck and perseverance to succeed in farming as well as in any other business. Sweet corn, tomatoes, beets (for bunching and selling early) and pole beans paid the best of the garden truck this past season. Currants paid me best in the fruit line and my small dairy of cows paid best in the general line. I shall try to increase all along the line, except in raising small grains. Farming will not pay in this section if one sits down and looks at the work—he has to go at it and make it pay. I am not in love with all kinds of farm work, but I am in love with the old farm that my grandfather and father before me tilled. My gross income for 1889 will be about $2,000. I can give the exact figures at the end of the year—and this on a farm that probably would not sell for more than $3,500 at auction; but I don't want to sell, nor am I going to abandon it. I am sure the income can be doubled. Twelve years ago the gross receipts were $450. C. P. S.

East Clarendon.

JERSEYMEN JUDGE JUSTLY.

THE potato crop in the first place and the hay crop in the second are the crops from which I expect to realize my profits if there are to be any. Owing to the excessive rains of last season and the low prices, I am of the opinion that New Jersey farmers are to have a hard time of it, and that in many cases the balance will be on the wrong side of their accounts. I believe the potato crop will prove the best paying crop even with the risks attending its growth. It never entirely fails to be a paying crop in a greater or less degree, and whenever it proves a fairly successful crop it pays well; otherwise it leaves our soil so thoroughly improved that only a slight outlay is needed for the wheat crop which succeeds and in ordinary seasons we are assured of a maximum wheat crop and splendid grass crops for two years thereafter. Next in importance is our hay crop. These are usually our paying crops. For myself I propose to continue my present system. All my yard manure is applied on sward for corn; then come potatoes, wheat and two years of mowing. I shall make an extra effort with my potato crop next year using only chemical fertilizers—and that freely—considering this the basis of all subsequent crops.

Cranbury. D. C. L.

HAY pays best. Potato raising with me seems to be a risky business; only once in a while do I get a good crop, and then the tubers rot. Last season two-thirds rotted. Being located near Newark, taxes are high and so is labor. I conclude that it is best to plow sod in the fall, cart the manure out during winter, put in a cultivated crop next summer and put on rye and seed to grass in the fall. W. V.

Franklin.

ALL crops have been very poor hereabouts this year, with the exception of hay, but a great part of the latter was gathered in a very bad condition. Wheat was a half-crop; the oat crop was very light. The greater part of it was damaged by the rain. Corn was a half-crop and potatoes not half. What there were have rotted very badly.

Mendham. B. H. L.

MY two paying crops for the past year were early tomatoes and Yellow Globe Danvers Onions. I transplanted my tomato plants on two beats; by the first of May, they were fine, large plants, some in blossom. Then I transplanted them into my cold-frame and covered them with canvas frames for a few days and nights; they scarcely felt the transplanting. I had tomatoes in market far ahead of other gardeners around here and got 15 and 20 cents per quart, wholesale, for a good many peach-basketfuls. I intend to increase this branch of my business next year. My onion seed I always sow quite thickly and make three sizes in sorting the bulbs—large, pickling and sets. I raised 50 bushels from one pound of seed on less than one-eighth of an acre. W. P.

Kingston.

THE grass crop has paid much the best; first, because the season was favorable to the growth of grass, and very unfavorable to grain raising on account of wet and cloudy weather. The hay crop was the heaviest, to my knowledge, ever cut in this neighborhood, while the crops of grain were the poorest, both in yield and quality. In our plan of farming I do not think it would be wise to increase the area of grass land, as in order to keep the live stock clean and comfortable a certain quantity of straw seems to be indispensable; but it is my constant aim to increase the yield of grass by drainage, the use of lime and manure, clean seed and plenty of it, etc. I sow Timothy in the fall, and think that where I lose a sheaf of wheat by it I gain a load of hay. I sow clover seed in April, and pasture the land the first year, when the growth is mostly clover, and mow it the second season when it is about three-fourths Timothy and makes excellent hay, easily cured, etc. I cut four tons to the acre on a part of my land this year—75 two-horse loads from 20 acres. I never had so heavy a yield before. Pasturing was also abundant. D. J. B.

Harborton.

IOWA INDICATES INCREASE.

THE familiar expression that corn is king in Iowa, may be quite as truly applied to my farm as to my State, It is the most important crop that I raise. It is the crop that absorbs the attention of this whole region. Every successful farmer raises all the corn he can, and it is to be feared that he too often sighs because he cannot raise more corn. But at the present price—20 cents per bushel—there is no profit in raising corn to sell. The profit—whenever there is any—comes from feeding good, thrifty, swine. My hogs are my best paying product. There was a time, perhaps, when fat steers paid as well as fat hogs, but that time has passed. For a number of years we have been making our money out of the swineherd and we expect to continue to make it in that way for years to come, for doubtless the present depression of the market will not continue a long time. But where is our profit this year? Dealers are paying $3.25 per cwt. alive. The profit is certainly very small. I think it will require a microscope with power to magnify about 15,000 times in order to see it at all. Yet there is more money in three-cent pork than there is in 20-cent corn. One year ago we sold prime hogs for $5 per cwt. Then we made some money. Every farmer who was ready to sell at that time and did sell wore smiles. Probably we then received surplus enough to balance, in part at least, the deficit this year. We have to estimate our profits not from the prices of any one year, but from the average prices of longer periods when all the ups and downs of an unstable market may be equalized. It is from this larger view of the situation that I answer as above the first question propounded by the RURAL. A few fine young horses are also profitable ornaments on this farm, and a small dairy helps to make profitable pork; but these branches of farming are only supplementary. The extensive corn-fields and large droves of swine all over this country are sufficient proofs that the great majority think alike.

Here is a little anecdote to illustrate the usual fate that befalls the man who tries to get up a little rebellion against our King Corn: Mr Blank, one of our highly respected citizens, made potatoes his specialty this year. The work was all well done and the season was very favorable. He harvested a bountiful crop, but, as the RURAL has already noted, we have a superabundance of potatoes. Accordingly Mr. Blank "cast a wishful eye" toward Mr. Terry's market. I suppose he concluded that Mr. Terry and his co-laborers had not supplied the good people of Ohio with potatoes enough, so he sent away two carloads to that State. I cannot state all the particulars of this transaction, but it is sufficient for my purpose to say that Mr. Blank was greatly amazed to see the railroads pocket the entire receipts. He will not raise potatoes next year. He will be found plowing corn.

This brings me to the second question: "Why?" The reasons are found in the fitness of things. This is the fittest country in which to grow corn. There is the most perfect adaptation of soil and climate to its production. Corn is the fittest food for making fat hogs. Let me stop right there. It is a clear case of "the survival of the fittest," but I do not wish to go on and state that the fittest food for the people is pork. However, so long as man continues te eat the hog, so long, I reckon, will the great corn belt furnish him with his ham and bacon. D. W. F.

Mt. Vernon.

NUBS OF NEW YORK NEWS.

MY farming is mixed. Some wheat, corn, barley, hay, colts, butter and beef are raised, besides some fruits, but nothing except a few eggs has been marketed this year. My opinion is that the farmer who has done the least, and has fodder for stock and lets the rest go back to the soil is the best off this year. No farmer can pay the present price of labor, sell his produce at the present prices and make any money. In fact, he had better just try to make a living and no more until the surplus of farm produce is consumed and fair prices are paid. W. H. O.

Clyde.

I FIND that beans have paid me much the best, considering the labor and time expended on their culture. The supply not being up to the usual average, they are in brisk demand and prices high. I shall plant a much larger acreage next year, as they generally bring good prices. Blooded stock pay me finely, and the satisfaction derived from their care and improvement is very good. Three years since I invested in a few full-blood Holsteins, and now have 13 head of pure-blood and high-grade animals, from the noted Aaggie, Netherland, and Pieterje families, beautiful animals whose milk and butter and surplus increase are highly remunerative. I have also two very fine pure-blood Jersey cows, bought to test the comparative merits of the two breeds, and so greatly do I favor the Holsteins that I may say the Jerseys are for sale, as I shall keep only Holsteins in future. J. M.

Nunda.

OWING to the wet season some crops did not do as well as anticipated, as I had a considerable wet ground under the plow. I had three acres of planted corn and about four acres of fodder-corn which was put in in the expectation that I could cure it; but as the season advanced, seeing that I should be short of winter feed, I finally decided to build a silo, and being quite a distance from the mill, a good deal of the labor was done by hand, such as hewing, etc. The bottom was filled with pounded stones and grouted. I commenced cutting my corn September 10 and began filling the silo on September 12. We were not quite a week in filling it and we covered the top with bog grass and weeds. To-day (Dec. 11) we are using the silage from the silo, feeding the cows twice a day from it with a little grain and hay once. We picked off the best ears of our planted corn and left them on the ground to dry or cure, and put the fodder and small ears in the silo. The other was put in with a drill so thickly that it would not ear. The corn was put into the silo without cutting and it comes out in fine condition. I intend another year to plant ensilage corn so that it will ear, and I shall cultivate it, and it will be put in without cutting, the same as this year.

Tallette. J. E. T.

MY potato crop has paid me the best the past season. In my opinion it has done so because the crop has been short in many sections, hence the price has been high. I had a very nice crop and sold them for 50 and 60 cents per bushel from the field at digging time. I hardly think it would be wise to increase this crop for another year.

Canastota. O. L. S.

CABBAGES and onions were the best paying crops that I raised, as there is a home market in which cabbages are sold readily for from $6 to $8 per 100, and onions for $1 per bushel. The cost of raising an acre of cabbage is less than that of raising an acre of corn. B. T.

Moriah.

The peach crop has paid the best the past season, on account of scarcity of peaches in other sections, which has made prices high here. It will pay me to give special attention to the fruit crop, as I can grow and market it at a less expense and greater profit than grain, even though the prices were much below those of the past season.

Youngstown. A. J. B.

THE corn crop was the most profitable this season, as corn yields both grain and fodder; but generally the potato crop is the one from which we get the most money: but this season potatoes were very poor. The business that has paid me the best for a number of years is dairying. Butter-making pays me the best as I have good customers through the summer and fall, and sell my butter at 30 and 40 cents per pound; but from now until June next we do not have much call for butter. There is also a good deal of cream and milk sold here in the summer. Yes, it will pay to increase the ability of one's farm to carry the stock through the winter in good condition. I saw a piece in one of the papers a short time ago, telling how a Mr. W. R. Devan of East Rodman, churned 57 pounds of cream from 376 pounds of milk which had been centrifuged, and received 14½ pounds of butter, being one pound of butter for about four pounds of cream from native cows. Now, this morning (December 3) I have churned 49 pounds of cream and received 14¼ pounds of unsalted butter, being about one pound of butter from 3½ pounds of cream. I use the Cooley Creamer and the Davis Swing Churn. I stop the churn when the butter is from the size of wheat kernels to that of a kernel of corn, and wash it thoroughly and salt it to suit the taste of my customers. In some there is no salt at all and that brings the highest price. C. H. B.

Southampton.

OUR chief product has been milk for the New York market, and the crops of the most value in producing milk the past year would have been hay and grass, had it not been so wet. Corn drilled and in hills makes a good crop for milk production. On an average I think apple orchards pay the largest profits. Milk has paid best the past season, because we can keep more stock by buying ground feed and also by cutting all our coarse feed with a horse-power. The cows use it all up and it makes more manure. G. J. G.

Yorktown.

MY farm consists of 10 acres of land and the necessary buildings. I produce for sale small fruits, onions, squashes, some sweet corn, milk and honey. I think the milk pays as well as anything, if not better, because I have a good warm stable, feed well the year round, and sell the milk to the neighbors who pay a fair price for it (in comparison with the prices for other farm produce) and come to the house after it.

Schuylerville. T. E. B.

POTATOES have paid me the best the past season. The yield was about 200 bushels per acre. I shall plant potatoes and cauliflowers for my principal crops next year, as they are the only crops from which we can get much money. H. F. R.

Riverhead.

In this region corn, oats and potatoes were an entire failure on account of the continuous rain. Early-sowed buckwheat was a fair crop. My grass was good. I cut nearly two tons to the acre. I do not feed my meadows off in the fall or pasture them in the spring. I put my manure on them as a top-dressing and it makes a heavy sod. Then when the land is under the plow I consider it rich enough to produce any crop put on it in an ordinary season.

Whitney's Point. J. H. K.

I think poultry and eggs have paid best, according to the money invested. I think it about as well to continue the regular routine of crops with some stock and young horses and about 100 fowls, raising also some sheep, pork, dried fruits, etc., etc. Some around us are raising from one to five or six acres of tobacco and claim it pays best and they intend to continue the business. H. C.

Wolcott.

My best crops the past season were wheat, oats, hay, seed and pasturage, making an increased amount of butter on account of the abundant pasturage. I attribute the very large hay crop—3½ tons per acre on 12 acres of new meadow and over 60 tons on 30 acres of older meadow—to the abundant rains in the fore part of the season; but this cause seriously damaged corn, beans and potatoes, and also evidently injured the fruit crop. I shall go right on with my regular rotation of crops, and trust to Providence and good management.

Johnson's Creek. J. M.

For the money invested and the labor laid out, corn sowed in drills three feet apart, and about one foot in the drill, for fall and early winter feeding of milch cows has paid as well as any, because it has come at a time of the year when other feed is mostly gone and it produces a good flow of rich milk when butter and cheese are bringing better prices than when grass is plentiful. I think it will pay to improve the crop both in quantity and quality.

Sherburne. D. J. P.

This has been such an exceptional year, and one which has caused so many losses to farmers, on account of the constant rain, that in this vicinity it is hard to speak of any crop that has been a paying one. The only crop I have that pays anything is beans, and it pays because only a comparatively small acreage has been planted in all this section. W. M. N.

Mt. Morris.

I carry on mixed farming. The principal parts of my spring grains, hay, corn-stalks and straw are fed out on the farm to different kinds of stock. I have for a number of years given most of my attention to the breeding of American Merino sheep. I think this business has, the past season, paid as well as anything on my farm, and I live in hopes that it will pay much better in the near future. C. C.

Victor.

In my opinion the wool crop has paid me better than anything else the past season, because, first, the price of wool has been better than for some years past; second, there has been no difficulty in disposing of my surplus sheep and lambs at good prices; and, third, besides enriching the farm, my sheep have paid me good interest by destroying piles of weeds. I think it will pay well to keep as many sheep as a farm can carry safely through summer and winter, if they can have plenty of good shelter to protect them from storms. Barley has been a good crop until this season: but overproduction or the "Brewers' Trust" has knocked the price of the grain so low that we can afford to raise only enough grain to keep our land seeded. Farmers in this community who depend on their grain to pay hired help, taxes, and interest on their farms, don't smile very much when they look at the future prospects for their occupation. T. & B.

Naples.

Potatoes have paid me better the past season than any other crop I have cultivated. I had only half an acre. I thought that would be all I could attend to and do them justice. From the half acre I harvested 125 bushels, 120 bushels of which were good and marketable, there being only five bushels of small ones. At harvest time potatoes taken from the field brought 50 cents per bushel. I think that pays well. I make farm dairy butter of the finest quality. I use the old-fashioned, shallow, eight-quart pans for setting the milk. I do not allow it to get sour before the cream is taken off. I supply some of the dairymen with butter, and send the rest of what I make to the city. Last summer I sent my butter to New York City and was getting from 22 cents to 23 cents per pound when the factory farmers were getting only 16 cents per pound. My butter this season will net me 23 cents per pound. Why? Because I make fine, fresh butter, not grease. In my opinion the farmer is most to blame if he gets low figures for his product. It is not because it is farm dairy butter that the price is low; but because its quality is poor. If the farmer would take a little time to think how he should care for his milk and cream, he could get as much for his butter as the creameries can for theirs. I have no trouble in getting the highest price for my butter, because it is of fine quality. W. H. P.

Columbus.

MASSACHUSETTS MATTERS.

Onions have paid me decidedly the best; and this in spite of the fact that the maggots, at a low estimate took 40 per cent. of the crop. Why? On account of a large demand in this vicinity for them, while there were comparatively few producers. Next year I shall increase the area devoted to the crop, having prepared the ground this fall as far as such work can be done at this season. W. H. B.

Leominster.

MAINE MONEY MATERIALIZES.

Sweet corn for the canning factory has been my best paying crop for this season. Strawberries usually pay me well, but the crop was a partial failure this year on account of the ground being bare so much last winter. I think it will pay me well to increase the crop by using more fertilizer and better cultivation. D. B.

East Baldwin.

Grass and hay are ahead among farmers in this section. We break up a few acres, sow with oats, then the next year plant with sweet corn; next year the land is seeded to grass with wheat or oats, so our farmers' leading crop is sweet corn. I can hear the whistles from four canning factories at my place. Most of the farms that are not forsaken, are little old New England farms. E. F. N.

West Farmington.

PENNSYLVANIA, PASTURE, POTATOES.

It seems clear to me that farmers cannot make any profit out of oats and corn by selling them off the farm at present prices—20 cents for the former and 30 cents for the latter. It takes 25 per cent. of the value of a bushel of corn to ship it to our nearest market, Philadelphia, only 125 miles distant. I think farmers would do much better by feeding all their oats and corn on the farm to sheep, hogs and colts. About the market price can be obtained for corn by feeding it to steers, but there is no profit in it at the market price. There is no market for milk. No milk is sold within a radius of 3½ miles of our railroad station. The surplus butter is mostly sold to the country stores. It is, of course, not of uniform character and is often sold very low, sometimes as low as eight cents per pound. At present it is worth 20 cents. If there is any profit in a butter dairy this ought to be a good location, as there are 500 cows within three miles of our station. I believe that a profit could be made out of oats and corn if fed to good cows, if we had a dairy to work up the milk. Our farmers are conservative—are slow to make changes. They have followed the five-year rotation so long, and have heretofore done so with such advantage, that they dislike to adopt new methods. But the continual depression in their business necessitates a new departure and I think that it should be by keeping more and better cows and by making butter. Our county—Cumberland—lies within the region mentioned by Hugh McCulloch, ex-Secretary of the U. S. Treasury, when he said that the only good farming found in the United States, was included within a radius of 50 miles of Harrisburg. Much of the land in the section mentioned is of the best quality of limestone. Many of the buildings are large, handsome and expensive, and this is particularly true of the barns. By following the five-year rotation, plowing down a clover and Timothy sod for corn, the corn being followed by oats, then wheat, and then two years in grass, the fertility of the soil has not only been maintained, but has in many cases been greatly increased. Of course we have no abandoned farms, but farms are hard to dispose of. Sales of limestone farms have been made this fall at from $60 to $90 per acre. J. P.

Greason.

My potato crop has paid me as well as any of my other farm crops this year. Though the conditions of the past season, agriculturally speaking, were adverse, this crop was fair. On one acre of Early Beauty of Hebron, and Early Rose, I dug 165 bushels of marketable potatoes. They were raised on dry red-shell land with about 600 pounds of Clark's Cove potato manure applied to the hill. I sold my crop at an average price of 85 cents per bushel. I shall double my acreage of potatoes next season. W. S. G.

Tompkinsville.

MINNESOTA MENTIONS MANY MERCIES.

Flax has been our best paying crop the past season. It is a favorite owing to its ability to rot "new breaking" and dry out wet land, also the length of time during which it can be sowed, as it does equally well sown in April or June, and it therefore lengthens our seed-time and harvest; and moreover, it is gathered without the necessity for twine. It will surely pay to try to increase the yield by growing clover on alternate seasons. Our next crop is Timothy seed, of which for 10 square miles hereabouts there are thousands of acres. Our crop the past season amounted to 2,200 bushels. Oats, barley, wheat, and corn come next. Butter and pork are also important products, as grasses of all kinds do well. What we most need is more farmers who want to make homes for themselves. Land is worth from $6.25 to $25 per acre. F. P. S.

Grand Meadow.

Here is a list of the crops raised here and their value per acre in our market: Wheat, yield, 28 bushels at 65 cents, $18.20; oats, 50 bushels at 15 cents, $7.50; barley, 35 bushels at 40 cents, $14.00; Timothy seed, 6½ bushels at one dollar, $6.50; corn, 40 bushels at 20 cents, $8; hay $5 per acre. Wheat gives the most money per acre, owing to the fact that we raise more than an average yield; but we can't risk much in it, as it has failed too many times. The grain and hay raised are mostly all fed out to cows, hogs, and horses. We sell some wheat and barley. Cows pay best. Good horses also pay pretty well. The man who tries to farm in Southern Minnesota must keep good stock or "get left." R. E. M.

St. Charles.

MARYLAND MUST MUSTER MORE MEANS.

Raising corn and tomatoes for canning has been the leading business hereabouts, but the low prices for these goods have put nearly every one in despair. Our great misfortune is due to the large size of our

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Everywhere.

RURAL SPECIAL REPORTS.

Indiana.

Hamilton County, December 7.—Corn gathering is mostly done and farmers are about ready to begin preparing their year's wood. We have had but one light snow this winter, and it went away almost as soon as it fell. We have had very mild weather here so far; there has been a considerable amount of mud and the ground has scarcely been frozen enough to bear a person's weight. We have had as nice a time this last fall for preparing for winter as I ever witnessed. Wheat is doing well so far; if it would only look as green on April 1, how pleased the farmers would be. But we do not depend very largely on wheat in this section. Of course, a failure in wheat injures us, but it doesn't injure us like a failure in corn does. Corn and hogs are the products that bring us our money. When we have plenty of corn and plenty of hogs we have plenty of cash. There was almost any amount of corn here this fall that was chaffy and otherwise damaged so that it was rendered unfit for sale; but it was fed to hogs and the farmers realized a fair profit from it. I think it will pay me to increase my facilities for raising hogs. M. M. H.

Pendleton, Madison County, December 6.—Wet weather has continued through the fall till date, so that corn did not mature well. The yield is light, and the quality very poor. Not more than 60 per cent. of the crop is marketable at 25 cents. Once more with a light corn crop, hogs and pigs were fattened early; again, too, it occurs that as they are just ready for market prices have gone down. Farmers were reluctant to sell at $3.25 The pressure of a small corn crop is compulsory, and the market is lively. P. W. H.

Maine.

Bridgton, Cumberland County, December 14.—Sweet corn and hay are our two best paying crops. Farmers have abandoned the planting of yellow corn for the reason of low-priced Western corn. Sugar corn is substituted, as it pays fairly well and brings money soon after delivery to packers. Hay is fed in winter largely for butter, as silage is a thing of "the future" with us. Cheap cattle! This is one of the most serious conditions which confronts us. It will, no doubt, in the near future affect the price of our hay. P. L. C.

Pennsylvania.

Library, Allegheny County, December 12.—With us, hay has been rather the most profitable of our farm crops this season, because there was a heavy crop and it was for the most part harvested in good time and in good condition for market. A great deal of the hay shipped here is not in good condition and in our market, Pittsburgh, dealers do not like to change from the home product as long as such change can be avoided without considerable sacrifice. It would not pay to increase the acreage here because we rely entirely on our home market and the best customers have, heretofore, been the street-car companies and these are doing away with horse-power and the demand for home-grown hay is not increasing, but rather decreasing.

I am convinced that the raising of hay and grain in this section must soon cease to be relied on as a means of making money. Our farms are becoming cut up into too small areas and competition with our Western friends is too sharp to allow us much of a margin of profit.

Farm land in this section is worth from $125 to $200 per acre and 100 acres are considered quite a good-sized farm. I think the crops to increase are fruits and vegetables for our home market. Almost everything of this kind does well here and the demand is constantly increasing, and the margin of profit is much wider than in hay and grain. Farmers are conservative and it is hard to make the change, but they must come to it, or "go west." In the coming day of small things, I think I see the day of greater profits. J. C. B.

THE FARMER'S CLUB

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention. Before asking a question, please see if it is not answered in our advertising columns. Ask only a few questions at one time. Put questions on a separate piece of paper.]

SEEDING OATS AND GRASS.

J. W. T., Staunton, Va.

Some five years ago I bought a farm of 160 acres, and have since lived upon it. Being a merchant in Staunton, one mile away, I cannot work or superintend the work of the farm; but living on it, I am there morning and evening, and can plan and direct. Never having lived on a farm before, my whole experience in this regard is confined to the last five years. I do not, therefore, pretend to be much of a farmer, being not even a "book" farmer, but rather a "paper" farmer, as my knowledge of farming has been derived from agricultural papers and journals. Neighbors tell me my farm has greatly improved in these years, and I cheerfully give the credit to the papers. There are two things I wish the Rural to advise me about.

1. I have 25 acres in wheat. The ground was put in good condition, the wheat was seeded nicely, and is now looking well. With the wheat was sown Timothy seed—

one peck per acre. It is also doing nicely. My idea is in the early spring, say, in March, about the time of the "Crab," when the "sign is down," (provided the condition of the ground and the weather suit) to sow on the wheat one peck per acre of clover seed and roll it Should it be rolled? Is one peck too much seed? Would it be better to add other kinds of grass seed, and if so, what kinds? I want the hay for market, and the seeding to last as long as possible without plowing again. The 25 acres are in two fields, 10 acres being strong limestone land lying well to the sun, and 15 acres a medium quality of sandy loam with a Western exposure. It has all been well fertilized with complete fertilizers. 2. I expect to sow 20 acres with oats, and at the same time seed, say one peck each of clover and Timothy, sowing three bushels of oats. Am I wrong as to these quantities, and will it be better to use some other grass seeds? The hay is wanted for market, and to be mown as long as possible. Will it be better to sow the grass seed broadcast before sowing the oats, or should they be sowed by the grass-seed sower on the drill when the oats are seeded? Will it be well to use a roller after the drill? The soil is loamy and of fair quality. What variety of oats does the R. N.-Y. prefer?

ANSWERED BY HENRY STEWART, N. C.

A peck of clover seed per acre is heavy sowing, but many good farmers use as much as this. The writer has sown this quantity both of clover and Timothy for many years, believing that the thicker stand makes better and more hay. The time for sowing the clover is as soon as the land is fit after heavy frosts are over, and no doubt it may be sown in February with perfect safety. A time should be chosen when the surface is dry and cracked all over by a frost leaving innumerable small openings into which the seed will fall and be covered when the ground settles or when the first shower falls. The sign referred to may be safely disregarded, as the condition of the soil is the most important factor and the position of the stars in the zodiac or almanac has no effect upon what is occurring in or upon the soil. The suitable condition of the soil and the weather should be the sole guides. Timothy and clover will make the best hay for market, and if fresh clover seed is sown after the second year or the second-growth clover is left to seed on the ground, sufficient clover will remain. But the Timothy will not be at its best until the third year and with occasional top-dressings in the fall and some fresh seed will remain in good condition for 10 or 12 years. Rolling would be beneficial after the clover had been sown, if done when the land is dry. It will also benefit the wheat, especially if any of it has been thrown up by frost during the winter. But to roll wet land is exceedingly injurious. A seeding of 2½ bushels of oats is ample for an acre. The grass and clover seed is right in quantity, but it should be sown after the oats are drilled in, following the drill as closely as possible, so that the seed will fall on the fresh soil and quickly settle down into it; or if the ground is so dry that it will not crust after the roller, the land may be rolled as soon as the grass and clover are sown, and ample covering will be given to the seed by the rolling. As oats are apt to rust in the Southern States, the Southern rust-proof variety would probably be the safest. The writer has grown other oats in North Carolina safely three years out of five, but they suffered from rust the other two years. A heavy white oat called by the seedsmen "Clydesdale," and the Welcome Oat have done well in North Carolina and also in Virginia, yielding grain weighing 40 pounds to the bushel. It might be safest to sow half of the native kind and try half the field with a heavier variety which could be procured in Richmond.

GROWING ROSES FROM SEED.

F. K. Phœnix, Walworth Co., Wis.—The Editor of the R. N.-Y. has had *wonderful* success in growing roses from seed, whereas, after doing my best for three years in the open ground, I cannot get one seed to grow where I think I ought to get a hundred. Are good-looking rose seeds mostly good? They are so precious that I never dare cut or break one to see if it is good or not. How should the seed be treated under glass and in the open ground?

ANS. This is our method: The heps or fruits are plucked as soon as ripe and kept in a dry place until fall—say November 1. Then they are broken open, the seeds removed and planted. The R. N.-Y. uses shallow boxes of any convenient size about three inches deep. Holes are bored in the bottom and each is covered with a piece of broken flower-pot or something of the kind. These boxes are filled with about one-half of soil taken from under fences or old fields, one-quarter of *rich* garden soil and one-quarter of sand all thoroughly mixed together. The soil is well firmed in the boxes, especially about the edges. These boxes should be *securely* nailed at the ends and sides so that they will not spring apart.

The seeds are placed on the top of the soil in straight rows one inch apart—the rows one inch apart. Then each is *pressed down* half an inch and the depressions so formed are filled even with the surface with the same soil. The sides of the boxes are now half an inch above the soil surface of the boxes. These boxes are now removed to the garden and placed in any exposed situation elevated two inches above the soil and covered with wire netting which prevents birds, hens or other animals disturbing the soil. In this way they are left exposed to the elements until after a hard frost. The boxes are then covered closely and securely with boards and are so left until February 1st, or thereabouts. They are then removed to a little cool conservatory where they begin to germinate in two or three weeks. When they have grown two inches they are carefully lifted with all the soil that can be made to adhere to the tiny roots and planted in two to three-inch pots. They are thumped out and planted in prepared plots of the garden the latter part of May two by three feet apart. Here they make a growth according to the vigor of the plants until fall. The tender kinds must then, of course, be removed to pits or to houses. Those left out may be protected with straw, boughs or any suitable material, or if only hardy kinds are to be retained, a three-inch mulching of coarse manure will answer.

This season we have about 50 hybrids between Rosa rugosa (white and pink) as the mother plant or seed-bearer and many kinds of Hybrid Remontants and a few Teas as pollen parents. These we have protected in a way never before tried. The plants are in two rows about 50 feet long. These two rows are inclosed in a long box, one foot high by four feet wide. Over this box and extending a foot further over the soil outside is a quantity of coarse swamp hay, tomato and potato haulms, asparagus tops, etc., about six inches deep. There is no mulch inside.

There may be simpler, more effective ways of raising seedling roses and of protecting them through the winter. The R. N.-Y. gives merely its own experience.

We have never planted any rose seeds except those of Rosa rugosa. Consequently it is the mother of all our plants. These seeds in so far as we can judge are generally sound.

One year we planted the seeds, as above described, just as soon as they were mature, supposing they would sprout in a couple of weeks without having been frozen. There were no signs of sprouting when cold weather arrived.

FUNGOID DISEASE ON RASPBERRY CANES: HARDINESS OF BERRIES, ETC.

E. S., W. Bridgewater, Mass.—1. Among my Shaffer's Colossal Raspberries, I have noticed canes—sometimes there are a good many in a place—that have a scarred appearance. They are green, but the bark looks as if some disease was at work, or some small insect. Most of the canes have a healthy look. I send the R. N.-Y. some cuttings from the affected canes, thinking it can explain the cause. The soil is rather a sandy loam, well drained. I have used Mapes Fruit and Vine Manure altogether. The canes fruited the past season for the first time, and though cut well back because they had been winter-killed, they yielded a fair crop for a first one. 2. Hardiness in raspberries and blackberries is a puzzle. The Erie has been killed more or less, sometimes to the root and plants not far off have only been affected to a small extent. Those on a higher and drier soil have been killed more than some on a rather low place that is at times a little wet—soil sandy loam, becoming gravelly in the highest places. In the winter of '87-'88, Taylor Blackberry was killed way back, while the Marlboro Raspberry went through nicely; but last winter—'88-'89—the Taylor went through all right and Marlboro was killed to the ground. They are both in the same field, a sandy loam, well drained. The Cuthbert Raspberry seems to be hardy, and I have been surprised to see the Hansell Raspberry go through the past three winters uninjured, while the Marlboro has been killed two out of the three years. Hansell has yielded very well, and is a good bright-colored berry, of good, though not large size. Again, it seems strange that in a winter when the Erie Blackberry and Marlboro Raspberry have been killed, a few Wilson Jr. Blackberries that I have, should have lived unprotected. The latter are between the other two in the same field. We have had very little snow the past two winters. I make very little manure, and cannot buy nearly all I need at a reasonable price, and so have used chemical fertilizers for many things with very good results. Some of my soil lacks humus, and it has seemed to me that wood ashes and bone would perhaps be better than chemical manure, using nitrate of soda, etc., where needed. 3. Were the Canada ashes the R. N.-Y. has had from Monroe, Judson and Stroup satisfactory? I understand there are 50 bushels per ton. Parker & Wood, of Boston, offered them this season by the car-load, at $12 per ton. My soil is very similar to that in New Jersey, that is, between the light drift sand of eastern and southeastern Jersey and the clay lands along the Delaware and northern portions.

ANS.—1. We take it that the injury to the canes is of fungoid origin—for which there is as yet no known remedy. 2. Just such unaccountable behavior as to the relative hardiness of varieties has often been observed at the Rural Grounds. It can only be said, as to the raspberry and blackberry, that hardiness is a relative word depending upon conditions which are not understood. 3. Yes, the ashes were, as we believe, of high quality. Such ashes vary so much that their actual value can not be estimated except by analyses. The potash is worth the highest price, being carbonate—at least six cents the pound; the phosphoric acid eight cents.

BUCKWHEAT AS FEED: FEED FOR BUTTER.

N.R. T., Gainesville, N. Y.—Last spring I sowed a piece of sweet corn, and after cultivating it twice I sowed three pecks of buckwheat between the rows of corn. The two made a heavy crop. The buckwheat got ripe; the corn ears were just fit to roast when the crop was harvested. I am feeding this crop to cows together with about two quarts of meal to each, along with oats and peas ground together. I get a fair quantity of milk, but it makes little butter. The milk is set in a Cooley Creamer. What else should be fed to produce a good amount of butter?

ANS.—As we understand, you have been feeding the sweet corn and buckwheat cut and cured together. If so, this feeding is probably the reason why the milk is not rich in butter. Buckwheat straw is exceedingly poor feed and the grain, while it is productive of milk, yields milk of a poor quality. An excellent standard feed for cows kept for butter is mixed hay, half clover, and clear corn-meal, but the yield of milk will be larger, and more butter will be made, and hay will be saved, if the hay is cut and moistened—with warm water preferably—and the meal is mixed with it. A cow in full milk should have, at this season, at least two quarts of meal at each feed, and some cows will profitably consume three quarts, two feeds being given in this way, with about five pounds of dry hay at noon, or as much as is eaten clean and without waste. About five pounds of the cut hay will be eaten in the mixed feed at one meal.

GROWING CHESTNUTS.

H. G. M., Vernon County, Mo.—1. To a person intending to plant chestnut trees for profit in this part of Missouri, what advice would the R. N.-Y. give as regards soil, varieties and distances of the trees apart, general management, etc.? 2. Would seedlings be as profitable as grafted trees? 3. What price do the improved varieties bring in the market? 4. Would the chestnut be the most profitable nut to grow? 5. What other nuts would do well here and what soils does each sort require?

ANSWERED BY H. M. ENGLE & SON.

1. Chestnuts as a rule flourish fairly in light soils—sandy or sandy loam, slate and gravel—although we know of trees planted in rather heavy clay soil that grow and bear well. As to varieties, we have planted only the Paragon, Numbo and Japan, and shall not increase our stock of any except the former for profit. The distance most profitable for planting would be 15 to 20 feet, and when the trees begin to crowd each other, they should be thinned out to 30 to 40 feet. 2. Seedlings are too unreliable to be depended on for profit. 3. Paragons bring from $6 to $8 per bushel in our markets. 4. I believe good large chestnuts to be the most profitable of all tree nuts in proper soils. 5. Walnuts, butternuts, pecans and similar nuts flourish best in rich loamy soils.

UNITED STATES LAND OFFICES IN KANSAS AND NEBRASKA.

L. B. H., Paulding, Ohio.—To whom should I apply to find out where Government lands can be obtained in Kansas and Nebraska?

ANS.—To the General Land Office at Washington, D. C., or, perhaps, better, to the Registers of the local United States Land Offices in the above two States. Address an inquiry, with stamp for an answer, to the Register United States Land Office at any of the following places: Kansas: Topeka, Saline, Independence, Wichita, Kirwin, Concordia, Larned, Wakeeny or Oberlin. Nebraska: Neligh, Beatrice, Lincoln, Niobrara, Grand Island, North Platte, Bloomington, Valentine or McCook.

Miscellaneous.

S. W. S., Martindale, Pa.—What kind of trees should one plant along a fancy board fence on the north side of a farm?

ANS.—The R. N.-Y. would choose pears.

U. R. S., Mapleton, Mich.—1. Is the Ritson Pear blight proof as is claimed by an agent?

ANS.—The R. N.-Y. does not know of this pear.

D. C. A., Cattaraugus, N. Y.—We regard the Aspinwall potato-planter as one of the most ingenious farm implements ever invented. We are informed that the corn-planting attachment works equally well.

E. L., Cheektowaga, N. Y.—With us, hen-manure gives the best results on a light soil. We prefer to use it on sweet corn, melons, peas and beans. It is also good for cabbage. It is a good plan to mix sifted coal-ashes with the hen manure. Wood-ashes should not be so used.

J. B. R., Lettsville, Iowa.—Who sells Pea-combed Plymouth Rock Fowls? Our climate is so cold that all single-combed fowls in a severe winter have their combs frozen. I tried the Langshans and that was the worst trouble.

ANS.—H. S. Babcock, Providence, R. I., breeds these birds. We do not know that they are widely distributed yet.

A. R. Tabernacle, N. C.—The Monarch Incubator, made by James Rankin, South Easton, Mass., is a good one—perhaps as good as any for a beginner at the business, Will it pay to buy one? Will it pay to improve your stock, cattle, poultry or sheep? Not unless you are willing to give them the best of care and thought. Incubators pay some men while to others they prove only an expense. The profit or loss depends upon the way they are run.

L. L. W., Round Lake, N. Y.—Dorset Sheep are bred by Woodward & Jacques, Lockport, N. Y., and James Wood, Mt. Kisco, N. Y. This is a "special purpose" breed—chiefly valuable for producing early lambs for market. Twin lambs are very frequent when a ram of this breed is used and the lambs are well suited for the early market. The Dorsets are better suited to the methods of the man who has improved facilities for growing lambs than to those used by the "average farmer."

C. M. M., North Clymer, N. Y.—I am ditching a black muck swamp covered with flags, how long should it lie before seeding? What kind of seed would be best?

ANS.—The swamp land should receive this winter an application of lime at the rate of 100 bushels to the acre and be plowed and dragged next spring. It may then be seeded with 12 pounds of Alsike, five pounds of Timothy, five pounds of Red Top and five pounds of Meadow Fescue to the acre. If not ready now, the liming may be done next March or April, and the seeding take place the ensuing fall.

S. W. S., Martindale, Pa.—How far from a pump can I dig a sink without injuring the water?

ANS.—This will depend upon the character of the soil; where it is light and porous the danger is far greater than in a heavy, compact clay, because it is easier for the water to find its way through. We would not want a sink within 150 feet of our well.

Miscellaneous Advertising.

"Herbrand" Fifth Wheel for Buggies

In fact, we do not believe in a sink at all. It is healthier and neater to have a large barrel on wheels, which may be emptied twice a day. Sinks and privy vaults are nuisances. Your other questions will be answered later.

Discussion.

A VERMONT MAN "GOES WEST."

L. H. R., FORT ATKINSON, WIS.—In the R. N.-Y. of December 6, I see several letters in reply to questions in regard to the abandoned farms in New Hampshire and Vermont. I wish to say a word on that topic myself, as I am fully convinced that most of the reasons advanced by those correspondents are misleading and false. Before giving the reasons for the abandonment of so many farms in Vermont I wish to say that I always lived in that State until about a month ago, and have made some study of the matter, and after looking at the subject from all sides I thought it decidedly a good time to go west. Now for the reasons:

1. We in Vermont are no nearer markets in regard to the cost of transportation than the farmers in any of these Western States. In other words, the farmer in Vermont can sell his hogs, beef cattle, butter, potatoes, etc., at just the same prices as the farmers in Wisconsin, Minnesota and Iowa can theirs, and for no more. 2. The land in Vermont being hilly and stony, it is not possible to grow as many acres of crop with the same labor as in the Western States where the land is level or slightly rolling, and free from stones. 3. If the Vermont farmer wants to buy feed of any kind he must pay double price for it as compared with what it can be bought for here. When I left Vermont, a month ago, bran was selling for $16.00 per ton and corn-meal for $17 per ton and those were the lowest figures that had ever been reached there so long as I can remember, the prices often running from $20 to $25 per ton. The prices here are $8.50 for bran, and $7.00 for new corn on the ear. Now, does any one think that the Vermont farmer can make pork, beef or butter and sell it at the same rates as the farmers here can, with feed at one-half the price which the Vermont farmer has to pay?

4. The winters are from two to four months longer in Vermont than they are here, so that the people there have a much longer season for feeding their stock and a much shorter season for doing farm work, to say nothing of being blocked up in five to seven feet of snow for four to six months each year. 5. To my mind the most important of all reasons for the low prices of Vermont farms lies in the fact that every man or woman who has a few dollars to put at interest, instead of letting it out at an honest rate of six per cent. at home, must either put it into some Western mortgage company in Kansas, Nebraska or Dakota, or, even worse, send it to some of the many mushroom cities in the West and South, in expectation of getting eight or 10 per cent. or even more for it; but in many cases they lose even the principal. Now, I consider that the price of articles is regulated by three things—supply, demand and ready money, and as the ready money is all sent out of the State an important factor is wanting and prices go down, and as the supply of farms for sale increases they take another drop, and there being little or no money and plenty of farms for sale demand soon ceases and there is a crash in prices, just as there is at the present time. Mr. H. O. Hadley makes the following statement in the RURAL: "The only reason why there are so many deserted farms in the State is because the young men of today are too lazy to work." Perhaps that is the reason in his State of New Hampshire; but the case is different with the young men of old Vermont who have always stood in the front ranks for their energy and ability.

The reason why young men depart from the farms of Vermont is that they have looked the matter squarely in the face, and have seen their fathers and neighbors growing poorer and poorer year by year owing to the constant decrease in prices and the constant discriminations made in favor of the West by our railroads, and one by one they have arrived or are arriving at the same conclusion—that they can make more money in the rich and growing West than they can in the poverty-stricken East.

The New Hampshire farmers who have told readers of the R. N.-Y. the reasons why so many farms in their State and Vermont have been abandoned as unprofitable, are, nearly all, men who have farms for sale. It is therefore essentially to their interests to represent matters in the most favorable light to possible purchasers. All the world over, whenever a man wishes to sell his business, whatever it may be, really because he couldn't do well in it, he is certain to tell a different tale altogether to a would-be purchaser. The R. N.-Y. did well in calling attention to the subject and getting one side of the story from deeply interested parties; but, of course, it could not expect to get the truth about the matter from such a source.

VARIOUS TOPICS.

C. C. W., GRAND BAY, ALABAMA.—In an article by Dr. Henry Stewart in a late issue of the R. N.-Y., he speaks of the peculiar medicinal properties of the cotton root, and says the oil of the seed has the same properties. Now, if this is so, what quantity of the oil would be required to produce any effect upon a human being? Is not most of the cotton-seed oil now made used as human food in some form or another—as an adulterant in lard and olive (?) oil, and in other ways? I don't know how it is in any other places; but in Mobile refined cotton-seed oil can be purchased of any grocer, and is largely used in lieu of the miserable stuff called lard by the citizens for all sorts of cooking and shortening, and it is good too, but like many other so-called good things, its use may produce very serious results. Who knows?

One of my new neighbors is a man from Missouri, and the other day while reading the news of that blizzard out West, he remarked that he was thankful that he was out of the range of such things, and he didn't propose to face any more of that sort of thing as long as he could make a decent living here, and he had done very well so far, and as soon as he could get his fruit orchard to a bearing age he hoped to get along still better. When this man went back to his old home a little more than a year ago he told the people there what he had seen here and about some of his experiences, but he added that his stories looked too big and the people would not believe them. The above is brought to mind by reading on page 775 of the R. N.-Y. what Mr. Burpitt has to say about Georgia and the Island of Jersey. Suppose he were to return and tell those people about what he had seen and learned in Georgia: would they believe him? I doubt it.

The R. N.-Y. asks, on page 776, what is an acre of apples or peaches, quinces or pears worth when just coming into bearing. Well, I don't know how much the trees are worth, but I know the net value of the fruit from one acre containing 108 Le Conte Pear trees seven years old. The first crop, this year brought $626.40 and the trees are full of fruit buds for next spring's crop. I have not found the sort of apple that does well here. Peaches are unreliable. Of plums I believe the Japan sorts, like Kelsey, Satsuma and others, will pay well, as they bear large showy fruits of good quality, which stand transportation well, and can consequently be sent to distant markets at a season when they will sell for enough to give the grower a profit after a division with transportation companies and commission merchants.

I want to say "Amen," to Mr. Terry's Thanksgiving for fruit. To-day is Thanksgiving Day and we have just gathered the last of the fruits of the season—some Chinese quinces, many of which weigh 2½ pounds. The season began with the first week in March, when we gathered our first mess of strawberries, and ever since we have had some sort of fruit. For about eight months out of the 12, we can enjoy fresh fruits besides having melons from June till frost, if we plant in succession, and this we do, and seeds from the first melons planted at once produce a second crop.

CLOVER AND ABANDONED FARMS.

E. P., JEWETT, N. Y.—The issue of the R. N.-Y. for December 7, was an unusually good one, especially the letter of Mr. Terry and the articles in regard to abandoned farms. I am a believer in clover and always have been, and I think Mr. Terry's way of farming excellent for his farm, and at first thought I felt like saying: "Let us go and do likewise." But, instead, let us stop and think before we jump in—Have we all Mr. Terry's sub-soil to work on? Is not Mr. T. doing with his clover what could be done with a sub-soil plow? I think from my own experience on different kinds of land, that many who may try to follow Mr. Terry's footsteps to wealth will find, to their disappointment, that they have not his sub-soil, and that no clover will grow without constant manuring. I have known apparently worn-out land to produce as abundantly as Mr. Terry's by the use of a sub-soil plow, and the supply of fertility seemed to be almost inexhaustible. I can only say: "Happy is the man who has a farm with such a reserve for time of need," and I am sorry we are not all so fortunate. If others try experiments like Mr. Terry's I would like to hear from them. This is an important question, for if clover will do in all cases what it has for Mr. Terry then we farmers in the East are on an even footing with the owners of the new lands of the West and we are or will soon be rich men.

Now as regards abandoned farms: As far as my observation goes, really no farm is left to be abandoned. The farm was sold years ago in its products—butter, pork, etc. There would be as much sense in asking such a farm to produce profitable crops as there would be in asking the skeleton of a horse to rise and work. The young men who leave these farms know to their sorrow that nothing can be produced on such land without capital to restore the fertility and repair the dilapidated buildings. This capital they have not and they do not know where to get it, so they leave the farms to their fate. I am sure it is owing to the farmers' fault that farms are in this condition, for while the large majority of farms have deteriorated greatly in the last 20 years, a few have improved, and where the farm has improved the farmer has grown wealthy. I really do not think that farming has in the past had its share of brains. The parrot will croak that times are hard and "farmin' don't pay" until more capital and more brains are put into farming and until then farms will continue to be abandoned.

AGAINST THE SILO AGAIN.

A. T. T., FRANKLIN PARK, N. J.—I notice that it is charged that in my article of November 2, regarding the silo and the injury to milk by feeding silage, I have not plainly stated whether my silage was from corn well matured before it was cut or from green stuff, and it is also charged that I was not definite enough as to manner of storing it in the silo, etc. The corn was quite green when cut in the field and was quickly chopped and stored in the silo, where it was well tramped, covered at once and heavily weighted immediately. It would weigh 45 pounds to the cubic foot when taken out, and was moderately acid in taste, and when fed emitted an odor about the same as that of "barley grains." That there is a deleterious principle in this feed which is manifested in the milk, I think has been fully proven in the action of the condensed milk factories throughout certain portions of the dairying districts contiguous to New York City. These absolutely refuse to buy milk from cows that have been fed on silage. It is alleged that this action was not taken until heavy damage had resulted from the quality of the goods made from silage-fed cows. I am not prepared to deny that this obnoxious factor is eliminated in "sweet silage," and furthermore I will not assert that because I have never seen sweet silage, such a product has no existence except in the imagination of some silage enthusiast; but I will say that I have made silage from a variety of materials and stored it in a variety of ways, put it up fast and slowly, and it has never yet been my fortune to obtain absolutely sweet silage. Relatively some of it has been sweet, but only as compared with some that was offensively sour.

ABOUT POTASH.

F. A. B., ROCHDALE, MASS.—Do you put sugar into your turnips when you prepare them for the table? I should think there was sugar in this celery it tastes so sweet What very sweet strawberries these are! What is the name of them? Crescent. Why I thought the Crescent was a sour berry? It is with some. The above are actual questions which the writer has repeatedly answered at his table. The secret? Simply *lots* of potash. I mean by that, two or three times as much as is generally used or even more. I have used for years large quantities of wood ashes; also the Mapes Potato Manure at the rate of 1,200 pounds to 1,500 pounds per acre. I cannot get much barn-yard manure. I have raised celery on the same spot several years in succession, and this year the best crop I ever had. I have also grown parsnips year after year on the same spot and I sell them all in the fall. People say that they thought parsnips did not get sweet till spring; I say "Sometimes they don't; but mine do." I have never experienced any trouble from using very large quantities of potash in the form of ashes, except in the case of beets and potatoes. They will be more or less scabby in ground on which too large quantities of ashes have been applied. I have had about 1½ acre in a market garden for the past eight years and have kept it in good condition almost wholly with the Mapes manures and wood ashes, with occasionally a barrel or two of finely-ground bone on my small fruits—soil, a clayey loam.

THOSE CHEESE SYNDICATES.

COL. F. D. CURTIS, KIRBY HOMESTEAD, N. Y.—It is understood that an effort has been made to purchase and put under one management a considerable number of cheese factories. If, as the result of such purchase, more uniformity can be had in the quality of the cheese and a better grading, and this at a lower cost on account of doing business on a larger scale and thereby purchasing the material required at less cost, then the entire plan is a good one. If, on the other hand, the motive is to squeeze the price of milk down to a lower figure the movement is all wrong. I do not understand how such a combination can cut down the price of milk, for it is only factories which will be purchased not the farmers. The farmers will still have the liberty of personal and co-operative action. The spirit of co-operation is not an evil spirit providing there is not too much Mammon in it. Farmers need more of the co-operative spirit to reduce the cost of production and to induce more uniformity in the quality of farm products, and especially where they are manufactured. I understand that it is New York City capital which is behind this project. A combined interest in the manufacture and sale of cheese can be made to work good if there is not too much trickery in it. We shall see.

COAL ASHES AND CLOVER.

A. J. D., HACKENSACK, N. J.—In a late issue of the R. N.-Y. any person who has had experience with coal ashes is requested to state the results. The soil where I reside is sandy, and so light that when the wind blows it drifts in ridges, and nothing would grow on it except beans. I tried to get a sod on it by sowing Timothy, but it died out. A few years ago, however, one of our church masters informed me that there was a big lot of coal ashes in the church cellar and that he would give it to anybody who would haul it away. I hauled about 20 loads and spread it over a two-acre lot, and then with a light dressing of stable manure, I plowed it under and sowed clover seed, and to-day I have just as fine a sod on that lot as anybody can find in this county. I know it is the first time that sod has been on that lot in 30 years, and for how many years the same had been the case before I came here, I don't know.

WORTH NOTING BY CORRESPONDENTS.

E. P. S., W. BRIDGEWATER, MASS.—I have often thought that if contributors, in giving their experience, or the results they have obtained, would always mention the condition under which they had worked, what they say would be of more value to others than it often is. A dry season does not give the same results as a wet one. Chemical manure will do better on some soils than on others. Some soils seem to need barn-yard manure. Some crops do very well with chemical manures only, while others will do nothing with barn manure.

What Others Say.

ANALYSES OF FERTILIZERS.—Readers of the R. N.-Y. should study the bulletins issued by the various experiment stations, which give analyses of commercial fertilizers. Let us give a few instances to show in what way they may be benefited: According to a late bulletin issued by the N. J. Experiment Station, as pointed out by Dr. Collier in the Husbandman, of the samples of ground bone analyzed there were 10 which gave an average value of $40 per ton, the average selling price being but $32—that is, their real value was 26 per cent. greater than the price asked for them. On

the other hand, nine other samples of ground bone had an average intrinsic value, as shown by analysis, of $21.69, while their average selling price was $41.78, or 47 per cent. in excess. It will be seen, therefore, that upon the average those farmers in New Jersey who bought their ground bone from the last lot of nine samples, paid 85.2 per cent. more for the same amount of fertilizing material than did those who bought from the first lot of 10 above mentioned. Again, if we consider the so-called complete fertilizers analyzed, we shall find differences almost as great. For example, six of the number had, upon an average, an intrinsic value per ton of $31.88, while the average selling prices were $30.08—that is, they were, upon an average, worth six per cent. more than their market price. Twenty other samples had, as shown by analyses, an average value of $34.80, while their average selling price was $37.60, or eight per cent. more. Again, 50 other brands had an average value of $26.69, while their average market price was $37.69, or 41.2 per cent. greater. In other words, the New Jersey farmer who is so unfortunate as to buy some one of the 50 complete fertilizers mentioned, will pay, upon an average, 49.6 per cent. more for his nitrogen, phosphorus and potash than does the fortunate farmer who buys from one of the six first mentioned, or if one of the 26 first mentioned is bought, there would be an average saving of 34.4 per cent. over what would be paid for one of the last 50 mentioned.

SULPHUR AS A DISINFECTANT.—The value of sulphur as a disinfectant should be well known, says Henry Stewart in the Times. By burning it, the sulphur is oxidized and becomes a most acrid and poisonous vapor known as sulphurous acid. This acid quickly destroys all kinds of germs, whether of mold, mildew, and other kinds of minute fungi, or of those organisms which cause disease in plants and animals. The germs of all the contagious diseases of farm animals are destroyed by exposure to the fumes of burning sulphur, and wherever these diseases have appeared, or are expected to appear, they may be avoided by closing the buildings and fumigating them with sulphur wrapped in paper moistened with kerosene oil to make it more inflammable, screwing up the paper and lighting one end. The papers, for safety, should be put in an iron pot or pan. One ounce of the sulphur will be sufficient to fumigate and disinfect a small poultry house, and a pound will serve for a large stable or barn. The building should be tightly closed to retain the fumes, the cattle, of course, being removed meanwhile, and the sulphur should be burned in several places over the floor so that every part of the building may receive a full share of the disinfectant. As the salt known as hyposulphite of soda consists of sulphurous acid united with the base, it is a useful internal disinfectant, and as its action on the internal organs is safe, it is usually given as a preventive to the animals which have been exposed to infection or contagion.

POINTERS.

PETER HENDERSON says that the business of market gardening, though healthful and fairly profitable, is exceedingly laborious, from which any one not accustomed to manual labor would quickly shirk. The labor is not what might be called heavy, but the hours are long—not less than an average of 10 hours a day for both summer and winter. No one should engage in it after passing middle life, neither is it fitted for men of feeble constitution, for it is emphatically a business in which one has to rough it, and if it is to be prosecuted successfully the owner must put his shoulder to the wheel at least as strongly as his roughest employee.....

A LONGER trial of the Red-caps does not change the opinion previously expressed that they are less profitable than better known breeds. Their eggs average one more to the pound than those of Wyandottes and they are lighter in color—nearly white. But they are small in body and the big comb is a decided objection.....

THE PATAGONIANS are an interesting lot. The race is so little fixed as not to be entitled to a name at all. They seem to be a mixture of Houdans and Games, and possibly other breeds. They are hardy, plump, medium-sized fowls, contented and quiet. Their eggs average as large as those of Wyandottes, varying in color. The small topknot is no objection; the small comb is in their favor. Among our pullets is a pure white Patagonian. Others are black and variously mixed.....

THE R. N.-Y. was probably the first of the stations or journals to try the Wyandottes both dark-colored and white. As to the first, we have merely to repeat the opinion expressed in these columns several years ago, viz., that they should be ranked as among the very first all-purpose breeds. There is but one objection to them—a rather inferior-sized egg. The White Wyandottes come true to color. They are plump, early-maturing, full-feathered fowls, quiet, and desirable in all ways.....

OUR Andalusians were condemned on account of small bodies and large Leghorn-like combs. Crosses of Andalusians and Wyandottes, however, have given us some of the most perfect individuals we have ever seen in so far as shape, markings and feathers are concerned.....

PETER HENDERSON says that peat moss, now being used in the cities for bedding, is likely to be of great value to the market gardener if it can only be had in sufficient quantities. He has had it in use in his own stables for about two years, and finds it not only more economical than straw for bedding, but its absorbing qualities make it of great value for fertilizing purposes. He can buy ordinary straw manure in his vicinity for $1 per team load; but he is buying all he can get from stables where the moss is used at $2 per team load, believing it to have twice the value of ordinary straw manure. It is claimed that the source of supply of the peat moss in Europe is almost inexhaustible, and it is now offered by three or four firms in New York at prices ranging from $12 to $14 per ton, and it is hoped competition will bring it yet still lower. It is now used exclusively as bedding by some of our largest horse-car stables and express companies in New York and vicinity; and one of our largest livery stable men in Jersey City, who has been using it for two years, says he would rather use peat moss for bedding at $14 per ton than he would straw for nothing, so much more satisfactory does he find it in all respects for his horses. There are, no doubt, many swamps in the United States composed of peat moss, which may some day prove gold mines to the discoverers, as these deposits in Germany must now be proving to their owners.....

MR. M. MURRAY, of Centre, Ohio, claims that the new seedling potato, "Ross," is better in quality than the Rural New Yorker No. 2.....

DIRECT.

——LIFE: "If we can love our neighbor the world is bound to be interesting to us. Don't doubt, don't forget it. If you love no one, you are a wretched failure, a poor old machine, the parts of which are wearing out without anything to show for their activity. If you love your friends there is hope for you; you must be getting some comfort out of life. If you love your neighbor, that is the fulfillment of the law. Great is duty, and it pays to do it, for that makes life sweet. But if you love your enemies, that, brethren, is the fulfillment of the Gospel. If you can do that the true Christmas spirit must be in you. Let it out, comrade, let it out; it is rare in the world. Not every one knows that it exists, but you, who have felt it, know that it is the golden key to life."

——THE ART OF MAKING GIFTS. "In selecting an arm chair for papa seek one that will match his temper rather than his complexion.

Girls over 20 are likely to feel insulted if presented with wax dolls.

If your husband smokes, insist that he shall use the box of cigars you gave him at Christmas. This may cure him of the habit.

If you have a neighbor whose love of music keeps you awake o' nights it will be a polite tribute to his taste if you send his small boy a drum.

Your mother-in-law will be intensely gratified if you give her—her own way.

A few sheets of postage stamps may be gracefully offered to struggling genius.

Your sweetheart will probably be as much pleased with an engagement ring as anything else you can give her."

——DR. TALMAGE: "I would not take up smoking again for all the surplus in the Treasury."

——REV. R. HEBER NEWTON: "I can scarcely fancy myself seeking spiritual consolation from lips whence issue the odious fumes of nicotine."

——REV. THOMAS ARMITAGE: "There is something so unclean, morbid and adverse to the daily life of the Lord Jesus in the practice of smoking, chewing or snuffing tobacco that the very thought of associating the Son of God therewith would be scouted by the slaves of these practices as savoring of blasphemy."

——REV. THO'S. K. BEECHER: "Tobacco has its uses no doubt. He is a rare man who learns to use it usefully."

——POPULAR SCIENCE NEWS: "The treatment of pneumonia by chloroform inhalations is reported upon by Dr. Theodore Clemens, in Alleg. Med. Central Zeitung. During 42 years' practice he has treated all cases of pneumonia, severe or mild, with chloroform inhalations, and has not had a single fatal case. To the chloroform he adds alcohol, saturates some cotton twisted into a ball, covers it with some loose, dry cotton, and holds this to within an inch of the patient's mouth and nose. He thinks that the chloroform spirits are taken by the blood, completely changing it in the lungs, and, by defibrinating, preventing its hepatization."

——TENNESSEE EXPERIMENT STATION: "Considered as a food the strawberry would hardly be rated as very nutritious. The small amounts of food constitutents present are so diluted by the ninety per cent. of water, that to sustain life a very large quantity would have to be consumed."

——LONDON LIVE-STOCK JOURNAL: "We regard, in fact, the American people as being distinctly an assistant and ally in the battle of life—and not an enemy. When we read of what it has done and is doing, and see what it has let us have and is likely to forward, we think this island has been, and is likely again to be, altogether a gainer by any prosperity which may befall the Greater Britain beyond the sea."

Miscellaneous Advertising.

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We doubt if there is, or can be, a specific remedy for rheumatism; but thousands who have suffered its pains have been greatly benefited by Hood's Sarsaparilla. If you have failed to find relief, try this great remedy. It corrects the acidity of the blood which is the cause of the disease, and builds up the whole system.

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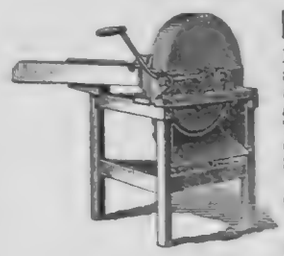

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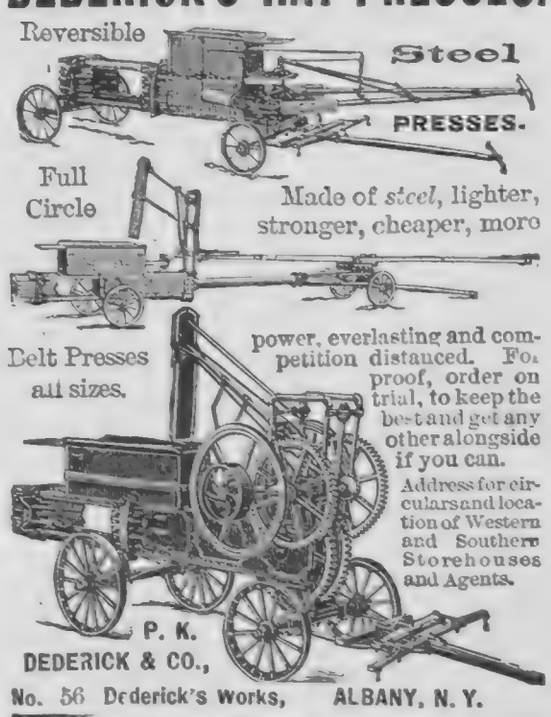

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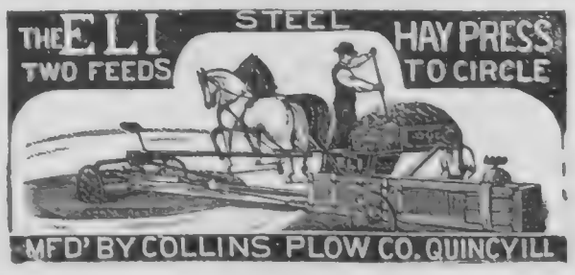

THE
RURAL NEW-YORKER,
(34 PARK ROW, NEW YORK),

A National Journal for Country and Suburban Homes.

Conducted by
ELBERT S. CARMAN.

SATURDAY, DECEMBER 28, 1889.

NOTICE.

THE RURAL NEW-YORKER is invariably discontinued at the end of the term subscribed for. Any copies sent to non-subscribers are sent without charge as specimens merely.

The R. N.-Y. will begin 1890 with a Dairy Number which we hope will help our winter dairymen. A strong feature of this number will be an exhaustive report of the recent meeting of the New York State Dairymen's Association at Ithaca.

ATTENTION is called to the special premium offered on page 850. The papers are full of offers to send books for almost nothing. Most of such books turn out to be poorly printed on inferior paper, and cheaply bound. The R. N.-Y. offers a book well-bound, well-printed and well-written. We know our readers will find it valuable. For three subscriptions it is an excellent premium.

ONE man writes the R. N.-Y. that farmers read too much about crops and stock and too little about political economy. Another man, living in the same town, thinks farmers spend too much time over the daily and political papers while too little is given to reliable agricultural literature. Who is right? The R. N.-Y. sees good men wasting time over worse than misleading political discussions, while others give valuable time to worse than senseless agricultural information.

IT is respectfully submitted that the R. N.-Y.'s index is more systematically arranged and more comprehensive than any published by its esteemed contemporaries. Making it up is the most trying, perplexing and tedious work of the year.

"Now why should a half-starved orchard bear a full crop every year any more than a half-fed cow should give a maximum yield of milk or make the greatest possible amount of butter? Will young stock grow without feed, or horses do their best work when half-starved?"—See page 850.

THE Early Vermont is the potato named as having yielded over 1,000 bushels to the acre, taking the first prize. The variety has never had the reputation of being a heavy yielder. Its yield was low in the R. N.-Y.'s trials with it. Possibly Mrs. Day planted some other variety under that name.

THIS is the way a Michigan subscriber puts it:

"DEAR RURAL: (I had almost written Dear Friend, for I have taken the RURAL so long that it seems like a friend.) This month completes the eighth year you have visited us weekly, and beneficial acquaintanceship for that period is almost long enough to make a dear friend."

THE R. N.-Y. is in some distress over the fact that, having in its experiment grounds a gooseberry that in several respects is superior to any other variety known to it, it has as yet no authority to give it to others or to have it introduced. It was sent to us as No. 2 by the late James Dougal of Windsor, Ontario, Canada, in the fall of 1883. All of our several endeavors to communicate with his heirs have proven unavailing.

YOU eat too much, good friend. All of us do. Don't ever fear that you will eat too little. The most idiotic way of celebrating a holiday is by eating too much. You do not sleep enough. There is little fear that you will sleep too much. Sleep never injured any one. It is Nature's restorer. It is one of the sweet rewards of industry and of a serene conscience. You can not afford to hate your neighbor. Did it ever occur to you that hate costs more than diamonds, and that it isn't worth one cent? Tell me of a single instance where hate serves you well. Keep these R. N.-Y. injunctions in your mind for the New Year.

AT the recent dairymen's meeting at Ithaca, the following was adopted:

"Resolved: That this convention recommend that every dairyman in this State purchase scales or balances and that all weigh and record the milk of each cow separately for one year and report the same to the secretary of this association."

The convention asked Congress to enact a law requiring all skim-milk cheese to be branded as such at the factory where it is made. It is an encouraging sign that cheese-makers all over the country are making desperate efforts to make clear the distinction between the best cheese and that of an inferior grade.

HERE is a New Year's thought for you. The American people drink, each year, over $900,000,000 worth of liquors. The manufacturing, handling and selling of this stuff provides work for a number of workmen, but that is all the good it does do. Take this amount of money out of the total amount in the country and a big hole is left. It is a hole large enough to account for a large proportion of our "hard times." The misappropriation of this money will account for low prices, business stagnation, want, dissatisfaction and crime, as no other factor can account. Put a stop to the liquor traffic and do you suppose there would be so much blame cast upon trusts and monopolies? This is a fair question.

ONE of the soundest men in New York State sends us the following.

"On page 820 S. B. Harlow Jr., has given us an exceedingly valuable estimate of the worth and influence of the farmers' institutes, and from attendance at several institutes, I agree with him in his criticism of the various speakers; but I have too high an appreciation of the influence of my mother and my wife on my own life to wish with him that the ladies might be excluded. Undoubtedly the primary object of these meetings has to do, as he says, with *practical* farm management; but the discussion of all things that will enhance and elevate the farmer's home life has an equally important place. I take it that we should not hold ourselves down too closely to a mere rule and-measure discussion of details of management, but after these are disposed of, give consideration to some of those questions that elevate and broaden and give us a larger and better view of men and things."

"THE mild weather of the past three winters has had more to do with the stagnation in the woolen goods business than anything else." This statement was recently made by a man who has been long familiar with the woolen trade. Is it sensible or not? Ask yourself whether in a mild, open winter the members of your family require as large a supply of woolen goods as is purchased in an extra cold winter. There are thousands of people who put off the purchasing of thick under-clothing until the coldest weather sets in and if this cold weather does not come before late in January many of them try to get through the winter with cheaper and lighter goods. The result is that sales of the heavier goods are seriously cut down. When the sale of an article is cut down, manufacturing must stop or over-production ensue. Heavy woolen goods go with cold weather. Until we have the cold weather, a portion of the goods will remain unsold, and production must be cut down.

THE R. N.-Y. has no special prospectus to present for 1890. We have always said that those who desire to know what the future R. N.-Y. will be must judge by the past. The paper will never go backward while the present editors have anything to do with it. That is the only promise we care to make.

Readers will be sure to hear from all of our old correspondents during 1890, and we expect to introduce many new ones. We shall, as always, endeavor to be independent, accurate, honest and conservative. We shall endeavor to keep fully up with the times in all departments of farm life. Particular attention will be given to sheep husbandry and dairying. Horticulture and gardening both as a business and a pleasure will be treated by the best authorities in the land. We cannot begin to tell, in a single page, the interesting questions we have on hand for investigation. They are certainly interesting to us, and we believe they will be to our present readers. It is, of course, superfluous for us to say that we shall be glad to have all our present readers enjoy the discussions with us.

ONE of the most effective hinderances to the extermination of contagious pleuro-pneumonia among cattle in this country is the conflict of authority between the State and National authorities—between the various Cattle Commissions and the Bureau of Animal Industry. Such conflicts are based, of course, in a great measure, on the old doctrine of States' rights against Federal encroachment, but they are just as common in the North in which centralization is supposed to have great weight, as in the South where State rights are still a cherished inheritance—just as common in Illinois and New Jersey as in Maryland and Virginia. Pennsylvania is the last State in which such a conflict has occurred. A short time ago the State authorities ordered three affected cows in Chester County to be killed, but as the disease was directly traceable to Baltimore, they did not think it necessary to quarantine exposed animals. A few days later the agents of the Bureau of Animal Industry visited the section and promptly quarantined twelve herds. The national authorities can quarantine cattle in transit from one State to another, but there their power ends. Governor Beaver, of Pennsylvania, promptly notified them that such an action must not be repeated, and the owners of the herds have been paying no attention whatever to the Bureau's proclamation. Should not some means be devised by which such unseemly bickerings and quarrels may be avoided?

WHAT PAID BEST?

THE crop reports in this paper are interesting and unique. They are truthful and suggestive. The crop and product, it seems, must be adapted to the local conditions of soil, market, seasons, etc. So far as grain crops go, corn seems to have given best satisfaction. Our correspondents state very clearly the fact that corn gives its greatest returns when made into beef, pork, wool or butter. The silo and the new methods of preserving corn-fodder have done much to insure the value of the corn crop. The apple crop has proved exceedingly profitable to many farmers, and a great deal of this profit was due to the use of Paris-green and to careful culture and manuring. The hog and the dairy cow seem to have been the best paying animals, though sheep have carried many of our friends along. It is gratifying to learn that all who have made a systematic effort to improve their animals by the introduction of improved stock, have found such a change profitable. The maple-sugar makers are all happy. This is a product that can be profitably increased. The potato crop has, on the whole, been a disappointment this year. In the sections where the best markets are found, the crop has been poor; in the sections far removed from markets the crop has been large. Those who might have realized good prices have not had the potatoes to sell, while those who had plenty of potatoes to sell have been obliged to accept a low price. Dairying has been the sheet-anchor of hundreds of our readers.

The Michigan man, who says on page 850. "There is no more profitable stock farming than all-the-year-round dairying," hits the secret of his success when he says that he can see that his fields are getting more fertile. Next to honey or maple sugar, butter takes less fertility out of the farm than any other product, while its production necessitates the manufacture and application of stores of the most desirable fertility. No wonder the butter dairyman sees his fields growing richer and his crops growing larger. The hay farmers seem to have done well this year. In fact, every section of the country seems to have some product that has given satisfactory returns when well handled. It is the R. N.-Y.'s wish that the year now closing may long be known as the worst season for American farmers. If we could only have our way each succeeding year would bring an added store of prosperity and happiness to the farmers of the country.

BREVITIES.

THE horses like a few raw potatoes just now.

THIS week the R. N.-Y. was offered a coop of good Brown Leghorn hens at 10 cents per pound.

ISN'T the best farmer the one who secures a liberal support from tilling the fewest number of acres?

DO NOT throw hen-manure and wood-ashes into the manure pile. They are worth more to apply to special crops.

WE estimate that something over 3,000 questions have been answered under the "Farmers' Club" in this volume of the R. N.-Y.

WE find that a good many farmers in Western New York are sowing plaster on their clover now instead of waiting till next summer.

"A CROSS-GRAINED man that loses his temper at the first provocation can scare more fat off a sheep in a day than he can replace in a week." See page 858.

DO YOU keep your chicken manure dry or wet? The number of farmers who believe in keeping it *wet* increases every year. What do you think about it?

THE R. N.-Y. notices, with a good deal of pleasure, that the farmers' institutes in this State are being followed by the formation of excellent farmers' clubs.

GOOD LUCK, good health, a clean conscience and work that keeps you busy! We wish you this whether you stay in the R. N.-Y. family another year or not.

MR. TERRY is going to tell us about the cash sales from his 50-acre farm. It is also expected that he will tell us what he would raise if he lived too far away from a good potato market.

LET US BE FRIENDS.—If we are to part company with this issue, let's be friends over it anyway. If we keep together a year longer we will hope to be better friends than ever.

AWHILE ago the R. N.-Y. bought a barrel of Tompkins King Apples for $3.75. The apples on the top were fine specimens, those below being a mixture of Baldwin, Ben Davis, etc., of poor quality. Well what about it? Simply that we shall not trouble that particular dealer again.

THE potato sorter is becoming a very useful implement on potato farms. There are several different makes all working on the same principle. The potatoes are put on a large wire sieve through the holes of which the small potatoes fall while the larger ones roll down to bags which stand ready for them.

NECTAR is a black grape which originated with the late A. J. Caywood. A vine was sent to the R. N.-Y. in May of 1888, and bore its first fruit the past season. The berries were ripe September 1, a few days before Concord. They are round in shape, of medium size with firm skin, about like that of Ulster, and pure in flavor.

YES, the R. N.-Y. fully concurs with the views of the agricultural students of the Wisconsin University, viz., that "how to hold the plow, milk a cow or sow grain," should be learned at home on the farm. Agricultural schools are not needed to teach such elementary work any more than literary colleges are needed to teach spelling, grammar and geography.

A CANADIAN subscriber, in renewing his subscription, gives the R. N.-Y. the following advice:

"Advocate Continental free trade; but don't even wish for political annexation. The greatest good to the greatest number will result from the honest working out of two political systems side by side. We Canadians greatly admire you Americans, but we think that in some things we are freer than you. 'If ignorance is bliss,' all right."

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NOTES ON 1889.

(*Continued from Page 852.*)

farms (from 200 to 1,000 acres each) with poor help. Besides, most of our people have not got over the effects of slavery. We want pushing Northern people, and until we get them among us, I see no chance for improvement. We have every natural advantage, such as a good, kind soil, good roads, good water and good railroad facilities; what we want is men.

Perryman. S. H. E.

ILLINOIS ILLUSTRATIONS.

CORN has paid me better than any other crop I have raised this year or any year that I have farmed: but, of course, at the present market price it will not pay the expenses of raising, cultivating and gathering it, together with six per cent. on the investment, or more than do this. But by putting it into hogs that have been raised on the farm and escaped the swine fever, and getting $3 to $3.50 per cwt. for them, the raising of corn becomes profitable, and one is paid something for his time. This is the pretty side of the matter. One can't raise profitably more than two or three crops of corn and have it pay six per cent. —then come seeding down, meadowing and pasturing that don't pay six per cent.; but we have to give our land a change or rest from corn or any one kind of grain.

Walnut. L. K. T.

MY best paying crops are wheat and hay —clover and Timothy. I raise these crops because they are better adapted to the soil than any others. My farm was a worn-out piece of land and I raise mostly clover followed by wheat, then clover again for the improvement of the soil. Wheat I have sold at 70 cents per bushel this year and clover hay at $8 and Timothy at $10 per ton. I also raise cattle, buying most of them while young at the farm for $3 to $5 per head. I keep them through one summer and sell them to butchers for from $10 to $14. My object is to improve my land rather than make the most money at farming in one year. P. O. J.

Metropolis.

SINCE the Anglo-Swiss Condensed Milk Company has erected its enormous buildings for the purpose of manufacturing condensed milk, farming has been almost revolutionized in this immediate vicinity. As the prices paid for milk by the company have been very satisfactory to farmers, many have been induced to change from grain and stock to dairy farming. The present contracts call for 1,400 or 1,500 cows, and the present price paid for milk is $1.30 per cwt. As this is a new industry for this vicinity, I am unable to give any correct figures as to the net profit; but, like my neighbors, I know from my income from the business, as compared with that from other industries, that the former pays by far the best. The present high price, however, may not be long maintained, as it may be only a "bait" which the manufacturers of condensed milk have thrown out to induce the farmers of this vicinity to invest heavily in the dairy business, and after things have been got into convenient shape for dairying, the company may knock the price down quite below the cost of production, as is often done by other monopolies of this class. R. W. G.

Woosung.

THE crop that has paid me best this season and in fact for several seasons past has been hay. The crop is very large this year; still good prime tame hay is worth $5 per ton in the city. Potatoes have also given a good yield, but the prices are low—25 cents per bushel. One reason why hay has paid well is that it does not cost as much to raise as many other crops and there is a steady and increasing demand for it, and I think that it will continue, still in view of the varying conditions of soil, climate and location as well as of the supply and demand and also for many other causes, what pays one man best may not pay another at all, even were they in the same immediate neighborhood. Success or failure will depend on the man himself. Were I asked what pays best as a general business among our Western farmers I would say, stock-raising and farming combined, raising all standard crops and feeding all on the farm and selling the stock and using the manure on the land. J. H. W

Sterling.

MISSOURI MEN MAKE MENTION.

GRASS and corn pay me best. Of 240 acres only 30 acres are cultivated to corn. Everything that is grown on the farm, is fed to stock till they are in good condition for market. The cattle go off when about two years old; the pigs when from five to seven months, the wether lambs at weaning time; and the ewes when four years old. I do not sow any wheat. J. T. F.

Bates City.

THE corn crop has paid best this year. I got enough corn at 25 cents per bushel to pay for the land on which it grew, the first cost having been at the rate of $10 per acre. The crop will bring 25 cents in the market and is worth more than that for feeding to stock, especially swine. It will pay to increase the yield, though this was very good the past season—40 to 60 bushels per acre, and it was of good quality.

Corneau. G. W. T.

WISCONSIN WISDOM.

CLOVER has paid best the past season. The first cut for hay amounted to three to four tons per acre, and the second cut for seed gave two to six bushels. Hay brings $5 per ton; seed $3.50 per bushel. I cut the clover two years for hay and seed, and the third year pasture it with hogs or sheep until the last of August, then plow it under for corn for the fourth year; the fifth year I sow clover with wheat. The corn I feed to hogs, so that it is clover, hogs, corn and sheep; it takes five years to get around. My land keeps producing better crops and we live very well. J. M. S.

Princeton.

I AM engaged in dairying exclusively. I aim to feed all my cows well so that I cannot say that I can profitably increase the product. There is a limit to profitable feeding. As to the land, it gets so little feed I cannot raise oats or wheat with profit. I find it a slow process to get ahead at present prices for dairy goods with the high labor we have to use. A. S. B.

Salem.

VIRGINIA VIEWS.

MY principal product and, in fact, the only one of any consequence, is milk, which means large crops of hay, corn, corn-fodder and turnips, for all of which this portion of Virginia seems particularly adapted. I ship milk directly to Washington, distant only 17 miles, receiving 13½ cents net per gallon in winter and 9½ in summer. I have only been in this State a year and a half and so am hardly able to say whether there is much profit in the milk business or not. My principal object is to make a large quantity of manure, with which to enrich the proverbially poor Virginia soil. The land is really poor, but with one application of manure it will produce as large crops of corn and hay as I ever saw in New York State. I think it will pay me to increase the milk business to its largest capacity, as I have 100 acres, all clear land, and I think that in a few years I can make it carry 50 cows. There is a large quantity of poor land in this part of the State, but it is very easily made productive. All that is needed to make this a splendid farming country is a little Northern energy, enterprise and capital. W. R. G.

Oakton.

OHIO OUTLOOK.

No crop has left much margin of profit with me during the past year, as prices have been so low and I had a wet season to contend with. Corn on wet land was nearly a failure and all other crops were short except grass, which made a large growth, but the weather was so wet while it was being cured that there is more poor and unsalable hay than I ever before saw in this section, a large part of it being almost worthless for anything but manure. There is one thing that has paid well, in fact, a large profit on the labor bestowed on it, and that is a maple orchard. The sirup is a cash article and brings readily 75 cents per gallon in bulk, and on private contract from $1.00 to $1.25 to consumers, and though it is hard work to make it, it lasts only a short time, and comes at a time of year when a farmer cannot do much else. It will certainly pay to increase this to the utmost limit; for the West cannot compete with us, and there is no "trust" to control and dictate prices for a luxury that cannot be made extensively enough to glut the market, and it will therefore always command good prices and pay well for manufacturing. R. B. C.

Garrettsville.

WOOL. This is a great wool-growing section. We are too far from market to handle much that is perishable or that cannot be easily moved. Our land is rolling and too thin to produce crops of grain continuously like some of the more favored sections of this State. It is much better adapted to grazing than to anything else. We raise most of the grain we use, but we do not use as much as in cattle and hog sections. Wool-growing is not as profitable as it was before the reduction of the tariff: but it is still more profitable than anything we can engage in at present. We can only farm such fields as need resetting, being generally about 10 acres out of every 100 of cleared land. The rest is kept in grass, and will, in addition to the necessaries, such as a cow for family use, team, etc., keep 100 sheep. The wool from these sheep at present prices should be worth $200, and there should also be a small increase in the flock. We can keep at least 12 sheep for every steer. (Some place the proportion as high as 25 sheep to one steer), and at present prices (2½ cents per pound), it is easy to see which would make the best return. Our land is mostly light clay. Along the streams we have some limestone soil, but it is generally very rough C. C. E.

Bartlett.

NORTH DAKOTA'S NOTICE.

MY crop of spring wheat has proved more profitable than any or all of my other products during the past season. There are two reasons for this: First, I thrashed a good crop, (an average of 22 bushels per acre) of the very best quality of bright, clean wheat; second, myself and family did all, or nearly all the labor of plowing, seeding, cutting and stacking: so that the actual outlay for twine, thrashing, etc., did not exceed 10 cents per bushel. I hope it will pay me to increase my crop of wheat next year: and with 90 per cent. of the farmers in this country I will continue to depend on the wheat crop next year and for several years from necessity. Cattle are worthless; corn is much more uncertain than wheat, and will not be largely grown for some years. A large number of hogs cannot be profitably raised until corn is more generally produced. The raising of horses is profitable and many of our better-to-do farmers have turned their attention to that industry: but it requires too much capital and the returns are too slow for the average farmer in this new country. In my opinion, sheep and sheep only can—and would if tried—lift the farmers out of the "rut;" pay off his chattel and other mortgages; release him from the grasp of the machinery men, and relieve him largely from the extortion of railroads. But sheep have not been tried, and I do not wish to be too sanguine before I have tested the value of my opinion.

Seymour. A. W. T.

Sheep Husbandry.

FARMING 900 ACRES AT A PROFIT IN WESTERN NEW YORK.

NO. I.

SHEEP FEEDING.

PROBLEM that confronts every farmer each autumn is how he can best use his hay, corn, straw and corn-stalks. Some solve it by selling all of their surplus hay, straw, etc., saving just enough to carry over the horses and a cow or two. Others turn what stock they have into the barn-yard and let them shift for themselves; while others keep cows and do a profitable business in winter dairying. A few feed steers, and a great many shiftless farmers let their stalks rot down in the field rather than take the trouble to make them do service as a valuable food, and also as a choice fertilizing agent. We feed for two reasons: first for profit, and second for manure.

Success in sheep-feeding depends upon several conditions. It is no use for any one to try to feed sheep if he does not like them. The man who kicks his dog or abuses his wife and swears at everybody and everything cannot hope to be a good shepherd. A cross-grained man that loses his temper at the first provocation can scare more fat off of a sheep in a day than he can replace in a week. Then the first requisite is a quiet, low-voiced careful shepherd. The sheds should be so arranged that they can be made very warm when the mercury ranges in the neighborhood of zero, still leaving plenty of ventilation. One great mistake that many farmers make is that of keeping the sheds too warm in moderate weather. The flocks ought to be given free access to water and salt at all times. I buy my sheep in Buffalo, beginning with a car-load or two in August, and I generally have our full number in the yard by December 15. I should advise buying early in the autumn if possible, as the flock will gain 15 or 20 pounds apiece in two or three months on good pasture. It is not always an immense gain which makes feeding profitable, as some will feed so high that the profits will be spent twice over in the amount of fodder used. A gain of 20 pounds can be put on from grass twice as cheaply as it can be made by feeding grain and hay.

In my boyhood days, father used to drive over two or three counties in search of stockers and be away from home days at a time, and then might not make satisfactory purchases. It was and is hard to buy from farmers on their farms, as usually they place fancy prices on the stock, owing to ignorance of the market or the fond belief that their sheep are better than those of any one else. Now all is changed and for the better. If we want a load, father takes the morning train for East Buffalo, goes at once to the stock-yards where he finds 5,000 or 6,000 head to select from, makes his purchases, gives an order to the shipping agent and comes home, the sheep following on the first freight train.

Buffalo is the best point in the United States to buy sheep for Eastern feeding. There are thousands on sale every morning, including all breeds, ages and varieties, from the choicest Canada lambs to the wild, long-legged Colorados that jump six-rail fences just for exercise. Most of the sheep shipped into Buffalo have been on the road two or three days or sometimes more and naturally shrink about 10 pounds so that if one buys soon after their arrival, he gets shrunken weights, a saving at five cents per pound of 50 cents per head over what he would have to pay if he bought them from the field. This does not amount to much on one sheep: but on 100 it is $50, a sum not to be sneezed at. The freight is only a small item, $10 per car-load and each car will hold from 200 to 250 head. I consider sheep well bought, half sold. After we get them home, they are divided into flocks of about 100 each, and when they are put in the yards, the weaklings and small ones are all put into pens by themselves. My experience has been that sheep, like hens, pay best when kept in small flocks. The sheds are so arranged that there is plenty of ventilation in them and attached to each is a well littered yard where the flock can go out to exercise and drink on pleasant days. There are racks inside the sheds giving ample room to feed hay so that the entire flock can eat at once. We give each flock of 100 a grain ration of a bushel of corn per day in two feeds, gradually increasing the quantity till, during the last month, they have all the corn they can eat and are fed three times per day. The hay is fed nights and mornings so plentifully that each sheep is sure to have enough. Sometimes we use a mixed ration of bran and corn. Refuse beans as sheep feed have never given satisfactory results with us. We sell to local buyers if we can in the month of March; if not, we ship direct to New York, usually to one well known commission firm at the Union Stock-yards at the foot of West 60th Street.

Sheep feeding is a lottery. There is only one profit one can be sure of and that is the manure. Father has fed more or less sheep ever since he began farming, but during the last nine years we have fed from 600 to 1,000 head every winter, not always with profit, but four years out of five there has been some money in it. The men that succeed in any branch of business are those who stick to it year after year and who are

Miscellaneous Advertising.

When Baby was sick, we gave her Castoria,
When she was a Child, she cried for Castoria.
When she became Miss, she clung to Castoria
When she had Children, she gave them Castoria

not discouraged by one or two unfavorable seasons. The outlook for money in sheep this year is rather misty. They are worth a cent a pound more in Buffalo now than they have been for the last two or three years at this time, and the prospects for higher prices next spring are not in the least encouraging. The present high price is not owing to the "Harrison Administration Protection Idea" so much as to the fact that Western sheep-breeders have decided to turn their immense corn crop to better use than formerly by feeding it out to sheep on the farm.

To illustrate this, the Chicago Drovers' Journal mentions, in a late edition, that "about 30,000 sheep are being fed within a radius of five or six miles from Gibbon, Nebraska, and 5,000 around Raymond. This is unusual for those localities but a similar item could be written about hundreds of Western towns that formerly were in the habit of shipping stockers east in the fall. Most of these Western-fed sheep will have to be sold early in the spring, so that their owners can get some ready money, and the indications are that the spring market will be a good one for buyers only. In face of this discouraging future we are going to try to feed our usual number, and father is in Buffalo to day to buy those we vet need. We will feed them in the best manner, make them weigh as heavily as possible by the middle of March and then, like Micawber, wait for something to "turn up" which we hope will be a lively demand with good prices. Our success in sheep feeding may be summed up by saying that we get, on the average, good, fair prices for all that is fed out and have the manure left on the farm. Is not this better than impoverishing the soil by selling off all that grows on it?

EDWARD F. DIBBLE.

Woman's Work.

CONDUCTED BY EMILY LOUISE TAPLIN.

CHAT BY THE WAY.

NEW YEAR'S DAY brings New Year's resolutions—we decide on the faults we shall discard, and the virtues we may adopt. How many of them will survive January? Alas, we are usually as apt at breaking our resolutions as at making them. But we don't believe that any of us are a bit the worse for making new resolves, though such determinations should come oftener than once a year.

* * *

As a holiday, New Year's Day seems less observed now than in former years—the old custom; the custom of holding open-house for the reception of all one's friends is gradually dying out, especially in cities. It seems a nice idea to begin the year by welcoming all one's friends; but there is no doubt that the custom was greatly abused, and this largely accounts for its decadence.

In France the 1st of January is the great day of gifts rather than Christmas; it is kept as a high festival, calling for all sorts of gaieties. All the newest and prettiest ideas of the shop-keepers are for this day, and the children hold high carnival. In England the children's special day during this holiday season is Twelfth Day—January 6th; very elaborate Twelfth cakes are made for it, and it is the great day for children's parties, and pantomimes at the theaters.

* * *

A NOVEL and attractive way to cover perfume bottles is described in the Art Interchange; instead of the silk or satin we are so familiar with the covering used is chamois skin, now very popular in fancy work. Any glass-stoppered toilet bottle may be used, but the prettiest is a rather flat bottle with a long neck. Measure the circumference of the bottle, and cut three pieces of skin one-third of its size, less three-fourths of an inch. The hight must be from about one inch under the bottle to half way up the neck, and the piece of chamois is narrowed to fit. The edges of the three pieces may be pinked or cut in points, and these touched with gold. Perforate holes along the edge, and lace with small cords from bottom to top; this will bring into shape with the bottle. Run a strong thread through the lower edge and draw under the bottom of the bottle. A little design may be painted on each piece. A toilet cushion to match may be covered with satin, with a painted square of chamois laid on the top.

AMONG inexpensive gifts described by the same authority are bureau sachets, made just the size to fit in the bottom of a bureau drawer. An inexpensive one is made with a good quality of cheese-cloth, inclosing one thickness of cotton, and tacked together with colored crewel. Before closing, violet and heliotrope powder is sifted in. A handsomer one is made with Florence silk, tufted with baby ribbons. Small sachets made the same way answer for putting among one's clothes.

* * *

A PRETTY lamp-shade is made of white lace flouncing about 12 inches deep. The leaves and flowers are tinted either in natural or conventional colors, and the edges run with five threads of filo floss the color of the tinting. At the upper edge narrow lace is run on, the join hidden by lace beading through which is run No. 11 ribbon, drawing it up to the size of the shade. On the lower edge, a three-inch fringe of twisted wash silk matching the embroidery is tied in.

GOLDEN GRAINS.

EXPERIMENTAL religion is like a secret in arithmetic—infinitely hard until it be found out by a right operation, and then it is so plain we are amazed we did not understand it sooner.....

NATURE is frank, and will allow no man to abuse himself without giving him a hint of it.....

DR. JOHNSON says piety practiced in solitude, like the flower that blooms in the desert, may give its fragrance to the winds of heaven and delight the unbodied spirits that survey the works of God and the actions of men: but it bestows no assistance upon earthly beings, and, however free from taints of impurity, yet wants the sacred splendors of beneficency.....

MADRIAN says that plain, straightforward morality and every-day righteousness are better than all emotion, and dogmatism and all churchism, says the world, and Christianity says much the same; but plain, straightforward righteousness and every-day morality come most surely when a man is keeping close to Christ.....

THE Rev. T. L. Cuyler, says: The very core of health and happy discipleship is the willingness to deny self, and let the Master have His way. This principle runs through all the deepest, richest experience of the blood-bought and consecrated believer.....

MULLER says faith, though weak, is still faith; a glimmering taper, if not a glowing torch; but the taper may give light as truly as the torch, though not so brightly.

SCROLL SAWING.—Catalogue from A. H. Pomeroy, 216-220 Asylum Street, Hartford, Connecticut. To the boy who owns a scroll saw these designs will be invaluable, while for the boy who has no scroll saw we cannot suggest a better Christmas present than one.

Miscellaneous Advertising.

When You Know

That scores of people have been cured of Boils, Carbuncles, and Scrofulous Sores by the use of

Ayer's Sarsaparilla

why not try it yourself? As a blood-purifier, this medicine has no equal. Listen to good advice: Take Ayer's Sarsaparilla, and no other.

"I had numbers of carbuncles on my neck and back, with swellings in my armpits and was tormented with pain almost beyond endurance. All means of relief to which I resorted failed until I began to use Ayer's Sarsaparilla. One bottle of this remedy restored me to health."—S. Carter, Nashville, Tennessee.

Ayer's Sarsaparilla,

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

Price $1; six, $5. Worth $5 a bottle.

THE GREAT ENGLISH REMEDY.

Beecham's Pills

For Bilious and Nervous Disorders.

"Worth a Guinea a Box"—but sold

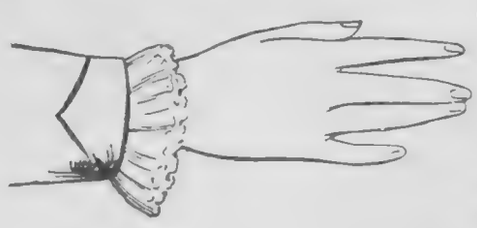
for 25 cents,

BY ALL DRUGGISTS.

CUTICURA
MEDICATED TOILET SOAP

The Most Exquisite Skin Purifier and Beautifier of Modern Times

PRODUCES THE SOFTEST, WHITEST HANDS, FREE FROM REDNESS, ROUGHness, Chaps, and Fissures, Shapeless Nails and Painful Finger Ends,



clears the complexion of Pimples, Blackheads, and minor Skin Blemishes, lessens Tan, Freckles, and Discolorations, and prevents Irritation and Inflammation of the Skin and Scalp of Children and Infants. Absolutely pure, delicately medicated, exquisitely perfumed, surprisingly effective, it is simply incomparable as a Skin Purifying Soap, unequalled for the Toilet, and unrivalled for the Nursery. Guaranteed of the highest purity by the Analytical Chemists of the State of Massachusetts. Sale greater than the combined sales of all other skin soaps, both foreign and domestic. Sold throughout the civilized world.

☞ Send for "How to Cure Skin Diseases," 64 pages, 50 illustrations, 300 diseases of the Skin, Scalp, and Blood, and 50 Remarkable Testimonials. Address Potter Drug and Chemical Corporation, Boston, U. S. A.

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Breakfast Cocoa

Is absolutely pure and it is soluble.

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are used in its preparation. It has *more than three times the strength* of Cocoa mixed with Starch, Arrowroot or Sugar, and is therefore far more economical, *costing less than one cent a cup.* It is delicious, nourishing, strengthening, EASILY DIGESTED, and admirably adapted for invalids as well as persons in health.

Sold by Grocers everywhere.

W. BAKER & CO., Dorchester, Mass.

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Wanted shrewd men to act under instructions in Secret Service work. Representatives receive the International Detective, Grannan's Warning Against Fraud, Grannan's Pocket Gallery of Noted Criminals. Those interested in detective business, or desiring to be detectives, send stamp for particulars. Employment for all. GRANNAN DETECTIVE BUREAU CO. Arcade, Cincinnati, O.

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"Handsome, melting, sweet, pleasant, *very good.*"—ELLWANGER & BARRY. "It has come to stay,"—HON. H. E. VANDEMAN. "One of the best, if not *the best* of its season."—PRES'T T. T. LYON. "A decided acquisition."—PRES'T. SWEET. "Good, handsome, pleasant."—John J. THOMAS. "Finest of all early pears."—J. T. LOVETT. "Delicious, Worthy of trial."—RURAL NEW YORKER. **Wilder Early Pear.**—Best quality of early pears; earliest good pear; best keeping early pear. Price, one year, $1.00. Two years, $2.00. Send for elegant Lithographed Catalogue of plants, vines or trees, free, also copy of Green's Fruit Grower.—Green's Nursery Co., Rochester, N. Y

CATARRH

HAY FEVER

CATARRHAL DEAFNESS

A NEW TREATMENT.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been discovered which permanently cures the most ageravated cases of these distressing diseases by a few simple applications made (*two weeks apart*) by the patient at home. A pamphlet explaining this new treatment is sent *free* by A. H. DIXON & SON, 337 and 339 West King Street, Toronto, Canada.

FOR A DISORDER D LIVER try BEECHAM'S PILLS

POULTRY PAPER, 16 pages, 4 months for 10c. Sample *free.* C. C. DEPUY, Syracuse, N. Y.

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A WHOLE PRINTING OUTFIT, Complete and Practical, Just as shown in cut. 3 Alphabets of neat Type, Bottle of Indelible Ink, Pad, Tweezers, in neat case with catalogue and directions "HOW TO BE A PRINTER." Sets up any name, prints cards, paper, envelopes, etc., marks linen. Worth 50c. The best gift for young people. Postpaid only 25c., 3 for 50c., 6 for $1. Ag'ts wanted. INGERSOLL & BRO. 45 Fulton St. N.Y. City 25c

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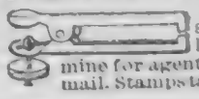
LOW-DOWN WAGON on high wheels—**only Practical, Common Sense** Farm Wagon in the world. Send for 28 reasons why

GARDINER IRON WAGON CO., Mullica Hill, N. J

HORSE BLANKET HOLDER.



Keeps blanket from blowing or sliding off horse. Attached to blanket in a moment. Nickel plated. Gold mine for agents. Sample set, 25c., Six sets, $1.00 by mail. Stamps taken STAYNER & CO., Providence R I

BEE HIVES AND SECTIONS.

We make the best Bee Hives, the best Sections the best shipping Crates, the best Frames, &c. We sell them at the lowest prices. Write for free illustrated Catalogue.

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Entered at the Post-office at New York City, N. Y., as second class mail matter.

News of the Week.

HOME NEWS.

SATURDAY, December 21, 1889.

THE millers of Pennsylvania are organizing a combination for the purpose of making their own paper bags to beat the Paper Bag Trust.....Unfortunate Johnstown, Pa., has just got a new charter from Governor Beaver, and has taken in Grubtown, Conemaugh, Woodvale, Prospect, Millville and Cambria, which together have a population of at least 10,000..... In Congress Representative Dockery, of Missouri, has introduced a bill reciting widespread complaints that farmers do not receive a just return for their labor and capital, and that their homes and farms are generally mortgaged, and requiring the Superintendent of the Census to collect statistics of the owners and tenants and mortgage indebtedness.....Bills are before Congress enacting a national bankrupt law and a national copyright law. The former protecting honest creditors from dishonest debtors and preventing fraudulent assignments is loudly demanded. There is no clamorous uproar in favor of the latter.....Several bills provide for amendments of the Pre-emption and Homestead Laws looking to better conditions for honest settlers, and two at least provide for the forfeiture of unearned railroad grants.....The nomination of Judge Brewer to a place on the bench of the United States Supreme Court to succeed Judge Stanley Matthews has been confirmed by the Senate with 11 negative votes. The Prohibitionists and Anti-monopolists opposed him; but no valid grounds for opposition by these parties appear to exist..... A House bill provides for the promotion of meritorious seamen to the rank of commissioned officers, and another appropriates many millions for the construction of new war vessels. Our present war-ships are manned, in great part, by foreigners; and there's just as much need of providing American sailors for our war ships as of providing the ships themselves ..... The Republicans have introduced a bill of 30 pages for amending the tariff. Tariff amendment is a necessity for all parties. .....The State debt of South Carolina amounts to about $6,000,000, and it is proposed to pay it off by selling the State's rights to the vast phosphate beds which supply the world with fertilizing phosphoric acid, for $7,000,000, to an English syndicate. The State now gets about $230,000 per annum from the sale of the product in the form of a royalty of $1 per ton. The projected measure is bitterly opposed by the interests already engaged in phosphate mining and by the fertilizer manufacturers; for if the beds are sold, the royalty and therefore the cost of the product are likely to go up..... In view of the certainty that the Sugar Trust will be declared illegal by the Court of Appeals of New York State, it is said that the monopoly has made all arrangements for transferring its assets to a new organization just started for the purpose in Connecticut. These Trusts have the best legal talent in the country to instruct them how best to evade the laws..... Leprosy is steadily spreading in this country and Europe, and is causing considerable alarm among the medical faculty..... .....An unusual number of "annexation straws" appear to be floating on the Canadian political stream just now, especially on the French-Canadian part of it. Indeed the thorough going Englishmen and their descendants appear to be the only strong opponents of the measure. They want all the advantages of Statehood in the way of free trade, without any of its responsibilities. Still a more generous measure of reciprocity would, no doubt, help the Dominion without injuring the Union..... .....In spite of the decisions against the constitutionality of anti-dressed-beef legislation in other States, a bill against the sale of Western dressed beef is being vigorously pressed in the Virginia legislature. It is hardly likely that the legal objections that have proven fatal to such legislation elsewhere, can be avoided in the Old Dominion.....Early in this month Sec'y Mohler, of the Kansas Agricultural Department, reported quite favorably of that bursted sugar fraud at Mineola and other parts of Kansas, according to advices just received..... The Russian influenza or grippe has not only spread over most of Europe; but it has also crossed the Atlantic and is prevalent in New York and Boston, and there are reports that it has appeared in Kansas City. It's annoying but not dangerous..... ....In the Cronin murder trial, in Chicago, Dan Coughlin, Patrick O'Sullivan and Martin Burke were pronounced guilty of conspiracy to murder by the jury, which fixed the penalty at imprisonment for life; John Kunze was found guilty of manslaughter with three years' imprisonment, and John F. Beggs was found not guilty. The verdict was a compromise. There were 11 "obstinate" jurymen who refused to agree with another "obstinate" named Culver who insisted that all were not guilty. The 11 wanted to hang the accused; but Culver's long-continued obstinacy would have "hung" the jury had the majority not agreed to compromise. The verdict meets with general disfavor; even the three wretches who were condemned to prison instead of the halter are dissatisfied and have appealed. The witnesses' expenses in the trial were about $5,000; the legal expense, $20,000; the stenographers and type-writers assimilated $10,000 and the jury $8,000. The total cost was about $100,000; and doubtless before the case is finally settled this large sum will be more than doubled. Miscarriage of justice often costs more than justice itself..... It is charged that the Live-Stock Inspection Bill introduced into the last Missouri Legislature at Jefferson City, providing that no beef should be sold in the State unless it had been previously inspected "on the hoof," was defeated by the absolute purchase of enough State Senators for $25,000 paid by the Dressed Beef Combine. The fight was chiefly between the butchers and the dressed beef men, and the latter raised just five times more boodle than the former could get together. The names of some of the bribed and the amounts they got for their corrupt votes are given. They "won" the "swag" in pretended poker games.....

CONSUMPTION SURELY CURED.

TO THE EDITOR:

Please inform your readers that I have a positive remedy for above named disease. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption, if they will send me their Express and P. O. address. Respectfully,

T. A. SLOCUM, M. C.

181 Pearl St., New York.—*Adv.*

AGRICULTURAL NEWS.

SATURDAY, December 21, 1889.

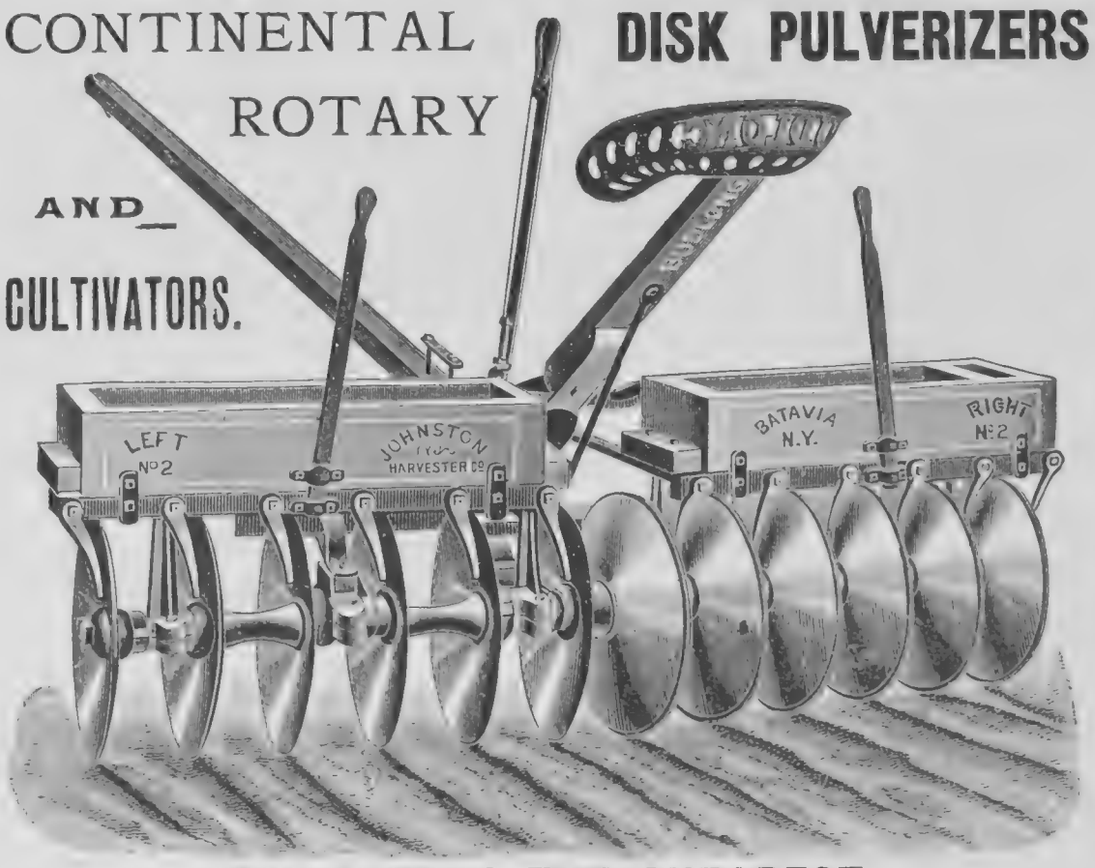
AT the recent meeting of the Connecticut Board of Agriculture, the culture of the Rhode Island Bent, an improved pasture grass was discussed. A table showing the economy of the home-mixing of fertilizers was presented, and called out a heated discussion between the farmers and some fertilizer manufacturers who were present. Dr. Jenkins as an expert, did not consider home-mixing an economy in all cases, but it would pay farmers to experiment on account of the greater likelihood of getting pure materials. The Connecticut Farmers' Convention held in connection with this meeting passed resolutions sympathizing with the Massachusetts farmers in their efforts to secure anti-oleomargarine legislation..... Many of the dealers in this city are opposed to the proposed ordinance to sell fruits and vegetables by weight. They say it would be impracticable, and would cause no end of trouble.....Robert Bonner says

Miscellaneous Advertising.

SEND 10 Cts. in P. O stamps to **E & O. WARD,** Produce Commission Merchants, for circular about **Shipping Produce** Also recipe for **Preserving Eggs.** Established 1845.
No. 279 Washington St., New York City

Continental Steel Frame Binders, Mowers and Reapers.

CONTINENTAL ROTARY AND CULTIVATORS. **DISK PULVERIZERS**



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THE JOHNSTON HARVESTER CO.,

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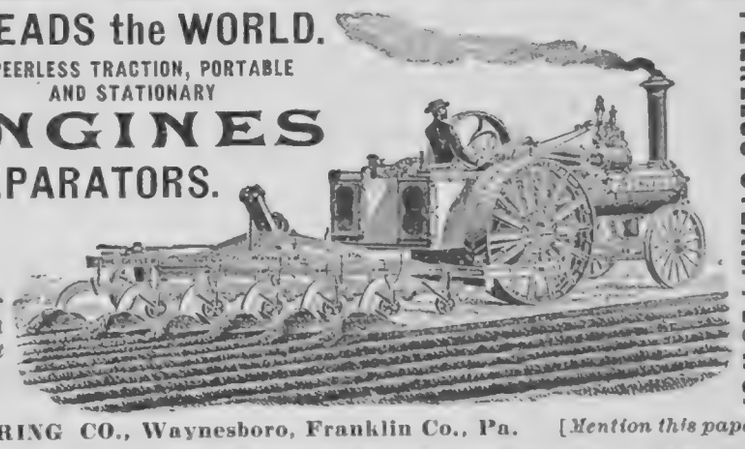
UPRIGHT ENGINES, NEW PEERLESS and GEISER THRESHERS and SEPARATORS.

PEERLESS LEADS the WORLD.

PEERLESS TRACTION, PORTABLE AND STATIONARY **ENGINES**



Latest Improved and Cheapest **SAW-MILL** on the market. Patent Variable Friction Feed, Patent Dogs, Set Works and Saw Guide. *We want Agents*, and invite correspondence.

Send for Catalogue to—

THE GEISER MANUFACTURING CO., Waynesboro, Franklin Co., Pa. [*Mention this paper.*]

PEERLESS STEAM PLOWS.

NEW STRAWBERRY **"LADY RUSK"**

The best berry for long distance shipments. Will not rot or melt down if packed dry. Headquarters for all leading varieties of Berry Plants and GRAPE VINES having 300 acres in cultivation. Catalogue free.
WM. STAHL, Quincy, Ill.

ELLIOT'S PARCHMENT PAPER THE DAIRYMEN'S FRIEND

The Cheapest. The Best. The Highest Quality. Over 10,000 progressive creameries, dairymen, farmers and dealers indorse it in place of muslin or wax paper, for wrapping Butter, Cheese, Lard, Meat Sausage, Etc., Etc. Good butter demands a good wrapper. Send for samples and testimonials to dealers in Dairy Supplies, or

A. G. ELLIOT & CO., Paper Manufacturers, Philadelphia, Pa.

The Best

WASHER

We will guarantee the "LOVELL" WASHER to do better work and do it easier and in less time than any other machine in the world. Warranted five years, and if it don't wash the clothes clean without rubbing, we will refund the money.

AGENTS WANTED in every county. We can show proof that agents are making from $75 to $150 per month. Farmers make $200 to $500 during the winter. Ladies have great success selling this Washer. Retail price, only $5. Sample to those desiring an agency $2. Also the Celebrated KEYSTONE WRINGERS at manufacturers' lowest prices. We invite the strictest investigation. Send your address on a postal card for further particulars.

LOVELL WASHER CO., Erie, Pa

ISLAND HOME STOCK FARM

Grosse Isle, Wayne County, Mich., 12 miles from Detroit and 48 from Toledo.

PERCHERON AND FRENCH COACH **HORSES!**

During the last two years our horses have taken more first premiums than have been awarded any other firm in America, and PLUVIOSE 3755 (653) and his get have always taken first prize wherever shown. We have 87 stallions and 41 mares on hand; we will make close prices and guarantee our horses breeders, and we most cordially invite all those who contemplate purchasing, to send for our new catalogue just out; we will send it free by mail, and we feel confident that we can make it to your advantage to come and inspect our stock. Write us a letter stating what you want and we will answer fully and present facts that cannot fail to interest you. Our horses are selected in France by Mr. Farnum personally (not by high-priced agents) and we will give our customers the benefit.

We can and will make it to your advantage to deal with us--We mean business--if you do, write us and we will convince you that it will pay you to come and see us. Address

SAVAGE & FARNUM, 52 Campau Building, DETROIT MICH.

SAVAGE & FARNUM, IMPORTERS AND BREEDERS, Grosse Isle Wayne County Mich.

THE SCIENTIFIC GRINDING MILL

GRINDS EAR CORN with or without Shucks on and all small Grains, in fact everything which can possibly be utilized for feed.

SAFETY BOTTOM and other Practical Devices to prevent breakage should iron accidentally get into Mill.

GRINDING PLATES reversible, self-sharpening, double the capacity of all others. Sold on trial. All Mills fully guaranteed. Simplest, lightest running, strongest, fastest grinding. Send for circulars.

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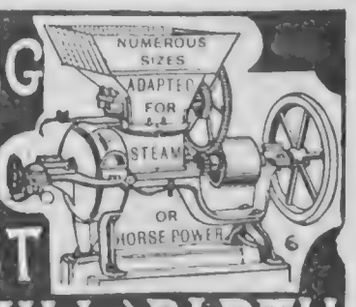

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25 CENTS **PISO'S CURE FOR** 25 CENTS

BEST COUGH MEDICINE.

Recommended by Physicians. Cures where all else fails. Pleasant and agreeable to the taste. Children take it without objection. Sold by all druggists.

CONSUMPTION

that he will leave Sunol in California until next October.... .....For a long time the accumulations of manure about many of the stables in this city have been a constant menace to the public health. The proper officials being so dilatory in abating this nuisance, the ladies in the vicinity combined during the past winter and have been working ever since to secure action by the proper authorities. As a result, the Board of Health have just issued the following order: "On and after May 15, 1890, it shall not be lawful to remove stable manure from any stable or premises in the built-up portion of the city or to cart the same within the city limits without a permit from the Health Department, unless the manure be pressed and baled and be properly covered while being removed and carted or be inclosed in tightly covered barrels so as to prevent the escape of all offensive dors and liquid matter." The object is to compel stablemen to bale the manure. They protest vigorously against this action.....
An English breeder having lost several valuable animals through anthrax, has made arrangements to have his entire herd inoculated according to Pasteur's system.....
The farmers have control of the South Carolina legislature, and have just passed a bill establishing the Clemson Agricultural College, appropriating $39,000 a year in perpetuity therefor. The bill also authorizes the sale of all the farms and buildings of the State Agricultural Department, takes possession of the tax on fertilizers, and the State's share of the Hatch fund.....
.....English breeders are on the lookout for new markets for pedigree stock They have a good trade with South America. but are fearful that it will not last forever. The government of Natal has appointed a commission to consider the question of the importation of blooded stock, and the Britishers are making efforts to attract the business in their direction.....
The Missouri State Board of Agriculture will hold 15 farmers' meetings at widely-scattered points. They had calls for more than 40, but were unable to do more with the means at command. The meetings will begin at Macon City, December 30, and close at Linneus, January 24. The board have done the best possible with the penurious allowance at their disposal. Levi Chubbuck, secretary, Columbia.....
The New Jersey State Grange, Patrons of Husbandry, have for years held their meetings in the Assembly Chamber at the State Capitol. Upon their assembling last week, the superintendent of the capitol refused to allow them to use the hall, but tendered them the use of another room. They refused this compromise and held their meeting in Library Hall.....
The New Jersey State Poultry Association was organized at Trenton recently. Franklin Dye was elected secretary.....Charles Richards Dodge, son of J. R. Dodge of the Department of Agriculture, has the *Ordre du Merite Agricole* conferred upon him by the French Government, for services at the Paris Exposition. His collection of American fibers was considered the best in the exposition, and he received gold medals instead of silver in consideration of his efforts.....The Nebraska State Horticultural Society will hold its winter meeting at Lincoln, January 14-16. The programme is a varied one and includes the names of prominent horticulturists, both in and out of the State. There will be an exhibit of fruit. The railroads will give reduced rates. G. J. Carpenter, secretary.....

Crops & Markets.

SATURDAY, December 21, 1889.

WE certainly live in a progressive age. Spring lambs, chickens and the like used to be raised in the spring and green peas, new potatoes, etc, were formerly hailed as a delicacy to be had by the more enterprising farmers in the Northern States on Independence Day. But the enterprise of experimenters and seedsmen, in originating earlier varieties as well as the development of the Southern fruit and vegetable trade, have placed fresh fruits and vegetables within reach of the city dweller at nearly all times of the year. The development of the process of artificial incubation gives us a plentiful supply of spring chickens while winter is yet with us. Formerly the growing of early spring lambs has proven very remunerative to enterprising farmers, the degree of profit depending upon the earliness with which they were marketed, which has been earlier each succeeding year. This year, however, the much abused New Jersey farmer has stolen a march upon his competitors, and has sent his spring lambs to market before Christmas. They are fine ones too, and sell readily for $10 each. Are we approaching the time when we shall have spring all the year round?

SOUTHERN vegetables are arriving principally from Florida. Good lots are not plenty and sell readily at good prices. Cucumbers are worth $2 to $5 per crate, eggplant $4 to $6 per barrel, and string beans $2 to $4 per crate. The city man can have "spring" vegetables with his "spring" lamb for his Christmas dinner—with the permission of his pocket book.

POULTRY have swamped the market. The accumulation of sweaty, sour, almost rotten stock is enormous; much of it has been seized by the Board of Health and more will be. Choice turkeys are scarce and wanted. All other kinds are in full supply and the receipts exceed the sales, so that the outlook is not encouraging.

EGGS have fallen off considerably in price, as the prevalent warm weather is very favorable both to production and forwarding.

LATEST WHOLESALE PRICES
—OF—
COUNTRY PRODUCE.

New York, Saturday, December 21, 1889.

BEANS.—Marrows—New, $2 50@$2 55; New Mediums, choice, $1 80@$1 85; Pea, $1 75@$—; Red Kidney, $3 40; White Kidney choice, $2 70@$2 75; Foreign Mediums, $1 70@$1 90; California Lima, $3 00@$3 25; Italian, $1 70@$1 80. Green Peas, $1 05@$1 10.

BUTTER—New—State and Pennsylvania, best, 20@25, Elgin, best, 29c; Western, best, 24@27½c; do prime, 23@25c; do good, 18@20; do poor, 14@17; State, Dairy, half-firkins, tubs, best, 22@23c; do do prime 19@21; do do fine, 15@17; Welsh tubs, fine, 19@21c; do do, good, 15@18; firkins, best, —@—c; do prime, —@—c; do fine,—@—c. Western Imitation Creamery, best, 18@20; do fine, 14@16; Western dairy, fine, 16@18c; do fair, 11@13c; do poor, 9@10c; do factory, fresh, best, 19@20c, do prime, 15@17; do good, 10@12; do poor, 7@10c.

CHEESE.—State factory, fancy, 10@10½c; do do fine, 9½@10c; do do, prime, 9@10c; do do, fair to good, 8¾@9½c; Ohio, flat, prime, 7½@10c; do good,—@—c; do. good, —@—; Skims, light, 7@8c; do medium, 5@7c; do full, 2@4c.

EGGS.—Near-by, fresh, 23@25c; Canadian, 20@21c; Southern, 20@21c; Western, best, 22½@23c; limed, 16½@17½c; ice house, 17@18c.

FRUITS.—FRESH.—Apples, per bbl, $2 00@$4 00; Pears, per bbl, $2 00@$3 50; do per keg, $2 00@2 75. Grapes, best per lb, 3@7c, do, good 2@3c. Cranberries; C. C, per bbl, $5 00@$12 50; do per crate, $2 75@$3 50. Jersey, do, $2 50@$3 25. Lemons, per box, $1 50@$4 50.

DOMESTIC DRIED Apples—Evaporated, old, 5@7½c do choice, new, 9½@10c; prime, —@8½c; sliced, new, 4@5½c; do old, 3½@3¾c Chopped, 3½@3¾c, Cores and skins, 2½@3c. Cherries new, 8@12c; do, old, 8@10c. Raspberries new, 21@24c; Blackberries, 5¼@5½c Peaches, Delaware, evaporated, peeled, 15@20c, do do, unpeeled, 8@10c; Georgia, evaporated, peeled, new, 13@15c; do do do, unpeeled, 7½@10c; do do, sundried, 6½@9½c. Huckleberries, new, 11@12c. Plums, new, 7@8½c

GAME—Plover, per doz, $1 50@$1 75; Snipe do, do, $1 50@$1 75; Woodcock, per pair, $0 50@$1 00; Grouse, do do, 75@$1 10; Partridges do, $0 55@$1 00. DUCK, Mallard 75@85c; do, Teal, 35@50c; do, Redhead, $1 50@$2 50; do Canvas-back, $3 00@$5 00; Rabbits, per pair, 10@12c; Quail, per dozen, $0 50@$1 50.

HAY AND STRAW.—Timothy, best, 80@85c; do good, 70@75c; do medium, 50@60c; Clover, mixed, 45@55c; shipping, 40@45c. STRAW—No. 1 rye, 75@80c; short rye, 35@40c; oat, 30@35c.

HONEY—In one-pound boxes. White Clover, 12@14c; Buckwheat, 10@12c; Beeswax 22@23c.

HOPS.—State New, 13@15c; do, good, 11@12c; do common, 9@10c; do 1888, best, 10@12c; do do prime, 9@—c; do do common, 6@7c; California, New, best, 12@13c; do good to prime, 10@11c; do Old, best, 11@12c, do common and fair, 7@9c.

NUTS.—Peanuts are quiet. Fancy, hand-picked quoted 6¾@7½c, and farmers' grades at 4½@5½c, Pecans, 6½@9c. Chestnuts, $4 00@$6 00 per bushel; Hickory Nuts, $1 50@$2 00 per bushel.

POULTRY. DRESSED—Turkeys, mixed, per lb. 10@17c; Fowls, western, choice, 7@9c; do common to good, 5@7c; Ducks, spring, good, 4@14; Squabs, white, per dozen, $2 50@$2 75; do dark, do, $2 00@$2 25. Chickens, spring, 7@14c; Fowls, near by, 5@10c.

POULTRY—LIVE.—Chickens—Spring, per lb, 7@8c. Fowls near-by, per lb, 7@9c, do Western, per lb. 7@9c; roosters, per lb, 5@5½c; Turkeys, per lb, 8@10c; Ducks, Western, per pair, 60@80c; Geese, Western, per pair, $1 15@$1 50.

SEEDS.—Clover is hard to sell; exporters quiet New prime, future deliveries offered at 6¼ and choice, 6½c, with fancy at 6¾c. Timothy quoted at $1 50@$1 60. Canary, 2@4c.

VEGETABLES.—Potatoes—Maine, per bbl, $1 90@$2 00; Long Island do, $2; State do, $1 25@$2 15 Western, do, $1 00@$1 90; Sweets do, $2 25@$3 50. Cabbage, per 100, $3 00@$5 00. Turnips, per bbl, 75@95c Onions—Orange County Red, $1 50@$2 75 Eastern White, $5 00@$8 00; Eastern Red, $2 50@$3 00, State, Yellow, $2 00@$2 25. Cauliflower, per bbl, $3 00@$9 00; Squash, Marrow, $1 00@$1 25; do Hubbard, $1 25@$1 50, Celery, per doz. bunches, 20c@$1 50.

WOOL.—Spring Texas, 17@23c, and Fall do 20@25c; Fall California, 15@18c, and Spring do 19@25; Scoured Texas, 52@53c; Delaine, 36c; Indiana, 29c; Scoured Territory, 55c; Donskoi, 24½c; XX Ohio, 34c; Scoured Colorado, 53c; Australian, 38c.

Communications Received for the Week Ending December 21, 1889.

C. E. P.—E. P S.—H. A W.—S. R. W.—J. W. S.—G. C. S.—D. C. A.—W. S G.—S. W. S.—R.—I. P. R.—M. J. S.—J. M. D.—H. M. C.—H. C. R—M. B S.—A. C. C.—S. McD.—C. M. L.—H. B. Bronson, thank you.—W. H. K.—G. S. P., thanks—O. A R. Uber.—W. A. P.—G. J. B.—J. A. H.—T. F. M.—H. L. thank you—F. E. B—W. E B. C. P.—J. H D.—A W. T—B. H. W.—E. W.—E. B V.—C. E. T—J. M T—C. T. N—J. E. S.—J. T.—J. P. D C. L.—W. H. B—J. E T.—W. H B—E. W.—K L. R.—T. B T.—A R.—J W S.—H. A. S.—F. McG., Jr—C. E. L. H—C. W.—P. M S.—D. W. T—F D. D.—J. R—H. H. W.—E. W.—S A. H—A L H—C. A C. H. L J—C. H. C.—A P.—J. W. I—I. P R—H. P. A.—F H. S—W. W. D.—H. L. J.—H. S.—S—L. W P.—°. & H.—C A. U.—N. H S—A. S T. B T.—L D. S.

Miscellaneous Advertising.

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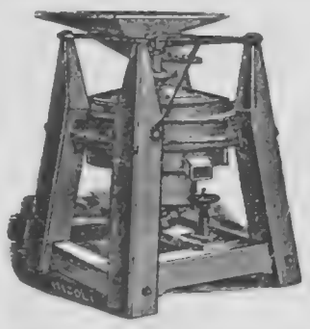
Scales of all sizes. 5-Ton Wagon Scale, with Brass Tare Beam and Beam Box, $60. For free Price-List of all kinds, address JONES OF BINGHAMTON, Binghamton, N.Y.



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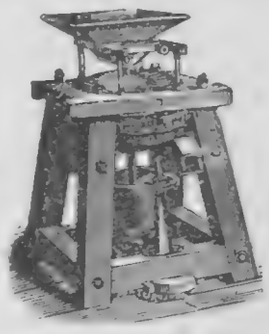
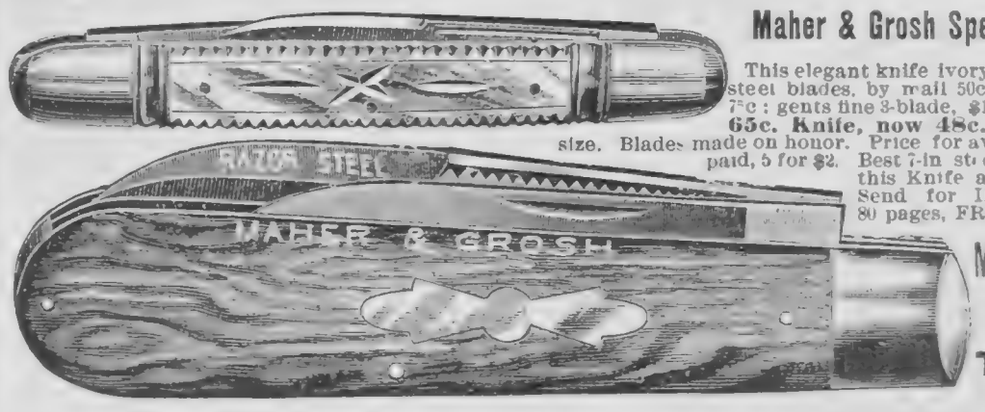
OF FRENCH BUHR,
Twenty-eight Sizes and Styles.
FACTORY ESTABLISHED 1851
WARRANTED
MILLS for grinding ear corn, shelled corn, corn and oats, buckwheat and rye. A BOY CAN OPERATE and keep in order. A complete mill and sheller for less than $30. REDUCED PRICES for Fall of 1889. OVER 20,000 IN USE. Received Highest Awards at St. Louis, Cincinnati, New Orleans and Indianapolis fairs and Expositions. Send for Book No. 18—interesting and valuable. Mention paper, and address Nordyke & Marmon Co., Indianapolis, Ind.





Maher & Grosh Special Offer.
This elegant knife ivory handle, 2 razor steel blades, by mail 50c; pearl handle, 75c; gents fine 3-blade, $1. The Toledo 65c. Knife, now 48c. Cut is exact size. Blades made on honor. Price for awhile, 48c. post paid, 5 for $2. Best 7-in steel Shears, 60c.; this Knife and Shears, $1. Send for Illustrated List 80 pages, FREE.
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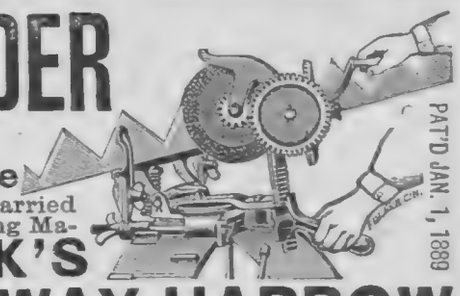
FAY CURRANT HEADQUARTERS GRAPES LARGEST GROWER OF GRAPE VINES IN AMERICA
NEW GRAPES. ESTHER (white), and ROCKWOOD (black), originated by E. W. BULL, originator of the CONCORD GRAPE. Also EATON, MOYER, and all others, new and old. Best and Cheapest. Small Fruits. Free Catalogues. GEO. S. JOSSELYN, Fredonia, N.Y.

OUR NEW U.S. MOWER KNIFE GRINDER
The Most Complete MOWING MACHINE KNIFE GRINDER made
Small, Light. Weighs only 13 pounds. Can be carried into the field, and attached to Mowing Machine Wheel.
ENTIRELY NEW.



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SUPERSEDES the PLOW! BEATS the WORLD!
Ground Made into a PERFECT SEED BED.
HAS A SEEDING ATTACHMENT FOR SOWING ALL KINDS OF GRAIN.
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Cook your POTATOES with the PROFIT FARM BOILER
With Dumping Caldron, empties its kettle in one minute. The simplest and best arrangement for cooking food for stock. Also make Dairy and Laundry Stoves, Water and Steam Jacket Kettles, Hog Scalders, Caldrons, Etc. Send for circulars.
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It pays to get our Illustrated Catalogue and Price on Tread and Sweep Power, Thresher, Separator, Corn Sheller, Feed Cutter with Crusher, Land Roller, Engines, three to ten Horse Power. E. E. MESSINGER & SON, Tannery (Northampton Co. Pa.

STANDARD POULTRY FENCING.—AND POULTRY SUPPLIES OF EVERY DESCRIPTION
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100 SONGS for a 2 cent stamp HOME & YOUTH, CADIZ, O.

PRESSEY'S BROODER.—The Cheapest and the Best. Hammonton Incubators, two sizes, $25 and $15 each. Langshan fowls and eggs for sale. Circulars free.
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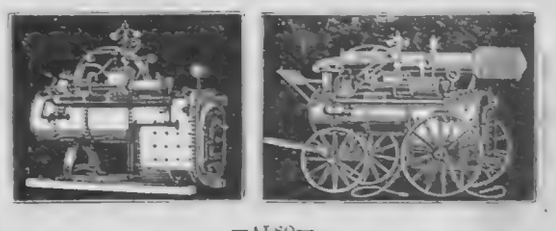

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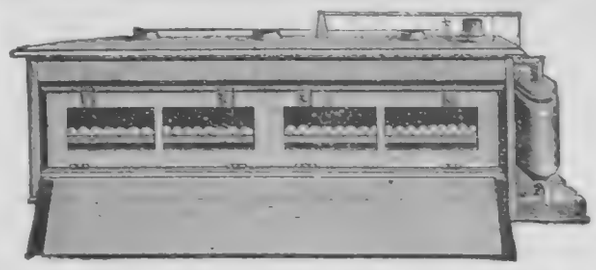
Catalogue and Prices sent on application.



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AND POWER COMBINED
GRINDS ALL KINDS OF GRAIN including EAR CORN and FURNISHES POWER to run a Feed Cutter, Wood Saw, &c. at the same time. Catalogue showing a full line of Sweep and Belt Power Feed Mills, Corn Shellers, Feed Cutters, Horse Powers, &c., *free* by mentioning this paper.
STOVER MFG. CO., FREEPORT, ILL.

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When I say cure I do not mean merely to stop them for a time and then have them return again. I mean a radical cure. I have made the disease of FITS, EPILEPSY or FALLING SICKNESS a life-long study. I warrant my remedy to cure the worst cases. Because others have failed is no reason for not now receiving a cure. Send at once for a treatise and a Free Bottle of my infallible remedy. Give Express and Post Office. H. G. ROOT, M. C., 183 Pearl St. New York.

THE R. N.-Y.'S GREETING FOR 1890.

Literary.

BOOK REVIEWS.

BLAKELEE'S INDUSTRIAL CYCLOPEDIA is the title of the most useful, practical book we have seen in a long time. It is intended as an aid to the unskilled in making and repairing, as well as keeping in order the thousand and one articles of use and ornament required in every home and on every farm. The language is plain and the directions so simple that they may easily be understood by the most unscientific. Under "The Home Workshop" directions are given for the care and use of tools, preparing and working timber, the construction of houses, roofs, chimneys, fences, gates, cellars, poultry-houses, cisterns, and innumerable minor articles, garden fixtures, the care of carriages and harnesses, all about paints and paint ng, calcimining, varnishing, gluing, soldering, cementing, etc., etc. "The Mechanical Farmer" tells how to construct farm residences of different kinds, barns, stables, sheds, ice-houses, fences, and dozens of lesser conveniences that can be easily made by the farmer at odd times by means of such simple directions as are here given. Then there is a department, "The Handy Housewife," that includes innumerable useful and ornamental articles which thrifty house-keepers are fond of fabricating. A little money and an ingenious woman will accomplish wonders in this direction. The care and repairing of furniture, beds, carpets, and all kinds of clothing, house furnishings, the making of soap, butter and cheese, pickles, canning fruits and vegetables are all treated. These will be especially valuable to young housekeepers. Then there is a department for the boys which tells how to make sleds, boats, kites, traps, and many other articles dear to the boyish heart, and one for the girls, equally interesting and instructive. It is a valuable book because it will save money. It contains over 700 pages, six by 8½ inches in size over 200 illustrations, and is strongly and neatly bound in cloth, with neat and appropriate designs and lettering. Price $3. The Baker & Taylor Co., New York

A MOST difficult book to review fairly is "A Knight of Faith," by Lydia Hoyt Farmer, for the reason that it is both so very good and so very bad. In spite of the array of titles upon the title-page, showing the number of historical and scientific works put forth by this writer, her latest book leaves the reviewer with the irritated feeling that she should have taken several more terms at school before attempting it. So much bad grammar in a single book it is not often given to us to see. The book is claimed to be "a powerful story and a complete refutation of Robert Elsmere." The first few chapters are unpardonably stupid; while the descriptions are crude, and broken by long and involved dissertations, and the attempt at dialect would do no credit to a school-boy. On the other hand, what plot there is, is not bad, the later chapters increase in interest, and the theological part is really good. The arguments are well arranged and seem irrefutable, and being largely quotations, this part of the book is free from the worst faults of the earlier chapters, and will well pay the reader. It seems a great pity that such laudable effort and so much good work should be spoiled through causes so easily remedied. Cloth; 288 pages, five by 7½ inches; $1 00; in paper covers, 25 cents; J. S. Ogilvie, New York.

THE attractive volume entitled "A New England Girlhood" by Lucy Larcom, is the sixth in the Riverside Library for Young People. The simply told tale of the early life of this sweet singer has more of the charm of a story than of an autobiography, which it really is. The writer speaks of herself as one of a large family, and as therefore having enjoyed the "privilege" of a little wholesome neglect. Descended from the French La Combes through Welsh and English Puritan ancestors, she seems to have been a unique combination of healthy New England capability and its dreamy opposite. Her simple narrative of quaint New England life, of her childish struggles to understand the mysteries of life and religion, of her love of hymns and of versifying, and of the friends who helped to mold her life, is as fresh and pleasing as her verse, while the glimpse of life in the Lowell mills is very interesting, and is entirely new to most readers of the present day. The book is full of helpful hints from the lessons life has taught her, and none of the girls for whom it is written but will be fascinated with it and helped to better living by it and by this close acquaintance with the modest woman who "never attempted remarkable things." Cloth; 274 pages, 4½ by seven inches; 75 cents; Houghton, Mifflin & Co., Boston,

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Kansas City Property Exclusively.

Real Estate Bonds

8 Per Cent. 8 Per Cent.

Profit participating. Interest guaranteed. April and October coupons payable in Boston.

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25 per cent. special deposit additional security with American Loan and Trust Company.

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CHURNS and other Dairy Supplies at unheard of prices Circulars for stamp W. L. DIXON, Union Center, N.Y.

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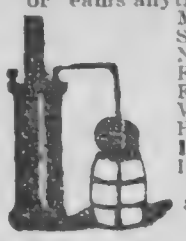
For cooking any kind of food for stock. Cooks, boils or steams anything with economy and dispatch.



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Nothing to get out of order!
Freezing does not damage it!
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We sell more than all others comb'n'd
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Investigate and you will buy no other
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This grape originated in the Green Mountains of Vermont. It is very early; color, greenish white; pulp tender, sweet and delicious. The only grape yet introduced that ranks first, both in earliness and quality. Each vine sold will be sealed with our Trade-Mark.

None genuine without it, as our copyright name "GREEN MOUNTAIN," gives us the exclusive right for its propagation for sale. Send for Circular giving further information. Address

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have issued their handsomely illustrated SEED Catalogue for 1890. Merchants, Market Gardeners and Private Families desiring Good Seeds, should send a postal for a copy. FREE to all applicants. Address

D. LANDRETH & SONS Seed Farmers and Merchants, PHILADELPHIA, PA.

SEEDS Plants, Roses, Shrubs, Trees, Grape Vines, Small Fruits, etc.

Rarest new. Choicest old.

Send ten cents for our illustrated catalogue of about 150 pages, containing a certificate good for ten cents in seeds, etc. Or send for our 32 page abridged catalogue and price-list free.

36 years. 24 greenhouses. 700 acres.

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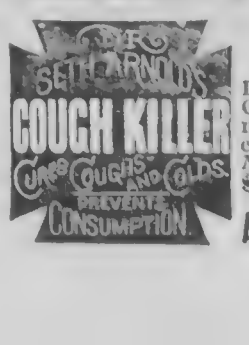

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I have used Dr Seth Arnold's Cough Killer and it is the only medicine which relieves my cough.—*Peter Edel, Gloversville N. Y.* Price 25c., 50c. and $1 per bottle.

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IF YOU REALLY WISH to use the very best Butter Color ever made; one that never turns rancid, always gives a bright, natural color, and will not color the buttermilk, ask for *Wells, Richardson & Co's*, and take no other. Sold everywhere. More of it Used than of all other makes combined. Send for our valuable circulars. WELLS, RICHARDSON & Co., Burlington, Vt.

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and **Farmers** with no experience make **$2.50** an **hour** during spare time. A. D. BATES, 164 W. Robbins Ave., Covington, Ky., made **$21 one day. $81 one week.** So can you. **Proofs and catalogue free.** J. E. SHEPARD & Co., Cincinnati, O

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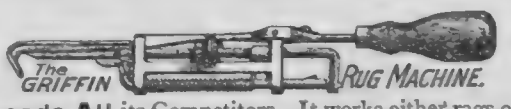

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Salary and Expenses paid, or Commission if preferred Salesmen wanted No experience needed Address, stating age, H. W. FOSTER & CO., Nurserymen, Box F, Geneva N. Y.

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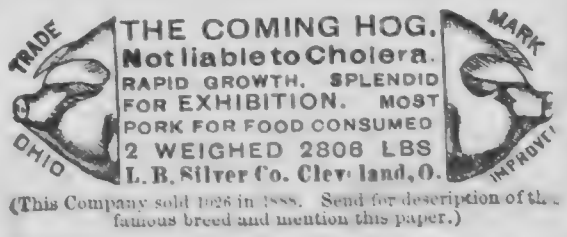

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With this outfit any boy or girl can make money. With 10 cents worth of wood you can make articles that will sell easily for 75 cents or more. You get your money back on the first article you sell. You can make articles to beautify your home and presents to your friends. Persons who work during the day can make extra money by sawing a few minutes evenings. Send for an outfit and try it; you will never regret it. The outfit consists of one **Steel Bracket Saw Frame, Extra Saw Blades, Brad Awl, Copying Paper, Sand Paper, one dozen Patterns** for making **Easels,** Match Safes, **Wall Brackets,** Card Baskets, &c., one pack **Business** Cards to give to your friends, and full directions for using, packed in a neat box and sent by mail, postpaid, for 30 cents; 4 for one dollar.
Address HOWARD MFG. CO., PROVIDENCE, R. I.

OUR NEW CATALOGUE FOR 1890,

containing descriptive lists of novelties and standard sorts with illustrations of choice vegetables, cultural instructions and recipes for preparation and cooking, sent free to all applicants. Address

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For Outbuildings, Shingles, Fences, etc. Durable Strong Preservatives of the Wood. Can be applied with a Whitewash Brush by any boy. In all colors.
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Do not Buy a Watch

Until you see my new Wholesale Catalogue, sent for four cents in stamps; contains illustrations of over 300 beautiful Watches, from $2 up You can select a single watch as cheap or cheaper than a retail dealer can buy in dozen lots. Large commissions and premiums to agents. Watches cleaned, repaired and regulated for 50 cents Gold or silver-plated from $1 up. Highest price paid for old Gold and Silver.

H. R. HARDENBROOK,

58 Liberty Street, New York.

Having recently purchased the entire stock of watches of the Bankrupt firm of Welden, Richards & Co., consisting of solid gold, silver, and gold-filled cases, we shall offer a portion of the entire lot at prices never before heard of in the Watch trade. Among the stock are 8,790 **American Make** stem winders, in **solid gold-filled Cases,** which we shall sell singly or by the dozen to private parties or the trade at the unheard-of **low price of $3.50 each.** Each and every watch is guaranteed a perfect time-keeper, and each watch is accompanied with our written guarantee for five years. Think of it! A genuine, Stem-winding, American Movement watch, in solid, gold-filled cases and guaranteed for **five years,** for **$3.50.** Those wanting a first class, reliable time-keeper, at about one third retail price, should order at once. Watch speculators can make money by buying by the dozen to sell again.

Solid Gold Watches at $3.50.

These watches must be sold, and as an inducement for you to order quickly, we will send to each of the first one hundred, ordering from this advertisement, **a solid, 14k Gold Watch** worth **$50,** provided **$3.50** is sent with the order. Elegant, **SOLID ROLLED GOLD CHAINS** of the latest patterns, for **$1.00, $2.00, $3.00,** and up. **ORDER AT ONCE.** Be one of the first and get a solid gold watch for **$3.50.** All are stem-winding, elegantly finished, and guaranteed perfectly satisfactory in every way. **Send money** by registered letter or P. O order at our risk. Watches and chains sent safely by registered mail to any address, provided **25 cents** extra is sent to pay postage.

EUROPEAN WATCH CO.,
37 College Place, New York

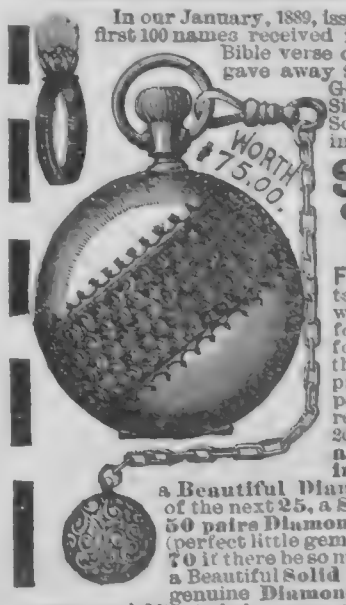
$225.00 CASH,

70 Diamond Rings,

50 PAIRS GENUINE DIAMOND SCREW EAR RINGS.

26 Solid Gold AND Silver Watches

GIVEN AWAY



In our January, 1889, issue we published the first 100 names received in reply to our last Bible verse contest, in which we gave away $225 in cash, a Solid Gold Watch, 25 Solid Silver Watches, and 71 Solid Gold and Genuine Diamond Rings.

$661 MORE TO BE GIVEN AWAY, Feb'y 1st, 1890.

We will give to the **First 150 PERSONS** telling us where the word **WIFE** is first found in the Bible, before **Feb. 1st, 1890,** the following valuable prizes: To the 1st person giving the correct answer, **$100;** 2d, **$75;** 3d **$50;** the **Solid Gold Hunting Case Watch;** 5th, a **Beautiful Diamond Ring;** to each of the next **25,** a **Solid Silver Watch, 50 pairs Diamond Screw Ear Rings** (perfect little gems); to each of the next **70** if there be so many correct answers, a Beautiful **Solid Gold Ring** set with genuine **Diamonds.** With your answer send **25c.** to help cover expense of this adv't, postage, &c., and we will send you our **Illustrated 16 page Monthly for 4 months** and our new **Illustrated Catalogue** of Watches, Diamonds, &c. Our 11'd Monthly of March issue will announce the result of the contest, with names and addresses of the winners. This offer is made solely to introduce our publications into new homes. We, as publishers, are thoroughly known. "Honesty and Square Dealing" is our motto. Our MONTHLY was established in 1877. Give full name and address. (Stamps taken.) Address

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5 & 7 Warren Street, New York.

Humorous.

The RURAL NEW-YORKER *is prepared to offer very liberal terms to good, responsible* PERMANENT *agents. Correspondence solicited.*

FOND MOTHER (with ugly child): "Well, Dr. Baxter, what do you think of that for a baby?" The Rev. Baxter (who has his own ideas of beauty but is conscientious): "Well that is a baby."—*Life.*

AT A RAILWAY BOOKSTALL.—Fashionable couple are searching for something to read during the approaching journey. She: "'Last Days of Pompeii'—what did he die of?" He: "Don't know exactly, but believe it was some sort of eruption."—*Detroit Free Press.*

A PECULIAR VINE.—Strange things happen in the gardens of amateur cultivators. "Mamma." exclaimed Jack, as he came running into the house, "you know that lemon pit I planted last year that came up a pea vine? Well, it's got string beans on it!"—*West Haven Budget.*

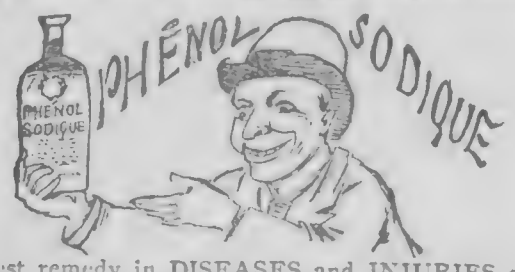
MISS SLYMME: "How do you like my new gown, dear?" Miss Plompe: "Well it isn't so bad. But it has a rather odd-looking figure in it, I think." About 30 minutes later. Miss Slymme: "I wonder if that hateful thing was referring to me. These goods are perfectly plain."—*Terre Haute Express.*

MR. MACDUFF: "You've been over an hour dressing and you said it wouldn't take you over 20 minutes." Mrs. MacDuff: "Now don't say a word! I thought I should never get into this new gown." Mr. MacDuff: "Well, judging from appearances, you have not more than half succeeded."—*Time.*

MISS SPINSTER (to widower's son): "How would you like me for your mamma, Harry? I would be so affectionate and tender to you." Master Harry: "Guess you couldn't be tender to me." Miss Spinster: "Why, dear?" Master Harry: "'Cause I heard pa say you were no chicken."—*Kearney Enterprise.*

THE BRAINS DIDN'T COUNT.—Jiggs: "I hear that you have started in business with Boggs." Biggs: "Yes. We are equal partners—he puts in the money and I put in the experience and brains." Jiggs: "You put in the experience and brains?" Biggs: "Yes." Jiggs: "And you are equal partners?" Biggs: "Yes." Jiggs: "What an immense amount of experience you must have had, Biggs."—*Life.*

Miscellaneous Advertising.



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The Finest Stock at bottom prices. Satisfaction Guaranteed. We make a Specialty of dealing direct with the Farmer. Send for Price List. Free to all.
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SITUATION WANTED.—Man with trade in New Jersey and Long Island who thoroughly understands the Fertilizer business a position from January 1st. KENT, Rural N.-Yr. Office.

STARR'S BEAUTY.
A new, promising variety of potato, to be introduced in 1890. Flesh color, smooth, compact in the hill, earlier than E. R.; and this year the yield was the best of 29 varieties. D. A. STARR, Uncasville, Conn.

PILES. Instant relief. Final cure in 10 days and never returns. No purge, no salve, no suppository. A simple remedy mailed FREE. Address TUTTLE & Co., 78 Nassau Street, New York City

THE GREAT POTATO CONTEST.

Stockbridge Manures Win Over All Other Fertilizers.

738 BUSHELS TAKE THE GRAND PRIZE OF $1,100.

The *American Agriculturist* for January will say: "Convinced that there is no question as to a yield of over 738 bushels on a fraction less than one acre, and this yield being far larger than that of any other contestant, the *American Agriculturist* awards its Grand Prize of Five Hundred Dollars in Gold to to Mr. Charles B. Coy, of Presque Isle, Maine."

"Among the other prizes offered in the official schedule was one that said: 'If the *American Agriculturist* Grand Cash Prize of Five Hundred Dollars in Gold goes to potatoes grown exclusively on the Stockbridge Potato Manure, the Bowker Fertilizer Co., of Boston and New York, will give Six Hundred Dollars in Gold.' This prize it is also our duty and pleasure to award to Mr. Coy. He will thus receive *Eleven Hundred Dollars in Gold* in prizes, besides the receipts from the sale of this crop, making the best paying crop of marketable (not fancy seed) potatoes ever raised in the world."

This large yield of 738 bushels is not made up of two crops grown on one acre; nor was the seed started in a greenhouse and afterwards transplanted; but from start to finish it was grown in the open field, by a man whose record is above suspicion.

The *Agriculturist* will further say: "The first lesson of this competition is that on the great majority of soils, complete, high grade special potato fertilizers (like the Stockbridge) are superior by far for potatoes, to stable manure. . . . The soil (on which this crop was grown) . . . only needed a liberal supply of plant food in the *right form* and in the *proper proportions*, to insure a good crop. *These conditions were complied with by the use of the Stockbridge Potato Manure.* . . . This case affords a fine example of the profitable use of quickly acting fertilizers which under favorable circumstances convert themselves into large yields of good quality that mean money. For quick cash profits fertilizers are preferable for potatoes on almost all soils."

THE OAT CROP CONTEST.

The yields on Fertilizers were as follows:

1st Yield, B. Gedney, White Plains, N. Y. (On Stockbridge Manure) 87 bushels.
2d Yield, R. T. Scott, Yellowstone, Wis. (On————Fertilizer) 83 "
3d Yield, Geo. N. Beals Sunderland, Mass. (On————Fertilizer) 36 "

Here, as in the potato crop, the Stockbridge Manures distanced all competitors. This crop was raised on land that had been in grass since 1880, but planted to corn in 1888.

As it is not our custom to state the names of any of our competitors, or speak of their goods in any of our advertisements or pamphlets, we would refer our friends who would like to know what fertilizers were used in the second and third yields, to the *American Agriculturist* for December, 1889, p. 651: also to the January number as to the Potato Contest, or send for our 1890 Pamphlet which will appear soon.

The Stockbridge Manures were the original special fertilizers, and, like all good things, have been extensively copied, but the copies have not been equal to the originals in *crop producing power*, as this great contest clearly shows.

BOWKER FERTILIZER COMPANY, Boston and New York.

A WET HEN

The man who has invested from three to five dollars in a Rubber Coat, and at his first half hour's experience in a storm finds to his sorrow that it is hardly a better protection than a mosquito netting, not only feels chagrined at being so badly taken in, but also feels if he does not look exactly like

We offer the man who wants service (not style) a garment that will keep him dry in the hardest storm. It is called TOWER'S FISH BRAND "SLICKER," a name familiar to every Cow-boy all over the land. With them the only perfect Wind and Waterproof Coat is "Tower's Fish Brand Slicker." and take no other. If your storekeeper

Ask for the "FISH BRAND" SLICKER does not have the FISH BRAND, send for descriptive catalogue. A. J. TOWER, 20 Simmons St., Boston, Mass.

TICKS Hon. JOHN E. RUSSELL, of Massachusetts, says of THYMO-CRESOL (the Cold-water Dip):—"*It will stimulate the skin, increase the growth of the wool, and destroy all parasites. I would not be without it if it cost $10 a gallon. It is the best thing for sores of any kind.*" Non-poisonous. Safe in coldest weather. Imported only by LAWFORD BROS., Baltimore, Md. Sample by Mail, 50 Cents. Mention this Paper.

Enterprise Meat Chopper.
Price, $2.00.
For Sale by the Hardware Trade.
IF you cannot get this Meat Chopper from your Hardware Dealer, send money to us and we will express by first fast train.
ENTERPRISE M'F'G CO.,
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SAW MILLS,
IRON FRAME,
STEEL ARBOR,
IMPROVED HEAD BLOCKS.
ALEXANDER IRON WORKS,
Send for Catalogue. SYRACUSE, N. Y.

LANE'S PATENT STEEL DOOR HANGER
ANTI-FRICTION.
The most perfect article of its kind made. No more breakage; ease of movement and satisfaction guaranteed. LANE'S PATENT STEEL TRACK No Wood work. Simple and durable.
Send for Circular.
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LANE BROS., Poughkeepsie, N. Y.
Sold by Hardware Dealers Generally.

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FOR ALL PURPOSES AT LAKESIDE.
Standard Bred Trotters.
A rare lot of Young Stallions of most popular lines of breeding.
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Imported and American Bred, of very superior quality, style and action.
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A Superb Lot of Young Stallions, Mares and Fillies of this valuable draft breed, the result of years of intelligent and careful importing and breeding.
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A few unusually fine young Stallions of this deservedly popular breed.
Catalogue containing full descriptions and pedigrees mailed to parties interested. In writing mention this paper.
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DISTRIBUTES FERTILIZERS
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THREE RIVERS, MICH.
Write for illustrated circular.
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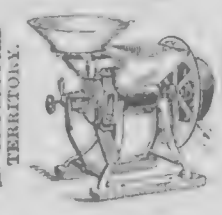
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QUAKER CITY GRINDING MILL
IMPROVED DURING 1889.
For Corn and Cobs, Feed and Table Meal. Grinds finer, runs lighter, is more durable than any mill on the market. Send for Catalogue before buying.
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